ATTACHMENT 4

Newark Bay Study Area Environmental Sample Collection Report (Normandeau 2017)

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FINAL

ENVIRONMENTAL SAMPLE COLLECTION
NEWARK BAY STUDY AREA



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1.0 Introduction

Normandeau Associates, Inc. was contracted by Tierra Solutions, Inc. (Tierra) to collect environmental samples in the Newark Bay Study Area (NBSA), located in New Jersey and New York, to support Tierra's development of a risk assessment pursuant to an Administrative Order on Consent (USEPA Index No. CERCLA-02-2004-2010) with the United States Environmental Protection Agency (USEPA). Tierra is conducting this work on behalf of Occidental Chemical Corporation, the successor to Diamond Shamrock Chemicals Company (formerly known as Diamond Alkali Company). The objective of the sampling activities is to support development of the baseline human health and ecological risk assessments, which is the goal of Phase III of the Remedial Investigation (RI) for the NBSA. The risk assessments will address the goal "…to determine the primary human and ecological receptors (endpoints) of PCDDs, PCDFs, PCBs, PAHs, pesticides, and metals contaminated sediments in the NBSA" (USEPA 2004).

The NBSA is identified as Newark Bay and portions of the Hackensack River, Kill van Kull, and Arthur Kill. The NBSA is located within one of the most heavily urbanized and industrialized areas in the United States. Most of the shoreline of the NBSA consists of commercial, developed, or abandoned properties with several areas of deteriorating and/or submerged pier structures. A well maintained shipping channel exists in the main body of the NBSA as it is a major shipping hub with two large ports located along the western shoreline (Port Elizabeth and Port Newark). Commercial shipping traffic occurs throughout the NBSA with the most concentrated shipping activity occurring in the middle and lower portions of Newark Bay.

Fish, blue crab, and softshell clam sampling was conducted in the NBSA in order to provide sufficient tissue mass for chemical analyses. The target organisms (fish, blue crab, and softshell clam) were collected from either specific intertidal areas or within three Newark Bay Zones (Figure 1-1). (Note that on Figure 1-1, 14 intertidal sampling locations are presented: 10 locations had co-located samples for sediment, softshell clams, blue crab, and forage fish; Location 126 had blue crab only; Location 125 had blue crab, softshell clam, and sediment only (no forage fish); Location 135 had forage fish, softshell clam, and sediment only (no blue crab); and Location 128 was attempted but no field samples were collected.) Tissue mass requirements for each tissue type for the target species were provided in both the Clam and Crab Sampling and Analysis, and Fish Sampling and Analysis Quality Assurance Project Plans (QAPPs) (Tierra 2014a, 2014b). The biological collections were initiated during September 2014 and focused on collection of softshell clam (*Mya arenaria*), blue crab (*Callinectes sapidus*), and sediment. Fish sampling was initiated during October 2014 and continued during spring 2015, summer 2015, and spring 2016. Fish collection periods were designed to coincide with the seasonal abundance and minimum length requirements for the target species in Newark Bay (Table 1-1). The sampling effort focused on likely suitable habitat for each species within the NBSA. For the purposes of this study effort, fish were defined by ecological feeding guilds: forage, benthic demersal flatfish, pelagic predatory, and sport fish. Within each feeding group, several species were identified as target species to fulfill tissue sample requirements.

The initial environmental samples were collected during the period 8 September through 24 October 2014. They consisted of softshell clam tissue, sediment associated with the softshell clam burrows, blue crab tissue, and tissue of various target fish species. Normandeau collected softshell clam, blue crab, and fish and prepared tissue samples as well as the clam burrow-associated sediment samples for shipment to several analytical laboratories. All of the environmental sampling and associated tissue sample preparation followed methodologies contained within the two QAPPs prepared by Tierra and approved by the USEPA (Tierra 2014a, 2014b).

2.0 Softshell Clam and Blue Crab Sampling In Intertidal Locations

The softshell clam sampling and associated tissue sample preparation were conducted on 8 September through 2 October 2014. Intertidal blue crab sampling and associated tissue sample preparation was conducted on 8 September through 14 October 2014. During these periods, samples were collected on 14 days for softshell clam and 19 days for blue crab. All work followed methodologies contained within the Crab and Clam Sampling and Analysis QAPP (Tierra 2014a).

The sampling was conducted under the following authority:

- New Jersey Department of Environmental Protection (NJDEP) Scientific Collecting Permit MFA-SCP Nos. 1467, 1535, and 1629 issued to William S. Ettinger.
- New York State Department of Environmental Conservation License to Collect or Possess Scientific Nos. 904 and 1995, issued to William S. Ettinger.

Prior to sampling, a Field Readiness Review led by a third-party (Field and Technical Services) was conducted in order to ensure that all details of the work were understood by Normandeau personnel, particularly the field sampling crew. In addition, an internal audit of the sampling and tissue sample processing was conducted early in the sampling effort in order to ensure adherence to the QAPP (Tierra 2014a). USEPA observers were present during all sampling activities and tissue sample preparation. The observers were personnel from Louis Berger and Battelle, USEPA environmental contractors.

Most of the sample collection locations were accessed by boat. Survey boats were launched from a boat ramp at the Elizabeth City (NJ) Marina, located near the southern end of Newark Bay. Some sample collection locations were accessed on foot from the shoreline where feasible.

Intact softshell clam and the associated sediment samples, and blue crab were transported to a temporary laboratory facility set up in a warehouse at 80 Lister Avenue in Newark. Samples were processed at the 80 Lister Avenue facility into the following tissue samples: edible muscle-only, hepatopancreas-only, and remaining carcass samples. Prior to tissue sample preparation, all softshell clam and blue crab were measured (softshell clam – shell length and weight; blue crab – carapace width and weight) and photographed. Sediment samples and tissue samples of both species were prepared, packaged, and shipped for contaminant testing. Sediment samples were shipped directly to each of the laboratories for analysis. Tissue samples were sent to Eurofins Lancaster Laboratories for frozen storage and distributed to the appropriate laboratories after concurrence from USEPA on the compositing

scheme and completion of homogenization. These laboratories were Eurofins Frontier Global Sciences (mercury/methylmercury analyses), Eurofins Lancaster Laboratories (all analyses except those noted for other laboratories), TestAmerica Burlington (butyltins analyses), Val Associates Laboratory (sulfide analyses), and Vista Analytical (pesticides analyses).

Softshell Clam

The softshell clam samples were collected at 18 intertidal areas shown in Figure 2-1. The symbols in Figure 2-1 represent the approximate center of the sediment and clam tissue composite sampling area. These intertidal locations differ slightly from those outlined in the QAPP (Tierra 2014a), which prescribed a total of 19 intertidal locations for collection of softshell clam (Protocol Modification Form for SOP #9, Appendix G). Intertidal Locations 126 and 128 (both along the east shore of South Zone) were searched for softshell clam for 30 minutes as per the QAPP, but none were encountered. In addition, the QAPP indicated that two softshell clam collections were to be conducted at Intertidal Location 129; however, only one location within Intertidal Location 129 contained sufficient numbers of softshell clam. As such, two alternative locations were selected in concurrence with USEPA where softshell clam were present, Intertidal Locations 134 and 135, both located in the southwestern portion of the South Zone of Newark Bay.

Softshell clam was collected on foot using an 11 x 5.5 inch stainless steel spade. The spade was decontaminated between sampling locations with an ambient water rinse and, if necessary, brushing with ambient water. All softshell clam sampling coincided with low tide to facilitate access to intertidal habitat on foot. The softshell clam was identified by locating its siphon hole at the surface of the sediment. The softshell clam was extracted by excavating the material above the clam until it was visible or by using a shovel to dig below the softshell clam and removing a shovel scoop of sediment containing softshell clam. The minimum target length (measured anterior to posterior) for softshell clam was 1.5 inch (38.0 mm) and specimens smaller than this were excluded from the tissue samples. In addition, sediment associated with each clam burrow was collected to prepare a composite sediment sample. Sample collection information including date, intertidal location, and GPS coordinates for the location of collected softshell clam was recorded on field data forms. Representative photographs were taken (Appendix A).

Descriptive statistics for the softshell clam collected are listed in Table 2-1. A total of 1,159 softshell clam were collected from 18 intertidal locations. The mean shell length for softshell clam was 49.3 mm and ranged between 31.0[1] and 92.0 mm. The total number collected and used for tissue samples ranged from 43 clams at Intertidal Location 135 to 88 clams at Intertidal Location 122B. Appendix B provides shell length-frequency distribution histograms for softshell clam collected at each intertidal location.

[1] Excluded from tissue sample; only softshell clam greater than 38.0 mm in length was included in tissue samples.

Blue Crab

The blue crab samples were collected at 12 intertidal collection locations distributed throughout Newark Bay as shown in Figure 2-2. Typically, three crab traps were deployed per station for a duration of 24 hours. However, if additional blue crab were needed at a station after the first 24-hour deployment, the number of crab traps deployed was adjusted to achieve the required number of blue crab. These intertidal collection locations differ slightly from those outlined in the QAPP (Tierra 2014a) for collection of blue crab. Intertidal Location 128 (along the east shore of the South Zone) was abandoned and not sampled for blue crab and an alternate location was selected (Intertidal Location 134) for sampling, which coincided with the location change for softshell clam. This allowed for consistency with the QAPP with sediment, softshell clam, and blue crab collected from 11 of the same intertidal collection locations. All changes were made following concurrence with EPA and after robust attempts to collect samples from the QAPP-designated locations.

Hardshell blue crab was collected using baited (bunker or chicken thighs) crab traps that were deployed from a boat and left overnight. Two sizes of crab traps were used; the crab trap dimensions were 24 inches x 24 inches x 18 inches and 18 inches x 18 inches x 12 inches, both with 1-inch mesh opening. Crab trap dimensions and mesh opening were compliant with NJDEP requirements. A total of 248 crab trap sets were conducted during the course of sampling. The minimum target carapace width for hardshell blue crab was 4.5 inches (114.3 mm), and specimens smaller than this were released alive. Other molts (peeler and shredder) were also released. Crab traps were decontaminated between sampling locations with an ambient water rinse and, if necessary, brushing with ambient water. During laboratory processing blue crab were inspected for gross anomalies but none were observed. Sample collection information including date, water depth, number of crab traps deployed, and collection location (GPS coordinates) were recorded on field location data forms. Representative photographs were taken (Appendix A). In situ water quality measurements were collected to provide a snapshot of field conditions within the sampling area. Water quality measurements were typically limited to one observation per day within the sampling area and are provided in Appendix C.

Descriptive statistics for the blue crab collected from intertidal collection locations are listed in Table 2-2. A total of 312 blue crab were collected during the course of the intertidal area collection effort with 68% of individuals being male. The mean weight for male blue crab was greater than female for all intertidal locations. The overall mean carapace width for blue crab was 140.4 mm with similar carapace width for males and females. During laboratory processing blue crab were inspected for gross external anomalies but none were observed. Carapace width among all intertidal locations ranged between 111[2] and 198 mm. Appendix D provides carapace width-frequency distribution histograms for blue crab collected at each intertidal collection location.

[2] Only hardshell blue crab with a carapace width greater than 114.3 mm were included in tissue samples.

Forms and Data Files

Field data sheets, daily safety briefings, and laboratory processing forms are provided as Appendix E. The length, weight, and location data for individual softshell clam and blue crab, respectively the clam and crab tallies submitted to USEPA, are provided as Appendix F. Deviations from the standard operating procedures described in the QAPP were documented using protocol modification forms. The protocol modification forms are provided as Appendix G and listed below.

- Protocol Modification Form for SOP #9, Sediment Sample Location Depth
- Protocol Modification Form for SOP #2, Crab/Clam/Sediment X and Y coordinates of sample location
- Protocol Modification Form for SOP #6, Crab Trap decontamination procedure
- Protocol Modification Form for QAPP Worksheet #14, tissue processing personal protective equipment
- Protocol Modification Form for QAPP Worksheet #31, Internal Field Audit
- Protocol Modification Form for SOP # 7 and #8, Timing of crab/clam tissue processing

3.0 Blue Crab and Fish Sampling in Bay Zones

For this sampling task, the NBSA was divided into three zones: North, Central, and South (Figure 1-1). The North Zone extended from near the mouth of both the Passaic and Hackensack Rivers down-estuary to the Port Newark Channel. The Central Zone extended from the Port Newark Channel down-estuary to the South Elizabeth Channel. The South Zone extended from the South Elizabeth Channel down-estuary to the Bayonne Bridge to the east and the Goethals Bridge to the west. Within each Bay Zone, sampling was conducted to meet specific tissue sample requirements for blue crab and fish.

Blue crab sampling specific to the three zones and associated tissue sample preparation were conducted on 6 through 23 October 2014. Fish sampling and associated tissue sample preparation were conducted on 6 through 24 October 2014, 30 March through 5 August 2015, and 14 through 24 March 2016. During these periods, blue crab was collected on 10 days in 2014 and fish samples were collected on 15 days in 2014, 29 days in 2015 and 8 days in 2016. All work followed methodologies contained within the Fish Sampling and Analysis QAPP (Tierra 2014b).

The sampling was conducted under the same scientific collection permits noted in Section 2.0.

Prior to sampling, a Field Readiness Review (by Field and Technical Services) was conducted in order to ensure that all details of the work were understood by Normandeau personnel, particularly the sampling crew. In addition, an internal audit of the sampling and tissue sample processing was conducted early in the sampling effort in order to ensure adherence to the QAPP. USEPA observers were present during most sampling and tissue sample preparation activities. The observers were personnel from Louis Berger, a USEPA environmental contractor.

The blue crab samples were collected at a number of locations distributed throughout the North, Central, and South Zones of Newark Bay as shown in Figure 3-1. Blue crab was collected using crab traps deployed from a boat and left overnight. Crab trap dimensions were identical to those used for intertidal locations. A small portion of the blue crab catch was also collected with trawl or gillnet during the fish sampling effort.

Fish sampling was conducted within the three Bay Zones during three separate collection periods: Fall 2014, Spring and Summer 2015, and Spring 2016. The fish were collected using various collection gear in order to collect target fish species within their preferred habitats as shown in Figures 3-2 through 3-4. Mummichog (*Fundulus heteroclitus*) and striped killifish (*Fundulus majalis*) were the only target fish species required to be collected at each of the intertidal locations (Figure 1-1). Mummichog or striped killifish collections were conducted using minnow traps or seine at the intertidal areas shown in Figures 3-5 and 3-6. These intertidal locations differ slightly from those outlined in the Fish Sampling and Analysis QAPP (Tierra 2014b), which prescribed a total of 19 intertidal locations for collection of mummichog or striped killifish. Intertidal Locations 125, 126, and 128 were targeted for mummichog and striped killifish but few were present. As such, two alternative locations were selected where these species were present, Intertidal Locations 134 and 135, both located in the southwestern portion of the South Zone of Newark Bay.

The other target fish species were bay anchovy (*Anchoa mitchilli*), Atlantic menhaden (*Brevoortia tyrannus*), Atlantic silverside (*Menidia menidia*), American eel (*Anguilla rostrata*), flounder/hake (includes winter [*Pseudopleuronectes americanus*], summer [*Paralichthys dentatus*], and windowpane [*Scophthalmus aquosus*] flounder, spotted hake [*Urophycis regia*]), white perch (*Morone americana*), striped bass (*Morone saxatilis*), weakfish (*Cynoscion regalis*), and bluefish (*Pomatomus saltatrix*). These species were to be collected throughout the NBSA within the three zones. Tissue mass requirements were variable depending on the target fish species and described in the QAPP (Tierra 2014b). Striped bass and bluefish did not have a tissue mass requirement for each zone, rather, a total number of tissue samples was required throughout the entire NBSA. The other target fish species required equal tissue mass collections for each of the three Bay Zones.

Minnow traps were used to collect mummichog, killifish, and silverside within intertidal locations. Minnow traps were baited with either dog food or crushed blue crab. Minnow traps were set overnight for approximately 12 hours. A standard minnow trap with the following characteristics was used.

- 16.5 inch length x 9 inch diameter at center, 0.25-inch square wire mesh with 1-inch opening at both ends

A 100-ft bag seine with 0.25-inch mesh was used to collect fish at each of the intertidal locations. Seining was conducted using a small flat bottom boat where one end of the seine was held on shore and the other end was fastened to the boat. The boat was used to pull the seine off shore and encircle a portion of the adjacent water and then pull the seine back into shore. In a few cases, seining was conducted by two individuals on foot. A minimum of one seine haul was conducted at each intertidal location. Seining was attempted several times at Intertidal Location 125 but few fish were caught. This location was determined to not have sufficient habitat for forage fish and, in concurrence with USEPA, was abandoned as a forage fish sample location.

Eel pots were set in various habitats to collect American eel. Eel pots were baited with crushed blue crab or bunker and typically set overnight for approximately 12 hours. However, in some instances eel pots were also set on consecutive days during the weekend. For these sets the eel pots were deployed on a Friday and retrieved the following Monday. This modification to the QAPP was approved and documented in a protocol modification form (Appendix G). Below is a description of the two different types of eel pots that were used:

- 30 inch length x 11 inch width x 6 inch height, 0.5-inch square wire mesh with single funnel entrance
- 24 inch length x 11 inch width x 9 inch height, 0.5-inch square wire mesh with single entrance rectangular trap with nylon mesh exit barrier

Trawls were conducted using an 8-m or 3-m semi-balloon otter (bottom) trawl with 0.25-inch mesh liner in the cod end. The trawl was deployed off the stern of the boat and hauled for approximately 10 minutes with the direction of water flow. The trawl was used to collect fish from transitional areas, shipping channels, and port channels.

Several different mesh sizes and lengths of gillnet were used to collect fish throughout the three sampling zones. Gillnet sets were set on the bottom in a variety of habitats including shoals, transitional areas, and deep water adjacent to the shipping channels. Gillnets were deployed overnight and typically fished for a minimum of 12 hours. Below is a description of specific mesh sizes and lengths of gillnets used. Most of the adult white perch were collected with gillnets and this gear was the most effective method for collection of adult white perch. In some instances, gillnets were clogged with debris and had to be cleaned prior to redeploying. In the north zone gillnets became easily clogged and subsequently, gillnets were not set in this zone.

- 100-ft multi-panel (3 inch and 2 inch square mesh)
- 300-ft panel (4 inch square mesh)
- 150-ft panel (1.5 inch square mesh)
- 60-ft panel (4 inch square mesh)

Traditional angling techniques (rod and reel) were used to target several fish species, including striped bass, bluefish, and summer and winter flounder. Two angling techniques, drift fishing with baited hook and trolling with artificial lures, were used to collect these species within transitional areas and the shipping channels.

Trotlines were approximately 100-ft in length and rigged with baited hooks. Hooks were baited with white mullet (*Mugil curema*) or peanut bunker purchased from a bait shop. This gear was meant to target bluefish. Trotlines were set overnight for approximately 12 hours and deployed in transitional areas.

Sample collection information including date, water depth, type of collection gear deployed, and collection location (GPS coordinates) was recorded on field location data forms. Representative photographs are provided in Appendix A. In situ water quality measurements were collected to provide a snapshot of field conditions within the sampling area. Water quality measurements were typically limited to one observation per day within the sampling area and are provided in Appendix C.

All of the blue crab and fish sampling was accomplished by boat launched at the Elizabeth City (NJ) Marina.

Intact blue crab and fish to be used for tissue samples were transported to the 80 Lister Avenue temporary laboratory facility for processing. All blue crab and fish were measured (blue crab – carapace width and weight; fish – total length and weight) and photographed. Processing information for blue crab was recorded on specimen tally forms and fish processing information was recorded on sample processing forms (Appendix E). The original sample processing form provided in the QAPP was modified to better suit the data recording requirements and the modifications were documented with a protocol modification form (Appendix G). Tissue processing conducted at the field facility included fish filleting and liver extractions. Tissue was removed, prepared, and packaged following procedures outlined in the QAPP (Tierra 2014a, 2014b). All tissue was sent to Eurofins Lancaster Laboratories for frozen storage and distributed to the appropriate laboratories after concurrence from USEPA on the compositing scheme and completion of homogenization. These laboratories were Eurofins Frontier

Global Sciences (mercury/methylmercury analyses), Eurofins Lancaster Laboratories Environmental (dioxins/furans, polychlorinated biphenyls, metals, semivolatiles, polycyclic aromatic hydrocarbons, lipids, and percent moisture analyses), TestAmerica Burlington (butyltins analyses), and Vista Analytical (pesticides analyses). All tissue compositing was conducted at the Eurofins Lancaster Laboratories. A subsample of all fish species that were collected was examined by a pathologist during October 2014 and July 2015 to determine the presence of both external and internal anomalies. The results of these analyses were provided in two reports submitted to USEPA (Experimental Pathology Laboratories 2016a, 2016b). During laboratory processing fish were inspected for gross external anomalies, with few observed. A total of six individuals were observed with gross external anomalies with details provided in Appendix J.

Non-target bycatch species were processed on the boat. Non-target individuals were identified to species, measured for length and weight, and released alive. If large numbers of a species were collected, a representative subsample was measured for length and weight and the remaining individuals were counted. In other instances when large numbers of individuals of smaller fish species (e.g., mummichog and striped killifish) were collected, a representative subsample of individuals was measured for length and the remaining individuals were counted.

Blue Crab

A total of 120 crab trap sets, four gillnet sets, and seven trawls were conducted during the course of sampling to provide enough individuals for tissue samples. This collection effort produced a total of 481 blue crab that were processed for tissue samples. Of these blue crab, 79% of the individuals were male. Descriptive statistics for blue crab collected from the three Bay Zones are listed in Table 3-1. Mean carapace width for all individuals was 138.5 mm and ranged from 117 to 174 mm. Appendix H provides carapace width-frequency distribution histograms for blue crab collected from the three Bay Zones. During laboratory processing blue crab were inspected for gross external anomalies but none were observed.

Summary of Fish Collections

A total of 44 fish species (target and bycatch species) were collected during the entire fish collection effort. Table 3-2 provides common and scientific names of fish and shellfish species that were collected. Fish were collected using eight gear types over the course of the sampling effort. The effort yielded 12,513 individuals with most fish being collected with seine or trawl (Table 3-3). Mummichog, white perch, Atlantic silverside, and striped bass were the most abundant species collected for this program because large numbers of individuals were targeted to meet the tissue mass requirement. Four species of crab (blue, horseshoe, mud, and spider) were collected as bycatch during the fish collection effort, with blue crab being the dominant species (Table 3-3). Appendix I provides length-frequency distribution histograms for select fish species (those with greater than 75 individuals measured for total length) collected in Newark Bay. Appendix K provides catch per unit effort (CPUE) data for each taxon by gear type and year.

Fish Collections 2014

The fish collection effort in 2014 was conducted from 6 through 24 October on a total of 15 days during which various gear types were deployed (Figure 3-2). A total of 39 minnow trap sets, 33 seine hauls, 68 eel pot sets, 19 trawls, and eight gillnet sets were conducted in 2014 (Figures 3-5 through 3-9). The target fish species for this collection effort included mummichog, killifish, silverside, American eel, Atlantic menhaden, flounder/hake, white perch, bluefish, and bay anchovy. This effort resulted in collection of a total of 31 fish species represented by 6,452 individuals. Of these, 12 target fish species represented by 3,078 individuals were collected using eel pots, gillnets, minnow traps, seine, and trawls or as crab trap bycatch (Table 3-4). Collection gear was species-specific with most individuals of the target fish species being collected with seine or minnow traps. Descriptive statistics for target species among the three Bay Zones are provided in Table 3-5. Mummichog and striped killifish collections were specific to the intertidal locations. Descriptive statistics for these two species across the intertidal areas are provided in Table 3-6.

The numbers of each fish species collected as bycatch for each gear type is provided in Table 3-7. A total of 28 non-target (bycatch) fish species represented by 3,376 individuals were collected throughout the NBSA (Figures 3-2 through 3-4). These totals include target species of insufficient size to be included in tissue samples. Descriptive statistics for bycatch fish species are provided in Table 3-8.

Fish Collections 2015

The fish collection effort in 2015 was conducted from 30 March through 5 August on a total of 29 days during which various gear types were deployed (Figure 3-3). A total of 117 trawls, 43 gillnet sets, 253 eel pot sets, 21 angling days, and 16 trotline sets were conducted in 2015 (Figures 3-10 through 3-14). The target fish species for this collection effort included American eel, flounder/hake, white perch, striped bass, and bluefish. This effort resulted in the collection of a total of 24 fish species represented by 2,243 individuals. Of these, 10 target fish species represented by 1,241 individuals were collected using trawl, eel pot, gillnet, angling, and trotline (Table 3-9). Collection gear was species-specific with most individuals of the target fish species being collected with trawl or gillnet. Descriptive statistics for target species among the three Bay Zones are provided in Table 3-10.

The number of each fish species collected as bycatch for each gear type is provided in Table 3-11. A total of 20 non-target (bycatch) fish species represented by 1,002 individuals were collected. These totals include target species of insufficient size to be included in tissue samples. Descriptive statistics for bycatch fish species are provided in Table 3-12.

The fish collections included four separate events, each targeting specific fish species. The first was conducted 30 March through 10 April, on a total of 8 days, targeting white perch. The second was conducted 27 April through 8 May, on a total of 7 days, targeting striped bass. The legal harvest length of striped bass from Newark Bay is 28 inches; however, USEPA approved the collection of striped bass for fillet tissue samples that were 18 inches or greater in length. The completed striped bass collection effort retained a total of 18 striped bass. A total of 14 individual striped bass were greater than or equal

to 28 inches. The other 4 individuals were between 18 and 28 inches total length. The length of the largest individual was 38.5 inches. The third was conducted 1 June through 8 June, on a total of 6 days, targeting bluefish. The fourth was conducted 27 July through 5 August, on a total of 8 days, targeting summer flounder and American eel. The legal harvest length of summer flounder in Newark Bay is 18 inches; however, USEPA approved the collection of summer flounder for fillet tissue samples that were 15 inches or greater in length. Tissue samples of summer flounder less than 15 inches were also processed for tissue in the benthic/demersal fish category for ecological risk assessment. The completed summer flounder collection effort retained a total of 40 summer flounder. A total of 5 individual summer flounder were greater than or equal to 18 inches, 16 individuals were between 15 and 18 inches, and 19 individuals were less than 15 inches. The length of the largest individual was 22.5 inches.

Fish Collections 2016

The fish collection effort in 2016 was conducted from 14 through 24 March on a total of 8 days during which trawls and gillnets were used (Figure 3-4). A total of 37 trawls and 26 gillnet sets were conducted in 2016 (Figures 3-15 and 3-16). This effort resulted in collection of a total of 25 fish species represented by 3,821 individuals. White perch was the only target species collected in 2016 with a total of 236 individuals collected (Table 3-13) to replace fillet and liver tissue samples that were inadvertently destroyed during the 2015 tissue processing. Descriptive statistics for white perch among the three Bay Zones are provided in Table 3-13.

The number of each fish species collected as bycatch for each gear type is provided in Table 3-14. A total of 25 non-target (bycatch) fish species represented by 3,585 individuals were collected. These totals include target species of insufficient size to be included in tissue samples. Descriptive statistics for bycatch fish species are provided in Table 3-15.

Atlantic Sturgeon

In 2012, five distinct population segments of Atlantic sturgeon (*Acipenser oxyrinchus*) were listed under the Endangered Species Act. The Chesapeake Bay, New York Bight, Carolina, and South Atlantic populations of Atlantic sturgeon were listed as endangered. The New York Bight population includes individuals of the species that occur in Newark Bay and the surrounding waterways. On 17 March 2016 the fish collection effort yielded an incidental capture of a single Atlantic sturgeon.

The fish was captured in a gillnet (1.5-inch square mesh) set on the bottom of Newark Bay (Figure 3-17). Water depth was approximately 40 feet. The Atlantic sturgeon was 737 mm total length and weighed 1,650 g. The fish was photographed to document physical condition and provide documentation of specific characteristics that aid in identification of the species; Atlantic sturgeon is similar in appearance to shortnose sturgeon (*Acipenser brevirostrum*) (Figure 3-18). A primary characteristic used to separate the two species is the ratio of inside lip width to interorbital width. A ratio of < 0.60 would indicate the individual is Atlantic sturgeon and > 0.60 would indicate shortnose sturgeon. The inside lip width (22 mm) and interorbital width (49 mm) ratio (22 mm/49 mm) was 0.45

for the individual captured in Newark Bay and clearly indicated the individual was an Atlantic sturgeon. The fish appeared to be in good condition and was quickly processed and released into the water; the fish immediately swam away.

The collection effort was conducted under a Scientific Collection Permit (referenced in Section 2.0) administered by New Jersey Division of Fish and Wildlife (NJDFW). The incidental capture of the Atlantic sturgeon was reported to Heather Corbett, Biologist, NJDFW, Bureau of Fisheries. Ms. Corbett provided the incidental take information to National Marine Fisheries Service Northeast Region Protected Resources Division.

Forms and Data Files

Field data sheets, daily safety briefings, and laboratory processing forms are provided as Appendix E. The length, weight, and location of collection data for individual blue crab and fish, respectively the blue crab and fish tallies submitted to USEPA, are provided as Appendix F. Deviations from the standard operating procedures described in the QAPP were documented using protocol modification forms. The protocol modification forms are provided as Appendix G and listed below.

- Protocol Modification Form for SOP #4, Interval for retrieval of fish traps
- Protocol Modification Form for Appendix D, Modification of sample processing form

4.0 Literature Cited

Experimental Pathology Laboratories, Inc. 2016a. Newark Bay Study Area Fish Sampling and Analysis Pathology Report. EPL Project Number A41-001. Prepared for Tierra Solutions, Inc.

Experimental Pathology Laboratories, Inc. 2016b. Newark Bay Study Area Fish Sampling and Analysis Pathology Report. EPL Project Number A41-002. Prepared for Tierra Solutions, Inc.

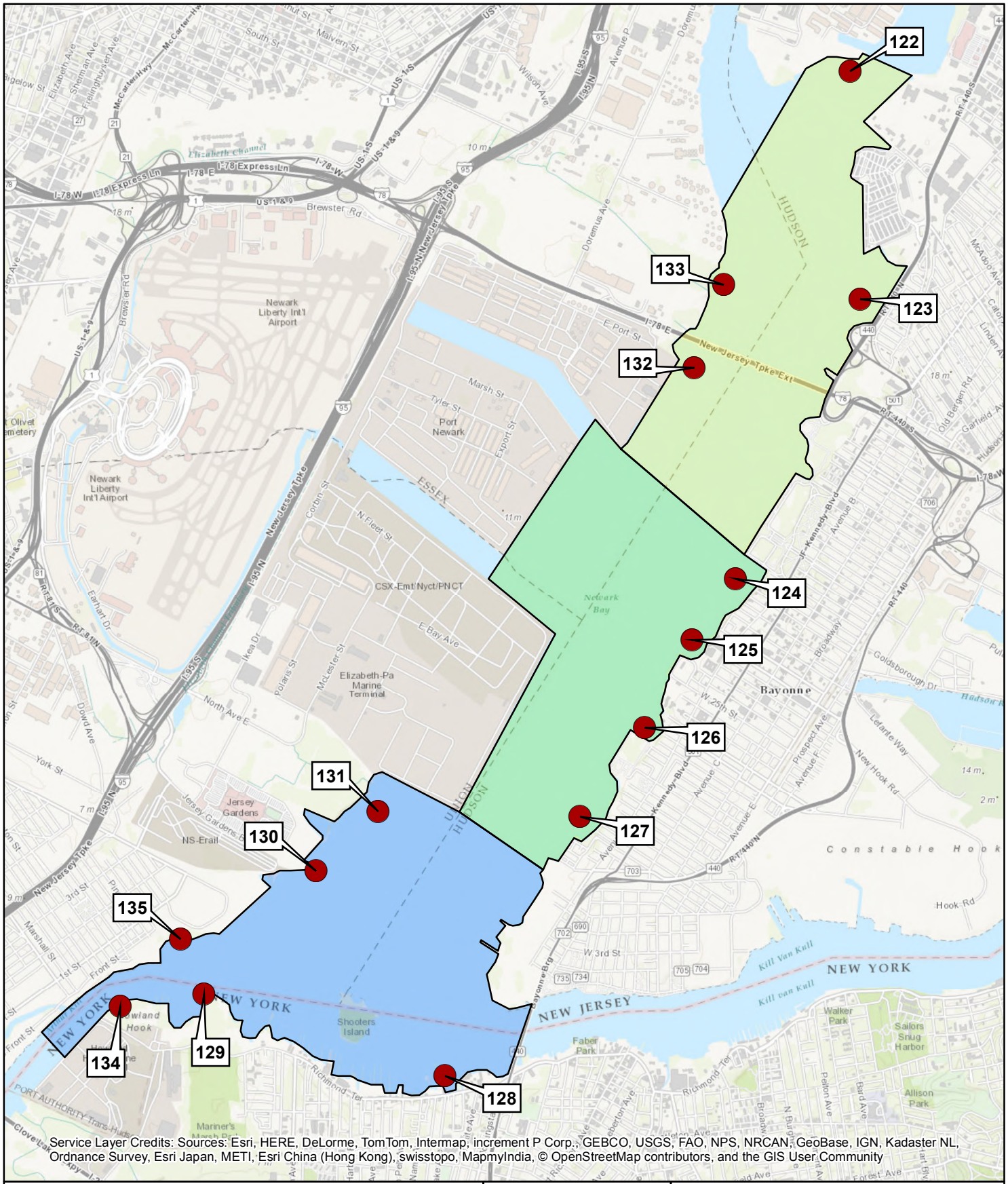
Tierra Solutions, Inc. 2014a. Newark Bay Study Area, Crab and Clam Sampling and Analysis, Quality Assurance Project Plan, Baseline Human Health and Ecological Risk Assessment. Tierra Solutions, Inc., East Brunswick, New Jersey, Revision 3a, August 2014.

Tierra Solutions, Inc. 2014b. Newark Bay Study Area, Fish Sampling and Analysis, Quality Assurance Project Plan, Baseline Human Health and Ecological Risk Assessment. Tierra Solutions, Inc., East Brunswick, New Jersey, Revision 2, October 2014.

U. S. Army Corps of Engineers, New York District. Date unknown. Essential Fish Habitat Assessment For Newark Bay Maintenance Dredging; Newark Bay – Port Newark Channel, Port Newark Pierhead Channel, & Port Elizabeth Channel Of Newark Bay, Hackensack & Passaic Rivers Federal Navigation Project.

U.S. Environmental Protection Agency. 2004. Administrative Order on Consent for Remedial Investigation and Feasibility Study, Newark Bay Study Area, USEPA Index No. CERCLA-02-2004-2010. Including all attachments, amendments, and updates.

FIGURES



Service Layer Credits: Sources: Esri, HERE, DeLorme, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

N

Newark Bay Zones

- Newark Bay North
- Newark Bay Central
- Newark Bay South
- Intertidal Areas

0 0.375 0.75 1.5 Miles

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Figure 1-1.
Intertidal Areas and Newark Bay Zones within the Newark Bay Study Area.

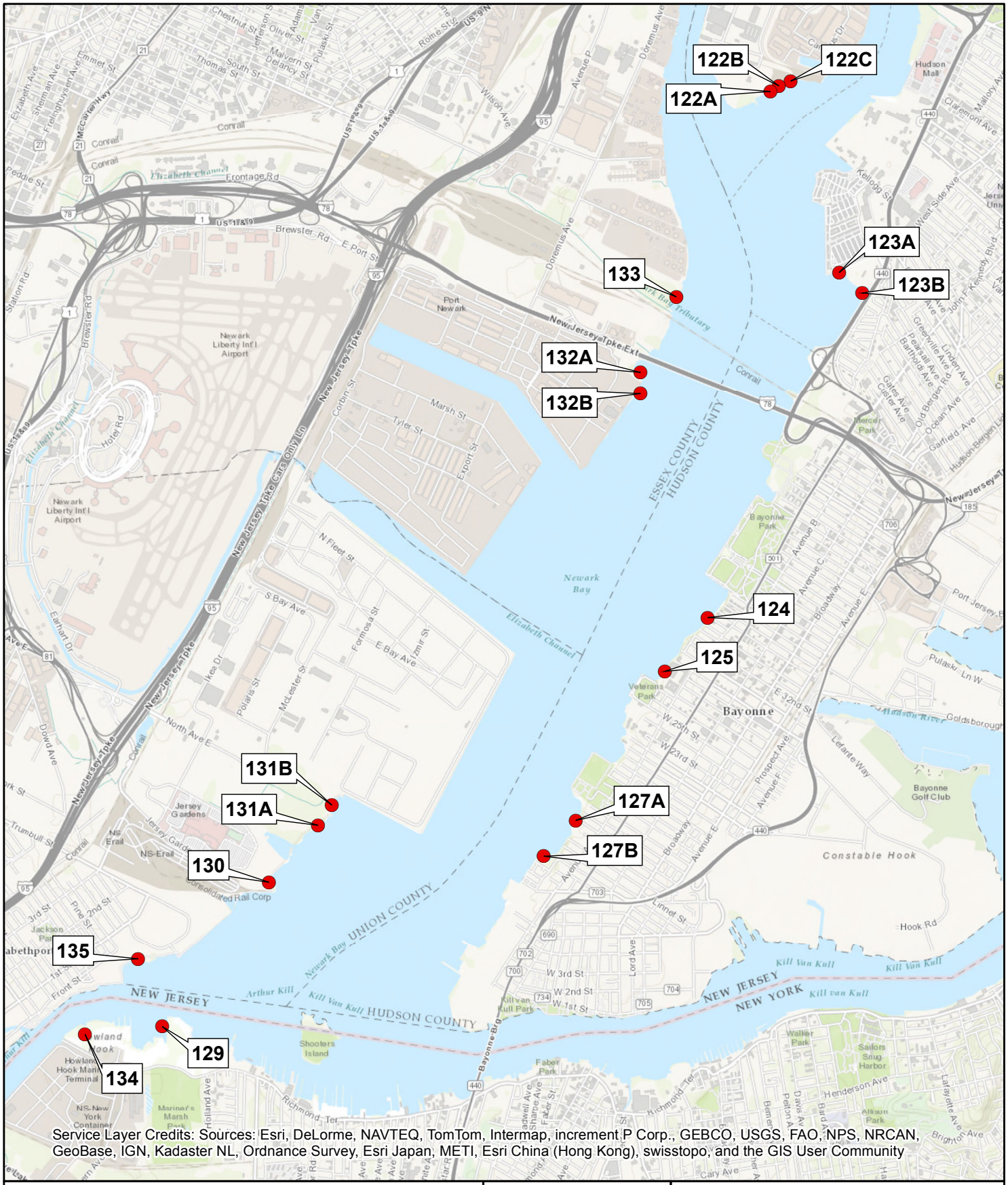
Date: 6/9/2016

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400 Old Reading Pike Bldg A Suite 101 Stowe, PA 19464

PREPARED FOR: BWL PROJECT: 23489.007 PREPARED BY: SAS

Path: J:\Projects\TierraSolutions_NewarkBaySampling_23489\MXD\2016_IntertidalAreas_BayZones_060916.mxd



N

Softshell clam and sediment collection location

Symbols represent the approximate center of the sediment and clam tissue composite sampling area.

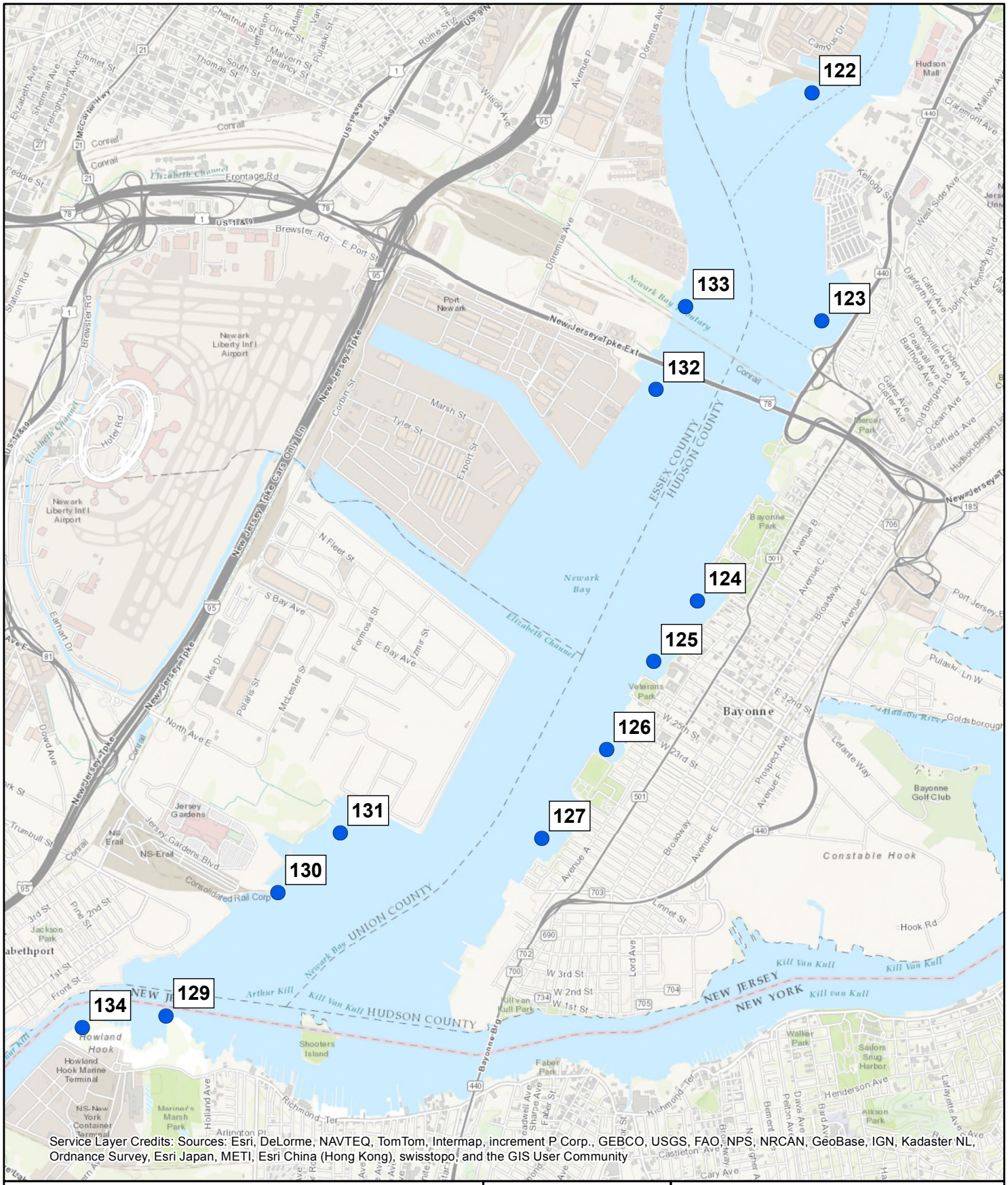
0 0.375 0.75 1.5 Miles

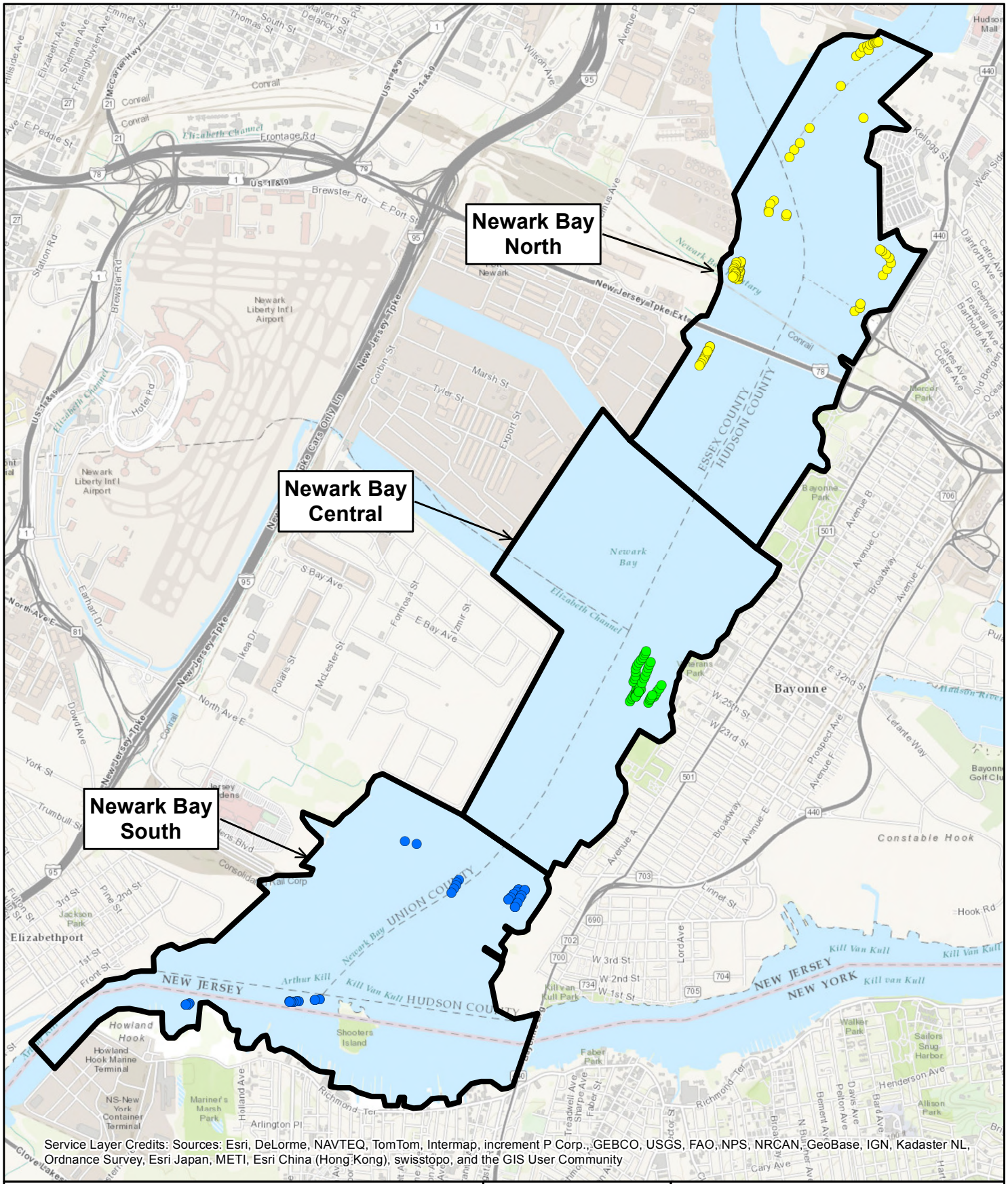
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Figure 2-1.
Collection locations for softshell clam *(Mya arenaria)* and sediment in Newark Bay, September and October 2014.

Date: 2/22/2017	Revised:	400 Old Reading Pike Bldg A Suite 101 Stowe, PA 19464
		PREPARED FOR: BWL PROJECT: 23489.007 PREPARED BY: SAS

Path: C:\Projects\TierraSolutions_NewarkBaySampling_23489\MXD\2014_Softshell_Clam_022217.mxd


122
133
123
132
124
125
126
131
127
130
134
129
Service Layer Credits: Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, and the GIS User Community
N
Blue crab collection location
Multiple crab traps were deployed at each collection location.
0
0.375
0.75
1.5 Miles
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Figure 2-2.
Intertidal area collection locations for blue crab (Callinectes sapidus) in Newark Bay, September and October 2014.
Date: 2/22/2017
Revised:
400 Old Reading Pike Bldg A Suite 101 Stowe, PA 19464
PREPARED FOR: BWL PROJECT: 23489.007 PREPARED BY: SAS
Path: C:\Projects\TierraSolutions_NewarkBaySampling_23489\MXD\2014_BlueCrab_IntertidalAreas_022217.mxd



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Figure 3-1.
Bay zone collection locations for blue crab *(Callinectes sapidus)* in Newark Bay, October 2014.

Date:	Revised:	400 Old Reading Pike Bldg A Suite 101 Stowe, PA 19464
2/22/2017		PREPARED FOR: BWL PROJECT: 23489.007 PREPARED BY: SAS

Path: C:\Projects\TierraSolutions_NewarkBaySampling_23489\MXD\2014_BlueCrab_BayZones_022217.mxd

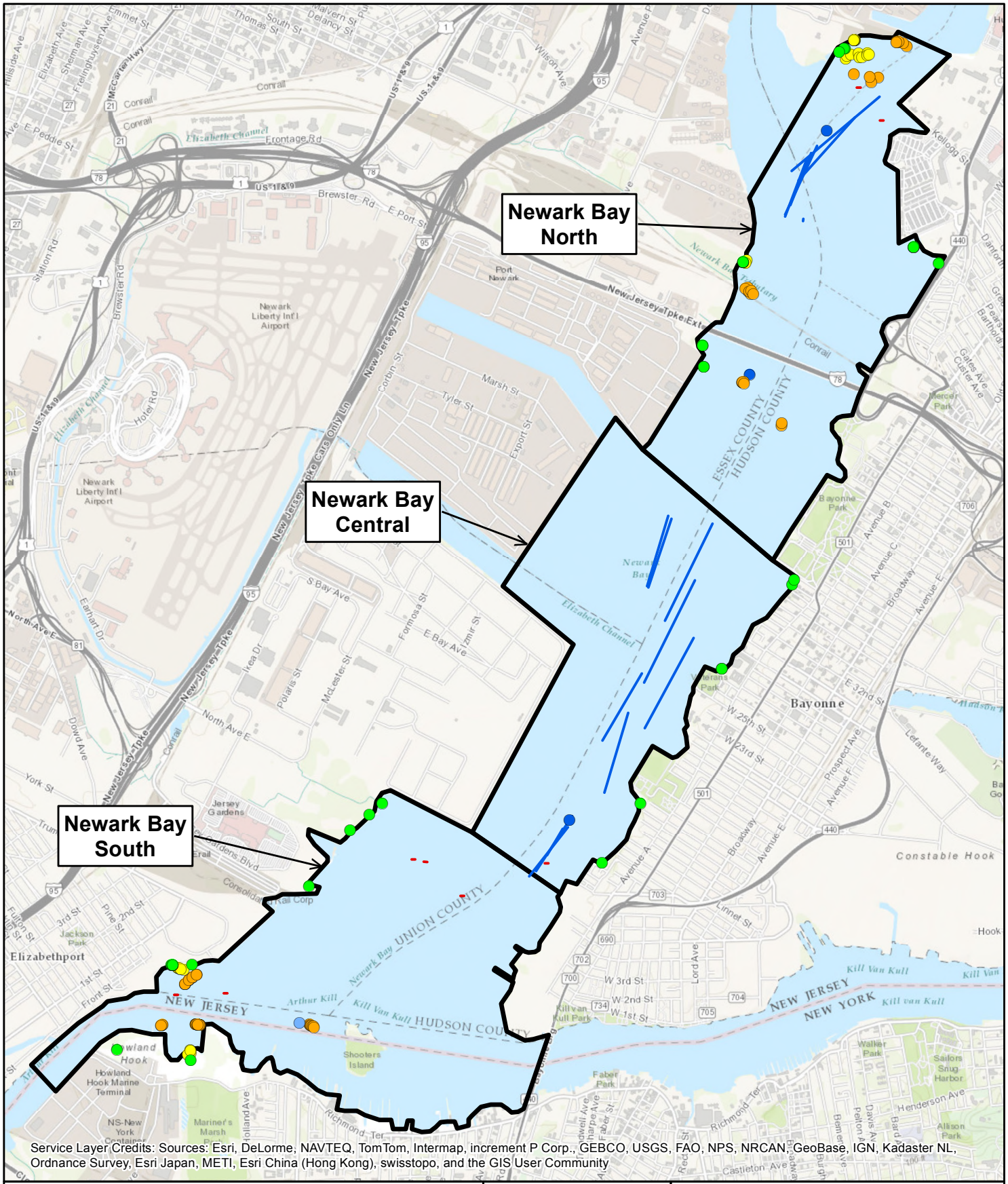
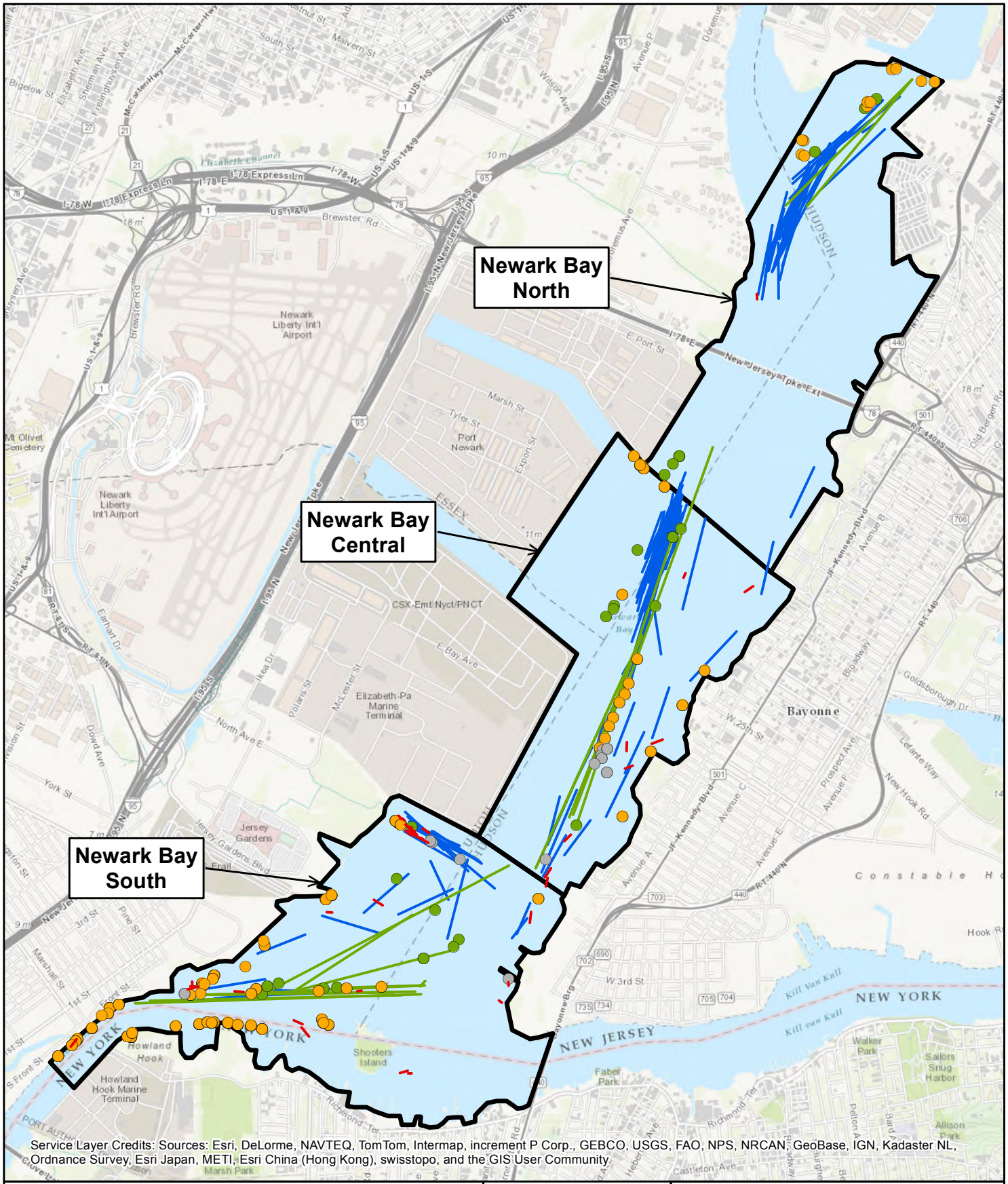


Figure 3-2.
Collection locations for all gear types used to collect target fish species in Newark Bay, October 2014.

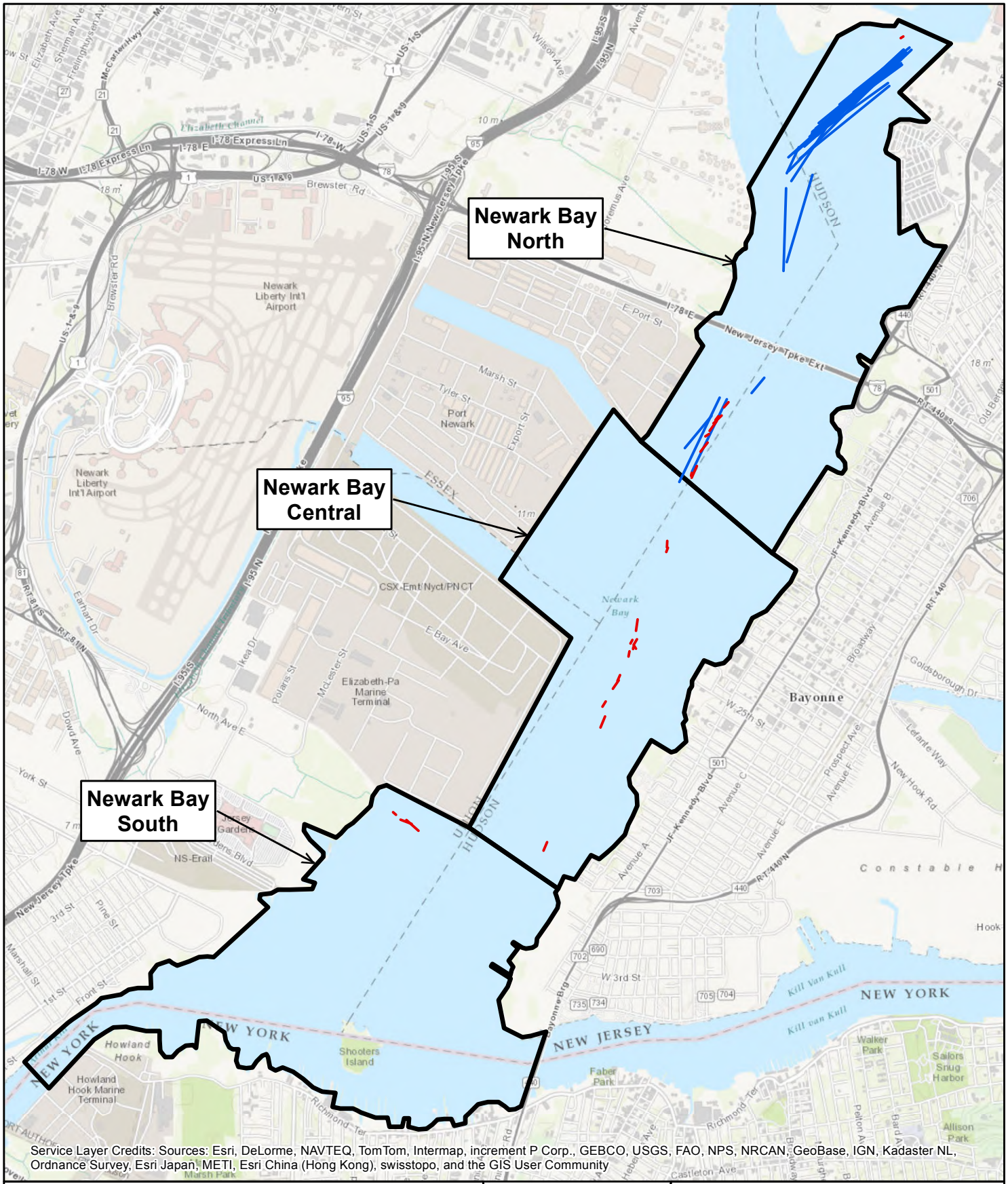


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Figure 3-3.
Collection locations for all gear types for target fish species in Newark Bay, March through August 2015.

Date:	Revised:	400 Old Reading Pike Bldg A Suite 101 Stowe, PA 19464
5/13/2016		PREPARED FOR: BWL PROJECT: 23489.007 PREPARED BY: SAS

Path: C:\Projects\TierraSolutions_NewarkBaySampling_23489\MXD\2015_Fish_All_GearTypes_051316.mxd

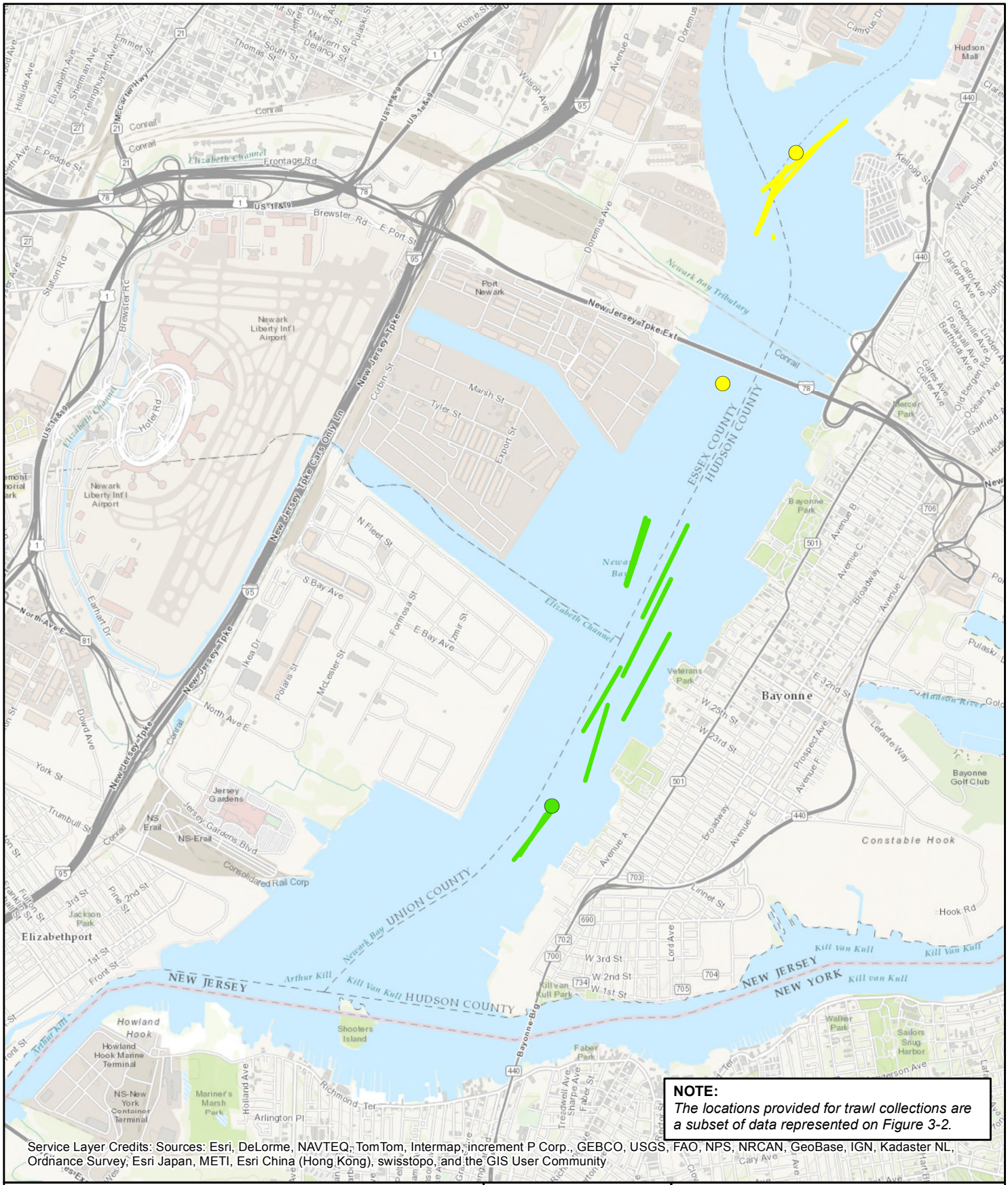


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Figure 3-4.
Collection locations for all gear types used to collect target fish species in Newark Bay, March 2016.

Date:	Revised:	400 Old Reading Pike Bldg A Suite 101 Stowe, PA 19464
5/13/2016		PREPARED FOR: BWL PROJECT: 23489.007 PREPARED BY: SAS

Path: C:\Projects\TierraSolutions_NewarkBaySampling_23489\MXD\2016_Spring_Fish_All_GearTypes_051316.mxd



NOTE:
The locations provided for trawl collections are a subset of data represented on Figure 3-2.

Service Layer Credits: Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, and the GIS User Community

N

Bay Zone Transects

- North - trawl collection location
- Central - trawl collection location

Individual points are trawl locations where start and end coordinates were not recorded.

0 0.375 0.75 1.5 Miles

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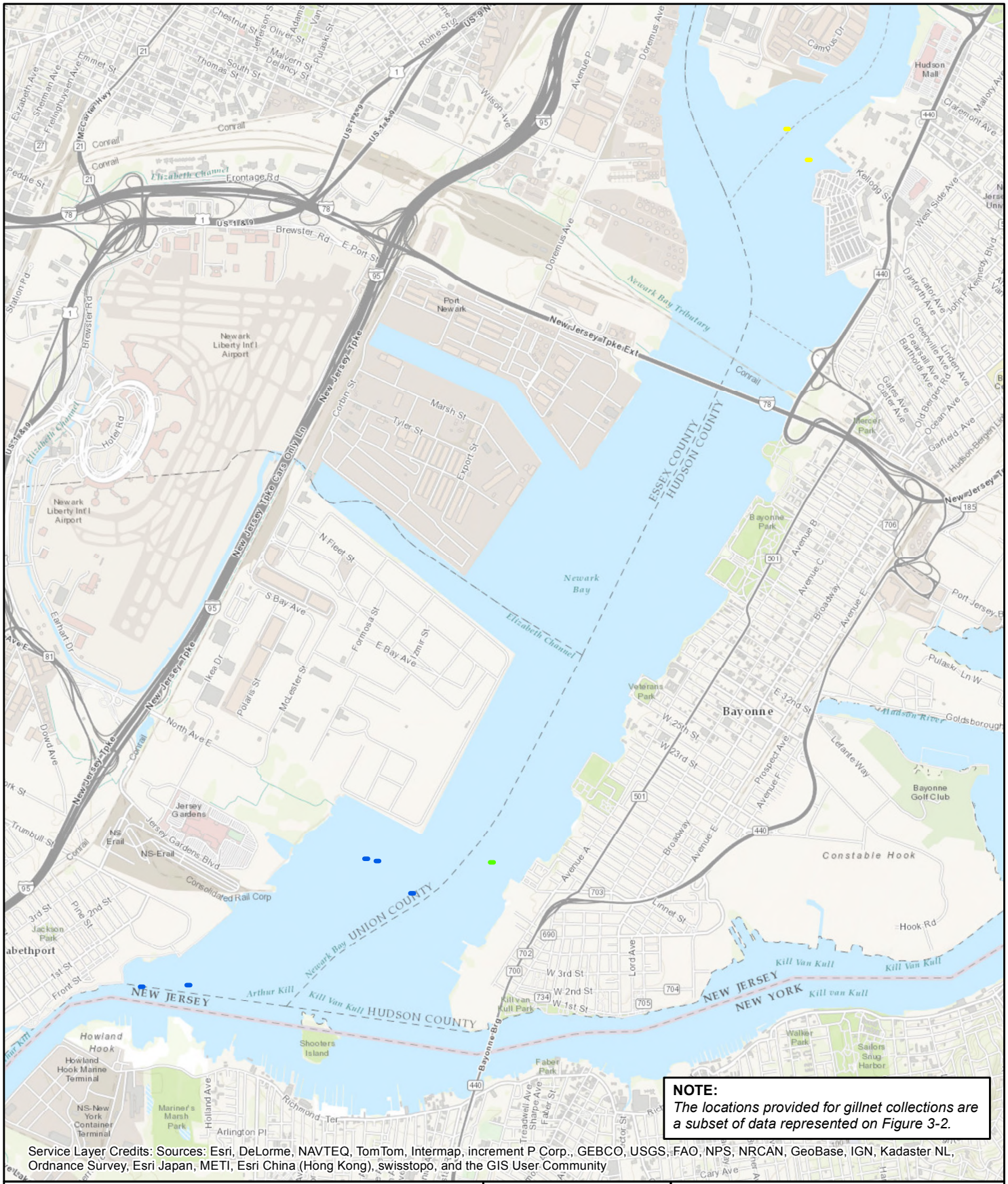
Figure 3-5.
Trawl collection locations for target fish species in Newark Bay, 6 through 24 October 2014.

Date:	Revised:
2/22/2017	

400 Old Reading Pike Bldg A Suite 101 Stowe, PA 19464

PREPARED FOR: BWL PROJECT: 23489.007 PREPARED BY: SAS

Path: C:\Projects\TierraSolutions_NewarkBaySampling_23489\MXD\2014_Fish_Trawl_022217.mxd



NOTE:
The locations provided for gillnet collections are a subset of data represented on Figure 3-2.

Service Layer Credits: Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, and the GIS User Community

N

Bay Zone

- North - gillnet collection location
- Central - gillnet collection location
- South - gillnet collection location

0 0.375 0.75 1.5 Miles

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Figure 3-6.
Gillnet collection locations for target fish species in Newark Bay, 6 through 24 October 2014.

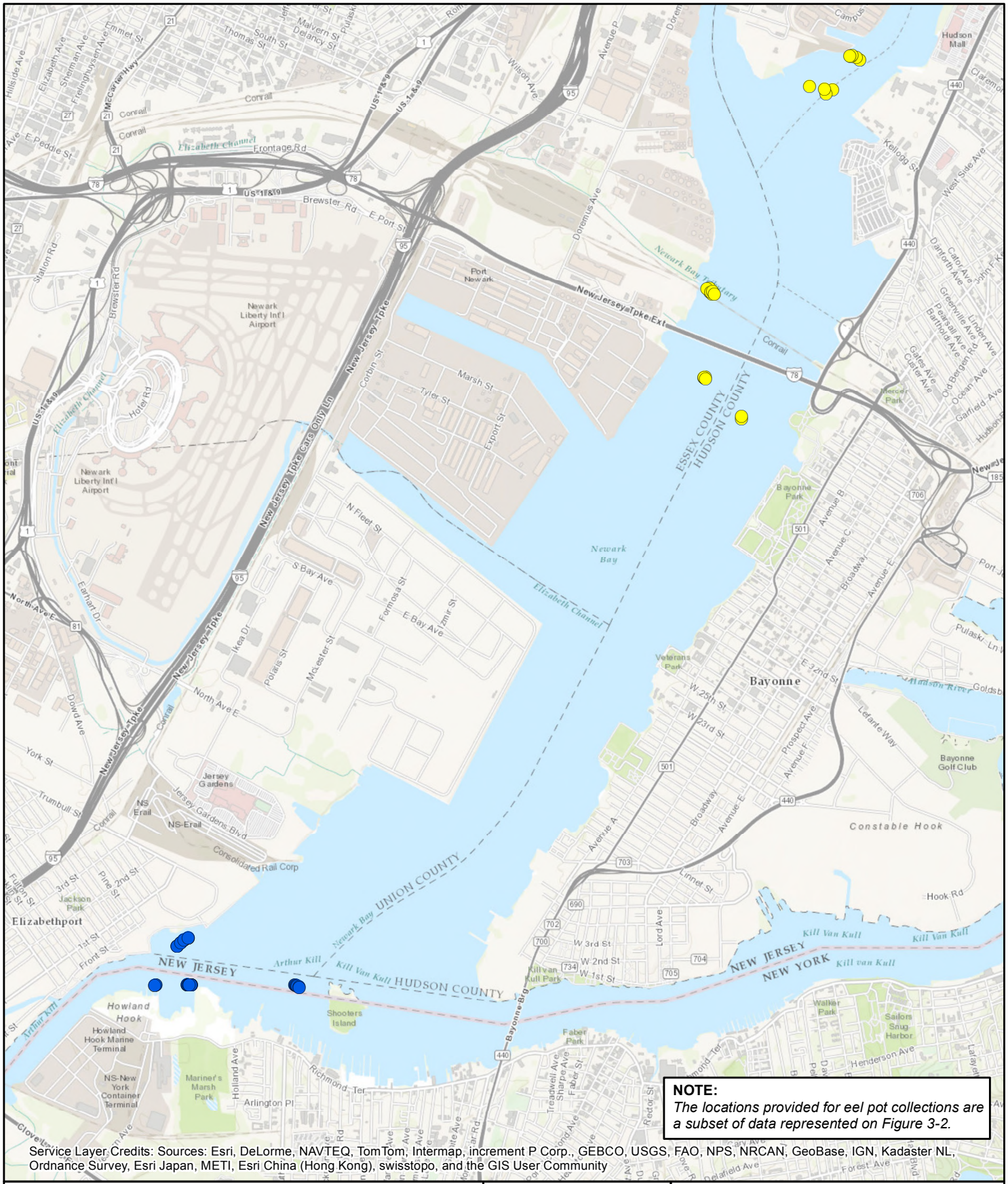
Date: 2/24/2017

Revised:

400 Old Reading Pike Bldg A Suite 101 Stowe, PA 19464

PREPARED FOR: BWL PROJECT: 23489.007 PREPARED BY: SAS

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NOTE:
The locations provided for eel pot collections are a subset of data represented on Figure 3-2.

Service Layer Credits: Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, and the GIS User Community

N

Bay Zone

- North - Eel pot collection location
- South - Eel pot collection location

0 0.375 0.75 1.5 Miles

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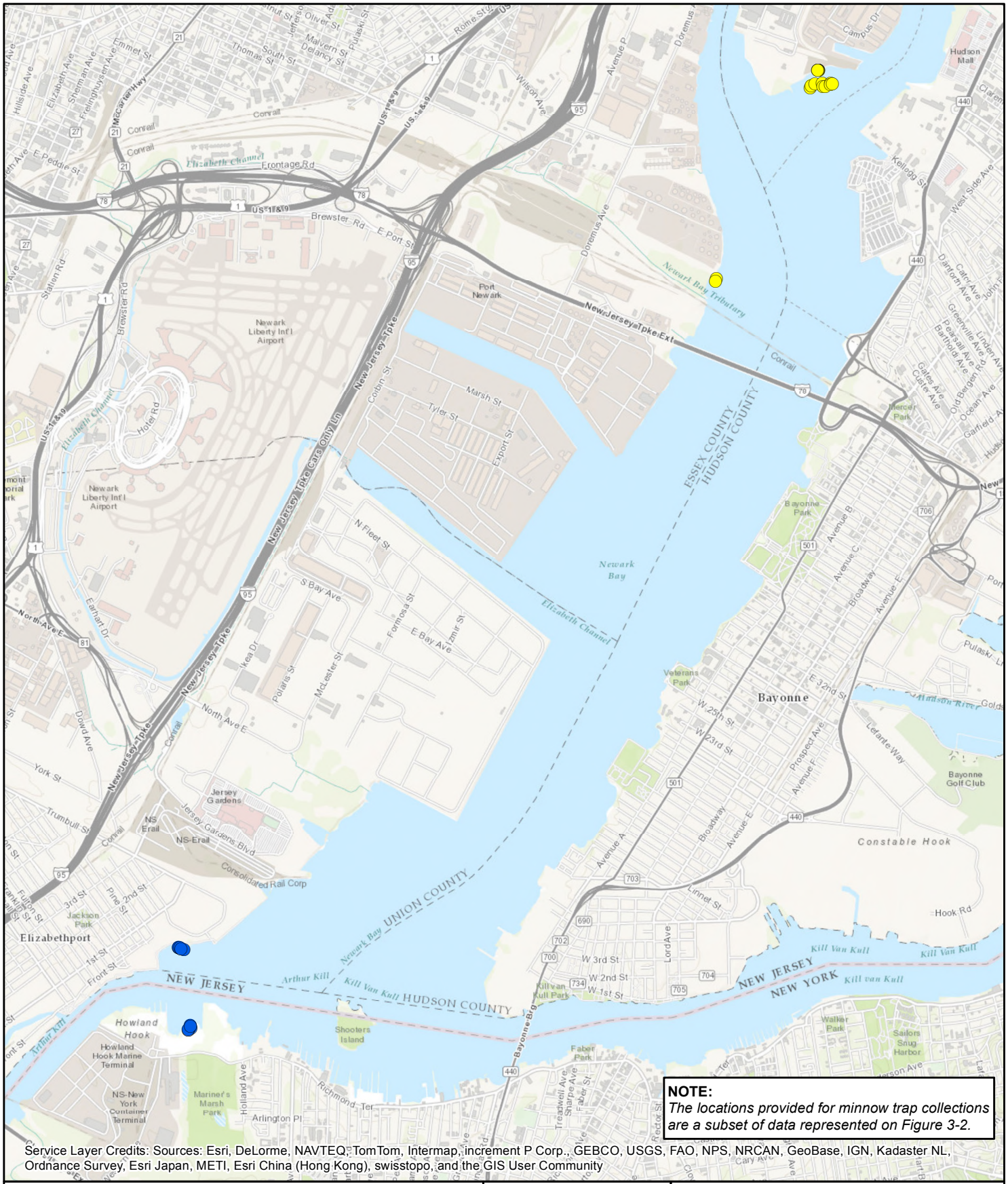
Figure 3-7.
Eel pot collection locations for target fish species in Newark Bay, 6 through 24 October 2014.

Date:	Revised:
2/22/2017	

400 Old Reading Pike Bldg A Suite 101 Stowe, PA 19464

PREPARED FOR: BWL PROJECT: 23489.007 PREPARED BY: SAS

Path: C:\Projects\TierraSolutions_NewarkBaySampling_23489\MXD\2014_Fish_EelPot_022217.mxd



NOTE:
The locations provided for minnow trap collections are a subset of data represented on Figure 3-2.

Service Layer Credits: Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, and the GIS User Community

N

Bay Zone

- North - minnow trap collection location
- South - minnow trap collection location

0 0.375 0.75 1.5 Miles

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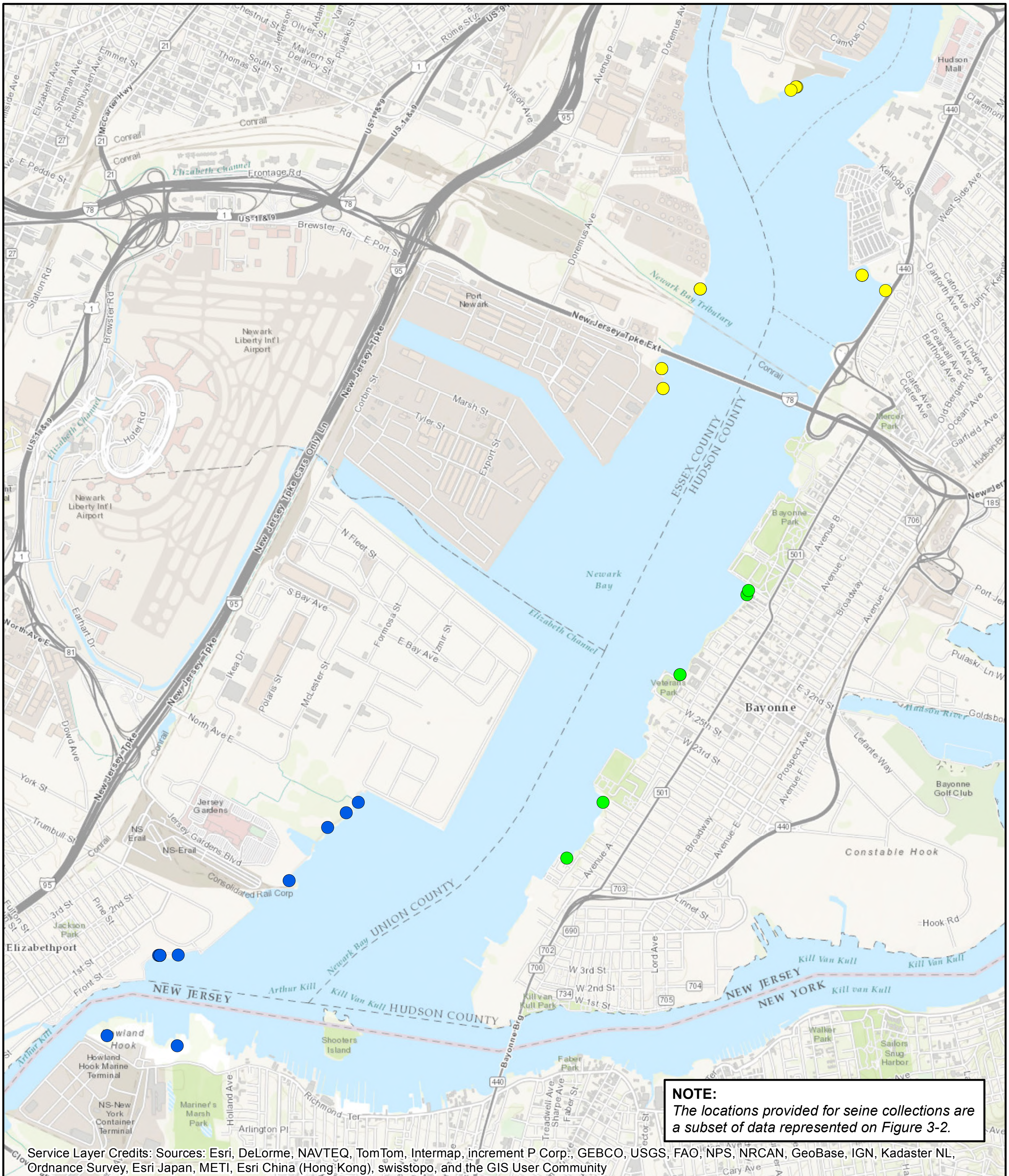
Figure 3-8.
Minnow trap collection locations for target fish species in Newark Bay, 6 through 24 October 2014.

Date:	Revised:
2/22/2017	

400 Old Reading Pike Bldg A Suite 101 Stowe, PA 19464

PREPARED FOR: BWL PROJECT: 23489.007 PREPARED BY: SAS

Path: C:\Projects\TierraSolutions_NewarkBaySampling_23489\MXD\2014_Fish_MinnowTrap_022217.mxd



NOTE:
The locations provided for seine collections are a subset of data represented on Figure 3-2.

Service Layer Credits: Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, and the GIS User Community

N

Bay Zone

- North - seine collection location
- Central - seine collection location
- South - seine collection location

0 0.375 0.75 1.5 Miles

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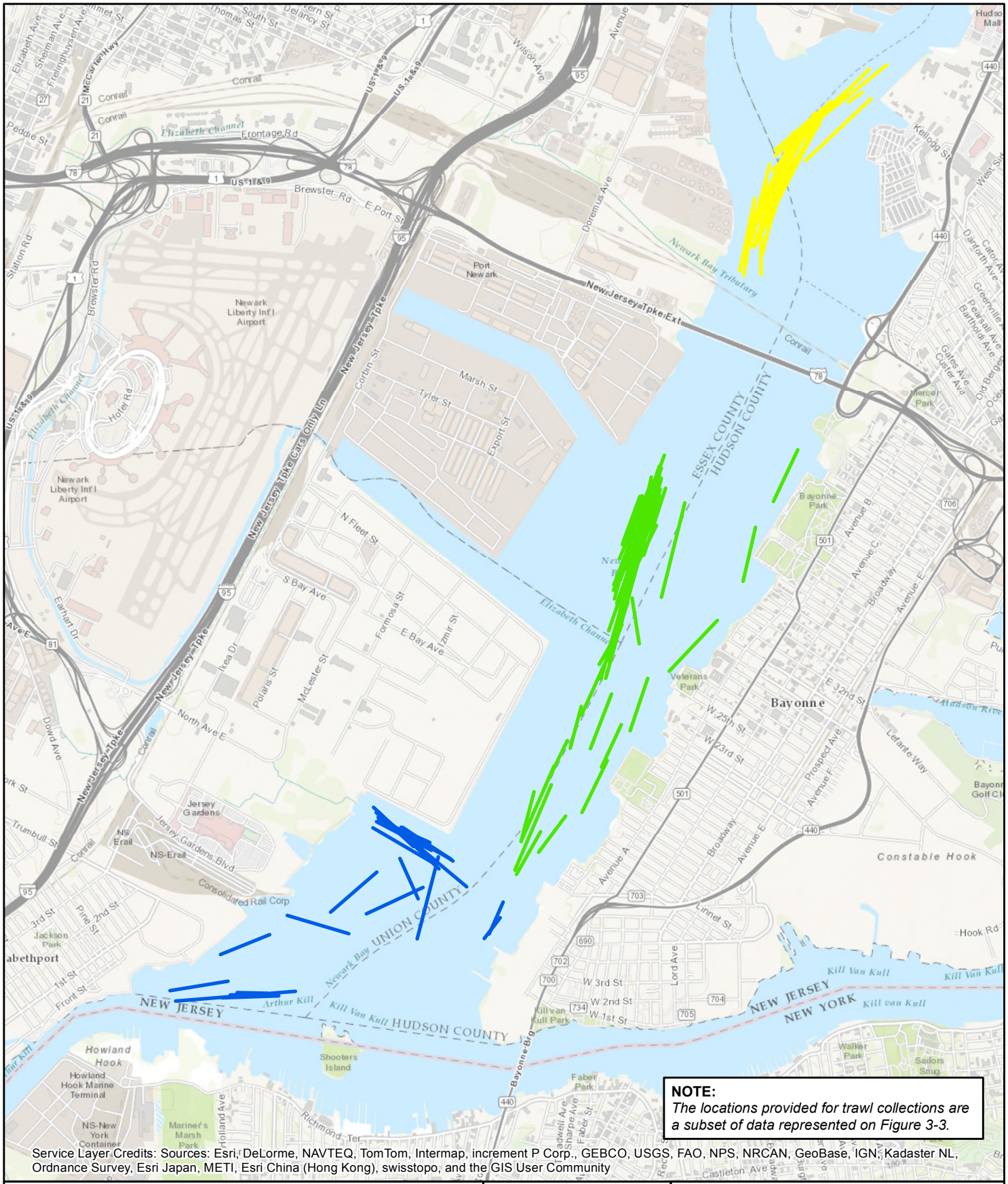
Figure 3-9.
Seine collection locations for target fish species in Newark Bay, 6 through 24 October 2014.

Date: 2/22/2017 | Revised:

400 Old Reading Pike Bldg A Suite 101 Stowe, PA 19464

PREPARED FOR: BWL PROJECT: 23489.007 PREPARED BY: SAS

Path: C:\Projects\TierraSolutions_NewarkBaySampling_23489\MXD\2014_Fish_Seine_022217.mxd

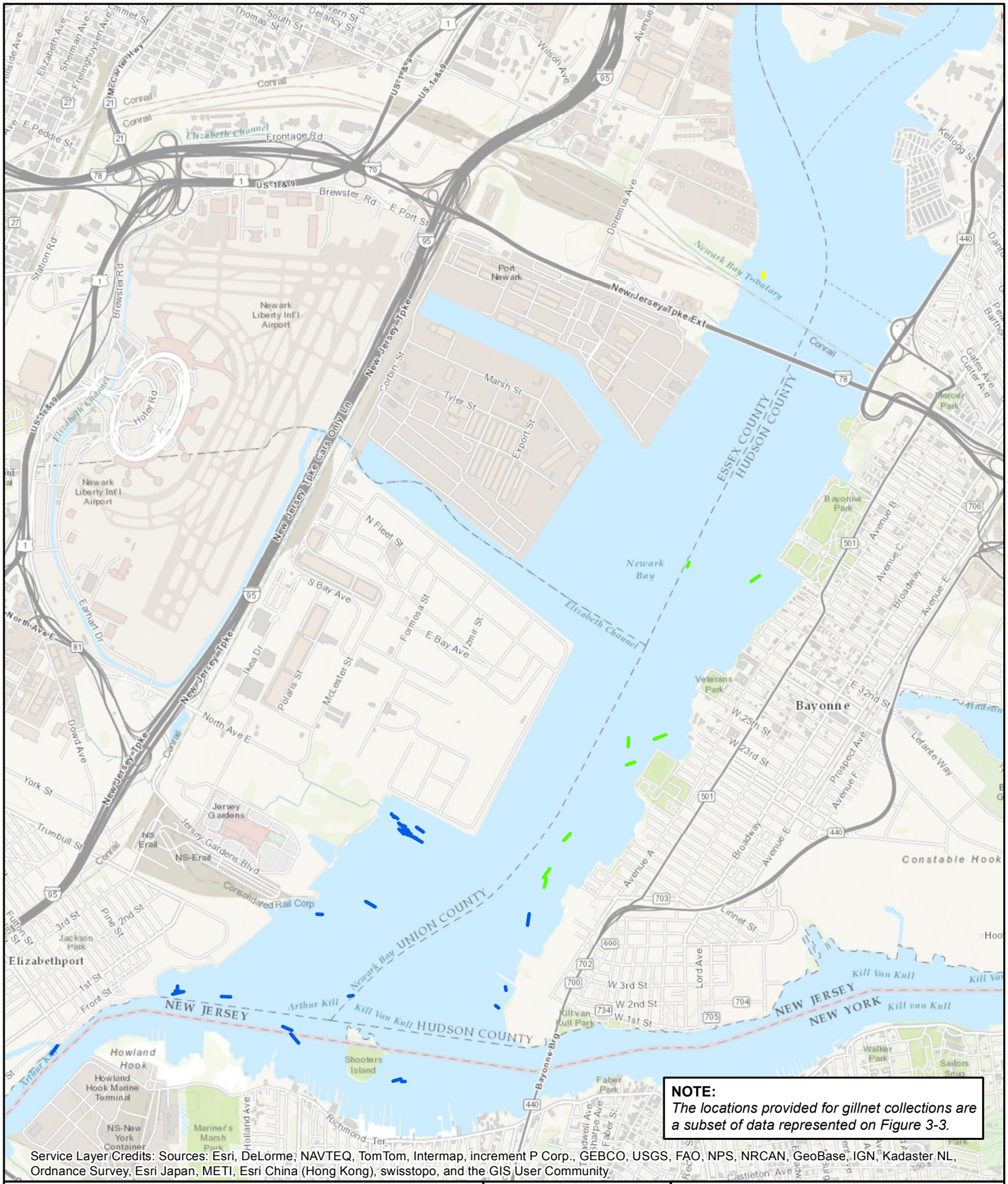


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Figure 3-10.
Trawl collection locations for target fish species in Newark Bay, 30 March through 5 August 2015.

Date:	Revised:	400 Old Reading Pike Bldg A Suite 101 Stowe, PA 19464
2/22/2017		PREPARED FOR: BWL PROJECT: 23489.007 PREPARED BY: SAS

Path: C:\Projects\TierraSolutions_NewarkBaySampling_23489\MXD\2015_Fish_Trawl_022217.mxd



NOTE:
The locations provided for gillnet collections are a subset of data represented on Figure 3-3.

Service Layer Credits: Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, and the GIS User Community.

N

Bay Zone

- North - gillnet collection locations
- Central - gillnet collection locations
- South - gillnet collection locations

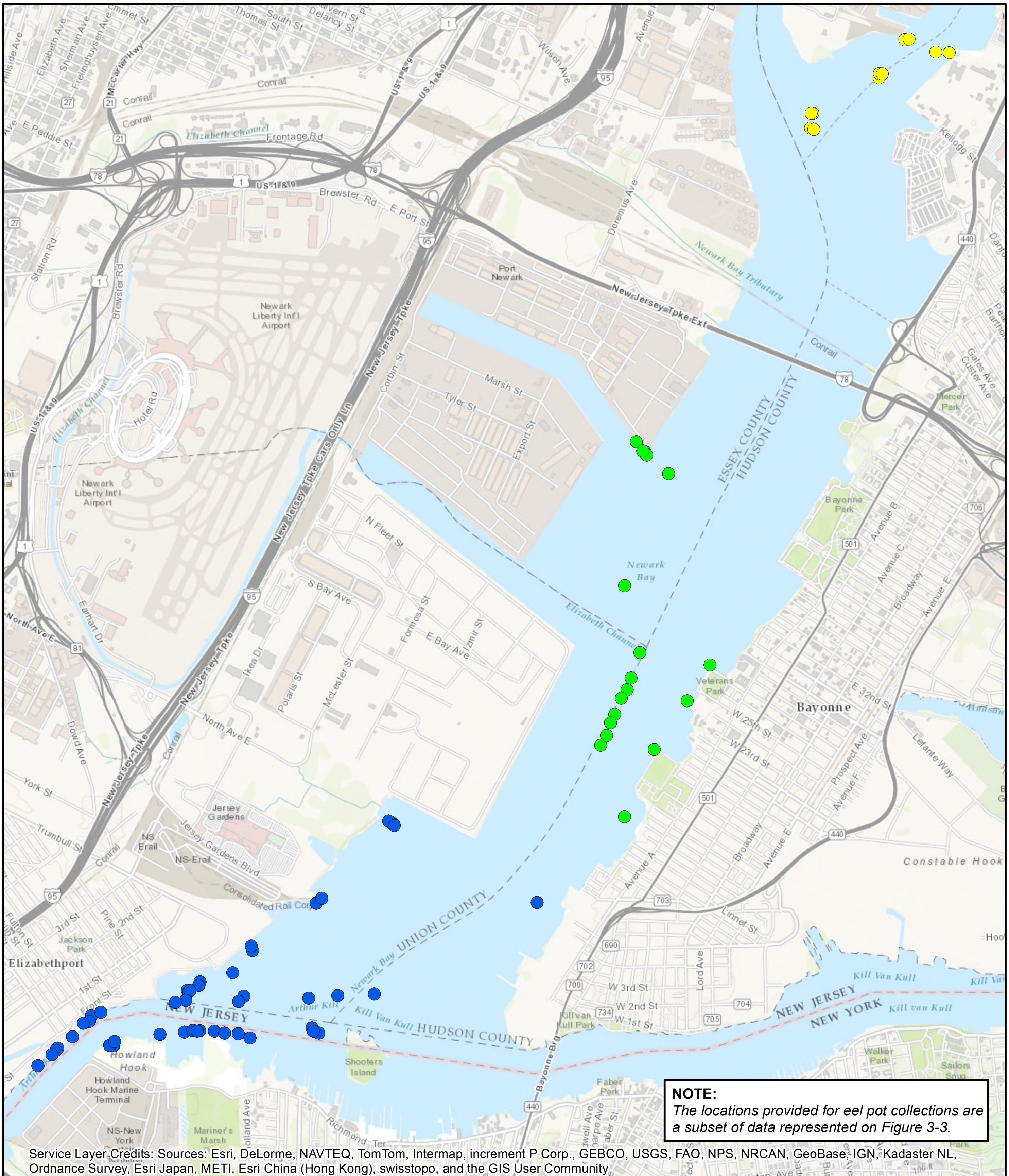
0 0.375 0.75 1.5 Miles

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Figure 3-11.
Gillnet collection locations for target fish species in Newark Bay, 30 March through 5 August 2015.

Date:	Revised:	400 Old Reading Pike Bldg A Suite 101 Stowe, PA 19464
2/22/2017		PREPARED FOR: BWL PROJECT: 23489.007 PREPARED BY: SAS

Path: C:\Projects\TierraSolutions_NewarkBaySampling_23489\MXD\2015_Fish_GillNet_022217.mxd



NOTE:
The locations provided for eel pot collections are a subset of data represented on Figure 3-3.

Service Layer Credits: Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, and the GIS User Community

N

Bay Zone

- North - eel pot collection location
- Central - eel pot collection location
- South - eel pot collection location

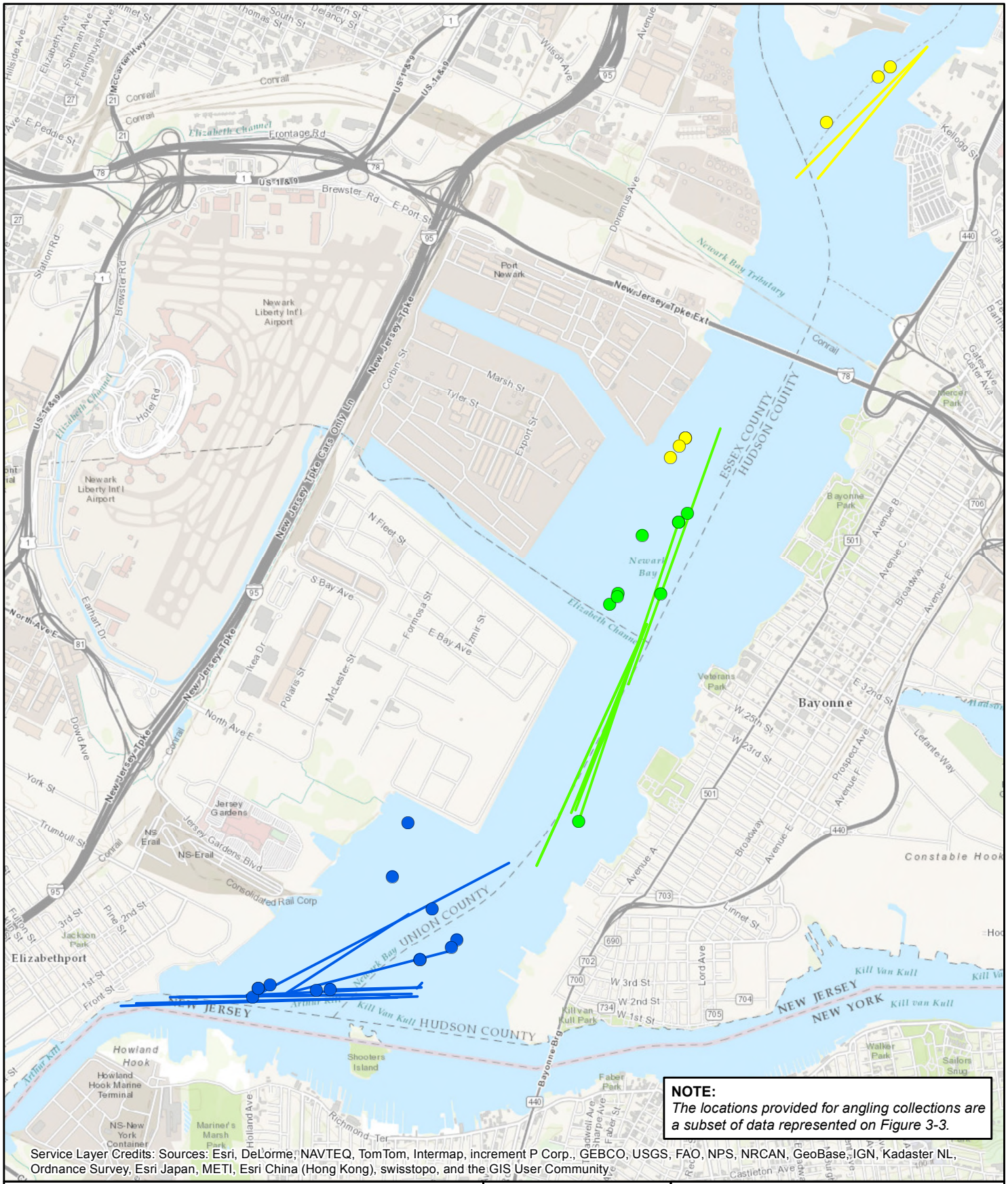
0 0.375 0.75 1.5 Miles

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Figure 3-12.
Eel pot collection locations for target fish species in Newark Bay, 30 March through 5 August 2015.

Date: 2/22/2017	Revised:	400 Old Reading Pike Bldg A Suite 101 Stowe, PA 19464
		PREPARED FOR: BWL PROJECT: 23489.007 PREPARED BY: SAS

Path: C:\Projects\TierraSolutions_NewarkBaySampling_23489\MXD\2015_Fish_EelPot_022217.mxd



NOTE:
The locations provided for angling collections are a subset of data represented on Figure 3-3.

Service Layer Credits: Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, and the GIS User Community

N

Angling-Drift Bay Zone

- North - angling collection location
- Central - angling collection location
- South - angling collection location

Angling-Troll Bay Zone

- North - angling collection location
- Central - angling collection location
- South - angling collection location

0 0.375 0.75 1.5 Miles

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Date: 2/22/2017

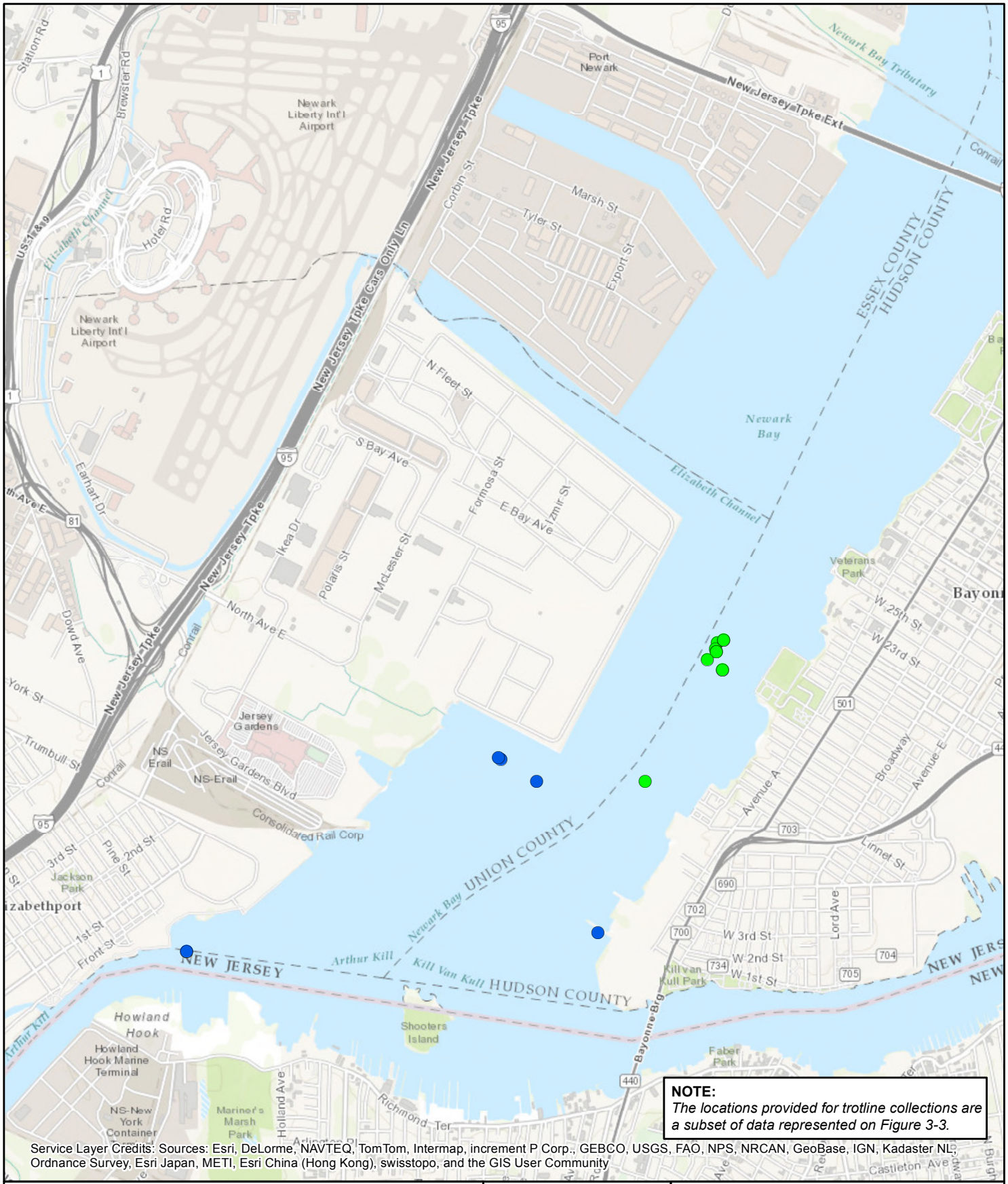
Revised:

Figure 3-13.
Angling collection locations for target fish species in Newark Bay, 30 March through 5 August 2015.

400 Old Reading Pike Bldg A Suite 101 Stowe, PA 19464

PREPARED FOR: BWL PROJECT: 23489.007 PREPARED BY: SAS

Path: C:\Projects\TierraSolutions_NewarkBaySampling_23489\MXD\2015_Fish_Angling_022217.mxd



N

Bay Zone

- Central - trotline collection location
- South - trotline collection location

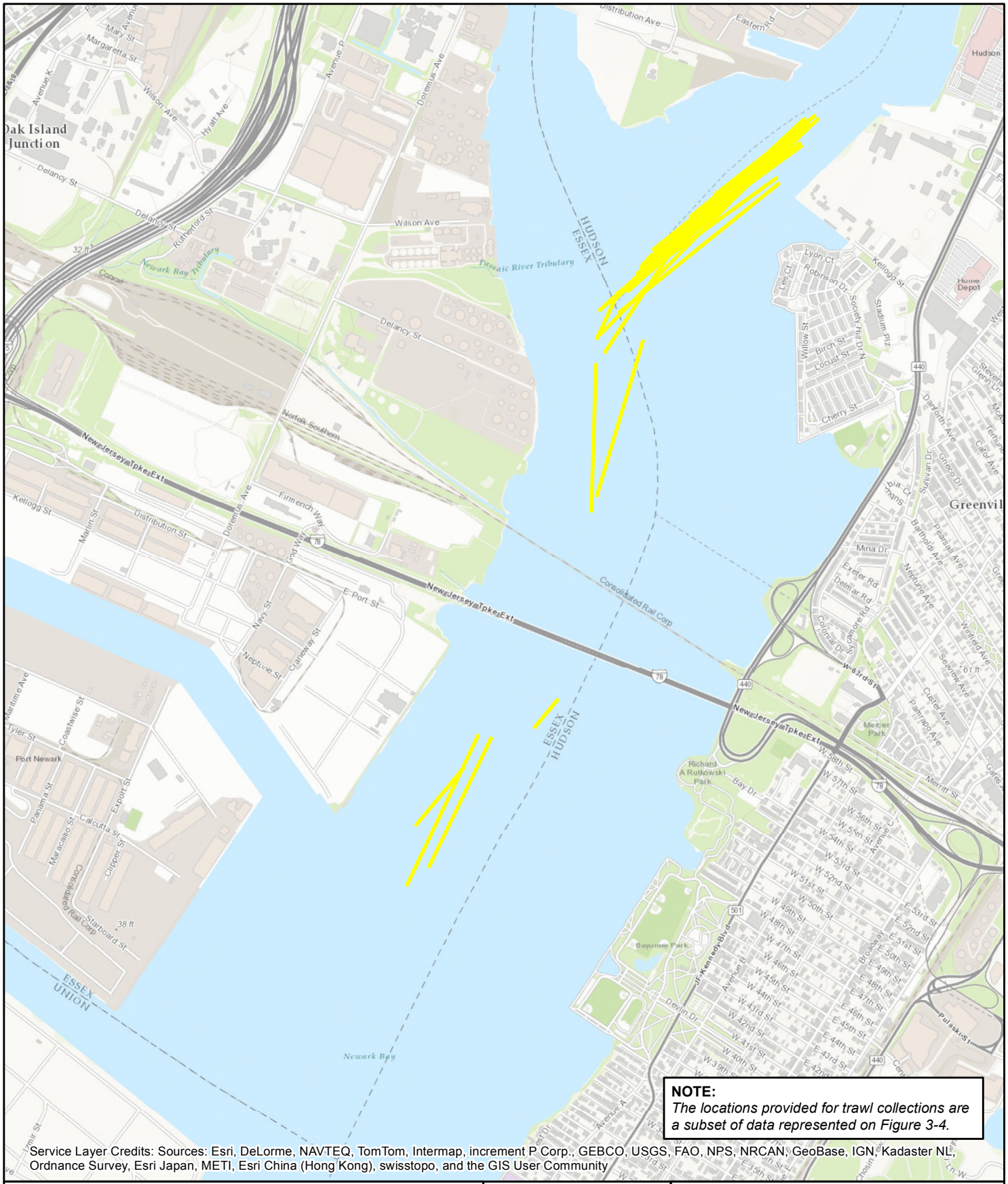
0 0.3 0.6 1.2 Miles

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Figure 3-14.
Trotline collection locations for target fish species in Newark Bay, 30 March through 5 August 2015.

Date:	Revised:	400 Old Reading Pike Bldg A Suite 101 Stowe, PA 19464
2/22/2017		PREPARED FOR: BWL PROJECT: 23489.007 PREPARED BY: SAS

Path: C:\Projects\TierraSolutions_NewarkBaySampling_23489\MXD\2015_Fish_Trotline_022217.mxd



NOTE:
The locations provided for trawl collections are a subset of data represented on Figure 3-4.

Service Layer Credits: Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, and the GIS User Community

N

Bay Zone

North - trawl collection location

0 0.2 0.4 0.8 Miles

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Environmental Consultants

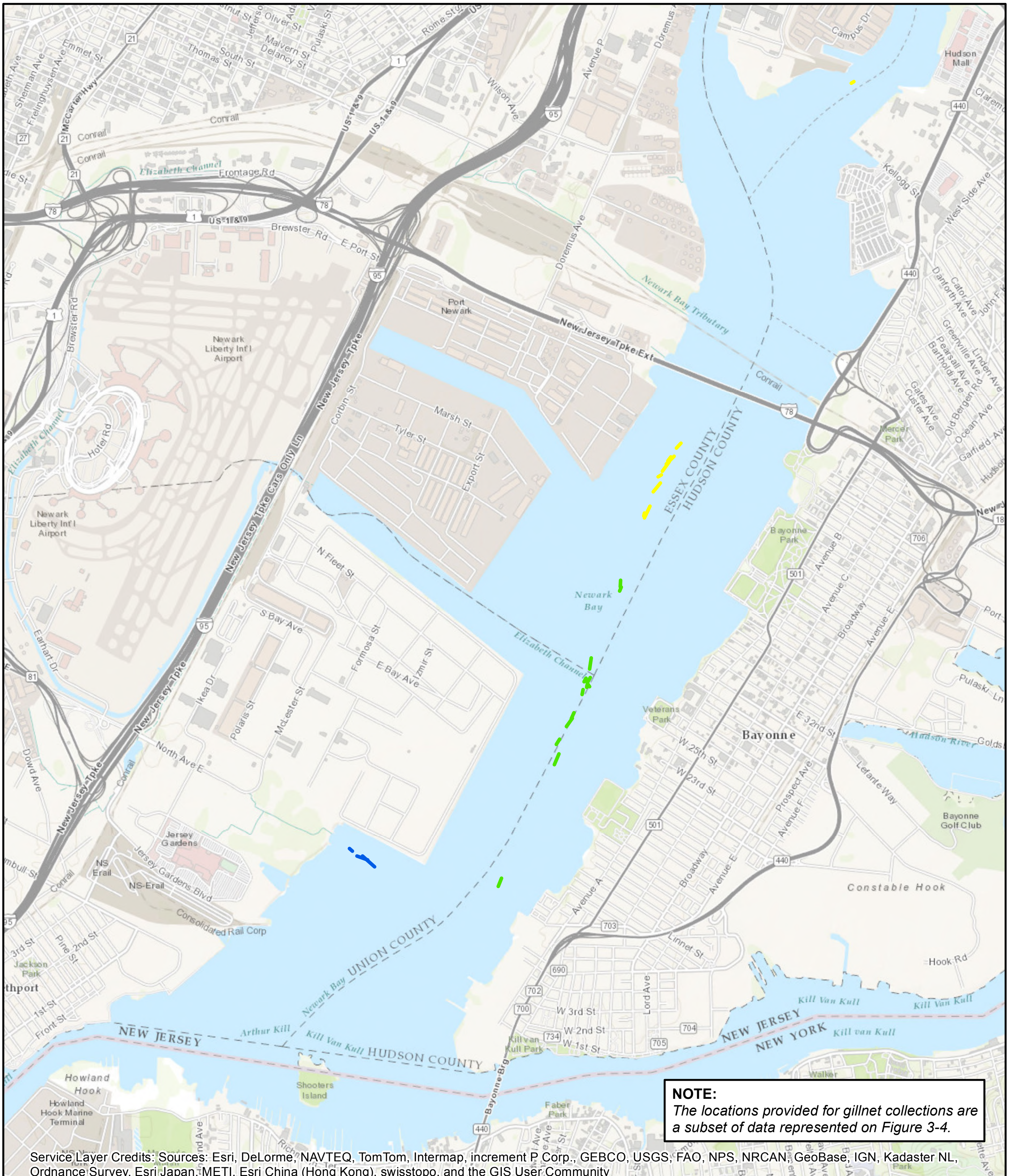
Figure 3-15.
Trawl collection locations for target fish species in Newark Bay, 14 through 24 March 2016.

Date:	Revised:
2/22/2017	

400 Old Reading Pike Bldg A Suite 101 Stowe, PA 19464

PREPARED FOR: BWL PROJECT: 23489.007 PREPARED BY: SAS

Path: C:\Projects\TierraSolutions_NewarkBaySampling_23489\MXD\2016_Spring_Fish_Trawl_022217.mxd



N

Bay Zone

- North - gillnet collection location
- Central - gillnet collection location
- South - gillnet collection location

0 0.375 0.75 1.5 Miles

NORMANDEAU ASSOCIATES
Environmental Consultants

Figure 3-16.
Gillnet collection locations for target fish species in Newark Bay, 14 through 24 March 2016.

Date: 2/24/2017	Revised:	400 Old Reading Pike Bldg A Suite 101 Stowe, PA 19464
		PREPARED FOR: BWL PROJECT: 23489.007 PREPARED BY: SAS

Path: C:\Projects\TierraSolutions_NewarkBaySampling_23489\MXD\2016_Spring_Fish_Gillnet_022417.mxd



N

LEGEND

Atlantic sturgeon location

(NJ State Plane, NAD83, Survey Feet)

0 0.25 0.5 1 Miles

NORMANDEAU ASSOCIATES
Environmental Consultants

Figure 3-17.
Location of gillnet collection of Atlantic sturgeon in Newark Bay, 17 March 2016.

Date: 6/9/2016	Revised:

400 Old Reading Pike Bldg A Suite 101 Stowe, PA 19464

PREPARED FOR: WSE PROJECT: 23489.007 PREPARED BY: SAS

Path: J:\Projects\TierraSolutions_NewarkBaySampling_23489\MXD\2016_Atlantic_Sturgeon_060916.mxd



Figure 3-18. Atlantic Sturgeon (total length = 737 mm, weight = 1,650 g) collected in Newark Bay, 17 March 2016.

TABLES

Table 1-1. Probable seasonal occurrence and minimum length requirements for target fish species in Newark Bay.

Species	Required Minimum Length mm	Required Minimum Length inch	Season [1]
Forage Species			
Bay Anchovy	None		Spring/Fall
Atlantic Silverside	None		year round
Atlantic Menhaden	None		Spring/Fall
Mummichog	None		year round
Striped Killifish	None		year round
Benthic/Demersal			
Hake species	None		year round
Summer Flounder	None		Summer
Winter Flounder	None		Winter/Spring
Windowpane Flounder	None		Spring/Summer/Fall
Sport Fish Species			
American Eel	229	9	year round
Bluefish	None		Summer/Fall
Striped Bass [3]	711	28	Spring/early Summer
Winter Flounder	305	12	Winter/Spring
Summer Flounder [4]	457	18	Summer
White Perch	None [2]		Winter/Spring
Weakfish	330	13	Summer/Fall
Pelagic Predatory Species			
White Perch	None [2]		Winter/Spring
American Eel	None		year round

[1] Seasonal occurrence based on Essential Fish Habitat Assessment Report For Newark Bay (USACOE), understanding of basic life history of species, and length of fish required for tissue sample

[2] Adult fish were targeted because fish size was directly related to weight of fillet and liver

[3] Legal harvest length of striped bass from Newark Bay is 28 inches; however, USEPA approved the collection of striped bass that were 18 inches or greater in length

[4] Legal harvest length of summer flounder in Newark Bay is 18 inches; however, USEPA approved the collection of summer flounder that were 15 inches or greater in length. Tissue samples of summer flounder less than 15 inches were also processed for tissue in the benthic/demersal fish category for ecological risk assessment

Table 2-1. Descriptive statistics for length and weight of softshell clam (*Mya arenaria*) collected in Newark Bay for tissue samples during September and October 2014.

		Shell Length (mm) [1]				Weight (g) [2]			
Intertidal Area	Total Number	Mean	Standard Deviation	Minimum	Maximum	Mean	Standard Deviation	Minimum	Maximum
122A	86	42.6	4.0	38.1	68.6	8.0	3.9	3.7	37.5
122B	88	42.0	3.4	38.0	56.3	7.8	2.0	3.7	15.2
122C	82	42.0	2.9	38.0	54.9	8.0	2.0	4.0	18.0
123A	66	51.6	6.3	38.4	64.8	15.5	7.0	5.8	37.6
123B	70	50.9	5.5	39.0	66.8	16.4	5.9	5.9	36.0
124	55	47.8	6.7	39.2	66.9	17.2	7.1	7.4	39.7
125	62	48.7	5.4	38.5	63.0	18.0	6.1	5.7	34.6
127A	52	58.4	7.4	39.7	70.3	22.8	9.9	8.1	45.5
127B	83	47.7	6.9	38.3	75.2	15.5	10.7	6.2	64.6
129 [ab]	44	48.6	4.7	39.0	60.0	15.2	4.8	7.7	32.5
130	44	52.9	12.1	38.7	77.0	20.4	15.9	6.5	59.3
131A	85	52.2	11.4	38.0	78.8	20.1	13.9	5.3	58.5
131B	67	52.3	10.4	38.8	92.0	21.5	17.5	6.9	99.0
132A	51	48.9	7.9	38.0	65.0	13.5	7.5	3.6	33.1
132B	75	53.2	7.6	38.7	73.0	15.6	7.0	4.4	33.8
133	46	52.4	8.7	40.6	70.8	18.2	11.1	6.0	57.4
134	59	51.8	8.8	39.0	75.4	20.7	12.7	5.7	61.9
135	43	53.1	6.5	41.8	69.7	18.3	7.1	7.1	39.1
Overall	1159	49.3	8.5	38.0	92.0	15.7	10.4	3.6	99.0

[1] Measurement of shell from anterior to posterior

[2] Whole organism wet weight

[a] One clam with shell length 31 mm was collected but not included in the tissue composite

[b] Softshell clams were collected on separate dates (September 8 and 25)

Table 2-2. Descriptive statistics for length and weight of blue crab (*Callinectes sapidus*) collected in Newark Bay for intertidal location tissue samples during September and October 2014.

		Carapace width (mm) [1]				Weight (g) [2]				
Intertidal Area	Gender	Mean	Minimum	Maximum	Standard Deviation	Mean	Minimum	Maximum	Standard Deviation	Total Number [3]
122	Female	148.0	139.0	165.0	8.5	138.9	114.0	174.0	22.6	8
122	Male	143.6	123.0	163.0	12.9	191.9	112.0	312.0	66.9	16
123	Female	149.0	125.0	165.0	15.4	156.6	112.0	190.0	33.8	5
123	Male	152.9	133.0	186.0	15.0	231.4	148.0	368.0	56.6	14
124	Female	139.0	124.0	154.0	11.0	136.3	88.0	198.0	45.1	7
124	Male	148.4	128.0	173.0	14.2	209.6	100.0	320.0	67.2	16
125	Female	140.5	120.0	149.0	10.4	128.3	84.0	165.0	27.7	6
125	Male	137.1	119.0	153.0	10.7	157.2	80.0	234.0	50.8	18
126	Female	131.5	131.0	132.0	0.7	95.0	90.0	100.0	7.1	2
126	Male	135.4	115.0	165.0	15.5	161.1	88.0	286.0	58.4	21
127	Female	140.0	134.0	146.0	8.5	120.5	90.0	151.0	43.1	2
127	Male	136.1	120.0	173.0	13.4	171.8	120.0	310.0	46.0	22
129	Female	138.5	127.0	148.0	8.7	113.0	105.0	121.0	8.7	4
129	Male	137.0	114.0	173.0	14.7	162.2	82.0	278.0	51.1	25
130	Female	138.4	125.0	155.0	9.0	113.9	90.0	150.0	16.0	17
130 [a]	Male	138.3	116.0	161.0	13.7	163.6	102.0	258.0	42.7	22
131 [a]	Female	142.3	120.0	165.0	12.1	115.1	88.0	150.0	16.4	11
131	Male	140.0	115.0	166.0	13.2	172.2	95.0	270.0	48.3	16
132	Female	137.3	122.0	151.0	9.2	113.8	72.0	142.0	21.3	12
132	Male	134.4	120.0	160.0	11.1	131.6	90.0	198.0	29.2	16
133	Female	150.1	135.0	168.0	12.4	152.4	123.0	190.0	23.5	10
133	Male	159.4	135.0	198.0	19.1	252.4	169.0	385.0	79.1	8
134	Female	136.5	125.0	150.0	6.4	128.4	90.0	160.0	18.6	16
134	Male	135.5	119.0	150.0	8.7	156.7	70.0	200.0	36.5	16
Overall										
Female		140.9	120.0	168.0	10.6	126.5	72.0	198.0	26.6	100
Male		140.4	114.0	198.0	14.7	174.7	70.0	385.0	58.5	210
Intertidal Areas [4]		140.5	114.0	198.0	13.5	159.2	70.0	385.0	55.2	310

[1] Measurement of carapace from point to point

[2] Whole organism wet weight

[3] Additional individuals were collected but not included in the tissue samples

[4] Includes both male and female blue crab

[a] Blue crab collected at Locations 130 and 131 were collected on separate dates (Location 130: September 18 and 24, Location 131: September 11 and 17)

Table 3-1. Descriptive statistics for length and weight of blue crab (*Callinectes sapidus*) collected in Newark Bay for bay zone tissue samples during October 2014.

			Carapace width (mm) [1]				Weight (g) [2]			
Bay Zone	Gender	Total Number	Mean	Minimum	Maximum	Standard Deviation	Mean	Minimum	Maximum	Standard Deviation
Central	Female	31	140.5	118	164	13.3	136.3	72	206	36.0
Central	Male	118	138.1	117	170	12.5	162.6	78	277	45.2
North	Female	44	140.2	120	165	11.6	121.2	60	170	26.9
North	Male	123	142.3	118	170	12.6	166.6	88	270	44.9
South	Female	25	136.3	121	152	9.5	119.5	82	168	22.8
South	Male	140	134.8	118	174	12.6	152.5	80	310	43.6
Overall										
Female		100	139.3	118	165	11.7	125.5	60	206	29.8
Male		381	138.2	117	174	12.9	160.2	78	310	44.8
Central		149	138.6	117	170	12.7	157.1	72	277	44.6
North		167	141.7	118	170	12.3	154.7	60	270	45.5
South		165	135.0	118	174	12.2	147.5	80	310	42.8
All Zones		481	138.5	117	174	12.7	153.0	60	310	44.4

[1] Measurement of carapace from point to point

[2] Whole organism wet weight

Table 3-2. List of common and scientific names of all fish and shellfish species collected during field activities conducted in Newark Bay, 6 October 2014 through 24 March 2016.

Family	Common Name	Scientific Name
	Fish Species	
Rajidae		
	Little Skate	*Leucoraja erinacea*
Acipenseridae		
	Atlantic Sturgeon	*Acipenser oxyrhynchus*
Anguillidae		
	American Eel	*Anguilla rostrata*
Clupeidae		
	Alewife	*Alosa pseudoharengus*
	American Shad	*Alosa sapidissima*
	Gizzard Shad	*Dorosoma cepedianum*
	Atlantic Menhaden	*Brevoortia tyrannus*
	Blueback Herring	*Alosa aestivalis*
Engraulidae		
	Bay Anchovy	*Anchoa mitchilli*
	Striped Anchovy	*Anchoa hepsetus*
Gadidae		
	Atlantic Tomcod	*Microgadus tomcod*
Batrachoididae		
	Oyster Toadfish	*Opsanus tau*
Fundulidae		
	Striped Killifish	*Fundulus majalis*
	Mummichog	*Fundulus heteroclitus*
Atherinidae		
	Atlantic Silverside	*Menidia menidia*
Syngnathidae		
	Northern Pipefish	*Syngnathus fuscus*
Triglidae		
	Striped Searobin	*Prionotus evolans*
Cottidae		
	Longhorn Sculpin	*Myoxocephalus octodecemspinosus*
Moronidae		
	Striped Bass	*Morone saxatilis*
	White Perch	*Morone americana*

Table 3-2. List of common and scientific names of all fish and shellfish species collected during field activities conducted in Newark Bay, 6 October 2014 through 24 March 2016.

Family	Common Name	Scientific Name
Serranidae		
	Black Seabass	*Centropristis striata*
Pomatomidae		
	Bluefish	*Pomatomus saltatrix*
Carangidae		
	Atlantic Moonfish	*Selene setapinnis*
	Lookdown	*Selene vomer*
Sparidae		
	Scup	*Stenotomus chrysops*
Sciaenidae		
	Northern Kingfish	*Menticirrhus saxatilis*
	Silver Perch	*Bairdiella chrysoura*
	Weakfish	*Cynoscion regalis*
	Atlantic Croaker	*Micropogonias undulatus*
Mugilidae		
	Striped Mullet	*Mugil cephalus*
	White Mullet	*Mugil curema*
Labridae		
	Cunner	*Tautogolabrus adspersus*
	Tautog	*Tautoga onitis*
Gobiidae		
	Naked Goby	*Gobiosoma bosc*
Stromateidae		
	Butterfish	*Peprilus triacanthus*
Paralichthyidae		
	Smallmouth Flounder	*Etropus microstomus*
	Summer Flounder	*Paralichthys dentatus*
Scophthalmidae		
	Windowpane	*Scophthalmus aquosus*
Pleuronectidae		
	Winter Flounder	*Pseudopleuronectes americanus*
Phycidae		
	Spotted Hake	*Urophycis regia*
	Red Hake	*Urophycis chuss*
Achiridae		
	Hogchoker	*Trinectes maculatus*
Tetraodontidae		
	Northern Pufferfish	*Sphoeroides maculatus*

Table 3-2. List of common and scientific names of all fish and shellfish species collected during field activities conducted in Newark Bay, 6 October 2014 through 24 March 2016.

Family	Common Name	Scientific Name
	Shellfish Species	
Myidae		
	Softshell Clam	*Mya arenaria*
Epialtidae		
	Spider Crab	*Libinia emarginata*
Limulidae		
	Horseshoe Crab	*Limulus polyphemus*
Portunidae		
	Blue Crab	*Callinectes sapidus*
Panopeidae		
	Mud Crab	*Dyspanopeus sayi*

Table 3-3. Total numbers of all fish and shellfish species collected using various gear types in Newark Bay, 6 October 2014 through 24 March 2016.

Common Name	Crab Trap	Eel Pot	Gillnet	Minnow Trap	Seine	Trawl	Angling	Trotline	Percent of Individual Fish Caught for Program
Fish species									
Alewife			81			272			2.82
American Eel		79		1		3			0.66
American Shad			3			100			0.82
Atlantic Croaker						2			0.02
Atlantic Herring						1			0.01
Atlantic Menhaden			226		10	6			1.93
Atlantic Moonfish						6			0.05
Atlantic Silverside				12	1565	2			12.62
Atlantic Sturgeon			1						0.01
Atlantic Tomcod						9			0.07
Bay Anchovy						125			1.00
Black Seabass		50				3			0.42
Blueback Herring					14	57			0.57
Bluefish			1		80	1	20	2	0.83
Butterfish						2			0.02
Clupeidae						4			0.03
Cunner						4			0.03
Gizzard Shad			3			8			0.09
Gobiidae [3]					2				0.02
Hogchoker						12			0.10
Little Skate			2			1			0.02
Longhorn Sculpin						8			0.06
Lookdown						2			0.02
Mummichog				641	2480				24.94
Naked Goby						1			0.01
Northern Kingfish					5	7			0.10
Northern Pipefish					2	11			0.10
Northern Pufferfish						1			0.01
Oyster Toadfish	7	10				7			0.19
Red Hake						3			0.02
Scup		1				57			0.46
Silver Perch						3			0.02
Smallmouth Flounder						11			0.09
Spotted Hake			1			525			4.20
Striped Anchovy					1				0.01
Striped Bass	3	1	445		32	815	41		10.68
Striped Killifish					1137				9.09
Striped Mullet					1				0.01
Striped Searobin						18			0.14
Summer Flounder	1		2			39	278		2.56
Tautog			2						0.02
Weakfish						76			0.61
White Mullet					5				0.04
White Perch			448		4	2268			21.74
Windowpane Flounder			3			21			0.19
Winter Flounder			14		37	268			2.55
									Total
Total Species [1]	3	5	14	3	14	38	3	1	44
Total Number	11	141	1232	654	5375	4759	339	2	12513
Shellfish species									
Blue Crab [2]		2				118			91.60
Horseshoe Crab			5						3.82
Mud Crab						1			0.76
Spider Crab		4				1			3.82
									Total
Total Species	0	2	1	0	0	3	0	0	4
Total Number	0	6	5	0	0	120	0	0	131

[1] Excludes individuals identified to family

[2] Not included in tissue sample

[3] Not identified to species and therefore listed at the family level

Table 3-4. Total numbers of each target fish species collected using various gear types in Newark Bay, 6 through 24 October 2014.

Common Name	Crab Trap	Eel Pot	Gillnet	Minnow Trap	Seine	Trawl	Total [1]
American Eel		12		1		1	14
Atlantic Menhaden					4	4	8
Atlantic Silverside				12	788		800
Bay Anchovy						54	54
Bluefish					80	1	81
Mummichog				641	511		1152
Spotted Hake						1	1
Striped Killifish					909		909
Summer Flounder	1		2			7	10
White Perch					4		4
Windowpane Flounder						5	5
Winter Flounder					37	3	40
Total Number	1	12	2	653	2332	76	3078
Total Species	1	1	1	3	7	8	12

[1] All individuals processed for tissue samples

Table 3-5. Descriptive statistics for target fish species collected within the three Newark Bay sampling zones, 6 through 24 October 2014.

Common Name	Bay Zone	Total Number	Total Length (mm)			Weight (g)		
			Mean	Minimum	Maximum	Mean	Minimum	Maximum
American Eel	North	8	457.8	201	610	254.3	13.2	472
Atlantic Menhaden	North	4	361.3	342	388	429.0	330	550
Atlantic Silverside	North	211	99.5	55	130	5.0	0.7	11.2
Bay Anchovy	North	21	74.6	51	92	2.5	0.6	4.9
Bluefish	North	10	156.3	130	228	34.8	15.7	98.1
Mummichog [1]	North	3	81.7	62	101	8.0	3.3	13.2
Spotted Hake	North	1	258.0	258	258	158.0	158	158
Summer Flounder	North	4	218.8	155	340	143.6	28.9	428
White Perch	North	2	85.5	77	94	7.1	4.5	9.7
Windowpane Flounder	North	5	119.4	83	145	21.6	6.5	37
Winter Flounder	North	13	94.9	73	170	11.1	3.6	50.9
Atlantic Silverside	Central	356	90.0	52	118	4.1	0.6	8.8
Bay Anchovy	Central	33	61.8	37	87	1.6	0.2	4.6
Bluefish	Central	41	166.2	106	230	45.2	9.9	101.8
Summer Flounder	Central	3	216.0	183	251	96.9	50.7	145.8
White Perch	Central	2	98.5	88	109	13.4	8.3	18.5
Winter Flounder	Central	22	90.5	68	110	8.7	3.5	16.5
American Eel	South	6	551.2	382	755	376.5	104	832
Atlantic Menhaden	South	4	89.0	78	108	6.2	4.1	10.9
Atlantic SIlverside	South	233	86.5	48	113	3.4	0.5	8
Bluefish	South	30	153.9	105	233	34.0	7.7	111.4
Summer Flounder	South	3	262.0	190	349	185.2	60.7	370
Winter Flounder	South	5	82.8	68	100	6.5	3	10.8

[1] Used for pathology and not included in tissue sample

Table 3-6. Descriptive statistics for mummichog and striped killifish collected from intertidal areas of Newark Bay, 6 through 24 October 2014.

Common Name	Intertidal Area	Total Number	Total Length (mm)			Weight (g)		
			Mean	Minimum	Maximum	Mean	Minimum	Maximum
Striped Killifish	122A	62	86.4	44	134	9.0	0.9	33.6
Striped Killifish	122B	41	67.9	35	130	5.4	0.5	33
Striped Killifish	123A	33	81.7	60	101	6.7	2.3	12.8
Striped Killifish	123B	87	90.4	67	110	9.4	2.6	15.7
Striped Killifish	124	103	78.2	43	99	6.3	1	12.8
Striped Killifish	127A	51	73.0	48	99	5.4	1.2	13
Striped Killifish	127B	56	83.2	63	130	7.8	3	29.1
Striped Killifish	129	79	47.0	25	89	1.9	0.2	9.4
Striped Killifish	130	46	77.6	66	88	5.2	3.1	7.7
Striped Killifish	131A	105	71.4	45	90	4.0	0.8	8.1
Striped Killifish	131B	108	77.6	50	101	5.8	1.1	11.4
Striped Killifish	132A	17	95.8	70	121	12.2	3.9	25.6
Striped Killifish	132B	54	84.4	65	110	7.7	2.5	15.3
Striped Killifish	134	67	68.8	6.3	89	4.4	1.2	8.4
Mummichog	122C	303	52.3	31	90	2.0	0.2	10.9
Mummichog	129	549	49.4	32	102	1.6	0.1	13
Mummichog	130	34	41.6	33	58	0.7	0.1	1.9
Mummichog	131A	6	44.2	35	57	0.7	0.2	1.5
Mummichog	133	111	62.3	31	96	3.7	0.3	12.6
Mummichog	135	146	55.6	31	115	2.7	0.3	18.4

Table 3-7. Total numbers of each fish species collected as bycatch using various gear types in Newark Bay, 6 through 24 October 2014.

Common Name [1]	Crab Trap	Eel Pot	Gillnet	Seine	Trawl	Total
Atlantic Menhaden			1	6		7
Atlantic Moonfish					6	6
Atlantic Silverside				777	1	778
Bay Anchovy					69	69
Black Seabass		50			2	52
Blueback Herring				14		14
Butterfish					2	2
Gizzard Shad			1		1	2
Gobiidae [3]				2		2
Hogchoker					4	4
Mummichog				1969		1969
Naked Goby					1	1
Northern Kingfish				5	7	12
Northern Pipefish [2]				2		2
Oyster Toadfish	7	8			5	20
Scup		1			57	58
Silver Perch					3	3
Smallmouth Flounder					4	4
Spotted Hake					1	1
Striped Anchovy [2]				1		1
Striped Bass	3	1		32	3	39
Striped Killifish				228		228
Striped Mullet [2]				1		1
Striped Searobin					16	16
Summer Flounder					3	3
Weakfish					76	76
White Mullet				5		5
Windowpane Flounder					1	1
Total Number	10	60	2	3042	262	3376
Total Species	2	4	2	12	19	28

[1] Bycatch includes target species that were not needed for tissue samples

[2] Northern pipefish, striped anchovy, and striped mullet not included in the 2014 pathology examination

[3] Not identified to species and therefore listed at the family level

Table 3-8. Descriptive statistics for fish species collected as bycatch within the three Newark Bay sampling zones, 6 through 24 October 2014.

Common Name [1]	Bay Zone	Total Number	Number Measured [2]	Total Length (mm)			Weight (g)		
				Mean	Minimum	Maximum	Mean	Minimum	Maximum
Atlantic Menhaden	North	3	3	86.3	84.0	90.0	5.8	5.6	6.1
Atlantic Menhaden	Central	3	3	88.3	87.0	90.0	6.5	6.4	6.6
Atlantic Menhaden	South	1	1	331.0	331.0	331.0	375.0	375.0	375.0
Atlantic Silverside	North	340	30	75.9	39.0	111.0	2.4	0.3	7.9
Atlantic Silverside	Central	335	43	68.9	48.0	97.0	1.6	0.3	4.2
Atlantic Silverside	South	103	19	91.1	38.0	111.0	4.2	0.3	7.3
Bay Anchovy	Central	69	0	*	*	*	*	*	*
Black Seabass	North	2	2	76.0	72.0	80.0	6.8	5.3	8.2
Black Seabass	Central	1	1	79.0	79.0	79.0	6.6	6.6	6.6
Black Seabass	South	49	24	83.8	70.0	110.0	8.3	4.4	16.1
Blueback Herring	North	1	1	85.0	85.0	85.0	3.1	3.1	3.1
Blueback Herring	Central	12	7	76.7	71.0	83.0	2.4	2.2	3.0
Blueback Herring	South	1	1	80.0	80.0	80.0	2.6	2.6	2.6
Butterfish	Central	2	2	158.5	145.0	172.0	46.7	25.6	67.8
Gizzard Shad	North	1	1	132.0	132.0	132.0	22.3	22.3	22.3
Gizzard Shad	South	1	1	407.0	407.0	407.0	950.0	950.0	950.0
Gobiidae [3]	North	2	2	40.5	38.0	43.0	0.7	0.5	0.8
Hogchoker	North	4	4	133.5	120.0	152.0	47.7	35.5	65.8
Moonfish	North	1	1	58.0	58.0	58.0	2.5	2.5	2.5
Moonfish	Central	5	5	80.8	60.0	115.0	7.6	3.1	17.8
Mummichog	North	663	157	51.7	30.0	99.0	2.1	0.1	13.6
Mummichog	South	1306	21	46.3	28.0	88.0	1.7	0.3	8.1
Naked Goby	North	1	1	41.0	41.0	41.0	0.7	0.7	0.7
Northern Kingfish	North	5	5	88.0	75.0	111.0	6.9	4.2	14.0
Northern Kingfish	Central	4	4	182.0	168.0	195.0	57.6	39.6	75.7
Northern Kingfish	South	3	3	93.7	60.0	115.0	9.4	1.8	14.0
Northern Pipefish	North	2	2	165.5	145.0	186.0	1.6	0.7	2.4
Oyster Toadfish	North	7	7	206.4	162.0	280.0	159.2	77.7	185.7
Oyster Toadfish	South	13	11	221.7	180.0	295.0	340.6	200.0	600.0
Scup	North	1	1	79.0	79.0	79.0	7.6	7.6	7.6
Scup	Central	56	52	89.8	69.0	110.0	12.3	5.0	21.0
Scup	South	1	1	85.0	85.0	85.0	8.5	8.5	8.5
Silver Perch	North	3	3	90.0	88.0	92.0	9.8	9.1	10.3
Smallmouth Flounder	North	3	3	57.0	53.0	61.0	1.5	1.1	1.9
Smallmouth Flounder	Central	1	0	*	*	*	*	*	*
Spotted Hake	North	1	1	222.0	222.0	222.0	103.3	103.3	103.3
Striped Anchovy	Central	1	1	65.0	65.0	65.0	1.8	1.8	1.8
Striped Bass	North	33	33	138.7	95.0	317.0	43.3	7.4	318.0
Striped Bass	Central	2	0	*	*	*	*	*	*
Striped Bass	South	4	4	177.0	110.0	325.0	104.5	12.0	350.0
Striped Killifish	North	122	23	67.1	36.0	88.0	3.6	0.3	8.0
Striped Killifish	Central	8	0	*	*	*	*	*	*
Striped Killifish	South	98	21	56.7	51.0	63.0	2.0	1.4	3.2
Striped Mullet	Central	1	1	230.0	230.0	230.0	136.6	136.6	136.6
Striped Searobin	North	12	12	88.6	49.0	140.0	11.7	1.7	34.3
Striped Searobin	Central	4	2	120.0	120.0	120.0	21.4	21.4	21.4
Summer Flounder	North	3	3	175.7	161.0	199.0	51.1	33.1	82.3
Weakfish	North	52	52	126.0	84.0	172.0	24.7	4.0	60.0
Weakfish	Central	24	24	132.8	113.0	158.0	24.4	12.7	38.0
White Mullet	South	5	5	134.8	117.0	160.0	28.2	14.7	46.8
Windowpane Flounder	North	1	1	142.0	142.0	142.0	32.7	32.7	32.7
Total		3376	605						

* No length or weight recorded

[1] Bycatch includes target species that were of insufficient length or not needed for tissue samples

[2] Length and weight measurements were conducted for a subsample of individuals for collections with large numbers of individuals

[3] Not identified to species and therefore listed at the family level

Table 3-9. Total numbers of each target fish species collected using various gear types in Newark Bay, 30 March through 5 August 2015.

Common Name	Angling	Eel Pot	Gillnet	Trawl	Trotline	Total [1]
American Eel		67		1		68
Bluefish	20		1		2	23
Hogchoker				8		8
Smallmouth Flounder				7		7
Spotted Hake				140		140
Striped Bass	18					18
Summer Flounder	29			11		40
White Perch			261	442		703
Windowpane Flounder			2	10		12
Winter Flounder			2	220		222
Total Number	67	67	266	839	2	1241
Total Species	3	1	4	8	1	10

[1] All individuals processed for tissue samples

Table 3-10. Descriptive statistics for target fish species collected within the three Newark Bay sampling zones, 30 March through 5 August 2015.

			Total Length (mm)			Weight (g)		
Common Name	Bay Zone	Total Number	Mean	Minimum	Maximum	Mean	Minimum	Maximum
American Eel	Central	25	489.2	334	900	260.4	76	800
American Eel	North	29	449.2	249	620	206.1	28	490
American Eel	South	14	499.4	250	790	298.4	30	950
Bluefish	Central	18	359.3	309	452	432.3	264	790
Bluefish	North	3	440.7	387	470	880.0	570	1210
Bluefish	South	2	398.5	377	420	526.5	478	575
Hogchoker	Central	7	113.9	98	125	29.2	18.2	44
Hogchoker	South	1	105.0	105	105	23.4	23.4	23.4
Smallmouth Flounder	Central	6	62.2	42	95	2.1	0.4	6.5
Smallmouth Flounder	South	1	110.0	110	110	11.0	11	11
Spotted Hake	Central	114	79.3	60	112	4.3	1.7	15.5
Spotted Hake	North	19	81.6	65	107	4.7	2	10
Spotted Hake	South	7	77.9	70	100	3.6	2.1	7.9
Striped Bass	South	18	774.7	620	978	4967.5	2098	9526
Summer Flounder	Central	15	305.2	65	572	488.6	1.8	1930
Summer Flounder	North	9	342.8	168	475	526.1	43.5	1150
Summer Flounder	South	16	369.5	248	463	519.1	126	1080
White Perch	Central	139	155.7	82	262	62.5	2	290
White Perch	North	306	164.8	76	280	82.6	3	360
White Perch	South	258	237.6	90	335	223.1	8.9	560
Windowpane Flounder	Central	9	152.3	125	195	40.5	21	93
Windowpane Flounder	South	3	247.3	130	324	261.8	20.3	550
Winter Flounder	Central	156	108.0	55	252	18.7	2	204
Winter Flounder	North	39	112.7	62	260	25.5	3	245
Winter Flounder	South	27	112.8	60	220	20.3	2.7	140

Table 3-11. Total numbers of each fish species collected as bycatch using various gear types in Newark Bay, 30 March through 5 August 2015.

Common Name	Angling	Eel Pot	Gillnet	Trawl	Total
Alewife			5	169	174
American Shad				73	73
Atlantic Herring				1	1
Atlantic Menhaden			89		89
Atlantic Tomcod				8	8
Blueback Herring				55	55
Clupeidae				4	4
Cunner				2	2
Little Skate			1	1	2
Longhorn Sculpin				8	8
Lookdown				2	2
Northern Pipefish				4	4
Northern Pufferfish				1	1
Oyster Toadfish		2		2	4
Spotted Hake				1	1
Striped Bass	23		13	241	277
Striped Searobin				1	1
Summer Flounder	249			12	261
White Perch				26	26
Windowpane Flounder				1	1
Winter Flounder				8	8
Total Number	272	2	108	620	1002
Total Species [1]	2	1	4	19	20

[1] Excludes family level identification if species within family collected by gear

Table 3-12. Descriptive statistics for fish species collected as bycatch within the three Newark Bay sampling zones, 30 March through 5 August 2015.

Common Name [1]	Bay Zone	Total Number	Total Measured [2]	Total Length (mm)			Weight (g)		
				Mean	Minimum	Maximum	Mean	Minimum	Maximum
Alewife	Central	279	152	101.3	70	300	21.3	1	400
Alewife	North	21	21	120.9	78	278	23.0	1	180
Alewife	South	1	1	305.0	305	305	270.0	270	270
American Shad	Central	83	70	130.5	105	180	15.8	1.5	180
American Shad	North	3	3	132.3	100	160	14.0	2	30
Atlantic Herring	North	1	1	280.0	280	280	120.0	120	120
Atlantic Menhaden	Central	2	2	312.5	300	325	305.0	300	310
Atlantic Menhaden	North	2	2	352.0	349	355	375.0	350	400
Atlantic Menhaden	South	249	85	332.4	295	372	365.1	284	550
Atlantic Tomcod	North	8	8	89.3	75	102	5.6	3	9
Blueback Herring	Central	55	55	79.9	60	225	3.7	1	70
Clupeidae	North	8	4	32.3	30	35	*	*	*
Cunner	Central	2	2	123.5	77	170	38.5	7	70
Little Skate	Central	1	1	90.0	90	90	5.0	5	5
Little Skate	South	1	1	445.0	445	445	600.0	600	600
Longhorn Sculpin	Central	4	4	85.0	75	100	6.8	2	10
Longhorn Sculpin	North	2	2	100.0	90	110	7.5	5	10
Longhorn Sculpin	South	2	2	74.5	72	77	*	*	*
Lookdown	North	2	2	37.5	35	40	1.0	1	1
Northern Pipefish	Central	4	4	180.0	130	210	5.3	1	10
Northern Pufferfish	South	1	1	178.0	178	178	146.0	146	146
Oyster Toadfish	Central	2	2	195.0	180	210	220.0	200	240
Oyster Toadfish	North	2	2	79.5	75	84	9.0	8	10
Spotted Hake	South	1	1	147.0	147	147	32.0	32	32
Striped Bass	Central	161	161	154.5	89	590	80.3	5	2268
Striped Bass	North	87	87	174.9	75	650	121.4	4	2722
Striped Bass	South	29	29	458.4	86	823	1444.8	34	7258
Striped Sea Robin	South	1	1	135.0	135	135	30.0	30	30
Summer Flounder	Central	61	61	320.5	270	380	327.4	160	525
Summer Flounder	North	42	42	305.5	168	391	279.2	40	625
Summer Flounder	South	158	158	333.5	200	430	364.8	134	710
White Perch	North	26	26	99.2	81	120	8.6	5	15
Windowpane Flounder	North	1	1	35.0	35	35	*	*	*
Winter Flounder	North	8	8	148.3	135	160	42.8	29	52
Total		1310	1002						

* No weight recorded

[1] Bycatch includes target species that were of insufficient length or not needed for tissue samples

[2] Length and weight measurements were conducted for a subsample of individuals for collections with large numbers of individuals

Table 3-13. Descriptive statistics for white perch collected within the three Newark Bay sampling zones, 14 through 24 March 2016.

			Total Length (mm)			Weight (g)		
Common Name	Bay Zone	Total Number [1]	Mean	Minimum	Maximum	Mean	Minimum	Maximum
White Perch	Central	128	235.4	185	280	214.3	95	381
White Perch	North	64	214.2	175	293	163.8	75	482
White Perch	South	44	240.0	201	298	230.3	143	424
Total [2]		236						

[1] All individuals processed for tissue samples

[2] Individuals collected by gear type: gillnet 187 and trawl 49

Table 3-14. Total numbers of each fish species collected as bycatch using various gear types in Newark Bay, 14 through 24 March 2016.

Common Name [1]	Gillnet	Trawl	Total
Alewife	76	103	179
American Eel		1	1
American Shad	3	27	30
Atlantic Croaker		2	2
Atlantic Menhaden	136	2	138
Atlantic Silverside		1	1
Atlantic Sturgeon	1		1
Atlantic Tomcod		1	1
Bay Anchovy		2	2
Black Sea Bass		1	1
Blue Crab		5	5
Blueback Herring		2	2
Cunner		2	2
Gizzard Shad	2	7	9
Northern Pipefish		7	7
Red Hake		3	3
Little Skate	1		1
Spotted Hake	1	382	383
Striped Bass	432	571	1003
Striped Sea Robin		1	1
Summer Flounder		6	6
Tautog	2		2
White Perch		1751	1751
Windowpane Flounder	1	4	5
Winter Flounder	12	37	49
Total Number	667	2918	3585
Total Species	11	22	25

[1] Bycatch includes target species that were not needed or of insufficient size for tissue samples

Table 3-15. Descriptive statistics for fish species collected as bycatch within the three Newark Bay sampling zones, 14 through 24 March 2016.

Common Name [1]	Bay Zone	Total Number	Number Measured [2]	Total Length (mm)			Weight (g)		
				Mean	Minimum	Maximum	Mean	Minimum	Maximum
Alewife	Central	60	38	292.2	270	325	238.4	125	350
Alewife	North	104	42	125.3	70	305	36.4	5	230
Alewife	South	15	15	293.3	275	310	262.7	190	300
American Eel	North	1	1	750.0	750	750	550.0	550	550
American Shad	Central	2	2	252.5	215	290	105.0	40	170
American Shad	North	27	27	140.4	110	180	23.4	7	50
American Shad	South	1	1	515.0	515	515	1450.0	1450	1450
Atlantic Croaker	North	2	2	127.5	125	130	22.5	15	30
Atlantic Menhaden	Central	109	40	323.6	280	380	341.7	240	450
Atlantic Menhaden	North	23	23	314.5	145	350	321.4	30	450
Atlantic Menhaden	South	6	6	325.0	300	340	371.0	275	420
Atlantic Silverside	North	1	1	112.0	112	112	*	*	*
Atlantic Sturgeon	Central	1	1	737.0	737	737	1650.0	1650	1650
Atlantic Tomcod	North	1	1	225.0	225	225	120.0	120	120
Bay Anchovy	North	2	2	62.5	60	65	2.0	2	2
Black Sea Bass	North	1	1	100.0	100	100	15.0	15	15
Blue Crab	North	5	5	134.0	105	155	145.0	100	200
Blueback Herring	North	2	2	82.5	80	85	*	*	*
Cunner	North	2	2	82.5	80	85	20.0	20	20
Gizzard Shad	Central	2	2	237.5	230	245	132.5	125	140
Gizzard Shad	North	7	7	193.6	150	270	90.7	30	190
Little Skate	Central	1	1	410.0	410	410	800.0	800	800
Northern Pipefish	North	7	7	170.0	110	210	*	*	*
Red Hake	North	3	3	105.0	95	120	11.7	10	15
Spotted Hake	Central	1	1	165.0	165	165	20.0	20	20
Spotted Hake	North	382	149	118.6	50	310	27.3	2	250
Striped Bass	Central	387	80	321.1	280	600	383.8	270	1900
Striped Bass	North	600	234	203.9	90	490	139.8	10	1150
Striped Bass	South	16	16	319.6	290	355	370.3	270	530
Striped Sea Robin	North	1	1	80.0	80	80	5.0	5	5
Summer Flounder	North	6	6	208.3	135	260	86.7	20	170
Tautog	Central	2	2	365.0	300	430	915.0	530	1300
White Perch	North	1751	175	128.0	90	180	32.9	10	100
Windowpane Flounder	Central	1	0	*	*	*	*	*	*
Windowpane Flounder	North	4	4	238.8	200	320	188.8	110	400
Winter Flounder	Central	5	5	173.0	155	205	62.0	40	100
Winter Flounder	North	40	40	169.1	125	260	62.6	15	250
Winter Flounder	South	4	4	183.8	155	210	70.0	20	120
Total		3585	949						

* No length and/or weight recorded

[1] Bycatch includes target species that were of insufficient length or not needed for tissue samples

[2] Length and weight measurements were conducted for a subsample of individuals for collections with large numbers of individuals

APPENDICES

APPENDIX A

Appendix A. Representative photographs of field collection activities and laboratory processing.



Photograph 1. Flat-bottom boat used for softshell clam and sediment collections.



Photograph 2. Shovel penetrating sediment to collect softshell clam (circle shows clam siphon hole).

Appendix A. Representative photographs of field collection activities and laboratory processing.



Photograph 3. Shovel removing sediment and softshell clam.



Photograph 4. Hole excavation after the removal of softshell clam.

Appendix A. Representative photographs of field collection activities and laboratory processing.



Photograph 5. Flagging showing locations where softshell clam were removed from sediment.



Photograph 6. Sediment composite collected from the excavated softshell clam holes.

Appendix A. Representative photographs of field collection activities and laboratory processing.



Photograph 7. Softshell clam batch photograph prior to tissue removal.

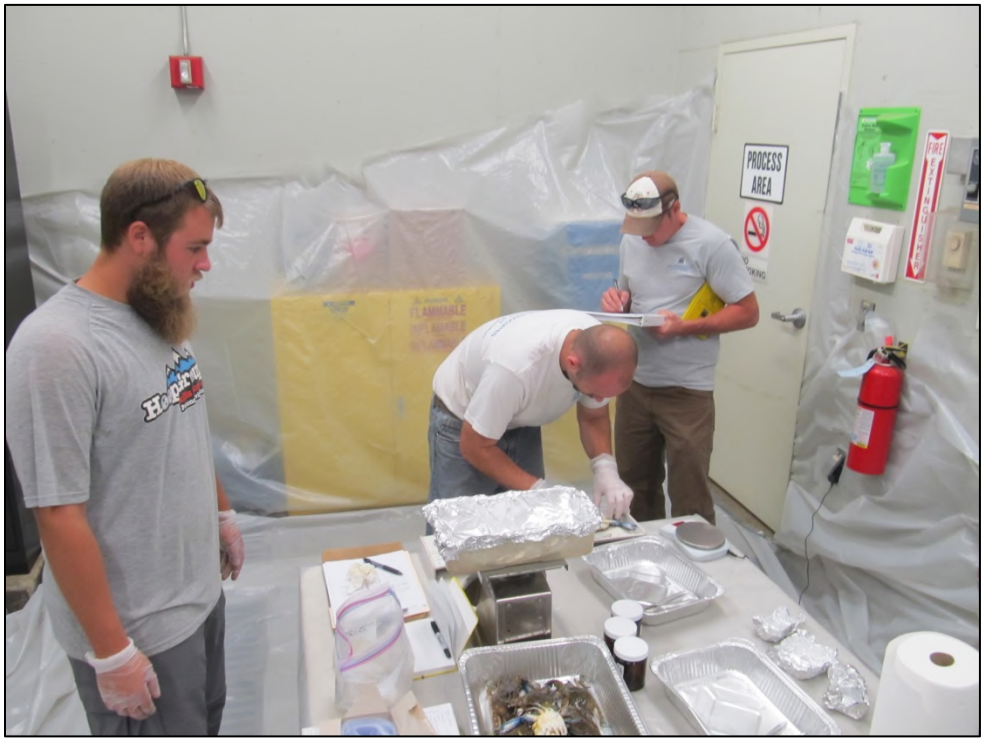


Photograph 8. Softshell clam tissue processing at the 80 Lister Avenue temporary processing facility.

Appendix A. Representative photographs of field collection activities and laboratory processing.



Photograph 9. Crap pot used for blue crab collection.



Photograph 10. Blue crab processing at the 80 Lister Avenue temporary processing facility.

Appendix A. Representative photographs of field collection activities and laboratory processing.



Photograph 11. Blue crab with carapace removed for tissue removal.



Photograph 12. Minnow trap used for collection of killifish, mummichog and silverside.

Appendix A. Representative photographs of field collection activities and laboratory processing.



Photograph 13. Eel pot used for collection of American eel.



Photograph 14. Deployed otter trawl.

Appendix A. Representative photographs of field collection activities and laboratory processing.



Photograph 15. Gillnet being retrieved with Atlantic menhaden entangled in the net.



Photograph 16. Gillnet being retrieved with striped bass entangled in net.

Appendix A. Representative photographs of field collection activities and laboratory processing.



Photograph 17. Example fishing gear (umbrella rig) used during striped bass angling.



Photograph 18. Measurement of summer flounder total length.

Appendix A. Representative photographs of field collection activities and laboratory processing.



Photograph 19. Weight measurement of summer flounder.



Photograph 20. Photograph of summer flounder prior to tissue processing.

Appendix A. Representative photographs of field collection activities and laboratory processing.



Photograph 21. Summer flounder after removal of dorsal fillet.



Photograph 22. Batch of white perch prior to tissue processing.

Appendix A. Representative photographs of field collection activities and laboratory processing.



Photograph 23. Batch of striped killifish prior to processing.



Photograph 24. Fish tissue processing equipment at the 80 Lister Avenue temporary processing facility.

Appendix A. Representative photographs of field collection activities and laboratory processing.



Photograph 25. American eel fillet processing.



Photograph 26. White perch fillet being weighed.

Appendix A. Representative photographs of field collection activities and laboratory processing.

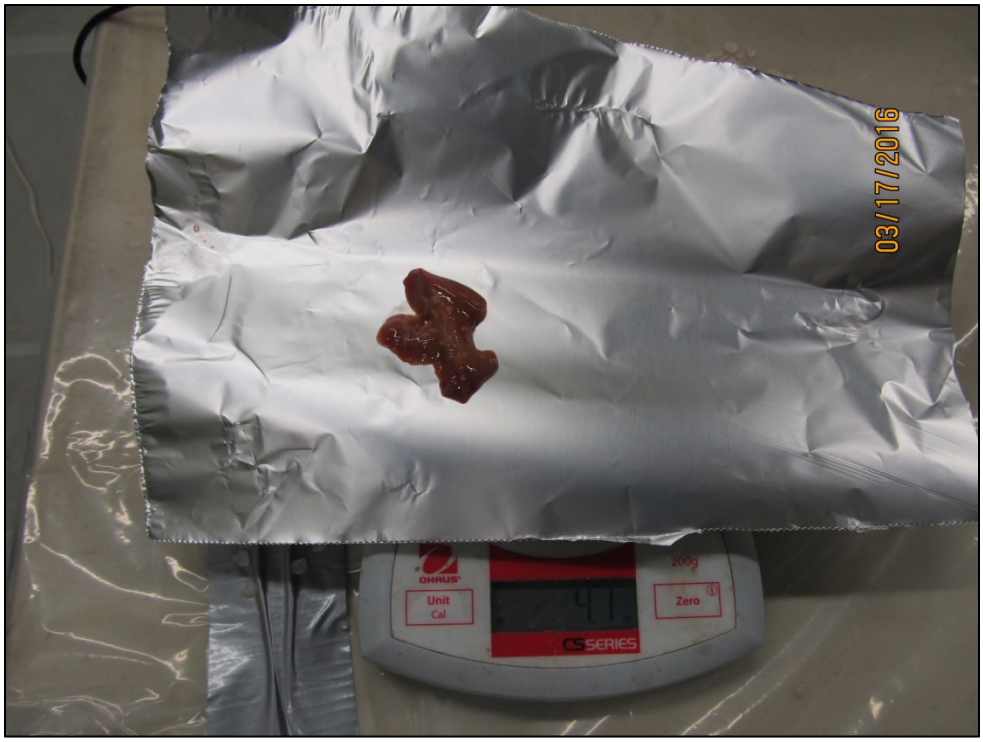


Photograph 27. White perch liver (circled) prior to removal from body cavity.

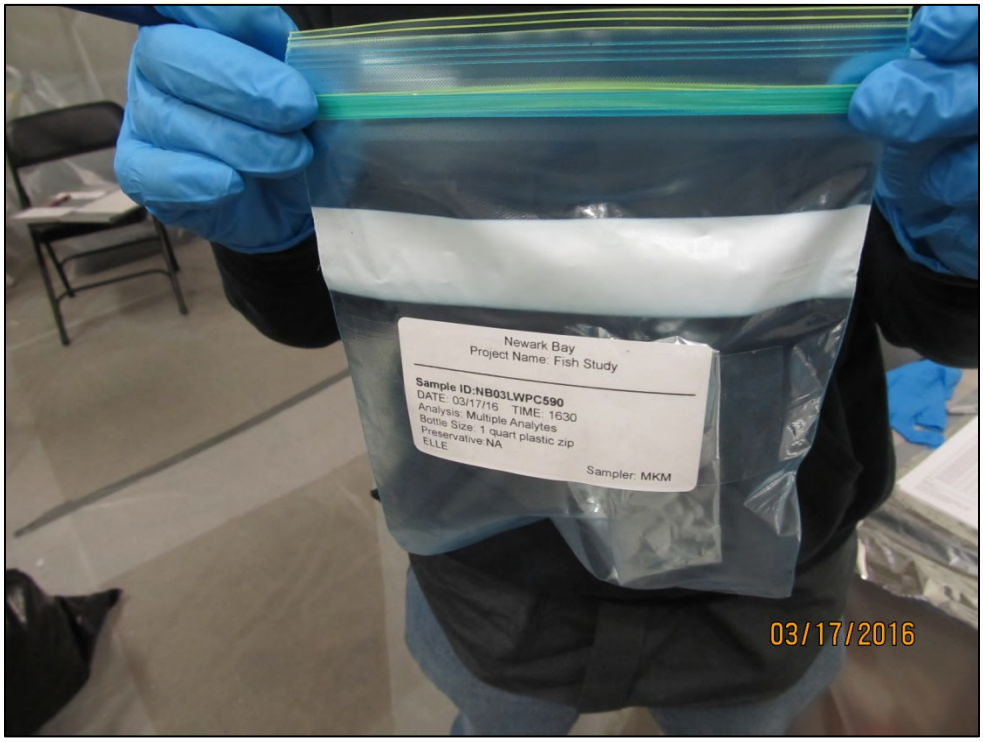


Photograph 28. White perch liver removal.

Appendix A. Representative photographs of field collection activities and laboratory processing.



Photograph 29. White perch liver being weighed.



Photograph 30. Represents the packaging and labeling of liver samples in 2016 following a protocol modification to pack liver and fillet samples in separate bags to avoid laboratory compositing errors.

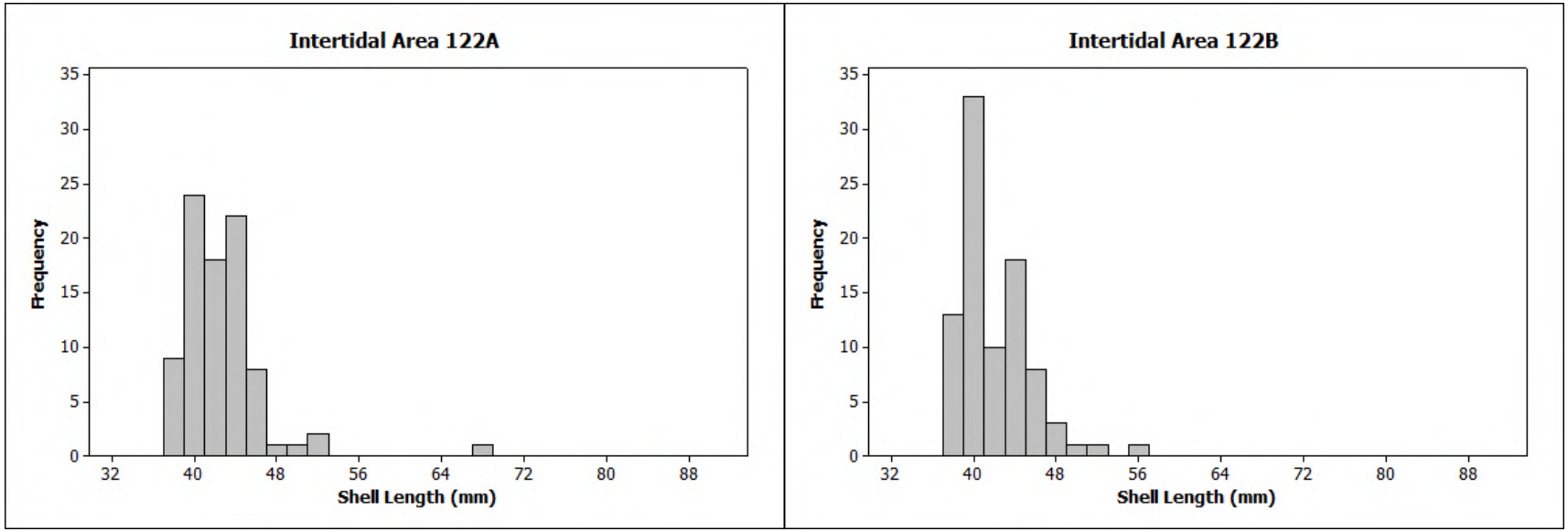
Appendix A. Representative photographs of field collection activities and laboratory processing.

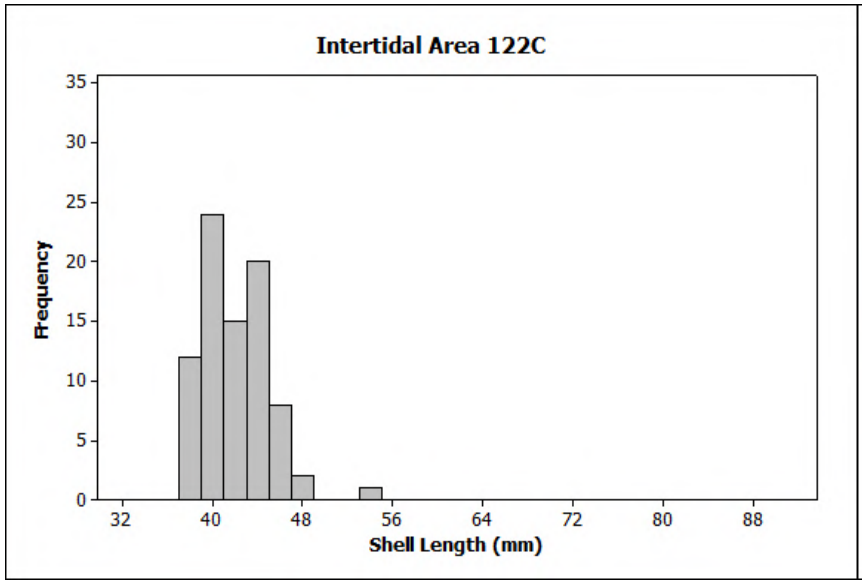


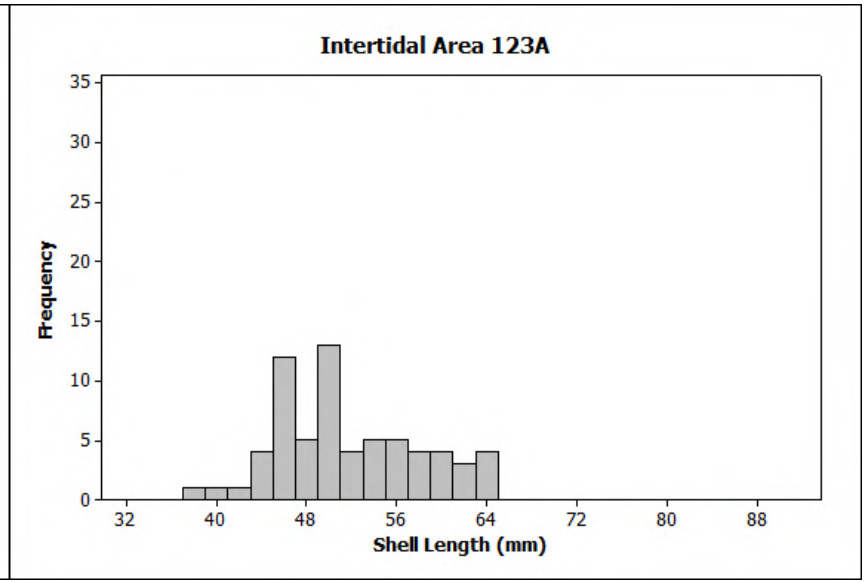
Photograph 31. Pathologist processing a small flounder.

APPENDIX B

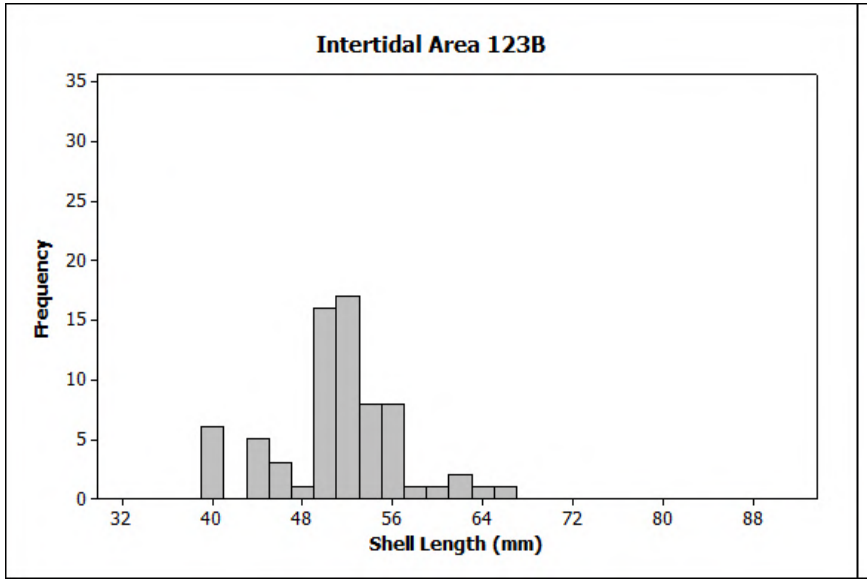
Appendix B. Length-frequency histograms for softshell clam collected from intertidal areas in Newark Bay.

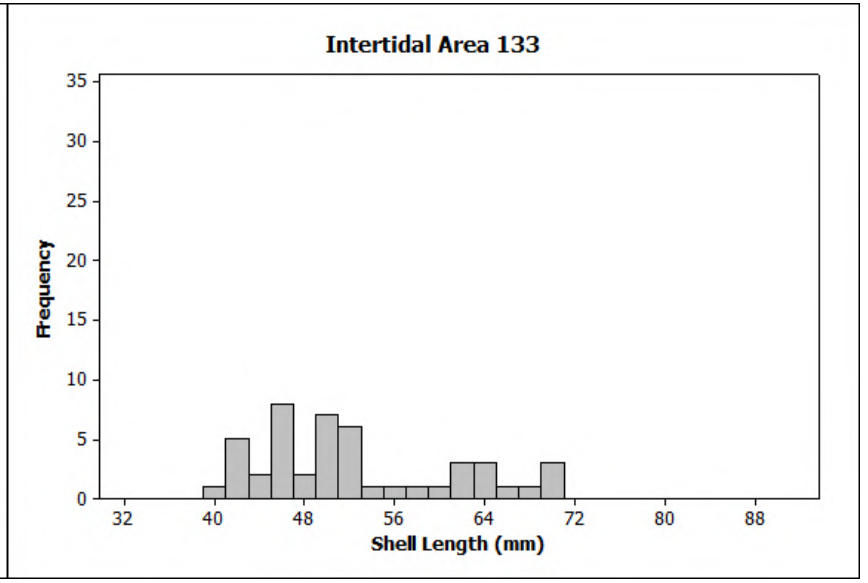


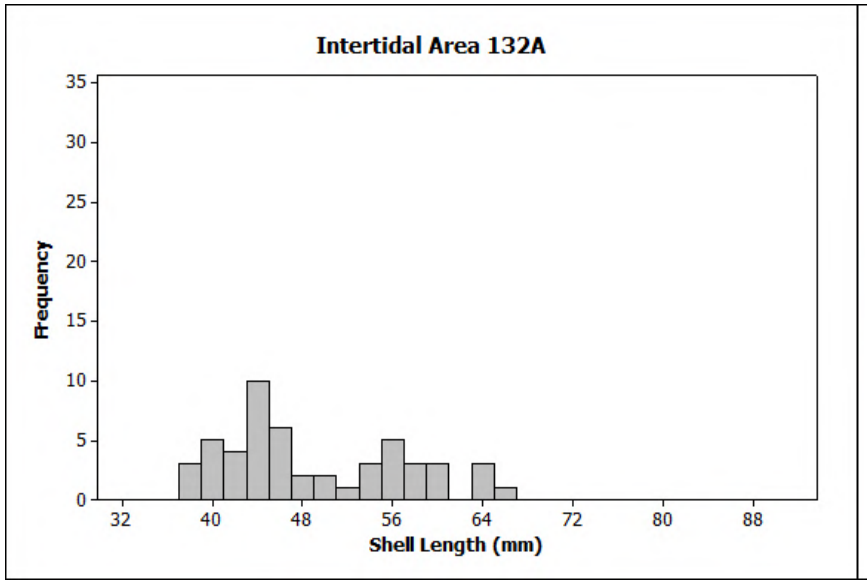


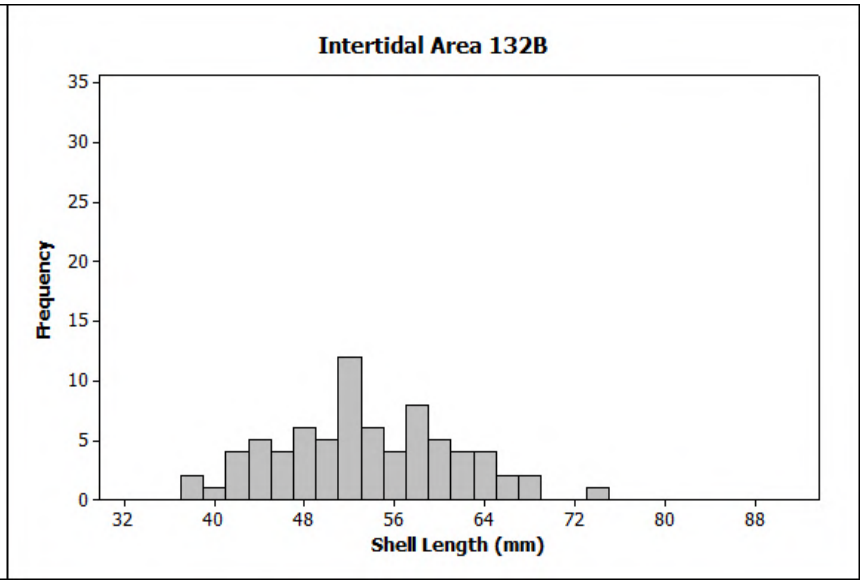


Appendix B. Length-frequency histograms for softshell clam collected from intertidal areas in Newark Bay.

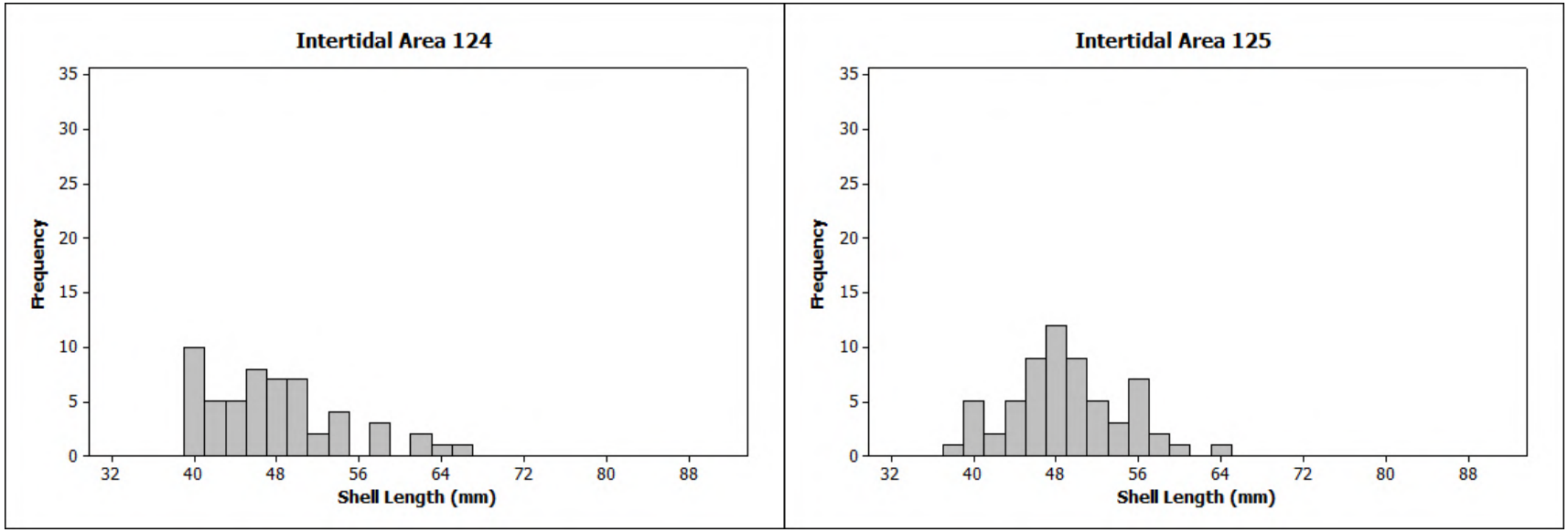


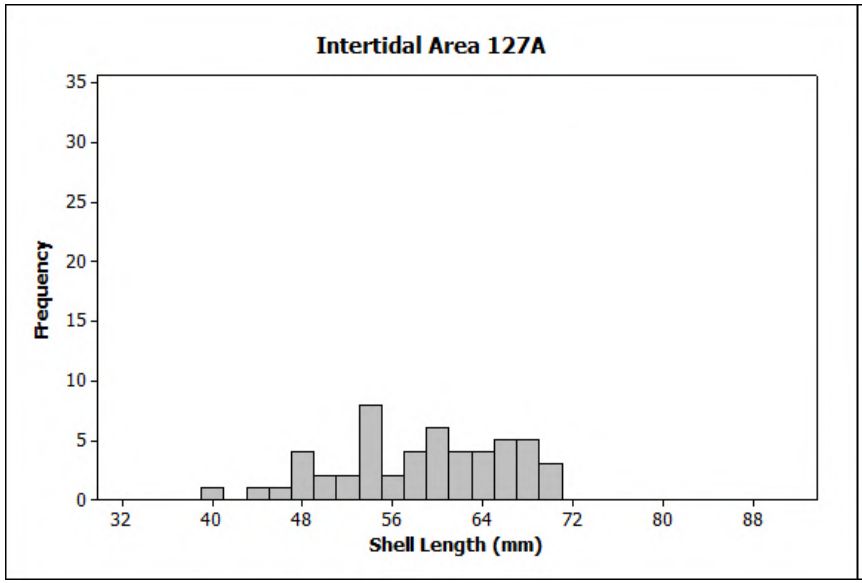


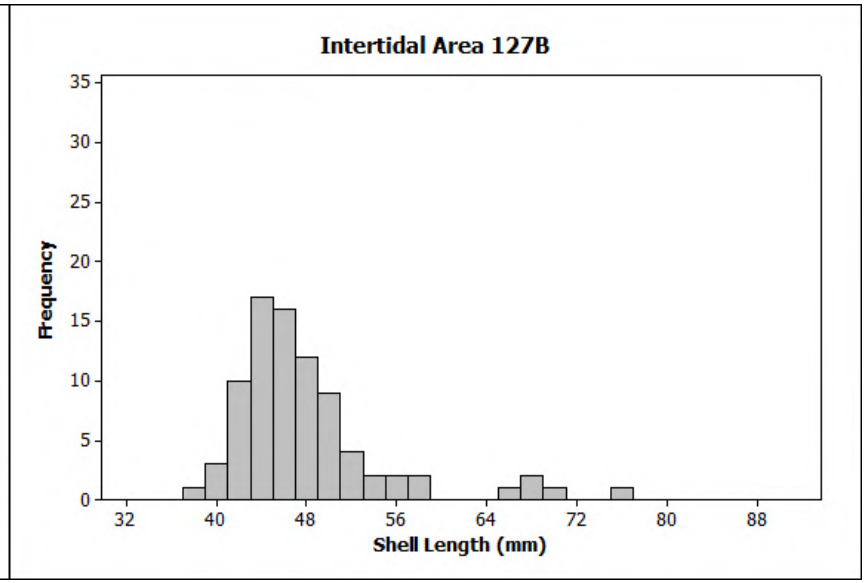




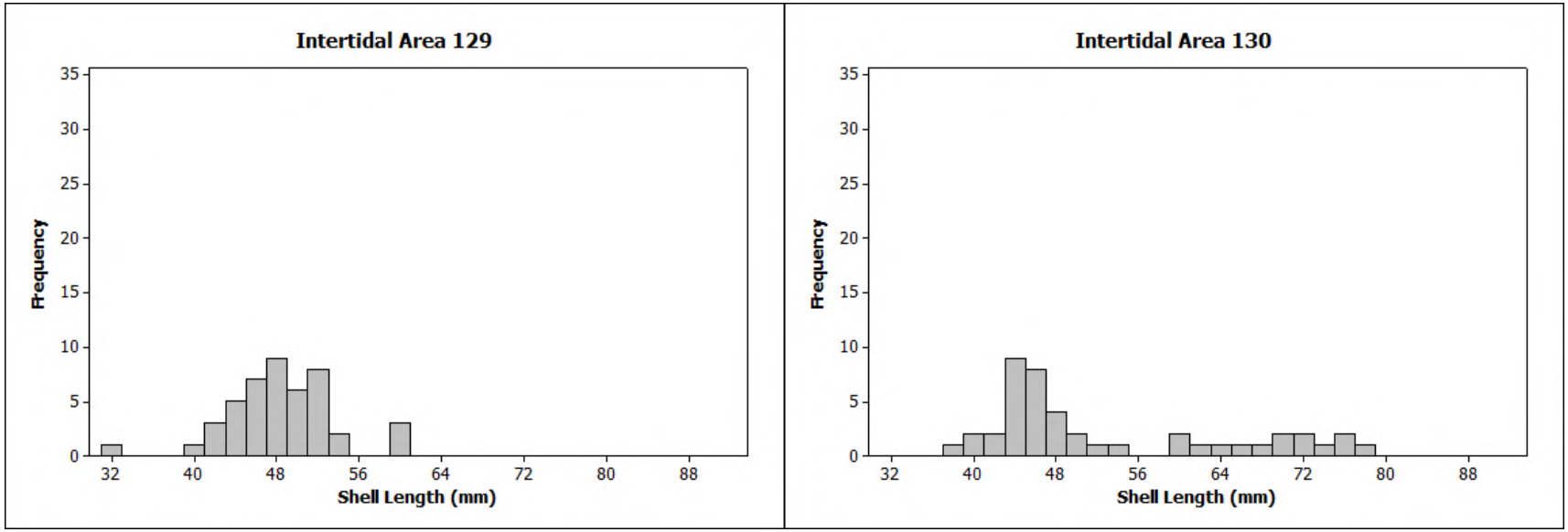
Appendix B. Length-frequency histograms for softshell clam collected from intertidal areas in Newark Bay.

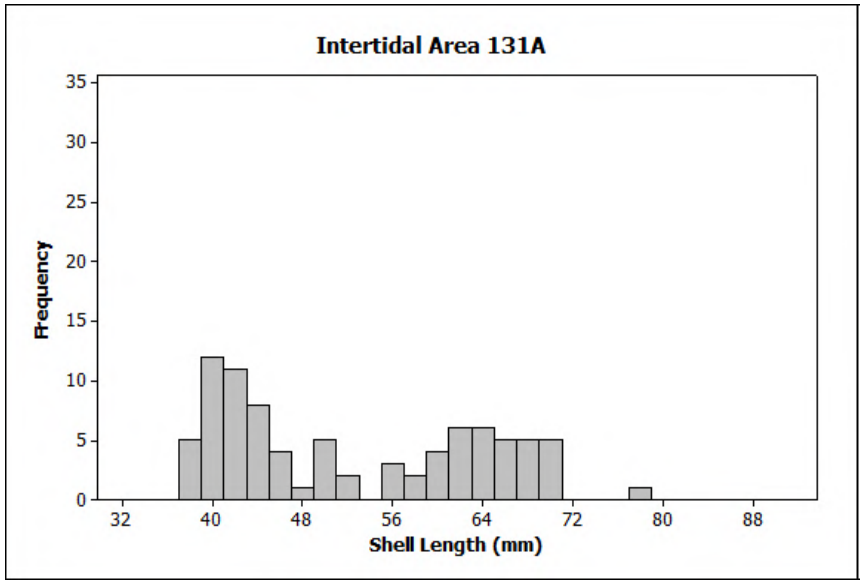


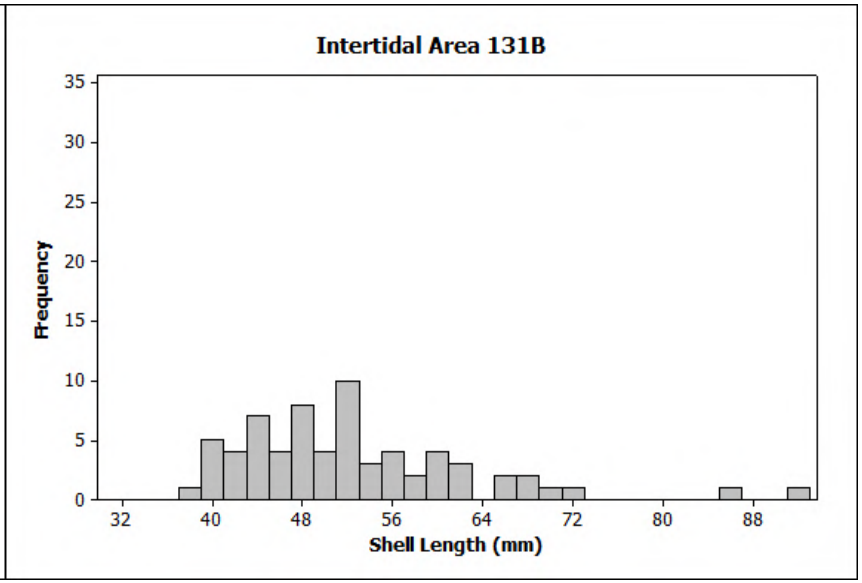




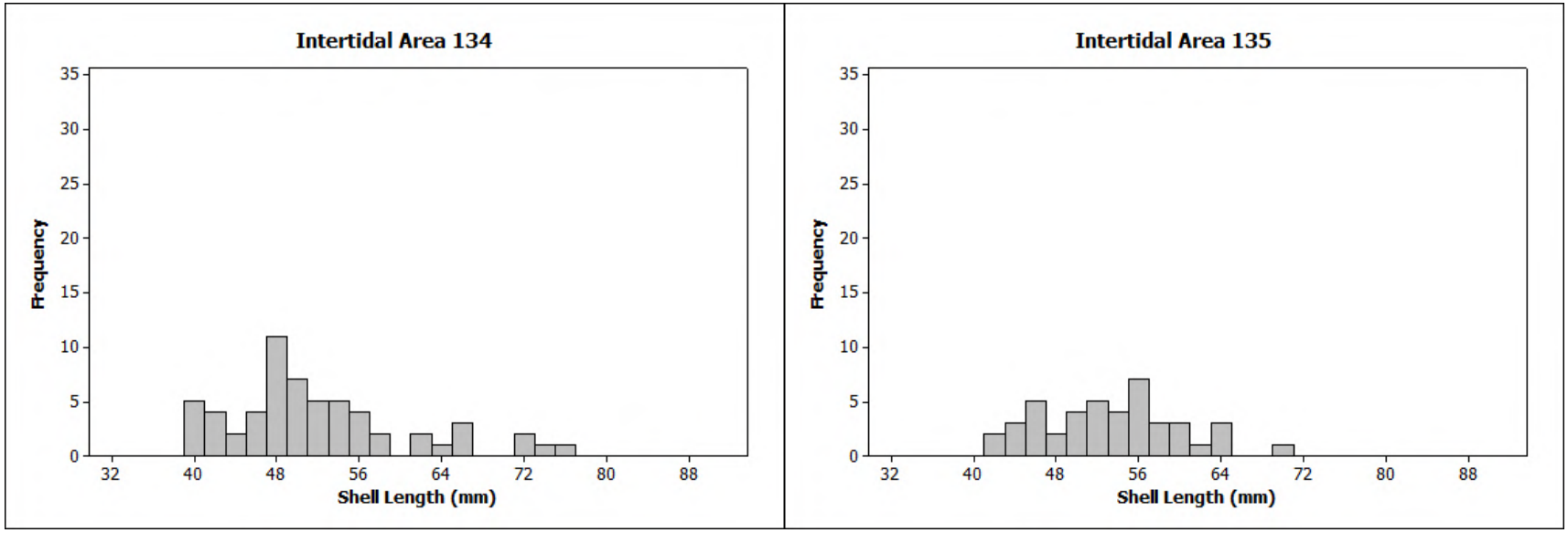
Appendix B. Length-frequency histograms for softshell clam collected from intertidal areas in Newark Bay.







Appendix B. Length-frequency histograms for softshell clam collected from intertidal areas in Newark Bay.



APPENDIX C

Appendix C. Water quality measurements collected during blue crab and fish collections in Newark Bay Study Area, September 8, 2014 through March 24, 2016.

Sample ID [1]	Year	Depth below water surface (ft)	Collection Time	Water Temperature (°C)	DO (mg/l)	pH	Conductivity (µs/cm)
s-129-ct01-0908	2014	1	17:44	23.5	5.5	7.4	25,400
s-129-ct09-0909	2014	1	14:10	24.7	5.9	7.5	26,500
s-131a-ct17-0910	2014	1	11:55	22.9	6.1	7.5	27,400
s-131-ct33-0915	2014	1	11:00	21.2	7.3	7.5	28,900
s-131-ct11-0916	2014	1	7:56	20.9	6.1	7.4	33,400
s-130-ct08-0917	2014	1	11:58	21.5	6	7.6	32,100
c-130-ct08-0918	2014	1	9:55	20.5	5.8	7.6	35,800
s-130-ct28-0922	2014	1	12:09	20.8	8.2	7.5	28,600
s-134-ct06-0923	2014	1	13:03	20.9	7.4	7.4	33,700
c-127-ct08-0924	2014	1	16:32	20.5	6.1	7.5	36,200
c-126-ct10-0929	2014	1	11:58	20.5	9.7	7.2	36,700
c-125-ct02-0930	2014	1	12:30	20.4	9.7	7.5	38,100
c-ct01-1001	2014	1	10:59	19.8	9.8	7.5	38,700
c-ct03-1002	2014	1	10:41	19.3	14.7	7.7	41,350
c-124-ct02-1002	2014	1	10:41	19.3	14.7	7.7	41,300
n-gn01-1006	2014	1	13:03	18.3	11.7	7.4	39,000
n-gn01-1006	2014	1	9:55	18.4	9	7.5	22,500
n-122-ct06-1006	2014	1	11:54	18.5	6	6.9	42,300
n-mt01-1007	2014	1	11:31	18.8	7.9	7.6	24,400
n-123-ct02-1007	2014	1	12:40	18.2	**	7.5	27,100
s-gn02-1008	2014	1	9:26	18.5	7	7.6	38,900
n-mt10-1008	2014	1	9:56	18.6	6.5	7.5	33,100
n-ct03-1008	2014	1	11:51	18.6	7	7.2	31,700
c-gn01-1009	2014	1	9:10	18.6	8	7.2	39,600
c-tw01-1009	2014	1	9:43	18.5	**	7.5	39,600
s-131a-sn01-1010	2014	1	9:32	17.2	5.9	7.2	32,000
n-132b-sn01-1013	2014	1	9:56	17.1	9.1	7.2	23,800
n-132a-sn01-1013	2014	1	10:39	17.2	7.8	7.6	25,800
n-ep16-1013	2014	1	10:51	17	5.8	7.5	25,300
n-123a-sn01-1013	2014	1	12:42	16.7	8.4	7.6	23,800
s-134-sn01-1013	2014	1	13:29	17.7	8.3	7.6	27,300
n-132-ct08-1013	2014	1	9:50	17.1	8.9	7.1	24,100
n-ct01-1014	2014	1	9:26	17.6	8.2	7.6	26,400
c-ct01-1014	2014	1	10:54	17.4	9	7.6	23,000
n-ep16-1014	2014	1	10:07	17.2	7	7.5	21,000
n-ep21-1014	2014	1	10:20	17.3	5.8	7.5	22,000
s-135-mt01-1014	2014	1	14:22	18.5	7.3	7.6	17,900
c-127a-sn01-1014	2014	1	14:35	18.1	7.2	7.5	29,200
c-127b-sn01-1014	2014	1	15:25	18.5	6.4	7.6	29,400
c-125-sn01-1014	2014	1	16:24	18.1	6.8	7.6	29,200
n-ct01-1015	2014	1	9:00	17.2	5.5	7.5	20,000
c-ct01-1015	2014	1	10:01	18	7.7	7.6	29,000
c-ct01-1015	2014	1	10:01	18	7.7	7.6	29,000
c-ct01-1015	2014	1	11:00	17.9	8.6	7.6	29,900
n-ep26-1015	2014	1	10:01	18	7.7	7.6	29,000
s-gn04-1015	2014	1	15:20	18.5	9.9	7.6	30,600
n-tw08-1015	2014	1	12:10	18.1	7.9	7.6	28,000

c-tw09-1015	2014	1	12:43	17.8	7.2	7.6	30,400
c-ct09-1016	2014	1	9:53	18	8.5	7.6	28,600
c-ct09-1016	2014	1	9:53	18.3	8.5	7.6	29,600
s-mt01-1016	2014	1	8:38	17.6	5.7	**	29,300
s-mt01-1017	2014	1	9:20	18.1	5	**	18,400
s-129-mt01-1017	2014	1	8:38	17.6	5.7	**	29,300
s-135-sn06-1017	2014	1	9:20	18.1	5	**	18,400
s-131b-sn01-1017	2014	1	9:55	18.2	6	**	18,600
c-ep29-1020	2014	1	10:05	15.9	6	6.9	34,500
s-ct01-1020	2014	1	10:16	16.6	5.7	7.1	35,400
n-mt01-1020	2014	1	10:45	17.2	6.7	7.7	30,700
n-133-mt01-1020	2014	1	11:45	17.2	6	7.7	33,000
n-123a-sn03-1020	2014	1	12:00	15.1	6.2	7.8	30,600
n-122c-sn01-1020	2014	1	12:25	16.6	5.9	7.8	33,100
c-ct44-1021	2014	1	8:47	16.3	7.4	7.6	31,100
c-ct44-1021	2014	1	8:47	16.3	7.4	7.6	31,100
s-ct06-1021	2014	1	9:37	16.6	5.9	7.7	32,000
s-ct06-1021	2014	1	9:37	16.6	5.9	7.7	32,000
s-ep21-1021	2014	1	11:50	16.8	6.4	7.7	32,100
s-ct16-1022	2014	1	9:28	16.6	6.1	7.8	32,100
s-ep28-1022	2014	1	9:28	16.6	6.1	7.8	32,100
s-ct36-1023	2014	1	10:10	15.6	7.1	7.8	31,100
s-ep35-1023	2014	1	10:10	15.6	7.1	7.8	31,100
s-gn05-1023	2014	1	9:04	16.1	7.4	7.8	31,600
s-ep35-1023	2014	1	9:55	16.3	6.9	7.7	31,200
c-sn02-1024	2014	1	9:25	14.6	7.8	7.1	29,200
s-ep21-0330	2015	1	13:46	4.6	12.4	7.9	26,100
s-ep21-0330	2015	6	13:49	4.6	11.9	7.9	26,900
s-ep03-0330	2015	1	15:42	4.6	12.5	8.1	24,530
s-ep03-0330	2015	10	15:44	5.3	13.4	8.2	26,120
s-ep10-0330	2015	1	14:20	4.9	12.4	8.4	26,500
s-ep10-0330	2015	7	14:23	4.9	12.5	8	26,700
s-ep18-0330	2015	1	10:48	4.9	12	8	29,500
s-ep03-0330	2015	10	10:51	4.7	11.9	8	30,200
s-ep06-0331	2015	1	9:08	4.6	11	7.8	29,000
s-ep06-0331	2015	4	9:11	4.8	11	7.8	30,400
s-ep02-0401	2015	1	11:25	5.3	10.5	7.8	30,900
s-ep02-0401	2015	5	11:29	4.6	10.7	7.8	31,800
s-ep06-0402	2015	1	8:24	4.7	11.2	7.7	28,000
s-ep06-0402	2015	5	8:28	5.1	10.8	7.8	29,000
s-ep03-0402	2015	1	9:55	5	10.7	7.8	28,500
s-ep03-0402	2015	11	9:58	4.6	10.9	7.8	31,500
s-ep15-0402	2015	5	10:44	6.2	10.5	7.9	28,600
s-ep15-0406	2015	1	10:42	6.6	10.5	7.9	28,400
s-ep11-0407	2015	1	9:06	6.8	10.7	7.9	26,100
s-ep11-0407	2015	5	9:07	6.7	10.8	7.9	26,200
n-tw01-0408	2015	35	9:15	6.9	9.4	7.7	27,400
n-tw01-0408	2015	1	9:15	7.5	9.7	7.7	22,300
c-tw01-0408	2015	1	11:09	6.9	9.9	7.8	28,000
c-tw01-0408	2015	35	11:15	6.5	9.5	7.8	29,900
c-tw01-0409	2015	1	8:50	6.6	9.8	7.8	28,000
c-tw01-0409	2015	35	8:50	6.6	9.9	7.8	29,000

n-tw01-0409	2015	1	9:05	7.3	9.3	7.7	23,600
n-tw01-0409	2015	35	9:05	6.6	9.3	7.8	29,100
s-gn01-0427	2015	1	12:30	10.4	10.1	7.8	20,300
n-gn01-0428	2015	1	9:50	10.4	9.4	7.7	19,000
s-gn01-0429	2015	1	9:05	10.2	10	7.8	21,200
elizabethmarina-0430	2015	1	11:00	10.9	9.8	7.9	22,900
elizabethmarina-0505	2015	1	6:55	12	9.7	7.9	25,000
s-ag01-0505	2015	1	9:15	11.3	10.5	7.9	26,000
s-ag01-0506	2015	1	13:32	12.9	8.4	7.9	26,100
elizabethmarina-0507	2015	1	8:00	12.4	7.8	7.8	25,500
s-ag01-0507	2015	1	18:20	14	9.9	8	26,500
c-gn01-0602	2015	1	9:55	17.1	**	6.6	29,400
elizabethmarina-0602	2015	1	8:35	17.6	9.3	7.2	29,300
c-gn01-0602	2015	1	11:40	17.2	**	7.1	29,300
c-gn03-0602	2015	10	11:40	17.1	**	7.2	30,000
c-tl01-0603	2015	1	11:10	17.2	**	7.1	28,000
c-gn01-0603	2015	10	11:10	17	**	7.1	28,900
n-ag01-0604	2015	1	14:45	17.6	**	7.2	20,000
n-ag01-0604	2015	10	14:45	17.6	**	7.2	20,100
elizabethmarina-0605	2015	1	7:00	17.1	**	7	22,500
n-ep01-0727	2015	1	15:10	25.3	7.6	7.6	32,000
n-ag01-0728	2015	1	15:30	26	7.5	7.6	34,400
n-ag01-0728	2015	3	15:30	23.4	6.3	7.5	36,100
elizabethmarina-0729	2015	1	7:50	24	7.5	**	36,000
c-ag01-0731	2015	1	9:00	24	5.1	7.2	36,300
elizabethmarina-0804	2015	1	7:25	24.1	3.7	7.2	38,000
s-ep01-0804	2015	1	11:30	24.4	5.6	7.1	38,000
n-tw01-0314	2016	1	14:58	7.6	11.8	6.5	21,100
c-gn02-0315	2016	1	12:20	7.5	11.9	**	21,300
n-tw01-0315	2016	1	14:35	8.1	11.6	7.2	24,700
c-gn03-0316	2016	1	12:30	8.3	10.5	7.3	27,000
c-gn01-0317	2016	1	9:00	8.2	10.5	7.5	28,500
n-tw04-0323	2016	1	13:40	8.3	10.2	7.1	25,700
n-tw01-0324	2016	1	8:50	8.3	10.2	7.3	26,700

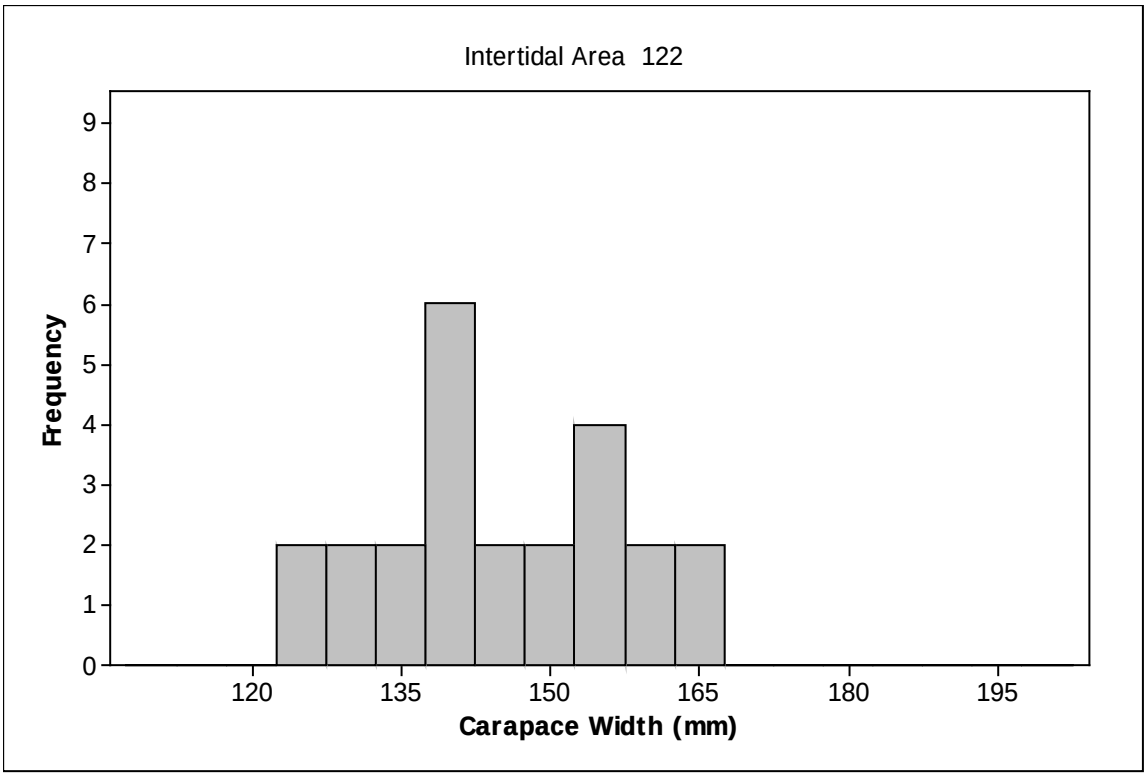
[1] A unique identifier that includes the Zone (**n**orth, **c**entral, **s**outh)-Intertidal Location (if applicable)-sample method (tw = trawl, gn = gillnet, tl =trotline, ct = crab trap, ep = eel pot, sn = seine, ag= angling)-collection date (month and day) used to relate the location coordinate data to water quality data. In a few instances water quality was collected at the Elizabeth Marina boat dock.

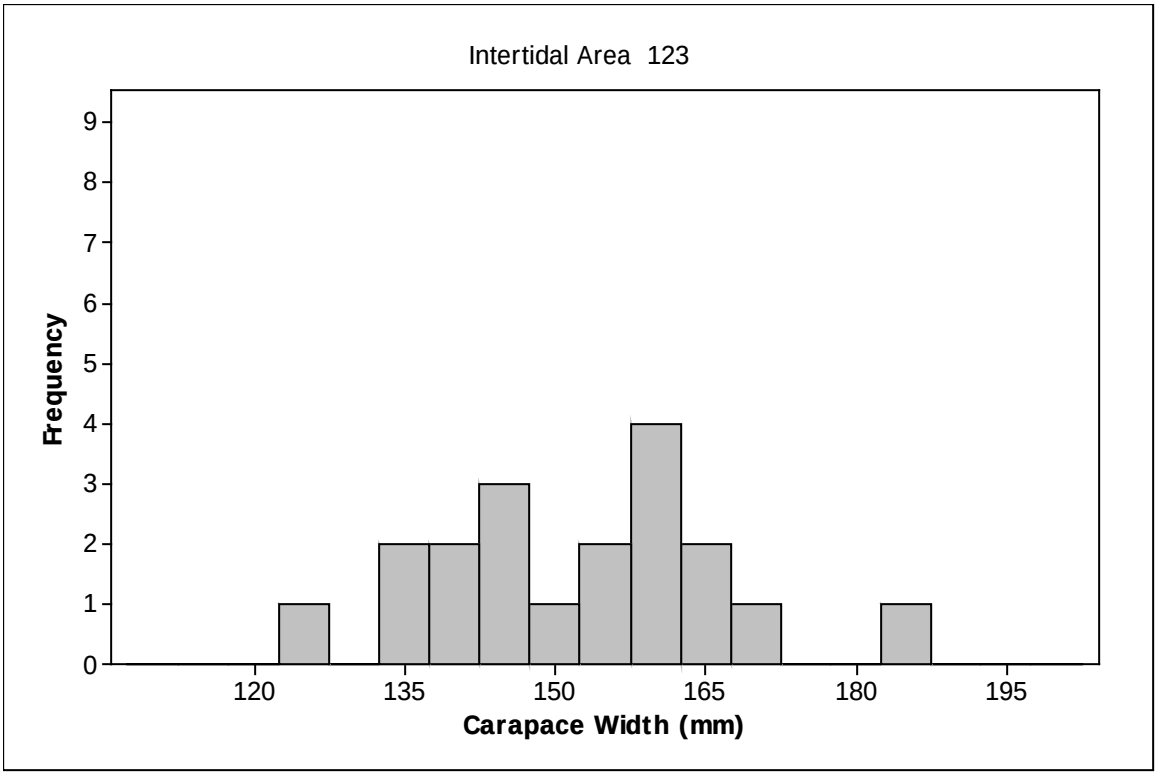
*water quality data collected with a calibrated YSI 556 multiparameter meter

** parameter not collected due to instrumentation problem

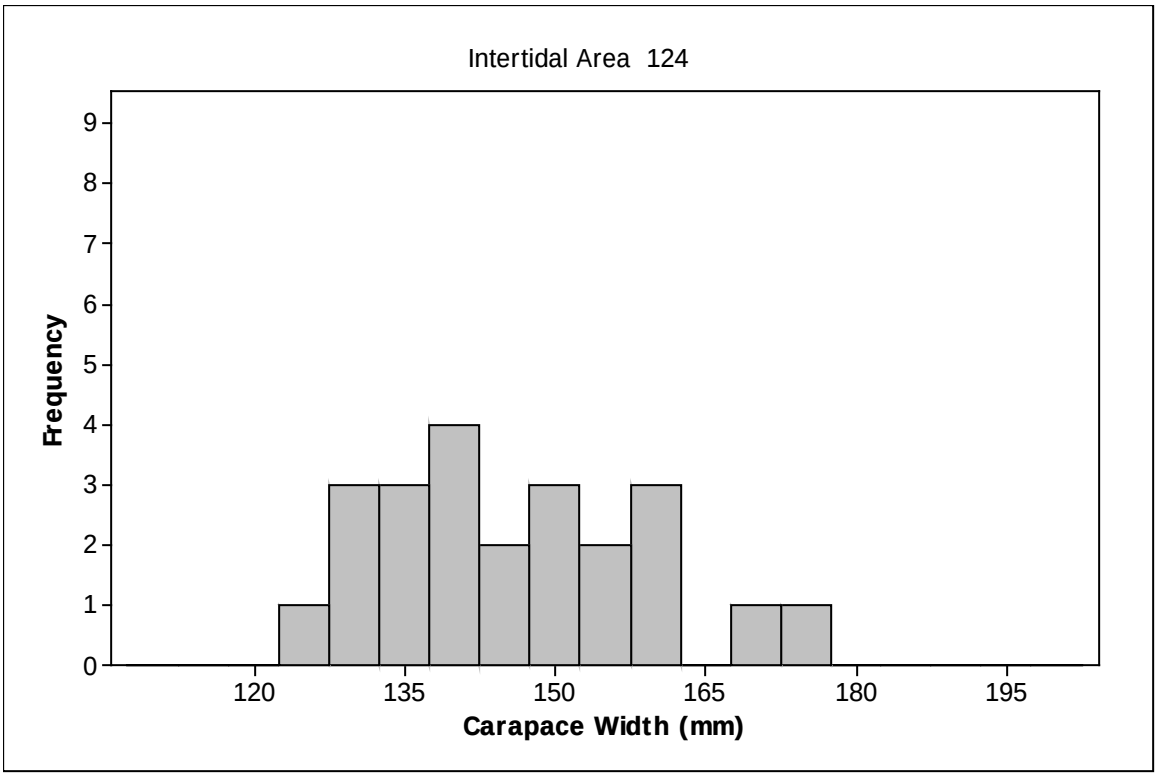
APPENDIX D

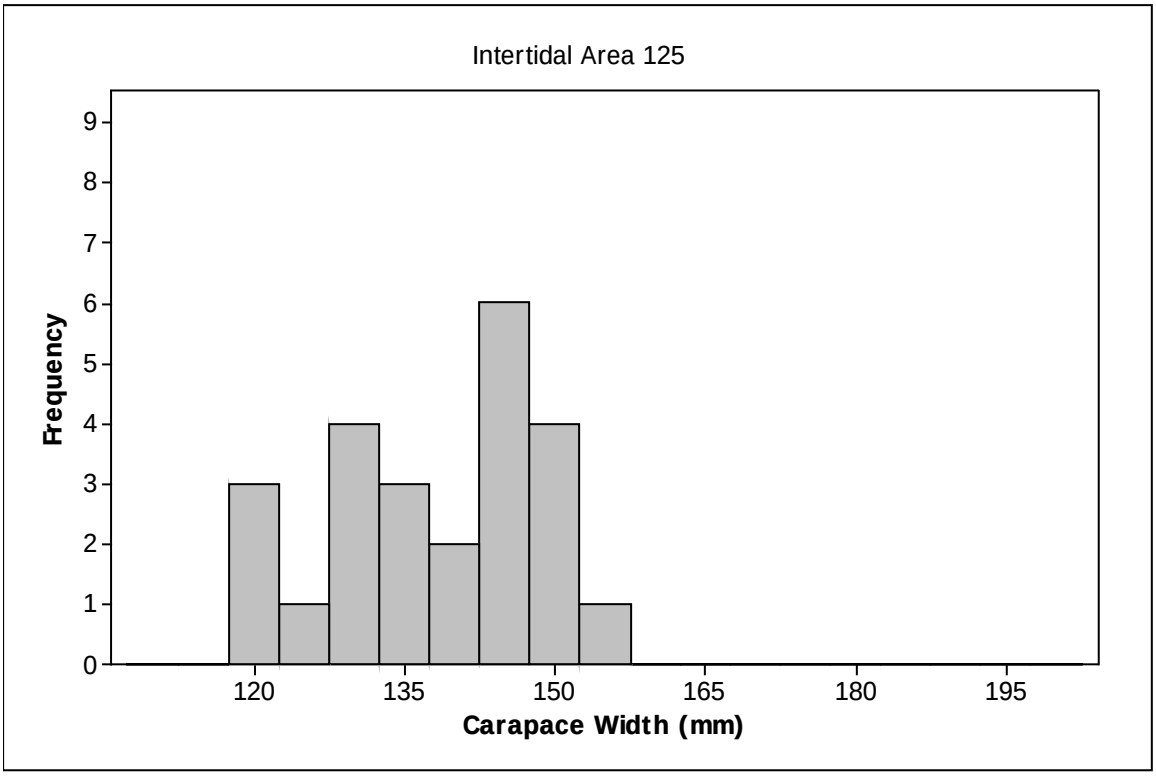
Appendix D. Carapace width-frequency histograms for blue crab collected from intertidal areas in Newark Bay.



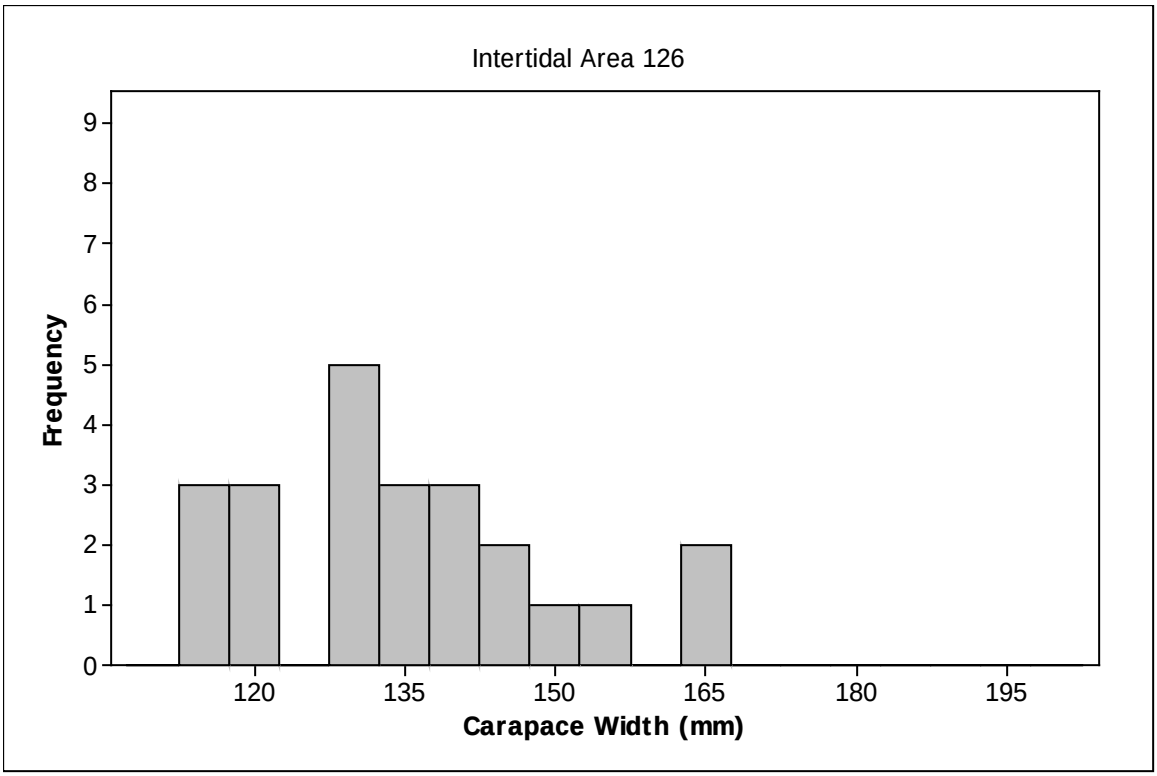


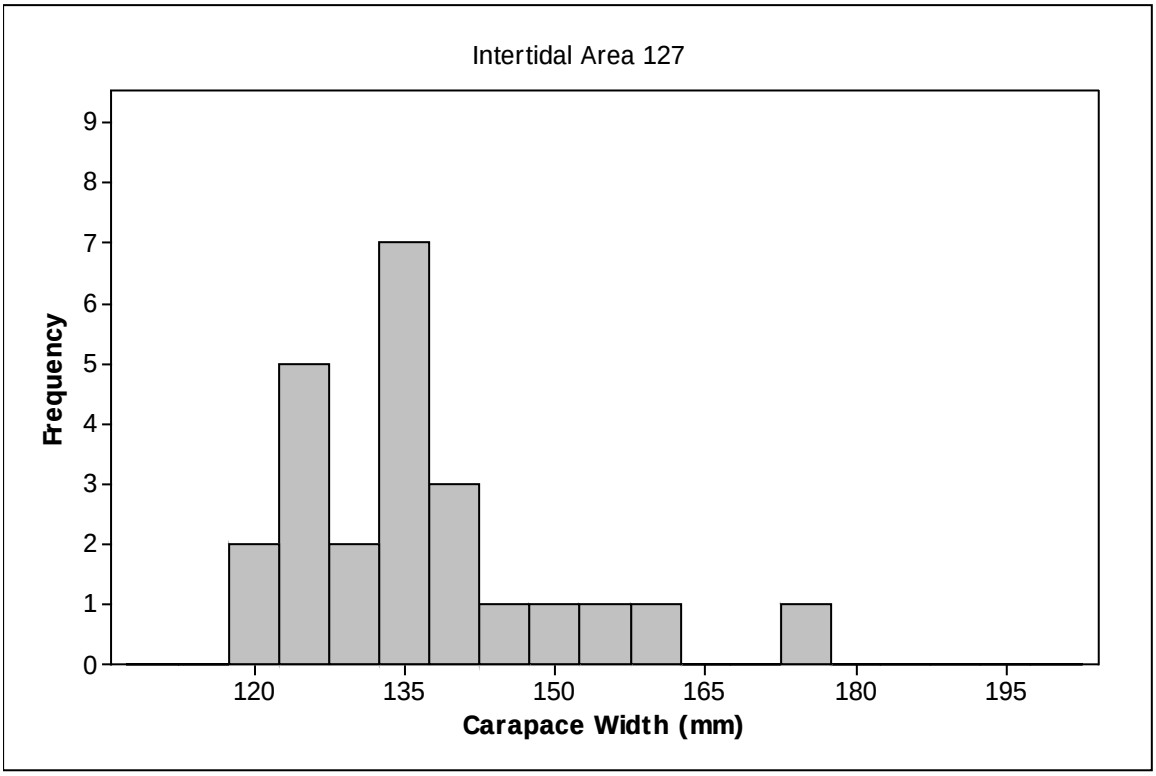
Appendix D. Carapace width-frequency histograms for blue crab collected from intertidal areas in Newark Bay.



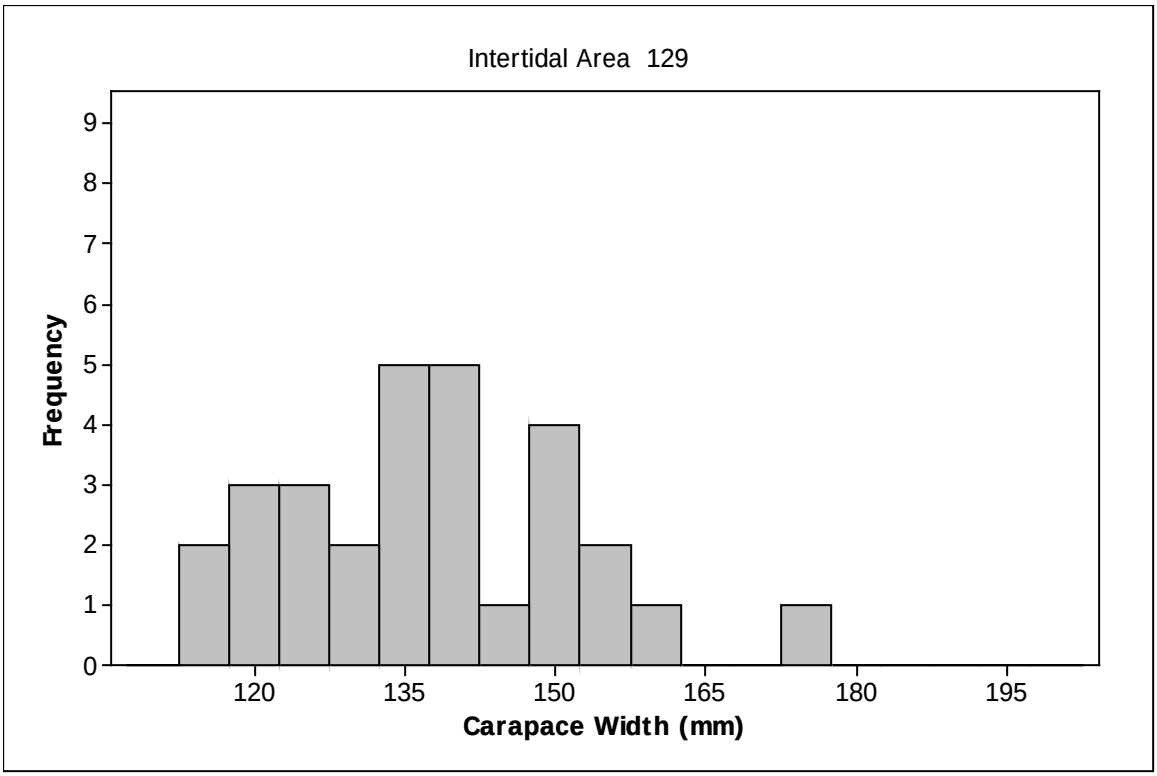


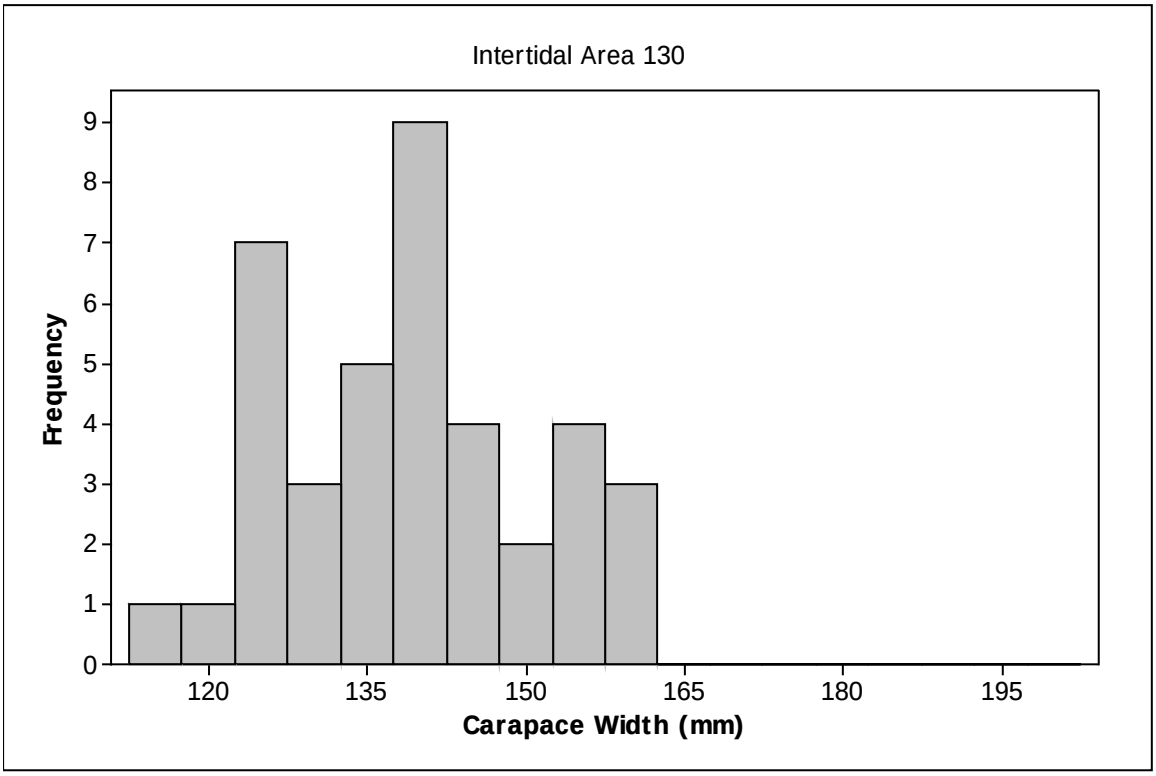
Appendix D. Carapace width-frequency histograms for blue crab collected from intertidal areas in Newark Bay.



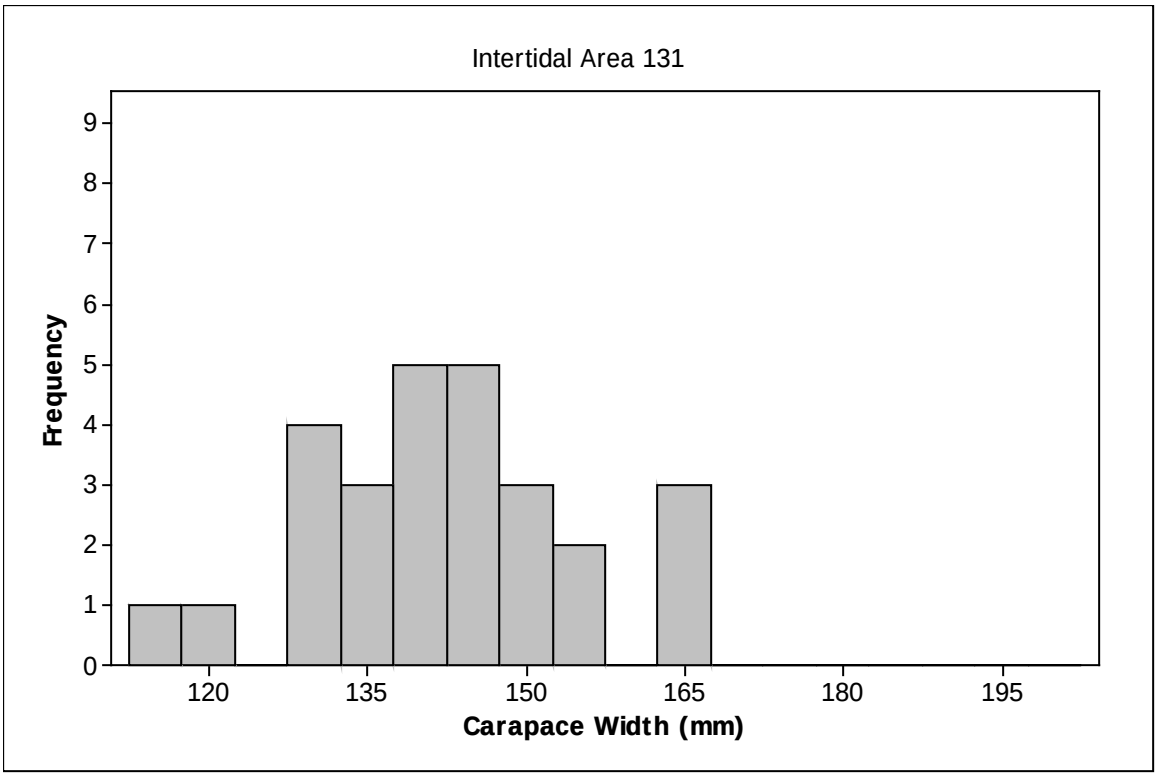


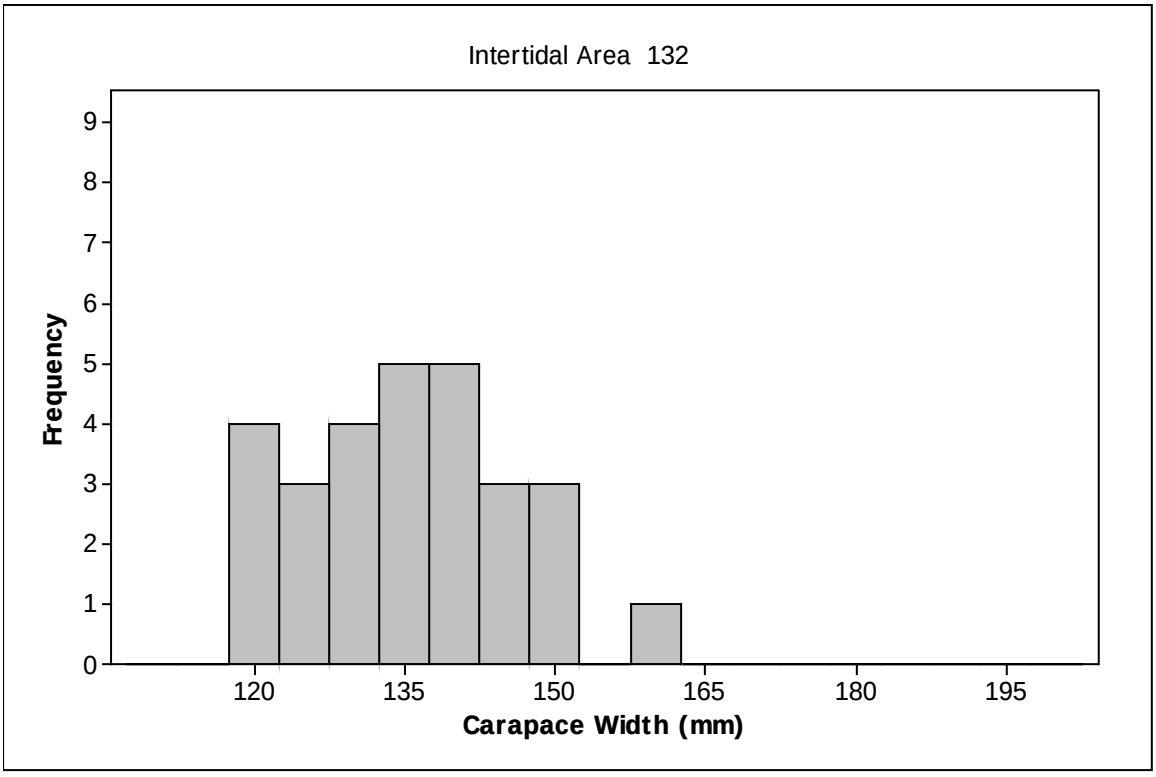
Appendix D. Carapace width-frequency histograms for blue crab collected from intertidal areas in Newark Bay.



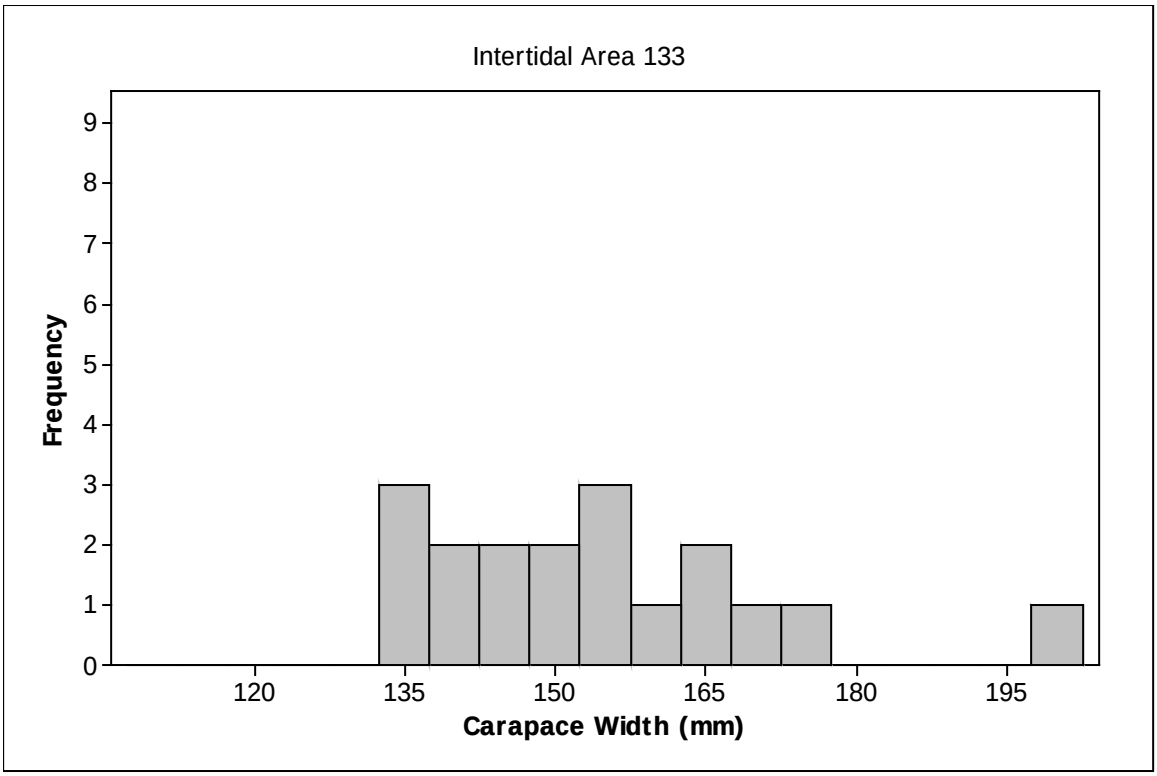


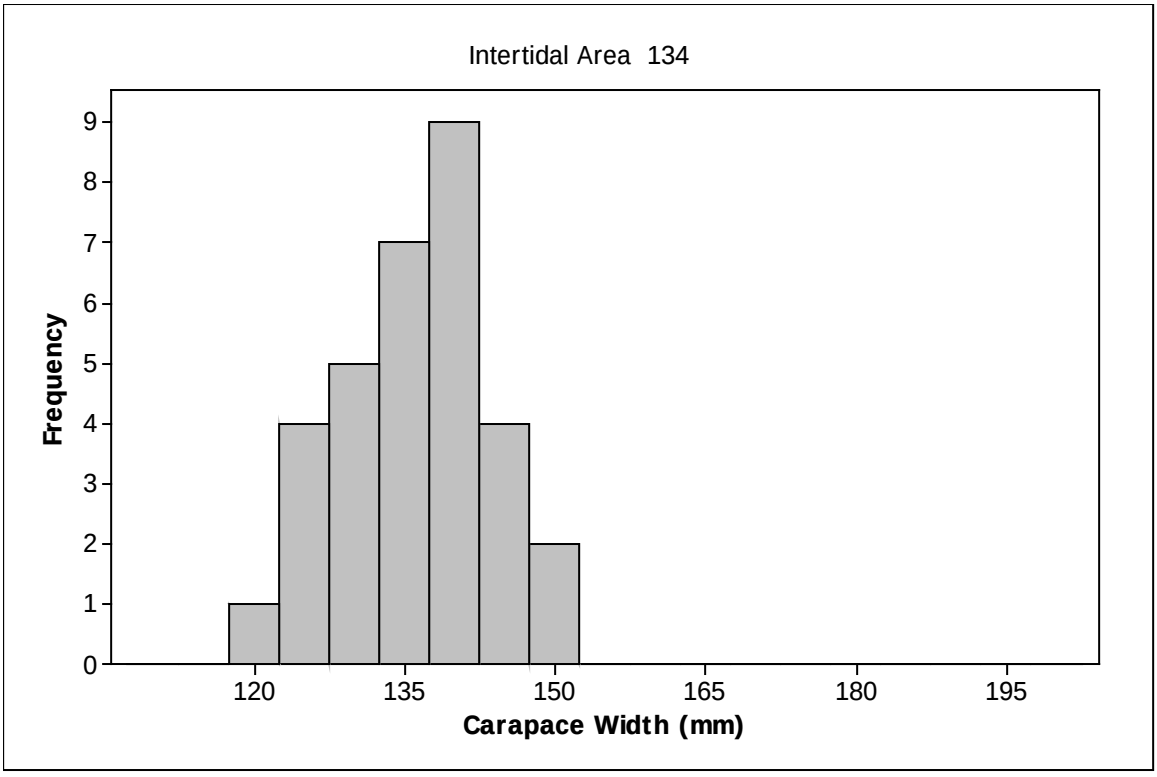
Appendix D. Carapace width-frequency histograms for blue crab collected from intertidal areas in Newark Bay.





Appendix D. Carapace width-frequency histograms for blue crab collected from intertidal areas in Newark Bay.





APPENDIX E

2014

NORMANDEAU
environmental consultants

Attachment 4

DAILY SAFETY BRIEFING

DATE: 9/8/14 11:30 TOWN: Elizabeth NJ LOCATION: Elizabeth City Marina	**CONTACTS:** Bryan Loos **Normandeau Associates:** **CLIENT:** **SUBCONTRACTORS(S):**

Nearest Hospital Location: Trinitas Hospital

End of day check-in: Marina

JOB OVERVIEW

- o Protective clothing
- o Insect protection
- o Sun protection
- o Slip, Trip, Fall
- o Cold/Heat Stress indicators
- o Severe weather
- o Hunting Season
- o End of day check-in

Other: _____

CREW SIGN-IN:

Keith Marburger II
Charles D. Ring
Jayme Schmidt
Bryan Nichols

NORMANDEAU
environmental consultants

Attachment 4

DAILY SAFETY BRIEFING

DATE: 9/9/14

TOWN: Elizabeth NJ

LOCATION: Eliz City Marina

CONTACTS:
Normandeau Associates: Bryan Lees

CLIENT: Tierra Brian Mikuki

SUBCONTRACTORS(S):
EPA - Louise Berger

Nearest Hospital Location: Trinitas Hospital

End of day check-in: Marina

JOB OVERVIEW

- ✓ Protective clothing
- ✓ Insect protection
- ✓ Sun protection
- ✓ Slip, Trip, Fall
- ✓ Cold/Heat Stress indicators
- ○ Severe weather
- ○ Hunting Season
- ○ End of day check-in

Other: _____

CREW SIGN-IN:

Bryan Lees
Jayme Schuff

NORMANDEAU
environmental consultants

Attachment 4

DAILY SAFETY BRIEFING

DATE: 9/10/14

TOWN: Eliz NJ

LOCATION: Eliz City Marina

CONTACTS:
Normandeau Associates: Bryan Lees

CLIENT: Tierra — Brian Mikulki

SUBCONTRACTORS(S):

Nearest Hospital Location: Trinitas

End of day check-in: Marina

JOB OVERVIEW

- ✓ Protective clothing
- ✓ Insect protection
- ✓ Sun protection
- ✓ Slip, Trip, Fall
- o Cold/Heat Stress indicators
- o Severe weather
- o Hunting Season
- o End of day check-in

Other:

CREW SIGN-IN: BATTELLE

FTS

Rev 1

NORMANDEAU
environmental consultants

Attachment 4

DAILY SAFETY BRIEFING

DATE: 9/11/14

TOWN: Eliz. NJ

LOCATION: Eliz. City Marina
St 132, Newark

CONTACTS:
Normandeau Associates: Bryan Lees

CLIENT: Tierra – Brian Mikulki

SUBCONTRACTORS(S):

Nearest Hospital Location: Trinitas

End of day check-in: Marina

JOB OVERVIEW

- o Protective clothing
- o Insect protection
- o Sun protection
- o Slip, Trip, Fall
- o Cold/Heat Stress indicators
- o Severe weather
- o Hunting Season
- o End of day check-in

Other: _____

CREW SIGN-IN:

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environmental consultants

Attachment 4

DAILY SAFETY BRIEFING

DATE: 9/15/14

TOWN: Elizabeth NJ

LOCATION: Residence Inn

CONTACTS:
Normandeau Associates: Bryan Lees

CLIENT: Tierra Solns

SUBCONTRACTORS(S):

Nearest Hospital Location: Trinitas

End of day check-in: Eliz Marina

JOB OVERVIEW

- o Protective clothing
- o Insect protection
- o Sun protection
- o Slip, Trip, Fall
- o Cold/Heat Stress indicators
- o Severe weather
- o Hunting Season
- o End of day check-in

Other: _____

CREW SIGN-IN:

LBG

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environmental consultants

Attachment 4

DAILY SAFETY BRIEFING

DATE: 9/16/14

TOWN: Elizabeth NJ

LOCATION: Eliz. Marina

CONTACTS:
Normandeau Associates: Bryan Lees

CLIENT: Tierra Sol'n - Brian Mikuki

SUBCONTRACTORS(S):
Jordan - L-B

Nearest Hospital Location: Trinitas

End of day check-in: Eliz. Marina

JOB OVERVIEW

- ✓ Protective clothing
- ✓ Insect protection
- ✓ Sun protection
- ✓ Slip, Trip, Fall
- ✓ Cold/Heat Stress indicators
- ✓ Severe weather
- o Hunting Season
- ✓ End of day check-in

Other: _____

CREW SIGN-IN:

NORMANDEAU
environmental consultants

Attachment 4

DAILY SAFETY BRIEFING

DATE: 9/17/14 TOWN: Elizabeth LOCATION: Eliz Marina 7:25	CONTACTS: **Normandeau Associates:** Bryan Lees **CLIENT:** Tierra Solm Brian Mitzel **SUBCONTRACTORS(S):** Xiulan Wang (Louis Berger)

Nearest Hospital Location: Trinitas

End of day check-in: Eliz. Marina

JOB OVERVIEW

- o Protective clothing
- o Insect protection
- o Sun protection
- o Slip, Trip, Fall
- o Cold/Heat Stress indicators
- o Severe weather
- o Hunting Season
- o End of day check-in

Other: _____

CREW SIGN-IN:

Jayme Schaufl

Rudolph Klo

Charles D Hay

NORMANDEAU
environmental consultants

Attachment 4

DAILY SAFETY BRIEFING

DATE: 9/18/14

TOWN: Elizabeth NJ

LOCATION: Eliz. Marina

CONTACTS:
Normandeau Associates: Bryan Lees

CLIENT: Tierra Sol'n - Brian Mikula

SUBCONTRACTORS(S):

Nearest Hospital Location: Trinitas

End of day check-in: Eliz. Marina

JOB OVERVIEW

- o Protective clothing
- o Insect protection
- o Sun protection
- o Slip, Trip, Fall
- o Cold/Heat Stress indicators
- o Severe weather
- o Hunting Season
- o End of day check-in

Other: _____

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Attachment 4

DAILY SAFETY BRIEFING

DATE: 9/19/14

TOWN: Eliz NJ

LOCATION: Eliz Marina

CONTACTS:
Normandeau Associates: Bryan Lees

CLIENT: Brian Mikuki - Tierra Solns

SUBCONTRACTORS(S):
Sue Lindstrom - L-B

Nearest Hospital Location: Trinitas

End of day check-in: Eliz. Marina

JOB OVERVIEW

- o Protective clothing
- o Insect protection
- o Sun protection
- o Slip, Trip, Fall
- o Cold/Heat Stress indicators
- o Severe weather
- o Hunting Season
- o End of day check-in

Other: _____

CREW SIGN-IN:

Bryan Lees
Jayme Schultz
Jack Mayfield
Brian Mikuki
Susan Lindstrom
Charles D. Dix

NORMANDEAU
environmental consultants

Attachment 4

DAILY SAFETY BRIEFING

DATE: 9/22/14

TOWN: Elizabeth

LOCATION: Eliz. Marina

CONTACTS:
Normandeau Associates: Bryan Lees

CLIENT: Brian Mikuki - Tierra Solns

SUBCONTRACTORS(S):

Nearest Hospital Location: Trinitas

End of day check-in: Eliz. Marina

JOB OVERVIEW

- o Protective clothing
- o Insect protection
- o Sun protection
- o Slip, Trip, Fall
- o Cold/Heat Stress indicators
- o Severe weather
- o Hunting Season
- o End of day check-in

Other: _____

CREW SIGN-IN:

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NORMANDEAU
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Attachment 4

DAILY SAFETY BRIEFING

DATE: 9/23/14 TOWN: Eliz. NJ LOCATION: Eliz. Marina	CONTACTS: **Normandeau Associates:** Bryan Lees CLIENT: Brian Mikulski - Tierra **SUBCONTRACTORS(S):**

Nearest Hospital Location: Trinitas

End of day check-in: Eliz. Marina

JOB OVERVIEW

- o Protective clothing
- o Insect protection
- o Sun protection
- o Slip, Trip, Fall
- o Cold/Heat Stress indicators
- o Severe weather
- o Hunting Season
- o End of day check-in

Other: _____

CREW SIGN-IN:

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Attachment 4

DAILY SAFETY BRIEFING

DATE: 9/24/14

TOWN: Eliz NJ

LOCATION: Eliz. Marina

CONTACTS:
Normandeau Associates: Bayan Coes

CLIENT: Tierra – Brian Mikuki

SUBCONTRACTORS(S):
Sue Lindstrom-LB

Nearest Hospital Location: Trinitas

End of day check-in: Eliz. Marina.

JOB OVERVIEW

- o Protective clothing
- o Insect protection
- o Sun protection
- o Slip, Trip, Fall
- o Cold/Heat Stress indicators
- o Severe weather
- o Hunting Season
- o End of day check-in

Other: _____

CREW SIGN-IN:

Rus
James Luttrell
Charles D. Dix
Brian Shanks
Susan Lindstrom

NORMANDEAU
environmental consultants

Attachment 4

DAILY SAFETY BRIEFING

DATE: 9/25/14

TOWN: Eliz. NJ

LOCATION: Eliz. Marina

CONTACTS:
Normandeau Associates: Bryan Lees

CLIENT: Brian Mikulki - TIERRA

SUBCONTRACTORS(S):

Nearest Hospital Location: Trin Tas

End of day check-in: Eliz Marina

JOB OVERVIEW

- o Protective clothing
- o Insect protection
- o Sun protection
- o Slip, Trip, Fall
- o Cold/Heat Stress indicators
- o Severe weather
- o Hunting Season
- o End of day check-in

Other: _____

CREW SIGN-IN:

Bryan Lees

Brian Mikulki

Jayme Schmidt

Charles D. Sipp

NORMANDEAU
environmental consultants

Attachment 4

DAILY SAFETY BRIEFING

DATE: 9/26/14

TOWN: Eliz.

LOCATION: Eliz. Marina

CONTACTS:
Normandeau Associates: Bryan Lees

CLIENT: Tierra - Brian Mikuki

SUBCONTRACTORS(S):
Jordan Goldstein

Nearest Hospital Location: Trinitas

End of day check-in: Eliz. Marina

JOB OVERVIEW

- d Protective clothing
- o Insect protection
- o Sun protection
- o Slip, Trip, Fall
- o Cold/Heat Stress indicators
- o Severe weather
- o Hunting Season
- o End of day check-in

Other: _____

CREW SIGN-IN:

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Attachment 4

DAILY SAFETY BRIEFING

DATE: 9/29/14 TOWN: Elizabeth, NS LOCATION: Elizabeth Marina @ 1050	CONTACTS: **Normandeau Associates:** CLIENT: Tierra **SUBCONTRACTORS(S):**

Nearest Hospital Location: _____

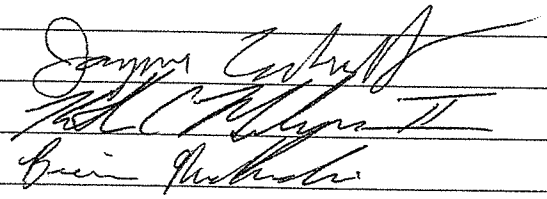
End of day check-in: _____

JOB OVERVIEW

- ✓ Protective clothing
- ✓ Insect protection
- ✓ Sun protection
- ✓ Slip, Trip, Fall
- ✓ Cold/Heat Stress indicators
- o Severe weather
- o Hunting Season
- o End of day check-in

Other: Crab Traps Site 126 Deployment

CREW SIGN-IN:



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Attachment 4

DAILY SAFETY BRIEFING

DATE: 9/30/14

TOWN: Elizabeth, NJ

LOCATION: Elizabeth Marina @ 1020

CONTACTS:
Normandeau Associates:

CLIENT: Tierra

SUBCONTRACTORS(S):

Nearest Hospital Location: _____

End of day check-in: _____

JOB OVERVIEW

- ✓ Protective clothing
- ✓ Insect protection
- ✓ Sun protection
- ✓ Slip, Trip, Fall
- ✓ Cold/Heat Stress indicators
- ✓ Severe weather
- o Hunting Season
- ✓ End of day check-in

Other: Crab Pots @ 126

CREW SIGN-IN:

Wayne Schadt
Susan Lindstrom
Brian Yurkiewicz
Kelly Myers

Rev 1

NORMANDEAU
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Attachment 4

DAILY SAFETY BRIEFING

DATE: 10/1/14 TOWN: Elizabeth, NJ LOCATION: Elizabet Marina	CONTACTS: **Normandeau Associates:** CLIENT: Tierra **SUBCONTRACTORS(S):**

Nearest Hospital Location: _____

End of day check-in: _____

JOB OVERVIEW

- Protective clothing
- Insect protection
- Sun protection
- Slip, Trip, Fall
- Cold/Heat Stress indicators
- Severe weather
- Hunting Season
- End of day check-in

Other: Crab Pots @ 125

CREW SIGN-IN:

Jayme Schaaff
Brian Richardson
Lisa Lindelof
Matt Mahoney

Rev 1

NORMANDEAU
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Attachment 4

DAILY SAFETY BRIEFING

DATE: 10/2/14 TOWN: Elizabeth, NJ LOCATION: Elizabeth Marina	CONTACTS: **Normandeau Associates:** CLIENT: Tierra **SUBCONTRACTORS(S):**

Nearest Hospital Location: _____

End of day check-in: _____

JOB OVERVIEW

- Protective clothing
- Insect protection
- Sun protection
- Slip, Trip, Fall
- Cold/Heat Stress indicators
- Severe weather
- Hunting Season
- End of day check-in

Other: Crab Pots @ 124, 125

CREW SIGN-IN:

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Attachment 4

DAILY SAFETY BRIEFING

DATE: 10/3/14

TOWN: Elizabeth, NJ

LOCATION: Elizabeth Marina

CONTACTS:
Normandeau Associates:

CLIENT: Tierra

SUBCONTRACTORS(S):

Nearest Hospital Location: _____

End of day check-in: _____

JOB OVERVIEW

- [x] Protective clothing
- [x] Insect protection
- [x] Sun protection
- [x] Slip, Trip, Fall
- [x] Cold/Heat Stress indicators
- [x] Severe weather
- [x] Hunting Season
- [x] End of day check-in

Other: ST 124 CRABS

CREW SIGN-IN:

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Attachment 4

DAILY SAFETY BRIEFING

DATE: 10/6/14	**CONTACTS:**
TOWN: Eliz.	**Normandeau Associates:** Bryan Lees
LOCATION: Eliz Marina	**CLIENT:** Tierra Solin
	SUBCONTRACTORS(S):

Nearest Hospital Location: Trinitas

End of day check-in: Eliz. Marina

JOB OVERVIEW

- o Protective clothing
- o Insect protection
- o Sun protection
- o Slip, Trip, Fall
- o Cold/Heat Stress indicators
- o Severe weather
- o Hunting Season
- o End of day check-in

Other: _____

CREW SIGN-IN:

Bryan Lees

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environmental consultants

Attachment 4

DAILY SAFETY BRIEFING

DATE: 10/7/14	**CONTACTS:**
TOWN: Eliz NJ	**Normandeau Associates:** Bryan Lees
LOCATION: Eliz Marina	**CLIENT:** Tierra Solin
	SUBCONTRACTORS(S):

Nearest Hospital Location: _____

End of day check-in: _____

JOB OVERVIEW

- o Protective clothing
- o Insect protection
- o Sun protection
- o Slip, Trip, Fall
- o Cold/Heat Stress indicators
- o Severe weather
- o Hunting Season
- o End of day check-in

Other: _____

CREW SIGN-IN:

Carly Thompson

Jennifer Schultz

Rev 1

NORMANDEAU
environmental consultants

Attachment 4

DAILY SAFETY BRIEFING

DATE: 10/8/14 TOWN: Eliz NH LOCATION: Eliz Marina	**CONTACTS:** **Normandeau Associates:** **CLIENT:** **SUBCONTRACTORS(S):**

Nearest Hospital Location: Wentworth
End of day check-in: Eliz Marina

JOB OVERVIEW

- o Protective clothing
- o Insect protection
- o Sun protection
- o Slip, Trip, Fall
- o Cold/Heat Stress indicators
- o Severe weather
- o Hunting Season
- o End of day check-in

Other: _____

CREW SIGN-IN:

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Attachment 4

DAILY SAFETY BRIEFING

DATE: 10/9/14

TOWN: Eliz. NJ

LOCATION: Eliz. Marina

CONTACTS:
Normandeau Associates: Bryan Lees

CLIENT: Tierra Soln

SUBCONTRACTORS(S):

Nearest Hospital Location: Trinitas

End of day check-in: Eliz. Marina

JOB OVERVIEW

- o Protective clothing
- o Insect protection
- o Sun protection
- o Slip, Trip, Fall
- o Cold/Heat Stress indicators
- o Severe weather
- o Hunting Season
- o End of day check-in

Other: _____

CREW SIGN-IN:

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Attachment 4

DAILY SAFETY BRIEFING

DATE: 10/10/14 TOWN: Elizabeth, NJ LOCATION: Newark Bay	**CONTACTS:** **Normandeau Associates:** **CLIENT:** Tierra **SUBCONTRACTORS(S):**

Nearest Hospital Location: _____

End of day check-in: _____

JOB OVERVIEW

- o Protective clothing
- o Insect protection
- o Sun protection
- o Slip, Trip, Fall
- o Cold/Heat Stress indicators
- o Severe weather
- o Hunting Season
- o End of day check-in

Other: _____

CREW SIGN-IN:

NORMANDEAU
environmental consultants

Attachment 4

DAILY SAFETY BRIEFING

DATE: 10-13-14 TOWN: Elizabeth LOCATION: Elizabeth Marina	**CONTACTS:** **Normandeau Associates:** **CLIENT:** Tierra. **SUBCONTRACTORS(S):**

Nearest Hospital Location: _____

End of day check-in: _____

JOB OVERVIEW

- o Protective clothing
- o Insect protection
- o Sun protection
- o Slip, Trip, Fall
- o Cold/Heat Stress indicators
- o Severe weather
- o Hunting Season
- o End of day check-in

Other: Crab pots ~~133~~ KOM 132
Beach Seine 132

CREW SIGN-IN:

NORMANDEAU
environmental consultants

Attachment 4

DAILY SAFETY BRIEFING

DATE: 10-14-13 TOWN: Elizabeth LOCATION: Elizabeth Marina	**CONTACTS:** **Normandeau Associates:** **CLIENT:** Tierra **SUBCONTRACTORS(S):** LB

Nearest Hospital Location: _____

End of day check-in: _____

JOB OVERVIEW

- o Protective clothing
- o Insect protection
- o Sun protection
- o Slip, Trip, Fall
- o Cold/Heat Stress indicators
- o Severe weather
- o Hunting Season
- o End of day check-in

Other: 133 Crab Pot Retrieval
Set Crab pots
Possible Beach Seine.

CREW SIGN IN:

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environmental consultants

Attachment 4

DAILY SAFETY BRIEFING

DATE: 10/15/14 TOWN: Elizabeth, NJ LOCATION: Elizabeth Marina	**CONTACTS:** **Normandeau Associates:** **CLIENT:** Tierra **SUBCONTRACTORS(S):**

Nearest Hospital Location: _____

End of day check-in: _____

JOB OVERVIEW

- Protective clothing
- Insect protection
- Sun protection
- Slip, Trip, Fall
- Cold/Heat Stress indicators
- Severe weather
- Hunting Season
- End of day check-in

Other: Crab Pots From North & Central Zones

CREW SIGN-IN:

Jayne Schmidt

Xiulan Wang

NORMANDEAU
environmental consultants

Attachment 4

DAILY SAFETY BRIEFING

DATE: 10/16/14 TOWN: Elizabeth LOCATION: Elizabeth Marina	**CONTACTS:** **Normandeau Associates:** **CLIENT:** Tierra **SUBCONTRACTORS(S):**

Nearest Hospital Location: _____

End of day check-in: _____

JOB OVERVIEW

- o Protective clothing
- o Insect protection
- o Sun protection
- ✓ Slip, Trip, Fall
- o Cold/Heat Stress indicators
- ✓ Severe weather
- o Hunting Season
- o End of day check-in

Other: GIL NET
CRAB POTS

CREW SIGN-IN:

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NORMANDEAU
environmental consultants

Attachment 4

DAILY SAFETY BRIEFING

DATE: 10/17/14 TOWN: Elizabeth LOCATION: Elizabeth Mayinan	**CONTACTS:** **Normandeau Associates:** **CLIENT:** **SUBCONTRACTORS(S):**

Nearest Hospital Location: Elizabeth NJ

End of day check-in: Lister Lab

JOB OVERVIEW

- ☒ Protective clothing
- ○ Insect protection
- ○ Sun protection
- ☒ Slip, Trip, Fall
- ○ Cold/Heat Stress indicators
- ○ Severe weather
- ○ Hunting Season
- ○ End of day check-in

Other: Small boat seining - PFDs

CREW SIGN-IN:

Chris Burrell

Rev 1

NORMANDEAU
environmental consultants

Attachment 4

DAILY SAFETY BRIEFING

DATE: 10-20-14 TOWN: Elizabeth, NJ LOCATION: Elizabeth Marina	**CONTACTS:** **Normandeau Associates:** **CLIENT:** Tierra **SUBCONTRACTORS(S):** L. B.

Nearest Hospital Location: _____

End of day check-in: _____

JOB OVERVIEW

- o Protective clothing
- o Insect protection
- o Sun protection
- o Slip, Trip, Fall
- o Cold/Heat Stress indicators
- o Severe weather
- o Hunting Season
- o End of day check-in

Other: _____

CREW SIGN-IN:

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NORMANDEAU
environmental consultants

Attachment 4

DAILY SAFETY BRIEFING

DATE: 10-21-14 TOWN: Elizabeth LOCATION: Elizabeth Marina	**CONTACTS:** **Normandeau Associates:** **CLIENT:** Tierra **SUBCONTRACTORS(S):** L. B.

Nearest Hospital Location: _____

End of day check-in: _____

JOB OVERVIEW

- o Protective clothing
- o Insect protection
- o Sun protection
- o Slip, Trip, Fall
- o Cold/Heat Stress indicators
- o Severe weather
- o Hunting Season
- o End of day check-in

Other: - Central/South Crab Pots
- South Eel pots
-

CREW SIGN-IN:

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DAILY SAFETY BRIEFING

DATE: 10/22/14

TOWN: Elizabeth

LOCATION: Elizabeth Marina

CONTACTS:
Normandeau Associates:

CLIENT: Tierra

SUBCONTRACTORS(S):

Nearest Hospital Location: Elizabeth Marina

End of day check-in: _____

JOB OVERVIEW

- [x] Protective clothing
- [ ] Insect protection
- [ ] Sun protection
- [x] Slip, Trip, Fall
- [ ] Cold/Heat Stress indicators
- [x] Severe weather
- [ ] Hunting Season
- [ ] End of day check-in

Other: Crab Pots, Eel Pots, Gill Net

CREW SIGN-IN:

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Attachment 4

DAILY SAFETY BRIEFING

DATE: 10/23/14

TOWN: Elizabeth

LOCATION: Elizabeth Marina

CONTACTS:
Normandeau Associates:

CLIENT: Tierra Solutions

SUBCONTRACTORS(S): LB

Nearest Hospital Location: Elizabeth, NY

End of day check-in:

JOB OVERVIEW

- o Protective clothing
- o Insect protection
- o Sun protection
- ✓ Slip, Trip, Fall
- o Cold/Heat Stress indicators
- ✓ Severe weather
- o Hunting Season
- o End of day check-in

Other: Nets, Crab Traps, Eel Pots

CREW SIGN-IN:

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environmental consultants

Attachment 4

DAILY SAFETY BRIEFING

DATE: 10/24/14

TOWN: Elizabeth, NJ

LOCATION: Elizabeth Marina

CONTACTS:
Normandeau Associates:

CLIENT: Tierra

SUBCONTRACTORS(S):

Nearest Hospital Location: Elizabeth, NJ

End of day check-in: _____

JOB OVERVIEW

- o Protective clothing
- o Insect protection
- o Sun protection
- ✓ Slip, Trip, Fall
- o Cold/Heat Stress indicators
- o Severe weather
- o Hunting Season
- o End of day check-in

Other: Gill Net, Crab Traps
Seine, Eel Pots

CREW SIGN-IN:

Rev 1

NB03CLM 122a

Newark Bay Phase III Study
Tierra Solutions
East Brunswick, NJ

SOFTSHELL CLAM COLLECTION FIELD DATA SHEET

Date: 9/17/14

Intertidal Location: 122a

Signature: [signature]

Arrival Time: 0900

Departure Time: 1050

Crew: BW, CSD, KCM, JBS

LOW TIDE: 1017

Weather conditions: clear, sunny, 60°F

TASKS:

1. Navigate to GPS coordinates for center point of clam investigation (~~mark with flag~~) BW based on RAPP this location was
   Northing: 686666.38 Easting: 600057.00 several ft deep @ low tide
2. Collect softshell clam (Mya arenaria) with clam shovel. Retain individuals that are at least 1.5 inches from anterior to posterior. N = 53 retained clams collections occurred several hundred ft inshore from this point.
3. GPS coordinates for location of each retained softshell clam hole:

Clam No.	Northing	Easting	Clam No.	Northing	Easting
1	686897.41	599735.58	14	686876.37	599708.10
2	686904.66	599736.36	15	686879.67	599705.01
3	686903.97	599734.02	16	686874.42	599703.72
4	686889.50	599733.28	17	686878.73	599702.17
5	686887.86	599728.30	18	686874.00	599698.07
6	686892.5	599725.08	19	686876.49	599689.36
7	686895.66	599724.23	20	686866.77	599698.84
8	686894.63	599713.24	21	686862.21	599694.35
9	686897.60	599718.59	22	686864.82	599690.69
10	686885.21	599717.62	23	686861.16	599689.15
11	686887.13	599714.64	24	686860.91	599683.81
12	686883.04	599712.08	25	686852.30	599695.35
13	686879.17	599710.24	26	686855.06	599680.02
			27.	686850.65	599679.47

4. Rinse collected clams with ambient water and scrub clean with brush to remove sediment and place in labeled storage bag. ✓
5. Photograph collection location and complete batch of all clams.
   Photolog:
6. Place labeled bag on wet ice in lab cooler. ✓

Additional Notes: station near edge of project boundary

NB03CLM 122B

Newark Bay Phase III Study
Tierra Solutions
East Brunswick, NJ

SOFTSHELL CLAM COLLECTION FIELD DATA SHEET

Intertidal Location: 122 B

Date: 9/18/14

Arrival Time: 0905 hrs

Signature: Bryan Lu

Departure Time: 1040 hrs

Crew: BWL, CDD, JBS, KCM

Weather conditions: sunny, 55°F

LOW TIDE: 11:12

TASKS:

1. Navigate to GPS coordinates for center point of clam investigation (mark with flag)
   Northing: 686886.76 Easting: 600213.74
2. Collect softshell clam (Mya arenaria) with clam shovel. Retain individuals that are at least 1.5 inches from anterior to posterior. Found first >1.5" clam @ 930hrs N=88 retained
3. GPS coordinates for location ~~of each retained~~ softshell clam ~~hole~~: Bow of edge of collection.

Clam No.	Northing	Easting	Clam No.	Northing	Easting
1	~~686886.76~~	~~600213.74~~ Bow	14	687011.99	599949.08
2	~~687105.43~~	~~600201.16~~ Bow	15	687048.31	599919.69
3	~~687151.16~~	~~600208.26~~ Bow	16	687029.99	599910.71
4	~~687103.35~~	~~600180.65~~ Bow	17	687020.12	599916.95
5	~~687144.78~~	~~600156.52~~ Bow	18		
6	~~687091.84~~	~~600164.86~~ Bow	19		
7	~~687115.50~~	~~600131.58~~ Bow	20		
8	~~687097.55~~	~~600141.77~~ Bow	21		
9	687073.74	599959.12	22		
10	687072.02	599942.33	23		
11	687049.71	599944.13	24		
12	687037.09	599948.42	25		
13	687017.40	599956.10	26		

4. Rinse collected clams with ambient water and scrub clean with brush to remove sediment and place in labeled storage bag.
5. Photograph collection location and complete batch of all clams.
   Photolog: 167 - 2034
   167 - 2035
6. Place labeled bag on wet ice in lab cooler.

Additional Notes: * Based on QAPP the GPS coordinates were collected to establish the perimeter of the retained clam collection. Previously, GPS coordinates were recorded for all holes of retained clams with exception of holes within 24" were midpoint was recorded.

NB03CLM 122C

Newark Bay Phase III Study
Tierra Solutions
East Brunswick, NJ

SOFTSHELL CLAM COLLECTION FIELD DATA SHEET

Intertidal Location: 122C

Date: 9/18/14

Arrival Time: 1041

Signature: Bryan Lee

Departure Time: 1140

Crew: BWM JBS, CAD, KCM

Weather conditions: sunny, 70°F

LOW TIDE: 11:12

TASKS:

1. Navigate to GPS coordinates for center point of clam investigation (mark with flag)
   Northing: 686897.49 Easting: 600496.69
2. Collect softshell clam (Mya arenaria) with clam shovel. Retain individuals that are at least 1.5 inches from anterior to posterior. N=90, only 82 atleast 1.5" after lab processing.
3. GPS coordinates for ~~location of each retained softshell clam hole~~: the perimeter of the retained softshell clams

Clam No.	Northing	Easting	Clam No.	Northing	Easting
1	686886.76	600213.74	14		
2	687105.43	600101.16	15		
3	687151.16	600208.26	16		
4	687103.35	600180.65	17		
5	687114.78	600156.52	18		
6	687091.04	600164.82	19		
7	687115.50	600131.58	20		
8	687097.55	600141.77	21		
9			22		
10			23		
11			24		
12			25		
13			26		

4. Rinse collected clams with ambient water and scrub clean with brush to remove sediment and place in labeled storage bag.
5. Photograph collection location and complete batch of all clams.
   Photolog: 167 - 2036 batch clams
6. Place labeled bag on wet ice in lab cooler.

Additional Notes:

NB03CLM 123A

Newark Bay Phase III Study
Tierra Solutions
East Brunswick, NJ

SOFTSHELL CLAM COLLECTION FIELD DATA SHEET

Intertidal Location: 123A

Date: 9/23/14

Arrival Time: 13:20

Signature: Bwl

Departure Time: 14:20

Crew: BWL, CDD, KCM, CCB

Weather conditions: SUN, 70°F

LOW TIME: 15:00

TASKS:

1. Navigate to GPS coordinates for center point of clam investigation (~~mark with flag~~) BWL coordinates from QAPP
   Northing: ~~6816~~ 681867.84 Easting: ~~601475.68~~ 601618.54
2. Collect softshell clam (Mya arenaria) with clam shovel. Retain individuals that are at least 1.5 inches from anterior to posterior. N=66 retained clams
3. GPS coordinates for ~~location~~ perimeter of ~~each~~ BWL retained softshell clam ~~hole~~. BWL

Clam No.	Northing	Easting	Clam No.	Northing	Easting
1	681632.17	601649.39	14		
2	681651.80	601659.47	15		
3	681654.45	601678.70	16		
4	681592.65	601702.36	17		
5	681543.61	601709.71	18		
6	681518.68	601645.32	19		
7	681538.88	601611.08	20		
8	681627.93	601615.98	21		
9			22		
10			23		
11			24		
12			25		
13			26		

4. Rinse collected clams with ambient water and scrub clean with brush to remove sediment and place in labeled storage bag.
5. Photograph collection location and complete batch of all clams.
   Photolog: batch clams – 170-2084
6. Place labeled bag on wet ice in lab cooler.

Additional Notes: ~73 clams collected @ 1348hrs. Other species observed: Macoma, horseshoe crab, polychaetes

NB03CLM 123B

Newark Bay Phase III Study
Tierra Solutions
East Brunswick, NJ

SOFTSHELL CLAM COLLECTION FIELD DATA SHEET

Intertidal Location: 123B

Date: 9/23/14

Arrival Time: 1431

Signature: Bwl

Departure Time: 1535

Crew: BWL, CDD, KCM, CCB

Weather conditions: SUN, 75°F

LOW TIDE: 1500

TASKS:

1. Navigate to GPS coordinates for center point of clam investigation (~~mark with flag~~ BWL coordinates from QAPP
   Northing: 681010.43 Easting: 601975.68
2. Collect softshell clam (Mya arenaria) with clam shovel. Retain individuals that are at least 1.5 inches from anterior to posterior. N=70 clams
3. GPS coordinates for ~~location~~ BWL perimeter of ~~each~~ our retained softshell clam ~~shell~~ BWL

Clam No.	Northing	Easting	Clam No.	Northing	Easting
1	681058.43	602306.52	14		
2	681052.96	602331.75	15		
3	681033.68	602330.28	16		
4	681012.87	602353.41	17		
5	680998.30	602343.53	18		
6	681015.33	602317.29	19		
7	681038.46	602302.23	20		
8			21		
9			22		
10			23		
11			24		
12			25		
13			26		

4. Rinse collected clams with ambient water and scrub clean with brush to remove sediment and place in labeled storage bag.
5. Photograph collection location and complete batch of all clams.
   Photolog: batch clams - 170-2085
6. Place labeled bag on wet ice in lab cooler.

Additional Notes: Clams abundant and dense within collection area.

NB03CLM 125

Newark Bay Phase III Study
Tierra Solutions
East Brunswick, NJ

SOFTSHELL CLAM COLLECTION FIELD DATA SHEET

Intertidal Location: 125

Date: 9/26/14

Arrival Time: 15:36

Signature: [signature]

Departure Time: 1715

Crew: BM, COD, CCM

Weather conditions: Sun, 65°F, wind 10mph from north LOW TIDE: 17:00hrs

TASKS:

1. Navigate to GPS coordinates for center point of clam investigation ~~(mark with flag)~~ BM
   Northing: 669980.50 Easting: 596337.01
2. Collect softshell clam (Mya arenaria) with clam shovel. Retain individuals that are at least 1.5 inches from anterior to posterior. N=62 clams
3. GPS coordinates for the perimeter of the retained clams collection area:

Clam No.	Northing (ft)	Easting (ft)	Clam No.	Northing	Easting
1	670078.09	5965942	11		
2	670040.69	596571.24	12		
3	670093.94	596599.65	13		
4	670169.87	596596.52	14		
5	670269.14	596623.68	15		
6	670161.20	596587.24			
7	670104.27	596579.55			
8					
9					
10					

4. Rinse collected clams with ambient water and scrub clean with brush to remove sediment and place in labeled storage bag.
5. Photograph collection location and complete batch of all clams.
   Photolog: batch clams ; 173-2142
6. Place labeled bag on wet ice in lab cooler.

Additional Notes: Clams collected from northern corner of the intertidal area. Coarse sand, gravel + cobble substrate in most of intertidal area from Veterans park up to where we collected the retained clams. No silt observed in this area. Northern collection area had cobble on surface and mix of sand and silt below

Newark Bay Phase III Study
Tierra Solutions
East Brunswick, NJ

SOFTSHELL CLAM COLLECTION FIELD DATA SHEET

Intertidal Location: 127A

Date: 9/24/14

Arrival Time: 1405

Signature: Bryan Lee

Departure Time: 15:15

Low tide: 15:41

Crew: Bud, CDD, KCM, JBS

Weather conditions: clouds, 65°F, winds from SE 10-15 mph

TASKS:

1. Navigate to GPS coordinates for center point of clam investigation (~~mark with flag~~ Bud)
   Northing: 666083.60 Easting: 593922.64
2. Collect softshell clam (Mya arenaria) with clam shovel. Retain individuals that are at least 1.5 inches from anterior to posterior. N=54 retained
3. GPS coordinates for ~~location~~ perimeter of ~~each~~ Bud retained softshell clam ~~hole~~ Bud:

Clam No.	Northing (ft)	Easting (ft)	Clam No.	Northing	Easting
1	665808.61	593976.75	11		
2	665826.61	593992.84	12		
3	665863.97	594038.35	13		
4	665908.67	594065.80	14		
5	665927.52	594063.59	15		
6	665890.03	594033.10	16		
7	665840.06	593982.75	17		
8	665833.81	593968.67	18		
9			19		
10			20		

4. Rinse collected clams with ambient water and scrub clean with brush to remove sediment and place in labeled storage bag.
5. Photograph collection location and complete batch of all clams.
   Photolog: batch clams 171-2112
6. Place labeled bag on wet ice in lab cooler.

Additional Notes:

Newark Bay Phase III Study
Tierra Solutions
East Brunswick, NJ

SOFTSHELL CLAM COLLECTION FIELD DATA SHEET

Intertidal Location: 127B

Date: 9/24/14

Arrival Time: 15:28

Signature: Bryan Lee

Departure Time: 16:08

Crew: BWL, CDD, KCM, JBS

Weather conditions: cloudy, 60°F, winds SE 10-15mph

TASKS:

1. Navigate to GPS coordinates for center point of clam investigation (~~mark with flag~~ BWL)
   Northing: 664837.18 Easting: 593183.21
2. Collect softshell clam (Mya arenaria) with clam shovel. Retain individuals that are at least 1.5 inches from anterior to posterior. NS 83
3. GPS coordinates for ~~location~~ BWL perimeter of ~~each~~ retained softshell clam ~~hole~~ BWL:

Clam No.	Northing (~~Ft~~)	Easting (~~Ft~~)	Clam No.	Northing	Easting
1	664720.09	593076.92	11		
2	664711.64	593054.11	12		
3	664691.64	593072.51	13		
4	664688.85	593094.18	14		
5	664703.19	593127.07	15		
6	664719.43	593103.77	16		
7	664719.85	593084.51	17		
8			18		
9			19		
10			20		

4. Rinse collected clams with ambient water and scrub clean with brush to remove sediment and place in labeled storage bag.
5. Photograph collection location and complete batch of all clams.
   Photolog:
   batch clams – 171-2113
6. Place labeled bag on wet ice in lab cooler.

Additional Notes:

Newark Bay Phase III Study
Tierra Solutions
East Brunswick, NJ

SOFTSHELL CLAM COLLECTION FIELD DATA SHEET

Intertidal Location: 129 NB03CLM129

Date: 9/8/14

Arrival Time: 1430

Signature: Bryan Lee

Departure Time: 1620

low tide @ 14:46 hrs

Crew: BWY, CAP, KRM

Weather conditions:

TASKS:

1. Navigate to GPS coordinates for center point of clam investigation (mark with flag).
   Northing: 659578.7174 Easting: 581397.24 Not suitable habitat for M. arenaria soft mud, no sand or coarse material
2. Collect softshell clam (Mya arenaria) with clam shovel. Retain individuals that are at least 1.5 inches from anterior to posterior. N=17 Mya arenaria collected (see field notebook for additional description, logbook entry #1)
3. GPS coordinates for location of each retained softshell clam hole:

Clam No.	Northing	Easting	Clam No.	Northing	Easting
1	659824.18	582102.72	11	659828.54	582078.97
2	659820.00	582097.17	12	659828.54	582078.97
3	659820.73	582095.10	13	659828.54	582078.97
4	659816.55	582097.13	14	659828.54	582078.97
5	659814.37	582096.17	15	659827.40	582079.55
6	659804.94	582094.37	16	659827.40	582079.55
7	659838.85	~~582087~~ 582087.31	17	659833.90	582074.70
8	659835.41	582084.64	18		
9	659828.54	582078.97	19		
10	659828.54	582078.97	20		

4. Rinse collected clams with ambient water and scrub clean with brush to remove sediment and place in labeled storage bag.
5. Photograph collection location and complete batch of all clams.
   Photolog: 159-1943 collection location
   159-1942 " "
   159-1941 " "
   batch photo:
   159:1947
   159:1948
   159:1949
   159:1951
   159:1952
6. Place labeled bag on wet ice in lab cooler.

Additional Notes:

Clams collected along edge of mud flat near shore with hard pier structure (wood). Slightly firmer bottom w/ mix of sand & observed large polychaetes in same area. Clams present within top 6" of surface.

NB03CLM 130

Newark Bay Phase III Study
Tierra Solutions
East Brunswick, NJ

SOFTSHELL CLAM COLLECTION FIELD DATA SHEET

Intertidal Location: 130 Date: 9/16/14

Arrival Time: 918 Signature: Bryan Thur

Departure Time: 1156

Crew: BWG, JBS, KCM, CDD

Weather conditions: rain 50°F, heavy rain LOW TIDE: 9:15

TASKS:

1. Navigate to GPS coordinates for center point of clam investigation (~~mark with flag~~) BWG – QAPP location moved upstream
   Northing: 663400.79 Easting: 584458.98 where suitable habitat
2. Collect softshell clam (Mya arenaria) with clam shovel. Retain individuals that are at least 1.5 inches from anterior to posterior. N=43 retained clams
3. GPS coordinates for location of each retained softshell clam hole:

Clam No.	Northing	Easting	Clam No.	Northing	Easting
1	663932.15	585154.91	14	663978.48	585130.50
2	663935.31	585153.01	15	663973.83	585135.11
3	663953.27	585142.47	16	663973.40	585139.21
4	663947.79	585130.91	17	663977.87	585143.93
5	663951.45	585133.11	18	663969.33	585140.55
6	663956.58	585139.16	19	663965.29	585146.29
7	663960.00	585137.74	20		
8	663964.11	585144.57	21		
9	663966.79	585139.32	22		
10	663969.73	585140.53	23		
11	663965.02	585136.65	24		
12	663961.17	585126.49	25		
13	663974.08	585127.57	26		

4. Rinse collected clams with ambient water and scrub clean with brush to remove sediment and place in labeled storage bag.
5. Photograph collection location and complete batch of all clams.
   Photolog: 165-2010
   165-2011
6. Place labeled bag on wet ice in lab cooler.

Additional Notes: GPS coordinates were collected at mid-point of retained clam holes within 24" of each other; composite collected from 30 holes of retained clams

Newark Bay Phase III Study
Tierra Solutions
East Brunswick, NJ

SOFTSHELL CLAM COLLECTION FIELD DATA SHEET

Intertidal Location: NB03 Clm 131a

Date: 9/10/14

Arrival Time: 1530

Signature: [signature]

Departure Time: 1740

low tide @ 16:32 hrs

Crew: BWL, CM, KAM

Weather conditions: cloudy, 75°F

TASKS:

1. Navigate to GPS coordinates for center point of clam investigation (mark with flag)
   Northing: 665217.24 Easting: 586381.33
2. Collect softshell clam (Mya arenaria) with clam shovel. Retain individuals that are at least 1.5 inches from anterior to posterior. N=85 retained clams * fairly firm substrate with sand, silt and clay mix.
3. GPS coordinates for location of each retained softshell clam hole:

GPS: Trimble Geo XH

Clam No.	Northing	Easting	Clam No.	Northing	Easting
1	665598.29	586575.00	11	665631.51	586598.50
2	665604.60	586569.60	12	665616.90	586611.45
3	665610.03	586577.41	13	665633.32	586625.60
4	665603.34	586579.57	14	665624.79	586638.17
5	665603.33	586591.51	15	665642.42	586647.30
6	665604.91	586589.49	16	665651.59	586677.32
7	665610.97	586594.04	17	665587.77	586561.82
8	665619.72	586585.95	18	665588.43	586552.83
9	665609.07	586581.93	19	665581.49	586558.00
10	665625.37	586590.58	20	665571.38	586557.94

* multiple clams and ho w/in cl proxim (n=8)

conflict

4. Rinse collected clams with ambient water and scrub clean with brush to remove sediment and place in labeled bag storage bag.
5. Photograph collection location and complete batch of all clams.
   Photolog: 161-1976
   161-1977
   161-1978
6. Place labeled bag on wet ice in lab cooler.

Additional Notes: * collected additional clams for ~~duplicate~~ BWL split

depth of holes 3-6 inches where clams retained.

• Clam # 11422 multiple holes only 1 GPS point recorded in center of hole (many clams retained within a small area)

NB03CLM 1316

Newark Bay Phase III Study
Tierra Solutions
East Brunswick, NJ

SOFTSHELL CLAM COLLECTION FIELD DATA SHEET

Intertidal Location: 1316

Date: 9/15/14

Arrival Time: 650hrs - start search

Signature: Bryan L

Departure Time: 0900HRS.

Crew: BWL, CDD, JBS, KCM

Weather conditions: sunny, 60°F

LOW TIDE: 8:15 HRS

TASKS:

1. Navigate to GPS coordinates for center point of clam investigation (mark with flag)
   Northing: 666117.91 Easting: 587073.06
2. Collect softshell clam (Mya arenaria) with clam shovel. Retain individuals that are at least 1.5 inches from anterior to posterior. N=70 clams retained
3. GPS coordinates for location of each retained softshell clam hole:

GPS: Trimble Geo XH

Clam No.	Northing	Easting	Clam No.	Northing	Easting
1	666084.97	5869 22.73	14	666147.05	586957.94
2	666093.42	586922.93	15	666151.69	586956.99
3	666100.52	586931.61	16	666136.24	586979.49
4	666174.60	586978.33	17	666133.21	586986.96
5	666123.24	586949.95	18	666122.51	586989.50
6	666129.52	586952.18	19	666113.14	586986.91
7	666138.93	586954.04	20	666143.29	587034.34
8	666133.02	586958.56	21	666144.38	587029.74
9	666129.74	586962.31	22	666148.41	587029.34
10	666131.41	586969.14	23	666152.28	587037.18
11	666133.25	586964.84	24	666162.23	587047.55
12	666139.92	586964.74	25	666168.78	587041.83
13	666144.43	586959.40	26	666166.10	587031.36

(contid on back

4. Rinse collected clams with ambient water and scrub clean with brush to remove sediment and place in labeled storage bag.
5. Photograph collection location and complete batch of all clams.
   Photolog: batch clams 163-1999 163-2000 clam processing 163-2001 163-2002 163-2003
6. Place labeled bag on wet ice in lab cooler.

Additional Notes: Mudflat composed of mostly sand with some small cobble, relict oyster shells and some silt. Firm bottom compared to station 13/a.

NB03CLM132a

Newark Bay Phase III Study
Tierra Solutions
East Brunswick, NJ

SOFTSHELL CLAM COLLECTION FIELD DATA SHEET

Intertidal Location: 132a

Date: 9/11/14

Arrival Time: 16:15 hrs

Signature:

Departure Time: 18:00 hrs

low tide @ 17:23 hrs

Crew: BWL, CDD, JBS, KCM Jordan - L.B Brian - Tierra

Weather conditions: 85°F, partly cloudy

TASKS:

1. Navigate to GPS coordinates for center point of clam investigation (mark with flag)
   Northing: Easting:
2. Collect softshell clam (Mya arenaria) with clam shovel. Retain individuals that are at least 1.5 inches from anterior to posterior. N = 51 clams
3. GPS coordinates for location of each retained softshell clam hole:

Clam No.	Northing	Easting	Clam No.	Northing	Easting
1	678725.55	595862.32	11	678731.09	595884.50
2	678729.14	595863.55	12	678727.54	595880.19
3	678731.98	595863.35	13	678725.81	595876.05
4	678738.75	595869.30	14	678725.04	595871.29
5	678736.15	595865.51	15	678724.06	595867.41
6	678744.07	595868.57	16	678720.67	595869.14
7	678736.09	595871.77	17	678721.02	595876.50
8	678730.96	595875.06	18	678725.37	595879.69
9	678734.72	595876.70	19	678722.79	595890.72
10	678731.88	595879.98	20	678719.70	595884.89

4. Rinse collected clams with ambient water and scrub clean with brush to remove sediment and place in labeled storage bag. GPS cont'd on back page
5. Photograph collection location and complete batch of all clams.
   Photolog: 162-1984 162-1987
   162-1985 162-1988
   162 1986 162-
6. Place labeled bag on wet ice in lab cooler.

Additional Notes:

firmer substrate mix sand and silt, some clay
Retained clam holes within 24" of each other were GPS at mid-point.

NB03CLM 132B

Newark Bay Phase III Study
Tierra Solutions
East Brunswick, NJ

SOFTSHELL CLAM COLLECTION FIELD DATA SHEET

Intertidal Location: 132B

Date: 9/22/14

Arrival Time: 1235

Signature: Bryan Lee

Departure Time: 13:30

Crew: BLL, CSD, KCM, ECB

Weather conditions: Cloudy, 60°F

LOW TIDE: 1409

TASKS:

1. Navigate to GPS coordinates for center point of clam investigation (~~mark with flag~~ BLL)
   Northing: NA Easting: NA: Relocated south from original QAPP coordinates
2. Collect softshell clam (Mya arenaria) with clam shovel. Retain individuals that are at least 1.5 inches from anterior to posterior. N = 75
3. GPS coordinates for ~~location~~ perimeter of ~~each~~ BLL retained softshell clam ~~hole~~ collection area BLL

Clam No.	Northing	Easting	Clam No.	Northing	Easting
1	678120.06	595893.08	14		
2	678123.53	595880.35	15		
3	678143.75	595888.94	16		
4	678165.36	595900.82	17		
5	678145.65	595910.03	18		
6	678129.28	595907.90	19		
7	678095.49	595897.94	20		
8	678090.70	595889.55	21		
9	678111.03	595878.60	22		
10			23		
11			24		
12			25		
13			26		

4. Rinse collected clams with ambient water and scrub clean with brush to remove sediment and place in labeled storage bag.
5. Photograph collection location and complete batch of all clams.
   Photolog: 169-2064 batch clams
6. Place labeled bag on wet ice in lab cooler.

Additional Notes: large numbers of clams present w/ wide size range, high densities

NB03CLM 133

Newark Bay Phase III Study
Tierra Solutions
East Brunswick, NJ

SOFTSHELL CLAM COLLECTION FIELD DATA SHEET

Intertidal Location: 133

Date: 9/22/14

Arrival Time: 13:38

Signature: Bryan Lu

Departure Time: 15:12

Crew: BWL, CDD, KCM, CCB

Weather conditions: SUN, 70°F

LOW TIDE: 14:09

TASKS:

1. Navigate to GPS coordinates for center point of clam investigation (~~mark with flag~~ BWL)
   Northing: 680827.96 Easting: 596858.72
2. Collect softshell clam (Mya arenaria) with clam shovel. Retain individuals that are at least 1.5 inches from anterior to posterior. N = 46
3. GPS coordinates for location of each retained softshell clam hole:

Clam No.	Northing	Easting	Clam No.	Northing	Easting
1	680769.98	596773.58	14		
2	681024.37	596927.88	15		
3	681042.50	596948.91	16		
4	681059.02	596985.50	17		
5	681039.32	596960.00	18		
6	681049.35	596936.87	19		
7			20		
8			21		
9			22		
10			23		
11			24		
12			25		
13			26		

4. Rinse collected clams with ambient water and scrub clean with brush to remove sediment and place in labeled storage bag.
5. Photograph collection location and complete batch of all clams.
   Photolog: batch clam: 169-2065, 169-2064
6. Place labeled bag on wet ice in lab cooler.

Additional Notes:

Newark Bay Phase III Study
Tierra Solutions
East Brunswick, NJ

SOFTSHELL CLAM COLLECTION FIELD DATA SHEET

Intertidal Location: 134

Date: 9/25/14

Arrival Time: 15:15

Signature: Bryan Lees

Departure Time: 16:30

Crew: BWL, CDO, JBS

Low tide: 16:09

Weather conditions: Rain, 60°F

TASKS:

1. Navigate to GPS coordinates for center point of clam investigation ~~(mark with flag)~~ Blue This is a new mudflat that was selected to replace 129B and no GPS coordinates were provided to field crew.
   Northing: NA Easting: NA
2. Collect softshell clam (Mya arenaria) with clam shovel. Retain individuals that are at least 1.5 inches from anterior to posterior. N=59 retained clams
3. GPS coordinates for ~~location~~ Blue perimeter of ~~each~~ retained softshell clam ~~hole~~ Blue:

Clams collected from both sides of the intertidal mudflat. Few clams collected ~~from east side of mudflat~~

Clam No.	Northing (ft)	Easting (ft)	Clam No.	Northing	Easting
1	659737.52	579884.31	11		
2	659712.87	579888.34	12		
3	659735.00	579879.18	13		
4	659452.70	579813.98	14		
5	659441.28	579807.44	15		
6	659432.45	579805.29	16		
7	659404.60	579790.86	17		
8	659404.45	579794.09	18		
9	659414.83	579804.73	19		
10	659433.47	579813.14	20		

4. Rinse collected clams with ambient water and scrub clean with brush to remove sediment and place in labeled storage bag.
5. Photograph collection location and complete batch of all clams.
   Photolog: batch clams 172 - 2131 to 2132
6. Place labeled bag on wet ice in lab cooler.

Additional Notes: High ~~Large~~ densities of polychaetes. Ribbed mussels also present. Mudflat bordered by Spartina and Phragmites. Old pier on west side of mudflat. East side w/ remnant bricks and slag material. Likely old landfill area. Clams ~~Mud~~ on

NB03CLM

Newark Bay Phase III Study
Tierra Solutions
East Brunswick, NJ

SOFTSHELL CLAM COLLECTION FIELD DATA SHEET

Intertidal Location: 135 - alternate location to st 128 Date: 9/19/14

Arrival Time: 1030 hrs Signature: Bmp Le

Departure Time: 1131

Crew: BMP, CAD, JBS, KCM

Weather conditions: Sun 60°F LOW TIDE: 1202

TASKS:

1. Navigate to GPS coordinates for center point of clam investigation ~~(mark with flag)~~ BMP - this is location of first retained clam
   Northing: 661734.52 Easting: 581440.70
2. Collect softshell clam (Mya arenaria) with clam shovel. Retain individuals that are at least 1.5 inches from anterior to posterior. N=43
3. GPS coordinates for ~~location~~ BMP of ~~each~~ BMP retained softshell clam hole: Perimeter

Clam No.	Northing (ft)	Easting (ft)	Clam No.	Northing	Easting
1	661734.52	581440.70	14		
2	661746.79	581417.67	15		
3	661728.61	581433.25	16		
4	661735.42	581400.88	17		
5	661752.68	581405.53	18		
6	661740.57	581362.47	19		
7	661754.79	581373.95	20		
8	661737.74	581306.86	21		
9			22		
10			23		
11			24		
12			25		
13			26		

4. Rinse collected clams with ambient water and scrub clean with brush to remove sediment and place in labeled storage bag.
5. Photograph collection location and complete batch of all clams.
   Photolog: 167-2043 batch clams 167-2044 to 2045 (individual clams)
6. Place labeled bag on wet ice in lab cooler.

Additional Notes: Small intertidal mud flat with mix of sand, silt, and no clay. One edge of flat bordered by spartina. Fairly dense #'s of polychaetes present and observed while

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SEDIMENT COLLECTION FIELD DATA SHEET

Intertidal Location: 122a

Date: 9/17/14

Arrival Time: 0900 hrs

Signature:

Departure Time: 1050

Crew: Bldy, CDD, JBS, KCM

Weather conditions: sunny, 60°F

TASKS:

1. Collect sediment grab sample for VOCs using hand trowel or spoon (surface, 0-6 inches) from location of first retained softshell clam. Collected: ~~9:57 hrs~~ 1008 completed 10:11 hrs
   Sediment Grab GPS Coordinates
   Northing: 686897.41 Easting: 599735.58
2. Place sediment grab in appropriate sample container with no head space and store on wet ice. ✓
3. Remove a small aliquot of sediment (1oz) from the grab sample and place in ziplock bag for analysis with PID
   Collected 9:57 hrs 0.6 ppm peak reading
4. Collect composite sediment sample using hand trowel or spoon from sediment dug out of the retained softshell clam holes. Start 10:15 hrs, completed filling jars @ 5:76 · 1032 hrs
5. Photograph sediment composite(use white erase board to indicate location)

Photolog: 165-2014 sediment composite
- 2015
- 2016
- 2017
- 2018

sample area

6. Characterize composite sediment sample (color, sheen, odor, type of material, etc.)
   35% sand
   20% silt
   50% clay
   cohesive, no odor or sheen detected
   5YR 2.5/1
7. Homogenize, place in sample container and store on wet ice. ✓

Additional Notes: sediment composite collected from 31 holes of retained clams. Mudflat fringed w/ spartina directly adjacent to H2O and phragmites in upland areas

NBO3SED 122B

Newark Bay Phase III Study
Tierra Solutions
East Brunswick, NJ

SEDIMENT COLLECTION FIELD DATA SHEET

Intertidal Location: 122B

Date: 9/18/14

Arrival Time: 0905

Signature: Bryan Lees

Departure Time: 1040

Crew: BL, CAD, JBS, KCM

Weather conditions: sunny, 55°F

TASKS:

1. Collect sediment grab sample for VOCs using hand trowel or spoon (surface, 0-6 inches) from location of first retained softshell clam. VOC/%moisture collection time: 950
   Sediment Grab GPS Coordinates
   Northing: 687072.02 Easting: 599942.33
2. Place sediment grab in appropriate sample container with no head space and store on wet ice.
3. Remove a small aliquot of sediment (1oz) from the grab sample and place in ziplock bag for analysis with PID
   Collection time: 9:40 peak PID reading: 2.1 ppm, time: 957
4. Collect composite sediment sample using hand trowel or spoon from sediment dug out of the retained softshell clam holes. Collection time: 1020
5. Photograph sediment composite(use white erase board to indicate location)

Photolog: 166-2020 to 166-2026 sample holes, habitat
166-2027 - sed. composite

sediments collected from 32 holes of retained clams for the composite

6. Characterize composite sediment sample (color, sheen, odor, type of material, etc.)

Sand 60% moist, low plasticity, cohesive
Silt 15%
clay 25% Olive 2.5/5GY

7. Homogenize, place in sample container and store on wet ice.

Additional Notes: 10:00 hrs ~50 small clams collected

NBO3SED 122C

Newark Bay Phase III Study
Tierra Solutions
East Brunswick, NJ

SEDIMENT COLLECTION FIELD DATA SHEET

Intertidal Location: 122C

Date: 9/18/14

Arrival Time: 1041

Signature: Bryan Lon

Departure Time: 1140

Crew: BWL, CBD, JBS, KCM

Weather conditions: sunny, 70°F

TASKS:

1. Collect sediment grab sample for VOCs using hand trowel or spoon (surface, 0-6 inches) from location of first retained softshell clam. VOC/%moisture collection time: 1103
   Sediment Grab GPS Coordinates
   Northing: 687105.43 Easting: 600101.16
2. Place sediment grab in appropriate sample container with no head space and store on wet ice.
3. Remove a small aliquot of sediment (1oz) from the grab sample and place in ziplock bag for analysis with PID
   Collection time: 1107 peak PID reading: 2.1 ppm, time: 1122
4. Collect composite sediment sample using hand trowel or spoon from sediment dug out of the retained softshell clam holes. Collection time: 1112
5. Photograph sediment composite(use white erase board to indicate location)

Photolog: 1CC-2028 composite
1CC-2029 to 2032 habitat / clam holes

6. Characterize composite sediment sample (color, sheen, odor, type of material, etc.)
   no petroleum or sheen, cohesive, medium plasticity, moist
   silty 30%
   sand 40%
   clay 30%
   Gley 1 2.5/10Y
7. Homogenize, place in sample container and store on wet ice.

Additional Notes:

NBO3SED 123A

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SEDIMENT COLLECTION FIELD DATA SHEET

Intertidal Location: 123A

Date: 9/23/14

Arrival Time: 13:20

Signature: Bryn Lee

Departure Time: 14:20

Crew: BWL, CDD, KCM, CCB

Weather conditions: SUN, 70°F

TASKS:

1. Collect sediment grab sample for VOCs using hand trowel or spoon (surface, 0-6 inches) from location of first retained softshell clam. VOC/%moisture collection time: 1357
   Sediment Grab GPS Coordinates (ft)
   Northing: 681632.17 Easting: 601649.39
2. Place sediment grab in appropriate sample container with no head space and store on wet ice.
3. Remove a small aliquot of sediment (1oz) from the grab sample and place in ziplock bag for analysis with PID
   Collection time: 1354 peak PID reading: 2.5 ppm, time: 1413
4. Collect composite sediment sample using hand trowel or spoon from sediment dug out of the retained softshell clam holes. Collection time: 1405
5. Photograph sediment composite(use white erase board to indicate location)

Photolog: 169 - 2067 to 2071 - habitat / holes
composite: 169 - 2072

6. Characterize composite sediment sample (color, sheen, odor, type of material, etc.)
   % sand 65%
   silt 30%
   clay 5%
   moist, cohesive, medium plasticity
   Gley 1 2.5/10Y
   no sheen, limited odor and no obvious petroleum smell
7. Homogenize, place in sample container and store on wet ice.

Additional Notes: Large mud flat bordered by Spartina and phragmites in upland area.
Composite collected from 27 holes of retained clams

NBO3SED 123B

Newark Bay Phase III Study
Tierra Solutions
East Brunswick, NJ

SEDIMENT COLLECTION FIELD DATA SHEET

Intertidal Location: 12BB

Date: 9/23/14

Arrival Time: 1431

Signature: Bryan Lu

Departure Time: 1535

Crew: BWL, KCM, CEB, CAD

Weather conditions: SUN, 75°F

TASKS:

1. Collect sediment grab sample for VOCs using hand trowel or spoon (surface, 0-6 inches) from location of first retained softshell clam. VOC/%moisture collection time: 1455
   Sediment Grab GPS Coordinates
   Northing: 681058.43 Easting: 602306.52
2. Place sediment grab in appropriate sample container with no head space and store on wet ice.
3. Remove a small aliquot of sediment (1oz) from the grab sample and place in ziplock bag for analysis with PID
   Collection time: 1453 peak PID reading: 2.8 ppm, time: 1512
4. Collect composite sediment sample using hand trowel or spoon from sediment dug out of the retained softshell clam holes. Collection time: 1505
5. Photograph sediment composite(use white erase board to indicate location)

Photolog: 170-2075 composite
habitat/holes - 170-2076 to 2083

6. Characterize composite sediment sample (color, sheen, odor, type of material, etc.)

Silt 10%
Sand 45%
Clay 45%

cohesive, high plasticity, moist
no sheen, no petroleum odor
Gley 1 2.5/10GY

7. Homogenize, place in sample container and store on wet ice.

Additional Notes: Composite collected from 21 holes of retained clams, Large mudflat adjacent to RT 440. Limited Spartina and Phragmites adjacent to mudflat. Stormwater pipe along [illegible] of the flat - likely from RT 440.

NBO3SED

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SEDIMENT COLLECTION FIELD DATA SHEET

Intertidal Location: 124

Date: 10/2/14

Arrival Time: 0820

Signature: Jayna Schaff

Departure Time: 0955

Crew: JBS, KCM

Weather conditions: Cloudy, NE wind 10-15mph

TASKS:

1. Collect sediment grab sample for VOCs using hand trowel or spoon (surface, 0-6 inches) from location of first retained softshell clam. VOC/%moisture collection time: 0922
   Sediment Grab GPS Coordinates
   Northing: 671666.23 Easting: 597867.40
2. Place sediment grab in appropriate sample container with no head space and store on wet ice.
3. Remove a small aliquot of sediment (1oz) from the grab sample and place in ziplock bag for analysis with PID
   Collection time: 0920 peak PID reading: 0.1 ppm, time: 0935
4. Collect composite sediment sample using hand trowel or spoon from sediment dug out of the retained softshell clam holes. Collection time: 0935
5. Photograph sediment composite(use white erase board to indicate location)

Photolog: 20141002_085642
20141002_085644
20141002_085653
20141002_094437

6. Characterize composite sediment sample (color, sheen, odor, type of material, etc.)
   coarse sand with small cobble, 90 % sand
   moist, non plastic, non cohesive 10 % silt
   2.5YR 3/3 0 % clay
7. Homogenize, place in sample container and store on wet ice.

Additional Notes:

sediment from 21 holes

NB03CLM

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SOFTSHELL CLAM COLLECTION FIELD DATA SHEET

Intertidal Location: 124

Date: 10/2/14

Arrival Time: 0820

Signature: Joyce Schmitt

Departure Time: 0955

Crew: KCM JBS

Weather conditions: Cloudy, NE wind 10-15 mph

LOW TIDE: 0927

TASKS:

1. Navigate to GPS coordinates for center point of clam investigation (mark with flag)
   Northing: 671977.41 Easting: 597901.61
2. Collect softshell clam (Mya arenaria) with clam shovel. Retain individuals that are at least 1.5 inches from anterior to posterior.
3. GPS coordinates for the perimeter of the retained clams collection area:

Clam No.	Northing	Easting	Clam No.	Northing	Easting
1	671666.23	597867.40	11		
2	671646.78	597841.82	12		
3	671640.34	597826.87	13		
4	671629.82	597812.34	14		
5	671618.26	597799.42	15		
6	671633.90	597833.08			
7	671635.55	597839.52			
8	671683.95	597895.82			
9					
10					

4. Rinse collected clams with ambient water and scrub clean with brush to remove sediment and place in labeled storage bag.
5. Photograph collection location and complete batch of all clams.
   Photolog: 20141002-140732
6. Place labeled bag on wet ice in lab cooler.

Additional Notes:

NBO3SED 125

Newark Bay Phase III Study
Tierra Solutions
East Brunswick, NJ

SEDIMENT COLLECTION FIELD DATA SHEET

Intertidal Location: 125

Date: 9/26/14

Arrival Time: 1536

Signature:

Departure Time: 1715

Crew: BWH, CDD, KCM

Weather conditions: sun, 65°F

TASKS:

1. Collect sediment grab sample for VOCs using hand trowel or spoon (surface, 0-6 inches) from location of first retained softshell clam. VOC/%moisture collection time: 1625
   Sediment Grab GPS Coordinates
   Northing: 670078.29 Easting: 596590.42
2. Place sediment grab in appropriate sample container with no head space and store on wet ice.
3. Remove a small aliquot of sediment (1oz) from the grab sample and place in ziplock bag for analysis with PID
   collection time: 1614 peak PID reading: 3.6 ppm, time: 1645
4. Collect composite sediment sample using hand trowel or spoon from sediment dug out of the retained softshell clam holes. Collection time: 1642
5. Photograph sediment composite(use white erase board to indicate location)

Photolog: 173-2133 to 2139 holes/habitat
173-2140 - composite

6. Characterize composite sediment sample (color, sheen, odor, type of material, etc.)
   coarse sand 80% no odor or sheen, non-cohesive, non-plastic
   silt 20%
   Gley1 2.5 5.GY
7. Homogenize, place in sample container and store on wet ice.

Additional Notes: Composite collected from 21 holes of retained clams. Gravel and cobble within sediment and larger material on surface (large cobble)

NBO3SED

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SEDIMENT COLLECTION FIELD DATA SHEET

Intertidal Location: 127A

Date: 9/24/14

Arrival Time: 1405

Signature: Bryan Lu

Departure Time: 15:15 hrs

Crew: Billy CSD, KCM, JBS

Weather conditions: cloudy, 65° F, winds from SE 10-15 mph

TASKS:

1. Collect sediment grab sample for VOCs using hand trowel or spoon (surface, 0-6 inches) from location of first retained softshell clam. VOC/%moisture collection time: 14:50
   Sediment Grab GPS Coordinates
   Northing: 665808.61 Easting: 593976.75
2. Place sediment grab in appropriate sample container with no head space and store on wet ice.
3. Remove a small aliquot of sediment (1oz) from the grab sample and place in ziplock bag for analysis with PID
   Collection time: 1444 peak PID reading: 2.2 ppm, time: 1500
4. Collect composite sediment sample using hand trowel or spoon from sediment dug out of the retained softshell clam holes. Collection time: 1456
5. Photograph sediment composite(use white erase board to indicate location)

Photolog: 2095
Habitat/holes - 171-~~163~~ BWL to 2101
171-2103 - composite sediment

6. Characterize composite sediment sample (color, sheen, odor, type of material, etc.)
   Silt 15% ~~Bill~~ Cohesive, moist, not plastic (low plasticity)
   Sand 80%
   clay 5%
   Gley 1 2.5/10Y
7. Homogenize, place in sample container and store on wet ice.

Additional Notes: Fairly large # of polychaetes, some Macoma present. Mud flat bordered in upland by Phragmites + Japanese Knotweed. *Composite collected from 22 holes of retained clams

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SEDIMENT COLLECTION FIELD DATA SHEET

Intertidal Location: 127B

Date: 9/24/14

Arrival Time: 1528

Signature: [signature]

Departure Time: 1608 hrs

Crew: BW, CND, ICCM, JBS

Low tide: 15:41

Weather conditions: cloudy, 60°F, winds SE 10-15mph

TASKS:

1. Collect sediment grab sample for VOCs using hand trowel or spoon (surface, 0-6 inches) from location of first retained softshell clam. 1545
   Sediment Grab GPS Coordinates
   Northing: Easting:

2. Place sediment grab in appropriate sample container with no head space and store on wet ice.
3. Remove a small aliquot of sediment (1oz) from the grab sample and place in ziplock bag for analysis with PID
   Collected 1452 hrs. PID reading of 0.0 ppm - likely not functioning. Remeasured at Lister Ave 0918.06 hrs peak value = 2.2 ppm
4. Collect composite sediment sample using hand trowel or spoon from sediment dug out of the retained softshell clam holes. 1553
5. Photograph sediment composite(use white erase board to indicate location)

Photolog:
habitat – 171-2104 to 2110
composite – 171-2111

6. Characterize composite sediment sample (color, sheen, odor, type of material, etc.)
   Sand 20%
   Silt 20%
   Clay 60%
   petroleum odor + sheen strong, cohesive, moist
   low plasticity
   Gley 1 2.5/10Y
7. Homogenize, place in sample container and store on wet ice.

Additional Notes: Mudflat bordered in upland by Spartina. Rock pier along northern edge + bulkhead along southern edge. High density of clams of various sizes present. Approximately 70 clams collected in 13 minutes. *Composite collected from 21

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SEDIMENT COLLECTION FIELD DATA SHEET

Intertidal Location: 129 NB03SED129

Date: 9/8/14

Arrival Time: 1430

Signature: Bryan Lee

Departure Time: 1620

Crew: BWL, CDD, KRM

Weather conditions:

TASKS:

1. Collect sediment grab sample for VOCs using hand trowel or spoon (surface, 0-6 inches) from location of first retained softshell clam.
   Sediment Grab GPS Coordinates ~~collected at 1545~~ BWL collected at 1554 VOC moisture collected at 1604
   Northing: 659824.18 Easting: 582102.72
2. Place sediment grab in appropriate sample container with no head space and store on wet ice.
3. Remove a small aliquot of sediment (1oz) from the grab sample and place in ziplock bag for analysis with PID
   collected at 1545, reading at 1625 7ppm
4. Collect composite sediment sample using hand trowel or spoon from sediment dug out of the retained softshell clam holes. Started collecting at 1602. Sediment collected from 16 of 17 retained clam holes. N=1 location was under water and did not collect sediment ended at 1615 collecting composite.
5. Photograph sediment composite(use white erase board to indicate location)

   Photolog: 159-1946
   159-1945

   aluminum pan size- 20.75in x 12.81in
   depth 3.19in

6. Characterize composite sediment sample (color, sheen, odor, type of material, etc.)
   petroleum odor, mostly silt and sand mix, black, moist, soft
   80% 2.5Y 2.5/1 munsell 20% 2.5Y 4/3
7. Homogenize, place in sample container and store on wet ice.
   Sample homogenized and bottles filled on boat w engine down wind.

Additional Notes: see logbook entry #1 for other field notes

NBO3SED 130

Newark Bay Phase III Study
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SEDIMENT COLLECTION FIELD DATA SHEET

Intertidal Location: 130

Date: 9/15/14

Arrival Time: 0810

Signature: Bryan Lu

Departure Time: 1150

Crew: BWL, CDB JBS, KCM

Weather conditions: rain, 50°F

TASKS:

1. Collect sediment grab sample for VOCs using hand trowel or spoon (surface, 0-6 inches) from location of first retained softshell clam. VOC/%moisture collection time: 905 hrs
   Sediment Grab GPS Coordinates
   Northing: 663932.15 Easting: 585154.91
2. Place sediment grab in appropriate sample container with no head space and store on wet ice.
3. Remove a small aliquot of sediment (1oz) from the grab sample and place in ziplock bag for analysis with PID
   Collection time: 848 peak PID reading: 1.6 ppm, time: 905
4. Collect composite sediment sample using hand trowel or spoon from sediment dug out of the retained softshell clam holes. Collection time: ~~830-840 hrs~~ 9:30 hrs
5. Photograph sediment composite(use white erase board to indicate location)

Photolog: 164-2009 – composite

164-2004
sample 2005
2006
area 2007
mudflat 2008

*composite collected from 30 holes of retained clams.

6. Characterize composite sediment sample (color, sheen, odor, type of material, etc.)
   Grey 1 2.5/5GY cohesive, petroleum odor, sheen
   40% sand, 50% silt, 10% clay
7. Homogenize, place in sample container and store on wet ice.

Additional Notes: filled composite sample jars on boat. Also, collected MS/MSD samples and filled on boat

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SEDIMENT COLLECTION FIELD DATA SHEET

Intertidal Location: NB03SED13/a / NB03SEDDUP-01 Date: 9/11/14

Arrival Time: 1530 Signature: Bryan Lew

Departure Time: 1740

Crew: BWL, CDD, KCM — observers

Weather conditions: windy, partly cloudy

TASKS:

1. Collect sediment grab sample for VOCs using hand trowel or spoon (surface, 0-6 inches) from location of first retained softshell clam. collected 16:42 VOCs + % moisture
   Sediment Grab GPS Coordinates
   Northing: 665548.29 Easting: 586575.00
2. Place sediment grab in appropriate sample container with no head space and store on wet ice.
3. Remove a small aliquot of sediment (1oz) from the grab sample and place in ziplock bag for analysis with PID
   collected 16:37 reading 17.16 hrs 2.0 ppm
4. Collect composite sediment sample using hand trowel or spoon from sediment dug out of the retained softshell clam holes. collected 17.00 hrs, completed filling sample jars @ 1735 hrs
5. Photograph sediment composite(use white erase board to indicate location)

Photolog: 161-1979 — sediment composite in pan.

aluminum pan size - 20.75 in x 12.81 in
depth 3.19 in

6. Characterize composite sediment sample (color, sheen, odor, type of material, etc.)
   No odor, no sheen Grey / 2.5 Y / 10 Y moist, cohesive
   45% silt
   25% sand
   30% clay
   Some empty clam shells in matrix
7. Homogenize, place in sample container and store on wet ice.

Additional Notes: Collected sediment duplicate

* Sediment for composite collected from 20 ~~holes~~ BW2 locations of retained clams.

NBO3SED131B

Newark Bay Phase III Study
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SEDIMENT COLLECTION FIELD DATA SHEET

Intertidal Location: 131 6

Date: 8/15/14

Arrival Time: 650 hrs

Signature: [signature]

Departure Time: 0900hrs

Crew: BWL KCM, CDD, JBS

Weather conditions: Sunny, 60°F

TASKS:

1. Collect sediment grab sample for VOCs using hand trowel or spoon (surface, 0-6 inches) from location of first retained softshell clam. VOC/%moisture collection time: 8:18 hrs
   Sediment Grab GPS Coordinates
   Northing: 666084.97 Easting: 586922.73
2. Place sediment grab in appropriate sample container with no head space and store on wet ice.
3. Remove a small aliquot of sediment (1oz) from the grab sample and place in ziplock bag for analysis with PID
   Collection time: 815 hrs peak PID reading: 3.9 ppm, time: 840 hrs
4. Collect composite sediment sample using hand trowel or spoon from sediment dug out of the retained softshell clam holes. Collection time: 833hrs completed at 839hrs, from 41 holes of retain Clams
5. Photograph sediment composite(use white erase board to indicate location)

Photolog: 163-1995 Composite sample 163-1996 - filling sample jars
retained clam holes 163-1991
163-1992
163-1993
163-1994

6. Characterize composite sediment sample (color, sheen, odor, type of material, etc.)
   no sheen or odor Gley 12.5/5GY, not plastic or cohesive
   sand 70%
   silt 30%
   moist
7. Homogenize, place in sample container and store on wet ice.
   sample thoroughly homogenized with trowel. 2 additional sample jars filled for Amy Marie (L-B) - 2-4oz glass jars

Additional Notes: mudflat upland area with phragmites.

NB03SED132a

Newark Bay Phase III Study
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SEDIMENT COLLECTION FIELD DATA SHEET

Intertidal Location: 132a

Date: 9/11/14

Arrival Time: 1615hrs

Signature:

Departure Time: 1800hrs

Crew: Birly CDD, JBS, KCM

Weather conditions:

TASKS:

1. Collect sediment grab sample for VOCs using hand trowel or spoon (surface, 0-6 inches) from location of first retained softshell clam. VOCs at 1726hrs and %moisture. Completed 17:32
   Sediment Grab GPS Coordinates
   Northing: 678725.55 Easting: 595862.32
2. Place sediment grab in appropriate sample container with no head space and store on wet ice.
3. Remove a small aliquot of sediment (1oz) from the grab sample and place in ziplock bag for analysis with PID
   1725hrs placed in ziplock reading @ 1748hrs 3.8ppm
4. Collect composite sediment sample using hand trowel or spoon from sediment dug out of the retained softshell clam holes. 1735hrs start composite, completed at 17:40hrs
5. Photograph sediment composite(use white erase board to indicate location) Sediment composite collected from 30 retained clam holes.

Photolog:
162-1983 composite in Al pan
: composite homogenized with s.s. trowel prior to filling sample jars.

6. Characterize composite sediment sample (color, sheen, odor, type of material, etc.)
   Grey 1 2.5/10Y moist, cohesive, sheen in some holes no organic material and some relict shells
   40% silt
   40% sand
   20% clay
7. Homogenize, place in sample container and store on wet ice.

Additional Notes: completed sorting, tapping at 1755hrs

132B

Newark Bay Phase III Study
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SEDIMENT COLLECTION FIELD DATA SHEET

Intertidal Location: 132B

Date: 9/22/14

Arrival Time: 1235

Signature: Brya Lee

Departure Time: 13:30

Crew: BWL, COD, ICCM, CMS Bennett

Weather conditions: cloudy, 60°F

TASKS:

1. Collect sediment grab sample for VOCs using hand trowel or spoon (surface, 0-6 inches) from location of first retained softshell clam. 13:05hrs ~~peak value = 0.7ppm~~
   Sediment Grab GPS Coordinates
   Northing: 678120.06 Easting: 595893.08
2. Place sediment grab in appropriate sample container with no head space and store on wet ice.
3. Remove a small aliquot of sediment (1oz) from the grab sample and place in ziplock bag for analysis with PID
   1256hrs peak value = 0.7ppm
4. Collect composite sediment sample using hand trowel or spoon from sediment dug out of the retained softshell clam holes. time @ 1315hrs
5. Photograph sediment composite(use white erase board to indicate location)

Photolog:

habitat 168-2046 to 2050
sed. composite 168-2051

6. Characterize composite sediment sample (color, sheen, odor, type of material, etc.)
   85% sand
   15% silt
   non-cohesive, moist, no odor or sheen
   Gley 1 2.5/5GY
   no organic material
7. Homogenize, place in sample container and store on wet ice.

Additional Notes: Upland area adjacent to flat w/ goldenrod + Phragmites. Large parking lot immediately adjacent. No polychaetes observed. Composite collected from 27 holes of retained clams. [illegible]

NBO3SED133

Newark Bay Phase III Study
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East Brunswick, NJ

SEDIMENT COLLECTION FIELD DATA SHEET

Intertidal Location: 133

Date: 9/22/14

Arrival Time: 13:38

Signature: Bryan Lee

Departure Time: 15:12

Crew: BLW, CDD, KCM, CCB

Weather conditions: sun, 70°F

TASKS:

1. Collect sediment grab sample for VOCs using hand trowel or spoon (surface, 0-6 inches) from location of first retained softshell clam. VOC/%moisture collection time: 14:15
   Sediment Grab GPS Coordinates
   Northing: ~~680827 BWC~~ 681014.65 Easting: 596885.10
2. Place sediment grab in appropriate sample container with no head space and store on wet ice.
3. Remove a small aliquot of sediment (1oz) from the grab sample and place in ziplock bag for analysis with PID
   Collection time: 1409 peak PID reading: 3.5 ppm, time: 14:25
4. Collect composite sediment sample using hand trowel or spoon from sediment dug out of the retained softshell clam holes. Collection time: 14:35 * Sediment collected from 19 holes of retained clams
5. Photograph sediment composite(use white erase board to indicate location)

Photolog: composite: 168-2057

habitat + clam holes: 168-2058 to 2063
168-2052 to 2056

6. Characterize composite sediment sample (color, sheen, odor, type of material, etc.)
   40% clay, 40% sand, 20% silt — moist, cohesive, petroleum odor + sheen — potential old landfill — Gley 1 2.5/N
7. Homogenize, place in sample container and store on wet ice. ✓

Additional Notes: large amounts of trash ~~sediment~~ are present within sediment. Glass, ceramics and plastics mixed with sediments. Narrow area of intertidal flat available for collection, ~15' of workable area along waters edge. Few ribbed mussels + polychaetes observed. Some gravel and chunks of old bricks mixed in sediment. Mudflat bordered by Phragmites in upland areas

NBO3SED 134

Newark Bay Phase III Study
Tierra Solutions
East Brunswick, NJ

SEDIMENT COLLECTION FIELD DATA SHEET

Intertidal Location: 134

Date: 9/26/14

Arrival Time: 15:15

Signature: Bryan Lee

Departure Time: 15:30

Crew: BWL, CSS, JBS

Weather conditions: Rain, 60°F

TASKS:

1. Collect sediment grab sample for VOCs using hand trowel or spoon (surface, 0-6 inches) from location of first retained softshell clam. VOC/%moisture collection time: 1600
   Sediment Grab GPS Coordinates
   Northing: 659737.52 Easting: 579884.31
2. Place sediment grab in appropriate sample container with no head space and store on wet ice.
3. Remove a small aliquot of sediment (1oz) from the grab sample and place in ziplock bag for analysis with PID
   Collection time: 1554 peak PID reading: 060 ppm, time: 1723
4. Collect composite sediment sample using hand trowel or spoon from sediment dug out of the retained softshell clam holes. Collection time: 1610
5. Photograph sediment composite(use white erase board to indicate location)

Photolog: 172 -2129 composite
172 - 2123 to 2128 – collection holes + habitat

6. Characterize composite sediment sample (color, sheen, odor, type of material, etc.)

o/o sand 20
o/o silt 60
o/o ~~clay~~ Bmf 20 organic

petroleum odor and sheen
organic material from remnant rooted vegetation
2.5/10Y

7. Homogenize, place in sample container and store on wet ice.

*East side of flat with gravel/cobble and surface along with bricks/slag type material. West side of flat collection adjacent to mouth of small chan

Additional Notes: Composite collected from 20 holes. Clams collected from only 4 holes on east side of the mud flat. West si of flat provided better habit

* Note PID reading taken after rain stopped

NBO3SED

Newark Bay Phase III Study
Tierra Solutions
East Brunswick, NJ

SEDIMENT COLLECTION FIELD DATA SHEET

Intertidal Location: 135

Date: 9/19/14

Arrival Time: 1030

Signature:

Departure Time: 1131

Crew: BW, CD, JBS, KCM

Weather conditions: S wind 60°F

TASKS:

1. Collect sediment grab sample for VOCs using hand trowel or spoon (surface, 0-6 inches) from location of first retained softshell clam. VOC/%moisture collection time: 1107 completed 11113hrs
   Sediment Grab GPS Coordinates
   Northing: 661734.52 Easting: 581440.70
2. Place sediment grab in appropriate sample container with no head space and store on wet ice.
3. Remove a small aliquot of sediment (1oz) from the grab sample and place in ziplock bag for analysis with PID
   Collection time: 1106 peak PID reading: 4.2 ppm, time: 11:22
4. Collect composite sediment sample using hand trowel or spoon from sediment dug out of the retained softshell clam holes. Collection time: 1115 composite collected from 29 retained clam holes
5. Photograph sediment composite(use white erase board to indicate location)

Photolog: composite 167-2042
site: 167-2038 to 2041

6. Characterize composite sediment sample (color, sheen, odor, type of material, etc.)

Sand 70% Gley 1 10,5/10Y non-cohesive
silt 30% no organic coarse material moist

7. Homogenize, place in sample container and store on wet ice.

Additional Notes:

NEWARK BAY PHASE III
Location: 122a

START: 1357
END: 1416

Specimen Tally Form

Project Name: NB03 Project No.: NA

Species Sampled: Mya arenaria Field Crew Initials: BWL, CDD, JBS, KCM

Softshell clam collection

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
9/17/14	0900	NA	1	44.1	9.3	NA	
			2	44.0	7.0		
			3	39.7	6.2		
			4	42.6	7.7		
			5	44.3	7.6		
			6	40.7	7.0		
			7	51.9	15.1		
			8	43.8	9.0		
			9	40.1	6.6		
			10	43.1	8.6		
			11	42.3	8.3		
			12	40.5	6.3		
			13	44.1	9.3		
			14	40.2	6.9		
			15	38.4	6.3		
			16	40.8	3.9		Broken shell
			17	43.3	8.2		
			18	43.0	8.4		

Specimen Tally Form

Project Name: NB03 **Project No.:** NA

Species Sampled: Mya arenaria **Field Crew Initials:** BWD, CDD, JBS, KCM

Softshell clam collection

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
9/17/14	0900	NA	19	42.5	7.8	NA	
			20	39.8	6.3		
			21	43.3	5.8		Broken shell
			22	41.8	5.0		Broken shell
			23	39.9	5.3		Broken shell
			24	39.5	5.7		
			25	43.3	8.8		
			26	40.7	7.8		
			27	44.9	9.1		
			28	43.0	7.3		
			29	38.1	4.3		
			30	40.9	7.1		
			31	41.1	6.9		
			32	45.7	8.5		
			33	44.7	9.3		
			34	46.6	10.4		
			35	45.0	9.3		
			36	47.3	10.7		

Specimen Tally Form

Project Name: NB 03 **Project No.:** NA

Species Sampled: Mya arenaria **Field Crew Initials:** BWL, COD, JBS, KCM

soft-shell clam collection

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
9/17/14	0900	NA	37	43.3	9.9	NA	
			38	41.4	7.8		
			39	38.6	6.8		
			40	42.3	9.0		
			41	39.5	6.1		
			42	40.3	7.3		
			43	42.9	7.8		
			44	41.7	7.1		
			45	46.2	10.3		
			46	40.1	8.2		
			47	41.5	6.7		
			48	41.7	7.0		
			49	41.3	3.7		broken shell
			50	43.5	5.2		broken shell
			51	38.9	4.0		broken shell
			52	43.3	5.8		broken shell
			53	41.4	5.1		broken shell

Start: 1508
End: 1516

NEWARK BAY PHASE III
Location: 122a

208 gms.

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Specimen Tally Form

Specimen Tally Form

Project Name: NB03 **Project No.:** NA

Species Sampled: Mya arenaria **Field Crew Initials:** BWL, JBS, CSA, KOM

Softshell clam Collection

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
9/18/14	0905	NA	1	43.9	9.0	NA	
			2	68.6	37.5		
			3	49.6	7.3		cracked shell
			4	52.4	18.8		
			5	45.4	9.1		
			6	45.0	9.9		
			7	45.6	8.9		
			8	41.0	5.3		cracked shell
			9	41.4	8.3		
			10	43.9	10.6		
			11	44.8	11.1		
			12	44.0	9.4		
			13	39.6	7.1		
			14	39.8	8.0		
			15	44.6	10.2		
			16	41.3	8.0		
			17	40.1	8.0		
			18	40.9	8.3		

15:00 hrs start processing

Photos 167-2033 second batch of clams

NEWARK BAY PHASE III
Location: 122 a

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Specimen Tally Form

Specimen Tally Form

Project Name: NB 03 **Project No.:** NA

Species Sampled: Mya arenaria **Field Crew Initials:** BWL, CDD, JBS, KCM

soft shell Clam collection

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
9/18/14	0905	NA	19	40.3	6.9	NA	
			20	42.5	7.8		
			21	43.6	6.5		
			22	38.2	6.1		
			23	38.7	6.2		
			24	39.2	7.2		
			25	40.3	6.7		
			26	40.7	7.3		
			27	45.1	7.4		Cracked Shell
			28	37.7	6.0		
			29	38.9	6.2		
			30	40.3	7.2		
			31	39.4	7.5		
			32	38.5	6.0		
			33	41.2	4.3		Cracked shell

NEWARK BAY PHASE III
Location: 122 b

START PROCESSING: 1538 hrs
END PROCESSING: 1615 hrs

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Specimen Tally Form

Specimen Tally Form

Project Name: NB 03 **Project No.:** NA

Species Sampled: Mya arenaria **Field Crew Initials:** BWL, CDD, JBS KCM

Soft shell clam collection

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
9/18/14	0905	NA	1	43.6	9.1	NA	
			2	46.0	10.3		
			3	40.1	6.9		
			4	40.3	7.8		
			5	51.8	15.2		
			6	46.3	6.7		cracked shell
			7	56.3	12.8		cracked shell
			8	43.9	10.3		
			9	43.7	10.1		
			10	47.0	7.7		
			11	44.8	12.2		
			12	45.4	7.5		
			13	45.3	6.3		cracked shell
			14	47.9	10.1		
			15	39.8	8.2		
			16	42.6	8.8		
			17	39.1	6.5		
			18	44.1	10.5		

total tissue weight (g) = 206

NEWARK BAY PHASE III
Location: 122b

Specimen Tally Form

Project Name: NB 03 **Project No.:** NA

Species Sampled: Mya arenaria **Field Crew Initials:** BWL, CDD, JBS, KCM

Soft shell clam collection

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
9/18/14	0905	NA	19	39.0	6.3	NA	
			20	49.8	8.3		shell cracked
			21	39.7	6.6		
			22	40.8	7.6		
			23	40.4	7.1		
			24	46.9	11.7		
			25	40.6	8.1		
			26	40.0	7.7		
			27	44.4	10.8		
			28	38.3	5.7		
			29	40.7	8.2		
			30	39.3	7.2		
			31	39.4	7.0		
			32	37.9	6.2		
			33	40.2	8.4		
			34	39.3	7.5		
			35	43.2	9.7		
			36	46.6	9.4		

NEWARK BAY PHASE III
Location: 122b

Specimen Tally Form

Project Name: NB 03 **Project No.:** NA

Species Sampled: Mya arenaria **Field Crew Initials:** BWC, CDD, JBS, KCM

Soft shell clam collection

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
9/18/14	0905	NA	37	47.0	8.7	NA	
			38	39.0	6.7		
			39	42.7	6.1		shell cracked
			40	38.4	6.6		
			41	44.3	9.0		
			42	40.4	7.2		
			43	46.0	5.0		shell cracked
			44	44.0	8.5		
			45	42.5	9.0		
			46	44.3	9.0		
			47	38.8	7.2		
			48	38.7	3.7		shell cracked
			49	39.9	5.7		
			50	38.8	7.1		
			51	40.0	7.2		
			52	42.3	7.9		
			53	43.0	9.0		
			54	44.9	10.0		

NEWARK BAY PHASE III
Location: 122b

Specimen Tally Form

Project Name: NB 03 **Project No.:** NA

Species Sampled: Mya arenaria **Field Crew Initials:** BWC, CDD, JBS, KCM

Soft shell clam collection

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
9/18/14	0905	NA	55	41.5	7.7	NA	
			56	39.2	7.5		
			57	39.0	7.0		
			58	40.0	7.2		
			59	38.7	5.6		
			60	38.0	6.1		
			61	44.2	10.3		
			62	42.7	6.8		
			63	39.7	7.7		
			64	39.6	4.9		
			65	43.6	7.9		
			66	40.1	7.1		
			67	44.0	8.9		
			68	43.0	8.5		
			69	39.4	6.9		
			70	44.7	9.3		
			71	42.8	9.9		
			72	40.3	7.3		

NEWARK BAY PHASE III
Location: 122 b

Specimen Tally Form

Project Name: NB 03 **Project No.:** NA

Species Sampled: Mya arenaria **Field Crew Initials:** BWC, CDD, JBS, KCM

Soft shell clam collection

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
9/18/14	0905	NA	73	41.9	7.8	NA	
			74	40.2	7.6		
			75	42.0	5.8		shell cracked
			76	42.5	8.9		
			77	45.0	10.0		
			78	38.9	4.8		
			79	39.5	5.0		shell cracked
			80	39.4	6.5		
			81	38.2	5.8		
			82	38.2	6.6		
			83	38.2	6.3		
			84	38.5	7.4		
			85	37.8	5.5		
			86	39.2	4.8		
			87	39.5	5.3		shell cracked
			88	43.6	4.6		shell cracked
			~~89~~ CDD	NA	NA		
			~~90~~ CDD	NA	NA		

NEWARK BAY PHASE III
Location: 122 C

START Processing: 1639 hrs
END Processing: 1705 hrs

Specimen Tally Form

Project Name: NB 03 **Project No.:** NA

Species Sampled: Mya Arenaria **Field Crew Initials:** BWL, CDD, JBS, KCM

Soft shell clam collection

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
9/18/14	1041	NA	1	43.6	8.2	NA	
			2	44.3	6.9		shell cracked
			3	43.9	10.0		
			4	38.6	7.1		
			5	44.5	11.6		
			6	44.6	10.3		
			7	45.9	10.7		
			8	41.7	8.6		
			9	43.2	5.9		shell cracked
			10	43.6	9.7		
			11	48.3	7.8		
			12	46.3	10.7		
			13	39.2	6.8		
			14	44.6	9.4		
			15	38.9	7.1		
			16	46.4	9.6		
			17	54.9	18.0		
			18	43.9	8.5		

total tissue weight (g) = 199g

NEWARK BAY PHASE III
Location: 122C

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Specimen Tally Form

Specimen Tally Form

Project Name: NB03 **Project No.:** NA

Species Sampled: Mya ARENARIA **Field Crew Initials:** BLW, CDO, JBS, KCM
Softshell clam collection

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
9/18/14	1041	NA	19	41.9	7.7	NA	
			20	45.3	10.4		
			21	43.7	9.1		
			22	40.4	7.8		
			23	46.3	10.5		
			24	47.5	12.5		
			25	45.9	9.7		
			26	40.1	6.1		
			27	42.3	8.7		
			28	41.2	7.7		
			29	45.7	10.1		
			30	42.1	8.4		
			31	44.5	10.4		
			32	43.6	8.9		
			33	42.7	8.4		
			34	39.1	6.5		
			35	44.4	10.2		
			36	41.1	7.9		

NEWARK BAY PHASE III
Location: 1B2C

Specimen Tally Form

Project Name: NB03 **Project No.:** NA

Species Sampled: MYA ARENARIA Softshell clam collection **Field Crew Initials:** BWL, CDQ, JBS, KCM

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
9/18/14	1041	NA	37	40.7	8.5	NA	
			38	42.3	8.7		
			39	43.0	7.7		
			40	44.3	9.5		
			41	44.3	7.0		shell cracked
			42	43.8	9.6		
			43	43.0	8.9		
			44	38.2	6.4		
			45	38.0	5.7		
			46	44.3	10.8		
			47	41.9	7.7		
			48	40.6	7.6		
			49	39.5	7.6		
			50	40.0	6.2		
			51	43.3	9.2		
			52	40.1	7.0		
			53	41.4	7.7		
			54	45.9	6.8		shell cracked

NEWARK BAY PHASE III
Location: 122C

Specimen Tally Form

Project Name: NB03 **Project No.:** NA

Species Sampled: Mya arenaria softshell clam collection **Field Crew Initials:** BWL, CDM, JBS, KCM

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
9/18/14	1041	NA	55	40.5	7.4	NA	
			56	42.3	5.4		Cracked shell
			57	40.0	6.8		
			58	39.1	6.5		
			59	38.2	7.1		
			60	37.9	5.4		
			61	40.0	7.2		
			62	39.9	6.4		Cracked shell
			63	41.8	7.5		
			64	41.3	8.0		
			65	39.9	6.8		
			66	41.5	8.6		
			67	40.1	7.2		
			68	41.3	7.7		
			69	39.2	6.8		
			70	38.1	5.7		
			71	38.9	6.0		
			72	40.0	7.2		

NEWARK BAY PHASE III
Location: 122C

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Specimen Tally Form

Specimen Tally Form

Project Name: NB 03 **Project No.:** NA

Species Sampled: MYA ARENARIA **Field Crew Initials:** BLK, COD, JBS, KCM

Softshell clam collection

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
9/18/14	1041	NA	73	39.6	6.2	NA	
			74	40.6	6.8		
			75	38.9	6.3		cracked shell
			76	40.4	7.7		
			77	40.7	7.0		
			78	38.5	6.5		
			79	39.2	5.9		
			80	39.5	6.9		
			81	38.5	4.0		cracked shell
9/18/14	1041	NA	82	38.6	4.6		cracked shell

Start 1809
End 1819 on 09-23-14

1 of 4

NEWARK BAY PHASE III
Location: 123A

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Specimen Tally Form

Specimen Tally Form

Project Name: NB03 **Project No.:** NA

Species Sampled: Soft Shell Clams (mya arenaria) **Field Crew Initials:** BWL, KCM, CDD, CCB

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
09-23-14	1320	N/A	1	59.5	26.4	N/A	N/A
			2	62.0	37.6		
			3	64.8	33.2		
			4	54.0	23.0		
			5	59.5	25.4		
			6	60.0	27.0		
			7	56.0	20.3		
			8	61.4	23.1		
			9	63.0	29.0		
			10	58.0	22.8		
			11	50.0	14.0		
			12	58.8	24.1		
			13	64.7	27.0		
			14	44.5	9.9		
			15	63.0	30.2		
			16	55.0	20.7		
			17	53.7	19.9		
			18	56.8	23.0		

Total Tissue Mass: 295g

*Two sample jars for tissue

BWL

NEWARK BAY PHASE III
Location: 123A

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Specimen Tally Form

Specimen Tally Form

Project Name: NB03 **Project No.:** NA

Species Sampled: Soft Shell clams (Mya arenaria) **Field Crew Initials:** BWL, KCM, COD, CCB

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
09-23-14	1320	N/A	19	55.8	21.2	N/A	N/A
			20	52.4	17.1		
			21	49.6	14.1		
			22	51.6	15.6		
			23	52.7	16.8		
			24	56.6	19.9		
			25	53.0	17.0		
			26	50.5	14.3		
			27	48.4	12.4		
			28	53.5	16.3		
			29	49.0	11.7		
			30	49.0	12.5		
			31	46.4	11.2		
			32	50.0	13.0		
			33	47.8	12.9		
			34	52.5	15.0		
			35	50.0	13.1		
			36	47.0	12.6		

BWL

NEWARK BAY PHASE III
Location: 123A

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Specimen Tally Form

Specimen Tally Form

Project Name: NB03 **Project No.:** NA

Species Sampled: Soft Shell Clam (Mya arenaria) **Field Crew Initials:** BWL, KCM, CDP, CCB

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
09-23-14	1320	N/A	37	45.0	9.4	N/A	N/A
			38	44.5	12.0		
			39	49.0	13.2		
			40	45.6	11.5		
			41	45.0	11.2		
			42	46.0	12.4		
			43	48.2	12.0		
			44	45.5	10.4		
			45	38.4	5.8		
			46	44.2	9.1		
			47	46.5	12.5		
			48	45.4	8.8		
			49	46.0	10.4		
			50	44.7	10.4		
			51	46.8	8.3		
			52	40.6	7.5		
			53	42.5	8.4		
			54	58.0	12.5		Cracked Shells

BWL

NEWARK BAY PHASE III
Location: 123A

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Specimen Tally Form

Specimen Tally Form

Project Name: NB03 **Project No.:** NA

Species Sampled: Soft Shell Clams (Mya arenaria) **Field Crew Initials:** BWL, KCM, CDD, CCB

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
09-23-14	1320	N/A	55	61.0	17.5	N/A	Cracked Shell
			56	53.0	9.0		
			57	58.0	14.2		
			58	50.0	9.0		
			59	59.0	19.0		
			60	50.0	7.7		
			61	50.0	13.7		
			62	50.0	9.5		
			63	49.0	8.7		
			64	47.0	8.5		
			65	26.7	8.8		
			66	46.7	7.1		

Blue

NEWARK BAY PHASE III
Location: 123B

Start 1841
Stop 1855 on 09-23-14

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Specimen Tally Form

Specimen Tally Form

Project Name: NB03 **Project No.:** NA

Species Sampled: Soft Shell Clams (Mya arenaria) **Field Crew Initials:** BWL, KCM, CDP, CCB

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
09-23-14	1431	N/A	1	66.8	36.0	N/A	N/A
			2	62.0	32.5		
			3	60.8	31.0		
			4	55.0	20.3		
			5	61.6	30.9		
			6	54.0	21.0		
			7	53.0	20.0		
			8	52.6	19.7		
			9	54.8	17.4		
			10	63.8	29.2		
			11	55.0	24.3		
			12	56.3	22.7		
			13	55.0	18.2		
			14	55.5	17.5		
			15	52.0	17.4		
			16	52.0	16.8		
			17	55.0	21.3		
			18	54.0	15.7		

Total Tissue Mass = 320g

* Two sample jars for tissue

BWL

NEWARK BAY PHASE III
Location: 123 B

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Specimen Tally Form

Specimen Tally Form

Project Name: NB03 ~~2014~~ **Project No.:** NA

Species Sampled: ~~Blue Crab, Clam~~ Soft Shell Clams (mya arenaria) **Field Crew Initials:** BWL, KCM, CDD, CCB

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
09-23-14	1431	N/A	19	54.0	18.0	N/A	N/A
			20	52.7	19.3		
			21	49.0	16.6		
			22	55.3	17.8		
			23	49.9	16.9		
			24	52.0	16.0		
			25	52.0	18.2		
			26	57.0	19.5		
			27	55.2	19.0		
			28	52.5	17.2		
			29	49.0	13.7		
			30	53.3	18.3		
			31	53.3	18.6		
			32	54.0	18.5		
			33	51.8	16.9		
			34	52.0 ~~62.0~~	16.5		
			35	50.0	13.9		
			36	51.5	14.8		

BWL

NEWARK BAY PHASE III
Location: 123 B

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Specimen Tally Form

Specimen Tally Form

Project Name: NBB03 **Project No.:** NA

Species Sampled: Soft Shell Clams (mya arenaria) **Field Crew Initials:** BWL, KCM, COD, CCB

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
09-23-14	1431	N/A	37	49.0	15.6	N/A	N/A
			38	52.3	15.3		
			39	51.0	16.0		
			40	51.0	13.7		
			41	50.0	15.8		
			42	50.0	15.7		
			43	52.0	16.0		
			44	48.0	15.2		
			45	49.5	14.2		
			46	51.4	17.0		
			47	43.5	11.0		
			48	52.0	16.5		
			49	50.0	15.5		
			50	50.2	13.0		
			51	51.5	16.2		
			52	50.7	14.0		
			53	49.0	13.7		
			54	49.8	14.0		

BWL

NEWARK BAY PHASE III
Location: 123 B

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Specimen Tally Form

Specimen Tally Form

Project Name: NB03 **Project No.:** NA

Species Sampled: Soft Shell Clams (mya arenaria) **Field Crew Initials:** BWL, KCM, CDD, CCB

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
09-23-14	1431	N/A	55	45.0	11.1	N/A	N/A
			56	50.9	14.0		
			57	46.7	13.9		
			58	49.0	12.9		
			59	44.0	11.0		
			60	45.0	12.5		
			61	43.6	9.0		
			62	44.0	18.5		
			63	43.0	8.7		
			64	39.0	6.4		
			65	40.4	7.0		
			66	40.5	8.5		
			67	40.8	7.4		
			68	40.4	5.9		Cracked Shell
			69	40.0	7.1		N/A
			70	49.0	6.4		N/A

BWL

NEWARK BAY PHASE III
Location: 124

124

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Specimen Tally Form

Specimen Tally Form

Project Name: NB03 **Project No.:** NA

Species Sampled: Mya Arenaria **Field Crew Initials:** JBS, KCM

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
10/2/14	0820	NA	1	49.5	20.1	NA	
			2	61.1	34.8		
			3	62.8	36.7		
			4	66.9	39.7		
			5	63.0	20.1		cracked shell
			6	57.9	27.8		
			7	57.3	28.6		
			8	54.4	23.5		
			9	54.4	15.8		
			10	57.7	27.0		
			11	53.9	21.7		
			12	48.4	15.3		
			13	49.1	17.0		
			14	49.1	21.6		
			15	45.2	17.8		
			16	52.9	20.5		
			17	50.2	21.8		
			18	54.4	21.3		

total weight 202g.

NEWARK BAY PHASE III
Location: 124

Specimen Tally Form

Project Name: NB 03 **Project No.:** NA

Species Sampled: Mya Arenaria **Field Crew Initials:** JBS, KCM

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
10/2/14	0820	NA	19	49.3	17.6	NA	
			20	46.3	16.1		
			21	46.2	17.0		
			22	48.7	17.0		
			23	51.1	25.4		
			24	44.2	13.0		
			25	42.9	12.6		
			26	47.1	14.2		
			27	46.1	14.1		
			28	48.9	20.6		
			29	49.1	18.9		
			30	47.8	16.5		
			31	44.4	16.5		
			32	44.5	15.5		
			33	45.3	12.9		
			34	50.6	20.0		
			35	49.9	18.5		
			36	46.5	16.1		

NEWARK BAY PHASE III
Location: 124

Specimen Tally Form

Project Name: NB03 **Project No.:** NA

Species Sampled: Mya arenaria **Field Crew Initials:** KCM, JBS

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
10/2/14	0820	NA	37	48.8	16.3	NA	
			38	42.8	11.6		
			39	45.2	13.7		
			40	45.2	14.3		
			41	43.4	16.7		
			42	39.3	8.4		
			43	41.9	12.0		
			44	41.0	11.6		
			45	24.4	10.8		
			46	40.3	11.1		
			47	42.2	12.0		
			48	40.0	10.5		
			49	40.2	9.3		
			50	39.2	9.0		
			51	39.2	10.5		
			52	39.5	7.4		
			53	39.3	7.7		
			54	39.4	9.4		

NEWARK BAY PHASE III
Location: 124

Specimen Tally Form

Project Name: NB03 **Project No.:** NA

Species Sampled: MYA Arenaria **Field Crew Initials:** JBS, KCM

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
10/2/14	0820	NA	55	39.4	8.4	NA	

2 short clams.

Specimen Tally Form

Project Name: NBP3 **Project No.:** NA

Species Sampled: Soft Shell Clams (*Mya arenaria*) **Field Crew Initials:** KCM, BWL, JBS, CDD

Length - measured anterior to posterior of shell

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
09-26-14	1536	N/A	1	46.5	17.0	N/A	N/A
			2	52.7	23.5		
			3	56.0	28.3		
			4	53.5	22.2		
			5	49.4	17.3		
			6	55.5	27.6		
			7	52.0	20.6		
			8	50.0	17.0		
			9	43.0	16.0		
			10	45.0	14.2		
			11	63.0	29.5		
			12	59.0	34.6		
			13	57.5	29.0		
			14	53.0	27.2		
			15	55.7	23.0		
			16	44.0	10.5		
			17	45.0	12.9		
			18	38.5	9.0		

* 3 individual collected were not of size and were not processed

Round 6 by KCM Total Tissue Weight: 247g 1 of 4

NEWARK BAY PHASE III
Location: 125

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Specimen Tally Form

Specimen Tally Form

Project Name: NB03 **Project No.:** NA

Species Sampled: (Mya arenaria) Soft Shell Clams **Field Crew Initials:** KCM, BWL, JBS, CPO

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
9/26/14	1536	NA	19	44.0	13.2	NA	NA
			26	57.0	24.0		
			21	48.0	17.0		
			22	55.9	24.3		
			23	50.0	19.8		
			24	39.0	8.2		
			25	49.0	22.6		
			26	42.0	11.6		
			27	56.4	26.3		
			28	47.7	14.9		
			29	52.2	25.1		
			30	54.0	27.1		
			31	55.0	24.0		
			32	51.0	21.2		
			33	47.5	15.0		
			34	55.5	25.3		
			35	47.6	16.5		
			36	40.0	12.6		

Specimen Tally Form

Project Name: NB03 **Project No.:** NA

Species Sampled: (Mya arenaria) Soft Shell Clams **Field Crew Initials:** KCM, BWL, JBS, CAD

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
9/26/14	1536	NA	37	39.0	5.7	NA	N/A
			38	50.6	20.6		
			39	52.5	18.8		
			40	46.5	16.7		
			41	46.5	18.0		
			42	45.4	14.6		
			43	43.0	13.3		
			44	41.3	10.4		
			45	46.6	18.2		
			46	40.0	11.3		
			47	49.0	17.5		
			48	49.1	17.4		
			49	49.1	15.9		
			50	47.0	16.7		
			51	47.5	21.0		
			52	46.0	13.9		
			53	44.4	13.2		
			54	40.0	10.6		

Specimen Tally Form

Project Name: NB03 **Project No.:** NA

Species Sampled: (Mya arenaria) Soft Shell Clams **Field Crew Initials:** BLL, KCM, EDD, JBS

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
9/24/14	1536	NA	55	46.0	13.3	NA	NA
			56	48.0	12.0		Cracked Shell
			57	48.0	12.3		
			58	49.0	16.3		
			59	48.2	10.3		
			60	48.2	16.0		
			61	48.0	14.7		
			62	48.0	21.6		

NEWARK BAY PHASE III
Location: 127A

Start: 1803
End: 1812
on 09-24-14

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Specimen Tally Form

Specimen Tally Form

Project Name: NB03 **Project No.:** NA

Species Sampled: Soft Shell Clams (mya arenaria) **Field Crew Initials:** BWL, KCM, JBS, CDD

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
09-24-14	1405	N/A	1	66.4	36.9	N/A	N/A
			2	70.0	44.4		
			3	67.0	42.0		
			4	62.9	34.0		
			5	58.0	28.1		
			6	67.6	45.5		
			7	60.8	30.0		
			8	70.3	44.6		
			9	64.0	36.9		
			10	61.9	20.5		
			11	59.9	28.0		
			12	60.6	26.0		
			13	58.4	24.7		
			14	58.0	23.9		
			15	61.1	32.0		
			16	54.9	20.0		
			17	49.0	18.0		
			18	60.0	20.9		

* Note: Two clams were undersized + not processed.

Total Tissue Weight: 391 g
*Two jar sample

BWL

NEWARK BAY PHASE III
Location: 127A

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Specimen Tally Form

Specimen Tally Form

Project Name: NB03 **Project No.:** NA

Species Sampled: Soft Shell Clams (mya arenaria) **Field Crew Initials:** BWL, KCM, JBS, CDD

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
09-24-14	1405	N/A	19	50.0	17.0	N/A	N/A
			20	54.0	15.5		from G N/A
			21	53.6	20.5		
			22	54.0	20.4		
			23	39.7	8.1		
			24	54.8	20.4		
			25	51.6	16.0		
			26	45.5	13.6		
			27	48.5	12.7		
			28	48.7	16.0		
			29	63.0	28.3		Cracked Shells
			30	66.0	25.0		
			31	70.0	45.0		
			32	63.0	27.5		
			33	63.0	25.0		
			34	67.0	17.0		
			35	57.0	17.3		
			36	60.8	24.2		

BWL

NEWARK BAY PHASE III
Location: 127A

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Specimen Tally Form

Specimen Tally Form

Project Name: NB03 **Project No.:** NA

Species Sampled: Soft Shell Clams (*Mya arenaria*) **Field Crew Initials:** BWL, KCM, JBS, CDD

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
09-24-14	1405	N/A	37	53.4	15.5	N/A	Cracked Shell
			38	66.0	25.2		
			39	61.0	17.5		
			40	65.5	20.5		
			41	54.0	16.2		
			42	53.6	14.3		
			43	47.0	9.2		
			44	60.2	19.6		
			45	67.0	23.0		
			46	67.0	27.0		
			47	56.0	10.6		
			48	56.0	15.0		
			49	47.0	9.8		
			50	44.2	8.4		
			51	51.0	10.3		
			52	65.0	16.0		
			~~53~~ KCM				
			~~54~~ KCM				

BWL

NEWARK BAY PHASE III
Location: 127B

Start: 1835
End: 1850
on 09-24-14

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Specimen Tally Form

Specimen Tally Form

Project Name: NB03 **Project No.:** NA

Species Sampled: Soft Shell Clams (mya arenaria) **Field Crew Initials:** BWL, KCM, JBS, CDD

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
09-24-14	1528	N/A	1	70.0	41.3	N/A	N/A
			2	75.2	64.6		
			3	67.6	52.4		
			4	68.9	52.4		
			5	58.5	26.6		
			6	54.7	23.3		
			7	55.4	20.5		
			8	66.0	28.5		
			9	58.2	28.7		
			10	26.5	13.8		
			11	56.2	24.3		
			12	48.5	12.9		
			13	53.4	18.5		
			14	52.4	17.7		
			15	47.4	15.1		
			16	44.3	12.8		
			17	47.2	14.0		
			18	46.2	13.2		

(<1.5")

* 1 individual too small & not processed

Total Tissue Weight:
331g

Recorded by KCM

* Two Jar 2

NEWARK BAY PHASE III
Location:
127 B

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Specimen Tally Form

Specimen Tally Form

Project Name: NB03 **Project No.:** NA

Species Sampled: Soft Shell Clams (mya arenaria) **Field Crew Initials:** BWL, KCM, JBS, CDD

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
09-24-14	1528	N/A	19	50.0	17.5	N/A	N/A
			20	46.5	11.2		
			21	48.0	14.5		
			22	51.5	18.5		
			23	40.0	8.1		
			24	43.5	12.3		
			25	42.0	14.3		
			26	50.0	15.7		
			27	48.0	12.9		
			28	49.0	16.2		
			29	46.0	14.3		
			30	49.0	15.1		
			31	42.4	11.3		
			32	47.0	11.0		
			33	47.0	12.5		
			34	50.0	16.8		
			35	48.9	14.3		
			36	44.0	11.5		

BWL

NEWARK BAY PHASE III
Location:
127B

Specimen Tally Form

Project Name: NB03 **Project No.:** NA

Species Sampled: Soft Shell Clams (mya arenaria) **Field Crew Initials:** BWL, ICM, JBS, CDD

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
09-24-14	1528	N/A	37	44.0	11.0	N/A	N/A
			38	45.0	11.1		
			39	47.5	15.3		
			40	51.0	15.1		
			41	47.1	14.2		
			42	46.0	14.1		
			43	45.5	11.0		
			44	46.2	11.7		
			45	44.3	11.7		
			46	40.0	8.5		
			47	46.3	12.3		
			48	44.7	11.4		
			49	51.6	16.5		
			50	46.3	11.8		
			51	41.4	10.9		
			52	44.0	10.0		
			53	45.5	12.0		
			54	49.0	15.7		

BWL

NEWARK BAY PHASE III
Location:
127B

Specimen Tally Form

Project Name: NB03 **Project No.:** NA

Species Sampled: Soft Shell Clams (mya arenaria) **Field Crew Initials:** BWL, KCM, JBS, CDP

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
09-24-14	1528	N/A	55	45.8	11.5	N/A	N/A
			56	45.5	11.3		
			57	41.3	8.8		
			58	41.3	7.5		
			59	38.3	7.1		
			60	43.0	10.0		
			61	42.6	10.5		
			62	44.8	11.8		
			63	44.4	11.4		
			64	43.2	10.8		
			65	44.0	10.7		
			66	40.5	8.0		
			67	43.0	11.4		
			68	45.0	10.9		
			69	42.0	11.2		
			70	44.0	10.6		
			71	41.0	9.3		
			72	49.0	14.6		

BWL

Station 127B

Specimen Tally Form

Project Name: NB03 Project No.: NA

Species Sampled: ~~Et~~ KCM Field Crew Initials: RWL, KCM, JBS, CDD

Soft Shell Clams (Mya arenaria)

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
09-24-14	1528	N/A	73	47.7	14.0	N/A	N/A
			74	43.0	9.3		
			75	45.0	10.3		
			76	47.0	13.2		
			77	43.0	10.0		
			78	42.7	9.4		
			79	45.5	12.5		
			80	49.0	8.1		Cracked Shell
			81	42.4	7.0		
			82	50.0	12.0		
			83	44.0	6.2		

BM

Laboratory Processing Mya arenaria 9/9/14
NB03CLM129

Specimen Tally Form

Project Name: Newark Bay Phase III Project No.:

Species Sampled: Mya arenaria Field Crew Initials: BWL

Weight with shell intact (whole specimen weight)
Lab processing of clams 9/9/14

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
9/8/14	1430	NA	1	50	14.5	NA	
			2	51	13		
			3	49	15.1		
			4	45	10.2		
			5	52	12.1		
			6	60	21.5		
			7	45	11.3		
			8	52	16.0		
			9	52	19.5		
			10	53	15.1		
			11	51	17.2		
			12	46	11.2		
			13	60	28.4		
			14	46	7.7		
			15	51	13.3		
			16	41	10.5		
			17	31	6		too small, less than 1.5

Notes:

start process time: 10:40 end process time: 11:15

BWL, MKM, KCM processed clams

NEWARK BAY PHASE III
Location: 129.

START: 1824
END: 1835

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Specimen Tally Form

Specimen Tally Form

Project Name: NB03 **Project No.:** NA

Species Sampled: Mya arenaria **Field Crew Initials:** BWL, CDD, JBS

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
9/25/14	1647	NA	1	60.0	32.5	NA	
			2	48.0	20.0		
			3	46.9	13.6		
			4	54.7	15.0		
			5	50.7	18.5		
			6	49.0	17.0		
			7	51.9	20.0		
			8	48.5	15.6		
			9	52.2	20.8		
			10	50.7	18.2		
			11	47.2	16.1		
			12	49.0	19.1		
			13	44.6	13.0		
			14	48.7	17.3		
			15	45.9	13.1		
			16	47.4	13.4		
			17	44.4	14.0		
			18	48.9	15.6		

batch clam photo 172–2130

N = 28 clams

Total weight : 120 grams

BWL

NEWARK BAY PHASE III
Location: 129

Specimen Tally Form

Project Name: NB03 **Project No.:** NA

Species Sampled: Mya arenaria **Field Crew Initials:** BWL, CDD, JBS

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
9/25/14	1647	NA	19	47.6	14.1	NA	
			20	41.2	10.7		
			21	45.3	13.6		
			22	39.0	8.6		
			23	44.2	16.3		
			24	44.0	14.3		
			25	42.2	12.0		
			26	44.7	10.5		Cracked shell
			27	48.7	9.3		" "
			28	48.1	9.5		" "

BWL

START: 1500
END: 1512

NEWARK BAY PHASE III
Location: 130

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Specimen Tally Form

Specimen Tally Form

Project Name: Newark Bay Phase III **Project No.:**

Species Sampled: Mya arenaria **Field Crew Initials:** BCVL

Collected with clam shovel

whole body weight

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
9/16/14	0810	NA	1	75.9	59.3	NA	
			2	74.7	55.9		
			3	77.0	57.2		
			4	68.6	25.7		cracked shell
			5	71.5	46.9		
			6	63.4	33.5		
			7	70.4	37.6		
			8	76.2	48.6		
			9	71.6	49.2		
			10	60.3	31.2		
			11	69.8	27.0		cracked shell
			12	66.7	45.7		
			13	61.9	32.0		
			14	51.8	17.3		
			15	46.0	11.7		
			16	60.8	21.9		
			17	47.6	14.2		
			18	53.0	18.0		

Bryan Lee

NEWARK BAY PHASE III
Location: 130

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Specimen Tally Form

Specimen Tally Form

Project Name: Newark Bay Phase III **Project No.:**

Species Sampled: Mya arenaria **Field Crew Initials:** BWL

collected with clam shovel

whole body weight

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
9/16/14	0810	NA	19	48.9	14.0	NA	
			20	45.3	12.5		
			21	47.0	10.4		
			22	43.4	8.6		
			23	43.4	11.3		
			24	40.0	7.6		
			25	45.4	11.8		
			26	45.4	9.2		
			27	41.8	8.6		
			28	49.9	15.0		
			29	48.8	8.0		cracked shell
			30	46.5	14.2		
			31	43.6	11.0		
			32	44.4	11.6		
			33	38.7	6.5		
			34	41.3	7.8		
			35	46.2	10.9		
			36	45.0	7.3		

Bryan Lu

Specimen Tally Form

Project Name: Newark Bay Phase III **Project No.:**

Species Sampled: Mya arenaria **Field Crew Initials:** BWL

Collected with clam shovel
whole body weight

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
9/16/14	0810	NA	37	43.4	9.5	NA	
			38	44.4	9.9		
			39	40.1	7.5		
			40	49.7	13.8		
			41	45.9	10.9		
			42	43.2	9.2		
			43	43.8	11.8		
			44	43.1	6.9		cracked shell

Bryan Lu 3 of 3

NB03CLM131a

lot 5

9/10/14

Specimen Tally Form

Project Name: Newark Bay Phase III Project No.:

Species Sampled: Mya arenaria Field Crew Initials: BML

Collected with clam shovel.

Whole body weight

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
9/10/14	1530	NA	1	44.0	10.0	NA	
			2	70.3	46.5		
			3	38.4	5.3		
			4	51.5	15.9		
			5	38.7	6.6		
			6	42.2	5.9		
			7	78.8	58.5		
			8	70.7	47.2		
			9	61.5	36.7		
			10	50.4	11.2		
			11	61.3	27.5		
			12	64.4	32.9		
			13	69.1	47.1		
			14	39.3	8.1		
			15	57.6	20.0		
			16	67.5	48.3		
			17	39.9	7.1		
			18	41.7	8.6		

BATCH PHOTO #'S

161-1980

161-1981

NB03CLM131A

09/10/14 2 of 5

Specimen Tally Form

Project Name: Newark Bay Phase III **Project No.:**

Species Sampled: Mya arenaria **Field Crew Initials:** BWL

Collected with clam shovel

whole body weight

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
9/10/14	1530	NA	19	59.8	27.8	NA	
			20	70.3	41.5		
			21	65.0	36.5		
			22	59.9	27.1		
			23	44.3	9.2		
			24	66.7	37.0		
			25	60.0	28.3		
			26	62.0	28.8		
			27	64.6	41.4		
			28	69.4	42.0		
			29	40.8	8.9		
			30	45.1	12.1		
			31	64.9	24.6		
			32	68.9	53.2		
			33	68.5	45.9		
			34	64.0	32.3		
			35	68.0	29.9		
			36	50.0	13.5		

NB03CLM131A

09/10/14

Specimen Tally Form

Project Name: Newark Bay Phase III **Project No.:**

Species Sampled: Mya arenaria **Field Crew Initials:** BWL

Collected with clam shovel

Whole body weight

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
9/10/14	1530	NA	37	63.8	33.8	NA	
			38	61.1	33.4		
			39	59.9	27.3		
			40	61.5	34.3		
			41	65.0	27.0		
			42	56.0	34.2		
			43	64.0	37.1		
			44	38.0	7.1		
			45	40.4	8.5		
			46	67.3	37.4		
			47	49.6	16.6		
			48	65.0	34.5		
			49	58.6	28.2		
			50	55.5	26.8		
			51	61.0	32.0		
			52	66.0	27.8		
			53	55.0	15.1		
			54	45.2	9.3		

NB03CLM131A

09/10/14

Specimen Tally Form

Project Name: Newark Bay Phase III Project No.:

Species Sampled: Mya arenaria Field Crew Initials: BWL

Collected with Clam Shovel

Whole Body Weight

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
9/10/14	1530	NA	55	49.5	15.1	NA	
			56	44.6	14.4		
			57	43.7	12.0		
			58	39.2	7.1		
			59	48.3	8.9		
			60	43.7	7.9		
			61	52.0	14.9		
			62	41.7	8.4		
			63	41.8	9.1		
			64	40.0	6.9		
			65	43.5	10.4		
			66	41.7	9.2		
			67	42.2	8.3		
			68	42.5	10.1		
			69	39.6	8.2		
			70	46.0	10.4		
			71	46.5	10.2		
			72	41.0	7.1		

NB03CLM131A

5 of 5
09/10/14

Specimen Tally Form

Project Name: Newark Bay Phase III Project No.:

Species Sampled: Mya arenaria Field Crew Initials: BWL

Collected w/ clam shovel

Whole Body Weight

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
9/10/14	1530	NA	73	43.2	11.1	NA	
			74	40.0	8.0		
			75	40.3	7.1		
			76	40.5	7.0		
			77	40.6	8.0		
			78	42.5	9.1		
			79	41.7	8.0		
			80	37.2	7.1		
			81	44.0	6.8		
			82	41.5	9.5		
			83	38.3	6.2		
			84	35.4	6.2		
			85	50.5	11.2		

NEWARK BAY PHASE III
Location: 131B

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Specimen Tally Form

Specimen Tally Form

Project Name: NB03 Project No.:

Species Sampled: Mya arenaria (softshell clam) Field Crew Initials: BWL, KCM, JBS

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
9/15/14	0645	NA	1	85.4	50.0	NA	
			2	66.6	24.2		
			3	44.5	12.3		
			4	67.0	44.5		
			5	67.0	33.5		
			6	72.0	38.7		
			7	70.5	42.3		
			8	92.0	52.0		
			9	60.6	32.0		
			10	57.5	24.6		
			11	61.2	37.9		
			12	56.0	21.5		
			13	62.0	33.0		
			14	55.0	18.1		
			15	59.0	32.4		
			16	55.8	19.5		
			17	51.7	13.7		
			18	51.7	18.0		

Start: 1430
End: 1450

NEWARK BAY PHASE III
Location: 131B

Specimen Tally Form

Project Name: NB03 **Project No.:**

Species Sampled: Mya arenaria (softshell clam) **Field Crew Initials:** BWL, KCM, JBS

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
09-15-14	0646	N/A	19	57.0	23.8	N/A	
			20	59.2	24.1		
			21	54.1	19.3		
			22	52.0	17.0		
			23	46.0	14.9		
			24	38.8	8.7		
			25	39.0	7.2		
			26	48.0	12.8		
			27	51.4	14.0		
			28	48.3	13.5		
			29	51.4	14.9		
			30	43.9	10.0		
			31	51.0	15.4		
			32	40.5	8.3		
			33	50.0	11.0		
			34	47.3	11.0		
			35	48.6	9.2		
			36	66.8	31.1		

NEWARK BAY PHASE III
Location:

Specimen Tally Form

Project Name: NB03 **Project No.:**

Species Sampled: Mya arenaria (softshell clams) **Field Crew Initials:** BWL, KCM, JBS

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
09/15/14	0645	NA	37	59.3	21.9	NA	
			38	41.2	9.1		
			39	52.3	16.8		
			40	54.9	19.7		
			41	61.8	17.2		
			42	52.5	18.5		
			43	53.1	18.5		
			44	49.3	17.3		
			45	45.6	14.4		
			46	47.3	13.5		
			47	44.5	11.5		
			48	44.6	11.1		
			49	52.9	14.8		
			50	39.0	10.1		
			51	42.1	11.0		
			52	41.2	9.9		
			53	43.7	9.7		
			54	43.0	9.1		

NEWARK BAY PHASE III
Location: 131B

Specimen Tally Form

Project Name: NB03 **Project No.:**

Species Sampled: Mya arenaria (softshell clam) **Field Crew Initials:** BWL, KCM, JBS

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
09-15-14	0645	NA	55	47.7	11.8	N/A	
			56	56.0	21.9		
			57	49.5	14.1		
			58	52.1	14.9		
			59	46.5	13.6		
			60	42.8	~~10.6~~ 10.1		
			61	47.7	12.9		
			62	49.0	15.7		
			63	45.1	11.8		
			64	47.5	14.2		
			65	44.5	12.1		
			66	36.6	7.9		
			67	39.3	6.9		
			68	NA	NA		half of specimen; no measurements
			69	NA	NA		too small
			70	NA	NA		too small

xcm 09114

~~NB03132A~~

NB03CLM132A

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Specimen Tally Form

Specimen Tally Form

Project Name: Newark Bay Phase III Project No.:

Species Sampled: Mya arenaria Field Crew Initials: BWL, JBS, CPD, KCM

Collected with Clam Shovel

Whole body weight

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
9/11/14	1615	NA	1	64.0	30.1	NA	
			2	65.0	33.1		
			3	45.0	9.7		
			4	54.0	19.5		
			5	42.0	7.2		
			6	44.0	8.1		
			7	54.3	15.4		
			8	49.0	15.3		
			9	59.7	21.5		
			10	44.8	10.4		
			11	46.7	9.2		
			12	55.0	15.6		
			13	63.0	25.2		
			14	55.0	20.4		
			15	58.3	27.9		
			16	60.0	21.8		
			17	63.5	25.6		
			18	57.5	23.4		

Start: 1955

End: 2010

Photo Taken: 162-1989 batch of clams

~~NB03132A~~
NB03CLM132A

Specimen Tally Form

Project Name: Newark Bay Phase III Project No.:

Species Sampled: Mya arenaria Field Crew Initials: BWL, JBS, CDD, KCM

Collected with Clam shovel

Whole Body Weight

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
9/11/14	1615	NA	19	54.0	15.0	NA	
			20	56.0	16.4		
			21	60.6	25.9		
			22	51.0	12.8		
			23	56.0	22.6		
			24	50.0	14.2		
			25	43.0	5.0		
			26	43.7	7.7		
			27	57.8	22.3		
			28	56.0	18.8		
			29	46.7	11.7		
			30	46.0	9.0		
			31	43.0	8.0		
			32	43.0	7.3		
			33	42.0	8.3		
			34	43.0	8.0		
			35	40.0	7.2		
			36	38.0	3.6		

~~NB03132A~~

NB03CLM132A

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Specimen Tally Form

Specimen Tally Form

Project Name: Newark Bay Phase III Project No.:

Species Sampled: Mya arenaria Field Crew Initials: BWL, JBS, CDD, KCM

collected with clam shovel

whole Body Weight

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
9/11/14	1615	NA	37	41.0	6.7	NA	
			38	44.0	11.5		
			39	42.0	7.9		
			40	47.0	10.1		
			41	44.0	6.4		
			42	44.8	9.5		
			43	46.0	8.5		
			44	38.0	5.4		
			45	38.0	6.8		
			46	46.6	10.1		
			47	48.7	13.8		
			48	40.9	7.2		
			49	40.4	8.0		
			50	39.1	6.3		
			51	40.8	7.7		

Specimen Tally Form

Project Name: NB03 **Project No.:** NA

Species Sampled: Mya arenaria **Field Crew Initials:** BWL, CDS, KCM, CCB

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
9/22/14	1235	NA	1	65.9	29.2	NA	
			2	59.8	29.1		
			3	73.0	29.2		Shell Cracked
			4	60.4	23.9		
			5	67.0	31.2		
			6	62.0	26.2		
			7	63.6	27.1		
			8	58.7	21.6		
			9	55.4	21.2		
			10	60.5	27.5		
			11	52.6	18.2		
			12	64.6	33.8		
			13	52.2	14.3		
			14	59.0	23.7		
			15	56.2	19.1		
			16	48.2	14.3		
			17	64.5	29.7		
			18	61.6	26.1		

Specimen Tally Form

Project Name: NB03 Project No.: NA

Species Sampled: Mya arenaria Field Crew Initials: BW, CAD, KCM, CCB

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
1/22/14	1235	NA	19	58.5	18.9	NA	
			20	56.0	19.0		
			21	64.0	22.8		
			22	62.6	16.5		
			23	52.0	14.4		
			24	52.8	17.5		
			25	53.2	17.0		
			26	53.0	17.6		
			27	51.0	20.0		
			28	51.0	14.0		
			29	47.6	11.0		
			30	51.0	15.4		
			31	49.5	13.8		
			32	53.8	16.5		
			33	46.9	10.2		
			34	51.9	14.7		
			35	51.9	20.7		
			36	49.2	11.2		

BW

NEWARK BAY PHASE III
Location: 132B

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Specimen Tally Form

Specimen Tally Form

Project Name: NB03 **Project No.:** NA

Species Sampled: Mya arenaria **Field Crew Initials:** BML, CDP, KCM, CCB

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
9/22/14	1235	NA	37	45.8	13.2	NA	
			38	55.0	15.0		
			39	46.0	12.0		
			40	52.3	11.6		Shell Cracked
			41	43.4	7.7		
			42	41.8	8.7		
			43	37.9	4.4		
			44	39.9	6.6		
			45	47.6	14.1		
			46	51.6	15.3		
			47	41.0	5.2		
			48	41.0	7.0		
			49	44.7	8.9		Shell Cracked
			50	58.8	19.3		
			51	49.9	12.1		
			52	51.5	16.8		
			53	45.0	9.5		
			54	48.9	12.4		

BML

Specimen Tally Form

Project Name: NB03 **Project No.:** NA

Species Sampled: Mya arenaria **Field Crew Initials:** BW, CAD, KCM, CCB

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
9/22/14	1235	NA	55	38.7	6.6	NA	
			56	44.3	8.3		
			57	61.5	17.4		Shell Cracked
			58	57.0	13.0		
			59	67.0	20.1		
			60	58.0	14.0		
			61	65.0	15.0		
			62	50.0	9.5		
			63	48.8	9.8		
			64	42.0	6.0		
			65	49.0	8.8		
			66	57.0	16.0		
			67	53.0	13.3		
			68	57.0	10.3		
			69	53.8	8.1		
			70	59.0	14.2		
			71	53.9	10.9		
			72	57.0	12.2		

BW

NEWARK BAY PHASE III
Location: 132B

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Specimen Tally Form

Specimen Tally Form

Project Name: NB03 **Project No.:** NA

Species Sampled: Mya arenaria **Field Crew Initials:** BWL, CDD, KCM, CCB

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
9/22/14	1235	NA	73 ~~55~~ BWL	48.0	8.2	NA	Shell Cracked
↓	↓	↓	74 ~~56~~	44.0	4.9	↓	↓
			75 ~~57~~	50.4	7.3	↓	Shell Cracked

Total clams = 75

Total tissue wt = 363g

5 of 5

R1.1

processing
start : 1806
end : 1820

NEWARK BAY PHASE III
Location: 133

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Specimen Tally Form

Specimen Tally Form

Project Name: NB03 Project No.: NA

Species Sampled: Mya arenaria Field Crew Initials: BWR, CSD, KCM, CCB

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
9/22/14	1338	NA	1	66.7	41.4	NA	
			2	70.0	26.0		Shell Cracked
			3	70.8	46.2		
			4	67.0	30.3		
			5	70.0	57.4		
			6	64.6	33.1		
			7	60.4	33.0		
			8	62.1	29.4		
			9	64.3	32.3		
			10	52.0	20.3		
			11	61.7	31.4		
			12	53.4	15.3		
			13	50.9	15.5		
			14	50.4	16.9		
			15	51.1	14.7		
			16	52.0	18.0		
			17	52.3	16.4		
			18	51.5	15.1		

1 of 3

NEWARK BAY PHASE III
Location: 133

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Specimen Tally Form

Specimen Tally Form

Project Name: NB03 Project No.: NA

Species Sampled: Mya arenaria Field Crew Initials: BWy, CDS, KCM, CCB

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
9/22/14	1338	NA	19	50.0	16.3	NA	
			20	51.2	13.3		
			21	50.4	13.0		
			22	50.1	13.6		
			23	47.8	12.0		
			24	50.3	13.7		
			25	46.9	14.0		
			26	50.9	15.0		
			27	47.0	14.8		
			28	43.4	11.9		
			29	46.0	13.4		
			30	43.0	10.0		
			31	42.0	10.4		
			32	46.3	11.8		
			33	46.5	11.9		
			34	42.5	10.9		
			35	42.0	9.0		
			36	41.2	10.0		

NEWARK BAY PHASE III
Location: 133

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Specimen Tally Form

Specimen Tally Form

Project Name: NB03 **Project No.:** NA

Species Sampled: Mya arenaria **Field Crew Initials:** BLM, CSD, KCM, CCB

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
9/22/14	13:38	NA	37	42.0	10.5	NA	
			38	45.1	6.0		Shell Cracked
			39	40.6	7.1		
			40	60.0	25.0		Shell Cracked
			41	61.0	22.0		
			42	56.0	13.5		
			43	57.0	11.0		
			44	46.0	8.4		
			45	46.0	7.0		
			46	45.0	8.0		
			47	NA	NA		
			48				
			49				
			50				
			51				
			52				
			53				
			54				

N = 46 clams
Total tissue wt = 245g

NEWARK BAY PHASE III
Location: 134

processing start: 1845
end: 1901

Specimen Tally Form

Project Name: NB03 **Project No.:** NA

Species Sampled: Mya arenaria **Field Crew Initials:** BWL, CDD, JBS

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
9/25/14	1515	NA	1	73.0	55.6	NA	
			2	75.4	56.4		
			3	71.5	57.9		
			4	72.0	61.9		
			5	65.4	37.4		
			6	55.7	22.3		
			7	64.2	38.0		
			8	66.3	44.3		
			9	61.3	31.8		
			10	65.2	37.3		
			11	55.8	27.0		
			12	53.5	20.7		
			13	54.5	20.9		
			14	49.9	18.8		
			15	61.6	30.3		
			16	58.0	16.0		
			17	56.6	22.8		
			18	55.9	20.9		

batch: clam photo 172-213
N=59 clams processed
Total wt (g) = 324

NEWARK BAY PHASE III
Location: 134

Specimen Tally Form

Project Name: NB 03 **Project No.:** NA

Species Sampled: Mya arenaria **Field Crew Initials:** BWL, CDD, JBS

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
9/25/14	1515	NA	19	52.0	17.5	NA	
			20	54.0	22.7		
			21	48.8	15.7		
			22	52.8	17.8		
			23	49.0	17.2		
			24	47.5	14.4		
			25	54.1	22.0		
			26	49.0	16.0		
			27	52.0	27.4		
			28	48.0	17.0		
			29	49.3	19.0		
			30	47.8	16.3		
			31	48.0	17.2		
			32	49.0	15.3		
			33	47.5	14.7		
			34	51.2	15.9		
			35	48.6	16.3		
			36	51.5	18.0		

BWL

NEWARK BAY PHASE III
Location: 134

Specimen Tally Form

Project Name: NB 03 **Project No.:** NA

Species Sampled: Mya arenaria **Field Crew Initials:** BWL, COD, JBS

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
9/25/14	1515	NA	37	50.0	15.0	NA	
			38	53.8	17.2		
			39	48.5	17.8		
			40	46.8	13.4		
			41	43.7	12.4		
			42	44.0	12.4		
			43	39.3	9.5		
			44	45.3	12.5		
			45	42.8	13.5		
			46	47.0	13.0		
			47	39.0	8.5		
			48	40.0	8.8		
			49	42.0	12.5		
			50	47.5	14.0		
			51	40.5	10.8		
			52	42.5	10.5		
			53	46.8	14.0		
			54	41.4	11.5		

BWL

NEWARK BAY PHASE III
Location: 134

Specimen Tally Form

Project Name: NB03 **Project No.:** NA

Species Sampled: Mya arenaria **Field Crew Initials:** BWL, COD, JBS

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
9/25/14	1515	NA	55	39.0	5.7	NA	Cracked Shell
			56	47.0	13.0		" "
			57	45.0	8.5		" "
			58	49.0	14.0		" "
			59	57.0	13.0		" "

BWL

NEWARK BAY PHASE III
Location: 135

START: 1310
END: 1336

Specimen Tally Form

Project Name: NB 03 **Project No.:** NA

Species Sampled: Mya arenaria **Field Crew Initials:** BWL, CDD, JBS, KCM

Soft shell clam collection

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
9/19/14	1030	NA	1	58.7	19.0	NA	Cracked shell
			2	47.8	10.0		Cracked shell
			3	69.7	24.6		Cracked shell
			4	44.5	7.7		Cracked shell
			5	55.4	15.4		Cracked shell
			6	55.0	17.9		Cracked shell
			7	46.4	7.1		Cracked shell
			8	61.4	16.8		Cracked shell
			9	45.8	9.0		Cracked shell
			10	55.5	20.7		
			11	63.1	28.2		
			12	60.0	26.7		
			13	64.4	39.1		
			14	60.3	22.7		
			15	56.7	25.5		
			16	55.4	18.2		
			17	57.7	26.8		
			18	60.0	27.1		

NEWARK BAY PHASE III
Location: 135

Specimen Tally Form

Project Name: NB 03 **Project No.:** NA

Species Sampled: Mya arenaria **Field Crew Initials:** BWL, CDD, JBS, KCM

Soft shell clam collection

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
9/19/14	1030	NA	19	64.0	34.3	NA	
			20	52.9	22.1		
			21	57.3	27.5		
			22	49.5	15.9		
			23	53.4	19.9		
			24	45.5	16.0		
			25	53.4	19.3		
			26	55.1	21.3		
			27	53.8	18.0		
			28	52.2	16.1		
			29	51.1	17.3		
			30	54.6	17.5		
			31	51.0	16.1		
			32	52.3	18.1		
			33	50.1	17.1		
			34	46.9	12.8		
			35	56.4	20.5		
			36	49.3	16.3		

NEWARK BAY PHASE III
Location: 135

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Specimen Tally Form

Specimen Tally Form

Project Name: NB03 **Project No.:** NA

Species Sampled: Mya arenaria **Field Crew Initials:** BWL, CDD, JGS, KCM

Soft shell clam collection

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
9/19/14	1030	NA	37	50.4	15.5	NA	
			38	48.5	13.3		
			39	41.8	9.0		
			40	44.5	10.5		
			41	44.5	9.3		
			42	45.1	10.9		
			43	42.3	8.9		

total composite wt = 268g

NEWARK BAY PHASE III
INTERTIDAL LOCATION: 124

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Location Data Form

Location Data Form

Project Name: NEWARK BAY PHASE III **Project No.:** NA

Field Crew Initials: JBS KCM

TRAPS PULLED FOR WEEKEND ON 10/3/14 STARTING AT 0754 TO 0841

Deployment Date & Time	Retrieval Date & Time	Location ID	Trap ID	Collection Method	Coordinates[a] Easting (X)[b]	Coordinates[a] Northing (Y)[b]	Depth (ft)
10/1/14 1056	10/2/14 @ 1053	124	#13	CRAB TRAP	597515.33	672585.92	8' 1"
10/1/14 1059	10/2/14 @ 1104	124	7		597561.48	672369.14	7' 8"
10/2/14 1038			10		597523.32	671709.04	4' 2"
			4		597632.87	671807.04	4' 0"
			9		597738.64	671921.89	4' 1"
			2		597838.13	672102.94	4' 4"
			1		597922.84	672275.26	3' 10"
			12		597774.14	672354.75	4' 10"
			5		597404.05	672274.08	6' 9"
			6		597235.52	672256.19	7' 0"
			14		597109.06	672166.29	7' 4"
10/2/14 1050		124	8		597172.58	671991.12	7' 3"

[a] Field-observed coordinates.

[b] NAD83 New Jersey State Plane (ft).

Subsurface p-chem @ ~~1026~~ 1041 10/2/14 ~~#10~~ #9

temperature (C)	~~19.35~~	19.31
conductivity (uS/cm)	~~41,260~~	41,350
dissolved oxygen (mg/L)	~~18.26~~	14.74
pH	~~7.76~~	7.75

Subsurface p-chem @ 0801 10/3/14 #2

temperature (C)	19.44
conductivity (uS/cm)	42,590
dissolved oxygen (mg/L)	7.90
pH	7.59

NEWARK BAY PHASE III
INTERTIDAL LOCATION: 125

Location Data Form

Project Name: NEWARK BAY PHASE III **Project No.:** NA

Field Crew Initials: KCM JBS

Retrieval Date & Time
10/2/14 1004

10/2/14 1032

Deployment Date & Time	~~Check~~ Retrieval Date & Time	Location ID	Trap ID	Collection Method	Coordinates[a] Easting (X)[b]	Coordinates[a] Northing (Y)[b]	Depth (ft)
9/30/14 @1228	10/1/14 @ 1006	125	8	CRAB TRAP	596150.80	670242.01	8'3"
			14		596162.51	670298.54	5'7"
			5		596207.96	670422.27	6'10"
			12		596268.26	670527.31	7'0"
			6		596331.07	670593.01	6'9"
			1		596400.97	670575.90	6'1"
			2		596423.11	670470.33	5'7"
			9		596384.49	670362.15	5'1"
			4		596376.41	670268.17	4'10"
9/30/14 @1235	10/1/14 @ 1042		10		596299.76	670187.63	4'9"

[a] Field-observed coordinates.

[b] NAD83 New Jersey State Plane (ft).

Subsurface p-chem @1238 9/30/14 @#2
temperature (C) 20.43°C
conductivity (uS/cm) 38,190
dissolved oxygen (mg/L) 9.71
pH 7.51

Subsurface p-chem @ 1042 10/1/14 @#10
temperature (C) 19.82
conductivity (uS/cm) 38,770
dissolved oxygen (mg/L) 9.83
pH 7.28

NEWARK BAY PHASE III
INTERTIDAL LOCATION: 126

Location Data Form

Project Name: NEWARK BAY PHASE III **Project No.:** NA

Field Crew Initials: JBS KCM

Deployment Date & Time	Retrieval Date & Time	Location ID	Trap ID	Collection Method	Coordinates[a] Easting (X)[b]	Coordinates[a] Northing (Y)[b]	Depth (ft)
9/29/14 @1130	9/30/14 @ 1051	126	12	CRAB POT	594603.02	667916.66	9'6"
			2		594526.94	667846.68	9'7"
			6		594588.83	667808.11	8'3"
			1		594733.50	667764.64	8'
			10		594829.09	667717.69	7'3"
			4		594723.30	667640.88	6'5"
			9		595055.58	667644.70	6'2"
			3		595095.31	667725.12	6'6"
			5		595073.38	667877.87	7'1"
			14		595022.95	667980.29	7'9"
			8		595016.15	668108.57	8'8"
			13		594891.83	668149.14	9'2"
9/29/14 @1142	9/30/14 @ 1131		7		594810.80	667946.06	8'9"

[a] Field-observed coordinates.

[b] NAD83 New Jersey State Plane (ft).

Subsurface p-chem @ #14 1158 9/29/14
temperature (C) 20.50°C
conductivity (uS/cm) 36,780
dissolved oxygen (mg/L) 9.40
pH 7.17

Subsurface p-chem @ #13 1127 9/30/14
temperature (C) 20.40°C
conductivity (uS/cm) 38,170
dissolved oxygen (mg/L) 8.22
pH 7.14

NEWARK BAY PHASE III
INTERTIDAL LOCATION: 127

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Location Data Form

Location Data Form

Project Name: NEWARK BAY PHASE III **Project No.:** NA

Field Crew Initials: BWL, CDD, ICCM, JBS

Deployment Date & Time	Retrieval Date & Time	Location ID	Trap ID	Collection Method	Coordinates[a] Easting (X)[b]	Northing (Y)[b]	Depth (ft)[1]	Total # blue crab > 4.5"
9/24/14 1620	9/25/14 1237	127	#3	CRAB TRAP	592894.17	664918.04	2.0	0
			#6		592851.96	664977.66	2.0	2
			#7		592772.11	665034.90	4.0	3
			#2		592631.47	664987.15	5.0	1
			#14		592716.70	665106.90	5.0	4
			#1		592715.82	665189.63	6.0	2
			#13		592866.94	665216.65	5.0	5
			#10		592920.62	665145.06	4.0	0
			#12		592977.84	665104.00	3.5	2
			#4		593049.33	665050.11	3.4	0
			#5		593443.64	665824.01	4.1	3
			#8		593560.38	665850.86	4.2	2
	9/25/14 13:30		#9		593602.40	665914.01	4.5	0
~~bycatch~~								
blue crab < 4.5": N = 9								Σ 24

[a] Field-observed coordinates.

[b] NAD83 New Jersey State Plane (ft).

[1] deployment depth

trap #10 Subsurface p-chem @ 1632
temperature (C) 20.5
conductivity (uS/cm) 36,240
dissolved oxygen (mg/L) 6.1
pH 7.5

trap #9 Subsurface p-chem @ 13:30
temperature (C) 19.3
conductivity (uS/cm) 34,280
dissolved oxygen (mg/L) 8.9
pH 7.6

BWL

st 129 crab pots

9/8/14

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Location Data Form

Location Data Form

Project Name: NB03CRB Newark Bay Phase III Project No.:

Field Crew Initials: BWL, JBS, KCM, CDD

Deployment Date & Time	Retrieval Date & Time	Location ID	Trap ID	Collection Method	Coordinates[a] Easting (X)[b]	Coordinates[a] Northing (Y)[b]	Depth (ft)
09/08 ~~1458~~	1658	129 W	1	crab pot	581516.63	660080.05	6.3
	~~1459~~ 1659		2		581588.44	660079.36	6.3
	~~1500~~ 1700		3		581675.69	660075.11	8.0
	~~1501~~ 1201		4	Relocate; too deep			~~9.0~~ bm
	1704		4		581723.05	660108.25	9.0
	← 1707		5		581784.62	660148.46	19.0
	← 1708		6		581882.61	660143.80	10.6
	← 1711		7		581967.59	660133.58	10.1
	← 1713		8		582042.25	660162.24	18.0
	All retrieved 9/9 see field book						

[a] Field-observed coordinates.

[b] NAD83 New Jersey State Plane (ft).

Crab pots baited with chicken thighs

p-chems @ 1744, depth + GPS coordinates collected from 1745-184

crabpot #1 temp 23.5 °C
conduct 25.4 mS/cm
pH 7.41
DO 5.5 mg/L

Bryan Lam

9/10/14

st 129a crab pots

Location Data Form

Project Name: Newark Bay Study Phase III **Project No.:**

Field Crew Initials: BMH, CBD, KCM

Deployment Date & Time	Retrieval Date & Time	Location ID	Trap ID	Collection Method	Coordinates[a] Easting (X)[b]	Coordinates[a] Northing (Y)[b]	Depth (ft)	Total >4.5" Crabs
9/9/14 1342	9/10 1410	129a	1	crab pot	581495.18	660071.46	3	1
	1417	129a	2		581588.17	660067.25	3.4	0
	1416	129a	3		581713.73	660039.04	4.3	0
	1417	129a	4		581735.92	660076.96	4.8	0
	1419	129a	5		581799.10	660150.58	18	7
	1425	129a	6		581858.93	660121.44	4.5	6
	1435	129a	7		581978.81	660117.71	5.5	1
	1438	129a	8		582117.90	660150.39	5.3	2
								17

[a] Field-observed coordinates.
[b] NAD83 New Jersey State Plane (ft).

Crab trap #1 subsurface parameters @ 1410 hrs

temp 24.7
cond. 26.5
DO 5.86
pH 7.5

by catch (all traps) – 1 turtle
2 oyster toad fish
1 <4.5 inch blue crab female

NEWARK BAY PHASE III
INTERTIDAL LOCATION: 130

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Location Data Form

Bmy K

Location Data Form

Project Name: NEWARK BAY PHASE III **Project No.:** NA

Field Crew Initials: BWL, CAA, KCM

Deployment Date & Time	Retrieval Date & Time	Location ID	Trap ID	Collection Method	Coordinates[a] Easting (X)[b]	Coordinates[a] Northing (Y)[b]	Depth (ft)
9/18/14 12.41	9/19/14 934	130	5	CRAB TRAP	584725.06	663580.28	3.8
			8		584824.87	663605.61	4
			6		584924.28	663589.79	5
			9		584981.15	663591.47	5
			10		585072.53	663587.69	6
			12		585214.33	663584.34	7
			7		585599.96	663721.93	13
			2		585709.37	663889.22	8.3
			1		585818.67	664002.37	6
			3		585845.07	664210.83	5
		1004	4		585700.32	664140.51	4

Total # blue crab
4, 5 11
2
1
2
0
0
1
0
1
2
0
0

Σ = 10 9 blue

by-catch
oyster toadfish - 160mm T.L. n=1
blue crab < 4.5" - |||| || n= 7

[a] Field-observed coordinates.
[b] NAD83 New Jersey State Plane (ft).

Crab pot #2

Subsurface p-chem @ 9.55
temperature (C) 20.5
conductivity (uS/cm) 35,860
dissolved oxygen (mg/L) 5.8
pH 7.6

Subsurface p-chem @
temperature (C)
conductivity (uS/cm) NA
dissolved oxygen (mg/L)
pH

total pull time: 934-1004 hrs

NEWARK BAY PHASE III
INTERTIDAL LOCATION: 130

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Location Data Form

Location Data Form

Project Name: NEWARK BAY PHASE III **Project No.:**

Field Crew Initials: BWL, CSD, KCM

Deployment Date & Time	Retrieval Date & Time	Location ID	Trap ID	Collection Method	Coordinates[a] Easting (X)[b]	Coordinates[a] Northing (Y)[b]	Depth (ft)	Total # >4.5" blue crab
9/17/14 1140	9/18/14 1240	130	5	CRAB TRAP	584725.06	663580.38	3.8	2
			8		584894.87	663605.61	4.0	1
			6		584924.28	663587.79	5.0	1
			9		584981.15	663591.47	5.0	0
			10		585077.53	663587.69	6.0	1
			12		585214.33	663584.34	7.0	2
			7		585599.96	663721.93	13.0	0
			2		585709.37	663889.22	8.3	0
			1		586818.67	664002.37	6.0	0
			3		585845.07	664210.83	5.0	0
			4		585700.32	664140.51	4.0	0
	by-catch: blue crab <4.5" 1		n=1					

[a] Field-observed coordinates.
[b] NAD83 New Jersey State Plane (ft).

trap #2 Subsurface p-chem @ 1158
temperature (C) 21.5
conductivity (uS/cm) 32,130
dissolved oxygen (mg/L) 6
pH 7.6

trap #2 Subsurface p-chem @ 1256
temperature (C) 21.8
conductivity (uS/cm) 31,700
dissolved oxygen (mg/L) 6.2
pH 7.5

start 11:40 9/17/14
retrieval 12:40 9/18/14

BWL

NEWARK BAY PHASE III
INTERTIDAL LOCATION: 130

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Location Data Form

Location Data Form

Project Name: NEWARK BAY PHASE III **Project No.:** NA

Field Crew Initials: BWL, CDD, ICCM, CCB

Deployment Date & Time	Retrieval Date & Time	Location ID	Trap ID	Collection Method	Coordinates[a] Easting (X)[b]	Coordinates[a] Northing (Y)[b]	Depth (ft)	Total # blue crab ≥4.5"
9/22/14 1205	9/23/14 1225	130	#6	CRAB TRAP	586115.73	663951.98	9	0
			#8		585878.09	663972.70	6	2
			#5		585748.67	663930.10	5	3
			#9		585602.94	663906.84	3.5	0
			#3		585490.62	663823.39	3	0
			#1		585530.28	663739.10	10	0
			#12		585269.03	663529.83	10	4
			#10		585103.84	663535.02	5.5	0
			#14		585045.88	663540.05	5	7
			#4		584944.42	663547.39	4.3	0
			#7		584877.05	663537.12	4	0
			#2		584800.42	663535.67	3.5	4
	1253		#13		584720.43	663543.38	3	5
	bycatch							
	blue crab ≥4.5" ++++							Σ 25
	spider crab "							
	oyster toadfish T.L.(mm) 260,220,230							

[a] Field-observed coordinates.

[b] NAD83 New Jersey State Plane (ft).

bait= chicken thigh or bunker.

trap #1
Subsurface p-chem @ 1209
temperature (C) 20.8
conductivity (uS/cm) 28670
dissolved oxygen (mg/L) 8.2
pH 7.5

trap #1
Subsurface p-chem @ 1245
temperature (C) 21.2
conductivity (uS/cm) 37,350
dissolved oxygen (mg/L) 7.6
pH 7.5

NEWARK BAY PHASE III
INTERTIDAL LOCATION: 130

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Location Data Form

Location Data Form

Project Name: NEWARK BAY PHASE III **Project No.:**

Field Crew Initials: BWL, CDD, KCM

Deployment Date & Time	Retrieval Date & Time	Location ID	Trap ID	Collection Method	Coordinates[a] Easting (X)[b]	Coordinates[a] Northing (Y)[b]	Depth (ft)	Total # >4.5" live crab
9/17/14 1140	9/18/14 1240	130	5	CRAB TRAP	584725.06	663580.28	3.8	2
			8		584824.87	663605.61	4.0	1
			6		584924.28	663589.79	5.0	1
			9		584981.15	663591.47	5.0	0
			10		585072.53	663587.69	6.0	1
			12		585214.33	663584.34	7.0	2
			7		585699.96	663721.93	13.0	0
			2		585709.37	663889.22	8.3	0
			1		585818.67	663902.37	6.0	0
			3		585845.07	664210.83	5.8	0
			4		585700.32	664140.51	4.0	0
		by-catch: blue crab <4.5" 1	n=1					

[a] Field-observed coordinates.

[b] NAD83 New Jersey State Plane (ft).

trap #2 Subsurface p-chem @ 1158
temperature (C) 21.5
conductivity (uS/cm) 32130
dissolved oxygen (mg/L) 6
pH 7.6

trap #2 Subsurface p-chem @ 1256
temperature (C) 21.8
conductivity (uS/cm) 31,700
dissolved oxygen (mg/L) 6.2
pH 7.5

Start 11:40 9/17/14
retrieval 12:40 9/18/14

BWL

NEWARK BAY PHASE III
INTERTIDAL LOCATION: 130

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Location Data Form

Brg K

Location Data Form

Project Name: NEWARK BAY PHASE III **Project No.:** NA

Field Crew Initials: BWZ, CSD, KCM

Deployment Date & Time	Retrieval Date & Time	Location ID	Trap ID	Collection Method	Coordinates[a] Easting (X)[b]	Coordinates[a] Northing (Y)[b]	Depth (ft)	Total # >4.5" blue crab
9/18/14 12:41	9/19/14 934	130	5	CRAB TRAP	584725.06	663580.28	3.8	2
			8		584824.87	663605.61	4	1
			6		584924.28	663589.79	5	2
			9		584981.15	663591.42	5	0
			10		585072.53	663587.69	6	0
			12		585214.33	663584.34	7	1
			7		585599.96	663721.93	13	0
			2		585709.37	663889.22	8.3	1
			1		585818.67	664002.37	6	2
			3		585845.07	664210.83	5	0
	1004		4		585700.32	664140.51	4	0

Σ = 10 (BWK 9)

by-catch
oyster toadfish - 160mm T.L. n=1
blue crab < 4.5" - |||| || n= 7

[a] Field-observed coordinates.
[b] NAD83 New Jersey State Plane (ft).

Crab pot #2

Subsurface p-chem @ 9.55
temperature (C) 20.5
conductivity (uS/cm) 35,560
dissolved oxygen (mg/L) 5.8
pH 7.6

Subsurface p-chem @
temperature (C)
conductivity (uS/cm) NA
dissolved oxygen (mg/L)
pH

total pull time: 934-1004 hrs

NEWARK BAY PHASE III
INTERTIDAL LOCATION: 130

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
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Revision Date: October 2013
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Location Data Form

Project Name: NEWARK BAY PHASE III **Project No.:** NA

Field Crew Initials: BWL, CDD, KCMW, CCB

Deployment Date & Time	Retrieval Date & Time	Location ID	Trap ID	Collection Method	Coordinates[a] Easting (X)[b]	Coordinates[a] Northing (Y)[b]	Depth (ft)	Total # blue crab ≥4.5"
9/22/14 1205	9/23/14 1225	130	#6	CRAB TRAP	586115.73	663951.98	9	0
			#8		585878.09	663972.70	6	2
			#5		585748.67	663930.10	5	3
			#9		585602.94	663906.84	3.5	0
			#3		585490.62	663823.39	3	0
			#1		585530.28	663739.10	10	0
			#12		585269.03	663529.83	10	4
			#10		585103.84	663535.02	5.5	0
			#14		585045.88	663540.05	5	7
			#4		584944.42	663547.39	4.3	0
			#7		584877.05	663537.12	4	0
			#2		584800.42	663535.67	3.5	4
	1253		#13		584720.43	663543.38	3	5
	bycatch							Σ 25
	blue crab ≥4.5" ++++							
	spider crab "							
	oyster toadfish T.L.(mm) 260, 220, 230							

[a] Field-observed coordinates.

[b] NAD83 New Jersey State Plane (ft).

bait = chicken thigh or bunker.

trap #1
Subsurface p-chem @ 1209
temperature (C) 20.8
conductivity (uS/cm) 25670
dissolved oxygen (mg/L) 8.2
pH 7.5

trap #4
Subsurface p-chem @ 1245
temperature (C) 21.2
conductivity (uS/cm) 37,350
dissolved oxygen (mg/L) 7.6
pH 7.5

NEWARK BAY PHASE III
INTERTIDAL LOCATION: 131

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Location Data Form

Location Data Form

Project Name: NEWARK BAY PHASE III **Project No.:** NA

Field Crew Initials: BWR, CDD, KCM

Deployment Date & Time	Retrieval Date & Time	Location ID	Trap ID	Collection Method	Coordinates[a] Easting (X)[b]	Coordinates[a] Northing (Y)[b]	Depth (ft)	Total # >4.5" blue crab
9/16/14 1201	9/17/14 750	131	10	CRAB TRAP	586819.07	664896.31	6	0
1207	751		4		586720.35	665115.61	6.3	0
1209	752		9		587050.91	665259.26	6.2	1
1213	755		8		587338.03	665326.13	7	2
1216	759		5		587652.87	665116.60	8	3
1221	803		6		587832.32	665238.71	8	0
1225	807		12		587281.09	665705.04	10	2
1229	810		3		587362.95	665782.64	14	3
1232	813		1		587212.70	665854.03	8.3	2
1234	815		2		587248.36	666010.88	12	2
1239	817		7		587130.23	666165.27	5	1
								2/16

by-catch spider crab 11 = 2
oyster toadfish 11 = 2
<4.5" blue crab " = 2

[a] Field-observed coordinates.
[b] NAD83 New Jersey State Plane (ft).

trap #8
Subsurface p-chem @ 756
temperature (C) 20.9
conductivity (uS/cm) 33420
dissolved oxygen (mg/L) 6.1
pH 7.4

Subsurface p-chem @
temperature (C)
conductivity (uS/cm)
dissolved oxygen (mg/L)
pH
NA

NEWARK BAY PHASE III
INTERTIDAL LOCATION: 131

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Location Data Form

Location Data Form

Project Name: NEWARK BAY PHASE III **Project No.:**

Field Crew Initials: BML, CSO, KCM

Blue Crab trapping

Deployment Date & Time	Retrieval Date & Time	Location ID	Trap ID	Collection Method	Coordinates[a] Easting (X)[b]	Coordinates[a] Northing (Y)[b]	Depth (ft)	Total # >4.5" blue crab
9/17/14 7:50 ~8.25 hrs	9/17/14 1128	131	6	CRAB TRAP	587982.07	664996.37	6	0
	1125		5		587697.87	665116.60	6.3	2
	1127		8		587338.03	665326.13	7	0
	1128		9		587050.91	665259.26	6.2	0
	1126		12		587281.09	665778.04	10	1
	1120		10		586819.07	664996.31	6.0	0
	1121		1		587212.70	665854.03	8.3	0
	1118		2		587248.36	666010.98	12	0
	1115		3		587362.95	665782.64	14	0
	1123		4		586920.35	665115.61	6.3	0
	1122		7		587130.23	666165.27	5.0	0
								3
	by-catch: spider crab	1	= 1					
	blue crab < 4.5"	1	= 1					

[a] Field-observed coordinates.

[b] NAD83 New Jersey State Plane (ft).

Subsurface p-chem @ NA
temperature (C)
conductivity (uS/cm)
dissolved oxygen (mg/L)
pH

Subsurface p-chem @ NA
temperature (C)
conductivity (uS/cm)
dissolved oxygen (mg/L)
pH

NEWARK BAY PHASE III
INTERTIDAL LOCATION: 131

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Location Data Form

Boy Lees

Location Data Form

Project Name: NEWARK BAY PHASE III **Project No.:**

Field Crew Initials: BWL, JBS, CDD, KCM

CRAB TRAP #11 not recovered

Deployment Date & Time	Retrieval Date & Time	Location ID	Trap ID	Collection Method *	Coordinates[a] Easting (X)[b]	Coordinates[a] Northing (Y)[b]	Depth (ft)
9/15/14 1048	9/16/14	131	CRAB POT #11	CRAB POT	586746.97	664890.85	6
9/15/14 1049	9/16/14 1200		#10		586819.07	664986.31	6
1050	1206		#4		586920.35	665115.61	6.3
1051	1208		#9		587050.91	665259.26	6.2
1052	1212		#8		587338.03	665326.13	7
1053	1213		#5		587697.87	665116.60	8
1054	1215		#6		587932.32	665238.71	8
1056	1220		#12		587881.09	665778.04	10
1110	1224		#3		587362.95	665782.64	14
1113	1228		#1		587212.70	665854.03	8.3
1114	1231		#2		587248.36	666010.98	12
1116	1233		#7		587130.23	666165.27	5

Total # 74.5" Blue crab

1 0 1 2 0 0 2 1 3 2 1

= 12

[a] Field-observed coordinates.
[b] NAD83 New Jersey State Plane (ft).

crab pot #9 9/15/14
Subsurface p-chem @ 11:00
temperature (C) 21.2
conductivity (uS/cm) 28,960
dissolved oxygen (mg/L) 7.3
pH 7.5

crab pot #8 09/16/14
Subsurface p-chem @ 1240
temperature (C) 21.1
conductivity (uS/cm) 26,700
dissolved oxygen (mg/L) 6.3
pH 7<

9/15/14

+ all crab pots meet size requirements of NJDEP

Set 129a and 131a Crab pots

9/10/14

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Location Data Form

Location Data Form

Project Name: Newark Bay Phase III Study Project No.:

Field Crew Initials: BWY KCM, COB

Blue crab trapping

	Deployment Date & Time	Retrieval Date & Time	Location ID	Trap ID	Collection Method	Coordinates[a] Easting (X)[b]	Northing (Y)[b]	Depth (ft)	Total blue crab >4.5"
1500	9/10/14	9/11/14 1220	131a	1	Crab pot	586326.75	664790.28	8' 4"	0
1500	9/10/14	1223	131a	2		586384.59	664847.87	8'	1
1500		1227	131a	3		586462.95	664899.85	7' 6"	2
		1232	131a	4		586571.67	664955.58	7' 8"	0
		1155	129a	5		581769.44	660153.09	18' 9"	3
		1205	129a	6		582802.23	660188.16	39'	1
		1236	131a	7		586700.99	664989.52	8' 1"	0
		1241	131a	8		587054.37	665073.10	8' 3"	2

[a] Field-observed coordinates.
[b] NAD83 New Jersey State Plane (ft).

* all traps baited with chicken thighs.

Crab trap # 5 subsurface p-chems @ 1155

temp(°C) = 22.9 DO(mg/L) = 6.1
Conductivity(mS/cm) = 27.4 pH = 7.5

crab trap # 1 subsurface p-chems @ 1220

temp = 22.8 DO = 7.4
Conductivity = 28.3 pH = 7.5

NEWARK BAY PHASE III
INTERTIDAL LOCATION: Station 13Z Crab Pots

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Location Data Form

Location Data Form

Project Name: NEWARK BAY PHASE III **Project No.:** 23489.001

Field Crew Initials: KCM, SMS, CJR, CCB

CATCH (5)

Deployment Date & Time	Retrieval Date & Time	Location ID	Trap ID	Collection Method	Coordinates[a] Easting (X)[b]	Coordinates[a] Northing (Y)[b]	Depth (ft)
10-13-14 @ 0947 (2)	10-14-14@0853 (4)	13Z	6 (1)	Crab Pot	596488.76	678512.43	5.1
			3 (3)		596451.16	678439.84	5.0
			14 (5)		596414.62	678388.48	5.2
			2 (0)		596381.71	678311.07	5.0
			13 (3)		596362.96	678284.31	4.9
			12 (1)		596334.44	678242.09	4.6
			5 (2)		596313.46	678185.19	4.8
			8 (7)		596277.55	678123.24	4.7
			1 (4)		596227.92	678036.68	4.7
			7		596193.05	677981.~~570~~5	4.6
10/14/14 853	10-15-14@0936		6		SEE ABOVE		
↓	11	↓	3	↓	↓	↓	↓

[a] Field-observed coordinates.

[b] NAD83 New Jersey State Plane (ft).

10-15-14
Temp: 17.76
Cond: 26420
D.O. 8.07
pH 7.59

10-13-14 @ 0950 @ Trap 8
Subsurface p-chem @
temperature (C) 17.1
conductivity (uS/cm) 24.1
dissolved oxygen (mg/L) 8.9
pH 7.10

10-14-14
Subsurface p-chem @ 0916
temperature (C) 17.1
conductivity (uS/cm) 19860
dissolved oxygen (mg/L) 7.4
pH 7.38

NEWARK BAY PHASE III
INTERTIDAL LOCATION: 133

Location Data Form

Project Name: NEWARK BAY PHASE III **Project No.:** 23489.001

Field Crew Initials: BWL, CBD, CCB

Deployment Date & Time	Retrieval Date & Time	Location ID	Trap ID	Collection Method	Coordinates[a] Easting (X)[b]	Coordinates[a] Northing (Y)[b]	Depth (ft)
10/8/14 1115	10/9/14 1350	133	13	CRAB TRAP	597225.21	680883.64	8.5
			3		597201.93	680879.49	8.5
			7		597171.48	680720.79	9
			1		597139.46	680691.33	8.5
			6		597150.42	680642.75	8
			2		597193.90	680585.25	9
			19		597202.46	680544.44	13
			14		597196.33	680471.96	9
			5		597172.83	680450.92	8
10/8/14 1132			8		597118.90	680481.68	8

Total # blue crab > 4.5" Σ=50

[a] Field-observed coordinates.

[b] NAD83 New Jersey State Plane (ft).

Subsurface p-chem @
temperature (C)
conductivity (uS/cm)
dissolved oxygen (mg/L)
pH
NA

Subsurface p-chem @
temperature (C)
conductivity (uS/cm)
dissolved oxygen (mg/L)
pH
NA

NEWARK BAY PHASE III
INTERTIDAL LOCATION: 134

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Location Data Form

Location Data Form

Project Name: NEWARK BAY PHASE III **Project No.:** N/A

Field Crew Initials: BML, CDD, KCM, CCB
Brian Milkulki – Tierra
Sue Lindstrom – L.B.

Deployment Date & Time	Retrieval Date & Time	Location ID	Trap ID	Collection Method	Coordinates[a] Easting (X)[b]	Coordinates[a] Northing (Y)[b]	Depth (ft)
9/23/14 1630	9/24/14 12:43	134	#3	CRAB POT	579592.38	659744.04	4
			#7		579647.94	659723.07	4
			#10		579739.86	659647.36	3.5
			#2		579760.09	659649.80	3
			#4		579786.24	659622.38	3.5
			#6		579770.32	659766.15	3
			#12		579736.35	659737.57	2.8
			#14		579714.81	659775.95	3
			#13		579678.57	659808.44	4
			#5		579761.71	659814.40	5
			#8		579748.40	659842.26	5
	13:36		#9		579813.71	659830.69	3
9/23/14 16:30	9/24/14 13:36	134	#1	CRAB POT	579842.44	659877.07	5

N=37 Kept for processing required/ser 6 replica
remainder released alive
were males (n=16)

Total 4 (mgt) by catch: Summer flounder 230mL - N=1
blue crab < 4.5" " " - N=7

Trap # | Blue Crab > 4.5"
1 | 6
2 | 0
3 | 0
4 | 5
5 | 4
6 | 2
7 | 3
8 | 4
9 | 5
10 | 6
11 | 2
12 | 3
Σ 53

[a] Field-observed coordinates.
[b] NAD83 New Jersey State Plane (ft).

trap #6

Subsurface p-chem @ 1303
temperature (C) 20.9
conductivity (uS/cm) 33700
dissolved oxygen (mg/L) 7.4
pH 7.4

Subsurface p-chem @
temperature (C)
conductivity (uS/cm) NA
dissolved oxygen (mg/L)
pH

bait = bunker or chicken

NEWARK BAY PHASE III Blue Crab
Location: 124

Composite Sample Form

Project Name: NEWARK BAY PHASE III Blue Crab **Project No.:** NA

Date Composited: 10/3/14 **Composited By:** JOS KCM

Tissue Type	Composite ID	Specimen ID	Tissue Sample ID	Weight (g ww)
CRAB	NBO3HEP	NA	NA	
	NBO3CAR 124	↓	↓	286g
	NBO3MUS 124			298g
	NBO3HEP 124			251g
	NBO3CAR			
	NBO3MUS			
	NBO3HEP			
	NBO3CAR			
	NBO3MUS			
	NBO3HEP			
	NBO3CAR			
	NBO3MUS			
	NBO3HEP			
	NBO3CAR			
	NBO3MUS			
	NBO3HEP			
	NBO3CAR			
	NBO3MUS			

Comments:

NEWARK BAY PHASE III Blue Crab
Location: 125

Composite Sample Form

Project Name: NEWARK BAY PHASE III Blue Crab **Project No.:** NA

Date Composited: 10/2/14 **Composited By:** JBS, KCM

Tissue Type	Composite ID	Specimen ID	Tissue Sample ID	Weight (g ww)
CRAB	NBO3HEP	NA	NA	
	NBO3CAR 125			240g
	NBO3MUS 125			271g
	NBO3HEP 125			242g
	NBO3CAR			
	NBO3MUS			
	NBO3HEP			
	NBO3CAR			
	NBO3MUS			
	NBO3HEP			
	NBO3CAR			
	NBO3MUS			
	NBO3HEP			
	NBO3CAR			
	NBO3MUS			
	NBO3HEP			
	NBO3CAR			
	NBO3MUS			

Comments:

Composite Sample Form

Project Name: NEWARK BAY PHASE III Blue Crab **Project No.:**

Date Composited: 10/1/14 **Composited By:** JBS, KCM

Tissue Type	Composite ID	Specimen ID	Tissue Sample ID	Weight (g ww)
CRAB	NBO3HEP	NA	NA	
	NBO3CAR -126			206
	NBO3MUS -126			294
	NBO3HEP -126			223
	NBO3CAR			
	NBO3MUS			
	NBO3HEP			
	NBO3CAR			
	NBO3MUS			
	NBO3HEP			
	NBO3CAR			
	NBO3MUS			
	NBO3HEP			
	NBO3CAR			
	NBO3MUS			
	NBO3HEP			
	NBO3CAR			
	NBO3MUS			

Comments:

NEWARK BAY PHASE III
Location: 122

122

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Specimen Tally Form

Specimen Tally Form

Project Name: NB03 **Project No.:** N/A

Species Sampled: BLUE CRABS **Field Crew Initials:** KCM, JBS

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
10-7-14	10:40	NA	1	140	119	F	N/A
			2	151	168	F	
			3	165	174	F	
			4	142	126	F	
			5	139	162	M	
			6	163	312	M	
			7	140	164	M	
			8	126	132	M	
			9	135	160	M	
			10	130	132	M	
			11	147	150	F	
			12	139	114	F	
			13	147	126	F	
			14	153	134	F	
			15	158	242	M	
			16	155	231	M	
			17	156	294	M	
			18	150	250	M	

Total wt(g)
CAR = 250
MUS = 277
HEP = 268

BWL

NEWARK BAY PHASE III
Location: 122

Specimen Tally Form

Project Name: NB03 **Project No.:** NA

Species Sampled: BLUE CRABS **Field Crew Initials:** KCM, JBS

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
10-7-14	10:40	NA	19	158	288	M	
			20	156	172	M	missing claw
			21	132	124	M	
			22	136	132	M	
			23	123	112	M	
			24	140	163	M	

DWL

Composite Sample Form

Project Name: NEWARK BAY PHASE III Blue Crab **Project No.:** NA

Date Composited: 10/8/14 **Composited By:** JBS, KCM

Tissue Type	Composite ID	Specimen ID	Tissue Sample ID	Weight (g ww)
CRAB	~~NBO3HEP~~	~~NA~~	~~NA~~	Bad
↓	NBO3CAR 122	NA	NA	250
↓	NBO3MUS 122	↓	↓	277
↓	NBO3HEP 122	↓	↓	268
	NBO3CAR			
	NBO3MUS			
	NBO3HEP			
	NBO3CAR			
	NBO3MUS			
	NBO3HEP			
	NBO3CAR			
	NBO3MUS			
	NBO3HEP			
	NBO3CAR			
	NBO3MUS			
	NBO3HEP			
	NBO3CAR			
	NBO3MUS			

Comments:

Bad

St. 123

NB03CRB-HEP123
NB03CRB-CAR123
NB03CRB-MUS123

Specimen Tally Form

Project Name: NB03 Project No.: 23489.001

Species Sampled: Blue Crab Field Crew Initials: KCM

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
10-8-14	Crab Pot		1	159	252	M	
			2	158	264	M	
			3	133	176	M	
			4	168	254	M	
			5	166	228	M	
			6	160	253	M	
			7	157	180	F	
			8	148	212	M	
			9	125	112	F	
			10	144	130	F	
			11	165	190	F	
			12	154	171	F	
			13	133	200	M	
			14	142	178	M	
			15	143	191	M	
			16	140	148	M	
			17	186	368	M	
			18	145	218	M	

Total wt (g)
HEP = 203g
CAR = 201g
MUS = 258

St. ~~122~~ KCM 123

NB03CRB-HEP 123
NB03CRB-CAR 123
NB03CRB-MUS 123

2 of 2

Specimen Tally Form

Project Name: NB03 Project No.: 23489.001

Species Sampled: Blue Crab Field Crew Initials: KCM

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
10-8-14		B1	19	160	298	M	
			~~20~~ KCM				
			~~21~~ KCM				
			~~22~~ KCM				

NEWARK BAY PHASE III Blue Crab
Location: 123

NB03CRB-HEP123
NB03CRB-CAR123
NB03CRB-MUS123

Composite Sample Form

Project Name: NEWARK BAY PHASE III Blue Crab **Project No.:** N/A

Date Composited: 10-9-14 **Composited By:** KCM

Tissue Type	Composite ID	Specimen ID	Tissue Sample ID	Weight (g ww)
CRAB	NBO3HEP 123	NA	NA	203g
↓	NBO3CAR 123	↓	↓	201g
↓	NBO3MUS 123	↓	↓	258g
	NBO3HEP			
	NBO3CAR			
	NBO3MUS			
	NBO3HEP			
	NBO3CAR			
	NBO3MUS			
	NBO3HEP			
	NBO3CAR			
	NBO3MUS			
	NBO3HEP			
	NBO3CAR			
	NBO3MUS			
	NBO3HEP			
	NBO3CAR			
	NBO3MUS			

Comments:

NEWARK BAY PHASE III
Location: 124

Start: 1033

Specimen Tally Form

Project Name: NB03 **Project No.:** NA

Species Sampled: Blue Crab **Field Crew Initials:** JBS, KCM

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
10/3/14	0754	NA	1	145	148	F	N/A
			2	129	96	F	
			3	138	154	M	
			4	150	192	M	
			5	173	284	M	
			6	172	320	M	
			7	140	172	M	
			8	136	100	M	
			9	140	156	M	
			10	148	230	M	
			11	~~F~~ 133	88	F	Missing (2) claws N/A
			12	135	212	M	
			13	162	282	M	
			14	124	102	F	
			15	145	208	M	
			16	131	130	M	
			17	162	244	M	
			18	128	120	M	

NEWARK BAY PHASE III
Location: 124

Specimen Tally Form

Project Name: NB 03 **Project No.:** NA

Species Sampled: BLUE CRAB **Field Crew Initials:** JDS, KCM

COLLECTION DATE	COLLECTION TIME	TRAP ID	SPECIMEN ID NO.	LENGTH (mm)	WEIGHT (g)	GENDER	COMMENTS
10/3/14	0754	NA	19	159	290	M	N/A
↓	↓	↓	20	155	260	M	↑
10/2/14	1053	↓	21	154	198	F	↓
10/2/14	1053		22	149	192	F	
10/2/14	1053		23	139	130	F	

NEWARK BAY PHASE III
Location: 125

Specimen Tally Form

Project Name: NB03 **Project No.:** NA

Species Sampled: Blue Crab **Field Crew Initials:** JBS, KCM

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
10/1/14	1006	NA	1	119	80	M	N/A
			2	128	112	M	N/A
			3	127	92	M	missing 1 claw
			4	131	140	M	N/A
			5	147	180	M	N/A
			6	146	210	M	N/A
			7	151	228	M	N/A
			8	128	108	M	missing (2) claws
			9	133	120	M	KCM AM N/A
			10	132	148	M	missing 1 claw
			11	146	234	M	KCM N/A
			12	135	166	M	~~F20~~ N/A
			13	120	90	M	N/A
			14	135	150	M	N/A
10/1/14	1006		15	149	120	F	N/A
10/2/14	1004		16	120	84	F	N/A
			17	143	141	F	N/A
			18	146	165	F	N/A

NEWARK BAY PHASE III
Location: 125

Specimen Tally Form

Project Name: NB 03 **Project No.:** NA

Species Sampled: Blue Crab **Field Crew Initials:** JBS, KCM

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
10/2/14	1004	NA	19	144	142	F	N/A
↓	↓	↓	20	141	118	F	N/A
			21	153	205	M	N/A
			22	148	200	M	N/A
			23	148	222	M	N/A
			24	141	144	M	N/A

Composite Sample Form

Project Name: NEWARK BAY PHASE III Blue Crab **Project No.:**

Date Composited: 10/1/14 **Composited By:** JBS, KCM

Tissue Type	Composite ID	Specimen ID	Tissue Sample ID	Weight (g ww)
CRAB	NBO3HEP	NA	NA	
	NBO3CAR -126			206
	NBO3MUS -126			294
	NBO3HEP -126			223
	NBO3CAR			
	NBO3MUS			
	NBO3HEP			
	NBO3CAR			
	NBO3MUS			
	NBO3HEP			
	NBO3CAR			
	NBO3MUS			
	NBO3HEP			
	NBO3CAR			
	NBO3MUS			
	NBO3HEP			
	NBO3CAR			
	NBO3MUS			

Comments:

NEWARK BAY PHASE III
Location: 126

Specimen Tally Form

Project Name: NB03 **Project No.:** NA

Species Sampled: Blue Crab **Field Crew Initials:** JBS, KCM

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
9/30/14	1051	NA	1	~~119~~ 116	88	M	N/A
			2	128	144	M	
			3	138	169	M	
			4	142	130	M	missing claw
			5	149	210	M	missing claw
			6	142	182	M	N/A
			7	116	92	M	
			8	131	90	F	missing claw
			9	120	118	M	N/A
			10	129	122	M	
			11	132	100	F	
			12	135	128	M	
			13	144	208	M	
			14	130	113	M	missing claw
			15	165	283	M	N/A
			16	135	191	M	
			17	115	107	M	
			18	157	236	M	missing leg

NEWARK BAY PHASE III
Location: 126

Specimen Tally Form

Project Name: NB 03 **Project No.:** NA

Species Sampled: Blue Crab **Field Crew Initials:** JBS, KCM

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
9/30/14	1051	NA	19	146	189	M	N/A
9/30/14	↓	↓	20	118	114	M	↓
9/30/14	↓	↓	21	119	115	M	↓
9/30/14	↓	↓	22	165	286	M	↓
9/30/14	1051	↓	23	134	158	M	↓
10/1/14	1006	↓	~~24~~ KCM				
10/1/14	↓	↓	~~25~~ KCM				
10/1/14	↓	↓	~~26~~ KCM				
10/1/14	↓	↓	~~27~~ KCM				

NEWARK BAY PHASE III
Location: 127

START Processing: 1048
END Processing: 1103

Specimen Tally Form

Project Name: NB03 **Project No.:** NA

Species Sampled: Blue Crab- Callinectes sapidus **Field Crew Initials:** BWL, KCM, COD, JBS

Length = Carapace width

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length [1] (mm)	Weight (g)	Gender	Comments
09-25-14	1237	NA	1	130	166	M	N/A
			2	120	128	M	N/A
			3	137	150	M	missing 1 claw
			4	123	120	M	N/A
			5	136	132	M	missing 1 claw
			6	135	146	M	N/A
			7	122	142	M	N/A
			8	140	172	M	N/A
			9	151	204	M	missing 1 claw
			10	134	90	F	missing 1 claw
			11	146	151	F	N/A
			12	124	166	M	N/A
			13	123	126	M	N/A
			14	127	186	M	N/A
			15	141	212	M	N/A
			16	123	128	M	missing 1 claw
			17	153	250	M	N/A
			18	133	158	M	

[1] carapace width

BWL

NEWARK BAY PHASE III
Location: 127

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Specimen Tally Form

Specimen Tally Form

Project Name: NB03 **Project No.:** NA

Species Sampled: Blue Crab - Callinectes sapidus **Field Crew Initials:** BWL, KCM, COD, JBS

1

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
09-25-14	1237	NA	19	142	168	M	N/A
			20	135	172	M	N/A
			21	173	230	M	missing 1 claw
			22	136	150	M	N/A
			23	160	310	M	
			24	131	164	M	

N=24 bluecrabs

Total tissue wt. (g)
HEP = 222
CAR = 238
MUS = 417

2 of 2

BWL

NEWARK BAY PHASE III Blue Crab
Location: 127

Composite Sample Form

Project Name: NEWARK BAY PHASE III Blue Crab **Project No.:** NA

Date Composited: 9/26/14 **Composited By:** BSS, JBS, KCM

Collection Date	Tissue Type	Composite ID	Specimen ID	Tissue Sample ID	Weight (g ww)
9/25/14	CRAB	NBO3HEP 127	NA	NA	220
9/25/14	CRAB	NBO3CAR 127	↓	↓	238
9/25/14	CRAB	NBO3MUS 127	↓	↓	417
		NBO3HEP			
		NBO3CAR			
		NBO3MUS			
		NBO3HEP			
		NBO3CAR			
		NBO3MUS			
		NBO3HEP			
		NBO3CAR			
		NBO3MUS			
		NBO3HEP			
		NBO3CAR			
		NBO3MUS			
		NBO3HEP			
		NBO3CAR			
		NBO3MUS			

Comments:

BM

NB03 'Blue crab 129

9/9/14 collected
9/10/14 processed

process start: 10:15

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Specimen Tally Form

Specimen Tally Form

Project Name: **Project No.:**

Species Sampled: Blue crab **Field Crew Initials:**

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	*Comments
9/9/14	1342	CRAB	1	130	113	M	No cheliped, 3 legs
			2	135	140	M	NA
			3	158	230	M	No cheliped, 1 leg missing
			4	154	211	M	NA
			5	150	198	M	No cheliped
			6	138	140	M	NA
			7	121	89	M	No cheliped
			8	122	131	M	1 leg missing
			9	127	139	M	1 swim leg missing
			10	115	127	M	1 leg missing
			11	130	140	M	NA
			12	134	122	M	no cheliped

Length = carapace width

* small leg unless otherwise noted

9/11/14

NB03 CRAB St 129

process start: 12:30
end process: 12:40

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Specimen Tally Form

Specimen Tally Form

Project Name: NB 03 Crab/Clam Project No.:

Species Sampled: Blue crab Field Crew Initials: BWL, CDD

Whole body weights recorded

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments (missing/abnormal)
9/10/14	1410	CRAB	13	136	166	M	NA
			14	114	82	M	miss chelped, 2 legs
			15	149	223	M	NA
			16	123	111	M	NA
			17	154	232	M	NA
			18	142	183	M	1 leg off
			19	138	106	F	miss both claws
			20	146	168	M	1 claw
			21	139	167	M	NA
			22	173	278g	M	NA
			23	150	232	M	NA
			24	133	158	M	NA
			25	118	98	M	1 claw
			26	127	105	F	NA
			27	134	177	M	NA
			28	141	121	F	NA
			29	148	190	F	NA

* Weights recorded with Accu-Weigh
* all hard-shell
* some claws/legs lost as result of handling/removing individuals from crab traps

Bryan Lu

NB03 Blue Crab 129 bwL

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Composite Sample Form

Composite Sample Form

Project Name: Newark Bay Phase III **Project No.:**

Date Composited: 09/10/14 **Composited By:** BWL, KCM

Tissue Type	Composite ID	Specimen ID	Tissue Sample ID	Weight (g ww)
CRAB	NB03 HEP129	NA	Hep	7.0
|	NB03 CAR129	NA	CAR	6.1
|	NB03 MUS129	NA	MUS	18.4
CRAB	NB03 HEP 129	NA	HEP	8.4
|	NB03CAR 129	NA	CAR	6.2
|	NB03 MUS 129	NA	MUS	28.3
CRAB	NB03 HEP 129	NA	HEP	20.3
|	NB03 CAR 129	N/A	CAR	11.1
|	NB03 MUS 129	NA	MUS	33.4
CRAB	NB03 HEP 129	NA	HEP	10.3
|	NB03CAR129	NA	CAR	6.0
|	NB03MUS 129	NA	MUS	19.5
CRAB	NB03 HEP129	NA	HEP	12.5
|	NB03CAR129	NA	CAR	22.5
|	NB03MUS 129	NA	MUS	41.9
|	NB03HEP 129	NA	HEP	7.6
|	NB03CAR 129	NA	CAR	8.9
|	NB03 MUS129	NA	MUS	19.6

Comments:

process start: 1030 - 1225

Σ HEP = 66.1
Σ CAR = 60.7
Σ MUS = 162

NB03 blue crab 129 ~~blue~~

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Composite Sample Form

Composite Sample Form

Project Name: NB Phase III **Project No.:**

Date Composited: 9/10/14 **Composited By:** MM, BM

Tissue Type	Composite ID	Specimen ID	Tissue Sample ID	Weight (g ww)
CRAB	NB03 HEP 129	NA	HEP	6.0
|	NB03 CAR 129	NA	CAR	11.6
|	NB03 MUS 129	NA	MUS	18.2
CRAB	NB03 HEP 129	NA	HEP	6.4
|	NB CAR 129	NA	CAR	10.2
|	NB MUS 129	NA	MUS	18.9
CRAB	NB HEP 129	NA	HEP	6.7
|	NB CAR 129	NA	CAR	12.2
|	NB MUS 129	NA	MUS	19.4
CRAB	NB HEP 129	NA	HEP	7.3
|	NB CAR 129	NA	CAR	20.6
|	NB MUS 129	NA	MUS	20.2
CRAB	NB HEP 129	NA	HEP	4.9
|	NB CAR 129	NA	CAR	10.3
|	NB MUS 129	NA	MUS	27.5
CRAB	NB HEP 129	NA	HEP	5.2
|	NB CAR 129	NA	CAR	7.1
|	NB MUS 129	NA	MUS	19.0

Comments:

Photos: 160-1961 to 160-1974

Σ Hep = 36.5
Σ CAR = 72.0
Σ MUS = 123.2

NBO3 blue crab 129a bowl

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Composite Sample Form

Composite Sample Form

Project Name: NBO3 **Project No.:**

Date Composited: 9/11/14 **Composited By:** Bill, CSD

Tissue Type	Composite ID	Specimen ID	Tissue Sample ID	Weight (g ww)
CRAB	NBO3HEP129a	NA	NA	1.5
	NBO3CAR129a			11.1
	NBO3MUS129a			17.3
	NBO3HEP129a			8.5
	NBO3CAR129a			7.7
	NBO3MUS129a			30.2
	NBO3HEP129a			4.2
	NBO3CAR129a			7.4
	NBO3MUS129a			25.8
	NBO3HEP129a			9.1
	NBO3CAR129a			11.1
	NBO3MUS129a			15.5
	NBO3HEP129a			5.6
	NBO3CAR129a			11.4
	NBO3MUS129a			47.1
	NBO3HEP129a			12.7
	NBO3CAR129a			11.6
	NBO3MUS129a			38.4

Comments:

Σ Hep = 41.6
Σ CAR = 60.3
Σ MUS = 174.3

NBO3 blue crab /29a

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Composite Sample Form

Composite Sample Form

Project Name: NBO3 **Project No.:**

Date Composited: 9/11/14 **Composited By:** BLM CAP

TISSUE TYPE	COMPOSITE ID	SPECIMEN ID	TISSUE SAMPLE ID	WEIGHT (g ww)
CRAB	NBO3HEP129a	NA	NA	13
	NBO3CAR129a			8
	NBO3MUS129a			24.4
	NBO3HEP129a			14.1
	NBO3CAR129a			14.7
	NBO3MUS129a			50
	NBO3HEP129a			6.3
	NBO3CAR129a			14.5
	NBO3MUS129a			19
	NBO3HEP129a			5
	NBO3CAR129a			14.1
	NBO3MUS129a			~~51.2~~ BLM 45.1
	NBO3HEP129a			13.1
	NBO3CAR129a			23.5
	NBO3MUS129a			51.5
	NBO3HEP129a			10.3
	NBO3CAR129a			8.9
	NBO3MUS129a			18.5

Comments:

ΣHep 61.8
ΣCAR 83.7
ΣMUS 208.5

NB03 blue crab 129 a/bw1

Composite Sample Form

Project Name: NB 03 **Project No.:**

Date Composited: 9/11/14 **Composited By:** BWL, CDD

Tissue Type	Composite ID	Specimen ID	Tissue Sample ID	Weight (g ww)
CRAB	NB03 HEP 129a	NA	NA	6.3
	NB03 CAR 129a			12.3
	NB03 MUS 129a			19.0
	NB03 HEP 129a			15.2
	NB03 CAR 129a			13.8
	NB03 MUS 129a			16.0
	NB03 HEP 129a			4.4
	NB03 CAR 129a			14.3
	NB03 MUS 129a			11.2
	NB03 HEP 129a			7.4
	NB03 CAR 129a			9.1
	NB03 MUS 129a			19.1
	NB03 HEP 129a			4.7
	NB03 CAR 129a			10.7
	NB03 MUS 129a			25.0
	NB03 HEP 129a			NA
	NB03 CAR 129a			↓
↓	NB03 MUS 129a	↓	↓	

Comments:

Σ Total HEP = 244.0 g
CAR = 336.9 g
MUS = 758.3 g

Σ HEP = 38.0
Σ CAR = 60.2
Σ MUS = 90.3

unit processing @ 1450hrs on 9/11/14

NEWARK BAY PHASE III
Location: 130

9/18/14 START PROCESSING: 1715 hrs
END PROCESSING: 1756

9/19/14 START: 1345
END:

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Specimen Tally Form

Specimen Tally Form

Project Name: NB03 **Project No.:** NA

Species Sampled: Blue Crab *Callinectes sapidus* **Field Crew Initials:** BW, CDD, JBS, KCM

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
9/18/14	1240	CRAB	1	120	102	male	1 claw missing
			2	111	102	male	
			3	150	202	male	
			4	141	170	male	
			5	126	90	female	1 claw missing, 2 small legs missing
			6	153	199	male	
9/18/14	1240		7	155	110	female	1 claw missing, 1 small leg missing
9/19/14	0934		8	145	160	male	1 claw missing
			9	133	132	male	
			10	127	140	male	
			11	142	123	male	missing 2 claws, soft shell
			12	145	170	male	1 claw missing
			13	123	140	male	
			14	155	212	male	
			15	161	258	male	
9/19/14 JBS	0934 JBS		16	140	180	male	
			17	NA			

total wt(g) 9/18/14
HEP = 49
CAR = 49
MUS = 99

total wt(g) 9/19/14
HEP = 81g
CAR = 85g
MUS = 155g

NEWARK BAY PHASE III
Location: 130

Start: 1000
End: 1054

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Specimen Tally Form

Specimen Tally Form

Project Name: NB03 **Project No.:** NA

Species Sampled: Blue crab *Callinectes sapidus* **Field Crew Initials:** BWG, CAD, KCM

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
9/23/14	12:25	CRABTRAP	18	147	130	F	N/A
			19	138	130	F	N/A
			20	137	100	F	missing claw
			21	125	100	F	N/A
			22	142	120	F	N/A
			23	140	110	F	missing claw
			24	142	130	F	N/A
			25	133	110	F	missing 2 small legs + 1 swimmer leg
			26	138	130	F	N/A
			27	153	102	F	N/A
			28	132	104	F	N/A
			29	132	106	F	N/A

Note: 9 males not processed.
3 females not processed.

Prepared by KCM

total wt (g) 9/23/14
HEP = 82
CAR = 100
MUS = 148

Additional Blue CRABS NOT Processed for TISSUE

NEWARK BAY PHASE III
Location: 130

Start 1105
End: 1112

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Specimen Tally Form

Specimen Tally Form

Project Name: NB03 **Project No.:** NA

Species Sampled: Blue crab (Callinectes sapidus) **Field Crew Initials:** BM, KCM, CAD

*Collected but not processed for tissue

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
9/23/14	12:25	CRAB	1	136	162	M	
			2	125	95	F	
			3	147	150	F	
			4	141	120	F	
			5	136	120	M	
			6	125	120	M	
			7	159	252	M	
			8	150	184	M	
			9	128	132	M	
			10	160	182	M	
			11	116	110	M	
			12	125	149	M	
			~~13~~ KCM	N/A	N/A	N/A	
			~~14~~ KCM				
			~~15~~ KCM				

* Note: I make individual not weighed or measured

Prepared by KCM

NEWARK BAY PHASE III Blue Crab
Location: 130

Composite Sample Form

Project Name: NEWARK BAY PHASE III Blue Crab **Project No.:** NA

Date Composited: 9/18/14, 9/19/14, **Composited By:** BW

Collection Date

Tissue Type	Composite ID	Specimen ID	Tissue Sample ID	Weight (g ww)
9/18/14 CRAB	NBO3HEP 130	NA	NA	49
	NBO3CAR 130			49
	NBO3MUS 130			99
9/19/14	NBO3HEP 130			81
	NBO3CAR 130			85
	NBO3MUS 130			155
9/23/14	NBO3HEP 130			82
	NBO3CAR 130			100
	NBO3MUS 130			148
	NBO3HEP			
	NBO3CAR			
	NBO3MUS			
	NBO3HEP			
	NBO3CAR			
	NBO3MUS			
	NBO3HEP			
	NBO3CAR			
	NBO3MUS			

Comments: Total wt (g)

HEP = 212
CAR = 234
MUS = 402

NOAA blue crab
Station 131

process start: 1920

end process: 1925

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Specimen Tally Form

Specimen Tally Form

Project Name: Newark Bay Phase III Project No.:

Species Sampled: Blue Crab Field Crew Initials: BWL

Whole Body weights recorded
Station 131

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
9/11/14	12:20	CRAB	1	145	110	F	
↓	↓	↓	2	138	110	F	
			3	145	185	M	
			4	138	180	M	
			5	120	102	F	missing 1 claw

NEWARK BAY PHASE III
Location: 131

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Specimen Tally Form

Specimen Tally Form

Project Name: Newark Bay Phase III Project No.:

Species Sampled: blue crab Callinectes sapidus Field Crew Initials: BWR, KCM, JBS

Collected with crab traps

Collection Date	*Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
9/16/14	12:00	CRAB TRAP	1	166	270	M	N/A
			2	148	155	M	missing both claws
			3	135	158	M	N/A
			4	136	160	M	KCM ~~N/A~~ missing 1 front leg
			5	112	108	M	N/A
			6	140	120	F	N/A
			7	145	110	F	N/A
			8	139	150	M	missing claw
			9	146	168	M	missing claw
			10	134	110	F	missing 1 leg
			11	154	268	M	N/A
			12	141	88	F	missing claw + 2 legs

* collection time for first crab trap retrieved at the station.

Start: 1555
End: 1604

Bryan Lee

START: BWL

~~END~~: BWL

NEWARK BAY PHASE III
Location: 13 |

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Specimen Tally Form

Specimen Tally Form

Project Name: NB 03 **Project No.:** NA

Species Sampled: Blue Crab **Field Crew Initials:** BWL, CDD, JBS, KCM

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
9/17/14	1201-1239	NA	1	149	130	female	
			2	130	108	male	
			3	156	128	female	
			4	132	108	female	1 claw missing
			5	150	220	male	
			6	165	150	female	
			7	145	170	male	
			8	128	140	male	
			9	115	95	male	1 claw missing
			10	130	138	male	
			11	163	190	male	1 claw missing / 1 swimming leg missing
			~~12~~ BWL				

START PROCESSING 1455 hrs
END PROCESSING 1505 hrs

NEWARK BAY PHASE III Blue Crab
Location: 131

process start time: 16:15
end time: 17:00

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Composite Sample Form

Composite Sample Form

Project Name: NEWARK BAY PHASE III Blue Crab **Project No.:**

Date Composited: 9/16/14 – 9/17/14 **Composited By:** BWL, JBS

Date	Tissue Type	Composite ID	Specimen ID	Tissue Sample ID	Weight (g ww)
9/16/14	CRAB	NBO3HEP131	NA	NA	100
9/16/14	CRAB	NBO3CAR131			106
9/16/14		NBO3MUS131			170
9/17/14		NBO3HEP			69
9/17/14		NBO3CAR			87
9/17/14		NBO3MUS			158
		NBO3HEP			NA
		NBO3CAR			
		NBO3MUS			
		NBO3HEP			
		NBO3CAR			
		NBO3MUS			
		NBO3HEP			
		NBO3CAR			
		NBO3MUS			
		NBO3HEP			
		NBO3CAR			
		NBO3MUS			

Comments:

Σ HEP = 169g
Σ CAR = 193g
Σ MUS = 328g

Total tissue wt (g)
HEP = 207.6
CAR = 246.9
MUS = 402.8

N = 28 crabs processed

NB03 131 blue crab

Composite Sample Form

Project Name: NB 03 **Project No.:**

Date Composited: 9/11/14 **Composited By:** BW, JBS

Tissue Type	Composite ID	Specimen ID	Tissue Sample ID	Weight (g ww)
CRAB	NB03HEP131	NA	NA	5.4
	NB03CAR131			8.3
	NB03MUS131			5.0
	NB03HEP			4.5
	NB03CAR			13.7
	NB03MUS			11.3
	NB03HEP			8.0
	NB03CAR			10.2
	NB03MUS			30.1
	NB03HEP			12.0
	NB03CAR			12.8
	NB03MUS			19.3
	NB03HEP			8.7
	NB03MUS			9.1
	NB03CAR			8.9
	NA			NA
	NA			
	NA			

Comments: N=5 blue crab

ΣHEP = 38.6
ΣCAR = 53.9
ΣMUS = 74.8

NEWARK BAY PHASE III
Location: Station 132

Specimen Tally Form

Project Name: NB03 **Project No.:** 23489.001

Species Sampled: Blue Crabs **Field Crew Initials:** CJR, KCM

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
10-14-13	0853	N/A	1	122	124	M	
			2	141	141	M	
			3	136	111	F	
			4	134	107	F	
			5	121	90	M	
			6	144	111	M	
			7	149	140	F	
			8	142	129	F	
			9	134	149	M	
			10	151	142	F	
			11	131	102	M	
			12	123	120	M	
			13	133	124	M	
			14	160	198	M	
			15	122	72	F	missing one claw
			16	132	92	F	
			17	140	110	F	
			18	148	136	F	

NEWARK BAY PHASE III
Location: Station 132

Specimen Tally Form

Project Name: NBO3 **Project No.:** 23489.001

Species Sampled: Blue Crab **Field Crew Initials:** KCM, CJR

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
10-14-14	0853	N/A	19	139	153	M	
			20	120	90	M	
			21	145	134	M	
			22	125	94	F	
			23	131	110	F	
			24	129	154	M	
			25	147	160	M	
			26	138	123	F	
			27	135	152	M	
			28	127	104	M	

Total wt (g)
HEP = 225
CAR = 201
MUS = 270

133

NB03CRB-HEP133
NB03CRB-CAR133
NB03CRB-MUS133

Specimen Tally Form

Project Name: NB03 Project No.: N/A

Species Sampled: Blue Crab Field Crew Initials: KCM

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
10-9-14	1350	NA	1	174	356	M	N/A
			2	167	178	F	
			3	135	209	M	
			4	168	173	F	
			5	163	168	F	
			6	150	146	F	
			7	147	230	M	
			8	153	190	F	
			9	198	385	M	
			10	147	144	F	
			11	137	124	F	
			12	160	197	M	
			13	141	146	F	
			14	135	123	F	
			15	152	201	M	
			16	154	272	M	
			17	140	132	F	
			18	155	AK 169 KCM	M	

Total Wt (g)
HEP = 261
CAR = 201
MUS = 311

Specimen Tally Form

Project Name: Newark Bay Phase ~~III~~ **Project No.:** NA

Species Sampled: Blue Crab - Callinectes sapidus **Field Crew Initials:** BWL, COO, JBS, KCM

Collected with crap traps

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length [1] (mm)	Weight (g)	Gender	Comments
9/24/14	12:43	NA	1	138	160	F	N/A
			2	140	120	F	missing claw
			3	140	146	F	N/A
			4	136	185	M	
			5	134	120	F	
			6	134	160	M	
			7	131	180	M	
			8	139	150	M	missing claw
			9	125	124	F	missing 1 small leg
			10	130	120	F	missing 1 swimming leg
			11	147	200	M	N/A
			12	127	120	M	
			13	135	160	M	
			14	145	150	F	
			15	150	160	F	missing 1 small leg
			16	144	188	M	N/A
			17	128	140	M	missing 1 small leg
			18	135	115	F	N/A

N = 32 blue crab processed

Total tissue wt(g): MUS = 484
CAR = 271
HEP = 270

[1] carapace width

BWL

NEWARK BAY PHASE III
Location: 134

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Specimen Tally Form

Specimen Tally Form

Project Name: NB03 **Project No.:**

Species Sampled: Blue crab - Callinectes sapidus collected with crab traps **Field Crew Initials:** BWL, KCM, JBS, CDD

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
9/24/14	12:43	NA	19	119	70	M	missing 2 claws + 1 swim leg
			20	123	110	M	N/A
			21	140	130	F	N/A
			22	138	120	F	missing 1 claw, 2 small legs
			23	140	128	F	N/A
			24	145	190	M	N/A
			25	136	140	F	missing 1 claw
			26	132	130	M	missing 1 claw + 1 small leg
			27	126	90	F	missing 1 claw + 1 small leg
			28	150	192	M	N/A
			29	132	112	F	
			30	138	190	M	
			31	135	120	F	missing 1 claw
			32	140	142	M	missing 1 claw + 1 small leg

BWL

NEWARK BAY PHASE III Blue Crab
Location: 134

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Composite Sample Form

Composite Sample Form

Project Name: NEWARK BAY PHASE III Blue Crab **Project No.:** NA

Date Composited: 9/24/14 **Composited By:** BW, CSD, JTBS, KCm

Tissue Type	Composite ID	Specimen ID	Tissue Sample ID	Weight (g ww)
CRAB	NBO3HEP 134	NA	NA	270
	NBO3CAR 134	↓	↓	271
	NBO3MUS 134	↓	↓	484
	NBO3HEP			
	NBO3CAR			
	NBO3MUS			
	NBO3HEP			
	NBO3CAR			
	NBO3MUS			
	NBO3HEP			
	NBO3CAR			
	NBO3MUS			
	NBO3HEP			
	NBO3CAR			
	NBO3MUS			
	NBO3HEP			
	NBO3CAR			
	NBO3MUS			

Comments:

BW

NEWARK BAY PHASE III
Location:
North Bay
Sta-133

NB03CRB-HEP-N004
NB03CRB-~~HEP~~ KCM CAR N004
NB03CRB-MUS-N004

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Specimen Tally Form

Specimen Tally Form

Project Name: NB03 **Project No.:** N/A

Species Sampled: Blue Crab **Field Crew Initials:** KCM, COD, CCS, CCB

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
10-9-14		NA	1	137	111	F	N/A
			2	155	240	m	
			3	140	135	m	
			4	138	164	m	
			5	125	111	m	
			6	158	188	m	
			7	143	158	m	
			8	170	210	m	missing 1 claw
			9	140	134	m	missing 1 claw
			10	155	152	m	missing 1 claw
			11	148	205	m	N/A
			12	160	260	m	
			13	150	173	m	
			14	155	204	m	
			15	161	204	m	
			16	145	199	m	
			17	152	184	m	
			18	158	260	m	

* Crabs in this sample were collected by crab pots at Station 133

Total Wt (g)
HEP = 254
CAR = 248
MUS = ___

NEWARK BAY PHASE III
Location: North Bay Sta-133

NB03CRB-HEP-N004
NB03CRB-Car-N004
NB03CRB-MUS-N004

Specimen Tally Form

Project Name: NB03 **Project No.:** N/A

Species Sampled: Blue Crab **Field Crew Initials:** KCM, CDP, CCS, CCB

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
10-9-14		NA	19	145	147	M	Missing 1 claw
10-9-14		NA	20	156	161	F	N/A

N005

1 of 2

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 3
Revision Date: August 2014
Specimen Tally Form

North Bay NB03CRB-HEP-N003
NB03CRB-CAR-N003
NB03CRB-MUS-N003

Specimen Tally Form

Project Name: NB03 **Project No.:** 23489.001

Species Sampled: Blue Crab **Field Crew Initials:** BW, CAD, CCB, CCS

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
10-7-14		Gill Net	1	138	140	m	N/A
			2	127	120	m	N/A
			3	142	100	m	missing both claws
			4	160	250	m	N/A
			5	145	120	F	
			6	128	90	F	missing both claws
			7	150	140	F	N/A
			8	140	190	m	
			9	170	210	m	
			10	150	200	m	
			11	140	130	m	
			12	140	160	m	
			13	138	100	F	
			14	120	60	F	missing both claws
			15	135	150	m	N/A
			16	150	160	m	missing both claws
			~~17~~	~~145~~	~~60~~	~~F~~	~~missing~~ CCS
			~~18~~				
10-7-14		Gill Net					

North Bay

NB03CRB-HEP-N003
NB03CRB-CAR-N003
NB03CRB-MUS-N003

Specimen Tally Form

Project Name: NB03 Project No.: 23489.001

Species Sampled: Blue Crab Field Crew Initials: KCM

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
10-08-14		Trawl	18	165	170	F	N/A
↓		↓	19	153	143	F	↓
			20	122	126	M	
			21	144	150	M	
			22	129	70	F	missing 2 claws
			~~23~~ KCM				

NEWARK BAY PHASE III Blue Crab
Location: N003

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Composite Sample Form

NB03CRB-CAR-N003
NB03CRB-HEP-N003
NB03CRB-MUS-N003

Composite Sample Form

Project Name: NEWARK BAY PHASE III Blue Crab **Project No.:** N/A

Date Composited: 10-09-14 **Composited By:** KCM

Tissue Type	Composite ID	Specimen ID	Tissue Sample ID	Weight (g ww)
CRAB	NBO3HEP N003	NA	NA	235
↓	NBO3CAR N003	↓	↓	236
↓	NBO3MUS N003	↓	↓	248
	NBO3HEP			
	NBO3CAR			
	NBO3MUS			
	NBO3HEP			
	NBO3CAR			
	NBO3MUS			
	NBO3HEP			
	NBO3CAR			
	NBO3MUS			
	NBO3HEP			
	NBO3CAR			
	NBO3MUS			
	NBO3HEP			
	NBO3CAR			
	NBO3MUS			

Comments:

NEWARK BAY PHASE III
Location: North Zone 005

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Specimen Tally Form

Specimen Tally Form

Project Name: NB 03 **Project No.:** NA

Species Sampled: Blue Crabs **Field Crew Initials:** JBS CJR KCM

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
10-14-14			1	157	160	F	
			2	135	167	M	
			3	145	223	M	
			4	134	111	F	
			5	127	118	M	
			6	144	178	M	
			7	141	122	F	
			8	146	100	F	missing both claws
			9	147	169	F	
			10	150	174	M	
			11	152	191	M	
			12	143	190	M	
			13	135	154	M	
			14	150	160	M	
			15	129	142	M	
			16	119	94	M	
			17	133	133	F	
			18	150	144	F	

NEWARK BAY PHASE III
Location: North Zone 006

Specimen Tally Form

Project Name: NB03 **Project No.:** NA

Species Sampled: Blue Crabs **Field Crew Initials:** JBS CJR KCM

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
10-14-14		NA	1	141	196	F	
			2	158	138	F	
			3	143	140	F	
			4	165	162	F	
			5	121	100	M	
			6	161	196	M	
			7	154	252	M	
			8	121	74	F	
			9	142	186	M	missing one claw
			10	137	148	M	
			11	146	191	M	missing one claw
			12	139	198	M	
			13	146	86	F	missing one claw
			14	134	142	M	
			15	131	136	M	
			16	123	100	F	
			17	123	126	M	
			18	148	226	M	

NEWARK BAY PHASE III
Location: North Zone 006

Specimen Tally Form

Project Name: NB03 **Project No.:** N.A

Species Sampled: Blue Crab **Field Crew Initials:** JBS CJR KCM

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
10-14-14			19	129	124	M	missing 1 claw
10-14-14			20	132	104	M	missing 1 claw
1							

NEWARK BAY PHASE III
Location: North Zone 007

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Specimen Tally Form

Specimen Tally Form

Project Name: NB03 **Project No.:** NA

Species Sampled: Blue crab **Field Crew Initials:** JBS, CJR, CCB, SMS

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
10-13-14		NA	1	125	156	M	
10-14-14			2	118	92	M	
10-15-14			3	133	132	F	
			4	147	162	M	
			5	140	126	F	missing one claw
			6	129	102	F	~~MJS~~ CJR
			7	130	102	M	missing one claw
			8	143	126	F	
			9	141	184	M	
			10	124	120	M	
			11	142	142	M	
			12	151	262	M	
			13	126	100	F	
			14	136	120	F	
			15	165	204	M	
			16	144	140	M	
			17	142	150	M	
			18	141	168	M	

NEWARK BAY PHASE III
Location: North Zone 007

Specimen Tally Form

Project Name: NB03 **Project No.:** NA

Species Sampled: Blue crab **Field Crew Initials:** JBS, CJR, CCB, SMS

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
10-15-14		NA	19	130	102	F	
			20	133	146	M	

NEWARK BAY PHASE III
Location:

NB03CRB-HEP-N008
" -CAR-N008
" -MUS-N008

North Bay

Specimen Tally Form

Project Name: NB03 **Project No.:**

Species Sampled: Blue Crabs **Field Crew Initials:** KCM, MKM

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
10-15-14		N/A	1	150	170	M	N/A
			2	134	124	M	missing 2 claws
			3	140	146	M	missing 1 claw
			4	150	150	F	N/A
			5	167	238	M	missing 2 legs
			6	138	146	M	N/A
			7	142	126	F	
			8	144	180	M	
			9	161	210	M	
			10	120	96	M	
			11	133	132	M	missing 1 claw
			12	120	100	M	N/A
			13	150	142	F	
			14	138	192	M	
			15	150	198	M	
			16	148	202	M	
			17	133	154	M	
			18	123	118	M	

Total Wts (g)

HEP = 232

CAR = 218

MUS = 324

NEWARK BAY PHASE III
Location:

NB03CRB-HEP-N008
" - CAR-N008
" - MUS-N008
North Bay

2 of 2

Title: Crab and Clam Sampling and Analysis Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Specimen Tally Form

Specimen Tally Form

Project Name: NB03 **Project No.:**

Species Sampled: Blue Crab **Field Crew Initials:** KCM, MKM

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
10-15-14			19	150	246	M	missing 1 claw
			20	152	212	M	N/A
			21	140	170	M	↓

NB03CRB-CAK-5001
NB03CRB-HEP-5001
NB03CRB-MUS-5001

NEWARK BAY PHASE III
Location: South Bay - Gill Net

Specimen Tally Form

Project Name: NB03 **Project No.:** N/A

Species Sampled: blue crab **Field Crew Initials:** BLG, CAD, CCS, CCB

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
10-8-14		~~CRAB TRAP~~	1	147	180	m	Missing 1 Claw
↓		Gill	2	118	80	m	
		↓	3	120	100	m	Missing both claws
			4	135	110	m	Missing 1 claw
			5	130	90	m	Missing both claws
			6	135	110	m	Missing both claws
10-8-14			7	130	108	m	Missing both claws

NEWARK BAY PHASE III
Location: NB03CRB-HEP-C001
" -CAR-C001
" -MUS-C001
Central Bay

Specimen Tally Form

Project Name: NB03 **Project No.:**

Species Sampled: Blue Crabs **Field Crew Initials:** ICCM, MKM, JBS

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
10-15-14			1	138	120	M	missing 1 claw
			2	138	170	M	N/A
			3	150	186	M	
			4	137	126	M	
			5	118	88	ICCM ~~M~~ F	
			6	159	208	M	
			7	162	184	F	
			8	132	142	M	
			9	150	200	M	
			10	120	84	M	missing 1 claw
			11	130	91	M	missing 1 swimmer
			12	122	106	M	
			15	121	86	M	missing 2 legs
			14	170	266	M	N/A
			15	133	132	M	
			16	140	174	M	
			17	164	204	F	
			18	142	170	M	

Total wt (g)

MUS-~~MKM~~ ICCM-C001 = 282

HEP-C001 = 222

CAR-C001 = 214

NEWARK BAY PHASE III
Location:

Specimen Tally Form

Project Name: NB03 **Project No.:**

Species Sampled: Blue Crab **Field Crew Initials:** KCM, JBS, MKM

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
10-15-14			19	141	112	F	n/a
↓			20	120	100	M	1

NEWARK BAY PHASE III
Location:

NB03CRB-HEP-C00Z
" -CAR-C00Z
" -MUS-C00Z

Central Bay

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Specimen Tally Form

Specimen Tally Form

Project Name: NB03 **Project No.:**

Species Sampled: Blue Crab **Field Crew Initials:** KCM, JBS, MKM

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
10-15-14		N/A	1	120	84	F	missing 1 claw
10-15-14			2	121	94	F	N/A
10-16-14			3	130	142	M	missing 1 claw
			4	150	206	M	N/A
			5	147	154	M	missing 1 claw
			6	151	206	F	N/A
			7	158	244	M	
			8	126	112	M	missing 1 claw
			9	143	170	M	N/A
			10	152	169	F	
			11	153	204	M	
			12	146	206	M	
			13	140	133	F	
			14	146	174	M	
			15	128	152	M	
			16	140	158	M	missing 1 claw
			17	162	266	M	N/A
			18	150	246	M	

Total Wt (g)

HEP = 221 g
CAR = 220 g
MUS = 229 g

NEWARK BAY PHASE III
Location: NB03CRB-HEP-C003
" -MWS-C003
" -CAR-C003
Central Bay

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Specimen Tally Form

Specimen Tally Form

Project Name: NB03 **Project No.:**

Species Sampled: Blue Crab **Field Crew Initials:** KCM, MKM, JBS, SMS, CCB

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
10-16-14			1	157	192	M	N/A
			2	140	156	M	missing 1 claw
			3	133	160	M	N/A
			4	167	236	M	missing 1 claw
			5	128	132	M	N/A
			6	162	260	M	
			7	161	194	M	
			8	151	190	M	
			9	143	170	M	
			10	129	144	M	
			11	143	182	M	
			12	141	146	F	
			13	136	~~KCM~~ ±132	F	
			14	132	154	M	
			15	142	172	M	
			16	129	160	M	
			17	120	114	M	
			18	136	166	M	

Total Wt (g)

HEP: 231g
CAR: 213g
MWS: 282g

NEWARK BAY PHASE III
Location: NB03CRB-CAR-C004
HEP-C004
MUS-C004

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Specimen Tally Form

Specimen Tally Form

Project Name: NB03 **Project No.:** NA

Species Sampled: Blue Crab **Field Crew Initials:** JBS KCM MKM

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
10-16-14		N/A	1	133	149	M	N/A
			2	156	223	M	
			3	120	129	M	
			4	119	100	M	
			5	135	155	M	
			6	134	150	M	
			7	138	168	M	
			8	151	192	M	
			9	138	152	M	
			10	137	178	M	
			11	130	124	M	
			12	139	178	M	
			13	132	140	M	missing 1 claw
			14	157	234	M	missing 1 claw
			15	152	234	M	N/A
			16	135	163	M	
			17	132	124	M	
			18	150	140	F	

Total WT(g) HEP: 229g
CAR: 251g
MUS: 254g

NB03CRB-HEP-C005

NEWARK BAY PHASE III " CAR-C005

Location: " MUS-C005 Central Bay

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Specimen Tally Form

Specimen Tally Form

Project Name: NB03 **Project No.:**

Species Sampled: Blue Crab **Field Crew Initials:** KCM, MKM, JBS

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
10-16-14		N/A	1	122	100	M	missing 2 claws
			2	136	142	M	missing 1 claw
			3	164	268	M	N/A
			4	156	204	M	
			5	136	184	M	
			6	131	116	M	missing 1 claw
			7	158	196	F	N/A
			8	124	104	F	
			9	146	160	M	
			10	131	170	M	
			11	148	206	M	
			12	137	130	F	
			13	119	72	F	missing 1 claw
			14	131	121	M	
			15	142	232	M	N/A
			16	134	172	M	
			17	150	248	M	
			18	138	147	F	missing 1 claw

Total wt(g): HEP: 232g
CAR: 256g
MUS: 267g

NEWARK BAY PHASE III
Location: Central Zone

~~NB03CRB-C006~~ kcm

NB03CRB-HEP-C006
NB03CRB-CAR-C006
NB03CRB-MUS-C006

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Specimen Tally Form

Specimen Tally Form

Project Name: NB03 **Project No.:**

Species Sampled: Blue Crab **Field Crew Initials:** KCM, CJR, JBS, SMS

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
10-21-14			1	131	151	M	N/A
			2	165	277	M	
			3	164	230	M	
			4	146	182	M	
			5	132	179	M	
			6	121	120	M	
			7	138	116	F	
			8	126	105	F	
			9	140	162	M	
			10	155	170	F	
			11	151	140	F	
			12	129	144	M	
			13	139	162	M	
			14	148	178	M	
			15	118	96	M	
			16	122	78	M	
			17	124	130	M	
			18	130	121	M	

Total wt (g)
HEP = 210
CAR = 261
MUS = 241

NEWARK BAY PHASE III NBO3CRB-HEP-C006
Location: NBO3CRB-CAR-C006
Central NBO3CRB-MUS-C006
Zone

Specimen Tally Form

Project Name: NBO3 **Project No.:** N/A

Species Sampled: Blue Crab **Field Crew Initials:** KCM, CTR, JBS, SMS

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
10-21-14			19	142	168	M	N/A

NEWARK BAY PHASE III
Location: Central Zone

NB03CRB-HEP-C007
NB03CRB-CAR-C007
NB03CRB-MUS-C007

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Specimen Tally Form

Specimen Tally Form

Project Name: NB03 **Project No.:** N/A

Species Sampled: Blue Crab **Field Crew Initials:** KCM, CJR, SMS, JBS

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
10-21-14			1	153	198	M	N/A
↓			2	117	95	M	↓
			3	147	142	F	
			4	145	141	M	Missing one claw
			5	124	104	M	N/A
			6	130	112	M	Missing one claw
			7	117	110	M	N/A
			8	129	118	M	↓
			9	136	120	F	
			10	133	123	M	
			11	122	107	M	
			12	136	152	M	
			13	140	127	M	Missing one claw
			14	139	108	F	" " "
			15	139	155	M	N/A
10-22-14			16	142	132	F	↓
↓			17	130	143	M	
			18	134	188	M	

Total Wt (g) HEP = ~~211~~ KCM 201
CAR = 208
MUS = 210

NEWARK BAY PHASE III
Location: Central Zone

NB03CRB-HEP-C007
NB03CRB-CAR-C007
NB03CRB-MUS-C007

Specimen Tally Form

Project Name: NB03 **Project No.:** N/A

Species Sampled: Blue Crab **Field Crew Initials:** KCM, CJR, JBS

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
10-22-14			19	130	132	M	N/A
"			20	133	120	F	↓

~~NB03CRB-C008~~ KCM

NEWARK BAY PHASE III
Location: Central Zone

NB03CRB-HEP-C008
NB03CRB-CAR-C008
NB03CRB-MUS-C008

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Specimen Tally Form

Specimen Tally Form

Project Name: NB03 **Project No.:** N/A

Species Sampled: Blue Crabs **Field Crew Initials:** KCM, JBS, CJR

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
10-22-14			1	145	158	M	N/A
			2	142	126	F	N/A
			3	126	120	M	missing 1 claw
			4	127	146	M	N/A
			5	127	136	M	
			6	136	160	M	
			7	148	210	M	
			8	164	201	F	
			9	123	104	F	
			10	133	184	M	
			11	146	155	F	
			12	138	198	M	
			13	125	130	M	
			14	127	130	M	
			15	156	260	M	
			16	143	146	F	
			17	123	136	M	
			18	130	139	M	

Total Wt (g) HEP = 226
CAR = 219
MUS = 267

NEWARK BAY PHASE III
Location: South Zone

NB03CRB-HEP-S001
NB03CRB-CAR-S001
NB03CRB-MUS-S001

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Specimen Tally Form

Specimen Tally Form

Project Name: NB03 **Project No.:**

Species Sampled: Blue Crab **Field Crew Initials:** KCM, CJR, JBS

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
10-21-14			1	156	231	male	N/A
			2	124	82	female	N/A
			3	146	117	female	Missing one claw
			4	131	98	female	N/A
			5	151	164	male	
			6	152	230	male	
			7	143	146	male	
			8	149	220	male	
10-22-14			9	121	86	F	missing 1 claw
			10	133	150	M	N/A
			11	131	174	M	
			12	137	153	M	
			13	144	124	F	missing 1 claw
			14	137	182	M	N/A

Note: Partial sample of NB03CRB- - S001 was sent to lab on 10/10/14.

Total Wt (g):
HEP = 167 + 52 from 10/10/14 sample = 219g
CAR = 176 + 60 from 10/10/14 sample = 236g
MUS = 147 + 65 from 10/10/14 sample = 212g

NEWARK BAY PHASE III
Location: South Zone

NB03CRB-HEP-S002
NB03CRB-CAR-S002
NB03CRB-MUS-S002

Title: Crab and Clam Sampling and Analysis Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Specimen Tally Form

Specimen Tally Form

Project Name: NB03 **Project No.:**

Species Sampled: Blue Crab **Field Crew Initials:** KCM, JBS, CJR

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
10-22-14			1	142	182	M	
			2	137	184	M	
			3	127	134	M	
			4	120	143	M	
			5	122	134	M	
			6	148	187	M	
			7	138	169	M	
			8	122	172	M	
			9	139	154	M	
			10	147	257	M	
			11	141	142	M	
			12	133	138	M	
			13	132	138	M	
			14	139	152	M	missing 1 claw
			15	119	126	M	
			16	151	144	F	
			17	133	154	M	
			18	120	114	M	

Total Wt (g) HEP: 212
CAR: 205
MUS: 242

NEWARK BAY PHASE III
Location: South Zone

NB03CRB-HEP-5003
NB03CRB-MUS-5003
NB03CRB-CAR-5003

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Specimen Tally Form

Specimen Tally Form

Project Name: NB03 **Project No.:** N/A

Species Sampled: Blue Crab **Field Crew Initials:** KCM, JBS, CTR

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
10-22-14			1	130	142	M	N/A
			2	151	233	M	
			3	144	189	M	
			4	126	127	M	
			5	123	131	M	
			6	170	285	M	missing 1 claw
			7	174	310	M	N/A
			8	159	188	M	missing 1 claw
			9	139	142	M	missing 1 claw
10-23-14			10	121	96	M	N/A
			11	136	162	M	N/A
			12	130	152	M	
			13	119	102	M	
			14	147	165	M	missing 1 claw
			15	139	122	M	missing 1 claw
			16	143	130	F	N/A
			17	134	113	F	N/A
			~~JB~~ KCM				

Total wt (g): HEP = 215
CAR = 217
MUS = 241

NEWARK BAY PHASE III
Location: South Zone

NB03CRB-HEP-S004
NB03CRB-CAR-S004
NB03CRB-MUS S004

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Specimen Tally Form

Specimen Tally Form

Project Name: NB03 **Project No.:** N/A

Species Sampled: Blue Crab **Field Crew Initials:** ICM, JBS, CTR, SMS

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
10-23-14			1	164	172	M	N/A
			2	159	241	M	↓
			3	140	140	M	missing 1 claw
			4	121	133	M	N/A
			5	119	100	M	missing 1 claw
			6	138	157	M	N/A
			7	125	107	M	missing 1 claw
			8	124	138	M	N/A
			9	131	142	M	↓
			10	151	203	M	
			11	123	120	M	
			12	163	254	M	↓
			13	143	110	F	missing 1 claw
			14	130	142	M	N/A
			15	131	112	M	missing 1 claw
			16	138	172	M	N/A
			17	130	100	F	missing 2 claws

Total Wt: HEP: 222
CAR: 204
MUS: 244

NEWARK BAY PHASE III
Location: South Zone

NB03CRB-HEP-S005
NB03CRB-CAR-S005
NB03CRB-MUS-S005

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Specimen Tally Form

Specimen Tally Form

Project Name: NB03 **Project No.:** N/A

Species Sampled: Blue Crab **Field Crew Initials:** KCM, JBS, SMS, CTR

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
10-23-14			1	118	100	M	N/A
			2	167	214	M	
			3	149	182	M	
			4	142	124	M	
			5	133	142	M	
			6	141	150	M	
			7	136	156	M	
			8	120	106	M	missing 1 claw
			9	121	91	F	
			10	140	138	F	N/A
			11	127	126	M	
			12	159	238	M	
			13	134	152	M	
			14	125	110	M	
			15	144	154	F	
			16	129	128	M	
			17	119	120	M	
			18	133	154	M	

Total Wt (g) HEP 212
CAR 201
MUS 237

NEWARK BAY PHASE III
Location: South Zone

NB03CRB-HEP-S006
NB03CRB-CAR-S006
NB03CRB-MUS-S006

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Specimen Tally Form

Specimen Tally Form

Project Name: NB03 **Project No.:** N/A

Species Sampled: Blue Crab **Field Crew Initials:** KCM, JBS, CJR, SMS

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
10-23-14			1	124	130	M	N/A
			2	121	104	M	
			3	127	108	F	
			4	124	123	M	
			5	119	112	M	
			6	136	165	M	
			7	120	108	M	
			8	145	220	M	
			9	134	140	M	missing 1 claw
			10	123	121	M	N/A
			11	123	135	M	
			12	122	102	M	
			13	120	100	M	missing 1 claw
			14	134	130	M	
			15	145	128	F	N/A
			16	119	108	M	
			17	120	106	M	
			18	136	165	M	

Total Wt (g): HEP 216
CAR 218
MUS 239

NEWARK BAY PHASE III
Location: South Zone

NB03CRB-HEP-S006
NB03CRB-CAR-S006
NB03CRB-MUS-S006

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Specimen Tally Form

Specimen Tally Form

Project Name: NB03 **Project No.:** N/A

Species Sampled: Blue Crab **Field Crew Initials:** KCM, JBS, CJR, SMS

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
10-23-14			19	118	102	M	
↓			20	136	137	M	

NB03CRB-HEP-S007
NB03CRB-CAR-S007
NB03CRB-MUS-S007

NEWARK BAY PHASE III
Location: South zone

Specimen Tally Form

Project Name: NB03 **Project No.:** N/A

Species Sampled: Blue Crab **Field Crew Initials:** KLM, JBS, CJR, SMS

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
10-23-14			1	136	178	M	N/A
			2	120	104	M	missing 1 claw
			3	132	158	M	N/A
			4	129	158	M	
			5	154	220	M	
			6	139	136	M	
			7	141	138	F	
			8	121	110	M	missing 1 claw
			9	132	192	M	N/A
			10	135	100	M	missing 1 claw
			11	133	118	F	N/A
			12	129	128	M	
			13	152	168	F	
			14	130	122	M	
			15	149	220	M	
			16	126	140	M	
			17	128	130	M	missing 1 claw
			18	140	174	M	N/A

Total Wt (g): HEP: 222
CAR: 212
MUS: 267

NBO3CRB-HEP-S008
NBO3CRB-CAR-S008
NBO3CRB-MUS-S008

NEWARK BAY PHASE III
Location: South Zone

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Specimen Tally Form

Specimen Tally Form

Project Name: NBO3 **Project No.:** N/A

Species Sampled: Blue Crab **Field Crew Initials:** KCM, JBS, CJR, SMS

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
10-23-14			1	134	104	F	N/A
			2	136	152	M	
			3	122	104	F	
			4	123	138	M	
			5	120	125	M	
			6	119	108	M	
			7	148	171	M	missing 1 claw
			8	132	146	M	N/A
			9	150	217	M	missing 1 claw
10-24-14			10	136	154	F	N/A
			11	137	174	M	
			12	122	114	M	
			13	145	154	M	missing 1 claw
			14	136	110	F	
			15	147	142	M	
			16	118	100	M	
			17	132	125	M	missing 1 claw
			18	140	192	M	

Total Wt (g):
HEP: 219
CAR: 210
MUS: 277

NEWARK BAY PHASE III
Location: South Zone

NB03CRB-HEP-S009
NB03CRB-CAR-S009
NB03CRB-MUS-S009

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Specimen Tally Form

Specimen Tally Form

Project Name: NB03 **Project No.:** N/A

Species Sampled: Blue Crab **Field Crew Initials:** KCM, CJR, JBS

Collection Date	Collection Time	Trap ID	Specimen ID No.	Length (mm)	Weight (g)	Gender	Comments
10-24-14			1	156	278	M	N/A
			2	125	124	M	
			3	123	124	M	
			4	159	192	M	missing 1 claw
			5	132	142	M	N/A
			6	140	188	M	
			7	155	202	M	
			8	124	124	M	
			9	130	147	M	
			10	127	100	F	
			11	132	121	F	
			12	150	148	F	
			13	123	135	M	
			14	152	247	M	
			15	140	148	M	
			16	135	202	M	
			17	133	142	M	
			18	144	132	M	missing 1 claw

Total Wt (g)

HEP	257
CAR	221
MUS	224

NEWARK BAY PHASE III
INTERTIDAL LOCATION: North Zone Eel Pots - Station 3

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Location Data Form

Location Data Form

Project Name: NEWARK BAY PHASE III **Project No.:**

Field Crew Initials: SMS, CCB, JBS

Deployment Date & Time	Retrieval Date & Time	Location ID	Trap ID	Collection Method	Coordinates[a]		Depth (ft)
					Easting (X)[b]	Northing (Y)[b]	
10-15-14/1020	10-16-14 0915	North Zone - 3	1	Eel Pot	598036.18	676547.85	10.5
"	"	"	2	"	598044.38	676623.37	10.5

[a] Field-observed coordinates.

[b] NAD83 New Jersey State Plane (ft).

10-15-14 Station 3 ~~1024~~

Subsurface p-chem @ 1024
temperature (C) 17.97
conductivity (uS/cm) 27940
dissolved oxygen (mg/L) 7.87
pH 7.63

Subsurface p-chem @
temperature (C)
conductivity (uS/cm)
dissolved oxygen (mg/L)
pH

NEWARK BAY PHASE III
INTERTIDAL LOCATION: South Zone Eel Pots

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Location Data Form

Location Data Form

Project Name: NEWARK BAY PHASE III **Project No.:**

Field Crew Initials: SMS, CCB

	Deployment Date & Time	Retrieval Date & Time	Location ID	Trap ID	Collection Method	Coordinates[a] Easting (X)[b]	Coordinates[a] Northing (Y)[b]	Depth (ft)
0	10/15/14 @ 1115	10/16/14 @ 0855	South Zone	5	Eel Pot	581969.34	660142.28	7.5
1	↓	↓	↓	3	↓	581985.51	660136.60	7.9
0	↓	↓	↓	6	↓	582027.24	660141.14	7.7
	RECHECKED & RESET 10/17/14							
	10/16/14 0900	10/17/14 @ 1015	South Zone	5	Eel Pots	→	→	↓
	↓	↓	↓	3	↓	↓	↓	↓
				6				
	~~These~~ pots were left overnight set 10/17 @ 1020 hrs and retrieved 10/20 @ 1055 hrs							

[a] Field-observed coordinates.

[b] NAD83 New Jersey State Plane (ft).

Reset on 10/16/14 @ 0900

10-15-14
Subsurface p-chem @ 1119
temperature (C) 18.08
conductivity (uS/cm) 30270
dissolved oxygen (mg/L) 8.44
pH 7.63

10-16-14
Subsurface p-chem @ 0845
temperature (C) 18.62
conductivity (uS/cm) 28980
dissolved oxygen (mg/L) 8.65
pH 7.23

NEWARK BAY PHASE III
INTERTIDAL LOCATION: South Zone Eel Pots

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Location Data Form

Location Data Form

Project Name: NEWARK BAY PHASE III **Project No.:** NA

Field Crew Initials: CCB, SMS

Deployment Date & Time	Retrieval Date & Time	Location ID	Trap ID	Collection Method	Coordinates[a]		Depth (ft)	Total # Blue Crab >4.5"
					Easting (X)[b]	Northing (Y)[b]		
10/16/14 @ 1100	10/17/14 @ 0845	South Zone	1	Eel Pot	581056.26	660133.93	-	
"		"	2	"	581019.85	660115.39		

[a] Field-observed coordinates.

[b] NAD83 New Jersey State Plane (ft).

10-16-14
Subsurface p-chem @ 0845
temperature (C) 18.62
conductivity (uS/cm) 28980
dissolved oxygen (mg/L) 8.65
pH 7.23

10/17/14
Subsurface p-chem @ 1009
temperature (C) 19.4
conductivity (uS/cm) 17000
dissolved oxygen (mg/L) 4.0
pH 5.7

NEWARK BAY PHASE III
INTERTIDAL LOCATION: South Zone Eel Pots

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Location Data Form

Location Data Form

Project Name: NEWARK BAY PHASE III **Project No.:** NA

Field Crew Initials: SMS, ICCM, JBS

Deployment Date & Time	Retrieval Date & Time	Location ID	Trap ID	Collection Method	Coordinates[a] Easting (X)[b]	Coordinates[a] Northing (Y)[b]	Depth (ft)	Total # Blue Crab >4.5"
10/20/14 @ 1120	10/21/14 @ 1115	South Zone	6	Eel Pots	585086.18	660136.99	10.5	
			5		585102.86	660128.12	9.7	
			3		585119.23	660117.77	9.6	
			1		585138.24	660107.82	6.0	
			2		585162.19	660098.20	7.6	
			9		585202.55	660078.77	8.0	
			10		585213.48	660051.63	6.4	

[a] Field-observed coordinates.

[b] NAD83 New Jersey State Plane (ft).

Subsurface p-chem @
temperature (C)
conductivity (uS/cm)
dissolved oxygen (mg/L)
pH

Subsurface p-chem @
temperature (C)
conductivity (uS/cm)
dissolved oxygen (mg/L)
pH

NEWARK BAY PHASE III
INTERTIDAL LOCATION:

South Zone
Eel Pots

Location Data Form

Project Name: NEWARK BAY PHASE III **Project No.:** NA

Field Crew Initials: KCM, JBS, SMS

Deployment Date & Time	Retrieval Date & Time	Location ID	Trap ID	Collection Method	Coordinates[a] Easting (X)[b]	Coordinates[a] Northing (Y)[b]	Depth (ft)	Total # Blue Crab >4.5"
10/21/14 @ 1143	10/22/14 @ 1020	South Zone	9	Eel Pots	581677.84	661250.92	4.9	
↓	↓	↓	2	↓	581778.57	661353.51	4.9	
↓	↓	↓	10	↓	581876.39	661438.07	4.7	
			3		581995.81	661494.22	5.6	
					582089.37 (recorded)			
10/21/14 @ 1143	↓	South Zone	1	Eel Pots	~~582025.2~~	660127.06	4.4	
↓	↓	↓	5	↓	582071.31	660124.10	4.5	
↓	↓	↓	6	↓	582025.23	660130.13	5.4	

[a] Field-observed coordinates.

[b] NAD83 New Jersey State Plane (ft).

10/21/14
Subsurface p-chem @ 1150
temperature (C) 16.77
conductivity (uS/cm) 32100
dissolved oxygen (mg/L) 6.4
pH 7.70

10/22/14
Subsurface p-chem @ 0925
temperature (C) 16.64
conductivity (uS/cm) 32100
dissolved oxygen (mg/L) 6.14
pH 7.78

NEWARK BAY PHASE III
INTERTIDAL LOCATION: South Zone Eel Pots

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Location Data Form

Location Data Form

Project Name: NEWARK BAY PHASE III **Project No.:** NA

Field Crew Initials:

Total # Blue Crab >4.5"	Deployment Date & Time	Retrieval Date & Time	Location ID	Trap ID	Collection Method	Coordinates[a] Easting (X)[b]	Coordinates[a] Northing (Y)[b]	Depth (ft)
0	10/22/14@1020	10/23/14@1120	South Zone	9	Eel Pots	581677.840	661d5092	4.9
0				2		581778.57	661383.51	4.9
0				10		581876.39	661~~38.07~~	4.7
0				3		581975.81	661494.23	~~5~~ 5.6
0				1		582089.37	660127.06	4.4
0				5		582071.3	660124.10	4.5
				6		582025.23	660130.13	5.4

[a] Field-observed coordinates.

[b] NAD83 New Jersey State Plane (ft).

Subsurface p-chem @
temperature (C)
conductivity (uS/cm)
dissolved oxygen (mg/L)
pH

Subsurface p-chem @
temperature (C)
conductivity (uS/cm)
dissolved oxygen (mg/L)
pH

NEWARK BAY PHASE III
INTERTIDAL LOCATION: South Zone Eel pots

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Location Data Form

Location Data Form

Project Name: NEWARK BAY PHASE III **Project No.:** NA

Field Crew Initials: SMS, KCM, CJR, JBS

Deployment Date & Time	Retrieval Date & Time	Location ID	Trap ID	Collection Method	Coordinates[a] Easting (X)[b]	Coordinates[a] Northing (Y)[b]	Depth (ft)	Total # Blue Crab >4.5"
10/23/14@1120	10/24/14@0955	South Zone	9	Eel Pots	581677.84	661250.92	4.9	
			2		581778.57	661353.51	4.9	
			10		581876.37	661438.07	4.7	
			3		581995.81	661494.22	5.6	
			1		582082.37	660127.06	4.4	
			5		582071.31	660124.10	4.5	
			6		582025.23	660130.13	5.4	

[a] Field-observed coordinates.

[b] NAD83 New Jersey State Plane (ft).

10/23/14
Subsurface p-chem @ 1010
temperature (C) 15.65
conductivity (uS/cm) 31100
dissolved oxygen (mg/L) 7.06
pH 7.80

10/24/14
Subsurface p-chem @ 0955
temperature (C) 16.26
conductivity (uS/cm) 31200
dissolved oxygen (mg/L) 6.87
pH 7.69

NEWARK BAY PHASE III
INTERTIDAL LOCATION: 122 (North Zone)

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Location Data Form

Location Data Form

Project Name: NEWARK BAY PHASE III **Project No.:** 23489.001

Field Crew Initials: BWG, CAB, JDS, CCB, CCS

Deployment Date & Time	Retrieval Date & Time	Location ID	Trap ID	Collection Method	Coordinates[a] Easting (X)[b]	Coordinates[a] Northing (Y)[b]	Depth (ft)
10/9/14 1156	10/8/14 1015	122 North	eel pot 1	eel pot	600016.71	686193.14	5.8
10/9/14 1030			2		~~599795.19~~	~~686617.58~~	17.0
			3		~~601213.13~~	~~687061.51~~	20
	LOST		~~4 Bird~~		—	—	—
			5		~~600494.58~~	~~685975.74~~	11
1038	10/8/14	North	6		~~600448.48~~	~~686118.18~~	12
10/8/14 1020	10/9/14 1130	122eel/1-3	1	eel pot	597120.56	680236.83	12
		122eel/2-2	2		601184.83	687074.64	15
		122eel/3-2	3		601251.10	687088.03	10
		~~122eel Bird~~	~~5 Bird~~				
10/8/14		122eel/6-3	6		597189.36	680163.95	11

* Eel pot 5 recovered on 10/9/14 @ 11:30hrs

[a] Field-observed coordinates.
[b] NAD83 New Jersey State Plane (ft).

bait = Atlantic menhaden (bunker)

Subsurface p-chem @
temperature (C)
conductivity (uS/cm)
dissolved oxygen (mg/L)
pH

NA

Subsurface p-chem @
temperature (C)
conductivity (uS/cm)
dissolved oxygen (mg/L)
pH

NA

Location Data Form

Project Name: NEWARK BAY PHASE III **Project No.:**

Field Crew Initials: KCM, CJR, CCB, SMS

Deployment Date & Time	Retrieval Date & Time	Location ID	Trap ID	Collection Method	Coordinates[a] Easting (X)[b]	Coordinates[a] Northing (Y)[b]	Depth (ft)
10-13-14/1045	10-14-14/1000	North Zone	2	Eel Pot	597114.28	680339.19	7.5
↓	↓	↓	6	↓	597041.44	680315.28	6.6
			6		597151.77	680238.61	9.9
			3		597199.03	680253.89	10.8
			5		597252.73	680167.42	15.3

[a] Field-observed coordinates.

[b] NAD83 New Jersey State Plane (ft).

10-15-14 @ 1001
Subsurface p-chem @
temperature (C) 18.03
conductivity (uS/cm) 29030
dissolved oxygen (mg/L) 7.73
pH 7.63

10-14-14 @ Station 3 1007
Subsurface p-chem @
temperature (C) 17.2
conductivity (uS/cm) 21060
dissolved oxygen (mg/L) 7.0
pH 7.47

NEWARK BAY PHASE III
INTERTIDAL LOCATION: North Bay

Location Data Form

Project Name: NEWARK BAY PHASE III **Project No.:**

Field Crew Initials: CCB, SMS, CJR, KCM

Deployment Date & Time	Retrieval Date & Time	Location ID	Trap ID	Collection Method	Coordinates[a] Easting (X)[b]	Coordinates[a] Northing (Y)[b]	Depth (ft)
10-14-14/1018	10-15-14/0942	North Zone	3	Eel Pot	596994.36	677756.13	9.9
			5		596954.13	677740.01	11.9
			6		596962.04	677750.62	9.3
			2		596958.27	677745.63	10.1
			1		597003.56	677712.09	14.8

[a] Field-observed coordinates.

[b] NAD83 New Jersey State Plane (ft).

10-14-14 Station = 2
Subsurface p-chem @ 1020
temperature (C) 17.3
conductivity (uS/cm) 22060
dissolved oxygen (mg/L) 5.8
pH 7.49

10-15-14 Station = 2
Subsurface p-chem @ 1001
temperature (C) 18.03
conductivity (uS/cm) 29030
dissolved oxygen (mg/L) 7.73
pH 7.63

NEWARK BAY PHASE III
INTERTIDAL LOCATION: SOUTH BAY / CENTRAL BAY

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Location Data Form

Location Data Form

Project Name: NEWARK BAY PHASE III **Project No.:**

Field Crew Initials: BWJ, CDD, CCB, CCS

Deployment Date & Time	Retrieval Date & Time	Location ID	Trap ID	Collection Method	Coordinates[a] Easting (X)[b]	Coordinates[a] Northing (Y)[b]	Depth (ft)	
10/8/14 915	10/8/14 1350	South Bay	NA	Gillnet 1	587941.78	664654.40	10-20	GPS location of net
10/8/14 915	10/8/14 1350	South Bay	NA	Gillnet 2	588268.79	664591.37	10-20	GPS pt
10/9/14 900	10/9/14 1500	South Bay	Glnt South 3	Gillnet 3	581430.50	660944.21	15-23	center pt
10/9/14 910	10/9/14 1436	Central Bay	Glnt ~~South~~ Central 4	" 4	591587.78	6645580.07	17	center pt

[a] Field-observed coordinates.

[b] NAD83 New Jersey State Plane (ft).

Subsurface p-chem @ NA
temperature (C)
conductivity (uS/cm)
dissolved oxygen (mg/L)
pH

Subsurface p-chem @ NA
temperature (C)
conductivity (uS/cm)
dissolved oxygen (mg/L)
pH

NEWARK BAY PHASE III
INTERTIDAL LOCATION: South Zone Experimental Net

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Location Data Form

Location Data Form

Project Name: NEWARK BAY PHASE III **Project No.:** NA

Field Crew Initials: SMS, CCB

Deployment Date & Time	Retrieval Date & Time	Location ID	Trap ID	Collection Method	Coordinates[a] Easting (X)[b]	Coordinates[a] Northing (Y)[b]	Depth (ft)	Total # Blue Crab >4.5"
10/15/14 1515	10/16/14 0840	South Zone	SGN1	Gill Net	~~600149.20~~ 582786.95	~~685022.00~~ 660990.45	28	

[a] Field-observed coordinates.

[b] NAD83 New Jersey State Plane (ft).

10-15-14
Subsurface p-chem @ 1520
temperature (C) 18.5
conductivity (uS/cm) 30680
dissolved oxygen (mg/L) 9.94
pH 7.56

10-16-14
Subsurface p-chem @ 0845
temperature (C) 18.62
conductivity (uS/cm) 28980
dissolved oxygen (mg/L) 8.65
pH 7.23

Location Data Form TRAWLS - NORTH BAY

Project Name: NBO3 Fish Study **Project No.:** 23489.001

Field Crew Initials: BWL, CDD, CCB

	Deployment Date & Time	Retrieval Date & Time	Sampling Zone & Location	Sampling Method	Water Depth (feet)	GPS Coordinates EASTING (X)	GPS Coordinates NORTHING (Y)	Notes
start	10/6/14 1348	—	North	Trawl 1	20-30	598311.66	683537.07	
end	—	10/6/14 1359	North	Trawl	—	600722.83	685566.28	
start	10/6/14 1438	—	North	Trawl 2	7-10	597159.22	677951.51	
end	—	10/6/14 1441	North	Trawl	—	Trawl lost due to hang down		
start	10/7/14 1318	—	North	Trawl 3	4-10	598274.77	682595.91	
end	—	10/7/14 1329	North	Trawl	—	598849.48	684028.17	
start	10/7/14 1342	—	↓	4	4-10	598618.73	682157.80	
end	—	10/7/14 1353			—	598628.68	682220.98	
start	10/7/14 1409	—		5	4-10	598130.34	682335.21	
end	—	10/7/14 1419	↓	↓	—	599005.93	684222.05	
start	10/8/14 1225	—	North	Trawl 6	28-34	~~599272.78~~	~~684641.28~~	none recorded
end	~~10/8/~~	10/8/14 1241	North	6	—	599272.78	684641.28	
start	10/8/14 1257	—	North	Trawl 7	24-30	598130.06	682285.38	
end	—	10/6/14 1307	North	7	—	598708.87	683816.14	
~~start~~	~~10/9/14~~							
~~end~~								

Notes:

Location Data Form TRAWLS – CENTRAL BAY

Project Name: NBO3 Fish Study **Project No.:** 23489.001

Field Crew Initials: BW, CCS, CCB

	Deployment Date & Time	Retrieval Date & Time	Sampling Zone & Location	Sampling Method	Water Depth (feet)	GPS Coordinates EASTING (X)	GPS Coordinates NORTHING (Y)	Notes
start	10/9/14 926	—	Central	Trawl 1	20	592034.52	665499.15	
end	—	10/9/14 933	"	"	"	591599.50	664778.65	
start	10/9/14 949	—	Central	Trawl 2	20	592289.68	665848.52	
end	—	10/9/14 1000	"	"	—	591298.33	664336.96	
start	10/9/14 1009	—	Central	Trawl 3	20	592223.58	665740.46	
end	—	10/9/14 1012	"	"	—	No end pt, hang down, early retrieval		
start	10/9/14 1022	—	Central	Trawl 4	18	592174.78	665544.82	
end	—	10/9/14 1026	"	"	—	591116.45	664193.70	
start	10/9/14 1044	—	Central	Trawl 5	10-20	594199.08	669754.91	
end	—	10/9/14 1055	"	"	—	593121.22	667920.34	
st	10/9/14 1111	—	Central	Trawl 6	10	594834.12	671201.28	
end	~~10/9/14~~	10/9/14 1121	"	"		596143.22	673864.54	
st	10/9/14 1135	—	Central	Trawl 7	30	594377.87	672113.62	
end	—	10/9/14 1145	"	"	—	595013.49	674000.93	
st	10/9/14 1208	—	Central	Trawl 8	30	594323.94	674080.43 ↖	
end	—	10/9/14 1218	"	"	—	594346.12	672147.76 ↙	

Notes:

NEWARK BAY PHASE III
INTERTIDAL LOCATION: North Zone Otter Trawls

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
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Location Data Form

Project Name: NEWARK BAY PHASE III **Project No.:**

Field Crew Initials: SMS, CCB

Deployment Date & Time	Retrieval Date & Time	Location ID	Trap ID	Collection Method	Coordinates[a]		Depth (ft)
					Easting (X)[b]	Northing (Y)[b]	
10-15-14 1214	1224	North Zone	NT1S	Trawls	600045.19	684997.61	34
"	"	"	NT1E	"	598499.41	683272.31	"

[a] Field-observed coordinates.
[b] NAD83 New Jersey State Plane (ft).

*Note: "S" in trap ID represents start of trawl and "E" represents the endpoint of trawl

Subsurface p-chem @ 10-15-14 1210
temperature (C) 18.1
conductivity (uS/cm) 28070
dissolved oxygen (mg/L) 7.91
pH 7.60

Subsurface p-chem @
temperature (C)
conductivity (uS/cm)
dissolved oxygen (mg/L)
pH

NEWARK BAY PHASE III
INTERTIDAL LOCATION: Central Zone, Otter Trawls

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Location Data Form

Location Data Form

Project Name: NEWARK BAY PHASE III **Project No.:**

Field Crew Initials: SMS, CCB

Deployment Date & Time	Retrieval Date & Time	Location ID	Trap ID	Collection Method	Coordinates[a] Easting (X)[b]	Coordinates[a] Northing (Y)[b]	Depth (ft)
10.15.14 ↓							
1249	1259	Central Zone	CT1S	Trawl	593828.79	668673.41	10.5
1314	1324	"	CT2S	"	595655.14	672306.62	10.6
1337	1347	"	CT3S	"	595619.36	670726.94	9.5
1249	1259	"	CT1E	"	593179.13	666488.56	10.5
1314	1324	"	CT2E	"	594261.79	669504.70	10.6
1337	1347	"	CT3E	"	594284.90	668259.55	9.5

[a] Field-observed coordinates.

[b] NAD83 New Jersey State Plane (ft).

10-15-14
Subsurface p-chem @ 1243
temperature (C) 17.8
conductivity (uS/cm) 30450
dissolved oxygen (mg/L) 7.23
pH 7.65

Subsurface p-chem @
temperature (C)
conductivity (uS/cm)
dissolved oxygen (mg/L)
pH

*Note: Letter "S" in trap ID signifies starting point of trawl and "E" represents the endpoint of the trawl.

NEWARK BAY PHASE III
INTERTIDAL LOCATION: 122

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Location Data Form

Location Data Form

Project Name: NEWARK BAY PHASE III **Project No.:** 23489.001

Field Crew Initials: BWL, KCM, CCB

Deployment Date & Time	Retrieval Date & Time	Location ID	Trap ID	Collection Method	Coordinates[a] Easting (X)[b]	Coordinates[a] Northing (Y)[b]	Depth (ft)
10/6/14 1210	10/7/14 ~~1155~~	122	eel pot 1	eel pot	601468.93	686956.09	22.0
	1020		2	"	601372.19	687030.13	17
	1025		3		601213.13	687061.51	20
	LOST		4		600687.76	686100.10	12
	1006		5		600494.58	685975.74	11
1228	1010		6	eel pot	600448.48	686118.18	12
10/6/14 1240	10/7/14 9:12	122	Gillnet 2.5", 5" panel	(100ft length each)	600149.28	685822.88	5-10
10/6/14 1252	10/7/14 9:40	vicinity 122	Gillnet 2.5", 5" panel	(100ft length each)	600777.80	684920.31	8-11
10/7/14 1125	10/8/14 ~~1125~~	122minn1	1	minnow trap	599795.19	686617.58	2.8
	~~1127~~	122minn2	2	minnow trap	599828.40	686686.35	3
	1130	122minn3	3		599937.45	686728.11	2.6
	~~1142~~	122minn4	4		600145.12	686755.04	2.8
		122minn5	5		600168.32	686652.94	3.0
		122minn6	6		600236.28	686659.68	3.3
		122minn7	7		600389.41	686760.65	2.9
		122minn8	8		600383.11	686708.01	2.8
1152	~~1152~~	122minn9	9		600438.05	686728.07	3.0

[a] Field-observed coordinates.
[b] NAD83 New Jersey State Plane (ft).

*GPS for gillnet is the outside panel edge toward channel

gillnet 2 Subsurface p-chem @ 1303
temperature (C) 18.3
conductivity (uS/cm) 37,000
dissolved oxygen (mg/L) 11.7
pH 7.4

gillnet 2 Subsurface p-chem @ 955
temperature (C) 18.4
conductivity (uS/cm) 22,550
dissolved oxygen (mg/L) 9.0
pH 7.5

Location Data Form

Project Name: NEWARK BAY PHASE III **Project No.:** 23489.001

Field Crew Initials: BWL, CCS, CCB

Minnow Traps

Deployment Date & Time	Retrieval Date & Time	Location ID	Trap ID	Collection Method	Coordinates[a] Easting (X)[b]	Coordinates[a] Northing (Y)[b]	Depth (ft)
10/8/14 1010	10/9/14 1305	122	1	Minnow trap	none recorded see field book (Safety)		1
			2				2
			3				2
			4				1
			5				1
			6				2
			7				1.5
			8				2.5
			9				2.2

[a] Field-observed coordinates.

[b] NAD83 New Jersey State Plane (ft).

Subsurface p-chem @ NA
temperature (C)
conductivity (uS/cm)
dissolved oxygen (mg/L)
pH

Subsurface p-chem @ NA
temperature (C)
conductivity (uS/cm)
dissolved oxygen (mg/L)
pH

BWL

NEWARK BAY PHASE III
INTERTIDAL LOCATION: Side 129 Minnow Traps

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Location Data Form

Location Data Form

Project Name: NEWARK BAY PHASE III **Project No.:** NA

Field Crew Initials: SMS, CCB

Deployment Date & Time	Retrieval Date & Time	Location ID	Trap ID	Collection Method	Coordinates[a] Easting (X)[b]	Coordinates[a] Northing (Y)[b]	Depth (ft)	Total # Blue Crab >4.5"
10/16/14@1323	10/17/14@0845	Side 129	8	Minnow Trap	581819.40	659437.48		
			3		581824.83	659377.90		
			5		581831.50	659349.60		
			9		581769.70	659298.40		
			4		581759.14	659311.39		
			6		581823.37	659405.80		

[a] Field-observed coordinates.

[b] NAD83 New Jersey State Plane (ft).

10-17-14
Subsurface p-chem @ 0838
temperature (C) 17.6
conductivity (uS/cm) 29300
dissolved oxygen (mg/L) 5.7
pH 4.5 → Questionable reading

Subsurface p-chem @
temperature (C)
conductivity (uS/cm)
dissolved oxygen (mg/L)
pH

NEWARK BAY PHASE III
INTERTIDAL LOCATION: Site 135 Minnow Traps

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Location Data Form

Location Data Form

Project Name: NEWARK BAY PHASE III **Project No.:** NA

Field Crew Initials: SMS, CCB

Deployment Date & Time	Retrieval Date & Time	Location ID	Trap ID	Collection Method	Coordinates[a] Easting (X)[b]	Coordinates[a] Northing (Y)[b]	Depth (ft)	Total # Blue Crab >4.5"
10/16/14 @1342	10/17/14 @ 0915	Site 135	10	Minnow Trap	581475.05	661692.77		
"	"	"	7	"	581511.08	661687.98		
"	"	"	1	"	581555.44	661658.95		

[a] Field-observed coordinates.

[b] NAD83 New Jersey State Plane (ft).

10/17/14
Subsurface p-chem @ 0920
temperature (C) 18.1°
conductivity (uS/cm) 18400
dissolved oxygen (mg/L) 5.0
Questionable reading → pH 5.3

Subsurface p-chem @
temperature (C)
conductivity (uS/cm)
dissolved oxygen (mg/L)
pH

NEWARK BAY PHASE III
INTERTIDAL LOCATION: SITE 133 Minnow Traps

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Location Data Form

0

Location Data Form

Project Name: NEWARK BAY PHASE III **Project No.:** NA

Field Crew Initials: SMS, KCM, JBS

Deployment Date & Time	Retrieval Date & Time	Location ID	Trap ID	Collection Method	Coordinates[a] Easting (X)[b]	Coordinates[a] Northing (Y)[b]	Depth (ft)	Total # Blue Crab >4.5"
10/20/14@1145 (19)	10/21/14@1025	Site 133	7	Minnow Trap	597074.71	681084.42	1	
" (50)	"	"	4	"	597048.74	681010.61	1	

[a] Field-observed coordinates.

[b] NAD83 New Jersey State Plane (ft).

Subsurface p-chem @
temperature (C)
conductivity (uS/cm)
dissolved oxygen (mg/L)
pH

Subsurface p-chem @
temperature (C)
conductivity (uS/cm)
dissolved oxygen (mg/L)
pH

NEWARK BAY PHASE III
INTERTIDAL LOCATION: Site 122 C Minnow Traps

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Location Data Form

Location Data Form

Project Name: NEWARK BAY PHASE III **Project No.:** NA

Field Crew Initials: SMS, KCM, JBS

Deployment Date & Time	Retrieval Date & Time	Location ID	Trap ID	Collection Method	Coordinates[a] Easting (X)[b]	Coordinates[a] Northing (Y)[b]	Depth (ft)	Total # Blue Crab >4.5"
10/20/14@1320	10/21/14@1045	122C	10	Minnow Trap	600040.95	687126.62		
			9		600046.94	687126.69		
			6		600033.50	687129.98		
			3		600027.36	687131.13		
			8		600022.78	687131.23		
			1		600016.22	687128.11		
			5		600011.71	687127.69		

[a] Field-observed coordinates.

[b] NAD83 New Jersey State Plane (ft).

10/21/14

Subsurface p-chem @ 1045
temperature (C) 17.24
conductivity (uS/cm) 30700
dissolved oxygen (mg/L) 6.7
pH 7.72

Subsurface p-chem @
temperature (C)
conductivity (uS/cm)
dissolved oxygen (mg/L)
pH

Sample Processing Form

Project: NBO3 Fish Study
Sample Location: N (North)
Sample Date: 10/06/14 Sampled by: KCM, BWL, CDD, CCB
Processing Date: 10/06/14 Processed by: BWL, KCM

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)										Notes
KCM ~~NB03WHANO01~~	~~HA~~	~~W~~	~~1~~	222 103.3										
~~NB03BA~~ KCM	BA	KCM AW	14	71.0 2.5	62.0 3.3	92.0 4.9	85.0 3.3	85.0 3.6	84.0 3.0	82.0 3.2	80.0 2.8	72.0 2.1	68.0 1.3	
NB03WBAN002	↓	↓	↓	71.0 2.0	70.0 1.9	62.0 1.3	58.0 1.1							
KCM ~~NB03WSFN003~~	SF	W	1	167 33.1	199 82.3	161 37.9								
KCM ~~NB03WSFN004~~			1	←	←									
KCM ~~NB03WSFN005~~			1	←	←									
NB03WWFN001	WF	W	1	95.0 10.4										
NB03WWFN003	WF	W	1	92.0 8.6										

Notes: Species HA and SF above were used by pathologist therefore contaminated and not used in the sample.

g = gram
mm = millimeters
SF = skin-on fillet; SF* = skin-off fillet (eel); WBC = whole-body composite; WBI = whole-body individual

MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish
WW=window pane

Sample Processing Form

Project: NBO3 Fish Study
Sample Location: North Bay
Sample Date: 10/7/14 Sampled by: BWL
Processing Date: 10/7/14 Processed by: BWL

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Photo Notes
NB03WWFN004	WF	TRAWL	1	170 / 50.9	
NB03WSF N005	SF		1	190 / 67	
NB03WSF N006	SF		1	155 / 289	
NB03WWW N007	WW		1	109 / 14.1	176-2214
NB03WBA N002	BA		4	79 / 3 ; 82 / 3 ; 76 / 3.2 ; 71 / 2.4	
NB03WME N008	ME		2	347 / 330 ; 342 / 418 → split sample	176-2215
NB03WME N009	ME		2	368 / 418 ; 388 / 550 split sample	176-2216
NB03WSF N010	SF		1	340 / 428 split sample	176-2218

Notes: Parasites on Menhaden - sample # NB03WMEN009 - hook worm (Lernea) Photo # 176-2217.

g = gram
mm = millimeters
~~SF = skin-on fillet; SF* = skin-off fillet (eel); WBC = whole-body composite; WBI = whole-body individual~~ ccs as per BWL

MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish
WW = window pane

Sample Processing Form

Project: NBO3 Fish Study
Sample Location: NORTH BAY
Sample Date: 10/7/14 Sampled by: Bill
Processing Date: 10/8/14 Processed by: Bill

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Photo Notes
NB03FAEN011	Am Eel	Fillet	1	545 / 390	177-2223
NB03FAEN012	Am eel	Fillet	1	531 / 340	177-2224
NB03FAEN013	Am eel	Fillet	1	470 / 178	177-2225

Notes:

g = gram
mm = millimeters
~~SF = skin-on fillet; SF* = skin-off fillet (eel); WBC = whole-body composite; WBI = whole-body individual~~ Bill

MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Bill

North Bay

Sample Processing Form

Project: NBO3 Fish Study
Sample Location: North Bay
Sample Date: 10-9-14 Sampled by: KCM
Processing Date: 10-10-14 Processed by: KCM

	Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Notes
NBO3	WAENO24	AE	W	1	510 / 273	179-2248
NBO3	WAENO25	AE	W	1	610 / 472	179 2249

Notes:

g = gram
mm = millimeters
SF = skin-on fillet; SF* = skin-off fillet (eel); WBC = whole-body composite; WBI = whole-body individual

MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

CENTRAL BAY

Sample Processing Form

Project: NBO3 Fish Study
Sample Location: Central (CC)
Sample Date: 10-9-14 Sampled by: KCM
Processing Date: 10-9-14 Processed by: KCM

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)										Notes
NB03WBAC001	BA	W		87 4.6	82 3.0	75 2.4	82 3.0	75 2.7	66 1.8	65 1.6	76 2.6	75 2.7	76 2.8	
				72 2.4	75 2.4	72 2.6	66 1.7	75 2.8	66 1.8	71 2.1	63 1.4	57 1.1	43 0.4	
				51 0.7	45 0.5	48 0.6	54 0.7	58 1.0	47 0.6	51 0.8	38 0.3	53 0.8	47 0.4	
				37 0.2	44 0.4	48 0.6	TRAWL							
NB03FBLC002	BL	F	1	144 25.2	TRAWL									
NB03WSFC003	SF	W	1	251 145.8										
NB03WSFC004	SF	W	1	214 94.1										
NB03WSFC005	SF	W	1	183 50.7										

Notes:

g = gram
mm = millimeters
SF = skin-on fillet; SF* = skin-off fillet (eel); WBC = whole-body composite; WBI = whole-body individual

MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

NORTH BAY

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 1
Revision Date: September 2014
Sample Processing Form

Sample Processing Form

Project: NBO3 Fish Study
Sample Location: ~~St 122 Minnow traps~~ CCS
Sample Date: 10/9/14 Sampled by: BWL
Processing Date: 10/9/14 Processed by: BWL

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Notes
~~BN NBO3A~~					
NBO3WASN014	AS	W	12	109 6.1; 117 6.9; 99 4.7; 102 5.4; 89 3.4; 107 5.3; 95 4.1; 90 3.0; 97 5.0; 91 3.9; 98 4.5; 96 4.1 — Minnow traps - Sta 122	178-2229
NBO3WMUN015	MU	W	3	82 7.6; 62 3.3; 101 13.2 — Minnow traps-Sta 122	178-2230
NBO3WAEN016	AE	W	1	555 340 — Eel Pot	178-2231
NBO3WAEN017	AE	W	1	240 27.9 — Trawl	178 2233
NBO3WSFN018	SF	W	1	190 50.3 — Trawl	178 2234
NBO3WHAN019	~~SH~~ HA	W	1	253 158 — Trawl	178-2235
~~NB~~ ~~03WSFN020~~	~~SF~~	~~W~~		189 50.3 — Trawl — CCS	
NBO3WWWN020	WW	W	~~4~~ CCS 1	145 37 — Trawl	178-2237
NBO3WWWN021	WW	W	1	139 28.3 — Trawl	
NBO3WWWN022	WW	W	1	121 22.1 — Trawl	
NBO3WWWN023	WW	W	1	83 6.5 — Trawl	
NBO3WBANOO2	BA	W	3	82 3.4; 63 1.4; 51 0.6 — Trawl	

Notes:

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mm = millimeters
SF = skin-on fillet; SF* = skin-off fillet (eel); WBC = whole-body composite; WBI = whole-body individual

MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish ~~SH~~= Spotted Hake = HA
WW= Window Pane Flounder

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 1
Revision Date: September 2014
Sample Processing Form

SOUTH BAY

Sample Processing Form

Project: NBO3 Fish Study
Sample Location: South Bay
Sample Date: 10/8/14 | 10/9/14 Sampled by: Bill
Processing Date: 10/9/14 Processed by: Bill

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)										Photo Notes
NB03WSFS001	SF	W	1	190 60.7			Trawl~~ics~~		Gill	Net				
NB03WSFS002	SF	W	1	349 370			Gill	Net						178-2232

Notes:

g = gram
mm = millimeters
SF = skin-on fillet; SF* = skin-off fillet (eel); WBC = whole-body composite; WBI = whole-body individual

MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

South Bay

1 of 3

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 1
Revision Date: September 2014
Sample Processing Form

Sample Processing Form

Project: NBO3 Fish Study
Sample Location: South Bay
Sample Date: 10-10-14 Sampled by: KCM
Processing Date: 10-10-14 Processed by: KCM

	Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)										Notes
NB03	FBLS003	BL	F	14	233 111.4	158 27.9	227 94.4	160 30.3	145 21.5	136 19.2	145 21.7	160 30.1	128 18.0	118 11.6	178-2241
					105 7.7	130 17.1	133 17.9	128 17.7		Beach Seine					178-2240
NB03	WASS004	AS	W	45	98 4.7	80 2.7	58 1.1	85 2.6	95 4.9	105 6.0	110 7.2	103 5.7	101 5.8	93 3.4	178-2242
					87 3.2	103 3.9	98 5.1	110 6.4	98 5.2	90 4.0	91 3.9	90 3.9	87 3.0	60 0.9	
					100 5.7	88 3.2	85 3.1	97 4.9	104 6.1	98 4.9	113 8.0	102 6.0	95 3.9	100 4.8	
					98 5.4	98 4.8	108 6.2	104 5.6	95 4.1	87 2.7	90 3.7	65 1.5	95 4.3	90 3.6	
					94 4.1	100 4.7	106 5.8	90 3.7	94 4.3	Beach Seine					
NB03	WASS005	AS	W	55	100 5.1	87 3.2	100 5.3	103 6.1	105 6.1	83 3.1	87 3.4	101 4.9	88 3.3	91 4.1	
					102 4.2	105 6.5	95 5.5	80 2.2	109 6.4	102 5.6	90 3.5	92 4.3	70 1.7	105 6.5	
					80 2.1	82 2.7	90 3.5	101 5.5	101 5.0	92 4.0	83 2.7	95 4.2	80 2.6	86 3.6	
					95 5.0	95 4.2	91 3.7	71 2.1	100 5.2	83 2.8	88 3.2	101 4.9	78 2.4	86 2.9	
					90 3.5	94 4.7	96 4.3	102 5.3	78 2.3	86 3.2	75 1.9	60 1.1	70 1.5	56 1.0	
					65 1.5	70 1.5	60 1.2	65 1.3	90 3.1		Beach Seine				
NB03	WASS006	AS	W	86	91 3.9	92 4.2	97 4.3	98 4.4	102 4.5	91 4.0	83 2.6	81 2.4	72 1.8	82 3.9	
					100 5.3	81 2.4	75 1.8	70 1.5	95 4.2	93 5.0	87 3.1	87 3.1	86 3.1	87 3.1	
					79 2.1	77 1.8	76 2.2	81 2.8	70 1.6	61 1.1	81 2.6	76 3.3	62 1.2	87 3.1	
					71 1.9	84 3.3	89 3.3	81 2.7	85 3.3	67 1.6	72 1.9	67 1.2	71 1.5	65 1.4	
					73 2.2	73 1.8	74 2.0	91 3.7	73 1.6	80 2.3	71 1.8	70 1.6	92 4.2	75 2.2	
					71 1.7	64 1.1	48 0.5	81 2.1	65 1.4	71 1.8	75 2.0	78 2.3	68 1.5	68 1.7	
					90 3.9	74 1.9	75 2.0	74 1.8	70 1.5	68 1.6	79 2.2	92 4.2	70 1.5	82 3.0	

Notes:

g = gram
mm = millimeters
SF = skin-on fillet; SF* = skin-off fillet (eel); WBC = whole-body composite; WBI = whole-body individual

MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

South Bay

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Sample Processing Form

Project: NBO3 Fish Study
Sample Location: South Bay
Sample Date: 10-10-14 Sampled by: KCM
Processing Date: 10-10-14 Processed by: KCM

	Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Photo Notes
NBO3	WASS006	AS	W		70 1.6, 71 1.9, 69 1.6, 69 1.5, 65 1.4, 78 2.2, 76 1.7, 69 1.6, 71 1.7, 62 1.2	
					62 1.2, 68 1.5, 68 1.6, 75 2.0, 73 2.1, 75 2.3, Beach Seine	
NBO3	WASS007	AS	W	47	105 5.7, 110 6.9, 100 4.7, 100 5.4, 101 5.1, 98 4.6, 96 4.3, 100 5.3, 100 4.3, 110 6.6	178-2243
					101 4.7, 110 6.8, 96 4.3, 103 5.0, 90 3.4, 110 6.0, 110 4.7, 90 3.6, 88 3.1, 101 5.0	
					81 2.8, 85 3.1, 82 3.1, 87 3.4, 94 4.2, 87 3.2, 87 3.0, 84 2.6, 92 3.6, 93 4.3	
					85 3.0, 91 3.7, 90 3.4, 91 3.9, 95 4.3, 102 4.9, 80 2.6, 104 4.8, 85 3.0, 100 4.5	
					99 4.3, 95 3.7, 95 3.8, 95 4.2, 82 3.0, 93 3.9, 104 5.1, Beach Seine	
~~NBO3~~	~~WSK1315~~ KCM	SK	W		88 7.0, 82 6.4, 90 8.1, 87 7.3, 88 6.7, 85 6.3, 81 6.4, 88 7.5, 87 8.1, 77 5.1	178-2244
	NBO3WSK131A				78 5.0, 66 3.3, 82 5.8, 75 4.2, 85 6.5, 80 6.0, 80 5.1, 75 4.8, 82 6.3, 85 6.6	
					88 7.3, 78 5.3, 80 5.2, 70 3.6, 74 4.8, 77 4.9, 77 4.4, 85 6.3, 77 4.8, 77 5.2	
					80 7.4, 76 4.7, 80 5.4, 85 6.7, 82 4.9, 87 7.5, Beach Seine	
					82 5.7, 65 2.4, 67 2.8, 74 4.0, 75 4.5, 82 5.8, 82 6.0, 82 5.4, 83 5.1, 83 5.8	
					80 5.6, 78 5.0, 76 4.8, 65 3.0, 63 2.4, 78 4.4, 61 2.3, 80 5.5, 76 4.4, 81 4.7	
					70 3.0, 70 3.3, 76 4.8, 63 2.6, 65 2.4, 60 1.6, 65 2.5, 65 2.4, 60 2.0, 70 3.0	
					58 2.0, 60 2.1, 45 0.8, 70 2.9, 70 3.1, 70 3.6, 50 1.1, 68 2.7, 60 1.7, 62 2.1	
					61 1.9, 80 5.4, 76 4.3, 76 4.0, 68 3.4, 76 5.2, 75 3.4, 57 2.2, 55 1.4, 60 2.0	
					61 1.8, 59 1.7, 61 2.1, 70 3.2, 59 2.1, 54 1.5, 60 2.0, 54 1.3, 58 1.8, 63 2.8	
					55 1.7, 62 2.4, 62 2.3, 61 2.4, 55 2.0, Beach Seine	
	NBO3WMU131A				55 1.8, 51 1.0, 57 1.7, 55 1.2	
~~NBO3~~	~~WMU131B~~	MU	W		53 1.5, 41 0.6, 41 0.8, 38 0.5, 35 0.2, 37 0.4, Beach Seine	

Notes:

g = gram
mm = millimeters
SF = skin-on fillet; SF* = skin-off fillet (eel); WBC = whole-body composite; WBI = whole-body individual

MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

South Bay

Sample Processing Form

Project: NBO3 Fish Study
Sample Location: South Bay
Sample Date: 10-10-14 Sampled by: KCM
Processing Date: 10-10-14 Processed by: KCM

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)										Photo Notes
NBO3 WMES008	ME	W	KCM 4	78 4.1	108 10.9	85 5.2	85 4.7	Beach	Seine					179-2245
~~NBO3~~ KCM ~~WSK131A~~	SK	W	46	88 7.7	86 6.9	83 5.9	88 6.7	88 7.3	83 6.2	81 6.1	84 6.5	88 7.5	82 5.3	179-2246
NBO3WSK130				87 6.7	87 6.8	75 4.9	78 5.0	87 7.6	85 6.7	74 4.2	71 4.1	71 5.8	71 4.0	
				79 5.1	78 5.1	81 5.7	80 4.4	78 5.1	78 4.9	83 6.9	71 3.8	81 5.9	67 3.6	
				76 4.7	78 4.9	73 4.1	67 3.2	70 3.3	73 4.2	73 4.5	68 3.4	75 4.4	74 3.6	
				71 4.1	70 3.9	66 3.2	71 3.7	67 3.1	84 6.5	Beach	Seine			
~~NBO3~~ KCM ~~WMU131A~~	MU	W	34	40 0.6	45 0.9	38 0.4	52 1.5	43 0.7	40 0.6	33 0.1	48 1.2	40 0.4	53 1.5	179-2247
NBO3WMU130				40 0.6	40 0.6	33 0.3	36 0.4	58 1.9	40 0.4	45 1.0	35 0.3	46 1.1	50 0.9	
				45 0.7	42 0.8	35 0.3	48 0.8	35 0.3	47 1.0	35 0.3	42 0.6	36 0.2	50 1.1	
				36 0.6	38 0.5	35 0.3	36 0.4		Beach	Seine				
~~NBO3~~ ~~WME5009~~	ME	W	3	108 10.9	85 5.2	85 4.7		Beach	Seine					KCM

Notes:

g = gram
mm = millimeters
SF = skin-on fillet; SF* = skin-off fillet (eel); WBC = whole-body composite; WBI = whole-body individual

MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

North Bay

Sample Processing Form

Project: NBO3 Fish Study
Sample Location: 132B North Bay
Sample Date: 10-13-14 Sampled by: KCM, CCB, SMS
Processing Date: 10-13-14 Processed by: KCM, CCB, SMS

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)										Notes
NB03WSK132B	SK	W	21	~~195~~ 95 12.1	~~185~~ 95 7.9	88 8.2	87 7.3	90 9.3	91 8.3	103 11.5	95 10.6	84 6.9	65 2.9	180-2253
				98 11.8	98 11.8	90 8.6	105 12.9	90 8.8	105 14.9	106 15.1	92 9.9	85 7.0	94 9.7	
				95 9.6						SEINE				
NB03WSK132B	SK	W	33	80 6.0	68 3.5	95 10.0	94 10.0	92 8.5	83 6.2	84 7.6	76 5.0	68 3.2	74 12.2	180-2254
				68 3.5	70 4.0	67 3.2	70 4.5	110 15.3	78 5.8	79 5.7	67 2.8	65 2.8	80 5.9	
				68 3.4	68 3.6	76 4.5	80 5.7	74 4.9	70 3.1	78 5.2	68 3.5	105 14.4	82 5.6	
				92 9.7	92 9.9	98 11.8				SEINE				
~~NB03WASN132B~~														
NB03WASNO26	AS	W	38	105 5.3	108 6.6	108 6.0	108 7.3	115 7.3	121 8.6	95 4.3	98 5.8	102 5.1	116 7.9	180-2255
				105 5.7	110 6.2	98 4.8	55 0.7	94 4.1	118 7.9	110 7.1	114 7.6	118 8.3	103 5.2	
				113 7.6	110 6.6	115 6.8	85 2.7	90 3.7	91 3.3	100 4.8	108 5.6	93 4.0	99 4.3	
				93 4.2	90 3.1	98 4.5	88 3.2	82 2.8	85 2.3	90 2.9	97 4.2	SEINE		
NB03WASNO26	AS	W	39	115 8.1	90 3.0	114 7.1	100 5.3	112 7.1	122 9.3	84 2.8	110 5.9	110 6.9	98 5.1	180-2257
				113 6.4	116 7.6	100 4.6	115 7.6	95 3.8	104 5.9	97 4.4	110 6.6	104 6.0	96 4.4	
				99 5.2	97 4.4	102 4.9	88 3.3	107 6.1	85 2.8	98 4.9	95 4.1	78 2.3	65 1.3	
				59 0.9	110 6.9	104 5.1	106 6.0	89 3.1	105 5.3	60 1.1	108 6.8	107 6.2	SEINE	

Notes:

g = gram
mm = millimeters
SF = skin-on fillet; SF* = skin-off fillet (eel); WBC = whole-body composite; WBI = whole-body individual

MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

NORTH BAY

Sample Processing Form

Project: NBO3 Fish Study
Sample Location: 123B North Bay
Sample Date: 10-13-14 Sampled by: KCM, CCB, SMS
Processing Date: 10-13-14 Processed by: KCM, CCB, SMS

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)										Notes
NB03WASN026	AS	W	36	110 6.8	109 6.6	110 4.9	113 7.3	95 4.5	106 6.0	130 11.2	111 7.4	100 5.1	95 4.3	180-2258
				108 6.2	110 6.6	105 5.7	108 6.0	102 5.2	101 4.9	103 4.9	109 7.7	101 5.3	94 4.1	
				105 5.1	98 4.4	110 7.1	107 6.2	96 4.0	102 5.1	94 4.0	110 6.6	91 3.9	98 4.6	
				103 4.9	93 4.2	105 5.7	97 4.3	105 6.7	100 5.1	SEINE				
NB03FBLN027	BL	F	10	153 28.4	225 98.1	175 43.4	147 23.7	132 17.5	134 21.4	130 15.7	141 24.4	145 26.1	178 49.3	180-2259
↳	204 g			257 153.1					SEINE		~~1385 F~~		~~1107 g~~ I	
NB03WSK123B	SK	W	20	105 14.1	95 9.6	80 5.9	96 11.7	92 9.5	95 11.0	97 11.6	95 11.3	104 13.1	90 9.1	180-2260
				87 8.0	110 15.7	92 10.3	102 12.6	95 10.1	89 8.5	83 6.8	88 8.8	68 3.5	72 4.2	
											SEINE			
NB03WSK123B	SK	W	27	96 8.6	75 4.3	70 4.0	94 10.5	72 4.3	67 2.6	80 6.3	95 11.6	88 8.4	68 3.8	180-2260
				92 9.6	93 10.6	88 8.7	73 4.2	73 4.5	72 4.7	97 10.9	96 10.5	102 13.2	73 4.5	
				81 5.9	86 8.1	88 11.0	92 9.9	103 13.1	74 4.7	72 4.4	SEINE			
NB03WSK123B	SK	W	18	105 13.7	93 10.1	95 9.7	94 10.7	105 14.2	105 15.4	92 9.6	95 11.0	103 13.1	103 12.5	180-2260
				100 13.0	93 10.3	98 11.7	107 13.7	88 8.8	87 8.6	94 11.0	80 6.4	SEINE		
NB03WSK123B	SK	W	22	92 8.9	88 8.1	89 8.4	93 9.4	93 10.9	105 13.8	88 8.1	98 11.0	87 8.1	104 14.0	180-2260
				85 8.0	80 6.2	98 12.0	92 9.7	88 9.6	96 9.6	96 9.3	99 11.3	98 11.4	88 7.9	
				97 11.5	90 9.2						SEINE			
NB03WWPN028	WP	W	1	94 9.7							SEINE			180-2261

Notes:

g = gram
mm = millimeters
SF = skin-on fillet; SF* = skin-off fillet (eel); WBC = whole-body composite; WBI = whole-body individual

MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

NORTH BAY

Sample Processing Form

Project: NBO3 Fish Study
Sample Location: North Bay
Sample Date: 10-13-14 Sampled by: KCM, CCB, SMS
Processing Date: 10-13-14 Processed by: KCM, CCB, SMS

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)										Notes
NB03WASN029	AS	W	41	110 6.7	109 7.2	98 4.4	110 6.8	101 5.0	111 6.7	107 5.6	103 4.9	98 5.0	102 5.9	180-22662
				72 1.7	82 2.6	117 8.4	92 3.6	102 5.0	94 4.9	111 6.5	102 5.6	92 3.7	110 6.9	
				95 4.0	110 6.2	108 6.3	90 3.4	103 5.9	107 5.3	91 3.2	89 3.4	105 5.0	110 7.4	
				96 4.2	80 2.4	103 5.1	83 2.5	91 4.3	109 5.7	90 3.2	88 2.8	97 4.5	98 4.4	
				96 4.6							SEINE			
NB03WASN029	AS	W	45	94 4.3	73 1.6	91 3.8	91 3.8	96 4.7	95 4.0	107 6.5	82 2.9	103 5.1	115 7.5	180-22662
				98 5.0	94 4.0	98 4.6	94 3.5	105 5.3	98 4.8	102 4.8	110 7.4	106 5.5	96 4.7	
				108 6.6	88 3.3	90 4.0	90 3.5	99 5.0	90 3.6	94 4.3	112 7.2	95 4.1	91 3.2	
				106 6.2	96 4.4	96 4.7	95 4.5	92 3.9	88 3.4	90 3.3	101 4.7	82 2.8	96 4.0	
				93 4.1	92 3.8	88 3.7	97 4.5	104 5.5			SEINE			
NB03WSK132A	SK	W	17	126 25.6	121 24.3	110 17.8	101 13.5	99 12.6	108 17.8	98 13.4	96 11.3	88 9.8	94 10.2	180-22663
				99 9.1	85 8.1	81 6.7	70 3.9	95 10.2	78 5.5	85 7.9	SEINE			
NB03WWFN030	WF	W	1	105 11.7							SEINE			180-22664
NB03WWFN031	WF	W	1	104 11.8							SEINE			180-22665
NB03WWFN032	WF	W	1	103 12.3							SEINE			180-22666
NB03WWFN033	WF	W	1	80 5.5							SEINE			180-22667

Notes:

g = gram
mm = millimeters
SF = skin-on fillet; SF* = skin-off fillet (eel); WBC = whole-body composite; WBI = whole-body individual

MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

South Bay

Sample Processing Form

Project: NBO3 Fish Study
Sample Location: 134
Sample Date: 10-13-14 Sampled by: KCM
Processing Date: 10-13-14 Processed by: KCM, JBS

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Notes
NB03WSK134	SK	W	67	82 6.7; 62 2.8; 65 3.1; 87 7.9; 80 5.7; 79 6.2; 88 8.4; 58 2.1; 77 6.1; 73 4.5	180-2250
				82 7.1; 75 6.0; 63 3.3; 70 4.3; 61 2.8; 89 8.3; 80 6.0; 81 7.1; 65 3.0; 64 2.8	
				81 6.1; 68 3.8; 68 3.8; 61 2.8; 77 5.4; 69 3.9; 83 7.1; 57 2.2; 71 4.3; 80 6.5	
				81 6.7; 85 7.8; 82 7.1; 47 1.2; 59 2.2; 77 5.3; 80 5.7; 64 3.4; 76 5.8; 86 8.2	
				64 3.0; 65 3.1; 67 3.6; 76 5.2; 81 6.2; 70 4.5; 67 4.1; 61 2.7; 62 2.8; 62 2.8	
				70 4.2; 51 1.6; 48 1.3; 48 1.3; 56 2.0; 53 1.8; 73 4.0; 70 4.5; 73 4.5; 66 3.5	
				62 2.6; 66 3.6; 75 5.1; 55 1.8; 53 1.6; 72 4.4; 70 3.7; Seine	
NB03FBLS009	BL	F	3	132 18.2; 139 21.1; 157 28.6; Seine	180-2251
				28g Fillets	
NB03WWFS010	WF	W	1	90 9.5; Seine	180 2252

Notes:

g = gram
mm = millimeters
SF = skin-on fillet; SF* = skin-off fillet (eel); WBC = whole-body composite; WBI = whole-body individual

MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NBO3 Fish Study
Sample Location: 130
Sample Date: 10/14/14 Sampled by: SMS, CCB
Processing Date: 10/15/14 Processed by: KCM, CJR, MKM

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)										Notes
~~NBO3WSK130~~ KCM	~~SK~~ KCM	W	21	115 18.9	80 6.5	58 2.3	31 0.3	48 1.2	39 0.6	41 0.8	50 0.9	40 0.6	38 0.7	181-2280
NBO3WMU135	MU			37 0.7	50 1.3	48 1.1	37 0.6	45 1.0	44 0.8	36 0.5	38 0.6	34 0.3	45 0.7	
				50 1.2										

Notes:

g = gram
mm = millimeters
SF = skin-on fillet; SF* = skin-off fillet (eel); WBC = whole-body composite; WBI = whole-body individual

MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NBO3 Fish Study
Sample Location: 127B
Sample Date: 10/14/14 Sampled by: SMS, CCB
Processing Date: 10/15/14 Processed by: KCM, CJR, MKM

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)										Notes
NBO3WSK127B	SK	W	56	130 29.1	90 8.7	95 11.4	71 4.0	98 12.5	91 9.4	74 5.0	92 10.2	72 4.7	90 10.1	181-227
				75 5.0	79 5.6	69 4.3	71 4.4	93 11.0	90 9.3	90 9.8	71 3.8	68 4.0	81 6.7	
				92 10.6	98 12.2	89 9.1	84 7.4	91 9.8	63 3.0	78 5.4	74 4.7	70 4.4	73 4.7	
				75 5.0	91 9.0	86 7.6	92 10.4	73 4.4	88 9.0	66 3.4	88 9.2	57 8.3	95 11.3	
				71 4.5	75 5.2	84 7.0	98 11.6	85 7.3	82 7.0	69 3.8	79 6.1	84 7.2	94 10.4	
				84 7.4	91 9.9	97 12.0	77 5.3	73 4.8	74 5.4	BEACH SEINE				

Notes:

g = gram
mm = millimeters
SF = skin-on fillet; SF* = skin-off fillet (eel); WBC = whole-body composite; WBI = whole-body individual

MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NBO3 Fish Study
Sample Location: 127 A
Sample Date: 10/14/14 Sampled by: SMS, CCB
Processing Date: 10/15/14 Processed by: KCM, CJR, MKM

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)										Notes
NBO3 WSK127A	SK	W	51	90 9.7	88 9.0	90 10.1	85 8.7	85 8.0	80 6.5	88 9.4	87 8.2	90 10.4	90 9.3	18i-2268
				68 3.5	92 10.6	82 7.2	62 2.8	70 4.2	81 7.3	83 7.8	48 1.2	82 7.6	91 10.0	
				83 7.1	77 5.1	62 2.8	70 4.2	58 2.4	75 4.7	77 5.4	63 2.8	62 2.9	63 3.1	
				63 3.2	48 1.3	65 3.5	68 3.5	70 4.3	72 4.9	78 5.6	73 4.9	99 13.0	72 4.7	
				72 4.4	62 2.5	62 2.6	63 3.1	58 2.4	62 2.8	59 2.5	69 4.4	75 5.5	63 3.6	
				48 1.3		Beach	Seine							

Notes:

g = gram
mm = millimeters
SF = skin-on fillet; SF* = skin-off fillet (eel); WBC = whole-body composite; WBI = whole-body individual

MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NBO3 Fish Study
Sample Location: Central Zone
Sample Date: 10/14/14 Sampled by: SMS CCB
Processing Date: 10/15/14 Processed by: KCM, CJR, MKM

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Notes
NBO3WASC013	AS	W	45	89/3.5 92/4.2 88/3.9 113/7.0 106/6.3 98/4.9 98/4.5 103/5.9 97/4.7 102/5.9	181-2279
				103/5.8 98/4.8 102/5.4 111/7.9 98/4.7 98/5.2 102/6.3 105/5.5 104/6.2 98/5.0	
				103/5.7 106/6.3 104/5.5 96/4.9 96/4.5 76/2.4 100/5.1 98/4.6 107/6.2 108/6.3	
				103/5.7 104/6.8 110/7.0 105/6.4 98/4.6 88/3.5 97/5.5 98/5.7 104/5.7 111/7.5	
				105/5.7 95/4.9 105/6.2 90/3.7 112/6.9 BEACH SEINE	
NBO3WWFC014	WF	W	1	95/9.5 BEACH SEINE	181-2285
NBO3WWFC015	WF	W	1	109/16.2 BEACH SEINE	181-2286
NBO3WWFC016	WF	W	1	90/8.4 BEACH SEINE	181-2287
NBO3WWFC017	WF	W	1	85/7.4 BEACH SEINE	181-2288
NBO3WWFC018	WF	W	1	96/10.7 BEACH SEINE	181-2289
NBO3WWFC019	WF	W	1	68/3.5 BEACH SEINE	181-2290
NBO3WWFC020	WF	W	1	89/8.3 BEACH SEINE	181-2291
NBO3WWFC021	WF	W	1	110/15.4 BEACH SEINE	181-2292
NBO3WWFC022	WF	W	1	92/9.1 BEACH SEINE	181-2293
NBO3WWFC023	WF	W	1	90/9.2 BEACH SEINE	181-2294
NBO3WWFC024	WF	W	1	107/16.5 BEACH SEINE	181-2295
NBO3WWFC025	WF	W	1	79/6.0 BEACH SEINE	181-2296
NBO3WWFC026	WF	W	1	74/4.5 BEACH SEINE	181-2297

Notes: NBO3WWFC014, 016, 017, 019, 020, 025, 026 composited into NBO3WWFC036 per Tierra
NBO3WWFC015, 018, 021, 022, 023, 024 composited into NBO3WWFC037 per Tierra

g = gram
mm = millimeters
SF = skin-on fillet; SF* = skin-off fillet (eel); WBC = whole-body composite; WBI = whole-body individual

MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NBO3 Fish Study
Sample Location: 129A
Sample Date: 10/14/14 Sampled by: SMS, CCB
Processing Date: 10/15/14 Processed by: KCM, CJR, MKM

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)										Notes
NBO3WSK129A (KCM)	SK	W	79	65 3.9	72 5.4	87 9.4	80 6.4	66 3.5	89 9.2	83 7.4	80 6.7	83 8.2	39 0.6	181-2269
				85 8.8	33 0.4	63 3.1	45 1.0	30 0.3	68 3.3	52 1.6	32 0.4	40 0.8	79 6.1	
				30 0.2	48 1.2	53 1.6	53 1.6	50 1.6	25 0.2	75 5.9	80 7.0	57 2.1	80 6.3	
				52 1.6	55 1.8	50 1.6	42 0.8	58 2.4	48 0.9	42 0.8	55 1.7	31 0.2	32 0.3	
				38 0.6	49 1.2	30 0.3	48 1.0	48 0.6	38 0.5	42 0.8	32 0.3	29 0.2	35 0.3	
				29 0.2	26 0.2	40 0.6	32 0.3	33 0.3	30 0.2	37 0.5	28 0.2	29 0.2	32 0.3	
				30 0.3	39 0.6	28 0.2	38 0.6	32 0.3	35 0.4	37 0.5	34 0.4	38 0.5	31 0.3	
				34 0.4	34 0.3	28 0.2	42 1.0	50 1.6	45 0.9	46 1.3	51 1.4	52 1.7		
				Beach Seine										
NBO3WWFS011	WF	W	1	100 10.8	BEACH SEINE									181-2270
NBO3WWFS012	WF	W	1	68 3.0	BEACH SEINE									181-2281
NBO3WWFS013	WF	W	1	74 3.9	BEACH SEINE									181-2282
NBO3WWFS014	WF	W	1	82 5.2	BEACH SEINE									181-2283
NBO3FBLS015	BL	F	~~7~~ 9 (KCM)	~~136 22.6~~	148 29.9	200 67.8	213 82.8	172 45.9	215 97.7	171 35.1	152 31.4	~~144 22.9~~	~~145 23.8~~	181-2284
	L→202g fillets			~~145 20.7~~	155 34.0	154 30.7	~~145 28.7~~	~~146 29.5~~	BEACH SEINE					
NBO3FBLS016	BL	F	6	145 22.8	145 28.7	144 22.9	135 20.7	145 29.5	138 22.6	Beach Seine				181-2284

Notes: Enough fillet was yielded from 9 fish for NBO3FBLS015 so removing 6 fish were used to start sample NBO3FBLS016.

g = gram
mm = millimeters
SF = skin-on fillet; SF* = skin-off fillet (eel); WBC = whole-body composite; WBI = whole-body individual

MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NBO3 Fish Study
Sample Location: Central Zone
Sample Date: 10/14/14 Sampled by: SMS, CCB
Processing Date: 10/15/15 Processed by: KCM, CJR, MKM

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Notes
NBO3WWFC006	WF	W	1	88 / 6.9 BEACH SEINE	181-2272
NBO3WWFC007	WF	W	1	85 / 6.2 BEACH SEINE	181-2273
NBO3WWFC008	WF	W	1	93 / 9.7 BEACH SEINE	181-2274
NBO3WWFC009	WF	W	1	90 / 7.8 BEACH SEINE	181-2275
NBO3WWPC010	WP	W	2	88 / 8.3; 109 / 18.5 BEACH SEINE	181-2276
NBO3FBLC011 → 156g	BL	F	13 CJR	204 / 100.7; 208 / 86.0; 185 / 59.1; 209 / 74.2; 179 / 12.6; 215 / 99.7; 161 / 33.2; 161 / 35.7; 165 / 40.6; 161 / 31.8; 184 / 9.9; 185 / 15.0; 122 / 17.3; 168 / 41.0; 201 / 101.8; 208 / 73.1; 163 / 31.5; 230 / 92.8; 211 / 82.4; 212 / 73.2; 215 / 84.3; 155 / 29.1; 150 / 26.6; 145 / 13.6; 125 / 16.9; 153 / 29.7; 112 / 11.6; 138 / 22.6; 128 / 14.6; 136 / 17.6; 134 / 22.5; 132 / 21.1; 162 / 41.5; 192 / 61.0; 188 / 63.9; 128 / 18.5; 156 / 41.4; 205 / 70.2 Beach Seine	181-2277
NBO3FBLC027 → 206g	BL	F fillets	6	229 / 100.7; 221 / 101.8; 215 / 99.7; 215 / 84.3; 195 / 59.1; 132 / 21.1 BEACH SEINE	181-2277
NBO3FBLC028 → 202g	BL	F fillets	9	211 / 82.4; 230 / 92.8; 192 / 61.0; 205 / 70.2; 158 / 44.0; 161 / 37.8; 138 / 22.6; 165 / 40.6; 106 / 9.9 BEACH SEINE	181-2277
NBO3FBLC029 → 208g	BL	F fillets	10	163 / 37.5; 208 / 73.1; 208 / 86.0; 188 / 63.9; 209 / 74.2; 212 / 73.2; 125 / 15.0; 115 / 13.6; 112 / 11.8; 119 / 12.6 BEACH SEINE	181-2277

Notes: Enough fillet was yielded from 13 fish for NBO3FBLC011 so remaining 25 fish were used to create samples NBO3FBLC027, NBO3FBLC028, and NBO3FBLC029.

g = gram
mm = millimeters
SF = skin-on fillet; SF* = skin-off fillet (eel); WBC = whole-body composite; WBI = whole-body individual

MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NBO3 Fish Study
Sample Location: Central Zone
Sample Date: 10/14/14 Sampled by: SMS, CCB
Processing Date: 10/15/14 Processed by: KCM, CJR, MKM

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)										Notes
NBO3 NASC012	AS	W	209	92 4.5	98 4.7	98 5.3	102 7.5	90 3.6	52 0.7	109 6.2	105 5.7	88 3.4	80 2.0	181-2278
				92 3.7	95 4.7	108 6.8	101 5.0	102 5.8	82 2.9	103 5.1	58 0.9	80 2.1	62 1.0	
				74 2.1	108 6.2	105 5.4	108 5.8	108 5.8	112 6.8	93 4.1	105 6.3	99 5.2	89 3.4	
				102 4.9	100 5.2	71 1.6	103 5.4	85 3.2	85 3.9	98 4.4	75 2.1	110 6.2	97 4.2	
				86 3.3	97 4.9	71 1.7	84 3.2	62 1.2	84 3.2	91 3.5	82 2.9	84 2.7	84 2.5	
				52 0.6	91 4.4	103 5.2	80 2.3	85 4.2	80 2.3	98 4.7	74 1.8	98 4.7	77 2.5	
				89 3.6	66 1.3	80 2.9	107 6.0	118 8.8	99 5.2	105 6.4	95 4.4	97 5.2	91 4.2	
				92 4.1	105 5.4	101 5.0	98 4.7	108 6.3	103 4.7	101 5.8	101 5.0	98 5.1	89 3.5	
				102 5.2	96 4.7	105 6.2	100 4.8	94 4.0	94 4.2	80 2.3	85 3.0	86 3.2	81 2.7	
				95 4.3	94 4.7	94 4.2	85 3.0	86 3.6	72 1.8	98 5.6	100 5.2	102 5.8	102 5.2	
				109 7.4	93 4.2	94 4.0	110 6.5	102 5.6	92 4.1	95 4.6	80 2.9	92 4.2	96 4.7	
				100 5.2	102 6.3	98 4.8	94 4.8	91 3.9	90 3.7	85 6.6	105 6.1	85 3.3	97 4.4	
				88 3.4	85 3.4	90 3.9	91 4.0	98 4.7	94 4.1	108 6.5	102 5.6	105 5.9	79 2.2	
				89 3.6	101 5.5	92 4.0	85 3.3	101 5.9	90 3.5	89 3.4	88 6.5	92 3.8	101 4.5	
				92 3.8	88 3.5	75 2.6	83 3.0	84 2.9	90 3.8	100 5.0	94 3.7	108 6.8	108 6.1	
				95 4.3	94 4.3	101 5.4	98 4.9	85 3.8	100 4.9	103 5.6	95 4.5	94 4.6	95 5.3	
				100 5.4	105 5.8	98 4.7	108 6.6	100 5.1	104 6.1	99 5.8	89 3.5	98 4.5	88 3.4	
				82 2.6	103 5.4	91 4.0	98 5.2	105 7.1	91 4.0	94 4.1	111 6.6	99 5.3	99 5.7	
				101 5.5	103 6.2	103 5.2	108 6.2	108 7.0	81 2.9	104 6.6	100 5.8	100 5.1	100 5.2	
				91 4.0	98 4.5	91 4.6	105 5.7	108 6.9	106 6.1	99 5.7	102 6.0	98 5.2	96 4.6	

Notes:

g = gram
mm = millimeters
SF = skin-on fillet; SF* = skin-off fillet (eel); WBC = whole-body composite; WBI = whole-body individual

MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NBO3 Fish Study
Sample Location: Central Zone
Sample Date: 10/14/14 Sampled by: SMS, CCB
Processing Date: 10/15/14 Processed by: KCM, CJR, MKM

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)										Notes
NBO3WASC012	AS	W	209	113 6.3	105 6.3	108 6.9	101 5.8	106 5.9	94 4.1	98 4.8	90 3.6	100 4.9		181–2278
					BEACH SEINE									

Notes:

g = gram
mm = millimeters
SF = skin-on fillet; SF* = skin-off fillet (eel); WBC = whole-body composite; WBI = whole-body individual

MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Central Bay

Sample Processing Form

Project: NBO3 Fish Study
Sample Location: Central Bay St. 124
Sample Date: 10-16-14 Sampled by: SMS, CCB
Processing Date: 10-16-14 Processed by: SMS, CCB, JOS.

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)										Notes
NB03WSK124	SK	W	24	99 12.8	85 8.4	74 4.8	86 8.8	85 8.0	96 10.5	94 10.1	91 9.1	82 6.4	97 12.0	183-2301
				94 10.1	97 10.8	94 11.3	87 7.9	90 9.0	96 11.5	86 7.6	82 7.3	92 9.4	79 6.3	
				77 5.9	85 7.9	70 4.2	70 4.0	204 g			SEINE			
NB03WSK124	SK	W	24	91 9.6	87 8.6	88 8.1	88 9.1	90 8.8	84 7.8	92 9.6	78 6.6	97 11.3	97 11.7	183-2301
				93 9.4	80 6.6	76 6.0	85 8.0	91 9.4	92 10.1	90 9.5	89 8.8	73 4.7	66 3.8	
				93 9.6	85 8.2	94 10.4	90 9.1	204 g			SEINE			
NB03WSK124	SK	W	55	86 8.0	86 8.4	81 7.1	78 6.4	64 3.2	70 4.1	72 4.5	78 5.8	66 3.9	71 4.4	183-2301
				75 5.6	77 5.5	69 3.9	85 7.1	73 4.8	71 4.6	71 4.4	56 2.0	67 4.5	75 5.1	
				69 4.0	61 3.5	75 5.6	74 5.6	64 3.3	66 3.4	71 4.7	66 3.5	66 4.1	69 4.3	
				77 5.4	74 5.4	64 3.4	70 4.2	70 4.3	65 3.1	69 3.6	66 3.3	71 4.3	70 4.3	
				68 3.6	67 3.6	77 5.5	66 3.5	73 4.3	66 3.4	68 3.8	66 3.9	75 4.6	77 5.7	
				75 4.7	43 1.0	70 3.9	72 4.3	72 4.2	248 g		SEINE			
NB03FBLC030	BL	F	1	160 29.2							SEINE			188-2302
NB03WWFC031	WF		1	102 10.1							SEINE			183-2303
NB03WWFC032	WF		1	74 3.5							SEINE			183-2304
NB03WWFC033	WF		1	100 9.3							SEINE			183-2305
NB03WWFC034	WF		1	85 5.3							SEINE			183-2306
NB03WWFC035	WF		1	91 7.8							SEINE			183-2307

Notes: Samples NB03WWFC031 → WWFC035 were composited into sample jar labeled NB03WWFC036 per Tierra.

g = gram
mm = millimeters
SF = skin-on fillet; SF* = skin-off fillet (eel); WBC = whole-body composite; WBI = whole-body individual

MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NBO3 Fish Study
Sample Location: South Bay Station 135
Sample Date: 10-16-14 Sampled by: SMS, CCB
Processing Date: 10-16-14 Processed by: KCM, JBS, MKM

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)										Notes
NBO3WMU135	MU	W	36	105 17.0	94 9.2	85 8.2	88 8.9	92 12.3	83 7.4	75 5.4	65 3.7	71 4.3	75 5.2	182-2298
				58 2.1	56 1.8	57 2.2	74 4.7	47 1.0	56 2.2	67 3.4	43 0.8	38 0.6	55 2.3	
				55 1.6	46 1.1	48 1.2	57 2.2	63 3.0	52 1.4	39 0.6	54 1.5	54 1.6	52 1.8	
				54 1.7	61 2.5	49 1.4	58 2.2	46 1.0	51 1.3					
				MINNOW TRAPS										
NBO3WAES017	~~WU~~ KCM AE	W	1	382 104	MINNOW TRAPS									182-2249 ~~183~~ KCM
NBO3FAES018	AE	F	1	700 620	EEL Pot #3 202g Fillet									183-230c

Notes:

g = gram
mm = millimeters
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MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NBO3 Fish Study
Sample Location: NBO3WMU129
Sample Date: 10/17/14 Sampled by: CCB, SMS
Processing Date: 10/17/14 Processed by: MKM, JDS, CCB, SMS

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)										Notes
NBO3WMU129	MU	WBC	53	90 8.5	67 3.2	74 4.9	55 2.2	66 4.1	63 3.3	58 2.5	52 1.0	63 3.4	74 4.1	183-2309
				62 3.1	58 2.0	58 2.5	66 3.3	65 4.2	102 12.6	78 5.7	61 3.0	88 9.1	66 3.8	
				68 4.4	65 3.2	34 0.8	62 2.3	61 3.0	100 13.0	77 5.6	58 2.3	65 3.3	69 3.5	
				69 3.2	76 5.2	64 4.0	88 8.6	89 7.7	58 3.1	56 2.1	73 4.8	61 3.3	58 2.6	
				65 2.9	58 2.1	65 3.2	74 5.5	65 3.3	67 3.3	46 1.5	58 2.1	80 6.6	55 2.0	
				71 4.9	83 8.7	95 12.8			(234g)		SEINE			Minnow Trap
NBO3WMU129	MU	WBC	153	63 3.1	48 0.9	90 9.5	64 2.7	42 0.7	75 4.9	59 2.1	38 0.6	50 1.2	48 1.2	183-2309
				57 2.5	58 3.3	50 1.4	48 1.3	48 1.1	42 0.9	51 1.5	48 1.1	45 0.8	48 1.3	
				51 1.3	52 1.6	48 1.4	44 0.9	52 1.4	35 0.1	50 1.3	56 1.6	48 1.1	50 1.1	
				55 1.8	45 1.0	42 0.8	47 1.3	55 2.0	46 1.1	56 1.3	62 3.9	61 2.4	55 2.0	
				57 2.7	51 1.4	48 1.2	43 1.2	55 2.2	44 0.8	52 1.5	48 1.1	55 2.0	45 1.2	
				40 0.8	59 2.4	40 0.4	38 0.7	40 0.8	49 1.4	50 1.3	43 0.9	42 0.5	55 1.7	
				41 0.8	37 0.7	41 1.0	48 1.5	45 0.8	55 1.9	52 1.9	49 1.2	62 2.7	50 1.4	
				48 0.7	53 1.9	48 1.4	46 0.9	40 0.7	53 1.6	51 1.5	45 1.0	40 0.8	35 0.4	
				48 1.2	38 0.4	52 1.5	52 1.7	50 1.3	52 1.6	41 0.8	45 1.1	55 1.9	53 1.8	
				44 0.9	45 1.0	48 1.2	35 0.5	48 0.9	48 0.9	58 2.5	48 1.2	47 1.2	43 0.7	
				37 0.3	41 0.8	51 1.5	34 0.3	43 0.8	34 0.3	40 0.7	40 0.8	45 1.1	60 1.6	
				50 1.3	51 1.4	50 1.3	46 1.0	47 1.2	51 1.3	48 1.0	40 0.6	45 0.8	60 3.9	
				52 1.6	48 1.4	65 3.0	55 1.9	53 2.2	57 1.9	48 1.1	48 1.0	55 1.8	56 2.0	
				43 1.3	46 1.1	41 0.6	50 1.5	57 2.0	53 1.8	40 0.7	45 1.0	50 1.7	40 0.6	

Notes: continued on page 2 of 3

g = gram
mm = millimeters
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WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NBO3 Fish Study
Sample Location: NBO3 W MU 129
Sample Date: 10/17/14 Sampled by: CCB, SMS
Processing Date: 10/17/14 Processed by: CCB, SMS, JBS

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)										Notes
NBO3WMU129	MU	WBC	X	46 1.2	47 1.0	55 1.3	50 1.1	40 0.7	54 2.0	43 0.9	55 1.8	45 0.1	40 0.6	1833 7309
				55 2.0	45 0.8	41 0.6				210 g	SE~~NE~~			Minnow trap
NBO3WMU129	MU	WBC	180	66 3.1	45 0.8	38 0.5	45 1.1	42 0.8	43 0.8	51 1.4	51 1.5	54 1.8	48 1.2	1833 2309
				36 0.5	57 1.9	52 1.4	34 0.3	42 0.7	55 1.6	46 0.9	52 1.3	50 1.2	45 0.8	
				44 0.9	41 0.7	47 1.0	42 0.8	40 0.7	52 1.4	61 2.0	60 2.3	55 1.8	52 1.3	
				41 0.7	37 0.6	45 0.8	44 0.7	47 1.2	45 1.0	40 0.7	55 1.8	50 1.6	44 0.8	
				34 0.5	42 0.6	40 0.6	38 0.5	48 0.9	35 0.4	73 4.6	47 1.1	42 0.8	55 3.3	
				67 3.5	50 1.4	50 1.5	60 2.5	51 1.3	52 1.7	43 0.9	73 5.6	45 1.0	41 0.7	
				44 1.1	33 0.4	68 3.4	58 2.6	45 0.9	50 1.4	45 0.8	48 1.2	44 0.9	50 1.6	
				41 0.7	45 0.9	46 1.2	46 1.0	50 1.3	40 0.7	39 0.5	56 2.1	49 1.2	41 0.6	
				43 0.8	45 0.9	45 0.9	52 1.4	58 1.7	41 0.7	51 1.5	44 0.3	41 0.7	51 1.3	
				42 0.8	41 0.7	43 0.9	48 1.2	44 1.1	42 0.7	38 0.6	56 1.4	53 1.5	53 1.5	
				51 1.4	47 1.2	38 0.6	50 1.4	44 0.8	43 1.1	37 0.4	42 0.8	45 1.0	45 1.0	
				33 0.5	40 0.7	43 0.8	48 1.3	40 0.7	35 0.5	38 0.6	38 0.8	47 0.9	42 0.8	
				48 1.2	65 3.1	43 0.8	47 0.8	46 1.0	48 1.3	56 1.6	35 0.4	42 0.9	39 0.5	
				48 1.5	58 2.0	55 2.1	42 1.1	45 1.1	50 1.5	52 1.7	48 1.3	50 1.4	46 1.0	
				42 0.6	38 0.5	46 1.3	43 0.8	36 0.6	41 0.7	48 1.2	40 0.8	56 1.8	41 0.7	
				57 2.0	41 0.6	42 1.0	59 2.4	45 1.0	42 0.8	44 1.0	43 0.8	35 0.5	41 0.7	
				41 0.8	35 0.5	46 1.1	44 0.7	42 0.6	51 1.4	43 0.8	68 3.0	46 0.9	46 1.0	
				55 2.0	51 1.6	40 0.5	52 1.5	41 1.3	60 2.0	51 1.5	51 1.6	43 0.9	42 0.7	

Notes: continued from page 1 of 3

214g Minnow Trap

g = gram
mm = millimeters
SF = skin-on fillet; SF* = skin-off fillet (eel); WBC = whole-body composite; WBI = whole-body individual

MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NBO3 Fish Study
Sample Location: NBO3WMU129
Sample Date: 10/17/14 Sampled by: CCB, SMS
Processing Date: 10/17/14 Processed by: CCB, SMS, JTBS

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)										Notes
NBO3WMU129	MU	WBC	163	58 2.3	55 1.9	45 0.9	53 1.7	51 1.5	41 0.7	51 1.5	42 0.7	40 0.5	41 0.8	183-2309
				45 1.0	43 0.8	48 1.5	38 0.5	52 1.4	51 1.3	42 0.8	47 1.3	50 1.4	51 1.2	
				46 1.2	56 1.8	52 1.3	45 0.8	44 1.1	48 1.1	42 0.8	48 1.2	46 1.1	44 0.9	
				48 1.2	46 1.1	42 0.8	41 0.6	45 0.9	51 1.4	52 0.9	45 1.2	47 1.2	51 2.2	
				62 2.2	43 1.2	49 1.8	44 0.9	43 0.9	60 2.0	52 1.6	43 0.8	45 0.8	45 1.0	
				50 1.1	53 1.3	41 0.7	43 0.8	38 0.5	45 1.0	45 1.0	40 0.5	36 0.4	32 0.4	
				41 0.7	41 0.8	37 0.5	44 1.0	52 1.5	42 1.1	55 1.8	45 1.1	42 0.7	38 0.5	
				41 0.5	41 0.8	43 0.9	48 1.2	52 1.5	50 1.2	50 1.3	51 1.8	55 1.8	45 0.9	
				40 0.6	46 0.9	45 1.0	46 1.1	46 0.8	41 0.8	50 1.3	36 0.5	43 0.8	48 1.2	
				44 0.9	48 1.2	41 0.7	55 1.3	54 1.5	45 0.8	40 0.7	55 1.5	46 0.8	41 0.8	
				51 1.3	42 0.8	43 0.7	51 1.0	50 1.1	49 1.0	50 1.4	40 0.5	37 0.5	41 0.6	
				41 0.7	40 0.6	45 1.0	53 1.9	48 1.0	48 1.3	40 1.1	45 0.9	43 0.9	51 1.3	
				48 1.2	52 1.4	51 1.3	52 1.4	51 1.2	51 1.6	48 1.2	45 0.8	41 0.7	42 0.8	
				46 1.0	41 0.7	46 1.3	42 0.9	45 1.3	44 0.8	55 1.6	55 1.8	42 1.0	41 1.0	
				41 1.1	43 1.0	51 1.3	50 1.3	45 0.9	41 0.5	53 1.9	42 0.7	49 1.3	49 1.2	
				52 1.5	43 0.6	44 1.4	42 0.6	63 2.5	50 1.1	35 0.7	40 0.8	45 0.8	55 2.0	
				95 12.4	97 11.7	65 3.4				200 g				Minnow Trap

Notes: Continued from page 2 of 3

g = gram
mm = millimeters
SF = skin-on fillet; SF* = skin-off fillet (eel); WBC = whole-body composite; WBI = whole-body individual

MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NBO3 Fish Study
Sample Location: NBO3WMU135
Sample Date: 10/17/14 Sampled by: ~~MKM~~ CCB SS
Processing Date: 10/17/14 Processed by: JBS, MKM, CCB

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)										Notes
NBO3WMU135	MU	WBC		56 2.5	88 11.2	68 4.8	62 3.3	55 2.1	45 0.8	96 12.4	88 9.4	82 7.8	76 4.9	1833-2308
				68 3.1	58 2.6	73 4.1	66 4.1	60 2.3	62 3.1	65 3.6	51 1.4	42 0.5	44 1.0	
				52 1.3	56 1.6	78 6.7	54 1.8	65 2.7	50 1.9	49 1.2	54 1.7	60 2.5	58 2.3	
				44 1.3	53 1.9	40 0.8	51 1.3	50 1.5	50 1.4	78 6.1	78 5.4	72 4.9	70 4.8	
				73 5.1	68 4.1	55 2.3	70 5.3	52 1.9	44 1.2	46 1.3	50 1.4	55 1.7	47 0.8	
				46 1.0	44 0.9	42 0.9	51 1.3	60 2.5	62 3.0	58 3.4	48 1.1	45 0.8	68 4.5	
				53 1.8	48 1.6	60 2.8	50 1.6	55 1.8	52 1.4	53 1.9	46 1.2	45 1.0	40 0.6	
				42 0.8	53 1.4	44 1.2	42 0.9	44 1.0	45 1.2	42 0.8	48 1.4	41 0.8	38 0.5	Total wet wt 21 kg
↓	↓	↓	89	48 1.2	49 1.5	51 1.5	45 1.0	42 0.6	46 0.9	43 0.8	38 0.6	43 0.6		

Notes: Sample finish @ 1210

g = gram
mm = millimeters
SF = skin-on fillet; SF* = skin-off fillet (eel); WBC = whole-body composite; WBI = whole-body individual

MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NBO3 Fish Study
Sample Location: NB03WSK13IB
Sample Date: 10/17/14 Sampled by: SMS, CCB
Processing Date: 10/17/14 Processed by:

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)										Notes
NB03WSK13IB	SK	WBC	35	88 8.0	90 9.2	97 10.7	85 7.3	83 6.8	80 6.1	80 6.6	56 1.8	68 3.6	64 3.1	183-230
				71 3.9	85 7.0	50 1.1	85 7.5	85 7.4	76 5.1	76 5.4	90 9.5	85 7.2	51 1.5	
				81 6.4	85 7.3	89 8.2	82 6.3	77 6.3	81 6.2	80 5.9	68 3.3	56 1.5	78 5.0	
				83 4.8	81 4.4	70 4.0	80 6.0	88 8.0		208g		SEINE		
NB03WSK13IB	SK	WBC	35	84 7.0	97 11.2	86 8.5	80 6.3	70 4.2	83 6.6	59 2.0	62 2.8	75 5.0	72 4.7	183-230
				73 4.3	79 5.8	75 4.6	62 2.7	101 11.4	57 2.1	90 8.1	56 1.9	54 1.8	76 5.1	
				93 9.1	81 7.4	91 8.9	80 5.9	92 9.5	75 5.1	83 7.0	86 8.0	85 7.4	87 6.6	
				83 7.0	81 6.5	60 2.2	79 5.9	82 6.2		208g		SEINE		
NB03WSK13IB	SK	WBC	38	80 6.0	86 6.9	72 4.8	79 5.4	81 6.1	80 6.3	82 6.5	81 6.4	87 7.8	90 9.1	
				75 5.3	84 7.3	80 6.5	83 7.0	63 2.9	77 5.3	80 6.0	76 4.9	69 3.5	82 6.8	
				79 5.6	92 10.0	80 5.5	79 5.7	80 5.9	85 7.0	72 4.5	78 5.3	80 6.2	74 4.6	
				75 5.0	68 3.7	72 4.3	61 2.3	68 3.5	63 3.0	70 4.7	68 3.2	212g		SEINE

Notes:

g = gram
mm = millimeters
SF = skin-on fillet; SF* = skin-off fillet (eel); WBC = whole-body composite; WBI = whole-body individual

MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NBO3 Fish Study
Sample Location: 123A North
Sample Date: 10/20/14
Processing Date: 10/20/14
Sampled by: SMS, KCM, JBS
Processed by: SMS, JBS

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)										Notes
NB03WSK123A	SK	WBC	33	100 12.8	89 8.8	92 9.0	61 2.5	93 9.1	94 9.3	70 3.8	95 10.2	99 11.2	95 10.1	134-23.4
				90 8.7	78 5.0	68 3.3	85 7.2	60 3.4	91 9.4	60 2.3	80 7.0	69 3.7	74 4.5	
				87 8.3	85 7.0	82 6.4	66 3.2	101 11.4	96 10.2	93 9.4	83 6.9	73 4.1	70 3.8	
				69 3.2	65 2.6	71 4.1				224g SEINE				

Notes:

g = gram
mm = millimeters
SF = skin-on fillet; SF* = skin-off fillet (eel); WBC = whole-body composite; WBI = whole-body individual

MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NBO3 Fish Study
Sample Location: 122A North Zone
Sample Date: 10/20/14 Sampled by: SMS, KCM, JBS
Processing Date: 10/20/14 Processed by: JBS, SMS

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)										Notes
NB03WSK122A	SK	WBC	19	134 33.6	125 27.4	130 25.9	123 25.5	44 0.9	65 3.1	70 3.9	93 9.9	77 5.5	82 6.3	134-231S
				91 9.4	90 8.7	95 10.4	77 5.7	66 3.2	75 4.8	75 4.8	89 8.5	85 7.4	SEINE	2065
NB03WSK122A	SK	WBC	22	119 20.1	117 20.1	96 11.1	95 11.0	79 5.7	72 4.4	57 2.0	93 9.4	88 7.9	95 10.8	183-231S
				93 9.7	90 8.5	97 11.7	91 10.3	91 9.9	92 9.2	80 6.1	76 5.5	87 8.9	94 10.4	
				92 9.8	90 8.8			2.12 g				SEINE		
NB03WSK122A	SK	WBC	21	90 8.8	88 8.9	87 8.3	95 10.4	70 4.0	75 5.1	83 7.7	68 3.8	66 3.3	67 3.6	
				83 6.4	50 1.2	80 6.6	79 6.1	103 12.5	96 10.6	81 6.5	87 7.7	85 7.3	82 7.0	
				71 4.7				1.40 g				SEINE		

Notes:

g = gram
mm = millimeters
SF = skin-on fillet; SF* = skin-off fillet (eel); WBC = whole-body composite; WBI = whole-body individual

MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NBO3 Fish Study
Sample Location: 12213 North
Sample Date: 10/20/14 Sampled by: SMS, KCM, JBS
Processing Date: 10/21/14 Processed by: SMS, KCM, JBS, CJR

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)										Notes
NBO3WSK122B	SK	WBC	41	130 33.0	111 17.8	114 20.8	93 10.4	88 9.8	90 10.2	77 6.0	93 11.5	80 7.2	83 7.6	184-2316
				82 7.1	79 6.3	74 4.8	76 4.8	75 5.3	80 6.5	80 6.3	70 4.1	71 4.3	70 4.1	
				75 5.2	65 3.5	72 5.1	57 2.5	50 1.2	49 1.2	51 1.5	46 1.0	57 2.0	40 0.6	
				46 0.8	56 1.8	39 0.7	42 0.7	51 1.3	52 1.6	38 0.5	50 1.2	43 0.8	54 1.6	
				35 0.5					2269		Seine			

Notes:

g = gram
mm = millimeters
SF = skin-on fillet; SF* = skin-off fillet (eel); WBC = whole-body composite; WBI = whole-body individual

MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NBO3 Fish Study
Sample Location: 122C North
Sample Date: 10/20/14 and 10/21/14 Sampled by: SMS, KCM, JBS
Processing Date: 10/21/14 Processed by: SMS, KCM, JBS, CJR

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)										Notes
NB03WMU122C	MU	WBC	45	90 10.9	79 7.1	61 2.8	84 8.1	90 9.7	72 4.6	81 7.2	77 6.1	71 4.4	63 3.5	185-2317
				60 2.4	85 7.7	72 5.1	76 5.4	80 6.2	66 3.9	79 7.1	72 4.4	65 3.4	63 3.1	
				56 2.5	65 2.7	73 5.2	61 2.5	69 4.3	74 4.7	63 3.3	72 4.3	77 5.3	59 2.5	
				65 3.1	60 2.3	59 2.6	65 3.2	61 3.1	62 2.9	68 3.4	70 4.1	62 3.7	66 3.8	
				72 4.3	57 2.2	68 3.4	67 3.7	57 2.3		2008		SEINE		
NB03WMU122C	MU	WBC	122	69 3.7	70 3.9	62 2.8	71 4.3	61 2.6	40 0.7	57 2.4	65 3.1	65 3.5	61 2.8	185-2317
				65 3.4	68 3.9	62 3.1	52 2.1	66 3.5	58 2.7	60 2.8	61 2.7	66 3.4	66 3.1	
				51 1.7	41 0.9	40 1.2	42 0.7	48 1.3	43 1.0	51 1.4	40 0.8	55 2.5	48 1.2	
				47 1.2	51 1.9	44 0.9	43 1.0	42 0.8	56 2.2	47 1.1	68 2.3	44 0.7	43 1.0	
				48 1.2	42 0.9	43 1.1	44 1.1	56 1.9	66 3.6	54 2.0	57 2.4	42 1.2	36 0.5	
				51 1.5	59 2.2	46 1.2	41 1.2	51 1.8	49 1.3	50 1.7	53 1.7	41 0.9	38 0.7	
				45 1.0	53 1.9	53 2.0	57 2.2	60 2.5	55 2.4	48 1.4	54 1.8	45 1.2	62 3.3	
				49 1.6	48 1.5	44 0.9	42 0.8	40 0.7	46 1.2	50 1.5	46 1.0	39 0.7	41 0.8	
				46 1.2	41 0.7	46 1.1	52 1.4	42 0.4	44 0.8	51 1.8	47 1.3	44 1.2	51 2.0	
				41 0.9	46 0.8	57 1.3	60 2.9	49 1.4	56 1.8	59 2.7	41 0.7	56 1.8	52 1.5	
				53 1.6	51 2.1	41 0.8	47 1.4	44 0.2	44 1.1	41 0.8	40 0.7	41 0.7	41 0.7	
				49 1.3	55 2.0	60 2.4	56 2.0	50 1.7	42 0.6	53 2.1	43 0.9	43 1.0	40 0.7	
				45 1.0	44 0.9					2008		SEINE		
NB03WMU122C	MU	WBC	136	61 2.7	52 2.1	47 1.4	55 2.1	45 0.9	55 2.5	42 0.9	41 0.8	55 1.8	48 1.2	185-2317
				53 1.9	54 2.0	41 0.8	58 2.2	47 1.2	57 2.2	50 1.3	51 1.7	50 1.5	53 1.9	

Notes:

g = gram
mm = millimeters
SF = skin-on fillet; SF* = skin-off fillet (eel); WBC = whole-body composite; WBI = whole-body individual

MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NBO3 Fish Study
Sample Location: 122C North
Sample Date: 10/20/14 and 10/21/14 Sampled by: SMS, KCM, JBS
Processing Date: 10/21/14 Processed by: SMS, KCM, JBS, CJR

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)										Notes
NB03WM1122C	MU	WBC	✓	57 2.2	61 2.5	51 1.4	56 1.9	51 1.5	52 1.6	51 1.5	51 1.7	48 1.3	51 1.5	
Cont.			✓	44 1.2	50 1.6	46 1.0	50 1.3	38 0.6	43 0.9	46 1.2	45 0.8	49 1.2	48 1.1	
			✓	47 1.3	46 1.0	56 1.8	61 2.5	49 1.2	49 1.3	50 1.3	43 1.0	41 0.7	49 1.3	
			✓	47 1.3	51 1.4	54 1.8	40 0.9	51 1.6	44 1.3	47 1.3	52 2.1	46 1.1	59 2.2	
			✓	48 1.6	52 2.1	48 1.3	47 1.4	60 2.6	47 1.2	48 1.4	53 0.8	58 2.5	41 1.0	
			✓	40 1.0	42 0.8	49 2.0	46 1.3	49 1.1	57 2.2	41 1.0	36 0.6	60 2.6	60 2.4	
			✓	59 2.3	46 1.1	51 1.5	52 1.8	51 1.4	50 1.1	56 2.1	51 1.5	47 1.6	43 1.1	
			✓	54 1.6	49 1.5	42 0.9	46 1.3	44 1.1	41 0.9	55 2.7	45 1.1	46 0.7	45 0.9	
			✓	38 0.6	43 0.9	60 2.3	60 2.5	50 1.3	45 0.9	45 1.2	43 0.9	38 0.6	31 0.5	
			✓	53 2.0	37 0.6	40 0.9	53 1.6	55 1.9	54 2.1	51 1.9	55 1.9	36 0.6	45 0.9	
			✓	52 1.6	55 2.1	49 1.2	42 0.7	48 1.2	45 1.3	36 0.5	51 1.7	49 1.1	54 1.7	
			✓	46 1.1	50 1.3	53 1.7	43 1.0	42 0.8	46 1.1	200g	SEINE			

Notes:

g = gram
mm = millimeters
SF = skin-on fillet; SF* = skin-off fillet (eel); WBC = whole-body composite; WBI = whole-body individual

MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

North Bay

Sample Processing Form

Project: NBO3 Fish Study
Sample Location: 132B North Bay
Sample Date: 10-13-14 Sampled by: ICCM, CCB, SMS
Processing Date: 10-13-14 Processed by: ICCM, CCB, SMS

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)										Notes
NB03WSK132B	SK	W	21	~~95~~ 95 12.1	~~85~~ 85 7.9	85 8.2	87 7.3	90 9.3	91 8.3	103 11.5	95 10.6	84 6.9	65 2.9	180-2253
				98 11.8	98 11.8	90 8.6	105 12.9	90 8.8	105 14.9	106 15.1	92 9.9	85 7.0	94 9.7	
				95 9.6						SEINE				
NB03WSK132B	SK	W	33	80 6.0	68 3.5	95 10.0	94 10.0	92 8.5	83 6.2	84 7.6	76 5.0	68 3.2	74 12.2	180-2254
				68 3.5	70 4.0	67 3.2	70 4.5	110 15.3	78 5.8	79 5.7	67 2.8	65 2.8	80 5.9	
				68 3.4	68 3.6	76 4.5	80 5.7	74 4.9	70 3.1	78 5.2	68 3.5	105 14.4	82 5.6	
				92 9.7	92 9.9	98 11.8				SEINE				
~~NB03WASN132B~~														
NB03WASN026	AS	W	38	105 5.3	108 6.6	108 6.0	108 7.3	115 7.3	121 8.6	95 4.3	98 5.8	102 5.1	116 7.9	180-2255
				105 5.7	110 6.2	98 4.8	55 0.7	94 4.1	118 7.9	110 7.1	114 7.6	118 8.3	103 5.2	
				113 7.6	110 6.6	115 6.8	85 2.7	90 3.7	91 3.3	100 4.8	108 5.6	93 4.0	94 4.3	
				93 4.2	90 3.1	98 4.5	88 3.2	82 2.8	85 2.3	90 2.9	97 4.2	SEINE		
NB03WASN026	AS	W	39	115 8.1	90 3.0	114 7.1	100 5.3	112 7.1	122 9.3	84 2.8	110 5.9	110 6.9	98 5.1	180-2257
				113 6.4	116 7.6	100 4.6	115 7.6	95 3.8	104 5.9	97 4.4	110 6.6	104 6.0	96 4.4	
				99 5.2	97 4.4	102 4.9	88 3.3	107 6.1	85 2.8	98 4.9	95 4.1	78 2.3	65 1.3	
				59 0.9	110 6.9	104 5.1	106 6.0	89 3.1	105 5.3	60 1.1	108 6.8	107 6.2	SEINE	

Notes:

g = gram
mm = millimeters
F = skin-on fillet; SF* = skin-off fillet (eel); WBC = whole-body composite; WBI = whole-body individual

MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

NORTH BAY

Sample Processing Form

Project: NBO3 Fish Study
Sample Location: 123B North Bay
Sample Date: 10-13-14 Sampled by: KCM, CCB, SMS
Processing Date: 10-13-14 Processed by: KCM, CCB, SMS

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)										Notes
NB03WASN026	AS	W	36	110 6.8	109 6.6	110 4.9	113 7.3	95 4.5	106 6.0	130 11.2	111 7.4	100 5.1	95 4.3	180-2258
				108 6.2	110 6.6	105 5.7	108 6.0	102 5.2	101 4.9	103 4.9	109 7.7	101 5.3	94 4.1	
				105 5.1	98 4.4	110 7.1	107 6.2	96 4.0	102 5.1	94 4.0	110 6.6	91 3.9	98 4.6	
				103 4.9	93 4.2	105 5.7	97 4.3	105 6.7	100 5.1		SEINE			
NB03FBLN027	BL	F	10	153 23.4	228 98.1	175 43.4	147 23.7	132 17.5	134 21.4	130 15.7	141 24.4	145 26.1	178 49.3	180-2259
↳	204 g			257 153.1					SEINE		~~138 g~~		~~167 g~~	
VB03WSK123B	SK	W	20	105 14.1	95 9.6	80 5.9	96 11.7	92 9.5	95 11.0	97 11.6	95 11.3	104 13.1	90 9.1	180-2260
				87 8.0	110 15.7	92 10.3	102 12.6	95 10.1	89 8.5	83 6.8	88 8.8	68 3.5	72 4.2	
											SEINE			
JB03WSK123B	SK	W	27	96 8.6	75 4.3	70 4.0	94 10.5	72 4.3	67 2.6	80 6.3	95 11.6	88 8.4	68 3.8	180-2260
				92 9.6	93 10.6	88 8.7	73 4.2	73 4.5	72 4.7	97 10.9	96 10.5	102 13.2	73 4.5	
				81 5.9	86 8.1	88 11.0	92 9.9	103 13.1	74 4.7	72 4.4	SEINE			
VB03WSK123B	SK	W	18	105 13.7	93 10.1	95 9.7	94 10.7	105 14.2	105 15.4	92 9.6	95 11.0	103 13.1	103 12.5	180-2260
				100 13.0	93 10.3	98 11.7	107 13.7	88 8.8	87 8.6	94 11.0	80 6.4	SEINE		
1B03WSK123B	SK	W	22	92 8.9	88 8.1	89 8.4	93 9.4	93 10.9	105 13.8	88 8.1	98 11.0	87 8.1	104 14.0	180-2260
				85 8.0	80 6.2	98 12.0	92 9.7	88 9.6	91 9.6	96 9.3	99 11.3	98 11.4	88 7.9	
				97 11.5	90 9.2							SEINE		
1B03WWPN028	WP	W	1	94 9.7							SEINE			180-2261

Notes:

g = gram
mm = millimeters
F = skin-on fillet; SF* = skin-off fillet (eel); WBC = whole-body composite; WBI = whole-body individual

MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

NORTH BAY

Sample Processing Form

Project: NBO3 Fish Study
Sample Location: North Bay
Sample Date: 10-13-14 Sampled by: KCM, CCB, SMS
Processing Date: 10-13-14 Processed by: KCM, CCB, SMS

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)										Notes
NB03WASN029	AS	W	41	110 6.7	109 7.2	98 4.4	110 6.8	101 5.0	111 6.7	107 5.16	103 4.9	98 5.0	102 5.9	18C-2262
				72 1.7	82 2.6	117 8.4	92 3.6	102 5.0	94 4.9	111 6.5	102 5.6	92 3.7	110 6.9	
				95 4.0	110 6.2	108 6.3	90 3.4	103 5.9	107 5.3	91 3.2	89 3.4	105 5.0	110 7.4	
				96 4.2	80 2.4	103 5.1	83 2.5	91 4.3	109 5.7	90 3.2	88 2.8	97 4.5	98 4.4	
				96 4.6							SEINE			
NB03WASN029	AS	W	45	94 4.3	73 1.6	91 3.8	91 3.8	96 4.7	95 4.0	107 6.5	82 2.9	103 5.1	115 7.5	18C-2262
				98 5.0	94 4.0	98 4.6	94 3.5	105 5.3	98 4.8	102 4.8	110 7.4	106 5.5	96 4.7	
				108 6.6	88 3.3	90 4.0	90 3.5	99 5.0	90 3.6	94 4.3	112 7.2	95 4.1	91 3.2	
				106 6.2	96 4.4	96 4.7	95 4.5	92 3.9	88 3.4	90 3.3	101 4.7	82 2.8	96 4.0	
				93 4.1	92 3.8	88 3.7	97 4.5	104 5.5			SEINE			
NB03WSK132A	SK	W	17	126 25.6	121 24.3	110 17.8	101 13.5	99 12.6	108 17.8	98 13.4	96 11.3	88 9.8	94 10.2	18C-2263
				99 9.1	85 8.1	81 6.7	70 3.9	95 10.2	78 5.5	85 7.9	SEINE			
NB03WWFN030	WF	W	1	105 11.7							SEINE			18C-2264
NB03WWFN031	WF	W	1	102 11.8							SEINE			18C-2265
NB03WWFN032	WF	W	1	103 12.3							SEINE			18C-2266
NB03WWFN033	WF	W	1	80 5.5							SEINE			18C-2267

Notes:

g = gram
mm = millimeters
SF = skin-on fillet; SF* = skin-off fillet (eel); WBC = whole-body composite; WBI = whole-body individual

MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NBO3 Fish Study
Sample Location: Site 133 North
Sample Date: 10/20/14 Sampled by: SMS, KCM, JBS
Processing Date: 10/20/14 Processed by:

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)										Notes
NB03WMU133	MU	WBC	26	95 12.2	93 12.6	96 11.4	89 10.6	93 11.4	79 7.9	89 11.5	84 7.6	87 8.6	80 6.5	184-2311
				90 9.0	80 8.3	80 7.5	84 8.3	86 9.1	89 8.6	74 5.6	76 6.4	77 6.5	76 5.8	
				76 5.5	77 5.9	80 7.1	73 4.8	66 3.6	67 3.8		(208g)	SEINE		
~~NB03WMF~~														
NB03WMU133	MU	WBC	85	55 2.1	63 3.5	61 2.8	76 5.8	74 5.6	69 5.6	64 3.8	64 3.4	62 3.3	73 5.1	184-2311
				68 4.9	59 2.9	66 3.3	59 2.6	60 2.8	57 2.8	70 5.1	65 3.7	66 4.2	63 3.0	
				70 4.8	62 3.4	63 3.3	63 3.8	71 5.2	60 3.1	72 4.5	60 2.8	61 3.1	57 2.0	
				55 2.5	57 2.4	62 2.9	61 2.8	60 2.9	56 2.3	57 2.3	61 2.6	56 2.2	54 2.0	
				54 1.8	51 1.6	57 2.2	58 2.9	55 2.0	60 2.3	57 2.3	55 2.1	55 2.1	61 2.7	
				56 2.3	52 1.7	51 2.0	49 1.4	48 1.4	50 1.5	51 1.7	52 1.4	50 1.5	52 1.6	
				50 1.5	49 1.3	53 1.6	49 1.5	51 1.6	55 2.3	46 0.9	53 2.0	54 1.9	45 1.2	
				50 1.4	35 0.3	45 1.3	54 1.9	31 0.3	47 1.1	52 1.6	47 1.3	52 1.5	47 1.3	
				37 0.5	55 2.0	46 1.3	38 0.6	49 1.4		(208g)	SEINE			
NB03WMFN034	WF	WBC	6	78 4.5	91 7.3	87 7.4	73 4.2	85 6.3	73 3.6		SEINE			184-2312
NB03WMPN035	WP	WBC	1	77 4.5							SEINE			184-2312

Notes:

g = gram
mm = millimeters
SF = skin-on fillet; SF* = skin-off fillet (eel); WBC = whole-body composite; WBI = whole-body individual

MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NBO3 Fish Study
Sample Location: North Zone
Sample Date: 10/21/14
Processing Date: 10/21/14
Sampled by: SMS, KCM, JBS
Processed by: SMS, JBS, CJR

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Notes
NBO3WAENO36	AE	WBC	1	201 / 13.2	185-2318
				~~eel pot~~ BWL 12/15/14 minnow trap	

Notes:

g = gram
mm = millimeters
SF = skin-on fillet; SF* = skin-off fillet (eel); WBC = whole-body composite; WBI = whole-body individual

MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NBO3 Fish Study
Sample Location: Central Zone
Sample Date: 10/24/14
Processing Date: 10/24/14
Sampled by: CJR, JBS
Processed by: CJR, JBS

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Notes
1B03WASC031	AS	W	102	100 5.6; 118 8.1; 116 7.9; 115 7.9; 104 6.1; 101 5.7; 93 4.3; 105 5.5; 90 3.7; 97 4.8	186-2322
✓				100 5.1; 87 3.1; 87 3.5; 94 4.5; 96 3.7; 84 3.0; 87 4.0; 86 3.1; 86 3.3; 80 2.7	
✓				94 3.5; 82 2.7; 86 3.1; 92 4.4; 80 3.3; 90 3.2; 95 3.7; 90 3.7; 76 2.1; 77 2.0	
✓				79 2.7; 70 1.6; 79 2.5; 78 2.5; 76 2.2; 70 1.8; 81 3.8; 90 4.0; 96 4.1; 82 2.8	
✓				84 3.3; 80 2.6; 76 2.3; 71 1.8; 91 4.6; 85 3.3; 81 2.6; 69 1.5; 80 2.6; 72 1.9	
✓				79 2.2; 65 1.2; 76 2.2; 70 1.4; 75 1.9; 71 1.7; 73 1.8; 76 2.1; 71 1.7; 71 1.8	
✓				60 1.0; 68 1.5; 77 2.1; 72 1.8; 61 1.3; 69 1.5; 65 1.3; 60 1.3; 64 1.5; 73 2.1	
✓				75 2.0; 73 1.8; 67 1.4; 67 1.2; 71 2.0; 62 1.3; 60 0.9; 66 1.4; 61 1.0; 68 1.7	
				56 0.8; 56 0.8; 68 1.4; 73 1.9; 68 1.6; 70 1.5; 54 0.7; 60 1.0; 65 1.2; 63 1.2	
				70 1.6; 61 1.0; 59 1.1; 52 0.6; 66 1.2; 65 1.2; 62 1.0; 66 1.5; 70 1.6; 59 1.0	
				55 0.8; 54 0.7; (256g); Seine	
1B03FBL032	BL	F	1	214 66.7; Fillet 22g; Seine	186-2323

Notes:

g = gram
mm = millimeters
F = skin-on fillet; SF* = skin-off fillet (eel); WBC = whole-body composite; WBI = whole-body individual

MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NBO3 Fish Study
Sample Location: South Zone Eel Pots
Sample Date: 10/20/14 Sampled by: SMS, KCM, JBS
Processing Date: 10/21/14 Processed by: SMS, JBS, CJR

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Notes
NB03FAESC19	AE	F	1	755 832 382 grams Fillet	185 2319

Notes:

g = gram
mm = millimeters
SF = skin-on fillet; SF* = skin-off fillet (eel); WBC = whole-body composite; WBI = whole-body individual

MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NBO3 Fish Study
Sample Location: South Zone
Sample Date: 10-22-14 Sampled by: JBS, ~~BMS~~, CJR
Processing Date: 10-23-14 Processed by: JBS, KCM

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Notes
NB03WAES020	AE	W	1	585 / 395	186 - 2320

Notes:

g = gram
mm = millimeters
SF = skin-on fillet; SF* = skin-off fillet (eel); WBC = whole-body composite; WBI = whole-body individual

MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NBO3 Fish Study
Sample Location: South Zone
Sample Date: 10-23-14 Sampled by: JBS, ~~KCM~~, SMS, CJR
Processing Date: 10-23-14 Processed by: JBS, KCM

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Notes
NBO3WSFS021	SF	W	1	247 / 125 ~~Trawl~~ BWL Crab trap 12/5/14	186 / 232 1

Notes:

g = gram
mm = millimeters
SF = skin-on fillet; SF* = skin-off fillet (eel); WBC = whole-body composite; WBI = whole-body individual

MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NBO3 Fish Study
Sample Location: South Zone
Sample Date: 10-24-14 Sampled by: JBS, CJR
Processing Date: 10-24-14 Processed by: JBS, CJR

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Notes
NBO3WAESOZZ	AE	W	1	445 / 160	186-2324
NBO3WAESOZ3	AE	W	1	440 / 148	186-2325

Notes:

g = gram
mm = millimeters
SF = skin-on fillet; SF* = skin-off fillet (eel); WBC = whole-body composite; WBI = whole-body individual

MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.001

Field Crew Initials: BWL, KCM, CDD, CCB

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
10/06/14 - 1359	Trawl	North (N)	WE	130	22.6	N/A	ID = WE
				172	46.7		
				125	18.1		
				132	22.0		
				132	21.5		
				131	21.4		
				132	23.0		
				109	11.0		
				111	12.3		
				115	13.0		
				122	17.9		
				120	16.7		
				116	14.5		
	Trawl	N	Northern Kingfish	80	4.3	N/A	ID = NK

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.001

Field Crew Initials: BWL, KCM, CDD, CCB

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
10-06-14 - 1359	Trawl	N	Scup	79.0	7.6		ID = SC
			Hogchoker	140	53.2		ID = HC
			↓	120	36.4		↓
			Windowpane	142	32.7		ID = WW
			Winter Flounder	95	~~10.4~~ g	KCM	~~ID = WW~~ KCM
			↓	92	8.6 g	KCM	

START PROCESSING: 1636
END PROCESSING: 17:05

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.001

Field Crew Initials: BWS CAD

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
10/7/14	TRAWL	NORTH BAY	Striped Bass	268	208	NA	
			Oyster toadfish	198	181.2		
			Oyster toadfish	199	166.6		
			Oyster toadfish	185	148		
			Oyster toadfish	162	77.7		
			Oyster toadfish	200	185.7		
			Gizzard shad	132	22.3		partially eaten
			Hogchoker	152	65.8		
			Hogchoker	122	35.5		
			Silver perch	92	10.3		
			Silver perch	90	9.9		
			Hogchoker	88	9.1		
			Striped Sea Robin	112	17.4		
10/7/14	TRAWL	NORTH	Striped Sea Robin	111	15.6		

*Includes target species that did not meet size requirements

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.001

Field Crew Initials: BWL, CDD, CCB, CCS

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
10/7/14	Trawl	North	Moonfish	58	2.5	NA	Pathologist

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.001

Field Crew Initials: BWL, CDD, JBS, CCB, CCS

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
10/7/14 1220	CRAB TRAP	122	Oyster toadfish	201	175	NA	no abnormalities
10/7/14 1318	TRAWL	NORTH BAY	Weakfish	165	50	NA	no external abnormalities
				155	45		
				160	45		
				130	25		
				110	20		
				88	5		
				90	5		
				106	10		
				93	5		
				134	20		
				160	40		
				155	35		
				115	20		

NORTH BAY

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.001

Field Crew Initials: BWL, CDD, CCB, CCS

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
10/7/14 1318	TRAWL	North Bay	Weakfish	108	5	NA	no abnormalities
				84	4		
				133	25		
10/8/14 1225	TRAWL	NORTH BAY	weakfish	145	50	NA	
				120	30		
				167	60		
				130	40		
				134	40		
				105	25		
				117	25		
				115	25		
				135	40		
				130	30		
				125	30		

BWL

NORTH BAY

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.001

Field Crew Initials: BWL, CCS, CCB

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
10/8/14 1225	TRAWL	NORTH BAY	Weakfish	135	30	NA	no external abnormalities
				145	30		
				165	45		
				126	35		
				120	15		
				124	20		
				113	15		
				115	15		
				128	20		
				108	15		
				110	15		
				105	14		

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Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.001

Field Crew Initials: BWL, CDD, CCS, CCB

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
10-8-14 1225	Trawl	NORTH BAY	Striped Sea Robin	132	28.2	NA	
				140	34.3		
				118	22.4		
				68	3.2		
				49	1.7		
				56	2.3		
				68	3.4		
				75	4.0		
				84	6.5		
			Striped Sea Robin	50	1.8		
			Northern King Fish	111	14.0		
			Northern King Fish	88	5.8		
			Black Sea Bass	72	5.3		
			Naked Goby	41	0.7		

NORTH BAY

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.001

Field Crew Initials: BWL, CCB, CSB, CCS

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
10-8-14/1225	Trawl	NORTH BAY	Smallmouth Flounder	57	1.4	NA	
	↓	↓	Smallmouth Flounder	53	1.1	↓	
↓	Trawl	↓	Smallmouth Flounder	61	1.9	↓	
↓	1045 Crab Pot	↓	Striped Bass	282	218	↓	
↓	↓ Crab Pot	↓	Striped Bass	268	189	↓	

* includes target species that are not of sufficient length

Central Bay

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.001

Field Crew Initials: BWJ, CDD, CC, CCB

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
10/9/14: 0926	Trawl	Central Bay	Scup	100	17.4	NA	
				88	10.7		
				100	16.0		
				94	15.0		
				110	21.0		
				98	16.0		
				92	13.0		
				96	14.7		
				76	8.0		
				97	14.0		
				87	10.9		
				102	18.0		
				82	10.1		
	Trawl	Central Bay		85	10.1		

Central Bay

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.001

Field Crew Initials: BWL, CDD, CCS, CCB

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
10/9/14-0926	Trawl	Central Bay	Scup	86	10.5	NA	
				105	17.0		
				100	17.6		
				108	19.8		
				95	14.7		
				97	13.3		
				90	12.7		
				80	8.6		
				100	18.0		
				93	13.0		
				70	5.5		
				91	13.3		
				95	15.3		
				87	11.7		

Central Bay

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.001

Field Crew Initials: BWL, CDD, CCS, CCB

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
10/9/14-0926	Trawl	Central Bay	Scup	91	11.0	NA	
				72	7.0		
				80	9.2		
				77	8.0		
				85	9.7		
				92	12.3		
				77	7.7		
				90	12.5		
				88	11.1		
				82	10.0		
				69	5.0		
				77	7.2		
				89	11.3		
				100	12.2		

Central Bay

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.001

Field Crew Initials: BWL, CDD, CCS, CCB

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
10/9/14 0926	Trawl	Central Bay	Sculp	87	10.7	Adult	
			↓	95	14.0		
			↓	92	14.0		
			Sculp	78	7.6		
			Moonfish	115	17.8		
			Weakfish	135	29.8		
			↓	132	24.5		
			↓	115	16.6		
			↓	133	24.0		
			↓	130	22.9		
			↓	145	34.4		
			↓	145	28.6		
			↓	145	27.3		
↓	↓	↓	Weakfish	131	25.0	↓	

Central Bay

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.001

Field Crew Initials: BWL, COD, CCS, CCB

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
10/9/14 0926	Trawl	Central Bay	Weakfish	135	23.0	NA	
				115	12.7		
				158	38.0		
				133	21.7		
				116	18.5		
				130	22.3		
				132	25.7		
				142	31.0		
				113	14.0		
				137	25.0		
				130	24.0		
				118	16.5		
				141	28.0		
			Weakfish	143	26.7		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.001

Field Crew Initials: BWL, CCD, CCS, CCB

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
10/9/14 0926	Trawl	Central Bay	Striped Sea Robin	120	21.4	NA	
10/9/14 0926	Trawl	Central Bay	Northern Kingfish	195	75.7	↓	

North Bay

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.001

Field Crew Initials: BWL, CCD, CCS, CCB

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
10/9/14	Eel Pot	North Bay	Black Sea Bass	80	8.2	NA	
↓	Eel pot	↓	Oyster toadfish	280	180.0	↓	
10/9/14	↓	North Bay	Striped Bass	317	318	↓	

Central Bay

~~6 of 6~~ kccm
1 of 1

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.001

Field Crew Initials: KCM

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
10-9-14	Trawl	Central (C)	Scup	91	10.9	NA	
				84	8.2		
				95	12.5		
				96	13.6		
				88	10.6		
			Moonfish	65	3.5		
				81	6.4		
				83	7.2		
				60	3.1		
			Black Sea Bass	79	6.6		
			Butterfish	172	67.8		
				145	25.6		
			Northern Kingfish	168	39.6		
				183	57.5		

South Bay

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.001

Field Crew Initials: KCM, CCO, CCS, CCB

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
10-10-14	Seine	South Bay	BB	80	2.6	NA	Blueback
				115	14.0		Northern Kingfish
				106	12.3		↓
10-10-14				60	1.8		Northern Kingfish
				141	29.6		White Mullet
				125	26.0		↓
				160	46.8		
				131	23.9		↓
10-10-14	Seine	South Bay		117	14.7		White Mullet
10-10-14	↓	↓	SB	155	40.0		Striped Bass
10-10-14			SB	110	12.0		↓
10-10-14	Seine	South Bay	SB	118	16.1		Striped Bass

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.001

Field Crew Initials: SMS, CCB

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
10/14/14	Seine	Central Zone	AS	N/A	773	NA	293 individuals

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.001

Field Crew Initials: KCM, CCB, SMS, JBS

Collection Date/Time	Collection Method	Sampling Zone and Location	Species	Count*	Estimated Size Class	Notes
10-13-14	Seine	134(S)	AS	85	NA	138g
10-13-14	Seine	132B(N)	SK	51		162g
10-13-14	Seine	132B(N)	MU	2		2.1g
10-13-14	Seine	132B(N)	AS	66		168g
10-13-14	Seine	123B(N)	SK	37		327g
10-13-14	Seine	123B(N)	AS	23		42g
10-13-14	Seine	132A(N)	AS	43		115g
10-13-14	Seine	132A(N)	SK	14		18g
10-13-14	Seine	132A(N)	MU	5		2.3g
~~10-13-14~~	~~Seine~~	~~123A(N)~~	~~SB~~			
10-13-14	Seine	133(N)	AS	56		84g

*Can be estimated count if individuals are numerous.

Notes: target species that were not needed to meet tissue mass requirements

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.001

Field Crew Initials:

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
10-13-14 1235	SEINE	123A (N)	SB	150	33.2	NA	
				138	25.6		
				113	14.0		
				127	18.1		
				118	16.6		
				135	24.5		
				133	21.7		
				148	32.1		
				110	13.0		
				110	14.2		
				126	20.0		
				121	17.9		
				117	15.3		
10-13-14 1235	SEINE	123A (N)	SB	115	15.4		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.001

Field Crew Initials:

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
10-13-14 1235	SEINE	123A(N)	SB	108	11.8	NA	
				112	15.0		
				111	13.5		
				106	11.0		
				140	27.6		
				111	14.3		
				105	11.1		
				103	10.3		
				108	13.3		
				125	17.9		
10-13-14 1235	SEINE	123A(N)	SB	102	10.4		
10-13-14 1235	SEINE	123A(N)	Northern Kingfish	75	4.2		
10-13-14 1235	SEINE	123A(N)	Northern Kingfish	86	6.0		
10-13-14 1235	SEINE	123A(N)	Blueback	85	3.1		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.001

Field Crew Initials:

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
10-13-14 1235	SEINE	123A (N)	ME	85	6.1	NA	
10-13-14 1235	SEINE	123A (N)	ME	84	5.8		
10-13-14 1235	SEINE	123A (N)	ME	90	5.6		
10-13-14 1058	SEINE	133 (N)	SB	128	21.0		
10-13-14 1058	SEINE	133 (N)	SB	95	7.4		
10-13-14 1058	SEINE	133 (N)	SB	105	10.7		

Central Bay

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.001

Field Crew Initials: SMS, CCB, JBS

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
10/16/14 1425	Seine	Central/Site124	AS	65	1.0	NA	
				69	1.2		
				55	1.2		
				62	0.8		
				54	0.7		
				62	1.1		
				80	2.3		
				67	1.2		
				67	1.3		
				55	0.7		
				64	1.3		
				59	0.9		
				66	1.1		
				57	0.8		

South Bay

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.001

Field Crew Initials: SMS, CCB, JBS, KCM, MKM

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
10-16-14	Eel Pot	~~St.~~ KCM South	Black Seabass	101	16.1	NA	
				85	7.1		
				71	4.8		
				71	4.5		
				70	4.4		

Central Bay

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.001

Field Crew Initials: SMS, CCB, JBS

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
10/16/14 1405	Seine	Central / Site 125	AS	97	4.2	NA	
				80	2.1		
				75	1.8		
				85	3.0		
				67	1.7		
				85	2.8		
				72	1.8		
				83	2.6		
				79	2.1		
				80	2.2		
				78	2.1		
				94	3.9		
				65	1.4		
				85	2.8		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.001

Field Crew Initials: SMS, CCB, JBS

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
10/16/14 1425	Seine	Central/Site124	BB	71	2.3	NA	
				78	2.3		
				83	3.0		
				74	2.2		
				76	2.3		
				78	2.3		
10/16/14 1425	Seine	Central/Site124	Striped Anchovy	65	1.8		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.001

Field Crew Initials: SMS, CCB, JBS

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
10/16/14 1425	Seine	Central / Site 124	AS	55	0.7	NA	
				73	1.6		
				62	1.1		
				63	1.1		
				60	1.0		
				66	1.2		
				58	1.0		
				55	1.3		
				58	0.9		
				74	1.8		
				71	1.2		
				68	1.3		
				48	0.3		
				75	1.4		

SITE 131B
Striped Killifish

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.001

Field Crew Initials: CCB, SMS

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
10/17/14	Seine	131B	SK	61	2.4	NA	
				56	2.0		
				63	2.7		
				58	2.2		
				55	1.8		
				55	1.7		
				63	3.2		
				54	1.8		
				52	1.5		
				51	1.4		
				55	1.6		
				52	1.4		
				59	2.2		
				51	1.4		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.001

Field Crew Initials: CCB, SMS

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
10/17/14	SEINE	131 13	SK	60	2.3	NA	
				61	2.4		
				56	1.8		
				57	2.0		
				53	1.7		
				61	2.5		
	SEINE	131 13	SK	*	136g	→	Batch weight of (78) individuals

SITE 131B
Mummichogs

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 2
Revision Date: October 2014
Non-Target Species Tally Form

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.001

Field Crew Initials: CCB, SMS

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
10/19/14	Seine	131B	MU	88	8.1	NA	
				78	6.4		
				67	3.7		
				39	0.7		
				48	1.2		
				43	0.8		
				28	0.3		
				30	0.3		
				36	0.5		
				40	0.9		
				33	0.5		
				43	1.0		
				40	0.7		
				53	1.9		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.001

Field Crew Initials: CCB, SMS

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
10/17/14	Seine	131B	MU	49	1.3	NA	
				28	0.3		
				40	0.7		
				35	0.5		
				46	1.3		
				61	3.0		
10/17/14	Seine	131B	MU	*	890g	→	Total Weight of (1286) individual

Side 131B
Silversides

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.001

Field Crew Initials:

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
10/10/14	Seine	131B	AS	38	0.3	NA	
				60	1.0		
				90	3.9		
				111	7.3		
				101	5.1		
				85	3.3		
				96	4.5		
				106	6.1		
				95	4.1		
				107	6.0		
				80	2.6		
				83	2.9		
				101	5.3		
				100	5.0		

Site 13 B
Silversides

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.001

Field Crew Initials: CCB, SMS

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
10/17/14	Seine	13B	AS	108	5.8	NA	
				91	3.7		
				86	3.3		
				102	5.2		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.001

Field Crew Initials: SMS, KCM, JBS

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
10/20/14 @ 1305	Seine	North / 122A	MU	99	13.6		
				72	4.3		
				92	11.3		
				51	1.6		
				36	0.5		
				52	1.6		
				55	1.8		
				37	0.5		
				56	2.2		
				59	2.3		
				50	1.2		
				70	3.7		
				65	3.9		
				82	7.0		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.001

Field Crew Initials: SMS, KCM, JBS

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
10/20/14 1305	Seine	North/122A	MU	60	2.6		
↓	↓	↓	↓	47	1.3		
				42	0.8		
				40	0.8		
				30	0.3		
				46	1.2		
				—	330g	—	157 Individuals

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.001

Field Crew Initials: SMS, KCM, JBS

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
10/20/14@1200	SEINE	North/123A	AS	61	1.0		
			MU	95	11.1		
				97	7.9		
				83	6.3		
				60	2.5		
				33	1.3		
				41	1.2		
				55	2.0		
				41	0.8		
				46	1.4		
				63	3.0		
				55	1.8		
				85	8.8		
				60	2.7		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.001

Field Crew Initials: SMS, KCM, JBS

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
10/20/14 @ 1200	Seine	North/123A	MU	57	2.0		
↓	↓	↓	↓	62	2.1		
				44	1.0		
				53	1.8		
				55	1.9		
				36	0.6		
				61	2.8		
				65	3.2		
				68	4.1		
				65	3.5		
				45	1.4		
				49	1.6		
				78	5.4		
				76	5.3		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.001

Field Crew Initials: SMS, KCM, JBS

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
14/20/4 @ 1200	Seine	North/123A	MU	59	2.3		
				56	2.1		
				80	6.5		
				67	3.9		
				49	1.5		
				52	1.7		
				55	1.9		
				46	1.4		
				49	1.5		
				78	5.5		
				48	1.3		
				78	5.6		
				72	4.2		
				54	1.2		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.001

Field Crew Initials: SMS, KCM, JBS

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
10/20/14 @ 1200	Seine	North / 123A	MU	49	1.5		
				47	1.2		
				56	2.3		
				51	1.4		
				70	3.8		
				39	0.9		
				50	1.8		
				63	2.4		
				47	1.3		
				80	5.4		
				75	4.4		
				56	3.2		
				62	2.6		
				55	2.2		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.001

Field Crew Initials: SMS, KCM, JBS

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
10/20/14 @ 1250	Seine	North / 122B	MU	96	11.3		
				72	4.7		
				58	2.4		
				58	2.3		
				45	0.9		
				46	1.0		
				34	0.4		
				41	0.6		
				44	1.0		
				36	0.5		
				50	1.3		
				53	1.7		
				34	0.4		
				43	1.0		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.001

Field Crew Initials: SMS, KCM, JBS

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
10/29/14@1250	Seine	North/122B	MU	69	3.9		
↓	↓	↓	↓	42	0.8		
				51	1.4		
				43	0.9		
				35	0.4		
↓	↓	↓	↓	42	0.9		
10/30/14@1250	Seine	North/122B	MU	—	435 grams		/346 Individuel/Fish

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.001

Field Crew Initials: SMB, KCM, JBS

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
10/22/14 @ 1230	Seine	North / 122 C	SB	121	17.9		
↓	↓	↓	AS	111	7.9		
			SK	82	7.0		
			↓	85	8.0		
				79	6.1		
				51	1.3		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.001

Field Crew Initials: SMS, KCM, JBS

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
10/20/14 @ 1200	Seine	North/123A	MW	45	0.9		
				54	1.9		
				60	2.3		
				58	2.3		
				65	3.6		
				52	2.1		
				61	2.5		
				65	3.1		
				55	2.0		
				39	0.9		
				38	0.8		
				68	4.1		
				45	1.0		
				49	0.9		
				46	0.8		

SITE 133
By cadcL

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.001

Field Crew Initials: SMS, KCM, JBS

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
10/20/14 @ 1140	SEINE	North / 133	MU	34	0.5		
				30	0.1		
				40	0.5		
				37	0.4		
				45	1.2		
				40	0.7		
				50	1.6		
				46	1.2		
				48	1.1		
				43	1.1		
				41	1.0		
				36	0.6		
				41	0.9		
				46	1.0		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.001

Field Crew Initials: SMS, KCM, JBS

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
10/20/14 @ 1140	SEINE	North / 133	MU	41	0.7		
				36	0.6		
				39	0.6		
				33	0.5		
				30	0.3		
				40	0.7		
				40	0.6		
				42	0.8		
				42	0.7		
				43	0.8		
				35	0.5		
				33	0.3		
				46	1.1		
				39	0.7		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.001

Field Crew Initials: SMS, KCM, JBS

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
10/20/14 @ 1140	SEINE	North / 133	MU	40	0.7		
				36	0.5		
				36	0.6		
				40	0.7		
				46	1.0		
				38	0.6		
				38	0.6		
				35	0.4		
				40	0.7		
				43	0.9		
				40	0.8		
				39	0.7		
				46	0.9		
				45	1.0		
				35	0.3		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.001

Field Crew Initials: SMS, KCM, JBS

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
10/20/14 @ 1140	SEINE	North / 133	Northern pipefish	186	2.4		
↓	↓	↓	↓	145	0.7		
			Goby	43	0.8		
			↓	38	0.5		
			SK	36	0.3		
			↓	56	1.8		
				71	3.5		
				65	2.6		
				64	2.5		
				88	7.5		
				83	5.4		
				65	2.8		
				66	2.8		
↓	↓	↓	↓	58	1.9		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.001

Field Crew Initials: SMS, KCM, JBS

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
10/20/14 @ 1140	SEINE	North / 133	SK	75	4.1		
↓	↓	↓	↓	70	3.8		
				65	2.5		
				56	1.9		
				65	2.8		
				61	2.4		
↓	↓	↓	AS	69	1.5		
			↓	45	0.4		
				39	0.3		
				66	1.3		
				96	4.2		
				85	2.9		
				102	5.9		
↓	↓	↓	↓	70	1.6		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.001

Field Crew Initials: SMB, KCM, JBS

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
10/20/14@ 1140	SEINE	North / 133	AS	90	3.8		
				75	2.0		
				75	1.8		
				72	1.8		
				88	3.2		
				85	2.6		
				58	1.0		
				83	2.6		
				92	3.3		
				81	2.5		
				70	1.7		
				80	2.4		
				76	2.1		
				53	0.8		

* 127 more Striped Killifish @ 205.2 g. *

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.001

Field Crew Initials: SMS, JBS, KCM

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
10/21/14 @ 1110	Eel Pots	South Zone	Scup	85	8.5		
			Black Sea Bass	102	14.9		
				72	4.6		
				87	8.9		
				86	9.0		
				77	6.0		
				71	5.0		
				87	8.1		
				95	11.8		
				71	4.8		
				74	4.6		
				93	9.9		

South Zone

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.001

Field Crew Initials: CJR, SMS, JBS

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
10-22-14	Crab Pots	Southern Zone	Oyster Toad Fish	180	250		
				230	325		
				295	600		
				225	350		
				230	450		
	Eel Pots		Oyster Toad Fish	185	200		
				185	200		
				215	250		
	Eel Pots		Black Sea Bass	85	6		
				95	10		
				110	11		

South Zone

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.001

Field Crew Initials: JBS, CJR, SMS

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
10-23-14	Crab Pots	South Zone	Oyster Toad Fish	250	440		
			Striped Bass	325	350		
	Eel Pot		Black Sea Bass	70			wouldn't weigh individually on scale so done collectively
				85	10		
				86			

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.001

Field Crew Initials: SMS, KCM, JBS, CJR

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
10/24/14@0830	Gill Net	South Zone	Gizzard Shad	407	950		
"	"	"	Atlantic Menhaden	331	375		
10/24/14@0830	Beach Seine	Central/Site 124	Blueback Herring	—	—		(6) Total
"	"	" / "	Striped Killifish	—	—		(8) Total

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.001

Field Crew Initials: JBS, CJR

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
10/24/14 0827	Beach Seine	Central Zone/124	Striped Mullet	230	136.6		
10/24/14 0827	Beach Seine	Central Zone/124	AM	90	6.4		
10/24/14 0827	Beach Seine	Central Zone/124	AM	88	6.4		
10/24/14 0827	Beach Seine	Central Zone/124	AM	87	6.6		

AM = Atlantic Menhaden

2015

NORMANDEAU
environmental consultants

Attachment 4

DAILY SAFETY BRIEFING

DATE: 3/30/15	**CONTACTS:**
TOWN: Elizabeth	**Normandeau Associates:** B. Lees
LOCATION: Eliz Marina	**CLIENT:** Terra - B. Michuk
	SUBCONTRACTORS(S):
	Louis - Berger

Nearest Hospital Location: Trinitas

End of day check-in: Marina

JOB OVERVIEW

- o Protective clothing
- o Insect protection
- o Sun protection
- o Slip, Trip, Fall
- o Cold/Heat Stress indicators
- o Severe weather
- o Hunting Season
- o End of day check-in

Other: _____

CREW SIGN-IN:

Kate Maurer
Matthew W. Hawes
NATE GAINER
Ryan
Jamie Schaff
Chris Barnett
A. Accardi Dey (LBG)

NORMANDEAU
environmental consultants

Attachment 4

DAILY SAFETY BRIEFING

DATE: 3/31/15

TOWN: Eliz. NJ

LOCATION: Eliz marina

CONTACTS:
Normandeau Associates: Bryan Lees

CLIENT: Tierra – Brian Mikucki

SUBCONTRACTORS(S):

Nearest Hospital Location: Trinitas Hospital

End of day check-in: Marina

JOB OVERVIEW

- o Protective clothing
- o Insect protection
- o Sun protection
- o Slip, Trip, Fall
- o Cold/Heat Stress indicators
- o Severe weather
- o Hunting Season
- o End of day check-in

Other: _____

CREW SIGN-IN:

Chris Burnett
Jayne Schultz
NATE GAINER
Matthew R Williams
Keith Maurice
Brian Mikucki
Bryan Lees
Anthony Accardi-Dey (LBG)

NORMANDEAU
environmental consultants

Attachment 4

DAILY SAFETY BRIEFING

DATE: 4/1/15 TOWN: Eliz NJ LOCATION: Eliz. Marina	**CONTACTS:** **Normandeau Associates:** Bryan Lees **CLIENT:** **SUBCONTRACTORS(S):**

Nearest Hospital Location: Trinitas

End of day check-in: _____

JOB OVERVIEW

- o Protective clothing
- o Insect protection
- o Sun protection
- o Slip, Trip, Fall
- o Cold/Heat Stress indicators
- o Severe weather
- o Hunting Season
- o End of day check-in

Other: _____

CREW SIGN-IN:

Bryan Lees
Matthew Williams
NATE GAINER
C Burnett
(LBG)

Rev 1

NORMANDEAU
environmental consultants

Attachment 4

DAILY SAFETY BRIEFING

DATE: 4/2/15	**CONTACTS:**
TOWN: Eliz. NJ	**Normandeau Associates:** Bryan Lees
LOCATION: Eliz. Marina	**CLIENT:** Tierra
	SUBCONTRACTORS(S):

Nearest Hospital Location: Trinitas

End of day check-in: Marina

JOB OVERVIEW

- o Protective clothing
- o Insect protection
- o Sun protection
- o Slip, Trip, Fall
- o Cold/Heat Stress indicators
- o Severe weather
- o Hunting Season
- o End of day check-in

Other: _____

CREW SIGN-IN:

Matthew R. Williams

Keith R Maurice

NATE GAINER

Rev 1

NORMANDEAU
environmental consultants

Attachment 4

DAILY SAFETY BRIEFING

DATE: 4/6/15

TOWN: Eliz. NJ

LOCATION: Eliz. Marina

CONTACTS:
Normandeau Associates: Bryan Lees

CLIENT: Tierra Solutions

SUBCONTRACTORS(S):

Nearest Hospital Location: Trinitas

End of day check-in: Marina

JOB OVERVIEW

- o Protective clothing
- o Insect protection
- o Sun protection
- o Slip, Trip, Fall
- o Cold/Heat Stress indicators
- o Severe weather
- o Hunting Season
- o End of day check-in

Other: _____

CREW SIGN-IN:

Nate Gainer

NORMANDEAU
environmental consultants

Attachment 4

DAILY SAFETY BRIEFING

DATE: 4/7/15	**CONTACTS:**
TOWN: Eliz.	**Normandeau Associates:** Bryan Leas
LOCATION: Eliz Marina	**CLIENT:** Tierra
	SUBCONTRACTORS(S): LBG

Nearest Hospital Location: Trinitas

End of day check-in: Eliz Marina

JOB OVERVIEW

- o Protective clothing
- o Insect protection
- o Sun protection
- o Slip, Trip, Fall
- o Cold/Heat Stress indicators
- o Severe weather
- o Hunting Season
- o End of day check-in

Other: _____

CREW SIGN-IN:

Bryan Leas
Jayme Schaff
Greg Rl
Kate Marino
Cory Thomas
Chris Brust
Nate Gainer

NORMANDEAU
environmental consultants

Attachment 4

DAILY SAFETY BRIEFING

DATE: 4/8/15 TOWN: Elizabeth LOCATION: Elizabeth Marina	**CONTACTS:** **Normandeau Associates:** **CLIENT:** **SUBCONTRACTORS(S):**

Nearest Hospital Location: _____

End of day check-in: _____

JOB OVERVIEW

- ⊘ Protective clothing
- o Insect protection
- ⊘ Sun protection
- ⊘ Slip, Trip, Fall
- ⊘ Cold/Heat Stress indicators
- ⊘ Severe weather
- o Hunting Season
- o End of day check-in

Other: _____

CREW SIGN-IN:

Joseph Schorr — Brian Hudnut

NATE GAMER — JR

Chris Pl

Chris Barnett

Tim Hill

Scott Hawk

Corey Ennis

NORMANDEAU
environmental consultants

Attachment 4

DAILY SAFETY BRIEFING

DATE: 4/9/15 TOWN: Elizabeth, NJ LOCATION: Elizabeth Marina	**CONTACTS:** **Normandeau Associates:** **CLIENT:** **SUBCONTRACTORS(S):**

Nearest Hospital Location: _____

End of day check-in: _____

JOB OVERVIEW

- ○ Protective clothing
- ○ Insect protection
- ○ Sun protection
- ○ Slip, Trip, Fall
- ○ Cold/Heat Stress indicators
- ○ Severe weather
- ○ Hunting Season
- ○ End of day check-in

Other: _____

CREW SIGN-IN:

NATE GAINER

NORMANDEAU
environmental consultants

Attachment 4

DAILY SAFETY BRIEFING

DATE: 4/27/15	**CONTACTS:**
TOWN: Eliz. NJ	**Normandeau Associates:** Bryan Lees
LOCATION: Eliz. Marina	**CLIENT:** Tierra
	SUBCONTRACTORS(S): Oversight - LBG

Nearest Hospital Location: Trinitas

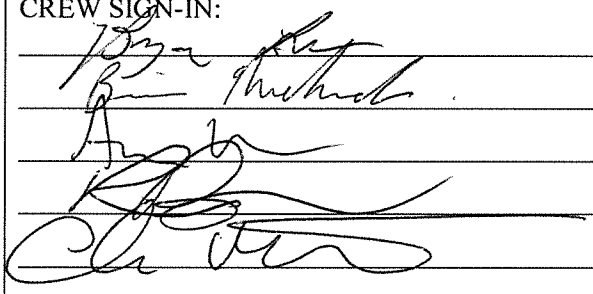
End of day check-in: Eliz. Marina

JOB OVERVIEW

- o Protective clothing
- o Insect protection
- o Sun protection
- o Slip, Trip, Fall
- o Cold/Heat Stress indicators
- o Severe weather
- o Hunting Season
- o End of day check-in

Other: _____

CREW SIGN-IN:



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Attachment 4

DAILY SAFETY BRIEFING

DATE: 4/28/15	**CONTACTS:**
TOWN: Eliz. NJ	**Normandeau Associates:** Normandeau
LOCATION: Eliz. Marina	**CLIENT:** Terra
	SUBCONTRACTORS(S):

Nearest Hospital Location: Trinitas

End of day check-in: marina

JOB OVERVIEW

- [x] Protective clothing
- [ ] Insect protection
- [x] Sun protection
- [ ] Slip, Trip, Fall
- [ ] Cold/Heat Stress indicators
- [ ] Severe weather
- [ ] Hunting Season
- [x] End of day check-in

Other: _____

CREW SIGN-IN:

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Attachment 4

DAILY SAFETY BRIEFING

DATE: 4/29/15	**CONTACTS:**
TOWN: Eliz NJ	**Normandeau Associates:** Team
LOCATION: Eliz. Marina	**CLIENT:**
	SUBCONTRACTORS(S):

Nearest Hospital Location: Trinitas

End of day check-in: _____

JOB OVERVIEW

- ✓ Protective clothing
- o Insect protection
- ✓ Sun protection
- o Slip, Trip, Fall
- o Cold/Heat Stress indicators
- o Severe weather
- o Hunting Season
- o End of day check-in

Other: _____

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DAILY SAFETY BRIEFING

DATE: 4/30/15 TOWN: Eliz NJ LOCATION: Eliz Marina	**CONTACTS:** **Normandeau Associates:** Bryan Lees **CLIENT:** Tierra **SUBCONTRACTORS(S):**

Nearest Hospital Location: Trenton

End of day check-in: Eliz Marina

JOB OVERVIEW

- ✓ Protective clothing
- ✓ Insect protection
- ✓ Sun protection
- o Slip, Trip, Fall
- o Cold/Heat Stress indicators
- o Severe weather
- o Hunting Season
- o End of day check-in

Other: _____

CREW SIGN-IN:

Bryan Lees
Chris Burnett
Beth Gluchowski

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Attachment 4

DAILY SAFETY BRIEFING

DATE: 5/4/15

TOWN: Eliz NJ

LOCATION: Eliz Marina

CONTACTS:
Normandeau Associates: Bryan Lees

CLIENT: Tierra

SUBCONTRACTORS(S):

Nearest Hospital Location: Trinitas

End of day check-in: Marina

JOB OVERVIEW

- ✓ Protective clothing
- o Insect protection
- ✓ Sun protection
- ✓ Slip, Trip, Fall
- o Cold/Heat Stress indicators
- o Severe weather
- o Hunting Season
- o End of day check-in

Other: _____

CREW SIGN-IN:

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DAILY SAFETY BRIEFING

DATE: 5/5/15	**CONTACTS:**
TOWN: Elizabeth NJ	**Normandeau Associates:** Bryan Lees
LOCATION: Elizabeth Marina	**CLIENT:** Tierra
	SUBCONTRACTORS(S):

Nearest Hospital Location: Trinitas

End of day check-in: Marina

JOB OVERVIEW

- ✓ Protective clothing
- o Insect protection
- ✓ Sun protection
- ✓ Slip, Trip, Fall
- o Cold/Heat Stress indicators
- o Severe weather
- o Hunting Season
- o End of day check-in

Other: _____

CREW SIGN-IN:

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DAILY SAFETY BRIEFING

DATE: 5/6/15 TOWN: Eliz NJ LOCATION: Eliz Marina	**CONTACTS:** **Normandeau Associates:** Bryan Lees **CLIENT:** **SUBCONTRACTORS(S):**

Nearest Hospital Location: Trin Fas

End of day check-in: Eliz. Marina

JOB OVERVIEW

- o Protective clothing
- o Insect protection
- o Sun protection
- o Slip, Trip, Fall
- o Cold/Heat Stress indicators
- o Severe weather
- o Hunting Season
- o End of day check-in

Other: _____

CREW SIGN-IN:

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DAILY SAFETY BRIEFING

DATE: 5/7/15	**CONTACTS:**
TOWN: Elizabeth NJ	**Normandeau Associates:** ~~Tierra~~ Bryan Chris
LOCATION: Elizabeth Marina	**CLIENT:** Tierra
	SUBCONTRACTORS(S):

Nearest Hospital Location: Trinitas

End of day check-in: marina

JOB OVERVIEW

- [x] Protective clothing
- [ ] Insect protection
- [x] Sun protection
- [x] Slip, Trip, Fall
- [ ] Cold/Heat Stress indicators
- [ ] Severe weather
- [ ] Hunting Season
- [ ] End of day check-in

Other: _____

CREW SIGN-IN:

Bryan [illegible]

Bryan [illegible]

Chris [illegible]

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DAILY SAFETY BRIEFING

DATE: 6/11/15

TOWN: Elizabeth NJ.

LOCATION: Elizabeth marina

CONTACTS:
Normandeau Associates: Bryan Lees

CLIENT: Tierra

SUBCONTRACTORS(S):

Nearest Hospital Location: Trinitas

End of day check-in: marina

JOB OVERVIEW

- o Protective clothing
- o Insect protection
- o Sun protection
- o Slip, Trip, Fall
- o Cold/Heat Stress indicators
- o Severe weather
- o Hunting Season
- o End of day check-in

Other: _____

CREW SIGN-IN:

Bryan Lees

Anne

Cassi Thompson

Seth Clerts

Jayne Schaff

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DAILY SAFETY BRIEFING

DATE: 6/2/15	**CONTACTS:**
TOWN: Eliz. NJ	**Normandeau Associates:** Bryan Legs
LOCATION: Eliz marina	**CLIENT:** Ticora
	SUBCONTRACTORS(S):

Nearest Hospital Location: Trinitas

End of day check-in: Eliz Marina

JOB OVERVIEW

- o Protective clothing
- o Insect protection
- o Sun protection
- o Slip, Trip, Fall
- o Cold/Heat Stress indicators
- o Severe weather
- o Hunting Season
- o End of day check-in

Other: _____

CREW SIGN-IN:

Bryan Legs

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DAILY SAFETY BRIEFING

DATE: 6/3/15	**CONTACTS:**
TOWN: Ellis NJ	**Normandeau Associates:** Bryan Lee
LOCATION: Ellis Marina	**CLIENT:** Tetra
	SUBCONTRACTORS(S):

Nearest Hospital Location: Trinitas

End of day check-in: Marina

JOB OVERVIEW

- o Protective clothing
- o Insect protection
- o Sun protection
- o Slip, Trip, Fall
- o Cold/Heat Stress indicators
- o Severe weather
- o Hunting Season
- o End of day check-in

Other: _____

CREW SIGN-IN:

Bryan Lee
James Schmitt
Gabe Clark
Brian Thelen
Andrew Nelson

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DAILY SAFETY BRIEFING

DATE: 6/4/15

TOWN: Eliz NJ

LOCATION: Eliz Marina

CONTACTS:
Normandeau Associates: Bryan Lees

CLIENT: Tetra

SUBCONTRACTORS(S):

Nearest Hospital Location: Trinitas

End of day check-in: _____

JOB OVERVIEW

- o Protective clothing
- o Insect protection
- o Sun protection
- o Slip, Trip, Fall
- o Cold/Heat Stress indicators
- o Severe weather
- o Hunting Season
- o End of day check-in

Other: _____

CREW SIGN-IN:

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DAILY SAFETY BRIEFING

DATE: 6/5/15 TOWN: Eliz NJ LOCATION: Eliz Marina	**CONTACTS:** **Normandeau Associates:** Bryan Lees **CLIENT:** Tierra **SUBCONTRACTORS(S):**

Nearest Hospital Location: Trinitas

End of day check-in: Marina

JOB OVERVIEW

- o Protective clothing
- o Insect protection
- o Sun protection
- o Slip, Trip, Fall
- o Cold/Heat Stress indicators
- o Severe weather
- o Hunting Season
- o End of day check-in

Other: _____

CREW SIGN-IN

Bryan Lees

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DAILY SAFETY BRIEFING

DATE: 6/8/15 TOWN: Elizabeth LOCATION: Eliz. Marina	**CONTACTS:** **Normandeau Associates:** **CLIENT:** **SUBCONTRACTORS(S):**

Nearest Hospital Location: _____

End of day check-in: _____

JOB OVERVIEW

- ✓ Protective clothing
- ✓ Insect protection
- ✓ Sun protection
- ✓ Slip, Trip, Fall
- ✓ Cold/Heat Stress indicators
- ✓ Severe weather
- ○ Hunting Season
- ✓ End of day check-in

Other: _____

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DAILY SAFETY BRIEFING

DATE: 7/27/15

TOWN: Eliz NJ

LOCATION: Eliz Marina

CONTACTS: B. Lees
Normandeau Associates:

CLIENT: Tierra - B. Mikucki

SUBCONTRACTORS(S):

Nearest Hospital Location: Trinitas

End of day check-in: Marina

JOB OVERVIEW

- ✓ Protective clothing
- ✓ Insect protection
- ✓ Sun protection
- ✓ Slip, Trip, Fall
- ○ Cold/Heat Stress indicators
- ✓ Severe weather
- ○ Hunting Season
- ✓ End of day check-in

Other: _____

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DAILY SAFETY BRIEFING

DATE: 7/28/15	**CONTACTS:**
TOWN: Elizabeth NJ	**Normandeau Associates:** Bryan Lees
LOCATION: Elizabeth Marina	**CLIENT:** Tetra - Carlie Thompson
	SUBCONTRACTORS(S):

Nearest Hospital Location: Trinitas

End of day check-in: Marina

JOB OVERVIEW

- ✓ Protective clothing
- ○ Insect protection
- ✓ Sun protection
- ✓ Slip, Trip, Fall
- ○ Cold/Heat Stress indicators
- ✓ Severe weather
- ○ Hunting Season
- ✓ End of day check-in

Other: _____

CREW SIGN-IN:

Bryan Lees
Tom Schmidt
Mark Klug
Ana Ulmer
Carlie Thompson

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DAILY SAFETY BRIEFING

DATE: 7/29/15	**CONTACTS:**
TOWN: Eliz NJ	**Normandeau Associates:** B Coes
LOCATION: Eliz Marina	**CLIENT:** Merra
	SUBCONTRACTORS(S):

Nearest Hospital Location: Trinitas

End of day check-in: Marina

JOB OVERVIEW

- ✓ Protective clothing
- ✓ Insect protection
- ✓ Sun protection
- ✓ Slip, Trip, Fall
- o Cold/Heat Stress indicators
- o Severe weather
- o Hunting Season
- o End of day check-in

Other: _____

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DAILY SAFETY BRIEFING

DATE: 7/30/15	**CONTACTS:**
TOWN: Eliz. NJ	**Normandeau Associates:** B. Lees
LOCATION: Eliz Marina	**CLIENT:** B. Mikucki/ Marina
	SUBCONTRACTORS(S):

Nearest Hospital Location: Trinitas

End of day check-in: Marina

JOB OVERVIEW

- ✓ Protective clothing
- o Insect protection
- ✓ Sun protection
- ✓ Slip, Trip, Fall
- o Cold/Heat Stress indicators
- ✓ Severe weather
- o Hunting Season
- ✓ End of day check-in

Other: _____

CREW SIGN-IN:

Brian Thill
Brian Thurman
Anna Hyatt
Mary
James Schultz

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DAILY SAFETY BRIEFING

DATE: 7/21/15

TOWN: Old NJ

LOCATION: Old Marina

CONTACTS:
Normandeau Associates: B. Lees

CLIENT: Team

SUBCONTRACTORS(S):

Nearest Hospital Location: Trinitas

End of day check-in: Marina

JOB OVERVIEW

- [x] Protective clothing
- [ ] Insect protection
- [x] Sun protection
- [x] Slip, Trip, Fall
- [ ] Cold/Heat Stress indicators
- [ ] Severe weather
- [ ] Hunting Season
- [x] End of day check-in

Other: _____

CREW SIGN-IN:

James Schultz
Bryan Lees
Andrew Vuskey
Mark Mc
[illegible]

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DAILY SAFETY BRIEFING

DATE: 8/3/15	**CONTACTS:**
TOWN: Eliz. NJ	**Normandeau Associates:** B. Lees
LOCATION: Eliz Marina	**CLIENT:** Tierra
	SUBCONTRACTORS(S):

Nearest Hospital Location: Trinitas

End of day check-in: Marina

JOB OVERVIEW

- ✓ Protective clothing
- o Insect protection
- ✓ Sun protection
- o Slip, Trip, Fall
- ✓ Cold/Heat Stress indicators
- o Severe weather
- o Hunting Season
- ✓ End of day check-in

Other: _____

CREW SIGN-IN:

Bryan Hall
Brian Thomas
Andrew Adams
James Schultz
Chris Rose

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DAILY SAFETY BRIEFING

DATE: 8/4/15

TOWN: Eliz NJ

LOCATION: Eliz. Marina

CONTACTS:
Normandeau Associates: B. Lees

CLIENT: Terra - B. Mikucki

SUBCONTRACTORS(S):

Nearest Hospital Location: Trinitas

End of day check-in: Marina

JOB OVERVIEW

- ✓ Protective clothing
- o Insect protection
- ✓ Sun protection
- ✓ Slip, Trip, Fall
- o Cold/Heat Stress indicators
- o Severe weather
- o Hunting Season
- ✓ End of day check-in

Other: _____

CREW SIGN-IN:

Bryan Lees

Jayson Schultz

Brian Mikucki

Andrew

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Attachment 4

DAILY SAFETY BRIEFING

DATE: 8/5/15	**CONTACTS:**
TOWN: Elizabeth NJ	**Normandeau Associates:** B. Lees
LOCATION: Elizabeth Marina	**CLIENT:** Tierra
	SUBCONTRACTORS(S):

Nearest Hospital Location: Trinitas

End of day check-in: Marina

JOB OVERVIEW

- ☑ Protective clothing
- ○ Insect protection
- ☑ Sun protection
- ☑ Slip, Trip, Fall
- ○ Cold/Heat Stress indicators
- ○ Severe weather
- ○ Hunting Season
- ☑ End of day check-in

Other: _____

CREW SIGN-IN:

Location Data Form

Project Name: NEWARK BAY PHASE III **Project No.:** NA

Field Crew Initials: CDD, MKW (Set Crew), Amy Maxis Accardi (Louis Berger)
CDD, KFM (Retrieval Crew), Amy Maxis Accardi (Louis Berger)

Deployment Date & Time	Retrieval Date & Time	Location ID	Trap ID	Collection Method	Coordinates[a]		Depth (ft)
					Easting (X)[b]	Northing (Y)[b]	
03/30 1341	03/31 0932	S-EP21-0330	EP 21	EP	578201.43	659647.80	7'
03/30 1355	3/31 0936	S-EP20-0330	EP 20	EP	577694.06	659206.89	11'
03/30 1403	03/31 0926	S-EP14-0330	EP 14	EP	578632.35	659996.33	7'
03/30 1412	03/31 0944	S-EP13-0330	EP 13	EP	579635.39	659753.67	8.5'
03/30 1417	03/31 0949	S-EP10-0330	EP10	EP	579743.64	659745.36	8.4'
03/30 1434	03/31 0955	S-EP12-0330	EP12	EP	581006.37	660058.08	7.0'
03/30 1441	03/31 1004	S-EP11-0330	EP11	EP	581666.90	660116.56	10'
03/30 1452	03/31 1008	S-EP08-0330	EP08	EP	582477.65	660157.29	10'
03/30 1512	03/31 1130	S-EP04-0330	EP04	EP	581748.29	661256.67	8.2'
03/30 1517	03/31 1125	S-EP09-0330	EP09	EP	582087.38	661480.87	~~6.5~~ 6.5'
03/30 1525	03/31 1110	S-EP05-0330	EP05	EP	585395.80	663750.29	7.5'
03/30 1530	03/31 1114	S-EP02-0330	EP02	EP	585240.94	663621.65	7.5'
03/30 1540	03/31 1044	S-EP03-0330	EP03	EP	587354.55	665753.23	11.0'
03/30 1547	03/31 1057	S-EP01-0330	EP01	EP	587280.49	665804.62	9.0'
03/30 1550	03/31 1100	S-EP15-0330	EP15	EP	587209.35	665849.70	6.5'
03/30 1610	03/31 1027	S-EP19-0330	EP19	EP	583444.16	659965.67	7.5'
03/30 1612	03/31 1017	S-EP18-0330	EP18	EP	583126.88	660074.70	7.5'

not retrieved * set hung up on debris

[a] Field-observed coordinates.

[b] NAD83 New Jersey State Plane (ft).

Subsurface p-chem @
temperature (C) salinity (ppt)
conductivity (uS/cm)
dissolved oxygen (mg/L)
pH

Subsurface p-chem @
temperature (C) salinity (ppt)
conductivity (uS/cm)
dissolved oxygen (mg/L)
pH

1 of 1

Location Data Form

Project Name: NEWARK BAY PHASE III **Project No.:** NA

Field Crew Initials: COD, MRW (Set Crew)
COD, KEM (Retrieval Crew)

Deployment Date & Time	Retrieval Date & Time	Location ID	Trap ID	Collection Method	Coordinates[a]		Depth (ft)
					Easting (X)[b]	Northing (Y)[b]	
03/30 1615	03/31 1011	S-EP16-0330	EP16	EP	582752.10	660094.10	8.0'
03/30 1627	03/31 1137	S-EP17-0330	EP17	EP	579397.15	660657.49	10.0'
03/30 1635	03/31 0914	S-EP07-0330	EP07	EP	579093.87	660413.21	11.0'
03/30/1640	03/31 0905	S-EP06-0330	EP06	EP	579139.35	660565.18	7.0
D							

[a] Field-observed coordinates.

[b] NAD83 New Jersey State Plane (ft).

Subsurface p-chem @
temperature (C) salinity (ppt)
conductivity (uS/cm)
dissolved oxygen (mg/L)
pH

Subsurface p-chem @
temperature (C) salinity (ppt)
conductivity (uS/cm)
dissolved oxygen (mg/L)
pH

Location Data Form

Project Name: NEWARK BAY PHASE III **Project No.:** NA

Field Crew Initials: CPD, KEM (Set Crew), Amy Marie Accardi (Louis Berger)
CPD, NSB (Retrieval Crew), Tom Shinsky (Louis Berger)

Deployment Date & Time	Retrieval Date & Time	Location ID	Trap ID	Collection Method	Coordinates[a] Easting (X)[b]	Coordinates[a] Northing (Y)[b]	Depth (ft)
03/31 0906	4/01 0855	S-EP06-0331	EP06	EP	579139.35	660655.18	4.0'
03/31 0918	4/01 0901	S-EP07-0331	EP07	EP	579093.87	660413.21	9.0'
03/31 0927	4/01 1001	S-EP14-0331	EP14	EP	578632.35	659996.33	8.7'
03/31 0933	4/01 0909	S-EP21-0331	EP21	EP	578201.43	659647.80	9.7'
03/31 0937	4/01 0940	S-EP20-0331	EP20	EP	577694.06	659206.89	4.6'
03/31 0945	4/01 1006	S-EP13-0331	EP13	EP	579635.39	659753.67	7.0'
03/31 0950	4/01 1010	S-EP10-0331	EP10	EP	579743.64	659745.36	6.5'
03/31 0956	4/01 1015	S-EP12-0331	EP12	EP	581006.37	660058.08	8.0'
03/31 1005	4/01 1018	S-EP11-0331	EP11	EP	581666.90	660116.56	6.5'
03/31 1009	4/01 1023	S-EP08-0331	EP08	EP	582477.65	660151.29	8.0'
03/31 1012	4/01 1026	S-EP16-0331	EP16	EP	582752.10	660094.10	7.4'
~~03/31 1018~~ CNP	~~4/01 1042~~	~~S-EP18-0331~~	~~EP18~~	~~EP~~	~~583126.88~~	~~660074.70~~	~~7.5'~~
03/31 1028	4/01 1047	S-EP19-0331	EP19	EP	583444.16	659965.67	7.2'
03/31 1045	4/01 1058	S-EP03-0331	EP03	EP	587354.55	665753.23	11.0'
03/31 1058	4/01 1103	S-EP01-0331	EP01	EP	587280.49	665804.62	7.5'
03/31 1101	4/01 1106	S-EP15-0331	EP15	EP	587209.35	665849.70	6.0'
03/31 1111	4/01 1115	S-EP05-0331	EP05	EP	585395.80	663750.29	8.0'

[a] Field-observed coordinates.

[b] NAD83 New Jersey State Plane (ft).

Subsurface p-chem @
temperature (C) salinity (ppt)
conductivity (uS/cm)
dissolved oxygen (mg/L)
pH

Subsurface p-chem @
temperature (C) salinity (ppt)
conductivity (uS/cm)
dissolved oxygen (mg/L)
pH

Location Data Form

Project Name: NEWARK BAY PHASE III **Project No.:** NA

Field Crew Initials: CDD, KKM (Set Crew), Amy Marie Accardi (Louis Berger)
CDD, NSG (Retrieval Crew), Tom Shimskey (Louis Berger)

Deployment Date & Time	Retrieval Date & Time	Location ID	Trap ID	Collection Method	Coordinates[a]		Depth (ft)
					Easting (X)[b]	Northing (Y)[b]	
03/31 1115	4/01 1119	S-EP02-0331	EP02	EP	585240.94	663621.65	7.0'
03/31 1126	4/01 1137	S-EP09-0331	EP09	EP	582087.38	661480.87	5.7'
03/31 1131	4/01 1142	S-EP04-0331	EP 04	EP	581748.29	661256.67	7.1'
03/31 1138	4/01 1148	S-EP17-0331	EP 17	EP	579397.15	660657.49	9.5'

[a] Field-observed coordinates.

[b] NAD83 New Jersey State Plane (ft).

Subsurface p-chem @
temperature (C) salinity (ppt)
conductivity (uS/cm)
dissolved oxygen (mg/L)
pH

Subsurface p-chem @
temperature (C) salinity (ppt)
conductivity (uS/cm)
dissolved oxygen (mg/L)
pH

Location Data Form

Project Name: NEWARK BAY PHASE III **Project No.:** NA

Field Crew Initials: CDM, NSC (Sit Crew), Tom Shinsky (Louis Berger)

Deployment Date & Time	Retrieval Date & Time	Location ID	Trap ID	Collection Method	Coordinates[a] Easting (X)[b]	Coordinates[a] Northing (Y)[b]	Depth (ft)
4/01 0856	4/02 0818	S-EP06-0401	EP06	EP	579139.35	660655.18	6.0'
4/01 0902	4/02 0830	S-EP06-0401	EP07	EP	579043.87	660413.21	10.0'
4/01 0940	4/02 0842	S-EP21-0401	EP21	EP	578235.17	659687.87	~~12.0'~~ 6.0'
4/01 0919	4/02 0848	S-EP20-0401	EP20	EP	579694.06	659206.89	~~11.0'~~ 7.0'
4/01 1002	4/02 0838	S-EP14-0401	EP14	EP	578632.35	659996.33	8.0'
4/01 1007	4/02 0855	S-EP13-0401	EP13	EP	579635.39	659763.67	7.0'
4/01 1011	4/02 0859	S-EP10-0401	EP10	EP	579743.64	659745.36	5.5'
4/01 1016	4/02 0906	S-EP12-0401	EP12	EP	581066.37	660058.08	8.0'
4/01 1019	4/02 0912	S-EP11-0401	EP11	EP	581666.90	660116.56	5.5'
4/01 1024	4/02 0917	S-EP08-0401	EP08	EP	582477.65	660151.29	7.0'
4/01 1027	4/02 0921	S-EP16-0401	EP16	EP	582752.10	660094.10	7.0'
4/01 1043	4/02 0930	S-EP18-0401	EP18	EP	583126.88	660074.70	7.0'
4/01 1048	4/02 0934	S-EP19-0401	EP19	EP	583444.16	659965.67	8.0'
4/01 1059	4/02 0950	S-EP03-0401	EP03	EP	587354.55	665753.23	12.0'
4/01 1104	4/02 1002	S-EP01-0401	EP01	EP	587280.49	665804.62	8.0'
4/01 1107	4/02 1006	S-EP15-0401	EP15	EP	587209.35	665849.70	6.0'
4/01 1116	4/02 1016	S-EP05-0401	EP05	EP	585345.80	663750.29	8.0'

[a] Field-observed coordinates.

[b] NAD83 New Jersey State Plane (ft).

Subsurface p-chem @
temperature (C) salinity (ppt)
conductivity (uS/cm)
dissolved oxygen (mg/L)
pH

Subsurface p-chem @
temperature (C) salinity (ppt)
conductivity (uS/cm)
dissolved oxygen (mg/L)
pH

Location Data Form

Project Name: NEWARK BAY PHASE III **Project No.:** NA

Field Crew Initials: CDD, NSG (Set Crew), Tom Shinsky (Louis Berger)

Deployment Date & Time	Retrieval Date & Time	Location ID	Trap ID	Collection Method	Coordinates[a]		Depth (ft)
					Easting (X)[b]	Northing (Y)[b]	
4/01 1120	4/02 1024	S-EP02-0401	EP02	EP	585240.94	663621.65	6.0'
4/01 1138	4/02 1034	S-EP09-0401	EP09	EP	582087.38	661480.87	6.2'
4/01 1143	4/02 1038	S-EP04-0401	EP04	EP	581748.29	661256.67	6.8
4/01 1149	4/02 1045	S-EP17-0401	EP17	EP	579397.15	660657.49	10.0'

[a] Field-observed coordinates.

[b] NAD83 New Jersey State Plane (ft).

Subsurface p-chem @
temperature (C) salinity (ppt)
conductivity (uS/cm)
dissolved oxygen (mg/L)
pH

Subsurface p-chem @
temperature (C) salinity (ppt)
conductivity (uS/cm)
dissolved oxygen (mg/L)
pH

Location Data Form

Project Name: NEWARK BAY PHASE III **Project No.:** NA

Field Crew Initials: COP, KEM (Set Crew), Tom Shinskey (Louis Berger)

Deployment Date & Time	Retrieval Date & Time	Location ID	Trap ID	Collection Method	Coordinates[a]		Depth (ft)
					Easting (X)[b]	Northing (Y)[b]	
4/02 0819	stolen 4/6	S-EP06-0402	EP06	EP	579139.35	660685.18	6.0'
4/02 0831	stolen 4/6	S-EP07-0402	EP07	EP	579093.87	660413.21	10.5'
4/02 0839	0948 4/6	S-EP14-0402	EP14	EP	578632.35	659996.33	7.5'
4/02 0843	0952 4/6	S-EP21-0402	EP21	EP	578235.17	659687.87	5.5'
4/02 0849	0955 4/6	S-EP20-0402	EP20	EP	577694.06	659206.89	8.5'
4/02 0856	0958 4/6	S-EP13-0402	EP13	EP	579635.39	659753.67	8.0'
4/02 0900	1000 4/6	S-EP10-0402	EP10	EP	579743.64	659745.36	6.0'
4/02 0907	1004 4/6	S-EP12-0402	EP12	EP	581006.37	660058.08	9.5'
4/02 0913	1007 4/6	S-EP11-0402	EP11	EP	581666.90	660116.56	8.0'
4/02 0918	1011 4/6	S-EP08-0402	EP08	EP	582477.65	660151.29	9.5'
4/02 0922	Hung up	S-EP16-0402	EP16	EP	582752.10	660094.10	9.0'
4/02 0931	1020 4/6	S-EP18-0402	EP18	EP	583126.88	660074.70	9.5'
4/02 0935	1021 4/6	S-EP19-0402	EP19	EP	583444.16	659965.67	9.5'
4/02 0951	1033 4/6	S-EP03-0402	EP03	EP	587354.55	659753.23	13.0'
4/02 1003	1036 4/6	S-EP01-0402	EP01	EP	587280.49	659804.62	10.1'
4/02 1007	1041 4/6	S-EP15-0402	EP15	EP	587209.35	659849.70	7.2'
4/02 1017	1050 4/6	S-EP05-0402	EP05	EP	585395.80	663750.29	7.5'

[a] Field-observed coordinates.

[b] NAD83 New Jersey State Plane (ft).

Subsurface p-chem @
temperature (C) salinity (ppt)
conductivity (uS/cm)
dissolved oxygen (mg/L)
pH

Subsurface p-chem @
temperature (C) salinity (ppt)
conductivity (uS/cm)
dissolved oxygen (mg/L)
pH

Location Data Form

Project Name: NEWARK BAY PHASE III **Project No.:** NA

Field Crew Initials: COD, JCKM, Tom Shinskey (S.T. Crew)

Deployment Date & Time	Retrieval Date & Time	Location ID	Trap ID	Collection Method	Coordinates[a]		Depth (ft)
					Easting (X)[b]	Northing (Y)[b]	
4/02 1025	1052 4/6	5-EP02-0402	EP02	EP	585240.94	663621.65	7.0'
4/02 1035	1055 4/6	5-EP09-0402	EP09	EP	582087.38	661480.87	7.0'
4/02 1039	1058 4/6	5-EP04-0402	EP04	EP	581748.29	661256.67	7.5'
4/02 1046	1103 4/6	5-EP17-0402	EP17	EP	579397.15	660657.49	8.5'

[a] Field-observed coordinates.

[b] NAD83 New Jersey State Plane (ft).

Subsurface p-chem @
temperature (C) salinity (ppt)
conductivity (uS/cm)
dissolved oxygen (mg/L)
pH

Subsurface p-chem @
temperature (C) salinity (ppt)
conductivity (uS/cm)
dissolved oxygen (mg/L)
pH

NEWARK BAY PHASE III
INTERTIDAL LOCATION:

7-Apr-2015
1 of 2

EP06 & EP07 are lost
Could not locate EP20, may be lost or rope got wrapped up at low tied and buoy may be submerged. Check again.

Title: Crab and Clam Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 0
Revision Date: October 2013
Location Data Form

Location Data Form

Project Name: NEWARK BAY PHASE III **Project No.:** NA

Field Crew Initials: CAF, KRM, Tom Shinskey (Louis Berger

Deployment Date & Time	Retrieval Date & Time	Location ID	Trap ID	Collection Method	Coordinates[a] Easting (X)[b]	Coordinates[a] Northing (Y)[b]	Depth (ft)
NA	NA	S-EP06-0402	EP06- Stolen could not locate	EP	—	—	—
NA	NA	S-EP07-0402	EP07- " "	EP	—	—	—
4/6 0949	4/7 8:37	S-EP14-0402	EP14	EP	578632.35	659996.33	9.5
4/6 0953	4/7 8:41	S-EP21-0402	EP21	EP	578235.17	659687.87	7.5
4/6 0956	4/7 8:54	S-EP20-0402	EP20	EP	577694.06	659206.89	10.5
4/6 0959	4/7 8:54	S-EP13-0402	EP13	EP	579635.39	659753.67	10.0
4/6 1001	4/7 8:56	S-EP10-0402	EP10	EP	579743.64	659745.36	8.0
4/6 1005	4/7 9:00	S-EP12-0402	EP12	EP	581006.37	660058.08	11.5
4/6 1008	4/7 9:04	S-EP11-0402	EP11	EP	581666.90	660116.56	10.0
4/6 1112	4/7 9:12	S-EP08-0402	EP08	EP	582477.65	660151.29	11.5
4/6 Hung up	4/7 9:15	S-EP16-0402	EP16	EP	582752.18	660094.10	11.0
4/6 1021	4/7 9:17	S-EP18-0402	EP18	EP	583126.88	660074.70	11.5
4/6 1022	4/7 9:24	S-EP19-0402	EP19	EP	583444.16	659965.67	11.5
4/6 1034	4/7 9:37	S-EP03-0402	EP03	EP	58735455	6657523	15.0
4/6 1037	4/7 9:43	S-EP01-0402	EP01	EP	587280.49	665804.62	12.0
4/6 1042	4/7 9:49	S-EP15-0402	EP15	EP	587209.35	665849.70	9.0
4/6 1051	4/7 10:01	S-EP05-0402	EP05	EP	585395.80	663750.29	9.5

Could Not locate

[a] Field-observed coordinates.

[b] NAD83 New Jersey State Plane (ft).

Subsurface p-chem @
temperature (C) salinity (ppt)
conductivity (uS/cm)
dissolved oxygen (mg/L)
pH

Subsurface p-chem @
temperature (C) salinity (ppt)
conductivity (uS/cm)
dissolved oxygen (mg/L)
pH

7-Apr-2015

2 of 2

Location Data Form

Project Name: NEWARK BAY PHASE III **Project No.:** NA

Field Crew Initials: CAF, KRM, Tom Skinsky (Louis Berger)

Deployment Date & Time	Retrieval Date & Time	Location ID	Trap ID	Collection Method	Coordinates[a]		Depth (ft)
					Easting (X)[b]	Northing (Y)[b]	
4/6 1026	4/7 10:04	S-EP02-402	EP02	EP	585240.94	663621.65	9.0
4/6 1036	4/7 10:12	S-EP09-402	EP09	EP	582087.38	661480.87	9.0
4/6 1039	4/7 10:16	S-EP04-402	EP04	EP	581748.29	661256.67	9.5
4/6 1046	4/7 10:26	S-EP17-402	EP17	EP	579397.15	660657.49	8.5

[a] Field-observed coordinates.

[b] NAD83 New Jersey State Plane (ft).

Subsurface p-chem @
temperature (C) salinity (ppt)
conductivity (uS/cm)
dissolved oxygen (mg/L)
pH

Subsurface p-chem @
temperature (C) salinity (ppt)
conductivity (uS/cm)
dissolved oxygen (mg/L)
pH

Cel pots on Printer

9 Apr 2015

Location Data Form

Project Name: NEWARK BAY PHASE III **Project No.:** NA

Field Crew Initials: CAF, KRM

Deployment Date & Time	Retrieval Date & Time	Location ID	Trap ID	Collection Method	Coordinates[a] Easting (X)[b]	Coordinates[a] Northing (Y)[b]	Depth (ft)
4/7 8:38	4/9 8:46	S-EP14-0402	EP14	EP	578632.35	659996.33	5.5
4/7 8:42	4/9 8:49	S-EP21-0402	EP21	EP	578235.17	659687.87	8.5
Could Not Locate		S-EP20-0402	EP20 Could not locate	EP			
4/7 8:55	4/9 8:55	S-EP13-0402	EP13	EP	579635.39	659753.67	5.5
4/7 8:57	4/9 8:59	S-EP10-0402	EP10	EP	579743.64	659745.36	5.5
4/7 9:01	4/9 9:10	S-EP12-0402	EP12	EP	581006.37	660058.08	10.0
4/7 9:05	4/9 9:03	S-EP11-0402	EP11	EP	581666.90	660416.56	10.5
4/7 9:13	4/9 9:14	S-EP08-0402	EP08	EP	582477.65	660151.29	9.0
4/7 9:16	4/9 11:30	S-EP16-0402	EP16 Retrieved later same morning	EP	582752.18	660094.10	10.0
4/7 9:18	4/9 9:19	S-EP18-0402	EP18	EP	583126.88	660074.70	9.5
4/7 9:25	4/9 9:27	S-EP19-0402	EP19	EP	583444.16	659965.67	9.5
4/7 9:38	4/9 9:36	S-EP03-0402	EP03	EP	587354.55	665753.23	13.0
4/7 9:44	4/9 9:40	S-EP01-0402	EP01	EP	587280.49	665809.62	11.0
4/7 9:50	4/9 9:46	S-EP15-0402	EP15	EP	587209.35	665849.70	8.0
4/7 10:02	4/9 9:51	S-EP05-0402	EP05	EP	585395.80	663750.29	6.0
4/7 10:27	4/9 9:55	S-EP02-0402	EP02	EP	585240.94	663621.65	9.5
4/7 10:37	4/9 10:02	S-EP09-0402	EP09	EP	582087.38	661480.87	9.5

[a] Field-observed coordinates.

[b] NAD83 New Jersey State Plane (ft).

Subsurface p-chem @
temperature (C) salinity (ppt)
conductivity (uS/cm)
dissolved oxygen (mg/L)
pH

Subsurface p-chem @
temperature (C) salinity (ppt)
conductivity (uS/cm)
dissolved oxygen (mg/L)
pH

eel pots

on privateer

1st Apr 2015

Location Data Form

Project Name: NEWARK BAY PHASE III **Project No.:** NA

Field Crew Initials: CAF, KRM

Deployment Date & Time	Retrieval Date & Time	Location ID	Trap ID	Collection Method	Coordinates[a]		Depth (ft)
					Easting (X)[b]	Northing (Y)[b]	
4/7 10:40	4/9 11:35	S-EP04-0402	EP04	EP	581748.29	661256.67	10.5
4/7 10:47	4/9 10:11	S-EP17-0402	EP17	EP	579397.15	660657.49	13.0
Received instructions from client to retrieve all eel pots and end sampling for now.							

[a] Field-observed coordinates.

[b] NAD83 New Jersey State Plane (ft).

Subsurface p-chem @
temperature (C) salinity (ppt)
conductivity (uS/cm)
dissolved oxygen (mg/L)
pH

Subsurface p-chem @
temperature (C) salinity (ppt)
conductivity (uS/cm)
dissolved oxygen (mg/L)
pH

Trawl on P-3 30-March-2015

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 1
Revision Date: September 2014
Location Data Form

Location Data Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: BWL, CCB, RCB

Deployment Date & Time	Retrieval Date & Time	Sampling Zone & Location	Sampling Method	Water Depth (feet)	GPS Coordinates		Notes
					EASTING (X)	NORTHING (Y)	
3/30 1406	3/30 —	North	TW1	34	600765.96	685535.09	start
3/30 —	3/30 1416	North	TW1	28	600386.07	685278.33	end
3/30 1426	3/30 ~~1426~~	North	TW2	16	601013.05	685361.40	start
3/30 —	3/30 1436	North	TW2	10	599227.17	683677.67	end
3/30 1448	3/30 —	North	TW3	34	601436.22	686275.76	start
3/30 —	3/30 1502	North	TW3	35	599248.20	684532.12	end
3/30 1516	3/30 —	North	TW4	36	599463.29	684899.91	start
3/30 —	3/30 1528	North	TW4	40	598109.91	682336.88	end
3/30 1548	3/30 —	North	TW5	37	599289.91	684682.81	start
3/30 —	3/30 1600	North	TW5	41	598038.15	682252.89	end
3/30 1614	3/30 —	North	TW6	30	598916.34	684057.84	start
3/30 —	3/30 1625	North	TW6	35	597951.71	681541.47	end
3/30 1643	3/30 —	North	TW7	28	598990.56	684152.55	start
3/30 —	3/30 1655	North	TW7	42	598115.47	681501.68	end

Notes:

TW = trawl

TW = 8 m

1 of 1

BWL

Trawl on P-3 31 March 2015

Location Data Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: CcB, mlw, RcB

Deployment Date & Time	Retrieval Date & Time	Sampling Zone & Location	Sampling Method	Water Depth (feet)	GPS Coordinates		Notes
					EASTING (X)	NORTHING (Y)	
03/31 0918	03/31 —	C-TW01-ST	TW	34'	593656,73	669578,51	Start
03/31 —	03/31 0929	C-TW01-ED	TW	34'	594466,62	672436,29	End
03/31 0944	03/31 —	C-TW02-ST	TW	32'	594423,25	672116,68	Start
03/31 —	03/31 0954	C-TW02-ED	TW	39'	595251,37	674600,32	End
03/31 1005	03/31 —	C-TW03-ST	TW	8'	595306,85	671507,99	Start
03/31 —	03/31 1016	C-TW03-ED	TW	8'	595948,09	674376,40	End
03/31 1030	03/31 —	C-TW04-ST	TW	55'	593970,56	670592,81	Start
03/31 —	03/31 1042	C-TW04-ED	TW	40'	594874,10	673797,52	End
03/31 1055	03/31 —	C-TW05-ST	TW	53'	593126,63	668841,27	Start
03/31 —	03/31 1059	C-TW05-ED	TW	45'	592828,57	667701,41	End
03/31 1110	03/31 —	C-TW06-ST	TW	32'	594236,74	671067,32	Start
03/31 —	03/31 1115	C-TW06-ED	TW	47'	593613,40	669950,54	End
03/31 1127	03/31 —	C-TW07-ST	TW	50'	594152,30	670918,56	Start
03/31 —	03/31 1137	C-TW07-ED	TW	50'	593133,68	668595,23	End
03/31 1204	03/31 —	C-TW08-ST	TW	20'	592018,32	665437,18	Start
03/31 —	03/31 1213	C-TW08-ED	TW	16'	591369,94	664275,29	End
03/31 1224	03/31 —	C-TW09-ST	TW	35'	595034,86	674032,61	Start
03/31 —	03/31 1245	C-TW09-ED	TW	30'	593791,35	669599,10	End
03/31 1307	03/31 —	C-TW10-ST	TW	38'	595078,50	674311,92	Start
03/31 —	03/31 1323	C-TW10-ED	TW	50'	593876,13	670349,86	End

Notes:

Trawl on P-3 31 March 2015

Location Data Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: CCB, MRW, RCB

Deployment Date & Time	Retrieval Date & Time	Sampling Zone & Location	Sampling Method	Water Depth (feet)	GPS Coordinates		Notes
					EASTING (X)	NORTHING (Y)	
03/31 1400	03/31 —	S-TW01-ST	TW	52'	592094.11	660833.20	Start
03/31 —	03/31 1412	S-TW01-ED	TW	27'	595352.92	661095.15	END
03/31 1554	03/31 —	S-TW02-ST	TW	50'	597704.21	665867.60	Start
03/31 —	03/31 1606	S-TW02-ED	TW	57'	590009.00	663933.19	End

Notes:

Trawl on p.3

~~01/04/2015~~
1 April 2015

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 1
Revision Date: September 2014
Location Data Form

1 of 2

Location Data Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: CCB, MRW, RCB

Deployment Date & Time	Retrieval Date & Time	Sampling Zone & Location	Sampling Method	Water Depth (feet)	GPS Coordinates		Notes
					EASTING (X)	NORTHING (Y)	
01/04 0909	01/04 —	C-TW01-ST	TW	37'	594120.15	670865.33	Start
01/04 —	01/04 0911	C-TW01-ED	TW	40'	594159.57	670897.80	End
01/04 0923	01/04 —	C-TW02-ST	TW	34'	594631.65	672829.38	Start
01/04 —	01/04 0934	C-TW02-ED	TW	35'	595271.71	674735.58	End
01/04 0945	—	C-TW03-ST	TW	40'	594485.~~10~~01	672820.17	Start
—	01/04 0955	C-TW03-ED	TW	45'	595115.74	674580.57	End
01/04 1011	—	S-TW01-ST	TW	13'	590491.04	662530.16	Start
—	01/04 1016	S-TW01-ED	TW	81	590925.33	663095.78	End
01/04 1105	—	S-TW02-ST	TW	48'	587900.14	665602.83	Start
—	01/04 1112	S-TW02-ED	TW	50'	589555.28	664705.55	End
01/04 1130	—	S-TW03-ST	TW	41'	587902.02	665416.28	Start
—	01/04 1135	S-TW03-ED	TW	—	Not recorded	Void Sample	End
01/04 1156	—	S-TW04-ST	TW	53'	588277.33	665546.50	Start
—	01/04 1203	S-TW04-ED	TW	48'	589640.79	664634.57	End
01/04 1220	—	S-TW05-ST	TW	53'	588231.40	665557.78	Start
—	01/04 1227	S-TW05-ED	TW	52'	589598.73	664677.51	End
01/04 1331	—	C-TW04-ST	TW	31'	594429.57	672367.00	Start
—	01/04 1342	C-TW04-ED	TW	30'	595308.95	674520.63	End
01/04 1356	—	C-TW05-ST	TW	40'	594292.81	672678.62	Start
—	01/04 1406	C-TW05-ED	TW	36'	595218.88	674594.53	End

Notes:

MRW

trawl on P-3 1 April 2015

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 1
Revision Date: September 2014
Location Data Form

2 of 2

Location Data Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: CCB, MRW, RCB

Deployment Date & Time	Retrieval Date & Time	Sampling Zone & Location	Sampling Method	Water Depth (feet)	GPS Coordinates		Notes
					EASTING (X)	NORTHING (Y)	
01/04 1419	—	C-TW06-ST	TW	36'	594472.44	672763.19	Start
—	01/04 1428	C-TW06-ED	TW	38'	595228.82	674826.19	End
01/04 1442	—	C-TW07-ST	TW	39'	594521.06	673039.40	Start
—	01/04 1450	C-TW07-ED	TW	35'	595155.90	674766.66	End
01/04 1507	—	C-TW08-ST	TW	40'	595234.19	674861.18	Start
—	01/04 1520	C-TW08-ED	TW	33'	594512.00	672602.74	End
01/04 1533	—	C-TW09-~~ST~~ ED	TW	30'	595422.32	674776.21	Start
—	01/04 1543	C-TW09-ED	TW	25'	594529.50	672951.72	End

Notes:

MRW

trawl on P3

2 April 2015

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 1
Revision Date: September 2014
Location Data Form

1 of 1

Location Data Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: CCB, MRW, RCB

Deployment Date & Time	Retrieval Date & Time	Sampling Zone & Location	Sampling Method	Water Depth (feet)	GPS Coordinates		Notes
					EASTING (X)	NORTHING (Y)	
04/02 0937	—	C-TWO1-ST	TW	48'	595035.76	675077.60	Start
—	04/02 0955	C-TWO1-ED	TW	54'	594256.79	671376.63	End
04/02 0925	—	C-TWO2-ST	TW	42'	595248.76	675370.41	Start
—	04/02 0945	C-TWO2-ED	TW	40'	594174.75	670907.37	End
04/02 1011	—	C-TWO3-ST	TW	41'	594354.93	672568.91	Start
—	04/02 1026	C-TWO3-ED	TW	42'	595134.27	674928.95	End

Notes:

MRW

Gill net
*trawl on trihull

30-March-2015

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 1
Revision Date: September 2014
Location Data Form

Location Data Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: JBS, KCM, MSG

Deployment Date & Time	Retrieval Date & Time	Sampling Zone & Location	Sampling Method	Water Depth (feet)	GPS Coordinates EASTING (X)	GPS Coordinates NORTHING (Y)	Notes
03/30/15 @ 1410	3/31/15 @ 0925 checked	South	Gill Net	7'	Start 586593.39	663610.42	S-GN-1S-3-30
" "			" "	7'	End 586845.33	663463.05	S-GN-1E-3-30
03/30/15@ 1450	3/31/15 @ 0905		Gill Net	9'	Start 581409.17	661171.65	S-GN-2S-3-30
" "			" "	9'	End 581547.93	661171.22	S-GN-2E-3-30
03/30/15@ 1535	3/31/15 @ 1010	Central	Gill Net	10'	Start 594432.42	668021.14	C-GN-3S-3-30
" "			" "	8'	End 594747.07	668139.98	C-GN-3E-3-30
03/30/15 @ 1650	03/30/15 @ 1700		Trawl	8'	Start 599016.32	675819.70	C-TW-1S-3-30
"	"			8'	End 598355.25	674413.34	C-TW-1E-3-30
03/30/15@1713	03/30/15@1723			12'	Start 597870.22	673713.82	C-TW-2S-3-30
"	"			8'	End 597530.14	672242.19	C-TW-2E-3-30

Notes:

3m Trawl

1 of 1

Gill nets + trawl on Trihull

31-March-2015

Title: Fish Sampling and Analysis Quality Assurance Project Plan
Revision Number: 1
Revision Date: September 2014
Location Data Form

Location Data Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: JGS, BWC, NSG

Deployment Date & Time	Retrieval Date & Time	Sampling Zone & Location	Sampling Method	Water Depth (feet)	GPS Coordinates EASTING (X)	GPS Coordinates NORTHING (Y)	Notes
3/31/15 @ 0905	4/1/15 0925	South	Gill Net, 15" ~~5K~~	9'	Start 581409.17	661171.65	S-GN-2S-3-30
		"	"		End 581547.93	661171.22	S-GN-2E-3-30
3/31/15 @ 0945	4/1/15 1015	South	Gill Net, 4" ftg	12'	Start 590392.15	661294.61	S-GN-2S-3-31
		"	"	9'	End 590402.88	661189.24	S-GN-2E-3-31
3/31/15 @ 1030	LOST	Central	Gill Net, 15" ftg	10'	Start 593903.65	667398.90	C-GN-3S-3-31
	Not Recovered	"	"	10'	End 593683.75	667319.80	C-GN-3E-3-31
3/31/15 @ 1055	3/31/15 @ 1105	South	Trawl 1	9'	Start 588823.35	663916.47	S-TW-1S-3-31
		"	"	7'	end 587281.68	663203.46	S-TW-1E-3-31
3/31/15 @ 1229	3/31/15 @ 1230	South	Trawl 2	96'	Start 581205.55	660907.43	S-TW-2S-3-31
		"	"		End Alarms Went	No Trawl	~~S-TW-2E-3-31~~
3/31/15 @ 1300	3/31/15 @ 1310	South	Trawl 3	10'	Start 581947.23	661114.81	S-TW-3S-3-31
		"	"	5'	End 583521.82	661371.52	S-TW-3E-3-31
3/31/15 @ 1323	3/31/15 @ 1333	South	TW 4	5'	Start 586713.83	663249.70	S-TW-4S-3-31
		"	"	8'	End 587565.33	664339.32	S-TW-4E-3-31
3/31/15 @ 1355	3/31/15 @ 1405	South	TW 5	47'	Start 587613.71	665969.58	S-TW-5S-3-31
		"	"	32'	End 588561.62	665030.~~75~~57	S-TW-5E-3-31
3/31/15 @ 1428	3/31/15 @ 1438	South	TW 6	48'	start 587549.96	665955.52	S-TW-6S-3-31
		"	"	28'	End 588572.51	665038.56	S-TW-6E-3-31

Notes:

3m Trawl

Location Data Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials:

Deployment Date & Time	Retrieval Date & Time	Sampling Zone & Location	Sampling Method	Water Depth (feet)	GPS Coordinates		Notes
					EASTING (X)	NORTHING (Y)	
3-31-15 @1511	3-31-15 @1519	South	TW 7	12'	Start 590625.903	662648.96	S-TW-7S-3-31
		"	"		End 591002.53	663523.40	S-TW-7E-3-31

Notes:

Gill nets 1- Apr- 2015
trawls on tri-hull

Location Data Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: BWL, KCM, JBS

Deployment Date & Time	Retrieval Date & Time	Sampling Zone & Location	Sampling Method	Water Depth (feet)	GPS Coordinates EASTING (X)	GPS Coordinates NORTHING (Y)	Notes
4/1/15 9:25	4/2/15 8:30	South	Gillnet, 1.5", fishing	15	581337.88	661085.51	S-GN-1S-4-1
4/1/15					581641.33	661157.10	S-GN-1E-4-1
4/1/15 9:54	4/2/15 1000	South	GN, 1.5" sink	9	585415.82	663258.30	S-GN-2S-4-1
4/1/15					585260.96	663261.73	S-GN-2E-4-1
4/1/15 1030	4/2/15 930	South	GN, 4", fishing	10	590392.15	661294.61	S-GN-3S-4-1
4/1/15					590428.88	661189.24	S-GN-3E-4-1
4/1/15 1139	4/2/15 1030	South	GN, 1.5" sink	36	587673.61	665642.76	S-GN-4S-4-1
4/1/15					587521.79	665700.32	S-GN-4E-4-1
4/1/15 1216	4/2/15 9:00	South	GN, 4" fishing	8	581337.88	661085.51	S-GN-5S-4-1
4/1/15					581641.33	661157.10	S-GN-5E-4-1
4/1/15 @1325	4/1/15 @1335	South	Trawl 1	4'	start 583316.51	662094.99	S-TW-1S-4-1
				4'	End 584651.77	662635.74	S-TW-1E-4-1
4/1/15 @1341	4/1/15 @1351	South	Trawl 2	5'	start 585132.87	663160.92	S-TW-2S-4-1
				3'	end 586810.74	662663.68	S-TW-2E-4-1
4/1/15 @1403	4/1/15 @1413	South	Trawl 3	7'	start 587459.92	665540.58	S-TW-3S-4-1
					end 589121.08	664577.83	S-TW-3E-4-1
4/1/15 @1428	4/1/15 @1438	South	Trawl 4	46'	start 587600.85	665824.57	S-TW-4S-4-1
				16'	End 588795.19	664968.47	S-TW-4E-4-1
4/1/15 @1455	4/1/15 @1505	South	Trawl 5	47'	start 587624.61	665752.69	S-TW-5S-4-1
				52'	End 589013.14	665139.20	S-TW-5E-4-1

Notes: Gillnets
1.5", 300' floating, 8ft panel
4", 300' floating, 8ft panel
1.5", 150' [illegible] 8 ft panel

3m Trawl

1- Apr-2015

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 1
Revision Date: September 2014
Location Data Form

Location Data Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: JBS KCM CDD

Deployment Date & Time	Retrieval Date & Time	Sampling Zone & Location	Sampling Method	Water Depth (feet)	GPS Coordinates		Notes
					EASTING (X)	NORTHING (Y)	
4/1/15 @ 1518	4/1/15 @ 1534	South	Trawl 6	51'	Start 589263.13	664426.77	S-TW-6S-4-1
				48'	End 587481.62	666093.89	S-TW-6E-4-1
4/1/15 @ 1552	4/1/15 @ 1602	South	Trawl 7	10'	Start 592702.27	665856.31	S-TW-7S-4-1
					End 591966.96	664877.48	S-TW-7E-4-1

Notes:

2 of 2

Trawling P-3 6-Apr-2015 1 of 2

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 1
Revision Date: September 2014
Location Data Form

Location Data Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: CCB, SMS, NSG

Deployment Date & Time	Retrieval Date & Time	Sampling Zone & Location	Sampling Method	Water Depth (feet)	GPS Coordinates EASTING (X)	GPS Coordinates NORTHING (Y)	Notes
4/6/15 0936	—	North	TW	37	599468.18	684964.44	start
" 0955	4/6/15 0955	"	TW	37	598194.35	682589.01	end
4/6/15 1021		North	TW	37	599615.88	684712.21	Start
" 1035	4/6/15 1035	"	TW	42	598230.05	682435.86	End
4/6/15 1100		North	TW	38	598805.58	684182.09	Start
	4/6/15 1115	"	TW	46	598041.38	681105.06	End
4/6/15 1137		North	TW	41	598262.26	682417.52	Start
	4/6/15 1152	"	TW	38	599664.53	684977.30	End
4/6/15 1227		North	TW	39	597909.96	681582.39	Start
	4/6/15 1244	"	TW	38	598893.44	684440.64	End
4/6/15 1300		North	TW	28	597581.20	680755.57	Start
	4/6/15 1312	"	TW	36	597822.87	682481.03	End
4/6/15 1326		North	TW	44	598020.94	680579.03	Start
	4/6/15 1338	"	TW	41	598011.31	682159.62	End
4/6/15 1356		North	TW	20	597439.93	680687.01	Start
	4/16/15 1410	"	TW	26	597847.39	682653.91	End
4/6/15 1436		Central	TW	52	594036.54	671763.00	Start
	4/6/15 1451	"	TW	45	594789.20	671572.77	End
4/6/15 1509		Central	TW	40	594246.71	673243.50	Start
	4/6/15 1520	"	TW	38	595204.66	675156.29	End

Notes:

Trawling on P-3 6- Apr- 2015 2 of 2

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 1
Revision Date: September 2014
Location Data Form

Location Data Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: CCB, SMS, NSG

Deployment Date & Time	Retrieval Date & Time	Sampling Zone & Location	Sampling Method	Water Depth (feet)	GPS Coordinates		Notes
					EASTING (X)	NORTHING (Y)	
4/6/15 1541		Control	TW	41	594591.51	673516.31	Start
	4/6/15 1551	"	TW	38	595386.75	675666.99	End

Notes:

Gill nets & trawls on Trihull 6-Apr-2015

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 1
Revision Date: September 2014
Location Data Form

Location Data Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: JBS, BWL, CLR

Deployment Date & Time	Retrieval Date & Time	Sampling Zone & Location	Sampling Method	Water Depth (feet)	GPS Coordinates		Notes
					EASTING (X)	NORTHING (Y)	
4/6/15 0925	4/7/15	South	GN 1 st	35	587624.76	665613.60	1.5" sink
—		"	GN 1 end		587488.00	665741.82	1.5" sink
4/6/15 0935	4/7/15	South	GN 2 st	18	587364.35	665895.03	1.5" sink
—		"	GN2 end		587290.27	665989.54	"
4/6/15 0945	4/7/15	South	GN3 st	12	587976.45	665330.43	1" float
—		"	GN3 end		587898.17	665446.05	1.5" float
4/6/15 11:05	4/6/15 13:10	South	Angling	12	587242.16	664207.81	
4/6/15 13:30	4/6/15 15:20	South	Angling 1	49	587671.42	665672.23	
4/6/15 16:03	—	South	TW1 st	17	583767.26	661060.34	3m Trawl
—	4/6/15 1611	South	TW1 ed	18	584600.71	661038.41	Void, bag open
4/6/15 1619	—	South	TW2 st	21	583584.59	660998.15	3m TW
—	4/6/15 1630	South	TW2 ed	41	584621.54	660997.68	"
4/6/15 1645	—	South	TW3 s	52	584903.24	660968.25	"
—	4/6/15 1652	South	TW3 e	52	583372.43	660921.19	"

Notes:

7-Apr-2015 Trawl on P-3

1 of 2

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 1
Revision Date: September 2014
Location Data Form

Location Data Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: CCB, SMS, NSG, Brian M (obs. Team)

Deployment Date & Time	Retrieval Date & Time	Sampling Zone & Location	Sampling Method	Water Depth (feet)	GPS Coordinates EASTING (X)	GPS Coordinates NORTHING (Y)	Notes
4/7/15 0906		Central	TW	40	595307.76	675037.11	Start
	4/7/15 0920	"	"	40	594681.37	672979.21	End
4/7/15 0937		Central	TW	40	595281.89	674978.95	Start
	4/7/15 0950	"	"	40	594748.39	672978.23	End
4/7/15 1012		Central	TW	46	594969.56	674593.46	Start
	4/7/15 1025	"	"	40	594545.26	672837.95	End
4/7/15 1048		North	TW	39	599329.57	684743.72	Start
	4/7/15 1112	"	"	30	597664.66	681830.27	End
4/7/15 1126		North	TW	28	597629.61	681198.61	Start
	4/7/15 1141	"	"	32	598252.67	683586.63	End
4/7/15 1215		Central	TW	45	594452.06	672971.64	Start
	4/7/15 1232	"	"	40	595311.03	675315.92	End
4/7/15 1254		Central	TW	43	594260.85	673295.45	Start
	4/7/15 1305	"	"	40	594722.69	674551.40	End
4/7/15 1346		Central	TW	43	594509.92	673036.70	Start
	4/7/15 1402	"	"	40	595210.81	674782.33	End
4/7/15 1436		Central	TW	32	594574.48	672541.45	Start
	4/7/15 1445	"	"	14	595173.85	673761.07	End
4/7/15 1508		North	TW	30	597732.84	681355.84	Start
	4/7/15 1523	"	"	34	598169.17	683115.03	End

Notes:

7-Apr-2015 Trawl on P-3

2 of 2

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 1
Revision Date: September 2014
Location Data Form

Location Data Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: CLB, SMS, NSG, + Brian Mikulki

Deployment Date & Time	Retrieval Date & Time	Sampling Zone & Location	Sampling Method	Water Depth (feet)	GPS Coordinates		Notes
					EASTING (X)	NORTHING (Y)	
4/7/15 1543		North	TW	30	597551.15	682057.27	Start
	4/7/15 1553	"	"	31	597796.07	682155.29	End

Notes:

7-Apr-2015

Gill nets & angling on tri-hull

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 1
Revision Date: September 2014
Location Data Form

Location Data Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: BM, JBS, CLR

Deployment Date & Time	Retrieval Date & Time	Sampling Zone & Location	Sampling Method	Water Depth (feet)	GPS Coordinates		Notes
					EASTING (X)	NORTHING (Y)	
4/7/15 935	4/8/15 0900	South	GN1 (1.5" sink)	37	587751.16	665497.00	GN1 st
		"	GN1		587633.82	665587.15	GN1 ed
4/7/15 1005	4/8/15 0950	South	GN2 (1.5" sink)	31	587460.80	665860.53	GN2 st
		"	GN2		587380.58	665925.42	GN2 ed
4/7/15 1045	4/8/15 1040	South	GN3 (1.5", flt)	20	588125.30	665225.58	GN3 st
		"	GN3		587877.01	665357.42	GN3 ed
4/7/15 12:10	4/7/15 14:30	Central	Angling	25	595261.65	674089.53	C_ANGL_4/7
4/7/15 1445	4/7/15 1520	Central	Angling	20-50	595029.94	673848.37	Drifting

Notes:

8-Apr-2015 Trawl on P-3

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 1
Revision Date: September 2014
Location Data Form

Location Data Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: CCB, SMS, NSG

	Deployment Date & Time	Retrieval Date & Time	Sampling Zone & Location	Sampling Method	Water Depth (feet)	GPS Coordinates EASTING (X)	GPS Coordinates NORTHING (Y)	Notes
1	4/8/15 0924		North	TW	39	598865.69	684310.27	Start
		4/8/15 0941	"	"	41	597915.29	682112.33	End
2	4/8/15 0957		North	TW	36	598740.44	684014.05	Start
		4/8/15 1011	"	"	39	597709.00	681828.35	End
3	4/8/15 1035		North	TW	39	599020.16	684389.28	Start
		4/8/15 1052	"	"	33	597718.14	681817.66	End
4	4/8/15 1120		Central	TW	47	595020.54	674266.23	Start
		4/8/15 1138	"	"	56	594095.50	671641.23	End
5	4/8/15 1150		Central	TW	42	595085.50	674154.64	Start
		4/8/15 1209	"	"	55	594249.98	671791.90	End
6	4/8/15 1328		Central	TW	44	594192.45	672279.59	Start
		4/8/15 1343	"	"	48	594980.41	674676.72	End
7	4/8/15 1411		Central	TW	43	594165.79	672856.69	Start
		4/8/15 1425	"	"	47	594982.56	674793.14	End
8	4/8/15 1453		Central	TW	45	594007.87	671995.51	Start
		4/8/15 1510	"	"	46	594844.30	674184.28	End
9	4/8/15 1530		Central	TW	42	594012.45	672149.07	Start
		4/8/15 1550	"	"	46	594993.04	674695.22	End
10								

Notes:

8-Apr 2015
1 of 2

Gill Nets + Trawls on Tri-hull

Title: Fish Sampling and Analysis Quality Assurance Project Plan
Revision Number: 1
Revision Date: September 2014
Location Data Form

Location Data Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: JBS, CJR, CAF

Deployment Date & Time	Retrieval Date & Time	Sampling Zone & Location	Sampling Method	Water Depth (feet)	GPS Coordinates EASTING (X)	GPS Coordinates NORTHING (Y)	Notes
4/8/15 0935		South	GN 1	45	587820.97	665446.56	S-GN-1s-4-8
	4/9/15 0910	"	1,5" sink, 150' net		587652.18	665586.25	S-GN-1e-4-8
4/8/15 1130		Central	GN 2	9	597298.68	672465.24	C-GN-2s-4-8
	4/9/15 0950	"	1,5" float, 300' net		597063.24	672302.43	C-GN-2e-4-8
4/8/15 1145		Central	GN 3	11	595385.68	672829.71	C-GN-3s-4-8
	4/9/15 1015	"	Sink 1.5"		595331.26	672704.59	C-GN-3e-4-8
4/8/15 1215		Central	GN 4	20	592151.02	665449.70	C-GN-4s-4-8
	4/9/15 1050	"	1,5", sink, 300' net		591972.03	665270.63	C-GN-4e-4-8
4/8/15 1322		Central	TW1	8	593148.76	665954.72	C-TW-1s-4-8
	4/8/15 1332	"		11	593835.98	667371.11	C-TW-1e-4-8
4/8/15 1336		Central	TW2	14	593682.01	667189.14	C-TW-2s-4-8
	4/8/15 1346	"		12	594221.07	668349.79	C-TW-2e-4-8
4/8/15 1350		Central	TW3	12	593375.30	667689.30	C-TW-3s-4-8
	4/8/15 1406	"		10	593950.77	669176.93	C-TW-3e-4-8
4/8/15 1417		Central	TW4	8	594453.96	668182.13	C-TW-4s-4-8
	4/8/15 1427	"		9	594934.25	669604.87	C-TW-4e-4-8
4/8/15 1436		Central	TW5	9	595524.07	669799.54	C-TW-5s-4-8
	4/8/15 1446	"		7	596833.79	671182.76	C-TW-5e-4-8
4/8/15 1501		Central	TW6	11	594703.16	670543.18	C-TW-6s-4-8
	4/8/15 1511	"			594507.05	671792.06	C-TW-6e-4-8

Notes:

8-Apr-2015
2 of 2

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 1
Revision Date: September 2014
Location Data Form

Location Data Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: TBS, CJR

Deployment Date & Time	Retrieval Date & Time	Sampling Zone & Location	Sampling Method	Water Depth (feet)	GPS Coordinates		Notes
					EASTING (X)	NORTHING (Y)	
4/8/15 1522		Central	TW 7	54	593852.17	670170.76	C-TW-7S-4-8
	4/8/15 1532	"		54	594345.63	671592.77	C-TW-7E-4-8
4/8/15 1549		Central	TW 8	53	593848.57	670078.00	C-TW-8S-4-8
	4/8/15 1559	"		49	594399.08	671671.05	C-TW-8E-4-8

Notes:

Trawl on P-3

9-Apr-2015

1 of 1

Title: Fish Sampling and Analysis Quality Assurance Project Plan
Revision Number: 1
Revision Date: September 2014
Location Data Form

Location Data Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: CCB, SMS, NSG

	Deployment Date & Time	Retrieval Date & Time	Sampling Zone & Location	Sampling Method	Water Depth (feet)	GPS Coordinates EASTING (X)	GPS Coordinates NORTHING (Y)	Notes
1	4/9/15 0918		North	TW	38	598877.36	684256.61	Start
		4/9/15 0940	"	"	35	597833.17	681336.92	End
2	4/~~10~~9/15 1006	~~4/10/15~~	North	TW	38	599722.83	684991.73	Start
		4/~~10~~9/15 1030	"	"	35	597829.13	681334.77	End
3	4/9/15 1101		Central	TW	42	595230.95	675055.62	Start
		4/9/15 1122	"	"	55	594199.57	671820.78	End
4	4/9/15 1159		Central	TW	47	595152.32	674683.75	Start
		4/9/15 1216	"	"	55	594098.24	671498.34	End
5	4/9/15 1329		Central	TW	46	594428.99	672878.60	Start
		4/9/15 1339	"	"	42	595257.09	675115.55	End
6	4/9/15 1420		Central	TW	46	594386.13	672903.39	Start
		4/9/15 1432	"	"	45	595146.50	675001.87	End
7	4/9/15 1510		Central	TW	53	594217.67	671766.82	Start
		4/9/15 1536	"	"	42	595212.89	675257.50	End
8								
9								
10								

Notes:

Trawl on Tri-Hull

9-Apr-2015

1 of 1

Title: Fish Sampling and Analysis Quality Assurance Project Plan
Revision Number: 1
Revision Date: September 2014
Location Data Form

Location Data Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: JBS CJR

Deployment Date & Time	Retrieval Date & Time	Sampling Zone & Location	Sampling Method	Water Depth (feet)	GPS Coordinates		Notes
					EASTING (X)	NORTHING (Y)	
4/9/15 1321		Central	TW1	48	591326.26	664391.04	C-TW-1S-4-9
	4/9/15 1336	Central	TW 1	52	592317.62	666710.92	C-TW-1E-4-9
4/9/15 1348		Central	TW 2	57	592266.74	666919.86	C-TW-2S-4-9
	4/9/15 1359	Central	TW2	56	592752.57	667914.22	C-TW-2E-4-9
4/9/15 1416		Central	TW3	56	591846.16	666526.05	C-TW-3S-4-9
	4/9/15 1433	Central	TW3	56	592696.16	668703.29	C-TW-3E-4-9
4/9/15 1449		Central	TW4	57	591488.86	665171.02	C-TW-4S-4-9
	4/9/15 1508	Central	TW4	55	592389.42	669210.89	C-TW-4E-4-9
4/9/15 1528		North	TW5	40	597905.06	681526.03	N-TW-5S-4-9
	4/9/15 1544	North	TW5	13	598149.40	683336.08	N-TW-5E-4-9
4/9/15 1552		North	TW6	41	599995.46	682378.25	N-TW-6S-4-9
	4/9/15 1608	North	TW6	30	599215.12	684441.16	N-TW-6E-4-9
4/9/15 1617		North	TW7	28	598409.72	683901.69	N-TW-7S-4-9
	4/9/15 1630	North	TW7	34	599923.09	685284.96	N-TW-7E-4-9
4/9/15 1645		North	TW8	25	598411.11	683818.69	N-TW-8S-4-9
	4/9/15 1700	North	TW8	35	600353.00	685582.20	N-TW-8E-4-9

Notes:

Location Data Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: BWL, CCB, RCB on P3

Deployment Date & Time	Retrieval Date & Time	Sampling Zone & Location	Sampling Method	Water Depth (feet)	GPS Coordinates EASTING (X) (ft)	GPS Coordinates NORTHING (Y) (ft)	Notes
4/27/15 1030	4/28/15 850	South	GN1 4" float	15	587333.90	658723.30	GN1 st
			300' net	—	587549.92	658787.76	GN1 ed
4/27/15 1115	4/28/15 1020	South	GN2 4" flt	12	587599.35	665580.99	GN2 st
			300' net	—	587730.41	665420.74	GN2 ed
4/27/15 1155	4/28/15 1035	South	GN3 4" sink	45	587969.30	665630.11	GN3 st
			120' net	—	588159.00	665494.52	GN3 ed
4/27/15 1220	4/28/15 920	South	GN4 4" sink	8	590120.48	660778.95	GN4 st
			120' net	—	590205.60	660713.12	GN4 ed
4/27/15 1330	4/28/15 1115	South	GN5 float	9	581470.94	661309.88	GN5 st
			120' net	—	581466.19	661185.31	GN5 ed

Notes: GPS units
US State Plane 1983
New Jersey 2900
NAD 1983 (CONUS)
feet

Location Data Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: BWL, CCB, RCB on P3

Deployment Date & Time	Retrieval Date & Time	Sampling Zone & Location	Sampling Method	Water Depth (feet)	GPS Coordinates EASTING (X) ft	GPS Coordinates NORTHING (Y) ft	Notes
4/28/15 9:00	4/29/15 8:45	South	GN 1 4" fit	15	587333.90	658723.30	GN1 st
			300' net		587549.92	658787.76	GN1 ed
~~4/28/15 BWL 0945~~		~~North~~ BWL	~~GN 2 4" sink~~	~~15~~ BWL	~~587599.35~~ BWL	BWL ~~665580.99~~	~~GN2 st~~
			~~120' net~~		~~587738.44~~ BWL	~~665720.74~~ BWL	~~GN2 ed~~ BWL
4/28/15 1030	4/29/15 9:15	South	GN3 4" fit	15	587969.30	665630.11	GN3 st
			300' net		588159.00	665494.52	GN3 ed
4/28/15 1045	4/29/15 1045	South	GN4 4" sink	47	590120.48	660778.99	GN4 st
			120' net		590205.60	660713.12	GN4 ed
4/28/15 1130	4/29/15 1130	South	GN5 4" sink	16	587564.66	658714.65	GN5 st
			120' net		587661.33	658716.79	GN5 ed
4/28/15 0945	4/29/15 1005	North	GN2 4" sink	15	597407.98	680555.74	GN2 st
			120' net		597402.50	680711.18	GN2 ed

Notes:

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 1
Revision Date: September 2014
Location Data Form

Location Data Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: BWL, CCB, ROB on P3

Deployment Date & Time	Retrieval Date & Time	Sampling Zone & Location	Sampling Method	Water Depth (feet)	GPS Coordinates EASTING (X)	GPS Coordinates NORTHING (Y)	Notes
4/29/15 855	4/29/15 1645	South	GN1 4"	35	586123.63	661037.08	Removed early due to fisherman
			sink 120'		586244.11	661054.08	
4/29/15 945	4/30/15 1300	South	GN2 4"	8-	590993.66	662964.31	
			flt 300'		591037.28	663275.29	
4/27/15 1050	4/30/15 ~~1230~~ ~~1645~~ 1300	South	GN3 4"	45	587820.48	660778.99	UTC are not correct as moved
			sink	—	590205.60	660713.12	
4/29/15 1150	4/30/15 1150	South	GN4 4"	10	584767.01	659757.01	GN4 st
			flt 300'	—	584552.71	660010.74	GN4 ed
4/30/15		South	Rod/reel	20-30	584361.96	661051.79	trolling angle st 4/30
"		"	"	"	587685.88	661041.70	" angle ed 4/30
4/30/15					588407.01	661791.71	angle 1 st 4/30
"					589483.76	663190.73	angle 1 ed 4/30
4/30/15					592277.91	665950.33	angle 2 st 4/30
"					590025.32	661762.12	angle 2 ed 4/30

Notes:

Location Data Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: BWL, CCB, RCB on P3

Deployment Date & Time	Retrieval Date & Time	Sampling Zone & Location	Sampling Method	Water Depth (feet)	GPS Coordinates		Notes
					EASTING (X)	NORTHING (Y)	
5/5/15 1530	5/6/15 1330	South	GN1 300' floating (4")	10	582665.21	661029.61	GN1 st
—	—	—	—	—	582918.50	661016.81	GN1 ed
5/5/15 1600	5/6/15 1440	South	GN2 float 300', 4" sp.	10-17	584585.25	660108.16	GN2 st
—	—	—	—	—	584335.76	660211.94	GN2 ed

Notes:

Location Data Form

Project Name: NEWARK BAY PHASE III **Project No.:** NA

Field Crew Initials: BW, JBS, GMC on P3

Deployment Date & Time	Retrieval Date & Time	Location ID	Trap ID	Collection Method	Coordinates[a] Easting (X)[b]	Coordinates[a] Northing (Y)[b]	Depth (ft)	
6/3/15 1325	6/5/15 710	SOUTH	EP 8	Eel pot	581783.35	661208.29	7	
			13		582058.32	661384.43	6	
			12 white		583275.20	661095.50	7	
			15		582079.80	660158.47	13	
			12 orange		585730.07	660240.75	8	
			3		591241.90	663638.24	10	
			5		587359.10	665729.36	10	
6/3/15 1435	6/5/15 745	Central	11		593613.09	665969.25	3.5	pulled
			2		594413.86	667793.55	5	
			9		595308.62	669112.63	5	
	LOST		4*		595933.37	670087.05	5	
	6/5/15 745		10		594883.85	675272.61	10	
			1		594153.08	675871.84	11	

[a] Field-observed coordinates.

[b] NAD83 New Jersey State Plane (ft).

*EP 4 was picked up by a fisherman from Bayonne.

Subsurface p-chem @
temperature (C) salinity (ppt)
conductivity (uS/cm)
dissolved oxygen (mg/L)
pH

Subsurface p-chem @
temperature (C) salinity (ppt)
conductivity (uS/cm)
dissolved oxygen (mg/L)
pH

Location Data Form

Project Name: NEWARK BAY PHASE III **Project No.:** NA

Field Crew Initials: BW, JDS, GMC on P3

Deployment Date & Time	Retrieval Date & Time	Location ID	Trap ID	Collection Method	Coordinates[a] Easting (X)[b]	Coordinates[a] Northing (Y)[b]	Depth (ft)
6/2/15 900	6/2/15 1630	South	trotline 1	trotline	581259.44	660972.45	12
6/2/15 930	6/3/15 845	South	trotline 2	trotline	588191.54	665281.21	22
6/2/15 950	6/3/15 840	South	GN1 4" sq. sink 120'	GN	587627.54	665440.53	12
—		—		—	587498.20	665574.69	—
~~6/2/15~~							
						Bar	
6/3/15 1030	6/3/15 1000	South	GN2 4" ft 300'	GN	591425.18	664252.90	15
—	—	—			591595.78	664508.32	—
6/2/15 1100	6/2/15 1800	Control	trotline 3	trotline	593009.65	667693.74	23
6/2/15 1135	6/3/15 930	Control	GN3 4" ft 300'	GN	593135.99	668060.98	10
—		—			593724.82	667813.25	—
6/2/15 1700	6/3/15 1030	~~Control~~ South	trotline 4	trotline	590397.47	661386.33	15

[a] Field-observed coordinates.

[b] NAD83 New Jersey State Plane (ft).

Subsurface p-chem @ 1140
temperature (C) 17.2 salinity (ppt) —
conductivity (uS/cm) 29300
dissolved oxygen (mg/L) —
pH 7.1 WQ for GN 3 (Control)

Subsurface p-chem @ 1140 bottom
temperature (C) 17.1 salinity (ppt) —
conductivity (uS/cm) 30,100
dissolved oxygen (mg/L) —
pH 7.2

Location Data Form

Project Name: NEWARK BAY PHASE III **Project No.:** NA

Field Crew Initials: BWL, JBS, GME ON P3

Deployment Date & Time	Retrieval Date & Time	Location ID	Trap ID	Collection Method	Coordinates[a] Easting (X)[b]	Coordinates[a] Northing (Y)[b]	Depth (ft)
6/1/15 1230	6/2/15 1130	Central	GN1 4" float 300'	GN1	593735.99	668060.98	8
—	—	"	4" square mesh	"	593724.82	667813.25	—
6/1/15 1255	6/2/15 1030	Central	GN2 4" sq. float	GN2	591506.41	664231.09	8-10
—		"	300'	"	591445.46	663992.88	—
6/1/15 1310	6/2/15 945	South	GN3 4" sq. sink	GN3	587629.06	665604.45	
—	—	"	120'	"	587754.72	665543.10	23-28
6/1/15 1330	6/2/15 930	South	Trotline 1	Trotline	588243.63	665236.52	20
6/1/15 1555	6/2/15 1045	South	Trotline 2	↓	593051.09	667829.70	20
6/1/15 1620	6/2/15 900	South	Trotline 3	↓	581259.44	660972.45	12

[a] Field-observed coordinates.
[b] NAD83 New Jersey State Plane (ft).

Subsurface p-chem @
temperature (C) salinity (ppt)
conductivity (uS/cm)
dissolved oxygen (mg/L)
pH

Subsurface p-chem @
temperature (C) salinity (ppt)
conductivity (uS/cm)
dissolved oxygen (mg/L)
pH

Location Data Form

Project Name: NEWARK BAY PHASE III **Project No.:** NA

Field Crew Initials: JBS, BWL, GMC

Deployment Date & Time	Retrieval Date & Time	Location ID	Trap ID	Collection Method	Coordinates[a]		Depth (ft)
					Easting (X)[b]	Northing (Y)[b]	
6/4/15 0815	6/4/15 1600	Southern	Trotline 1	Trotline	589034.27	664753.05	15
6/4/15 0855	6/4/15 1800	Central	2	"	589895.49	664752.05	12
6/4/15 0910	6/4/15 1830	"	3	"	591446.85	664750.93	18

[a] Field-observed coordinates.

[b] NAD83 New Jersey State Plane (ft).

Subsurface p-chem @
temperature (C) salinity (ppt)
conductivity (uS/cm)
dissolved oxygen (mg/L)
pH

Subsurface p-chem @
temperature (C) salinity (ppt)
conductivity (uS/cm)
dissolved oxygen (mg/L)
pH

Location Data Form

Project Name: NEWARK BAY PHASE III **Project No.:** NA

Field Crew Initials: BW, JBS, OMC on B3

Deployment Date & Time	Retrieval Date & Time	Location ID	Trap ID	Collection Method	Coordinates[a] Easting (X)[b]	Coordinates[a] Northing (Y)[b]	Depth (ft)
6/3/15 910	6/3/15 1525	Central	Trotline 1	Trotline	593027.17	667621.08	20
6/3/15 1058	6/3/15 1525	"	Trotline 2	"	593186.84	667885.58	21
6/3/15 1105	6/3/15 1525	"	Trotline 3	"	593170.86	667220.38	12
				~~Anglings~~			
6/3/15 1525	6/4/15 0815	Central	Trotline 1	Trotline	593027.17	667621.08	20
6/3/15 1525	6/4/15 0855	"	" 2	"	593186.84	667885.58	21
6/3/15 1525	6/4/15 0910	"	" 3	"	593170.86	667220.38	12
~~6/4~~							

[a] Field-observed coordinates.
[b] NAD83 New Jersey State Plane (ft).

Subsurface p-chem @ 1110 Trot 3 6/3/15
temperature (C) 17.2 salinity (ppt) —
conductivity (uS/cm) 28,000
dissolved oxygen (mg/L) —
pH 7.1

~~Subsurface~~ Bottom p-chem @ 1110 trot 3
temperature (C) 17.0 salinity (ppt) —
conductivity (uS/cm) 28,900
dissolved oxygen (mg/L) —
pH 7.1

Location Data Form

Project Name: NEWARK BAY PHASE III **Project No.:** NA

Field Crew Initials: BWL, JBS, GMC on P3

Deployment Date & Time	Retrieval Date & Time	Location ID	Trap ID	Collection Method	Coordinates[a] #4		Depth (ft)
					Easting (X)[b]	Northing (Y)[b]	
6/1/15 1430	6/3/15 1320	South	EP 8	eel pot	581783.35	661208.29	7
6/1/15 1433		South	EP 13		582058.32	661384.43	6
6/1/15 1440		South	EP 12 white		583275.20	661095.50	7
6/1/15 1445		South	EP15		582079.80	660155.47	13
6/1/15 1450		South	EP12 orange		585130.07	660240.75	8
6/1/15 1458		South	EP 3		591241.90	663638.24	10
6/1/15 1503		South	EP5		587359.10	665729.36	10
6/1/15 1515	1430	Central	EP11		593613.09	665969.25	3.5
6/1/15 1520		Central	EP 2		594413.86	667793.55	5
6/1/15 1525		Central	EP 9		595308.62	669112.63	5
6/1/15 1528		Central	EP 4		595933.37	670087.05	5
6/1/15 1538		Central	EP10		594803.85	675272.61	10
6/1/15 1542		Central	EP 1		594153.08	675871.84	11

[a] Field-observed coordinates.

[b] NAD83 New Jersey State Plane (ft).

Subsurface p-chem @
temperature (C) salinity (ppt)
conductivity (uS/cm)
dissolved oxygen (mg/L)
pH

Subsurface p-chem @
temperature (C) salinity (ppt)
conductivity (uS/cm)
dissolved oxygen (mg/L)
pH

Location Data Form

Project Name: NEWARK BAY PHASE III **Project No.:** NA

Field Crew Initials: BWL, JBS, GMC on P3

Deployment Date & Time	Retrieval Date & Time	Location ID	Trap ID	Collection Method	Coordinates[a] Easting (X)[b]	Coordinates[a] Northing (Y)[b]	Depth (ft)	
6/3/15 1325	6/5/15 710	SOUTH	EP 8	Eel pot	581783.35	661208.29	7	
			13		582058.32	661384.43	6	
			12 white		583275.20	661095.50	7	
			15		582079.80	660158.47	13	
			12 orange		585730.07	660240.75	8	
			3		591241.90	663638.24	10	
			5		587359.10	665729.36	10	
6/3/15 1435	6/5/15 745	Central	11		593613.09	665969.25	3.5	pulled
			2		594413.86	667793.55	5	
			9		595308.62	669112.63	5	
	LOST		4*		595933.37	670087.05	5	
	6/5/15 745		10		594883.85	675272.61	10	
			1		594153.08	675871.84	11	

[a] Field-observed coordinates.

[b] NAD83 New Jersey State Plane (ft).

*EP 4 was picked up by a fisherman from Bayonne.

Subsurface p-chem @
temperature (C) salinity (ppt)
conductivity (uS/cm)
dissolved oxygen (mg/L)
pH

Subsurface p-chem @
temperature (C) salinity (ppt)
conductivity (uS/cm)
dissolved oxygen (mg/L)
pH

Location Data Form

Project Name: NEWARK BAY PHASE III **Project No.:** NA

Field Crew Initials: BWy JBS, CJR

Deployment Date & Time	Retrieval Date & Time	Location ID	Trap ID	Collection Method	Coordinates[a] Easting (X)[b]	Coordinates[a] Northing (Y)[b]	Depth (ft)	# eels
8/4/15 1030	8/5/15 745	Central	EP00	eel pot	592970.45	667905.84	29	—
1030			EP15 white		593122.21	668168.87	28	—
1020			EP14		593233.36	668512.42	30	—
1020			21		593348.61	668749.83	28	3
1020			20		593521.73	669181.78	20	2
1020			19		593681.44	669413.46	15	1
1005			18		593789.90	669727.87	28	2
1005			22		593609.06	672238.88	19	1
955			8		594212.29	675772.48	~~21~~	—
955			12 white		594191.59	675811.92	20	—
955			11		594162.84	675852.60	21	—
~~1050~~ 950			15		594210.33	675891.86	12	—
940			23		593933.66	676142.41	21	—
1005			0		594031.55	67041573	29	—
								2 = 9
		1 2nd eel pot lost/stolen		in Central zone				

[a] Field-observed coordinates.

[b] NAD83 New Jersey State Plane (ft).

Subsurface p-chem @
temperature (C) salinity (ppt)
conductivity (uS/cm)
dissolved oxygen (mg/L)
pH

Subsurface p-chem @
temperature (C) salinity (ppt)
conductivity (uS/cm)
dissolved oxygen (mg/L)
pH

Location Data Form

Project Name: NEWARK BAY PHASE III **Project No.:** NA

Field Crew Initials: BWL, JBS, CJR ON PJ

Deployment Date & Time	Retrieval Date & Time	Location ID	Trap ID	Collection Method	Coordinates[a] Easting (X)[b]	Coordinates[a] Northing (Y)[b]	Depth (ft)	# eels
8/4/15 1125	8/5/15 905	South	EP G8	Eel Pot	583485.58	662458.97	13	1
8/4/15 1140		"	EP 100	"	583516.17	662333.08	10	2
↓		"	EP 69	↓	581702.75	660981.38	25	—
↓ 1150		↓	EP 9		581426.91	660930.68	25	1
↓			12 Orange		579774.99	659866.77	28	—
↓	8/5/15 845		1		585041.05	661044.79	26	1
↓	↓	↓	13	↓	585831.11	661114.51	27	—
8/4/15 1205	LOST	South	3	↓	586818.71	661527.27	25	LOST
8/4/15	8/5/15 850	South	10	↓	582015.84	660157.88	12	1

n=8

[a] Field-observed coordinates.

[b] NAD83 New Jersey State Plane (ft).

Subsurface p-chem @ EP100 @1130
temperature (C) 24.4 salinity (ppt) —
conductivity (uS/cm) 38,000
dissolved oxygen (mg/L) 5.6
pH 7.1

~~Subsurface~~ mid-depth p-chem @ EP100 @1135
temperature (C) 24.3 salinity (ppt)
conductivity (uS/cm) 38,000
dissolved oxygen (mg/L) 5.5
pH 7.4

Location Data Form

Project Name: NEWARK BAY PHASE III **Project No.:** NA

Field Crew Initials: BWL, JDS, NSG on R3

Deployment Date & Time	Retrieval Date & Time	Location ID	Trap ID	Collection Method	Coordinates[a] Easting (X)[b]	Coordinates[a] Northing (Y)[b]	Depth (ft)	# eels
8/3/15 1040	8/4/15 955	Central	EP 11	Eel Pot	594162.84	675852.60	21	1
			12 white		594191.59	675811.92	20	—
			8		594212.29	675777.48	21	—
	8/4/15 956		15		594110.33	675891.96	12	—
	1108 8/4/15 1040	South	13		585313.89	660096.40	17	— moved
			3		585169.25	660152.23	9	— moved
			1		583140.77	660956.98	9	— moved
	1100		9		581899.65	660163.59	15	— moved
	1145		10		582015.84	660151.88	12	—
			5 12 orange		579875.77	659949.68	6	— moved
8/3/15 1200	1110	South	68		582974.83	661734.25	10	— moved
			69		581821.22	661242.62	12	— moved
			100		583516.17	662333.08	10	1
		Rock		Dirt				

[a] Field-observed coordinates.

[b] NAD83 New Jersey State Plane (ft).

Subsurface p-chem @
temperature (C) salinity (ppt)
conductivity (uS/cm)
dissolved oxygen (mg/L)
pH

Subsurface p-chem @
temperature (C) salinity (ppt)
conductivity (uS/cm)
dissolved oxygen (mg/L)
pH

Location Data Form

Project Name: NEWARK BAY PHASE III **Project No.:** NA

Field Crew Initials: BWL, JBS, CJR on P3

Deployment Date & Time	Retrieval Date & Time	Location ID	Trap ID	Collection Method	Coordinates[a] Easting (X)[b]	Coordinates[a] Northing (Y)[b]	Depth (ft)	# eels
8/3/15 1020	8/4/15 940	Central	eel pot 23	eel pot	593933.66	676142.41	21	—
	8/4/15 1005		22		593609.06	672238.88	19	1
			0		594031.55	670415.73	29	4+1
			18		593789.90	669726.87	28	2
	8/4/15 1020		19		593681.44	669413.46	15	0
			20		593526.73	669186.78	20	3
			21		593348.61	668749.83	28	—
			14		593233.36	668512.42	30	—
	1030		15 white		593122.21	668168.87	28	—
			00		592970.45	667905.84	29	—
(11)			Not Found					

[a] Field-observed coordinates.

[b] NAD83 New Jersey State Plane (ft).

Subsurface p-chem @
temperature (C) salinity (ppt)
conductivity (uS/cm)
dissolved oxygen (mg/L)
pH

Subsurface p-chem @
temperature (C) salinity (ppt)
conductivity (uS/cm)
dissolved oxygen (mg/L)
pH

Location Data Form

Project Name: NEWARK BAY PHASE III **Project No.:** NA

Field Crew Initials: BWL, JBS, NSG on P3

Deployment Date & Time	Retrieval Date & Time	Location ID	Trap ID	Collection Method	Coordinates[a] Easting (X)[b]	Coordinates[a] Northing (Y)[b]	Depth (ft)	
7/31/15 800	8/3/15 1040	Cntrl	EP 11	Eel Pot	594162.84	675852.60	21	
			12 white		594191.59	675811.92	20	
			8		594213.29	675777.48	21	
			15		594110.33	675871.96	12	N=2
7/31/15 11:00	8/3/15 1110	South	13		585313.89	660096.40	7	
			3		585569.25	660152.23	9	
1115			1		583140.77	660956.95	9	
1			9		581899.65	660163.59	15	N=1
			10		582015.84	660015.88	12	
1130	LOST		5		578181.84	659949.68	6	
↓	~~LOST~~ BWL		12 orange		579875.77	659949.68	10	Lost/Stolen

[a] Field-observed coordinates.

[b] NAD83 New Jersey State Plane (ft).

Subsurface p-chem @
temperature (C) salinity (ppt)
conductivity (uS/cm)
dissolved oxygen (mg/L)
pH

Subsurface p-chem @
temperature (C) salinity (ppt)
conductivity (uS/cm)
dissolved oxygen (mg/L)
pH

Location Data Form

Project Name: NEWARK BAY PHASE III **Project No.:** NA

Field Crew Initials: BWK, JBS, NSG on P3

eels

Deployment Date & Time	Retrieval Date & Time	Location ID	Trap ID	Collection Method	Coordinates[a] Easting (X)[b]	Coordinates[a] Northing (Y)[b]	Depth (ft)	
7/30/15 1040	7/31/15 800	Control	EP 11	Eel POT	594162.84	675852.60	21	—
↓	↓	↓	12 White	↓	594191.59	675811.92	20	—
↓	↓	↓	8	↓	594212.29	675777.48	21	N=1
↓	↓	↓	15	↓	594110.33	675891.96	12	—
7/30/15 1100	7/31/15 745	SOUTH	13	↓	585313.89	660096.40	7	—
↓	7/31/15 745	↓	3	↓	585169.25	660152.23	9	2
1115	7/31/15 735	↓	1	↓	583140.77	660966.95	9	—
↓	7/31/15 730	↓	9	↓	581899.65	660163.59	15	N=1
↓	7/31/15 ↓	↓	10	↓	582015.84	660151.88	12	—
1130	7/31/15 7:10	↓	5	↓	578181.84	659625.42	6	—
↓	↓	↓	12 orange	↓	578075.62	659511.25	6	pulled, reset new locale

[a] Field-observed coordinates.

[b] NAD83 New Jersey State Plane (ft).

Subsurface p-chem @
temperature (C) salinity (ppt)
conductivity (uS/cm)
dissolved oxygen (mg/L)
pH

Subsurface p-chem @
temperature (C) salinity (ppt)
conductivity (uS/cm)
dissolved oxygen (mg/L)
pH

Location Data Form

Project Name: NEWARK BAY PHASE III **Project No.:** , NA

Field Crew Initials: BWL, JDS, NSG on P3

Deployment Date & Time	Retrieval Date & Time	Location ID	Trap ID	Collection Method	Coordinates[a] Easting (X)[b]	Coordinates[a] Northing (Y)[b]	Depth (ft)	# eels
7/29/15 935	7/30/15 1040	Centra	EP 11	Eel pot	594162.84	675852.60	21	
7/29/15		Centra	EP 12 white		594191.59	675811.92	20	
		Centra	EP 8		594212.29	675777.48	21	
		Centra	EP 15		594110.33	675891.96	17	
7/29/15 950	7/30/15 1100	South	EP 13		585313.89	660096.40	7	N=1
			EP 3		585169.25	660152.23	9	
7/29/15 1005	7/30/15 1115		EP 1		583140.77	660956.95	18 9	
			EP 9		581899.65	660163.59	15	
			EP 10		582015.84	660151.88	12	
7/29/15 1015	7/30/15 1130		EP 5		578181.84	659625.42	6	
			EP 12 orange		578075.62	659511.25	6	

[a] Field-observed coordinates.

[b] NAD83 New Jersey State Plane (ft).

Subsurface p-chem @
temperature (C) salinity (ppt)
conductivity (uS/cm)
dissolved oxygen (mg/L)
pH

Subsurface p-chem @
temperature (C) salinity (ppt)
conductivity (uS/cm)
dissolved oxygen (mg/L)
pH

Location Data Form

Project Name: NEWARK BAY PHASE III **Project No.:** NA

Field Crew Initials: P3 – DWL, JBS, NSG

Deployment Date & Time	Retrieval Date & Time	Location ID	Trap ID	Collection Method	Coordinates[a] Easting (X)[b]	Coordinates[a] Northing (Y)[b]	Depth (ft)
7/27/15 930	—	South	TW1 st	Otter trawl	588573.53	662037.20	10
	7/27/15 944	"	TW1 end	"			
7/27/15 952	—	South	TW2 st	"	588195.87	664705.53	8
7/27/15 —	1000	"	TW2 ed	"	588693.91	663610.52	
7/27/15 1009	—		TW3 st	"	587558.29	665707.63	30-50
7/27/15	1018		TW3 ed	"	589055.35	664927.43	
7/27/15 1024	—		TW4 st	"	589245.57	664754.87	~~30-50~~
—	1040	South	TW4 ed	"	588667.35	662516.11	8-20
7/27/15 1059	—	South	TW5 st	"	587109.65	662199.44	
—	7/27/15 1111	South	TW5 ed	"			5-7
7/27/15 1130	—	North	TW6 st	"	598330.21	663398.04	30-35
	7/27/15 1145	North	TW6 ed	"	600076.19	685295.40	
7/27/15 1202	—	North	TW2 st		599013.28	684366.18	30-35
—	7/27/15	~~1200~~ but	TW2 ed		599163.76	684529.20	hung down
7/27/15 1222	—	~~1233~~	TW3 st		599072.82	684265.36	30-35
—	7/27/15 1233	North	TW3 ed		600954.66	686172.53	

[a] Field-observed coordinates.

[b] NAD83 New Jersey State Plane (ft).

Subsurface p-chem @
temperature (C) salinity (ppt)
conductivity (uS/cm)
dissolved oxygen (mg/L)
pH

Subsurface p-chem @
temperature (C) salinity (ppt)
conductivity (uS/cm)
dissolved oxygen (mg/L)
pH

Location Data Form

Project Name: NEWARK BAY PHASE III **Project No.:** NA

Field Crew Initials: BWL, JBS, NSG on P3

Deployment Date & Time	Retrieval Date & Time	Location ID	Trap ID	Collection Method	Coordinates[a] Easting (X)[b]	Coordinates[a] Northing (Y)[b]	Depth (ft)	# eels
7/27/15 1445	7/29/15 820	North	11	eel pot	598660.46	684647.37	13	
7/27/15 1446	↓	↓	13	↓	598744.75	684611.63	8	
7/27/15 1450	↓	↓	8	↓	598724.71	685045.82	8	
7/27/15 1451	825	↓	12 white	↓	598674.78	685049.15	8	
7/27/15 1452	↓	↓	15	↓	600517.88	686008.97	12	N=1
1453	↓	↓	3	↓	600528.75	686129.08	18	N=1
1454	↓	↓	12 orange	↓	600610.59	686119.43	14	N=8 juv
1456	845	↓	5	↓	602422.82	686695.92	9	
1458	↓	↓	1	↓	602055.43	686714.26	~~20~~ 9	N=2
1501	905	↓	10	↓	601215.77	687047.83	20	
1502	↓	↓	9	↓	601333.31	687065.14	20	N=12 juv 17
7/27/15 1515	7/27/15 1535	North	Ang Ing				15-20	
7/27/15 1545	" 1735	South	"				10-15	
								29

[a] Field-observed coordinates.

[b] NAD83 New Jersey State Plane (ft).

pots baited w/ blue crab or hard clam

Subsurface p-chem @ 1510
temperature (C) ~~25.3~~ salinity (ppt) —
conductivity (uS/cm) 32,000
dissolved oxygen (mg/L) 7.6
pH 7.6

Subsurface p-chem @ 1515 mid depth (15')
temperature (C) 25 salinity (ppt) —
conductivity (uS/cm) 32,800
dissolved oxygen (mg/L) 7.
pH 7.5

Location Data Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: BWL, JBJ, CJL on P3

Deployment Date & Time	Retrieval Date & Time	Sampling Zone & Location	Sampling Method	Water Depth (feet)	GPS Coordinates		Notes
					EASTING (X)	NORTHING (Y)	
8/4/15 ~~740~~	8/4/15 840	Central	Angling	9-20	593358.74	671827.50	Ang
8/4/15 845	8/4/15 910	North	Angling	8-20	594805.39	675603.18	Ang
8/4/15 915	8/4/15 930	North	"	12-20	599049.86	684727.18	Ang 12

Notes:

Location Data Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: BWL, JBS, CJR

Deployment Date & Time	Retrieval Date & Time	Sampling Zone & Location	Sampling Method	Water Depth (feet)	GPS Coordinates		Notes
					EASTING (X)	NORTHING (Y)	
8/3/15 1230	8/3/15 1400	South	Angling	10-15	583592.26	661171.84	Ang1
8/3/15 1420	8/3/15 1540	South	"	10-20	588843.20	662288.71	Ang2
8/3/15 1555	8/3/15 1600	South	"	8-20	583592.26	661171.84	Ang3
8/3/15 1610	8/3/15 1710	Central	"	8-20	593147.22	671612.49	Ang

Notes:

Location Data Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: BWH, JBS, NSG on P3

Deployment Date & Time	Retrieval Date & Time	Sampling Zone & Location	Sampling Method	Water Depth (feet)	GPS Coordinates EASTING (X) ft	GPS Coordinates NORTHING (Y) ft	Notes
7/31/15 830	7/31/15 900	Control	angling	8-15	593378.58	671916.79	
7/31/15 920	7/31/15 1020	South	Angling	10-20	583440.89	660937.96	

Notes:
YSI 556
subsurface water quality 7/31/15 (water depth = 13ft)
temp 24.3°C
DO 5.1
pH 7.2
cond 36,300 µS/cm
mid-depth (7ft)
temp 24.1
DO 4.6
pH 7.4
cond = 36,700

Location Data Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: BWL, JBS, NSG

Deployment Date & Time	Retrieval Date & Time	Sampling Zone & Location	Sampling Method	Water Depth (feet)	GPS Coordinates		Notes
					EASTING (X)	NORTHING (Y)	
7/30/15 810	855	South	Angling	10-20	583909.87	661260.05	Ang1
900	920	"	"	8-20	585554.10	661147.16	Ang2
930	945	North	"	8-15	595042.27	675922.94	Ang1
7/30/15 950	1030	North	"	8-15	600449.65	685953.56	Ang2

Notes:

Location Data Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: BWL, JBS, NSG on P3

Deployment Date & Time	Retrieval Date & Time	Sampling Zone & Location	Sampling Method	Water Depth (feet)	GPS Coordinates EASTING (X) ft	GPS Coordinates NORTHING (Y) ft	Notes
7/29/15 1030	7/29/15 1140	South	Angling	10-25	588995.20	662490.92	
7/29/15 1200	7/29/15 1250	Central	Angling	8-20	594642.86	671900.61	Ang 1
7/29/15 1310	7/29/15 1400	Central	Angling	8-20	594037.70	673486.06	Ang 2
7/29 1530	7/29 1645	NORTH	ANGLING	8-15	595213.50	676137.76	GPS not recorded same locale as previous
7/29 1700	7/29 1730	SOUTH	ANGLING	10-15	585182.41	661119.97	

Notes:

Location Data Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: PJ – BWL, JGS, NSG

Deployment Date & Time	Retrieval Date & Time	Sampling Zone & Location	Sampling Method	Water Depth (feet)	GPS Coordinates EASTING (X) ft	GPS Coordinates NORTHING (Y) ft	Notes
7/28/15 830	7/28/15 850	South	Angling	10-20	587999.86	661964.55	S-Angl-7/28
7/28/15 850	7/28/15 920	"	"	10-20	595213.50	676137.76	" " "
7/28/15 930	" 1150	North		10-20	595213.50	676137.76	N-Angl-7/28
		~~South~~					
7/28 1245	7/28 1510	SOUTH			587999.86	661964.55	
7/28 1520	7/28 1630	NORTH			595213.50	676137.76	
* Note – GPS points are location of starting point for each drift.							

Notes: WQ NORTH ZONE 1530 → depth ~0.5m
DO% – 104.4% 7.50 mg/L
26.03°C 7.55 pH
depth → 3.0m
DO – 85.0% 6.30 mg/L
temp – 23.44°C
Cond – 36.11 mS/cm

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: JBS, KCM, NSG

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/30/15 @1723	Trawl	Central	Blue Crab	110	45		♂ C-TW-2

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: BWL, CCB, RCB

Collection Date/~~Time~~	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/30 ~~1625~~ BWL	TW	North	Ameri shad	100	2	NA	
			Alewife	105	2		
			"	126	7.5		
			"	81	3		
			"	78	1		
			"	84	1		
			"	200	50		
			"	130	30		
			"	152	30		
			Am. shad	137	10		
			blue crab	111	50		
			blue crab	121	90		
			longhorn sculpin	90	5		

BWL

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: BWR, RCB, CCB

Collection Date/~~Time~~	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/30/15	TW	North	striped bass	181	80	—	
3/30/15	TW	North	blue crab	120	—	—	
			striped bass	320	300	NA	
			alewife	270	~~180~~		
			alewife	278	150		
			blue crab	120	70		
			blue crab	97	50		
			"	115	65		
			"	108	55		
			"	123	80		
			"	35	4		
			striped bass	78	4		
			blue crab	110	90		
			blue crab	120	110		

BWR

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: JBS, CDD, NSG

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/31/15 @ 1333	Trawl	South	B/w Crab	96	55		♀ S-TW-4 3/31
"	"	"	"	28	<5		"
"	"	"	Mud Crab	37	<5		♀ "
3/31/15 @ 1438	"	"	Striped Bass	155	34		
"	"	"	B/w Crab	36	<5		♂
"	"	"	"	44	<5		♂
"	"	"	"	41	<5		♂
"	"	"	"	36	<5		♀
"	"	"	"	29	<5		♂
"	"	"	"	36	<5		♀
"	"	"	"	40	<5		♂

31 March 2015

Non-Target Species Tally Form

1 of 1

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: CCB, MRW, RLB

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
03/31 1016	TW	C-TW03-ED-0331	Blue Crab	120	~~35~~ MRW 35		
03/31 1213	TW	C-TW05-ED-0331	Blue Crab	110	~~30~~ MRW 30		
03/31 1323	TW	C-TW10-ED-0331	Blue Crab	75	1		
"	"	"	"	65	1		
"	"	"	"	95	1.5		
"	"	"	Shad	120	1.5		
03/31 14	TW	S-TW01-ED-0331	Spdr Crab	60	~~400~~ 100 MRW		
"	"	"	Blue Crab	100	30		

1 April 2015

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

1 of 2

Field Crew Initials: CCB, MRW, RCB

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
01/04 0955	TN	C-TW03-ED	Blue Crab	100	30		♂
01/04 1406	TN	C-TW05-ED	Shad (American)	107	2		
01/04 1428	TN	C-TW06-ED	Striped bass	160	30		
01/04 1450	TN	C-TW07-ED ~~C-TW07-ED~~	Striped bass	125	16		
			"	152	32		
			Alewife	90	1		
			"	96	1		
			"	86	1		
			"	82	1		
			"	85	1		
			"	91	1		
			Blue back herring	75	1		
			"	80	1		
			"	70	1		

MRW

1 April 2015

Non-Target Species Tally Form

2 of 2

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: CCB, MRW, RCB

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
01/04 1450	TW	C-~~TW06~~ TW07-GD	Blue back herring	75	1		
				70	1		
				77	1		
				80	1		
				72	1		
				71	1		
01/04 1520	TW	C-TW08-GD	Skipjack Bass	175	25		
"	"	"	Blue Crab	105	30		♀

MRW

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: JBS, KCM, CDD

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
4/1/15 @ 1403	Trawl 3	South	Sculpin	77	< 5		longhorn
" "	" "	"	Sculpin	72	< 5		longhorn
4/1/15 @ 1428	Trawl 4	South	Striped Bass	86	<5		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: BWL, JBS, NSG

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
4/2/15	GN	South	Striped bass	355	425	-	1.5" sinking GN

2 April 2015

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

1 of 5

Field Crew Initials: CCB, MRW, RCB

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
04/02 0955	TW	C-TW01-ED	Blueback herring	81	1		
			"	67	1		
			"	71	1		
			"	85	1		
			"	65	1		
			"	70	1		
			"	77	1		
			"	74	1		
			Blue back herring	75	1		
			American Shad	165	21		
			"	139	17		
			"	110	5		
			"	116	5		
04/02 0955	TW	C-TW01-ED	American Shad	127	7		

MRW

2 April 2015

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

2 of 3

Field Crew Initials: CCB, MRW, RCB

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
04/02 0855	TW	C-TW01-ED	Alewife	101	4		
			↓	80	3		
			Alewife	81	4		
			Blueback herring	71	1		
			↓	70	1		
				77	1		
				73	1		
				70	1		
				70	1		
				69	1		
				75	1		
				65	1		
↓	↓	↓	↓	74	1		
04/02 0855	TW	C-TW01-ED	Blueback herring	73	1		

MRW

2 April 2015

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

3 of 5

Field Crew Initials: CCB, MRW, RCB

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
04/02 0855	TW	C-TW01-ED	Striped Bass	150	20		
			"	158	30		
			"	181	42		
			"	155	29		
			"	124	18		
			"	132	21		
			Striped Bass	115	15		
			Alewife	119	10		
			"	95	6		
			"	80	1		
			"	86	1		
			"	115	7		
			"	105	5		
04/02 0855	TW	C-TW01-ED	Alewife	129	9		

MRW

2 April 2015

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

4 of 5

Field Crew Initials: CCB, MRW, RCB

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
04/02 0855	TW	C-TW01-ED	American Shad	150	25		
04/02 0855	TW	C-TW01-ED	American Shad	165	15		
04/02 0945	TW	C-TW02-ED	Blueback herring	66	1		
04/02 0945	TW	C-TW02-ED	Blueback herring	71	1		
04/02 1026	TW	C-TW03-ED	Blue Crab	125	30		
↓	↓	↓	Striped Bass	110	15		
			Gunner	77	7		
			American Shad	110	2		
			Alewife	70	1		
			↓	94	1		
				100	1		
				107	1		
↓	↓	↓	↓	74	1		
04/02 1026	TW	C-TW03-ED	Alewife	75	1		

MRW

2 April 2015

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

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Field Crew Initials: CCB, MRW, RCB

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
04/02 1026	TW	C-TW03-ED	Alewife	81	1		
			Alewife	82	1		
			Blueback herring	80	1		
				80	1		
				71	1		
				90	1		
04/02 1026	TW	C-TW03-ED	Blueback herring	81	1		

MRW

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: CCB, SMS, NSG

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
4-6-15 0938	TW	North	Striped Bass	100	10		
↓	↓	↓	Blue Crab	35	1		Female
↓	↓	↓	↓	35	1		Male
4-6-15 1021	↓	↓	Striped Bass	305	300		
↓	↓	↓	Blue Crab	75	30		male
↓	↓	↓	Blue Crab	110	60		male
4-6-15 1100	↓	↓	Striped Bass	150	30		
↓	↓	↓	Blue Crab	120	90		Male
↓	↓	↓	↓	100	60		Male
↓	↓	↓	↓	120	80		male
↓	↓	↓	↓	90	50		male
4-6-15 1137	↓	↓	Striped Bass	205	100		
↓	↓	↓	↓	165	50		
↓	↓	↓	↓	100	20		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: CCB, SMS, N.SG

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
4-6-15 1137	TW	North	Striped Bass	100	20		
			Striped Bass	80	10		
			Blue Crab	111	90		male
			↓	120	100		Male
				120	90		Female
				100	60		Male
				80	30		Male
				35	10		male
↓			↓	50	10		male
4-6-15 1227			Blue crab	110	60		Male
↓			↓	95	40		male
				120	80		Male
				100	60		Female
↓			↓	120	90		male

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: CCB, SMS, NSG

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
4/6/15 1300	TW	North	Striped Bass	175	50		
4/6/15 1326	↓	↓	Striped Bass	255	160		
↓	↓	↓	Blue Crab	110	80		M
↓	↓	↓	Blue Crab	140	150		M
4/6/15 1358	↓	↓	Alewife	80	2		
↓	↓	↓	Blue crab	40	2		M
↓	↓	↓	Blue crab	140	120		M
4/6/15 1436	↓	Central	Striped Bass	205	50		
↓	↓	↓	Cunner	170	70		
4/6/15 1508	↓	↓	Blue Black H.	220	70		
↓	↓	↓	Striped Bass	140	20		
↓	↓	↓		130	20		
↓	↓	↓		130	20		
↓	↓	↓		120	10		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: CCB, SMS, SNG

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
4/6/15 1508	TW		Striped Bass	140	20		
				120	10		
				175	40		
				160	30		
				115	10		
				90	10		
				210	70		
				220	80		
				200	60		
				190	50		
				180	50		
				150	30		
				145	30		
				125	20		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: CCO, SMS, WSG

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
4/6/15 1508	TV	Central Zone	Striped Bass	120	20		
↓	↓	↓	↓	105	10		
				100	10		
				90	10		
				90	10		
				105	10		
				95	5		
			Blueback	225	70		
			Alewife	75	5		
			↓	70	5		
↓			↓	80	5		
4/6/15 1514			Striped bass	120	10		
↓			↓	185	50		
↓	↓	↓	↓	130	20		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: BWL, JBS, CLR

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
4/6/15	TW	South	blue crab	85	50	—	

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: BWL, JBS, CLR

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
4/7/15 0945	GN 2	South	Striped Bass	327	360	—	
4/7/15 0945	GN 2	South	Striped Bass	348	400	—	
4/7/15 0945	GN 2	South	Striped Bass	340	395	—	

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: CCB, SMS, NSG

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
4-7-15 0906	TW	Central	Alewife	80	1		
			Blue back	70	1		
			Shad	125	5		
			Shad	125	5		
			Striped Bass	100	5		
				105	5		
				105	5		
				195	50		
4-7-15 0937			Striped Bass	210	90		
				115	20		
				100	10		
				130	20		
				165	40		
				125	20		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: CCB, SMS, NSG

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
4-7-15 0937	TW	Central Zone	Am. Shad	140	20		
				130	20		
				130	10		
				125	10		
				140	20		
				140	20		
				155	30		
				140	20		
				125	10		
				120	10		
				110	10		
				115	10		
				120	10		
				110	10		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: CCB, SMS, NSG

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
4-7-15 0937	TN	Central Zone	Am. Shad	125	10		
↓	↓	↓	Alewife	150	30		
↓	↓	↓	↓	125	10		
↓	↓	↓	↓	110	10		
↓	↓	↓	↓	130	20		
↓	↓	↓	↓	125	20		
↓	↓	↓	↓	100	10		
↓	↓	↓	↓	100	10		
↓	↓	↓	↓	90	10		
4-7-15 1012	↓	↓	N. Pipefish	190	1		
↓	↓	↓	Alewife	120	20		
↓	↓	↓	Alewife	115	10		
↓	↓	↓	Striped Bass	215	90		
4-7-15 1018	↓	North Zone	Blue Crab	115	80		M

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: CCB, SMS, NSG

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
4-7-15 1048	TW	North Zone	Striped Bass	210	90		
				210	80		
				195	60		
				125	20		
				210	90		
				170	40		
				135	20		
			Alewife	100	10		
				100	5		
				90	5		
				80	2		
				80	2		
4-7-15 1126			Blue Crab	105	50		M
4-7-15 1217		Central Zone	Striped Bass	135	20		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: CCB, SMS, NSG

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
4-7-15-1215	TW	Central Zone	Striped Bass	90	10		
			Alewife	90	5		
				90	5		
				140	20		
				95	5		
				105	5		
				80	2		
				80	2		
				90	2		
			Blue Back	90	2		
			A. Shad	125	10		
				120	10		
				120	10		
4-7-15 1254			Blue Crab	150	130		M

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: CCB, SMS, WSG

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
4-7-15 1254	TW	Central	Blue Crab	145	100		F
				150	130		M
				140	130		F
				120	70		M
			Sculpin	85	10		
			A. Shad	120	10		
			A. Shad	125	20		
			Alewife	90	2		
4-7-15 1348			Blue Crab	140	190		M
				135	140		M
				130	120		M
				120	100		M
				120	90		F
				150	150		F

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: CCB, SMS, NSG

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
4-7-15 1148	TW	Central	Blue Crab	130	130		M
			Alewife	75	1		
				75	1		
				80	2		
				80	2		
			A. Shad	125	20		
			A. Shad	135	20		
			sculpin	80	5		
4-7-15-1436			Blue crab	100	50		F
4-7-15-1508		North	Blue Crab	95	40		F
4-7-15 1508			Blue Crab	120	90		M
4-7-15 1543			sculpin	110	10		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: CCB, SMS, NSG

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
4-8-15 0957	TW	North	Striped Bass	330	370		
↓	↓	↓	↓	220	100		
				250	150		
				190	50		
				220	90		
				210	60		
				140	20		
				160	20		
				150	30		
				170	40		
				175	40		
				170	30		
				150	30		
↓	↓	↓	↓	180	50		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: CCB, SMS, NSG

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
4-3-15 0957	TW	North	Striped Bass	135	30		
				150	30		
				110	10		
				120	10		
				140	20		
				90	10		
				120	10		
				105	10		
				95	10		
				100	10		
			Alewife	100	2		
				105	2		
				105	2		
				105	2		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: CCB, SMS, NSG

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
4-8-15 0907	TW	North	Blue Crab	120	100		M
↓	↓	↓	↓	110	50		M
↓	↓	↓	↓	95	40		F
4-8-15 1035	↓	↓	Striped Bass	185	60		
↓	↓	↓	↓	160	40		
↓	↓	↓	↓	120	20		
↓	↓	↓	↓	135	20		
↓	↓	↓	↓	145	30		
↓	↓	↓	↓	140	30		
↓	↓	↓	↓	130	30		
↓	↓	↓	↓	105	10		
↓	↓	↓	Alewife	90	2		
4-8-15 1328	↓	Central	Striped Bass	110	30		
↓	↓	↓	↓	110	20		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: CCB, SMS, NSG

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
4-8-15 1328	TW	Central	Striped Bass	105	20		
↓	↓	↓	↓	135	40		
				130	40		
				180	30		
				110	20		
				120	30		
				95	20		
			Blue Crab	160	200		M
			↓	140	180		M
			↓	110	70		F
			Shad	155	20		
			↓	160	20		
			Alewife	100	2		
↓	↓	↓	↓	85	2		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: CCB, SMS, NBG

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
4-8-15 1328	TW	Central	Sculpin	100	2		
4-8-15 1411	↓	↓	Striped Bass	310	270		
↓	↓	↓	↓	120	20		
				185	60		
				140	30		
				125	20		
				110	10		
			Little Skate	90	5		
			Blue Crab	160	200		M
			↓	150	130		F
				140	140		M
			Shad	110	5		
			↓	110	5		
↓	↓	↓	Alewife	105	5		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: CCB, SMS, NSG

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
4-8-15 1411	TW	Central	Alewife	90	2		
↓	↓	↓	↓	100	2		
				100	2		
				110	2		
				90	2		
				100	2		
↓			↓	80	1		
4-8-15 1453			Striped bass	200	70		
↓			↓	135	20		
				120	10		
↓			Alewife	90	1		
↓			↓	88	1		
4-8-15 1530	↓	↓	Striped bass	105	20		
↓			↓	115	10		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: CCB, SMS, NSG

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
4-8-15 1530	TW	Central	Striped Bass	95	10		
↓	↓	↓	↓	90	10		
				110	10		
			Blueback H.	100	3		
			↓	75	1		
				70	1		
				70	1		
				75	1		
				75	1		
				85	2		
				70	1		
				75	1		
				60	1		
↓	↓	↓	↓	70	1		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: CCB, SMS, NJS

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
4-8-5 1530	TW	Central	Alewife	110	5		Sub sample
				105	5		
				85	2		
				95	103		
				80	2		
				75	2		
				90	2		
				70	1		
				85	2		
				75	1		
			42 Alewife		160		Total Count

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: JBS, CJR, CAF

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
4/8/15 0900	GN 1	South	Striped Bass	331	340		
4/8/15 0900	GN 1	South	Striped Bass	375	540		
4/8/15 0900	GN1	South	Alewife	305	270		
4/8/15 0900	GN1	South	Striped Bass	321	320		
4/8/15 0950	GN2	South	Striped Bass	380	580		
4/8/15 0950	GN2	South	Striped Bass	315	310		
4/8/15 1406	TW3	Central	Northern Pipefish	130	<5		
4/8/15 1532	TW 7	Central	Northern Pipefish	210	5		
		Central	Alewife	76	<5		
		Central	Alewife	87	<5		
		Central	Striped Bass	89	10		
		Central	Striped Bass	107	12		
↓	↓	Central	Striped Bass	98	9		
4/8/15 1559	TW 8	Central	Striped Bass	107	10		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: JBS, CJR

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
4/8/15 1559	TW 8	Central	Striped Bass	100	8		
			" "	100	8		
			Alewife	114	12		
				127	10		
				96	6		
				118	8		
				91	6		
				90	<5		
				86	<5		
				94	8		
				92	6		
				86	<5		
				71	<5		
				88	<5		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: JBS, CJR

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
4/8/15 1559	TW8	Central	Alewife	87	6		
"	"	"	"	86	<5		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: JBS, BWL, CJR

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
4/9/15 0910	GN1	South	Striped Bass	300	300		
4/9/15 0950	GN2	Central	Alewife	291	285		
" "	"	"	Striped Bass	346	390		
4/9/15 1050	GN4	Central	Striped Bass	311	310		
			Alewife	280	260		
			"	290	300		
			"	300	310		
4/9/15 1433	TW3	Central	Alewife	71	65		
			Alewife	103	10		
			striped bass	91	10		
4/9/15 1544	TW5	North	white perch	81	6		
			"	104	14		
			striped bass	105	7		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: JBS, BWL, CJR

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
4/9/15 1608	TW6	North	Striped Bass	93	6		
			White Perch	96	6		
				93	8		
				100	11		
				95	8		
				116	15		
				100	14		
4/9/15 1608	TW6	North	White Perch	98	15		
4/9/15 1630	TW7	North	Blue Crab	48	<5		
			White Perch	95	6		
				99	7		
				84	<5		
				120	15		
			Striped Bass	75	<5		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: JBS, BWL, CJR

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
4/9/15 16:30	TW7	North	Striped Bass	84	5		
				109	10		
				122	16		
				160	30		
4/4/15 1900	TW8	North	White Perch	98	8		Not large enough to filet
				117	10		Not - Filetable
				106	8		Not - Filetable
				109	8		
				106	8		
				95	6		
				91	5		
				97	5		
				101	6		
				101	9		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: JBS, BWL, CSR

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
4/9/15 1900	TW 8	North	White Perch	91	5		Not - Filletable
↓	↓	↓	↓	92	5		↓
				94	6		
↓	↓	↓	Striped bass	81	45		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: CCB, SMS, WSG

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
4/9/15 0918	TW	North	Striped Bass	120	20		
			↓	145	30		
			↓	165	30		
			↓	230	110		
			Ashad	160	30		
			Blue Crab	130	140		M
			↓	90	50		M
			↓	85	40		M
4/9/15 1006			Striped Bass	275	220		
			↓	200	90		
			↓	220	110		
			↓	175	50		
			↓	170	50		
↓	↓	↓	↓	185	60		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: CCB, SMS, NSG

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
4/9/15 1006	TW	North	Striped Bass	205	70		
				210	90		
				175	50		
				180	60		
				180	60		
				145	30		
				180	50		
				230	130		
				145	40		
				165	50		
				130	40		
				140	40		
				135	30		
				160	40		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: CCB, SMS, NSG

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
4-9-15 1006	TW	North	Atl. Herring	280	120		
↓	↓	↓	Blue Crab	110	90		M
↓	↓	↓	↓	90	50		M
↓	↓	↓	↓	125	100		M
4-9-15- 1101	↓	Central	Striped Bass	335	380		
↓	↓	↓	↓	300	310		
↓	↓	↓	↓	260	200		
↓	↓	↓	↓	250	180		
↓	↓	↓	↓	255	190		
↓	↓	↓	↓	200	80		
↓	↓	↓	↓	210	110		
↓	↓	↓	↓	190	80		
↓	↓	↓	↓	160	60		
↓	↓	↓	↓	170	70		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: CCB, SMS, NSG

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
4-9-15 1101	TW	Central	Striped Bass	150	50		
				150	50		
				130	40		
				100	20		
				110	30		
				90	20		
				110	30		
				120	30		
				125	40		
				120	30		
				160	50		
				130	40		
				130	30		
			Alewife	120	10		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: CCB, SMS, NSG

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
4-9-15 1101	TW	Central	Alewife	145	40		subset of 10
				105	5		
				105	5		
				130	5		
				95	3		
				95	3		
				100	3		
				85	3		
					320		39 Alewife
			Am Shad	155	20		
				130	10		
				120	5		
				155	10		
				160	10		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: CCB, SMS, NSG

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
4-9-15 1101	TW	Central	Am Shad	160	10		
↓	↓	↓	↓	120	5		
				155	10		
				135	5		
				140	5		
				120	3		
				120	3		
				150	10		
				135	10		
				135	5		
↓			↓	125	3		
4-9-15 1159			Striped Bass	170	60		
↓			↓	180	70		
↓	↓	↓		125	40		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: CCB, SMS, NSG

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
4-9-15 1159	TW	Central	Striped Bass	120	30		
				120	30		
				95	20		
				90	20		
				120	30		
				100	20		
				100	20		
				135	40		
				135	30		
				120	30		
				110	20		
				100	20		
			↓	100	20		
↓	↓	↓	Alewife	105	10		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: CCB, SMS, NSG

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
4-9-15 1159	TW	Central	Alewife	110	10		
				125	15		
				90	5		
				80	3		
				85	3		
				85	3		
				85	3		
				95	5		
				90	5		
				80	2		
				80	2		
				85	3		
				95	5		
				75	2		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: CCB, SMS, NSG

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
4-9-15 1159	TW	Central	Alewife	80	3		
↓	↓	↓	↓	70	3		
			↓	100	5		
↓	↓	↓	Blueback H.	65	1		
4-9-15 1329			Stn pat bass	160	50		
↓	↓	↓	↓	95	15		
			↓	175	50		
			Longhorn Sculpin	75	10		
			Am Shad	140	20		
			Alewife	155	30		
			↓	110	20		
				110	20		
				110	20		
↓	↓	↓	↓	85	5		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: CCB, SMS, NSG

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
4-9-15 1324	TW	Central	Alewife	105	15		
↓	↓	↓	↓	100	15		
				90	5		
				85	5		
				90	10		
				85	5		
				95	10		
				100	10		
				120	20		
				100	10		
↓			↓	135	20		
4-9-15 1420			Striped Bass	240	160		
↓	↓		↓	170	60		
↓	↓	↓	↓	135	40		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: CCB, SMS, WSG

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
4-9-15 1420	TW	Central	Striped Bass	155	40		
↓	↓	↓	↓	150	40		
				100	20		
				105	20		
			Blue Crab	125	110		M
			Am. Shad	120	30		
			↓	130	30		
				120	20		
				135	30		
↓			Alewife	80	5		
4-9-15 1510			Striped Bass	285	240		
↓			↓	230	140		
				200	70		
↓	↓	↓	↓	185	60		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: CCB, SMS, NSG

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
4-9-15 1510	TW	Central	Striped Bass	210	100		
				165	50		
				100	20		
				220	110		
				110	20		
				150	50		
				210	100		
				220	120		
				120	30		
				100	20		
				105	20		
				90	15		
				170	50		
				110	30		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: CCB, SMS, WSG

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
4-9-15 1510	TW	Control	Striped Bass	125	30		
				135	40		
				105	20		
				170	50		
			Blue Crab	140	150		M
				110	120		M
				75	50		M
				110	120		M
			Alewife	140	30		subset of 10
				90	10		
				120	20		
				90	5		
				90	5		
				100	20		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: CCB, SMS, NSG

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
4-9-15 1510	TW	Central	Alewife	140	30		
				105	10		
				105	10		
				90	10		
					400		49 Alewife
			AM Shad	110	10		Subset of 10
				135	20		
				120	20		
				115	15		
				145	30		
				110	10		
				110	15		
				105	10		
				160	40		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: CCB, SMS, NSG

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
4-4-15 1510	TW	Central	Am Shad	120	20		subset of 10
↓	↓	↓	Am Shad		180		14 Shad
↓	↓	↓	N. Pipefish	190	10		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: BWL, CCB, RCB on P3

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
4/28/15 ~~8:50~~ 9:00	GNT OW	South	Atl. menhaden	328	350		4" fit, 300' net
				335	320		Photos 112-0906
				318	360		112-0907
				350	500		112-0908-0910
				331	350		
				295	295		
				335	350		
				322	400		
				334	400		
				328	350		
				332	325		
				350	400		
				331	300		
				315	300		

1 of 2

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: BW, CCB, RCB on P3

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
4/28/15	GN	South	Atlantic menhaden	—	—	300-350mm	N=16, not measured
4/28/15	GN	South	Little skate	445	600	—	Photo 112-0912
			Atlantic menhaden	335	350	—	
				347	400		
				337	350		
				343	400		
				360	450		
				331	370		
				339	390		
				372	550		
				344	370		
				355	450		
				330	340		
				336	345		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: BWL, CCB, RCB ON P3

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
4/28/15	GN	South	Alewife	—	—	325-375	n=24 not measured

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: BWL, CCB, RCB on PJ

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
4/28/15	Rod	Central	Striped bass	530	1300	—	trolling

1 of 1

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: BW, CCB, RCB ON P3

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
4/29/15	GN	South	At. menhaden	345	400	—	
				337	350		
				365	400		
				329	350		
				330	320		
				355	450		
				340	350		
		North	At. menhaden	349	400		
			At menhaden	355	350		
				~~355~~ dup			
		North	Horseshoe crab	250	—		carapace width for Length
				200	—		
				225	—		
4/29/15	Hook+Line	South	Striped Bass	635	applied.		

1 of 2

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: BWL, CCB, ROB, P3

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
4/29/15	Gillnet	South	Alt. Menhaden	335	400		Sub sample
				337	320		of 139
				339	380		
				320	400		
				315	350		
				327	400		
				332	450		
				329	400		
				341	400		
				330	380		
				310	320		
4/29/15				332	400		
4/29/15	GN	South	Atl. menhaden	—	—	300–375	n=127 not measured

2 of 2

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: BWy CCB, RCB on P3

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
4/30/15	GN	South	At. menhaden	317	350	NA	
				326	350		
				344	400		
				345	375		
				310	310		
				329	350		
4/30/15	GN	South	Striped bass	656			6lbs 6oz
			At. menhaden	331	375		
				334	410		
				330	400		
				333	390		
				325	300		
				335	410		
				336	300		

Bwy
~~374 550~~

1 of 3

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: BW, CCB, RCB on P3

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
4/30/15	GN	South	Af. menhaden	344	400	NA	
				351	370		
				340	400		
				337	400		
				325	300		
				319	290		
				333	400		
				326	350		
				319	310		
				339	410		
				337	400		
				303	300		
				319	310		
				326	400		

2 of 3

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: BW, CCB, RCB on P3

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
4/30/15	GN	South	Atl. menhaden	341	400	NA	
↓	↓	↓	↓	323	400	↓	
				339	390		
				319	300		
4/30/15	Rod/reel	South	Striped bass	530	—		
↓	↓	↓	↓	525	—		
				600	—		19:30 hrs caught
				650	—		19:30 hrs caught

3 of 3

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: Bly CCB, RCB on P3

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
5/5/15	Rod/reel	South	Striped bass	511	1134	—	2 16 8 oz
↓	↓	11	11	600	2523	—	5/6 9oz
		↓	↓	675	2466	—	5/6 7oz
				635	2155	—	4/6 12oz
				595	1843	—	4/6 1oz

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: BWL, CCB, RCB ON Trihull

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
5/6/15	GN	South	Atl. menhaden	335	284	NA	10oz
↓	↓	↓	↓	323	284	↓	10oz
↓	↓	↓	↓	323	284	↓	10oz
5/6/15	GN	South	Atl. menhaden	310	284	↓	10oz
↓	↓	↓	↓	321	284	↓	10oz
↓	↓	↓	↓	327	312	↓	11oz

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: BWL, JBS, GMC on PJ

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
6/1/15	angling	South	striped bass			—	1615 2.7ft

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: BWL, JBJ, GMC on P3

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
6/2/15	GN	Control	At. menhaden	325	300	—	4" f.H. GN
6/2/15	GN	Control	At. menhaden	300	310	—	" "

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: BWL, JAS, GMC

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	carapace width Length (mm)	Weight (g)	Estimated Size Class	Notes
6/3/15	GN	South	horseshoe crab	250	1400	—	
6/3/15	GN	South	horseshoe crab	270	2000	—	
6/3/15	ANGLING	South	Striped Bass	21"	4lb	—	
6/3/15	Angling	South	Striped Bass	18"	3lb	—	

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: BW, JBS, GMC on P3

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
6/4/15 0930	Troll	Central	Striped Bass	590mm	5lb	—	
6/4/15 1111	"	South	" "	380	705g	—	
6/4/15 1258	Troll	North	" "	650mm	6lb	—	
6/4/15 1655	Troll	Central	" "	20"	3lb	—	

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: JBS, CJR on P3

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
6/8/15 0930	Troll	Central	Striped Bass	400	1 lb	—	

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: BWJ, JBS, C JR

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
8/5/15	eel pot	Central	oyster toadfish	210	240	—	
	"	"	"	180	200		
	eel pot	Central	blue crab	—	—	80-130mm	N=7
	"	South	blue crab			90-120mm	N=4

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: BWL, JBS, CJR

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
8/4/15	Angling	Central	SF	290	250	—	
				350	400		
				330	350		
				278	208		
				360	300		
				305	306		
				330	300		
				310	200		
				274	160		
				320	320		
				290	320		
				300	300		
				315	315		
				300	250		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: BWL, JBS, CJR

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
8/14/15	Angling	Central	SF	330	375	—	
				300	320	—	
				310	320		
				320	350		
		North	SF	350	380		
			SB	405	680		
			SF	379	625		
			SF	391	NA		jumped off boat prior to weighing
			SF	250	150		
	EP	Central	spider crab	—	—	—	
	EP	South	spider crab	—	—	—	
	EP	South	tan tog	134	50	—	
	EP	South	tan tog	110	35	—	

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: BWS, JBS, CLR

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
8/13/15 1020	Angling	SOUTH	SF	330	380	—	
				305	310		
				350	300		
				370	500		
				350	400		
				310	320		
				384	556		
				330	400		
				310	375		
				350	400		
				300	275		
				420	700		
				330	380		
				292	260		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: BWM, JVBS, CLR

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
8/3/15 1500	Angling	South	SF	395	600	—	
				310	390		
				300	350		
				310	550		
				320	320		
				400	600		
				422	650		
				350	400		
				430	710		
				330	400		
				300	320		
				325	310		
				300	300		
				350	360		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials:

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
8/3/15	Angling	South	SF	360	275	—	
				320	300		
				320	300		
				200	220		
				370	340		
				376	500		
				365	450		
				382	600		
				370	570		
				350	400		
				300	290		
				310	310		
				365	400		
				365	400		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: BMH, JBS, CLR

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
8/3/15	Angling	SOUTH	SF	387	600	—	
				370	440		
				382	550		
				330	350		
				320	390		
				300	350		
				310	300		
				350	380		
				300	350		
				320	340		
				300	260		
				335	350		
				360	450		
				350	350		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: BWL, JBS, CJR

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
8/3/15	Angling	Central	SF	320	360	—	
				370	360		
				320	370		
				340	380		
				330	310		
				330	380		
				310	310		
				330	370		
				340	350		
				310	310		
				295	250		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: BWL, JBS, NSG

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
7/31/15 830	Angling	Central	SF	324	360	—	
				310	300		
				330	360		
				310	230		
				280	200		
				295	230		
				320	300		
				300	300		
7/31/15 920		South	SF	350	350		
				315	290		
				365	420		
				330	340		
				400	540		
				330	400		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: BM, JBS, NSG

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
7/31/2015 9:30	ANGLING	SOUTH	Summer flounder	293	240		
				330	350		
				365	475		
				330	350		
				335	350		
				317	320		
				340	480		
				350	425		
				280	180		
				405	585		
				322	300		
				341	360		
				348	360		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: BWL, JBJ, WSG

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
7/30/15 815	Angling	South	SF	365	410	—	
			striped bass	420	720	—	
			SF	330	380		
				315	320		
				335	375		
				305	300		
				330	360		
				365	490		
				295	200		
				307	360		
				380	~~375~~ 350		
				330	330		
				335	370		
				350	460		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: BM, JBS, NSG

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
7/30/15 900	Angling	South	SF	310	310		
				350	430		
				360	460		
				340	430		
				310	320		
				300	240		
				295	230		
				300	250		
				330	330		
				410	680		
				384	560		
				350	400		
7/30/15 930		North	SF	335	370		
				290	175		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: BM, JBS, NSG

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
7/30/15	Angling	North	Sum. Flan.	253	140	4	
"	"	"	"	254	150	"	
"	"	"	"	310	340	"	
"	"	"	"	360	400	"	

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: BW, JBS, NSG

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
7/29/15 1100	Angling	South	SF	308	250		
				306	200		
				368	410		
				340	400		
				348	370		
				343	400		
				300	250		
				370	500		
				320	300		
				350	400		
				330	300		
				326	360		
				344	400		
				345	360		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: BWL, GBS, NSG

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
7/29/15	Angling	South	SF	360	450		
				300	290		
				372	480		
				310	250		
				330	370		
				345	360		
				355	400		
				345	380		
				340	360		
				320	320		
				360	520		
				368	500		
				335	400		
				324	320		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: BWG, JBS, NSG

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
07/29 1200	Ang Ling	CENTRAL	Summer flounder	380	525		
				340	360		
				325	310		
				290	200		
				330	300		
				330	350		
				350	400		
				300	300		
				341	400		
				325	425		
				320	320		
				355	420		
				340	300		
				285	225		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: BLL, JDS, NJG

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
7/29/15	Angling	CENTRAL	SF	350	400		
				300	250		
				300	250		
				350	440		
				365	520		
				375	450		
				370	450		
				316	300		
				320	300		
				340	375		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: NSG, JBS

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
7/29 1530	Angling	North	SF	310	250		
			1	360	430		
			Striped bass	595	5 lbs		
			SF	305	245		
				265	160		
				255	155		
7/29 1645				263	180		
7/29 1700		South		327	360		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: BWL, JBS, NSG

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
7/28/15 905	Angling	South	SF	330	300	—	
		North	SF	302	320		
		North	SF	260	150		
				340	350		
				350	390		
				325	310		
				286	240		
				340	340		
				300	300		
				320	310		
				375	540		
				280	200		
				355	400		
				335	360		

2 of 3

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: PB BWL, JBS, NSG

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
7/28/15 1145	Angling	North	SF	285	230	—	
				290	210	—	
				295	235	—	
7/28/15 1245		South		294	220		
				320	310		
				339	350		
				325	350		
~~1500~~				365	460		
		NORTH		240	140		
				273	170		
				285	230		
				325	380		
				260	150		
				340	380		
				~~275~~ 344 352	~~160~~ ~~300~~		

*3 blue crab hooked and not landed

2 of 3

Non-Target Species Tally Form

3 of 3

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: BWL, JBS, NSG

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
7/28 1520	ANGLING	NORTH	SF	275	186	T	
↓	↓	↓	↓	344	360		
↓	↓	↓	↓	352	380		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: P3 — BWL, NGN, JBS

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
7/27 944	TW1	South	blue crab	85	40	—	
1000	"	"	"	80	30	—	
1	"	"	"	135	140	—	female ripe
"	"	"	blue crab	60	10	—	
				135	140		male
				120	100		male
				115	90		male
				105	55		female
				80	20		
				110	100		male
7/27/15 1145	TW1	North	Clupeidae	35	—		#5 not measured
"	"	"	"	32	—		
"	"	"	"	36	—		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: BWR, JBS, NSG on PJ

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
7/27/15	TW1	North	blue crab	~~135~~ 160	~~135~~ 160	—	male
				105	60	—	male
				130	90	—	female
				95	40	—	female
				70	10	—	male
				135	130	—	male
				80	20	—	male
7/27/15	TW1	North	windowpane	35	—	—	—
7/27/15	TW2	North	blue crab	145	160	—	male
			"	130	100	—	male
				115	80	—	male
				95	30	—	female
				140	150	—	male

* blue crab L = rostrum width

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: P3 - BWL, JBJ, NSC

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
7/27/15	TWL	North	blue crab	—	—	80-140mm	N=9
↓	↓	↓	Summer flounder	168	40	—	
			Winter flounder	147	40	—	
			Winter flounder	135	40	NA	
			Winter flounder	150	50	↓	
			oyster toad fish	84	10		
			oyster toad fish	75	8		
			look down	40	1		
			look down	35	1		
			Atlantic tomcod	78	3		
			Atlantic tomcod	76	3		
↓	↓	↓	Atlantic tomcod	75	3	↓	
↓	Angling	South	Summer fl.	314	250		
↓	/	/	Summer flounder	300	250		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: BWL, JTBS, NSG

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
7/27/15	Ang Ling	South	SF	385	400	✓	
			Summ fl.	375	490		
			Summer fl.	350	350		
				310	220		
				305	230		
			↓	320	300		
			Summer fl.	310	310		
			Striped bass	435	810		
			SF	375	450		
			SF	320	300		
			SF	318	300		

SF = Summer flounder

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 2
Revision Date: March 2015
Sample Processing Form

Project: NB03 Fish Study
Sample Location: North
Sample Date: 3/30/15
Processing Date: 3/31/15

Sampled By: BWL
Processed By: BWL, KCM, KRM

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03WWPN037	WP	~~BWL~~ TW		160 / 55	TW	0262	~~KCM~~ KRM
NB03WWPN038	WP	W		223 / ~~170~~ 180	TW	↓	
NB03WWPN039	WP	W		160 / 60	TW		
NB03WWPN040	WP	W		230 / 185	TW		
NB03WWPN041	WP	W		256 / 288	TW		
NB03WWPN042	WP	W		230 / 190	TW		
NB03WWPN043	WP	W		255 / 275	TW		
NB03WWPN044	WP	W		183 / 85	TW	0263	
NB03WWPN045	WP	W		235 / 180	TW	↓	
NB03WWPN046	WP	W		190 / 100	TW		
NB03WWPN047	WP	W		260 / 275	TW	0264	
NB03WWPN048	WP	W		240 / 210	TW	↓	
NB03WWPN049	WP	W		170 / 70	TW		
NB03WWPN050	WP	W		170 / 62	TW		
NB03WWPN051	WP	W		195 / 115	TW	↓	

Notes: Total weight = 2,320 g

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN
Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: North
Sample Date: 3/30/15
Processing Date: 3/31/15

Sampled By: BWL MEM
Processed By: BWL/KEM/KRM

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
~~NB03FWPN052~~ NB03FWPN052	WP	~~FL~~ F		235 210 Fillet = 60.73g KRM	TW	Napheta	Fillet = 60.7
~~NB03FLPN052~~							
NB03LWPN052	WP	L		Liver = 3.4g KRM	TW		
NB03FWPN053	WP	F		242 260 Fillet = 80g	TW		
NB03LWPN053	WP	L		Liver = 7.1g	TW		
NB03FWPN054	WP	F		230 190 Fillet = 62.5g	TW	0265	
NB03LWPN054	WP	L		Liver = 5.1g	TW	0265	
NB03FWPN055	WP	F		245 250 Fillet = 92.0g	TW	0266	
NB03LWPN055	WP	L		Liver = 3.6g	TW	0266	
NB03FWPN056	WP	F		230 360 Fillet = 119.5g	TW	0268	Female
NB03LWPN056	WP	L		Liver = 8.3g	TW	0268	
NB03FWPN057	WP	F		235 240 Fillet = 80.0g	TW	0267	Female
NB03LWPN057	WP	L		Liver = 6.5g	TW	0267	
NB03FWPN058	WP	F		230 200 Fillet = 72.1g	TW	0269	Female
NB03LWPN058	WP	L		Liver = 4.7g	TW	0269	

Notes: Total Fillet Weight = 566.8 g Total Liver Weight = 39.5g
F = fillet L = liver

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: North
Sample Date: 3/30/15
Processing Date: 3/31/15

Sampled By: BWL
Processed By: BWL/MEM/KRM

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03FWPN059	WP	F		250 245 Fillet = 64.0g		0270	Female
NB03LWPN059	WP	L		Liver = 3.8g			
NB03FWPN060	WP	F		250 245 Fillet = 86.0g		0271	Female
NB03LWPN060	WP	L		Liver = 5.4g			
NB03FWPN061	WP	F		250 230 Fillet = 80.0g		0272	Female
NB03LWPN061	WP	L		Liver = 4.2g		~~0272~~	KRM
NB03FWPN062	WP	F		230 230 Fillet = 83.7g		0273	~~Male~~ KRM Female
NB03LWPN062	WP	L		Liver = 6.2g			
NB03FWPN063	WP	F		215 150 Fillet = 55g		0274	~~Female~~ KRM male
NB03LWPN063	WP	L		Liver = 3.4g			
NB03FWPN064	WP	F		245 240 Fillet = 78.4g		0275	Female
NB03LWPN064	WP	L		Liver = 5.5g			
NB03FWPN065	WP	F		225 195 Fillet = 67.0g		0276	Female
NB03LWPN065	WP	L		Liver = 4.6g			

Notes: Total Fillet Weight = 514.1g Total Liver Weight = 33.1g

o = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: North
Sample Date: 3/30/15
Processing Date: 3/31/15

Sampled By: BWL
Processed By: BWL/MEM/KRM

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03FWPN066	WP	F		225 225 Fillet = 84.0	TW	0278	Female
NB03LWPN066	WP	L		Liver = 7.4g	TW		
NB03FWPN067	WP	F		248 248 Fillet = 75.0g	TW	0277	Female
NB03LWPN067	WP	L		Liver = 5.8g	TW		
NB03FWPN068	WP	F		225 175 Fillet = 58.0g	TW	0280	Male
NB03LWPN068	WP	L		Liver = 3.0g	TW		
NB03FWPN069	WP	F		215 150 Fillet = ~~250~~ 250g KRM	TW	0279	Male
NB03LWPN069	WP	L		Liver = 2.1g	TW		
NB03LWPN070	WP	L		230 180 Liver = 3.4g	TW	0281	Male
NB03LWPN071	WP	L		210 140 Liver = 3.2g	TW	0282	Male
NB03LWPN072	WP	L		174 80 Liver = 1.7g	TW	0283	Male
NB03LWPN073	WP	L		210 148 Liver = 4.1g	TW	0284	Male
NB03LWPN074	WP	L		250 275 Liver = 8.2g	TW	0285	Female
NB03LWPN075	WP	L		190 100 Liver = 2.4g	TW	0286	Male
NB03LWPN076	WP	L		210 160 Liver = 5.3g	TW	0287	Female

Notes: Total Fillet Weight = 267.0 Total Liver Weight = 46.6g

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN
Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 2
Revision Date: March 2015
Sample Processing Form

Project: NB03 Fish Study
Sample Location: North
Sample Date: 3/30/15
Processing Date: 3/31/15

Sampled By: BWL
Processed By: BWL/MEM/RRM/KCM

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03LWPN077	WP	L		200 110 Liver = 1.7g	TW	0288 0289	Male
NB03LWPN078	WP	L		180 90 Liver = 1.0g	TW	0290	Male
NB03LWPN079	WP	L		180 80 Liver = 1.8g	TW	0291	Male
NB03LWPN080	WP	L		190 90 Liver = 2.6g	TW	0292	Female
NB03LWPN081	WP	L		180 85 Liver = 1.7g	TW	None	Female
NB03LWPN082	WP	L		170 70 Liver = 1.7g	TW	None	Male
NB03LWPN083	WP	L		230 180 Liver = 3.7g	TW	0293 0294	Female
NB03LWPN084	WP	L		175 80 Liver = 2.4g	TW	None	Female
NB03LWPN085	WP	L		170 65 Liver = 1.7g	TW	None	Male
NB03LWPN086	WP	L		200 130 Liver = 3.1g	TW	None	Male
NB03LWPN087	WP	L		240 240 Liver = 5.0g	TW	None	Male
NB03LWPN088	WP	L		215 150 Liver = 3.1g	TW	None	Male
NB03LWPN089	WP	L		170 65 Liver = 1.4g	TW	None	Male
NB03LWPN090	WP	L		165 75 Liver = 1.9g	TW	None	Male
NB03LWPN091	WP	L		170 80 Liver = 2.2g	TW	None	Male

Notes: Total Liver Weight = 35.0g

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 2
Revision Date: March 2015
Sample Processing Form

Project: NB03 Fish Study
Sample Location: North
Sample Date: 3/30/15
Processing Date: 3/31/15

Sampled By: BWL
Processed By: BWL/MEM/KRM/KRM

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03LWPN092	WP	L		190 100 Liver = 2.0g	TW	None	Male
NB03LWPN093	WP	L		180 75 Liver = 1.9g	TW		Male
NB03LWPN094	WP	L		170 70 Liver = 1.9g	TW		Male
NB03LWPN095	WP	L		170 60 Liver = 1.6g	TW		Male
NB03LWPN096	WP	L		185 90 Liver = 2.1g	TW		Male
NB03LWPN097	WP	L		160 60 Liver = 1.6g	TW		—
NB03LWPN098	WP	L		160 55 Liver = 1.3g	TW		Female
NB03LWPN099	WP	L		146 45 Liver = 0.8g	TW		Female
NB03LWPN100	WP	L		155 50 Liver = 0.6g	TW		Female
NB03LWPN101	WP	L		158 50 Liver = 1.5g	TW		Female
NB03LWPN102	WP	L		180 80 Liver = 2.3g	TW		Female
NB03LWPN103	WP	L		155 55 Liver = 1.6g	TW		Female
NB03LWPN104	WP	L		120 20 Liver = 0.4g	TW		—
NB03LWPN105	WP	L		110 15 Liver = 0.3g	TW		—
NB03LWPN106	WP	L		100 10 Liver = 0.2g	TW		—

Notes: Total Liver Weight = 20.1g

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN
Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: North
Sample Date: 3/30/15
Processing Date: 3/31/15

Sampled By: BWL
Processed By: BWL/MEM/KRM

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03LWPN107	WP	L		180 90 Liver = 3.1g	TW	None	Male
NB03LWPN108	WP	L		KRM 195 120 Liver = 2.9g	TW		—
NB03LWPN109	WP	L		175 90 Liver = 2.0g	TW		Male
NB03LWPN110	WP	L		170 63 Liver = 1.7g	TW		—
NB03LWPN111	WP	L		185 91 Liver = 2.1g	TW		Male
NB03LWPN112	WP	L		180 70 Liver = 2.1g	TW		Female
NB03LWPN113	WP	L		170 70 Liver = 1.9g	TW		Male
NB03LWPN114	WP	L		170 70 Liver = 1.4g	TW		Male
NB03LWPN115	WP	L		155 50 Liver = 1.2g	TW		Male
NB03LWPN116	WP	L		175 70 Liver = 1.6g	TW		Male
NB03LWPN117	WP	L		190 100 Liver = 2.3g	TW		Male
NB03LWPN118	WP	L		175 85 Liver = 1.9g	TW		Male
NB03LWPN119	WP	L		170 70 Liver = 1.7g	TW		Female
NB03LWPN120	WP	L		180 95 Liver = 2.7g	TW		Male
NB03LWPN121	WP	L		165 65 Liver = 1.5g	TW		—

Notes: Total Fillet Weight = 30.1g

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Project: NB03 Fish Study
Sample Location: Nash
Sample Date: 3/26/15
Processing Date: 3/31/15

Sampled By: BWL
Processed By: BWL/MEM/RAM

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03LWPN122	WP	L		170 70 Liver = 1.6g	TW	None	Male
NB03LWPN123	WP	L		165 60 Liver = 1.1g	TW		Male
NB03LWPN124	WP	L		175 70 Liver = 1.6g	TW		Female
NB03LWPN125	WP	L		175 85 Liver = 2.2g	TW		—
NB03LWPN126	WP	L		260 290 Liver = 5.1g	TW	0295	Male
NB03LWPN127	WP	L		230 180 Liver = 4.2g	TW	None	Female
NB03LWPN128	WP	L		205 180 Liver = 2.7g	TW		Female
NB03LWPN129	WP	L		190 110 Liver = 2.8g	TW		Female
NB03LWPN130	WP	L		205 140 Liver = 3.5g	TW		Male
NB03LWPN131	WP	L		230 200 Liver = 3.9g	TW		Male
NB03LWPN132	WP	L		225 160 Liver = 3.4g	TW		Male
NB03LWPN133	WP	L		110 15 Liver = 0.3g	TW		—
NB03LWPN134	WP	L		218 160 Liver = 3.5g	TW		Male
NB03LWPN135	WP	L		120 20 Liver = 0.5g	TW		—
NB03LWPN136	WP	L		210 170 Liver = 2.7g	TW		Male

Notes: Total Liver Weight = 39.1g

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN
Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Project: NB03 Fish Study
Sample Location: North
Sample Date: KRM 3/30/15 3/30/15
Processing Date: KRM 3/30/15 3/31/15 KRM 31 KRM

Sampled By: BWL
Processed By: BWL/MEM/KRM

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03LWPN137	WP	L		159 100 Liver = 2.3g	TW	None	male
NB03LWPN138	WP	L		180 90 Liver = 1.9g	TW		Female
NB03LWPN139	WP	L		200 140 Liver = 2.4g	TW		male
NB03LWPN140	WP	L		190 110 Liver = 2.1g	TW		male
NB03LWPN141	WP	L		190 115 Liver = 2.5g	TW		male
NB03LWPN142	WP	L		175 75 Liver = 1.7g	TW		male
NB03LWPN143	WP	L		152 50 Liver = 1.0g	TW		—
NB03LWPN144	WP	L		175 80 Liver = 2.1g	TW		Female
NB03LWPN145	WP	L		210 150 Liver = 4.3g	TW		Female
NB03LWPN146	WP	L		180 80 Liver = 1.7g	TW		Female
NB03LWPN147	WP	L		165 60 Liver = 1.6g	TW		—
NB03LWPN148	WP	L		112 20 Liver = 0.4g	TW		—
NB03LWPN149	WP	L	12 / 20	~~TKT~~ KRM Liver = 0.5g	TW		—
NB03LWPN150	WP	L		165 60 Liver = 1.4g	TW		Female
NB03LWPN151	WP	L		130 30 Liver = 0.6g	TW	↓	Female
Notes: Total Liver Weight = 26.5g							

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN
Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: ~~North~~
Sample Date: KRM ~~3/30/15~~ ~~3/30/15~~ 3/30/15
Processing Date: KRM ~~3/31/15~~ ~~3/31/15~~ 3/31/15 KRM

Sampled By: BWL
Processed By: BWL/MEM/KRM

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03LWPN152	WP	L		160 60 Liver = 1.3g	TW	NONE	male
NB03LWPN153	WP	L		153 50 Liver = 0.6g	TW	NONE	—
End of processing for 3/31/15							

Notes: Total Liver Weight (3/31/15) = 1.9g

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN
Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 2
Revision Date: March 2015
Sample Processing Form

Project: NB03 Fish Study
Sample Location: North
Sample Date: 3/30/15
Processing Date: 4/1/15

Sampled By: BWL
Processed By: MEM/KRM

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03LWPN154	WP	L		200 105 Liver = 2.2g	TW	None	Female
NB03LWPN155	WP	L		185 90 Liver = 2.4g	TW	↓	Female
NB03LWPN156	WP	L		195 110 Liver = 2.6g	TW	↓	Female
NB03LWPN157	WP	L		220 170 Liver = 5.2g	TW	None	Female
NB03LWPN158	WP	L		205 100 Liver = 2.0g	TW	↓	Male
NB03LWPN159	WP	L		165 65 Liver = 1.5g	TW	↓	Male
NB03LWPN160	WP	L		175 70 Liver = 1.8g	TW	↓	Male
NB03LWPN161	WP	L		250 240 Liver = 4.1g	TW	↓	Male
NB03LWPN162	WP	L		150 50 Liver = 1.4g	TW	↓	—
NB03LWPN163	WP	L		175 70 Liver = 1.8g	TW	↓	Female
NB03LWPN164	WP	L		275 350 Liver = 5.6g	TW	↓	Male
NB03LWPN165	WP	L		190 100 Liver = 2.4g	TW	↓	Male
NB03LWPN166	WP	L		150 50 Liver = 0.9g	TW	↓	Male
NB03LWPN167	WP	L		195 100 Liver = 2.4g	TW	↓	Female
NB03LWPN168	WP	L		185 90 Liver = 2.1g	TW	↓	Female

Notes: Total Liver Weight = 38.4g

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN
Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: North
Sample Date: 3/30/15
Processing Date: 4/1/15

Sampled By: BWL
Processed By: MEM/KRM

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03LWPN169	WP	L		170 70 Liver = 1.9g	TW	None	Male
NB03LWPN170	WP	L		175 80 Liver = 1.8g	TW		Male
NB03LWPN171	WP	L		110 20 Liver = 0.5g	TW		—
NB03LWPN172	WP	L		220 160 Liver = 3.3g	TW		Male
NB03LWPN173	WP	L		110 20 Liver = 0.3g	TW		—
NB03LWPN174	WP	L		245 180 Liver = 3.8g	TW		Female
NB03LWPN175	WP	L		195 100 Liver = 2.1g	TW		Female
NB03LWPN176	WP	L		190 100 Liver = 2.1g	TW		Male
NB03LWPN177	WP	L		190 90 Liver = 1.9g	TW		Male
NB03LWPN178	WP	L		225 155 Liver = 3.0g	TW		Male
NB03LWPN179	WP	L		200 110 Liver = 2.5g	TW		Female
NB03LWPN180	WP	L		180 90 Liver = 2.6g	TW		Male
NB03LWPN181	WP	L		200 120 Liver = 3.4g	TW		Female
NB03LWPN182	WP	L		210 140 Liver = 2.8g	TW		Male
NB03LWPN183	WP	L		215 170 Liver = 3.3g	TW		Male

Notes: Total Liver Weight = 35.3g

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN
Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: North
Sample Date: 3/26/15
Processing Date: 4/1/15

Sampled By: BWL
Processed By: MEM/KRM

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03LWPN184	WP	L		230 170 Liver = 3.3g	TW	NONE	Male
NB03LWPN185	WP	L		160 65 Liver = 1.6g	TW		Female
NB03LWPN186	WP	L		175 80 Liver = 1.5g	TW		Male
NB03LWPN187	WP	L		180 70 Liver = 1.4g	TW		Female
NB03LWPN188	WP	L		150 45 Liver = 1.0g	TW		—
NB03LWPN189	WP	L		210 125 Liver = 2.4g	TW		Male
NB03LWPN190	WP	L		200 120 Liver = 3.6g	TW		Male
NB03LWPN191	WP	L		225 190 Liver = 3.5g	TW		Male
NB03LWPN192	WP	L		200 120 Liver = 2.6g	TW		Male
NB03LWPN193	WP	L		205 150 Liver = 3.7g	TW		Female
NB03LWPN194	WP	L		215 160 Liver = 4.2g	TW		Female
NB03LWPN195	WP	L		230 180 Liver = 4.3g	TW		Male
NB03LWPN196	WP	L		185 95 Liver = 1.8g	TW		Male
NB03LWPN197	WP	L		200 120 Liver = 2.6g	TW		Female
NB03LWPN198	WP	L		205 125 Liver = 2.3g	TW		Male

Notes: Total Liver Weight = 39.8g

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: North
Sample Date: 3/30/15
Processing Date: 4/1/15

Sampled By: BWL
Processed By: MEM/KRM

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03LWPN199	WP	L		230 200 Liver = 4.3g	TW	None	Male
NB03LWPN200	WP	L		180 90 Liver = 2.2g	TW		Male
NB03LWPN201	WP	L		165 65 Liver = 1.9 g	TW		Male
NB03LWPN202	WP	L		150 50 Liver = 1.4 g	TW		Female
NB03WWFN203	WF	W	KRM	~~265~~ 77.1 115 15.3	TW KRM	0297 ~~0296~~	Whole Body Unknown
NB03WSFN204	SF	W		205 77.1	TW	0298	Whole Body Unknown

Notes: Total Liver Weight = 9.8g

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: Con Hal/South
Sample Date: 3/31/15
Processing Date: 4/1/15

Sampled By: BWL
Processed By: MEM/KRM

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03WWPC036	WP	W		220 / 151.9	GN	0299	Whole Body Unknown
NB03WWPC037	WP	W		195 / 88.1	TW	0300	
NB03WWFC038	WF	W		100 / 12	TW	0301	
NB03WSFC039 (WF KRM / SF WF)	SF	W		75 / 3.8	TW	0302	
NB03WSFC040	SF	W		65 / 1.8	TW	0303	
NB03WHC041	HC	W		125 / 34	TW	0304	
NB03WWPS024	WP	W		250 / 262	GN	0305	
NB03WWPS025	WP	W		215 / 135.8	GN	0306	
NB03WWPS026	WP	W		115 / 15.5	TW	0307	
NB03WWPS027	WP	W		105 / 12.2	TW	0308	
NB03WWPS028	WP	W		105 / 13.1	TW	0309	
NB03WWPS029	WP	W		90 / 8.9	TW	0310	
NB03WHAS030	HA	W		75 / 2.7g	TW	0311	
NB03WHAS031	HA	W		75 / 3.4	TW	0312	
NB03WHAS032	HA	W		75 / 2.9	TW	0313	

Notes:

o = oram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: South
Sample Date: 3/31/15
Processing Date: 4/1/15

Sampled By: BWL
Processed By: MEM/KRM/BWL

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03W HA 5033	HA	W		80 3.4	TW	0314	0315, 0316 = batch
NB03W WF 5034	WF	W		100 11.1	TW	0317	WF photo's
NB03W WF 5035	WF	W		85 6.6	TW	0318	Whole Body UNKNOWN
NB03W WF 5036	WF	W		115 16.7	TW	0319	
NB03W WF 5037	WF	W		105 11.3	TW	0320	
NB03W WF 5038	WF	W		105 10.8	TW	0321	
NB03W WF 5039	WF	W		115 15.4	TW	0322	
NB03W WF 5040	WF	W		145 33.5	TW	0323	
NB03W WF 5041	WF	W		100 10.1	TW	0324	
NB03W WF 5042	WF	W		110 14.2	TW	0325	
NB03W WF 5043	WF	W		135 26.7	TW	0326	
NB03W WF 5044	WF	W		130 27.5	TW	0327	
NB03W WF 5045	WF	W		110 14.4	TW	0328	
NB03W WF 5046	WF	W		60 2.7	TW	0329	
NB03W WF 5047	WF	W		105 11.8	TW	0330	

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: South
Sample Date: 3/31/15
Processing Date: 4/1/15

Sampled By: BWL
Processed By: MEM/BWL/KRM

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03WWFS048	WF	W		80 / 5	TW	0331	Whole Body UNKNOWN
NB03WWFS049	WF	W		105 / 11.8	TW	0332	
NB03WWFS050	WF	W		90 / 7.8	TW	0333	
NB03WWFS051	WF	W		85 / 6.0	TW	0334	

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: South
Sample Date: 04-01-15
Processing Date: 04-02-15

Sampled By: BWL
Processed By: MCM, MLM

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03WWFS057	WF	W		110 / 13.1	TW	0335	
NB03WHAS053	HA	W		70 / 2.1	TW	0336	
NB03WHCS054	HC	W		105 / 23.4	TW	0337	
NB03WWWS055	WW	W		130 / 20.3	TW	0338	
NB03WHAS056	HA	W		100 / 7.9	TW	0339	
NB03WHAS057	HA	W		70 / 2.6	TW	0340	
NB03WWFS058	WF	W		105 / 11.7	TW	0341	
NB03WWFS059	WF	W		135 / 29.4	TW	0342	
NB03WWFS060	WF	W		85 / 5.2	TW	0343	
NB03WWFS061	WF	W		115 / 15.5	TW	0344	
NB03WWFS062	WF	W		105 / 10.7	TW	0345	
NB03WWFS063	WF	W		100 / 9.2	TW	0346	

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 2
Revision Date: March 2015
Sample Processing Form

Project: NB03 Fish Study
Sample Location: Central
Sample Date: 04-01-15
Processing Date: 04-02-15

Sampled By: BWL
Processed By: KCM, MKM

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03WWFC042	WF	W		230 / 131.7	TW	0347	
NB03WWFC043	WF	W		115 / 17.0	TW	0348	
NB03WWFC044	WF	W		85 / 6.8	TW	0349	
NB03WWPC045	WP	W		120 / 17.0	TW	0350	
KCM ~~NB03WWPC06~~							
NB03WWPC046	WP	W		150 / 45.8	TW	0351	
NB03FWPC047WP	F			235 / 195 Fillet = 55.6g	TW	0352	Male
NB03LWPC047WP	L			Liver = 4.0g	TW	0353	

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: Control
Sample Date: 04-02-15
Processing Date: 04-02-15

Sampled By: BWL
Processed By: ACB, JBS, BWL, KCM, WSG

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03WWPC048	WP	W		132 28	TW	0354	
NB03WWPC049	WP	W		122 20	TW	0355	
NB03WWPC050	WP	W		105 12.0	TW	0356	
NB03WWPC051	WP	W		135 30.0	TW	0357	
NB03WWPC052	WP	W		138 35.0	TW	0358	
NB03WWPC053	WP	W		158 50.0	TW	0359	
NB03WWPC054	WP	W		158 55.0	TW	0360	
NB03WWPC055	WP	W		118 ~~120~~ 19cm 20g	TW	0361	
NB03WWPC056	WP	W		87 8.0	TW	0362	
NB03WWPC057	WP	W		100 12.0	TW	0363	
NB03WWPC058	WP	W		175 60.0	TW	0364	
NB03WWPC059	WP	W		158 60.0	TW	0365	
NB03WWPC060	WP	W		110 12.0	TW	0366	
NB03WWPC061	WP	W		155 48.0	TW	0367	
NB03WWPC062	WP	W		172 70.0	TW	0368	

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: Central
Sample Date: 04-02-15
Processing Date: 04-02-15

Sampled By: BWL
Processed By: RLB, JBS, BWL, KCM, NSG

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03WWPC063	WP	W		168 / 60	TW	0369	
NB03WWPC064	WP	W		186 / 100	TW	0370	
NB03WWPC065	WP	W		202 / 110	TW	0371	
NB03WWPC066	WP	W		195 / 98	TW	0372	
KCM ~~NB03FWPC067~~							
NB03FWPC067	WP	F		262 / 258 Fillet: 76.0g	TW	0373	Female
NB03LWPC067	WP	L		Liver: 7.2g	TW		
NB03FWPC068	WP	F		232 / 180 Fillet: 51.3g	TW	0374	Male
NB03LWPC068	WP	L		Liver: 3.7g	TW		
NB03FWPC069	WP	F		230 / 150 Fillet: 41.0g	TW	0375	Male
NB03LWPC069	WP	L		Liver: 3.4g	TW		
NB03WHAC070	HA	W		72 / 2.7	TW	0376	
NB03WWFC071	WF	W		215 / 105	TW	0377	
NB03WWFC072	WF	W		135 / 30.0	TW	0378	
NB03WWFC073	WF	W		100 / 11.5	TW	0379	

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN
Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: Central
Sample Date: 04-02-15
Processing Date: 04-02-15

Sampled By: BWL
Processed By: RCO, JBS, BWL, KCM, NSG

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03WWFC074	WF	W		80 / 5.8	TW	0380	
NB03WWWC075	WW	W		155 / 35	TW	0381	
NB03FAEC076	AE	F		900 / 720 Fillet = 255g	TW	0382, 0383	

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: South
Sample Date: 09-02-15
Processing Date: 09-02-15

Sampled By: BWL
Processed By: RCB, JBS, BWL, KCM, NSG

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03FWPS064	WP	F		250 240 Fillet = 75.0	GN	0384	Female
NB03LWPS064	WP	L		Liver = 6.6	GN		
NB03FWPS065	WP	F		280 360 Fillet = 105	GN	0385	Male
NB03LWPS065	WP	L		Liver = 5.4	GN		
NB03FWPS066	WP	F		285 350 Fillet = 115	GN	0386	Male
NB03LWPS066	WP	L		Liver = 6.5	GN		
NB03FWPS067	WP	F		310 560 Fillet = 155	GN	0387	Female
NB03LWPS067	WP	L		Liver = 14.0	GN		
NB03FWPS068	WP	F		240 220 Fillet = 70.0	GN	0388	Female
NB03LWPS068	WP	L		Liver = 5.4	GN		
NB03FWPS069	WP	F		275 315 Fillet = 85.0	GN	0389	Female
KRM L NB03FWPS069	WP	L		Liver = 6.6	GN		
NB03FWPS070	WP	F		278 340 Fillet = 100	GN	0390	Female
NB03LWPS070	WP	L		Liver = 7.9	GN		
				KRM GN			

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN
Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: ~~Swan Pt~~
Sample Date: ~~4/2/15~~
Processing Date: 4/2/15

Sampled By: BWL
Processed By: ~~RCB, JBS, BWL, KRM~~/NSG

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03FWP 5071	WP	F KRM		235 / 140 Fillet = 53.0	GN	0391	Female
NB03LWP 5071	WP	L		Liver = 3.0	GN		
NB03FWP5072	WP	F		225 / 170 Fillet = 51.0	GN	0392	Male
NB03LWP5072	WP	L		Liver = 2.5	GN		
NB03FWP5073	WP	F		255 / 285 Fillet = 91.0	GN	0393	Female
NB03LWP5073	WP	L		Liver = 2.0	GN		
NB03FWP5074	WP	F		230 / 190 Fillet = 58.0	GN	0394	Male
NB03LWP5074	WP	L		Liver = 3.1	GN		
NB03FWP5075	WP	F		215 / 155 Fillet = 45.0	GN	0395	Female
NB03LWP 5075	WP	L		Liver = 2.7	GN		
NB03FWP 5076	WP	F		215 / 165 Fillet = 47.0	GN	0396	Male
NB03LWP 5076	WP	L		Liver = 2.5	GN		
NB03WWF5077	WF	W		320 / 140	GN	0397	

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Central Zone

Sample Processing Form

Project: NB03 Fish Study
Sample Location: Central
Sample Date: 04-06-15
Processing Date: 04-07-15

Sampled By: JSW L
Processed By: KEM, GMC

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03WWFC077 (KEM)	WF	W		138 / 30	TW	0398	
NB03WWFC078	WF			135 / 28			
NB03WWFC079				118 / 10			
NB03WWFC080				120 / 24			
NB03WWFC081				122 / 23			
NB03WWFC082				117 / 18			
NB03WWFC083				165 / 55			
NB03WWFC084				122 / 26			
NB03WWFC085				109 / 17		0399	
NB03WWFC086				130 / 25			
NB03WWFC087				130 / 27			
NB03WWFC088				102 / 13			
NB03WWFC089				205 / 109			
NB03WHAC090	HA			70 / 2.0		0400	
NB03WHAC091	HA			70 / 3.0			

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: Central
Sample Date: 07-06-15
Processing Date: 07-07-15

Sampled By: BWL
Processed By: KCM, GMC

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03WWPC092	WP	W		95 6	TW	0408	
NB03WWPC093				85 6			
NB03WWPC094				98 12			
NB03WWPC095				135 28			
NB03WWPC096				157 52			
NB03WWPC097				150 44			
NB03WWPC098				84 6			
NB03WWPC099				176 75			
NB03WWPC100				121 19			
NB03WWPC101				169 58			
NB03WWPC102				125 14			
NB03WWPC103				115 17			
NB03WWPC104				122 23			
NB03WWPC105				147 41			
NB03WWPC106				161 54			

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: Central
Sample Date: 04-06-15
Processing Date: 04-07-15

Sampled By: BWL
Processed By: KCM, SMC

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03WWPC107	WP	W		178 70	TW	0409	
NB03WWPC108				173 72			
NB03WWPC109				180 84			
NB03WWPC110				191 92			
NB03WWPC111				171 ~~77~~ KCM 67			
NB03WWPC112				176 71			
NB03WWPC113				176 70			
NB03WWPC114				162 50			
NB03WWPC115				160 58		0411	
NB03WWPC116				165 59			
NB03WWPC117				176 77			
NB03WWPC118				155 48			
NB03WWPC119				188 89			
NB03WWPC120				183 77			
NB03WWPC121				165 59			

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: Central
Sample Date: 08-06-15
Processing Date: 09-07-15

Sampled By: BCW
Processed By: KCM, GMC

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03WWPC122	WP	W		175 66	TW	0411	
NB03WWPC123	WP	W		174 68		↓	
NB03FWPC124		F		211 127 Fillet Wt(g): 44.7		0412	Male
NB03LWPC124		L		Liver Wt(g): 2.3			
NB03FWPC125		F		218 157 Fillet Wt(g): 58.4			Female
NB03LWPC125	↓	L		Liver Wt(g): 4.5	↓	↓	

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: North
Sample Date: 09-06-15
Processing Date: 09-07-15

Sampled By: BWL
Processed By: JCM, GMC

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03WHANZ05	HA	W		78 3.0	TW	0401	
NB03WHANZ06	HA	W		107 10.0		↓	
NB03WWFNZ07	WF	↓		111 15		0402	
NB03WWFNZ08	↓	↓		112 12		↓	
NB03WWFNZ09				90 7			
NB03WWFNZ10				132 28			
NB03WWFNZ11				102 11			
NB03WWFNZ12				119 22			
NB03WWFNZ13				80 6			
NB03WWFNZ14				71 4		↓	
NB03WWPNZ15	WP	W		101 12		0403	
NB03WWPNZ16	↓	↓		150 42		↓	
NB03WWPNZ17				153 47			
NB03WWPNZ18				147 39			
NB03WWPNZ19				151 45			

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: North
Sample Date: 04-06-15
Processing Date: 04-07-15

Sampled By: BWL
Processed By: KCM, GMC

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03WWPN220	WP	W		122 / 19	TW	0403	
NB03WWPN221				111 / 16		↓	
NB03WWPN222				112 / 17			
NB03WWPN223				110 / 16		0406	
NB03WWPN224				~~KCM 111~~ 101 / 12			
NB03WWPN225				103 / 14			
NB03WWPN226				90 / 8			
NB03WWPN227				88 / 9			
NB03WWPN228				85 / 7			
NB03WWPN229				89 / 8			
NB03WWPN230				100 / 12			
NB03WWPN231				87 / 7			
NB03WWPN232				88 / 11			
NB03WWPN233				88 / 8		↓	

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: North
Sample Date: 04-06-15
Processing Date: 04-07-15

Sampled By: BWL
Processed By: KCM, CMC

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03FWPNZ34	WP	F		185 81 Fillet wt (g): 27.7	TW	0407	Female
NB03LWPNZ34		L		Liver wt (g): 1.0			
NB03FWPNZ35		F		188 88 Fillet wt (g): 30.4			Female
NB03LWPNZ35		L		Liver wt (g): 1.3			
NB03FWPNZ36		F		186 82 Fillet wt (g): 27.3			Male
NB03LWPNZ36		L		Liver wt (g): 1.3			

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: South
Sample Date: 07-06-15
Processing Date: 07-07-15

Sampled By: BWL
Processed By: KCM, GMC

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03WSM5078SM	SM	W		110 11	TW	0414	

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: NB-7L
Sample Date: 04-07-15
Processing Date: 04-08-15

Sampled By: BWL
Processed By: KCM, GMC, KRM

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03WHANZ37	HA	W		91 9	TW	0415	
~~NB03WWFNZ38~~	~~WF~~	~~W~~	KCM	188 ~~98~~			
NO3WWFNZ39	WF	W		143 34			
NB03WSFNZ38	SF	W		188 48			
NB03WWFNZ40	WF	W		121 18			
NB03WWFNZ41	WF	W		89 10			
NB03WWFNZ42	WF	W		106 14			
NB03WWPNZ43	WP	W		157 48		0416	
NB03WWPNZ44	WP	W		118 20			
NB03WWPNZ45	WP	W		101 13			
NB03WWPNZ46				120 19			
NB03WWPNZ47				84 7			
NB03WWPNZ48				91 9			
NB03WWPNZ49				76 5			
NB03WWPNZ50				94 10			

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: North KCM
Sample Date: 04-07-15
Processing Date: 04-08-15

Sampled By: BWL
Processed By: KCM, GMC, KRM

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03LWPN251	WP	L		190 / 102 / Liver Wt(g): 2.5	TW	0416	Female
NB03LWPN252	WP	L		KCM ~~117~~ 217 / 162 / Liver Wt(g): 3.5	TW	↓	Male

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN
Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: Central
Sample Date: 04-07-15
Processing Date: 04-08-15

Sampled By: BWC
Processed By: KCM, BMC, KRM

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03WHAC126	HA	W		88 6	TW	0417	
NB03WHAC127				88 6			
NB03WHAC128				80 4			
NB03WHAC129				95 7			
NB03WHAC130				73 4			
NB03WHAC131 (KCM)				91 7			
NB03WHAC132				77 4			
NB03WHAC133				82 5			
NB03WHAC134				71 4			
NB03WHAC135				62 2			
NB03WHAC136	↓	↓		66 4		↓	
NB03WHCC137	HC			119 34		0418	
NB03WWWC138	WW			132 23			
NB03WSFC139	SF			192 60			
NB03WSFC140	↓	↓		260 155	↓	↓	

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: Central
Sample Date: 04-07-15
Processing Date: 04-08-15

Sampled By: BWL
Processed By: JCM, GMC, KRM

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03WWFC141	WF	W		159 / 44	TW	0418	
NB03WWFC142				131 / 26			
NB03WWFC143				119 / 20			
NB03WWFC144				120 / 19		↓	
NB03WWFC145				101 / 11		0419	
NB03WWFC146				98 / 12			
NB03WWFC147				88 / 8			
NB03WWFC148				115 / 18			
NB03WWFC149				99 / 11			
NB03WWFC150				86 / 8			
NB03WWFC151				94 / 10			
NB03WWFC152				100 / 12			
NB03WWFC153				102 / 13			
NB03WWFC154				95 / 12			
NB03WWFC155	↓	↓		86 / 8	↓	↓	

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: Central
Sample Date: 04-07-15
Processing Date: 04-08-15

Sampled By: BWL
Processed By: KCM, CML, KRM

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03WWFC156	WF	W		66 2	TW	0419	
NB03WWFC157				55 2			
NB03WWFC158				112 17			
NB03WWFC159				108 ~~115~~ KCM 15			
NB03WWFC160				92 8		0420	
NB03WWFC161				119 20			
NB03WWFC162				97 12			
NB03WWFC163				87 8			
NB03WWFC164				102 14			
NB03WWFC165				95 13			
NB03WWFC166				105 15			
NB03WWFC167				95 11			
NB03WWFC168				111 14			
NB03WWFC169				124 21			
NB03WWFC170				74 5			

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: Central
Sample Date: 09-07-15
Processing Date: 09-08-15

Sampled By: BWL
Processed By: KCM, GMC, KRM

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03WWFC171	WF	W		79 6	TW	0420	
NB03WWFC172	WF	W		82 8	↓	↓	
NB03WWFC173	WF	W		112 17	↓	↓	
NB03WWPC174	WP	W		160 48	↓	0421	
NB03WWPC175	WP	↓		164 54	↓	↓	
NB03WWPC176	WP			177 75	↓	↓	
NB03WWPC177	WP			175 65	↓	↓	
NB03WWPC178	WP			121 16	↓	↓	
NB03WWPC179	WP			115 18	↓	↓	
NB03WWPC180	WP	↓		98 10	↓	↓	
NB03FWPC181	WP	F		201 132 Fillet wt(g): 50.5	↓	↓	Female
NB03LWPC181	WP	L		Liver Wt(g): 2.9			
		F	KCM				
		L	KCM				

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 2
Revision Date: March 2015
Sample Processing Form

Project: NB03 Fish Study
Sample Location: South
Sample Date: 04-07-15
Processing Date: 04-08-15

Sampled By: BWL
Processed By: KEM, GMC, KEM

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03FWPS079	WP	F		315 473 Fillet Wt(g): 176.0	GN	0422	Female
NB03LWPS079		L		~~KEM 280~~ Liver Wt(g): 7.8			
NB03FWPS080		F		280 368 Fillet Wt(g): 115.1			Male
NB03LWPS080		L		Liver Wt(g): 8.7			
NB03FWPS081		F		272 315 Fillet Wt(g) 111.2			Male
NB03LWPS081		L		Liver Wt(g): 5.0			
NB03FWPS082		F		270 330 Fillet Wt(g): 117.0			Female
NB03LWPS082		L		Liver Wt(g): 7.3		0423	
NB03FWPS083		F		263 283 Fillet Wt(g): 104.2			Female
NB03LWPS083		L		Liver Wt(g): 6.8			
NB03FWPS084		F		256 290 Fillet Wt(g): 100.0			Male
NB03LWPS084		L		Liver Wt(g): 7.6			
NB03FWPS085		F		258 261 Fillet Wt(g): 104.4			Male
NB03LWPS~~086~~085		L		Liver Wt(g): 4.4			
KEM		F	KEM				

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: South
Sample Date: 04-07-15
Processing Date: 04-08-15

Sampled By: BWL
Processed By: KCM, GMC, KRM

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03FWPS086	WP	F		262 279 Fillet wt(g): 90.8	GN	0423	Male
NB03LWPS086		L		Liver wt(g): 4.9		↓	
NB03FWPS087		F		262 274 Fillet wt(g): 97.9		0424	Male
NB03LWPS087		L		Liver wt(g): 4.5		0426	
NB03FWPS088		F		242 227 Fillet wt(g): 85.4		0429	Male
NB03LWPS088		L		Liver wt(g): 3.5			
NB03FWPS089		F		245 218 Fillet wt(g): 77.6			Male
NB03LWPS089		L		Liver 3.9g			
NB03FWPS090		F		246 217 Fillet wt(g): 81.0			Male
NB03LWPS090		L		Liver wt(g): 3.4			
NB03FWPS091		F		223 180 Fillet wt(g): 67.6		0427	Male
NB03LWPS091		L		Liver wt(g): 2.7			
NB03FWPS092		F		222 183 Fillet wt(g): 66.0			Female
NB03LWPS092	↓	L		Liver wt(g): 5.4	↓	↓	

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: SOMK
Sample Date: 04-07-15
Processing Date: 04-08-15

Sampled By: BWL
Processed By: ICCM, GMC, KRM

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
VB03LWWPS093	WP	W		215/147	GN	0428	
VB03LWWPS094				203/158			
VB03LWWPS095				219/167			
VB03LWWPS096				235/200			
VB03LWWPS097				217/170			
VB03LWWPS098				231/195			
VB03LWWPS099				221/148		0429	
VB03LWWPS100				229/171			
VB03LWWPS101				232/192			
VB03LWWPS102				225/181			
VB03LWWPS103				212/158			
VB03LWWPS104				215/160			
VB03LWWPS105				222/173		0430	
VB03LWWPS106				206/151		0431	
VB03LWWPS107				218/160		0432	

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 2
Revision Date: March 2015
Sample Processing Form

Project: NB03 Fish Study
Sample Location: Central
Sample Date: 04-08-15
Processing Date: 04-09-15

Sampled By: JBS
Processed By: KCM, GMC

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03FWPC182	WP	F		194 99 Fillet wt(g): 34.9	TW	0433	Female
NB03LWPC182		L		~~190~~ 82 KCM Liver wt(g): 2.0			
NB03FWPC183		F		190 82 Fillet wt(g): 29.1			Female
NB03LWPC183		L		Liver wt(g): 1.3			
NB03FWPC184		F		196 102 Fillet wt(g): 40.5			Female
NB03LWPC184		L		Liver wt(g): 0.9			
NB03FWPC185		F		201 104 Fillet wt(g): 37.9			Male
NB03LWPC185		L		Liver wt(g): 2.1			
NB03FWPC186		F		211 152 Fillet wt(g): 56.9			Female
NB03LWPC186		L		Liver wt(g): 3.2			
NB03LWPC187		L		97 ~~5~~ OTT 10 Liver wt(g): 0.2		0434	Juvenile
NB03LWPC188				157 49 Liver wt(g): 0.7			Female
NB03LWPC189				100 12 Liver wt(g): 0.1			Juvenile
NB03LWPC190				84 ~~3~~ OTT 7 Liver wt(g): 0.1			Juvenile
NB03LWPC191				121 11 OTT 21 Liver wt(g): ~~0.3~~ 0.6 KCM			~~Female~~ KCM ↑ Juvenile

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: Central
Sample Date: 04-08-15
Processing Date: 04-09-15

Sampled By: JBS
Processed By: KCM, GMC

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03LWPC192	WP	L		110 15 Liver wt(g): 0.2	TW	0434	Juvenile
NB03LWPC193				109 15 Liver wt(g): 0.4			Juvenile
NB03LWPC194				96 11 Liver wt(g): 0.2			Juvenile
NB03LWPC195				114 17 Liver wt(g): 0.3			~~Juvenile~~ KCM Female
NB03LWPC196				103 14 Liver wt(g): 0.2		0435	Juvenile
NB03LWPC197				112 16 Liver wt(g): 0.3			Juvenile
~~NB03LWPC198~~ NB03LWPC198				95 10 Liver wt(g): 0.1			Juvenile
NB03LWPC199				175 72 Liver wt(g): 1.5			Female
NB03LWPC200				130 26 Liver wt(g): 0.3			Juvenile
NB03LWPC201		L		162 58 Liver wt(g): 0.8			~~Male~~ KCM Female

Notes:

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Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
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Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 2
Revision Date: March 2015
Sample Processing Form

Project: NB03 Fish Study
Sample Location: North
Sample Date: 04-08-15
Processing Date: 04-09-15

Sampled By: JBS
Processed By: KCM, JBS

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03FWPNZ53	WP	F		215 161 Fillet wt(g): 58.7	TW	0436	Male
NB03LWPNZ53		L		Liver wt(g): 3.1			
NB03FWPNZ54		F		205 138 Fillet wt(g): 47.8			Female
NB03LWPNZ54		L		Liver wt(g): 2.7			
NB03FWPNZ55		F		190 98 Fillet wt(g): 38.6			Male
NB03LWPNZ55		L		Liver wt(g): 1.8			
NB03FWPNZ56		F		195 96 Fillet wt(g): 37.9			Male
NB03LWPNZ56		L		Liver wt(g): 2.1			
NB03LWPNZ57		L		180 75 Liver wt(g): 1.5			Male
NB03LWPNZ58		L		182 55 Liver wt(g): 2.5			Female
NB03LWPNZ59		L		175 68 Liver wt(g): 1.4			Female
NB03LWPNZ60		L		167 50 Liver wt(g): 1.2			Female
NB03LWPNZ61		L		192 103 Liver wt(g): 2.3			Female
NB03LWPNZ62		L		163 55 Liver wt(g): 1.2			Female
NB03LWPNZ63		L		169 57 Liver wt(g): 0.6			Male

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: North
Sample Date: ~~04-07-15~~ 04-08-15
Processing Date: ~~04-08-15~~ 04-09-15

Sampled By: JBS
Processed By: KCM, ~~JBS~~ GMC

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03LWPNZ64	WP	L		160 52 Liver wt(g): 0.5	TW	0437	Male
NB03LWPNZ65		L		144 35 Liver wt(g): 0.9			Male
NB03LWPNZ66		L		135 25 Liver wt(g): 0.7			KCM Juvenile ~~Female~~
NB03LWPNZ67		L		123 18 Liver wt(g): 0.5			Male
NB03LWPNZ68		L		110 12 Liver wt(g): 0.1			Juvenile
NB03LWPNZ69		L		116 14 Liver wt(g): 0.5			
NB03LWPNZ70		L		134 22 Liver wt(g): 0.4			
NB03LWPNZ71		L		111 12 Liver wt(g): 0.3			
NB03LWPNZ72		L		111 15 Liver wt(g): 0.3		0438	Juvenile
NB03LWPNZ73		L		114 15 Liver wt(g): 0.2			
NB03LWPNZ74		L		110 11 Liver wt(g): 0.2			
NB03LWPNZ75		L		118 15 Liver wt(g): 0.4			
NB03LWPNZ76		L		116 13 Liver wt(g): 0.3			
NB03LWPNZ77		L		114 12 Liver wt(g): 0.3			
NB03LWPNZ78		L		115 12 Liver wt(g): 0.3			

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: North
Sample Date: 04-08-15
Processing Date: 04-09-15

Sampled By: JBS
Processed By: ~~KCM, GMC, BWL~~, KRM, CAF

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03LWPNZ77	WP	L		113 11 Liver wt(g) 0.3	TW	0438	
NB03LWPNZ80				119 14 Liver wt(g) 0.3			
NB03LWPNZ81			0 KCM	109 12 Liver wt(g) 0.2			
NB03LWPNZ82				114 11 Liver wt(g) 0.3			
NB03LWPNZ83				108 11 Liver wt(g) 0.4			
NB03LWPNZ84				103 11 Liver wt(g) 0.2			
NB03LWPNZ85				102 11 Liver wt(g) 0.2			
NB03LWPNZ86				109 10 Liver wt(g) 0.3			
NB03LWPNZ87				100 10 Liver wt(g) 0.2			
NB03LWPNZ88				101 10 Liver wt(g) 0.2			
NB03LWPNZ89				94 8 Liver wt(g) 0.1			
KCM ~~NB0330~~ NB03LWPNZ90				96 9 Liver wt(g) 0.2			
KCM ~~NB0331~~ NB03LWPNZ91				88 6 Liver wt(g) 0.2		0439	
NB03LWPNZ92				96 5 Liver wt(g) 0.1			
NB03LWPNZ93				103 5 Liver wt(g) 0.2			

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: Work
Sample Date: 04-08-15
Processing Date: 04-09-15

Sampled By: JBS
Processed By: ~~KCM, GML~~, BWL, KRM, CAF

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03LWPN294	WP	L		100 / 5 Liver wt(g) 0.1	TW	0439	
NB03LWPN295				85 / 3 Liver wt(g) 0.1			
NB03LWPN296				86 / 3 Liver wt(g) 0.1			
NB03LWPN297				93 / 4 Liver wt(g) 0.1			
NB03LWPN298				91 / 4 Liver wt(g) 0.1			
NB03LWPN299				95 / 4 Liver wt(g) 0.1			
NB03LWPN300				96 / 4 Liver wt(g) 0.1			
NB03LWPN301				85 / 3 Liver wt(g) 0.1			
NB03LWPN302				85 / 4 Liver wt(g) 0.1			
NB03LWPN303				84 / 3 Liver wt(g) 0.1			
NB03LWPN304				100 / 5 Liver wt(g) 0.1			
NB03LWPN305				95 / 5 Liver wt(g) 0.1			
NB03LWPN306				88 / 3 Liver wt(g) 0.2			
NB03LWPN307				89 / 4 Liver wt(g) 0.1			
NB03LWPN308				80 / 3 Liver wt(g) 0.2			

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: North
Sample Date: 04-08-15
Processing Date: 04-09-15

Sampled By: JBS
Processed By: KCM, GMC, BWL, KRM, CAF

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03LWPN309	WP	L		85 / 4 Liver wt(g) 0.1	TW KCM 0439	0439	
NB03LWPN310				86 / 3 Liver wt(g) 0.2			
NB03LWPN311				87 / 3 Liver wt(g) 0.1			
NB03WHAN312	HA	W		71 / 3		0440	
NB03WHAN313				78 / 3.4			
NB03WHAN314				74 / 3			
NB03WHAN315				70 / 2.6			
NB03WHAN316				67 / 2.5			
NB03WHAN317				88 / 5.4			
NB03WHAN318				65 / 2.0			
NB03WHAN319				77 / 3.7			
NB03WHAN320				72 / 2.8			

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 2
Revision Date: March 2015
Sample Processing Form

Project: NB03 Fish Study
Sample Location: South
Sample Date: 04-07-15
Processing Date: 04-09-15

Sampled By: JBS
Processed By: KCM, GMC, KRM, BWL, CAF

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03LWPS108	WP	L		235 200 Liver Wt(g): 5.2	GN	0441	Female
NB03LWPS109				236 195 Liver Wt(g): 3.9			Female
NB03LWPS110				261 250 Liver Wt(g): 6.7			Female
NB03LWPS111				230 195 Liver Wt(g): 6.3			Female
NB03LWPS112				233 175 Liver Wt(g): 4.0			Female
NB03LWPS113				242 225 Liver Wt(g): 5.7			Female
NB03LWPS114				225 175 Liver Wt(g): 3.6			Female
NB03LWPS115				230 200 Liver Wt(g): 4.0			Male
NB03LWPS116				260 305 Liver Wt(g): 8.0		0442	Female
NB03LWPS117				235 225 Liver Wt(g): 8.6			Female
NB03LWPS118				240 200 Liver Wt(g): 4.2			Female
NB03LWPS119				228 175 Liver Wt(g): 4.2			Female
NB03LWPS120				222 200 Liver Wt(g): 4.6			Female
NB03LWPS121				212 155 Liver Wt(g): 4.0			Female
NB03LWPS122				235 200 Liver Wt(g): 5.0			Female

Notes:

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mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN
Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: South
Sample Date: 04-07-15
Processing Date: 04-09-15

Sampled By: JBS
Processed By: LCM, BMC, KRM, BWL, CAF

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03LWPS123	WP	L		242 250 Liver Wt(g): 4.7	GN	0442	Male
NB03LWPS124				248 250 Liver Wt(g): 6.7		0443	Female
NB03LWPS125				286 425 Liver Wt(g): 12.3			Female
NB03LWPS126				258 255 Liver Wt(g): 7.5			Female
NB03LWPS127				231 200 Liver Wt(g): 4.6			Female
NB03LWPS128				257 ~~290~~ 310 Liver Wt(g): 7.7			Female
NB03LWPS129				253 275 Liver Wt(g): 8.2			Female
NB03LWPS130				240 210 Liver Wt(g): 4.9			Female
NB03LWPS131				240 200 Liver Wt(g): 4.3		↓	Female
NB03LWPS132				260 290 Liver Wt(g): 3.8		0444	Male
NB03LWPS133				244 240 Liver Wt(g): 5.6			Female
NB03LWPS134				245 220 Liver Wt(g): 6.2			Female
NB03LWPS135				243 225 Liver Wt(g): 3.2			Male
NB03LWPS136				264 290 Liver Wt(g): 6.9			Female
NB03LWPS137	↓	↓		214 150 Liver Wt(g): 2.6	↓	↓	Male

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: South
Sample Date: 04-07-15
Processing Date: 04-09-15

Sampled By: JBS
Processed By: KCM, GMC, KRM, BLW, CAF

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03LWPS138	WP	L		290/450 Liver wt(g): 11.8	GN	0445	Female
NB03LWPS139				230/200 Liver wt(g): 5.0			Male
NB03LWPS140				252/260 Liver wt(g): 7.3			Female
NB03LWPS141				244/220 Liver wt(g): 3.4			Male
NB03LWPS142				216/180 Liver wt(g): 4.1			Female
NB03LWPS143				245/240 Liver wt(g): ~~4.0~~ KCM 6.0			Female
NB03LWPS144				243/210 Liver wt(g): 4.8			Male
NB03LWPS145				240/230 Liver wt(g): 4.2			Male
NB03WWPS146		W		240/200 ~~Liver wt(g):~~ KCM		0446	
NB03WWPS147				228/180 ~~Liver wt(g):~~ KCM			
NB03WWPS148				218/175			
NB03WWPS149				231/180			
NB03WWPS150				226/210			
NB03WWPS151				225/190			
NB03WWPS152				230/180			

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
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WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: South
Sample Date: 04-07-15
Processing Date: 04-09-15

Sampled By: JBS
Processed By: KCM, GMC, BWL, KRM, CAF

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03WWPS153	WP	W		239 / 190	GN	0446	
NB03WWPS154				218 / 170		↓	
NB03WWPS155				228 / 160		0447	
NB03WWPS156				230 / 175			
NB03WWPS157				232 / 200			
NB03WWPS158				246 / 220			
NB03WWPS159				241 / 200			
NB03WWPS160				232 / 190			
~~NB03WWFS161~~				~~205 / 160~~ KCM			
				190 / ~~70~~ KCM			
NB03WWPS161				205 / 160			
NB03WWFS162	WF	↓		190 / 70	↓	↓	

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
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WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: North
Sample Date: 04-08-15
Processing Date: 04-09-15

Sampled By: JBS
Processed By: BWL, KCM, GMC, KRM,

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03WWFN321	WF	W		106 / 14	TW	0448	
NB03WWFN322				93 / 9			
NB03WWFN323				116 / 17.9			
NB03WWFN324				100 / 11.2			
NB03WWFN325				115 / 17.6			
NB03WWFN326				115 / 19.3			

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: Central
Sample Date: 04-08-15
Processing Date: 04-09-15

Sampled By: JBS
Processed By: KCM, KRM

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03WSMC092	SM	W		58 / 1.3	TW	0449	
NB03WSMC093				42 / 0.4			
NB03WWFC094	WF			100 / 9.5			
NB03WWFC095				86 / 6.4			
NB03WWFC096				82 / 6.3			
NB03WWFC097				85 / 6.0			
NB03WWFC098				112 / 15.5			
NB03WHAC199	HA			83 / 4.2			
NB03WHAC200				91 / 5.7			
NB03WHAC201				70 / 3.0			
NB03WHAC202				80 / 3.8			
NB03WHAC203				85 / 4.7			
NB03WHAC204				71 / 2.5			
NB03WHAC205				65 / 2.2			
NB03WHAC206				73 / 2.7			

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: Central
Sample Date: 04-08-15
Processing Date: 04-09-15

Sampled By: ~~KRM~~ KRM JBS
Processed By: ~~KRM~~ KRM, BWL, GMC, CAF, KRM

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03WHAC207	~~KRM WF~~	W		70 2.9	TW	0449	
NB03WHAC208	HA			73 2.5			
NB03WHAC209				82 3.6			
NB03WHAC210				81 4.0			
NB03WHAC211				81 4.4			
NB03WHAC212				75 3.2			
NB03WHAC213				76 3.5			
NB03WHAC214				85 4.5			
NB03WHAC215				81 4.8			
NB03WHAC216				77 3.8			
NB03WHAC217				76 3.5			
NB03WHAC218				86 5.5			
NB03WHAC219				85 4.5			
NB03WHAC220				79 3.8		0450	
NB03WHAC221				80 3.8			

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN
Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: Central
Sample Date: 04-08-15
Processing Date: 04-09-15

Sampled By: JBS
Processed By: KCM, BLL, KRM, GMC, CAF

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
VB03WHAC222	HA	W		70 / 2.4	TW	0450	
VB03WHAC223				61 / 1.9			
VB03WHAC224				94 / 5.9			
VB03WHAC225				70 / 3.0			
VB03WHAC226				94 / 6.2			
VB03WHAC227				63 / 2.0			
VB03WHAC228				79 / 3.9			
VB03WHAC229				60 / 1.7			
VB03WHAC230				65 / 1.7			
VB03WWWC231	WW			150 / 32.4		0451	
VB03WWWC232	WW			160 / 40.9			
VB03WSFC233	SF			205 / 68.5			
VB03WSFC234				190 / 52.8			
VB03WSFC235				216 / 87.0			
VB03WSFC236				180 / 44.8			

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: Central
Sample Date: 04-08-15
Processing Date: 04-09-15

Sampled By: JBS
Processed By: KCM, GMC, KRM, BWL, CAF

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03WHCC237	HC	W		120 / 26.5	TW	0451	
NB03WHCC238	↓	↓		98 / 18.2	↓	↓	
NB03WHCC239	↓	↓		110 / 25	↓	↓	
NB03WWFC240	WF	↓		138 / 29.7	↓	↓	
NB03WWFC241	↓	↓		100 / 11.7	↓	↓	
NB03WWFC242	↓	↓		80 / 6.4	↓	↓	
NB03WWFC243	↓	↓		90 / 7.3	↓	↓	
NB03WWFC244	↓	↓		80 / 5.4	↓	↓	
NB03WWFC245	↓	↓		100 / 10.4	↓	↓	
NB03WWFC246	↓	↓		110 / 14.5	↓	↓	
NB03WWFC247	↓	↓		115 / 17.6	↓	↓	
NB03WWFC248	↓	↓		90 / 9.0	↓	↓	
NB03WWFC249	↓	↓		105 / 12.3	↓	↓	
NB03WWFC250	↓	↓		170 / 55.1	↓	0452	
NB03WWFC251	↓	↓		86 / 6.1	↓	↓	

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN
Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: Central
Sample Date: 07-08-15
Processing Date: 07-09-15

Sampled By: JBS
Processed By: KCM, GMC, KRM, BWL, CAF

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03WWFCZ52	WF	W		100 11.6	TW	0452	
NB03WWFCZ53				95 8.6			
NB03WWFCZ54				85 7.2			
NB03WWFCZ55				82 6.5			
NB03WWFCZ56				91 8.1			
NB03WWFCZ57				102 12.4			
NB03WWFCZ58				93 8.9			
NB03WWFCZ59				80 4.8			
NB03WWFCZ60				81 5.8			
NB03WWFCZ61				101 11.1			
NB03WWFCZ62				122 20.9			
NB03WWFCZ63				170 60.6			
NB03WWFCZ64				132 22.9			
NB03WWFCZ65				142 34.5			
NB03WWFCZ66				212 127.0			

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 2
Revision Date: March 2015
Sample Processing Form

Project: NB03 Fish Study
Sample Location: Central
Sample Date: 09-08-15
Processing Date: 09-09-15

Sampled By: JBS
Processed By: KCM, KRM, CMC, BWL, CAF

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03WWFC267	WF	W		128 / 25.8	TW	0452	
NB03WWFC268				105 / 12.7			
NB03WWFC269				105 / 11.8			
NB03WWFC270				125 / 19.8			
NB03WWFC271				119 / 20.0			
NB03WWFC272				97 / 10.1			
NB03WWFC273				82 / 6.6			
NB03WWFC274				91 / 8.2			
NB03WWFC275				110 / 14.7			
NB03WWFC276				82 / 6.9			
NB03WWFC277				88 / 8.4			
NB03WWFC278				85 / 7.7			
NB03WWFC279				100 / 12.1			
NB03WWFC280				100 / 10.7			
NB03WSMC281	SM			95 / 6.5		0453	

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN
Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: Central
Sample Date: 04-08-15
Processing Date: 04-09-15

Sampled By: JBS
Processed By: ICCM, BWL, GMC, CAF, KRM

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03WSMC282	SM	W		60 / 1.6	TW	0453	
NB03WSMC283	SM	W		57 / 1.3	TW	0453	

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: South
Sample Date: 4/8/15
Processing Date: 4/10/15

Sampled By: BW
Processed By: BW, GMC, CLR

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03WPL S163	WP	L		228 / 180 Liver = 3.6	GN	0454	Female
NB03WPL S164				260 / 310 Liver = 5.4			Male
NB03WPL S165				255 / 260 Liver = 4.7			Male
NB03WPL S166				230 / 190 Liver = 4.6			Female
NB03WPL S167				265 / 310 Liver = 6.9			Female
NB03WPL S168				252 / 260 Liver = 7.2			Female
NB03WPL S169				220 / 176 Liver = 3.8			Male
NB03WPL S170				245 / 230 Liver = 4.9			Female
NB03WPL S171				275 / 330 Liver = 3.9		0455	~~Female~~ Male KRM
NB03WPL S172				245 / 230 Liver = 5.4			Female
NB03WPL S173				275 / 370 Liver = 8.6			Female
NB03WPL S174				260 / 295 Liver = 4.7			Female
NB03WPL S175				240 / 220 Liver = 7.0			Female
NB03WPL S176				230 / 180 Liver = 2.7			Male
NB03WPL S177				235 / 240 Liver = 3.3			Male #0456 for liver

Notes: Labels transposed for sample type + species. Should be LWP, GTT

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: South
Sample Date: 4/8/15
Processing Date: 4/16/15

Sampled By: BWL
Processed By: BWL, GMC, KRM, CAF, NSG, CJR

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03WPLS178	WP	L		240 / 200 Liver = 3.8	GN	0455	Male
NB03WPLS179				230 / 200 Liver = 4.8		0457	Female
NB03WPLS180				240 / 220 Liver = 5.1			Female
NB03WPLS181				230 / 200 Liver = 4.4			Female, 0459, 0460
NB03WPLS182				230 / 210 Liver = 4.7			Female
NB03WPLS183				290 / 460 Liver = 13.6			Female
NB03WPLS184				230 / 190 Liver = 3.8			Female
NB03WPLS185				235 / 180 Liver = 2.4			Male
NB03WPLS186				230 / 205 Liver = 4.2			Male
NB03WPLS187				270 / 330 Liver = 9.1		0461	Female
NB03WPLS188				275 / 370 Liver = 8.5			Female
NB03WPLS189				225 / 170 Liver = 4.3			Female
NB03WPLS190				245 / 235 Liver = 6.2			Female
NB03WPLS191				280 / 370 Liver = 9.3			Female
NB03WPLS192				245 / 245 Liver = 3.7			Male, 0463

Notes: Labels transposed for sample type + species. Should be LWP. CTT

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: South
Sample Date: 4/13/15
Processing Date: 4/12/15

Sampled By: BWL
Processed By: BWL, GME, CAF, KAM, NSG

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03WPL5193	WP	L		245 / 235 Liver=6.0	GN	0461	Female
NB03WPL5194				245 / 210 Liver=4.4		↓	—
NB03WPL5195				235 / 200 Liver=3.3		0464	Male
NB03WPL5196				245 / 240 Liver=4.0			Male
NB03WPL5197				220 / 170 Liver=3.0			Male
NB03WPL 5198				270 / 330 Liver=4.2			Male
NB03WPL 5199				210 / 150 Liver=4.2			Female
NB03WPL 5200				240 / 220 Liver=3.9			Male
NB03WPL 5201				225 / 200 Liver=4.5			Female
NB03WPL 5202				225 / 180 Liver=4.2		↓	Female
NB03WPL 5203				235 / 210 Liver=3.4		0465	Male
NB03WPL 5204				212 / 150 Liver=3.3			Female
NB03WPL 5205				250 / 245 Liver=4.0			Male
NB03WPL 5206				225 / 190 Liver=3.4			Male
NB03WPL5207				230 / 170 Liver=4.3			Female

Notes: 0462 – lab photo Labels transposed for sample type + species. Should be LWP. CTT

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 2
Revision Date: March 2015
Sample Processing Form

Project: NB03 Fish Study
Sample Location: Sewer
Sample Date: 4/8/15
Processing Date: 4/10/15

Sampled By: BWL
Processed By: ~~BWL, GMC, CAF~~, KRM, NSG, CJR

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03WPL5208	WP	L		245 215 Liver= 4.9	GN	0465	Female
NB03WPL5209				230 200 Liver= 3.1			Male
NB03WPL5210				225 185 Liver= 3.4		↓	Male
NB03WPL5211				230 170 Liver= 3.1		0466	Male
NB03WPL5212				250 250 Liver= 4.1			Male
NB03WPL5213				225 170 Liver= 2.7			Male
NB03WPL5214				220 175 Liver= 3.8			Female
NB03WPL5215				295 450 Liver= 11.0			Female, 0467 0468
NB03WPL5216				235 200 Liver= 4.5			Male
NB03WPL5217				230 260 Liver= 3.2			Female
NB03WPL5218				225 190 Liver= 4.3		↓	Female
NB03WPL5219				275 370 Liver= 7.4		0469	Female
NB03WPL5220				220 180 Liver= 3.5			Male
NB03WPL5221				265 340 Liver= 8.7			Female
NB03WPL5222	↓	↓		240 240 Liver= 5.8	↓	↓	Female

Notes: Labels transposed for sample type + species. Should be LWP. CTT

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN
Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: South
Sample Date: 4/8/15
Processing Date: 4/10/15

Sampled By: BWL
Processed By: BWL, GMC, CAF, KRM, NSG, CJR

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03WPLS223	WP	L		225 / 180 Liver = 3.1	GN	0469	Female
NB03WPL S224				225 / 190 Liver = 4.3			Female
NB03WPL S225				230 / 200 Liver = 5.1			Female
NB03WPL S226				245 / 270 Liver = 4.9			Male
NB03WPL S227				245 / 250 Liver = 6.5		0470	Female
NB03WPL S228				225 / 180 Liver = 4.1			Male
NB03WPL S229				240 / 220 Liver = 5.5			Female
NB03WPL S230				270 / 360 Liver = 8.4			Female
NB03WPL S231				220 / 180 Liver = 3.8			Male
NB03WPL S232				220 / 170 Liver = 2.7			Male
NB03WPL S233				245 / 255 Liver = 7.2			Female
NB03WPL S234				252 / 295 Liver = 4.5			Male
NB03WPL S235				230 / 220 Liver = 4.1		0471	Male
NB03WPL S236				250 / 255 Liver = 6.4			Female
NB03WPL S237				240 / 205 Liver = 7.0			Female

Notes: ~~S23~~ KRM Labels transposed for sample type + species. Should be LWP. CJT

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN
Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: South
Sample Date: 4/8/15
Processing Date: 4/10/15

Sampled By: BWL
Processed By: BWL, GMC, CAF, KRM, NSG, CJA

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03WPLS238	WP	L		240 220 Liver = 5.0	GN	0471	Female
NB03WPLS239				250 260 Liver = 5.1			Male
NB03WPLS240				215 170 Liver = 3.7			Male
NB03WPLS241				245 240 Liver = 6.5			Female
NB03WPLS242				230 200 Liver = 5.1			Female
NB03WPLS243				220 180 Liver = 3.0		0472	Male
NB03WPLS244				235 210 Liver = 4.5			Male
NB03WPLS245				245 250 Liver = 8.0			Female
NB03WPLS246				275 370 Liver = 10.7			Female
NB03WPLS247				230 180 Liver = 4.4			Female
NB03WPLS248				225 170 Liver = 3.0			Female
NB03WPLS249				244 220 Liver = 5.8			Female
NB03WPLS250				225 200 Liver = 4.8			Female
NB03WPLS251				240 200 Liver = 3.5		0473	Male
NB03WPLS252				240 220 Liver = 3.9			Male

Notes: Labels transposed for sample type & species. Should be LWP. KRM

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 2
Revision Date: March 2015
Sample Processing Form

Project: NB03 Fish Study
Sample Location: South
Sample Date: 4/3/15
Processing Date: 4/10/15

Sampled By: BWL
Processed By: BWL, GMC, CAF, KRM, NSG, CJR

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03WPL5253	WP	L		240 220 Liver= 5.7	GN	0473	Female
NB03WPL5254				225 160 Liver= 2.6			Male
NB03WPL5255				235 220 Liver= 5.7			Female
NB03WPL5256				240 210 Liver= 5.3			Male
NB03WPL5257				240 240 Liver= 6.0			Female
NB03WPL5258				210 160 Liver= 3.4			Male
NB03WPL5259				250 270 Liver= 6.6		0474	Female
NB03WPL5260				262 400 Liver= 10.5			Female
NB03WPL5261				232 195 Liver= 4.4			Female
NB03WPL5262				248 250 Liver= 5.2			Female
NB03WPL5263				230 210 Liver= 4.5			Female
NB03WPL5264				258 250 Liver= 6.7			Female
NB03WPL5265				250 300 Liver= 7.0			Female
NB03WPL5266				238 216 Liver= 3.5			Male
NB03WPL5267				230 190 Liver= 4.3		0475	Female

Notes: Lables transposed for sample type & species. Should be L WP. KRM

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN
Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: South
Sample Date: 4/8/15
Processing Date: 4/10/15

Sampled By: BWL
Processed By: BWL, CME, CAP, KRM, NSG, CJR

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03LWPS268	WP	L		215 / 165 Liver= 4.6	GN	0475	Female
NB03LWPS269	↓	↓		218 / 160 Liver= 4.5	↓	↓	Female
NB03LWPS270	↓	↓		280 / 340 Liver= 6.2	↓	↓	Male

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: South
Sample Date: 4/9/15
Processing Date: 4/10/15

Sampled By: BWL, JBS, CLR
Processed By: BWL, GMC, NSG, KRM, CAF, CLR

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03LWPS271	WP	L		235 / 190 5.4 = Liver	GN	0476	Female
NB03LWPS272				215 / 150 2.4 = Liver			Male
NB03LWPS273				215 / 170 5.1 = Liver			Female
NB03LWPS274				225 / 190 5.2 = Liver			Female
NB03LWPS275				225 / 170 3.3 = Liver			Male
NB03LWPS276				265 / 240 5.9 = Liver			Female
NB03LWPS277				235 / 200 5.0 = Liver			Female
NB03LWPS278				235 / 230 3.4 = Liver			Male
NB03LWPS279				255 / 270 Liver = 6.0		0477	Female
NB03LWPS280				239 / 195 3.2 = Liver			Male
NB03LWPS281				265 / 340 Liver = 9.2			Female
NB03LWPS282				225 / 185 Liver = 4.3			NA
NB03LWPS283				235 / 205 Liver = 3.4			Male
NB03LWPS284				220 / 170 Liver = 3.0			Male
NB03LWPS285				235 / 220 Liver = 4.3			Male

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN
Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: South
Sample Date: 4/9/15
Processing Date: 4/10/15

Sampled By: BWL, JBS, CJR
Processed By: BWL, GMC, NSG, KRM, CAF, CJR

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03LWPS286	WP	L		250 240 Liver = 4.6	GN	0477	Female
NB03LWPS287				265 150 Liver = 2.7		0478	Male
NB03LWPS288				245 255 Liver = 5.1			Male
NB03LWPS289				230 190 Liver = 3.4			Male
NB03LWPS290				235 200 Liver = 3.1			Male
NB03LWPS291				222 180 Liver = 3.1			Male
NB03LWPS292				225 180 Liver = 2.4			Male
NB03LWPS293				232 190 Liver = 4.4			Female
NB03LWPS294				230 190 Liver = 3.9			Male
NB03LWPS295				235 230 Liver = 6.5		0479	Female
NB03LWPS296				240 240 Liver = 6.3			Female
NB03LWPS297				265 290 Liver = 6.8			Female
NB03LWPS298				225 160 Liver = 4.6			Female
NB03LWPS299				223 190 Liver = 4.7			Female
NB03LWPS300				228 220 Liver = 7.3			Female

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN
Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: South
Sample Date: 4/9/15
Processing Date: 4/10/15

Sampled By: BWL, JBS, CJR
Processed By: BWL, GMC, NSG, KRM, CAF, CJR

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03LWPS301	WP	L		218/170 Liver= 4.0	GN	0479	Female
NB03LWP 5302	↓	↓		238/190 Liver= 2.9	↓	↓	———
NB03LWP5303				270/315 Liver= 7.5		0480	Female
NB03LWP5304				229/165 Liver= 2.5		↓	male
NB03LWP5305				235/225 Liver= 5.3			Female
NB03LWP 5306				220/205 Liver= 5.5			Female
NB03LWPS307				235/200 Liver= 4.1			Female
NB03LWP 5308				238/215 Liver= 3.7			Male
NB03LWPS309				230/165 Liver= 3.1			Male
NB03LWPS310				260/275 Liver= 4.2		↓	Male
NB03LWP5311				220/165 Liver= 2.4		0481	Male
NB03LWPS312				245/250 Liver= 4.1		↓	Female
NB03LWP5313				262/355 Liver= 9.6			Female
NB03LWPS314				235/240 Liver= 4.7			Male
NB03LWPS315	↓	↓		230/210 Liver= 5.3	↓	↓	Female

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: South
Sample Date: 4/9/15
Processing Date: 4/10/15

Sampled By: BWL, JBS, CJR
Processed By: BWL, GMS, NSG, KRM, CAF, CJR

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03LWP5316	WP	L		240 / 240 Liver= 5.8	GN	0481	Male
NB03LWP5317	↓	↓		335 / 140 Liver= 3.6	↓	↓	Female
NB03LWP5318	↓	↓		222 / 185 Liver= 4.9	↓	↓	Female
NB03WWW5319	WW	W		288 / 215	GN	0482	—

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: ~~4/9/15~~ Central
Sample Date: 4/9/15
Processing Date: 4/10/15

Sampled By: BWL, JBS, CJR KRM, CJR, NSG
Processed By: BWL, GMC, CAF

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03 FWP C284	WP	F		235 170 Fillet= 64.3	GN	0483	Male
NB03 LWP C284		L		Liver= 3.6			
NB03 FWP C285		F		230 200 Fillet= 64.4			Female
NB03 LWP C285		L		Liver= 5.5			
NB03 FWP C286		F		220 170 Fillet= 48.6			Female
NB03 LWP C286		L		Liver= 3.8			
NB03 FWP C287		F		242 220 Fillet= 66.5			Female
NB03 LWP C287		L		Liver= 4.3			
NB03 FWP C288		F		230 210 Fillet= 86.9			Male
NB03 LWP C288		L		Liver= 2.6			
NB03 FWP C289		F		245 245 Fillet= 88.1			Male
NB03 LWP C289		L		Liver= 2.3			
CAF NB03 FWP C290	WP	F		255 290 Fillet= 108.8	TW	0484	Female
NB03 LWP C290	WP	L		KRM ~~200~~ 198 Liver= 8.7			
KRM ~~C292~~				KRM 266 Liver			

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN
Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: Central
Sample Date: 4/9/15
Processing Date: 4/10/15

Sampled By: BWL, JBS, CJR
Processed By: BWL, GMC, CAF, KRM, CJR, NSG

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03FLWP C291	WP	F		200 108 Fillet= 28.4	TW	0484	Female
NB03LWP C291		L		Liver= 3.0			
NB03FLWP C292		F		200 112 Fillet= 34.3			Female
NB032LWP C292		L		Liver= 2.6			
NB03FLWP C293		F		190 90 Fillet= 17.9			male
NB03LWP C293		L		Liver= 1.6			
NB03FLWP C294		F		200 100 Fillet= 28.4			Female
NB03LWP C294		L		Liver= 2.3			
NB03FLWP C295		F		192 90 Fillet= 21.4			—
NB03FLLWP C295		L		Liver= 1.2			
NB03FLWP C296		F		188 80 Fillet= 30.8			Female
NB03LWP C296		L		Liver= 1.6			
NB03FLWP C297		F		181 90 Fillet= 31.5			Female
NB03LWP C297		L		Liver= 2.5			

Notes: 7 Sample IDs should have Sample Type of F for Fillet, corrections to SampleID made by Carlie Thompson 4/10/15

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: Central
Sample Date: 4/9/15
Processing Date: 4/16/15

Sampled By: BWL, JBS, CJR
Processed By: BWL, CMG, CAF, KRM, CJR, NSG

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03LWP C298	WP	L		162 / 55 Liver = 1.3	TW	0485	JuV
NB03LWP C299				180 / 80 Liver = 1.3			JuV
NB03LWP C300				168 / 60 Liver = 1.2			JuV
NB03LWP C301				163 / 55 Liver = 0.7			JuV
NB03LWP C302				168 / 60 Liver = 1.4			JuV
NB03LWP C303				170 / 70 Liver = 1.7			Female
NB03LWP C304				170 / 70 Liver = 1.4			JuV
NB03LWP C305				182 / 80 Liver = 2.2			Female
NB03LWP C306				180 / 80 Liver = 1.4			Male
NB03LWP C307				160 / 50 Liver = 1.0			Male
NB03LWP C308				182 / 80 Liver = 1.9			Male
NB03LWP C309				165 / 70 Liver = 1.9			Female
NB03LWP C310				160 / 55 Liver = 1.3			Female
NB03LWP C311				175 / 65 Liver = 1.2			Male
NB03LWP C312				162 / 65 Liver = 1.3			Male

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: Control
Sample Date: 4/9/15
Processing Date: 4/16/16

Sampled By: BWL, JBS, CJR
Processed By: BWL, GMC, CAP, KAM, CJR, NSG

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03WWPC313	WP	W		152/40	TW	0486	NA
NB03WWPC314				138/30			
NB03WWPC315				110/11			
NB03WWPC316				110/10			
NB03WWPC317				138/30			
NB03WWPC318				112/12			
NB03WWPC319				136/30			
NB03WWPC320				98/5			
NB03WWPC321				102/8			
NB03WWPC322				111/11			
NB03WWPC323				115/18			
NB03WWPC324				85/3			
NB03WWPC325				122/21			
NB03WWPC326				113/12			
NB03WWPC327				108/10			

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: Central
Sample Date: 4/9/15
Processing Date: 4/10/15

Sampled By: BWL, JBJ, CJR
Processed By: BWL, GMC, CAF, KRM, CJR, NSG

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03WWP C328	WP	W		125 21	TW	0486	NA
NB03WWP C329				118 12			
NB03WWP C330				112 11			
NB03WWP C331				145 11			
NB03WWP C332				85 2			
NB03WWP C333	WP	W		82 5.7	TW	0487	NA
NB03 WSF C334	SF	W		170 37			
NB03 WSF C335	SF	W		195 58			
NB03 WSF C336	SF	W		172 38			
NB03 WSM C337	SM	W		61 1.6			
NB03 WHC C338	HC			120 44			
NB03WHC C339	HC			105 23			
NB03WWW C340	WW			195 93			
NB03WWW C341	WW			125 21			
NB03WWW C342	WW			140 25.6			

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: Central
Sample Date: 4/9/15
Processing Date: 4/16/15

Sampled By: BWH, JBS, CJR
Processed By: BWH, GME, KRM, NSG

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03 WWW C343	WW	W		180 / 65	TW	0487	NA
NB03 WWW C344	WW			134 / 26			
NB03 WWF C345	WF			100 / 11		0488	
NB03 WWF C346				120 / 20			
NB03 WWF C347				122 / 24			
NB03 WWF C348				252 / 204			
NB03 WWF C349				92 / 10			
NB03 WWF C350				135 / 27			
NB03 WWF C351				140 / 37			
NB03 WWF C352				115 / 18			
NB03 WWF C353				92 / 9.6			
NB03 WWF C354				82 / 6.8			
NB03 WWF C355				175 / 60			
NB03 WWF C356				102 / 12.5			
NB03 WWF C357				125 / 23			

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN
Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: ~~Control~~
Sample Date: 4/9/15
Processing Date: 4/16/16

Sampled By: BWL, JBS, CJR
Processed By: ~~BWL, CMC, KRM~~, NSG

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03 WWFC 358	WF	W		95 / 9	TW	0488	NA
NB03 WWFC 359				120 / 20			
NB03 WWFC 360				80 / 5.6			
NB03 WWFC 361				85 / 8.0			
NB03 WWFC 362				118 / 17.5			
NB03 WWFC 363				122 / 21			
NB03 WWFC 364				75 / 4.5			
NB03 WWFC 365				98 / 11			
NB03 WWFC 366				82 / 6.7			
NB03 WWFC 367	WF	W		140 / 33	TW	0489	NA
NB03 WWFC 368				105 / 14			
NB03 WWFC 369				115 / 19			
NB03 WWFC 370				85 / 6.3			
NB03 WWFC 371				90 / 9.0			
NB03 WWFC 372				95 / 8.7			

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: Central
Sample Date: 4/9/15
Processing Date: 4/16/15

Sampled By: BWL, JBS, CJR
Processed By: BWL, CMC, KRM, NSG

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03 WWF<373	WF	W		115 21.6	TW	C489	NA
NB03WWF<374				92 8.1			
NB03WWF<375				108 14.3			
NB03WWF<376				118 17.7			
NB03WWF<377				66 3.0			
NB03WWF<378				92 8.7			
NB03WWF<379				125 22.6			
NB03WWF<380				80 5.6			
NB03WWF<381				80 6.2			
NB03WWF<382				92 8.7			
NB03WWF<383				83 6.7			
NB03WWF<384				92 9.1			
NB03WWF<385				142 37.1			
NB03WWF<386				105 11.7			
NB03WWF<387				110 15.7			

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: Newtown Creek
Sample Date: 4/9/15
Processing Date: 4/16/15

Sampled By: BWL, JBS, CJR
Processed By: BWL, GMC, KRM, NSG

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03 WWFC388	WF	W		110 / 16.3	TW	0489	NA
NB03 WWFC389				98 / 10.9			
NB03 WWFC390				102 / 12.5		↓	
NB03 WWFC391				115 / 18.8		0490	
NB03 WWFC392				82 / 6.3			
NB03 WWFC393				92 / 10.2			
NB03 WWFC394				88 / 7.5			
NB03 WWFC395				112 / 17			
NB03 WWFC396				98 / 14.5			
NB03 WWFC397				102 / 11.2			
NB03 WWFC398				110 / 14.8			
NB03 WWFC399				105 / 12.5			
NB03 WWFC400	↓			98 / 10		↓	
NB03 WHAC401	HA			92 / 6.9		0491	
NB03 WHAC402	HA	↓		88 / 5.8	↓	↓	↓

Notes: All hakes are spotted hakes.

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN
Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: Cow Yard
Sample Date: 4/9/15
Processing Date: 4/10/15

Sampled By: BWL, JBS, CJR
Processed By: BWL, GMC, KRM, NSG

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03WHAC403	HA	W		75 3.5	TW	0491	NA
NB03WHAC404				75 3.4			
NB03WHAC405				92 6.7			
NB03WHAC406				80 3.9			
NB03WHAC407				90 5.6			
NB03WHAC408				82 5.0			
NB03WHAC409				70 2.7			
NB03WHAC410				70 2.9			
NB03WHAC411				80 3.8			
NB03WHAC412				75 3.7			
NB03WHAC413				72 3.1			
NB03WHAC414				72 3.1			
NB03WHAC415				75 3.7			
NB03WHAC416				78 3.8			
NB03WHAC417				88 5.8			

Notes: All hakes are spotted hakes.

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: Cold Spring
Sample Date: 4/9/15
Processing Date: 4/10/15

Sampled By: BWK, JBS, CJR
Processed By: BWK, CMC, KRM, NSC

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03WHAC418	HA	W		87 4.5	TW	0491	NA
NB03 WHAC419				70 2.7			
NB03 WHAC420				72 2.8			
NB03 WHAC421				78 3.7			
NB03 WHAC422				75 3.1			
NB03 WHAC423				72 3.6			
NB03 WHAC424				90 5.7			
NB03WHAC425				68 2.7			
NB03 WHAC426				90 5.7			
NB03 WHAC427				80 3.9			
NB03WHAC428				75 3.3			
NB03 WHAC429				88 5.9			
NB03 WHAC430				80 4.3			
NB03 WHAC431				70 3.0			
NB03WHAC432				90 5.9			

Notes: All hakes are spotted hakes.

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: Goat Island
Sample Date: 4/9/15
Processing Date: 4/10/15

Sampled By: BWH JBS CJR
Processed By: BWH, CMC, KAM, NSG

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03 WHAC433	HA	W		75 4.2	TW	0491	NA
NB03 WHAC434				72 3.0			
NB03 WHAC435				90 6.3			
NB03 WHAC436				72 3.1		0492	NA
NB03 WHAC437				75 3.1			
NB03 WHAC438				70 2.6			
NB03 WHAC439				75 3.3			
NB03 WHAC440				68 2.6			
NB03 WHAC441				72 2.9			
NB03 WHAC442				80 3.3			
NB03 WHAC443				82 4.1			
NB03 WHAC444				90 4.6			
NB03 WHAC445				82 3.9			
NB03 WHAC446				102 9.6			
NB03 WHAC447				71 3.1			

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: Control
Sample Date: 4/9/15
Processing Date: 4/14/15

Sampled By: BWH, JBS, CJR
Processed By: BWH, CMC, KRM, NSG

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03 WHAC448	HA	W		82 4.4	TW	0492	NA
NB03 WHAC449				78 3.7			
NB03 WHAC450				81 4.4			
NB03 WHAC451				86 4.8			
NB03 WHAC452				91 6.5			
NB03 WHAC453				108 10.6			
NB03 WHAC454				98 7.7			
NB03 WHAC455				95 6.8			
NB03 WHAC456				92 6.6			
NB03 WHAC457				78 3.9			
NB03 WHAC458				70 2.9			
NB03 WHAC459				80 3.7			
NB03 WHAC460				70 2.6			
NB03 WHAC461				72 3.3			
NB03 WHAC462				82 5.2			

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: Control
Sample Date: 4/9/15
Processing Date: 4/16/15

Sampled By: BWL, JBS, CJR
Processed By: BWL, CMC, KRM, NSG

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)					Gear Type	Photo #	Comments
NB03 WHA C463	HA	W		90 6.6					TW	0492	NA
NB03 WHA C464	↓	↓		71 3.0					↓	↓	↓
NB03 WHA C465				85 4.9							
NB03 WHA C466				82 4.2							
NB03 WHA C467				80 3.8							

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN
Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 2
Revision Date: March 2015
Sample Processing Form

Project: NB03 Fish Study
Sample Location: North
Sample Date: 4/9/15
Processing Date: 4/10/15

Sampled By: BWL, JBS, CJR
Processed By: BWL, GMC, KRM, NSG

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03 WHA N327	HA	W		192 6.8	TW	0493	NA
NB03 WHA N328				90 5.9			
NB03 WHA N329				86 4.7			
NB03 WHA N330				82 4.7			
NB03 WHA N331				100 8.6			
NB03 WHA N332				88 5.6			
NB03 WHA N333				75 3.4			
NB03 WSF N334	SF (KRM)			168 43.5			
NB03 WWF N335	WF			97 11.3			
NB03 WWF N336				82 7.1			
NB03 WWF N337				105 13.3			
NB03 WWF N338				90 9.7			
NB03 WWF N339				90 9.1			
NB03 WWF N340				100 13.6			
NB03 WWF N341				78 5.7			

Notes: All hake are spotted hake

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN
Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: NCFW
Sample Date: 9/9/15
Processing Date: 9/16/15

Sampled By: BWL, JBS, CJR
Processed By: BWL, GMC, KRM, NSG

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03WWFN342	WF	W		102 12.7	TW	0493	NA
NB03WWFN343				98 11.7			
NB03WWFN344				95 9.8			
NB03WWFN345				98 11.2			
NB03WWFN346				110 17.1			
NB03WWFN347				106 15.2			
NB03WWFN348				88 8.7			
NB03WWFN349				130 26.8			
NB03WWFN350				145 41.2			
NB03WWFN351				260 245		0494	
NB03WWFN352				225 133.1			
NB03WWFN353				200 102			
NB03WWFN354	WF			62 3.0			
NB03WWPN355	WP			155 51.7		0495	
NB03WWPN356	WP			145 38.6			

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN
Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Project: NB03 Fish Study
Sample Location: Upstream
Sample Date: 4/9/15
Processing Date: 4/16/15

Sampled By: BWL, JBS, CJR
Processed By: BWH, GMG, KAM, NSG

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03WWP N357	WP	W		158 51	TW	0495	NA
NB03 WWP N358				157 58			
NB03 WWP N359				145 8			
NB03 WWP N360				155 47.5			
NB03WWP N361				120 19			
NB03 WWP N362				116 15.1			
NB03 WWP N363				120 19.8			
NB03 WWP N364				102 12.7			
NB03WWP N365				140 33.8			
NB03WWP N366				151 50.8			
NB03WWP N367				152 27.6			
NB03WWP N368				158 49			
NB03WWP N369				158 47			
NB03WWP N370				110 14.8			
NB03WWP N371				112 15.3			

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: ~~NB03~~ NS6
Sample Date: 4/9/15
Processing Date: 4/10/15

Sampled By: BWL, JSB, CJR
Processed By: BWL, GMG, ~~KRM~~ NS6

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03 WWP N372	WP	W		128 22.6	TW	0495 0945 KRM	NA
NB03 WWP N373				85 5.4			
NB03 WWP N374				112 15.4			
NB03 WWP N375				140 34			
NB03 WWP N376				130 26.9			
NB03 WWP N377				140 40			
NB03 WWP N378				122 22.4			
NB03 WWP N379				110 15.5			
NB03 WWP N380				~~123~~ 14.1			
NB03 LWP N381	WP	L		255 280 Liver= 7.5	TW	0496 KRM 0946	NA KRM Female
NB03 LWP N382				228 200 Liver= 3.8			Male
NB03 LWP N383				235 180 Liver= 3.3			Female
NB03 LWP N384				210 150 Liver= 3.0			Male
NB03 LWP N385				175 75 Liver= 1.8			Female
NB03 LWP N386				185 90 Liver= KRM 1.8			Female

Notes: KRM ~~N387~~

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN
Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: ~~Hg54~~
Sample Date: 4/9/15
Processing Date: ~~4/8/10~~

Sampled By: BWL, JBS, CJR
Processed By: BWL, GMC, KM, NSG

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03 LWPN387	WP	L		198 115 Liver= 3.7	TW	0496 0446 KRM	NA Female KRM
NB03 LWPN388				190 110 Liver= 2.2			Male
NB03 LWPN389				180 80 Liver= 1.1			Male
NB03 LWPN390				165 60 Liver= 1.3			Juv
NB03 LWPN391				164 70 Liver= 1.7			Female
NB03 LWPN392				170 65 Liver= 1.4			Female
NB03 LWPN393				202 120 Liver= 3.0		0497 0447 KRM	Male
NB03 LWPN394				178 80 Liver= 0.7			Male
NB03LWPN395				160 60 Liver= 1.4			Male
NB03LWPN396				180 70 Liver= 1.7			Male
NB03 LWP N397				175 70 Liver= 1.6			Male
NB03 LWP N398				165 55 Liver= 1.2			Juv
NB03 LWPN399				166 62 Liver= 1.2			Male
NB03 LWP N400				172 60 Liver= 1.4			Female
NB03LWPN401				160 50 Liver= 0.9			Male

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: North
Sample Date: 4/9/15
Processing Date: 4/10/15

Sampled By: BWH, JBS, CJR
Processed By: BWH, GMC, KRM, NSG

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03 LWP N402	WP	L		168 60 Liver = 1.4	TW	0447 KRM 0447	Male
NB03 LWP N403	WP	L		165 65 Liver = 1.6	TW	0447 KRM 0447	Female

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 2
Revision Date: March 2015
Sample Processing Form

Project: NB03 Fish Study
Sample Location: South
Sample Date: 4/28/15
Processing Date: 4/29/15

Sampled By: BWL, CCB, RCB
Processed By: BWL

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03FSBS320	SB	F	1	978 9526 Fillet = 1,690	Rod/reel		L = 38.5" W = 21 lbs Female (gravid) 5320

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN
Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 2
Revision Date: March 2015
Sample Processing Form

Project: NB03 Fish Study
Sample Location: South
Sample Date: 4/30/15
Processing Date: 5/1/15

Sampled By: BWL, RCB, CCB
Processed By: BWL, RCB

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03FSBS321	SB	F	1	876 / 5676 Fillet = 2,220	Rod/reel	113-0923 / 113-0924	41bs 2oz, 34.5" female (gravid)
NB03FSBS322	SB	F	1	737 / 4706 Fillet = 1,120	Rod/reel	113-0925	29", 10lb 6oz male
NB03FSBS323	SB	F	1	787 / 4,706 Fillet = 1,260	Rod/reel	113-0926	31" 10lb 6oz
NB03FSBS324	SB	F	1	800 / 5443 Fillet = 1,375	Rod/reel	113-0927	31.5" 12lbs scar (line) toward caudal fin female
NB03FSBS325	SB	F	1	889 / 7852 Fillet = 1,480	Rod/reel 113-0929		35", 17lbs 5oz female
(BWL) WWW NB03FSBS326	WW	W	1	324 / 550	GN	113-0928	

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN
Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 2
Revision Date: March 2015
Sample Processing Form

Project: NB03 Fish Study
Sample Location: South
Sample Date: 5/5/15
Processing Date: 5/6/15

Sampled By: BWL, ECB, CCB
Processed By: BWL

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03F-SBS327	SB	F	1	820 / 4,706 Fillet=1,290	Angling	113-19341016 6 of 2	Female (gravid)

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN
Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 2
Revision Date: March 2015
Sample Processing Form

Project: NB03 Fish Study
Sample Location: South
Sample Date: 5/6/15
Processing Date: 5/6/15

Sampled By: BWL, CCB, RCB
Processed By: BWL

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03FSBS328	SB	F	1	770 / 4536 Fillet = 1,020	Angling	113-0940	10 lbs; Female
~~BWL~~							
NB03FSBS329	SB	F	1	750 / 2948 Fillet = 1,020	Angling	113-0941	6 lb 8 oz Female
						113-0942 to 0945	

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN
Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 2
Revision Date: March 2015
Sample Processing Form

Project: NB03 Fish Study
Sample Location: South
Sample Date: 5/6/15
Processing Date: 5/7/15

Sampled By: BuL, CCB, RCB
Processed By: BuL, CCB

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03FSBS330	SB	F	1	692 2920 Fillet = 1,170	Angling	113-0949	6lb 7oz Female
Notes:							

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 2
Revision Date: March 2015
Sample Processing Form

Project: NB03 Fish Study
Sample Location: South
Sample Date: 5/7/15
Processing Date: 5/7/15

Sampled By: BLL, CCB
Processed By: BLL

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03FSBS331	SB	F	1	638 2806 Fillet = 1,160	Angling	113-0950	6/16 30z Female
NB03FSB S332	SB	F	1	628 2098 Fillet = 530	Angling	113-0951	4/16 10oz male
NB03FSB S333	SB	F	1	787 4990 Fillet = 1,760	Angling	113-0952	31" 11/16 missing pectoral fin
NB03FSB S334	SB	F	1	815 6180 Fillet = 1,300	Angling		33.25" 13/16 10oz female

) immature female

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 2
Revision Date: March 2015
Sample Processing Form

Project: NB03 Fish Study
Sample Location: South
Sample Date: 5/8/15
Processing Date: 5/8/15

Sampled By: BWL, CCB, RCB
Processed By: BWL, CCB, RCB

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03FSBS335	SB	F	1	838 6577 Fillet = 2,105	Angling	113-0964	33" 14lb 8oz Female
NB03FSBS336	SB	F	1	667 3856 Fillet = 1,340	Angling	113-0965	816 8oz
						113-0966	Female ripe eggs
NB03FSBS337	SB	F	1	743 3657 Fillet = 1,172	Angling	113-0967	29.25" 816 1oz Male
NB03FSBS338	SB	F	1	707 3232 Fillet = 1,330	Angling		716 2oz Female

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 2
Revision Date: March 2015
Sample Processing Form

Project: NB03 Fish Study
Sample Location: South
Sample Date: 6/3/15
Processing Date: 6/3/15

Sampled By: BWL, JBS/GMC
Processed By: BWL

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03FBLS339	BL	F	1	420 / 575 Fillet = 245	GN	113-0986	NA sex immature
Notes:							

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 2
Revision Date: March 2015
Sample Processing Form

Project: NB03 Fish Study
Sample Location: ~~South~~
Sample Date: ~~6/3/15~~
Processing Date: ~~6/4/15~~

Sampled By: JBS, GMC
Processed By: BWL

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03WSFS340	SF	W	1	350 / 480	Angling	113-0987	
NB03WSFS341		W	1	365 / 478		113-0988	
NB03WSFS342		W	1	385 / 570		113-0989	
NB03WSFS343		W	1	340 / 390		113-0990	
NB03WSFS344		W	1	342 / 410		113-0991	
NB03WSFS345		W	1	308 / 220		113-0992	
NB03WSFS346		W	1	248 / 126		113-0993	
~~NB03WSFS347~~		W	1				BWL
NB03FAES347	AE	F	1	790 / 950	Fillet=250g	eel pot	113-0994

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN
Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 2
Revision Date: March 2015
Sample Processing Form

Project: NB03 Fish Study
Sample Location: Central
Sample Date: 6/2/15
Processing Date: 6/3/15

Sampled By: BWL, JBS, GMK
Processed By: BWL

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)		Gear Type	Photo #	Comments
NB03FBLC468	BL	F	1	362 / 460	Fillet = 200	Angling	113-0976	male
							113-0976-0978	
NB03FBLC469	BL	F	1	378 / 530	Fillet = 235	Angling	↓	female
NB03FBLC470	BL	F	1	368 / 420	Fillet = 184	Angling	113-0980	NA for sex immature
NB03FBLC471	BL	F	1	368 / 460	Fillet = 212	Angling	113-0981	female
NB03FBLC472	BL	F	1	342 / 370	Fillet = 170	Trotline	113-0982	female
NB03FBLC473	BL	F	1	351 / 376	Fillet = 175	Trotline	113-0983	female

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN
Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 2
Revision Date: March 2015
Sample Processing Form

Project: NB03 Fish Study
Sample Location: Central
Sample Date: 6/3/15
Processing Date: 6/3/15

Sampled By: BWJ, JBS, GMC
Processed By: BWJ

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03FBLC474	BL	F	1	309 / 275 Fillet = 116	Angling	113-0984	immature
NB03FBLC475	BL	F	1	415 / 610 Fillet = 245	Angling	113-0985	immature
Notes:							

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN
Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 2
Revision Date: March 2015
Sample Processing Form

Project: NB03 Fish Study
Sample Location: South
Sample Date: 6/4/15
Processing Date: 6/5/15

Sampled By: Bull, JBS, GMC
Processed By: Bull, JBS, GMC

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03WSFS348	SF	W	1	345 380 Fillet Bull	Angling	113-1000	
NB03FBLS349	BL	F	1	377 478 Fillet=210	TROLL	113-1004	

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 2
Revision Date: March 2015
Sample Processing Form

Project: NB03 Fish Study
Sample Location: Control
Sample Date: 6/4/15
Processing Date: 6/5/15

Sampled By: BWC, JBS, GMC
Processed By:

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03FBLC476	BL	F	1	358 408 Fillet= 194	Angling TROLL	113-1005	NA
NB03FBLC477	BL	F	1	335 390 Fillet= 176	Angling	113-1006	~~NA~~ female
NB03FBLC478	BL	F	1	452 490 Fillet= 336	Angling	113-1007	

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN
Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 2
Revision Date: March 2015
Sample Processing Form

Project: NB03 Fish Study
Sample Location: Aberdeen
Sample Date: 6/14/15
Processing Date: 6/15/15

Sampled By: BWL, JBS, GMC
Processed By: " " "

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03FBL N404	BL	F	1	465 1210 Fillet=340	Angling	113-1001	immature
NB03FBL N405	BL	F	1	470 860 Fillet=375	Angling	113-1002	immature
NB03FBLN406	BL	F	1	387 570 Fillet=270	"	113-1003	immature

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN
Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 2
Revision Date: March 2015
Sample Processing Form

Project: NB03 Fish Study
Sample Location: Central
Sample Date: 6/5/15
Processing Date: 6/5/15

Sampled By: Bill, JBS, GMC
Processed By: " " "

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03FBL C479 ~~AL~~	BL	F	1	360 490 Fillet = 224	Angling	113-1008	
NB03FBL C480	BL	F	1	310 264 Fillet = 112	"	113-1009	
NB03FBL C481	BL	F	1	379 454 Fillet = 184	"	113-1010	
					"	~~113-~~	
NB03FBL C482	BL	F	1	357 402 Fillet = 170	"	113-1011	

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN
Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: South
Sample Date: 6/8/15
Processing Date: 6/8/15

Sampled By: JBS, CJR
Processed By: JBS

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)					Gear Type	Photo #	Comments
NB03WAES350	AE	W	1	610 / 374					Eel Pot	113-1012	

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN
Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 2
Revision Date: March 2015
Sample Processing Form

Project: NB03 Fish Study
Sample Location: Central
Sample Date: 6/8/15
Processing Date: 6/8/15

Sampled By: JBS, CJR
Processed By: JBS

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03FBLC483	BL	F	1	331 326 Fillet = 146	Angling	← 113-1013	
NB03FBLC484	BL	F	1	342 362 Fillet = 152	Angling	113-1014	
NB03FBLC485	BL	F	1	351 394 Fillet = 164	Angling	113-1015	

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN
Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 2
Revision Date: March 2015
Sample Processing Form

Project: NB03 Fish Study
Sample Location: South
Sample Date: 7/27/15
Processing Date: 7/28/15

Sampled By: BLR, JBS, NSG
Processed By: BWL

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03FSFS351	SF	F	1	398 / 630 Fillet = 290g	Angling	113-1016	
NB03FSFS352	SF	F	1	380 / 522 Fillet = 220g	Angling	113-1017	* short fish, needs to be 381mm = 15 inch

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 2
Revision Date: March 2015
Sample Processing Form

Project: NB03 Fish Study
Sample Location: North
Sample Date: 7/28/15
Processing Date: 7/28/15

Sampled By: BWL, JBS, NSG
Processed By: BWL

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03FSFN407	SF	F	1	382 / 550	Fillet=210g	Angling	113-1018	
NB03FSFN408	SF	F	1	408 / 660	Fillet=225g	↓	113-1019	small blue crab in stomach
NB03FSFN409	SF	F	1	460 / 1000	Fillet=380g		113-1020	
NB03FSFN410	SF	F	1	475 / 1150	Fillet=480g		113-1021	

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN
Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 2
Revision Date: March 2015
Sample Processing Form

Project: NB03 Fish Study
Sample Location: South
Sample Date: 7/28/15
Processing Date: 7/29/15

Sampled By: BWL, JBS, NSG
Processed By: BWL

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03FSFS353	SF	F	1	386 490 Fillet = 210g	Angling	113-1023	
NB03FSFS354	SF	F	1	405 670 Fillet = 255g		113-1024	
~~NB03FSFS355~~	~~SF~~	~~F~~	~~1~~	BWL			
~~NB03FSFS356~~	~~SF~~	~~F~~	~~1~~	BWL			

Note: 1 Keeper from yesterday was <15inch. Total Length 370mm. Fish not processed and disgarded

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN
Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: North
Sample Date: 7/28/15
Processing Date: 7/29/15

Sampled By: BLW, JBS, NSG
Processed By: BLW

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03FSF N411	SF	F	1	410 665	Fillet=240g	Angling	113-1025
Notes:							

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 2
Revision Date: March 2015
Sample Processing Form

Project: NB03 Fish Study
Sample Location: Central
Sample Date: 7/29/15
Processing Date: 7/30/15

Sampled By: BWL, JBS, NSG
Processed By: BWL, JBS, NSG

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03FSFC486	SF	F	1	426 / 730 Fillet = 340 g	Angling	113-1026	
C487	SF	F	1	412 / 750 Fillet → 230 g		113-1027	
C488				512 / 1750 Fillet → 735 g		113-1028	3 lbs 14 oz
C489				397 / 570 Fillet → 220 g		113-1029	
C490				391 / 624 Fillet → 292		113-1030	
BWL C491							BWL

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

760 + 735 = 1495

Sample Processing Form

Project: NB03 Fish Study
Sample Location: SOUTH
Sample Date: 07/29/2015
Processing Date: 07/30/2015

Sampled By: BWL, JBS, NSG
Processed By: BWL, JBS, NSG

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03 FSF S355	SF	F	1	405 640 Fillet → 270 g	ANGLING	113-1031	
Notes:							

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 2
Revision Date: March 2015
Sample Processing Form

Project: NB03 Fish Study
Sample Location: SOUTH
Sample Date: 07/30/2015
Processing Date: 07/30/2015

Sampled By: BWL, JBS, NSG
Processed By: BWL, JBS, NSG

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03 FSF S356	SF	F	1	392 610 Fillet → 310g	ANGLING	113-1032	
						~~113-1034~~ NG	
FSF S357	SF	F	1	400 610 Fillet → 250g	ANGLING	113-1033	

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 2
Revision Date: March 2015
Sample Processing Form

Project: NB03 Fish Study
Sample Location: NORTH
Sample Date: 07/30/2015
Processing Date: 07/30/2015

Sampled By: BWL, JBS, NSG
Processed By: BWL, JBS, NSG

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)					Gear Type	Photo #	Comments
NB03 FSF N412	SF	F	1	389	541		Fillet → 248g		ANGLING	113-1034	

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 2
Revision Date: March 2015
Sample Processing Form

Project: NB03, Fish Study
Sample Location: North
Sample Date: 07/29/2015
Processing Date: 07/30/2015

Sampled By: ~~7/29/15~~ MY BWL, JBS, NSG
Processed By: ~~7/30/15~~ MD BWL, JBS, NSG

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03WAEN413	AE	W	1	405 / 110	Eel Pot	113-1035	
NB03WAEN414	AE	W	1	435 / 153		113-1036	
N415		W	1	321 / 57		113-1037	
N416		W	1	342 / 69		113-1038	
N417		W	1	249 / 28		113-1039	
N418		W	1	326 / 54		113-1040	
N419		W	1	266 / 35		113-1041	
N420		W	1	300 / 47		113-1042	
N421		W	1	341 / 69		113-1043	
N422		W	1	376 / 89		113-1044	
N423		W	1	346 / 81		113-1045	
N424		W	1	428 / 128		113-1046	
N425		W	1	382 / 98		113-1047	
N426		W	1	403 / 106		113-1048	

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 2
Revision Date: March 2015
Sample Processing Form

Project: NB03 Fish Study
Sample Location: NORTH
Sample Date: 07/29/2015
Processing Date: 07/30/2015

Sampled By: BWL, JBS, NSG
Processed By: BWL, JBS, NSG

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03 FAE N427	AE	F	1	580 455 fillet-176	Eel Pot	113-1049	
N428				545 309 fillet-108		113-1050	
N429				575 490 fillet-200		113-1051	
N430				562 395 fillet-140		113-1052	
N431				620 404 fillet-169		113-1053	
N432				535 310 fillet-120		113-1054	
N433				595 416 fillet-202		113-1055	
N434				582 400 fillet-170		113-1056	
N435				560 321 fillet-152		113-1057	
N436				556 297 fillet-150		113-1058	

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN
Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 2
Revision Date: March 2015
Sample Processing Form

Project: NB03 Fish Study
Sample Location: North
Sample Date: 07/29/2015
Processing Date: 07/30/2015

Sampled By: BWL, JBS, NSG
Processed By: BWL, JBS, NSG

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03 WAE N437	AE	W	1	442 / 152	EEL POT	113-1059	
N438	↓	↓	↓	443 / 181	↓	113-1060	
N439				504 / 244		113-1061	
N440				513 / 224		113-1062	
N441				444 / 256		113-1063	

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 2
Revision Date: March 2015
Sample Processing Form

Project: NB03 Fish Study
Sample Location: SOUTH
Sample Date: 07/30/2015
Processing Date: 07/30/2015

Sampled By: BWL, JBS, NSG
Processed By: BWL, JBS, NSG

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)					Gear Type	Photo #	Comments
NB03 WAE 5358	AE	W	1	388 94					EEL POT	113-1064	

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: CENTRAL
Sample Date: 07/31/2015
Processing Date: 07/31/2015

Sampled By: BWL, JBS, NSG
Processed By: BWL, JBS, NSG

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03FSFC491	SF	F	1	572 / 1930 Fillet → 770g	ANGLING	113-1065	4 lbs 4oz + photos 113-1066 113-1067
NB03WAEC492	AE	W	1	302 / 95	EEL POT	113-1069	

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 2
Revision Date: March 2015
Sample Processing Form

Project: NB03 Fish Study
Sample Location: SOUTH
Sample Date: 07/31/2015
Processing Date: 07/31/2015

Sampled By: BWL, JBS, NSG
Processed By: BWL, JBS, NSG

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)					Gear Type	Photo #	Comments
NB03 FSFS359	SF	F	1	463	1080	fillet → 460g			ANGLING	113-1068	
NB03 WAES360	AE	W	1	250	30				EEL POT	113-1070	
NB03 FAES361	AE	F	1	520	390	fillet → 120 g			EEL POT	113-1071	tail shorter, deformed slightly
NB03 FAES362	AE	F	1	475	230	fillet → 85 g			EEL POT	113-1072	

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN
Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

620 + 460 =

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 2
Revision Date: March 2015
Sample Processing Form

Project: NB03 Fish Study
Sample Location: Central
Sample Date: 8/3/15
Processing Date: 8/4/15

Sampled By: Bull, JBJ, CSR
Processed By: _____

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03WSFC493	SF	W	1	390 / 468	Angling	114-1073	~~last knife from~~ Bull FB10
NB03WAEC494	AE	W	1	514 / 207	eel pot	114-1074	
~~NB03W~~ Bill							
NB03FAEC495	AE	F	1	564 / 384	Fillet = 200g eel pot	114-1075	*last knife for FB010 used for this fish.

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN
Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 2
Revision Date: March 2015
Sample Processing Form

Project: NB03 Fish Study
Sample Location: B13/15 South
Sample Date: 8/13/15
Processing Date: 8/14/15

Sampled By: BW, JBS, CJR
Processed By: BW, JBS, CJR

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03WAES363	AE	W	1	466 / 135	eel pot	114-1076	

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver

Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 2
Revision Date: March 2015
Sample Processing Form

Project: NB03 Fish Study
Sample Location: South
Sample Date: 8/4/15
Processing Date: 8/4/15

Sampled By: BWJ, JBS, CJR
Processed By: " " "

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)					Gear Type	Photo #	Comments
NB03FAES364	AE	F	1	610	485		Fillet (g) = 204		eel pot	114-1077	first knife from FB011

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN
Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 2
Revision Date: March 2015
Sample Processing Form

Project: NB03 Fish Study
Sample Location: Central
Sample Date: 8/14/15
Processing Date: 8/14/15

Sampled By: BW, JBS, KTR
Processed By: " " "

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)					Gear Type	Photo #	Comments
NB03WAEC496	AE	W	1	459	196				eel pot	114-1078	
NB03WAEC497	AE	W	1	355	88				eel pot	114-1080	
NB03WAEC498	AE	W	1	334	80				"	114-1081	
NB03WAEC499	AE	W	1	382	116				"	114-1082	
NB03WAEC500	AE	W	1	337	79				"	114-1083	
NB03WAEC501	AE	W	1	342	76				"	114-1084	
NB03FAEC502	AE	F	1	552	399	Fillet = 196			eel pot	114-1085	
NB03FAEC503	AE	F	1	570	400	Fillet = 150			eel pot	114-1086	
NB03FAEC504	AE	F	1	540	320	Fillet = 138			"	114-1087	
NB03FAEC505	AE	F	1	520	290	Fillet = 90			"	114-1088	
NB03FAEC506	AE	F	1	535	292	Fillet = 136			"	114-1089	
NB03FAEC507	AE	F	1	470	208	Fillet = 86			"	114-1090	

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN
Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 2
Revision Date: March 2015
Sample Processing Form

Project: NB03 Fish Study
Sample Location: Central
Sample Date: 8/6/15
Processing Date: 8/5/15

Sampled By: BM, JBS, CJR
Processed By: " " "

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03FAE C508	AE	F	1	700 800 fillet= 288	eel pot	114-1091	
NB03FAE C509	"	F	1	590 425 fillet= 130	"	114-1092	
NB03WAE C510		W	1	515 270		114-1093	
NB03WAE C511		W	1	458 190		114-1094	
NB03WAE C512		W	1	445 170		114-1095	
NB03WAE C513		W	1	490 250		114-1096	
NB03WAE C514		W	1	505 240		114-1097	
NB03WAE C515		W	1	390 115		114-1098	
NB03WAE C516		W	1	382 100		114-1099	

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN
Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 2
Revision Date: March 2015
Sample Processing Form

Project: NB03 Fish Study
Sample Location: South
Sample Date: 8/5/15
Processing Date: 8/5/15

Sampled By: BWL, JBS, CJR
Processed By: " " "

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)	Gear Type	Photo #	Comments
NB03FAE5365	AE	F	1	620 / 500 fillet = 220	eel pot	114-1100-1104	
NB03WAE5366	↓	W	1	550 / 350	↓	114-1105	
NB03WAE5367		W	1	480 / 230		114-1106	
NB03WAE5368		W	1	345 / 80		114-1107	
NB03WAE5369		W	1	385 / 120		114-1108	
NB03WAE5370		W	1	502 / 210		114-1109	

Notes:

g = gram
mm = millimeters

Sample Type: W=whole body, F=fillet, L=liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN
Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

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Attachment 4

DAILY SAFETY BRIEFING

DATE: 3/14/16 TOWN: Brz. NJ LOCATION: E/12. Marina	**CONTACTS:** **Normandeau Associates:** B. Lees **CLIENT:** Tierra **SUBCONTRACTORS(S):**

Nearest Hospital Location: Trinitas

End of day check-in: marina

JOB OVERVIEW

- o Protective clothing
- o Insect protection
- o Sun protection
- o Slip, Trip, Fall
- o Cold/Heat Stress indicators
- o Severe weather
- o Hunting Season
- o End of day check-in

Other: _____

CREW SIGN-IN:

Bryan Lees

Brian Ghiska

Jamie Gilbert

Keith Mannara

NORMANDEAU
environmental consultants

Attachment 4

DAILY SAFETY BRIEFING

DATE: 3/15/16	**CONTACTS:**
TOWN: Eliz. NS	**Normandeau Associates:** B. Lees
LOCATION: Eliz Marina	**CLIENT:** Tierra - Mikucki
	SUBCONTRACTORS(S): LB

Nearest Hospital Location: Trinitas

End of day check-in: Marina

JOB OVERVIEW

- o Protective clothing
- o Insect protection
- o Sun protection
- o Slip, Trip, Fall
- o Cold/Heat Stress indicators
- o Severe weather
- o Hunting Season
- o End of day check-in

Other: _____

CREW SIGN-IN:

Bryan [illegible]
[illegible]
Keith Maurice
Amy Acamian
Dayna Schmidt

Rev 1

NORMANDEAU
environmental consultants

Attachment 4

DAILY SAFETY BRIEFING

DATE: 3/16/16	**CONTACTS:**
TOWN: Eliz	**Normandeau Associates:** B. Lee
LOCATION: Eliz. Marina	**CLIENT:** —
	SUBCONTRACTORS(S): —

Nearest Hospital Location: Frisbie

End of day check-in: Marina

JOB OVERVIEW

- o Protective clothing
- o Insect protection
- o Sun protection
- o Slip, Trip, Fall
- o Cold/Heat Stress indicators
- o Severe weather
- o Hunting Season
- o End of day check-in

Other: _____

CREW SIGN-IN:

B. Lee

Jayne Schadt

Rev 1

NORMANDEAU
environmental consultants

Attachment 4

DAILY SAFETY BRIEFING

DATE: 3/17/16	**CONTACTS:**
TOWN: Ellis	**Normandeau Associates:** B. Lees
LOCATION: Ellis Marina	**CLIENT:** Tierra
	SUBCONTRACTORS(S):

Nearest Hospital Location: Trinitas

End of day check-in: Marina

JOB OVERVIEW

- o Protective clothing
- o Insect protection
- o Sun protection
- o Slip, Trip, Fall
- o Cold/Heat Stress indicators
- o Severe weather
- o Hunting Season
- o End of day check-in

Other: _____

CREW SIGN-IN:

Bill
Brian
Amy Atamian
Kathleen Maurice
Ryan

NORMANDEAU
environmental consultants

Attachment 4

DAILY SAFETY BRIEFING

DATE: 3/18/16	**CONTACTS:**
TOWN: Blair	**Normandeau Associates:** B. Lee S
LOCATION: Blair Marina	**CLIENT:**
	SUBCONTRACTORS(S):

Nearest Hospital Location: Littleton

End of day check-in: Marina

JOB OVERVIEW

- o Protective clothing
- o Insect protection
- o Sun protection
- o Slip, Trip, Fall
- o Cold/Heat Stress indicators
- o Severe weather
- o Hunting Season
- o End of day check-in

Other: _____

CREW SIGN-IN:

Rhys Jones

Joseph Kilduff

Kelly Maurice

Rev 1

NORMANDEAU
environmental consultants

Attachment 4

DAILY SAFETY BRIEFING

DATE: 3/22/16 TOWN: Elizabeth, NJ LOCATION: Newark Bay	**CONTACTS:** **Normandeau Associates:** **CLIENT:** **SUBCONTRACTORS(S):**

Nearest Hospital Location: _____

End of day check-in: _____

JOB OVERVIEW

- ☒ Protective clothing
- ○ Insect protection
- ☒ Sun protection
- ☒ Slip, Trip, Fall
- ☒ Cold/Heat Stress indicators
- ☒ Severe weather
- ○ Hunting Season
- ☒ End of day check-in

Other: _____

CREW SIGN-IN:

Sam Goldstein
Keith Brauner
Amy Attanasio
Brian Smith
Ben Gross

Rev 1

NORMANDEAU
environmental consultants

Attachment 4

DAILY SAFETY BRIEFING

DATE: 3/23/16 TOWN: Elizabeth, NJ LOCATION: Newark Bay	**CONTACTS:** **Normandeau Associates:** **CLIENT:** **SUBCONTRACTORS(S):**

Nearest Hospital Location: _____

End of day check-in: _____

JOB OVERVIEW

- ✓ Protective clothing
- o Insect protection
- ✓ Sun protection
- ✓ Slip, Trip, Fall
- ✓ Cold/Heat Stress indicators
- o Severe weather
- o Hunting Season
- ✓ End of day check-in

Other: _____

CREW SIGN-IN:

Jenna Gabriel
Keith Maurice
Ben Ma
Amy Attanian
Chris DeJarlais

Rev 1

NORMANDEAU
environmental consultants

Attachment 4

DAILY SAFETY BRIEFING

DATE: 3/24/16 TOWN: Elizabeth, NJ LOCATION: Newark Bay	**CONTACTS:** **Normandeau Associates:** **CLIENT:** **SUBCONTRACTORS(S):**

Nearest Hospital Location: _____

End of day check-in: _____

JOB OVERVIEW

- ✓ Protective clothing
- o Insect protection
- ✓ Sun protection
- ✓ Slip, Trip, Fall
- ✓ Cold/Heat Stress indicators
- ✓ Severe weather
- o Hunting Season
- ✓ End of day check-in

Other: _____

CREW SIGN-IN:

Jayne Schaff

Keith Maenza

Amy Adamian

Brian Thurber

Rev 1

Location Data Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: BWL, JBS, KRM

Deployment Date & Time	Retrieval Date & Time	Sampling Zone & Location	Sampling Method	Water Depth (feet)	GPS Coordinates EASTING (X) US ft	GPS Coordinates NORTHING (Y) US ft	Notes
3/14 10:13	— sink	South	1.5", 300ft GN	50	587688.69	665606.19	S-GN1-3/14-st
3/14 ~~1035~~	3/15 845	"	~~1.5", 150ft GN~~	~~27-33ft~~	587988.25	665479.69	S-GN1-3/14-ed
3/14 1035	— sink	South	1.5", 150ft GN	27-33	587482.08	665812.47	S-GN2
—	3/15 9:10	"		—	587561.62	665739.53	S-GN2
3/14 1100	— sink	Central	1.5", 300ft GN	28	593123.16	668117.30	C-GN1
—	3/15 11:30	"		—	593248.19	668416.85	C-GN1
3/14 1120	— sink	Central	1.5", 150ft GN	28-34	594026.37	670368.34	C-GN2
—	3/15 1025	"		—	594110.37	670516.34	C-GN2
3/14 1150	— sink	North	1.5", 60ft GN	22	601281.86	686860.32	N-GN1
—	3/15 950	"		—	601356.73	686903.35	N-GN1
3/14 12:13	—	North	Trawl	36	601523.05	686600.34	N-TW1
—	3/14 1224	"	"	—	600003.46	685392.00	N-TW1
3/14 1311	—	North	TW	35	600369.57	685494.78	N-TW2
—	3/14 1319	"	"	—	600940.63	686066.75	N-TW2
3/14 1356		North	TW	38	598307.73	682972.17	N-TW3
—	3/14 1406	"	"	—	599298.73	684485.03	N-TW3
3/14 1433		North	TW	38	599711.38	685106.71	N-TW4
—	3/14 1443	"	"	—	601446.51	686460.69	N-TW4

Notes:

River - Central N = 3
~~River - South N = 1~~
River - North N = 1

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 1
Revision Date: September 2014
Location Data Form

Location Data Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: BWL, JBS, KRM

Deployment Date & Time	Retrieval Date & Time	Sampling Zone & Location	Sampling Method	Water Depth (feet)	GPS Coordinates EASTING (X)	GPS Coordinates NORTHING (Y)	Notes
3/15/16 855	sink	South	300', 1.5" GN	48	588170.13	665311.59	S-GN1-set
—	3/16/15 815	"		48	587845.32	665605.54	" ed
3/15/16 940	sink	North	150', 1.5" GN	15	590323.18	676582.01	N-GN1-set
—	3/16/15 1320	"		15	596244.15	676478.08	N-GN1-ed
3/15/16 1115	3 sink	Central	150', 1.5", GN	28	594027.83	670354.02	C-GN1
—	3/16/15 945	"	—	—	594085.04	670259.90	"
3/15/16 1210	— sink	Central	300', 1.5", GN	38	593585.38	669383.29	C-GN2
—	3/16/15 1020	"		—	593652.76	669543.91	"
3/15/16 1405	-sink	Central	300', 1.5", GN	24	591575.20	664767.84	C-GN3
—	3/16/15 11:05	"		—	591666.95	664997.25	"
3/15/16 1415	- sink	North	60', 1.5", GN	20	595596.78	675038.99	N-GN2
—	3/16/15 1300	"		—	595580.56	674961.35	"

Notes: sink = sinking GN set

p-chem @ 12:20 GGN2 subsurface
temp (°C) 7.5 DO ~~21.3~~ 11.9
pH NA conductivity 21,300

p-chem @ 1425 NGN2 subsurface
temp 7.6 DO 11.8
pH 7.2 cond. 27,800 µS/cm

Location Data Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: BWL, JBS, KRM

Deployment Date & Time	Retrieval Date & Time	Sampling Zone & Location	Sampling Method	Water Depth (feet)	GPS Coordinates EASTING (X)	GPS Coordinates NORTHING (Y)	Notes
3/15/16 1441	—	North	TW	40	~~595580.56~~ 600174.12	~~674961.35~~ 686545.77	N-TW1-3/15-st
—	3/15/16 1451	"	"	—	600184.50	685232.64	N-TW1-3/15-rd
3/15/16 1507	—	"	"	38	600295.86	685435.50	N-TW2-3/15-st
—	3/15/16 1517	"	"	38	599408.90	684711.01	"
3/15/16 1537	—	"	"	35	599140.41	684343.58	N-TW3
—	3/15/16 1548	"	"	"	600940.65	685643.24	"

Notes: p-chem @ N-TW1 @ 1435, subsurface
temp 8.1 pH 7.2
DO 11.6 Cond 24,760

Location Data Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: BWL, JBS, KRM

Deployment Date & Time	Retrieval Date & Time	Sampling Zone & Location	Sampling Method	Water Depth (feet)	GPS Coordinates EASTING (X)	GPS Coordinates NORTHING (Y)	Notes
3/16/16 930	— sink	Central	GN, 300', 1.5"	30-45	594083.74	670745.57	C-GN1-3/16-set
—	3/17/16 ~~1330~~ 1120	"	"	—	594130.76	671056.06	C-GN1
3/16/16 1300	— sink	Central	150', 1.5", GN	32-38	593884.22	670049.28	C-GN2
—	3/17/16 850	"	"	—	593911.90	670186.60	C-GN2
3/16/16 1045	— sink	Central	300', 1.5" GN	38	59~~3391.42~~	67~~0281.44~~ 669013.44	C-GN3
—	3/17/16 ~~945~~	"	"	—	593394 NA	NA	C-GN3
3/16/16 1245	— sink	Central	300', 1.5" GN	30	594929.02	673013.50	C-GN4
3 —	3/17/16 ~~1330~~ 1420	"	"	—	594938.11	673192.92	"
3/16/16 1351	—	North	TW	12	597574.34	677626.15	N-TW1
—	3/16/16 1357	"	"	"	597228.38	677210.79	N-TW1 hung up
3/16/16 1555	— sink	Central	GN, 150', 1.5"	55	593174.76	668680.09	C-GN5
—	3/17/16 8:15	"	"	—	593260.19	668820.99	C-GN5
3/16/16 1605	sink	Central	60', 1.5", GN	50	593936.94	670399.17	C-GN6
—	3/17/16 ~~1009~~	"	"	—	593991.22	670500.97	C-GN6
3/16/16 1617	—	North	TW	40	596143.85	676592.57	N-TW2
—	3/16/16 1627	"	"	—	595411.22	675712.55	N-TW2
3/16/16 1651		North	TW	37	600793.27	685954.98	N-TW3
—	3/16/16 1701	"	"		599056.15	684550.28	N-TW3

Notes: C-GN3 WQ @ 1230, subsurface
temp 8.3 DO 10.5
pH 7.3 cond 27,000 µS/cm

(3/15) N-GN1 WQ @ 1330 on 3/16, subsurface
temp 8.5 DO 14.8
pH 7.5 cond. 24,700

Location Data Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: BWL, SBS, KRM

Deployment Date & Time	Retrieval Date & Time	Sampling Zone & Location	Sampling Method	Water Depth (feet)	GPS Coordinates		Notes
					EASTING (X)	NORTHING (Y)	
3/17/16 920	— sink	Central	GN, 300', 1.5"	30-40	593455.08	669168.13	C-GN1-3/17
—	3/18/16 835	"	"	—	593615.62	669347.47	C-GN1-3/17
3/17/16 1015	— sink	Central	GN, 60', 1.5"	30-40	594010.94	670246.62	C-GN2
—	3/18/16 915			—	594016.10	670300.26	C-GN2
3/17/16 1435	— sink	Central	GN, 150', 1.5"	20	594912.23	672891.72	C-GN3
—	3/18/16 935	"		—	594954.51	673001.47	C-GN3
3/18/16 108	—	North	TRAWL-9'	10-20	595610.55	675076.79	N-TW1-3/18
	3/18/16 1013				596559.87	677040.75	"
3/18/16 1028	—	North	Trawl-9'	30-35	598887.43	684119.13	N-TW2-3/18-S4
—	3/18/16 1039	"	"		601013.03	685992.13	N-TW2

Notes: GN1 @ 900 3/17/16: subsurface temp 8.2°C pH 7.5 DO 10.5 mg/L cond 28,500 uS/cm

Location Data Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: JBS, KRM, BJA

Deployment Date & Time	Retrieval Date & Time	Sampling Zone & Location	Sampling Method	Water Depth (feet)	GPS Coordinates		Notes
					EASTING (X)	NORTHING (Y)	
3/22/16 0918		N	GN1 300 Sink	15-25	595745.89	675224.79	n-gn1-3-22-st
	3/23/16 @ 0815				595598.77	674906.90	n-gn1-3-22-ed
3/22/16 0932		N	GN2 150 Sink	15-30	596034.31	675863.67	n-gn2-3-22-st
	3/23/16 @ 0845				595840.99	675619.63	n-gn2-3-22-ed
3/22/16 0944		N	GN3 300 Sink	30	596281.54	676448.53	n-gn3-3-22-st
	3/23/16 @ 0910				596090.06	676182.98	n-gn3-3-22-ed
3/22/16 0955		N	GN4 150 Sink	15-30	596604.91	676958.35	n-gn4-3-22-st
	3/23/16 @ 0940				596474.57	676820.69	n-gn4-3-22-ed
3/22/16 1010	@1020	N	TW1	30-40	598185.04 598887.78	680768.99 683137.73	n-tw1-3-22-st n-tw1-3-22-ed
3/22/16 1046	@1056	N	TW2	30-40	598185.09 599914.74	683184.54 685107.24	n-tw2-3-22-st n-tw2-3-22-ed
3/22/16 1118	@1132	N	TW3	30-40	598512.57 601319.17	683893.24 686134.25	n-tw3-3-22-st n-tw3-3-22-ed
3/22/16 1151	@1205	N	TW4	20-30	598536.20 600972.03	683587.79 685557.66	n-tw4-3-22-st n-tw4-3-22-ed
3/22/16 1327	@1337	N	TW5	30-40	595268.06 596359.83	684793.56 677084.48	n-tw5-3-22-st n-tw5-3-22-ed
3/22/16 1347	@1359	N	TW6	30-40	598100.04 598170.76	680531.24 682779.40	n-tw6-3-22-st n-tw6-3-22-ed
3/22/16 1410	@1423	N	TW7	30-40	598229.10 600952.73	683619.48 686065.17	n-tw7-3-22-st n-tw7-3-22-ed
3/22/16 1441	@1455	N	TW8 3M	30-40	598691.03 601037.17	683178.94 686140.37	n-tw8-3-22-st n-tw8-3-22-ed
3/22/16 1522	@1534	N	TW 8 9	30-40	598865.10 601221.93	684267.46 686343.79	n-tw9-3-22-st n-tw9-3-22-ed

Notes:

Location Data Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: JBS, KRM, BJA

Deployment Date & Time	Retrieval Date & Time	Sampling Zone & Location	Sampling Method	Water Depth (feet)	GPS Coordinates EASTING (X)	GPS Coordinates NORTHING (Y)	Notes
3/23/16 @1000		N	GN 1 300ft sink	20-35	596413.58	676597.05	n-gn1-3-23-st
	3/24/16 @0825				596196.86	676384.93	n-gn1-3-23-ed
3/23/16 @1113		N	TW1	30-40	598403.19	683732.80	n-tw1-3-23-st
	3/23/16 @1128				600458.53	685581.76	n-tw1-3-23-ed
3/23/16 @1156					598797.05	684115.62	n-tw2-3-23-st
	3/23/16 @1210	N	TW2	30-40	601104.80	686262.03	n-tw2-3-23-ed
3/23/16 @1236					598984.21	684325.14	n-tw3-3-23-st
	3/23/16 @1252	N	TW3	30-40	601078.11	686193.60	n-tw3-3-23-ed
3/23/16 @1325					599017.04	684332.37	n-tw4-3-23-st
	3/23/16 @1340	N	TW4	30-40	601211.49	686262.41	n-tw4-3-23-ed
3/23/16 @1414		N	TW5	30-40	599383.45	684708.61	n-tw5-3-23-st
	3/23/16 @1426				601190.73	686320.11	n-tw5-3-23-ed
3/23/16 @1449		N	TW6	30-40	599258.30	684573.87	n-tw6-3-23-st
	3/23/16 @1503	~~N~~			601347.72	686531.96	n-tw6-3-23-ed
3/23/16 @1523		N	TW7	30-40	599378.90	684757.40	n-tw7-3-23-st
	3/23/16 @1535				601293.64	686424.79	n-tw7-3-23-ed
3/23/16 @1600		N	GN2	25-35	596065.56	676091.83	n-gn2-3-23-st
	3/24/16 @0813		60' sink		595973.08	676033.37	n-gn2-3-23-ed

Notes:

phem @ N-TW4-3-23-ed @1340 Hrs Temp: 8.3 cond: 25760

DO: 10.2 pH: 7.1

Location Data Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: JBS, BJA, KRM

Deployment Date & Time	Retrieval Date & Time	Sampling Zone & Location	Sampling Method	Water Depth (feet)	GPS Coordinates		Notes
					EASTING (X)	NORTHING (Y)	
3/24/16 @ 0850		N	TW 1	30-40	601296.37	686179.10	n-tw1-3-24-st
	3/24/16 @ 0902				598969.73	684412.27	n-tw1-3-24-ed
3/24/16 @ 0916		N	TW 2	30-40	601386.51	686408.90	n-tw2-3-24-st
	3/24/16 @ 0933				598878.36	684312.11	n-tw2-3-24-ed
3/24/16 @ 0954		N	TW3	30-40	598803.04	684175.32	n-tw3-3-24-st
	3/24/16 @ 1009				601367.98	686549.62	n-tw3-3-24-ed
3/24/16 @ 1028		N	TW4	30-40	599623.04	685052.39	n-tw4-3-24-st
	3/24/16 @ 1038				601404.51	686514.96	n-tw4-3-24-ed
3/24/16 @ 1056		N	TW5	30-40	599016.22	684214.84	n-tw5-3-24-st
	3/24/16 @ 1109				601325.28	686472.08	n-tw5-3-24-ed
3/24/16 @ 1130		N	TW6	30-40	599238.45	684456.54	n-tw6-3-24-st
	3/24/16 @ 1143				601403.45	686488.74	n-tw6-3-24-ed
3/24/16 @ 1206		N	TW 7	30-40	599153.38	684480.94	n-tw7-3-24-st
	3/24/16 @ 1220				601178.12	686362.81	n-tw7-3-24-ed
3/24/16 @ 1253		N	TW 8	30-40	598233.60	683243.45	n-tw8-3-24-st
	3/24/16 @ 1318				601416.49	686473.17	n-tw8-3-24-ed
3/24/16 @ 1350		N	TW 9	30-40	598666.77	683910.11	n-tw9-3-24-st
	3/24/16 @ 1410				601294.61	686280.06	n-tw9-3-24-ed

Notes:

WATER QUALITY

TEMP: 8.3 pH: 7.3

DO: 10.2 conductivity: 2670

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.001

Field Crew Initials: BWJ, JBS, KRM

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/14/16	TW	North	Striped Bass	210	150		
				250	200		
				235	175		
				125	25		
				130	30		
				135	30		
				210	100		
				280	225		
			Spotted Hake	135	20		
				85	7		
				120	25		
				100	30		
				85	5		
				70	5		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.001

Field Crew Initials: BWL, JBS, KRM

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/14/16	TW	NORTH	White Perch	165	80		
				125	50		
				125	50		
				130	60		
				130	50		
				110	20		
				115	20		
				110	15		
				105	10		
				105	10		
				105	N/A		
				105	12		
				110	15		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.001

Field Crew Initials: BM, JBS, KRM

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/14/16	TW1	North	Sp. Hakve	80	5		
				65	2		
				85	10		
				75	7		
				80	9		
			Striped bass	210	100		
				230	150		
				135	20		
				155	30		
			White perch	N=30			Count only
			Sp. Hakve	N=5			"

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.001

Field Crew Initials: BWL, JBS, KRM

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/14/16	TWL	North	Am. Shad	125	15		
			striped bass	160	75		
				160	70		
				210	150		
				155	60		
				155	55		
				158	75		
				125	40		
				130	25		
				118	20		
			Gizz. Shad	200	110		
			Alewife	50	10		
			Sp. Hickr	120	50		
				140	45		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.001

Field Crew Initials: BWG, OBS, KRM

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
8/14/16	Trawl	North	WP	160	70		non-filletable
				130	50		
				130	60		
				140	70		
			Hake	100	70		
				90	20		
				50	N/A		
			WP	150	50		
				140	40		
				145	30		
				135	40		
			"	95	15		
	TW	"	WP	R(95 — 130)		N=30*	non-filletable

*30 Additional White Perch. Not weighed/measured (see above)

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.001

Field Crew Initials: BWL, JBS, KRM

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/14/16	Trawl	North	SB	390	750		SB = striped bass
				255	200		
				195	125		
				190	75		
				180	80		
				215	120		
				170	60		
				140	40		
				145	40		
				140	35		
				130	40		
				145	50		
			WP	170	90		WP = white perch
			WP	155	70		non-fillet-able

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.001

Field Crew Initials: AWL, JBS, KRM

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/14/16	TWL	North	~~Summer Fl.~~ Windowpane Flounder	200	125		
			WF	140	N/A		winter flounder = WF
			Alewife	95	N/A		
			Striped bass	N=32			Can't only
			DP. Hake	N=~~5~~ 10			"
			White Perch	N = 108			", not filletable

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.001

Field Crew Initials: BWL, JBS, KRM

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/14/16	TW	North	SP Hake	75	3		
			↓	65	2		
			Striped Bass	115	15		
			White Perch	N = 109			counts, not filleted
			Spotted Hake	N = 6			"
			Striped Bass	N = 6			"

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.001

Field Crew Initials: BWJ, JBS, KRM

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/15/16	Gill Net	South	Striped Bass	310	325		
				308	300		
				290	270		
				310	320		
				305	300		
				310	350		
				325	320		
			Alewife	290	275		
				300	290		
				275	220		
				275	220		
			Menhaden	300	275		
			W. Flounder	210	120		
				200	110		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.001

Field Crew Initials: BWS, JBS, KRM

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/15/16	Gill Net	South	Striped Bass	325	400		
				355	530		
				320	400		
				325	450		
				315	360		
				315	400		
				320	350		
			Menhaden	330	350		
			Alewife	280	210		
				310	300		
				295	250		
				310	300		
				310	290		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.001

Field Crew Initials: BWL, JBS, KRM

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/15/16	Gill net	North	Menhaden	330	320		
3/15/16	Gill net	Central	Menhaden	355	400		
				305	350		
				280	250		
				325	315		
				300	275		
			Striped Bass	300	300		
				345	415		
				315	300		
				310	315		
				340	500		
				310	300		
				315	325		
				325	400		

N=41 Striped Bass released / Not weighed / measured

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: BWL JBS, KRM

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/15/16	Gill net	Central	Striped Bass	285	300		
				320	350		
				310	300		
				305	400		
				315	300		
			Menhaden	305	300		
				325	350		
				295	275		
				300	400		
				295	350		
				330	325		
			Striped Bass	280	300		
			Alewife	305	300		
				285	250		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: BWL, JBS, KRM

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/15/16	Gill net	Central	Alewife	280	250		
↓	↓	↓	↓	285	250		
				320	300		
				275	200		
				270	200		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: RMJ, JBS, KRM

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/15/16	Gill NET	Central	Menhaden	335	300		
				315	350		
				345	350		
				330	300		
				340	300		
			menhaden	N = 6	—		
			Striped BASS	370	400		
				335	300		
				300	300		
				305	350		
				300	300		
				310	350		
				305	315		
				370	400		

Striped BASS N = 29, count only

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: BWL, JBS, KRM

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/15/16	Gill Net	Central	Alewife	275	150		
				280	125		
				275	125		
				310	275		
				285	200		
				285	250		
			Alewife	N=7			
			menhaden	N/A	N/A		
			Striped Bass	N/A			

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: BWE, JBS, KRM

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/15/16	TW 1	North	w. Perch	100	NA		
			↓	95			
			w. Perch	N = 99			Non-Filetable
			At. Silverside	112			
			Alewife	125			
			Am. Shad	160	10		
			Alewife	80	N/A		
			SP. Nake	78	N/A		
				71			
				78			
				88			
				90			
				82			
			↓	N = 4	↓		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: BM, JBS, KRM

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/15/16	Tw 1	North	Blue Crab	140	N/A		
			Striped bass	125			
				190			
				145			
				175			
				130			
				148			
				260	175		
			Striped BASS	N=	11		Count
			W. Perch	140	N/A		
				100			
				120			
				135			
				125			

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: BWL, KRM, JTBS

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/15/16	TWL	North	AM. shad	155	7		
			Alewife	80	N/A		
			Alewife	78	N/A		
3/15/16	TWL	North	Striped BASS	185	50		
			SP. Hake	90	N/A		spotted hake
				75	N/A		
				82	N/A		
				72	N/A		
			W. Perch	160	40		non-filleted
				130	20		
				128	15		
				125	15		
			SP. Hake	75	N/A		
				80	N/A		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: BAL, JBS, KRM

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/15/16	TW1	North	W. Flounder	160	15		
↓	↓	↓	S. Flounder	255	130		
			Striped BASS	1/2	N/A		Scoliosis
↓	↓	↓	↓	130	N/A		Scoliosis

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: BWL, JBJ, KRM

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/16/16	GN	South	American Shad	515	1450	—	photo
			SB	340	380		
			SB	315	340		
			SB	335	480		
			WF	170	20		
			Atlantic menhaden	340	420		AM = At. menhaden
			AM	340	420		
			AM	315	330		
			AM	330	410		
			Alewife	285	275		
			"	300	280		
			"	300	290		
			"	280	190		photo
			"	295	300		
			"	295	250		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: BWL, JBS, KRM

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/16/16	GN	Control	AM	335	380	—	AM = At. menhaden
			AM	340	430		
			↓	335	370		
			↓	350	440		
			AM	R(~~275~~ 335)	2,300	N=7	bulkut
			Alewife	295	270		
			↓	290	250		
			↓	300	270		
			↓	300	290		
			SB	360	550		
			↓	290	280		
			↓	310	320		
			↓	310	330		
			↓	315	340		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: BWL, JBS, KRM

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/16/16	GN	South	WF	155	30	—	
3/16/16	GN	Central	SB	330	350		
3/16/16	GN	Central	SB	345	440		
			SB	325	370		
			SB	335	410		
			Tautog	300	530		
			SB	355	540		
			SB	300	330		
			SB	310	350		
			SB	350	500		
			SB	320	350		
			AM	380	440		
			↓	325	380		
			↓	305	270	↓	

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: BWL, JBS, KRM

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/16/16	GN3	Central	Tautog	430	1300	—	
	"	"	SB	R(290-375)		N=35	released alive
			SB	R(330-395)	5500	N=13	grp wt
			WF	190	70		
			AM	R(295-335)	9,400	N=26	grp wt
			Alewife	310	250		
				280	220		
				290	240		
			Alewife	R(280-300)	675	N=3	grp wt
			AM	R(300-330)	9000	N=10	grp wt
3/16/16	GN1	North	SB	305	320		
			AM	300	220		
			SB	295	290		
	GN1		AM	320	340		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: BWL, JBS, KRM

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/16/16	GN	~~South~~ Central Basin	SB	R(290-350)	2,100	N=5	
			WF	160	50	—	
			SB	R(300-370)	1950	N=5	
			SB	R(330-340)	1500	N=4	
			Gizzard Shad	230	140		
			AM	335	390		
			Alewife	R(175-300)	1900	N=8	
			SB	R(290-370)	—	N=20 released alive	
3/16/16	GN1	NORTH	SB	335	400		
				325	360		
				295	290		
				300	300		
				335	400		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: BWL, JBS, KRM

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/16/16	TW	North	blueback herring	80	~~NA~~	—	
			SB	110	—		
			WF	145	20		
			bay anchovy	60	—		
			blueback herring	85	—		
			WF	155	30		
3/16/17 16	TW		SB	165	20		
			SB	165	15		
			SB	145	10		
			WP	R(105-120)	50	N=5	group wt
			SH	R(60-150)	100	N=15	"
			WF	220	130		

SH = spotted hake

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: BWL, JBS, KRM

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/16/16	TW	NORTH	WP	R(100-145)	400	N=19	group wt
↓	↓	↓	SB	155	20		
↓	↓	↓	SH	90-110	30	N=3	

Non-Target Species Tally Form

Project Name: NB03 **Project No.:**

Field Crew Initials: BWL, JBS, KRM

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/17/16	GN	Central	SB	295	300	—	
			AM	305	240		
			Am. shad	290	170		
			Alew. fx	300	240		
				300	230		
				300	280		
				295	230		
				300	230		
				290	220		
			Atl. Sturgeon	737	1650		
			SB	R(290-340)	2,100	N=6	
			SB	"	1850	N=5	
			SB	"	1,800	N=5	
			Am	295	300	—	

Non-Target Species Tally Form

Project Name: N803 **Project No.:**

Field Crew Initials: BWL, JBS, KRM

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/17/16	GN	Control	Alewife	295	240		
			"	285	230		
			SH	165	20		
			windowpane	—	—		lost, no measurements
			SB	290	300		
			SB	305	320		
			SB	290	270		
			SB	R(310-345)	1,900	N=5	
			SB	"	1,900	N=5	
			SB	"	2,000	N=5	
			"	"	1,850	N=4	
			SB	"	1,850	N=4	
			SB	N=61	, no measurements, alive		
			Alewife	285	250		

Non-Target Species Tally Form

Project Name: NB03 **Project No.:**

Field Crew Initials: BWL, JBS, KRM

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/17/16	GN	Central	Alewife	300	310	—	
"	"	"	SB	N=25	(release)	alive	
3/17/16	GN	Central	SB	600	1900	—	
	GN	Central	SB	R(315-350)	2,100	N=5	
			~~SB~~ Alewife	R(290-310)	1950	N=8	
			A.M.	R(270-340)	1850	N=6	
			A.M.	"	1300	N=4	

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.001

Field Crew Initials: RWL, JBS, KRM

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/17/16	Gill Net	Central	SKATE	410	800	—	
			WF	205	100	—	
			SB	330	410		
			SB	340	440		
				295	290		
				320	310		
				300	300		
				315	370		
				305	350		
				345	570		
				300	320		
				300	290		
				315	350		
				300	350		

Non-Target Species Tally Form

Project Name: NBC3 Fish **Project No.:**

Field Crew Initials: BWL, JBS, KRM

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/18/16	GN	Central	SB	N=15	live release		
			SB	R(310-380)	2,100	N=5	
			~~SB~~				BWL
			AM	R(285-350)	2150	N=~~6~~7 BWL	
			AM	"	1900	N=5	
			AM	"	1850	N=5	
			Alewife	325	350		
			"	290	250		
			"	295	230		
3/18/16	TW	North	Cunner	80	—		
"	"	"	SH	90	—		
			SB	R(225-295)	850	N=10	
			N pipefish	180	—		
			SB	R(115-235)	450	N=12	

Non-Target Species Tally Form

Project Name: NBOS Fish **Project No.:**

Field Crew Initials: JBS, BWL, KRM

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/18/16	GN	Central	SB	N=20 released alive			
			Alewife	280	150		
			Am. shad	215	40		
			AM	350	450		
			AM	320	300		
			AM	330	310		
			Gizzard shad	245	125		
			SB	325	300		
			SB	345	400		
			SB	340	375		
			WF	155	40		
			WF	155	50		
			SB	N=8 live release			
			AM	N=3 fell out of net			

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.004

Field Crew Initials: BWL, JBS, KRM

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/18/16	TW	NORTH	SH	R(80-115)	120	N=13	
"	"	"	WF	260	250	—	
		"	Am. shad	160	30	—	
			Northern pipefish	110	—	—	
			WP	R(95-170)	1,500	N=64	
			SH	—	—	N=1	

Non-Target Species Tally Form

Project Name: NB03 **Project No.:**

Field Crew Initials: JBS, KRM, BJA

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/22/16 @1020	TW1	N	Striped Bass	205	150		
				215	90		
				155	50		
				170	70		
				170	70		
			↓	130-195	550 (N=17)		Length RANGE/BAR Weight
			Menhaden	145	30		
			SB. Hake	245	120		
				165	30		
				150	70		
				130	20		
			W. Flounder	140	30		
			White Perch	115	30		
↓	↓	↓	↓	125	30		

Non-Target Species Tally Form

Project Name: NB03 **Project No.:**

Field Crew Initials: JBS, KRM, BJA

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
8/22/16 10:30	TWL	North	W. Perch	150	40		
↓	↓	↓	↓	130	30		
				140	30		
				180	100		
				110-140	1100	N=50	length RANGE / BATCH weight
				100-130	550	N=21	↓
			W. Flounder	130	20		
↓	↓	↓	Striped BASS	100-145	300	N=2	

Non-Target Species Tally Form

Project Name: NBO3 **Project No.:**

Field Crew Initials: JBS, KRM, BJA

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/22 @ 1056	TWS	North	Striped BASS	145	40		
			↓	180	100		
			Sp. HAKE	120	30		
			Striped BASS	90	10		
			Gizzard shad	245	180		
			W. Flounder	160	50		
			Blue Crab	140	150		
			Striped BASS	160	40		
			W. Perch	145	40		
			↓	125	20		
				115	10		
				140	35		
				100	10		
↓	↓	↓	↓	~~95~~ 90 BM - ~~45 - 95~~ 45 - 95 BM 95 - 145	1,050		Length RANGE / BATCH weight N=49

Non-Target Species Tally Form

Project Name: NB03 **Project No.:**

Field Crew Initials: JBS, KRM, BJA

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
8/22-Q 1056	TWL	North	Striped BASS	105	10		
↓	↓	↓	W. Perch	85 - 130	1200 (N=68)		
			Striped BASS	110	10		
			↓	110	10		
				105	10		

Non-Target Species Tally Form

Project Name: NB03 **Project No.:**

Field Crew Initials: JBS, KRM, BJA

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/27@1132	TwB	North	Striped BASS	210	100		
				205	100		
				205	90		
				170	50		
				120	15		
			S. Flounder	185	70		
			SP. HAKE	160	50		
				180	95		
				95	10		
				105	10		
				130	50		
				55-145	200 (n=13)		Length RANGE / BATCH weight
			N. Pipefish	185	N/A		
			w. Perch	140	40		

Non-Target Species Tally Form

Project Name: NB 03 **Project No.:**

Field Crew Initials: JBS, KRM, BJA

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/22@1132	TWL3	North	W. Perch	150	40		
↓	↓	↓	↓	115	30		
				135	50		
				100	10		
				110-150	950 (N=34)		

Non-Target Species Tally Form

– **Project Name:** NT303 **Project No.:**

Field Crew Initials: JBS, KAM, BJA

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/22/2015	tw4	North	W. Flounder	135	30		
			SP. HAKE	140	40		
				100	10		
				85	8		
				100	10		
			N. Pipefish	210	N/A		
			W. Perch	105	25		
				115	40		
			Striped Sea Robin	80	5		
			Menhaden	340	400		
			Am. Shad	165	30		

Non-Target Species Tally Form

– **Project Name:** NB03 **Project No.:**

Field Crew Initials: JBS, KRM, BJA

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/22 @1338	TW5	North	N. pipefish	160	N/A		
			Striped BASS	115	20		
				240	140		
				175	70		
				150	30		
				135	20		
				110-215	200 (N=6)		
			W. Flounder	220	110		
			W. Perch.	110	20		
				135	40		
				125	40		
				130	35		
				135	30		
				115-170	300 (N=11)		

Non-Target Species Tally Form

Project Name: NB03 **Project No.:**

Field Crew Initials: JBS, KRM, BJA

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/22 1423	TWT	North	Striped BASS	240	150		
				170	50		
				170	45		
				120	15		
				150	50		
				155	40		
			W. Flounder	155	30		
			Sp. ~~Hake~~	130	20		
				130	20		
				150	40		
			Sp. ~~Red~~ Hake	110	10		
				100	15		
				90	10		
				70	5		

Non-Target Species Tally Form

Project Name: NB03 **Project No.:**

Field Crew Initials: JBS, KRM, BJA

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/22/16 1433	TW7	North	Red Hake	95	10		
			W. Perch	115	20		
				180	40		
				150	40		
				155	60		
				115-165	600 (N=27)		
3/22 1455	TW8	North	Wh. Perch	90	15		
				110	20		
				130	35		
				140	40		
				110	20		
				90-155	1100 (N=48)		Range - Batch
				100-145	1300 (N=65)		" " "
			Sp. Hake	50-110	80 (N=5)		

D chem N-TW-8-3-22-~~S~~7

Temp: 8.3 cond: 23320

DO: 10.8 pH: 7.2

Non-Target Species Tally Form

Project Name: NB03 **Project No.:**

Field Crew Initials: JBS, KRM, BJA

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/22/14 1455	TWS	North	sp. Hake	170	30		
				150	25		
				110	10		
				100	7		
				145	20		
			↓	95-170	225 (N=11)		
			N. pipefish	175	N/A		
			Striped BASS	230	90		
				150	35		
				205	80		
				120	20		
				170	50		
				155	40		
↓	↓	↓	↓	130-200	350 (N=8)		
			Sp Hake	155	40		

Non-Target Species Tally Form

Project Name: NBO3 **Project No.:**

Field Crew Initials: JBS, KRM, BJA

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/22 1455	TW8	North	W. Flounder	140	40		
3/22 1455	TW8	North	W. Flounder	145	50		
3/22 1534	TW9	North.	Striped BASS	230	130		
				225	120		
				190	70		
				150	60		
				155	25		
			↓	130-190	1250 (N=19)		
			Red Hake	100	10		
			SP. Hake	80	10		
				155	40		
				175	60		
				135	30		
↓	↓	↓	↓	~~HO~~ BM 110-155	120 (N=6)		

Non-Target Species Tally Form

Project Name: NB03 **Project No.:**

Field Crew Initials: JBS, KEM, BJA.

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/22 1534	TWQ	North	Red Hake	170	15		
			Striped Bass	170	30		
			Alewife	90	10		
			W. Flounder	200	80		
			↓	210	100		
			W. Perch	170	70		
				140	35		
				125	30		
				130	40		
				120	25		
			↓	100-165	1300 (n=51)		

Non-Target Species Tally Form

Project Name: NB-03 **Project No.:**

Field Crew Initials: JBS, KRM, BJA

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/23/16 0840	GN1	N	SB	325	350		
				340	400		
				300	340		
				330	390		
				320	370		
			WF	205	120		
			At Menhaden	340	450		
				330	400		
				335	350		
				320	330		
				325	350		
				280	240		

Non-Target Species Tally Form

Project Name: NB-03 **Project No.:**

Field Crew Initials: JBS, KRM, BJA

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/23/16@0903	GNZ	N	SB	490	1150		
↓	↓	↓	↓	320	370		
			↓	350	450		
			At Menhaden	350	370		
			↓	310	270		
				330	400		
				310	370		
				335	350		
				320	300		
↓	↓	↓	↓	320	310		

Non-Target Species Tally Form

Project Name: NB 03 **Project No.:**

Field Crew Initials: JBS, KRM, BJA

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/23/16 @ 0930	GN3	N	SB	310	350		
				310	350		
				310	320		
				305	300		
				310	310		
				305	300		
				305	300		
				290	275		
				305	330		
			Alewife	305	230		
			At Menhaden	335	310		
			WF	165	50		

Non-Target Species Tally Form

Project Name: NB03 **Project No.:**

Field Crew Initials: JBS, KRM, BJA

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/23/16 0947	GN4	N	SB	365	510		
↓	↓	↓	↓	315	400		
			↓	320	350		
			At Menhaden	300	270		
			↓	335	380		
				320	310		
↓	↓	↓	↓	330	350		

Non-Target Species Tally Form

Project Name: NB 03 **Project No.:**

Field Crew Initials: JBS, KRM, BJA

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/23/16 @1128	TW1	N	SB	255	120		
			↓	255	130		
				230	100		
				150	30		
				145	30		
			SB	115-185	150 (N=3)		Range + Batch weight
			SF	220	70		
			WF	125	20		
			WF	140	30		
			Sp. Hake	135	20		
			↓	150	40		
			Gr. Shad	155	40		
			↓	170	50		
↓	↓	↓	SB	145	25		

Non-Target Species Tally Form

Project Name: NB-03 **Project No.:**

Field Crew Initials: JBS, KRM, BJA

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/23/16 @1128	TWI	N	SB	100	10		
			Sp. Hake	120	15		
			Am. Shad	140	20		
				180	50		
				130	20		
				150	30		
				140	30		
				150	35		
			Bay Anchovy	65	2		
			Alewife	85	5		
				90	8		
				75	5		
				100	10		
				105	12		
			Alewife	80-90	50	(N=6)	Range & Batch weigh

Non-Target Species Tally Form

Project Name: NB-03 **Project No.:**

Field Crew Initials: JBS, KRM, BJA

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/23/16 @ 1128	TW1	N	WH. Perch	130	25		
				125	20		
				130	20		
				120	20		
				140	30		
				85-130	575	(N=32)	Range & Batch weigh

Non-Target Species Tally Form

Project Name: NB-03 **Project No.:**

Field Crew Initials: JBS, KRM, BJA

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/23/16 @1200	TW 2	N	SB	380	600		
				330	375		
				275	225		
				270	230		
				165	30		
			SB	165-330	1050	(N=6)	Range & Batch Weigh
			Blue Crab	105	100		Male
			Alewife	120	20		
			Sp. Hake	125	20		
				105	10		
				90	7		
				90	7		
				80	5		
			Wh Perch	150	50		

Non-Target Species Tally Form

Project Name: NB-03 **Project No.:**

Field Crew Initials: JBS, KRM, BJA

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/23/16 8/210	TW2	N	Wh. Perch	135	40		
				135	40		
				125	30		
				120	15		
			Wh. Perch	95-170	650	(N=26)	Range & Batch weigh

Non-Target Species Tally Form

Project Name: NB-03 **Project No.:**

Field Crew Initials: JBS, KRM, BJA

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/23/16 @ 1252	TW3	N	SB	330	420		
				320	350		
				280	330		
				130	20		
			↓	140	20		
			SB	125-270	1850	(N = 17)	Range & Batch Weigh
			SB	145-245	600	(N = 10)	" " "
			Sp. Hake	145	40		
				165	50		
				80	7		
				80	7		
			↓	105	10		
			Sp. Hake	105-130	60	(N = 5)	Range & Batch Weigh
↓	↓	↓	Window Pane	220	120		

Non-Target Species Tally Form

Project Name: NB-03 **Project No.:**

Field Crew Initials: JBS, KRM, BJA

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/23/16 1252	TW3	N	WH. Perch	110	25		
↓	↓	↓	↓	120	30		
				125	30		
				160	50		
				165	70		
↓	↓	↓	WH. Perch	95-160	1550	(N=59)	Range & Batch Weigh

Non-Target Species Tally Form

– **Project Name:** NB-03 **Project No.:**

Field Crew Initials: JBS, KRM, BJA

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/23/16 0/340	TW4	N	At. Croaker	125	15		
			SB	210	100		
				160	50		
				135	20		
				245	140		
				280	170		
			SB	125 - 340	1900	(N = 17)	Range & Batch Weigh
			SB	120 - 240	1800	(N = 28)	" " "
			SB	~~105~~ 115 - 220	300	(N = 7)	" " "
			Sp. Hake	155	40		
				115	20		
				105	10		
				85	7		
				165	50		

Non-Target Species Tally Form

Project Name: NB-03 **Project No.:**

Field Crew Initials: JBS, KRM, BJA

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/23/16 @1340	TW4	N	Sp. Hake	100-150	500	(N=35)	Range & Batch Weigh
			Giz. Shad	150	45		
			WF	140	30		
			↓	165	50		
			↓	160	50		
			↓	165	50		
			SB	120	15		
			Wh. Perch	155	60		
			↓	135	25		
			↓	140	40		
			↓	125	20		
			↓	90	10		
			Wh Perch	90-170	1500	(N=69)	Range & Batch Weigh
↓	↓	↓	↓	110-160	1500	(N=62)	" " "
			Sp. Hake	80	10		

Non-Target Species Tally Form

Project Name: NB - 03 **Project No.:**

Field Crew Initials: JBS, KRM, BJA

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/23/16 @1426	TW 5	N	SB	335	430		
				270	140		
				220	110		
				145	40		
				145	40		
			SB	105-255	1000	(N= 11)	Range & Batch Weigh
			WF	175	70		
			Alewife	185	60		
			Sp. Hake	150	40		
				145	40		
				125	20		
				105	10		
				85	7		
			Sp. Hake	75-160	160	(N= 10)	Range & Batch Weigh

Non-Target Species Tally Form

Project Name: NB-03 **Project No.:**

Field Crew Initials: JBS, KRM, BJA

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/23/16 @1426	TWS	N	WH. Perch	145	50		
↓	↓	↓	↓	145	40		
				140	40		
				115	25		
				130	25		
↓	↓	↓	WH. Perch	95-150	470	(N = 21)	Range & Batch Weigh

Non-Target Species Tally Form

Project Name: NB - 03 **Project No.:**

Field Crew Initials: JBS, KRM, BJA

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/23/16 @1503	TW 6	N	SB	215	120		
				225	130		
				195	90		
				145	40		
			↓	125	20		
			SB	105 - 260	1600	(N = 20)	Range & Batch Weigh
			Sp. Hake	125	30		
				125	30		
				115	20		
				95	15		
			↓	80	10		
			Sp Hake	90 - 140	100	(N = 7)	Range & Batch Weigh
			WF	170	40		
↓	↓	↓	Alewife	95	10		

Non-Target Species Tally Form

– **Project Name:** NB - 03 **Project No.:**

Field Crew Initials: JBS, KRM, BJA

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/23/16 @ 1503	TW 6	N	WH. PERCH	130	30		
↓	↓	↓	↓	125	25		
				120	25		
				140	30		
				100	10		
↓	↓	↓	WH. PERCH	100 - 170	600	(N = 28)	Range & Batch Weigh

Non-Target Species Tally Form

Project Name: NB-03 **Project No.:**

Field Crew Initials: JBS, KRM, BJA

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
8/23/16 @1535	TW 7	N	At. Tomcod	225	120		
↓	↓	↓	Giz. Shad	270	190		
			Alewife	270	170		
			↓	150	30		
			SB	240	130		
			↓	185	70		
				145	30		
				110	10		
				110	10		
			SB	120 - 245	480	(N = 9)	Range & Batch Weigh
			Alewife	85	10		
			WF	180	60		
			Sp Hake	140	20		
↓	↓	↓	↓	140	20		

Non-Target Species Tally Form

Project Name: NB-03 **Project No.:**

Field Crew Initials: JBS, KRM, BJA

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/23/16 @1535	TW7	N	So Hake	120	15		
↓	↓	↓	↓	110	12		
				110	15		
			So Hake	65 - 160	100	(N= 8)	Range & Batch Weigh
			WH Perch	140	30		
			↓	130	25		
				135	25		
				120	20		
				105	15		
↓	↓	↓	WH Perch	95 - 140	850	(N= 34)	
							Range & Batch Weigh

Non-Target Species Tally Form

– **Project Name:** NJB03 **Project No.:**

Field Crew Initials: JBS, KRM, BJA

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/24 @ 933	TWL	North	Striped BASS	570	550		
↓	↓	↓	↓	180	70		
			Sp. Hake	175	40		
			↓	165	40		
				110	20		
			Alewife	80	10		
			W. Perch	130	25		
↓	↓	↓	↓	130	40		

Non-Target Species Tally Form

– **Project Name:** NB03 **Project No.:**

Field Crew Initials: JBS, KRM, BJA

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/24 @ 1609	TW3	North	Striped BASS	320	380		
				290	300		
				195	70		
				130	20		
				175	50		
				270	200		
				235	150		
			Sp. Hake	170	50		
				140	35		
				110	15		
				95	10		
				85	7		
				70	5		
				85	5		

Non-Target Species Tally Form

Project Name: NB03 **Project No.:**

Field Crew Initials: OBS, KRM, BJA

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
9/24 @ 1009	TW3	North	Alewife	100	10		
			S. Flounder	195	50		
			w. Perch	155	50		
				115	20		
				125	20		
				120	15		
				105	10		
				90-170	805 (ND=36)		

Non-Target Species Tally Form

Project Name: NB03 **Project No.:**

Field Crew Initials: JBS, KRM, BJA.

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/24 1038	TW 4	North	Striped Bass	390	610		
				395	370		
				165	130		
				155	20		
				220	110		
				170-275	1350 (N=8)		
			Sp. Hake	65	5		
				70	5		
			Am. shad	140	20		
			W. Flounder	225	150		
			W. Perch	140	30		
				100	10		
				140	30		
				110-135	260 (N=10)		

Non-Target Species Tally Form

Project Name: NB03 **Project No.:**

Field Crew Initials: JBS, KRM, BJA

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/24 @ 1109	TW 5	North	Alewife	85	5		
			Am. shad	140	20		
			↓	120	15		
			w. Flounder	155	25		
			Sp. Hake	135	20		
			↓	130	20		
			w. Perch	160	90		
				130	30		
				135	30		
				130	25		
				100	10		
				105-160	1300 (N=48)		
				90-155	850 (N=37)		
			Alewife	80	5		

Non-Target Species Tally Form

Project Name: NB03 **Project No.:**

Field Crew Initials: JBS, KRM, BSA

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/24 @ 1109	TW 5	North	SB	250	180		
				205	100		
				190	80		
				110	15		
				105	10		
				110 - 255	1700	(N=24)	
				120 - 160	300	(N=4)	
			Alewife	245	140		
				205	90		
				90	7		
			SB	125	10		
			Blue Crab	130	130		MALE
			SB	135	30		
				135	30		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.001

Field Crew Initials: JBS, KRM, RJA

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/24 @ 1143	TW 6	North	Alewife	70	5		
			↓	75	5		
			Am. Shad	140	30		
				120	25		
				110	10		
			↓	110	10		
			W. Flounder	140	30		
			W. Perch	175	70		
				190	60		
				130	35		
				115	20		
				120	20		
↓	↓	↓		45-160	950 (N=49)		
			↓				

Non-Target Species Tally Form

Project Name: NB03 **Project No.:**

Field Crew Initials: JBS, KRM, BJA

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/24 @ 1143	TW 6	North	SP Hake	310	250		
				140	30		
				135	20		
				130	15		
				80	5		
				85-105	50 (N=5)		
			SB	285	250		
				220	120		
				155	40		
				135	20		
				120	30		
				140-270	800 (N=15)		
			Alewife	180	50		
				120	30		

Non-Target Species Tally Form

Project Name: NB03 **Project No.:**

Field Crew Initials: JBS, ERM

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/24 @ 1320	TW 7	North	Am. Shad	180	40		
	↓	↓	↓	160	35		
				115	10		
				115	10		
			Sp. Hake	145	70		
			↓	175	50		
				135	25		
				130	20		
				95-165	250 (N=13)		
			Pipefish	170	N/A		
			W. Perch	140	30		
			↓	130	25		
				135	25		
	↓	↓	↓	95-165	800 (N=35)		

Non-Target Species Tally Form

Project Name: NB03 **Project No.:**

Field Crew Initials: JBS, KRM, BJA

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/24 @ 1220	TW 7	North	SB	285	250		
				230	120		
				250	130		
				175	50		
				150	20		
				120-250	1700 (N=27)		
			W. Flounder	200	90		
				135	20		
			Window pane	320	400		
			Am. eel	750	550		
			Gizz shad	150	36		
			Alewife	145	20		
				115	20		
				80-100	100 (N=15)		

Non-Target Species Tally Form

Project Name: NB03 **Project No.:**

Field Crew Initials: JBS, KEM, BJA

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/21 @ 1318	TW 8	North	AM. Shad	115	10		
↓	↓	↓	↓	115	10		
			W. Perch	130	30		
			↓	130	30		
				110	20		
				100	15		
				100	15		
				95-155	1400 (N=55)		
↓	↓	↓	↓	95-135	950 (N=54)		

Non-Target Species Tally Form

Project Name: NBO3 Fish Study **Project No.:** 23489.001

Field Crew Initials: JBS, KRM, BJA

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/24@1315	TW8	North	SB	230	120		
				200	90		
				250	~~140~~ 90	40	
				125	20		
				135	15		
				110-200	1400 (27 EN)		
				130-210	550 (N=10)		
			window pane	215	110		
			W. Flounder	210	110		
				180	90		
				155	40		
			S. Flounder	135	20		
			SB	195	80		
				155	30		
				90	10		

Non-Target Species Tally Form

Project Name: **Project No.:**

Field Crew Initials:

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/24 @ 7315	TWS	North	S. Flounder	260	170		
			SP. Hake	240	130		
				150	40		
				165	30		
				100	10		
				90-140	200 (N=16)		
			gizz. shad	185	40		
			Alewife	190	50		
				125	20		
				175	20		
				95	10		
				105	10		
				85-115	300 (N=41)		
			Am. shad	145	20		

Non-Target Species Tally Form

Project Name: NB03 **Project No.:**

Field Crew Initials: JBS, KRM, BJA

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/24 @ 1410	TW9	North	SB	240	130		
				320	380		
				155	40		
				130	20		
				120	10		
				185-205	800 (N=20)		
			Blue Crab	155	200		
			SB	155	30		
				140	20		
				120	15		
				90	10		
			Sp Halve	280	190		
				185	20		
				120	20		

Non-Target Species Tally Form

Project Name: NB03 **Project No.:**

Field Crew Initials: JBS, KRM, BJA

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
7/24 @ 1410	JW 9	North	SP Hake	140	20		
			↓	105	10		
			↓	95-240	1250 (N=63)		
			Alewife	250	130		
				115	30		
			AM. shad	140	40		
			Black sea BASS	100	15		
			Cunner	85	20		
			W. Flounder	215	110		
			↓	200	90		
			↓	155	60		
			↓	135	30		
			W. Perch.	145	40		
↓	↓	↓	↓	130	30		

Non-Target Species Tally Form

Project Name: NB03 **Project No.:**

Field Crew Initials: JBS, KRM, RJA

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/24 @ 1410	TW9	North	w. Perch	120	20		
↓	↓	↓	↓	110	20		
				100	10		
				100-150	1200 (N=65)		
↓	↓	↓	Crocker	130	30		

Non-Target Species Tally Form

Project Name: NB-03 **Project No.:**

Field Crew Initials: JBS, KRM, BJA

Collection Date/Time	Collection Method	Sampling Zone/Location	Species	Length (mm)	Weight (g)	Estimated Size Class	Notes
3/24/16 0083	GN2	N	SB	325	350		
"	"	"	SB	330	370		
3/24/16 0825	GN1	N	WF	155	40		

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 3
Rev. Date: March 2016
Sample Processing Form

Project: NB03 Fish Study
Sample Location: North
Sample Date: 03-14-16
Processing Date: 03-15-16

Sampled By: BWL, JTBS, KRM
Processed By: KRM

Sample ID	Species	Sample Type	Number of Organisms	Total Length (mm) / Weight (g)	Fillet Weight (g)	Liver Weight (g)	Gear Type	Photo #	Comments
NB03FWPN442	WP	F	1	293 / 482	129.8	—	TW	116-1218	Female
NB03LWPN442		L	1		—	~~2.4~~ GT 3.0			
NB03FWPN443		F	1	191 / 99	28.5	—			Male
NB03LWPN443		L	1		—	1.2			
NB03FWPN444		F	1	246 / 223	74.8	—			Female
NB03LWPN444		L	1		—	3.9			
NB03FWPN445		F	1	274 / 334	97.3	—			Male
NB03LWPN445		L	1		—	5.6		↓	
NB03FWPN446		F	1	235 / 210	61.1	-		116-1219	Female
NB03LWPN446		L	1		—	3.9			
NB03FWPN447		F	1	211 / 140	46.5	—			Male
NB03LWPN447		L	1		—	2.8			
NB03FWPN448		F	1	192 / 102	33.0	—			Male
NB03LWPN448	↓	L	1		—	2.0		↓	

Notes: Sample time 1430

g= grams
mm = millimeters

Sample Type: W = whole body, F= fillet, L = liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net = GN
Species Code: WP = white perch

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 3
Rev. Date: March 2016
Sample Processing Form

Project: NB03 Fish Study
Sample Location: South
Sample Date: 03-15-16
Processing Date: 03-16-16

Sampled By: BWL, JBS, KRM
Processed By: KRM, MKM

Sample ID	Species	Sample Type	Number of Organisms	Total Length (mm) / Weight (g)	Fillet Weight (g)	Liver Weight (g)	Gear Type	Photo #	Comments
VB03FWPS371	WP	F	1	235 / 212	58.2	–	GN	116-1227	Male
VB03LWPS371		L	1		–	3.2			
VB03FWPS372		F	1	218 / 164	50.8	–			Female
VB03LWPS372		L	1		–	4.8			
VB03FWPS373		F	1	278 / 316	89.1	–			Female
VB03LWPS373		L	1		–	5.8			
VB03FWPS374		F	1	231 / 174	49.5	–			Male
VB03LWPS374		L	1		–	2.2		↓	
VB03FWPS375		F	1	232 / 194	56.1	–		116-1230	Female
VB03LWPS375		L	1		–	3.9			
VB03FWPS376		F	1	229 / 198	58.3	–			Female
VB03LWPS376		L	1		–	4.1			
VB03FWPS377		F	1	232 / 185	47.1	–			Male
VB03LWPS377	↓	L	1		–	2.6	↓	↓	

Notes: Sample time 1430

g= grams
mm = millimeters

Sample Type: W = whole body, F= fillet, L = liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net = GN
Species Code: WP = white perch

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 3
Rev. Date: March 2016
Sample Processing Form

Project: NB03 Fish Study
Sample Location: South
Sample Date: 03-15-16
Processing Date: 03-16-16

Sampled By: BWL, JBS, KRM
Processed By: KCM, MKM

Sample ID	Species	Sample Type	Number of Organisms	Total Length (mm) / Weight (g)	Fillet Weight (g)	Liver Weight (g)	Gear Type	Photo #	Comments
VB03FWPS378	WP	F	1	226 / 177	44.8	–	GN	116-1230	Female
VB03LWPS378	↓	L	1	/	–	4.0	↓	↓	
VB03FWPS379		F	1	222 / 173	52.4	–		116-1231	Male
VB03LWPS379		L	1	/	–	3.1		↓	
VB03FWPS380		F	1	258 / 282	72.4	–		↓	Female
VB03LWPS380		L	1	/	–	5.5			
VB03FWPS381		F	1	245 / 226	68.0	–		116-1232	Male
VB03LWPS381		L	1	/	–	3.8		↓	
VB03FWPS382		F	1	248 / 285	80.3	–		↓	Female
VB03LWPS382		L	1	/	–	4.2			
VB03FWPS383		F	1	239 / 190 ~~290~~ CUT	49.0	–		↓	Male
VB03LWPS383		L	1	/	–	3.2			
VB03FWPS384		F	1	265 / 350	100.3	–		116-1233	Female
VB03LWPS384	↓	L	1	/	–	10.3	↓	↓	
				/					

Notes: Sample time 1430

g= grams
mm = millimeters

Sample Type: W = whole body, F= fillet, L = liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net = GN
Species Code: WP = white perch

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 3
Rev. Date: March 2016
Sample Processing Form

Project: NB03 Fish Study
Sample Location: South
Sample Date: 03-15-16
Processing Date: 03-16-16

Sampled By: BwL, JBS, KRM
Processed By: Kim, MLM

Sample ID	Species	Sample Type	Number of Organisms	Total Length (mm) / Weight (g)	Fillet Weight (g)	Liver Weight (g)	Gear Type	Photo #	Comments
NB03FWPS385	WP	F	1	270 / 402	131.4	–	GN	116-1233	Female
NB03LWPS385		L	1		–	7.8			
NB03FWPS386		F	1	222 / 208	47.4	–			Female
NB03LWPS386		L	1		–	8.2			
NB03FWPS387		F	1	245 / 231	66.8	–		116-1234	Female
NB03LWPS387		L	1		–	3.7			
NB03FWPS388		F	1	228 / 190	53.0	–			Female
NB03LWPS388		L	1		–	4.1			
NB03FWPS389		F	1	232 / 206	69.4	–			Female
NB03LWPS389		L	1		–	3.9			
NB03FWPS390		F	1	258 / 264	76.7	–			Female
NB03LWPS390		L	1		–	5.1			
NB03FWPS391		F	1	241 / 232	69.8	–		116-1235	Female
NB03LWPS391		L	1		–	4.2			

Notes: Sample time 1430

g= grams
mm = millimeters

Sample Type: W = whole body, F= fillet, L = liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net = GN
Species Code: WP = white perch

Sample Processing Form

Title: Fish Sampling and Analysis Quality Assurance Project Plan
Revision Number: 3
Rev. Date: March 2016
Sample Processing Form

Project: NB03 Fish Study
Sample Location: South
Sample Date: 03-15-16
Processing Date: 03-16-16

Sampled By: BWL, JBS, ICRM
Processed By: ICRM, MKM

Sample ID	Species	Sample Type	Number of Organisms	Total Length (mm) / Weight (g)	Fillet Weight (g)	Liver Weight (g)	Gear Type	Photo #	Comments
NB03FWPS392	WP	F	1	221 / 160	43.8	–	GN	116-1235	Female
NB03LWPS392		L	1		–	3.1			
NB03FWPS393		F	1	270 / 354	89.6	–			Female
NB03LWPS393		L	1		–	7.9			

Notes: Sample time 1430

g= grams
mm = millimeters

Sample Type: W = whole body, F= fillet, L = liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net = GN
Species Code: WP = white perch

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 3
Rev. Date: March 2016
Sample Processing Form

Project: NB03 Fish Study
Sample Location: Central
Sample Date: 03-15-16
Processing Date: 03-16-16

Sampled By: BWL, JBS, KRM
Processed By: KRM

Sample ID	Species	Sample Type	Number of Organisms	Total Length (mm) / Weight (g)	Fillet Weight (g)	Liver Weight (g)	Gear Type	Photo #	Comments
NB03FWPC517	WP	F	1	215 / 160	42.5	—	GN	116-1220	Female
NB03LWPC517		L	1		—	5.0			
NB03FWPC518		F	1	216 / 155	52.0	—			Female
NB03LWPC518		L	1		—	3.5			
NB03FWPC519		F	1	214 / 163	52.7	—			Female
NB03LWPC519		L	1		—	4.2			
NB03FWPC520		F	1	237 / 218	69.5	—			Female
NB03LWPC520		L	1		—	4.2			
NB03FWPC521		F	1	218 / 180	63.1	—		116-1221	Male
NB03LWPC521		L	1		—	3.5			
NB03FWPC522		F	1	217 / 164	59.8	—			Male
NB03LWPC522		L	1		—	4.2			
NB03FWPC523		F	1	228 / 186	69.6	—			Male
NB03LWPC523		L	1		—	2.9			
NB03FWPC524		F	1	232 / 222	70.7	—			Female

Notes: Sample time 1000

g= grams
mm = millimeters

Sample Type: W = whole body, F= fillet, L = liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net = GN
Species Code: WP = white perch

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 3
Rev. Date: March 2016
Sample Processing Form

Project: NB03 Fish Study
Sample Location: Central
Sample Date: 03-15-16
Processing Date: 03-16-16

Sampled By: BWL, JBS, KRM
Processed By: KCM

Sample ID	Species	Sample Type	Number of Organisms	Total Length (mm) / Weight (g)	Fillet Weight (g)	Liver Weight (g)	Gear Type	Photo #	Comments
NB03LWPC524	WP	L ~~F~~ KCM	1	232 / 222	–	4.4	GN	116-~~121~~ 1221 ~~CRT~~	Female
NB03FWPC525		F KCM	1	212 / 154	50.4	–		116-1222	Female
NB03LWPC525		L	1	/	–	3.7			
NB03FWPC526		F	1	206 / 148	38.9	–			Female
NB03LWPC526		L	1	/	–	3.3			
NB03FWPC527		F	1	221 / 185	58.1	–			Female
NB03LWPC527		L	1	/	–	3.9			
NB03FWPC528		F	1	253 / 285	85.2	–			Female
NB03LWPC528		L	1	/	–	5.9		↓	
NB03FWPC529		F	1	245 / 244	79.2	–		116-1223	Female
NB03LWPC529		L	1	/	–	3.9			
NB03FWPC530		F	1	250 / 260	82.8	–			Female
NB03LWPC530		L	1	/	–	5.6	↓	↓	
				/					
				/					

Notes: Sample time 1000

g= grams
mm = millimeters

Sample Type: W = whole body, F= fillet, L = liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net = GN
Species Code: WP = white perch

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 3
Rev. Date: March 2016
Sample Processing Form

Project: NB03 Fish Study
Sample Location: Central
Sample Date: 03-15-16
Processing Date: 03-16-16

Sampled By: BWL, JBS, [illegible]
Processed By: [illegible], MKM

Sample ID	Species	Sample Type	Number of Organisms	Total Length (mm) / Weight (g)	Fillet Weight (g)	Liver Weight (g)	Gear Type	Photo #	Comments
NB03FWPC531	WP	F	1	227 / 190	55.6	–	GN	116-1224	Female
NB03LWPC531		L	1		–	3.5			
NB03FWPC532		F	1	219 / 168	46.4	–			Male
NB03LWPC532		L	1		–	3.0			
NB03FWPC533		F	1	225 / 177	40.3	–			Male
NB03LWPC533		L	1		–	2.6			
NB03FWPC534		F	1	252 / 201	55.3	–			Female
NB03LWPC534		L	1		–	2.9			
NB03FWPC535		F	1	220 / 164	45.7	–		116-1225	Female Worms/parasites in fillet
NB03LWPC535		L	1		–	2.7			
NB03FWPC536		F	1	240 / 233	68.8	–			Female
NB03LWPC536		L	1		–	5.7			
NB03FWPC537		F	1	237 / 212	54.4	–			Male
NB03LWPC537		L	1		–	3.4			

Notes: Sample time 1300

g= grams
mm = millimeters

Sample Type: W = whole body, F= fillet, L = liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net = GN
Species Code: WP = white perch

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 3
Rev. Date: March 2016
Sample Processing Form

Project: NB03 Fish Study
Sample Location: North
Sample Date: 03-15-16
Processing Date: 03-16-16

Sampled By: BWL, JBS, ICRM
Processed By: KCM, MKM

Sample ID	Species	Sample Type	Number of Organisms	Total Length (mm) / Weight (g)	Fillet Weight (g)	Liver Weight (g)	Gear Type	Photo #	Comments
JB03FWPN449	WP	F	1	222 / 140	37.6	—	TW	116-1226	Female
JB03LWPN449	WP	L	1		—	2.8	TW	↓	

Notes: Sample time 14/15

g= grams
mm = millimeters

Sample Type: W = whole body, F= fillet, L = liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net = GN
Species Code: WP = white perch

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 3
Rev. Date: March 2016
Sample Processing Form

Project: NB03 Fish Study
Sample Location: South
Sample Date: 03-16-16
Processing Date: 03-16-16

Sampled By: BWL, JBS, KRM
Processed By: ICCM, MICM

Sample ID	Species	Sample Type	Number of Organisms	Total Length (mm) / Weight (g)	Fillet Weight (g)	Liver Weight (g)	Gear Type	Photo #	Comments
VB03FWPS394	WP	F	1	238 / 235	75.2	–	GN	116-1236	Male
VB03LWPS394		L	1		–	3.1			
VB03FWPS395		F	1	242 / 226	61.2	–			Male
VB03LWPS395		L	1		–	4.0			
VB03FWPS396		F	1	265 / 379	114.3	–			Female
VB03LWPS396		L	1		–	7.7			
VB03FWPS397		F	1	232 / 251	75.4	–			Female
VB03LWPS397		L	1		–	8.1		↓	
VB03FWPS398		F	1	298 / 424	120.8	–		116-1237	Female
VB03LWPS398		L	1		–	8.7			
VB03FWPS399		F	1	261 / 235	74.0	–			Male
VB03LWPS399		L	1		–	4.6			
VB03FWPS400		F	1	239 / 210	53.2	–			Female
VB03LWPS400	↓	L	1		–	3.2	↓	↓	

Notes: Sample time 1700

g= grams
mm = millimeters

Sample Type: W = whole body, F= fillet, L = liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net = GN
Species Code: WP = white perch

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 3
Rev. Date: March 2016
Sample Processing Form

Project: NB03 Fish Study
Sample Location: NORTH
Sample Date: 3/16/2016
Processing Date: 3/17/2016

Sampled By: BWL,JBS,KRM
Processed By: MKM

Sample ID	Species	Sample Type	Number of Organisms	Total Length (mm) / Weight (g)	Fillet Weight (g)	Liver Weight (g)	Gear Type	Photo #	Comments
NB03FWPN450	WP	F	1	199 / 117	33.6		TW	116-1238	F
NB03LWPN450	WP	L	1			3.0	TW		
NB03FWPN451	WP	F	1	198 / 120	27.6		TW		F
NB03LWPN451	WP	L	1	~~219 MM~~ NM ~~165~~		2.7	TW		
NB03FWPN452	WP	F	1	219 / 165	47.3		GN	116-1239	F
NB03LWPN452	WP	L	1			3.7	GN		
NB03FWPN453	WP	F	1	221 / 184	43.2		GN		F
NB03LWPN453	WP	L	1			3.6	GN		
NB03FWPN454	WP	F	1	210 / 156	43.7		GN		F
NB03LWPN454	WP	L	1			2.9	GN		
NB03FWPN455	WP	F	1	199 / 174	45.2		GN		F
NB03LWPN455	WP	L	1			4.3	GN		

Notes:

g= grams
mm = millimeters

Sample Type: W = whole body, F= fillet, L = liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net = GN
Species Code: WP = white perch

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 3
Rev. Date: March 2016
Sample Processing Form

Project: NB03 Fish Study
Sample Location: CENTRAL
Sample Date: 3/16/2016
Processing Date: 3/17/2016

Sampled By: BWL,JBS,KRM
Processed By: MKM

Sample ID	Species	Sample Type	Number of Organisms	Total Length (mm) / Weight (g)	Fillet Weight (g)	Liver Weight (g)	Gear Type	Photo #	Comments
NB03FWPC538	WP	F	1	218 / 160	46.5	–	GN	116-1240	Male
NB03LWPC538	WP	L	1		–	5.1	GN		
NB03FWPC539	WP	F	1	248 / 224	58.6	–	GN		Female
NB03LWPC539	WP	L	1		–	5.9	GN		
NB03FWPC540	WP	F	1	231 / 208	59.0	–	GN		Male
NB03LWPC540	WP	L	1		–	3.4	GN		
NB03FWPC541	WP	F	1	230 / 184	44.5	–	GN		Female
NB03LWPC541	WP	L	1		–	3.2	GN		
NB03FWPC542	WP	F	1	278 / 381	101.5	–	GN	116-1241	Female
NB03LWPC542	WP	L	1		–	9.9	GN		
NB03FWPC543	WP	F	1	272 / 372	97.3	–	GN		Female
NB03LWPC543	WP	L	1		–	9.0	GN		
NB03FWPC544	WP	F	1	242 / 240	60.2	–	GN		Female
NB03LWPC544	WP	L	1		–	5.5	GN		
NB03LWPC545	WP	L	1	241 / 252	–	6.4	GN	116-1242	Female

Notes:

g= grams
mm = millimeters

Sample Type: W = whole body, F= fillet, L = liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net = GN
Species Code: WP = white perch

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 3
Rev. Date: March 2016
Sample Processing Form

Project: NB03 Fish Study
Sample Location: CENTRAL
Sample Date: 3/16/2016
Processing Date: 3/17/2016

Sampled By: BWL,JBS,KRM
Processed By: MKM

Sample ID	Species	Sample Type	Number of Organisms	Total Length (mm) / Weight (g)	Fillet Weight (g)	Liver Weight (g)	Gear Type	Photo #	Comments
NB03LWPC546	WP	L	1	201 / 142	–	3.6	GN	116-1242	Female
NB03LWPC547	WP	L	1	218 / 163	–	4.4	GN	↓	Female
NB03LWPC548	WP	L	1	223 / 200	–	3.6	GN	↓	Female
NB03LWPC549	WP	L	1	248 / 262	–	5.6	GN	116-1243	Female
NB03LWPC550	WP	L	1	235 / 204	–	3.4	GN	↓	Female
NB03LWPC551	WP	L	1	260 / 305	–	7.1	GN	↓	Female
NB03LWPC552	WP	L	1	232 / 201	–	5.7	GN	↓	Female
NB03LWPC553	WP	L	1	228 / 192	–	4.2	GN	↓	Female
NB03LWPC554	WP	L	1	~~235~~ 235 CT / 230	–	6.2	GN	↓	Female
NB03LWPC555	WP	L	1	230 / 192	–	5.1	GN	116-1244	Female
NB03LWPC556	WP	L	1	251 / 245	–	3.8	GN	↓	Male
NB03LWPC557	WP	L	1	216 / ~~168~~ ~~268~~ CT	–	2.9	GN	↓	Male
NB03LWPC558	WP	L	1	220 / 184	–	3.4	GN	↓	Female
NB03LWPC559	WP	L	1	224 / 158	–	2.5	GN	116-1245	Male
NB03LWPC560	WP	L	1	227 / 170	–	3.4	GN	↓	Female

Notes:

g= grams
mm = millimeters

Sample Type: W = whole body, F= fillet, L = liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net = GN
Species Code: WP = white perch

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 3
Rev. Date: March 2016
Sample Processing Form

Project: NB03 Fish Study
Sample Location: CENTRAL
Sample Date: 3/16/2016
Processing Date: 3/17/2016

Sampled By: BWL,JBS,KRM
Processed By: MKM

Sample ID	Species	Sample Type	Number of Organisms	Total Length (mm) / Weight (g)	Fillet Weight (g)	Liver Weight (g)	Gear Type	Photo #	Comments
NB03LWPC561	WP	L	1	210 / 144	–	4.0	GN	116-1245	Male
NB03LWPC562	WP	L	1	215 / 172	–	3.7	GN	↓	Female
NB03LWPC563	WP	L	1	223 / 171	–	2.8	GN	↓	Male
~~NB03LWPC564~~	~~WP~~	~~L~~	~~1~~	CT	–		GN		

Notes:

g= grams
mm = millimeters

Sample Type: W = whole body, F= fillet, L = liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net = GN
Species Code: WP = white perch

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 3
Rev. Date: March 2016
Sample Processing Form

Project: NB03 Fish Study
Sample Location: South
Sample Date: 3/16/2016
Processing Date: 3/17/2016

Sampled By: BWL,JBS,KRM
Processed By: MKM

Sample ID	Species	Sample Type	Number of Organisms	Total Length (mm) / Weight (g)	Fillet Weight (g)	Liver Weight (g)	Gear Type	Photo #	Comments
NB03LWPS401	WP	L	1	221 / 189	—	3.8	GN	116-1246	Female
NB03LWPS402	WP	L	1	225 / 200	—	3.7	GN		MALE
NB03LWPS403	WP	L	1	250 / 272	—	7.5	GN		MALE
NB03LWPS404	WP	L	1	225 / 193	—	2.5	GN		MALE
NB03LWPS405	WP	L	1	226 / 162	—	2.6	GN	116-1247	MALE
NB03LWPS406	WP	L	1	201 / 143	—	2.3	GN		MALE
NB03LWPS407	WP	L	1	232 / 179	—	2.7	GN		MALE
NB03LWPS408	WP	L	1	240 / 212	—	5.4	GN		Female
NB03LWPS409	WP	L	1	231 / 199	—	3.8	GN		Female
NB03LWPS410	WP	L	1	233 / 188	—	2.7	GN		MALE
NB03LWPS411	WP	L	1	239 / 218	—	3.9	iN	116-1248	Female
NB03LWPS412	WP	L	1	245 / 232	—	3.5	GN		MALE
NB03LWPS413	WP	L	1	225 / 179	—	1.4	GN		MALE
NB03LWPS414	WP	L	1	245 / 232	—	3.7	GN		MALE
	WP								

Notes:

g= grams
mm = millimeters

Sample Type: W = whole body, F= fillet, L = liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net = GN
Species Code: WP = white perch

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 3
Rev. Date: March 2016
Sample Processing Form

Project: NB03 Fish Study
Sample Location: CENTRAL
Sample Date: 3/17/2016
Processing Date: 3/17/2016

Sampled By: BWL,JBS,KRM
Processed By: MKM

Sample ID	Species	Sample Type	Number of Organisms	Total Length (mm) / Weight (g)	Fillet Weight (g)	Liver Weight (g)	Gear Type	Photo #	Comments
NB03LWPC564	WP	L	1	250 / 240	—	2.7	GN	116 - ~~1244~~ 1251 BM	MALE
NB03LWPC565	WP	L	1	241 / 200	—	3.4	GN		Female
NB03LWPC566	WP	L	1	252 / 243	—	4.7	GN		Female
NB03LWPC567	WP	L	1	219 / 185	—	3.5	GN		Female
NB03LWPC568	WP	L	1	238 / 195	—	2.6	GN	116 ~~1252~~	MALE
NB03LWPC569	WP	L	1	226 / 162	—	3.1	GN	~~116-1250~~ 13m	Female
NB03LWPC570	WP	L	1	255 / 239	—	4.6	GN		Female
NB03LWPC571	WP	L	1	250 / 244	—	4.5	GN		MALE
NB03LWPC572	WP	L	1	252 / 260	—	5.4	GN		Female
NB03LWPC573	WP	L	1	235 / 226	—	4.9	GN		Female
NB03LWPC574	WP	L	1	238 / 225	—	5.1	GN	116 1253 BM	Female
NB03LWPC575	WP	L	1	260 / 270	—	3.1	GN		MALE
NB03LWPC576	WP	L	1	262 / 300	—	5.9	GN		Female
NB03LWPC577	WP	L	1	235 / 200	—	4.1	GN		MALE
NB03LWPC578	WP	L	1	241 / 242	—	7.5	GN		Female

Notes:

g= grams
mm = millimeters

Sample Type: W = whole body, F= fillet, L = liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net = GN
Species Code: WP = white perch

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 3
Rev. Date: March 2016
Sample Processing Form

Project: NB03 Fish Study
Sample Location: CENTRAL
Sample Date: 3/17/2016
Processing Date: 3/17/2016

Sampled By: BWL,JBS,KRM
Processed By: MKM

Sample ID	Species	Sample Type	Number of Organisms	Total Length (mm) / Weight (g)	Fillet Weight (g)	Liver Weight (g)	Gear Type	Photo #	Comments
NB03LWPC579	WP	L	1	217 / 164	—	2.8	GN	116-1253	MALE
NB03LWPC580	WP	L	1	231 / 190	—	4.2	GN		Female
NB03LWPC581	WP	L	1	247 / 220	—	6.0	GN		Female
NB03LWPC582	WP	L	1	245 / 215	—	3.6	GN	116-1254	MALE
NB03LWPC583	WP	L	1	248 / 215	—	4.2	GN		MALE
NB03LWPC584	WP	L	1	255 / 295	—	5.6	GN		Female
NB03LWPC585	WP	L	1	248 / 220	—	2.6	GN		Female
NB03LWPC586	WP	L	1	225 / 185	—	5.1	GN		Female
NB03LWPC587	WP	L	1	245 / 260	—	7.3	GN		Female
NB03LWPC588	WP	L	1	240 / 230	—	4.1	GN		Female
NB03LWPC589	WP	L	1	238 / 225	—	4.7	GN		MALE
NB03LWPC590	WP	L	1	220 / 185	—	4.0	GN	116-1255	Female
NB03LWPC591	WP	L	1	232 / 210	—	4.4	GN		Female
NB03LWPC592	WP	L	1	220 / 160	—	2.5	GN		MALE
NB03LWPC593	WP	L	1	230 / 210	—	4.8	GN		Female

Notes:

g= grams
mm = millimeters

Sample Type: W = whole body, F= fillet, L = liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net = GN
Species Code: WP = white perch

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 3
Rev. Date: March 2016
Sample Processing Form

Project: NB03 Fish Study
Sample Location: CENTRAL
Sample Date: 3/17/2016
Processing Date: 3/17/2016

Sampled By: BWL,JBS,KRM
Processed By: MKM

Sample ID	Species	Sample Type	Number of Organisms	Total Length (mm) / Weight (g)	Fillet Weight (g)	Liver Weight (g)	Gear Type	Photo #	Comments
NB03LWPC594	WP	L	1	223 / 180	—	3.1 ~~116-1~~ BM	GN	116-1255	Female
NB03LWPC595	WP	L	1	225 / 180	—	2.6	GN		MALE
NB03LWPC596	WP	L	1	250 / 270	—	6.1	GN		Female
NB03LWPC597	WP	L	1	260 / 330	—	8.4	GN		Female
NB03LWPC598	WP	L	1	265 / 310	—	BM 7.0	GN		Female
NB03LWPC599	WP	L	1	231 / 178	—	2.9	GN		Female
NB03LWPC600	WP	L	1	185 / 95	—	1.5	GN	116-1260	Female
NB03LWPC601	WP	L	1	232 / 230	—	3.8	GN		MALE
NB03LWPC602	WP	L	1	230 / 205	—	4.6	GN		Female
NB03LWPC603	WP	L	1	225 / 190	—	3.5	GN		Female
NB03LWPC604	WP	L	1	248 / 250	—	3.8	GN		MALE
NB03LWPC605	WP	L	1	240 / 220	—	4.1	GN		MALE
NB03LWPC606	WP	L	1	245 / 245	—	4.0	GN		Female
NB03LWPC607	WP	L	1	245 / 250	—	6.2	GN		Female
NB03LWPC608	WP	L	1	260 / 285	—	6.0	GN	116-1263	Female

Notes:

g= grams
mm = millimeters

Sample Type: W = whole body, F= fillet, L = liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net = GN
Species Code: WP = white perch

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 3
Rev. Date: March 2016
Sample Processing Form

Project: NB03 Fish Study
Sample Location: CENTRAL
Sample Date: 3/17/2016
Processing Date: 3/17/2016

Sampled By: BWL,JBS,KRM
Processed By: MKM

Sample ID	Species	Sample Type	Number of Organisms	Total Length (mm) / Weight (g)	Fillet Weight (g)	Liver Weight (g)	Gear Type	Photo #	Comments
NB03LWPC609	WP	L	1	235 / 190	—	2.9	GN	116-1263	MALE
NB03LWPC610	WP	L	1	265 / 305	—	6.3	GN		Female
NB03LWPC611	WP	L	1	268 / 318	—	7.0	GN		Female
NB03LWPC612	WP	L	1	236 / 220	—	5.2	GN		Female
NB03LWPC613	WP	L	1	228 / 215	—	4.3	GN		Male
NB03LWPC614	WP	L	1	250 / 280	—	6.8	GN		Female
NB03LWPC615	WP	L	1	230 / 164	—	3.6	GN	116-1264	Female
NB03LWPC616	WP	L	1	236 / 200	—	6.0	GN		"
NB03LWPC617	WP	L	1	236 / 202	—	4.7	GN		"
NB03LWPC618	WP	L	1	240 / 186	—	4.9	GN		"
NB03LWPC619	WP	L	1	228 / 180	—	5.1	GN		"
NB03LWPC620	WP	L	1	248 / 199	—	3.8	GN		Male
NB03LWPC621	WP	L	1	252 / 247	—	4.6	GN		Female
NB03LWPC622	WP	L	1	212 / 150	—	2.7	GN		Male
NB03LWPC623	WP	L	1	219 / 161	—	2.4	GN		Male

Notes:

g= grams
mm = millimeters

Sample Type: W = whole body, F= fillet, L = liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net = GN
Species Code: WP = white perch

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 3
Rev. Date: March 2016
Sample Processing Form

Project: NB03 Fish Study
Sample Location: CENTRAL
Sample Date: 3/17/2016
Processing Date: 3/17/2016

Sampled By: BWL,JBS,KRM
Processed By: MKM

Sample ID	Species	Sample Type	Number of Organisms	Total Length (mm) / Weight (g)	Fillet Weight (g)	Liver Weight (g)	Gear Type	Photo #	Comments
NB03LWPC624	WP	L	1	238 / 192		2.4	GN	116-1264	MALE
NB03LWPC625	WP	L	1	217 / 160		2.9	GN	↓	MALE
NB03LWPC626	WP	L	1	220 / 190		3.4	GN	↓	FEMALE
							GN		
							GN		
							GN		
							GN		
							GN		
							GN		
							GN		
							GN		
							GN		
							GN		
							GN		
							GN		
							GN		

Notes:

g= grams
mm = millimeters

Sample Type: W = whole body, F= fillet, L = liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net = GN
Species Code: WP = white perch

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 3
Rev. Date: March 2016
Sample Processing Form

Project: NB03 Fish Study
Sample Location: CENTRAL
Sample Date: 3/18/2016
Processing Date: 3/18/2016

Sampled By: BWL,JBS,KRM
Processed By: MKM

Sample ID	Species	Sample Type	Number of Organisms	Total Length (mm) / Weight (g)	Fillet Weight (g)	Liver Weight (g)	Gear Type	Photo #	Comments
NB03LWPC627	WP	L	1	248 / 230	—	3.7	GN	116 - 1265	F
NB03LWPC628	WP	L	1	195 / 115	—	2.3	GN		F
NB03LWPC629	WP	L	1	280 / 335	—	6.7	GN		?
NB03LWPC630	WP	L	1	228 / 210	—	4.3	GN		F
NB03LWPC631	WP	L	1	252 / 245	—	2.8	GN		F
NB03LWPC632	WP	L	1	215 / 175	—	3.8	GN		M
NB03LWPC633	WP	L	1	235 / 250	—	5.2	GN		F
NB03LWPC634	WP	L	1	247 / 250	—	3.3	GN		M
NB03LWPC635	WP	L	1	220 / 180	—	2.9	GN		F
NB03LWPC636	WP	L	1	228 / 190	—	3.1	GN		F
NB03LWPC637	WP	L	1	271 / 330	—	7.3	GN	116-1274	F
NB03LWPC638	WP	L	1	230 / 190	—	2.9	GN		F
NB03LWPC639	WP	L	1	238 / 210	—	3.5	GN		F
NB03LWPC640	WP	L	1	228 / 200	—	4.7	GN		F
NB03LWPC641	WP	L	1	248 / 255	—	3.5	GN		M

Notes:

g= grams
mm = millimeters

Sample Type: W = whole body, F= fillet, L = liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net = GN
Species Code: WP = white perch

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 3
Rev. Date: March 2016
Sample Processing Form

Project: NB03 Fish Study
Sample Location: CENTRAL
Sample Date: 3/18/2016
Processing Date: 3/18/2016

Sampled By: BWL,JBS,KRM
Processed By: MKM

Sample ID	Species	Sample Type	Number of Organisms	Total Length (mm) / Weight (g)	Fillet Weight (g)	Liver Weight (g)	Gear Type	Photo #	Comments
NB03LWPC642	WP	L	1	238 / 215	—	3.4	GN	116-1274	F
NB03LWPC643	WP	L	1	262 / 290	—	4.6	GN	↓	Missing eye/F
NB03LWPC644	WP	L	1	212 / 180	—	5.0	GN	↓	F
							GN		
							GN		
							GN		
							GN		
							GN		
							GN		
							GN		
							GN		
							GN		
							GN		
							GN		
							GN		

Notes:

g= grams
mm = millimeters

Sample Type: W = whole body, F= fillet, L = liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net = GN
Species Code: WP = white perch

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 3
Rev. Date: March 2016
Sample Processing Form

Project: NB03 Fish Study
Sample Location: NORTH
Sample Date: 3/18/2016
Processing Date: 3/18/2016

Sampled By: BWL,JBS,KRM
Processed By: MKM

Sample ID	Species	Sample Type	Number of Organisms	Total Length (mm) / Weight (g)	Fillet Weight (g)	Liver Weight (g)	Gear Type	Photo #	Comments
NB03FWPN456	WP	F	1	192 / 100	29.5	—	TW	16-1275	M
NB03LWPN454	WP	L	1	192 / 100	—	1.6	TW	↓	M
NB03FWPN457	WP	F	1	195 / 110	32.7	—	TW	↓	F
NB03LWPN455	WP	L	1	195 / 110	—	2.7	TW	↓	F
				/					
				/					
				/					
				/					
				/					
				/					
				/					
				/					
				/					
				/					
				/					

Notes:

g= grams
mm = millimeters

Sample Type: W = whole body, F= fillet, L = liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net = GN
Species Code: WP = white perch

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 3
Rev. Date: March 2016
Sample Processing Form

Project: NB03 Fish Study
Sample Location: NORTH
Sample Date: 3/22/2016
Processing Date: 3/23/2016

Sampled By: BWL,JBS,KRM
Processed By: MKM

Sample ID	Species	Sample Type	Number of Organisms	Total Length (mm) / Weight (g)	Fillet Weight (g)	Liver Weight (g)	Gear Type	Photo #	Comments
NB03FWPN458	WP	F	1	185 / 76	22.8		TW	116-128	MALE
NB03LWPN458	WP	L	1			1.2	TW		
NB03FWPN459	WP	F	1	219 / 150	40.9		TW		FEMALE
NB03LWPN459	WP	L	1			3.1	TW		
NB03FWPN460	WP	F	1	178 / 75	21.3		TW		MALE
NB03LWPN460	WP	L	1			1.8	TW		
NB03FWPN461	WP	F	1	182 / 92	26.5		TW		MALE
NB03LWPN461	WP	L	1			2.3	TW		

Notes:

g= grams
mm = millimeters

Sample Type: W = whole body, F= fillet, L = liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net = GN
Species Code: WP = white perch

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 3
Rev. Date: March 2016
Sample Processing Form

Project: NB03 Fish Study
Sample Location: NORTH
Sample Date: 3/23/2016
Processing Date: 3/24/2016

Sampled By: BWL,JBS,KRM
Processed By: MKM

Sample ID	Species	Sample Type	Number of Organisms	Total Length (mm) / Weight (g)	Fillet Weight (g)	Liver Weight (g)	Gear Type	Photo #	Comments
NB03FWPN462	WP	F	1	276 / 322	85.9		GN	116-1282	female
NB03LWPN462	WP	L	1			7.1	GN		
NB03FWPN463	WP	F	1	251 / 283	87.9		GN		female
NB03LWPN463	WP	L	1			8.3	GN		
NB03FWPN464	WP	F	1	272 / 338	110.0		GN		female
NB03LWPN464	WP	L	1			8.3	GN	116-1282	
NB03FWPN465	WP	F	1	270 / 350	111.1		GN	116-1283	female
NB03LWPN465	WP	L	1			9.3	GN		
NB03FWPN466	WP	F	1	242 / 251	73.4		GN		female
NB03LWPN466	WP	L	1			6.9	GN		
NB03FWPN467	WP	F	1	252 / 238	69.5		GN		female
NB03LWPN467	WP	L	1			4.6	GN		
NB03FWPN468	WP	F	1	248 / 229	65.4		GN		female
NB03LWPN468	WP	L	1			5.1	GN	116-1283	
NB03FWPN469	WP	F	1	226 / 202	59.3		GN	116-1284	female

Notes:

g= grams
mm = millimeters

Sample Type: W = whole body, F= fillet, L = liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net = GN
Species Code: WP = white perch

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 3
Rev. Date: March 2016
Sample Processing Form

Project: NB03 Fish Study
Sample Location: NORTH
Sample Date: 3/23/2016
Processing Date: 3/24/2016

Sampled By: BWL,JBS,KRM
Processed By: MKM

Sample ID	Species	Sample Type	Number of Organisms	Total Length (mm) / Weight (g)	Fillet Weight (g)	Liver Weight (g)	Gear Type	Photo #	Comments
NB03LWPN469	WP	L	1			4.6	GN	116-1284	
NB03FWPN470	WP	F	1	232 / 208	67.6		GN		female
NB03LWPN470	WP	L	1			3.9	GN		
NB03FWPN471	WP	F	1	213 / 171	56.6		GN		male
NB03LWPN471	WP	L	1			2.1 ~~5.6~~	GN		
NB03FWPN472	WP	F	1	240 / 226	66.4		GN	↓	female
NB03LWPN472	WP	L	1			5.3	GN	116-1284	
NB03FWPN473	WP	F	1	225 / 184	58.1		TW	116-1285	female
NB03LWPN473	WP	L	1			3.6	TW		
NB03FWPN474	WP	F	1	231 / 207	63.2		TW		female
NB03LWPN474	WP	L	1			3.2	TW		
NB03FWPN475	WP	F	1	238 / 210	63.9		TW	↓	male
NB03LWPN475	WP	L	1			2.7	TW	116-1285	
NB03LWPN476	WP	L	1	231 / 201		4.7	TW	116-1286	female
NB03LWPN477	WP	L	1	212 / 161		2.7	TW	↓	male

Notes:

g= grams
mm = millimeters

Sample Type: W = whole body, F= fillet, L = liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net = GN
Species Code: WP = white perch

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 3
Rev. Date: March 2016
Sample Processing Form

Project: NB03 Fish Study
Sample Location: NORTH
Sample Date: 3/23/2016
Processing Date: 3/24/2016

Sampled By: BWL,JBS,KRM
Processed By: MKM

Sample ID	Species	Sample Type	Number of Organisms	Total Length (mm) / Weight (g)	Fillet Weight (g)	Liver Weight (g)	Gear Type	Photo #	Comments
NB03LWPN478	WP	L	1	195 / 96		1.6	TW	116-1286	male
NB03LWPN479	WP	L	1	190 / 95		2.2	TW	116-1287	female
NB03LWPN480	WP	L	1	176 / 84		2.1	TW	↓	female
NB03LWPN481	WP	L	1	218 / 170		4.2	TW	↓	female
NB03LWPN482	WP	L	1	175 / 85		2.3	TW	116-1287	female
NB03LWPN483	WP	L	1	~~22~~210 / 158		5.4	TW	116-1288	female
NB03LWPN484	WP	L	1	198 / 122		2.7	TW	↓	male
NB03LWPN485	WP	L	1	200 / 108		2.7	TW	116-1288	female
NB03LWPN486	WP	L	1	190 / 108		2.6	TW	116-1289	male
NB03LWPN487	WP	L	1	202 / 143		3.2	TW	↓	male
NB03LWPN488	WP	L	1	196 / 114		2.4	TW	↓	male
NB03LWPN489	WP	L	1	180 / 80		1.3	TW	116-1289	male
							TW		
							TW		
							TW		

Notes:

g= grams
mm = millimeters

Sample Type: W = whole body, F= fillet, L = liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net = GN
Species Code: WP = white perch

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 3
Rev. Date: March 2016
Sample Processing Form

Project: NB03 Fish Study
Sample Location: NORTH
Sample Date: 3/24/2016
Processing Date: 3/24/2016

Sampled By: BWL,JBS,KRM
Processed By: MKM

Sample ID	Species	Sample Type	Number of Organisms	Total Length (mm) / Weight (g)	Fillet Weight (g)	Liver Weight (g)	Gear Type	Photo #	Comments
NB03LWPN490	WP	L	1	208 / ~~22~~ 126		3.5	TW	116-1290	female
NB03LWPN491	WP	L	1	192 / 90		1.6	TW	↓	female
NB03LWPN492	WP	L	1	192 / 94		1.9	TW	↓	female
NB03LWPN493	WP	L	1	193 / 111		2.8	TW	116-1290	female
NB03LWPN494	WP	L	1	205 / 122		3.7	TW	116-1291	female
NB03LWPN495	WP	L	1	191 / 101		1.3	TW	↓	male
NB03LWPN496	WP	L	1	198 / 124		2.7	TW	↓	female
NB03LWPN497	WP	L	1	202 / 140		3.5	TW	116-1291	female
NB03LWPN498	WP	L	1	230 / 214		5.1	TW	116-1292	female
NB03LWPN499	WP	L	1	188 / 92		1.6	TW	↓	male
NB03LWPN500	WP	L	1	184 / 88		1.8	TW	↓	female
NB03LWPN501	WP	L	1	188 / 84		2.4	TW	116-1292	female
NB03LWPN502	WP	L	1	216 / 136		3.4	TW	116-1293	male
NB03LWPN503	WP	L	1	190 / 103		2.7	TW	↓	male
NB03LWPN504	WP	L	1	225 / 191		4.5	TW	↓	female

Notes:

g= grams
mm = millimeters

Sample Type: W = whole body, F= fillet, L = liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net = GN
Species Code: WP = white perch

Sample Processing Form

Title: Fish Sampling and Analysis
Quality Assurance Project Plan
Revision Number: 3
Rev. Date: March 2016
Sample Processing Form

Project: NB03 Fish Study
Sample Location: NORTH
Sample Date: 3/24/2016
Processing Date: 3/24/2016

Sampled By: BWL,JBS,KRM
Processed By: MKM

Sample ID	Species	Sample Type	Number of Organisms	Total Length (mm) / Weight (g)	Fillet Weight (g)	Liver Weight (g)	Gear Type	Photo #	Comments
NB03LWPN505	WP	L	1	255 / 275		7.2	TW	116-123	female

Notes:

g= grams
mm = millimeters

Sample Type: W = whole body, F= fillet, L = liver
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net = GN
Species Code: WP = white perch

APPENDIX F

Clam Sampling
Newark Bay Study Area
LOCATION COORDINATE DATA (Field observed coordinates)
Draft: For Discussion Purposes Only

Key

Study Area	NB	Newark Bay
Zone	NBN	North Zone
Intertidal Area	NBN122	Intertidal Area 122 in North Zone
Station	NBN122A	Station A in Intertidal Area 122

Zone	Intertidal Area	Station	Location Count	Collection Method	Easting (X)	Northing (Y)	Comments
NBN	122	NBN122A	NBN122A-01	Clam Shovel	599735.580	686897.410	
NBN	122	NBN122A	NBN122A-02	Clam Shovel	599736.360	686904.659	
NBN	122	NBN122A	NBN122A-03	Clam Shovel	599734.020	686903.971	
NBN	122	NBN122A	NBN122A-04	Clam Shovel	599733.280	686889.500	
NBN	122	NBN122A	NBN122A-05	Clam Shovel	599728.300	686887.879	
NBN	122	NBN122A	NBN122A-06	Clam Shovel	599725.080	686892.380	
NBN	122	NBN122A	NBN122A-07	Clam Shovel	599724.230	686895.661	
NBN	122	NBN122A	NBN122A-08	Clam Shovel	599713.240	686894.631	
NBN	122	NBN122A	NBN122A-09	Clam Shovel	599718.590	686890.599	
NBN	122	NBN122A	NBN122A-10	Clam Shovel	599717.620	686885.210	
NBN	122	NBN122A	NBN122A-11	Clam Shovel	599714.640	686887.131	
NBN	122	NBN122A	NBN122A-12	Clam Shovel	599712.000	686883.039	
NBN	122	NBN122A	NBN122A-13	Clam Shovel	599710.240	686879.170	
NBN	122	NBN122A	NBN122A-14	Clam Shovel	599708.100	686876.369	
NBN	122	NBN122A	NBN122A-15	Clam Shovel	599705.010	686879.670	
NBN	122	NBN122A	NBN122A-16	Clam Shovel	599704.720	686874.420	
NBN	122	NBN122A	NBN122A-17	Clam Shovel	599702.170	686878.729	
NBN	122	NBN122A	NBN122A-18	Clam Shovel	599698.070	686873.999	
NBN	122	NBN122A	NBN122A-19	Clam Shovel	599689.360	686876.490	
NBN	122	NBN122A	NBN122A-20	Clam Shovel	599698.840	686866.771	
NBN	122	NBN122A	NBN122A-21	Clam Shovel	599685.350	686856.299	
NBN	122	NBN122A	NBN122A-22	Clam Shovel	599680.020	686855.061	
NBN	122	NBN122A	NBN122A-23	Clam Shovel	599679.470	686850.650	
NBN	122	NBN122A	NBN122A-24	Clam Shovel	599736.410	686899.251	
NBN	122	NBN122A	NBN122A-25	Clam Shovel	599680.540	686850.959	
NBN	122	NBN122A	NBN122A-26	Clam Shovel	599689.800	686876.320	
NBN	122	NBN122A	NBN122A-27	Clam Shovel	599711.880	686895.101	
NBN	122	NBN122B	NBN122B-01	Clam Shovel	599942.330	687072.019	

[a] NAD83 New Jersey State Plane (ft)

Zone	Intertidal Area	Station	Location Count	Collection Method	Easting (X)	Northing (Y)	Comments
NBN	122	NBN122B	NBN122B-02	Clam Shovel	599959.120	687073.739	
NBN	122	NBN122B	NBN122B-03	Clam Shovel	599933.650	687054.920	
NBN	122	NBN122B	NBN122B-04	Clam Shovel	599919.690	687048.310	
NBN	122	NBN122B	NBN122B-05	Clam Shovel	599910.710	687029.990	
NBN	122	NBN122B	NBN122B-06	Clam Shovel	599916.950	687020.120	
NBN	122	NBN122B	NBN122B-07	Clam Shovel	599949.080	687011.490	
NBN	122	NBN122B	NBN122B-08	Clam Shovel	599956.100	687017.399	
NBN	122	NBN122B	NBN122B-09	Clam Shovel	599948.420	687037.089	
NBN	122	NBN122B	NBN122B-10	Clam Shovel	599941.130	687049.710	
NBN	122	NBN122C	NBN122C-01	Clam Shovel	600101.160	687105.430	
NBN	122	NBN122C	NBN122C-02	Clam Shovel	600114.020	687087.030	
NBN	122	NBN122C	NBN122C-03	Clam Shovel	600141.770	687097.550	
NBN	122	NBN122C	NBN122C-04	Clam Shovel	600164.860	687091.041	
NBN	122	NBN122C	NBN122C-05	Clam Shovel	600180.650	687103.351	
NBN	122	NBN122C	NBN122C-06	Clam Shovel	600208.260	687151.161	
NBN	122	NBN122C	NBN122C-07	Clam Shovel	600156.520	687114.781	
NBN	122	NBN122C	NBN122C-08	Clam Shovel	600131.580	687115.499	
NBN	123	NBN123A	NBN123A-01	Clam Shovel	601649.390	681632.169	
NBN	123	NBN123A	NBN123A-02	Clam Shovel	601659.470	681651.800	
NBN	123	NBN123A	NBN123A-03	Clam Shovel	601678.700	681654.450	
NBN	123	NBN123A	NBN123A-04	Clam Shovel	601702.360	681592.651	
NBN	123	NBN123A	NBN123A-05	Clam Shovel	601709.710	681543.609	
NBN	123	NBN123A	NBN123A-06	Clam Shovel	601645.320	681518.680	
NBN	123	NBN123A	NBN123A-07	Clam Shovel	601611.080	681538.879	
NBN	123	NBN123A	NBN123A-08	Clam Shovel	601615.980	681627.929	
NBN	123	NBN123B	NBN123B-01	Clam Shovel	602306.520	681058.430	
NBN	123	NBN123B	NBN123B-02	Clam Shovel	602331.150	681052.960	
NBN	123	NBN123B	NBN123B-03	Clam Shovel	602330.280	681033.680	
NBN	123	NBN123B	NBN123B-04	Clam Shovel	602353.410	681012.870	
NBN	123	NBN123B	NBN123B-05	Clam Shovel	602343.530	680998.299	
NBN	123	NBN123B	NBN123B-06	Clam Shovel	602317.290	681015.331	
NBN	123	NBN123B	NBN123B-07	Clam Shovel	602302.230	681038.461	
NBC	124	NBC124	NBC124-01	Clam Shovel	597867.400	671666.230	

[a] NAD83 New Jersey State Plane (ft)

Zone	Intertidal Area	Station	Location Count	Collection Method	Easting (X)	Northing (Y)	Comments
NBC	124	NBC124	NBC124-02	Clam Shovel	597841.820	671646.779	
NBC	124	NBC124	NBC124-03	Clam Shovel	597826.870	671640.340	
NBC	124	NBC124	NBC124-04	Clam Shovel	597812.340	671629.820	
NBC	124	NBC124	NBC124-05	Clam Shovel	597799.420	671618.260	
NBC	124	NBC124	NBC124-06	Clam Shovel	597833.080	671633.899	
NBC	124	NBC124	NBC124-07	Clam Shovel	597839.520	671635.551	
NBC	124	NBC124	NBC124-08	Clam Shovel	597895.820	671683.950	
NBC	125	NBC125	NBC125-01	Clam Shovel	596590.420	670078.290	
NBC	125	NBC125	NBC125-02	Clam Shovel	596571.240	670040.590	
NBC	125	NBC125	NBC125-03	Clam Shovel	596599.650	670093.940	
NBC	125	NBC125	NBC125-04	Clam Shovel	596596.520	670169.871	
NBC	125	NBC125	NBC125-05	Clam Shovel	596623.680	670269.140	
NBC	125	NBC125	NBC125-06	Clam Shovel	596587.240	670161.200	
NBC	125	NBC125	NBC125-07	Clam Shovel	596579.550	670104.270	
NBC	127	NBC127A	NBC127A-01	Clam Shovel	593976.750	665808.610	
NBC	127	NBC127A	NBC127A-02	Clam Shovel	593992.840	665826.610	
NBC	127	NBC127A	NBC127A-03	Clam Shovel	594038.350	665863.970	
NBC	127	NBC127A	NBC127A-04	Clam Shovel	594065.800	665908.670	
NBC	127	NBC127A	NBC127A-05	Clam Shovel	594063.590	665927.520	
NBC	127	NBC127A	NBC127A-06	Clam Shovel	594033.100	665890.030	
NBC	127	NBC127A	NBC127A-07	Clam Shovel	593982.750	665840.060	
NBC	127	NBC127A	NBC127A-08	Clam Shovel	593968.670	665833.810	
NBC	127	NBC127B	NBC127B-01	Clam Shovel	593076.920	664720.090	
NBC	127	NBC127B	NBC127B-02	Clam Shovel	593054.110	664711.640	
NBC	127	NBC127B	NBC127B-03	Clam Shovel	593072.510	664691.640	
NBC	127	NBC127B	NBC127B-04	Clam Shovel	593094.180	664688.850	
NBC	127	NBC127B	NBC127B-05	Clam Shovel	593127.070	664703.190	
NBC	127	NBC127B	NBC127B-06	Clam Shovel	593103.770	664719.430	
NBC	127	NBC127B	NBC127B-07	Clam Shovel	593084.510	664719.850	
NBS	129	NBS129	NBS129-01	Clam Shovel	582102.720	659824.180	
NBS	129	NBS129	NBS129-02	Clam Shovel	582097.170	659820.000	
NBS	129	NBS129	NBS129-03	Clam Shovel	582095.100	659820.730	
NBS	129	NBS129	NBS129-04	Clam Shovel	582097.130	659816.550	

[a] NAD83 New Jersey State Plane (ft)

Zone	Intertidal Area	Station	Location Count	Collection Method	Easting (X)	Northing (Y)	Comments
NBS	129	NBS129	NBS129-05	Clam Shovel	582096.170	659814.370	
NBS	129	NBS129	NBS129-06	Clam Shovel	582094.570	659804.940	
NBS	129	NBS129	NBS129-07	Clam Shovel	582087.310	659838.850	
NBS	129	NBS129	NBS129-08	Clam Shovel	582084.640	659835.410	
NBS	129	NBS129	NBS129-09	Clam Shovel	582078.970	659828.540	
NBS	129	NBS129	NBS129-10	Clam Shovel	582079.550	659827.400	
NBS	129	NBS129	NBS129-11	Clam Shovel	582079.550	659827.400	
NBS	129	NBS129	NBS129-12	Clam Shovel	582074.700	659833.900	
NBS	130	NBS130	NBS130-01	Clam Shovel	585154.910	663932.150	
NBS	130	NBS130	NBS130-02	Clam Shovel	585153.010	663935.310	
NBS	130	NBS130	NBS130-03	Clam Shovel	585142.470	663953.270	
NBS	130	NBS130	NBS130-04	Clam Shovel	585130.910	663947.790	
NBS	130	NBS130	NBS130-05	Clam Shovel	585133.110	663951.450	
NBS	130	NBS130	NBS130-06	Clam Shovel	585139.160	663956.580	
NBS	130	NBS130	NBS130-07	Clam Shovel	585137.740	663960.000	
NBS	130	NBS130	NBS130-08	Clam Shovel	585144.510	663964.110	
NBS	130	NBS130	NBS130-09	Clam Shovel	585139.320	663966.790	
NBS	130	NBS130	NBS130-10	Clam Shovel	585140.530	663969.730	
NBS	130	NBS130	NBS130-11	Clam Shovel	585136.650	663965.020	
NBS	130	NBS130	NBS130-12	Clam Shovel	585126.490	663961.170	
NBS	130	NBS130	NBS130-13	Clam Shovel	585127.570	663974.080	
NBS	130	NBS130	NBS130-14	Clam Shovel	585130.500	663978.480	
NBS	130	NBS130	NBS130-15	Clam Shovel	585135.110	663973.830	
NBS	130	NBS130	NBS130-16	Clam Shovel	585139.210	663973.400	
NBS	130	NBS130	NBS130-17	Clam Shovel	585143.930	663977.870	
NBS	130	NBS130	NBS130-18	Clam Shovel	585140.550	663969.330	
NBS	130	NBS130	NBS130-19	Clam Shovel	585146.290	663965.290	
NBS	131	NBS131A	NBS131A-01	Clam Shovel	586575.000	665598.290	
NBS	131	NBS131A	NBS131A-02	Clam Shovel	586569.600	665604.600	
NBS	131	NBS131A	NBS131A-03	Clam Shovel	586577.410	665610.030	
NBS	131	NBS131A	NBS131A-04	Clam Shovel	586579.570	665603.340	
NBS	131	NBS131A	NBS131A-05	Clam Shovel	586591.510	665603.330	
NBS	131	NBS131A	NBS131A-06	Clam Shovel	586589.490	665604.910	

[a] NAD83 New Jersey State Plane (ft)

Zone	Intertidal Area	Station	Location Count	Collection Method	Easting (X)	Northing (Y)	Comments
NBS	131	NBS131A	NBS131A-07	Clam Shovel	586594.040	665610.970	
NBS	131	NBS131A	NBS131A-08	Clam Shovel	586585.950	665619.720	
NBS	131	NBS131A	NBS131A-09	Clam Shovel	586581.930	665620.070	
NBS	131	NBS131A	NBS131A-10	Clam Shovel	586590.580	665625.370	
NBS	131	NBS131A	NBS131A-11	Clam Shovel	586598.500	665631.510	
NBS	131	NBS131A	NBS131A-12	Clam Shovel	586611.450	665616.900	
NBS	131	NBS131A	NBS131A-13	Clam Shovel	586625.600	665633.320	
NBS	131	NBS131A	NBS131A-14	Clam Shovel	586638.170	665624.790	
NBS	131	NBS131A	NBS131A-15	Clam Shovel	586647.300	665642.420	
NBS	131	NBS131A	NBS131A-16	Clam Shovel	586677.320	665651.590	
NBS	131	NBS131A	NBS131A-17	Clam Shovel	586561.820	665587.770	
NBS	131	NBS131A	NBS131A-18	Clam Shovel	586552.830	665588.430	
NBS	131	NBS131A	NBS131A-19	Clam Shovel	586558.000	665581.490	
NBS	131	NBS131A	NBS131A-20	Clam Shovel	586557.940	665571.380	
NBS	131	NBS131A	NBS131A-21	Clam Shovel	586551.680	665574.210	
NBS	131	NBS131A	NBS131A-22	Clam Shovel	586540.210	665570.370	
NBS	131	NBS131A	NBS131A-23	Clam Shovel	586542.500	665565.090	
NBS	131	NBS131A	NBS131A-24	Clam Shovel	586539.480	665557.320	
NBS	131	NBS131A	NBS131A-25	Clam Shovel	586539.390	665541.480	
NBS	131	NBS131A	NBS131A-26	Clam Shovel	586520.780	665564.170	
NBS	131	NBS131B	NBS131B-01	Clam Shovel	586922.730	666084.970	
NBS	131	NBS131B	NBS131B-02	Clam Shovel	586922.930	666093.420	
NBS	131	NBS131B	NBS131B-03	Clam Shovel	586931.610	666100.520	
NBS	131	NBS131B	NBS131B-04	Clam Shovel	586948.330	666114.600	
NBS	131	NBS131B	NBS131B-05	Clam Shovel	586949.950	666123.240	
NBS	131	NBS131B	NBS131B-06	Clam Shovel	586952.180	666129.520	
NBS	131	NBS131B	NBS131B-07	Clam Shovel	586954.040	666138.930	
NBS	131	NBS131B	NBS131B-08	Clam Shovel	586958.560	666133.020	
NBS	131	NBS131B	NBS131B-09	Clam Shovel	586962.310	666129.740	
NBS	131	NBS131B	NBS131B-10	Clam Shovel	586969.140	666131.410	
NBS	131	NBS131B	NBS131B-11	Clam Shovel	586964.840	666133.250	
NBS	131	NBS131B	NBS131B-12	Clam Shovel	586964.740	666139.920	
NBS	131	NBS131B	NBS131B-13	Clam Shovel	586959.400	666144.430	

[a] NAD83 New Jersey State Plane (ft)

Zone	Intertidal Area	Station	Location Count	Collection Method	Easting (X)	Northing (Y)	Comments
NBS	131	NBS131B	NBS131B-14	Clam Shovel	586957.940	666147.050	
NBS	131	NBS131B	NBS131B-15	Clam Shovel	586956.990	666151.690	
NBS	131	NBS131B	NBS131B-16	Clam Shovel	586979.490	666136.240	
NBS	131	NBS131B	NBS131B-17	Clam Shovel	586986.960	666133.210	
NBS	131	NBS131B	NBS131B-18	Clam Shovel	586989.500	666122.510	
NBS	131	NBS131B	NBS131B-19	Clam Shovel	586986.910	666113.140	
NBS	131	NBS131B	NBS131B-20	Clam Shovel	587034.340	666143.290	
NBS	131	NBS131B	NBS131B-21	Clam Shovel	587029.740	666144.380	
NBS	131	NBS131B	NBS131B-22	Clam Shovel	587029.340	666148.410	
NBS	131	NBS131B	NBS131B-23	Clam Shovel	587034.180	666152.280	
NBS	131	NBS131B	NBS131B-24	Clam Shovel	587047.550	666162.230	
NBS	131	NBS131B	NBS131B-25	Clam Shovel	587041.830	666168.780	
NBS	131	NBS131B	NBS131B-26	Clam Shovel	587031.360	666166.100	
NBS	131	NBS131B	NBS131B-27	Clam Shovel	587021.050	666169.510	
NBS	131	NBS131B	NBS131B-28	Clam Shovel	587023.990	666173.530	
NBS	131	NBS131B	NBS131B-29	Clam Shovel	587022.520	666178.120	
NBS	131	NBS131B	NBS131B-30	Clam Shovel	587014.980	666180.010	
NBS	131	NBS131B	NBS131B-31	Clam Shovel	587012.910	666172.530	
NBS	131	NBS131B	NBS131B-32	Clam Shovel	587006.250	666173.730	
NBS	131	NBS131B	NBS131B-33	Clam Shovel	586999.170	666168.100	
NBS	131	NBS131B	NBS131B-34	Clam Shovel	587000.870	666171.460	
NBS	131	NBS131B	NBS131B-35	Clam Shovel	586999.370	666176.520	
NBS	131	NBS131B	NBS131B-36	Clam Shovel	587004.100	666177.990	
NBS	131	NBS131B	NBS131B-37	Clam Shovel	587003.590	666182.490	
NBS	131	NBS131B	NBS131B-38	Clam Shovel	586989.780	666179.530	
NBN	132	NBN132A	NBN132A-01	Clam Shovel	595862.320	678725.550	
NBN	132	NBN132A	NBN132A-02	Clam Shovel	595863.550	678729.139	
NBN	132	NBN132A	NBN132A-03	Clam Shovel	595863.350	678731.979	
NBN	132	NBN132A	NBN132A-04	Clam Shovel	595859.300	678738.751	
NBN	132	NBN132A	NBN132A-05	Clam Shovel	595865.510	678736.151	
NBN	132	NBN132A	NBN132A-06	Clam Shovel	595868.570	678744.071	
NBN	132	NBN132A	NBN132A-07	Clam Shovel	595871.770	678736.090	
NBN	132	NBN132A	NBN132A-08	Clam Shovel	595875.060	678730.960	

[a] NAD83 New Jersey State Plane (ft)

Zone	Intertidal Area	Station	Location Count	Collection Method	Easting (X)	Northing (Y)	Comments
NBN	132	NBN132A	NBN132A-09	Clam Shovel	595876.700	678734.721	
NBN	132	NBN132A	NBN132A-10	Clam Shovel	595879.980	678731.880	
NBN	132	NBN132A	NBN132A-11	Clam Shovel	595884.500	678731.090	
NBN	132	NBN132A	NBN132A-12	Clam Shovel	595880.190	678727.541	
NBN	132	NBN132A	NBN132A-13	Clam Shovel	595876.050	678725.810	
NBN	132	NBN132A	NBN132A-14	Clam Shovel	595871.290	678725.039	
NBN	132	NBN132A	NBN132A-15	Clam Shovel	595867.410	678724.060	
NBN	132	NBN132A	NBN132A-16	Clam Shovel	595869.140	678720.671	
NBN	132	NBN132A	NBN132A-17	Clam Shovel	595876.500	678721.020	
NBN	132	NBN132A	NBN132A-18	Clam Shovel	595879.690	678725.369	
NBN	132	NBN132A	NBN132A-19	Clam Shovel	595890.720	678722.789	
NBN	132	NBN132A	NBN132A-20	Clam Shovel	595884.890	678719.700	
NBN	132	NBN132A	NBN132A-21	Clam Shovel	595879.930	678716.151	
NBN	132	NBN132A	NBN132A-22	Clam Shovel	595878.060	678711.769	
NBN	132	NBN132A	NBN132A-23	Clam Shovel	595878.570	678704.770	
NBN	132	NBN132A	NBN132A-24	Clam Shovel	595883.070	678704.160	
NBN	132	NBN132A	NBN132A-25	Clam Shovel	595883.150	678709.971	
NBN	132	NBN132A	NBN132A-26	Clam Shovel	595892.810	678716.169	
NBN	132	NBN132B	NBN132B-01	Clam Shovel	595893.080	678120.060	
NBN	132	NBN132B	NBN132B-02	Clam Shovel	595880.350	678123.530	
NBN	132	NBN132B	NBN132B-03	Clam Shovel	595888.940	678143.750	
NBN	132	NBN132B	NBN132B-04	Clam Shovel	595900.820	678165.360	
NBN	132	NBN132B	NBN132B-05	Clam Shovel	595910.030	678145.650	
NBN	132	NBN132B	NBN132B-06	Clam Shovel	595907.900	678129.280	
NBN	132	NBN132B	NBN132B-07	Clam Shovel	595897.940	678095.490	
NBN	132	NBN132B	NBN132B-08	Clam Shovel	595889.550	678090.700	
NBN	132	NBN132B	NBN132B-09	Clam Shovel	595878.600	678111.030	
NBN	133	NBN133	NBN133-01	Clam Shovel	596773.580	680769.980	
NBN	133	NBN133	NBN133-02	Clam Shovel	596927.880	681024.370	
NBN	133	NBN133	NBN133-03	Clam Shovel	596948.910	681042.500	
NBN	133	NBN133	NBN133-04	Clam Shovel	596985.500	681059.021	
NBN	133	NBN133	NBN133-05	Clam Shovel	596960.000	681039.321	
NBN	133	NBN133	NBN133-06	Clam Shovel	596936.870	681049.349	

[a] NAD83 New Jersey State Plane (ft)

Zone	Intertidal Area	Station	Location Count	Collection Method	Easting (X)	Northing (Y)	Comments
NBS	134	NBS134	NBS134-01	Clam Shovel	579884.310	659737.520	
NBS	134	NBS134	NBS134-02	Clam Shovel	579888.340	659712.870	
NBS	134	NBS134	NBS134-03	Clam Shovel	579879.180	659735.000	
NBS	134	NBS134	NBS134-04	Clam Shovel	579813.980	659452.700	
NBS	134	NBS134	NBS134-05	Clam Shovel	579807.440	659441.280	
NBS	134	NBS134	NBS134-06	Clam Shovel	579805.290	659432.450	
NBS	134	NBS134	NBS134-07	Clam Shovel	579790.860	659404.600	
NBS	134	NBS134	NBS134-08	Clam Shovel	579794.090	659404.450	
NBS	134	NBS134	NBS134-09	Clam Shovel	579804.730	659414.830	
NBS	134	NBS134	NBS134-10	Clam Shovel	579813.140	659433.470	
NBS	135	NBS135	NBS135-01	Clam Shovel	581440.700	661734.520	
NBS	135	NBS135	NBS135-02	Clam Shovel	581417.670	661746.790	
NBS	135	NBS135	NBS135-03	Clam Shovel	581405.530	661752.680	
NBS	135	NBS135	NBS135-04	Clam Shovel	581373.950	661754.790	
NBS	135	NBS135	NBS135-05	Clam Shovel	581306.860	661737.740	
NBS	135	NBS135	NBS135-06	Clam Shovel	581362.470	661740.570	
NBS	135	NBS135	NBS135-07	Clam Shovel	581400.880	661735.420	
NBS	135	NBS135	NBS135-08	Clam Shovel	581433.250	661728.610	
NBC	126	NBC126	NBC126-01	Clam Shovel	595193.953	667682.020	no clams collected
NBS	129	NBS129B	NBS129B-01	Clam Shovel	583056.130	659388.790	no clams collected
NBS	129	NBS129B	NBS129B-02	Clam Shovel	583290.500	659322.320	no clams collected
NBS	129	NBS129B	NBS129B-03	Clam Shovel	583206.910	659036.510	no clams collected
NBS	128	NBS128	NBS128-01	Clam Shovel	588160.130	657448.340	no clams collected
NBS	128	NBS128	NBS128-02	Clam Shovel	588486.490	657382.910	no clams collected

[a] NAD83 New Jersey State Plane (ft)

Clam Sampling
Newark Bay Study Area
SPECIMEN TALLY - Softshell Clam (*Mya arenaria*)
Draft: For Discussion Purposes Only

Key

Study Area	NB	Newark Bay
Zone	NBN	North Zone
Intertidal Area	NBN122	Intertidal Area 122 in North Zone
Station	NBN122A	Station A in Intertidal Area 122

Zone	Intertidal Area	Station	Collection Date	Collection Time	Specimen ID	Shell Length (mm)	Weight (g)	Comments
NBN	122	NBN122A	9/17/2014	9:00	NB03CLM122A-01	44.1	9.3	
NBN	122	NBN122A	9/17/2014	9:00	NB03CLM122A-02	44.0	7.0	
NBN	122	NBN122A	9/17/2014	9:00	NB03CLM122A-03	39.7	6.2	
NBN	122	NBN122A	9/17/2014	9:00	NB03CLM122A-04	42.6	7.7	
NBN	122	NBN122A	9/17/2014	9:00	NB03CLM122A-05	44.3	7.6	
NBN	122	NBN122A	9/17/2014	9:00	NB03CLM122A-06	40.7	7.0	
NBN	122	NBN122A	9/17/2014	9:00	NB03CLM122A-07	51.9	15.1	
NBN	122	NBN122A	9/17/2014	9:00	NB03CLM122A-08	43.8	9.0	
NBN	122	NBN122A	9/17/2014	9:00	NB03CLM122A-09	40.1	6.6	
NBN	122	NBN122A	9/17/2014	9:00	NB03CLM122A-10	43.1	8.6	
NBN	122	NBN122A	9/17/2014	9:00	NB03CLM122A-11	42.3	8.3	
NBN	122	NBN122A	9/17/2014	9:00	NB03CLM122A-12	40.5	6.3	
NBN	122	NBN122A	9/17/2014	9:00	NB03CLM122A-13	44.1	9.3	
NBN	122	NBN122A	9/17/2014	9:00	NB03CLM122A-14	40.2	6.9	
NBN	122	NBN122A	9/17/2014	9:00	NB03CLM122A-15	38.4	6.3	
NBN	122	NBN122A	9/17/2014	9:00	NB03CLM122A-16	40.8	3.9	broken shell
NBN	122	NBN122A	9/17/2014	9:00	NB03CLM122A-17	43.3	8.2	
NBN	122	NBN122A	9/17/2014	9:00	NB03CLM122A-18	43.0	8.4	
NBN	122	NBN122A	9/17/2014	9:00	NB03CLM122A-19	42.5	7.8	
NBN	122	NBN122A	9/17/2014	9:00	NB03CLM122A-20	39.8	6.3	
NBN	122	NBN122A	9/17/2014	9:00	NB03CLM122A-21	43.3	5.8	broken shell
NBN	122	NBN122A	9/17/2014	9:00	NB03CLM122A-22	41.8	5.0	broken shell
NBN	122	NBN122A	9/17/2014	9:00	NB03CLM122A-23	39.9	5.3	broken shell
NBN	122	NBN122A	9/17/2014	9:00	NB03CLM122A-24	39.5	5.7	
NBN	122	NBN122A	9/17/2014	9:00	NB03CLM122A-25	43.3	8.8	
NBN	122	NBN122A	9/17/2014	9:00	NB03CLM122A-26	40.7	7.8	
NBN	122	NBN122A	9/17/2014	9:00	NB03CLM122A-27	44.9	9.1	
NBN	122	NBN122A	9/17/2014	9:00	NB03CLM122A-28	43.0	7.3	
NBN	122	NBN122A	9/17/2014	9:00	NB03CLM122A-29	38.1	4.3	
NBN	122	NBN122A	9/17/2014	9:00	NB03CLM122A-30	40.9	7.1	
NBN	122	NBN122A	9/17/2014	9:00	NB03CLM122A-31	41.1	6.9	
NBN	122	NBN122A	9/17/2014	9:00	NB03CLM122A-32	45.7	8.5	

Zone	Intertidal Area	Station	Collection Date	Collection Time	Specimen ID	Shell Length (mm)	Weight (g)	Comments
NBN	122	NBN122A	9/17/2014	9:00	NB03CLM122A-33	44.7	9.3	
NBN	122	NBN122A	9/17/2014	9:00	NB03CLM122A-34	46.6	10.4	
NBN	122	NBN122A	9/17/2014	9:00	NB03CLM122A-35	45.0	9.3	
NBN	122	NBN122A	9/17/2014	9:00	NB03CLM122A-36	47.3	10.7	
NBN	122	NBN122A	9/17/2014	9:00	NB03CLM122A-37	43.3	9.9	
NBN	122	NBN122A	9/17/2014	9:00	NB03CLM122A-38	41.4	7.8	
NBN	122	NBN122A	9/17/2014	9:00	NB03CLM122A-39	38.6	6.8	
NBN	122	NBN122A	9/17/2014	9:00	NB03CLM122A-40	42.3	9.0	
NBN	122	NBN122A	9/17/2014	9:00	NB03CLM122A-41	39.5	6.1	
NBN	122	NBN122A	9/17/2014	9:00	NB03CLM122A-42	40.3	7.3	
NBN	122	NBN122A	9/17/2014	9:00	NB03CLM122A-43	42.9	7.8	
NBN	122	NBN122A	9/17/2014	9:00	NB03CLM122A-44	41.7	7.1	
NBN	122	NBN122A	9/17/2014	9:00	NB03CLM122A-45	46.2	10.3	
NBN	122	NBN122A	9/17/2014	9:00	NB03CLM122A-46	40.1	8.2	
NBN	122	NBN122A	9/17/2014	9:00	NB03CLM122A-47	41.5	6.7	
NBN	122	NBN122A	9/17/2014	9:00	NB03CLM122A-48	41.7	7.0	
NBN	122	NBN122A	9/17/2014	9:00	NB03CLM122A-49	41.3	3.7	broken shell
NBN	122	NBN122A	9/17/2014	9:00	NB03CLM122A-50	43.5	5.2	broken shell
NBN	122	NBN122A	9/17/2014	9:00	NB03CLM122A-51	38.9	4.0	broken shell
NBN	122	NBN122A	9/17/2014	9:00	NB03CLM122A-52	43.3	5.8	broken shell
NBN	122	NBN122A	9/17/2014	9:00	NB03CLM122A-53	41.4	5.1	broken shell
NBN	122	NBN122A	9/18/2014	9:05	NB03CLM122A-54	43.9	9.0	
NBN	122	NBN122A	9/18/2014	9:05	NB03CLM122A-55	68.6	37.5	
NBN	122	NBN122A	9/18/2014	9:05	NB03CLM122A-56	49.6	7.3	broken shell
NBN	122	NBN122A	9/18/2014	9:05	NB03CLM122A-57	52.4	18.8	
NBN	122	NBN122A	9/18/2014	9:05	NB03CLM122A-58	45.4	9.1	
NBN	122	NBN122A	9/18/2014	9:05	NB03CLM122A-59	45.0	9.9	
NBN	122	NBN122A	9/18/2014	9:05	NB03CLM122A-60	45.6	8.9	
NBN	122	NBN122A	9/18/2014	9:05	NB03CLM122A-61	41.0	5.3	broken shell
NBN	122	NBN122A	9/18/2014	9:05	NB03CLM122A-62	41.4	8.3	
NBN	122	NBN122A	9/18/2014	9:05	NB03CLM122A-63	43.9	10.6	
NBN	122	NBN122A	9/18/2014	9:05	NB03CLM122A-64	44.8	11.1	
NBN	122	NBN122A	9/18/2014	9:05	NB03CLM122A-65	44.0	9.4	
NBN	122	NBN122A	9/18/2014	9:05	NB03CLM122A-66	39.6	7.1	
NBN	122	NBN122A	9/18/2014	9:05	NB03CLM122A-67	39.8	8.0	
NBN	122	NBN122A	9/18/2014	9:05	NB03CLM122A-68	44.6	10.2	
NBN	122	NBN122A	9/18/2014	9:05	NB03CLM122A-69	41.3	8.0	

Zone	Intertidal Area	Station	Collection Date	Collection Time	Specimen ID	Shell Length (mm)	Weight (g)	Comments
NBN	122	NBN122A	9/18/2014	9:05	NB03CLM122A-70	40.1	8.0	
NBN	122	NBN122A	9/18/2014	9:05	NB03CLM122A-71	40.9	8.3	
NBN	122	NBN122A	9/18/2014	9:05	NB03CLM122A-72	40.3	6.9	
NBN	122	NBN122A	9/18/2014	9:05	NB03CLM122A-73	42.5	7.8	
NBN	122	NBN122A	9/18/2014	9:05	NB03CLM122A-74	43.6	6.5	
NBN	122	NBN122A	9/18/2014	9:05	NB03CLM122A-75	38.2	6.1	
NBN	122	NBN122A	9/18/2014	9:05	NB03CLM122A-76	38.7	6.2	
NBN	122	NBN122A	9/18/2014	9:05	NB03CLM122A-77	39.2	7.2	
NBN	122	NBN122A	9/18/2014	9:05	NB03CLM122A-78	40.3	6.7	
NBN	122	NBN122A	9/18/2014	9:05	NB03CLM122A-79	40.7	7.3	
NBN	122	NBN122A	9/18/2014	9:05	NB03CLM122A-80	45.1	7.4	broken shell
NBN	122	NBN122A	9/18/2014	9:05	NB03CLM122A-81	38.7	6.0	
NBN	122	NBN122A	9/18/2014	9:05	NB03CLM122A-82	38.9	6.2	
NBN	122	NBN122A	9/18/2014	9:05	NB03CLM122A-83	40.3	7.2	
NBN	122	NBN122A	9/18/2014	9:05	NB03CLM122A-84	39.4	7.5	
NBN	122	NBN122A	9/18/2014	9:05	NB03CLM122A-85	38.5	6.0	
NBN	122	NBN122A	9/18/2014	9:05	NB03CLM122A-86	41.2	4.3	broken shell
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-01	43.6	9.1	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-02	46.0	10.3	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-03	40.1	6.9	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-04	40.3	7.8	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-05	51.8	15.2	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-06	46.3	6.7	broken shell
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-07	56.3	12.8	broken shell
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-08	43.9	10.3	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-09	43.7	10.1	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-10	47.0	7.7	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-11	44.8	12.2	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-12	45.4	7.5	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-13	45.3	6.3	broken shell
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-14	47.9	10.1	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-15	39.8	8.2	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-16	42.6	8.8	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-17	39.1	6.5	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-18	44.1	10.5	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-19	39.0	6.3	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-20	49.8	8.3	broken shell

Zone	Intertidal Area	Station	Collection Date	Collection Time	Specimen ID	Shell Length (mm)	Weight (g)	Comments
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-21	39.7	6.6	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-22	40.8	7.6	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-23	40.4	7.1	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-24	46.9	11.7	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-25	40.6	8.1	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-26	40.0	7.7	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-27	44.4	10.8	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-28	38.3	5.7	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-29	40.7	8.2	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-30	39.3	7.2	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-31	39.4	7.0	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-32	38.9	6.2	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-33	40.2	8.4	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-34	39.3	7.5	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-35	43.2	9.7	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-36	46.6	9.4	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-37	47.0	8.7	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-38	39.0	6.7	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-39	42.7	6.1	broken shell
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-40	38.4	6.6	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-41	44.3	9.0	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-42	40.4	7.2	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-43	46.0	5.0	broken shell
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-44	44.0	8.5	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-45	42.5	9.0	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-46	44.3	9.0	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-47	38.8	7.2	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-48	38.7	3.7	broken shell
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-49	39.9	5.7	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-50	38.8	7.1	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-51	40.0	7.2	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-52	42.3	7.9	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-53	43.0	9.0	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-54	44.9	10.0	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-55	41.5	7.7	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-56	39.2	7.5	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-57	39.0	7.0	

Zone	Intertidal Area	Station	Collection Date	Collection Time	Specimen ID	Shell Length (mm)	Weight (g)	Comments
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-58	40.0	7.2	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-59	38.7	5.6	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-60	38.0	6.1	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-61	44.2	10.3	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-62	42.7	6.8	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-63	39.7	7.7	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-64	39.6	4.9	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-65	43.6	7.9	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-66	40.1	7.1	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-67	44.0	8.9	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-68	43.0	8.5	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-69	39.4	6.9	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-70	44.7	9.3	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-71	42.8	9.9	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-72	40.3	7.3	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-73	41.9	7.8	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-74	40.2	7.6	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-75	42.0	5.8	broken shell
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-76	42.5	8.9	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-77	45.0	10.0	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-78	38.9	4.8	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-79	39.5	5.0	broken shell
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-80	39.4	6.5	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-81	38.2	5.8	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-82	38.2	6.6	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-83	38.2	6.3	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-84	38.5	7.4	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-85	39.8	5.5	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-86	39.2	4.8	
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-87	39.5	5.3	broken shell
NBN	122	NBN122B	9/18/2014	9:05	NB03CLM122B-88	43.6	4.6	broken shell
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-01	43.6	8.2	
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-02	44.3	6.9	broken shell
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-03	43.9	10.0	
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-04	38.6	7.1	
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-05	44.5	11.6	
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-06	44.6	10.3	

Zone	Intertidal Area	Station	Collection Date	Collection Time	Specimen ID	Shell Length (mm)	Weight (g)	Comments
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-07	45.9	10.7	
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-08	41.7	8.6	
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-09	43.2	5.9	broken shell
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-10	43.6	9.7	
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-11	48.3	7.8	
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-12	46.3	10.7	
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-13	39.2	6.8	
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-14	44.6	9.4	
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-15	38.9	7.1	
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-16	46.4	9.6	
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-17	54.9	18.0	
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-18	43.9	8.5	
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-19	41.9	7.7	
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-20	45.3	10.4	
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-21	43.7	9.1	
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-22	40.4	7.8	
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-23	46.3	10.5	
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-24	47.5	12.5	
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-25	45.9	9.7	
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-26	40.1	6.1	
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-27	42.3	8.7	
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-28	41.2	7.7	
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-29	45.7	10.1	
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-30	42.1	8.4	
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-31	44.5	10.4	
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-32	43.6	8.9	
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-33	42.7	8.4	
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-34	39.1	6.5	
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-35	44.4	10.2	
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-36	41.1	7.9	
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-37	40.7	8.5	
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-38	42.3	8.7	
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-39	43.0	7.7	
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-40	44.3	9.5	
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-41	44.3	7.0	broken shell
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-42	43.8	9.6	
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-43	43.0	8.9	

Zone	Intertidal Area	Station	Collection Date	Collection Time	Specimen ID	Shell Length (mm)	Weight (g)	Comments
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-44	38.2	6.0	
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-45	38.0	5.7	
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-46	44.3	10.8	
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-47	41.9	7.7	
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-48	40.6	7.6	
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-49	39.5	7.6	
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-50	40.0	6.2	
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-51	43.3	9.2	
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-52	40.1	7.0	
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-53	41.4	7.7	
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-54	45.9	6.8	broken shell
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-55	40.5	7.4	
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-56	42.3	5.4	broken shell
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-57	40.0	6.8	
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-58	39.1	6.5	
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-59	38.2	7.1	
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-60	38.9	5.4	
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-61	40.0	7.2	
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-62	39.9	6.4	broken shell
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-63	41.8	7.5	
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-64	41.3	8.0	
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-65	39.9	6.8	
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-66	41.5	8.6	
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-67	40.1	7.2	
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-68	41.3	7.7	
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-69	39.2	6.8	
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-70	38.1	5.7	
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-71	38.9	6.0	
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-72	40.0	7.2	
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-73	39.6	6.2	
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-74	40.6	6.8	
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-75	38.9	6.3	broken shell
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-76	40.4	7.2	
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-77	40.7	7.0	
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-78	38.5	6.5	
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-79	39.2	5.9	
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-80	39.5	6.9	

Zone	Intertidal Area	Station	Collection Date	Collection Time	Specimen ID	Shell Length (mm)	Weight (g)	Comments
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-81	38.5	4.0	broken shell
NBN	122	NBN122C	9/18/2014	10:41	NB03CLM122C-82	38.6	4.6	broken shell
NBN	123	NBN123A	9/23/2014	13:20	NB03CLM123A-01	59.5	26.4	
NBN	123	NBN123A	9/23/2014	13:20	NB03CLM123A-02	62.0	37.6	
NBN	123	NBN123A	9/23/2014	13:20	NB03CLM123A-03	64.8	33.2	
NBN	123	NBN123A	9/23/2014	13:20	NB03CLM123A-04	54.0	23.0	
NBN	123	NBN123A	9/23/2014	13:20	NB03CLM123A-05	59.5	25.4	
NBN	123	NBN123A	9/23/2014	13:20	NB03CLM123A-06	60.0	27.0	
NBN	123	NBN123A	9/23/2014	13:20	NB03CLM123A-07	56.0	20.3	
NBN	123	NBN123A	9/23/2014	13:20	NB03CLM123A-08	61.4	23.1	
NBN	123	NBN123A	9/23/2014	13:20	NB03CLM123A-09	63.0	29.0	
NBN	123	NBN123A	9/23/2014	13:20	NB03CLM123A-10	58.0	22.8	
NBN	123	NBN123A	9/23/2014	13:20	NB03CLM123A-11	50.0	14.0	
NBN	123	NBN123A	9/23/2014	13:20	NB03CLM123A-12	58.8	24.1	
NBN	123	NBN123A	9/23/2014	13:20	NB03CLM123A-13	64.7	27.0	
NBN	123	NBN123A	9/23/2014	13:20	NB03CLM123A-14	44.5	9.9	
NBN	123	NBN123A	9/23/2014	13:20	NB03CLM123A-15	63.0	30.2	
NBN	123	NBN123A	9/23/2014	13:20	NB03CLM123A-16	55.0	20.7	
NBN	123	NBN123A	9/23/2014	13:20	NB03CLM123A-17	53.7	19.9	
NBN	123	NBN123A	9/23/2014	13:20	NB03CLM123A-18	56.8	23.0	
NBN	123	NBN123A	9/23/2014	13:20	NB03CLM123A-19	55.8	21.2	
NBN	123	NBN123A	9/23/2014	13:20	NB03CLM123A-20	52.4	17.1	
NBN	123	NBN123A	9/23/2014	13:20	NB03CLM123A-21	49.6	14.1	
NBN	123	NBN123A	9/23/2014	13:20	NB03CLM123A-22	51.6	15.6	
NBN	123	NBN123A	9/23/2014	13:20	NB03CLM123A-23	52.7	16.8	
NBN	123	NBN123A	9/23/2014	13:20	NB03CLM123A-24	56.6	19.9	
NBN	123	NBN123A	9/23/2014	13:20	NB03CLM123A-25	53.0	17.0	
NBN	123	NBN123A	9/23/2014	13:20	NB03CLM123A-26	50.5	14.3	
NBN	123	NBN123A	9/23/2014	13:20	NB03CLM123A-27	48.4	12.4	
NBN	123	NBN123A	9/23/2014	13:20	NB03CLM123A-28	53.5	16.3	
NBN	123	NBN123A	9/23/2014	13:20	NB03CLM123A-29	49.0	11.7	
NBN	123	NBN123A	9/23/2014	13:20	NB03CLM123A-30	49.0	12.5	
NBN	123	NBN123A	9/23/2014	13:20	NB03CLM123A-31	46.4	11.2	
NBN	123	NBN123A	9/23/2014	13:20	NB03CLM123A-32	50.0	13.0	
NBN	123	NBN123A	9/23/2014	13:20	NB03CLM123A-33	47.8	12.9	
NBN	123	NBN123A	9/23/2014	13:20	NB03CLM123A-34	52.5	15.0	
NBN	123	NBN123A	9/23/2014	13:20	NB03CLM123A-35	50.0	13.1	

Zone	Intertidal Area	Station	Collection Date	Collection Time	Specimen ID	Shell Length (mm)	Weight (g)	Comments
NBN	123	NBN123A	9/23/2014	13:20	NB03CLM123A-36	47.0	12.6	
NBN	123	NBN123A	9/23/2014	13:20	NB03CLM123A-37	45.0	9.4	
NBN	123	NBN123A	9/23/2014	13:20	NB03CLM123A-38	44.5	12.0	
NBN	123	NBN123A	9/23/2014	13:20	NB03CLM123A-39	49.0	13.2	
NBN	123	NBN123A	9/23/2014	13:20	NB03CLM123A-40	45.6	11.5	
NBN	123	NBN123A	9/23/2014	13:20	NB03CLM123A-41	45.0	11.2	
NBN	123	NBN123A	9/23/2014	13:20	NB03CLM123A-42	46.0	12.4	
NBN	123	NBN123A	9/23/2014	13:20	NB03CLM123A-43	48.2	12.0	
NBN	123	NBN123A	9/23/2014	13:20	NB03CLM123A-44	45.5	10.4	
NBN	123	NBN123A	9/23/2014	13:20	NB03CLM123A-45	38.4	5.8	
NBN	123	NBN123A	9/23/2014	13:20	NB03CLM123A-46	44.2	9.1	
NBN	123	NBN123A	9/23/2014	13:20	NB03CLM123A-47	46.5	12.5	
NBN	123	NBN123A	9/23/2014	13:20	NB03CLM123A-48	45.4	8.8	
NBN	123	NBN123A	9/23/2014	13:20	NB03CLM123A-49	46.0	10.4	
NBN	123	NBN123A	9/23/2014	13:20	NB03CLM123A-50	44.7	10.4	
NBN	123	NBN123A	9/23/2014	13:20	NB03CLM123A-51	46.8	8.3	
NBN	123	NBN123A	9/23/2014	13:20	NB03CLM123A-52	40.6	7.5	
NBN	123	NBN123A	9/23/2014	13:20	NB03CLM123A-53	42.5	8.4	
NBN	123	NBN123A	9/23/2014	13:20	NB03CLM123A-54	58.0	12.5	broken shell
NBN	123	NBN123A	9/23/2014	13:20	NB03CLM123A-55	61.0	17.5	broken shell
NBN	123	NBN123A	9/23/2014	13:20	NB03CLM123A-56	53.0	9.0	broken shell
NBN	123	NBN123A	9/23/2014	13:20	NB03CLM123A-57	58.0	14.2	broken shell
NBN	123	NBN123A	9/23/2014	13:20	NB03CLM123A-58	50.0	9.0	broken shell
NBN	123	NBN123A	9/23/2014	13:20	NB03CLM123A-59	59.0	19.0	broken shell
NBN	123	NBN123A	9/23/2014	13:20	NB03CLM123A-60	50.0	7.7	broken shell
NBN	123	NBN123A	9/23/2014	13:20	NB03CLM123A-61	50.0	13.7	broken shell
NBN	123	NBN123A	9/23/2014	13:20	NB03CLM123A-62	50.0	9.5	broken shell
NBN	123	NBN123A	9/23/2014	13:20	NB03CLM123A-63	49.0	8.7	broken shell
NBN	123	NBN123A	9/23/2014	13:20	NB03CLM123A-64	47.0	8.5	broken shell
NBN	123	NBN123A	9/23/2014	13:20	NB03CLM123A-65	46.7	8.8	broken shell
NBN	123	NBN123A	9/23/2014	13:20	NB03CLM123A-66	46.7	7.1	broken shell
NBN	123	NBN123B	9/23/2014	14:31	NB03CLM123B-01	66.8	36.0	
NBN	123	NBN123B	9/23/2014	14:31	NB03CLM123B-02	62.0	32.5	
NBN	123	NBN123B	9/23/2014	14:31	NB03CLM123B-03	60.8	31.0	
NBN	123	NBN123B	9/23/2014	14:31	NB03CLM123B-04	55.0	20.3	
NBN	123	NBN123B	9/23/2014	14:31	NB03CLM123B-05	61.6	30.9	
NBN	123	NBN123B	9/23/2014	14:31	NB03CLM123B-06	54.0	21.0	

Zone	Intertidal Area	Station	Collection Date	Collection Time	Specimen ID	Shell Length (mm)	Weight (g)	Comments
NBN	123	NBN123B	9/23/2014	14:31	NB03CLM123B-07	53.0	20.0	
NBN	123	NBN123B	9/23/2014	14:31	NB03CLM123B-08	52.0	19.7	
NBN	123	NBN123B	9/23/2014	14:31	NB03CLM123B-09	54.8	17.4	
NBN	123	NBN123B	9/23/2014	14:31	NB03CLM123B-10	63.8	29.2	
NBN	123	NBN123B	9/23/2014	14:31	NB03CLM123B-11	55.0	24.3	
NBN	123	NBN123B	9/23/2014	14:31	NB03CLM123B-12	56.3	22.7	
NBN	123	NBN123B	9/23/2014	14:31	NB03CLM123B-13	55.0	18.2	
NBN	123	NBN123B	9/23/2014	14:31	NB03CLM123B-14	55.5	17.5	
NBN	123	NBN123B	9/23/2014	14:31	NB03CLM123B-15	52.0	17.4	
NBN	123	NBN123B	9/23/2014	14:31	NB03CLM123B-16	52.0	16.8	
NBN	123	NBN123B	9/23/2014	14:31	NB03CLM123B-17	55.0	21.3	
NBN	123	NBN123B	9/23/2014	14:31	NB03CLM123B-18	54.0	15.7	
NBN	123	NBN123B	9/23/2014	14:31	NB03CLM123B-19	54.0	18.0	
NBN	123	NBN123B	9/23/2014	14:31	NB03CLM123B-20	52.7	19.3	
NBN	123	NBN123B	9/23/2014	14:31	NB03CLM123B-21	49.0	16.6	
NBN	123	NBN123B	9/23/2014	14:31	NB03CLM123B-22	55.3	17.8	
NBN	123	NBN123B	9/23/2014	14:31	NB03CLM123B-23	49.9	16.9	
NBN	123	NBN123B	9/23/2014	14:31	NB03CLM123B-24	52.0	16.0	
NBN	123	NBN123B	9/23/2014	14:31	NB03CLM123B-25	52.0	18.2	
NBN	123	NBN123B	9/23/2014	14:31	NB03CLM123B-26	57.0	19.5	
NBN	123	NBN123B	9/23/2014	14:31	NB03CLM123B-27	55.2	19.0	
NBN	123	NBN123B	9/23/2014	14:31	NB03CLM123B-28	52.5	17.2	
NBN	123	NBN123B	9/23/2014	14:31	NB03CLM123B-29	49.0	13.7	
NBN	123	NBN123B	9/23/2014	14:31	NB03CLM123B-30	53.3	18.3	
NBN	123	NBN123B	9/23/2014	14:31	NB03CLM123B-31	53.3	18.6	
NBN	123	NBN123B	9/23/2014	14:31	NB03CLM123B-32	54.0	18.5	
NBN	123	NBN123B	9/23/2014	14:31	NB03CLM123B-33	51.8	16.9	
NBN	123	NBN123B	9/23/2014	14:31	NB03CLM123B-34	52.0	16.5	
NBN	123	NBN123B	9/23/2014	14:31	NB03CLM123B-35	50.0	13.9	
NBN	123	NBN123B	9/23/2014	14:31	NB03CLM123B-36	51.5	14.8	
NBN	123	NBN123B	9/23/2014	14:31	NB03CLM123B-37	49.0	15.6	
NBN	123	NBN123B	9/23/2014	14:31	NB03CLM123B-38	52.3	15.3	
NBN	123	NBN123B	9/23/2014	14:31	NB03CLM123B-39	51.0	16.0	
NBN	123	NBN123B	9/23/2014	14:31	NB03CLM123B-40	51.0	13.7	
NBN	123	NBN123B	9/23/2014	14:31	NB03CLM123B-41	50.0	15.8	
NBN	123	NBN123B	9/23/2014	14:31	NB03CLM123B-42	50.0	15.7	
NBN	123	NBN123B	9/23/2014	14:31	NB03CLM123B-43	52.0	16.0	

Zone	Intertidal Area	Station	Collection Date	Collection Time	Specimen ID	Shell Length (mm)	Weight (g)	Comments
NBN	123	NBN123B	9/23/2014	14:31	NB03CLM123B-44	48.0	15.2	
NBN	123	NBN123B	9/23/2014	14:31	NB03CLM123B-45	49.5	14.2	
NBN	123	NBN123B	9/23/2014	14:31	NB03CLM123B-46	51.4	17.0	
NBN	123	NBN123B	9/23/2014	14:31	NB03CLM123B-47	43.5	11.0	
NBN	123	NBN123B	9/23/2014	14:31	NB03CLM123B-48	52.0	16.5	
NBN	123	NBN123B	9/23/2014	14:31	NB03CLM123B-49	50.0	15.5	
NBN	123	NBN123B	9/23/2014	14:31	NB03CLM123B-50	50.2	13.0	
NBN	123	NBN123B	9/23/2014	14:31	NB03CLM123B-51	51.5	16.2	
NBN	123	NBN123B	9/23/2014	14:31	NB03CLM123B-52	50.7	14.0	
NBN	123	NBN123B	9/23/2014	14:31	NB03CLM123B-53	49.0	13.7	
NBN	123	NBN123B	9/23/2014	14:31	NB03CLM123B-54	49.8	14.0	
NBN	123	NBN123B	9/23/2014	14:31	NB03CLM123B-55	45.0	11.1	
NBN	123	NBN123B	9/23/2014	14:31	NB03CLM123B-56	50.9	14.0	
NBN	123	NBN123B	9/23/2014	14:31	NB03CLM123B-57	46.7	13.9	
NBN	123	NBN123B	9/23/2014	14:31	NB03CLM123B-58	49.0	12.9	
NBN	123	NBN123B	9/23/2014	14:31	NB03CLM123B-59	44.0	11.0	
NBN	123	NBN123B	9/23/2014	14:31	NB03CLM123B-60	45.0	12.5	
NBN	123	NBN123B	9/23/2014	14:31	NB03CLM123B-61	43.6	9.0	
NBN	123	NBN123B	9/23/2014	14:31	NB03CLM123B-62	44.0	18.5	
NBN	123	NBN123B	9/23/2014	14:31	NB03CLM123B-63	43.0	8.7	
NBN	123	NBN123B	9/23/2014	14:31	NB03CLM123B-64	39.0	6.4	
NBN	123	NBN123B	9/23/2014	14:31	NB03CLM123B-65	40.4	7.0	
NBN	123	NBN123B	9/23/2014	14:31	NB03CLM123B-66	40.5	8.5	
NBN	123	NBN123B	9/23/2014	14:31	NB03CLM123B-67	40.8	7.4	
NBN	123	NBN123B	9/23/2014	14:31	NB03CLM123B-68	40.4	5.9	broken shell
NBN	123	NBN123B	9/23/2014	14:31	NB03CLM123B-69	40.0	7.1	
NBN	123	NBN123B	9/23/2014	14:31	NB03CLM123B-70	49.0	6.4	
NBC	124	NBC124	10/2/2014	8:20	NB03CLM124-01	49.5	20.1	
NBC	124	NBC124	10/2/2014	8:20	NB03CLM124-02	61.1	34.8	
NBC	124	NBC124	10/2/2014	8:20	NB03CLM124-03	62.8	36.7	
NBC	124	NBC124	10/2/2014	8:20	NB03CLM124-04	66.9	39.7	
NBC	124	NBC124	10/2/2014	8:20	NB03CLM124-05	63.0	20.1	broken shell
NBC	124	NBC124	10/2/2014	8:20	NB03CLM124-06	57.9	27.8	
NBC	124	NBC124	10/2/2014	8:20	NB03CLM124-07	57.3	28.6	
NBC	124	NBC124	10/2/2014	8:20	NB03CLM124-08	54.4	23.5	
NBC	124	NBC124	10/2/2014	8:20	NB03CLM124-09	54.4	15.8	
NBC	124	NBC124	10/2/2014	8:20	NB03CLM124-10	57.7	27.0	

Zone	Intertidal Area	Station	Collection Date	Collection Time	Specimen ID	Shell Length (mm)	Weight (g)	Comments
NBC	124	NBC124	10/2/2014	8:20	NB03CLM124-11	53.9	21.7	
NBC	124	NBC124	10/2/2014	8:20	NB03CLM124-12	48.4	15.3	
NBC	124	NBC124	10/2/2014	8:20	NB03CLM124-13	49.1	17.0	
NBC	124	NBC124	10/2/2014	8:20	NB03CLM124-14	49.1	21.6	
NBC	124	NBC124	10/2/2014	8:20	NB03CLM124-15	45.2	17.8	
NBC	124	NBC124	10/2/2014	8:20	NB03CLM124-16	52.9	20.5	
NBC	124	NBC124	10/2/2014	8:20	NB03CLM124-17	50.2	21.8	
NBC	124	NBC124	10/2/2014	8:20	NB03CLM124-18	54.4	21.3	
NBC	124	NBC124	10/2/2014	8:20	NB03CLM124-19	49.3	17.6	
NBC	124	NBC124	10/2/2014	8:20	NB03CLM124-20	46.3	16.1	
NBC	124	NBC124	10/2/2014	8:20	NB03CLM124-21	46.2	17.0	
NBC	124	NBC124	10/2/2014	8:20	NB03CLM124-22	48.7	17.0	
NBC	124	NBC124	10/2/2014	8:20	NB03CLM124-23	51.1	25.4	
NBC	124	NBC124	10/2/2014	8:20	NB03CLM124-24	44.2	13.0	
NBC	124	NBC124	10/2/2014	8:20	NB03CLM124-25	42.9	12.6	
NBC	124	NBC124	10/2/2014	8:20	NB03CLM124-26	47.1	14.2	
NBC	124	NBC124	10/2/2014	8:20	NB03CLM124-27	46.1	14.1	
NBC	124	NBC124	10/2/2014	8:20	NB03CLM124-28	48.9	20.6	
NBC	124	NBC124	10/2/2014	8:20	NB03CLM124-29	49.1	18.9	
NBC	124	NBC124	10/2/2014	8:20	NB03CLM124-30	47.8	16.5	
NBC	124	NBC124	10/2/2014	8:20	NB03CLM124-31	44.8	16.5	
NBC	124	NBC124	10/2/2014	8:20	NB03CLM124-32	44.5	15.5	
NBC	124	NBC124	10/2/2014	8:20	NB03CLM124-33	45.3	12.9	
NBC	124	NBC124	10/2/2014	8:20	NB03CLM124-34	50.6	20.0	
NBC	124	NBC124	10/2/2014	8:20	NB03CLM124-35	47.9	18.5	
NBC	124	NBC124	10/2/2014	8:20	NB03CLM124-36	46.5	16.1	
NBC	124	NBC124	10/2/2014	8:20	NB03CLM124-37	48.8	16.3	
NBC	124	NBC124	10/2/2014	8:20	NB03CLM124-38	42.8	11.6	
NBC	124	NBC124	10/2/2014	8:20	NB03CLM124-39	45.2	13.7	
NBC	124	NBC124	10/2/2014	8:20	NB03CLM124-40	45.2	14.3	
NBC	124	NBC124	10/2/2014	8:20	NB03CLM124-41	43.4	16.7	
NBC	124	NBC124	10/2/2014	8:20	NB03CLM124-42	39.3	8.4	
NBC	124	NBC124	10/2/2014	8:20	NB03CLM124-43	41.9	12.0	
NBC	124	NBC124	10/2/2014	8:20	NB03CLM124-44	41.0	11.6	
NBC	124	NBC124	10/2/2014	8:20	NB03CLM124-45	44.9	10.8	
NBC	124	NBC124	10/2/2014	8:20	NB03CLM124-46	40.3	11.1	
NBC	124	NBC124	10/2/2014	8:20	NB03CLM124-47	42.2	12.0	

Zone	Intertidal Area	Station	Collection Date	Collection Time	Specimen ID	Shell Length (mm)	Weight (g)	Comments
NBC	124	NBC124	10/2/2014	8:20	NB03CLM124-48	40.0	10.5	
NBC	124	NBC124	10/2/2014	8:20	NB03CLM124-49	40.2	9.3	
NBC	124	NBC124	10/2/2014	8:20	NB03CLM124-50	39.2	9.0	
NBC	124	NBC124	10/2/2014	8:20	NB03CLM124-51	39.2	10.5	
NBC	124	NBC124	10/2/2014	8:20	NB03CLM124-52	39.5	7.4	
NBC	124	NBC124	10/2/2014	8:20	NB03CLM124-53	39.3	7.7	
NBC	124	NBC124	10/2/2014	8:20	NB03CLM124-54	39.9	9.4	
NBC	124	NBC124	10/2/2014	8:20	NB03CLM124-55	39.4	8.4	
NBC	125	NBC125	9/26/2014	15:36	NB03CLM125-01	46.5	17.0	
NBC	125	NBC125	9/26/2014	15:36	NB03CLM125-02	52.7	23.5	
NBC	125	NBC125	9/26/2014	15:36	NB03CLM125-03	56.0	28.3	
NBC	125	NBC125	9/26/2014	15:36	NB03CLM125-04	53.5	22.2	
NBC	125	NBC125	9/26/2014	15:36	NB03CLM125-05	49.4	17.3	
NBC	125	NBC125	9/26/2014	15:36	NB03CLM125-06	55.5	27.0	
NBC	125	NBC125	9/26/2014	15:36	NB03CLM125-07	52.0	20.6	
NBC	125	NBC125	9/26/2014	15:36	NB03CLM125-08	50.0	17.0	
NBC	125	NBC125	9/26/2014	15:36	NB03CLM125-09	43.0	16.0	
NBC	125	NBC125	9/26/2014	15:36	NB03CLM125-10	45.0	14.2	
NBC	125	NBC125	9/26/2014	15:36	NB03CLM125-11	63.0	29.5	
NBC	125	NBC125	9/26/2014	15:36	NB03CLM125-12	59.0	34.6	
NBC	125	NBC125	9/26/2014	15:36	NB03CLM125-13	57.5	29.0	
NBC	125	NBC125	9/26/2014	15:36	NB03CLM125-14	53.0	27.2	
NBC	125	NBC125	9/26/2014	15:36	NB03CLM125-15	55.7	23.0	
NBC	125	NBC125	9/26/2014	15:36	NB03CLM125-16	44.0	10.5	
NBC	125	NBC125	9/26/2014	15:36	NB03CLM125-17	45.0	12.9	
NBC	125	NBC125	9/26/2014	15:36	NB03CLM125-18	38.5	9.0	
NBC	125	NBC125	9/26/2014	15:36	NB03CLM125-19	44.0	13.2	
NBC	125	NBC125	9/26/2014	15:36	NB03CLM125-20	57.0	24.0	
NBC	125	NBC125	9/26/2014	15:36	NB03CLM125-21	48.0	17.0	
NBC	125	NBC125	9/26/2014	15:36	NB03CLM125-22	55.9	24.3	
NBC	125	NBC125	9/26/2014	15:36	NB03CLM125-23	50.0	19.8	
NBC	125	NBC125	9/26/2014	15:36	NB03CLM125-24	39.0	8.2	
NBC	125	NBC125	9/26/2014	15:36	NB03CLM125-25	49.0	22.6	
NBC	125	NBC125	9/26/2014	15:36	NB03CLM125-26	42.0	11.6	
NBC	125	NBC125	9/26/2014	15:36	NB03CLM125-27	56.4	26.3	
NBC	125	NBC125	9/26/2014	15:36	NB03CLM125-28	47.7	14.9	
NBC	125	NBC125	9/26/2014	15:36	NB03CLM125-29	52.2	25.1	

Zone	Intertidal Area	Station	Collection Date	Collection Time	Specimen ID	Shell Length (mm)	Weight (g)	Comments
NBC	125	NBC125	9/26/2014	15:36	NB03CLM125-30	54.0	27.1	
NBC	125	NBC125	9/26/2014	15:36	NB03CLM125-31	55.0	24.0	
NBC	125	NBC125	9/26/2014	15:36	NB03CLM125-32	51.0	21.2	
NBC	125	NBC125	9/26/2014	15:36	NB03CLM125-33	47.5	15.0	
NBC	125	NBC125	9/26/2014	15:36	NB03CLM125-34	55.5	25.3	
NBC	125	NBC125	9/26/2014	15:36	NB03CLM125-35	47.6	16.5	
NBC	125	NBC125	9/26/2014	15:36	NB03CLM125-36	40.0	12.6	
NBC	125	NBC125	9/26/2014	15:36	NB03CLM125-37	39.0	5.7	
NBC	125	NBC125	9/26/2014	15:36	NB03CLM125-38	50.6	20.6	
NBC	125	NBC125	9/26/2014	15:36	NB03CLM125-39	52.5	18.8	
NBC	125	NBC125	9/26/2014	15:36	NB03CLM125-40	46.5	16.7	
NBC	125	NBC125	9/26/2014	15:36	NB03CLM125-41	46.5	18.0	
NBC	125	NBC125	9/26/2014	15:36	NB03CLM125-42	45.4	14.6	
NBC	125	NBC125	9/26/2014	15:36	NB03CLM125-43	43.0	13.3	
NBC	125	NBC125	9/26/2014	15:36	NB03CLM125-44	41.3	10.4	
NBC	125	NBC125	9/26/2014	15:36	NB03CLM125-45	46.6	18.2	
NBC	125	NBC125	9/26/2014	15:36	NB03CLM125-46	40.0	11.3	
NBC	125	NBC125	9/26/2014	15:36	NB03CLM125-47	49.0	17.5	
NBC	125	NBC125	9/26/2014	15:36	NB03CLM125-48	49.1	17.4	
NBC	125	NBC125	9/26/2014	15:36	NB03CLM125-49	49.1	15.9	
NBC	125	NBC125	9/26/2014	15:36	NB03CLM125-50	47.0	16.7	
NBC	125	NBC125	9/26/2014	15:36	NB03CLM125-51	47.5	21.0	
NBC	125	NBC125	9/26/2014	15:36	NB03CLM125-52	46.0	13.9	
NBC	125	NBC125	9/26/2014	15:36	NB03CLM125-53	44.4	13.2	
NBC	125	NBC125	9/26/2014	15:36	NB03CLM125-54	40.0	10.6	
NBC	125	NBC125	9/26/2014	15:36	NB03CLM125-55	46.0	13.3	
NBC	125	NBC125	9/26/2014	15:36	NB03CLM125-56	48.0	12.0	
NBC	125	NBC125	9/26/2014	15:36	NB03CLM125-57	48.0	12.3	
NBC	125	NBC125	9/26/2014	15:36	NB03CLM125-58	49.0	16.3	
NBC	125	NBC125	9/26/2014	15:36	NB03CLM125-59	48.2	10.3	
NBC	125	NBC125	9/26/2014	15:36	NB03CLM125-60	48.2	16.0	
NBC	125	NBC125	9/26/2014	15:36	NB03CLM125-61	48.0	14.7	
NBC	125	NBC125	9/26/2014	15:36	NB03CLM125-62	48.0	21.6	
NBC	127	NBC127A	9/24/2014	14:05	NB03CLM127A-01	66.4	36.9	
NBC	127	NBC127A	9/24/2014	14:05	NB03CLM127A-02	70.0	44.4	
NBC	127	NBC127A	9/24/2014	14:05	NB03CLM127A-03	67.0	42.0	
NBC	127	NBC127A	9/24/2014	14:05	NB03CLM127A-04	62.9	34.0	

Zone	Intertidal Area	Station	Collection Date	Collection Time	Specimen ID	Shell Length (mm)	Weight (g)	Comments
NBC	127	NBC127A	9/24/2014	14:05	NB03CLM127A-05	58.0	28.1	
NBC	127	NBC127A	9/24/2014	14:05	NB03CLM127A-06	67.6	45.5	
NBC	127	NBC127A	9/24/2014	14:05	NB03CLM127A-07	60.8	30.0	
NBC	127	NBC127A	9/24/2014	14:05	NB03CLM127A-08	70.3	44.6	
NBC	127	NBC127A	9/24/2014	14:05	NB03CLM127A-09	64.0	36.9	
NBC	127	NBC127A	9/24/2014	14:05	NB03CLM127A-10	61.9	20.5	
NBC	127	NBC127A	9/24/2014	14:05	NB03CLM127A-11	59.9	28.0	
NBC	127	NBC127A	9/24/2014	14:05	NB03CLM127A-12	60.6	26.0	
NBC	127	NBC127A	9/24/2014	14:05	NB03CLM127A-13	58.4	24.7	
NBC	127	NBC127A	9/24/2014	14:05	NB03CLM127A-14	58.0	23.9	
NBC	127	NBC127A	9/24/2014	14:05	NB03CLM127A-15	61.1	32.0	
NBC	127	NBC127A	9/24/2014	14:05	NB03CLM127A-16	54.9	20.0	
NBC	127	NBC127A	9/24/2014	14:05	NB03CLM127A-17	49.0	18.0	
NBC	127	NBC127A	9/24/2014	14:05	NB03CLM127A-18	60.0	20.9	
NBC	127	NBC127A	9/24/2014	14:05	NB03CLM127A-19	50.0	17.0	
NBC	127	NBC127A	9/24/2014	14:05	NB03CLM127A-20	54.0	15.5	
NBC	127	NBC127A	9/24/2014	14:05	NB03CLM127A-21	53.6	20.5	
NBC	127	NBC127A	9/24/2014	14:05	NB03CLM127A-22	54.0	20.4	
NBC	127	NBC127A	9/24/2014	14:05	NB03CLM127A-23	39.7	8.1	
NBC	127	NBC127A	9/24/2014	14:05	NB03CLM127A-24	54.8	20.4	
NBC	127	NBC127A	9/24/2014	14:05	NB03CLM127A-25	51.6	16.0	
NBC	127	NBC127A	9/24/2014	14:05	NB03CLM127A-26	45.5	13.6	
NBC	127	NBC127A	9/24/2014	14:05	NB03CLM127A-27	48.5	12.7	
NBC	127	NBC127A	9/24/2014	14:05	NB03CLM127A-28	48.7	16.0	
NBC	127	NBC127A	9/24/2014	14:05	NB03CLM127A-29	63.0	28.3	broken shell
NBC	127	NBC127A	9/24/2014	14:05	NB03CLM127A-30	66.0	25.0	broken shell
NBC	127	NBC127A	9/24/2014	14:05	NB03CLM127A-31	70.0	45.0	broken shell
NBC	127	NBC127A	9/24/2014	14:05	NB03CLM127A-32	63.0	27.5	broken shell
NBC	127	NBC127A	9/24/2014	14:05	NB03CLM127A-33	63.0	25.0	broken shell
NBC	127	NBC127A	9/24/2014	14:05	NB03CLM127A-34	67.0	17.0	broken shell
NBC	127	NBC127A	9/24/2014	14:05	NB03CLM127A-35	57.0	17.3	broken shell
NBC	127	NBC127A	9/24/2014	14:05	NB03CLM127A-36	60.8	24.2	broken shell
NBC	127	NBC127A	9/24/2014	14:05	NB03CLM127A-37	53.4	15.5	broken shell
NBC	127	NBC127A	9/24/2014	14:05	NB03CLM127A-38	66.0	25.2	broken shell
NBC	127	NBC127A	9/24/2014	14:05	NB03CLM127A-39	61.0	17.5	broken shell
NBC	127	NBC127A	9/24/2014	14:05	NB03CLM127A-40	65.5	20.5	broken shell
NBC	127	NBC127A	9/24/2014	14:05	NB03CLM127A-41	54.0	16.2	broken shell

Zone	Intertidal Area	Station	Collection Date	Collection Time	Specimen ID	Shell Length (mm)	Weight (g)	Comments
NBC	127	NBC127A	9/24/2014	14:05	NB03CLM127A-42	53.6	14.3	broken shell
NBC	127	NBC127A	9/24/2014	14:05	NB03CLM127A-43	47.0	9.2	broken shell
NBC	127	NBC127A	9/24/2014	14:05	NB03CLM127A-44	60.2	19.6	broken shell
NBC	127	NBC127A	9/24/2014	14:05	NB03CLM127A-45	67.0	23.0	broken shell
NBC	127	NBC127A	9/24/2014	14:05	NB03CLM127A-46	67.0	27.0	broken shell
NBC	127	NBC127A	9/24/2014	14:05	NB03CLM127A-47	56.0	10.6	broken shell
NBC	127	NBC127A	9/24/2014	14:05	NB03CLM127A-48	56.0	15.0	broken shell
NBC	127	NBC127A	9/24/2014	14:05	NB03CLM127A-49	47.0	9.8	broken shell
NBC	127	NBC127A	9/24/2014	14:05	NB03CLM127A-50	44.2	8.4	broken shell
NBC	127	NBC127A	9/24/2014	14:05	NB03CLM127A-51	51.0	10.3	broken shell
NBC	127	NBC127A	9/24/2014	14:05	NB03CLM127A-52	65.0	16.0	broken shell
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-01	70.0	41.3	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-02	75.2	64.6	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-03	67.6	52.4	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-04	68.9	52.4	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-05	58.5	56.6	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-06	54.7	23.3	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-07	55.4	20.5	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-08	66.0	28.5	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-09	58.2	28.7	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-10	46.5	13.8	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-11	56.2	24.3	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-12	48.5	12.9	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-13	53.4	18.5	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-14	52.4	17.7	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-15	47.4	15.1	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-16	44.3	12.9	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-17	47.2	14.0	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-18	46.2	13.2	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-19	50.0	17.5	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-20	46.5	11.2	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-21	48.0	14.5	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-22	51.5	18.5	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-23	40.0	8.1	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-24	43.5	12.3	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-25	42.0	14.3	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-26	50.0	15.7	

Zone	Intertidal Area	Station	Collection Date	Collection Time	Specimen ID	Shell Length (mm)	Weight (g)	Comments
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-27	48.0	12.9	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-28	49.0	16.2	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-29	46.0	14.3	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-30	49.0	15.1	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-31	42.4	11.3	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-32	47.0	11.0	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-33	47.0	12.5	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-34	50.0	16.8	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-35	48.9	14.3	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-36	44.0	11.5	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-37	44.0	11.0	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-38	45.0	11.1	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-39	47.5	15.3	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-40	51.0	15.1	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-41	47.1	14.2	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-42	46.0	14.1	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-43	45.5	11.0	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-44	46.2	11.7	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-45	44.3	11.7	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-46	40.0	8.5	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-47	46.3	12.3	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-48	44.7	11.4	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-49	51.6	16.5	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-50	46.3	11.8	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-51	41.4	10.9	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-52	44.0	10.0	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-53	45.5	12.0	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-54	49.0	15.7	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-55	45.8	11.5	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-56	45.5	11.3	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-57	41.3	8.8	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-58	41.3	7.5	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-59	38.3	7.1	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-60	43.0	10.0	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-61	42.6	10.5	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-62	44.8	11.8	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-63	44.4	11.4	

Zone	Intertidal Area	Station	Collection Date	Collection Time	Specimen ID	Shell Length (mm)	Weight (g)	Comments
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-64	43.2	10.8	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-65	44.0	10.7	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-66	40.5	8.0	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-67	43.0	11.4	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-68	45.0	10.9	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-69	42.0	11.2	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-70	44.0	10.6	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-71	41.0	9.3	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-72	49.0	14.6	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-73	47.7	14.0	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-74	43.0	9.3	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-75	45.0	10.3	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-76	47.0	13.2	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-77	43.0	10.0	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-78	42.7	9.4	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-79	45.5	12.5	
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-80	49.0	8.1	broken shell
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-81	42.4	7.0	broken shell
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-82	50.0	12.0	broken shell
NBC	127	NBC127B	9/24/2014	15:28	NB03CLM127B-83	44.0	6.2	broken shell
NBS	129	NBS129	9/8/2014	14:30	NB03CLM129-01	50.0	14.5	
NBS	129	NBS129	9/8/2014	14:30	NB03CLM129-02	51.0	13.0	
NBS	129	NBS129	9/8/2014	14:30	NB03CLM129-03	49.0	15.1	
NBS	129	NBS129	9/8/2014	14:30	NB03CLM129-04	45.0	10.2	
NBS	129	NBS129	9/8/2014	14:30	NB03CLM129-05	52.0	12.1	
NBS	129	NBS129	9/8/2014	14:30	NB03CLM129-06	60.0	21.5	
NBS	129	NBS129	9/8/2014	14:30	NB03CLM129-07	45.0	11.3	
NBS	129	NBS129	9/8/2014	14:30	NB03CLM129-08	52.0	16.0	
NBS	129	NBS129	9/8/2014	14:30	NB03CLM129-09	52.0	19.5	
NBS	129	NBS129	9/8/2014	14:30	NB03CLM129-10	53.0	15.1	
NBS	129	NBS129	9/8/2014	14:30	NB03CLM129-11	51.0	17.2	
NBS	129	NBS129	9/8/2014	14:30	NB03CLM129-12	46.0	11.2	
NBS	129	NBS129	9/8/2014	14:30	NB03CLM129-13	60.0	28.4	
NBS	129	NBS129	9/8/2014	14:30	NB03CLM129-14	46.0	7.7	
NBS	129	NBS129	9/8/2014	14:30	NB03CLM129-15	51.0	13.3	
NBS	129	NBS129	9/8/2014	14:30	NB03CLM129-16	41.0	10.5	
NBS	129	NBS129	9/8/2014	14:30	NB03CLM129-17	31.0	6.0	too small, not included in tissue sample

Zone	Intertidal Area	Station	Collection Date	Collection Time	Specimen ID	Shell Length (mm)	Weight (g)	Comments
NBS	129	NBS129	9/25/2014	16:47	NB03CLM129-18	60.0	32.5	
NBS	129	NBS129	9/25/2014	16:47	NB03CLM129-19	48.0	20.0	
NBS	129	NBS129	9/25/2014	16:47	NB03CLM129-20	46.9	13.6	
NBS	129	NBS129	9/25/2014	16:47	NB03CLM129-21	54.7	15.0	
NBS	129	NBS129	9/25/2014	16:47	NB03CLM129-22	50.7	18.5	
NBS	129	NBS129	9/25/2014	16:47	NB03CLM129-23	49.0	17.0	
NBS	129	NBS129	9/25/2014	16:47	NB03CLM129-24	51.9	20.0	
NBS	129	NBS129	9/25/2014	16:47	NB03CLM129-25	48.5	15.6	
NBS	129	NBS129	9/25/2014	16:47	NB03CLM129-26	52.2	20.8	
NBS	129	NBS129	9/25/2014	16:47	NB03CLM129-27	50.7	18.2	
NBS	129	NBS129	9/25/2014	16:47	NB03CLM129-28	47.2	16.1	
NBS	129	NBS129	9/25/2014	16:47	NB03CLM129-29	49.0	19.1	
NBS	129	NBS129	9/25/2014	16:47	NB03CLM129-30	44.6	13.0	
NBS	129	NBS129	9/25/2014	16:47	NB03CLM129-31	48.7	17.3	
NBS	129	NBS129	9/25/2014	16:47	NB03CLM129-32	45.9	13.1	
NBS	129	NBS129	9/25/2014	16:47	NB03CLM129-33	47.4	13.4	
NBS	129	NBS129	9/25/2014	16:47	NB03CLM129-34	44.4	14.0	
NBS	129	NBS129	9/25/2014	16:47	NB03CLM129-35	48.9	15.6	
NBS	129	NBS129	9/25/2014	16:47	NB03CLM129-36	47.6	14.1	
NBS	129	NBS129	9/25/2014	16:47	NB03CLM129-37	41.2	10.7	
NBS	129	NBS129	9/25/2014	16:47	NB03CLM129-38	45.3	13.6	
NBS	129	NBS129	9/25/2014	16:47	NB03CLM129-39	39.0	8.6	
NBS	129	NBS129	9/25/2014	16:47	NB03CLM129-40	44.2	16.3	
NBS	129	NBS129	9/25/2014	16:47	NB03CLM129-41	44.0	14.3	
NBS	129	NBS129	9/25/2014	16:47	NB03CLM129-42	42.2	12.0	
NBS	129	NBS129	9/25/2014	16:47	NB03CLM129-43	44.7	10.5	broken shell
NBS	129	NBS129	9/25/2014	16:47	NB03CLM129-44	48.7	9.3	broken shell
NBS	129	NBS129	9/25/2014	16:47	NB03CLM129-45	48.1	9.5	broken shell
NBS	130	NBS130	9/16/2014	8:10	NB03CLM130-01	75.9	59.3	
NBS	130	NBS130	9/16/2014	8:10	NB03CLM130-02	74.7	55.9	
NBS	130	NBS130	9/16/2014	8:10	NB03CLM130-03	77.0	57.2	
NBS	130	NBS130	9/16/2014	8:10	NB03CLM130-04	68.6	25.7	broken shell
NBS	130	NBS130	9/16/2014	8:10	NB03CLM130-05	71.5	46.9	
NBS	130	NBS130	9/16/2014	8:10	NB03CLM130-06	63.4	33.5	
NBS	130	NBS130	9/16/2014	8:10	NB03CLM130-07	70.4	37.6	
NBS	130	NBS130	9/16/2014	8:10	NB03CLM130-08	76.2	48.6	
NBS	130	NBS130	9/16/2014	8:10	NB03CLM130-09	71.6	49.2	

Zone	Intertidal Area	Station	Collection Date	Collection Time	Specimen ID	Shell Length (mm)	Weight (g)	Comments
NBS	130	NBS130	9/16/2014	8:10	NB03CLM130-10	60.3	31.2	
NBS	130	NBS130	9/16/2014	8:10	NB03CLM130-11	69.8	27.0	broken shell
NBS	130	NBS130	9/16/2014	8:10	NB03CLM130-12	66.7	45.7	
NBS	130	NBS130	9/16/2014	8:10	NB03CLM130-13	61.9	32.0	
NBS	130	NBS130	9/16/2014	8:10	NB03CLM130-14	51.8	17.3	
NBS	130	NBS130	9/16/2014	8:10	NB03CLM130-15	46.0	11.7	
NBS	130	NBS130	9/16/2014	8:10	NB03CLM130-16	60.8	21.9	
NBS	130	NBS130	9/16/2014	8:10	NB03CLM130-17	47.6	14.2	
NBS	130	NBS130	9/16/2014	8:10	NB03CLM130-18	53.0	18.0	
NBS	130	NBS130	9/16/2014	8:10	NB03CLM130-19	48.9	14.0	
NBS	130	NBS130	9/16/2014	8:10	NB03CLM130-20	45.3	12.5	
NBS	130	NBS130	9/16/2014	8:10	NB03CLM130-21	47.0	10.4	
NBS	130	NBS130	9/16/2014	8:10	NB03CLM130-22	43.4	8.6	
NBS	130	NBS130	9/16/2014	8:10	NB03CLM130-23	43.4	11.3	
NBS	130	NBS130	9/16/2014	8:10	NB03CLM130-24	40.0	7.6	
NBS	130	NBS130	9/16/2014	8:10	NB03CLM130-25	45.4	11.8	
NBS	130	NBS130	9/16/2014	8:10	NB03CLM130-26	45.4	9.2	
NBS	130	NBS130	9/16/2014	8:10	NB03CLM130-27	41.8	8.6	
NBS	130	NBS130	9/16/2014	8:10	NB03CLM130-28	49.9	15.0	
NBS	130	NBS130	9/16/2014	8:10	NB03CLM130-29	48.8	8.0	broken shell
NBS	130	NBS130	9/16/2014	8:10	NB03CLM130-30	46.5	14.2	
NBS	130	NBS130	9/16/2014	8:10	NB03CLM130-31	43.6	11.0	
NBS	130	NBS130	9/16/2014	8:10	NB03CLM130-32	44.4	11.6	
NBS	130	NBS130	9/16/2014	8:10	NB03CLM130-33	38.7	6.5	
NBS	130	NBS130	9/16/2014	8:10	NB03CLM130-34	41.3	7.8	
NBS	130	NBS130	9/16/2014	8:10	NB03CLM130-35	46.2	10.9	
NBS	130	NBS130	9/16/2014	8:10	NB03CLM130-36	45.0	7.3	
NBS	130	NBS130	9/16/2014	8:10	NB03CLM130-37	43.4	9.5	
NBS	130	NBS130	9/16/2014	8:10	NB03CLM130-38	44.4	9.9	
NBS	130	NBS130	9/16/2014	8:10	NB03CLM130-39	40.1	7.5	
NBS	130	NBS130	9/16/2014	8:10	NB03CLM130-40	49.7	13.8	
NBS	130	NBS130	9/16/2014	8:10	NB03CLM130-41	45.9	10.9	
NBS	130	NBS130	9/16/2014	8:10	NB03CLM130-42	43.2	9.2	
NBS	130	NBS130	9/16/2014	8:10	NB03CLM130-43	43.8	11.8	
NBS	130	NBS130	9/16/2014	8:10	NB03CLM130-44	43.1	6.9	broken shell
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-01	44.0	10.0	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-02	70.3	46.5	

Zone	Intertidal Area	Station	Collection Date	Collection Time	Specimen ID	Shell Length (mm)	Weight (g)	Comments
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-03	38.4	5.3	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-04	51.5	15.9	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-05	38.7	6.6	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-06	42.2	5.9	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-07	78.8	58.5	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-08	70.7	47.2	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-09	61.5	36.7	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-10	50.4	11.2	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-11	61.3	27.5	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-12	64.4	32.9	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-13	69.1	47.1	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-14	39.3	8.1	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-15	57.6	20.0	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-16	67.5	18.3	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-17	39.9	7.1	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-18	41.7	8.6	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-19	59.8	27.8	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-20	70.3	41.5	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-21	65.0	36.5	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-22	59.9	27.1	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-23	44.3	9.2	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-24	66.7	37.0	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-25	60.0	28.3	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-26	62.0	28.8	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-27	64.6	41.4	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-28	69.4	42.0	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-29	40.8	8.9	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-30	45.1	12.1	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-31	64.9	24.6	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-32	68.9	53.2	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-33	68.5	45.9	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-34	64.0	32.3	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-35	68.0	29.9	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-36	50.1	13.5	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-37	63.8	33.8	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-38	61.1	33.4	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-39	59.9	27.3	

Zone	Intertidal Area	Station	Collection Date	Collection Time	Specimen ID	Shell Length (mm)	Weight (g)	Comments
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-40	61.5	34.3	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-41	65.0	27.0	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-42	56.0	34.2	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-43	64.0	37.1	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-44	38.0	7.1	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-45	40.4	8.5	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-46	67.3	37.4	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-47	49.6	16.6	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-48	65.0	34.5	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-49	58.6	28.2	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-50	55.5	26.8	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-51	61.0	32.0	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-52	66.0	27.8	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-53	55.0	15.1	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-54	45.2	9.3	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-55	49.5	15.1	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-56	44.6	14.4	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-57	43.7	12.0	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-58	39.2	7.1	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-59	48.3	8.9	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-60	43.7	7.9	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-61	52.0	14.9	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-62	41.7	8.4	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-63	41.8	9.1	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-64	40.0	6.9	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-65	43.5	10.4	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-66	41.7	9.2	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-67	42.2	8.3	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-68	42.5	10.1	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-69	39.6	8.2	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-70	46.0	10.4	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-71	46.5	10.2	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-72	41.0	7.1	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-73	43.2	11.1	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-74	40.0	8.0	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-75	40.3	7.1	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-76	40.5	7.0	

Zone	Intertidal Area	Station	Collection Date	Collection Time	Specimen ID	Shell Length (mm)	Weight (g)	Comments
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-77	40.6	8.0	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-78	42.5	9.1	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-79	41.7	8.0	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-80	39.2	7.1	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-81	44.0	6.8	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-82	41.5	9.5	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-83	38.3	6.2	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-84	38.4	6.2	
NBS	131	NBS131A	9/10/2014	15:30	NB03CLM131A-85	50.5	11.2	
NBS	131	NBS131B	9/15/2014	6:45	NB03CLM131B-01	85.4	50.0	
NBS	131	NBS131B	9/15/2014	6:45	NB03CLM131B-02	66.6	51.2	
NBS	131	NBS131B	9/15/2014	6:45	NB03CLM131B-03	44.5	12.3	
NBS	131	NBS131B	9/15/2014	6:45	NB03CLM131B-04	67.0	44.5	
NBS	131	NBS131B	9/15/2014	6:45	NB03CLM131B-05	67.0	33.5	
NBS	131	NBS131B	9/15/2014	6:45	NB03CLM131B-06	72.0	38.7	
NBS	131	NBS131B	9/15/2014	6:45	NB03CLM131B-07	70.5	42.3	
NBS	131	NBS131B	9/15/2014	6:45	NB03CLM131B-08	92.0	52.0	
NBS	131	NBS131B	9/15/2014	6:45	NB03CLM131B-09	60.6	32.0	
NBS	131	NBS131B	9/15/2014	6:45	NB03CLM131B-10	57.5	24.6	
NBS	131	NBS131B	9/15/2014	6:45	NB03CLM131B-11	61.2	37.9	
NBS	131	NBS131B	9/15/2014	6:45	NB03CLM131B-12	56.0	21.5	
NBS	131	NBS131B	9/15/2014	6:45	NB03CLM131B-13	62.0	33.0	
NBS	131	NBS131B	9/15/2014	6:45	NB03CLM131B-14	55.0	18.1	
NBS	131	NBS131B	9/15/2014	6:45	NB03CLM131B-15	59.0	32.4	
NBS	131	NBS131B	9/15/2014	6:45	NB03CLM131B-16	55.8	19.5	
NBS	131	NBS131B	9/15/2014	6:45	NB03CLM131B-17	51.7	13.7	
NBS	131	NBS131B	9/15/2014	6:45	NB03CLM131B-18	51.7	18.0	
NBS	131	NBS131B	9/15/2014	6:45	NB03CLM131B-19	57.0	23.8	
NBS	131	NBS131B	9/15/2014	6:45	NB03CLM131B-20	59.2	24.1	
NBS	131	NBS131B	9/15/2014	6:45	NB03CLM131B-21	54.1	19.3	
NBS	131	NBS131B	9/15/2014	6:45	NB03CLM131B-22	52.0	17.0	
NBS	131	NBS131B	9/15/2014	6:45	NB03CLM131B-23	46.0	14.9	
NBS	131	NBS131B	9/15/2014	6:45	NB03CLM131B-24	38.8	8.7	
NBS	131	NBS131B	9/15/2014	6:45	NB03CLM131B-25	39.0	7.2	
NBS	131	NBS131B	9/15/2014	6:45	NB03CLM131B-26	48.0	12.8	
NBS	131	NBS131B	9/15/2014	6:45	NB03CLM131B-27	51.4	14.0	
NBS	131	NBS131B	9/15/2014	6:45	NB03CLM131B-28	48.3	13.5	

Zone	Intertidal Area	Station	Collection Date	Collection Time	Specimen ID	Shell Length (mm)	Weight (g)	Comments
NBS	131	NBS131B	9/15/2014	6:45	NB03CLM131B-29	51.4	14.9	
NBS	131	NBS131B	9/15/2014	6:45	NB03CLM131B-30	43.9	10.0	
NBS	131	NBS131B	9/15/2014	6:45	NB03CLM131B-31	51.0	15.4	
NBS	131	NBS131B	9/15/2014	6:45	NB03CLM131B-32	40.5	8.3	
NBS	131	NBS131B	9/15/2014	6:45	NB03CLM131B-33	50.0	11.0	
NBS	131	NBS131B	9/15/2014	6:45	NB03CLM131B-34	47.3	11.0	
NBS	131	NBS131B	9/15/2014	6:45	NB03CLM131B-35	48.6	9.2	
NBS	131	NBS131B	9/15/2014	6:45	NB03CLM131B-36	66.8	31.1	
NBS	131	NBS131B	9/15/2014	6:45	NB03CLM131B-37	59.3	21.9	
NBS	131	NBS131B	9/15/2014	6:45	NB03CLM131B-38	41.2	9.1	
NBS	131	NBS131B	9/15/2014	6:45	NB03CLM131B-39	52.3	16.8	
NBS	131	NBS131B	9/15/2014	6:45	NB03CLM131B-40	54.9	19.7	
NBS	131	NBS131B	9/15/2014	6:45	NB03CLM131B-41	61.8	17.2	
NBS	131	NBS131B	9/15/2014	6:45	NB03CLM131B-42	52.5	18.5	
NBS	131	NBS131B	9/15/2014	6:45	NB03CLM131B-43	53.1	18.5	
NBS	131	NBS131B	9/15/2014	6:45	NB03CLM131B-44	49.3	17.3	
NBS	131	NBS131B	9/15/2014	6:45	NB03CLM131B-45	45.6	14.4	
NBS	131	NBS131B	9/15/2014	6:45	NB03CLM131B-46	47.3	13.5	
NBS	131	NBS131B	9/15/2014	6:45	NB03CLM131B-47	44.5	11.5	
NBS	131	NBS131B	9/15/2014	6:45	NB03CLM131B-48	44.6	11.1	
NBS	131	NBS131B	9/15/2014	6:45	NB03CLM131B-49	52.9	14.8	
NBS	131	NBS131B	9/15/2014	6:45	NB03CLM131B-50	39.0	10.1	
NBS	131	NBS131B	9/15/2014	6:45	NB03CLM131B-51	42.1	11.0	
NBS	131	NBS131B	9/15/2014	6:45	NB03CLM131B-52	41.2	99.0	
NBS	131	NBS131B	9/15/2014	6:45	NB03CLM131B-53	43.7	97.0	
NBS	131	NBS131B	9/15/2014	6:45	NB03CLM131B-54	43.0	9.1	
NBS	131	NBS131B	9/15/2014	6:45	NB03CLM131B-55	47.7	11.8	
NBS	131	NBS131B	9/15/2014	6:45	NB03CLM131B-56	56.0	21.9	
NBS	131	NBS131B	9/15/2014	6:45	NB03CLM131B-57	49.5	14.1	
NBS	131	NBS131B	9/15/2014	6:45	NB03CLM131B-58	52.1	14.9	
NBS	131	NBS131B	9/15/2014	6:45	NB03CLM131B-59	46.5	13.6	
NBS	131	NBS131B	9/15/2014	6:45	NB03CLM131B-60	42.8	10.1	
NBS	131	NBS131B	9/15/2014	6:45	NB03CLM131B-61	47.7	12.9	
NBS	131	NBS131B	9/15/2014	6:45	NB03CLM131B-62	49.0	15.7	
NBS	131	NBS131B	9/15/2014	6:45	NB03CLM131B-63	45.1	11.8	
NBS	131	NBS131B	9/15/2014	6:45	NB03CLM131B-64	47.5	14.2	
NBS	131	NBS131B	9/15/2014	6:45	NB03CLM131B-65	44.5	12.1	

Zone	Intertidal Area	Station	Collection Date	Collection Time	Specimen ID	Shell Length (mm)	Weight (g)	Comments
NBS	131	NBS131B	9/15/2014	6:45	NB03CLM131B-66	39.6	7.9	
NBS	131	NBS131B	9/15/2014	6:45	NB03CLM131B-67	39.3	6.9	
NBN	132	NBN132A	9/11/2014	16:15	NB03CLM132A-01	64.0	30.1	
NBN	132	NBN132A	9/11/2014	16:15	NB03CLM132A-02	65.0	33.1	
NBN	132	NBN132A	9/11/2014	16:15	NB03CLM132A-03	45.0	9.7	
NBN	132	NBN132A	9/11/2014	16:15	NB03CLM132A-04	54.0	19.5	
NBN	132	NBN132A	9/11/2014	16:15	NB03CLM132A-05	42.0	7.2	
NBN	132	NBN132A	9/11/2014	16:15	NB03CLM132A-06	44.0	8.1	
NBN	132	NBN132A	9/11/2014	16:15	NB03CLM132A-07	54.3	15.4	
NBN	132	NBN132A	9/11/2014	16:15	NB03CLM132A-08	49.0	15.3	
NBN	132	NBN132A	9/11/2014	16:15	NB03CLM132A-09	59.7	21.5	
NBN	132	NBN132A	9/11/2014	16:15	NB03CLM132A-10	44.8	10.4	
NBN	132	NBN132A	9/11/2014	16:15	NB03CLM132A-11	46.7	9.2	
NBN	132	NBN132A	9/11/2014	16:15	NB03CLM132A-12	55.0	15.6	
NBN	132	NBN132A	9/11/2014	16:15	NB03CLM132A-13	63.0	25.2	
NBN	132	NBN132A	9/11/2014	16:15	NB03CLM132A-14	55.0	20.4	
NBN	132	NBN132A	9/11/2014	16:15	NB03CLM132A-15	58.3	27.9	
NBN	132	NBN132A	9/11/2014	16:15	NB03CLM132A-16	60.0	21.8	
NBN	132	NBN132A	9/11/2014	16:15	NB03CLM132A-17	63.5	25.6	
NBN	132	NBN132A	9/11/2014	16:15	NB03CLM132A-18	57.5	23.4	
NBN	132	NBN132A	9/11/2014	16:15	NB03CLM132A-19	54.0	15.0	
NBN	132	NBN132A	9/11/2014	16:15	NB03CLM132A-20	56.0	16.4	
NBN	132	NBN132A	9/11/2014	16:15	NB03CLM132A-21	60.6	25.9	
NBN	132	NBN132A	9/11/2014	16:15	NB03CLM132A-22	51.0	12.8	
NBN	132	NBN132A	9/11/2014	16:15	NB03CLM132A-23	56.0	22.6	
NBN	132	NBN132A	9/11/2014	16:15	NB03CLM132A-24	50.0	14.2	
NBN	132	NBN132A	9/11/2014	16:15	NB03CLM132A-25	43.0	5.0	
NBN	132	NBN132A	9/11/2014	16:15	NB03CLM132A-26	43.7	7.7	
NBN	132	NBN132A	9/11/2014	16:15	NB03CLM132A-27	57.8	22.3	
NBN	132	NBN132A	9/11/2014	16:15	NB03CLM132A-28	56.0	18.8	
NBN	132	NBN132A	9/11/2014	16:15	NB03CLM132A-29	46.7	11.7	
NBN	132	NBN132A	9/11/2014	16:15	NB03CLM132A-30	46.0	9.0	
NBN	132	NBN132A	9/11/2014	16:15	NB03CLM132A-31	43.0	8.0	
NBN	132	NBN132A	9/11/2014	16:15	NB03CLM132A-32	43.0	7.3	
NBN	132	NBN132A	9/11/2014	16:15	NB03CLM132A-33	42.0	8.3	
NBN	132	NBN132A	9/11/2014	16:15	NB03CLM132A-34	43.0	8.0	
NBN	132	NBN132A	9/11/2014	16:15	NB03CLM132A-35	40.0	7.2	

Zone	Intertidal Area	Station	Collection Date	Collection Time	Specimen ID	Shell Length (mm)	Weight (g)	Comments
NBN	132	NBN132A	9/11/2014	16:15	NB03CLM132A-36	38.0	3.6	
NBN	132	NBN132A	9/11/2014	16:15	NB03CLM132A-37	41.0	6.7	
NBN	132	NBN132A	9/11/2014	16:15	NB03CLM132A-38	44.0	11.5	
NBN	132	NBN132A	9/11/2014	16:15	NB03CLM132A-39	42.0	7.9	
NBN	132	NBN132A	9/11/2014	16:15	NB03CLM132A-40	47.0	10.1	
NBN	132	NBN132A	9/11/2014	16:15	NB03CLM132A-41	44.0	6.4	
NBN	132	NBN132A	9/11/2014	16:15	NB03CLM132A-42	44.8	9.5	
NBN	132	NBN132A	9/11/2014	16:15	NB03CLM132A-43	46.0	8.5	
NBN	132	NBN132A	9/11/2014	16:15	NB03CLM132A-44	38.0	5.4	
NBN	132	NBN132A	9/11/2014	16:15	NB03CLM132A-45	38.0	6.8	
NBN	132	NBN132A	9/11/2014	16:15	NB03CLM132A-46	46.6	10.1	
NBN	132	NBN132A	9/11/2014	16:15	NB03CLM132A-47	48.7	13.8	
NBN	132	NBN132A	9/11/2014	16:15	NB03CLM132A-48	40.9	7.2	
NBN	132	NBN132A	9/11/2014	16:15	NB03CLM132A-49	40.4	8.0	
NBN	132	NBN132A	9/11/2014	16:15	NB03CLM132A-50	39.1	6.3	
NBN	132	NBN132A	9/11/2014	16:15	NB03CLM132A-51	40.8	7.7	
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-01	65.9	29.2	
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-02	59.8	29.1	
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-03	73.0	29.2	broken shell
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-04	60.4	23.9	
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-05	67.0	31.2	
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-06	62.0	26.2	
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-07	63.6	27.1	
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-08	58.7	21.6	
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-09	55.4	21.2	
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-10	60.5	27.5	
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-11	52.6	18.2	
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-12	64.6	33.8	
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-13	52.2	14.3	
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-14	59.0	23.7	
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-15	56.2	19.1	
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-16	48.2	14.0	
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-17	64.5	29.7	
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-18	61.6	26.1	
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-19	58.5	18.9	
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-20	56.0	19.0	
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-21	64.0	22.8	

Zone	Intertidal Area	Station	Collection Date	Collection Time	Specimen ID	Shell Length (mm)	Weight (g)	Comments
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-22	62.6	16.5	
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-23	52.0	14.4	
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-24	52.8	17.5	
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-25	53.2	17.0	
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-26	53.0	17.6	
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-27	51.0	20.0	
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-28	51.0	14.0	
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-29	47.6	11.0	
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-30	51.0	15.4	
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-31	49.5	13.8	
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-32	53.8	16.5	
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-33	46.9	10.2	
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-34	51.9	14.7	
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-35	51.9	20.7	
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-36	44.2	11.2	
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-37	45.8	13.2	
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-38	55.0	15.0	
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-39	46.0	12.0	
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-40	52.3	11.6	broken shell
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-41	43.4	7.7	
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-42	41.8	8.7	
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-43	38.9	4.4	
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-44	39.9	6.6	
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-45	47.6	14.1	
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-46	51.6	15.3	
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-47	41.0	5.2	
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-48	41.0	7.0	broken shell
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-49	44.7	8.9	
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-50	58.8	19.3	
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-51	49.9	12.1	
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-52	51.5	16.8	
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-53	45.0	9.5	
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-54	48.9	12.4	
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-55	38.7	6.6	
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-56	44.3	8.3	
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-57	61.5	17.4	broken shell
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-58	57.0	13.0	broken shell

Zone	Intertidal Area	Station	Collection Date	Collection Time	Specimen ID	Shell Length (mm)	Weight (g)	Comments
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-59	67.0	20.1	broken shell
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-60	58.0	14.0	broken shell
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-61	65.0	15.0	broken shell
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-62	50.0	9.5	broken shell
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-63	48.8	9.8	broken shell
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-64	42.0	6.0	broken shell
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-65	49.0	8.8	broken shell
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-66	57.0	16.0	broken shell
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-67	53.0	13.3	broken shell
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-68	57.0	10.3	broken shell
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-69	53.8	8.1	broken shell
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-70	59.0	14.2	broken shell
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-71	53.9	10.9	broken shell
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-72	57.0	12.2	broken shell
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-73	48.0	8.2	broken shell
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-74	44.0	4.9	broken shell
NBN	132	NBN132B	9/22/2014	12:35	NB03CLM132B-75	50.4	7.3	broken shell
NBN	133	NBN133	9/22/2014	13:38	NB03CLM133-01	66.7	41.4	
NBN	133	NBN133	9/22/2014	13:38	NB03CLM133-02	70.0	26.0	broken shell
NBN	133	NBN133	9/22/2014	13:38	NB03CLM133-03	70.8	46.2	
NBN	133	NBN133	9/22/2014	13:38	NB03CLM133-04	67.0	30.3	
NBN	133	NBN133	9/22/2014	13:38	NB03CLM133-05	70.0	57.4	
NBN	133	NBN133	9/22/2014	13:38	NB03CLM133-06	64.6	33.1	
NBN	133	NBN133	9/22/2014	13:38	NB03CLM133-07	60.4	33.0	
NBN	133	NBN133	9/22/2014	13:38	NB03CLM133-08	62.1	29.4	
NBN	133	NBN133	9/22/2014	13:38	NB03CLM133-09	64.3	32.3	
NBN	133	NBN133	9/22/2014	13:38	NB03CLM133-10	52.0	20.3	
NBN	133	NBN133	9/22/2014	13:38	NB03CLM133-11	61.7	31.4	
NBN	133	NBN133	9/22/2014	13:38	NB03CLM133-12	53.4	15.3	
NBN	133	NBN133	9/22/2014	13:38	NB03CLM133-13	50.9	15.5	
NBN	133	NBN133	9/22/2014	13:38	NB03CLM133-14	50.4	16.9	
NBN	133	NBN133	9/22/2014	13:38	NB03CLM133-15	51.1	14.7	
NBN	133	NBN133	9/22/2014	13:38	NB03CLM133-16	52.0	18.0	
NBN	133	NBN133	9/22/2014	13:38	NB03CLM133-17	52.3	16.4	
NBN	133	NBN133	9/22/2014	13:38	NB03CLM133-18	51.5	15.1	
NBN	133	NBN133	9/22/2014	13:38	NB03CLM133-19	50.0	16.3	
NBN	133	NBN133	9/22/2014	13:38	NB03CLM133-20	51.2	13.3	

Zone	Intertidal Area	Station	Collection Date	Collection Time	Specimen ID	Shell Length (mm)	Weight (g)	Comments
NBN	133	NBN133	9/22/2014	13:38	NB03CLM133-21	50.4	13.0	
NBN	133	NBN133	9/22/2014	13:38	NB03CLM133-22	50.1	13.6	
NBN	133	NBN133	9/22/2014	13:38	NB03CLM133-23	47.8	12.0	
NBN	133	NBN133	9/22/2014	13:38	NB03CLM133-24	50.3	13.7	
NBN	133	NBN133	9/22/2014	13:38	NB03CLM133-25	46.9	14.0	
NBN	133	NBN133	9/22/2014	13:38	NB03CLM133-26	50.9	15.0	
NBN	133	NBN133	9/22/2014	13:38	NB03CLM133-27	47.0	14.8	
NBN	133	NBN133	9/22/2014	13:38	NB03CLM133-28	43.4	11.9	
NBN	133	NBN133	9/22/2014	13:38	NB03CLM133-29	46.0	13.4	
NBN	133	NBN133	9/22/2014	13:38	NB03CLM133-30	43.0	10.0	
NBN	133	NBN133	9/22/2014	13:38	NB03CLM133-31	42.0	10.4	
NBN	133	NBN133	9/22/2014	13:38	NB03CLM133-32	46.3	11.8	
NBN	133	NBN133	9/22/2014	13:38	NB03CLM133-33	46.5	11.9	
NBN	133	NBN133	9/22/2014	13:38	NB03CLM133-34	42.5	10.9	
NBN	133	NBN133	9/22/2014	13:38	NB03CLM133-35	42.0	9.0	
NBN	133	NBN133	9/22/2014	13:38	NB03CLM133-36	41.2	10.0	
NBN	133	NBN133	9/22/2014	13:38	NB03CLM133-37	42.0	10.5	
NBN	133	NBN133	9/22/2014	13:38	NB03CLM133-38	45.1	6.0	broken shell
NBN	133	NBN133	9/22/2014	13:38	NB03CLM133-39	40.6	7.1	
NBN	133	NBN133	9/22/2014	13:38	NB03CLM133-40	63.0	25.0	broken shell
NBN	133	NBN133	9/22/2014	13:38	NB03CLM133-41	61.0	22.0	broken shell
NBN	133	NBN133	9/22/2014	13:38	NB03CLM133-42	56.0	13.5	broken shell
NBN	133	NBN133	9/22/2014	13:38	NB03CLM133-43	57.0	11.0	broken shell
NBN	133	NBN133	9/22/2014	13:38	NB03CLM133-44	46.0	8.4	broken shell
NBN	133	NBN133	9/22/2014	13:38	NB03CLM133-45	46.0	7.0	broken shell
NBN	133	NBN133	9/22/2014	13:38	NB03CLM133-46	45.0	8.0	broken shell
NBS	134	NBS134	9/25/2014	15:15	NB03CLM134-01	73.0	55.6	
NBS	134	NBS134	9/25/2014	15:15	NB03CLM134-02	75.4	56.4	
NBS	134	NBS134	9/25/2014	15:15	NB03CLM134-03	71.5	57.9	
NBS	134	NBS134	9/25/2014	15:15	NB03CLM134-04	72.0	61.9	
NBS	134	NBS134	9/25/2014	15:15	NB03CLM134-05	65.4	37.4	
NBS	134	NBS134	9/25/2014	15:15	NB03CLM134-06	55.7	22.3	
NBS	134	NBS134	9/25/2014	15:15	NB03CLM134-07	64.2	38.0	
NBS	134	NBS134	9/25/2014	15:15	NB03CLM134-08	66.3	44.3	
NBS	134	NBS134	9/25/2014	15:15	NB03CLM134-09	61.3	31.8	
NBS	134	NBS134	9/25/2014	15:15	NB03CLM134-10	65.2	37.3	
NBS	134	NBS134	9/25/2014	15:15	NB03CLM134-11	55.8	27.0	

Zone	Intertidal Area	Station	Collection Date	Collection Time	Specimen ID	Shell Length (mm)	Weight (g)	Comments
NBS	134	NBS134	9/25/2014	15:15	NB03CLM134-12	53.5	20.7	
NBS	134	NBS134	9/25/2014	15:15	NB03CLM134-13	54.5	20.9	
NBS	134	NBS134	9/25/2014	15:15	NB03CLM134-14	49.9	18.8	
NBS	134	NBS134	9/25/2014	15:15	NB03CLM134-15	61.6	30.3	
NBS	134	NBS134	9/25/2014	15:15	NB03CLM134-16	58.0	16.0	
NBS	134	NBS134	9/25/2014	15:15	NB03CLM134-17	56.6	22.8	
NBS	134	NBS134	9/25/2014	15:15	NB03CLM134-18	55.9	20.9	
NBS	134	NBS134	9/25/2014	15:15	NB03CLM134-19	52.0	17.5	
NBS	134	NBS134	9/25/2014	15:15	NB03CLM134-20	54.0	22.7	
NBS	134	NBS134	9/25/2014	15:15	NB03CLM134-21	48.8	15.7	
NBS	134	NBS134	9/25/2014	15:15	NB03CLM134-22	52.8	17.8	
NBS	134	NBS134	9/25/2014	15:15	NB03CLM134-23	49.0	17.2	
NBS	134	NBS134	9/25/2014	15:15	NB03CLM134-24	47.5	14.4	
NBS	134	NBS134	9/25/2014	15:15	NB03CLM134-25	54.1	22.0	
NBS	134	NBS134	9/25/2014	15:15	NB03CLM134-26	49.0	16.0	
NBS	134	NBS134	9/25/2014	15:15	NB03CLM134-27	52.0	27.4	
NBS	134	NBS134	9/25/2014	15:15	NB03CLM134-28	48.0	17.0	
NBS	134	NBS134	9/25/2014	15:15	NB03CLM134-29	49.3	19.0	
NBS	134	NBS134	9/25/2014	15:15	NB03CLM134-30	47.8	16.3	
NBS	134	NBS134	9/25/2014	15:15	NB03CLM134-31	48.0	17.2	
NBS	134	NBS134	9/25/2014	15:15	NB03CLM134-32	49.0	15.3	
NBS	134	NBS134	9/25/2014	15:15	NB03CLM134-33	47.5	14.7	
NBS	134	NBS134	9/25/2014	15:15	NB03CLM134-34	51.2	15.9	
NBS	134	NBS134	9/25/2014	15:15	NB03CLM134-35	48.6	16.3	
NBS	134	NBS134	9/25/2014	15:15	NB03CLM134-36	51.5	18.0	
NBS	134	NBS134	9/25/2014	15:15	NB03CLM134-37	50.0	15.0	
NBS	134	NBS134	9/25/2014	15:15	NB03CLM134-38	53.8	17.2	
NBS	134	NBS134	9/25/2014	15:15	NB03CLM134-39	48.5	17.8	
NBS	134	NBS134	9/25/2014	15:15	NB03CLM134-40	46.8	13.4	
NBS	134	NBS134	9/25/2014	15:15	NB03CLM134-41	43.7	12.4	
NBS	134	NBS134	9/25/2014	15:15	NB03CLM134-42	44.0	12.4	
NBS	134	NBS134	9/25/2014	15:15	NB03CLM134-43	39.3	9.5	
NBS	134	NBS134	9/25/2014	15:15	NB03CLM134-44	45.3	12.5	
NBS	134	NBS134	9/25/2014	15:15	NB03CLM134-45	42.8	13.5	
NBS	134	NBS134	9/25/2014	15:15	NB03CLM134-46	47.0	13.0	
NBS	134	NBS134	9/25/2014	15:15	NB03CLM134-47	39.0	8.5	
NBS	134	NBS134	9/25/2014	15:15	NB03CLM134-48	40.0	8.8	

Zone	Intertidal Area	Station	Collection Date	Collection Time	Specimen ID	Shell Length (mm)	Weight (g)	Comments
NBS	134	NBS134	9/25/2014	15:15	NB03CLM134-49	42.0	12.5	
NBS	134	NBS134	9/25/2014	15:15	NB03CLM134-50	47.5	14.0	
NBS	134	NBS134	9/25/2014	15:15	NB03CLM134-51	40.5	10.8	
NBS	134	NBS134	9/25/2014	15:15	NB03CLM134-52	42.5	10.5	
NBS	134	NBS134	9/25/2014	15:15	NB03CLM134-53	46.8	14.0	
NBS	134	NBS134	9/25/2014	15:15	NB03CLM134-54	41.4	11.5	
NBS	134	NBS134	9/25/2014	15:15	NB03CLM134-55	39.0	5.7	broken shell
NBS	134	NBS134	9/25/2014	15:15	NB03CLM134-56	47.0	13.0	broken shell
NBS	134	NBS134	9/25/2014	15:15	NB03CLM134-57	45.0	8.5	broken shell
NBS	134	NBS134	9/25/2014	15:15	NB03CLM134-58	49.0	14.0	broken shell
NBS	134	NBS134	9/25/2014	15:15	NB03CLM134-59	57.0	13.0	broken shell
NBS	135	NBS135	9/19/2014	10:30	NB03CLM135-01	58.7	19.0	broken shell
NBS	135	NBS135	9/19/2014	10:30	NB03CLM135-02	47.8	10.0	broken shell
NBS	135	NBS135	9/19/2014	10:30	NB03CLM135-03	69.7	24.6	broken shell
NBS	135	NBS135	9/19/2014	10:30	NB03CLM135-04	44.5	7.7	broken shell
NBS	135	NBS135	9/19/2014	10:30	NB03CLM135-05	55.4	15.4	broken shell
NBS	135	NBS135	9/19/2014	10:30	NB03CLM135-06	55.0	17.9	broken shell
NBS	135	NBS135	9/19/2014	10:30	NB03CLM135-07	46.4	7.1	broken shell
NBS	135	NBS135	9/19/2014	10:30	NB03CLM135-08	61.4	16.8	broken shell
NBS	135	NBS135	9/19/2014	10:30	NB03CLM135-09	45.8	9.0	broken shell
NBS	135	NBS135	9/19/2014	10:30	NB03CLM135-10	55.5	20.7	
NBS	135	NBS135	9/19/2014	10:30	NB03CLM135-11	63.1	28.2	
NBS	135	NBS135	9/19/2014	10:30	NB03CLM135-12	60.0	26.7	
NBS	135	NBS135	9/19/2014	10:30	NB03CLM135-13	64.4	39.1	
NBS	135	NBS135	9/19/2014	10:30	NB03CLM135-14	60.3	22.7	
NBS	135	NBS135	9/19/2014	10:30	NB03CLM135-15	56.7	25.5	
NBS	135	NBS135	9/19/2014	10:30	NB03CLM135-16	55.4	18.2	
NBS	135	NBS135	9/19/2014	10:30	NB03CLM135-17	57.7	26.8	
NBS	135	NBS135	9/19/2014	10:30	NB03CLM135-18	60.0	27.1	
NBS	135	NBS135	9/19/2014	10:30	NB03CLM135-19	64.0	34.3	
NBS	135	NBS135	9/19/2014	10:30	NB03CLM135-20	52.9	22.1	
NBS	135	NBS135	9/19/2014	10:30	NB03CLM135-21	57.3	27.5	
NBS	135	NBS135	9/19/2014	10:30	NB03CLM135-22	49.5	15.9	
NBS	135	NBS135	9/19/2014	10:30	NB03CLM135-23	53.4	19.9	
NBS	135	NBS135	9/19/2014	10:30	NB03CLM135-24	45.5	16.0	
NBS	135	NBS135	9/19/2014	10:30	NB03CLM135-25	53.4	19.3	
NBS	135	NBS135	9/19/2014	10:30	NB03CLM135-26	55.1	21.3	

Zone	Intertidal Area	Station	Collection Date	Collection Time	Specimen ID	Shell Length (mm)	Weight (g)	Comments
NBS	135	NBS135	9/19/2014	10:30	NB03CLM135-27	53.8	18.0	
NBS	135	NBS135	9/19/2014	10:30	NB03CLM135-28	52.2	16.1	
NBS	135	NBS135	9/19/2014	10:30	NB03CLM135-29	51.1	17.3	
NBS	135	NBS135	9/19/2014	10:30	NB03CLM135-30	54.6	17.5	
NBS	135	NBS135	9/19/2014	10:30	NB03CLM135-31	51.0	16.1	
NBS	135	NBS135	9/19/2014	10:30	NB03CLM135-32	52.3	18.1	
NBS	135	NBS135	9/19/2014	10:30	NB03CLM135-33	50.1	17.1	
NBS	135	NBS135	9/19/2014	10:30	NB03CLM135-34	46.9	12.8	
NBS	135	NBS135	9/19/2014	10:30	NB03CLM135-35	56.4	20.5	
NBS	135	NBS135	9/19/2014	10:30	NB03CLM135-36	49.3	16.3	
NBS	135	NBS135	9/19/2014	10:30	NB03CLM135-37	50.4	15.5	
NBS	135	NBS135	9/19/2014	10:30	NB03CLM135-38	48.5	13.3	
NBS	135	NBS135	9/19/2014	10:30	NB03CLM135-39	41.8	9.0	
NBS	135	NBS135	9/19/2014	10:30	NB03CLM135-40	44.5	10.5	
NBS	135	NBS135	9/19/2014	10:30	NB03CLM135-41	44.5	9.3	
NBS	135	NBS135	9/19/2014	10:30	NB03CLM135-42	45.1	10.9	
NBS	135	NBS135	9/19/2014	10:30	NB03CLM135-43	42.3	8.9	

Clam Sampling
Newark Bay Study Area **Draft: For Discussion Purposes Only**
VARIABLE DESCRIPTION

Location Coordinate Data Tab

Zone	Code indicating the project location (Newark Bay = NB) and Zone (N = North, C= Central, S = South)
Intertidal Area	Intertidal Area where the sample was collected
Station	Combination of the Zone and Intertidal Area (if more than one sample was collected at an Intertidal Area, then A, B or C is used to designate a specific location within the Intertidal Area)
Location Count	Count of the locations where clams were collected per station
Collection Method	Method (or equipment, i.e., gear type) used to collect the organism
Easting (X)	Easting coordinate, coordinate system: US State Plane, NAD 83 (US survey feet), zone NJ 2900
Northing (Y)	Northing coordinate, coordinate system: US State Plane, NAD 83 (US survey feet), zone NJ 2900
Comments	

Specimen Tally Tab

Zone	Code indicating the project location (Newark Bay = NB) and Zone (N = North, C= Central, S = South)
Intertidal Area	Intertidal Area where the sample was collected
Station	Combination of the Zone and Intertidal Area (if more than one sample was collected at an Intertidal Area, then A, B or C is used to designate a specific location within the Intertidal Area)
Collection Date	Date of collection of softshell clam
Collection Time	Time when first softshell clam was collected at a station
Specimen ID	A unique identifier that combines the sample ID and consecutive numbering of the clams within the sample
Shell Length (mm)	Length of shell (mm) of individual softshell clam measured from anterior to posterior
Weight (g)	Weight (g) of individual softshell clam, including the shell
Comments	

Crab Sampling
Newark Bay Study Area
LOCATION COORDINATE DATA (Field observed coordinates)

Draft: For Discussion Purposes Only

Key

Study Area	NB	Newark Bay
Zone	NBN	North Zone
Intertidal Area	NBN122	Intertidal Area 122 in North Zone

Zone	Intertidal Area	Area	Collection Method	Deployment Date	Deployment Time	Easting (X)d	Northing (Y)d	Deployment Count	Collection Date	Collection Time	Easting (X)c	Northing (Y)c	Depth (ft)	Comments
NBS	129	NBS-0909-1342	Crab Trap	9/8/2014	16:58	581516.630	660080.050	NBS129-CT-01	9/9/2014	13:42			6.3	
NBS	129	NBS-0909-1342	Crab Trap	9/8/2014	16:58	581588.440	660079.360	NBS129-CT-02	9/9/2014	13:42			6.3	
NBS	129	NBS-0909-1342	Crab Trap	9/8/2014	16:58	581675.690	660075.110	NBS129-CT-03	9/9/2014	13:42			8	
NBS	129	NBS-0909-1342	Crab Trap	9/8/2014	16:58	581723.050	660108.250	NBS129-CT-04	9/9/2014	13:42			9	
NBS	129	NBS-0909-1342	Crab Trap	9/8/2014	16:58	581784.620	660148.460	NBS129-CT-05	9/9/2014	13:42			19	
NBS	129	NBS-0909-1342	Crab Trap	9/8/2014	16:58	581882.610	660143.800	NBS129-CT-06	9/9/2014	13:42			10	
NBS	129	NBS-0909-1342	Crab Trap	9/8/2014	16:58	581967.590	660133.520	NBS129-CT-07	9/9/2014	13:42			10.1	
NBS	129	NBS-0909-1342	Crab Trap	9/8/2014	16:58	582042.250	660162.240	NBS129-CT-08	9/9/2014	13:42			18	
NBS	129	NBS-0910-1410	Crab Trap	9/9/2014	13:42	581495.180	660071.460	NBS129-CT-09	9/10/2014	14:10			3	
NBS	129	NBS-0910-1410	Crab Trap	9/9/2014	13:42	581588.170	660067.250	NBS129-CT-10	9/10/2014	14:10			3.4	
NBS	129	NBS-0910-1410	Crab Trap	9/9/2014	13:42	581713.730	660039.040	NBS129-CT-11	9/10/2014	14:10			4.3	
NBS	129	NBS-0910-1410	Crab Trap	9/9/2014	13:42	581735.920	660071.960	NBS129-CT-12	9/10/2014	14:10			4.8	
NBS	129	NBS-0910-1410	Crab Trap	9/9/2014	13:42	581799.100	660150.580	NBS129-CT-13	9/10/2014	14:10			18	
NBS	129	NBS-0910-1410	Crab Trap	9/9/2014	13:42	581858.930	660121.440	NBS129-CT-14	9/10/2014	14:10			4.5	
NBS	129	NBS-0910-1410	Crab Trap	9/9/2014	13:42	581978.810	660117.710	NBS129-CT-15	9/10/2014	14:10			5.5	
NBS	129	NBS-0910-1410	Crab Trap	9/9/2014	13:42	582117.900	660150.390	NBS129-CT-16	9/10/2014	14:10			5.3	
NBS	129	NBS-0911-1155	Crab Trap	9/10/2014	15:00	581769.440	660153.090	NBS129-CT-17	9/11/2014	11:55			18.75	
NBS	129	NBS-0911-1155	Crab Trap	9/10/2014	15:00	582802.230	660188.160	NBS129-CT-18	9/11/2014	11:55			3.75	
NBS	131	NBS-0911-1220	Crab Trap	9/10/2014	15:00	586326.750	664790.280	NBS131-CT-01	9/11/2014	12:20			8.3	
NBS	131	NBS-0911-1220	Crab Trap	9/10/2014	15:00	586384.590	664847.870	NBS131-CT-02	9/11/2014	12:20			8	
NBS	131	NBS-0911-1220	Crab Trap	9/10/2014	15:00	586462.950	664899.850	NBS131-CT-03	9/11/2014	12:20			7.5	
NBS	131	NBS-0911-1220	Crab Trap	9/10/2014	15:00	586571.670	664955.580	NBS131-CT-04	9/11/2014	12:20			7.67	
NBS	131	NBS-0911-1220	Crab Trap	9/10/2014	15:00	586700.990	664989.520	NBS131-CT-05	9/11/2014	12:20			8.08	
NBS	131	NBS-0911-1220	Crab Trap	9/10/2014	15:00	587054.370	665073.100	NBS131-CT-06	9/11/2014	12:20			8.25	
NBS	131	NBS-0916-1200	Crab Trap	9/15/2014	10:48	586746.970	664890.850	NBS131-CT-07	9/16/2014	12:00			6	
NBS	131	NBS-0916-1200	Crab Trap	9/15/2014	10:48	586819.070	664996.310	NBS131-CT-08	9/16/2014	12:00			6	
NBS	131	NBS-0916-1200	Crab Trap	9/15/2014	10:48	586920.350	665115.610	NBS131-CT-09	9/16/2014	12:00			6.3	
NBS	131	NBS-0916-1200	Crab Trap	9/15/2014	10:48	587050.910	665259.260	NBS131-CT-10	9/16/2014	12:00			6.2	
NBS	131	NBS-0916-1200	Crab Trap	9/15/2014	10:48	587338.030	665326.130	NBS131-CT-11	9/16/2014	12:00			7	
NBS	131	NBS-0916-1200	Crab Trap	9/15/2014	10:48	587697.870	665116.600	NBS131-CT-12	9/16/2014	12:00			8	
NBS	131	NBS-0916-1200	Crab Trap	9/15/2014	10:48	587932.320	665238.710	NBS131-CT-13	9/16/2014	12:00			8	
NBS	131	NBS-0916-1200	Crab Trap	9/15/2014	10:48	587281.090	665778.040	NBS131-CT-14	9/16/2014	12:00			10	
NBS	131	NBS-0916-1200	Crab Trap	9/15/2014	10:48	587362.950	665782.640	NBS131-CT-15	9/16/2014	12:00			14	
NBS	131	NBS-0916-1200	Crab Trap	9/15/2014	10:48	587212.700	665854.030	NBS131-CT-16	9/16/2014	12:00			8.3	
NBS	131	NBS-0916-1200	Crab Trap	9/15/2014	10:48	587248.360	666010.980	NBS131-CT-17	9/16/2014	12:00			12	
NBS	131	NBS-0916-1200	Crab Trap	9/15/2014	10:48	587130.230	666165.270	NBS131-CT-18	9/16/2014	12:00			5	
NBS	131	NBS-0917-0750	Crab Trap	9/16/2014	12:01	586819.070	664996.310	NBS131-CT-19	9/17/2014	7:50			6	
NBS	131	NBS-0917-0750	Crab Trap	9/16/2014	12:01	586920.350	665115.610	NBS131-CT-20	9/17/2014	7:50			6.3	
NBS	131	NBS-0917-0750	Crab Trap	9/16/2014	12:01	587050.910	665259.260	NBS131-CT-21	9/17/2014	7:50			6.2	
NBS	131	NBS-0917-0750	Crab Trap	9/16/2014	12:01	587338.030	665326.130	NBS131-CT-22	9/17/2014	7:50			7	
NBS	131	NBS-0917-0750	Crab Trap	9/16/2014	12:01	587697.870	665116.600	NBS131-CT-23	9/17/2014	7:50			8	
NBS	131	NBS-0917-0750	Crab Trap	9/16/2014	12:01	587932.320	665238.710	NBS131-CT-24	9/17/2014	7:50			8	
NBS	131	NBS-0917-0750	Crab Trap	9/16/2014	12:01	587281.090	665778.040	NBS131-CT-25	9/17/2014	7:50			10	
NBS	131	NBS-0917-0750	Crab Trap	9/16/2014	12:01	587362.950	665782.640	NBS131-CT-26	9/17/2014	7:50			14	
NBS	131	NBS-0917-0750	Crab Trap	9/16/2014	12:01	587212.700	665854.030	NBS131-CT-27	9/17/2014	7:50			8.3	
NBS	131	NBS-0917-0750	Crab Trap	9/16/2014	12:01	587248.360	666010.980	NBS131-CT-28	9/17/2014	7:50			12	
NBS	131	NBS-0917-0750	Crab Trap	9/16/2014	12:01	587130.230	666165.270	NBS131-CT-29	9/17/2014	7:50			5	
NBS	131	NBS-0917-1123	Crab Trap	9/17/2014	7:50	586819.070	664996.310	NBS131-CT-30	9/17/2014	11:23			6	
NBS	131	NBS-0917-1123	Crab Trap	9/17/2014	7:50	586920.350	665115.610	NBS131-CT-31	9/17/2014	11:23			6.3	
NBS	131	NBS-0917-1123	Crab Trap	9/17/2014	7:50	587050.910	665259.260	NBS131-CT-32	9/17/2014	11:23			6.2	
NBS	131	NBS-0917-1123	Crab Trap	9/17/2014	7:50	587338.030	665326.130	NBS131-CT-33	9/17/2014	11:23			7	
NBS	131	NBS-0917-1123	Crab Trap	9/17/2014	7:50	587697.870	665116.600	NBS131-CT-34	9/17/2014	11:23			8	
NBS	131	NBS-0917-1123	Crab Trap	9/17/2014	7:50	587932.320	665238.710	NBS131-CT-35	9/17/2014	11:23			8	
NBS	131	NBS-0917-1123	Crab Trap	9/17/2014	7:50	587281.090	665778.040	NBS131-CT-36	9/17/2014	11:23			10	
NBS	131	NBS-0917-1123	Crab Trap	9/17/2014	7:50	587362.950	665782.640	NBS131-CT-37	9/17/2014	11:23			14	
NBS	131	NBS-0917-1123	Crab Trap	9/17/2014	7:50	587212.700	665854.030	NBS131-CT-38	9/17/2014	11:23			8.3	
NBS	131	NBS-0917-1123	Crab Trap	9/17/2014	7:50	587248.360	666010.980	NBS131-CT-39	9/17/2014	11:23			12	
NBS	131	NBS-0917-1123	Crab Trap	9/17/2014	7:50	587130.230	666165.270	NBS131-CT-40	9/17/2014	11:23			5	
NBS	130	NBS-0919-0934	Crab Trap	9/18/2014	12:41	584725.060	663580.280	NBS130-CT-01	9/19/2014	9:34			3.8	
NBS	130	NBS-0918-1240	Crab Trap	9/17/2014	11:40	584824.870	663605.610	NBS130-CT-02	9/18/2014	12:40			4	
NBS	130	NBS-0919-0934	Crab Trap	9/18/2014	12:41	584924.280	663589.790	NBS130-CT-03	9/19/2014	9:34			5	
NBS	130	NBS-0919-0934	Crab Trap	9/18/2014	12:41	584981.150	663591.470	NBS130-CT-04	9/19/2014	9:34			5	

Zone	Intertidal Area	Area	Collection Method	Deployment Date	Deployment Time	Easting (X)d	Northing (Y)d	Deployment Count	Collection Date	Collection Time	Easting (X)c	Northing (Y)c	Depth (ft)	Comments
NBS	130	NBS-0919-0934	Crab Trap	9/18/2014	12:41	585072.530	663587.690	NBS130-CT-05	9/19/2014	9:34			6	
NBS	130	NBS-0919-0934	Crab Trap	9/18/2014	12:41	585214.330	663584.340	NBS130-CT-06	9/19/2014	9:34			7	
NBS	130	NBS-0919-0934	Crab Trap	9/18/2014	12:41	585599.960	663721.930	NBS130-CT-07	9/19/2014	9:34			13	
NBS	130	NBS-0918-1240	Crab Trap	9/17/2014	11:40	585709.370	663889.220	NBS130-CT-08	9/18/2014	12:40			8.3	
NBS	130	NBS-0918-1240	Crab Trap	9/17/2014	11:40	585818.670	664002.370	NBS130-CT-09	9/18/2014	12:40			6	
NBS	130	NBS-0918-1240	Crab Trap	9/17/2014	11:40	585845.070	664210.830	NBS130-CT-10	9/18/2014	12:40			5	
NBS	130	NBS-0918-1240	Crab Trap	9/17/2014	11:40	585700.320	664140.510	NBS130-CT-11	9/18/2014	12:40			4	
NBS	130	NBS-0918-1240	Crab Trap	9/17/2014	11:40	584725.060	663580.280	NBS130-CT-12	9/18/2014	12:40			3.8	
NBS	130	NBS-0919-0934	Crab Trap	9/18/2014	12:41	584824.870	663605.610	NBS130-CT-13	9/19/2014	9:34			4	
NBS	130	NBS-0919-0934	Crab Trap	9/18/2014	12:41	584924.280	663589.790	NBS130-CT-14	9/19/2014	9:34			5	
NBS	130	NBS-0919-0934	Crab Trap	9/18/2014	12:41	584981.150	663591.470	NBS130-CT-15	9/19/2014	9:34			5	
NBS	130	NBS-0919-0934	Crab Trap	9/18/2014	12:41	585072.530	663587.690	NBS130-CT-16	9/19/2014	9:34			6	
NBS	130	NBS-0919-0934	Crab Trap	9/18/2014	12:41	585214.330	663584.340	NBS130-CT-17	9/19/2014	9:34			7	
NBS	130	NBS-0919-0934	Crab Trap	9/18/2014	12:41	585599.960	663721.930	NBS130-CT-18	9/19/2014	9:34			13	
NBS	130	NBS-0919-0934	Crab Trap	9/18/2014	12:41	585709.370	663889.220	NBS130-CT-19	9/19/2014	9:34			8.3	
NBS	130	NBS-0919-0934	Crab Trap	9/18/2014	12:41	585818.670	664002.370	NBS130-CT-20	9/19/2014	9:34			6	
NBS	130	NBS-0919-0934	Crab Trap	9/18/2014	12:41	585845.070	664210.830	NBS130-CT-21	9/19/2014	9:34			5	
NBS	130	NBS-0919-0934	Crab Trap	9/18/2014	12:41	585700.320	664140.510	NBS130-CT-22	9/19/2014	9:34			4	
NBS	130	NBS-0923-1225	Crab Trap	9/22/2014	12:05	586115.730	663951.980	NBS130-CT-23	9/23/2014	12:25			9	
NBS	130	NBS-0923-1225	Crab Trap	9/22/2014	12:05	585878.090	663972.700	NBS130-CT-24	9/23/2014	12:25			6	
NBS	130	NBS-0923-1225	Crab Trap	9/22/2014	12:05	585748.670	663930.100	NBS130-CT-25	9/23/2014	12:25			5	
NBS	130	NBS-0923-1225	Crab Trap	9/22/2014	12:05	585602.940	663906.840	NBS130-CT-26	9/23/2014	12:25			3.5	
NBS	130	NBS-0923-1225	Crab Trap	9/22/2014	12:05	585490.620	663823.390	NBS130-CT-27	9/23/2014	12:25			3	
NBS	130	NBS-0923-1225	Crab Trap	9/22/2014	12:05	585530.280	663739.100	NBS130-CT-28	9/23/2014	12:25			10	
NBS	130	NBS-0923-1225	Crab Trap	9/22/2014	12:05	585269.030	663529.830	NBS130-CT-29	9/23/2014	12:25			10	
NBS	130	NBS-0923-1225	Crab Trap	9/22/2014	12:05	585103.840	663535.020	NBS130-CT-30	9/23/2014	12:25			5.5	
NBS	130	NBS-0923-1225	Crab Trap	9/22/2014	12:05	585045.880	663540.050	NBS130-CT-31	9/23/2014	12:25			5	
NBS	130	NBS-0923-1225	Crab Trap	9/22/2014	12:05	584944.420	663547.390	NBS130-CT-32	9/23/2014	12:25			4.3	
NBS	130	NBS-0923-1225	Crab Trap	9/22/2014	12:05	584877.050	663537.120	NBS130-CT-33	9/23/2014	12:25			4	
NBS	130	NBS-0923-1225	Crab Trap	9/22/2014	12:05	584800.420	663535.670	NBS130-CT-34	9/23/2014	12:25			3.5	
NBS	130	NBS-0923-1225	Crab Trap	9/22/2014	12:05	584720.430	663543.380	NBS130-CT-35	9/23/2014	12:25			3	
NBS	134	NBS-0924-1243	Crab Trap	9/23/2014	16:30	579592.380	659744.040	NBS134-CT-01	9/24/2014	12:43			4	
NBS	134	NBS-0924-1243	Crab Trap	9/23/2014	16:30	579647.940	659723.070	NBS134-CT-02	9/24/2014	12:43			4	
NBS	134	NBS-0924-1243	Crab Trap	9/23/2014	16:30	579739.860	659647.360	NBS134-CT-03	9/24/2014	12:43			3.5	
NBS	134	NBS-0924-1243	Crab Trap	9/23/2014	16:30	579760.090	659649.800	NBS134-CT-04	9/24/2014	12:43			3	
NBS	134	NBS-0924-1243	Crab Trap	9/23/2014	16:30	579786.240	659622.380	NBS134-CT-05	9/24/2014	12:43			3.5	
NBS	134	NBS-0924-1243	Crab Trap	9/23/2014	16:30	579770.320	659766.150	NBS134-CT-06	9/24/2014	12:43			3	
NBS	134	NBS-0924-1243	Crab Trap	9/23/2014	16:30	579736.350	659737.570	NBS134-CT-07	9/24/2014	12:43			2.8	
NBS	134	NBS-0924-1243	Crab Trap	9/23/2014	16:30	579714.810	659775.950	NBS134-CT-08	9/24/2014	12:43			3	
NBS	134	NBS-0924-1243	Crab Trap	9/23/2014	16:30	579678.570	659808.440	NBS134-CT-09	9/24/2014	12:43			4	
NBS	134	NBS-0924-1243	Crab Trap	9/23/2014	16:30	579761.710	659814.400	NBS134-CT-10	9/24/2014	12:43			5	
NBS	134	NBS-0924-1243	Crab Trap	9/23/2014	16:30	579748.400	659842.260	NBS134-CT-11	9/24/2014	12:43			5	
NBS	134	NBS-0924-1243	Crab Trap	9/23/2014	16:30	579813.710	659830.690	NBS134-CT-12	9/24/2014	12:43			3	
NBS	134	NBS-0924-1243	Crab Trap	9/23/2014	16:30	579842.440	659877.070	NBS134-CT-13	9/24/2014	12:43			5	
NBC	127	NBC-0925-1237	Crab Trap	9/24/2014	16:20	592894.170	664918.040	NBC127-CT-01	9/25/2014	12:37			2	
NBC	127	NBC-0925-1237	Crab Trap	9/24/2014	16:20	592851.960	664977.660	NBC127-CT-02	9/25/2014	12:37			2	
NBC	127	NBC-0925-1237	Crab Trap	9/24/2014	16:20	592772.110	665034.900	NBC127-CT-03	9/25/2014	12:37			4	
NBC	127	NBC-0925-1237	Crab Trap	9/24/2014	16:20	592631.470	664987.150	NBC127-CT-04	9/25/2014	12:37			5	
NBC	127	NBC-0925-1237	Crab Trap	9/24/2014	16:20	592716.700	665106.900	NBC127-CT-05	9/25/2014	12:37			5	
NBC	127	NBC-0925-1237	Crab Trap	9/24/2014	16:20	592715.820	665189.630	NBC127-CT-06	9/25/2014	12:37			6	
NBC	127	NBC-0925-1237	Crab Trap	9/24/2014	16:20	592866.940	665216.650	NBC127-CT-07	9/25/2014	12:37			5	
NBC	127	NBC-0925-1237	Crab Trap	9/24/2014	16:20	592920.620	665145.060	NBC127-CT-08	9/25/2014	12:37			4	
NBC	127	NBC-0925-1237	Crab Trap	9/24/2014	16:20	592977.840	665104.000	NBC127-CT-09	9/25/2014	12:37			3.5	
NBC	127	NBC-0925-1237	Crab Trap	9/24/2014	16:20	593049.330	665050.110	NBC127-CT-10	9/25/2014	12:37			3.4	
NBC	127	NBC-0925-1237	Crab Trap	9/24/2014	16:20	593443.640	665824.010	NBC127-CT-11	9/25/2014	12:37			4.1	
NBC	127	NBC-0925-1237	Crab Trap	9/24/2014	16:20	593560.380	665850.860	NBC127-CT-12	9/25/2014	12:37			4.2	
NBC	127	NBC-0925-1237	Crab Trap	9/24/2014	16:20	593602.400	665914.010	NBC127-CT-13	9/25/2014	12:37			4.5	
NBC	126	NBC-0930-1051	Crab Trap	9/29/2014	11:30	594603.020	667916.660	NBC126-CT-01	9/30/2014	10:51			9.5	
NBC	126	NBC-0930-1051	Crab Trap	9/29/2014	11:30	594526.940	667846.680	NBC126-CT-02	9/30/2014	10:51			9.6	
NBC	126	NBC-0930-1051	Crab Trap	9/29/2014	11:30	594588.830	667808.110	NBC126-CT-03	9/30/2014	10:51			8.25	
NBC	126	NBC-0930-1051	Crab Trap	9/29/2014	11:30	594733.500	667764.640	NBC126-CT-04	9/30/2014	10:51			8	
NBC	126	NBC-0930-1051	Crab Trap	9/29/2014	11:30	594829.090	667717.690	NBC126-CT-05	9/30/2014	10:51			7.25	
NBC	126	NBC-0930-1051	Crab Trap	9/29/2014	11:30	594923.300	667640.810	NBC126-CT-06	9/30/2014	10:51			6.4	
NBC	126	NBC-0930-1051	Crab Trap	9/29/2014	11:30	595055.580	667644.700	NBC126-CT-07	9/30/2014	10:51			6.2	
NBC	126	NBC-0930-1051	Crab Trap	9/29/2014	11:30	595095.310	667725.120	NBC126-CT-08	9/30/2014	10:51			6.5	
NBC	126	NBC-0930-1051	Crab Trap	9/29/2014	11:30	595073.380	667877.870	NBC126-CT-09	9/30/2014	10:51			7.1	

Zone	Intertidal Area	Area	Collection Method	Deployment Date	Deployment Time	Easting (X)d	Northing (Y)d	Deployment Count	Collection Date	Collection Time	Easting (X)c	Northing (Y)c	Depth (ft)	Comments
NBC	126	NBC-0930-1051	Crab Trap	9/29/2014	11:30	595022.950	667980.290	NBC126-CT-10	9/30/2014	10:51			7.75	
NBC	126	NBC-0930-1051	Crab Trap	9/29/2014	11:30	595016.150	668108.570	NBC126-CT-11	9/30/2014	10:51			8.67	
NBC	126	NBC-0930-1051	Crab Trap	9/29/2014	11:30	594891.830	668149.140	NBC126-CT-12	9/30/2014	10:51			9.2	
NBC	126	NBC-0930-1051	Crab Trap	9/29/2014	11:30	594810.800	667946.060	NBC126-CT-13	9/30/2014	10:51			8.75	
NBC	125	NBC-1001-1006	Crab Trap	9/30/2014	12:28	596150.800	670242.009	NBC125-CT-01	10/1/2014	10:06			8.25	
NBC	125	NBC-1001-1006	Crab Trap	9/30/2014	12:28	596162.510	670298.541	NBC125-CT-02	10/1/2014	10:06			5.6	
NBC	125	NBC-1001-1006	Crab Trap	9/30/2014	12:28	596207.960	670422.270	NBC125-CT-03	10/1/2014	10:06			6.8	
NBC	125	NBC-1001-1006	Crab Trap	9/30/2014	12:28	596268.260	670527.310	NBC125-CT-04	10/1/2014	10:06			7	
NBC	125	NBC-1001-1006	Crab Trap	9/30/2014	12:28	596331.070	670593.010	NBC125-CT-05	10/1/2014	10:06			6.75	
NBC	125	NBC-1001-1006	Crab Trap	9/30/2014	12:28	596400.970	670575.899	NBC125-CT-06	10/1/2014	10:06			6.1	
NBC	125	NBC-1001-1006	Crab Trap	9/30/2014	12:28	596423.110	670470.330	NBC125-CT-07	10/1/2014	10:06			5.6	
NBC	125	NBC-1001-1006	Crab Trap	9/30/2014	12:28	596384.490	670362.150	NBC125-CT-08	10/1/2014	10:06			5.1	
NBC	125	NBC-1001-1006	Crab Trap	9/30/2014	12:28	596376.410	670268.170	NBC125-CT-09	10/1/2014	10:06			4.8	
NBC	125	NBC-1001-1006	Crab Trap	9/30/2014	12:28	596299.760	670187.630	NBC125-CT-10	10/1/2014	10:06			4.75	
NBC	124	NBC-1002-1053	Crab Trap	10/1/2014	10:56	597515.330	672585.920	NBC124-CT-01	10/2/2014	10:53			8.08	
NBC	124	NBC-1002-1053	Crab Trap	10/1/2014	10:56	597561.480	672369.140	NBC124-CT-02	10/2/2014	10:53			7.7	
NBC	125	NBC-1002-1004	Crab Trap	10/1/2014	10:06	596150.800	670242.009	NBC125-CT-11	10/2/2014	10:04			8.25	
NBC	125	NBC-1002-1004	Crab Trap	10/1/2014	10:06	596162.510	670298.541	NBC125-CT-12	10/2/2014	10:04			5.6	
NBC	125	NBC-1002-1004	Crab Trap	10/1/2014	10:06	596207.960	670422.270	NBC125-CT-13	10/2/2014	10:04			6.8	
NBC	125	NBC-1002-1004	Crab Trap	10/1/2014	10:06	596268.260	670527.310	NBC125-CT-14	10/2/2014	10:04			7	
NBC	125	NBC-1002-1004	Crab Trap	10/1/2014	10:06	596331.070	670593.010	NBC125-CT-15	10/2/2014	10:04			6.75	
NBC	125	NBC-1002-1004	Crab Trap	10/1/2014	10:06	596400.970	670575.899	NBC125-CT-16	10/2/2014	10:04			6.1	
NBC	125	NBC-1002-1004	Crab Trap	10/1/2014	10:06	596423.110	670470.330	NBC125-CT-17	10/2/2014	10:04			5.6	
NBC	125	NBC-1002-1004	Crab Trap	10/1/2014	10:06	596384.490	670362.150	NBC125-CT-18	10/2/2014	10:04			5.1	
NBC	125	NBC-1002-1004	Crab Trap	10/1/2014	10:06	596376.410	670268.170	NBC125-CT-19	10/2/2014	10:04			4.8	
NBC	125	NBC-1002-1004	Crab Trap	10/1/2014	10:06	596299.760	670187.630	NBC125-CT-20	10/2/2014	10:04			4.75	
NBC	124	NBC-1003-0754	Crab Trap	10/2/2014	10:38	597523.320	671709.040	NBC124-CT-03	10/3/2014	7:54			4.2	
NBC	124	NBC-1003-0754	Crab Trap	10/2/2014	10:38	597632.870	671807.040	NBC124-CT-04	10/3/2014	7:54			4	
NBC	124	NBC-1003-0754	Crab Trap	10/2/2014	10:38	597738.640	671921.890	NBC124-CT-05	10/3/2014	7:54			4.08	
NBC	124	NBC-1003-0754	Crab Trap	10/2/2014	10:38	597838.130	672102.940	NBC124-CT-06	10/3/2014	7:54			4.3	
NBC	124	NBC-1003-0754	Crab Trap	10/2/2014	10:38	597922.840	672275.260	NBC124-CT-07	10/3/2014	7:54			3.8	
NBC	124	NBC-1003-0754	Crab Trap	10/2/2014	10:38	597774.140	672354.751	NBC124-CT-08	10/3/2014	7:54			4.8	
NBC	124	NBC-1003-0754	Crab Trap	10/2/2014	10:38	597404.050	672274.080	NBC124-CT-09	10/3/2014	7:54			6.8	
NBC	124	NBC-1003-0754	Crab Trap	10/2/2014	10:38	597235.520	672256.190	NBC124-CT-10	10/3/2014	7:54			7	
NBC	124	NBC-1003-0754	Crab Trap	10/2/2014	10:38	597109.060	672166.290	NBC124-CT-11	10/3/2014	7:54			7.3	
NBC	124	NBC-1003-0754	Crab Trap	10/2/2014	10:38	597172.580	671991.120	NBC124-CT-12	10/3/2014	7:54			7.25	
NBN	122	NBN-1007-1040	Crab Trap	10/6/2014	11:25	600581.920	686650.580	NBN122-CT-01	10/7/2014	10:40			4	
NBN	122	NBN-1007-1040	Crab Trap	10/6/2014	11:25	600693.980	686739.391	NBN122-CT-02	10/7/2014	10:40			4	
NBN	122	NBN-1007-1040	Crab Trap	10/6/2014	11:25	600784.040	686898.339	NBN122-CT-03	10/7/2014	10:40			3.5	
NBN	122	NBN-1007-1040	Crab Trap	10/6/2014	11:25	600892.460	686931.650	NBN122-CT-04	10/7/2014	10:40			3.5	
NBN	122	NBN-1007-1040	Crab Trap	10/6/2014	11:25	600924.880	686832.969	NBN122-CT-05	10/7/2014	10:40			12	
NBN	122	NBN-1007-1040	Crab Trap	10/6/2014	11:25	600970.260	686967.380	NBN122-CT-06	10/7/2014	10:40			3	
NBN	122	NBN-1007-1040	Crab Trap	10/6/2014	11:25	601054.060	687026.171	NBN122-CT-07	10/7/2014	10:40			2.5	
NBN	122	NBN-1007-1040	Crab Trap	10/6/2014	11:25	601120.190	687040.111	NBN122-CT-08	10/7/2014	10:40			3	
NBN	122	NBN-1007-1040	Crab Trap	10/6/2014	11:25	601157.960	687037.889	NBN122-CT-09	10/7/2014	10:40			4	
NBN	122	NBN-1007-1040	Crab Trap	10/6/2014	11:25	601196.600	687061.200	NBN122-CT-10	10/7/2014	10:40			18	
NBN	123	NBN-1008-1045	Crab Trap	10/7/2014	12:20	600536.500	679508.100	NBN123-CT-01	10/8/2014	10:45			5.8	
NBN	123	NBN-1008-1045	Crab Trap	10/7/2014	12:20	600680.160	679595.260	NBN123-CT-02	10/8/2014	10:45			5.4	
NBN	123	NBN-1008-1045	Crab Trap	10/7/2014	12:20	600694.380	679730.190	NBN123-CT-03	10/8/2014	10:45			5	
NBN	123	NBN-1008-1045	Crab Trap	10/7/2014	12:20	601327.570	680523.660	NBN123-CT-04	10/8/2014	10:45			4.4	
NBN	123	NBN-1008-1045	Crab Trap	10/7/2014	12:20	601447.510	680684.370	NBN123-CT-05	10/8/2014	10:45			4.6	
NBN	123	NBN-1008-1045	Crab Trap	10/7/2014	12:20	601555.571	680870.110	NBN123-CT-06	10/8/2014	10:45			4.2	
NBN	123	NBN-1008-1045	Crab Trap	10/7/2014	12:20	601514.390	681009.840	NBN123-CT-07	10/8/2014	10:45			4.8	
NBN	123	NBN-1008-1045	Crab Trap	10/7/2014	12:20	601409.989	681114.670	NBN123-CT-08	10/8/2014	10:45			4.4	
NBN	123	NBN-1008-1045	Crab Trap	10/7/2014	12:20	601299.600	681191.061	NBN123-CT-09	10/8/2014	10:45			4.8	
NBN	123	NBN-1008-1045	Crab Trap	10/7/2014	12:20	601244.280	681237.390	NBN123-CT-10	10/8/2014	10:45			4.9	
NBN	133	NBN-1009-1350	Crab Trap	10/8/2014	11:15	597225.209	680883.640	NBN133-CT-01	10/9/2014	13:50			8.5	
NBN	133	NBN-1009-1350	Crab Trap	10/8/2014	11:15	597201.929	680799.490	NBN133-CT-02	10/9/2014	13:50			8.5	
NBN	133	NBN-1009-1350	Crab Trap	10/8/2014	11:15	597171.480	680720.791	NBN133-CT-03	10/9/2014	13:50			9	
NBN	133	NBN-1009-1350	Crab Trap	10/8/2014	11:15	597139.460	680691.330	NBN133-CT-04	10/9/2014	13:50			8.5	
NBN	133	NBN-1009-1350	Crab Trap	10/8/2014	11:15	597150.420	680642.750	NBN133-CT-05	10/9/2014	13:50			8	
NBN	133	NBN-1009-1350	Crab Trap	10/8/2014	11:15	597193.901	680585.250	NBN133-CT-06	10/9/2014	13:50			9	
NBN	133	NBN-1009-1350	Crab Trap	10/8/2014	11:15	597202.460	680544.441	NBN133-CT-07	10/9/2014	13:50			13	
NBN	133	NBN-1009-1350	Crab Trap	10/8/2014	11:15	597196.330	680479.960	NBN133-CT-08	10/9/2014	13:50			9	
NBN	133	NBN-1009-1350	Crab Trap	10/8/2014	11:15	597172.830	680450.920	NBN133-CT-09	10/9/2014	13:50			8	
NBN	133	NBN-1009-1350	Crab Trap	10/8/2014	11:15	597118.901	680481.680	NBN133-CT-10	10/9/2014	13:50			8	

Zone	Intertidal Area	Area	Collection Method	Deployment Date	Deployment Time	Easting (X)d	Northing (Y)d	Deployment Count	Collection Date	Collection Time	Easting (X)c	Northing (Y)c	Depth (ft)	Comments
NBN	132	NBN-1014-0853	Crab Trap	10/13/2014	9:47	596488.759	678512.430	NBN132-CT-01	10/14/2014	8:53			5.1	
NBN	132	NBN-1014-0853	Crab Trap	10/13/2014	9:47	596414.619	678388.480	NBN132-CT-02	10/14/2014	8:53			5	
NBN	132	NBN-1014-0853	Crab Trap	10/13/2014	9:47	596381.710	678311.070	NBN132-CT-03	10/14/2014	8:53			5.2	
NBN	132	NBN-1014-0853	Crab Trap	10/13/2014	9:47	596451.160	678439.840	NBN132-CT-04	10/14/2014	8:53			5	
NBN	132	NBN-1014-0853	Crab Trap	10/13/2014	9:47	596362.959	678284.310	NBN132-CT-05	10/14/2014	8:53			4.9	
NBN	132	NBN-1014-0853	Crab Trap	10/13/2014	9:47	596334.439	678242.090	NBN132-CT-06	10/14/2014	8:53			4.6	
NBN	132	NBN-1014-0853	Crab Trap	10/13/2014	9:47	596313.460	678185.190	NBN132-CT-07	10/14/2014	8:53			4.8	
NBN	132	NBN-1014-0853	Crab Trap	10/13/2014	9:47	596277.550	678123.240	NBN132-CT-08	10/14/2014	8:53			4.7	
NBN	132	NBN-1014-0853	Crab Trap	10/13/2014	9:47	596227.921	678036.680	NBN132-CT-09	10/14/2014	8:53			4.7	
NBN	132	NBN-1014-0853	Crab Trap	10/13/2014	9:47	596193.049	677981.050	NBN132-CT-10	10/14/2014	8:53			4.6	
NBN	132	NBN-1015-0936	Crab Trap	10/14/2014	8:53	596488.759	678512.430	NBN132-CT-11	10/15/2014	9:36			5.1	
NBN	132	NBN-1015-0936	Crab Trap	10/14/2014	8:53	596414.619	678388.480	NBN132-CT-12	10/15/2014	9:36			5	
NBC		NBC-1015-1040	Crab Trap	10/14/2014	10:50	594242.780	668588.070	NBC-CT-01	10/15/2014	10:40			9.1	
NBC		NBC-1015-1040	Crab Trap	10/14/2014	10:50	594285.180	668655.140	NBC-CT-02	10/15/2014	10:40			9.2	
NBC		NBC-1015-1040	Crab Trap	10/14/2014	10:50	594322.280	668716.170	NBC-CT-03	10/15/2014	10:40			9.3	
NBC		NBC-1015-1040	Crab Trap	10/14/2014	10:50	594365.250	668783.030	NBC-CT-04	10/15/2014	10:40			9.5	
NBC		NBC-1015-1040	Crab Trap	10/14/2014	10:50	594400.480	668854.420	NBC-CT-05	10/15/2014	10:40			9.4	
NBC		NBC-1015-1040	Crab Trap	10/14/2014	10:50	594430.940	668923.240	NBC-CT-06	10/15/2014	10:40			9.4	
NBC		NBC-1015-1040	Crab Trap	10/14/2014	10:50	594455.730	668994.410	NBC-CT-07	10/15/2014	10:40			9.4	
NBC		NBC-1015-1040	Crab Trap	10/14/2014	10:50	594480.800	669071.610	NBC-CT-08	10/15/2014	10:40			9.4	
NBC		NBC-1016-0928	Crab Trap	10/15/2014	9:50	594337.809	669139.820	NBC-CT-09	10/16/2014	9:28			7.6	
NBC		NBC-1016-0928	Crab Trap	10/15/2014	9:50	594381.249	669200.730	NBC-CT-10	10/16/2014	9:28			7.4	
NBC		NBC-1016-0928	Crab Trap	10/15/2014	9:50	594400.341	669282.560	NBC-CT-11	10/16/2014	9:28			7.3	
NBC		NBC-1016-0928	Crab Trap	10/15/2014	9:50	594406.990	669391.880	NBC-CT-12	10/16/2014	9:28			7.2	
NBC		NBC-1016-0928	Crab Trap	10/15/2014	9:50	594405.030	669493.500	NBC-CT-13	10/16/2014	9:28			7	
NBC		NBC-1016-0928	Crab Trap	10/15/2014	9:50	594443.940	669582.470	NBC-CT-14	10/16/2014	9:28			7.1	
NBC		NBC-1016-0928	Crab Trap	10/15/2014	9:50	594499.230	669655.120	NBC-CT-15	10/16/2014	9:28			7.1	
NBC		NBC-1016-0928	Crab Trap	10/15/2014	9:50	594548.029	669736.160	NBC-CT-16	10/16/2014	9:28			7.1	
NBC		NBC-1016-0928	Crab Trap	10/15/2014	9:50	594601.000	669805.460	NBC-CT-17	10/16/2014	9:28			7.1	
NBC		NBC-1016-0928	Crab Trap	10/15/2014	9:50	594641.210	669867.990	NBC-CT-18	10/16/2014	9:28			7	
NBC		NBC-1016-0928	Crab Trap	10/15/2014	9:50	594673.990	669928.540	NBC-CT-19	10/16/2014	9:28			7	
NBC		NBC-1016-0928	Crab Trap	10/15/2014	9:50	594699.130	669984.970	NBC-CT-20	10/16/2014	9:28			7	
NBC		NBC-1016-1118	Crab Trap	10/15/2014	10:40	594430.940	668923.240	NBC-CT-21	10/16/2014	11:18			9.4	
NBC		NBC-1016-1118	Crab Trap	10/15/2014	10:40	594455.730	668994.410	NBC-CT-22	10/16/2014	11:18			9.4	
NBC		NBC-1016-1118	Crab Trap	10/15/2014	10:40	594480.800	669071.610	NBC-CT-23	10/16/2014	11:18			9.4	
NBC		NBC-1016-1126	Crab Trap	10/15/2014	10:55	594924.249	668704.710	NBC-CT-24	10/16/2014	11:26			7.2	
NBC		NBC-1016-1126	Crab Trap	10/15/2014	10:55	594971.200	668784.260	NBC-CT-25	10/16/2014	11:26			7.2	
NBC		NBC-1016-1126	Crab Trap	10/15/2014	10:55	595006.650	668863.230	NBC-CT-26	10/16/2014	11:26			7.6	
NBC		NBC-1016-1126	Crab Trap	10/15/2014	10:55	595070.379	668934.410	NBC-CT-27	10/16/2014	11:26			7.7	
NBC		NBC-1016-1126	Crab Trap	10/15/2014	10:55	595121.239	669033.870	NBC-CT-28	10/16/2014	11:26			8	
NBC		NBC-1021-0824	Crab Trap	10/20/2014	9:54	594401.211	668709.840	NBC-CT-29	10/21/2014	8:24			7.9	
NBC		NBC-1021-0824	Crab Trap	10/20/2014	9:54	594397.630	668746.480	NBC-CT-30	10/21/2014	8:24			7.9	
NBC		NBC-1021-0824	Crab Trap	10/20/2014	9:54	594423.179	668782.820	NBC-CT-31	10/21/2014	8:24			7.9	
NBC		NBC-1021-0824	Crab Trap	10/20/2014	9:54	594439.480	668798.590	NBC-CT-32	10/21/2014	8:24			7.9	
NBC		NBC-1021-0824	Crab Trap	10/20/2014	9:54	594462.640	668818.640	NBC-CT-33	10/21/2014	8:24			7.9	
NBC		NBC-1021-0824	Crab Trap	10/20/2014	9:54	594483.809	668844.390	NBC-CT-34	10/21/2014	8:24			7.9	
NBC		NBC-1021-0824	Crab Trap	10/20/2014	9:54	594497.310	668863.050	NBC-CT-35	10/21/2014	8:24			7.8	
NBC		NBC-1021-0824	Crab Trap	10/20/2014	9:54	594512.660	668882.250	NBC-CT-36	10/21/2014	8:24			7.8	
NBC		NBC-1021-0824	Crab Trap	10/20/2014	9:54	594530.749	668899.350	NBC-CT-37	10/21/2014	8:24			7.7	
NBC		NBC-1021-0824	Crab Trap	10/20/2014	9:54	594550.221	668915.750	NBC-CT-38	10/21/2014	8:24			7.7	
NBC		NBC-1021-0824	Crab Trap	10/20/2014	9:54	594759.381	668544.530	NBC-CT-39	10/21/2014	8:24			6.5	
NBC		NBC-1021-0824	Crab Trap	10/20/2014	9:54	594799.739	668615.880	NBC-CT-40	10/21/2014	8:24			6.5	
NBC		NBC-1021-0824	Crab Trap	10/20/2014	9:54	594816.439	668658.890	NBC-CT-41	10/21/2014	8:24			6.6	
NBC		NBC-1021-0824	Crab Trap	10/20/2014	9:54	594831.781	668692.900	NBC-CT-42	10/21/2014	8:24			6.6	
NBC		NBC-1021-0824	Crab Trap	10/20/2014	9:54	594866.581	668746.630	NBC-CT-43	10/21/2014	8:24			6.5	
NBC		NBC-1022-0840	Crab Trap	10/21/2014	8:40	594514.761	668952.030	NBC-CT-44	10/22/2014	8:40			9.7	
NBC		NBC-1022-0840	Crab Trap	10/21/2014	8:40	594579.999	669104.330	NBC-CT-45	10/22/2014	8:40			9.8	
NBC		NBC-1022-0840	Crab Trap	10/21/2014	8:40	594645.210	669232.240	NBC-CT-46	10/22/2014	8:40			9.8	
NBC		NBC-1022-0840	Crab Trap	10/21/2014	8:40	594666.590	669311.930	NBC-CT-47	10/22/2014	8:40			9.6	
NBC		NBC-1022-0840	Crab Trap	10/21/2014	8:40	594711.761	669422.560	NBC-CT-48	10/22/2014	8:40			9.6	
NBC		NBC-1022-0840	Crab Trap	10/21/2014	8:40	594751.050	669512.520	NBC-CT-49	10/22/2014	8:40			9.6	
NBC		NBC-1022-0840	Crab Trap	10/21/2014	8:40	594788.609	669603.170	NBC-CT-50	10/22/2014	8:40			9.7	
NBC		NBC-1022-0840	Crab Trap	10/21/2014	8:40	594827.340	669683.210	NBC-CT-51	10/22/2014	8:40			9.6	
NBC		NBC-1022-0840	Crab Trap	10/21/2014	8:24	594401.210	668709.840	NBC-CT-52	10/22/2014	8:40			9.7	
NBC		NBC-1022-0840	Crab Trap	10/21/2014	8:24	594483.810	668844.390	NBC-CT-53	10/22/2014	8:40			9.7	
NBN	122	NBN-1007-1040	Crab Trap	10/6/2014	11:25	600581.920	686650.580	NBN122-CT-01	10/7/2014	10:40			4	

Zone	Intertidal Area	Area	Collection Method	Deployment Date	Deployment Time	Easting (X)d	Northing (Y)d	Deployment Count	Collection Date	Collection Time	Easting (X)c	Northing (Y)c	Depth (ft)	Comments
NBN	122	NBN-1007-1040	Crab Trap	10/6/2014	11:25	600693.980	686739.391	NBN122-CT-02	10/7/2014	10:40			4	
NBN	122	NBN-1007-1040	Crab Trap	10/6/2014	11:25	600784.040	686898.339	NBN122-CT-03	10/7/2014	10:40			3.5	
NBN	122	NBN-1007-1040	Crab Trap	10/6/2014	11:25	600892.460	686931.650	NBN122-CT-04	10/7/2014	10:40			3.5	
NBN	122	NBN-1007-1040	Crab Trap	10/6/2014	11:25	600924.880	686832.969	NBN122-CT-05	10/7/2014	10:40			12	
NBN	122	NBN-1007-1040	Crab Trap	10/6/2014	11:25	600970.260	686967.380	NBN122-CT-06	10/7/2014	10:40			3	
NBN	122	NBN-1007-1040	Crab Trap	10/6/2014	11:25	601054.060	687026.171	NBN122-CT-07	10/7/2014	10:40			2.5	
NBN	122	NBN-1007-1040	Crab Trap	10/6/2014	11:25	601120.190	687040.111	NBN122-CT-08	10/7/2014	10:40			3	
NBN	122	NBN-1007-1040	Crab Trap	10/6/2014	11:25	601157.960	687037.889	NBN122-CT-09	10/7/2014	10:40			4	
NBN	122	NBN-1007-1040	Crab Trap	10/6/2014	11:25	601196.600	687061.200	NBN122-CT-10	10/7/2014	10:40			18	
NBN	123	NBN-1008-1045	Crab Trap	10/7/2014	12:20	600536.500	679508.100	NBN123-CT-01	10/8/2014	10:45			5.8	
NBN	123	NBN-1008-1045	Crab Trap	10/7/2014	12:20	600680.160	679595.260	NBN123-CT-02	10/8/2014	10:45			5.4	
NBN	123	NBN-1008-1045	Crab Trap	10/7/2014	12:20	600694.380	679730.190	NBN123-CT-03	10/8/2014	10:45			5	
NBN	123	NBN-1008-1045	Crab Trap	10/7/2014	12:20	601327.570	680523.660	NBN123-CT-04	10/8/2014	10:45			4.4	
NBN	123	NBN-1008-1045	Crab Trap	10/7/2014	12:20	601447.510	680684.370	NBN123-CT-05	10/8/2014	10:45			4.6	
NBN	123	NBN-1008-1045	Crab Trap	10/7/2014	12:20	601555.571	680870.110	NBN123-CT-06	10/8/2014	10:45			4.2	
NBN	123	NBN-1008-1045	Crab Trap	10/7/2014	12:20	601514.390	681009.840	NBN123-CT-07	10/8/2014	10:45			4.8	
NBN	123	NBN-1008-1045	Crab Trap	10/7/2014	12:20	601409.989	681114.670	NBN123-CT-08	10/8/2014	10:45			4.4	
NBN	123	NBN-1008-1045	Crab Trap	10/7/2014	12:20	601299.600	681191.061	NBN123-CT-09	10/8/2014	10:45			4.8	
NBN	123	NBN-1008-1045	Crab Trap	10/7/2014	12:20	601244.280	681237.390	NBN123-CT-10	10/8/2014	10:45			4.9	
NBN	133	NBN-1009-1350	Crab Trap	10/8/2014	11:15	597225.209	680883.640	NBN133-CT-01	10/9/2014	13:50			8.5	
NBN	133	NBN-1009-1350	Crab Trap	10/8/2014	11:15	597201.929	680799.490	NBN133-CT-02	10/9/2014	13:50			8.5	
NBN	133	NBN-1009-1350	Crab Trap	10/8/2014	11:15	597171.480	680720.791	NBN133-CT-03	10/9/2014	13:50			9	
NBN	133	NBN-1009-1350	Crab Trap	10/8/2014	11:15	597139.460	680691.330	NBN133-CT-04	10/9/2014	13:50			8.5	
NBN	133	NBN-1009-1350	Crab Trap	10/8/2014	11:15	597150.420	680642.750	NBN133-CT-05	10/9/2014	13:50			8	
NBN	133	NBN-1009-1350	Crab Trap	10/8/2014	11:15	597193.901	680585.250	NBN133-CT-06	10/9/2014	13:50			9	
NBN	133	NBN-1009-1350	Crab Trap	10/8/2014	11:15	597202.460	680544.441	NBN133-CT-07	10/9/2014	13:50			13	
NBN	133	NBN-1009-1350	Crab Trap	10/8/2014	11:15	597196.330	680479.960	NBN133-CT-08	10/9/2014	13:50			9	
NBN	133	NBN-1009-1350	Crab Trap	10/8/2014	11:15	597172.830	680450.920	NBN133-CT-09	10/9/2014	13:50			8	
NBN	133	NBN-1009-1350	Crab Trap	10/8/2014	11:15	597118.901	680481.680	NBN133-CT-10	10/9/2014	13:50			8	
NBN	132	NBN-1014-0853	Crab Trap	10/13/2014	9:47	596488.759	678512.430	NBN132-CT-01	10/14/2014	8:53			5.1	
NBN	132	NBN-1014-0853	Crab Trap	10/13/2014	9:47	596414.619	678388.480	NBN132-CT-02	10/14/2014	8:53			5	
NBN	132	NBN-1014-0853	Crab Trap	10/13/2014	9:47	596381.710	678311.070	NBN132-CT-03	10/14/2014	8:53			5.2	
NBN	132	NBN-1014-0853	Crab Trap	10/13/2014	9:47	596451.160	678439.840	NBN132-CT-04	10/14/2014	8:53			5	
NBN	132	NBN-1014-0853	Crab Trap	10/13/2014	9:47	596362.959	678284.310	NBN132-CT-05	10/14/2014	8:53			4.9	
NBN	132	NBN-1014-0853	Crab Trap	10/13/2014	9:47	596334.439	678242.090	NBN132-CT-06	10/14/2014	8:53			4.6	
NBN	132	NBN-1014-0853	Crab Trap	10/13/2014	9:47	596313.460	678185.190	NBN132-CT-07	10/14/2014	8:53			4.8	
NBN	132	NBN-1014-0853	Crab Trap	10/13/2014	9:47	596277.550	678123.240	NBN132-CT-08	10/14/2014	8:53			4.7	
NBN	132	NBN-1014-0853	Crab Trap	10/13/2014	9:47	596227.921	678036.680	NBN132-CT-09	10/14/2014	8:53			4.7	
NBN	132	NBN-1014-0853	Crab Trap	10/13/2014	9:47	596193.049	677981.050	NBN132-CT-10	10/14/2014	8:53			4.6	
NBN		NBN-1014-0930	Crab Trap	10/13/2014	14:30	597349.900	680907.570	NBN-CT-01	10/14/2014	9:30			11.1	
NBN		NBN-1014-0930	Crab Trap	10/13/2014	14:30	597334.930	680848.120	NBN-CT-02	10/14/2014	9:30			10.8	
NBN		NBN-1014-0930	Crab Trap	10/13/2014	14:30	597316.080	680801.529	NBN-CT-03	10/14/2014	9:30			10.3	
NBN		NBN-1014-0930	Crab Trap	10/13/2014	14:30	597303.780	680759.151	NBN-CT-04	10/14/2014	9:30			10.2	
NBN		NBN-1014-0930	Crab Trap	10/13/2014	14:30	597286.600	680702.960	NBN-CT-05	10/14/2014	9:30			10.1	
NBN		NBN-1014-0930	Crab Trap	10/13/2014	14:30	597321.109	680637.630	NBN-CT-06	10/14/2014	9:30			12	
NBN		NBN-1014-0930	Crab Trap	10/13/2014	14:30	597310.641	680571.981	NBN-CT-07	10/14/2014	9:30			12.1	
NBN		NBN-1014-0930	Crab Trap	10/13/2014	14:30	597290.450	680505.250	NBN-CT-08	10/14/2014	9:30			11.9	
NBN		NBN-1014-0930	Crab Trap	10/13/2014	14:30	597288.750	680470.979	NBN-CT-09	10/14/2014	9:30			12.1	
NBN		NBN-1014-0930	Crab Trap	10/13/2014	14:30	597265.320	680391.100	NBN-CT-10	10/14/2014	9:30			12	
NBN		NBN-1015-0905	Crab Trap	10/14/2014	9:30	597265.320	680391.100	NBN-CT-11	10/15/2014	9:05			12	
NBN		NBN-1015-0905	Crab Trap	10/14/2014	9:30	597288.750	680470.979	NBN-CT-12	10/15/2014	9:05			12.1	
NBN		NBN-1015-0905	Crab Trap	10/14/2014	9:30	597290.450	680505.250	NBN-CT-13	10/15/2014	9:05			11.9	
NBN		NBN-1015-0905	Crab Trap	10/14/2014	9:30	597310.641	680571.981	NBN-CT-14	10/15/2014	9:05			12.1	
NBN		NBN-1015-0905	Crab Trap	10/14/2014	9:30	597321.109	680637.630	NBN-CT-15	10/15/2014	9:05			12	
NBN		NBN-1015-0905	Crab Trap	10/14/2014	9:30	597286.600	680702.960	NBN-CT-16	10/15/2014	9:05			10.1	
NBN		NBN-1015-0905	Crab Trap	10/14/2014	9:30	597303.780	680759.151	NBN-CT-17	10/15/2014	9:05			10.2	
NBN		NBN-1015-0905	Crab Trap	10/14/2014	9:30	597316.080	680801.529	NBN-CT-18	10/15/2014	9:05			10.3	
NBN		NBN-1015-0905	Crab Trap	10/14/2014	9:30	597334.930	680848.120	NBN-CT-19	10/15/2014	9:05			10.8	
NBN		NBN-1015-0905	Crab Trap	10/14/2014	9:30	597349.900	680907.570	NBN-CT-20	10/15/2014	9:05			11.1	
NBN	132	NBN-1015-0936	Crab Trap	10/14/2014	8:53	596488.759	678512.430	NBN132-CT-11	10/15/2014	9:36			5.1	
NBN	132	NBN-1015-0936	Crab Trap	10/14/2014	8:53	596414.619	678388.480	NBN132-CT-12	10/15/2014	9:36			5	
NBN		NBN-1007-0912	Gillnet	10/6/2014	12:40	600149.280	685822.879	NBN-GN-01	10/7/2014	9:12			5 to 10	GPS point is outside pane edge toward channel, panel set perpendicular to shoreline
NBN		NBN-1007-0912	Gillnet	10/6/2014	12:52	600777.800	684920.309	NBN-GN-02	10/7/2014	9:40			8 to 11	GPS point is outside pane edge toward channel, panel set perpendicular to shoreline
NBN		NBN-1006-1348	Trawl	10/6/2014	13:48	598311.660	683537.070	NBN-TW-01	10/6/2014	13:59	600722.830	685566.280	20 to 30	
NBN		NBN-1006-1348	Trawl	10/6/2014	14:38	597159.220	677951.510	NBN-TW-02	10/6/2014	14:41	*	*	7 to 10	GPS not recorded for end of trawl
NBN		NBN-1007-1318	Trawl	10/7/2014	13:18	598274.771	682595.911	NBN-TW-03	10/7/2014	13:29	598849.479	684028.170	4 to 10	

Zone	Intertidal Area	Area	Collection Method	Deployment Date	Deployment Time	Easting (X)d	Northing (Y)d	Deployment Count	Collection Date	Collection Time	Easting (X)c	Northing (Y)c	Depth (ft)	Comments
NBN		NBN-1007-1318	Trawl	10/7/2014	13:42	598618.730	682157.800	NBN-TW-04	10/7/2014	13:53	598628.680	682220.979	4 to 10	
NBN		NBN-1007-1318	Trawl	10/7/2014	14:09	598130.341	682335.210	NBN-TW-05	10/7/2014	14:19	599005.929	684222.049	4 to 10	
NBN		NBN-1008-1225	Trawl	10/8/2014	12:25	*	*	NBN-TW-06	10/8/2014	12:41	599272.780	684641.280	28 to 34	GPS not recorded for start of trawl
NBN		NBN-1008-1225	Trawl	10/8/2014	12:57	598130.060	682285.380	NBN-TW-07	10/8/2014	13:07	598708.869	683816.140	24 to 30	
NBS		NBS-1021-1020	Crab Trap	10/20/2014	10:10	589451.370	663580.790	NBS-CT-01	10/21/2014	10:20			12.5	
NBS		NBS-1021-1020	Crab Trap	10/20/2014	10:10	589391.060	663508.250	NBS-CT-02	10/21/2014	10:20			9.5	
NBS		NBS-1021-1020	Crab Trap	10/20/2014	10:10	589368.310	663428.260	NBS-CT-03	10/21/2014	10:20			12.8	
NBS		NBS-1021-1020	Crab Trap	10/20/2014	10:10	589313.270	663335.720	NBS-CT-04	10/21/2014	10:20			8.4	
NBS		NBS-1021-1020	Crab Trap	10/20/2014	10:10	589246.500	663230.720	NBS-CT-05	10/21/2014	10:20			7.6	
NBS		NBS-1022-0910	Crab Trap	10/21/2014	9:32	591119.050	663325.760	NBS-CT-06	10/22/2014	9:10			8.5	
NBS		NBS-1022-0910	Crab Trap	10/21/2014	9:32	591068.640	663244.410	NBS-CT-07	10/22/2014	9:10			7.9	
NBS		NBS-1022-0910	Crab Trap	10/21/2014	9:32	590988.850	663180.020	NBS-CT-08	10/22/2014	9:10			12.3	
NBS		NBS-1022-0910	Crab Trap	10/21/2014	9:32	590903.260	663098.620	NBS-CT-09	10/22/2014	9:10			10.3	
NBS		NBS-1022-0910	Crab Trap	10/21/2014	9:32	590840.310	663030.890	NBS-CT-10	10/22/2014	9:10			10.5	
NBS		NBS-1022-0930	Crab Trap	10/21/2014	9:41	585551.170	660238.440	NBS-CT-11	10/22/2014	9:30			8.2	
NBS		NBS-1022-0930	Crab Trap	10/21/2014	9:41	585424.370	660225.430	NBS-CT-12	10/22/2014	9:30			6.9	
NBS		NBS-1022-0955	Crab Trap	10/21/2014	9:48	581896.730	660116.270	NBS-CT-13	10/22/2014	9:55			6	
NBS		NBS-1022-0955	Crab Trap	10/21/2014	9:48	581858.850	660075.170	NBS-CT-14	10/22/2014	9:55			5.5	
NBS		NBS-1022-0955	Crab Trap	10/21/2014	9:48	581801.450	660091.790	NBS-CT-15	10/22/2014	9:55			7	
NBS		NBS-1023-0915	Crab Trap	10/22/2014	9:55	581896.730	660116.270	NBS-CT-23	10/23/2014	9:15			6	
NBS		NBS-1023-0915	Crab Trap	10/22/2014	9:55	581858.850	660075.170	NBS-CT-24	10/23/2014	9:15			5.5	
NBS		NBS-1023-0915	Crab Trap	10/22/2014	9:55	581801.450	660091.790	NBS-CT-25	10/23/2014	9:15			7	
NBS		NBS-1023-0935	Crab Trap	10/22/2014	9:50	584961.170	660188.470	NBS-CT-31	10/23/2014	9:35			9.2	
NBS		NBS-1023-0935	Crab Trap	10/22/2014	9:50	584901.930	660181.210	NBS-CT-32	10/23/2014	9:35			9.7	
NBS		NBS-1023-0935	Crab Trap	10/22/2014	9:50	584817.760	660172.990	NBS-CT-33	10/23/2014	9:35			9.8	
NBS		NBS-1023-0935	Crab Trap	10/22/2014	9:50	584754.140	660171.500	NBS-CT-34	10/23/2014	9:35			9.8	
NBS		NBS-1023-0935	Crab Trap	10/22/2014	9:50	584704.510	660186.440	NBS-CT-35	10/23/2014	9:35			10.5	
NBS		NBS-1023-0940	Crab Trap	10/22/2014	9:30	585551.170	660238.440	NBS-CT-21	10/23/2014	9:40			8.2	
NBS		NBS-1023-0940	Crab Trap	10/22/2014	9:30	585424.370	660225.430	NBS-CT-22	10/23/2014	9:40			6.9	
NBS		NBS-1023-1004	Crab Trap	10/22/2014	9:10	591119.050	663325.760	NBS-CT-16	10/23/2014	10:04			8.5	
NBS		NBS-1023-1004	Crab Trap	10/22/2014	9:10	591068.640	663244.410	NBS-CT-17	10/23/2014	10:04			7.9	
NBS		NBS-1023-1004	Crab Trap	10/22/2014	9:10	590988.850	663180.020	NBS-CT-18	10/23/2014	10:04			12.3	
NBS		NBS-1023-1004	Crab Trap	10/22/2014	9:10	590903.260	663098.620	NBS-CT-19	10/23/2014	10:04			10.3	
NBS		NBS-1023-1004	Crab Trap	10/22/2014	9:10	590840.310	663030.890	NBS-CT-20	10/23/2014	10:04			10.5	
NBS		NBS-1023-1004	Crab Trap	10/22/2014	9:23	591292.780	663293.120	NBS-CT-26	10/23/2014	10:04			9.8	
NBS		NBS-1023-1004	Crab Trap	10/22/2014	9:23	591201.150	663140.430	NBS-CT-27	10/23/2014	10:04			9.2	
NBS		NBS-1023-1004	Crab Trap	10/22/2014	9:23	591161.840	663062.130	NBS-CT-28	10/23/2014	10:04			9.6	
NBS		NBS-1023-1004	Crab Trap	10/22/2014	9:23	591097.610	662943.090	NBS-CT-29	10/23/2014	10:04			9.1	
NBS		NBS-1023-1004	Crab Trap	10/22/2014	9:23	591022.970	662820.190	NBS-CT-30	10/23/2014	10:04			9.1	
NBS		NBS-1024-0840	Crab Trap	10/23/2014	10:04	591292.780	663293.120	NBS-CT-36	10/24/2014	8:40			9.8	
NBS		NBS-1024-0840	Crab Trap	10/23/2014	10:04	591201.150	663140.430	NBS-CT-37	10/24/2014	8:40			9.2	
NBS		NBS-1024-0840	Crab Trap	10/23/2014	10:04	591161.840	663062.130	NBS-CT-38	10/24/2014	8:40			9.6	
NBS		NBS-1024-0840	Crab Trap	10/23/2014	10:04	591097.610	662943.090	NBS-CT-39	10/24/2014	8:40			9.1	
NBS		NBS-1024-0840	Crab Trap	10/23/2014	10:04	591022.970	662820.190	NBS-CT-40	10/24/2014	8:40			9.1	
NBS		NBS-1024-0840	Crab Trap	10/23/2014	9:35	584961.170	660188.470	NBS-CT-41	10/24/2014	8:40			9.2	
NBS		NBS-1024-0840	Crab Trap	10/23/2014	9:35	584901.930	660181.210	NBS-CT-42	10/24/2014	8:40			9.7	
NBS		NBS-1024-0840	Crab Trap	10/23/2014	9:35	584817.760	660172.990	NBS-CT-43	10/24/2014	8:40			9.8	
NBS		NBS-1024-0840	Crab Trap	10/23/2014	9:35	584754.140	660171.500	NBS-CT-44	10/24/2014	8:40			9.8	
NBS		NBS-1024-0840	Crab Trap	10/23/2014	9:35	584704.510	660186.440	NBS-CT-45	10/24/2014	8:40			10.5	
NBS		NBS-1024-0840	Crab Trap	10/23/2014	9:40	584758.390	660165.370	NBS-CT-46	10/24/2014	8:40			9.8	
NBS		NBS-1024-0840	Crab Trap	10/23/2014	9:40	584712.300	660172.550	NBS-CT-47	10/24/2014	8:40			10.1	
NBS		NBS-1008-1350	Gillnet	10/8/2014	9:15	587941.780	664654.400	NBS-GN-03	10/8/2014	13:50			10 to 20	GPS point for end of net
NBS		NBS-1008-1350	Gillnet	10/8/2014	9:15	588268.790	664591.370	NBS-GN-04	10/8/2014	13:50			10 to 20	GPS point for end of net

Crab Sampling
Newark Bay Study Area **Draft: For Discussion Purposes Only**
SPECIMEN TALLY - Blue Crab (*Callinectes sapidus*)

Key

Study Area	NB	Newark Bay
Zone	NBN	North Zone
Intertidal Area	NBN122	Intertidal Area 122 in North Zone

Zone	Intertidal Area	Area	Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Gender	Comments
NBN	122	NBN-1007-1040	NB03CRB-X122	NB03CRB-X122-01	Crab, Blue (CRB)	140	119	F	
NBN	122	NBN-1007-1040	NB03CRB-X122	NB03CRB-X122-02	Crab, Blue (CRB)	151	168	F	
NBN	122	NBN-1007-1040	NB03CRB-X122	NB03CRB-X122-03	Crab, Blue (CRB)	165	174	F	
NBN	122	NBN-1007-1040	NB03CRB-X122	NB03CRB-X122-04	Crab, Blue (CRB)	142	126	F	
NBN	122	NBN-1007-1040	NB03CRB-X122	NB03CRB-X122-05	Crab, Blue (CRB)	139	162	M	
NBN	122	NBN-1007-1040	NB03CRB-X122	NB03CRB-X122-06	Crab, Blue (CRB)	163	312	M	
NBN	122	NBN-1007-1040	NB03CRB-X122	NB03CRB-X122-07	Crab, Blue (CRB)	140	164	M	
NBN	122	NBN-1007-1040	NB03CRB-X122	NB03CRB-X122-08	Crab, Blue (CRB)	126	132	M	
NBN	122	NBN-1007-1040	NB03CRB-X122	NB03CRB-X122-09	Crab, Blue (CRB)	135	160	M	
NBN	122	NBN-1007-1040	NB03CRB-X122	NB03CRB-X122-10	Crab, Blue (CRB)	130	132	M	
NBN	122	NBN-1007-1040	NB03CRB-X122	NB03CRB-X122-11	Crab, Blue (CRB)	147	150	F	
NBN	122	NBN-1007-1040	NB03CRB-X122	NB03CRB-X122-12	Crab, Blue (CRB)	139	114	F	
NBN	122	NBN-1007-1040	NB03CRB-X122	NB03CRB-X122-13	Crab, Blue (CRB)	147	126	F	
NBN	122	NBN-1007-1040	NB03CRB-X122	NB03CRB-X122-14	Crab, Blue (CRB)	153	134	F	
NBN	122	NBN-1007-1040	NB03CRB-X122	NB03CRB-X122-15	Crab, Blue (CRB)	158	242	M	
NBN	122	NBN-1007-1040	NB03CRB-X122	NB03CRB-X122-16	Crab, Blue (CRB)	155	231	M	
NBN	122	NBN-1007-1040	NB03CRB-X122	NB03CRB-X122-17	Crab, Blue (CRB)	156	294	M	
NBN	122	NBN-1007-1040	NB03CRB-X122	NB03CRB-X122-18	Crab, Blue (CRB)	150	250	M	
NBN	122	NBN-1007-1040	NB03CRB-X122	NB03CRB-X122-19	Crab, Blue (CRB)	158	288	M	
NBN	122	NBN-1007-1040	NB03CRB-X122	NB03CRB-X122-20	Crab, Blue (CRB)	156	172	M	missing 1 claw
NBN	122	NBN-1007-1040	NB03CRB-X122	NB03CRB-X122-21	Crab, Blue (CRB)	132	124	M	
NBN	122	NBN-1007-1040	NB03CRB-X122	NB03CRB-X122-22	Crab, Blue (CRB)	136	132	M	
NBN	122	NBN-1007-1040	NB03CRB-X122	NB03CRB-X122-23	Crab, Blue (CRB)	123	112	M	
NBN	122	NBN-1007-1040	NB03CRB-X122	NB03CRB-X122-24	Crab, Blue (CRB)	140	163	M	
NBN	123	NBN-1008-1045	NB03CRB-X123	NB03CRB-X123-01	Crab, Blue (CRB)	159	252	M	
NBN	123	NBN-1008-1045	NB03CRB-X123	NB03CRB-X123-02	Crab, Blue (CRB)	158	264	M	
NBN	123	NBN-1008-1045	NB03CRB-X123	NB03CRB-X123-03	Crab, Blue (CRB)	133	176	M	
NBN	123	NBN-1008-1045	NB03CRB-X123	NB03CRB-X123-04	Crab, Blue (CRB)	168	254	M	
NBN	123	NBN-1008-1045	NB03CRB-X123	NB03CRB-X123-05	Crab, Blue (CRB)	166	228	M	
NBN	123	NBN-1008-1045	NB03CRB-X123	NB03CRB-X123-06	Crab, Blue (CRB)	160	253	M	
NBN	123	NBN-1008-1045	NB03CRB-X123	NB03CRB-X123-07	Crab, Blue (CRB)	157	180	F	
NBN	123	NBN-1008-1045	NB03CRB-X123	NB03CRB-X123-08	Crab, Blue (CRB)	148	212	M	
NBN	123	NBN-1008-1045	NB03CRB-X123	NB03CRB-X123-09	Crab, Blue (CRB)	125	112	F	
NBN	123	NBN-1008-1045	NB03CRB-X123	NB03CRB-X123-10	Crab, Blue (CRB)	144	130	F	
NBN	123	NBN-1008-1045	NB03CRB-X123	NB03CRB-X123-11	Crab, Blue (CRB)	165	190	F	
NBN	123	NBN-1008-1045	NB03CRB-X123	NB03CRB-X123-12	Crab, Blue (CRB)	154	171	F	
NBN	123	NBN-1008-1045	NB03CRB-X123	NB03CRB-X123-13	Crab, Blue (CRB)	133	200	M	
NBN	123	NBN-1008-1045	NB03CRB-X123	NB03CRB-X123-14	Crab, Blue (CRB)	142	178	M	
NBN	123	NBN-1008-1045	NB03CRB-X123	NB03CRB-X123-15	Crab, Blue (CRB)	143	191	M	
NBN	123	NBN-1008-1045	NB03CRB-X123	NB03CRB-X123-16	Crab, Blue (CRB)	140	148	M	
NBN	123	NBN-1008-1045	NB03CRB-X123	NB03CRB-X123-17	Crab, Blue (CRB)	186	368	M	

Zone	Intertidal Area	Area	Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Gender	Comments
NBN	123	NBN-1008-1045	NB03CRB-X123	NB03CRB-X123-18	Crab, Blue (CRB)	145	218	M	
NBN	123	NBN-1008-1045	NB03CRB-X123	NB03CRB-X123-19	Crab, Blue (CRB)	160	298	M	
NBC	124	NBC-1003-0754	NB03CRB-X124	NB03CRB-X124-01	Crab, Blue (CRB)	145	148	F	
NBC	124	NBC-1003-0754	NB03CRB-X124	NB03CRB-X124-02	Crab, Blue (CRB)	129	96	F	
NBC	124	NBC-1003-0754	NB03CRB-X124	NB03CRB-X124-03	Crab, Blue (CRB)	138	154	M	
NBC	124	NBC-1003-0754	NB03CRB-X124	NB03CRB-X124-04	Crab, Blue (CRB)	150	192	M	
NBC	124	NBC-1003-0754	NB03CRB-X124	NB03CRB-X124-05	Crab, Blue (CRB)	173	284	M	
NBC	124	NBC-1003-0754	NB03CRB-X124	NB03CRB-X124-06	Crab, Blue (CRB)	172	320	M	
NBC	124	NBC-1003-0754	NB03CRB-X124	NB03CRB-X124-07	Crab, Blue (CRB)	140	172	M	
NBC	124	NBC-1003-0754	NB03CRB-X124	NB03CRB-X124-08	Crab, Blue (CRB)	136	100	M	
NBC	124	NBC-1003-0754	NB03CRB-X124	NB03CRB-X124-09	Crab, Blue (CRB)	140	156	M	
NBC	124	NBC-1003-0754	NB03CRB-X124	NB03CRB-X124-10	Crab, Blue (CRB)	148	230	M	
NBC	124	NBC-1003-0754	NB03CRB-X124	NB03CRB-X124-11	Crab, Blue (CRB)	133	88	F	missing 2 claws
NBC	124	NBC-1003-0754	NB03CRB-X124	NB03CRB-X124-12	Crab, Blue (CRB)	135	212	M	
NBC	124	NBC-1003-0754	NB03CRB-X124	NB03CRB-X124-13	Crab, Blue (CRB)	162	282	M	
NBC	124	NBC-1003-0754	NB03CRB-X124	NB03CRB-X124-14	Crab, Blue (CRB)	124	102	F	
NBC	124	NBC-1003-0754	NB03CRB-X124	NB03CRB-X124-15	Crab, Blue (CRB)	145	208	M	
NBC	124	NBC-1003-0754	NB03CRB-X124	NB03CRB-X124-16	Crab, Blue (CRB)	131	130	M	
NBC	124	NBC-1003-0754	NB03CRB-X124	NB03CRB-X124-17	Crab, Blue (CRB)	162	244	M	
NBC	124	NBC-1003-0754	NB03CRB-X124	NB03CRB-X124-18	Crab, Blue (CRB)	128	120	M	
NBC	124	NBC-1003-0754	NB03CRB-X124	NB03CRB-X124-19	Crab, Blue (CRB)	159	290	M	
NBC	124	NBC-1003-0754	NB03CRB-X124	NB03CRB-X124-20	Crab, Blue (CRB)	155	260	M	
NBC	124	NBC-1002-1053	NB03CRB-X124	NB03CRB-X124-21	Crab, Blue (CRB)	154	198	F	
NBC	124	NBC-1002-1053	NB03CRB-X124	NB03CRB-X124-22	Crab, Blue (CRB)	149	192	F	
NBC	124	NBC-1002-1053	NB03CRB-X124	NB03CRB-X124-23	Crab, Blue (CRB)	139	130	F	
NBC	125	NBC-1001-1006	NB03CRB-X125	NB03CRB-X125-01	Crab, Blue (CRB)	119	80	M	
NBC	125	NBC-1001-1006	NB03CRB-X125	NB03CRB-X125-02	Crab, Blue (CRB)	128	112	M	
NBC	125	NBC-1001-1006	NB03CRB-X125	NB03CRB-X125-03	Crab, Blue (CRB)	127	92	M	missing 1 claw
NBC	125	NBC-1001-1006	NB03CRB-X125	NB03CRB-X125-04	Crab, Blue (CRB)	131	140	M	
NBC	125	NBC-1001-1006	NB03CRB-X125	NB03CRB-X125-05	Crab, Blue (CRB)	147	180	M	
NBC	125	NBC-1001-1006	NB03CRB-X125	NB03CRB-X125-06	Crab, Blue (CRB)	146	210	M	
NBC	125	NBC-1001-1006	NB03CRB-X125	NB03CRB-X125-07	Crab, Blue (CRB)	151	228	M	
NBC	125	NBC-1001-1006	NB03CRB-X125	NB03CRB-X125-08	Crab, Blue (CRB)	128	108	M	missing 2 claws
NBC	125	NBC-1001-1006	NB03CRB-X125	NB03CRB-X125-09	Crab, Blue (CRB)	133	120	M	
NBC	125	NBC-1001-1006	NB03CRB-X125	NB03CRB-X125-10	Crab, Blue (CRB)	132	148	M	
NBC	125	NBC-1001-1006	NB03CRB-X125	NB03CRB-X125-11	Crab, Blue (CRB)	146	234	M	missing 1 claw
NBC	125	NBC-1001-1006	NB03CRB-X125	NB03CRB-X125-12	Crab, Blue (CRB)	135	166	M	
NBC	125	NBC-1001-1006	NB03CRB-X125	NB03CRB-X125-13	Crab, Blue (CRB)	120	90	M	
NBC	125	NBC-1001-1006	NB03CRB-X125	NB03CRB-X125-14	Crab, Blue (CRB)	135	150	M	
NBC	125	NBC-1001-1006	NB03CRB-X125	NB03CRB-X125-15	Crab, Blue (CRB)	149	120	F	
NBC	125	NBC-1002-1004	NB03CRB-X125	NB03CRB-X125-16	Crab, Blue (CRB)	120	84	F	
NBC	125	NBC-1002-1004	NB03CRB-X125	NB03CRB-X125-17	Crab, Blue (CRB)	143	141	F	
NBC	125	NBC-1002-1004	NB03CRB-X125	NB03CRB-X125-18	Crab, Blue (CRB)	146	165	F	
NBC	125	NBC-1002-1004	NB03CRB-X125	NB03CRB-X125-19	Crab, Blue (CRB)	144	142	F	
NBC	125	NBC-1002-1004	NB03CRB-X125	NB03CRB-X125-20	Crab, Blue (CRB)	141	118	F	

Zone	Intertidal Area	Area	Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Gender	Comments
NBC	125	NBC-1002-1004	NB03CRB-X125	NB03CRB-X125-21	Crab, Blue (CRB)	153	205	M	
NBC	125	NBC-1002-1004	NB03CRB-X125	NB03CRB-X125-22	Crab, Blue (CRB)	148	200	M	
NBC	125	NBC-1002-1004	NB03CRB-X125	NB03CRB-X125-23	Crab, Blue (CRB)	148	222	M	
NBC	125	NBC-1002-1004	NB03CRB-X125	NB03CRB-X125-24	Crab, Blue (CRB)	141	144	M	
NBC	126	NBC-0930-1051	NB03CRB-X126	NB03CRB-X126-01	Crab, Blue (CRB)	116	88	M	
NBC	126	NBC-0930-1051	NB03CRB-X126	NB03CRB-X126-02	Crab, Blue (CRB)	128	144	M	
NBC	126	NBC-0930-1051	NB03CRB-X126	NB03CRB-X126-03	Crab, Blue (CRB)	138	169	M	
NBC	126	NBC-0930-1051	NB03CRB-X126	NB03CRB-X126-04	Crab, Blue (CRB)	142	130	M	missing 1 claw
NBC	126	NBC-0930-1051	NB03CRB-X126	NB03CRB-X126-05	Crab, Blue (CRB)	149	210	M	missing 1 claw
NBC	126	NBC-0930-1051	NB03CRB-X126	NB03CRB-X126-06	Crab, Blue (CRB)	142	182	M	
NBC	126	NBC-0930-1051	NB03CRB-X126	NB03CRB-X126-07	Crab, Blue (CRB)	116	92	M	
NBC	126	NBC-0930-1051	NB03CRB-X126	NB03CRB-X126-08	Crab, Blue (CRB)	131	90	F	missing 1 claw
NBC	126	NBC-0930-1051	NB03CRB-X126	NB03CRB-X126-09	Crab, Blue (CRB)	120	118	M	
NBC	126	NBC-0930-1051	NB03CRB-X126	NB03CRB-X126-10	Crab, Blue (CRB)	129	122	M	
NBC	126	NBC-0930-1051	NB03CRB-X126	NB03CRB-X126-11	Crab, Blue (CRB)	132	100	F	
NBC	126	NBC-0930-1051	NB03CRB-X126	NB03CRB-X126-12	Crab, Blue (CRB)	135	128	M	
NBC	126	NBC-0930-1051	NB03CRB-X126	NB03CRB-X126-13	Crab, Blue (CRB)	144	208	M	
NBC	126	NBC-0930-1051	NB03CRB-X126	NB03CRB-X126-14	Crab, Blue (CRB)	130	113	M	missing 1 claw
NBC	126	NBC-0930-1051	NB03CRB-X126	NB03CRB-X126-15	Crab, Blue (CRB)	165	283	M	
NBC	126	NBC-0930-1051	NB03CRB-X126	NB03CRB-X126-16	Crab, Blue (CRB)	135	191	M	
NBC	126	NBC-0930-1051	NB03CRB-X126	NB03CRB-X126-17	Crab, Blue (CRB)	115	107	M	
NBC	126	NBC-0930-1051	NB03CRB-X126	NB03CRB-X126-18	Crab, Blue (CRB)	157	236	M	missing 1 small leg
NBC	126	NBC-0930-1051	NB03CRB-X126	NB03CRB-X126-19	Crab, Blue (CRB)	146	189	M	
NBC	126	NBC-0930-1051	NB03CRB-X126	NB03CRB-X126-20	Crab, Blue (CRB)	118	114	M	
NBC	126	NBC-0930-1051	NB03CRB-X126	NB03CRB-X126-21	Crab, Blue (CRB)	119	115	M	
NBC	126	NBC-0930-1051	NB03CRB-X126	NB03CRB-X126-22	Crab, Blue (CRB)	165	286	M	
NBC	126	NBC-0930-1051	NB03CRB-X126	NB03CRB-X126-23	Crab, Blue (CRB)	134	158	M	
NBC	127	NBC-0925-1237	NB03CRB-X127	NB03CRB-X127-01	Crab, Blue (CRB)	130	166	M	
NBC	127	NBC-0925-1237	NB03CRB-X127	NB03CRB-X127-02	Crab, Blue (CRB)	120	128	M	
NBC	127	NBC-0925-1237	NB03CRB-X127	NB03CRB-X127-03	Crab, Blue (CRB)	137	150	M	missing 1 claw
NBC	127	NBC-0925-1237	NB03CRB-X127	NB03CRB-X127-04	Crab, Blue (CRB)	123	120	M	
NBC	127	NBC-0925-1237	NB03CRB-X127	NB03CRB-X127-05	Crab, Blue (CRB)	136	132	M	missing 1 claw
NBC	127	NBC-0925-1237	NB03CRB-X127	NB03CRB-X127-06	Crab, Blue (CRB)	135	146	M	
NBC	127	NBC-0925-1237	NB03CRB-X127	NB03CRB-X127-07	Crab, Blue (CRB)	122	142	M	
NBC	127	NBC-0925-1237	NB03CRB-X127	NB03CRB-X127-08	Crab, Blue (CRB)	140	172	M	
NBC	127	NBC-0925-1237	NB03CRB-X127	NB03CRB-X127-09	Crab, Blue (CRB)	151	204	M	missing 1 claw
NBC	127	NBC-0925-1237	NB03CRB-X127	NB03CRB-X127-10	Crab, Blue (CRB)	134	90	F	missing 1 claw
NBC	127	NBC-0925-1237	NB03CRB-X127	NB03CRB-X127-11	Crab, Blue (CRB)	146	151	F	
NBC	127	NBC-0925-1237	NB03CRB-X127	NB03CRB-X127-12	Crab, Blue (CRB)	124	166	M	
NBC	127	NBC-0925-1237	NB03CRB-X127	NB03CRB-X127-13	Crab, Blue (CRB)	123	126	M	
NBC	127	NBC-0925-1237	NB03CRB-X127	NB03CRB-X127-14	Crab, Blue (CRB)	127	186	M	
NBC	127	NBC-0925-1237	NB03CRB-X127	NB03CRB-X127-15	Crab, Blue (CRB)	141	212	M	
NBC	127	NBC-0925-1237	NB03CRB-X127	NB03CRB-X127-16	Crab, Blue (CRB)	123	128	M	missing 1 claw
NBC	127	NBC-0925-1237	NB03CRB-X127	NB03CRB-X127-17	Crab, Blue (CRB)	153	250	M	
NBC	127	NBC-0925-1237	NB03CRB-X127	NB03CRB-X127-18	Crab, Blue (CRB)	133	158	M	

Zone	Intertidal Area	Area	Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Gender	Comments
NBC	127	NBC-0925-1237	NB03CRB-X127	NB03CRB-X127-19	Crab, Blue (CRB)	142	168	M	
NBC	127	NBC-0925-1237	NB03CRB-X127	NB03CRB-X127-20	Crab, Blue (CRB)	135	172	M	
NBC	127	NBC-0925-1237	NB03CRB-X127	NB03CRB-X127-21	Crab, Blue (CRB)	173	230	M	missing 1 claw
NBC	127	NBC-0925-1237	NB03CRB-X127	NB03CRB-X127-22	Crab, Blue (CRB)	136	150	M	
NBC	127	NBC-0925-1237	NB03CRB-X127	NB03CRB-X127-23	Crab, Blue (CRB)	160	310	M	
NBC	127	NBC-0925-1237	NB03CRB-X127	NB03CRB-X127-24	Crab, Blue (CRB)	131	164	M	
NBS	129	NBS-0909-1342	NB03CRB-X129	NB03CRB-X129-01	Crab, Blue (CRB)	130	113	M	missing 1 claw and 3 small legs
NBS	129	NBS-0909-1342	NB03CRB-X129	NB03CRB-X129-02	Crab, Blue (CRB)	135	140	M	
NBS	129	NBS-0909-1342	NB03CRB-X129	NB03CRB-X129-03	Crab, Blue (CRB)	158	230	M	missing 1 claw and 1 small leg
NBS	129	NBS-0909-1342	NB03CRB-X129	NB03CRB-X129-04	Crab, Blue (CRB)	154	211	M	
NBS	129	NBS-0909-1342	NB03CRB-X129	NB03CRB-X129-05	Crab, Blue (CRB)	150	198	M	missing 1 claw
NBS	129	NBS-0909-1342	NB03CRB-X129	NB03CRB-X129-06	Crab, Blue (CRB)	138	140	M	
NBS	129	NBS-0909-1342	NB03CRB-X129	NB03CRB-X129-07	Crab, Blue (CRB)	121	89	M	missing 1 claw
NBS	129	NBS-0909-1342	NB03CRB-X129	NB03CRB-X129-08	Crab, Blue (CRB)	122	131	M	missing 1 small leg
NBS	129	NBS-0909-1342	NB03CRB-X129	NB03CRB-X129-09	Crab, Blue (CRB)	127	139	M	missing 1 swimmerette
NBS	129	NBS-0909-1342	NB03CRB-X129	NB03CRB-X129-10	Crab, Blue (CRB)	115	127	M	missing 1 small leg
NBS	129	NBS-0909-1342	NB03CRB-X129	NB03CRB-X129-11	Crab, Blue (CRB)	130	140	M	
NBS	129	NBS-0909-1342	NB03CRB-X129	NB03CRB-X129-12	Crab, Blue (CRB)	134	122	M	missing 1 claw
NBS	129	NBS-0910-1410	NB03CRB-X129	NB03CRB-X129-13	Crab, Blue (CRB)	136	166	M	
NBS	129	NBS-0910-1410	NB03CRB-X129	NB03CRB-X129-14	Crab, Blue (CRB)	114	82	M	missing 1 claw and 2 small legs
NBS	129	NBS-0910-1410	NB03CRB-X129	NB03CRB-X129-15	Crab, Blue (CRB)	149	223	M	
NBS	129	NBS-0910-1410	NB03CRB-X129	NB03CRB-X129-16	Crab, Blue (CRB)	123	111	M	
NBS	129	NBS-0910-1410	NB03CRB-X129	NB03CRB-X129-17	Crab, Blue (CRB)	154	232	M	
NBS	129	NBS-0910-1410	NB03CRB-X129	NB03CRB-X129-18	Crab, Blue (CRB)	142	183	M	missing 1 small leg
NBS	129	NBS-0910-1410	NB03CRB-X129	NB03CRB-X129-19	Crab, Blue (CRB)	138	106	F	missing 2 claws
NBS	129	NBS-0910-1410	NB03CRB-X129	NB03CRB-X129-20	Crab, Blue (CRB)	146	168	M	missing 1 claw
NBS	129	NBS-0910-1410	NB03CRB-X129	NB03CRB-X129-21	Crab, Blue (CRB)	139	167	M	
NBS	129	NBS-0910-1410	NB03CRB-X129	NB03CRB-X129-22	Crab, Blue (CRB)	173	278	M	
NBS	129	NBS-0910-1410	NB03CRB-X129	NB03CRB-X129-23	Crab, Blue (CRB)	150	232	M	
NBS	129	NBS-0910-1410	NB03CRB-X129	NB03CRB-X129-24	Crab, Blue (CRB)	133	158	M	
NBS	129	NBS-0910-1410	NB03CRB-X129	NB03CRB-X129-25	Crab, Blue (CRB)	118	98	M	missing 1 claw
NBS	129	NBS-0910-1410	NB03CRB-X129	NB03CRB-X129-26	Crab, Blue (CRB)	127	105	F	
NBS	129	NBS-0910-1410	NB03CRB-X129	NB03CRB-X129-27	Crab, Blue (CRB)	134	177	M	
NBS	129	NBS-0910-1410	NB03CRB-X129	NB03CRB-X129-28	Crab, Blue (CRB)	141	121	F	
NBS	129	NBS-0910-1410	NB03CRB-X129	NB03CRB-X129-29	Crab, Blue (CRB)	148	120	F	
NBS	130	NBS-0918-1240	NB03CRB-X130	NB03CRB-X130-01	Crab, Blue (CRB)	120	102	M	missing 1 claw
NBS	130	NBS-0918-1240	NB03CRB-X130	NB03CRB-X130-02	Crab, Blue (CRB)	111	102	M	
NBS	130	NBS-0918-1240	NB03CRB-X130	NB03CRB-X130-03	Crab, Blue (CRB)	150	202	M	
NBS	130	NBS-0918-1240	NB03CRB-X130	NB03CRB-X130-04	Crab, Blue (CRB)	141	170	M	
NBS	130	NBS-0918-1240	NB03CRB-X130	NB03CRB-X130-05	Crab, Blue (CRB)	126	90	F	missing 1 claw and 2 small legs
NBS	130	NBS-0918-1240	NB03CRB-X130	NB03CRB-X130-06	Crab, Blue (CRB)	153	199	M	
NBS	130	NBS-0918-1240	NB03CRB-X130	NB03CRB-X130-07	Crab, Blue (CRB)	155	110	F	missing 1 claw and 1 small leg
NBS	130	NBS-0919-0934	NB03CRB-X130	NB03CRB-X130-08	Crab, Blue (CRB)	145	160	M	missing 1 claw
NBS	130	NBS-0919-0934	NB03CRB-X130	NB03CRB-X130-09	Crab, Blue (CRB)	133	132	M	

Zone	Intertidal Area	Area	Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Gender	Comments
NBS	130	NBS-0919-0934	NB03CRB-X130	NB03CRB-X130-10	Crab, Blue (CRB)	127	140	M	
NBS	130	NBS-0919-0934	NB03CRB-X130	NB03CRB-X130-11	Crab, Blue (CRB)	142	123	M	missing 2 claws, soft shell
NBS	130	NBS-0919-0934	NB03CRB-X130	NB03CRB-X130-12	Crab, Blue (CRB)	145	170	M	missing 1 claw
NBS	130	NBS-0919-0934	NB03CRB-X130	NB03CRB-X130-13	Crab, Blue (CRB)	123	140	M	
NBS	130	NBS-0919-0934	NB03CRB-X130	NB03CRB-X130-14	Crab, Blue (CRB)	155	212	M	
NBS	130	NBS-0919-0934	NB03CRB-X130	NB03CRB-X130-15	Crab, Blue (CRB)	161	258	M	
NBS	130	NBS-0919-0934	NB03CRB-X130	NB03CRB-X130-16	Crab, Blue (CRB)	140	180	M	
NBS	130	NBS-0923-1225	NB03CRB-X130	NB03CRB-X130-17	Crab, Blue (CRB)	147	130	F	
NBS	130	NBS-0923-1225	NB03CRB-X130	NB03CRB-X130-18	Crab, Blue (CRB)	138	130	F	
NBS	130	NBS-0923-1225	NB03CRB-X130	NB03CRB-X130-19	Crab, Blue (CRB)	137	100	F	missing 1 claw
NBS	130	NBS-0923-1225	NB03CRB-X130	NB03CRB-X130-20	Crab, Blue (CRB)	125	100	F	
NBS	130	NBS-0923-1225	NB03CRB-X130	NB03CRB-X130-21	Crab, Blue (CRB)	142	120	F	
NBS	130	NBS-0923-1225	NB03CRB-X130	NB03CRB-X130-22	Crab, Blue (CRB)	140	110	F	missing 1 claw
NBS	130	NBS-0923-1225	NB03CRB-X130	NB03CRB-X130-23	Crab, Blue (CRB)	142	130	F	
NBS	130	NBS-0923-1225	NB03CRB-X130	NB03CRB-X130-24	Crab, Blue (CRB)	133	110	F	missing 2 small legs and 1 swimmerrette
NBS	130	NBS-0923-1225	NB03CRB-X130	NB03CRB-X130-25	Crab, Blue (CRB)	138	130	F	
NBS	130	NBS-0923-1225	NB03CRB-X130	NB03CRB-X130-26	Crab, Blue (CRB)	153	102	F	
NBS	130	NBS-0923-1225	NB03CRB-X130	NB03CRB-X130-27	Crab, Blue (CRB)	132	104	F	
NBS	130	NBS-0923-1225	NB03CRB-X130	NB03CRB-X130-28	Crab, Blue (CRB)	132	106	F	
NBS	131	NBS-0911-1220	NB03CRB-X131	NB03CRB-X131-01	Crab, Blue (CRB)	145	110	F	
NBS	131	NBS-0911-1220	NB03CRB-X131	NB03CRB-X131-02	Crab, Blue (CRB)	138	110	F	
NBS	131	NBS-0911-1220	NB03CRB-X131	NB03CRB-X131-03	Crab, Blue (CRB)	145	185	M	
NBS	131	NBS-0911-1220	NB03CRB-X131	NB03CRB-X131-04	Crab, Blue (CRB)	138	180	M	
NBS	131	NBS-0911-1220	NB03CRB-X131	NB03CRB-X131-05	Crab, Blue (CRB)	120	102	F	missing 1 claw
NBS	131	NBS-0916-1200	NB03CRB-X131	NB03CRB-X131-06	Crab, Blue (CRB)	166	270	M	
NBS	131	NBS-0916-1200	NB03CRB-X131	NB03CRB-X131-07	Crab, Blue (CRB)	148	155	M	missing 2 claws
NBS	131	NBS-0916-1200	NB03CRB-X131	NB03CRB-X131-08	Crab, Blue (CRB)	135	158	M	
NBS	131	NBS-0916-1200	NB03CRB-X131	NB03CRB-X131-09	Crab, Blue (CRB)	136	160	M	missing 1 small leg
NBS	131	NBS-0916-1200	NB03CRB-X131	NB03CRB-X131-10	Crab, Blue (CRB)	112	108	M	
NBS	131	NBS-0916-1200	NB03CRB-X131	NB03CRB-X131-11	Crab, Blue (CRB)	140	120	F	
NBS	131	NBS-0916-1200	NB03CRB-X131	NB03CRB-X131-12	Crab, Blue (CRB)	145	110	F	
NBS	131	NBS-0916-1200	NB03CRB-X131	NB03CRB-X131-13	Crab, Blue (CRB)	139	150	M	missing 1 claw
NBS	131	NBS-0916-1200	NB03CRB-X131	NB03CRB-X131-14	Crab, Blue (CRB)	146	168	M	missing 1 claw
NBS	131	NBS-0916-1200	NB03CRB-X131	NB03CRB-X131-15	Crab, Blue (CRB)	134	110	F	missing 1 small leg
NBS	131	NBS-0916-1200	NB03CRB-X131	NB03CRB-X131-16	Crab, Blue (CRB)	154	268	M	
NBS	131	NBS-0916-1200	NB03CRB-X131	NB03CRB-X131-17	Crab, Blue (CRB)	141	88	F	missing 1 claw and 2 small legs
NBS	131	NBS-0917-1201	NB03CRB-X131	NB03CRB-X131-18	Crab, Blue (CRB)	149	130	F	
NBS	131	NBS-0917-1201	NB03CRB-X131	NB03CRB-X131-19	Crab, Blue (CRB)	130	108	M	
NBS	131	NBS-0917-1201	NB03CRB-X131	NB03CRB-X131-20	Crab, Blue (CRB)	156	128	F	
NBS	131	NBS-0917-1201	NB03CRB-X131	NB03CRB-X131-21	Crab, Blue (CRB)	132	108	F	missing 1 claw
NBS	131	NBS-0917-1201	NB03CRB-X131	NB03CRB-X131-22	Crab, Blue (CRB)	150	220	M	
NBS	131	NBS-0917-1201	NB03CRB-X131	NB03CRB-X131-23	Crab, Blue (CRB)	165	150	F	
NBS	131	NBS-0917-1201	NB03CRB-X131	NB03CRB-X131-24	Crab, Blue (CRB)	145	170	M	
NBS	131	NBS-0917-1201	NB03CRB-X131	NB03CRB-X131-25	Crab, Blue (CRB)	128	140	M	
NBS	131	NBS-0917-1201	NB03CRB-X131	NB03CRB-X131-26	Crab, Blue (CRB)	115	95	M	missing 1 claw

Zone	Intertidal Area	Area	Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Gender	Comments
NBS	131	NBS-0917-1201	NB03CRB-X131	NB03CRB-X131-27	Crab, Blue (CRB)	130	138	M	
NBS	131	NBS-0917-1201	NB03CRB-X131	NB03CRB-X131-28	Crab, Blue (CRB)	163	190	M	missing 1 claw and 1 swimmerrette
NBN	132	NBN-1014-0853	NB03CRB-X132	NB03CRB-X132-01	Crab, Blue (CRB)	122	124	M	
NBN	132	NBN-1014-0853	NB03CRB-X132	NB03CRB-X132-02	Crab, Blue (CRB)	141	141	M	
NBN	132	NBN-1014-0853	NB03CRB-X132	NB03CRB-X132-03	Crab, Blue (CRB)	136	111	F	
NBN	132	NBN-1014-0853	NB03CRB-X132	NB03CRB-X132-04	Crab, Blue (CRB)	134	107	F	
NBN	132	NBN-1014-0853	NB03CRB-X132	NB03CRB-X132-05	Crab, Blue (CRB)	121	90	M	
NBN	132	NBN-1014-0853	NB03CRB-X132	NB03CRB-X132-06	Crab, Blue (CRB)	144	111	M	
NBN	132	NBN-1014-0853	NB03CRB-X132	NB03CRB-X132-07	Crab, Blue (CRB)	149	140	F	
NBN	132	NBN-1014-0853	NB03CRB-X132	NB03CRB-X132-08	Crab, Blue (CRB)	142	129	F	
NBN	132	NBN-1014-0853	NB03CRB-X132	NB03CRB-X132-09	Crab, Blue (CRB)	134	149	M	
NBN	132	NBN-1014-0853	NB03CRB-X132	NB03CRB-X132-10	Crab, Blue (CRB)	151	142	F	
NBN	132	NBN-1014-0853	NB03CRB-X132	NB03CRB-X132-11	Crab, Blue (CRB)	131	102	M	
NBN	132	NBN-1014-0853	NB03CRB-X132	NB03CRB-X132-12	Crab, Blue (CRB)	123	120	M	
NBN	132	NBN-1014-0853	NB03CRB-X132	NB03CRB-X132-13	Crab, Blue (CRB)	133	124	M	
NBN	132	NBN-1014-0853	NB03CRB-X132	NB03CRB-X132-14	Crab, Blue (CRB)	160	198	M	
NBN	132	NBN-1014-0853	NB03CRB-X132	NB03CRB-X132-15	Crab, Blue (CRB)	122	72	F	missing 1 claw
NBN	132	NBN-1014-0853	NB03CRB-X132	NB03CRB-X132-16	Crab, Blue (CRB)	132	92	F	
NBN	132	NBN-1014-0853	NB03CRB-X132	NB03CRB-X132-17	Crab, Blue (CRB)	140	110	F	
NBN	132	NBN-1014-0853	NB03CRB-X132	NB03CRB-X132-18	Crab, Blue (CRB)	148	136	F	
NBN	132	NBN-1014-0853	NB03CRB-X132	NB03CRB-X132-19	Crab, Blue (CRB)	139	153	M	
NBN	132	NBN-1014-0853	NB03CRB-X132	NB03CRB-X132-20	Crab, Blue (CRB)	120	90	M	
NBN	132	NBN-1014-0853	NB03CRB-X132	NB03CRB-X132-21	Crab, Blue (CRB)	145	134	M	
NBN	132	NBN-1014-0853	NB03CRB-X132	NB03CRB-X132-22	Crab, Blue (CRB)	125	94	F	
NBN	132	NBN-1014-0853	NB03CRB-X132	NB03CRB-X132-23	Crab, Blue (CRB)	131	110	F	
NBN	132	NBN-1014-0853	NB03CRB-X132	NB03CRB-X132-24	Crab, Blue (CRB)	129	154	M	
NBN	132	NBN-1014-0853	NB03CRB-X132	NB03CRB-X132-25	Crab, Blue (CRB)	147	160	M	
NBN	132	NBN-1014-0853	NB03CRB-X132	NB03CRB-X132-26	Crab, Blue (CRB)	138	123	F	
NBN	132	NBN-1014-0853	NB03CRB-X132	NB03CRB-X132-27	Crab, Blue (CRB)	135	152	M	
NBN	132	NBN-1014-0853	NB03CRB-X132	NB03CRB-X132-28	Crab, Blue (CRB)	127	104	M	
NBN	133	NBN-1009-1350	NB03CRB-X133	NB03CRB-X133-01	Crab, Blue (CRB)	174	356	M	
NBN	133	NBN-1009-1350	NB03CRB-X133	NB03CRB-X133-02	Crab, Blue (CRB)	167	178	F	
NBN	133	NBN-1009-1350	NB03CRB-X133	NB03CRB-X133-03	Crab, Blue (CRB)	135	209	M	
NBN	133	NBN-1009-1350	NB03CRB-X133	NB03CRB-X133-04	Crab, Blue (CRB)	168	173	F	
NBN	133	NBN-1009-1350	NB03CRB-X133	NB03CRB-X133-05	Crab, Blue (CRB)	163	168	F	
NBN	133	NBN-1009-1350	NB03CRB-X133	NB03CRB-X133-06	Crab, Blue (CRB)	150	146	F	
NBN	133	NBN-1009-1350	NB03CRB-X133	NB03CRB-X133-07	Crab, Blue (CRB)	147	230	M	
NBN	133	NBN-1009-1350	NB03CRB-X133	NB03CRB-X133-08	Crab, Blue (CRB)	153	190	F	
NBN	133	NBN-1009-1350	NB03CRB-X133	NB03CRB-X133-09	Crab, Blue (CRB)	198	385	M	
NBN	133	NBN-1009-1350	NB03CRB-X133	NB03CRB-X133-10	Crab, Blue (CRB)	147	144	F	
NBN	133	NBN-1009-1350	NB03CRB-X133	NB03CRB-X133-11	Crab, Blue (CRB)	137	124	F	
NBN	133	NBN-1009-1350	NB03CRB-X133	NB03CRB-X133-12	Crab, Blue (CRB)	160	197	M	
NBN	133	NBN-1009-1350	NB03CRB-X133	NB03CRB-X133-13	Crab, Blue (CRB)	141	146	F	
NBN	133	NBN-1009-1350	NB03CRB-X133	NB03CRB-X133-14	Crab, Blue (CRB)	135	123	F	
NBN	133	NBN-1009-1350	NB03CRB-X133	NB03CRB-X133-15	Crab, Blue (CRB)	152	201	M	

Zone	Intertidal Area	Area	Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Gender	Comments
NBN	133	NBN-1009-1350	NB03CRB-X133	NB03CRB-X133-16	Crab, Blue (CRB)	154	272	M	
NBN	133	NBN-1009-1350	NB03CRB-X133	NB03CRB-X133-17	Crab, Blue (CRB)	140	132	F	
NBN	133	NBN-1009-1350	NB03CRB-X133	NB03CRB-X133-18	Crab, Blue (CRB)	155	169	M	
NBS	134	NBS-0924-1243	NB03CRB-X134	NB03CRB-X134-01	Crab, Blue (CRB)	138	160	F	
NBS	134	NBS-0924-1243	NB03CRB-X134	NB03CRB-X134-02	Crab, Blue (CRB)	140	120	F	missing 1 claw
NBS	134	NBS-0924-1243	NB03CRB-X134	NB03CRB-X134-03	Crab, Blue (CRB)	140	146	F	
NBS	134	NBS-0924-1243	NB03CRB-X134	NB03CRB-X134-04	Crab, Blue (CRB)	136	185	M	
NBS	134	NBS-0924-1243	NB03CRB-X134	NB03CRB-X134-05	Crab, Blue (CRB)	134	120	F	
NBS	134	NBS-0924-1243	NB03CRB-X134	NB03CRB-X134-06	Crab, Blue (CRB)	134	160	M	
NBS	134	NBS-0924-1243	NB03CRB-X134	NB03CRB-X134-07	Crab, Blue (CRB)	131	180	M	
NBS	134	NBS-0924-1243	NB03CRB-X134	NB03CRB-X134-08	Crab, Blue (CRB)	139	150	M	missing 1 claw
NBS	134	NBS-0924-1243	NB03CRB-X134	NB03CRB-X134-09	Crab, Blue (CRB)	125	124	F	missing 1 small leg
NBS	134	NBS-0924-1243	NB03CRB-X134	NB03CRB-X134-10	Crab, Blue (CRB)	130	120	F	missing 1 swimmerette
NBS	134	NBS-0924-1243	NB03CRB-X134	NB03CRB-X134-11	Crab, Blue (CRB)	147	200	M	
NBS	134	NBS-0924-1243	NB03CRB-X134	NB03CRB-X134-12	Crab, Blue (CRB)	127	120	M	
NBS	134	NBS-0924-1243	NB03CRB-X134	NB03CRB-X134-13	Crab, Blue (CRB)	135	160	M	
NBS	134	NBS-0924-1243	NB03CRB-X134	NB03CRB-X134-14	Crab, Blue (CRB)	145	150	F	
NBS	134	NBS-0924-1243	NB03CRB-X134	NB03CRB-X134-15	Crab, Blue (CRB)	150	160	F	missing 1 small leg
NBS	134	NBS-0924-1243	NB03CRB-X134	NB03CRB-X134-16	Crab, Blue (CRB)	144	188	M	
NBS	134	NBS-0924-1243	NB03CRB-X134	NB03CRB-X134-17	Crab, Blue (CRB)	128	140	M	missing 1 small leg
NBS	134	NBS-0924-1243	NB03CRB-X134	NB03CRB-X134-18	Crab, Blue (CRB)	135	115	F	
NBS	134	NBS-0924-1243	NB03CRB-X134	NB03CRB-X134-19	Crab, Blue (CRB)	119	70	M	missing 2 claws and 1 swimmerette
NBS	134	NBS-0924-1243	NB03CRB-X134	NB03CRB-X134-20	Crab, Blue (CRB)	123	110	M	
NBS	134	NBS-0924-1243	NB03CRB-X134	NB03CRB-X134-21	Crab, Blue (CRB)	140	130	F	
NBS	134	NBS-0924-1243	NB03CRB-X134	NB03CRB-X134-22	Crab, Blue (CRB)	138	120	F	missing 1 claw and 2 small legs
NBS	134	NBS-0924-1243	NB03CRB-X134	NB03CRB-X134-23	Crab, Blue (CRB)	140	128	F	
NBS	134	NBS-0924-1243	NB03CRB-X134	NB03CRB-X134-24	Crab, Blue (CRB)	145	190	M	
NBS	134	NBS-0924-1243	NB03CRB-X134	NB03CRB-X134-25	Crab, Blue (CRB)	136	140	F	missing 1 claw
NBS	134	NBS-0924-1243	NB03CRB-X134	NB03CRB-X134-26	Crab, Blue (CRB)	132	130	M	missing 1 claw and 1 small leg
NBS	134	NBS-0924-1243	NB03CRB-X134	NB03CRB-X134-27	Crab, Blue (CRB)	126	90	F	missing 1 claw and 1 small leg
NBS	134	NBS-0924-1243	NB03CRB-X134	NB03CRB-X134-28	Crab, Blue (CRB)	150	192	M	
NBS	134	NBS-0924-1243	NB03CRB-X134	NB03CRB-X134-29	Crab, Blue (CRB)	132	112	F	
NBS	134	NBS-0924-1243	NB03CRB-X134	NB03CRB-X134-30	Crab, Blue (CRB)	138	190	M	
NBS	134	NBS-0924-1243	NB03CRB-X134	NB03CRB-X134-31	Crab, Blue (CRB)	135	120	F	missing 1 claw
NBS	134	NBS-0924-1243	NB03CRB-X134	NB03CRB-X134-32	Crab, Blue (CRB)	140	142	M	missing 1 claw and 1 small leg
NBS	130	NBS-0923-1225	NB03CRB-X130	NB03CRB-X130-29	Crab, Blue (CRB)	136	162	M	not processed for tissue sample
NBS	130	NBS-0923-1225	NB03CRB-X130	NB03CRB-X130-30	Crab, Blue (CRB)	125	95	F	not processed for tissue sample
NBS	130	NBS-0923-1225	NB03CRB-X130	NB03CRB-X130-31	Crab, Blue (CRB)	147	150	F	not processed for tissue sample
NBS	130	NBS-0923-1225	NB03CRB-X130	NB03CRB-X130-32	Crab, Blue (CRB)	141	120	F	not processed for tissue sample
NBS	130	NBS-0923-1225	NB03CRB-X130	NB03CRB-X130-33	Crab, Blue (CRB)	136	120	M	not processed for tissue sample
NBS	130	NBS-0923-1225	NB03CRB-X130	NB03CRB-X130-34	Crab, Blue (CRB)	125	120	M	not processed for tissue sample
NBS	130	NBS-0923-1225	NB03CRB-X130	NB03CRB-X130-35	Crab, Blue (CRB)	159	252	M	not processed for tissue sample
NBS	130	NBS-0923-1225	NB03CRB-X130	NB03CRB-X130-36	Crab, Blue (CRB)	150	184	M	not processed for tissue sample
NBS	130	NBS-0923-1225	NB03CRB-X130	NB03CRB-X130-37	Crab, Blue (CRB)	128	132	M	not processed for tissue sample
NBS	130	NBS-0923-1225	NB03CRB-X130	NB03CRB-X130-38	Crab, Blue (CRB)	160	182	M	not processed for tissue sample

Zone	Intertidal Area	Area	Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Gender	Comments
NBS	130	NBS-0923-1225	NB03CRB-X130	NB03CRB-X130-39	Crab, Blue (CRB)	116	110	M	not processed for tissue sample
NBS	130	NBS-0923-1225	NB03CRB-X130	NB03CRB-X130-40	Crab, Blue (CRB)	125	149	M	not processed for tissue sample
NBC		NBC-1015-0900	NB03CRB-X-C001	NB03CRB-X-C001-001	Crab, Blue (CRB)	138	120	M	missing 1 claw
NBC		NBC-1015-0900	NB03CRB-X-C001	NB03CRB-X-C001-002	Crab, Blue (CRB)	138	170	M	
NBC		NBC-1015-0900	NB03CRB-X-C001	NB03CRB-X-C001-003	Crab, Blue (CRB)	150	186	M	
NBC		NBC-1015-0900	NB03CRB-X-C001	NB03CRB-X-C001-004	Crab, Blue (CRB)	137	126	M	
NBC		NBC-1015-0900	NB03CRB-X-C001	NB03CRB-X-C001-005	Crab, Blue (CRB)	118	88	F	
NBC		NBC-1015-0900	NB03CRB-X-C001	NB03CRB-X-C001-006	Crab, Blue (CRB)	159	208	M	
NBC		NBC-1015-0900	NB03CRB-X-C001	NB03CRB-X-C001-007	Crab, Blue (CRB)	162	184	F	
NBC		NBC-1015-0900	NB03CRB-X-C001	NB03CRB-X-C001-008	Crab, Blue (CRB)	132	142	M	
NBC		NBC-1015-0900	NB03CRB-X-C001	NB03CRB-X-C001-009	Crab, Blue (CRB)	150	200	M	
NBC		NBC-1015-0900	NB03CRB-X-C001	NB03CRB-X-C001-010	Crab, Blue (CRB)	120	84	M	missing 1 claw
NBC		NBC-1015-0900	NB03CRB-X-C001	NB03CRB-X-C001-011	Crab, Blue (CRB)	130	91	M	missing 1 swimmerette
NBC		NBC-1015-0900	NB03CRB-X-C001	NB03CRB-X-C001-012	Crab, Blue (CRB)	122	106	M	
NBC		NBC-1015-0900	NB03CRB-X-C001	NB03CRB-X-C001-013	Crab, Blue (CRB)	121	86	M	missing 2 small legs
NBC		NBC-1015-0900	NB03CRB-X-C001	NB03CRB-X-C001-014	Crab, Blue (CRB)	170	266	M	
NBC		NBC-1015-0900	NB03CRB-X-C001	NB03CRB-X-C001-015	Crab, Blue (CRB)	133	132	M	
NBC		NBC-1015-0900	NB03CRB-X-C001	NB03CRB-X-C001-016	Crab, Blue (CRB)	140	174	M	
NBC		NBC-1015-0900	NB03CRB-X-C001	NB03CRB-X-C001-017	Crab, Blue (CRB)	164	204	F	
NBC		NBC-1015-0900	NB03CRB-X-C001	NB03CRB-X-C001-018	Crab, Blue (CRB)	142	170	M	
NBC		NBC-1015-0900	NB03CRB-X-C001	NB03CRB-X-C001-019	Crab, Blue (CRB)	141	112	F	
NBC		NBC-1015-0900	NB03CRB-X-C001	NB03CRB-X-C001-020	Crab, Blue (CRB)	120	100	M	
NBC		NBC-1015-0900	NB03CRB-X-C002	NB03CRB-X-C002-001	Crab, Blue (CRB)	120	84	F	missing 1 claw
NBC		NBC-1015-0900	NB03CRB-X-C002	NB03CRB-X-C002-002	Crab, Blue (CRB)	121	94	F	
NBC		NBC-1016-0951	NB03CRB-X-C002	NB03CRB-X-C002-003	Crab, Blue (CRB)	130	142	M	missing 1 claw
NBC		NBC-1016-0951	NB03CRB-X-C002	NB03CRB-X-C002-004	Crab, Blue (CRB)	150	206	M	
NBC		NBC-1016-0951	NB03CRB-X-C002	NB03CRB-X-C002-005	Crab, Blue (CRB)	147	154	M	missing 1 claw
NBC		NBC-1016-0951	NB03CRB-X-C002	NB03CRB-X-C002-006	Crab, Blue (CRB)	151	206	F	
NBC		NBC-1016-0951	NB03CRB-X-C002	NB03CRB-X-C002-007	Crab, Blue (CRB)	158	244	M	
NBC		NBC-1016-0951	NB03CRB-X-C002	NB03CRB-X-C002-008	Crab, Blue (CRB)	126	112	M	missing 1 claw
NBC		NBC-1016-0951	NB03CRB-X-C002	NB03CRB-X-C002-009	Crab, Blue (CRB)	143	170	M	
NBC		NBC-1016-0951	NB03CRB-X-C002	NB03CRB-X-C002-010	Crab, Blue (CRB)	152	169	F	
NBC		NBC-1016-0951	NB03CRB-X-C002	NB03CRB-X-C002-011	Crab, Blue (CRB)	153	204	M	
NBC		NBC-1016-0951	NB03CRB-X-C002	NB03CRB-X-C002-012	Crab, Blue (CRB)	146	206	M	
NBC		NBC-1016-0951	NB03CRB-X-C002	NB03CRB-X-C002-013	Crab, Blue (CRB)	140	133	F	
NBC		NBC-1016-0951	NB03CRB-X-C002	NB03CRB-X-C002-014	Crab, Blue (CRB)	146	174	M	
NBC		NBC-1016-0951	NB03CRB-X-C002	NB03CRB-X-C002-015	Crab, Blue (CRB)	128	152	M	
NBC		NBC-1016-0951	NB03CRB-X-C002	NB03CRB-X-C002-016	Crab, Blue (CRB)	140	158	M	missing 1 claw
NBC		NBC-1016-0951	NB03CRB-X-C002	NB03CRB-X-C002-017	Crab, Blue (CRB)	162	266	M	
NBC		NBC-1016-0951	NB03CRB-X-C002	NB03CRB-X-C002-018	Crab, Blue (CRB)	150	246	M	
NBC		NBC-1016-0951	NB03CRB-X-C003	NB03CRB-X-C003-001	Crab, Blue (CRB)	157	192	M	
NBC		NBC-1016-0951	NB03CRB-X-C003	NB03CRB-X-C003-002	Crab, Blue (CRB)	140	156	M	missing 1 claw
NBC		NBC-1016-0951	NB03CRB-X-C003	NB03CRB-X-C003-003	Crab, Blue (CRB)	133	160	M	
NBC		NBC-1016-0951	NB03CRB-X-C003	NB03CRB-X-C003-004	Crab, Blue (CRB)	167	236	M	missing 1 claw
NBC		NBC-1016-0951	NB03CRB-X-C003	NB03CRB-X-C003-005	Crab, Blue (CRB)	128	132	M	

Zone	Intertidal Area	Area	Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Gender	Comments
NBC		NBC-1016-0951	NB03CRB-X-C003	NB03CRB-X-C003-006	Crab, Blue (CRB)	162	260	M	
NBC		NBC-1016-0951	NB03CRB-X-C003	NB03CRB-X-C003-007	Crab, Blue (CRB)	161	194	M	
NBC		NBC-1016-0951	NB03CRB-X-C003	NB03CRB-X-C003-008	Crab, Blue (CRB)	151	190	M	
NBC		NBC-1016-0951	NB03CRB-X-C003	NB03CRB-X-C003-009	Crab, Blue (CRB)	143	170	M	
NBC		NBC-1016-0951	NB03CRB-X-C003	NB03CRB-X-C003-010	Crab, Blue (CRB)	129	144	M	
NBC		NBC-1016-0951	NB03CRB-X-C003	NB03CRB-X-C003-011	Crab, Blue (CRB)	143	182	M	
NBC		NBC-1016-0951	NB03CRB-X-C003	NB03CRB-X-C003-012	Crab, Blue (CRB)	141	146	F	
NBC		NBC-1016-0951	NB03CRB-X-C003	NB03CRB-X-C003-013	Crab, Blue (CRB)	136	132	F	
NBC		NBC-1016-0951	NB03CRB-X-C003	NB03CRB-X-C003-014	Crab, Blue (CRB)	132	154	M	
NBC		NBC-1016-0951	NB03CRB-X-C003	NB03CRB-X-C003-015	Crab, Blue (CRB)	142	172	M	
NBC		NBC-1016-0951	NB03CRB-X-C003	NB03CRB-X-C003-016	Crab, Blue (CRB)	129	160	M	
NBC		NBC-1016-0951	NB03CRB-X-C003	NB03CRB-X-C003-017	Crab, Blue (CRB)	120	114	M	
NBC		NBC-1016-0951	NB03CRB-X-C003	NB03CRB-X-C003-018	Crab, Blue (CRB)	136	166	M	
NBC		NBC-1016-0951	NB03CRB-X-C004	NB03CRB-X-C004-001	Crab, Blue (CRB)	133	149	M	
NBC		NBC-1016-0951	NB03CRB-X-C004	NB03CRB-X-C004-002	Crab, Blue (CRB)	156	223	M	
NBC		NBC-1016-0951	NB03CRB-X-C004	NB03CRB-X-C004-003	Crab, Blue (CRB)	120	129	M	
NBC		NBC-1016-0951	NB03CRB-X-C004	NB03CRB-X-C004-004	Crab, Blue (CRB)	119	100	M	
NBC		NBC-1016-0951	NB03CRB-X-C004	NB03CRB-X-C004-005	Crab, Blue (CRB)	135	155	M	
NBC		NBC-1016-0951	NB03CRB-X-C004	NB03CRB-X-C004-006	Crab, Blue (CRB)	134	150	M	
NBC		NBC-1016-0951	NB03CRB-X-C004	NB03CRB-X-C004-007	Crab, Blue (CRB)	138	168	M	
NBC		NBC-1016-0951	NB03CRB-X-C004	NB03CRB-X-C004-008	Crab, Blue (CRB)	151	192	M	
NBC		NBC-1016-0951	NB03CRB-X-C004	NB03CRB-X-C004-009	Crab, Blue (CRB)	138	152	M	
NBC		NBC-1016-0951	NB03CRB-X-C004	NB03CRB-X-C004-010	Crab, Blue (CRB)	137	178	M	
NBC		NBC-1016-0951	NB03CRB-X-C004	NB03CRB-X-C004-011	Crab, Blue (CRB)	130	124	M	
NBC		NBC-1016-0951	NB03CRB-X-C004	NB03CRB-X-C004-012	Crab, Blue (CRB)	139	178	M	
NBC		NBC-1016-0951	NB03CRB-X-C004	NB03CRB-X-C004-013	Crab, Blue (CRB)	132	140	M	missing 1 claw
NBC		NBC-1016-0951	NB03CRB-X-C004	NB03CRB-X-C004-014	Crab, Blue (CRB)	157	234	M	missing 1 claw
NBC		NBC-1016-0951	NB03CRB-X-C004	NB03CRB-X-C004-015	Crab, Blue (CRB)	152	234	M	
NBC		NBC-1016-0951	NB03CRB-X-C004	NB03CRB-X-C004-016	Crab, Blue (CRB)	135	163	M	
NBC		NBC-1016-0951	NB03CRB-X-C004	NB03CRB-X-C004-017	Crab, Blue (CRB)	132	124	M	
NBC		NBC-1016-0951	NB03CRB-X-C004	NB03CRB-X-C004-018	Crab, Blue (CRB)	150	140	F	
NBC		NBC-1016-1116	NB03CRB-X-C005	NB03CRB-X-C005-001	Crab, Blue (CRB)	122	100	M	missing 2 claws
NBC		NBC-1016-1116	NB03CRB-X-C005	NB03CRB-X-C005-002	Crab, Blue (CRB)	136	142	M	missing 1 claw
NBC		NBC-1016-1116	NB03CRB-X-C005	NB03CRB-X-C005-003	Crab, Blue (CRB)	164	268	M	
NBC		NBC-1016-1116	NB03CRB-X-C005	NB03CRB-X-C005-004	Crab, Blue (CRB)	156	204	M	
NBC		NBC-1016-1116	NB03CRB-X-C005	NB03CRB-X-C005-005	Crab, Blue (CRB)	136	184	M	
NBC		NBC-1016-1116	NB03CRB-X-C005	NB03CRB-X-C005-006	Crab, Blue (CRB)	131	116	M	missing 1 claw
NBC		NBC-1016-1116	NB03CRB-X-C005	NB03CRB-X-C005-007	Crab, Blue (CRB)	158	196	F	
NBC		NBC-1016-1116	NB03CRB-X-C005	NB03CRB-X-C005-008	Crab, Blue (CRB)	124	104	F	
NBC		NBC-1016-1116	NB03CRB-X-C005	NB03CRB-X-C005-009	Crab, Blue (CRB)	146	160	M	
NBC		NBC-1016-1116	NB03CRB-X-C005	NB03CRB-X-C005-010	Crab, Blue (CRB)	131	170	M	
NBC		NBC-1016-1116	NB03CRB-X-C005	NB03CRB-X-C005-011	Crab, Blue (CRB)	148	206	M	
NBC		NBC-1016-1116	NB03CRB-X-C005	NB03CRB-X-C005-012	Crab, Blue (CRB)	137	130	F	
NBC		NBC-1016-1116	NB03CRB-X-C005	NB03CRB-X-C005-013	Crab, Blue (CRB)	119	72	F	missing 1 claw
NBC		NBC-1016-1116	NB03CRB-X-C005	NB03CRB-X-C005-014	Crab, Blue (CRB)	131	121	M	missing 1 claw

Zone	Intertidal Area	Area	Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Gender	Comments
NBC		NBC-1016-1116	NB03CRB-X-C005	NB03CRB-X-C005-015	Crab, Blue (CRB)	142	232	M	
NBC		NBC-1016-1116	NB03CRB-X-C005	NB03CRB-X-C005-016	Crab, Blue (CRB)	134	172	M	
NBC		NBC-1016-1116	NB03CRB-X-C005	NB03CRB-X-C005-017	Crab, Blue (CRB)	150	248	M	
NBC		NBC-1016-1116	NB03CRB-X-C005	NB03CRB-X-C005-018	Crab, Blue (CRB)	138	147	F	missing 1 claw
NBC		NBC-1021-0900	NB03CRB-X-C006	NB03CRB-X-C006-001	Crab, Blue (CRB)	131	151	M	
NBC		NBC-1021-0900	NB03CRB-X-C006	NB03CRB-X-C006-002	Crab, Blue (CRB)	165	277	M	
NBC		NBC-1021-0900	NB03CRB-X-C006	NB03CRB-X-C006-003	Crab, Blue (CRB)	164	230	M	
NBC		NBC-1021-0900	NB03CRB-X-C006	NB03CRB-X-C006-004	Crab, Blue (CRB)	146	182	M	
NBC		NBC-1021-0900	NB03CRB-X-C006	NB03CRB-X-C006-005	Crab, Blue (CRB)	132	179	M	
NBC		NBC-1021-0900	NB03CRB-X-C006	NB03CRB-X-C006-006	Crab, Blue (CRB)	121	120	M	
NBC		NBC-1021-0900	NB03CRB-X-C006	NB03CRB-X-C006-007	Crab, Blue (CRB)	138	116	F	
NBC		NBC-1021-0900	NB03CRB-X-C006	NB03CRB-X-C006-008	Crab, Blue (CRB)	126	105	F	
NBC		NBC-1021-0900	NB03CRB-X-C006	NB03CRB-X-C006-009	Crab, Blue (CRB)	140	162	M	
NBC		NBC-1021-0900	NB03CRB-X-C006	NB03CRB-X-C006-010	Crab, Blue (CRB)	155	170	F	
NBC		NBC-1021-0900	NB03CRB-X-C006	NB03CRB-X-C006-011	Crab, Blue (CRB)	151	140	F	
NBC		NBC-1021-0900	NB03CRB-X-C006	NB03CRB-X-C006-012	Crab, Blue (CRB)	129	144	M	
NBC		NBC-1021-0900	NB03CRB-X-C006	NB03CRB-X-C006-013	Crab, Blue (CRB)	139	162	M	
NBC		NBC-1021-0900	NB03CRB-X-C006	NB03CRB-X-C006-014	Crab, Blue (CRB)	148	178	M	
NBC		NBC-1021-0900	NB03CRB-X-C006	NB03CRB-X-C006-015	Crab, Blue (CRB)	118	96	M	
NBC		NBC-1021-0900	NB03CRB-X-C006	NB03CRB-X-C006-016	Crab, Blue (CRB)	122	78	M	
NBC		NBC-1021-0900	NB03CRB-X-C006	NB03CRB-X-C006-017	Crab, Blue (CRB)	124	130	M	
NBC		NBC-1021-0900	NB03CRB-X-C006	NB03CRB-X-C006-018	Crab, Blue (CRB)	130	121	M	
NBC		NBC-1021-0900	NB03CRB-X-C006	NB03CRB-X-C006-019	Crab, Blue (CRB)	142	168	M	
NBC		NBC-1021-0900	NB03CRB-X-C007	NB03CRB-X-C007-001	Crab, Blue (CRB)	153	198	M	
NBC		NBC-1021-0900	NB03CRB-X-C007	NB03CRB-X-C007-002	Crab, Blue (CRB)	117	95	M	
NBC		NBC-1021-0900	NB03CRB-X-C007	NB03CRB-X-C007-003	Crab, Blue (CRB)	147	142	F	
NBC		NBC-1021-0900	NB03CRB-X-C007	NB03CRB-X-C007-004	Crab, Blue (CRB)	145	141	M	missing 1 claw
NBC		NBC-1021-0900	NB03CRB-X-C007	NB03CRB-X-C007-005	Crab, Blue (CRB)	124	104	M	
NBC		NBC-1021-0900	NB03CRB-X-C007	NB03CRB-X-C007-006	Crab, Blue (CRB)	130	112	M	missing 1 claw
NBC		NBC-1021-0900	NB03CRB-X-C007	NB03CRB-X-C007-007	Crab, Blue (CRB)	117	110	M	
NBC		NBC-1021-0900	NB03CRB-X-C007	NB03CRB-X-C007-008	Crab, Blue (CRB)	129	118	M	
NBC		NBC-1021-0900	NB03CRB-X-C007	NB03CRB-X-C007-009	Crab, Blue (CRB)	136	120	F	
NBC		NBC-1021-0900	NB03CRB-X-C007	NB03CRB-X-C007-010	Crab, Blue (CRB)	133	123	M	
NBC		NBC-1021-0900	NB03CRB-X-C007	NB03CRB-X-C007-011	Crab, Blue (CRB)	122	107	M	
NBC		NBC-1021-0900	NB03CRB-X-C007	NB03CRB-X-C007-012	Crab, Blue (CRB)	136	152	M	
NBC		NBC-1021-0900	NB03CRB-X-C007	NB03CRB-X-C007-013	Crab, Blue (CRB)	140	127	M	missing 1 claw
NBC		NBC-1021-0900	NB03CRB-X-C007	NB03CRB-X-C007-014	Crab, Blue (CRB)	139	108	F	missing 1 claw
NBC		NBC-1021-0900	NB03CRB-X-C007	NB03CRB-X-C007-015	Crab, Blue (CRB)	139	155	M	
NBC		NBC-1022-0825	NB03CRB-X-C007	NB03CRB-X-C007-016	Crab, Blue (CRB)	142	132	F	
NBC		NBC-1022-0825	NB03CRB-X-C007	NB03CRB-X-C007-017	Crab, Blue (CRB)	130	143	M	
NBC		NBC-1022-0825	NB03CRB-X-C007	NB03CRB-X-C007-018	Crab, Blue (CRB)	139	188	M	
NBC		NBC-1022-0825	NB03CRB-X-C007	NB03CRB-X-C007-019	Crab, Blue (CRB)	130	132	M	
NBC		NBC-1022-0825	NB03CRB-X-C007	NB03CRB-X-C007-020	Crab, Blue (CRB)	133	120	F	
NBC		NBC-1022-0825	NB03CRB-X-C008	NB03CRB-X-C008-001	Crab, Blue (CRB)	145	158	M	
NBC		NBC-1022-0825	NB03CRB-X-C008	NB03CRB-X-C008-002	Crab, Blue (CRB)	142	126	F	

Zone	Intertidal Area	Area	Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Gender	Comments
NBC		NBC-1022-0825	NB03CRB-X-C008	NB03CRB-X-C008-003	Crab, Blue (CRB)	126	120	M	missing 1 claw
NBC		NBC-1022-0825	NB03CRB-X-C008	NB03CRB-X-C008-004	Crab, Blue (CRB)	127	146	M	
NBC		NBC-1022-0825	NB03CRB-X-C008	NB03CRB-X-C008-005	Crab, Blue (CRB)	127	136	M	
NBC		NBC-1022-0825	NB03CRB-X-C008	NB03CRB-X-C008-006	Crab, Blue (CRB)	136	160	M	
NBC		NBC-1022-0825	NB03CRB-X-C008	NB03CRB-X-C008-007	Crab, Blue (CRB)	148	210	M	
NBC		NBC-1022-0825	NB03CRB-X-C008	NB03CRB-X-C008-008	Crab, Blue (CRB)	164	201	F	
NBC		NBC-1022-0825	NB03CRB-X-C008	NB03CRB-X-C008-009	Crab, Blue (CRB)	123	104	F	
NBC		NBC-1022-0825	NB03CRB-X-C008	NB03CRB-X-C008-010	Crab, Blue (CRB)	133	184	M	
NBC		NBC-1022-0825	NB03CRB-X-C008	NB03CRB-X-C008-011	Crab, Blue (CRB)	146	155	F	
NBC		NBC-1022-0825	NB03CRB-X-C008	NB03CRB-X-C008-012	Crab, Blue (CRB)	138	198	M	
NBC		NBC-1022-0825	NB03CRB-X-C008	NB03CRB-X-C008-013	Crab, Blue (CRB)	125	130	M	
NBC		NBC-1022-0825	NB03CRB-X-C008	NB03CRB-X-C008-014	Crab, Blue (CRB)	127	130	M	
NBC		NBC-1022-0825	NB03CRB-X-C008	NB03CRB-X-C008-015	Crab, Blue (CRB)	156	260	M	
NBC		NBC-1022-0825	NB03CRB-X-C008	NB03CRB-X-C008-016	Crab, Blue (CRB)	143	146	F	
NBC		NBC-1022-0825	NB03CRB-X-C008	NB03CRB-X-C008-017	Crab, Blue (CRB)	123	136	M	
NBC		NBC-1022-0825	NB03CRB-X-C008	NB03CRB-X-C008-018	Crab, Blue (CRB)	130	139	M	
NBN		NBN-1006-1348	NB03CRB-X-N001	NB03CRB-X-N001-001	Crab, Blue (CRB)	160	190	M	
NBN		NBN-1006-1348	NB03CRB-X-N001	NB03CRB-X-N001-002	Crab, Blue (CRB)	130	116	M	
NBN		NBN-1006-1348	NB03CRB-X-N001	NB03CRB-X-N001-003	Crab, Blue (CRB)	132	100	F	
NBN		NBN-1006-1348	NB03CRB-X-N001	NB03CRB-X-N001-004	Crab, Blue (CRB)	131	110	F	
NBN		NBN-1006-1348	NB03CRB-X-N001	NB03CRB-X-N001-005	Crab, Blue (CRB)	138	170	M	
NBN		NBN-1006-1348	NB03CRB-X-N001	NB03CRB-X-N001-006	Crab, Blue (CRB)	155	218	M	
NBN		NBN-1007-0912	NB03CRB-X-N002	NB03CRB-X-N002-017	Crab, Blue (CRB)	162	240	M	
NBN		NBN-1007-0912	NB03CRB-X-N002	NB03CRB-X-N002-018	Crab, Blue (CRB)	132	168	M	
NBN		NBN-1007-0912	NB03CRB-X-N002	NB03CRB-X-N002-019	Crab, Blue (CRB)	128	98	F	soft shell
NBN		NBN-1007-0912	NB03CRB-X-N002	NB03CRB-X-N002-020	Crab, Blue (CRB)	153	190	M	missing 1 claw
NBN		NBN-1007-0912	NB03CRB-X-N002	NB03CRB-X-N002-021	Crab, Blue (CRB)	155	260	M	
NBN		NBN-1007-0912	NB03CRB-X-N002	NB03CRB-X-N002-022	Crab, Blue (CRB)	158	210	M	
NBN		NBN-1007-0912	NB03CRB-X-N002	NB03CRB-X-N002-023	Crab, Blue (CRB)	148	150	F	
NBN		NBN-1007-0930	NB03CRB-X-N003	NB03CRB-X-N003-001	Crab, Blue (CRB)	138	140	M	
NBN		NBN-1007-0930	NB03CRB-X-N003	NB03CRB-X-N003-002	Crab, Blue (CRB)	127	120	M	
NBN		NBN-1007-0930	NB03CRB-X-N003	NB03CRB-X-N003-003	Crab, Blue (CRB)	142	100	M	missing 2 claws
NBN		NBN-1007-0930	NB03CRB-X-N003	NB03CRB-X-N003-004	Crab, Blue (CRB)	160	250	M	
NBN		NBN-1007-0930	NB03CRB-X-N003	NB03CRB-X-N003-005	Crab, Blue (CRB)	145	120	F	
NBN		NBN-1007-0930	NB03CRB-X-N003	NB03CRB-X-N003-006	Crab, Blue (CRB)	128	90	F	missing 2 claws
NBN		NBN-1007-0930	NB03CRB-X-N003	NB03CRB-X-N003-007	Crab, Blue (CRB)	150	140	F	
NBN		NBN-1007-0930	NB03CRB-X-N003	NB03CRB-X-N003-008	Crab, Blue (CRB)	140	190	M	
NBN		NBN-1007-0930	NB03CRB-X-N003	NB03CRB-X-N003-009	Crab, Blue (CRB)	170	210	M	
NBN		NBN-1007-0930	NB03CRB-X-N003	NB03CRB-X-N003-010	Crab, Blue (CRB)	150	200	M	
NBN		NBN-1007-0930	NB03CRB-X-N003	NB03CRB-X-N003-011	Crab, Blue (CRB)	140	130	M	
NBN		NBN-1007-0930	NB03CRB-X-N003	NB03CRB-X-N003-012	Crab, Blue (CRB)	140	160	M	
NBN		NBN-1007-0930	NB03CRB-X-N003	NB03CRB-X-N003-013	Crab, Blue (CRB)	138	100	F	
NBN		NBN-1007-0930	NB03CRB-X-N003	NB03CRB-X-N003-014	Crab, Blue (CRB)	120	60	F	missing 2 claws
NBN		NBN-1007-0930	NB03CRB-X-N003	NB03CRB-X-N003-015	Crab, Blue (CRB)	135	150	M	
NBN		NBN-1007-0930	NB03CRB-X-N003	NB03CRB-X-N003-016	Crab, Blue (CRB)	150	160	M	missing 2 claws

Zone	Intertidal Area	Area	Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Gender	Comments
NBN		NBN-1007-1040	NB03CRB-X-N001	NB03CRB-X-N001-007	Crab, Blue (CRB)	150	176	M	
NBN		NBN-1007-1040	NB03CRB-X-N001	NB03CRB-X-N001-008	Crab, Blue (CRB)	139	160	M	
NBN		NBN-1007-1040	NB03CRB-X-N001	NB03CRB-X-N001-009	Crab, Blue (CRB)	148	186	M	
NBN		NBN-1007-1040	NB03CRB-X-N001	NB03CRB-X-N001-010	Crab, Blue (CRB)	128	89	F	
NBN		NBN-1007-1040	NB03CRB-X-N001	NB03CRB-X-N001-011	Crab, Blue (CRB)	141	120	F	
NBN		NBN-1007-1040	NB03CRB-X-N001	NB03CRB-X-N001-012	Crab, Blue (CRB)	143	186	M	
NBN		NBN-1007-1040	NB03CRB-X-N001	NB03CRB-X-N001-013	Crab, Blue (CRB)	145	132	M	
NBN		NBN-1007-1040	NB03CRB-X-N001	NB03CRB-X-N001-014	Crab, Blue (CRB)	146	134	M	missing 1 claw
NBN		NBN-1007-1040	NB03CRB-X-N001	NB03CRB-X-N001-015	Crab, Blue (CRB)	151	146	F	
NBN		NBN-1007-1040	NB03CRB-X-N001	NB03CRB-X-N001-016	Crab, Blue (CRB)	148	139	F	
NBN		NBN-1007-1040	NB03CRB-X-N001	NB03CRB-X-N001-017	Crab, Blue (CRB)	138	140	M	
NBN		NBN-1007-1040	NB03CRB-X-N001	NB03CRB-X-N001-018	Crab, Blue (CRB)	132	162	M	
NBN		NBN-1007-1040	NB03CRB-X-N001	NB03CRB-X-N001-019	Crab, Blue (CRB)	143	155	M	
NBN		NBN-1007-1040	NB03CRB-X-N001	NB03CRB-X-N001-020	Crab, Blue (CRB)	131	118	M	
NBN		NBN-1007-1040	NB03CRB-X-N001	NB03CRB-X-N001-021	Crab, Blue (CRB)	133	120	M	
NBN		NBN-1007-1040	NB03CRB-X-N001	NB03CRB-X-N001-022	Crab, Blue (CRB)	124	94	M	
NBN		NBN-1007-1040	NB03CRB-X-N001	NB03CRB-X-N001-023	Crab, Blue (CRB)	119	88	M	
NBN		NBN-1007-1040	NB03CRB-X-N001	NB03CRB-X-N001-024	Crab, Blue (CRB)	127	117	M	
NBN		NBN-1007-1318	NB03CRB-X-N002	NB03CRB-X-N002-001	Crab, Blue (CRB)	160	250	M	
NBN		NBN-1007-1318	NB03CRB-X-N002	NB03CRB-X-N002-002	Crab, Blue (CRB)	145	170	M	
NBN		NBN-1007-1318	NB03CRB-X-N002	NB03CRB-X-N002-003	Crab, Blue (CRB)	165	190	M	
NBN		NBN-1007-1318	NB03CRB-X-N002	NB03CRB-X-N002-004	Crab, Blue (CRB)	160	270	M	
NBN		NBN-1007-1318	NB03CRB-X-N002	NB03CRB-X-N002-005	Crab, Blue (CRB)	155	225	M	
NBN		NBN-1007-1318	NB03CRB-X-N002	NB03CRB-X-N002-006	Crab, Blue (CRB)	152	182	M	
NBN		NBN-1007-1318	NB03CRB-X-N002	NB03CRB-X-N002-007	Crab, Blue (CRB)	124	98	M	
NBN		NBN-1007-1318	NB03CRB-X-N002	NB03CRB-X-N002-008	Crab, Blue (CRB)	135	148	M	
NBN		NBN-1007-1318	NB03CRB-X-N002	NB03CRB-X-N002-009	Crab, Blue (CRB)	145	98	M	missing 2 claws
NBN		NBN-1007-1318	NB03CRB-X-N002	NB03CRB-X-N002-010	Crab, Blue (CRB)	122	110	M	
NBN		NBN-1007-1318	NB03CRB-X-N002	NB03CRB-X-N002-011	Crab, Blue (CRB)	135	112	F	
NBN		NBN-1007-1318	NB03CRB-X-N002	NB03CRB-X-N002-012	Crab, Blue (CRB)	128	102	F	
NBN		NBN-1007-1318	NB03CRB-X-N002	NB03CRB-X-N002-013	Crab, Blue (CRB)	145	150	M	
NBN		NBN-1007-1318	NB03CRB-X-N002	NB03CRB-X-N002-014	Crab, Blue (CRB)	154	220	M	
NBN		NBN-1007-1318	NB03CRB-X-N002	NB03CRB-X-N002-015	Crab, Blue (CRB)	135	170	M	
NBN		NBN-1007-1318	NB03CRB-X-N002	NB03CRB-X-N002-016	Crab, Blue (CRB)	118	90	M	
NBN		NBN-1008-0930	NB03CRB-X-N003	NB03CRB-X-N003-017	Crab, Blue (CRB)	165	170	F	
NBN		NBN-1008-0930	NB03CRB-X-N003	NB03CRB-X-N003-018	Crab, Blue (CRB)	153	143	F	
NBN		NBN-1008-0930	NB03CRB-X-N003	NB03CRB-X-N003-019	Crab, Blue (CRB)	122	126	M	
NBN		NBN-1008-0930	NB03CRB-X-N003	NB03CRB-X-N003-020	Crab, Blue (CRB)	144	150	M	
NBN		NBN-1008-0930	NB03CRB-X-N003	NB03CRB-X-N003-021	Crab, Blue (CRB)	129	70	F	missing 2 claws
NBN		NBN-1009-1350	NB03CRB-X-N004	NB03CRB-X-N004-001	Crab, Blue (CRB)	137	111	F	
NBN		NBN-1009-1350	NB03CRB-X-N004	NB03CRB-X-N004-002	Crab, Blue (CRB)	155	240	M	
NBN		NBN-1009-1350	NB03CRB-X-N004	NB03CRB-X-N004-003	Crab, Blue (CRB)	140	135	M	
NBN		NBN-1009-1350	NB03CRB-X-N004	NB03CRB-X-N004-004	Crab, Blue (CRB)	138	164	M	
NBN		NBN-1009-1350	NB03CRB-X-N004	NB03CRB-X-N004-005	Crab, Blue (CRB)	125	111	M	
NBN		NBN-1009-1350	NB03CRB-X-N004	NB03CRB-X-N004-006	Crab, Blue (CRB)	158	188	M	

Zone	Intertidal Area	Area	Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Gender	Comments
NBN		NBN-1009-1350	NB03CRB-X-N004	NB03CRB-X-N004-007	Crab, Blue (CRB)	143	158	M	
NBN		NBN-1009-1350	NB03CRB-X-N004	NB03CRB-X-N004-008	Crab, Blue (CRB)	170	210	M	missing 1 claw
NBN		NBN-1009-1350	NB03CRB-X-N004	NB03CRB-X-N004-009	Crab, Blue (CRB)	140	134	M	missing 1 claw
NBN		NBN-1009-1350	NB03CRB-X-N004	NB03CRB-X-N004-010	Crab, Blue (CRB)	155	152	M	missing 1 claw
NBN		NBN-1009-1350	NB03CRB-X-N004	NB03CRB-X-N004-011	Crab, Blue (CRB)	148	205	M	
NBN		NBN-1009-1350	NB03CRB-X-N004	NB03CRB-X-N004-012	Crab, Blue (CRB)	160	260	M	
NBN		NBN-1009-1350	NB03CRB-X-N004	NB03CRB-X-N004-013	Crab, Blue (CRB)	150	173	M	
NBN		NBN-1009-1350	NB03CRB-X-N004	NB03CRB-X-N004-014	Crab, Blue (CRB)	155	204	M	
NBN		NBN-1009-1350	NB03CRB-X-N004	NB03CRB-X-N004-015	Crab, Blue (CRB)	161	204	M	
NBN		NBN-1009-1350	NB03CRB-X-N004	NB03CRB-X-N004-016	Crab, Blue (CRB)	145	199	M	
NBN		NBN-1009-1350	NB03CRB-X-N004	NB03CRB-X-N004-017	Crab, Blue (CRB)	152	184	M	
NBN		NBN-1009-1350	NB03CRB-X-N004	NB03CRB-X-N004-018	Crab, Blue (CRB)	158	260	M	
NBN		NBN-1009-1350	NB03CRB-X-N004	NB03CRB-X-N004-019	Crab, Blue (CRB)	145	147	M	missing 1 claw
NBN		NBN-1009-1350	NB03CRB-X-N004	NB03CRB-X-N004-020	Crab, Blue (CRB)	156	161	F	
NBN		NBN-1014-0930	NB03CRB-X-N005	NB03CRB-X-N005-001	Crab, Blue (CRB)	157	160	F	
NBN		NBN-1014-0930	NB03CRB-X-N005	NB03CRB-X-N005-002	Crab, Blue (CRB)	135	167	M	
NBN		NBN-1014-0930	NB03CRB-X-N005	NB03CRB-X-N005-003	Crab, Blue (CRB)	145	223	M	
NBN		NBN-1014-0930	NB03CRB-X-N005	NB03CRB-X-N005-004	Crab, Blue (CRB)	134	111	F	
NBN		NBN-1014-0930	NB03CRB-X-N005	NB03CRB-X-N005-005	Crab, Blue (CRB)	127	118	M	
NBN		NBN-1014-0930	NB03CRB-X-N005	NB03CRB-X-N005-006	Crab, Blue (CRB)	144	178	M	
NBN		NBN-1014-0930	NB03CRB-X-N005	NB03CRB-X-N005-007	Crab, Blue (CRB)	141	122	F	
NBN		NBN-1014-0930	NB03CRB-X-N005	NB03CRB-X-N005-008	Crab, Blue (CRB)	146	100	F	missing 2 claws
NBN		NBN-1014-0930	NB03CRB-X-N005	NB03CRB-X-N005-009	Crab, Blue (CRB)	147	169	F	
NBN		NBN-1014-0930	NB03CRB-X-N005	NB03CRB-X-N005-010	Crab, Blue (CRB)	150	174	M	
NBN		NBN-1014-0930	NB03CRB-X-N005	NB03CRB-X-N005-011	Crab, Blue (CRB)	152	191	M	
NBN		NBN-1014-0930	NB03CRB-X-N005	NB03CRB-X-N005-012	Crab, Blue (CRB)	143	190	M	
NBN		NBN-1014-0930	NB03CRB-X-N005	NB03CRB-X-N005-013	Crab, Blue (CRB)	135	154	M	
NBN		NBN-1014-0930	NB03CRB-X-N005	NB03CRB-X-N005-014	Crab, Blue (CRB)	150	160	M	
NBN		NBN-1014-0930	NB03CRB-X-N005	NB03CRB-X-N005-015	Crab, Blue (CRB)	129	142	M	
NBN		NBN-1014-0930	NB03CRB-X-N005	NB03CRB-X-N005-016	Crab, Blue (CRB)	119	94	M	
NBN		NBN-1014-0930	NB03CRB-X-N005	NB03CRB-X-N005-017	Crab, Blue (CRB)	133	133	F	
NBN		NBN-1014-0930	NB03CRB-X-N005	NB03CRB-X-N005-018	Crab, Blue (CRB)	150	144	F	
NBN		NBN-1014-0930	NB03CRB-X-N006	NB03CRB-X-N006-001	Crab, Blue (CRB)	141	136	F	
NBN		NBN-1014-0930	NB03CRB-X-N006	NB03CRB-X-N006-002	Crab, Blue (CRB)	158	138	F	
NBN		NBN-1014-0930	NB03CRB-X-N006	NB03CRB-X-N006-003	Crab, Blue (CRB)	143	140	F	
NBN		NBN-1014-0930	NB03CRB-X-N006	NB03CRB-X-N006-004	Crab, Blue (CRB)	165	162	F	
NBN		NBN-1014-0930	NB03CRB-X-N006	NB03CRB-X-N006-005	Crab, Blue (CRB)	121	100	M	
NBN		NBN-1014-0930	NB03CRB-X-N006	NB03CRB-X-N006-006	Crab, Blue (CRB)	161	196	M	
NBN		NBN-1014-0930	NB03CRB-X-N006	NB03CRB-X-N006-007	Crab, Blue (CRB)	154	252	M	
NBN		NBN-1014-0930	NB03CRB-X-N006	NB03CRB-X-N006-008	Crab, Blue (CRB)	121	74	F	
NBN		NBN-1014-0930	NB03CRB-X-N006	NB03CRB-X-N006-009	Crab, Blue (CRB)	142	186	M	missing 1 claw
NBN		NBN-1014-0930	NB03CRB-X-N006	NB03CRB-X-N006-010	Crab, Blue (CRB)	137	148	M	
NBN		NBN-1014-0930	NB03CRB-X-N006	NB03CRB-X-N006-011	Crab, Blue (CRB)	146	191	M	missing 1 claw
NBN		NBN-1014-0930	NB03CRB-X-N006	NB03CRB-X-N006-012	Crab, Blue (CRB)	139	198	M	
NBN		NBN-1014-0930	NB03CRB-X-N006	NB03CRB-X-N006-013	Crab, Blue (CRB)	146	86	F	missing 1 claw

Zone	Intertidal Area	Area	Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Gender	Comments
NBN		NBN-1014-0930	NB03CRB-X-N006	NB03CRB-X-N006-014	Crab, Blue (CRB)	134	142	M	
NBN		NBN-1014-0930	NB03CRB-X-N006	NB03CRB-X-N006-015	Crab, Blue (CRB)	131	136	M	
NBN		NBN-1014-0930	NB03CRB-X-N006	NB03CRB-X-N006-016	Crab, Blue (CRB)	123	100	F	
NBN		NBN-1014-0930	NB03CRB-X-N006	NB03CRB-X-N006-017	Crab, Blue (CRB)	123	126	M	
NBN		NBN-1014-0930	NB03CRB-X-N006	NB03CRB-X-N006-018	Crab, Blue (CRB)	148	226	M	
NBN		NBN-1014-0930	NB03CRB-X-N006	NB03CRB-X-N006-019	Crab, Blue (CRB)	129	124	M	missing 1 claw
NBN		NBN-1014-0930	NB03CRB-X-N006	NB03CRB-X-N006-020	Crab, Blue (CRB)	132	104	M	missing 1 claw
NBN		NBN-1014-0930	NB03CRB-X-N007	NB03CRB-X-N007-001	Crab, Blue (CRB)	125	156	M	
NBN		NBN-1014-0930	NB03CRB-X-N007	NB03CRB-X-N007-002	Crab, Blue (CRB)	118	92	M	
NBN		NBN-1015-0924	NB03CRB-X-N007	NB03CRB-X-N007-003	Crab, Blue (CRB)	133	132	F	
NBN		NBN-1015-0924	NB03CRB-X-N007	NB03CRB-X-N007-004	Crab, Blue (CRB)	147	162	M	
NBN		NBN-1015-0924	NB03CRB-X-N007	NB03CRB-X-N007-005	Crab, Blue (CRB)	140	126	F	missing 1 claw
NBN		NBN-1015-0924	NB03CRB-X-N007	NB03CRB-X-N007-006	Crab, Blue (CRB)	122	102	F	
NBN		NBN-1015-0924	NB03CRB-X-N007	NB03CRB-X-N007-007	Crab, Blue (CRB)	130	102	M	missing 1 claw
NBN		NBN-1015-0924	NB03CRB-X-N007	NB03CRB-X-N007-008	Crab, Blue (CRB)	143	126	F	
NBN		NBN-1015-0924	NB03CRB-X-N007	NB03CRB-X-N007-009	Crab, Blue (CRB)	141	184	M	
NBN		NBN-1015-0924	NB03CRB-X-N007	NB03CRB-X-N007-010	Crab, Blue (CRB)	124	120	M	
NBN		NBN-1015-0924	NB03CRB-X-N007	NB03CRB-X-N007-011	Crab, Blue (CRB)	142	142	M	
NBN		NBN-1015-0924	NB03CRB-X-N007	NB03CRB-X-N007-012	Crab, Blue (CRB)	151	262	M	
NBN		NBN-1015-0924	NB03CRB-X-N007	NB03CRB-X-N007-013	Crab, Blue (CRB)	126	100	F	
NBN		NBN-1015-0924	NB03CRB-X-N007	NB03CRB-X-N007-014	Crab, Blue (CRB)	136	120	F	
NBN		NBN-1015-0924	NB03CRB-X-N007	NB03CRB-X-N007-015	Crab, Blue (CRB)	165	204	M	
NBN		NBN-1015-0924	NB03CRB-X-N007	NB03CRB-X-N007-016	Crab, Blue (CRB)	144	140	M	
NBN		NBN-1015-0924	NB03CRB-X-N007	NB03CRB-X-N007-017	Crab, Blue (CRB)	142	150	M	
NBN		NBN-1015-0924	NB03CRB-X-N007	NB03CRB-X-N007-018	Crab, Blue (CRB)	141	168	M	
NBN		NBN-1015-0924	NB03CRB-X-N007	NB03CRB-X-N007-019	Crab, Blue (CRB)	130	102	F	
NBN		NBN-1015-0924	NB03CRB-X-N007	NB03CRB-X-N007-020	Crab, Blue (CRB)	133	146	M	
NBN		NBN-1015-0924	NB03CRB-X-N008	NB03CRB-X-N008-001	Crab, Blue (CRB)	150	170	M	
NBN		NBN-1015-0924	NB03CRB-X-N008	NB03CRB-X-N008-002	Crab, Blue (CRB)	134	124	M	missing 2 claws
NBN		NBN-1015-0924	NB03CRB-X-N008	NB03CRB-X-N008-003	Crab, Blue (CRB)	140	146	M	missing 1 claw
NBN		NBN-1015-0924	NB03CRB-X-N008	NB03CRB-X-N008-004	Crab, Blue (CRB)	150	150	F	
NBN		NBN-1015-0924	NB03CRB-X-N008	NB03CRB-X-N008-005	Crab, Blue (CRB)	167	238	M	missing 2 small legs
NBN		NBN-1015-0924	NB03CRB-X-N008	NB03CRB-X-N008-006	Crab, Blue (CRB)	138	146	M	
NBN		NBN-1015-0924	NB03CRB-X-N008	NB03CRB-X-N008-007	Crab, Blue (CRB)	142	126	F	
NBN		NBN-1015-0924	NB03CRB-X-N008	NB03CRB-X-N008-008	Crab, Blue (CRB)	144	180	M	
NBN		NBN-1015-0924	NB03CRB-X-N008	NB03CRB-X-N008-009	Crab, Blue (CRB)	161	210	M	
NBN		NBN-1015-0924	NB03CRB-X-N008	NB03CRB-X-N008-010	Crab, Blue (CRB)	120	96	M	
NBN		NBN-1015-0924	NB03CRB-X-N008	NB03CRB-X-N008-011	Crab, Blue (CRB)	133	132	M	missing 1 claw
NBN		NBN-1015-0924	NB03CRB-X-N008	NB03CRB-X-N008-012	Crab, Blue (CRB)	120	100	M	
NBN		NBN-1015-0924	NB03CRB-X-N008	NB03CRB-X-N008-013	Crab, Blue (CRB)	150	142	F	
NBN		NBN-1015-0924	NB03CRB-X-N008	NB03CRB-X-N008-014	Crab, Blue (CRB)	138	192	M	
NBN		NBN-1015-0924	NB03CRB-X-N008	NB03CRB-X-N008-015	Crab, Blue (CRB)	150	198	M	
NBN		NBN-1015-0924	NB03CRB-X-N008	NB03CRB-X-N008-016	Crab, Blue (CRB)	148	202	M	
NBN		NBN-1015-0924	NB03CRB-X-N008	NB03CRB-X-N008-017	Crab, Blue (CRB)	133	154	M	

Zone	Intertidal Area	Area	Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Gender	Comments
NBN		NBN-1015-0924	NB03CRB-X-N008	NB03CRB-X-N008-018	Crab, Blue (CRB)	123	118	M	
NBN		NBN-1015-0924	NB03CRB-X-N008	NB03CRB-X-N008-019	Crab, Blue (CRB)	150	246	M	missing 1 claw
NBN		NBN-1015-0924	NB03CRB-X-N008	NB03CRB-X-N008-020	Crab, Blue (CRB)	152	212	M	
NBN		NBN-1015-0924	NB03CRB-X-N008	NB03CRB-X-N008-021	Crab, Blue (CRB)	140	170	M	
NBS		NBS-1008-1350	NB03CRB-X-S001	NB03CRB-X-S001-001	Crab, Blue (CRB)	147	180	M	missing 1 claw
NBS		NBS-1008-1350	NB03CRB-X-S001	NB03CRB-X-S001-002	Crab, Blue (CRB)	118	80	M	
NBS		NBS-1008-1350	NB03CRB-X-S001	NB03CRB-X-S001-003	Crab, Blue (CRB)	120	100	M	missing 2 claws
NBS		NBS-1008-1350	NB03CRB-X-S001	NB03CRB-X-S001-004	Crab, Blue (CRB)	135	110	M	missing 1 claw
NBS		NBS-1008-1350	NB03CRB-X-S001	NB03CRB-X-S001-005	Crab, Blue (CRB)	130	90	M	missing 2 claws
NBS		NBS-1008-1350	NB03CRB-X-S001	NB03CRB-X-S001-006	Crab, Blue (CRB)	135	110	M	missing 2 claws
NBS		NBS-1008-1350	NB03CRB-X-S001	NB03CRB-X-S001-007	Crab, Blue (CRB)	130	108	M	missing 2 claws
NBS		NBS-1021-1136	NB03CRB-X-S001	NB03CRB-X-S001-008	Crab, Blue (CRB)	156	231	M	
NBS		NBS-1021-1136	NB03CRB-X-S001	NB03CRB-X-S001-009	Crab, Blue (CRB)	124	82	F	
NBS		NBS-1021-1136	NB03CRB-X-S001	NB03CRB-X-S001-010	Crab, Blue (CRB)	146	117	F	missing 1 claw
NBS		NBS-1021-1136	NB03CRB-X-S001	NB03CRB-X-S001-011	Crab, Blue (CRB)	131	98	F	
NBS		NBS-1021-1136	NB03CRB-X-S001	NB03CRB-X-S001-012	Crab, Blue (CRB)	151	164	M	
NBS		NBS-1021-1136	NB03CRB-X-S001	NB03CRB-X-S001-013	Crab, Blue (CRB)	152	230	M	
NBS		NBS-1021-1136	NB03CRB-X-S001	NB03CRB-X-S001-014	Crab, Blue (CRB)	143	146	M	
NBS		NBS-1021-1136	NB03CRB-X-S001	NB03CRB-X-S001-015	Crab, Blue (CRB)	149	220	M	
NBS		NBS-1022-0910	NB03CRB-X-S001	NB03CRB-X-S001-016	Crab, Blue (CRB)	121	86	F	missing 1 claw
NBS		NBS-1022-0910	NB03CRB-X-S001	NB03CRB-X-S001-017	Crab, Blue (CRB)	133	150	M	
NBS		NBS-1022-0910	NB03CRB-X-S001	NB03CRB-X-S001-018	Crab, Blue (CRB)	131	174	M	
NBS		NBS-1022-0910	NB03CRB-X-S001	NB03CRB-X-S001-019	Crab, Blue (CRB)	137	153	M	
NBS		NBS-1022-0910	NB03CRB-X-S001	NB03CRB-X-S001-020	Crab, Blue (CRB)	144	124	F	missing 1 claw
NBS		NBS-1022-0910	NB03CRB-X-S001	NB03CRB-X-S001-021	Crab, Blue (CRB)	137	182	M	
NBS		NBS-1022-0910	NB03CRB-X-S002	NB03CRB-X-S002-001	Crab, Blue (CRB)	142	182	M	
NBS		NBS-1022-0910	NB03CRB-X-S002	NB03CRB-X-S002-002	Crab, Blue (CRB)	137	184	M	
NBS		NBS-1022-0910	NB03CRB-X-S002	NB03CRB-X-S002-003	Crab, Blue (CRB)	127	134	M	
NBS		NBS-1022-0910	NB03CRB-X-S002	NB03CRB-X-S002-004	Crab, Blue (CRB)	120	143	M	
NBS		NBS-1022-0910	NB03CRB-X-S002	NB03CRB-X-S002-005	Crab, Blue (CRB)	122	134	M	
NBS		NBS-1022-0910	NB03CRB-X-S002	NB03CRB-X-S002-006	Crab, Blue (CRB)	148	187	M	
NBS		NBS-1022-0910	NB03CRB-X-S002	NB03CRB-X-S002-007	Crab, Blue (CRB)	138	169	M	
NBS		NBS-1022-0910	NB03CRB-X-S002	NB03CRB-X-S002-008	Crab, Blue (CRB)	122	172	M	
NBS		NBS-1022-0910	NB03CRB-X-S002	NB03CRB-X-S002-009	Crab, Blue (CRB)	139	154	M	
NBS		NBS-1022-0910	NB03CRB-X-S002	NB03CRB-X-S002-010	Crab, Blue (CRB)	147	257	M	
NBS		NBS-1022-0910	NB03CRB-X-S002	NB03CRB-X-S002-011	Crab, Blue (CRB)	141	142	M	
NBS		NBS-1022-0910	NB03CRB-X-S002	NB03CRB-X-S002-012	Crab, Blue (CRB)	133	138	M	
NBS		NBS-1022-0910	NB03CRB-X-S002	NB03CRB-X-S002-013	Crab, Blue (CRB)	132	138	M	
NBS		NBS-1022-0910	NB03CRB-X-S002	NB03CRB-X-S002-014	Crab, Blue (CRB)	139	152	M	missing 1 claw
NBS		NBS-1022-0910	NB03CRB-X-S002	NB03CRB-X-S002-015	Crab, Blue (CRB)	119	126	M	
NBS		NBS-1022-0910	NB03CRB-X-S002	NB03CRB-X-S002-016	Crab, Blue (CRB)	151	144	F	
NBS		NBS-1022-0910	NB03CRB-X-S002	NB03CRB-X-S002-017	Crab, Blue (CRB)	133	154	M	
NBS		NBS-1022-0910	NB03CRB-X-S002	NB03CRB-X-S002-018	Crab, Blue (CRB)	120	114	M	
NBS		NBS-1022-0910	NB03CRB-X-S003	NB03CRB-X-S003-001	Crab, Blue (CRB)	130	142	M	
NBS		NBS-1022-0910	NB03CRB-X-S003	NB03CRB-X-S003-002	Crab, Blue (CRB)	151	233	M	

Zone	Intertidal Area	Area	Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Gender	Comments
NBS		NBS-1022-0910	NB03CRB-X-S003	NB03CRB-X-S003-003	Crab, Blue (CRB)	144	189	M	
NBS		NBS-1022-0910	NB03CRB-X-S003	NB03CRB-X-S003-004	Crab, Blue (CRB)	126	127	M	
NBS		NBS-1022-0910	NB03CRB-X-S003	NB03CRB-X-S003-005	Crab, Blue (CRB)	123	131	M	
NBS		NBS-1022-0910	NB03CRB-X-S003	NB03CRB-X-S003-006	Crab, Blue (CRB)	170	285	M	missing 1 claw
NBS		NBS-1022-0910	NB03CRB-X-S003	NB03CRB-X-S003-007	Crab, Blue (CRB)	174	310	M	
NBS		NBS-1022-0910	NB03CRB-X-S003	NB03CRB-X-S003-008	Crab, Blue (CRB)	159	188	M	missing 1 claw
NBS		NBS-1022-0910	NB03CRB-X-S003	NB03CRB-X-S003-009	Crab, Blue (CRB)	139	142	M	missing 1 claw
NBS		NBS-1023-0915	NB03CRB-X-S003	NB03CRB-X-S003-010	Crab, Blue (CRB)	121	96	M	
NBS		NBS-1023-0915	NB03CRB-X-S003	NB03CRB-X-S003-011	Crab, Blue (CRB)	136	162	M	
NBS		NBS-1023-0915	NB03CRB-X-S003	NB03CRB-X-S003-012	Crab, Blue (CRB)	130	152	M	
NBS		NBS-1023-0915	NB03CRB-X-S003	NB03CRB-X-S003-013	Crab, Blue (CRB)	119	102	M	
NBS		NBS-1023-0915	NB03CRB-X-S003	NB03CRB-X-S003-014	Crab, Blue (CRB)	147	165	M	missing 1 claw
NBS		NBS-1023-0915	NB03CRB-X-S003	NB03CRB-X-S003-015	Crab, Blue (CRB)	139	122	M	missing 1 claw
NBS		NBS-1023-0915	NB03CRB-X-S003	NB03CRB-X-S003-016	Crab, Blue (CRB)	143	130	F	
NBS		NBS-1023-0915	NB03CRB-X-S003	NB03CRB-X-S003-017	Crab, Blue (CRB)	134	113	F	
NBS		NBS-1023-0915	NB03CRB-X-S004	NB03CRB-X-S004-001	Crab, Blue (CRB)	164	172	M	
NBS		NBS-1023-0915	NB03CRB-X-S004	NB03CRB-X-S004-002	Crab, Blue (CRB)	159	241	M	
NBS		NBS-1023-0915	NB03CRB-X-S004	NB03CRB-X-S004-003	Crab, Blue (CRB)	140	140	M	missing 1 claw
NBS		NBS-1023-0915	NB03CRB-X-S004	NB03CRB-X-S004-004	Crab, Blue (CRB)	121	133	M	
NBS		NBS-1023-0915	NB03CRB-X-S004	NB03CRB-X-S004-005	Crab, Blue (CRB)	119	100	M	missing 1 claw
NBS		NBS-1023-0915	NB03CRB-X-S004	NB03CRB-X-S004-006	Crab, Blue (CRB)	138	157	M	
NBS		NBS-1023-0915	NB03CRB-X-S004	NB03CRB-X-S004-007	Crab, Blue (CRB)	125	107	M	missing 1 claw
NBS		NBS-1023-0915	NB03CRB-X-S004	NB03CRB-X-S004-008	Crab, Blue (CRB)	124	138	M	
NBS		NBS-1023-0915	NB03CRB-X-S004	NB03CRB-X-S004-009	Crab, Blue (CRB)	131	142	M	
NBS		NBS-1023-0915	NB03CRB-X-S004	NB03CRB-X-S004-010	Crab, Blue (CRB)	151	203	M	
NBS		NBS-1023-0915	NB03CRB-X-S004	NB03CRB-X-S004-011	Crab, Blue (CRB)	123	120	M	
NBS		NBS-1023-0915	NB03CRB-X-S004	NB03CRB-X-S004-012	Crab, Blue (CRB)	163	254	M	
NBS		NBS-1023-0915	NB03CRB-X-S004	NB03CRB-X-S004-013	Crab, Blue (CRB)	143	110	F	missing 1 claw
NBS		NBS-1023-0915	NB03CRB-X-S004	NB03CRB-X-S004-014	Crab, Blue (CRB)	130	142	M	
NBS		NBS-1023-0915	NB03CRB-X-S004	NB03CRB-X-S004-015	Crab, Blue (CRB)	131	112	M	missing 1 claw
NBS		NBS-1023-0915	NB03CRB-X-S004	NB03CRB-X-S004-016	Crab, Blue (CRB)	138	172	M	
NBS		NBS-1023-0915	NB03CRB-X-S004	NB03CRB-X-S004-017	Crab, Blue (CRB)	130	100	F	missing 2 claws
NBS		NBS-1023-0915	NB03CRB-X-S005	NB03CRB-X-S005-001	Crab, Blue (CRB)	118	100	M	
NBS		NBS-1023-0915	NB03CRB-X-S005	NB03CRB-X-S005-002	Crab, Blue (CRB)	167	214	M	
NBS		NBS-1023-0915	NB03CRB-X-S005	NB03CRB-X-S005-003	Crab, Blue (CRB)	149	182	M	
NBS		NBS-1023-0915	NB03CRB-X-S005	NB03CRB-X-S005-004	Crab, Blue (CRB)	142	124	M	
NBS		NBS-1023-0915	NB03CRB-X-S005	NB03CRB-X-S005-005	Crab, Blue (CRB)	133	142	M	
NBS		NBS-1023-0915	NB03CRB-X-S005	NB03CRB-X-S005-006	Crab, Blue (CRB)	141	150	M	
NBS		NBS-1023-0915	NB03CRB-X-S005	NB03CRB-X-S005-007	Crab, Blue (CRB)	136	156	M	
NBS		NBS-1023-0915	NB03CRB-X-S005	NB03CRB-X-S005-008	Crab, Blue (CRB)	120	106	M	missing 1 claw
NBS		NBS-1023-0915	NB03CRB-X-S005	NB03CRB-X-S005-009	Crab, Blue (CRB)	121	91	F	missing 1 claw
NBS		NBS-1023-0915	NB03CRB-X-S005	NB03CRB-X-S005-010	Crab, Blue (CRB)	140	138	F	
NBS		NBS-1023-0915	NB03CRB-X-S005	NB03CRB-X-S005-011	Crab, Blue (CRB)	127	126	M	
NBS		NBS-1023-0915	NB03CRB-X-S005	NB03CRB-X-S005-012	Crab, Blue (CRB)	159	238	M	
NBS		NBS-1023-0915	NB03CRB-X-S005	NB03CRB-X-S005-013	Crab, Blue (CRB)	134	152	M	

Zone	Intertidal Area	Area	Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Gender	Comments
NBS		NBS-1023-0915	NB03CRB-X-S005	NB03CRB-X-S005-014	Crab, Blue (CRB)	125	110	M	
NBS		NBS-1023-0915	NB03CRB-X-S005	NB03CRB-X-S005-015	Crab, Blue (CRB)	144	154	F	
NBS		NBS-1023-0915	NB03CRB-X-S005	NB03CRB-X-S005-016	Crab, Blue (CRB)	129	128	M	
NBS		NBS-1023-0915	NB03CRB-X-S005	NB03CRB-X-S005-017	Crab, Blue (CRB)	119	120	M	
NBS		NBS-1023-0915	NB03CRB-X-S005	NB03CRB-X-S005-018	Crab, Blue (CRB)	133	154	M	
NBS		NBS-1023-0915	NB03CRB-X-S006	NB03CRB-X-S006-001	Crab, Blue (CRB)	124	130	M	
NBS		NBS-1023-0915	NB03CRB-X-S006	NB03CRB-X-S006-002	Crab, Blue (CRB)	121	104	M	
NBS		NBS-1023-0915	NB03CRB-X-S006	NB03CRB-X-S006-003	Crab, Blue (CRB)	127	108	F	
NBS		NBS-1023-0915	NB03CRB-X-S006	NB03CRB-X-S006-004	Crab, Blue (CRB)	124	123	M	
NBS		NBS-1023-0915	NB03CRB-X-S006	NB03CRB-X-S006-005	Crab, Blue (CRB)	119	112	M	
NBS		NBS-1023-0915	NB03CRB-X-S006	NB03CRB-X-S006-006	Crab, Blue (CRB)	136	165	M	
NBS		NBS-1023-0915	NB03CRB-X-S006	NB03CRB-X-S006-007	Crab, Blue (CRB)	120	108	M	
NBS		NBS-1023-0915	NB03CRB-X-S006	NB03CRB-X-S006-008	Crab, Blue (CRB)	145	220	M	
NBS		NBS-1023-0915	NB03CRB-X-S006	NB03CRB-X-S006-009	Crab, Blue (CRB)	134	140	M	missing 1 claw
NBS		NBS-1023-0915	NB03CRB-X-S006	NB03CRB-X-S006-010	Crab, Blue (CRB)	123	121	M	
NBS		NBS-1023-0915	NB03CRB-X-S006	NB03CRB-X-S006-011	Crab, Blue (CRB)	123	135	M	
NBS		NBS-1023-0915	NB03CRB-X-S006	NB03CRB-X-S006-012	Crab, Blue (CRB)	122	102	M	
NBS		NBS-1023-0915	NB03CRB-X-S006	NB03CRB-X-S006-013	Crab, Blue (CRB)	120	100	M	missing 1 claw
NBS		NBS-1023-0915	NB03CRB-X-S006	NB03CRB-X-S006-014	Crab, Blue (CRB)	134	130	M	missing 1 claw
NBS		NBS-1023-0915	NB03CRB-X-S006	NB03CRB-X-S006-015	Crab, Blue (CRB)	145	128	F	
NBS		NBS-1023-0915	NB03CRB-X-S006	NB03CRB-X-S006-016	Crab, Blue (CRB)	119	108	M	
NBS		NBS-1023-0915	NB03CRB-X-S006	NB03CRB-X-S006-017	Crab, Blue (CRB)	120	106	M	
NBS		NBS-1023-0915	NB03CRB-X-S006	NB03CRB-X-S006-018	Crab, Blue (CRB)	136	165	M	
NBS		NBS-1023-0915	NB03CRB-X-S006	NB03CRB-X-S006-019	Crab, Blue (CRB)	118	102	M	
NBS		NBS-1023-0915	NB03CRB-X-S006	NB03CRB-X-S006-020	Crab, Blue (CRB)	136	137	M	
NBS		NBS-1023-0915	NB03CRB-X-S007	NB03CRB-X-S007-001	Crab, Blue (CRB)	136	178	M	
NBS		NBS-1023-0915	NB03CRB-X-S007	NB03CRB-X-S007-002	Crab, Blue (CRB)	120	104	M	missing 1 claw
NBS		NBS-1023-0915	NB03CRB-X-S007	NB03CRB-X-S007-003	Crab, Blue (CRB)	132	158	M	
NBS		NBS-1023-0915	NB03CRB-X-S007	NB03CRB-X-S007-004	Crab, Blue (CRB)	129	158	M	
NBS		NBS-1023-0915	NB03CRB-X-S007	NB03CRB-X-S007-005	Crab, Blue (CRB)	154	220	M	
NBS		NBS-1023-0915	NB03CRB-X-S007	NB03CRB-X-S007-006	Crab, Blue (CRB)	139	136	M	
NBS		NBS-1023-0915	NB03CRB-X-S007	NB03CRB-X-S007-007	Crab, Blue (CRB)	141	138	F	
NBS		NBS-1023-0915	NB03CRB-X-S007	NB03CRB-X-S007-008	Crab, Blue (CRB)	121	110	M	missing 1 claw
NBS		NBS-1023-0915	NB03CRB-X-S007	NB03CRB-X-S007-009	Crab, Blue (CRB)	132	192	M	
NBS		NBS-1023-0915	NB03CRB-X-S007	NB03CRB-X-S007-010	Crab, Blue (CRB)	135	100	M	missing 1 claw
NBS		NBS-1023-0915	NB03CRB-X-S007	NB03CRB-X-S007-011	Crab, Blue (CRB)	133	118	F	
NBS		NBS-1023-0915	NB03CRB-X-S007	NB03CRB-X-S007-012	Crab, Blue (CRB)	129	128	M	
NBS		NBS-1023-0915	NB03CRB-X-S007	NB03CRB-X-S007-013	Crab, Blue (CRB)	152	168	F	
NBS		NBS-1023-0915	NB03CRB-X-S007	NB03CRB-X-S007-014	Crab, Blue (CRB)	130	122	M	
NBS		NBS-1023-0915	NB03CRB-X-S007	NB03CRB-X-S007-015	Crab, Blue (CRB)	149	220	M	
NBS		NBS-1023-0915	NB03CRB-X-S007	NB03CRB-X-S007-016	Crab, Blue (CRB)	126	140	M	
NBS		NBS-1023-0915	NB03CRB-X-S007	NB03CRB-X-S007-017	Crab, Blue (CRB)	128	130	M	missing 1 claw
NBS		NBS-1023-0915	NB03CRB-X-S007	NB03CRB-X-S007-018	Crab, Blue (CRB)	140	174	M	
NBS		NBS-1023-0915	NB03CRB-X-S008	NB03CRB-X-S008-001	Crab, Blue (CRB)	134	104	F	
NBS		NBS-1023-0915	NB03CRB-X-S008	NB03CRB-X-S008-002	Crab, Blue (CRB)	136	152	M	

Zone	Intertidal Area	Area	Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Gender	Comments
NBS		NBS-1023-0915	NB03CRB-X-S008	NB03CRB-X-S008-003	Crab, Blue (CRB)	122	104	F	
NBS		NBS-1023-0915	NB03CRB-X-S008	NB03CRB-X-S008-004	Crab, Blue (CRB)	123	138	M	
NBS		NBS-1023-0915	NB03CRB-X-S008	NB03CRB-X-S008-005	Crab, Blue (CRB)	120	125	M	
NBS		NBS-1023-0915	NB03CRB-X-S008	NB03CRB-X-S008-006	Crab, Blue (CRB)	119	108	M	
NBS		NBS-1023-0915	NB03CRB-X-S008	NB03CRB-X-S008-007	Crab, Blue (CRB)	148	171	M	missing 1 claw
NBS		NBS-1023-0915	NB03CRB-X-S008	NB03CRB-X-S008-008	Crab, Blue (CRB)	132	146	M	
NBS		NBS-1023-0915	NB03CRB-X-S008	NB03CRB-X-S008-009	Crab, Blue (CRB)	150	217	M	missing 1 claw
NBS		NBS-1024-0839	NB03CRB-X-S008	NB03CRB-X-S008-010	Crab, Blue (CRB)	136	154	F	
NBS		NBS-1024-0839	NB03CRB-X-S008	NB03CRB-X-S008-011	Crab, Blue (CRB)	137	174	M	
NBS		NBS-1024-0839	NB03CRB-X-S008	NB03CRB-X-S008-012	Crab, Blue (CRB)	122	114	M	
NBS		NBS-1024-0839	NB03CRB-X-S008	NB03CRB-X-S008-013	Crab, Blue (CRB)	145	154	M	missing 1 claw
NBS		NBS-1024-0839	NB03CRB-X-S008	NB03CRB-X-S008-014	Crab, Blue (CRB)	136	110	F	
NBS		NBS-1024-0839	NB03CRB-X-S008	NB03CRB-X-S008-015	Crab, Blue (CRB)	147	142	M	
NBS		NBS-1024-0839	NB03CRB-X-S008	NB03CRB-X-S008-016	Crab, Blue (CRB)	118	100	M	
NBS		NBS-1024-0839	NB03CRB-X-S008	NB03CRB-X-S008-017	Crab, Blue (CRB)	132	125	M	missing 1 claw
NBS		NBS-1024-0839	NB03CRB-X-S008	NB03CRB-X-S008-018	Crab, Blue (CRB)	140	192	M	
NBS		NBS-1024-0839	NB03CRB-X-S009	NB03CRB-X-S009-001	Crab, Blue (CRB)	156	278	M	
NBS		NBS-1024-0839	NB03CRB-X-S009	NB03CRB-X-S009-002	Crab, Blue (CRB)	125	124	M	
NBS		NBS-1024-0839	NB03CRB-X-S009	NB03CRB-X-S009-003	Crab, Blue (CRB)	123	124	M	
NBS		NBS-1024-0839	NB03CRB-X-S009	NB03CRB-X-S009-004	Crab, Blue (CRB)	159	192	M	missing 1 claw
NBS		NBS-1024-0839	NB03CRB-X-S009	NB03CRB-X-S009-005	Crab, Blue (CRB)	132	142	M	
NBS		NBS-1024-0839	NB03CRB-X-S009	NB03CRB-X-S009-006	Crab, Blue (CRB)	140	188	M	
NBS		NBS-1024-0839	NB03CRB-X-S009	NB03CRB-X-S009-007	Crab, Blue (CRB)	155	202	M	
NBS		NBS-1024-0839	NB03CRB-X-S009	NB03CRB-X-S009-008	Crab, Blue (CRB)	124	124	M	
NBS		NBS-1024-0839	NB03CRB-X-S009	NB03CRB-X-S009-009	Crab, Blue (CRB)	130	147	M	
NBS		NBS-1024-0839	NB03CRB-X-S009	NB03CRB-X-S009-010	Crab, Blue (CRB)	127	100	F	
NBS		NBS-1024-0839	NB03CRB-X-S009	NB03CRB-X-S009-011	Crab, Blue (CRB)	132	121	F	
NBS		NBS-1024-0839	NB03CRB-X-S009	NB03CRB-X-S009-012	Crab, Blue (CRB)	150	148	F	
NBS		NBS-1024-0839	NB03CRB-X-S009	NB03CRB-X-S009-013	Crab, Blue (CRB)	123	135	M	
NBS		NBS-1024-0839	NB03CRB-X-S009	NB03CRB-X-S009-014	Crab, Blue (CRB)	152	247	M	
NBS		NBS-1024-0839	NB03CRB-X-S009	NB03CRB-X-S009-015	Crab, Blue (CRB)	140	148	M	
NBS		NBS-1024-0839	NB03CRB-X-S009	NB03CRB-X-S009-016	Crab, Blue (CRB)	135	202	M	
NBS		NBS-1024-0839	NB03CRB-X-S009	NB03CRB-X-S009-017	Crab, Blue (CRB)	133	142	M	
NBS		NBS-1024-0839	NB03CRB-X-S009	NB03CRB-X-S009-018	Crab, Blue (CRB)	144	132	M	missing 1 claw

Crab Sampling
Newark Bay Study Area **Draft: For Discussion Purposes Only**
VARIABLE DESCRIPTION

Location Coordinate Data Tab

Zone	Code indicating the project location (Newark Bay = NB) and Zone (N = North, C= Central, S = South)
Intertidal Area	If applicable, Intertidal Area where the sample was collected
Collection Method	Method (or equipment, i.e., gear type) used to collect the organism
Deployment Date	Date when collection equipment was deployed at a sample location
Deployment Time	Time when collection equipment was deployed at a sample location
Easting (X)d	Easting coordinate of the deployed collection equipment*
Northing (Y)d	Northing coordinate of the deployed collection equipment*
Deployment Count	Count of the deployments of each type of equipment by Zone or Intertidal Area (CT = Crab Trap, GN = Gillnet, TW=Trawl)
Area	A unique identifier for the area from which the organisms were collected that includes the Zone, collection date, and collection time (for multiple trawls conducted in one day, the time is based on the first deployment of the day in the Zone; for multiple gillnets retrieved in one day, the time is based on the retrieval of the first gillnet in the Zone)
Collection Date	Date when collection equipment was retrieved from a sample location
Collection Time	Time when collection equipment was retrieved from a sample location
Easting (X)c	If applicable, easting coordinate of the retrieved collection equipment*
Northing (Y)c	If applicable, northing coordinate of the retrieved collection equipment*
Depth (ft)	Water depth (ft) where organism was collected
Comments	

Specimen Tally Tab

Zone	Code indicating the project location (Newark Bay = NB) and Zone (N = North, C= Central, S = South)
Intertidal Area	If applicable, Intertidal Area where the sample was collected
Area	A unique identifier for the area from which the organisms were collected that includes the Zone, collection date, and collection time (for multiple trawls conducted in one day, the time is based on the first deployment of the day in the Zone; for multiple gillnets retrieved in one day, the time is based on the retrieval of the first gillnet in the Zone)
Specimen ID	A unique identifier that combines the sample ID and consecutive numbering of the organisms within the sample (for crab samples "X" is used to represent the three tissue types [CAR, HEP, MUS])
Species	Species of the organism
Length (mm)	Length (mm) of the organism (for blue crabs, the width was measured from point to point on the carapace)
Weight (g)	Weight of the individual organism prior to any sample processing
Gender	If determined, gender of the organism (F=Female, M=Male)
Comments	

***All coordinates are provided in the following coordinate system: US State Plane, NAD 83 (US survey feet), zone NJ 2900**

2014

Fish Sampling
Newark Bay Study Area **Draft: For Discussion Purposes Only**
LOCATION COORDINATE DATA (Field observed coordinates)

Zone	Intertidal Area	Collection Method	Catch Code	Deployment Date	Deployment Time	Deployment Easting (X)	Deployment Northing (Y)	Deployment Count	Collection Date	Collection Time	Collection Easting (X)	Collection Northing (Y)	Depth (ft)	Comments
NBC		Gillnet	NBC-GN-1009	10/9/2014	9:10	591587.780	664550.070	NBC-GN-01	10/9/2014	14:36			17.0	No catch
NBC	127A	Seine	NBC-SN-1014	10/14/2014	14:45	593116.599	664572.790	NBC127A-SN-01	10/14/2014	NA			NA	
NBC	127B	Seine	NBC-SN-1014	10/14/2014	15:25	594164.360	666195.170	NBC127B-SN-01	10/14/2014	NA			NA	
NBC	125	Seine	NBC-SN-1014	10/14/2014	16:00	596395.200	669879.770	NBC125-SN-01	10/14/2014	NA			NA	No catch
NBC	125	Seine	NBC-SN-1016	10/16/2014	14:05	596395.200	669879.770	NBC125-SN-02	10/16/2014	NA			NA	No catch
NBC	124	Seine	NBC-SN-1016	10/16/2014	14:25	598331.750	672195.930	NBC124-SN-01	10/16/2014	NA			NA	
NBC	124	Seine	NBC-SN-1024	10/24/2014	8:27	598377.360	672320.110	NBC124-SN-02	10/24/2014	NA			NA	
NBC		Trawl	NBC-TW-1009	10/9/2014	9:26	592034.520	665499.150	NBC-TW-01	10/9/2014	9:33	591599.500	664778.650	20.0	
NBC		Trawl	NBC-TW-1009	10/9/2014	9:49	592289.500	665848.520	NBC-TW-02	10/9/2014	10:00	591298.330	664336.960	20.0	
NBC		Trawl	NBC-TW-1009	10/9/2014	10:09	592223.581	665740.460	NBC-TW-03	10/9/2014	10:12	*	*	20.0	GPS not recorded at end of trawl
NBC		Trawl	NBC-TW-1009	10/9/2014	10:22	592174.780	665544.820	NBC-TW-04	10/9/2014	10:26	591116.450	664193.700	18.0	
NBC		Trawl	NBC-TW-1009	10/9/2014	10:44	594199.079	669754.910	NBC-TW-05	10/9/2014	10:55	593121.219	667920.340	10 to 20	
NBC		Trawl	NBC-TW-1009	10/9/2014	11:11	594834.120	671201.280	NBC-TW-06	10/9/2014	11:21	596143.220	673864.540	10.0	
NBC		Trawl	NBC-TW-1009	10/9/2014	11:35	594377.869	672113.620	NBC-TW-07	10/9/2014	11:45	595013.490	674000.930	30.0	
NBC		Trawl	NBC-TW-1009	10/9/2014	12:08	594346.120	672147.760	NBC-TW-08	10/9/2014	12:18	594923.940	674080.430	30.0	
NBC		Trawl	NBC-TW-1015	10/15/2014	12:49	593828.789	668673.410	NBC-TW-09	10/15/2014	12:59	593179.129	666488.560	10.5	
NBC		Trawl	NBC-TW-1015	10/15/2014	13:14	595655.139	672306.620	NBC-TW-10	10/15/2014	13:24	594261.791	669504.700	10.6	
NBC		Trawl	NBC-TW-1015	10/15/2014	13:37	595619.361	670726.940	NBC-TW-11	10/15/2014	13:57	594284.899	668259.550	9.5	
NBN		Eel Pot	NBN-EP-1007	10/6/2014	12:10	601468.930	686956.090	NBN-EP-01	10/7/2014	10:15			22.0	
NBN		Eel Pot	NBN-EP-1007	10/6/2014	12:10	601372.190	687030.131	NBN-EP-02	10/7/2014	10:15			17.0	
NBN		Eel Pot	NBN-EP-1007	10/6/2014	12:10	601213.130	687061.510	NBN-EP-03	10/7/2014	10:15			20.0	
NBN		Eel Pot	NBN-EP-1007	10/6/2014	12:10	600687.760	686100.101	NBN-EP-04	10/7/2014	10:15			12.0	
NBN		Eel Pot	NA	10/6/2014	12:10	600494.580	685975.741	NBN-EP-05	NA	NA			11.0	Recovery attempted on 10/7 but eel pot not found
NBN		Eel Pot	NBN-EP-1007	10/6/2014	12:10	600448.480	686118.181	NBN-EP-06	10/7/2014	10:15			12.0	
NBN		Eel Pot	NBN-EP-1008	10/7/2014	10:30	*	*	NBN-EP-07	10/8/2014	10:15			17.0	No catch; GPS not recorded, located north of 122C clam collection area adjacent to Conrail bridge remnants
NBN		Eel Pot	NBN-EP-1008	10/7/2014	10:30	*	*	NBN-EP-08	10/8/2014	10:15			20.0	No catch; GPS not recorded, located north of 122C clam collection area adjacent to Conrail bridge remnants
NBN		Eel Pot	NBN-EP-1008	10/7/2014	10:30	*	*	NBN-EP-09	10/8/2014	10:15			12.0	No catch; GPS not recorded, located north of 122C clam collection area adjacent to Conrail bridge remnants
NBN		Eel Pot	NBN-EP-1008	10/7/2014	11:56	600016.710	686193.140	NBN-EP-10	10/8/2014	10:15			5.8	No catch
NBN		Eel Pot	NBN-EP-1009	10/7/2014	10:30	*	*	NBN-EP-11	10/9/2014	11:30			11.0	GPS not recorded, located north of 122C clam collection area adjacent to Conrail bridge remnants, recovered 2 days later
NBN		Eel Pot	NBN-EP-1009	10/8/2014	10:20	601251.101	687088.030	NBN-EP-12	10/9/2014	11:30			10.0	
NBN		Eel Pot	NBN-EP-1009	10/8/2014	10:20	601184.830	687074.640	NBN-EP-13	10/9/2014	11:30			15.0	
NBN		Eel Pot	NBN-EP-1009	10/8/2014	10:20	597120.561	680236.830	NBN-EP-14	10/9/2014	11:30			12.0	
NBN		Eel Pot	NBN-EP-1009	10/8/2014	10:20	597189.360	680163.950	NBN-EP-15	10/9/2014	11:30			11.0	
NBN		Eel Pot	NBN-EP-1014	10/13/2014	10:45	597114.279	680339.190	NBN-EP-16	10/14/2014	10:00			7.5	No catch
NBN		Eel Pot	NBN-EP-1014	10/13/2014	10:45	597041.441	680315.280	NBN-EP-17	10/14/2014	10:00			6.6	No catch
NBN		Eel Pot	NBN-EP-1014	10/13/2014	10:45	597151.770	680238.610	NBN-EP-18	10/14/2014	10:00			9.9	No catch
NBN		Eel Pot	NBN-EP-1014	10/13/2014	10:45	597199.031	680253.890	NBN-EP-19	10/14/2014	10:00			10.8	No catch
NBN		Eel Pot	NBN-EP-1014	10/13/2014	10:45	597252.730	680167.420	NBN-EP-20	10/14/2014	10:00			15.3	No catch
NBN		Eel Pot	NBN-EP-1015	10/14/2014	10:18	596994.359	677756.130	NBN-EP-21	10/15/2014	9:42			9.9	No catch
NBN		Eel Pot	NBN-EP-1015	10/14/2014	10:18	596954.129	677740.010	NBN-EP-22	10/15/2014	9:42			11.9	No catch
NBN		Eel Pot	NBN-EP-1015	10/14/2014	10:18	596962.040	677750.620	NBN-EP-23	10/15/2014	9:42			9.3	No catch
NBN		Eel Pot	NBN-EP-1015	10/14/2014	10:18	596958.270	677745.630	NBN-EP-24	10/15/2014	9:42			10.1	No catch
NBN		Eel Pot	NBN-EP-1015	10/14/2014	10:18	597003.560	677712.090	NBN-EP-25	10/15/2014	9:42			14.8	No catch
NBN		Eel Pot	NBN-EP-1016	10/15/2014	10:20	598036.179	676547.850	NBN-EP-26	10/16/2014	9:15			10.5	No catch
NBN		Eel Pot	NBN-EP-1016	10/15/2014	10:20	598044.380	676623.370	NBN-EP-27	10/16/2014	9:15			10.5	No catch
NBN		Gillnet	NBN-GN-1007	10/6/2014	12:40	600149.280	685822.879	NBN-GN-01	10/7/2014	9:12			5 to 10	GPS point is outside pane edge toward channel, panel set perpendicular to shoreline
NBN		Gillnet	NBN-GN-1007	10/6/2014	12:52	600777.800	684920.309	NBN-GN-02	10/7/2014	9:40			8 to 11	GPS point is outside pane edge toward channel, panel set perpendicular to shoreline
NBN	122	Minnow Trap	NBN-MT-1008	10/7/2014	11:25	599795.190	686617.581	NBN122-MT-01	10/8/2014	9:45			2.8	No catch
NBN	122	Minnow Trap	NBN-MT-1008	10/7/2014	11:25	599828.400	686686.350	NBN122-MT-02	10/8/2014	9:45			3.0	No catch
NBN	122	Minnow Trap	NBN-MT-1008	10/7/2014	11:25	599937.450	686728.110	NBN122-MT-03	10/8/2014	9:45			2.6	No catch
NBN	122	Minnow Trap	NBN-MT-1008	10/7/2014	11:25	600145.120	686755.040	NBN122-MT-04	10/8/2014	9:45			2.8	No catch
NBN	122	Minnow Trap	NBN-MT-1008	10/7/2014	11:25	600168.320	686652.940	NBN122-MT-05	10/8/2014	9:45			3.0	No catch
NBN	122	Minnow Trap	NBN-MT-1008	10/7/2014	11:25	600236.280	686659.681	NBN122-MT-06	10/8/2014	9:45			3.3	No catch
NBN	122	Minnow Trap	NBN-MT-1008	10/7/2014	11:25	600389.410	686762.650	NBN122-MT-07	10/8/2014	9:45			2.9	No catch
NBN	122	Minnow Trap	NBN-MT-1008	10/7/2014	11:25	600383.110	686708.009	NBN122-MT-08	10/8/2014	9:45			2.8	No catch
NBN	122	Minnow Trap	NBN-MT-1008	10/7/2014	11:25	600438.050	686728.070	NBN122-MT-09	10/8/2014	9:45			3.0	No catch
NBN	122	Minnow Trap	NBN-MT-1009	10/8/2014	10:10	*	*	NBN122-MT-10	10/9/2014	13:05			1.0	GPS not recorded due to weather, traps set at north end of 122 along rocky shoreline
NBN	122	Minnow Trap	NBN-MT-1009	10/8/2014	10:10	*	*	NBN122-MT-11	10/9/2014	13:05			2.0	GPS not recorded due to weather, traps set at north end of 122 along rocky shoreline
NBN	122	Minnow Trap	NBN-MT-1009	10/8/2014	10:10	*	*	NBN122-MT-12	10/9/2014	13:05			2.0	GPS not recorded due to weather, traps set at north end of 122 along rocky shoreline
NBN	122	Minnow Trap	NBN-MT-1009	10/8/2014	10:10	*	*	NBN122-MT-13	10/9/2014	13:05			1.0	GPS not recorded due to weather, traps set at north end of 122 along rocky shoreline
NBN	122	Minnow Trap	NBN-MT-1009	10/8/2014	10:10	*	*	NBN122-MT-14	10/9/2014	13:05			1.0	GPS not recorded due to weather, traps set at north end of 122 along rocky shoreline
NBN	122	Minnow Trap	NBN-MT-1009	10/8/2014	10:10	*	*	NBN122-MT-15	10/9/2014	13:05			2.0	GPS not recorded due to weather, traps set at north end of 122 along rocky shoreline
NBN	122	Minnow Trap	NBN-MT-1009	10/8/2014	10:10	*	*	NBN122-MT-16	10/9/2014	13:05			1.5	GPS not recorded due to weather, traps set at north end of 122 along rocky shoreline
NBN	122	Minnow Trap	NBN-MT-1009	10/8/2014	10:10	*	*	NBN122-MT-17	10/9/2014	13:05			2.5	GPS not recorded due to weather, traps set at north end of 122 along rocky shoreline
NBN	122	Minnow Trap	NBN-MT-1009	10/8/2014	10:10	*	*	NBN122-MT-18	10/9/2014	13:05			2.2	GPS not recorded due to weather, traps set at north end of 122 along rocky shoreline
NBN	133	Minnow Trap	NBN-MT-1021	10/20/2014	11:45	597074.711	681084.420	NBN133-MT-01	10/21/2014	10:25			1.0	
NBN	133	Minnow Trap	NBN-MT-1021	10/20/2014	11:45	597048.739	681010.609	NBN133-MT-02	10/21/2014	10:25			1.0	
NBN	122C	Minnow Trap	NBN-MT-1021	10/20/2014	13:20	600040.850	687126.620	NBN122C-MT-01	10/21/2014	10:45			<5	
NBN	122C	Minnow Trap	NBN-MT-1021	10/20/2014	13:20	600046.940	687126.690	NBN122C-MT-02	10/21/2014	10:45			<5	
NBN	122C	Minnow Trap	NBN-MT-1021	10/20/2014	13:20	600033.499	687129.980	NBN122C-MT-03	10/21/2014	10:45			<5	

Zone	Intertidal Area	Collection Method	Catch Code	Deployment Date	Deployment Time	Deployment Easting (X)	Deployment Northing (Y)	Deployment Count	Collection Date	Collection Time	Collection Easting (X)	Collection Northing (Y)	Depth (ft)	Comments
NBN	122C	Minnow Trap	NBN-MT-1021	10/20/2014	13:20	600027.360	687131.131	NBN122C-MT-04	10/21/2014	10:45			<5	
NBN	122C	Minnow Trap	NBN-MT-1021	10/20/2014	13:20	600022.780	687131.231	NBN122C-MT-05	10/21/2014	10:45			<5	
NBN	122C	Minnow Trap	NBN-MT-1021	10/20/2014	13:20	600016.221	687128.111	NBN122C-MT-06	10/21/2014	10:45			<5	
NBN	122C	Minnow Trap	NBN-MT-1021	10/20/2014	13:20	600011.710	687127.690	NBN122C-MT-07	10/21/2014	10:45			<5	
NBN	132B	Seine	NBN-SN-1013	10/13/2014	9:53	595900.820	678165.360	NBN132B-SN-01	10/13/2014	NA			NA	GPS probems thus coordinates estimated
NBN	132B	Seine	NBN-SN-1013	10/13/2014	9:59	595900.820	678165.360	NBN132B-SN-02	10/13/2014	NA			NA	GPS probems thus coordinates estimated
NBN	132A	Seine	NBN-SN-1013	10/13/2014	10:20	595868.570	678744.071	NBN132A-SN-01	10/13/2014	NA			NA	GPS probems thus coordinates estimated
NBN	132A	Seine	NBN-SN-1013	10/13/2014	10:30	595868.570	678744.071	NBN132A-SN-02	10/13/2014	NA			NA	GPS probems thus coordinates estimated
NBN	133	Seine	NBN-SN-1013	10/13/2014	11:03	596976.570	681041.680	NBN133-SN-01	10/13/2014	NA			NA	
NBN	133	Seine	NBN-SN-1013	10/13/2014	11:15	596976.570	681041.680	NBN133-SN-02	10/13/2014	NA			NA	Net hung up, only partial collection completed
NBN	133	Seine	NBN-SN-1013	10/13/2014	11:28	596976.570	681041.680	NBN133-SN-03	10/13/2014	NA			NA	
NBN	133	Seine	NBN-SN-1020	10/20/2014	11:30	596976.570	681041.680	NBN133-SN-04	10/20/2014	NA			NA	
NBN	123B	Seine	NBN-SN-1013	10/13/2014	12:22	602343.530	680998.299	NBN123B-SN-01	10/13/2014	NA			NA	
NBN	123A	Seine	NBN-SN-1013	10/13/2014	12:35	601660.230	681445.840	NBN123A-SN-01	10/13/2014	NA			NA	
NBN	123A	Seine	NBN-SN-1013	10/13/2014	12:40	601660.230	681445.840	NBN123A-SN-02	10/13/2014	NA			NA	
NBN	123A	Seine	NBN-SN-1020	10/20/2014	12:00	601660.230	681445.840	NBN123A-SN-03	10/20/2014	NA			NA	
NBN	122C	Seine	NBN-SN-1020	10/20/2014	12:30	599772.370	686894.900	NBN122C-SN-01	10/20/2014	NA			NA	
NBN	122B	Seine	NBN-SN-1020	10/20/2014	12:50	599742.901	686893.800	NBN122B-SN-01	10/20/2014	NA			NA	
NBN	122A	Seine	NBN-SN-1020	10/20/2014	13:05	599609.400	686796.200	NBN122A-SN-01	10/20/2014	NA			NA	
NBN		Trawl	NBN-TW-1006	10/6/2014	13:48	598311.660	683537.070	NBN-TW-01	10/6/2014	13:59	600722.830	685566.280	20 to 30	
NBN		Trawl	NBN-TW-1006	10/6/2014	14:38	597159.220	677951.510	NBN-TW-02	10/6/2014	14:41	*	*	7 to 10	GPS not recorded at end of trawl
NBN		Trawl	NBN-TW-1007	10/7/2014	13:18	598274.771	682595.911	NBN-TW-03	10/7/2014	13:29	598849.479	684028.170	4 to 10	
NBN		Trawl	NBN-TW-1007	10/7/2014	13:42	598618.730	682157.800	NBN-TW-04	10/7/2014	13:53	598628.680	682220.979	4 to 10	
NBN		Trawl	NBN-TW-1007	10/7/2014	14:09	598130.341	682335.210	NBN-TW-05	10/7/2014	14:19	599005.929	684222.049	4 to 10	
NBN		Trawl	NBN-TW-1008	10/8/2014	12:25	*	*	NBN-TW-06	10/8/2014	12:41	599272.780	684641.280	28 to 34	GPS not recorded at start of trawl
NBN		Trawl	NBN-TW-1008	10/8/2014	12:57	598130.060	682285.380	NBN-TW-07	10/8/2014	13:07	598708.869	683816.140	24 to 30	
NBN		Trawl	NBN-TW-1015	10/15/2014	12:14	600045.190	684997.610	NBN-TW-08	10/15/2014	12:24	598499.409	683272.310	34.0	
NBS		Eel Pot	NBS-EP-1016	10/15/2014	11:15	581969.340	660142.280	NBS-EP-01	10/16/2014	8:55			7.5	
NBS		Eel Pot	NBS-EP-1016	10/15/2014	11:15	581985.510	660136.600	NBS-EP-02	10/16/2014	8:55			7.9	
NBS		Eel Pot	NBS-EP-1016	10/15/2014	11:15	582027.240	660141.140	NBS-EP-03	10/16/2014	8:55			7.7	
NBS		Eel Pot	NBS-EP-1017	10/16/2014	9:00	581969.340	660142.280	NBS-EP-04	10/17/2014	10:15			7.5	No catch
NBS		Eel Pot	NBS-EP-1017	10/16/2014	9:00	581985.510	660136.600	NBS-EP-05	10/17/2014	10:15			7.9	No catch
NBS		Eel Pot	NBS-EP-1017	10/16/2014	9:00	582027.240	660141.140	NBS-EP-06	10/17/2014	10:15			7.7	No catch
NBS		Eel Pot	NBS-EP-1017	10/16/2014	11:00	581056.260	660133.930	NBS-EP-07	10/17/2014	10:15			*	No catch; depth not recorded
NBS		Eel Pot	NBS-EP-1017	10/16/2014	11:00	581019.850	660115.390	NBS-EP-08	10/17/2014	10:15			*	No catch; depth not recorded
NBS		Eel Pot	NBS-EP-1020	10/17/2014	10:20	581969.340	660142.280	NBS-EP-09	10/20/2014	10:55			7.5	
NBS		Eel Pot	NBS-EP-1020	10/17/2014	10:20	581985.510	660136.600	NBS-EP-10	10/20/2014	10:55			7.9	
NBS		Eel Pot	NBS-EP-1020	10/17/2014	10:20	582027.240	660141.140	NBS-EP-11	10/20/2014	10:55			7.7	
NBS		Eel Pot	NBS-EP-1020	10/17/2014	10:20	581056.260	660133.930	NBS-EP-12	10/20/2014	10:55			*	Depth not recorded
NBS		Eel Pot	NBS-EP-1020	10/17/2014	10:20	581019.850	660115.390	NBS-EP-13	10/20/2014	10:55			*	Depth not recorded
NBS		Eel Pot	NBS-EP-1021	10/20/2014	11:20	585086.180	660136.990	NBS-EP-14	10/21/2014	11:15			10.5	
NBS		Eel Pot	NBS-EP-1021	10/20/2014	11:20	585102.860	660128.120	NBS-EP-15	10/21/2014	11:15			9.7	
NBS		Eel Pot	NBS-EP-1021	10/20/2014	11:20	585119.230	660117.770	NBS-EP-16	10/21/2014	11:15			9.6	
NBS		Eel Pot	NBS-EP-1021	10/20/2014	11:20	585138.240	660107.820	NBS-EP-17	10/21/2014	11:15			6.0	
NBS		Eel Pot	NBS-EP-1021	10/20/2014	11:20	585162.190	660098.200	NBS-EP-18	10/21/2014	11:15			7.6	
NBS		Eel Pot	NBS-EP-1021	10/20/2014	11:20	585202.550	660078.770	NBS-EP-19	10/21/2014	11:15			8.0	
NBS		Eel Pot	NBS-EP-1021	10/20/2014	11:20	585213.480	660051.630	NBS-EP-20	10/21/2014	11:15			6.4	
NBS		Eel Pot	NBS-EP-1022	10/21/2014	11:43	581677.840	661250.920	NBS-EP-21	10/22/2014	10:20			4.9	
NBS		Eel Pot	NBS-EP-1022	10/21/2014	11:43	581778.570	661353.510	NBS-EP-22	10/22/2014	10:20			4.9	
NBS		Eel Pot	NBS-EP-1022	10/21/2014	11:43	581876.390	661438.070	NBS-EP-23	10/22/2014	10:20			4.7	
NBS		Eel Pot	NBS-EP-1022	10/21/2014	11:43	581995.810	661494.220	NBS-EP-24	10/22/2014	10:20			5.6	
NBS		Eel Pot	NBS-EP-1022	10/21/2014	11:43	582089.370	660127.060	NBS-EP-25	10/22/2014	10:20			4.4	
NBS		Eel Pot	NBS-EP-1022	10/21/2014	11:43	582071.310	660124.100	NBS-EP-26	10/22/2014	10:20			4.5	
NBS		Eel Pot	NBS-EP-1022	10/21/2014	11:43	582025.230	660130.130	NBS-EP-27	10/22/2014	10:20			5.4	
NBS		Eel Pot	NBS-EP-1023	10/22/2014	10:20	581677.840	661250.920	NBS-EP-28	10/23/2014	11:20			4.9	
NBS		Eel Pot	NBS-EP-1023	10/22/2014	10:20	581778.570	661353.510	NBS-EP-29	10/23/2014	11:20			4.9	
NBS		Eel Pot	NBS-EP-1023	10/22/2014	10:20	581876.390	661438.070	NBS-EP-30	10/23/2014	11:20			4.7	
NBS		Eel Pot	NBS-EP-1023	10/22/2014	10:20	581995.810	661494.220	NBS-EP-31	10/23/2014	11:20			5.6	
NBS		Eel Pot	NBS-EP-1023	10/22/2014	10:20	582089.370	660127.060	NBS-EP-32	10/23/2014	11:20			4.4	
NBS		Eel Pot	NBS-EP-1023	10/22/2014	10:20	582071.310	660124.100	NBS-EP-33	10/23/2014	11:20			4.5	
NBS		Eel Pot	NBS-EP-1023	10/22/2014	10:20	582025.230	660130.130	NBS-EP-34	10/23/2014	11:20			5.4	
NBS		Eel Pot	NBS-EP-1024	10/23/2014	11:20	581677.840	661250.920	NBS-EP-35	10/24/2014	9:55			4.9	
NBS		Eel Pot	NBS-EP-1024	10/23/2014	11:20	581778.570	661353.510	NBS-EP-36	10/24/2014	9:55			4.9	
NBS		Eel Pot	NBS-EP-1024	10/23/2014	11:20	581876.390	661438.070	NBS-EP-37	10/24/2014	9:55			4.7	
NBS		Eel Pot	NBS-EP-1024	10/23/2014	11:20	581995.810	661494.220	NBS-EP-38	10/24/2014	9:55			5.6	
NBS		Eel Pot	NBS-EP-1024	10/23/2014	11:20	582089.370	660127.060	NBS-EP-39	10/24/2014	9:55			4.4	
NBS		Eel Pot	NBS-EP-1024	10/23/2014	11:20	582071.310	660124.100	NBS-EP-40	10/24/2014	9:55			4.5	
NBS		Eel Pot	NBS-EP-1024	10/23/2014	11:20	582025.230	660130.130	NBS-EP-41	10/24/2014	9:55			5.4	
NBS		Gillnet	NBS-GN-1008	10/8/2014	9:15	587941.780	664654.400	NBS-GN-01	10/8/2014	13:50			10 to 20	
NBS		Gillnet	NBS-GN-1008	10/8/2014	9:15	588268.790	664591.370	NBS-GN-02	10/8/2014	13:50			10 to 20	
NBS		Gillnet	NBS-GN-1009	10/9/2014	9:00	581430.500	660944.210	NBS-GN-03	10/9/2014	15:00			15 to 23	No catch
NBS		Gillnet	NBS-GN-1016	10/15/2014	15:15	582786.950	660990.450	NBS-GN-04	10/16/2014	8:40			28.0	No catch
NBS		Gillnet	NBS-GN-1024	10/23/2014	8:52	589275.710	663656.510	NBS-GN-05	10/24/2014	8:30			*	Depth not recorded
NBS	135	Minnow Trap	NBS-MT-1015	10/14/2014	14:22	581479.240	661686.220	NBS135-MT-01	10/15/2014	11:00			<5	No catch

Zone	Intertidal Area	Collection Method	Catch Code	Deployment Date	Deployment Time	Deployment Easting (X)	Deployment Northing (Y)	Deployment Count	Collection Date	Collection Time	Collection Easting (X)	Collection Northing (Y)	Depth (ft)	Comments
NBS	135	Minnow Trap	NBS-MT-1015	10/14/2014	14:22	581550.330	661656.110	NBS135-MT-02	10/15/2014	11:00			<5	No catch
NBS	135	Minnow Trap	NBS-MT-1015	10/14/2014	14:22	581637.620	661632.770	NBS135-MT-03	10/15/2014	11:00			<5	No catch
NBS	129	Minnow Trap	NBS-MT-1017	10/16/2014	13:23	581819.400	659437.480	NBS129-MT-01	10/17/2014	8:45			<5	
NBS	129	Minnow Trap	NBS-MT-1017	10/16/2014	13:23	581824.830	659377.900	NBS129-MT-02	10/17/2014	8:45			<5	
NBS	129	Minnow Trap	NBS-MT-1017	10/16/2014	13:23	581831.500	659349.600	NBS129-MT-03	10/17/2014	8:45			<5	
NBS	129	Minnow Trap	NBS-MT-1017	10/16/2014	13:23	581769.700	659298.400	NBS129-MT-04	10/17/2014	8:45			<5	
NBS	129	Minnow Trap	NBS-MT-1017	10/16/2014	13:23	581759.140	659311.391	NBS129-MT-05	10/17/2014	8:45			<5	
NBS	129	Minnow Trap	NBS-MT-1017	10/16/2014	13:23	581823.370	659405.799	NBS129-MT-06	10/17/2014	8:45			<5	
NBS	135	Minnow Trap	NBS-MT-1017	10/16/2014	13:42	581475.050	661692.770	NBS135-MT-01	10/17/2014	9:45			<5	No catch
NBS	135	Minnow Trap	NBS-MT-1017	10/16/2014	13:42	581511.080	661687.980	NBS135-MT-02	10/17/2014	9:45			<5	No catch
NBS	135	Minnow Trap	NBS-MT-1017	10/16/2014	13:42	581555.440	661658.950	NBS135-MT-03	10/17/2014	9:45			<5	No catch
NBS	131A	Seine	NBS-SN-1010	10/10/2014	10:00	586198.570	665460.060	NBS131A-SN-01	10/10/2014	NA			NA	
NBS	131A	Seine	NBS-SN-1010	10/10/2014	10:25	586731.920	665891.430	NBS131A-SN-02	10/10/2014	NA			NA	
NBS	130	Seine	NBS-SN-1010	10/10/2014	10:53	585075.960	663925.280	NBS130-SN-01	10/10/2014	NA			NA	
NBS	135	Seine	NBS-SN-1010	10/10/2014	10:53	581303.430	661762.230	NBS135-SN-01	10/10/2014	NA			NA	
NBS	135	Seine	NBS-SN-1010	10/10/2014	11:15	581872.530	661775.520	NBS135-SN-02	10/10/2014	NA			NA	
NBS	134	Seine	NBS-SN-1013	10/13/2014	13:13	579807.440	659441.280	NBS134-SN-01	10/13/2014	NA			NA	
NBS	129	Seine	NBS-SN-1014	10/14/2014	12:10	581837.080	659149.870	NBS129-SN-01	10/14/2014	NA			NA	
NBS	135	Seine	NBS-SN-1014	10/14/2014	13:22	581339.900	661762.460	NBS135-SN-03	10/14/2014	NA			NA	
NBS	135	Seine	NBS-SN-1014	10/14/2014	13:40	581339.900	661762.460	NBS135-SN-04	10/14/2014	NA			NA	
NBS	135	Seine	NBS-SN-1014	10/14/2014	13:55	581339.900	661762.460	NBS135-SN-05	10/14/2014	NA			NA	
NBS	135	Seine	NBS-SN-1016	10/16/2014	13:00	581339.900	661762.460	NBS135-SN-06	10/16/2014	NA			NA	
NBS	131B	Seine	NBS-SN-1017	10/17/2014	9:40	587084.910	666193.040	NBS131B-SN-01	10/17/2014	NA			NA	

Fish Sampling
Newark Bay Study Area
SPECIMEN TALLY

Draft: For Discussion Purposes Only

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Comments
NBN		NBN-TW-1006	NB03WBAN002	NB03WBAN002-001	Anchovy, Bay (BA)	71	2.5	
NBN		NBN-TW-1006	NB03WBAN002	NB03WBAN002-002	Anchovy, Bay (BA)	82	3.3	
NBN		NBN-TW-1006	NB03WBAN002	NB03WBAN002-003	Anchovy, Bay (BA)	92	4.9	
NBN		NBN-TW-1006	NB03WBAN002	NB03WBAN002-004	Anchovy, Bay (BA)	85	3.3	
NBN		NBN-TW-1006	NB03WBAN002	NB03WBAN002-005	Anchovy, Bay (BA)	85	3.6	
NBN		NBN-TW-1006	NB03WBAN002	NB03WBAN002-006	Anchovy, Bay (BA)	84	3.0	
NBN		NBN-TW-1006	NB03WBAN002	NB03WBAN002-007	Anchovy, Bay (BA)	82	3.2	
NBN		NBN-TW-1006	NB03WBAN002	NB03WBAN002-008	Anchovy, Bay (BA)	80	2.8	
NBN		NBN-TW-1006	NB03WBAN002	NB03WBAN002-009	Anchovy, Bay (BA)	72	2.1	
NBN		NBN-TW-1006	NB03WBAN002	NB03WBAN002-010	Anchovy, Bay (BA)	68	1.3	
NBN		NBN-TW-1006	NB03WBAN002	NB03WBAN002-011	Anchovy, Bay (BA)	71	2.0	
NBN		NBN-TW-1006	NB03WBAN002	NB03WBAN002-012	Anchovy, Bay (BA)	70	1.9	
NBN		NBN-TW-1006	NB03WBAN002	NB03WBAN002-013	Anchovy, Bay (BA)	62	1.3	
NBN		NBN-TW-1006	NB03WBAN002	NB03WBAN002-014	Anchovy, Bay (BA)	58	1.1	
NBN		NBN-TW-1006	NB03WWFN001	NB03WWFN001-001	Flounder, Winter (WF)	95	10.4	
NBN		NBN-TW-1006	NB03WWFN003	NB03WWFN003-001	Flounder, Winter (WF)	92	8.6	
NBN		NBN-TW-1007	NB03WWFN004	NB03WWFN004-001	Flounder, Winter (WF)	170	50.9	
NBN		NBN-TW-1007	NB03WSFN005	NB03WSFN005-001	Flounder, Summer (SF)	190	67.0	
NBN		NBN-TW-1007	NB03WSFN006	NB03WSFN006-001	Flounder, Summer (SF)	155	28.9	
NBN		NBN-TW-1007	NB03WWWN007	NB03WWWN007-001	Flounder, Windowpane (WW)	109	14.1	
NBN		NBN-TW-1007	NB03WBAN002	NB03WBAN002-015	Anchovy, Bay (BA)	79	3.0	
NBN		NBN-TW-1007	NB03WBAN002	NB03WBAN002-016	Anchovy, Bay (BA)	82	3.0	
NBN		NBN-TW-1007	NB03WBAN002	NB03WBAN002-017	Anchovy, Bay (BA)	76	3.2	
NBN		NBN-TW-1007	NB03WBAN002	NB03WBAN002-018	Anchovy, Bay (BA)	71	2.4	
NBN		NBN-TW-1007	NB03WMEN008	NB03WMEN008-001	Menhaden, Atlantic (ME)	347	330	
NBN		NBN-TW-1007	NB03WMEN008	NB03WMEN008-002	Menhaden, Atlantic (ME)	342	418	Noted by USEPA observer as potential for split sample
NBN		NBN-TW-1007	NB03WMEN009	NB03WMEN009-001	Menhaden, Atlantic (ME)	368	418	
NBN		NBN-TW-1007	NB03WMEN009	NB03WMEN009-002	Menhaden, Atlantic (ME)	388	550	Noted by USEPA observer as potential for split sample
NBN		NBN-TW-1007	NB03WSFN010	NB03WSFN010-001	Flounder, Summer (SF)	340	428	Noted by USEPA observer as potential for split sample
NBN		NBN-EP-1007	NB03FAEN011	NB03FAEN011-001	Eel, American (AE)	545	390	
NBN		NBN-EP-1007	NB03FAEN012	NB03FAEN012-001	Eel, American (AE)	531	340	
NBN		NBN-EP-1007	NB03FAEN013	NB03FAEN013-001	Eel, American (AE)	470	178	
NBN	122	NBN-MT-1009	NB03WASN014	NB03WASN014-001	Silverside, Atlantic (AS)	109	6.1	
NBN	122	NBN-MT-1009	NB03WASN014	NB03WASN014-002	Silverside, Atlantic (AS)	112	6.9	
NBN	122	NBN-MT-1009	NB03WASN014	NB03WASN014-003	Silverside, Atlantic (AS)	99	4.7	
NBN	122	NBN-MT-1009	NB03WASN014	NB03WASN014-004	Silverside, Atlantic (AS)	102	5.4	
NBN	122	NBN-MT-1009	NB03WASN014	NB03WASN014-005	Silverside, Atlantic (AS)	89	3.4	
NBN	122	NBN-MT-1009	NB03WASN014	NB03WASN014-006	Silverside, Atlantic (AS)	102	5.3	
NBN	122	NBN-MT-1009	NB03WASN014	NB03WASN014-007	Silverside, Atlantic (AS)	95	4.1	
NBN	122	NBN-MT-1009	NB03WASN014	NB03WASN014-008	Silverside, Atlantic (AS)	90	3.0	
NBN	122	NBN-MT-1009	NB03WASN014	NB03WASN014-009	Silverside, Atlantic (AS)	97	5.0	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Comments
NBN	122	NBN-MT-1009	NB03WASN014	NB03WASN014-010	Silverside, Atlantic (AS)	91	3.9	
NBN	122	NBN-MT-1009	NB03WASN014	NB03WASN014-011	Silverside, Atlantic (AS)	98	4.5	
NBN	122	NBN-MT-1009	NB03WASN014	NB03WASN014-012	Silverside, Atlantic (AS)	96	4.1	
NBN	122	NBN-MT-1009	NB03WMUN015	NB03WMUN015-001	Mummichog (MU)	82	7.6	
NBN	122	NBN-MT-1009	NB03WMUN015	NB03WMUN015-002	Mummichog (MU)	62	3.3	
NBN	122	NBN-MT-1009	NB03WMUN015	NB03WMUN015-003	Mummichog (MU)	101	13.2	
NBN		NBN-EP-1009	NB03WAEN016	NB03WAEN016-001	Eel, American (AE)	555	340	
NBN		NBN-TW-1009	NB03WAEN017	NB03WAEN017-001	Eel, American (AE)	240	27.9	
NBN		NBN-TW-1009	NB03WSFN018	NB03WSFN018-001	Flounder, Summer (SF)	190	50.3	
NBN		NBN-TW-1009	NB03WHAN019	NB03WHAN019-001	Hake, Spotted (HA)	258	158	
NBN		NBN-TW-1009	NB03WWWN020	NB03WWWN020-001	Flounder, Windowpane (WW)	145	37.0	
NBN		NBN-TW-1009	NB03WWWN021	NB03WWWN021-001	Flounder, Windowpane (WW)	139	28.3	
NBN		NBN-TW-1009	NB03WWWN022	NB03WWWN022-001	Flounder, Windowpane (WW)	121	22.1	
NBN		NBN-TW-1009	NB03WWWN023	NB03WWWN023-001	Flounder, Windowpane (WW)	83	6.5	
NBN		NBN-TW-1009	NB03WBAN002	NB03WBAN002-019	Anchovy, Bay (BA)	82	3.4	
NBN		NBN-TW-1009	NB03WBAN002	NB03WBAN002-020	Anchovy, Bay (BA)	63	1.4	
NBN		NBN-TW-1009	NB03WBAN002	NB03WBAN002-021	Anchovy, Bay (BA)	51	0.6	
NBN		NBN-EP-1009	NB03WAEN024	NB03WAEN024-001	Eel, American (AE)	510	273	
NBN		NBN-EP-1009	NB03WAEN025	NB03WAEN025-001	Eel, American (AE)	610	472	
NBN	123A	NBN-SN-1020	NB03WSK123A	NB03WSK123A-001	Killifish, Striped (SK)	100	12.8	
NBN	123A	NBN-SN-1020	NB03WSK123A	NB03WSK123A-002	Killifish, Striped (SK)	89	8.8	
NBN	123A	NBN-SN-1020	NB03WSK123A	NB03WSK123A-003	Killifish, Striped (SK)	92	9.0	
NBN	123A	NBN-SN-1020	NB03WSK123A	NB03WSK123A-004	Killifish, Striped (SK)	61	2.5	
NBN	123A	NBN-SN-1020	NB03WSK123A	NB03WSK123A-005	Killifish, Striped (SK)	93	9.1	
NBN	123A	NBN-SN-1020	NB03WSK123A	NB03WSK123A-006	Killifish, Striped (SK)	94	9.3	
NBN	123A	NBN-SN-1020	NB03WSK123A	NB03WSK123A-007	Killifish, Striped (SK)	70	3.8	
NBN	123A	NBN-SN-1020	NB03WSK123A	NB03WSK123A-008	Killifish, Striped (SK)	95	10.2	
NBN	123A	NBN-SN-1020	NB03WSK123A	NB03WSK123A-009	Killifish, Striped (SK)	99	11.2	
NBN	123A	NBN-SN-1020	NB03WSK123A	NB03WSK123A-010	Killifish, Striped (SK)	95	10.1	
NBN	123A	NBN-SN-1020	NB03WSK123A	NB03WSK123A-011	Killifish, Striped (SK)	90	8.7	
NBN	123A	NBN-SN-1020	NB03WSK123A	NB03WSK123A-012	Killifish, Striped (SK)	78	5.0	
NBN	123A	NBN-SN-1020	NB03WSK123A	NB03WSK123A-013	Killifish, Striped (SK)	68	3.3	
NBN	123A	NBN-SN-1020	NB03WSK123A	NB03WSK123A-014	Killifish, Striped (SK)	85	7.2	
NBN	123A	NBN-SN-1020	NB03WSK123A	NB03WSK123A-015	Killifish, Striped (SK)	66	3.4	
NBN	123A	NBN-SN-1020	NB03WSK123A	NB03WSK123A-016	Killifish, Striped (SK)	91	9.4	
NBN	123A	NBN-SN-1020	NB03WSK123A	NB03WSK123A-017	Killifish, Striped (SK)	60	2.3	
NBN	123A	NBN-SN-1020	NB03WSK123A	NB03WSK123A-018	Killifish, Striped (SK)	86	7.0	
NBN	123A	NBN-SN-1020	NB03WSK123A	NB03WSK123A-019	Killifish, Striped (SK)	69	3.7	
NBN	123A	NBN-SN-1020	NB03WSK123A	NB03WSK123A-020	Killifish, Striped (SK)	74	4.5	
NBN	123A	NBN-SN-1020	NB03WSK123A	NB03WSK123A-021	Killifish, Striped (SK)	87	8.3	
NBN	123A	NBN-SN-1020	NB03WSK123A	NB03WSK123A-022	Killifish, Striped (SK)	85	7.0	
NBN	123A	NBN-SN-1020	NB03WSK123A	NB03WSK123A-023	Killifish, Striped (SK)	82	6.4	
NBN	123A	NBN-SN-1020	NB03WSK123A	NB03WSK123A-024	Killifish, Striped (SK)	66	3.2	
NBN	123A	NBN-SN-1020	NB03WSK123A	NB03WSK123A-025	Killifish, Striped (SK)	101	11.4	
NBN	123A	NBN-SN-1020	NB03WSK123A	NB03WSK123A-026	Killifish, Striped (SK)	96	10.2	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Comments
NBN	123A	NBN-SN-1020	NB03WSK123A	NB03WSK123A-027	Killifish, Striped (SK)	93	9.4	
NBN	123A	NBN-SN-1020	NB03WSK123A	NB03WSK123A-028	Killifish, Striped (SK)	83	6.9	
NBN	123A	NBN-SN-1020	NB03WSK123A	NB03WSK123A-029	Killifish, Striped (SK)	73	4.1	
NBN	123A	NBN-SN-1020	NB03WSK123A	NB03WSK123A-030	Killifish, Striped (SK)	70	3.8	
NBN	123A	NBN-SN-1020	NB03WSK123A	NB03WSK123A-031	Killifish, Striped (SK)	69	3.2	
NBN	123A	NBN-SN-1020	NB03WSK123A	NB03WSK123A-032	Killifish, Striped (SK)	65	2.6	
NBN	123A	NBN-SN-1020	NB03WSK123A	NB03WSK123A-033	Killifish, Striped (SK)	71	4.1	
NBN	122A	NBN-SN-1020	NB03WSK122A	NB03WSK122A-001	Killifish, Striped (SK)	134	33.6	
NBN	122A	NBN-SN-1020	NB03WSK122A	NB03WSK122A-002	Killifish, Striped (SK)	125	27.4	
NBN	122A	NBN-SN-1020	NB03WSK122A	NB03WSK122A-003	Killifish, Striped (SK)	130	25.9	
NBN	122A	NBN-SN-1020	NB03WSK122A	NB03WSK122A-004	Killifish, Striped (SK)	123	25.5	
NBN	122A	NBN-SN-1020	NB03WSK122A	NB03WSK122A-005	Killifish, Striped (SK)	44	0.9	
NBN	122A	NBN-SN-1020	NB03WSK122A	NB03WSK122A-006	Killifish, Striped (SK)	65	3.1	
NBN	122A	NBN-SN-1020	NB03WSK122A	NB03WSK122A-007	Killifish, Striped (SK)	70	3.9	
NBN	122A	NBN-SN-1020	NB03WSK122A	NB03WSK122A-008	Killifish, Striped (SK)	93	9.9	
NBN	122A	NBN-SN-1020	NB03WSK122A	NB03WSK122A-009	Killifish, Striped (SK)	77	5.5	
NBN	122A	NBN-SN-1020	NB03WSK122A	NB03WSK122A-010	Killifish, Striped (SK)	82	6.3	
NBN	122A	NBN-SN-1020	NB03WSK122A	NB03WSK122A-011	Killifish, Striped (SK)	91	9.4	
NBN	122A	NBN-SN-1020	NB03WSK122A	NB03WSK122A-012	Killifish, Striped (SK)	90	8.7	
NBN	122A	NBN-SN-1020	NB03WSK122A	NB03WSK122A-013	Killifish, Striped (SK)	95	10.4	
NBN	122A	NBN-SN-1020	NB03WSK122A	NB03WSK122A-014	Killifish, Striped (SK)	77	5.7	
NBN	122A	NBN-SN-1020	NB03WSK122A	NB03WSK122A-015	Killifish, Striped (SK)	66	3.2	
NBN	122A	NBN-SN-1020	NB03WSK122A	NB03WSK122A-016	Killifish, Striped (SK)	75	4.8	
NBN	122A	NBN-SN-1020	NB03WSK122A	NB03WSK122A-017	Killifish, Striped (SK)	75	4.8	
NBN	122A	NBN-SN-1020	NB03WSK122A	NB03WSK122A-018	Killifish, Striped (SK)	89	8.5	
NBN	122A	NBN-SN-1020	NB03WSK122A	NB03WSK122A-019	Killifish, Striped (SK)	85	7.4	
NBN	122A	NBN-SN-1020	NB03WSK122A	NB03WSK122A-020	Killifish, Striped (SK)	119	20.1	
NBN	122A	NBN-SN-1020	NB03WSK122A	NB03WSK122A-021	Killifish, Striped (SK)	117	20.1	
NBN	122A	NBN-SN-1020	NB03WSK122A	NB03WSK122A-022	Killifish, Striped (SK)	96	11.1	
NBN	122A	NBN-SN-1020	NB03WSK122A	NB03WSK122A-023	Killifish, Striped (SK)	95	11.0	
NBN	122A	NBN-SN-1020	NB03WSK122A	NB03WSK122A-024	Killifish, Striped (SK)	79	5.7	
NBN	122A	NBN-SN-1020	NB03WSK122A	NB03WSK122A-025	Killifish, Striped (SK)	72	4.4	
NBN	122A	NBN-SN-1020	NB03WSK122A	NB03WSK122A-026	Killifish, Striped (SK)	57	2.0	
NBN	122A	NBN-SN-1020	NB03WSK122A	NB03WSK122A-027	Killifish, Striped (SK)	93	9.4	
NBN	122A	NBN-SN-1020	NB03WSK122A	NB03WSK122A-028	Killifish, Striped (SK)	88	7.9	
NBN	122A	NBN-SN-1020	NB03WSK122A	NB03WSK122A-029	Killifish, Striped (SK)	95	10.8	
NBN	122A	NBN-SN-1020	NB03WSK122A	NB03WSK122A-030	Killifish, Striped (SK)	93	9.7	
NBN	122A	NBN-SN-1020	NB03WSK122A	NB03WSK122A-031	Killifish, Striped (SK)	90	8.5	
NBN	122A	NBN-SN-1020	NB03WSK122A	NB03WSK122A-032	Killifish, Striped (SK)	97	11.7	
NBN	122A	NBN-SN-1020	NB03WSK122A	NB03WSK122A-033	Killifish, Striped (SK)	91	10.3	
NBN	122A	NBN-SN-1020	NB03WSK122A	NB03WSK122A-034	Killifish, Striped (SK)	91	9.9	
NBN	122A	NBN-SN-1020	NB03WSK122A	NB03WSK122A-035	Killifish, Striped (SK)	92	9.2	
NBN	122A	NBN-SN-1020	NB03WSK122A	NB03WSK122A-036	Killifish, Striped (SK)	80	6.1	
NBN	122A	NBN-SN-1020	NB03WSK122A	NB03WSK122A-037	Killifish, Striped (SK)	76	5.5	
NBN	122A	NBN-SN-1020	NB03WSK122A	NB03WSK122A-038	Killifish, Striped (SK)	87	8.9	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Comments
NBN	122A	NBN-SN-1020	NB03WSK122A	NB03WSK122A-039	Killifish, Striped (SK)	94	10.4	
NBN	122A	NBN-SN-1020	NB03WSK122A	NB03WSK122A-040	Killifish, Striped (SK)	92	9.8	
NBN	122A	NBN-SN-1020	NB03WSK122A	NB03WSK122A-041	Killifish, Striped (SK)	90	8.8	
NBN	122A	NBN-SN-1020	NB03WSK122A	NB03WSK122A-042	Killifish, Striped (SK)	90	8.8	
NBN	122A	NBN-SN-1020	NB03WSK122A	NB03WSK122A-043	Killifish, Striped (SK)	88	8.9	
NBN	122A	NBN-SN-1020	NB03WSK122A	NB03WSK122A-044	Killifish, Striped (SK)	87	8.3	
NBN	122A	NBN-SN-1020	NB03WSK122A	NB03WSK122A-045	Killifish, Striped (SK)	95	10.4	
NBN	122A	NBN-SN-1020	NB03WSK122A	NB03WSK122A-046	Killifish, Striped (SK)	70	4.0	
NBN	122A	NBN-SN-1020	NB03WSK122A	NB03WSK122A-047	Killifish, Striped (SK)	75	5.1	
NBN	122A	NBN-SN-1020	NB03WSK122A	NB03WSK122A-048	Killifish, Striped (SK)	83	7.7	
NBN	122A	NBN-SN-1020	NB03WSK122A	NB03WSK122A-049	Killifish, Striped (SK)	68	3.8	
NBN	122A	NBN-SN-1020	NB03WSK122A	NB03WSK122A-050	Killifish, Striped (SK)	66	3.3	
NBN	122A	NBN-SN-1020	NB03WSK122A	NB03WSK122A-051	Killifish, Striped (SK)	67	3.6	
NBN	122A	NBN-SN-1020	NB03WSK122A	NB03WSK122A-052	Killifish, Striped (SK)	83	6.4	
NBN	122A	NBN-SN-1020	NB03WSK122A	NB03WSK122A-053	Killifish, Striped (SK)	50	1.2	
NBN	122A	NBN-SN-1020	NB03WSK122A	NB03WSK122A-054	Killifish, Striped (SK)	80	6.6	
NBN	122A	NBN-SN-1020	NB03WSK122A	NB03WSK122A-055	Killifish, Striped (SK)	79	6.1	
NBN	122A	NBN-SN-1020	NB03WSK122A	NB03WSK122A-056	Killifish, Striped (SK)	103	12.5	
NBN	122A	NBN-SN-1020	NB03WSK122A	NB03WSK122A-057	Killifish, Striped (SK)	96	10.6	
NBN	122A	NBN-SN-1020	NB03WSK122A	NB03WSK122A-058	Killifish, Striped (SK)	81	6.5	
NBN	122A	NBN-SN-1020	NB03WSK122A	NB03WSK122A-059	Killifish, Striped (SK)	87	7.7	
NBN	122A	NBN-SN-1020	NB03WSK122A	NB03WSK122A-060	Killifish, Striped (SK)	85	7.3	
NBN	122A	NBN-SN-1020	NB03WSK122A	NB03WSK122A-061	Killifish, Striped (SK)	82	7.0	
NBN	122A	NBN-SN-1020	NB03WSK122A	NB03WSK122A-062	Killifish, Striped (SK)	71	4.7	
NBN	122B	NBN-SN-1020	NB03WSK122B	NB03WSK122B-001	Killifish, Striped (SK)	130	33.0	
NBN	122B	NBN-SN-1020	NB03WSK122B	NB03WSK122B-002	Killifish, Striped (SK)	111	17.8	
NBN	122B	NBN-SN-1020	NB03WSK122B	NB03WSK122B-003	Killifish, Striped (SK)	114	20.8	
NBN	122B	NBN-SN-1020	NB03WSK122B	NB03WSK122B-004	Killifish, Striped (SK)	93	10.4	
NBN	122B	NBN-SN-1020	NB03WSK122B	NB03WSK122B-005	Killifish, Striped (SK)	88	9.8	
NBN	122B	NBN-SN-1020	NB03WSK122B	NB03WSK122B-006	Killifish, Striped (SK)	90	10.2	
NBN	122B	NBN-SN-1020	NB03WSK122B	NB03WSK122B-007	Killifish, Striped (SK)	77	6.0	
NBN	122B	NBN-SN-1020	NB03WSK122B	NB03WSK122B-008	Killifish, Striped (SK)	93	11.5	
NBN	122B	NBN-SN-1020	NB03WSK122B	NB03WSK122B-009	Killifish, Striped (SK)	80	7.2	
NBN	122B	NBN-SN-1020	NB03WSK122B	NB03WSK122B-010	Killifish, Striped (SK)	83	7.6	
NBN	122B	NBN-SN-1020	NB03WSK122B	NB03WSK122B-011	Killifish, Striped (SK)	82	7.1	
NBN	122B	NBN-SN-1020	NB03WSK122B	NB03WSK122B-012	Killifish, Striped (SK)	79	6.3	
NBN	122B	NBN-SN-1020	NB03WSK122B	NB03WSK122B-013	Killifish, Striped (SK)	74	4.8	
NBN	122B	NBN-SN-1020	NB03WSK122B	NB03WSK122B-014	Killifish, Striped (SK)	76	4.8	
NBN	122B	NBN-SN-1020	NB03WSK122B	NB03WSK122B-015	Killifish, Striped (SK)	75	5.3	
NBN	122B	NBN-SN-1020	NB03WSK122B	NB03WSK122B-016	Killifish, Striped (SK)	80	6.5	
NBN	122B	NBN-SN-1020	NB03WSK122B	NB03WSK122B-017	Killifish, Striped (SK)	80	6.3	
NBN	122B	NBN-SN-1020	NB03WSK122B	NB03WSK122B-018	Killifish, Striped (SK)	70	4.1	
NBN	122B	NBN-SN-1020	NB03WSK122B	NB03WSK122B-019	Killifish, Striped (SK)	71	4.3	
NBN	122B	NBN-SN-1020	NB03WSK122B	NB03WSK122B-020	Killifish, Striped (SK)	70	4.1	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Comments
NBN	122B	NBN-SN-1020	NB03WSK122B	NB03WSK122B-021	Killifish, Striped (SK)	75	5.2	
NBN	122B	NBN-SN-1020	NB03WSK122B	NB03WSK122B-022	Killifish, Striped (SK)	65	3.5	
NBN	122B	NBN-SN-1020	NB03WSK122B	NB03WSK122B-023	Killifish, Striped (SK)	72	5.1	
NBN	122B	NBN-SN-1020	NB03WSK122B	NB03WSK122B-024	Killifish, Striped (SK)	57	2.5	
NBN	122B	NBN-SN-1020	NB03WSK122B	NB03WSK122B-025	Killifish, Striped (SK)	50	1.2	
NBN	122B	NBN-SN-1020	NB03WSK122B	NB03WSK122B-026	Killifish, Striped (SK)	49	1.2	
NBN	122B	NBN-SN-1020	NB03WSK122B	NB03WSK122B-027	Killifish, Striped (SK)	51	1.5	
NBN	122B	NBN-SN-1020	NB03WSK122B	NB03WSK122B-028	Killifish, Striped (SK)	46	1.0	
NBN	122B	NBN-SN-1020	NB03WSK122B	NB03WSK122B-029	Killifish, Striped (SK)	57	2.0	
NBN	122B	NBN-SN-1020	NB03WSK122B	NB03WSK122B-030	Killifish, Striped (SK)	40	0.6	
NBN	122B	NBN-SN-1020	NB03WSK122B	NB03WSK122B-031	Killifish, Striped (SK)	46	0.8	
NBN	122B	NBN-SN-1020	NB03WSK122B	NB03WSK122B-032	Killifish, Striped (SK)	56	1.8	
NBN	122B	NBN-SN-1020	NB03WSK122B	NB03WSK122B-033	Killifish, Striped (SK)	39	0.7	
NBN	122B	NBN-SN-1020	NB03WSK122B	NB03WSK122B-034	Killifish, Striped (SK)	42	0.7	
NBN	122B	NBN-SN-1020	NB03WSK122B	NB03WSK122B-035	Killifish, Striped (SK)	51	1.3	
NBN	122B	NBN-SN-1020	NB03WSK122B	NB03WSK122B-036	Killifish, Striped (SK)	52	1.6	
NBN	122B	NBN-SN-1020	NB03WSK122B	NB03WSK122B-037	Killifish, Striped (SK)	38	0.5	
NBN	122B	NBN-SN-1020	NB03WSK122B	NB03WSK122B-038	Killifish, Striped (SK)	50	1.2	
NBN	122B	NBN-SN-1020	NB03WSK122B	NB03WSK122B-039	Killifish, Striped (SK)	43	0.8	
NBN	122B	NBN-SN-1020	NB03WSK122B	NB03WSK122B-040	Killifish, Striped (SK)	54	1.6	
NBN	122B	NBN-SN-1020	NB03WSK122B	NB03WSK122B-041	Killifish, Striped (SK)	35	0.5	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-001	Mummichog (MU)	90	10.9	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-002	Mummichog (MU)	79	7.1	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-003	Mummichog (MU)	61	2.8	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-004	Mummichog (MU)	84	8.1	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-005	Mummichog (MU)	90	9.7	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-006	Mummichog (MU)	72	4.6	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-007	Mummichog (MU)	81	7.2	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-008	Mummichog (MU)	77	6.1	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-009	Mummichog (MU)	71	4.4	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-010	Mummichog (MU)	63	3.5	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-011	Mummichog (MU)	60	2.4	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-012	Mummichog (MU)	85	7.7	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-013	Mummichog (MU)	72	5.1	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-014	Mummichog (MU)	76	5.4	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-015	Mummichog (MU)	80	6.2	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-016	Mummichog (MU)	66	3.9	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-017	Mummichog (MU)	79	7.1	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-018	Mummichog (MU)	72	4.4	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-019	Mummichog (MU)	65	3.4	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-020	Mummichog (MU)	63	3.1	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-021	Mummichog (MU)	56	2.5	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-022	Mummichog (MU)	65	2.7	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-023	Mummichog (MU)	73	5.2	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-024	Mummichog (MU)	61	2.5	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Comments
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-025	Mummichog (MU)	69	4.3	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-026	Mummichog (MU)	71	4.7	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-027	Mummichog (MU)	63	3.3	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-028	Mummichog (MU)	72	4.3	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-029	Mummichog (MU)	77	5.3	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-030	Mummichog (MU)	59	2.5	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-031	Mummichog (MU)	65	3.1	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-032	Mummichog (MU)	60	2.3	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-033	Mummichog (MU)	59	2.6	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-034	Mummichog (MU)	65	3.2	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-035	Mummichog (MU)	61	3.1	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-036	Mummichog (MU)	62	2.9	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-037	Mummichog (MU)	68	3.4	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-038	Mummichog (MU)	70	4.1	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-039	Mummichog (MU)	62	3.7	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-040	Mummichog (MU)	66	3.8	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-041	Mummichog (MU)	72	4.3	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-042	Mummichog (MU)	57	2.2	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-043	Mummichog (MU)	68	3.4	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-044	Mummichog (MU)	67	3.7	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-045	Mummichog (MU)	57	2.3	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-046	Mummichog (MU)	69	3.7	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-047	Mummichog (MU)	70	3.9	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-048	Mummichog (MU)	62	2.8	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-049	Mummichog (MU)	71	4.3	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-050	Mummichog (MU)	61	2.6	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-051	Mummichog (MU)	40	0.7	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-052	Mummichog (MU)	57	2.4	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-053	Mummichog (MU)	65	3.1	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-054	Mummichog (MU)	65	3.5	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-055	Mummichog (MU)	61	2.8	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-056	Mummichog (MU)	65	3.4	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-057	Mummichog (MU)	68	3.9	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-058	Mummichog (MU)	62	3.1	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-059	Mummichog (MU)	52	2.1	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-060	Mummichog (MU)	66	3.5	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-061	Mummichog (MU)	58	2.7	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-062	Mummichog (MU)	60	2.8	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-063	Mummichog (MU)	61	2.7	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-064	Mummichog (MU)	66	3.4	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-065	Mummichog (MU)	66	3.1	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-066	Mummichog (MU)	51	1.7	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-067	Mummichog (MU)	41	0.9	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-068	Mummichog (MU)	40	1.2	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-069	Mummichog (MU)	42	0.7	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Comments
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-070	Mummichog (MU)	48	1.3	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-071	Mummichog (MU)	43	1.0	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-072	Mummichog (MU)	51	1.4	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-073	Mummichog (MU)	40	0.8	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-074	Mummichog (MU)	55	2.5	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-075	Mummichog (MU)	48	1.2	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-076	Mummichog (MU)	47	1.2	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-077	Mummichog (MU)	51	1.9	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-078	Mummichog (MU)	44	0.9	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-079	Mummichog (MU)	43	1.0	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-080	Mummichog (MU)	42	0.8	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-081	Mummichog (MU)	56	2.2	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-082	Mummichog (MU)	47	1.1	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-083	Mummichog (MU)	63	2.3	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-084	Mummichog (MU)	44	0.7	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-085	Mummichog (MU)	43	1.0	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-086	Mummichog (MU)	48	1.2	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-087	Mummichog (MU)	42	0.9	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-088	Mummichog (MU)	43	1.1	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-089	Mummichog (MU)	44	1.1	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-090	Mummichog (MU)	56	1.9	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-091	Mummichog (MU)	66	3.6	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-092	Mummichog (MU)	54	2.0	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-093	Mummichog (MU)	57	2.4	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-094	Mummichog (MU)	42	1.2	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-095	Mummichog (MU)	36	0.5	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-096	Mummichog (MU)	51	1.5	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-097	Mummichog (MU)	59	2.2	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-098	Mummichog (MU)	46	1.2	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-099	Mummichog (MU)	41	1.2	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-100	Mummichog (MU)	51	1.8	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-101	Mummichog (MU)	49	1.3	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-102	Mummichog (MU)	50	1.7	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-103	Mummichog (MU)	53	1.7	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-104	Mummichog (MU)	41	0.9	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-105	Mummichog (MU)	38	0.7	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-106	Mummichog (MU)	45	1.0	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-107	Mummichog (MU)	53	1.9	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-108	Mummichog (MU)	53	2.0	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-109	Mummichog (MU)	57	2.2	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-110	Mummichog (MU)	60	2.5	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-111	Mummichog (MU)	55	2.4	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-112	Mummichog (MU)	48	1.4	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-113	Mummichog (MU)	54	1.8	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-114	Mummichog (MU)	45	1.2	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Comments
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-115	Mummichog (MU)	62	3.3	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-116	Mummichog (MU)	49	1.6	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-117	Mummichog (MU)	48	1.5	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-118	Mummichog (MU)	44	0.9	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-119	Mummichog (MU)	42	0.8	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-120	Mummichog (MU)	40	0.7	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-121	Mummichog (MU)	46	1.2	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-122	Mummichog (MU)	50	1.5	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-123	Mummichog (MU)	46	1.0	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-124	Mummichog (MU)	39	0.7	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-125	Mummichog (MU)	41	0.8	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-126	Mummichog (MU)	46	1.2	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-127	Mummichog (MU)	41	0.7	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-128	Mummichog (MU)	46	1.1	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-129	Mummichog (MU)	52	1.4	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-130	Mummichog (MU)	42	0.4	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-131	Mummichog (MU)	44	0.8	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-132	Mummichog (MU)	51	1.8	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-133	Mummichog (MU)	47	1.3	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-134	Mummichog (MU)	44	1.2	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-135	Mummichog (MU)	51	2.0	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-136	Mummichog (MU)	41	0.9	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-137	Mummichog (MU)	41	0.8	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-138	Mummichog (MU)	51	1.3	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-139	Mummichog (MU)	60	2.9	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-140	Mummichog (MU)	49	1.4	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-141	Mummichog (MU)	56	1.8	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-142	Mummichog (MU)	59	2.7	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-143	Mummichog (MU)	41	0.7	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-144	Mummichog (MU)	56	1.8	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-145	Mummichog (MU)	52	1.5	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-146	Mummichog (MU)	53	1.6	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-147	Mummichog (MU)	51	2.1	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-148	Mummichog (MU)	41	0.8	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-149	Mummichog (MU)	47	1.4	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-150	Mummichog (MU)	44	0.2	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-151	Mummichog (MU)	44	1.1	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-152	Mummichog (MU)	41	0.8	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-153	Mummichog (MU)	40	0.7	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-154	Mummichog (MU)	41	0.7	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-155	Mummichog (MU)	41	0.7	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-156	Mummichog (MU)	49	1.3	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-157	Mummichog (MU)	55	2.0	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-158	Mummichog (MU)	60	2.4	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-159	Mummichog (MU)	56	2.0	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Comments
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-160	Mummichog (MU)	50	1.7	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-161	Mummichog (MU)	42	0.6	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-162	Mummichog (MU)	53	2.1	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-163	Mummichog (MU)	43	0.9	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-164	Mummichog (MU)	43	1.0	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-165	Mummichog (MU)	40	0.7	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-166	Mummichog (MU)	45	1.0	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-167	Mummichog (MU)	44	0.9	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-168	Mummichog (MU)	61	2.7	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-169	Mummichog (MU)	52	2.1	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-170	Mummichog (MU)	47	1.4	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-171	Mummichog (MU)	55	2.1	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-172	Mummichog (MU)	45	0.9	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-173	Mummichog (MU)	55	2.5	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-174	Mummichog (MU)	42	0.9	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-175	Mummichog (MU)	41	0.8	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-176	Mummichog (MU)	55	1.8	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-177	Mummichog (MU)	48	1.2	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-178	Mummichog (MU)	53	1.9	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-179	Mummichog (MU)	54	2.0	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-180	Mummichog (MU)	41	0.8	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-181	Mummichog (MU)	58	2.2	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-182	Mummichog (MU)	47	1.2	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-183	Mummichog (MU)	57	2.2	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-184	Mummichog (MU)	50	1.3	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-185	Mummichog (MU)	51	1.7	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-186	Mummichog (MU)	50	1.5	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-187	Mummichog (MU)	53	1.9	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-188	Mummichog (MU)	57	2.2	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-189	Mummichog (MU)	61	2.5	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-190	Mummichog (MU)	51	1.4	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-191	Mummichog (MU)	56	1.9	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-192	Mummichog (MU)	51	1.5	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-193	Mummichog (MU)	52	1.6	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-194	Mummichog (MU)	51	1.5	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-195	Mummichog (MU)	51	1.7	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-196	Mummichog (MU)	48	1.3	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-197	Mummichog (MU)	51	1.5	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-198	Mummichog (MU)	44	1.2	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-199	Mummichog (MU)	50	1.6	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-200	Mummichog (MU)	46	1.0	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-201	Mummichog (MU)	50	1.3	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-202	Mummichog (MU)	38	0.6	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-203	Mummichog (MU)	43	8.9	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-204	Mummichog (MU)	46	1.2	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Comments
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-205	Mummichog (MU)	45	0.8	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-206	Mummichog (MU)	49	1.2	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-207	Mummichog (MU)	48	1.1	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-208	Mummichog (MU)	47	1.3	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-209	Mummichog (MU)	46	1.0	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-210	Mummichog (MU)	56	1.8	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-211	Mummichog (MU)	61	2.5	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-212	Mummichog (MU)	49	1.2	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-213	Mummichog (MU)	49	1.3	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-214	Mummichog (MU)	50	1.3	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-215	Mummichog (MU)	43	1.0	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-216	Mummichog (MU)	41	0.7	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-217	Mummichog (MU)	49	1.3	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-218	Mummichog (MU)	47	1.3	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-219	Mummichog (MU)	51	1.4	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-220	Mummichog (MU)	54	1.8	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-221	Mummichog (MU)	40	0.9	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-222	Mummichog (MU)	51	1.6	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-223	Mummichog (MU)	44	1.3	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-224	Mummichog (MU)	47	1.3	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-225	Mummichog (MU)	52	2.1	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-226	Mummichog (MU)	46	1.1	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-227	Mummichog (MU)	59	2.2	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-228	Mummichog (MU)	48	1.6	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-229	Mummichog (MU)	52	2.1	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-230	Mummichog (MU)	48	1.3	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-231	Mummichog (MU)	47	1.4	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-232	Mummichog (MU)	60	2.6	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-233	Mummichog (MU)	47	1.2	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-234	Mummichog (MU)	48	1.4	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-235	Mummichog (MU)	53	0.8	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-236	Mummichog (MU)	58	2.5	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-237	Mummichog (MU)	41	1.0	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-238	Mummichog (MU)	40	1.0	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-239	Mummichog (MU)	42	0.8	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-240	Mummichog (MU)	49	1.0	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-241	Mummichog (MU)	46	1.3	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-242	Mummichog (MU)	49	1.1	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-243	Mummichog (MU)	57	2.2	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-244	Mummichog (MU)	41	1.0	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-245	Mummichog (MU)	36	0.6	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-246	Mummichog (MU)	60	2.6	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-247	Mummichog (MU)	60	2.4	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-248	Mummichog (MU)	59	2.3	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-249	Mummichog (MU)	46	1.1	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Comments
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-250	Mummichog (MU)	51	1.5	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-251	Mummichog (MU)	52	1.8	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-252	Mummichog (MU)	51	1.4	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-253	Mummichog (MU)	50	1.1	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-254	Mummichog (MU)	56	2.1	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-255	Mummichog (MU)	51	1.5	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-256	Mummichog (MU)	47	1.6	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-257	Mummichog (MU)	43	1.1	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-258	Mummichog (MU)	54	1.6	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-259	Mummichog (MU)	49	1.5	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-260	Mummichog (MU)	42	0.9	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-261	Mummichog (MU)	46	1.3	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-262	Mummichog (MU)	44	1.1	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-263	Mummichog (MU)	41	0.9	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-264	Mummichog (MU)	55	2.7	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-265	Mummichog (MU)	45	1.1	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-266	Mummichog (MU)	40	0.7	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-267	Mummichog (MU)	45	0.9	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-268	Mummichog (MU)	38	0.6	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-269	Mummichog (MU)	43	0.9	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-270	Mummichog (MU)	60	2.3	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-271	Mummichog (MU)	60	2.5	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-272	Mummichog (MU)	50	1.3	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-273	Mummichog (MU)	45	0.9	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-274	Mummichog (MU)	45	1.2	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-275	Mummichog (MU)	43	0.9	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-276	Mummichog (MU)	38	0.6	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-277	Mummichog (MU)	31	0.5	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-278	Mummichog (MU)	53	2.0	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-279	Mummichog (MU)	37	0.6	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-280	Mummichog (MU)	40	0.9	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-281	Mummichog (MU)	53	1.6	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-282	Mummichog (MU)	55	1.9	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-283	Mummichog (MU)	54	2.1	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-284	Mummichog (MU)	51	1.9	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-285	Mummichog (MU)	55	1.9	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-286	Mummichog (MU)	36	0.6	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-287	Mummichog (MU)	45	0.9	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-288	Mummichog (MU)	52	1.6	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-289	Mummichog (MU)	55	2.1	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-290	Mummichog (MU)	49	1.2	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-291	Mummichog (MU)	42	0.7	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-292	Mummichog (MU)	48	1.2	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-293	Mummichog (MU)	45	1.3	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-294	Mummichog (MU)	36	0.5	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Comments
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-295	Mummichog (MU)	51	1.7	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-296	Mummichog (MU)	49	1.1	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-297	Mummichog (MU)	54	1.7	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-298	Mummichog (MU)	46	1.1	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-299	Mummichog (MU)	50	1.3	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-300	Mummichog (MU)	53	1.7	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-301	Mummichog (MU)	43	1.0	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-302	Mummichog (MU)	42	0.8	
NBN	122C	NBN-SN-1020	NB03WMU122C	NB03WMU122C-303	Mummichog (MU)	46	1.1	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-001	Silverside, Atlantic (AS)	110	6.8	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-002	Silverside, Atlantic (AS)	109	6.6	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-003	Silverside, Atlantic (AS)	110	4.9	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-004	Silverside, Atlantic (AS)	113	7.3	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-005	Silverside, Atlantic (AS)	95	4.5	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-006	Silverside, Atlantic (AS)	106	6.0	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-007	Silverside, Atlantic (AS)	130	11.2	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-008	Silverside, Atlantic (AS)	111	7.4	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-009	Silverside, Atlantic (AS)	100	5.1	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-010	Silverside, Atlantic (AS)	95	4.3	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-011	Silverside, Atlantic (AS)	108	6.2	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-012	Silverside, Atlantic (AS)	110	6.6	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-013	Silverside, Atlantic (AS)	105	5.7	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-014	Silverside, Atlantic (AS)	108	6.0	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-015	Silverside, Atlantic (AS)	102	5.2	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-016	Silverside, Atlantic (AS)	101	4.9	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-017	Silverside, Atlantic (AS)	103	4.9	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-018	Silverside, Atlantic (AS)	109	7.7	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-019	Silverside, Atlantic (AS)	101	5.3	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-020	Silverside, Atlantic (AS)	94	4.1	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-021	Silverside, Atlantic (AS)	105	5.1	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-022	Silverside, Atlantic (AS)	98	4.4	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-023	Silverside, Atlantic (AS)	110	7.1	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-024	Silverside, Atlantic (AS)	107	6.2	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-025	Silverside, Atlantic (AS)	96	4.0	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-026	Silverside, Atlantic (AS)	102	5.1	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-027	Silverside, Atlantic (AS)	94	4.0	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-028	Silverside, Atlantic (AS)	110	6.6	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-029	Silverside, Atlantic (AS)	91	3.9	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-030	Silverside, Atlantic (AS)	98	4.6	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-031	Silverside, Atlantic (AS)	103	4.9	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-032	Silverside, Atlantic (AS)	93	4.2	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-033	Silverside, Atlantic (AS)	105	5.7	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-034	Silverside, Atlantic (AS)	97	4.3	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-035	Silverside, Atlantic (AS)	105	6.7	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-036	Silverside, Atlantic (AS)	100	5.1	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Comments
NBN		NBN-SN-1013	NB03FBLN027	NB03FBLN027-001	Bluefish (BL)	153	28.4	
NBN		NBN-SN-1013	NB03FBLN027	NB03FBLN027-002	Bluefish (BL)	228	98.1	
NBN		NBN-SN-1013	NB03FBLN027	NB03FBLN027-003	Bluefish (BL)	175	43.4	
NBN		NBN-SN-1013	NB03FBLN027	NB03FBLN027-004	Bluefish (BL)	147	23.7	
NBN		NBN-SN-1013	NB03FBLN027	NB03FBLN027-005	Bluefish (BL)	132	17.5	
NBN		NBN-SN-1013	NB03FBLN027	NB03FBLN027-006	Bluefish (BL)	134	21.4	
NBN		NBN-SN-1013	NB03FBLN027	NB03FBLN027-007	Bluefish (BL)	130	15.7	
NBN		NBN-SN-1013	NB03FBLN027	NB03FBLN027-008	Bluefish (BL)	141	24.4	
NBN		NBN-SN-1013	NB03FBLN027	NB03FBLN027-009	Bluefish (BL)	145	26.1	
NBN		NBN-SN-1013	NB03FBLN027	NB03FBLN027-010	Bluefish (BL)	178	49.3	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-001	Killifish, Striped (SK)	105	14.1	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-002	Killifish, Striped (SK)	95	9.6	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-003	Killifish, Striped (SK)	80	5.9	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-004	Killifish, Striped (SK)	96	11.7	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-005	Killifish, Striped (SK)	97	9.5	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-006	Killifish, Striped (SK)	95	11.0	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-007	Killifish, Striped (SK)	97	11.6	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-008	Killifish, Striped (SK)	95	11.3	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-009	Killifish, Striped (SK)	104	13.1	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-010	Killifish, Striped (SK)	90	9.1	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-011	Killifish, Striped (SK)	87	8.0	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-012	Killifish, Striped (SK)	110	15.7	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-013	Killifish, Striped (SK)	92	10.3	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-014	Killifish, Striped (SK)	102	12.6	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-015	Killifish, Striped (SK)	95	10.1	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-016	Killifish, Striped (SK)	89	8.5	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-017	Killifish, Striped (SK)	83	6.8	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-018	Killifish, Striped (SK)	88	8.8	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-019	Killifish, Striped (SK)	68	3.5	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-020	Killifish, Striped (SK)	72	4.2	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-021	Killifish, Striped (SK)	91	8.6	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-022	Killifish, Striped (SK)	75	4.3	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-023	Killifish, Striped (SK)	70	4.0	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-024	Killifish, Striped (SK)	94	10.5	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-025	Killifish, Striped (SK)	72	4.3	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-026	Killifish, Striped (SK)	67	2.6	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-027	Killifish, Striped (SK)	80	6.3	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-028	Killifish, Striped (SK)	95	11.6	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-029	Killifish, Striped (SK)	88	8.4	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-030	Killifish, Striped (SK)	68	3.8	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-031	Killifish, Striped (SK)	92	9.6	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-032	Killifish, Striped (SK)	93	10.6	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-033	Killifish, Striped (SK)	88	8.7	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-034	Killifish, Striped (SK)	73	4.2	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-035	Killifish, Striped (SK)	73	4.5	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Comments
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-036	Killifish, Striped (SK)	72	4.7	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-037	Killifish, Striped (SK)	97	10.9	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-038	Killifish, Striped (SK)	96	10.5	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-039	Killifish, Striped (SK)	102	13.2	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-040	Killifish, Striped (SK)	73	4.5	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-041	Killifish, Striped (SK)	81	5.9	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-042	Killifish, Striped (SK)	86	8.1	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-043	Killifish, Striped (SK)	88	11.0	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-044	Killifish, Striped (SK)	92	9.9	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-045	Killifish, Striped (SK)	103	13.1	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-046	Killifish, Striped (SK)	74	4.7	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-047	Killifish, Striped (SK)	72	4.4	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-048	Killifish, Striped (SK)	105	13.7	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-049	Killifish, Striped (SK)	93	10.1	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-050	Killifish, Striped (SK)	95	9.7	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-051	Killifish, Striped (SK)	94	10.7	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-052	Killifish, Striped (SK)	105	14.2	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-053	Killifish, Striped (SK)	105	15.4	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-054	Killifish, Striped (SK)	92	9.6	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-055	Killifish, Striped (SK)	95	11.0	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-056	Killifish, Striped (SK)	103	13.1	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-057	Killifish, Striped (SK)	103	12.5	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-058	Killifish, Striped (SK)	100	13.0	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-059	Killifish, Striped (SK)	93	10.3	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-060	Killifish, Striped (SK)	98	11.7	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-061	Killifish, Striped (SK)	107	13.7	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-062	Killifish, Striped (SK)	88	8.8	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-063	Killifish, Striped (SK)	87	8.6	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-064	Killifish, Striped (SK)	94	11.0	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-065	Killifish, Striped (SK)	80	6.4	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-066	Killifish, Striped (SK)	92	8.9	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-067	Killifish, Striped (SK)	88	8.1	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-068	Killifish, Striped (SK)	89	8.4	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-069	Killifish, Striped (SK)	93	9.4	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-070	Killifish, Striped (SK)	93	10.9	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-071	Killifish, Striped (SK)	105	13.8	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-072	Killifish, Striped (SK)	88	8.1	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-073	Killifish, Striped (SK)	98	11.0	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-074	Killifish, Striped (SK)	87	8.1	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-075	Killifish, Striped (SK)	104	14.0	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-076	Killifish, Striped (SK)	85	8.0	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-077	Killifish, Striped (SK)	80	6.2	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-078	Killifish, Striped (SK)	98	12.0	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-079	Killifish, Striped (SK)	92	9.7	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-080	Killifish, Striped (SK)	88	9.6	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Comments
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-081	Killifish, Striped (SK)	91	9.6	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-082	Killifish, Striped (SK)	91	9.3	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-083	Killifish, Striped (SK)	99	11.3	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-084	Killifish, Striped (SK)	98	11.4	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-085	Killifish, Striped (SK)	88	7.9	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-086	Killifish, Striped (SK)	97	11.5	
NBN	123B	NBN-SN-1013	NB03WSK123B	NB03WSK123B-087	Killifish, Striped (SK)	90	9.2	
NBN		NBN-SN-1013	NB03WWPN028	NB03WWPN028-001	Perch, White (WP)	94	9.7	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-001	Silverside, Atlantic (AS)	110	6.7	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-002	Silverside, Atlantic (AS)	109	7.2	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-003	Silverside, Atlantic (AS)	98	4.4	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-004	Silverside, Atlantic (AS)	110	6.8	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-005	Silverside, Atlantic (AS)	101	5.0	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-006	Silverside, Atlantic (AS)	111	6.7	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-007	Silverside, Atlantic (AS)	107	5.6	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-008	Silverside, Atlantic (AS)	103	4.9	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-009	Silverside, Atlantic (AS)	98	5.0	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-010	Silverside, Atlantic (AS)	102	5.9	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-011	Silverside, Atlantic (AS)	72	1.7	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-012	Silverside, Atlantic (AS)	82	2.6	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-013	Silverside, Atlantic (AS)	117	8.4	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-014	Silverside, Atlantic (AS)	92	3.6	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-015	Silverside, Atlantic (AS)	102	5.0	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-016	Silverside, Atlantic (AS)	94	4.9	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-017	Silverside, Atlantic (AS)	111	6.5	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-018	Silverside, Atlantic (AS)	102	5.6	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-019	Silverside, Atlantic (AS)	92	3.7	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-020	Silverside, Atlantic (AS)	110	6.9	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-021	Silverside, Atlantic (AS)	95	4.0	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-022	Silverside, Atlantic (AS)	110	6.2	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-023	Silverside, Atlantic (AS)	108	6.3	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-024	Silverside, Atlantic (AS)	90	3.4	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-025	Silverside, Atlantic (AS)	103	5.9	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-026	Silverside, Atlantic (AS)	107	5.3	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-027	Silverside, Atlantic (AS)	91	3.2	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-028	Silverside, Atlantic (AS)	89	3.4	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-029	Silverside, Atlantic (AS)	105	5.0	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-030	Silverside, Atlantic (AS)	110	7.4	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-031	Silverside, Atlantic (AS)	96	4.2	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-032	Silverside, Atlantic (AS)	80	2.4	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-033	Silverside, Atlantic (AS)	103	5.1	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-034	Silverside, Atlantic (AS)	83	2.5	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-035	Silverside, Atlantic (AS)	91	4.3	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-036	Silverside, Atlantic (AS)	109	5.7	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-037	Silverside, Atlantic (AS)	90	3.2	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Comments
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-038	Silverside, Atlantic (AS)	88	2.8	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-039	Silverside, Atlantic (AS)	97	4.5	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-040	Silverside, Atlantic (AS)	98	4.4	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-041	Silverside, Atlantic (AS)	96	4.6	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-042	Silverside, Atlantic (AS)	94	4.3	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-043	Silverside, Atlantic (AS)	73	1.6	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-044	Silverside, Atlantic (AS)	91	3.8	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-045	Silverside, Atlantic (AS)	91	3.8	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-046	Silverside, Atlantic (AS)	96	4.7	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-047	Silverside, Atlantic (AS)	95	4.0	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-048	Silverside, Atlantic (AS)	107	6.5	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-049	Silverside, Atlantic (AS)	82	2.9	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-050	Silverside, Atlantic (AS)	103	5.1	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-051	Silverside, Atlantic (AS)	115	7.5	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-052	Silverside, Atlantic (AS)	98	5.0	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-053	Silverside, Atlantic (AS)	94	4.0	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-054	Silverside, Atlantic (AS)	98	4.6	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-055	Silverside, Atlantic (AS)	94	3.5	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-056	Silverside, Atlantic (AS)	105	5.3	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-057	Silverside, Atlantic (AS)	98	4.8	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-058	Silverside, Atlantic (AS)	102	4.8	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-059	Silverside, Atlantic (AS)	110	7.4	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-060	Silverside, Atlantic (AS)	106	5.5	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-061	Silverside, Atlantic (AS)	96	4.7	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-062	Silverside, Atlantic (AS)	108	6.6	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-063	Silverside, Atlantic (AS)	88	3.3	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-064	Silverside, Atlantic (AS)	90	4.0	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-065	Silverside, Atlantic (AS)	90	3.5	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-066	Silverside, Atlantic (AS)	99	5.0	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-067	Silverside, Atlantic (AS)	90	3.6	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-068	Silverside, Atlantic (AS)	94	4.3	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-069	Silverside, Atlantic (AS)	112	7.2	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-070	Silverside, Atlantic (AS)	95	4.1	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-071	Silverside, Atlantic (AS)	91	3.2	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-072	Silverside, Atlantic (AS)	106	6.2	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-073	Silverside, Atlantic (AS)	96	4.4	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-074	Silverside, Atlantic (AS)	96	4.7	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-075	Silverside, Atlantic (AS)	95	4.5	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-076	Silverside, Atlantic (AS)	92	3.9	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-077	Silverside, Atlantic (AS)	88	3.4	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-078	Silverside, Atlantic (AS)	90	3.3	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-079	Silverside, Atlantic (AS)	101	4.7	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-080	Silverside, Atlantic (AS)	82	2.8	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-081	Silverside, Atlantic (AS)	96	4.0	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-082	Silverside, Atlantic (AS)	93	4.1	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Comments
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-083	Silverside, Atlantic (AS)	97	3.8	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-084	Silverside, Atlantic (AS)	88	3.2	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-085	Silverside, Atlantic (AS)	97	4.5	
NBN		NBN-SN-1013	NB03WASN029	NB03WASN029-086	Silverside, Atlantic (AS)	104	5.5	
NBN	132A	NBN-SN-1013	NB03WSK132A	NB03WSK132A-001	Killifish, Striped (SK)	120	25.6	
NBN	132A	NBN-SN-1013	NB03WSK132A	NB03WSK132A-002	Killifish, Striped (SK)	121	24.3	
NBN	132A	NBN-SN-1013	NB03WSK132A	NB03WSK132A-003	Killifish, Striped (SK)	110	17.8	
NBN	132A	NBN-SN-1013	NB03WSK132A	NB03WSK132A-004	Killifish, Striped (SK)	101	13.5	
NBN	132A	NBN-SN-1013	NB03WSK132A	NB03WSK132A-005	Killifish, Striped (SK)	99	12.6	
NBN	132A	NBN-SN-1013	NB03WSK132A	NB03WSK132A-006	Killifish, Striped (SK)	108	17.8	
NBN	132A	NBN-SN-1013	NB03WSK132A	NB03WSK132A-007	Killifish, Striped (SK)	98	13.4	
NBN	132A	NBN-SN-1013	NB03WSK132A	NB03WSK132A-008	Killifish, Striped (SK)	96	11.3	
NBN	132A	NBN-SN-1013	NB03WSK132A	NB03WSK132A-009	Killifish, Striped (SK)	88	9.8	
NBN	132A	NBN-SN-1013	NB03WSK132A	NB03WSK132A-010	Killifish, Striped (SK)	94	10.2	
NBN	132A	NBN-SN-1013	NB03WSK132A	NB03WSK132A-011	Killifish, Striped (SK)	99	9.1	
NBN	132A	NBN-SN-1013	NB03WSK132A	NB03WSK132A-012	Killifish, Striped (SK)	85	8.1	
NBN	132A	NBN-SN-1013	NB03WSK132A	NB03WSK132A-013	Killifish, Striped (SK)	81	6.7	
NBN	132A	NBN-SN-1013	NB03WSK132A	NB03WSK132A-014	Killifish, Striped (SK)	70	3.9	
NBN	132A	NBN-SN-1013	NB03WSK132A	NB03WSK132A-015	Killifish, Striped (SK)	95	10.2	
NBN	132A	NBN-SN-1013	NB03WSK132A	NB03WSK132A-016	Killifish, Striped (SK)	78	5.5	
NBN	132A	NBN-SN-1013	NB03WSK132A	NB03WSK132A-017	Killifish, Striped (SK)	85	7.9	
NBN		NBN-SN-1013	NB03WWFN030	NB03WWFN030-001	Flounder, Winter (WF)	105	11.7	
NBN		NBN-SN-1013	NB03WWFN031	NB03WWFN031-001	Flounder, Winter (WF)	102	11.8	
NBN		NBN-SN-1013	NB03WWFN032	NB03WWFN032-001	Flounder, Winter (WF)	103	12.3	
NBN		NBN-SN-1013	NB03WWFN033	NB03WWFN033-001	Flounder, Winter (WF)	80	5.5	
NBN	132B	NBN-SN-1013	NB03WSK132B	NB03WSK132B-001	Killifish, Striped (SK)	95	12.1	
NBN	132B	NBN-SN-1013	NB03WSK132B	NB03WSK132B-002	Killifish, Striped (SK)	85	7.9	
NBN	132B	NBN-SN-1013	NB03WSK132B	NB03WSK132B-003	Killifish, Striped (SK)	88	8.2	
NBN	132B	NBN-SN-1013	NB03WSK132B	NB03WSK132B-004	Killifish, Striped (SK)	87	7.3	
NBN	132B	NBN-SN-1013	NB03WSK132B	NB03WSK132B-005	Killifish, Striped (SK)	90	9.3	
NBN	132B	NBN-SN-1013	NB03WSK132B	NB03WSK132B-006	Killifish, Striped (SK)	91	8.3	
NBN	132B	NBN-SN-1013	NB03WSK132B	NB03WSK132B-007	Killifish, Striped (SK)	103	11.5	
NBN	132B	NBN-SN-1013	NB03WSK132B	NB03WSK132B-008	Killifish, Striped (SK)	95	10.6	
NBN	132B	NBN-SN-1013	NB03WSK132B	NB03WSK132B-009	Killifish, Striped (SK)	84	6.9	
NBN	132B	NBN-SN-1013	NB03WSK132B	NB03WSK132B-010	Killifish, Striped (SK)	65	2.9	
NBN	132B	NBN-SN-1013	NB03WSK132B	NB03WSK132B-011	Killifish, Striped (SK)	98	11.8	
NBN	132B	NBN-SN-1013	NB03WSK132B	NB03WSK132B-012	Killifish, Striped (SK)	98	11.8	
NBN	132B	NBN-SN-1013	NB03WSK132B	NB03WSK132B-013	Killifish, Striped (SK)	90	8.6	
NBN	132B	NBN-SN-1013	NB03WSK132B	NB03WSK132B-014	Killifish, Striped (SK)	105	12.9	
NBN	132B	NBN-SN-1013	NB03WSK132B	NB03WSK132B-015	Killifish, Striped (SK)	90	8.8	
NBN	132B	NBN-SN-1013	NB03WSK132B	NB03WSK132B-016	Killifish, Striped (SK)	105	14.9	
NBN	132B	NBN-SN-1013	NB03WSK132B	NB03WSK132B-017	Killifish, Striped (SK)	106	15.1	
NBN	132B	NBN-SN-1013	NB03WSK132B	NB03WSK132B-018	Killifish, Striped (SK)	92	9.9	
NBN	132B	NBN-SN-1013	NB03WSK132B	NB03WSK132B-019	Killifish, Striped (SK)	85	7.0	
NBN	132B	NBN-SN-1013	NB03WSK132B	NB03WSK132B-020	Killifish, Striped (SK)	94	9.7	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Comments
NBN	132B	NBN-SN-1013	NB03WSK132B	NB03WSK132B-021	Killifish, Striped (SK)	95	9.6	
NBN	132B	NBN-SN-1013	NB03WSK132B	NB03WSK132B-022	Killifish, Striped (SK)	80	6.0	
NBN	132B	NBN-SN-1013	NB03WSK132B	NB03WSK132B-023	Killifish, Striped (SK)	68	3.5	
NBN	132B	NBN-SN-1013	NB03WSK132B	NB03WSK132B-024	Killifish, Striped (SK)	95	10.0	
NBN	132B	NBN-SN-1013	NB03WSK132B	NB03WSK132B-025	Killifish, Striped (SK)	94	10.0	
NBN	132B	NBN-SN-1013	NB03WSK132B	NB03WSK132B-026	Killifish, Striped (SK)	92	8.5	
NBN	132B	NBN-SN-1013	NB03WSK132B	NB03WSK132B-027	Killifish, Striped (SK)	83	6.2	
NBN	132B	NBN-SN-1013	NB03WSK132B	NB03WSK132B-028	Killifish, Striped (SK)	84	7.6	
NBN	132B	NBN-SN-1013	NB03WSK132B	NB03WSK132B-029	Killifish, Striped (SK)	76	5.0	
NBN	132B	NBN-SN-1013	NB03WSK132B	NB03WSK132B-030	Killifish, Striped (SK)	68	3.2	
NBN	132B	NBN-SN-1013	NB03WSK132B	NB03WSK132B-031	Killifish, Striped (SK)	74	12.2	
NBN	132B	NBN-SN-1013	NB03WSK132B	NB03WSK132B-032	Killifish, Striped (SK)	68	3.5	
NBN	132B	NBN-SN-1013	NB03WSK132B	NB03WSK132B-033	Killifish, Striped (SK)	70	4.0	
NBN	132B	NBN-SN-1013	NB03WSK132B	NB03WSK132B-034	Killifish, Striped (SK)	67	3.2	
NBN	132B	NBN-SN-1013	NB03WSK132B	NB03WSK132B-035	Killifish, Striped (SK)	70	4.5	
NBN	132B	NBN-SN-1013	NB03WSK132B	NB03WSK132B-036	Killifish, Striped (SK)	110	15.3	
NBN	132B	NBN-SN-1013	NB03WSK132B	NB03WSK132B-037	Killifish, Striped (SK)	78	5.8	
NBN	132B	NBN-SN-1013	NB03WSK132B	NB03WSK132B-038	Killifish, Striped (SK)	79	5.7	
NBN	132B	NBN-SN-1013	NB03WSK132B	NB03WSK132B-039	Killifish, Striped (SK)	67	2.8	
NBN	132B	NBN-SN-1013	NB03WSK132B	NB03WSK132B-040	Killifish, Striped (SK)	65	2.5	
NBN	132B	NBN-SN-1013	NB03WSK132B	NB03WSK132B-041	Killifish, Striped (SK)	80	5.9	
NBN	132B	NBN-SN-1013	NB03WSK132B	NB03WSK132B-042	Killifish, Striped (SK)	68	3.4	
NBN	132B	NBN-SN-1013	NB03WSK132B	NB03WSK132B-043	Killifish, Striped (SK)	68	3.6	
NBN	132B	NBN-SN-1013	NB03WSK132B	NB03WSK132B-044	Killifish, Striped (SK)	76	4.5	
NBN	132B	NBN-SN-1013	NB03WSK132B	NB03WSK132B-045	Killifish, Striped (SK)	80	5.7	
NBN	132B	NBN-SN-1013	NB03WSK132B	NB03WSK132B-046	Killifish, Striped (SK)	74	4.9	
NBN	132B	NBN-SN-1013	NB03WSK132B	NB03WSK132B-047	Killifish, Striped (SK)	70	3.1	
NBN	132B	NBN-SN-1013	NB03WSK132B	NB03WSK132B-048	Killifish, Striped (SK)	78	5.2	
NBN	132B	NBN-SN-1013	NB03WSK132B	NB03WSK132B-049	Killifish, Striped (SK)	68	3.5	
NBN	132B	NBN-SN-1013	NB03WSK132B	NB03WSK132B-050	Killifish, Striped (SK)	105	14.4	
NBN	132B	NBN-SN-1013	NB03WSK132B	NB03WSK132B-051	Killifish, Striped (SK)	82	5.6	
NBN	132B	NBN-SN-1013	NB03WSK132B	NB03WSK132B-052	Killifish, Striped (SK)	92	9.7	
NBN	132B	NBN-SN-1013	NB03WSK132B	NB03WSK132B-053	Killifish, Striped (SK)	92	9.9	
NBN	132B	NBN-SN-1013	NB03WSK132B	NB03WSK132B-054	Killifish, Striped (SK)	98	11.8	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-037	Silverside, Atlantic (AS)	105	5.3	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-038	Silverside, Atlantic (AS)	108	6.6	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-039	Silverside, Atlantic (AS)	108	6.0	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-040	Silverside, Atlantic (AS)	108	7.3	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-041	Silverside, Atlantic (AS)	115	7.3	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-042	Silverside, Atlantic (AS)	121	8.6	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-043	Silverside, Atlantic (AS)	95	4.3	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-044	Silverside, Atlantic (AS)	98	5.8	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-045	Silverside, Atlantic (AS)	102	5.1	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-046	Silverside, Atlantic (AS)	116	7.9	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-047	Silverside, Atlantic (AS)	105	5.7	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Comments
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-048	Silverside, Atlantic (AS)	110	6.2	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-049	Silverside, Atlantic (AS)	98	4.8	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-050	Silverside, Atlantic (AS)	55	0.7	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-051	Silverside, Atlantic (AS)	94	4.1	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-052	Silverside, Atlantic (AS)	118	7.9	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-053	Silverside, Atlantic (AS)	110	7.1	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-054	Silverside, Atlantic (AS)	114	7.6	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-055	Silverside, Atlantic (AS)	118	8.3	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-056	Silverside, Atlantic (AS)	103	5.2	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-057	Silverside, Atlantic (AS)	113	7.6	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-058	Silverside, Atlantic (AS)	110	6.6	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-059	Silverside, Atlantic (AS)	115	6.8	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-060	Silverside, Atlantic (AS)	85	2.7	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-061	Silverside, Atlantic (AS)	90	3.7	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-062	Silverside, Atlantic (AS)	91	3.3	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-063	Silverside, Atlantic (AS)	100	4.8	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-064	Silverside, Atlantic (AS)	108	5.6	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-065	Silverside, Atlantic (AS)	93	4.0	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-066	Silverside, Atlantic (AS)	94	4.3	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-067	Silverside, Atlantic (AS)	93	4.2	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-068	Silverside, Atlantic (AS)	90	3.1	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-069	Silverside, Atlantic (AS)	98	4.5	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-070	Silverside, Atlantic (AS)	88	3.2	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-071	Silverside, Atlantic (AS)	82	2.8	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-072	Silverside, Atlantic (AS)	85	2.3	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-073	Silverside, Atlantic (AS)	90	2.9	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-074	Silverside, Atlantic (AS)	97	4.2	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-075	Silverside, Atlantic (AS)	115	8.1	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-076	Silverside, Atlantic (AS)	90	3.0	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-077	Silverside, Atlantic (AS)	114	7.1	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-078	Silverside, Atlantic (AS)	100	5.3	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-079	Silverside, Atlantic (AS)	112	7.1	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-080	Silverside, Atlantic (AS)	122	9.3	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-081	Silverside, Atlantic (AS)	84	2.8	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-082	Silverside, Atlantic (AS)	110	5.9	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-083	Silverside, Atlantic (AS)	110	6.9	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-084	Silverside, Atlantic (AS)	98	5.1	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-085	Silverside, Atlantic (AS)	113	6.4	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-086	Silverside, Atlantic (AS)	116	7.6	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-087	Silverside, Atlantic (AS)	100	4.6	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-088	Silverside, Atlantic (AS)	115	7.6	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-089	Silverside, Atlantic (AS)	95	3.8	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-090	Silverside, Atlantic (AS)	104	5.9	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-091	Silverside, Atlantic (AS)	97	4.4	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-092	Silverside, Atlantic (AS)	110	6.6	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Comments
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-093	Silverside, Atlantic (AS)	104	6.0	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-094	Silverside, Atlantic (AS)	96	4.4	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-095	Silverside, Atlantic (AS)	99	5.2	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-096	Silverside, Atlantic (AS)	97	4.4	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-097	Silverside, Atlantic (AS)	102	4.9	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-098	Silverside, Atlantic (AS)	88	3.3	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-099	Silverside, Atlantic (AS)	107	6.1	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-100	Silverside, Atlantic (AS)	85	2.8	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-101	Silverside, Atlantic (AS)	98	4.9	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-102	Silverside, Atlantic (AS)	95	4.1	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-103	Silverside, Atlantic (AS)	78	2.3	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-104	Silverside, Atlantic (AS)	65	1.3	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-105	Silverside, Atlantic (AS)	59	0.9	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-106	Silverside, Atlantic (AS)	110	6.9	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-107	Silverside, Atlantic (AS)	104	5.1	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-108	Silverside, Atlantic (AS)	106	6.0	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-109	Silverside, Atlantic (AS)	89	3.1	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-110	Silverside, Atlantic (AS)	105	5.3	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-111	Silverside, Atlantic (AS)	60	1.1	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-112	Silverside, Atlantic (AS)	108	6.8	
NBN		NBN-SN-1013	NB03WASN026	NB03WASN026-113	Silverside, Atlantic (AS)	107	6.2	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-001	Mummichog (MU)	95	12.2	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-002	Mummichog (MU)	93	12.6	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-003	Mummichog (MU)	96	11.4	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-004	Mummichog (MU)	89	10.6	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-005	Mummichog (MU)	93	11.4	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-006	Mummichog (MU)	79	7.9	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-007	Mummichog (MU)	89	11.5	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-008	Mummichog (MU)	84	7.6	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-009	Mummichog (MU)	87	8.6	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-010	Mummichog (MU)	80	6.5	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-011	Mummichog (MU)	90	9.0	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-012	Mummichog (MU)	80	8.3	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-013	Mummichog (MU)	80	7.5	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-014	Mummichog (MU)	84	8.3	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-015	Mummichog (MU)	86	9.1	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-016	Mummichog (MU)	89	8.6	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-017	Mummichog (MU)	74	5.6	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-018	Mummichog (MU)	76	6.4	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-019	Mummichog (MU)	77	6.5	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-020	Mummichog (MU)	76	5.8	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-021	Mummichog (MU)	76	5.5	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-022	Mummichog (MU)	77	5.9	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-023	Mummichog (MU)	80	7.1	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-024	Mummichog (MU)	73	4.8	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Comments
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-025	Mummichog (MU)	66	3.6	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-026	Mummichog (MU)	67	3.8	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-027	Mummichog (MU)	55	2.1	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-028	Mummichog (MU)	63	3.5	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-029	Mummichog (MU)	61	2.8	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-030	Mummichog (MU)	76	5.8	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-031	Mummichog (MU)	74	5.6	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-032	Mummichog (MU)	69	5.6	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-033	Mummichog (MU)	64	3.8	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-034	Mummichog (MU)	64	3.4	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-035	Mummichog (MU)	62	3.3	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-036	Mummichog (MU)	73	5.1	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-037	Mummichog (MU)	68	4.9	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-038	Mummichog (MU)	59	2.9	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-039	Mummichog (MU)	66	3.3	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-040	Mummichog (MU)	59	2.6	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-041	Mummichog (MU)	60	2.8	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-042	Mummichog (MU)	57	2.8	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-043	Mummichog (MU)	70	5.1	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-044	Mummichog (MU)	65	3.7	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-045	Mummichog (MU)	66	4.2	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-046	Mummichog (MU)	63	3.0	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-047	Mummichog (MU)	70	4.8	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-048	Mummichog (MU)	62	3.4	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-049	Mummichog (MU)	63	3.3	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-050	Mummichog (MU)	63	3.8	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-051	Mummichog (MU)	71	5.2	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-052	Mummichog (MU)	60	3.1	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-053	Mummichog (MU)	72	4.5	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-054	Mummichog (MU)	60	2.8	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-055	Mummichog (MU)	61	3.1	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-056	Mummichog (MU)	57	2.0	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-057	Mummichog (MU)	55	2.5	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-058	Mummichog (MU)	57	2.4	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-059	Mummichog (MU)	62	2.9	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-060	Mummichog (MU)	61	2.8	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-061	Mummichog (MU)	60	2.9	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-062	Mummichog (MU)	56	2.3	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-063	Mummichog (MU)	57	2.3	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-064	Mummichog (MU)	61	2.6	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-065	Mummichog (MU)	56	2.2	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-066	Mummichog (MU)	54	2.0	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-067	Mummichog (MU)	54	1.8	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-068	Mummichog (MU)	51	1.6	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-069	Mummichog (MU)	57	2.2	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Comments
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-070	Mummichog (MU)	58	2.9	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-071	Mummichog (MU)	55	2.0	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-072	Mummichog (MU)	60	2.3	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-073	Mummichog (MU)	57	2.3	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-074	Mummichog (MU)	55	2.1	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-075	Mummichog (MU)	55	2.1	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-076	Mummichog (MU)	61	2.7	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-077	Mummichog (MU)	56	2.3	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-078	Mummichog (MU)	52	1.7	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-079	Mummichog (MU)	51	2.0	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-080	Mummichog (MU)	49	1.4	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-081	Mummichog (MU)	48	1.4	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-082	Mummichog (MU)	50	1.5	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-083	Mummichog (MU)	51	1.7	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-084	Mummichog (MU)	52	1.4	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-085	Mummichog (MU)	50	1.5	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-086	Mummichog (MU)	52	1.6	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-087	Mummichog (MU)	50	1.5	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-088	Mummichog (MU)	49	1.3	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-089	Mummichog (MU)	53	1.6	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-090	Mummichog (MU)	49	1.5	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-091	Mummichog (MU)	51	1.6	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-092	Mummichog (MU)	55	2.3	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-093	Mummichog (MU)	46	0.9	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-094	Mummichog (MU)	53	2.0	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-095	Mummichog (MU)	54	1.9	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-096	Mummichog (MU)	45	1.2	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-097	Mummichog (MU)	50	1.4	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-098	Mummichog (MU)	35	0.3	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-099	Mummichog (MU)	45	1.3	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-100	Mummichog (MU)	54	1.9	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-101	Mummichog (MU)	31	0.3	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-102	Mummichog (MU)	47	1.1	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-103	Mummichog (MU)	52	1.6	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-104	Mummichog (MU)	47	1.3	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-105	Mummichog (MU)	52	1.5	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-106	Mummichog (MU)	47	1.3	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-107	Mummichog (MU)	37	0.5	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-108	Mummichog (MU)	55	2.0	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-109	Mummichog (MU)	46	1.3	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-110	Mummichog (MU)	38	0.6	
NBN	133	NBN-SN-1020	NB03WMU133	NB03WMU133-111	Mummichog (MU)	49	1.4	
NBN		NBN-SN-1020	NB03WWFN034	NB03WWFN034-001	Flounder, Winter (WF)	78	4.5	
NBN		NBN-SN-1020	NB03WWFN034	NB03WWFN034-002	Flounder, Winter (WF)	91	7.3	
NBN		NBN-SN-1020	NB03WWFN034	NB03WWFN034-003	Flounder, Winter (WF)	87	7.4	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Comments
NBN		NBN-SN-1020	NB03WWFN034	NB03WWFN034-004	Flounder, Winter (WF)	73	4.2	
NBN		NBN-SN-1020	NB03WWFN034	NB03WWFN034-005	Flounder, Winter (WF)	85	6.3	
NBN		NBN-SN-1020	NB03WWFN034	NB03WWFN034-006	Flounder, Winter (WF)	73	3.6	
NBN		NBN-SN-1020	NB03WWPN035	NB03WWPN035-001	Perch, White (WP)	77	4.5	
NBN		NBN-MT-1021	NB03WAEN036	NB03WAEN036-001	Eel, American (AE)	201	13.2	
NBC		NBC-TW-1009	NB03WBAC001	NB03WBAC001-001	Anchovy, Bay (BA)	87	4.6	
NBC		NBC-TW-1009	NB03WBAC001	NB03WBAC001-002	Anchovy, Bay (BA)	82	3.0	
NBC		NBC-TW-1009	NB03WBAC001	NB03WBAC001-003	Anchovy, Bay (BA)	75	2.4	
NBC		NBC-TW-1009	NB03WBAC001	NB03WBAC001-004	Anchovy, Bay (BA)	82	3.0	
NBC		NBC-TW-1009	NB03WBAC001	NB03WBAC001-005	Anchovy, Bay (BA)	75	2.7	
NBC		NBC-TW-1009	NB03WBAC001	NB03WBAC001-006	Anchovy, Bay (BA)	66	1.8	
NBC		NBC-TW-1009	NB03WBAC001	NB03WBAC001-007	Anchovy, Bay (BA)	65	1.6	
NBC		NBC-TW-1009	NB03WBAC001	NB03WBAC001-008	Anchovy, Bay (BA)	76	2.6	
NBC		NBC-TW-1009	NB03WBAC001	NB03WBAC001-009	Anchovy, Bay (BA)	75	2.7	
NBC		NBC-TW-1009	NB03WBAC001	NB03WBAC001-010	Anchovy, Bay (BA)	76	2.8	
NBC		NBC-TW-1009	NB03WBAC001	NB03WBAC001-011	Anchovy, Bay (BA)	72	2.4	
NBC		NBC-TW-1009	NB03WBAC001	NB03WBAC001-012	Anchovy, Bay (BA)	75	2.4	
NBC		NBC-TW-1009	NB03WBAC001	NB03WBAC001-013	Anchovy, Bay (BA)	72	2.6	
NBC		NBC-TW-1009	NB03WBAC001	NB03WBAC001-014	Anchovy, Bay (BA)	66	1.7	
NBC		NBC-TW-1009	NB03WBAC001	NB03WBAC001-015	Anchovy, Bay (BA)	75	2.8	
NBC		NBC-TW-1009	NB03WBAC001	NB03WBAC001-016	Anchovy, Bay (BA)	66	1.8	
NBC		NBC-TW-1009	NB03WBAC001	NB03WBAC001-017	Anchovy, Bay (BA)	71	2.1	
NBC		NBC-TW-1009	NB03WBAC001	NB03WBAC001-018	Anchovy, Bay (BA)	63	1.4	
NBC		NBC-TW-1009	NB03WBAC001	NB03WBAC001-019	Anchovy, Bay (BA)	57	1.1	
NBC		NBC-TW-1009	NB03WBAC001	NB03WBAC001-020	Anchovy, Bay (BA)	43	0.4	
NBC		NBC-TW-1009	NB03WBAC001	NB03WBAC001-021	Anchovy, Bay (BA)	51	0.7	
NBC		NBC-TW-1009	NB03WBAC001	NB03WBAC001-022	Anchovy, Bay (BA)	45	0.5	
NBC		NBC-TW-1009	NB03WBAC001	NB03WBAC001-023	Anchovy, Bay (BA)	48	0.6	
NBC		NBC-TW-1009	NB03WBAC001	NB03WBAC001-024	Anchovy, Bay (BA)	54	0.7	
NBC		NBC-TW-1009	NB03WBAC001	NB03WBAC001-025	Anchovy, Bay (BA)	58	1.0	
NBC		NBC-TW-1009	NB03WBAC001	NB03WBAC001-026	Anchovy, Bay (BA)	47	0.6	
NBC		NBC-TW-1009	NB03WBAC001	NB03WBAC001-027	Anchovy, Bay (BA)	51	0.8	
NBC		NBC-TW-1009	NB03WBAC001	NB03WBAC001-028	Anchovy, Bay (BA)	38	0.3	
NBC		NBC-TW-1009	NB03WBAC001	NB03WBAC001-029	Anchovy, Bay (BA)	53	0.8	
NBC		NBC-TW-1009	NB03WBAC001	NB03WBAC001-030	Anchovy, Bay (BA)	47	0.4	
NBC		NBC-TW-1009	NB03WBAC001	NB03WBAC001-031	Anchovy, Bay (BA)	37	0.2	
NBC		NBC-TW-1009	NB03WBAC001	NB03WBAC001-032	Anchovy, Bay (BA)	44	0.4	
NBC		NBC-TW-1009	NB03WBAC001	NB03WBAC001-033	Anchovy, Bay (BA)	48	0.6	
NBC		NBC-TW-1009	NB03FBLC002	NB03FBLC002-001	Bluefish (BL)	144	25.2	
NBC		NBC-TW-1009	NB03WSFC003	NB03WSFC003-001	Flounder, Summer (SF)	251	145.8	
NBC		NBC-TW-1009	NB03WSFC004	NB03WSFC004-001	Flounder, Summer (SF)	214	94.1	
NBC		NBC-TW-1009	NB03WSFC005	NB03WSFC005-001	Flounder, Summer (SF)	183	50.7	
NBC		NBC-SN-1014	NB03WWFC006	NB03WWFC006-001	Flounder, Winter (WF)	88	6.4	
NBC		NBC-SN-1014	NB03WWFC007	NB03WWFC007-001	Flounder, Winter (WF)	85	6.2	
NBC		NBC-SN-1014	NB03WWFC008	NB03WWFC008-001	Flounder, Winter (WF)	93	9.7	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Comments
NBC		NBC-SN-1014	NB03WWFC009	NB03WWFC009-001	Flounder, Winter (WF)	90	7.8	
NBC		NBC-SN-1014	NB03WWPC010	NB03WWPC010-001	Perch, White (WP)	88	8.3	
NBC		NBC-SN-1014	NB03WWPC010	NB03WWPC010-002	Perch, White (WP)	109	18.5	
NBC		NBC-SN-1014	NB03FBLC011	NB03FBLC011-001	Bluefish (BL)	161	33.2	
NBC		NBC-SN-1014	NB03FBLC011	NB03FBLC011-002	Bluefish (BL)	161	35.7	
NBC		NBC-SN-1014	NB03FBLC011	NB03FBLC011-003	Bluefish (BL)	122	17.3	
NBC		NBC-SN-1014	NB03FBLC011	NB03FBLC011-004	Bluefish (BL)	155	29.1	
NBC		NBC-SN-1014	NB03FBLC011	NB03FBLC011-005	Bluefish (BL)	150	26.6	
NBC		NBC-SN-1014	NB03FBLC011	NB03FBLC011-006	Bluefish (BL)	125	16.9	
NBC		NBC-SN-1014	NB03FBLC011	NB03FBLC011-007	Bluefish (BL)	153	29.7	
NBC		NBC-SN-1014	NB03FBLC011	NB03FBLC011-008	Bluefish (BL)	128	14.6	
NBC		NBC-SN-1014	NB03FBLC011	NB03FBLC011-009	Bluefish (BL)	136	17.6	
NBC		NBC-SN-1014	NB03FBLC011	NB03FBLC011-010	Bluefish (BL)	134	22.5	
NBC		NBC-SN-1014	NB03FBLC011	NB03FBLC011-011	Bluefish (BL)	162	41.5	
NBC		NBC-SN-1014	NB03FBLC011	NB03FBLC011-012	Bluefish (BL)	128	18.5	
NBC		NBC-SN-1014	NB03FBLC011	NB03FBLC011-013	Bluefish (BL)	156	41.4	
NBC		NBC-SN-1014	NB03FBLC027	NB03FBLC027-001	Bluefish (BL)	224	100.7	
NBC		NBC-SN-1014	NB03FBLC027	NB03FBLC027-002	Bluefish (BL)	221	101.8	
NBC		NBC-SN-1014	NB03FBLC027	NB03FBLC027-003	Bluefish (BL)	215	99.7	
NBC		NBC-SN-1014	NB03FBLC027	NB03FBLC027-004	Bluefish (BL)	215	84.3	
NBC		NBC-SN-1014	NB03FBLC027	NB03FBLC027-005	Bluefish (BL)	195	59.1	
NBC		NBC-SN-1014	NB03FBLC027	NB03FBLC027-006	Bluefish (BL)	132	21.1	
NBC		NBC-SN-1014	NB03FBLC028	NB03FBLC028-001	Bluefish (BL)	211	82.4	
NBC		NBC-SN-1014	NB03FBLC028	NB03FBLC028-002	Bluefish (BL)	230	92.8	
NBC		NBC-SN-1014	NB03FBLC028	NB03FBLC028-003	Bluefish (BL)	192	61.0	
NBC		NBC-SN-1014	NB03FBLC028	NB03FBLC028-004	Bluefish (BL)	205	70.2	
NBC		NBC-SN-1014	NB03FBLC028	NB03FBLC028-005	Bluefish (BL)	158	44.0	
NBC		NBC-SN-1014	NB03FBLC028	NB03FBLC028-006	Bluefish (BL)	161	37.8	
NBC		NBC-SN-1014	NB03FBLC028	NB03FBLC028-007	Bluefish (BL)	138	22.6	
NBC		NBC-SN-1014	NB03FBLC028	NB03FBLC028-008	Bluefish (BL)	165	40.6	
NBC		NBC-SN-1014	NB03FBLC028	NB03FBLC028-009	Bluefish (BL)	106	9.9	
NBC		NBC-SN-1014	NB03FBLC029	NB03FBLC029-001	Bluefish (BL)	163	37.5	
NBC		NBC-SN-1014	NB03FBLC029	NB03FBLC029-002	Bluefish (BL)	208	73.1	
NBC		NBC-SN-1014	NB03FBLC029	NB03FBLC029-003	Bluefish (BL)	208	86.0	
NBC		NBC-SN-1014	NB03FBLC029	NB03FBLC029-004	Bluefish (BL)	188	63.9	
NBC		NBC-SN-1014	NB03FBLC029	NB03FBLC029-005	Bluefish (BL)	209	74.2	
NBC		NBC-SN-1014	NB03FBLC029	NB03FBLC029-006	Bluefish (BL)	212	73.2	
NBC		NBC-SN-1014	NB03FBLC029	NB03FBLC029-007	Bluefish (BL)	125	15.0	
NBC		NBC-SN-1014	NB03FBLC029	NB03FBLC029-008	Bluefish (BL)	115	13.6	
NBC		NBC-SN-1014	NB03FBLC029	NB03FBLC029-009	Bluefish (BL)	112	11.8	
NBC		NBC-SN-1014	NB03FBLC029	NB03FBLC029-010	Bluefish (BL)	119	12.6	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-001	Silverside, Atlantic (AS)	92	4.5	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-002	Silverside, Atlantic (AS)	98	4.7	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-003	Silverside, Atlantic (AS)	98	5.3	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-004	Silverside, Atlantic (AS)	102	7.5	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Comments
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-005	Silverside, Atlantic (AS)	90	3.6	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-006	Silverside, Atlantic (AS)	52	0.7	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-007	Silverside, Atlantic (AS)	109	6.2	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-008	Silverside, Atlantic (AS)	105	5.7	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-009	Silverside, Atlantic (AS)	88	3.4	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-010	Silverside, Atlantic (AS)	80	2.6	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-011	Silverside, Atlantic (AS)	92	3.7	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-012	Silverside, Atlantic (AS)	95	4.7	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-013	Silverside, Atlantic (AS)	108	6.8	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-014	Silverside, Atlantic (AS)	101	5.0	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-015	Silverside, Atlantic (AS)	102	5.8	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-016	Silverside, Atlantic (AS)	82	2.9	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-017	Silverside, Atlantic (AS)	103	5.1	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-018	Silverside, Atlantic (AS)	58	0.9	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-019	Silverside, Atlantic (AS)	80	2.1	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-020	Silverside, Atlantic (AS)	62	1.0	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-021	Silverside, Atlantic (AS)	74	2.1	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-022	Silverside, Atlantic (AS)	108	6.2	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-023	Silverside, Atlantic (AS)	105	5.4	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-024	Silverside, Atlantic (AS)	108	5.8	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-025	Silverside, Atlantic (AS)	108	5.8	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-026	Silverside, Atlantic (AS)	112	6.8	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-027	Silverside, Atlantic (AS)	93	4.1	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-028	Silverside, Atlantic (AS)	105	6.3	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-029	Silverside, Atlantic (AS)	99	5.2	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-030	Silverside, Atlantic (AS)	89	3.4	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-031	Silverside, Atlantic (AS)	102	4.9	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-032	Silverside, Atlantic (AS)	100	5.2	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-033	Silverside, Atlantic (AS)	71	1.6	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-034	Silverside, Atlantic (AS)	103	5.9	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-035	Silverside, Atlantic (AS)	85	3.2	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-036	Silverside, Atlantic (AS)	85	3.9	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-037	Silverside, Atlantic (AS)	98	4.4	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-038	Silverside, Atlantic (AS)	75	2.1	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-039	Silverside, Atlantic (AS)	110	6.2	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-040	Silverside, Atlantic (AS)	94	4.2	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-041	Silverside, Atlantic (AS)	86	3.3	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-042	Silverside, Atlantic (AS)	97	4.9	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-043	Silverside, Atlantic (AS)	71	1.7	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-044	Silverside, Atlantic (AS)	84	3.2	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-045	Silverside, Atlantic (AS)	62	1.2	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-046	Silverside, Atlantic (AS)	84	3.2	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-047	Silverside, Atlantic (AS)	91	3.5	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-048	Silverside, Atlantic (AS)	82	2.9	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-049	Silverside, Atlantic (AS)	84	2.7	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Comments
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-050	Silverside, Atlantic (AS)	84	2.5	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-051	Silverside, Atlantic (AS)	52	0.6	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-052	Silverside, Atlantic (AS)	91	4.4	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-053	Silverside, Atlantic (AS)	103	5.2	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-054	Silverside, Atlantic (AS)	80	2.3	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-055	Silverside, Atlantic (AS)	85	4.2	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-056	Silverside, Atlantic (AS)	80	2.3	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-057	Silverside, Atlantic (AS)	98	4.7	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-058	Silverside, Atlantic (AS)	79	1.8	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-059	Silverside, Atlantic (AS)	98	4.7	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-060	Silverside, Atlantic (AS)	77	2.5	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-061	Silverside, Atlantic (AS)	89	3.6	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-062	Silverside, Atlantic (AS)	66	1.3	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-063	Silverside, Atlantic (AS)	80	2.9	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-064	Silverside, Atlantic (AS)	107	6.0	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-065	Silverside, Atlantic (AS)	118	8.8	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-066	Silverside, Atlantic (AS)	99	5.2	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-067	Silverside, Atlantic (AS)	105	6.4	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-068	Silverside, Atlantic (AS)	95	4.4	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-069	Silverside, Atlantic (AS)	97	5.2	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-070	Silverside, Atlantic (AS)	91	4.2	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-071	Silverside, Atlantic (AS)	92	4.1	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-072	Silverside, Atlantic (AS)	105	5.9	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-073	Silverside, Atlantic (AS)	101	5.0	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-074	Silverside, Atlantic (AS)	98	4.7	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-075	Silverside, Atlantic (AS)	108	6.3	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-076	Silverside, Atlantic (AS)	103	4.7	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-077	Silverside, Atlantic (AS)	101	5.8	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-078	Silverside, Atlantic (AS)	101	5.0	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-079	Silverside, Atlantic (AS)	98	5.1	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-080	Silverside, Atlantic (AS)	89	3.5	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-081	Silverside, Atlantic (AS)	102	5.2	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-082	Silverside, Atlantic (AS)	96	4.7	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-083	Silverside, Atlantic (AS)	105	6.2	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-084	Silverside, Atlantic (AS)	100	4.8	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-085	Silverside, Atlantic (AS)	94	4.0	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-086	Silverside, Atlantic (AS)	94	4.2	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-087	Silverside, Atlantic (AS)	80	2.3	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-088	Silverside, Atlantic (AS)	85	3.0	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-089	Silverside, Atlantic (AS)	86	3.2	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-090	Silverside, Atlantic (AS)	81	2.7	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-091	Silverside, Atlantic (AS)	95	4.3	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-092	Silverside, Atlantic (AS)	94	4.7	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-093	Silverside, Atlantic (AS)	94	4.2	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-094	Silverside, Atlantic (AS)	85	3.0	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Comments
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-095	Silverside, Atlantic (AS)	86	3.6	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-096	Silverside, Atlantic (AS)	72	1.8	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-097	Silverside, Atlantic (AS)	98	5.6	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-098	Silverside, Atlantic (AS)	100	5.2	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-099	Silverside, Atlantic (AS)	102	5.8	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-100	Silverside, Atlantic (AS)	102	5.2	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-101	Silverside, Atlantic (AS)	109	7.4	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-102	Silverside, Atlantic (AS)	93	4.2	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-103	Silverside, Atlantic (AS)	94	4.0	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-104	Silverside, Atlantic (AS)	110	6.3	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-105	Silverside, Atlantic (AS)	102	5.6	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-106	Silverside, Atlantic (AS)	92	4.1	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-107	Silverside, Atlantic (AS)	95	4.6	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-108	Silverside, Atlantic (AS)	80	2.9	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-109	Silverside, Atlantic (AS)	92	4.2	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-110	Silverside, Atlantic (AS)	96	4.7	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-111	Silverside, Atlantic (AS)	100	5.2	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-112	Silverside, Atlantic (AS)	102	6.3	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-113	Silverside, Atlantic (AS)	98	4.8	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-114	Silverside, Atlantic (AS)	94	4.8	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-115	Silverside, Atlantic (AS)	91	3.9	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-116	Silverside, Atlantic (AS)	90	3.7	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-117	Silverside, Atlantic (AS)	85	6.6	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-118	Silverside, Atlantic (AS)	105	6.1	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-119	Silverside, Atlantic (AS)	85	3.3	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-120	Silverside, Atlantic (AS)	97	4.4	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-121	Silverside, Atlantic (AS)	88	3.4	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-122	Silverside, Atlantic (AS)	85	3.4	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-123	Silverside, Atlantic (AS)	90	3.9	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-124	Silverside, Atlantic (AS)	91	4.0	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-125	Silverside, Atlantic (AS)	98	4.7	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-126	Silverside, Atlantic (AS)	94	4.1	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-127	Silverside, Atlantic (AS)	108	6.5	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-128	Silverside, Atlantic (AS)	102	5.6	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-129	Silverside, Atlantic (AS)	105	5.9	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-130	Silverside, Atlantic (AS)	79	2.2	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-131	Silverside, Atlantic (AS)	89	3.6	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-132	Silverside, Atlantic (AS)	101	5.5	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-133	Silverside, Atlantic (AS)	92	4.0	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-134	Silverside, Atlantic (AS)	85	3.3	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-135	Silverside, Atlantic (AS)	101	5.9	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-136	Silverside, Atlantic (AS)	90	3.5	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-137	Silverside, Atlantic (AS)	89	3.4	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-138	Silverside, Atlantic (AS)	88	6.5	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-139	Silverside, Atlantic (AS)	92	3.8	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Comments
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-140	Silverside, Atlantic (AS)	101	4.5	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-141	Silverside, Atlantic (AS)	92	3.8	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-142	Silverside, Atlantic (AS)	88	3.5	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-143	Silverside, Atlantic (AS)	75	2.6	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-144	Silverside, Atlantic (AS)	83	3.0	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-145	Silverside, Atlantic (AS)	84	2.9	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-146	Silverside, Atlantic (AS)	90	3.8	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-147	Silverside, Atlantic (AS)	100	5.0	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-148	Silverside, Atlantic (AS)	94	3.7	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-149	Silverside, Atlantic (AS)	108	6.8	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-150	Silverside, Atlantic (AS)	108	6.1	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-151	Silverside, Atlantic (AS)	95	4.3	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-152	Silverside, Atlantic (AS)	94	4.3	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-153	Silverside, Atlantic (AS)	101	5.4	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-154	Silverside, Atlantic (AS)	98	4.9	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-155	Silverside, Atlantic (AS)	85	3.8	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-156	Silverside, Atlantic (AS)	100	4.9	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-157	Silverside, Atlantic (AS)	103	5.6	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-158	Silverside, Atlantic (AS)	95	4.5	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-159	Silverside, Atlantic (AS)	94	4.6	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-160	Silverside, Atlantic (AS)	95	5.3	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-161	Silverside, Atlantic (AS)	100	5.4	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-162	Silverside, Atlantic (AS)	105	5.8	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-163	Silverside, Atlantic (AS)	98	4.7	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-164	Silverside, Atlantic (AS)	108	6.6	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-165	Silverside, Atlantic (AS)	100	5.1	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-166	Silverside, Atlantic (AS)	104	6.1	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-167	Silverside, Atlantic (AS)	99	5.8	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-168	Silverside, Atlantic (AS)	89	3.5	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-169	Silverside, Atlantic (AS)	98	4.5	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-170	Silverside, Atlantic (AS)	88	3.4	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-171	Silverside, Atlantic (AS)	82	2.6	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-172	Silverside, Atlantic (AS)	103	5.4	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-173	Silverside, Atlantic (AS)	91	4.0	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-174	Silverside, Atlantic (AS)	98	5.2	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-175	Silverside, Atlantic (AS)	105	7.1	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-176	Silverside, Atlantic (AS)	91	4.0	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-177	Silverside, Atlantic (AS)	94	4.1	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-178	Silverside, Atlantic (AS)	111	6.6	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-179	Silverside, Atlantic (AS)	99	5.3	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-180	Silverside, Atlantic (AS)	99	5.7	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-181	Silverside, Atlantic (AS)	101	5.5	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-182	Silverside, Atlantic (AS)	103	6.2	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-183	Silverside, Atlantic (AS)	103	5.2	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-184	Silverside, Atlantic (AS)	108	6.2	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Comments
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-185	Silverside, Atlantic (AS)	108	7.0	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-186	Silverside, Atlantic (AS)	81	2.9	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-187	Silverside, Atlantic (AS)	104	6.6	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-188	Silverside, Atlantic (AS)	100	5.8	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-189	Silverside, Atlantic (AS)	100	5.1	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-190	Silverside, Atlantic (AS)	100	5.2	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-191	Silverside, Atlantic (AS)	91	4.0	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-192	Silverside, Atlantic (AS)	98	4.5	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-193	Silverside, Atlantic (AS)	91	4.6	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-194	Silverside, Atlantic (AS)	105	5.7	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-195	Silverside, Atlantic (AS)	108	6.9	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-196	Silverside, Atlantic (AS)	106	6.1	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-197	Silverside, Atlantic (AS)	99	5.7	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-198	Silverside, Atlantic (AS)	102	6.0	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-199	Silverside, Atlantic (AS)	98	5.2	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-200	Silverside, Atlantic (AS)	96	4.6	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-201	Silverside, Atlantic (AS)	113	6.3	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-202	Silverside, Atlantic (AS)	105	6.3	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-203	Silverside, Atlantic (AS)	108	6.4	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-204	Silverside, Atlantic (AS)	101	5.8	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-205	Silverside, Atlantic (AS)	106	5.9	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-206	Silverside, Atlantic (AS)	94	4.1	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-207	Silverside, Atlantic (AS)	98	4.8	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-208	Silverside, Atlantic (AS)	90	3.6	
NBC		NBC-SN-1014	NB03WASC012	NB03WASC012-209	Silverside, Atlantic (AS)	100	4.9	
NBC		NBC-SN-1014	NB03WASC013	NB03WASC013-001	Silverside, Atlantic (AS)	89	3.5	
NBC		NBC-SN-1014	NB03WASC013	NB03WASC013-002	Silverside, Atlantic (AS)	92	4.2	
NBC		NBC-SN-1014	NB03WASC013	NB03WASC013-003	Silverside, Atlantic (AS)	88	3.9	
NBC		NBC-SN-1014	NB03WASC013	NB03WASC013-004	Silverside, Atlantic (AS)	113	7.0	
NBC		NBC-SN-1014	NB03WASC013	NB03WASC013-005	Silverside, Atlantic (AS)	106	6.3	
NBC		NBC-SN-1014	NB03WASC013	NB03WASC013-006	Silverside, Atlantic (AS)	98	4.9	
NBC		NBC-SN-1014	NB03WASC013	NB03WASC013-007	Silverside, Atlantic (AS)	98	4.5	
NBC		NBC-SN-1014	NB03WASC013	NB03WASC013-008	Silverside, Atlantic (AS)	103	5.9	
NBC		NBC-SN-1014	NB03WASC013	NB03WASC013-009	Silverside, Atlantic (AS)	97	7.7	
NBC		NBC-SN-1014	NB03WASC013	NB03WASC013-010	Silverside, Atlantic (AS)	102	5.9	
NBC		NBC-SN-1014	NB03WASC013	NB03WASC013-011	Silverside, Atlantic (AS)	103	5.8	
NBC		NBC-SN-1014	NB03WASC013	NB03WASC013-012	Silverside, Atlantic (AS)	98	4.8	
NBC		NBC-SN-1014	NB03WASC013	NB03WASC013-013	Silverside, Atlantic (AS)	102	5.4	
NBC		NBC-SN-1014	NB03WASC013	NB03WASC013-014	Silverside, Atlantic (AS)	111	7.9	
NBC		NBC-SN-1014	NB03WASC013	NB03WASC013-015	Silverside, Atlantic (AS)	98	4.7	
NBC		NBC-SN-1014	NB03WASC013	NB03WASC013-016	Silverside, Atlantic (AS)	98	5.2	
NBC		NBC-SN-1014	NB03WASC013	NB03WASC013-017	Silverside, Atlantic (AS)	102	6.3	
NBC		NBC-SN-1014	NB03WASC013	NB03WASC013-018	Silverside, Atlantic (AS)	105	5.5	
NBC		NBC-SN-1014	NB03WASC013	NB03WASC013-019	Silverside, Atlantic (AS)	104	6.2	
NBC		NBC-SN-1014	NB03WASC013	NB03WASC013-020	Silverside, Atlantic (AS)	98	5.0	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Comments
NBC		NBC-SN-1014	NB03WASC013	NB03WASC013-021	Silverside, Atlantic (AS)	103	5.7	
NBC		NBC-SN-1014	NB03WASC013	NB03WASC013-022	Silverside, Atlantic (AS)	106	6.3	
NBC		NBC-SN-1014	NB03WASC013	NB03WASC013-023	Silverside, Atlantic (AS)	104	5.5	
NBC		NBC-SN-1014	NB03WASC013	NB03WASC013-024	Silverside, Atlantic (AS)	96	4.9	
NBC		NBC-SN-1014	NB03WASC013	NB03WASC013-025	Silverside, Atlantic (AS)	96	4.5	
NBC		NBC-SN-1014	NB03WASC013	NB03WASC013-026	Silverside, Atlantic (AS)	76	2.4	
NBC		NBC-SN-1014	NB03WASC013	NB03WASC013-027	Silverside, Atlantic (AS)	100	5.1	
NBC		NBC-SN-1014	NB03WASC013	NB03WASC013-028	Silverside, Atlantic (AS)	87	4.6	
NBC		NBC-SN-1014	NB03WASC013	NB03WASC013-029	Silverside, Atlantic (AS)	107	6.2	
NBC		NBC-SN-1014	NB03WASC013	NB03WASC013-030	Silverside, Atlantic (AS)	108	6.3	
NBC		NBC-SN-1014	NB03WASC013	NB03WASC013-031	Silverside, Atlantic (AS)	103	5.7	
NBC		NBC-SN-1014	NB03WASC013	NB03WASC013-032	Silverside, Atlantic (AS)	104	6.8	
NBC		NBC-SN-1014	NB03WASC013	NB03WASC013-033	Silverside, Atlantic (AS)	110	7.0	
NBC		NBC-SN-1014	NB03WASC013	NB03WASC013-034	Silverside, Atlantic (AS)	105	6.4	
NBC		NBC-SN-1014	NB03WASC013	NB03WASC013-035	Silverside, Atlantic (AS)	98	4.6	
NBC		NBC-SN-1014	NB03WASC013	NB03WASC013-036	Silverside, Atlantic (AS)	88	3.5	
NBC		NBC-SN-1014	NB03WASC013	NB03WASC013-037	Silverside, Atlantic (AS)	97	5.5	
NBC		NBC-SN-1014	NB03WASC013	NB03WASC013-038	Silverside, Atlantic (AS)	98	5.7	
NBC		NBC-SN-1014	NB03WASC013	NB03WASC013-039	Silverside, Atlantic (AS)	104	5.7	
NBC		NBC-SN-1014	NB03WASC013	NB03WASC013-040	Silverside, Atlantic (AS)	111	7.5	
NBC		NBC-SN-1014	NB03WASC013	NB03WASC013-041	Silverside, Atlantic (AS)	105	5.7	
NBC		NBC-SN-1014	NB03WASC013	NB03WASC013-042	Silverside, Atlantic (AS)	95	4.9	
NBC		NBC-SN-1014	NB03WASC013	NB03WASC013-043	Silverside, Atlantic (AS)	105	6.2	
NBC		NBC-SN-1014	NB03WASC013	NB03WASC013-044	Silverside, Atlantic (AS)	90	3.7	
NBC		NBC-SN-1014	NB03WASC013	NB03WASC013-045	Silverside, Atlantic (AS)	112	6.9	
NBC		NBC-SN-1014	NB03WWFC014	NB03WWFC014-001	Flounder, Winter (WF)	95	9.5	
NBC		NBC-SN-1014	NB03WWFC015	NB03WWFC015-001	Flounder, Winter (WF)	109	16.2	
NBC		NBC-SN-1014	NB03WWFC016	NB03WWFC016-001	Flounder, Winter (WF)	90	8.4	
NBC		NBC-SN-1014	NB03WWFC017	NB03WWFC017-001	Flounder, Winter (WF)	85	7.4	
NBC		NBC-SN-1014	NB03WWFC018	NB03WWFC018-001	Flounder, Winter (WF)	96	10.7	
NBC		NBC-SN-1014	NB03WWFC019	NB03WWFC019-001	Flounder, Winter (WF)	68	3.5	
NBC		NBC-SN-1014	NB03WWFC020	NB03WWFC020-001	Flounder, Winter (WF)	89	8.3	
NBC		NBC-SN-1014	NB03WWFC021	NB03WWFC021-001	Flounder, Winter (WF)	110	15.4	
NBC		NBC-SN-1014	NB03WWFC022	NB03WWFC022-001	Flounder, Winter (WF)	92	9.1	
NBC		NBC-SN-1014	NB03WWFC023	NB03WWFC023-001	Flounder, Winter (WF)	90	9.2	
NBC		NBC-SN-1014	NB03WWFC024	NB03WWFC024-001	Flounder, Winter (WF)	107	16.5	
NBC		NBC-SN-1014	NB03WWFC025	NB03WWFC025-001	Flounder, Winter (WF)	79	6.0	
NBC		NBC-SN-1014	NB03WWFC026	NB03WWFC026-001	Flounder, Winter (WF)	74	4.5	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-001	Killifish, Striped (SK)	99	12.8	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-002	Killifish, Striped (SK)	85	8.4	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-003	Killifish, Striped (SK)	74	4.8	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-004	Killifish, Striped (SK)	86	8.8	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-005	Killifish, Striped (SK)	85	8.0	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-006	Killifish, Striped (SK)	96	10.5	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-007	Killifish, Striped (SK)	94	10.1	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Comments
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-008	Killifish, Striped (SK)	91	9.1	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-009	Killifish, Striped (SK)	82	6.4	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-010	Killifish, Striped (SK)	97	12.0	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-011	Killifish, Striped (SK)	94	10.1	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-012	Killifish, Striped (SK)	97	10.8	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-013	Killifish, Striped (SK)	94	11.3	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-014	Killifish, Striped (SK)	87	7.9	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-015	Killifish, Striped (SK)	90	9.0	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-016	Killifish, Striped (SK)	96	11.5	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-017	Killifish, Striped (SK)	86	7.6	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-018	Killifish, Striped (SK)	82	7.3	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-019	Killifish, Striped (SK)	92	9.4	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-020	Killifish, Striped (SK)	79	6.3	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-021	Killifish, Striped (SK)	77	5.9	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-022	Killifish, Striped (SK)	85	7.9	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-023	Killifish, Striped (SK)	70	4.2	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-024	Killifish, Striped (SK)	70	4.0	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-025	Killifish, Striped (SK)	91	9.6	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-026	Killifish, Striped (SK)	87	8.6	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-027	Killifish, Striped (SK)	86	8.1	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-028	Killifish, Striped (SK)	88	9.1	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-029	Killifish, Striped (SK)	90	8.8	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-030	Killifish, Striped (SK)	84	7.8	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-031	Killifish, Striped (SK)	92	7.6	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-032	Killifish, Striped (SK)	78	6.6	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-033	Killifish, Striped (SK)	97	11.3	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-034	Killifish, Striped (SK)	97	11.7	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-035	Killifish, Striped (SK)	93	9.4	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-036	Killifish, Striped (SK)	80	6.6	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-037	Killifish, Striped (SK)	76	6.0	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-038	Killifish, Striped (SK)	85	8.0	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-039	Killifish, Striped (SK)	91	9.4	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-040	Killifish, Striped (SK)	92	10.1	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-041	Killifish, Striped (SK)	90	9.5	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-042	Killifish, Striped (SK)	89	8.8	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-043	Killifish, Striped (SK)	73	4.7	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-044	Killifish, Striped (SK)	66	3.8	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-045	Killifish, Striped (SK)	93	9.6	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-046	Killifish, Striped (SK)	85	8.2	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-047	Killifish, Striped (SK)	94	10.4	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-048	Killifish, Striped (SK)	90	9.1	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-049	Killifish, Striped (SK)	86	8.0	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-050	Killifish, Striped (SK)	86	8.4	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-051	Killifish, Striped (SK)	81	7.1	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-052	Killifish, Striped (SK)	78	6.4	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Comments
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-053	Killifish, Striped (SK)	64	3.2	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-054	Killifish, Striped (SK)	70	4.1	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-055	Killifish, Striped (SK)	72	4.5	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-056	Killifish, Striped (SK)	78	5.8	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-057	Killifish, Striped (SK)	66	3.9	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-058	Killifish, Striped (SK)	71	4.4	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-059	Killifish, Striped (SK)	75	5.6	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-060	Killifish, Striped (SK)	77	5.5	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-061	Killifish, Striped (SK)	69	3.9	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-062	Killifish, Striped (SK)	85	7.1	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-063	Killifish, Striped (SK)	73	4.8	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-064	Killifish, Striped (SK)	71	4.6	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-065	Killifish, Striped (SK)	71	4.4	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-066	Killifish, Striped (SK)	56	2.0	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-067	Killifish, Striped (SK)	67	4.5	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-068	Killifish, Striped (SK)	75	5.1	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-069	Killifish, Striped (SK)	69	4.0	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-070	Killifish, Striped (SK)	61	3.5	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-071	Killifish, Striped (SK)	75	5.6	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-072	Killifish, Striped (SK)	74	5.6	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-073	Killifish, Striped (SK)	64	3.3	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-074	Killifish, Striped (SK)	66	3.4	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-075	Killifish, Striped (SK)	71	4.7	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-076	Killifish, Striped (SK)	66	3.5	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-077	Killifish, Striped (SK)	66	4.1	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-078	Killifish, Striped (SK)	69	4.3	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-079	Killifish, Striped (SK)	77	5.4	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-080	Killifish, Striped (SK)	74	5.4	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-081	Killifish, Striped (SK)	64	3.4	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-082	Killifish, Striped (SK)	70	4.2	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-083	Killifish, Striped (SK)	70	4.3	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-084	Killifish, Striped (SK)	65	3.1	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-085	Killifish, Striped (SK)	69	3.6	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-086	Killifish, Striped (SK)	66	3.3	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-087	Killifish, Striped (SK)	71	4.3	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-088	Killifish, Striped (SK)	70	4.3	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-089	Killifish, Striped (SK)	68	3.6	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-090	Killifish, Striped (SK)	67	3.6	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-091	Killifish, Striped (SK)	77	5.5	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-092	Killifish, Striped (SK)	66	3.5	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-093	Killifish, Striped (SK)	73	4.3	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-094	Killifish, Striped (SK)	66	3.4	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-095	Killifish, Striped (SK)	68	3.8	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-096	Killifish, Striped (SK)	66	3.9	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-097	Killifish, Striped (SK)	75	4.6	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Comments
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-098	Killifish, Striped (SK)	77	5.7	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-099	Killifish, Striped (SK)	75	4.7	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-100	Killifish, Striped (SK)	43	1.0	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-101	Killifish, Striped (SK)	70	3.9	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-102	Killifish, Striped (SK)	72	4.3	
NBC	124	NBC-SN-1016	NB03WSK124	NB03WSK124-103	Killifish, Striped (SK)	72	4.2	
NBC		NBC-SN-1016	NB03FBLC030	NB03FBLC030-001	Bluefish (BL)	160	28.2	
NBC		NBC-SN-1016	NB03WWFC031	NB03WWFC031-001	Flounder, Winter (WF)	102	10.1	
NBC		NBC-SN-1016	NB03WWFC032	NB03WWFC032-001	Flounder, Winter (WF)	74	3.5	
NBC		NBC-SN-1016	NB03WWFC033	NB03WWFC033-001	Flounder, Winter (WF)	100	9.3	
NBC		NBC-SN-1016	NB03WWFC034	NB03WWFC034-001	Flounder, Winter (WF)	85	5.3	
NBC		NBC-SN-1016	NB03WWFC035	NB03WWFC035-001	Flounder, Winter (WF)	91	7.8	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-001	Silverside, Atlantic (AS)	100	5.6	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-002	Silverside, Atlantic (AS)	118	8.1	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-003	Silverside, Atlantic (AS)	116	7.9	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-004	Silverside, Atlantic (AS)	115	7.9	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-005	Silverside, Atlantic (AS)	104	6.1	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-006	Silverside, Atlantic (AS)	101	5.7	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-007	Silverside, Atlantic (AS)	93	4.3	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-008	Silverside, Atlantic (AS)	105	5.5	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-009	Silverside, Atlantic (AS)	90	3.7	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-010	Silverside, Atlantic (AS)	97	4.8	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-011	Silverside, Atlantic (AS)	100	5.1	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-012	Silverside, Atlantic (AS)	87	3.1	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-013	Silverside, Atlantic (AS)	87	3.5	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-014	Silverside, Atlantic (AS)	94	4.5	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-015	Silverside, Atlantic (AS)	96	3.7	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-016	Silverside, Atlantic (AS)	84	3.0	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-017	Silverside, Atlantic (AS)	87	4.0	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-018	Silverside, Atlantic (AS)	86	3.1	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-019	Silverside, Atlantic (AS)	86	3.3	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-020	Silverside, Atlantic (AS)	80	2.7	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-021	Silverside, Atlantic (AS)	94	3.5	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-022	Silverside, Atlantic (AS)	82	2.7	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-023	Silverside, Atlantic (AS)	86	3.1	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-024	Silverside, Atlantic (AS)	92	4.4	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-025	Silverside, Atlantic (AS)	80	3.3	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-026	Silverside, Atlantic (AS)	90	3.2	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-027	Silverside, Atlantic (AS)	95	3.7	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-028	Silverside, Atlantic (AS)	90	3.7	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-029	Silverside, Atlantic (AS)	76	2.1	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-030	Silverside, Atlantic (AS)	77	2.0	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-031	Silverside, Atlantic (AS)	79	2.7	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-032	Silverside, Atlantic (AS)	70	1.6	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-033	Silverside, Atlantic (AS)	79	2.5	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Comments
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-034	Silverside, Atlantic (AS)	78	2.5	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-035	Silverside, Atlantic (AS)	76	2.2	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-036	Silverside, Atlantic (AS)	70	1.8	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-037	Silverside, Atlantic (AS)	81	3.8	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-038	Silverside, Atlantic (AS)	90	4.0	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-039	Silverside, Atlantic (AS)	96	4.1	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-040	Silverside, Atlantic (AS)	82	2.8	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-041	Silverside, Atlantic (AS)	84	3.3	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-042	Silverside, Atlantic (AS)	80	2.6	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-043	Silverside, Atlantic (AS)	76	2.3	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-044	Silverside, Atlantic (AS)	71	1.8	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-045	Silverside, Atlantic (AS)	91	4.6	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-046	Silverside, Atlantic (AS)	85	3.3	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-047	Silverside, Atlantic (AS)	81	2.6	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-048	Silverside, Atlantic (AS)	69	1.5	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-049	Silverside, Atlantic (AS)	80	2.6	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-050	Silverside, Atlantic (AS)	72	1.9	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-051	Silverside, Atlantic (AS)	79	2.2	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-052	Silverside, Atlantic (AS)	65	1.2	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-053	Silverside, Atlantic (AS)	76	2.2	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-054	Silverside, Atlantic (AS)	70	1.4	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-055	Silverside, Atlantic (AS)	75	1.9	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-056	Silverside, Atlantic (AS)	71	1.7	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-057	Silverside, Atlantic (AS)	73	1.8	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-058	Silverside, Atlantic (AS)	76	2.1	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-059	Silverside, Atlantic (AS)	71	1.7	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-060	Silverside, Atlantic (AS)	71	1.8	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-061	Silverside, Atlantic (AS)	60	1.0	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-062	Silverside, Atlantic (AS)	68	1.5	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-063	Silverside, Atlantic (AS)	77	2.1	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-064	Silverside, Atlantic (AS)	72	1.8	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-065	Silverside, Atlantic (AS)	61	1.3	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-066	Silverside, Atlantic (AS)	69	1.5	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-067	Silverside, Atlantic (AS)	63	1.3	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-068	Silverside, Atlantic (AS)	60	1.3	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-069	Silverside, Atlantic (AS)	64	1.5	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-070	Silverside, Atlantic (AS)	73	2.1	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-071	Silverside, Atlantic (AS)	75	2.0	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-072	Silverside, Atlantic (AS)	73	1.8	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-073	Silverside, Atlantic (AS)	67	1.4	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-074	Silverside, Atlantic (AS)	67	1.2	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-075	Silverside, Atlantic (AS)	71	2.0	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-076	Silverside, Atlantic (AS)	62	1.3	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-077	Silverside, Atlantic (AS)	60	0.9	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-078	Silverside, Atlantic (AS)	66	1.4	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Comments
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-079	Silverside, Atlantic (AS)	61	1.0	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-080	Silverside, Atlantic (AS)	68	1.7	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-081	Silverside, Atlantic (AS)	56	0.8	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-082	Silverside, Atlantic (AS)	56	0.8	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-083	Silverside, Atlantic (AS)	68	1.4	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-084	Silverside, Atlantic (AS)	73	1.9	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-085	Silverside, Atlantic (AS)	68	1.6	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-086	Silverside, Atlantic (AS)	70	1.5	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-087	Silverside, Atlantic (AS)	54	0.7	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-088	Silverside, Atlantic (AS)	60	1.0	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-089	Silverside, Atlantic (AS)	65	1.2	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-090	Silverside, Atlantic (AS)	63	1.2	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-091	Silverside, Atlantic (AS)	70	1.6	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-092	Silverside, Atlantic (AS)	61	1.0	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-093	Silverside, Atlantic (AS)	59	1.1	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-094	Silverside, Atlantic (AS)	52	0.6	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-095	Silverside, Atlantic (AS)	66	1.2	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-096	Silverside, Atlantic (AS)	65	1.2	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-097	Silverside, Atlantic (AS)	62	1.0	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-098	Silverside, Atlantic (AS)	66	1.5	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-099	Silverside, Atlantic (AS)	70	1.6	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-100	Silverside, Atlantic (AS)	59	1.0	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-101	Silverside, Atlantic (AS)	55	0.8	
NBC	124	NBC-SN-1024	NB03WASC031	NB03WASC031-102	Silverside, Atlantic (AS)	54	0.7	
NBC	124	NBC-SN-1024	NB03FBLC032	NB03FBLC032-001	Bluefish (BL)	214	66.7	
NBC	127A	NBC-SN-1014	NB03WSK127A	NB03WSK127A-001	Killifish, Striped (SK)	90	9.7	
NBC	127A	NBC-SN-1014	NB03WSK127A	NB03WSK127A-002	Killifish, Striped (SK)	88	9.0	
NBC	127A	NBC-SN-1014	NB03WSK127A	NB03WSK127A-003	Killifish, Striped (SK)	90	10.1	
NBC	127A	NBC-SN-1014	NB03WSK127A	NB03WSK127A-004	Killifish, Striped (SK)	85	8.7	
NBC	127A	NBC-SN-1014	NB03WSK127A	NB03WSK127A-005	Killifish, Striped (SK)	85	8.0	
NBC	127A	NBC-SN-1014	NB03WSK127A	NB03WSK127A-006	Killifish, Striped (SK)	80	6.5	
NBC	127A	NBC-SN-1014	NB03WSK127A	NB03WSK127A-007	Killifish, Striped (SK)	88	9.4	
NBC	127A	NBC-SN-1014	NB03WSK127A	NB03WSK127A-008	Killifish, Striped (SK)	87	8.2	
NBC	127A	NBC-SN-1014	NB03WSK127A	NB03WSK127A-009	Killifish, Striped (SK)	90	10.4	
NBC	127A	NBC-SN-1014	NB03WSK127A	NB03WSK127A-010	Killifish, Striped (SK)	90	9.3	
NBC	127A	NBC-SN-1014	NB03WSK127A	NB03WSK127A-011	Killifish, Striped (SK)	68	3.5	
NBC	127A	NBC-SN-1014	NB03WSK127A	NB03WSK127A-012	Killifish, Striped (SK)	92	10.6	
NBC	127A	NBC-SN-1014	NB03WSK127A	NB03WSK127A-013	Killifish, Striped (SK)	82	7.2	
NBC	127A	NBC-SN-1014	NB03WSK127A	NB03WSK127A-014	Killifish, Striped (SK)	62	2.8	
NBC	127A	NBC-SN-1014	NB03WSK127A	NB03WSK127A-015	Killifish, Striped (SK)	70	4.2	
NBC	127A	NBC-SN-1014	NB03WSK127A	NB03WSK127A-016	Killifish, Striped (SK)	81	7.3	
NBC	127A	NBC-SN-1014	NB03WSK127A	NB03WSK127A-017	Killifish, Striped (SK)	83	7.8	
NBC	127A	NBC-SN-1014	NB03WSK127A	NB03WSK127A-018	Killifish, Striped (SK)	48	1.2	
NBC	127A	NBC-SN-1014	NB03WSK127A	NB03WSK127A-019	Killifish, Striped (SK)	82	7.6	
NBC	127A	NBC-SN-1014	NB03WSK127A	NB03WSK127A-020	Killifish, Striped (SK)	91	10.0	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Comments
NBC	127A	NBC-SN-1014	NB03WSK127A	NB03WSK127A-021	Killifish, Striped (SK)	83	7.1	
NBC	127A	NBC-SN-1014	NB03WSK127A	NB03WSK127A-022	Killifish, Striped (SK)	77	5.1	
NBC	127A	NBC-SN-1014	NB03WSK127A	NB03WSK127A-023	Killifish, Striped (SK)	62	2.8	
NBC	127A	NBC-SN-1014	NB03WSK127A	NB03WSK127A-024	Killifish, Striped (SK)	70	4.2	
NBC	127A	NBC-SN-1014	NB03WSK127A	NB03WSK127A-025	Killifish, Striped (SK)	58	2.4	
NBC	127A	NBC-SN-1014	NB03WSK127A	NB03WSK127A-026	Killifish, Striped (SK)	75	4.7	
NBC	127A	NBC-SN-1014	NB03WSK127A	NB03WSK127A-027	Killifish, Striped (SK)	77	5.4	
NBC	127A	NBC-SN-1014	NB03WSK127A	NB03WSK127A-028	Killifish, Striped (SK)	63	2.8	
NBC	127A	NBC-SN-1014	NB03WSK127A	NB03WSK127A-029	Killifish, Striped (SK)	62	2.9	
NBC	127A	NBC-SN-1014	NB03WSK127A	NB03WSK127A-030	Killifish, Striped (SK)	63	3.1	
NBC	127A	NBC-SN-1014	NB03WSK127A	NB03WSK127A-031	Killifish, Striped (SK)	63	3.2	
NBC	127A	NBC-SN-1014	NB03WSK127A	NB03WSK127A-032	Killifish, Striped (SK)	48	1.3	
NBC	127A	NBC-SN-1014	NB03WSK127A	NB03WSK127A-033	Killifish, Striped (SK)	65	3.5	
NBC	127A	NBC-SN-1014	NB03WSK127A	NB03WSK127A-034	Killifish, Striped (SK)	68	3.5	
NBC	127A	NBC-SN-1014	NB03WSK127A	NB03WSK127A-035	Killifish, Striped (SK)	70	4.3	
NBC	127A	NBC-SN-1014	NB03WSK127A	NB03WSK127A-036	Killifish, Striped (SK)	72	4.9	
NBC	127A	NBC-SN-1014	NB03WSK127A	NB03WSK127A-037	Killifish, Striped (SK)	78	5.6	
NBC	127A	NBC-SN-1014	NB03WSK127A	NB03WSK127A-038	Killifish, Striped (SK)	73	4.9	
NBC	127A	NBC-SN-1014	NB03WSK127A	NB03WSK127A-039	Killifish, Striped (SK)	99	13.0	
NBC	127A	NBC-SN-1014	NB03WSK127A	NB03WSK127A-040	Killifish, Striped (SK)	72	4.7	
NBC	127A	NBC-SN-1014	NB03WSK127A	NB03WSK127A-041	Killifish, Striped (SK)	72	4.4	
NBC	127A	NBC-SN-1014	NB03WSK127A	NB03WSK127A-042	Killifish, Striped (SK)	62	2.5	
NBC	127A	NBC-SN-1014	NB03WSK127A	NB03WSK127A-043	Killifish, Striped (SK)	62	2.6	
NBC	127A	NBC-SN-1014	NB03WSK127A	NB03WSK127A-044	Killifish, Striped (SK)	63	3.1	
NBC	127A	NBC-SN-1014	NB03WSK127A	NB03WSK127A-045	Killifish, Striped (SK)	58	2.4	
NBC	127A	NBC-SN-1014	NB03WSK127A	NB03WSK127A-046	Killifish, Striped (SK)	62	2.8	
NBC	127A	NBC-SN-1014	NB03WSK127A	NB03WSK127A-047	Killifish, Striped (SK)	59	2.5	
NBC	127A	NBC-SN-1014	NB03WSK127A	NB03WSK127A-048	Killifish, Striped (SK)	69	4.4	
NBC	127A	NBC-SN-1014	NB03WSK127A	NB03WSK127A-049	Killifish, Striped (SK)	75	5.5	
NBC	127A	NBC-SN-1014	NB03WSK127A	NB03WSK127A-050	Killifish, Striped (SK)	63	3.0	
NBC	127A	NBC-SN-1014	NB03WSK127A	NB03WSK127A-051	Killifish, Striped (SK)	48	1.3	
NBC	127B	NBC-SN-1014	NB03WSK127B	NB03WSK127B-001	Killifish, Striped (SK)	130	29.1	
NBC	127B	NBC-SN-1014	NB03WSK127B	NB03WSK127B-002	Killifish, Striped (SK)	90	8.7	
NBC	127B	NBC-SN-1014	NB03WSK127B	NB03WSK127B-003	Killifish, Striped (SK)	95	11.4	
NBC	127B	NBC-SN-1014	NB03WSK127B	NB03WSK127B-004	Killifish, Striped (SK)	71	4.0	
NBC	127B	NBC-SN-1014	NB03WSK127B	NB03WSK127B-005	Killifish, Striped (SK)	98	12.5	
NBC	127B	NBC-SN-1014	NB03WSK127B	NB03WSK127B-006	Killifish, Striped (SK)	91	9.4	
NBC	127B	NBC-SN-1014	NB03WSK127B	NB03WSK127B-007	Killifish, Striped (SK)	74	5.0	
NBC	127B	NBC-SN-1014	NB03WSK127B	NB03WSK127B-008	Killifish, Striped (SK)	92	10.2	
NBC	127B	NBC-SN-1014	NB03WSK127B	NB03WSK127B-009	Killifish, Striped (SK)	72	4.7	
NBC	127B	NBC-SN-1014	NB03WSK127B	NB03WSK127B-010	Killifish, Striped (SK)	90	10.1	
NBC	127B	NBC-SN-1014	NB03WSK127B	NB03WSK127B-011	Killifish, Striped (SK)	75	5.0	
NBC	127B	NBC-SN-1014	NB03WSK127B	NB03WSK127B-012	Killifish, Striped (SK)	79	5.6	
NBC	127B	NBC-SN-1014	NB03WSK127B	NB03WSK127B-013	Killifish, Striped (SK)	69	4.3	
NBC	127B	NBC-SN-1014	NB03WSK127B	NB03WSK127B-014	Killifish, Striped (SK)	71	4.4	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Comments
NBC	127B	NBC-SN-1014	NB03WSK127B	NB03WSK127B-015	Killifish, Striped (SK)	93	11.0	
NBC	127B	NBC-SN-1014	NB03WSK127B	NB03WSK127B-016	Killifish, Striped (SK)	90	9.3	
NBC	127B	NBC-SN-1014	NB03WSK127B	NB03WSK127B-017	Killifish, Striped (SK)	90	9.8	
NBC	127B	NBC-SN-1014	NB03WSK127B	NB03WSK127B-018	Killifish, Striped (SK)	71	3.8	
NBC	127B	NBC-SN-1014	NB03WSK127B	NB03WSK127B-019	Killifish, Striped (SK)	68	4.0	
NBC	127B	NBC-SN-1014	NB03WSK127B	NB03WSK127B-020	Killifish, Striped (SK)	81	6.7	
NBC	127B	NBC-SN-1014	NB03WSK127B	NB03WSK127B-021	Killifish, Striped (SK)	92	10.6	
NBC	127B	NBC-SN-1014	NB03WSK127B	NB03WSK127B-022	Killifish, Striped (SK)	98	12.2	
NBC	127B	NBC-SN-1014	NB03WSK127B	NB03WSK127B-023	Killifish, Striped (SK)	89	9.1	
NBC	127B	NBC-SN-1014	NB03WSK127B	NB03WSK127B-024	Killifish, Striped (SK)	84	7.4	
NBC	127B	NBC-SN-1014	NB03WSK127B	NB03WSK127B-025	Killifish, Striped (SK)	91	9.8	
NBC	127B	NBC-SN-1014	NB03WSK127B	NB03WSK127B-026	Killifish, Striped (SK)	63	3.0	
NBC	127B	NBC-SN-1014	NB03WSK127B	NB03WSK127B-027	Killifish, Striped (SK)	78	5.4	
NBC	127B	NBC-SN-1014	NB03WSK127B	NB03WSK127B-028	Killifish, Striped (SK)	74	4.7	
NBC	127B	NBC-SN-1014	NB03WSK127B	NB03WSK127B-029	Killifish, Striped (SK)	70	4.4	
NBC	127B	NBC-SN-1014	NB03WSK127B	NB03WSK127B-030	Killifish, Striped (SK)	73	4.7	
NBC	127B	NBC-SN-1014	NB03WSK127B	NB03WSK127B-031	Killifish, Striped (SK)	75	5.0	
NBC	127B	NBC-SN-1014	NB03WSK127B	NB03WSK127B-032	Killifish, Striped (SK)	91	9.0	
NBC	127B	NBC-SN-1014	NB03WSK127B	NB03WSK127B-033	Killifish, Striped (SK)	86	7.6	
NBC	127B	NBC-SN-1014	NB03WSK127B	NB03WSK127B-034	Killifish, Striped (SK)	92	10.4	
NBC	127B	NBC-SN-1014	NB03WSK127B	NB03WSK127B-035	Killifish, Striped (SK)	73	4.4	
NBC	127B	NBC-SN-1014	NB03WSK127B	NB03WSK127B-036	Killifish, Striped (SK)	88	9.0	
NBC	127B	NBC-SN-1014	NB03WSK127B	NB03WSK127B-037	Killifish, Striped (SK)	66	3.4	
NBC	127B	NBC-SN-1014	NB03WSK127B	NB03WSK127B-038	Killifish, Striped (SK)	88	9.2	
NBC	127B	NBC-SN-1014	NB03WSK127B	NB03WSK127B-039	Killifish, Striped (SK)	87	8.3	
NBC	127B	NBC-SN-1014	NB03WSK127B	NB03WSK127B-040	Killifish, Striped (SK)	95	11.3	
NBC	127B	NBC-SN-1014	NB03WSK127B	NB03WSK127B-041	Killifish, Striped (SK)	71	4.5	
NBC	127B	NBC-SN-1014	NB03WSK127B	NB03WSK127B-042	Killifish, Striped (SK)	75	5.2	
NBC	127B	NBC-SN-1014	NB03WSK127B	NB03WSK127B-043	Killifish, Striped (SK)	84	7.0	
NBC	127B	NBC-SN-1014	NB03WSK127B	NB03WSK127B-044	Killifish, Striped (SK)	98	11.6	
NBC	127B	NBC-SN-1014	NB03WSK127B	NB03WSK127B-045	Killifish, Striped (SK)	85	7.3	
NBC	127B	NBC-SN-1014	NB03WSK127B	NB03WSK127B-046	Killifish, Striped (SK)	82	7.0	
NBC	127B	NBC-SN-1014	NB03WSK127B	NB03WSK127B-047	Killifish, Striped (SK)	69	3.8	
NBC	127B	NBC-SN-1014	NB03WSK127B	NB03WSK127B-048	Killifish, Striped (SK)	79	6.1	
NBC	127B	NBC-SN-1014	NB03WSK127B	NB03WSK127B-049	Killifish, Striped (SK)	84	7.2	
NBC	127B	NBC-SN-1014	NB03WSK127B	NB03WSK127B-050	Killifish, Striped (SK)	94	10.4	
NBC	127B	NBC-SN-1014	NB03WSK127B	NB03WSK127B-051	Killifish, Striped (SK)	84	7.4	
NBC	127B	NBC-SN-1014	NB03WSK127B	NB03WSK127B-052	Killifish, Striped (SK)	91	9.9	
NBC	127B	NBC-SN-1014	NB03WSK127B	NB03WSK127B-053	Killifish, Striped (SK)	97	12.0	
NBC	127B	NBC-SN-1014	NB03WSK127B	NB03WSK127B-054	Killifish, Striped (SK)	77	5.3	
NBC	127B	NBC-SN-1014	NB03WSK127B	NB03WSK127B-055	Killifish, Striped (SK)	73	7.8	
NBC	127B	NBC-SN-1014	NB03WSK127B	NB03WSK127B-056	Killifish, Striped (SK)	74	5.4	
NBS		NBS-GN-1008	NB03WSFS001	NB03WSFS001-001	Flounder, Summer (SF)	190	60.7	
NBS		NBS-GN-1008	NB03WSFS002	NB03WSFS002-001	Flounder, Summer (SF)	349	370	
NBS		NBS-SN-1010	NB03FBLS003	NB03FBLS003-001	Bluefish (BL)	233	111.4	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Comments
NBS		NBS-SN-1010	NB03FBLS003	NB03FBLS003-002	Bluefish (BL)	158	27.9	
NBS		NBS-SN-1010	NB03FBLS003	NB03FBLS003-003	Bluefish (BL)	227	94.4	
NBS		NBS-SN-1010	NB03FBLS003	NB03FBLS003-004	Bluefish (BL)	160	30.3	
NBS		NBS-SN-1010	NB03FBLS003	NB03FBLS003-005	Bluefish (BL)	145	21.5	
NBS		NBS-SN-1010	NB03FBLS003	NB03FBLS003-006	Bluefish (BL)	136	19.2	
NBS		NBS-SN-1010	NB03FBLS003	NB03FBLS003-007	Bluefish (BL)	145	21.7	
NBS		NBS-SN-1010	NB03FBLS003	NB03FBLS003-008	Bluefish (BL)	160	30.1	
NBS		NBS-SN-1010	NB03FBLS003	NB03FBLS003-009	Bluefish (BL)	128	18.0	
NBS		NBS-SN-1010	NB03FBLS003	NB03FBLS003-010	Bluefish (BL)	118	11.6	
NBS		NBS-SN-1010	NB03FBLS003	NB03FBLS003-011	Bluefish (BL)	105	7.7	
NBS		NBS-SN-1010	NB03FBLS003	NB03FBLS003-012	Bluefish (BL)	130	17.1	
NBS		NBS-SN-1010	NB03FBLS003	NB03FBLS003-013	Bluefish (BL)	133	17.9	
NBS		NBS-SN-1010	NB03FBLS003	NB03FBLS003-014	Bluefish (BL)	128	17.7	
NBS		NBS-SN-1010	NB03WASS004	NB03WASS004-001	Silverside, Atlantic (AS)	98	4.7	
NBS		NBS-SN-1010	NB03WASS004	NB03WASS004-002	Silverside, Atlantic (AS)	80	2.7	
NBS		NBS-SN-1010	NB03WASS004	NB03WASS004-003	Silverside, Atlantic (AS)	58	1.1	
NBS		NBS-SN-1010	NB03WASS004	NB03WASS004-004	Silverside, Atlantic (AS)	85	2.6	
NBS		NBS-SN-1010	NB03WASS004	NB03WASS004-005	Silverside, Atlantic (AS)	95	4.9	
NBS		NBS-SN-1010	NB03WASS004	NB03WASS004-006	Silverside, Atlantic (AS)	105	6.0	
NBS		NBS-SN-1010	NB03WASS004	NB03WASS004-007	Silverside, Atlantic (AS)	110	7.2	
NBS		NBS-SN-1010	NB03WASS004	NB03WASS004-008	Silverside, Atlantic (AS)	103	5.7	
NBS		NBS-SN-1010	NB03WASS004	NB03WASS004-009	Silverside, Atlantic (AS)	101	5.8	
NBS		NBS-SN-1010	NB03WASS004	NB03WASS004-010	Silverside, Atlantic (AS)	93	3.4	
NBS		NBS-SN-1010	NB03WASS004	NB03WASS004-011	Silverside, Atlantic (AS)	87	3.2	
NBS		NBS-SN-1010	NB03WASS004	NB03WASS004-012	Silverside, Atlantic (AS)	103	5.9	
NBS		NBS-SN-1010	NB03WASS004	NB03WASS004-013	Silverside, Atlantic (AS)	98	5.1	
NBS		NBS-SN-1010	NB03WASS004	NB03WASS004-014	Silverside, Atlantic (AS)	110	6.4	
NBS		NBS-SN-1010	NB03WASS004	NB03WASS004-015	Silverside, Atlantic (AS)	98	5.2	
NBS		NBS-SN-1010	NB03WASS004	NB03WASS004-016	Silverside, Atlantic (AS)	90	4.0	
NBS		NBS-SN-1010	NB03WASS004	NB03WASS004-017	Silverside, Atlantic (AS)	91	3.9	
NBS		NBS-SN-1010	NB03WASS004	NB03WASS004-018	Silverside, Atlantic (AS)	90	3.9	
NBS		NBS-SN-1010	NB03WASS004	NB03WASS004-019	Silverside, Atlantic (AS)	87	3.0	
NBS		NBS-SN-1010	NB03WASS004	NB03WASS004-020	Silverside, Atlantic (AS)	60	0.9	
NBS		NBS-SN-1010	NB03WASS004	NB03WASS004-021	Silverside, Atlantic (AS)	100	5.7	
NBS		NBS-SN-1010	NB03WASS004	NB03WASS004-022	Silverside, Atlantic (AS)	88	3.2	
NBS		NBS-SN-1010	NB03WASS004	NB03WASS004-023	Silverside, Atlantic (AS)	85	3.1	
NBS		NBS-SN-1010	NB03WASS004	NB03WASS004-024	Silverside, Atlantic (AS)	97	4.9	
NBS		NBS-SN-1010	NB03WASS004	NB03WASS004-025	Silverside, Atlantic (AS)	104	6.1	
NBS		NBS-SN-1010	NB03WASS004	NB03WASS004-026	Silverside, Atlantic (AS)	98	4.9	
NBS		NBS-SN-1010	NB03WASS004	NB03WASS004-027	Silverside, Atlantic (AS)	113	8.0	
NBS		NBS-SN-1010	NB03WASS004	NB03WASS004-028	Silverside, Atlantic (AS)	102	6.0	
NBS		NBS-SN-1010	NB03WASS004	NB03WASS004-029	Silverside, Atlantic (AS)	95	3.9	
NBS		NBS-SN-1010	NB03WASS004	NB03WASS004-030	Silverside, Atlantic (AS)	100	4.8	
NBS		NBS-SN-1010	NB03WASS004	NB03WASS004-031	Silverside, Atlantic (AS)	98	5.4	
NBS		NBS-SN-1010	NB03WASS004	NB03WASS004-032	Silverside, Atlantic (AS)	98	4.8	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Comments
NBS		NBS-SN-1010	NB03WASS004	NB03WASS004-033	Silverside, Atlantic (AS)	108	6.2	
NBS		NBS-SN-1010	NB03WASS004	NB03WASS004-034	Silverside, Atlantic (AS)	104	5.6	
NBS		NBS-SN-1010	NB03WASS004	NB03WASS004-035	Silverside, Atlantic (AS)	95	4.1	
NBS		NBS-SN-1010	NB03WASS004	NB03WASS004-036	Silverside, Atlantic (AS)	84	2.7	
NBS		NBS-SN-1010	NB03WASS004	NB03WASS004-037	Silverside, Atlantic (AS)	90	3.7	
NBS		NBS-SN-1010	NB03WASS004	NB03WASS004-038	Silverside, Atlantic (AS)	65	1.5	
NBS		NBS-SN-1010	NB03WASS004	NB03WASS004-039	Silverside, Atlantic (AS)	95	4.3	
NBS		NBS-SN-1010	NB03WASS004	NB03WASS004-040	Silverside, Atlantic (AS)	90	3.6	
NBS		NBS-SN-1010	NB03WASS004	NB03WASS004-041	Silverside, Atlantic (AS)	94	4.1	
NBS		NBS-SN-1010	NB03WASS004	NB03WASS004-042	Silverside, Atlantic (AS)	100	4.7	
NBS		NBS-SN-1010	NB03WASS004	NB03WASS004-043	Silverside, Atlantic (AS)	106	5.8	
NBS		NBS-SN-1010	NB03WASS004	NB03WASS004-044	Silverside, Atlantic (AS)	90	3.7	
NBS		NBS-SN-1010	NB03WASS004	NB03WASS004-045	Silverside, Atlantic (AS)	94	4.3	
NBS		NBS-SN-1010	NB03WASS005	NB03WASS005-001	Silverside, Atlantic (AS)	100	5.1	
NBS		NBS-SN-1010	NB03WASS005	NB03WASS005-002	Silverside, Atlantic (AS)	87	3.2	
NBS		NBS-SN-1010	NB03WASS005	NB03WASS005-003	Silverside, Atlantic (AS)	100	5.3	
NBS		NBS-SN-1010	NB03WASS005	NB03WASS005-004	Silverside, Atlantic (AS)	108	6.1	
NBS		NBS-SN-1010	NB03WASS005	NB03WASS005-005	Silverside, Atlantic (AS)	105	6.1	
NBS		NBS-SN-1010	NB03WASS005	NB03WASS005-006	Silverside, Atlantic (AS)	83	3.1	
NBS		NBS-SN-1010	NB03WASS005	NB03WASS005-007	Silverside, Atlantic (AS)	87	3.4	
NBS		NBS-SN-1010	NB03WASS005	NB03WASS005-008	Silverside, Atlantic (AS)	101	4.9	
NBS		NBS-SN-1010	NB03WASS005	NB03WASS005-009	Silverside, Atlantic (AS)	88	3.3	
NBS		NBS-SN-1010	NB03WASS005	NB03WASS005-010	Silverside, Atlantic (AS)	91	4.1	
NBS		NBS-SN-1010	NB03WASS005	NB03WASS005-011	Silverside, Atlantic (AS)	102	4.2	
NBS		NBS-SN-1010	NB03WASS005	NB03WASS005-012	Silverside, Atlantic (AS)	105	6.5	
NBS		NBS-SN-1010	NB03WASS005	NB03WASS005-013	Silverside, Atlantic (AS)	95	5.5	
NBS		NBS-SN-1010	NB03WASS005	NB03WASS005-014	Silverside, Atlantic (AS)	80	2.2	
NBS		NBS-SN-1010	NB03WASS005	NB03WASS005-015	Silverside, Atlantic (AS)	109	6.4	
NBS		NBS-SN-1010	NB03WASS005	NB03WASS005-016	Silverside, Atlantic (AS)	102	5.6	
NBS		NBS-SN-1010	NB03WASS005	NB03WASS005-017	Silverside, Atlantic (AS)	90	3.5	
NBS		NBS-SN-1010	NB03WASS005	NB03WASS005-018	Silverside, Atlantic (AS)	92	4.3	
NBS		NBS-SN-1010	NB03WASS005	NB03WASS005-019	Silverside, Atlantic (AS)	70	1.7	
NBS		NBS-SN-1010	NB03WASS005	NB03WASS005-020	Silverside, Atlantic (AS)	105	6.5	
NBS		NBS-SN-1010	NB03WASS005	NB03WASS005-021	Silverside, Atlantic (AS)	80	2.1	
NBS		NBS-SN-1010	NB03WASS005	NB03WASS005-022	Silverside, Atlantic (AS)	82	2.7	
NBS		NBS-SN-1010	NB03WASS005	NB03WASS005-023	Silverside, Atlantic (AS)	90	3.5	
NBS		NBS-SN-1010	NB03WASS005	NB03WASS005-024	Silverside, Atlantic (AS)	101	5.5	
NBS		NBS-SN-1010	NB03WASS005	NB03WASS005-025	Silverside, Atlantic (AS)	101	5.0	
NBS		NBS-SN-1010	NB03WASS005	NB03WASS005-026	Silverside, Atlantic (AS)	92	4.0	
NBS		NBS-SN-1010	NB03WASS005	NB03WASS005-027	Silverside, Atlantic (AS)	83	2.7	
NBS		NBS-SN-1010	NB03WASS005	NB03WASS005-028	Silverside, Atlantic (AS)	95	4.2	
NBS		NBS-SN-1010	NB03WASS005	NB03WASS005-029	Silverside, Atlantic (AS)	80	2.6	
NBS		NBS-SN-1010	NB03WASS005	NB03WASS005-030	Silverside, Atlantic (AS)	86	3.6	
NBS		NBS-SN-1010	NB03WASS005	NB03WASS005-031	Silverside, Atlantic (AS)	95	5.0	
NBS		NBS-SN-1010	NB03WASS005	NB03WASS005-032	Silverside, Atlantic (AS)	95	4.2	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Comments
NBS		NBS-SN-1010	NB03WASS005	NB03WASS005-033	Silverside, Atlantic (AS)	91	3.7	
NBS		NBS-SN-1010	NB03WASS005	NB03WASS005-034	Silverside, Atlantic (AS)	71	2.1	
NBS		NBS-SN-1010	NB03WASS005	NB03WASS005-035	Silverside, Atlantic (AS)	100	5.2	
NBS		NBS-SN-1010	NB03WASS005	NB03WASS005-036	Silverside, Atlantic (AS)	83	2.8	
NBS		NBS-SN-1010	NB03WASS005	NB03WASS005-037	Silverside, Atlantic (AS)	88	3.2	
NBS		NBS-SN-1010	NB03WASS005	NB03WASS005-038	Silverside, Atlantic (AS)	101	4.9	
NBS		NBS-SN-1010	NB03WASS005	NB03WASS005-039	Silverside, Atlantic (AS)	78	2.4	
NBS		NBS-SN-1010	NB03WASS005	NB03WASS005-040	Silverside, Atlantic (AS)	86	2.9	
NBS		NBS-SN-1010	NB03WASS005	NB03WASS005-041	Silverside, Atlantic (AS)	90	3.5	
NBS		NBS-SN-1010	NB03WASS005	NB03WASS005-042	Silverside, Atlantic (AS)	94	4.7	
NBS		NBS-SN-1010	NB03WASS005	NB03WASS005-043	Silverside, Atlantic (AS)	96	4.3	
NBS		NBS-SN-1010	NB03WASS005	NB03WASS005-044	Silverside, Atlantic (AS)	102	5.3	
NBS		NBS-SN-1010	NB03WASS005	NB03WASS005-045	Silverside, Atlantic (AS)	78	2.3	
NBS		NBS-SN-1010	NB03WASS005	NB03WASS005-046	Silverside, Atlantic (AS)	86	3.2	
NBS		NBS-SN-1010	NB03WASS005	NB03WASS005-047	Silverside, Atlantic (AS)	75	1.9	
NBS		NBS-SN-1010	NB03WASS005	NB03WASS005-048	Silverside, Atlantic (AS)	60	1.1	
NBS		NBS-SN-1010	NB03WASS005	NB03WASS005-049	Silverside, Atlantic (AS)	70	1.5	
NBS		NBS-SN-1010	NB03WASS005	NB03WASS005-050	Silverside, Atlantic (AS)	56	1.0	
NBS		NBS-SN-1010	NB03WASS005	NB03WASS005-051	Silverside, Atlantic (AS)	65	1.5	
NBS		NBS-SN-1010	NB03WASS005	NB03WASS005-052	Silverside, Atlantic (AS)	70	1.5	
NBS		NBS-SN-1010	NB03WASS005	NB03WASS005-053	Silverside, Atlantic (AS)	60	1.2	
NBS		NBS-SN-1010	NB03WASS005	NB03WASS005-054	Silverside, Atlantic (AS)	65	1.3	
NBS		NBS-SN-1010	NB03WASS005	NB03WASS005-055	Silverside, Atlantic (AS)	90	3.1	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-001	Silverside, Atlantic (AS)	91	3.9	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-002	Silverside, Atlantic (AS)	92	4.2	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-003	Silverside, Atlantic (AS)	97	4.3	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-004	Silverside, Atlantic (AS)	98	4.4	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-005	Silverside, Atlantic (AS)	102	4.5	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-006	Silverside, Atlantic (AS)	91	4.0	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-007	Silverside, Atlantic (AS)	83	2.6	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-008	Silverside, Atlantic (AS)	81	2.4	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-009	Silverside, Atlantic (AS)	72	1.8	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-010	Silverside, Atlantic (AS)	82	3.9	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-011	Silverside, Atlantic (AS)	100	5.3	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-012	Silverside, Atlantic (AS)	81	2.4	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-013	Silverside, Atlantic (AS)	75	1.8	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-014	Silverside, Atlantic (AS)	70	1.5	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-015	Silverside, Atlantic (AS)	95	4.2	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-016	Silverside, Atlantic (AS)	93	5.0	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-017	Silverside, Atlantic (AS)	87	3.1	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-018	Silverside, Atlantic (AS)	87	3.1	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-019	Silverside, Atlantic (AS)	86	3.1	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-020	Silverside, Atlantic (AS)	87	3.1	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-021	Silverside, Atlantic (AS)	79	2.1	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-022	Silverside, Atlantic (AS)	77	1.8	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Comments
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-023	Silverside, Atlantic (AS)	76	2.2	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-024	Silverside, Atlantic (AS)	81	2.8	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-025	Silverside, Atlantic (AS)	70	1.6	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-026	Silverside, Atlantic (AS)	61	1.1	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-027	Silverside, Atlantic (AS)	81	2.6	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-028	Silverside, Atlantic (AS)	76	3.3	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-029	Silverside, Atlantic (AS)	62	1.2	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-030	Silverside, Atlantic (AS)	87	3.1	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-031	Silverside, Atlantic (AS)	71	1.9	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-032	Silverside, Atlantic (AS)	84	3.3	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-033	Silverside, Atlantic (AS)	89	3.3	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-034	Silverside, Atlantic (AS)	81	2.7	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-035	Silverside, Atlantic (AS)	85	3.3	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-036	Silverside, Atlantic (AS)	67	1.6	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-037	Silverside, Atlantic (AS)	72	1.9	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-038	Silverside, Atlantic (AS)	67	1.2	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-039	Silverside, Atlantic (AS)	71	1.5	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-040	Silverside, Atlantic (AS)	65	1.4	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-041	Silverside, Atlantic (AS)	73	2.2	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-042	Silverside, Atlantic (AS)	73	1.8	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-043	Silverside, Atlantic (AS)	74	2.0	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-044	Silverside, Atlantic (AS)	91	3.7	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-045	Silverside, Atlantic (AS)	73	1.6	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-046	Silverside, Atlantic (AS)	80	2.3	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-047	Silverside, Atlantic (AS)	71	1.8	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-048	Silverside, Atlantic (AS)	70	1.6	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-049	Silverside, Atlantic (AS)	92	4.2	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-050	Silverside, Atlantic (AS)	75	2.2	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-051	Silverside, Atlantic (AS)	71	1.7	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-052	Silverside, Atlantic (AS)	64	1.1	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-053	Silverside, Atlantic (AS)	48	0.5	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-054	Silverside, Atlantic (AS)	81	2.1	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-055	Silverside, Atlantic (AS)	65	1.4	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-056	Silverside, Atlantic (AS)	71	1.8	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-057	Silverside, Atlantic (AS)	75	2.0	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-058	Silverside, Atlantic (AS)	78	2.3	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-059	Silverside, Atlantic (AS)	68	1.5	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-060	Silverside, Atlantic (AS)	68	1.7	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-061	Silverside, Atlantic (AS)	90	3.9	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-062	Silverside, Atlantic (AS)	74	1.9	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-063	Silverside, Atlantic (AS)	75	2.0	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-064	Silverside, Atlantic (AS)	74	1.8	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-065	Silverside, Atlantic (AS)	70	1.5	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-066	Silverside, Atlantic (AS)	68	1.6	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-067	Silverside, Atlantic (AS)	79	2.2	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Comments
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-068	Silverside, Atlantic (AS)	92	4.2	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-069	Silverside, Atlantic (AS)	70	1.5	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-070	Silverside, Atlantic (AS)	82	3.0	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-071	Silverside, Atlantic (AS)	70	1.6	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-072	Silverside, Atlantic (AS)	71	1.9	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-073	Silverside, Atlantic (AS)	69	1.6	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-074	Silverside, Atlantic (AS)	69	1.5	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-075	Silverside, Atlantic (AS)	65	1.4	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-076	Silverside, Atlantic (AS)	78	2.2	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-077	Silverside, Atlantic (AS)	76	1.7	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-078	Silverside, Atlantic (AS)	69	1.6	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-079	Silverside, Atlantic (AS)	71	1.7	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-080	Silverside, Atlantic (AS)	62	1.2	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-081	Silverside, Atlantic (AS)	62	1.2	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-082	Silverside, Atlantic (AS)	68	1.5	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-083	Silverside, Atlantic (AS)	68	1.6	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-084	Silverside, Atlantic (AS)	75	2.0	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-085	Silverside, Atlantic (AS)	73	2.1	
NBS		NBS-SN-1010	NB03WASS006	NB03WASS006-086	Silverside, Atlantic (AS)	75	2.3	
NBS		NBS-SN-1010	NB03WASS007	NB03WASS007-001	Silverside, Atlantic (AS)	105	5.7	
NBS		NBS-SN-1010	NB03WASS007	NB03WASS007-002	Silverside, Atlantic (AS)	110	6.9	
NBS		NBS-SN-1010	NB03WASS007	NB03WASS007-003	Silverside, Atlantic (AS)	100	4.7	
NBS		NBS-SN-1010	NB03WASS007	NB03WASS007-004	Silverside, Atlantic (AS)	100	5.4	
NBS		NBS-SN-1010	NB03WASS007	NB03WASS007-005	Silverside, Atlantic (AS)	101	5.1	
NBS		NBS-SN-1010	NB03WASS007	NB03WASS007-006	Silverside, Atlantic (AS)	98	4.6	
NBS		NBS-SN-1010	NB03WASS007	NB03WASS007-007	Silverside, Atlantic (AS)	96	4.3	
NBS		NBS-SN-1010	NB03WASS007	NB03WASS007-008	Silverside, Atlantic (AS)	100	5.3	
NBS		NBS-SN-1010	NB03WASS007	NB03WASS007-009	Silverside, Atlantic (AS)	100	4.3	
NBS		NBS-SN-1010	NB03WASS007	NB03WASS007-010	Silverside, Atlantic (AS)	110	6.6	
NBS		NBS-SN-1010	NB03WASS007	NB03WASS007-011	Silverside, Atlantic (AS)	101	4.7	
NBS		NBS-SN-1010	NB03WASS007	NB03WASS007-012	Silverside, Atlantic (AS)	110	6.8	
NBS		NBS-SN-1010	NB03WASS007	NB03WASS007-013	Silverside, Atlantic (AS)	96	4.3	
NBS		NBS-SN-1010	NB03WASS007	NB03WASS007-014	Silverside, Atlantic (AS)	103	5.0	
NBS		NBS-SN-1010	NB03WASS007	NB03WASS007-015	Silverside, Atlantic (AS)	90	3.4	
NBS		NBS-SN-1010	NB03WASS007	NB03WASS007-016	Silverside, Atlantic (AS)	110	6.0	
NBS		NBS-SN-1010	NB03WASS007	NB03WASS007-017	Silverside, Atlantic (AS)	110	4.7	
NBS		NBS-SN-1010	NB03WASS007	NB03WASS007-018	Silverside, Atlantic (AS)	90	3.6	
NBS		NBS-SN-1010	NB03WASS007	NB03WASS007-019	Silverside, Atlantic (AS)	88	3.1	
NBS		NBS-SN-1010	NB03WASS007	NB03WASS007-020	Silverside, Atlantic (AS)	101	5.0	
NBS		NBS-SN-1010	NB03WASS007	NB03WASS007-021	Silverside, Atlantic (AS)	81	2.8	
NBS		NBS-SN-1010	NB03WASS007	NB03WASS007-022	Silverside, Atlantic (AS)	85	3.1	
NBS		NBS-SN-1010	NB03WASS007	NB03WASS007-023	Silverside, Atlantic (AS)	82	3.1	
NBS		NBS-SN-1010	NB03WASS007	NB03WASS007-024	Silverside, Atlantic (AS)	87	3.4	
NBS		NBS-SN-1010	NB03WASS007	NB03WASS007-025	Silverside, Atlantic (AS)	94	4.2	
NBS		NBS-SN-1010	NB03WASS007	NB03WASS007-026	Silverside, Atlantic (AS)	87	3.2	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Comments
NBS		NBS-SN-1010	NB03WASS007	NB03WASS007-027	Silverside, Atlantic (AS)	87	3.0	
NBS		NBS-SN-1010	NB03WASS007	NB03WASS007-028	Silverside, Atlantic (AS)	84	2.6	
NBS		NBS-SN-1010	NB03WASS007	NB03WASS007-029	Silverside, Atlantic (AS)	92	3.6	
NBS		NBS-SN-1010	NB03WASS007	NB03WASS007-030	Silverside, Atlantic (AS)	93	4.3	
NBS		NBS-SN-1010	NB03WASS007	NB03WASS007-031	Silverside, Atlantic (AS)	85	3.0	
NBS		NBS-SN-1010	NB03WASS007	NB03WASS007-032	Silverside, Atlantic (AS)	91	3.7	
NBS		NBS-SN-1010	NB03WASS007	NB03WASS007-033	Silverside, Atlantic (AS)	90	3.4	
NBS		NBS-SN-1010	NB03WASS007	NB03WASS007-034	Silverside, Atlantic (AS)	91	3.9	
NBS		NBS-SN-1010	NB03WASS007	NB03WASS007-035	Silverside, Atlantic (AS)	95	4.3	
NBS		NBS-SN-1010	NB03WASS007	NB03WASS007-036	Silverside, Atlantic (AS)	102	4.9	
NBS		NBS-SN-1010	NB03WASS007	NB03WASS007-037	Silverside, Atlantic (AS)	80	2.6	
NBS		NBS-SN-1010	NB03WASS007	NB03WASS007-038	Silverside, Atlantic (AS)	104	4.8	
NBS		NBS-SN-1010	NB03WASS007	NB03WASS007-039	Silverside, Atlantic (AS)	85	3.0	
NBS		NBS-SN-1010	NB03WASS007	NB03WASS007-040	Silverside, Atlantic (AS)	100	4.5	
NBS		NBS-SN-1010	NB03WASS007	NB03WASS007-041	Silverside, Atlantic (AS)	99	4.3	
NBS		NBS-SN-1010	NB03WASS007	NB03WASS007-042	Silverside, Atlantic (AS)	95	3.7	
NBS		NBS-SN-1010	NB03WASS007	NB03WASS007-043	Silverside, Atlantic (AS)	95	3.8	
NBS		NBS-SN-1010	NB03WASS007	NB03WASS007-044	Silverside, Atlantic (AS)	95	4.2	
NBS		NBS-SN-1010	NB03WASS007	NB03WASS007-045	Silverside, Atlantic (AS)	82	3.0	
NBS		NBS-SN-1010	NB03WASS007	NB03WASS007-046	Silverside, Atlantic (AS)	93	3.9	
NBS		NBS-SN-1010	NB03WASS007	NB03WASS007-047	Silverside, Atlantic (AS)	104	5.1	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-001	Killifish, Striped (SK)	88	7.0	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-002	Killifish, Striped (SK)	82	6.4	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-003	Killifish, Striped (SK)	90	8.1	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-004	Killifish, Striped (SK)	87	7.3	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-005	Killifish, Striped (SK)	88	6.7	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-006	Killifish, Striped (SK)	85	6.3	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-007	Killifish, Striped (SK)	81	6.4	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-008	Killifish, Striped (SK)	88	7.5	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-009	Killifish, Striped (SK)	87	8.1	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-010	Killifish, Striped (SK)	77	5.1	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-011	Killifish, Striped (SK)	78	5.0	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-012	Killifish, Striped (SK)	66	3.3	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-013	Killifish, Striped (SK)	82	5.8	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-014	Killifish, Striped (SK)	75	4.2	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-015	Killifish, Striped (SK)	85	6.5	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-016	Killifish, Striped (SK)	80	6.0	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-017	Killifish, Striped (SK)	80	5.1	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-018	Killifish, Striped (SK)	75	4.8	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-019	Killifish, Striped (SK)	82	6.3	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-020	Killifish, Striped (SK)	85	6.6	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-021	Killifish, Striped (SK)	88	7.3	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-022	Killifish, Striped (SK)	78	5.3	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-023	Killifish, Striped (SK)	80	5.2	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-024	Killifish, Striped (SK)	70	3.6	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Comments
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-025	Killifish, Striped (SK)	74	4.8	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-026	Killifish, Striped (SK)	77	4.9	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-027	Killifish, Striped (SK)	77	4.4	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-028	Killifish, Striped (SK)	85	6.3	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-029	Killifish, Striped (SK)	77	4.8	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-030	Killifish, Striped (SK)	77	5.2	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-031	Killifish, Striped (SK)	80	7.4	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-032	Killifish, Striped (SK)	76	4.7	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-033	Killifish, Striped (SK)	80	5.9	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-034	Killifish, Striped (SK)	85	6.7	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-035	Killifish, Striped (SK)	82	4.9	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-036	Killifish, Striped (SK)	87	7.5	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-037	Killifish, Striped (SK)	82	5.7	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-038	Killifish, Striped (SK)	65	2.4	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-039	Killifish, Striped (SK)	67	2.8	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-040	Killifish, Striped (SK)	74	4.0	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-041	Killifish, Striped (SK)	75	4.5	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-042	Killifish, Striped (SK)	82	5.8	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-043	Killifish, Striped (SK)	82	6.0	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-044	Killifish, Striped (SK)	82	5.4	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-045	Killifish, Striped (SK)	83	5.1	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-046	Killifish, Striped (SK)	83	5.8	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-047	Killifish, Striped (SK)	80	5.6	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-048	Killifish, Striped (SK)	78	5.0	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-049	Killifish, Striped (SK)	76	4.8	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-050	Killifish, Striped (SK)	65	3.0	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-051	Killifish, Striped (SK)	63	2.4	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-052	Killifish, Striped (SK)	78	4.4	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-053	Killifish, Striped (SK)	61	2.3	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-054	Killifish, Striped (SK)	80	5.5	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-055	Killifish, Striped (SK)	76	4.4	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-056	Killifish, Striped (SK)	81	4.7	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-057	Killifish, Striped (SK)	70	3.0	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-058	Killifish, Striped (SK)	70	3.3	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-059	Killifish, Striped (SK)	76	4.8	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-060	Killifish, Striped (SK)	63	2.6	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-061	Killifish, Striped (SK)	65	2.4	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-062	Killifish, Striped (SK)	60	1.6	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-063	Killifish, Striped (SK)	65	2.5	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-064	Killifish, Striped (SK)	65	2.4	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-065	Killifish, Striped (SK)	60	2.0	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-066	Killifish, Striped (SK)	70	3.0	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-067	Killifish, Striped (SK)	58	2.0	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-068	Killifish, Striped (SK)	60	2.1	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-069	Killifish, Striped (SK)	45	0.8	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Comments
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-070	Killifish, Striped (SK)	70	2.9	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-071	Killifish, Striped (SK)	70	3.1	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-072	Killifish, Striped (SK)	70	3.6	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-073	Killifish, Striped (SK)	50	1.1	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-074	Killifish, Striped (SK)	68	2.7	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-075	Killifish, Striped (SK)	60	1.7	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-076	Killifish, Striped (SK)	62	2.1	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-077	Killifish, Striped (SK)	61	1.9	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-078	Killifish, Striped (SK)	80	54.0	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-079	Killifish, Striped (SK)	76	4.3	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-080	Killifish, Striped (SK)	76	4.0	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-081	Killifish, Striped (SK)	68	3.4	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-082	Killifish, Striped (SK)	76	5.2	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-083	Killifish, Striped (SK)	75	3.4	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-084	Killifish, Striped (SK)	57	2.2	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-085	Killifish, Striped (SK)	55	1.4	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-086	Killifish, Striped (SK)	60	2.0	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-087	Killifish, Striped (SK)	61	1.8	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-088	Killifish, Striped (SK)	59	1.7	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-089	Killifish, Striped (SK)	61	2.1	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-090	Killifish, Striped (SK)	70	3.2	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-091	Killifish, Striped (SK)	59	2.1	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-092	Killifish, Striped (SK)	54	1.5	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-093	Killifish, Striped (SK)	60	2.0	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-094	Killifish, Striped (SK)	54	1.3	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-095	Killifish, Striped (SK)	58	1.8	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-096	Killifish, Striped (SK)	63	2.8	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-097	Killifish, Striped (SK)	55	1.7	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-098	Killifish, Striped (SK)	62	2.4	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-099	Killifish, Striped (SK)	62	2.3	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-100	Killifish, Striped (SK)	61	2.4	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-101	Killifish, Striped (SK)	55	2.0	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-102	Killifish, Striped (SK)	55	1.8	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-103	Killifish, Striped (SK)	51	1.0	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-104	Killifish, Striped (SK)	57	1.7	
NBS	131A	NBS-SN-1010	NB03WSK131A	NB03WSK131A-105	Killifish, Striped (SK)	55	1.2	
NBS	131A	NBS-SN-1010	NB03WMU131A	NB03WMU131A-001	Mummichog (MU)	53	1.5	
NBS	131A	NBS-SN-1010	NB03WMU131A	NB03WMU131A-002	Mummichog (MU)	41	0.6	
NBS	131A	NBS-SN-1010	NB03WMU131A	NB03WMU131A-003	Mummichog (MU)	41	0.8	
NBS	131A	NBS-SN-1010	NB03WMU131A	NB03WMU131A-004	Mummichog (MU)	38	0.5	
NBS	131A	NBS-SN-1010	NB03WMU131A	NB03WMU131A-005	Mummichog (MU)	35	0.2	
NBS	131A	NBS-SN-1010	NB03WMU131A	NB03WMU131A-006	Mummichog (MU)	57	0.4	
NBS		NBS-SN-1010	NB03WMES008	NB03WMES008-001	Menhaden, Atlantic (ME)	78	4.1	
NBS		NBS-SN-1010	NB03WMES008	NB03WMES008-002	Menhaden, Atlantic (ME)	108	10.9	
NBS		NBS-SN-1010	NB03WMES008	NB03WMES008-003	Menhaden, Atlantic (ME)	85	5.2	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Comments
NBS		NBS-SN-1010	NB03WMES008	NB03WMES008-004	Menhaden, Atlantic (ME)	85	4.7	
NBS	130	NBS-SN-1010	NB03WSK130	NB03WSK130-001	Killifish, Striped (SK)	88	7.7	
NBS	130	NBS-SN-1010	NB03WSK130	NB03WSK130-002	Killifish, Striped (SK)	86	6.9	
NBS	130	NBS-SN-1010	NB03WSK130	NB03WSK130-003	Killifish, Striped (SK)	83	5.9	
NBS	130	NBS-SN-1010	NB03WSK130	NB03WSK130-004	Killifish, Striped (SK)	88	6.7	
NBS	130	NBS-SN-1010	NB03WSK130	NB03WSK130-005	Killifish, Striped (SK)	88	7.3	
NBS	130	NBS-SN-1010	NB03WSK130	NB03WSK130-006	Killifish, Striped (SK)	83	6.2	
NBS	130	NBS-SN-1010	NB03WSK130	NB03WSK130-007	Killifish, Striped (SK)	81	6.1	
NBS	130	NBS-SN-1010	NB03WSK130	NB03WSK130-008	Killifish, Striped (SK)	84	6.5	
NBS	130	NBS-SN-1010	NB03WSK130	NB03WSK130-009	Killifish, Striped (SK)	88	7.5	
NBS	130	NBS-SN-1010	NB03WSK130	NB03WSK130-010	Killifish, Striped (SK)	82	5.3	
NBS	130	NBS-SN-1010	NB03WSK130	NB03WSK130-011	Killifish, Striped (SK)	87	6.7	
NBS	130	NBS-SN-1010	NB03WSK130	NB03WSK130-012	Killifish, Striped (SK)	87	6.8	
NBS	130	NBS-SN-1010	NB03WSK130	NB03WSK130-013	Killifish, Striped (SK)	75	4.9	
NBS	130	NBS-SN-1010	NB03WSK130	NB03WSK130-014	Killifish, Striped (SK)	78	5.0	
NBS	130	NBS-SN-1010	NB03WSK130	NB03WSK130-015	Killifish, Striped (SK)	87	7.6	
NBS	130	NBS-SN-1010	NB03WSK130	NB03WSK130-016	Killifish, Striped (SK)	85	6.7	
NBS	130	NBS-SN-1010	NB03WSK130	NB03WSK130-017	Killifish, Striped (SK)	74	4.2	
NBS	130	NBS-SN-1010	NB03WSK130	NB03WSK130-018	Killifish, Striped (SK)	71	4.1	
NBS	130	NBS-SN-1010	NB03WSK130	NB03WSK130-019	Killifish, Striped (SK)	71	5.8	
NBS	130	NBS-SN-1010	NB03WSK130	NB03WSK130-020	Killifish, Striped (SK)	71	4.0	
NBS	130	NBS-SN-1010	NB03WSK130	NB03WSK130-021	Killifish, Striped (SK)	79	5.1	
NBS	130	NBS-SN-1010	NB03WSK130	NB03WSK130-022	Killifish, Striped (SK)	78	5.1	
NBS	130	NBS-SN-1010	NB03WSK130	NB03WSK130-023	Killifish, Striped (SK)	81	5.7	
NBS	130	NBS-SN-1010	NB03WSK130	NB03WSK130-024	Killifish, Striped (SK)	80	4.4	
NBS	130	NBS-SN-1010	NB03WSK130	NB03WSK130-025	Killifish, Striped (SK)	78	5.1	
NBS	130	NBS-SN-1010	NB03WSK130	NB03WSK130-026	Killifish, Striped (SK)	78	4.9	
NBS	130	NBS-SN-1010	NB03WSK130	NB03WSK130-027	Killifish, Striped (SK)	83	6.9	
NBS	130	NBS-SN-1010	NB03WSK130	NB03WSK130-028	Killifish, Striped (SK)	71	3.8	
NBS	130	NBS-SN-1010	NB03WSK130	NB03WSK130-029	Killifish, Striped (SK)	81	5.9	
NBS	130	NBS-SN-1010	NB03WSK130	NB03WSK130-030	Killifish, Striped (SK)	67	3.6	
NBS	130	NBS-SN-1010	NB03WSK130	NB03WSK130-031	Killifish, Striped (SK)	76	4.7	
NBS	130	NBS-SN-1010	NB03WSK130	NB03WSK130-032	Killifish, Striped (SK)	78	4.9	
NBS	130	NBS-SN-1010	NB03WSK130	NB03WSK130-033	Killifish, Striped (SK)	73	4.1	
NBS	130	NBS-SN-1010	NB03WSK130	NB03WSK130-034	Killifish, Striped (SK)	67	3.2	
NBS	130	NBS-SN-1010	NB03WSK130	NB03WSK130-035	Killifish, Striped (SK)	70	3.3	
NBS	130	NBS-SN-1010	NB03WSK130	NB03WSK130-036	Killifish, Striped (SK)	73	4.2	
NBS	130	NBS-SN-1010	NB03WSK130	NB03WSK130-037	Killifish, Striped (SK)	73	4.5	
NBS	130	NBS-SN-1010	NB03WSK130	NB03WSK130-038	Killifish, Striped (SK)	68	3.4	
NBS	130	NBS-SN-1010	NB03WSK130	NB03WSK130-039	Killifish, Striped (SK)	75	4.4	
NBS	130	NBS-SN-1010	NB03WSK130	NB03WSK130-040	Killifish, Striped (SK)	74	3.6	
NBS	130	NBS-SN-1010	NB03WSK130	NB03WSK130-041	Killifish, Striped (SK)	71	4.1	
NBS	130	NBS-SN-1010	NB03WSK130	NB03WSK130-042	Killifish, Striped (SK)	70	3.9	
NBS	130	NBS-SN-1010	NB03WSK130	NB03WSK130-043	Killifish, Striped (SK)	66	3.2	
NBS	130	NBS-SN-1010	NB03WSK130	NB03WSK130-044	Killifish, Striped (SK)	71	3.7	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Comments
NBS	130	NBS-SN-1010	NB03WSK130	NB03WSK130-045	Killifish, Striped (SK)	67	3.1	
NBS	130	NBS-SN-1010	NB03WSK130	NB03WSK130-046	Killifish, Striped (SK)	84	6.5	
NBS	130	NBS-SN-1010	NB03WMU130	NB03WMU130-001	Mummichog (MU)	40	0.6	
NBS	130	NBS-SN-1010	NB03WMU130	NB03WMU130-002	Mummichog (MU)	45	0.9	
NBS	130	NBS-SN-1010	NB03WMU130	NB03WMU130-003	Mummichog (MU)	38	0.4	
NBS	130	NBS-SN-1010	NB03WMU130	NB03WMU130-004	Mummichog (MU)	52	1.5	
NBS	130	NBS-SN-1010	NB03WMU130	NB03WMU130-005	Mummichog (MU)	43	0.7	
NBS	130	NBS-SN-1010	NB03WMU130	NB03WMU130-006	Mummichog (MU)	40	0.6	
NBS	130	NBS-SN-1010	NB03WMU130	NB03WMU130-007	Mummichog (MU)	33	0.1	
NBS	130	NBS-SN-1010	NB03WMU130	NB03WMU130-008	Mummichog (MU)	48	1.2	
NBS	130	NBS-SN-1010	NB03WMU130	NB03WMU130-009	Mummichog (MU)	40	0.4	
NBS	130	NBS-SN-1010	NB03WMU130	NB03WMU130-010	Mummichog (MU)	53	1.5	
NBS	130	NBS-SN-1010	NB03WMU130	NB03WMU130-011	Mummichog (MU)	40	0.6	
NBS	130	NBS-SN-1010	NB03WMU130	NB03WMU130-012	Mummichog (MU)	40	0.6	
NBS	130	NBS-SN-1010	NB03WMU130	NB03WMU130-013	Mummichog (MU)	33	0.3	
NBS	130	NBS-SN-1010	NB03WMU130	NB03WMU130-014	Mummichog (MU)	36	0.4	
NBS	130	NBS-SN-1010	NB03WMU130	NB03WMU130-015	Mummichog (MU)	58	1.9	
NBS	130	NBS-SN-1010	NB03WMU130	NB03WMU130-016	Mummichog (MU)	40	0.4	
NBS	130	NBS-SN-1010	NB03WMU130	NB03WMU130-017	Mummichog (MU)	45	1.0	
NBS	130	NBS-SN-1010	NB03WMU130	NB03WMU130-018	Mummichog (MU)	35	0.3	
NBS	130	NBS-SN-1010	NB03WMU130	NB03WMU130-019	Mummichog (MU)	46	1.1	
NBS	130	NBS-SN-1010	NB03WMU130	NB03WMU130-020	Mummichog (MU)	50	0.9	
NBS	130	NBS-SN-1010	NB03WMU130	NB03WMU130-021	Mummichog (MU)	45	0.7	
NBS	130	NBS-SN-1010	NB03WMU130	NB03WMU130-022	Mummichog (MU)	42	0.8	
NBS	130	NBS-SN-1010	NB03WMU130	NB03WMU130-023	Mummichog (MU)	35	0.3	
NBS	130	NBS-SN-1010	NB03WMU130	NB03WMU130-024	Mummichog (MU)	48	0.8	
NBS	130	NBS-SN-1010	NB03WMU130	NB03WMU130-025	Mummichog (MU)	35	0.3	
NBS	130	NBS-SN-1010	NB03WMU130	NB03WMU130-026	Mummichog (MU)	47	1.0	
NBS	130	NBS-SN-1010	NB03WMU130	NB03WMU130-027	Mummichog (MU)	35	0.3	
NBS	130	NBS-SN-1010	NB03WMU130	NB03WMU130-028	Mummichog (MU)	42	0.6	
NBS	130	NBS-SN-1010	NB03WMU130	NB03WMU130-029	Mummichog (MU)	36	0.2	
NBS	130	NBS-SN-1010	NB03WMU130	NB03WMU130-030	Mummichog (MU)	50	1.1	
NBS	130	NBS-SN-1010	NB03WMU130	NB03WMU130-031	Mummichog (MU)	36	0.6	
NBS	130	NBS-SN-1010	NB03WMU130	NB03WMU130-032	Mummichog (MU)	38	0.5	
NBS	130	NBS-SN-1010	NB03WMU130	NB03WMU130-033	Mummichog (MU)	35	0.3	
NBS	130	NBS-SN-1010	NB03WMU130	NB03WMU130-034	Mummichog (MU)	36	0.4	
NBS	134	NBS-SN-1013	NB03WSK134	NB03WSK134-001	Killifish, Striped (SK)	82	6.7	
NBS	134	NBS-SN-1013	NB03WSK134	NB03WSK134-002	Killifish, Striped (SK)	62	2.8	
NBS	134	NBS-SN-1013	NB03WSK134	NB03WSK134-003	Killifish, Striped (SK)	65	3.1	
NBS	134	NBS-SN-1013	NB03WSK134	NB03WSK134-004	Killifish, Striped (SK)	87	7.9	
NBS	134	NBS-SN-1013	NB03WSK134	NB03WSK134-005	Killifish, Striped (SK)	80	5.7	
NBS	134	NBS-SN-1013	NB03WSK134	NB03WSK134-006	Killifish, Striped (SK)	79	6.2	
NBS	134	NBS-SN-1013	NB03WSK134	NB03WSK134-007	Killifish, Striped (SK)	88	8.4	
NBS	134	NBS-SN-1013	NB03WSK134	NB03WSK134-008	Killifish, Striped (SK)	58	2.1	
NBS	134	NBS-SN-1013	NB03WSK134	NB03WSK134-009	Killifish, Striped (SK)	77	6.1	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Comments
NBS	134	NBS-SN-1013	NB03WSK134	NB03WSK134-010	Killifish, Striped (SK)	73	4.5	
NBS	134	NBS-SN-1013	NB03WSK134	NB03WSK134-011	Killifish, Striped (SK)	82	7.1	
NBS	134	NBS-SN-1013	NB03WSK134	NB03WSK134-012	Killifish, Striped (SK)	75	6.0	
NBS	134	NBS-SN-1013	NB03WSK134	NB03WSK134-013	Killifish, Striped (SK)	6.3	3.3	
NBS	134	NBS-SN-1013	NB03WSK134	NB03WSK134-014	Killifish, Striped (SK)	70	4.3	
NBS	134	NBS-SN-1013	NB03WSK134	NB03WSK134-015	Killifish, Striped (SK)	61	2.8	
NBS	134	NBS-SN-1013	NB03WSK134	NB03WSK134-016	Killifish, Striped (SK)	89	8.3	
NBS	134	NBS-SN-1013	NB03WSK134	NB03WSK134-017	Killifish, Striped (SK)	80	6.0	
NBS	134	NBS-SN-1013	NB03WSK134	NB03WSK134-018	Killifish, Striped (SK)	81	7.1	
NBS	134	NBS-SN-1013	NB03WSK134	NB03WSK134-019	Killifish, Striped (SK)	65	3.0	
NBS	134	NBS-SN-1013	NB03WSK134	NB03WSK134-020	Killifish, Striped (SK)	64	2.8	
NBS	134	NBS-SN-1013	NB03WSK134	NB03WSK134-021	Killifish, Striped (SK)	81	6.1	
NBS	134	NBS-SN-1013	NB03WSK134	NB03WSK134-022	Killifish, Striped (SK)	68	3.8	
NBS	134	NBS-SN-1013	NB03WSK134	NB03WSK134-023	Killifish, Striped (SK)	68	3.8	
NBS	134	NBS-SN-1013	NB03WSK134	NB03WSK134-024	Killifish, Striped (SK)	61	2.8	
NBS	134	NBS-SN-1013	NB03WSK134	NB03WSK134-025	Killifish, Striped (SK)	77	5.4	
NBS	134	NBS-SN-1013	NB03WSK134	NB03WSK134-026	Killifish, Striped (SK)	69	3.9	
NBS	134	NBS-SN-1013	NB03WSK134	NB03WSK134-027	Killifish, Striped (SK)	83	7.1	
NBS	134	NBS-SN-1013	NB03WSK134	NB03WSK134-028	Killifish, Striped (SK)	57	2.2	
NBS	134	NBS-SN-1013	NB03WSK134	NB03WSK134-029	Killifish, Striped (SK)	71	4.3	
NBS	134	NBS-SN-1013	NB03WSK134	NB03WSK134-030	Killifish, Striped (SK)	80	6.5	
NBS	134	NBS-SN-1013	NB03WSK134	NB03WSK134-031	Killifish, Striped (SK)	81	6.7	
NBS	134	NBS-SN-1013	NB03WSK134	NB03WSK134-032	Killifish, Striped (SK)	85	7.8	
NBS	134	NBS-SN-1013	NB03WSK134	NB03WSK134-033	Killifish, Striped (SK)	82	7.1	
NBS	134	NBS-SN-1013	NB03WSK134	NB03WSK134-034	Killifish, Striped (SK)	47	1.2	
NBS	134	NBS-SN-1013	NB03WSK134	NB03WSK134-035	Killifish, Striped (SK)	59	2.2	
NBS	134	NBS-SN-1013	NB03WSK134	NB03WSK134-036	Killifish, Striped (SK)	77	5.3	
NBS	134	NBS-SN-1013	NB03WSK134	NB03WSK134-037	Killifish, Striped (SK)	80	5.7	
NBS	134	NBS-SN-1013	NB03WSK134	NB03WSK134-038	Killifish, Striped (SK)	64	3.4	
NBS	134	NBS-SN-1013	NB03WSK134	NB03WSK134-039	Killifish, Striped (SK)	76	5.8	
NBS	134	NBS-SN-1013	NB03WSK134	NB03WSK134-040	Killifish, Striped (SK)	86	8.2	
NBS	134	NBS-SN-1013	NB03WSK134	NB03WSK134-041	Killifish, Striped (SK)	64	3.0	
NBS	134	NBS-SN-1013	NB03WSK134	NB03WSK134-042	Killifish, Striped (SK)	65	3.1	
NBS	134	NBS-SN-1013	NB03WSK134	NB03WSK134-043	Killifish, Striped (SK)	67	3.6	
NBS	134	NBS-SN-1013	NB03WSK134	NB03WSK134-044	Killifish, Striped (SK)	76	5.2	
NBS	134	NBS-SN-1013	NB03WSK134	NB03WSK134-045	Killifish, Striped (SK)	81	6.2	
NBS	134	NBS-SN-1013	NB03WSK134	NB03WSK134-046	Killifish, Striped (SK)	70	4.5	
NBS	134	NBS-SN-1013	NB03WSK134	NB03WSK134-047	Killifish, Striped (SK)	67	4.1	
NBS	134	NBS-SN-1013	NB03WSK134	NB03WSK134-048	Killifish, Striped (SK)	61	2.7	
NBS	134	NBS-SN-1013	NB03WSK134	NB03WSK134-049	Killifish, Striped (SK)	62	2.8	
NBS	134	NBS-SN-1013	NB03WSK134	NB03WSK134-050	Killifish, Striped (SK)	62	2.8	
NBS	134	NBS-SN-1013	NB03WSK134	NB03WSK134-051	Killifish, Striped (SK)	70	4.2	
NBS	134	NBS-SN-1013	NB03WSK134	NB03WSK134-052	Killifish, Striped (SK)	51	1.6	
NBS	134	NBS-SN-1013	NB03WSK134	NB03WSK134-053	Killifish, Striped (SK)	48	1.3	
NBS	134	NBS-SN-1013	NB03WSK134	NB03WSK134-054	Killifish, Striped (SK)	48	1.3	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Comments
NBS	134	NBS-SN-1013	NB03WSK134	NB03WSK134-055	Killifish, Striped (SK)	56	2.0	
NBS	134	NBS-SN-1013	NB03WSK134	NB03WSK134-056	Killifish, Striped (SK)	53	1.8	
NBS	134	NBS-SN-1013	NB03WSK134	NB03WSK134-057	Killifish, Striped (SK)	73	4.0	
NBS	134	NBS-SN-1013	NB03WSK134	NB03WSK134-058	Killifish, Striped (SK)	70	4.5	
NBS	134	NBS-SN-1013	NB03WSK134	NB03WSK134-059	Killifish, Striped (SK)	73	4.5	
NBS	134	NBS-SN-1013	NB03WSK134	NB03WSK134-060	Killifish, Striped (SK)	66	3.5	
NBS	134	NBS-SN-1013	NB03WSK134	NB03WSK134-061	Killifish, Striped (SK)	62	2.6	
NBS	134	NBS-SN-1013	NB03WSK134	NB03WSK134-062	Killifish, Striped (SK)	66	3.6	
NBS	134	NBS-SN-1013	NB03WSK134	NB03WSK134-063	Killifish, Striped (SK)	75	5.1	
NBS	134	NBS-SN-1013	NB03WSK134	NB03WSK134-064	Killifish, Striped (SK)	55	1.8	
NBS	134	NBS-SN-1013	NB03WSK134	NB03WSK134-065	Killifish, Striped (SK)	53	1.6	
NBS	134	NBS-SN-1013	NB03WSK134	NB03WSK134-066	Killifish, Striped (SK)	72	4.4	
NBS	134	NBS-SN-1013	NB03WSK134	NB03WSK134-067	Killifish, Striped (SK)	70	3.7	
NBS		NBS-SN-1013	NB03FBLS009	NB03FBLS009-001	Bluefish (BL)	132	18.2	
NBS		NBS-SN-1013	NB03FBLS009	NB03FBLS009-002	Bluefish (BL)	139	21.1	
NBS		NBS-SN-1013	NB03FBLS009	NB03FBLS009-003	Bluefish (BL)	157	28.6	
NBS		NBS-SN-1013	NB03WWFS010	NB03WWFS010-001	Flounder, Winter (WF)	90	9.5	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-001	Killifish, Striped (SK)	65	3.9	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-002	Killifish, Striped (SK)	72	5.4	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-003	Killifish, Striped (SK)	87	9.4	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-004	Killifish, Striped (SK)	80	6.4	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-005	Killifish, Striped (SK)	66	3.5	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-006	Killifish, Striped (SK)	89	9.2	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-007	Killifish, Striped (SK)	83	7.4	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-008	Killifish, Striped (SK)	80	6.7	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-009	Killifish, Striped (SK)	83	8.2	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-010	Killifish, Striped (SK)	39	0.6	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-011	Killifish, Striped (SK)	85	8.8	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-012	Killifish, Striped (SK)	33	0.4	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-013	Killifish, Striped (SK)	63	3.1	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-014	Killifish, Striped (SK)	45	1.0	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-015	Killifish, Striped (SK)	30	0.3	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-016	Killifish, Striped (SK)	68	3.3	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-017	Killifish, Striped (SK)	52	1.6	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-018	Killifish, Striped (SK)	32	0.4	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-019	Killifish, Striped (SK)	40	0.8	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-020	Killifish, Striped (SK)	79	6.1	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-021	Killifish, Striped (SK)	30	0.2	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-022	Killifish, Striped (SK)	48	1.2	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-023	Killifish, Striped (SK)	53	1.6	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-024	Killifish, Striped (SK)	53	1.6	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-025	Killifish, Striped (SK)	50	1.6	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-026	Killifish, Striped (SK)	25	0.2	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-027	Killifish, Striped (SK)	75	5.9	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-028	Killifish, Striped (SK)	80	7.0	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Comments
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-029	Killifish, Striped (SK)	57	2.1	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-030	Killifish, Striped (SK)	80	6.3	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-031	Killifish, Striped (SK)	52	1.6	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-032	Killifish, Striped (SK)	55	1.8	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-033	Killifish, Striped (SK)	50	1.6	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-034	Killifish, Striped (SK)	42	0.8	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-035	Killifish, Striped (SK)	58	2.4	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-036	Killifish, Striped (SK)	48	0.9	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-037	Killifish, Striped (SK)	42	0.8	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-038	Killifish, Striped (SK)	55	1.7	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-039	Killifish, Striped (SK)	31	0.2	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-040	Killifish, Striped (SK)	32	0.3	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-041	Killifish, Striped (SK)	38	0.6	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-042	Killifish, Striped (SK)	49	1.2	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-043	Killifish, Striped (SK)	30	0.3	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-044	Killifish, Striped (SK)	48	1.0	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-045	Killifish, Striped (SK)	48	0.6	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-046	Killifish, Striped (SK)	38	0.5	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-047	Killifish, Striped (SK)	42	0.8	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-048	Killifish, Striped (SK)	32	0.3	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-049	Killifish, Striped (SK)	29	0.2	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-050	Killifish, Striped (SK)	35	0.3	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-051	Killifish, Striped (SK)	29	0.2	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-052	Killifish, Striped (SK)	26	0.2	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-053	Killifish, Striped (SK)	40	0.6	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-054	Killifish, Striped (SK)	33	0.3	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-055	Killifish, Striped (SK)	30	0.2	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-056	Killifish, Striped (SK)	37	0.5	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-057	Killifish, Striped (SK)	28	0.2	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-058	Killifish, Striped (SK)	29	0.2	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-059	Killifish, Striped (SK)	32	0.3	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-060	Killifish, Striped (SK)	30	0.3	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-061	Killifish, Striped (SK)	39	0.6	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-062	Killifish, Striped (SK)	28	0.2	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-063	Killifish, Striped (SK)	38	0.6	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-064	Killifish, Striped (SK)	32	0.3	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-065	Killifish, Striped (SK)	35	0.4	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-066	Killifish, Striped (SK)	37	0.5	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-067	Killifish, Striped (SK)	34	0.4	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-068	Killifish, Striped (SK)	38	0.5	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-069	Killifish, Striped (SK)	31	0.3	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-070	Killifish, Striped (SK)	34	0.4	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-071	Killifish, Striped (SK)	34	0.3	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-072	Killifish, Striped (SK)	28	0.2	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-073	Killifish, Striped (SK)	42	1.0	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Comments
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-074	Killifish, Striped (SK)	50	1.6	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-075	Killifish, Striped (SK)	45	0.9	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-076	Killifish, Striped (SK)	46	1.3	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-077	Killifish, Striped (SK)	51	1.4	
NBS	129	NBS-SN-1014	NB03WSK129	NB03WSK129-078	Killifish, Striped (SK)	52	1.7	
NBS		NBS-SN-1014	NB03WWFS011	NB03WWFS011-001	Flounder, Winter (WF)	100	10.8	
NBS		NBS-SN-1014	NB03WWFS012	NB03WWFS012-001	Flounder, Winter (WF)	68	3.0	
NBS		NBS-SN-1014	NB03WWFS013	NB03WWFS013-001	Flounder, Winter (WF)	74	3.9	
NBS		NBS-SN-1014	NB03WWFS014	NB03WWFS014-001	Flounder, Winter (WF)	82	5.2	
NBS		NBS-SN-1014	NB03FBLS015	NB03FBLS015-001	Bluefish (BL)	148	29.9	
NBS		NBS-SN-1014	NB03FBLS015	NB03FBLS015-002	Bluefish (BL)	213	82.8	
NBS		NBS-SN-1014	NB03FBLS015	NB03FBLS015-003	Bluefish (BL)	172	45.4	
NBS		NBS-SN-1014	NB03FBLS015	NB03FBLS015-004	Bluefish (BL)	215	97.7	
NBS		NBS-SN-1014	NB03FBLS015	NB03FBLS015-005	Bluefish (BL)	171	35.1	
NBS		NBS-SN-1014	NB03FBLS015	NB03FBLS015-006	Bluefish (BL)	155	34.0	
NBS		NBS-SN-1014	NB03FBLS015	NB03FBLS015-007	Bluefish (BL)	156	32.7	
NBS		NBS-SN-1014	NB03FBLS016	NB03FBLS016-001	Bluefish (BL)	145	22.8	
NBS		NBS-SN-1014	NB03FBLS016	NB03FBLS016-002	Bluefish (BL)	145	28.7	
NBS		NBS-SN-1014	NB03FBLS016	NB03FBLS016-003	Bluefish (BL)	144	22.9	
NBS		NBS-SN-1014	NB03FBLS016	NB03FBLS016-004	Bluefish (BL)	135	20.7	
NBS		NBS-SN-1014	NB03FBLS016	NB03FBLS016-005	Bluefish (BL)	145	29.5	
NBS		NBS-SN-1014	NB03FBLS016	NB03FBLS016-006	Bluefish (BL)	138	22.6	
NBS	135	NBS-SN-1016	NB03WMU135	NB03WMU135-022	Mummichog (MU)	105	17.0	
NBS	135	NBS-SN-1016	NB03WMU135	NB03WMU135-023	Mummichog (MU)	94	9.2	
NBS	135	NBS-SN-1016	NB03WMU135	NB03WMU135-024	Mummichog (MU)	85	8.2	
NBS	135	NBS-SN-1016	NB03WMU135	NB03WMU135-025	Mummichog (MU)	88	8.9	
NBS	135	NBS-SN-1016	NB03WMU135	NB03WMU135-026	Mummichog (MU)	92	12.3	
NBS	135	NBS-SN-1016	NB03WMU135	NB03WMU135-027	Mummichog (MU)	83	7.4	
NBS	135	NBS-SN-1016	NB03WMU135	NB03WMU135-028	Mummichog (MU)	75	5.4	
NBS	135	NBS-SN-1016	NB03WMU135	NB03WMU135-029	Mummichog (MU)	65	3.7	
NBS	135	NBS-SN-1016	NB03WMU135	NB03WMU135-030	Mummichog (MU)	71	4.3	
NBS	135	NBS-SN-1016	NB03WMU135	NB03WMU135-031	Mummichog (MU)	75	5.2	
NBS	135	NBS-SN-1016	NB03WMU135	NB03WMU135-032	Mummichog (MU)	58	2.1	
NBS	135	NBS-SN-1016	NB03WMU135	NB03WMU135-033	Mummichog (MU)	56	1.8	
NBS	135	NBS-SN-1016	NB03WMU135	NB03WMU135-034	Mummichog (MU)	57	2.2	
NBS	135	NBS-SN-1016	NB03WMU135	NB03WMU135-035	Mummichog (MU)	74	4.7	
NBS	135	NBS-SN-1016	NB03WMU135	NB03WMU135-036	Mummichog (MU)	47	1.0	
NBS	135	NBS-SN-1016	NB03WMU135	NB03WMU135-037	Mummichog (MU)	56	2.2	
NBS	135	NBS-SN-1016	NB03WMU135	NB03WMU135-038	Mummichog (MU)	67	3.4	
NBS	135	NBS-SN-1016	NB03WMU135	NB03WMU135-039	Mummichog (MU)	43	0.8	
NBS	135	NBS-SN-1016	NB03WMU135	NB03WMU135-040	Mummichog (MU)	38	0.6	
NBS	135	NBS-SN-1016	NB03WMU135	NB03WMU135-041	Mummichog (MU)	55	2.3	
NBS	135	NBS-SN-1016	NB03WMU135	NB03WMU135-042	Mummichog (MU)	55	1.6	
NBS	135	NBS-SN-1016	NB03WMU135	NB03WMU135-043	Mummichog (MU)	46	1.1	
NBS	135	NBS-SN-1016	NB03WMU135	NB03WMU135-044	Mummichog (MU)	48	1.2	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Comments
NBS	135	NBS-SN-1016	NB03WMU135	NB03WMU135-045	Mummichog (MU)	57	2.2	
NBS	135	NBS-SN-1016	NB03WMU135	NB03WMU135-046	Mummichog (MU)	63	3.0	
NBS	135	NBS-SN-1016	NB03WMU135	NB03WMU135-047	Mummichog (MU)	52	1.4	
NBS	135	NBS-SN-1016	NB03WMU135	NB03WMU135-048	Mummichog (MU)	39	0.6	
NBS	135	NBS-SN-1016	NB03WMU135	NB03WMU135-049	Mummichog (MU)	54	1.5	
NBS	135	NBS-SN-1016	NB03WMU135	NB03WMU135-050	Mummichog (MU)	54	1.6	
NBS	135	NBS-SN-1016	NB03WMU135	NB03WMU135-051	Mummichog (MU)	52	1.8	
NBS	135	NBS-SN-1016	NB03WMU135	NB03WMU135-052	Mummichog (MU)	54	1.7	
NBS	135	NBS-SN-1016	NB03WMU135	NB03WMU135-053	Mummichog (MU)	61	2.5	
NBS	135	NBS-SN-1016	NB03WMU135	NB03WMU135-054	Mummichog (MU)	49	1.4	
NBS	135	NBS-SN-1016	NB03WMU135	NB03WMU135-055	Mummichog (MU)	58	2.2	
NBS	135	NBS-SN-1016	NB03WMU135	NB03WMU135-056	Mummichog (MU)	46	1.0	
NBS	135	NBS-SN-1016	NB03WMU135	NB03WMU135-057	Mummichog (MU)	51	1.3	
NBS		NBS-EP-1016	NB03WAES017	NB03WAES017-001	Eel, American (AE)	382	104.0	
NBS		NBS-EP-1016	NB03FAES018	NB03FAES018-001	Eel, American (AE)	700	620	
NBS		NBS-EP-1020	NB03FAES019	NB03FAES019-001	Eel, American (AE)	755	832	
NBS		NBS-EP-1022	NB03WAES020	NB03WAES020-001	Eel, American (AE)	585	395	
NBS		NBS-CT-1023	NB03WSFS021	NB03WSFS021-001	Flounder, Summer (SF)	247	125.0	
NBS		NBS-EP-1024	NB03WAES022	NB03WAES022-001	Eel, American (AE)	445	160	
NBS		NBS-EP-1024	NB03WAES023	NB03WAES023-001	Eel, American (AE)	440	148	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-001	Mummichog (MU)	90	85.0	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-002	Mummichog (MU)	67	3.2	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-003	Mummichog (MU)	74	4.9	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-004	Mummichog (MU)	55	2.2	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-005	Mummichog (MU)	66	4.1	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-006	Mummichog (MU)	63	3.3	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-007	Mummichog (MU)	58	2.5	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-008	Mummichog (MU)	82	7.0	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-009	Mummichog (MU)	63	3.4	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-010	Mummichog (MU)	74	4.1	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-011	Mummichog (MU)	62	3.1	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-012	Mummichog (MU)	58	2.0	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-013	Mummichog (MU)	58	2.5	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-014	Mummichog (MU)	66	3.3	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-015	Mummichog (MU)	65	4.2	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-016	Mummichog (MU)	102	12.6	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-017	Mummichog (MU)	78	5.7	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-018	Mummichog (MU)	61	3.0	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-019	Mummichog (MU)	88	9.1	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-020	Mummichog (MU)	66	3.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-021	Mummichog (MU)	68	4.4	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-022	Mummichog (MU)	65	3.2	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-023	Mummichog (MU)	34	0.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-024	Mummichog (MU)	62	2.3	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-025	Mummichog (MU)	61	3.0	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Comments
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-026	Mummichog (MU)	100	13.0	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-027	Mummichog (MU)	77	5.6	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-028	Mummichog (MU)	58	2.3	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-029	Mummichog (MU)	65	3.3	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-030	Mummichog (MU)	64	3.5	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-031	Mummichog (MU)	69	3.2	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-032	Mummichog (MU)	76	5.2	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-033	Mummichog (MU)	64	4.0	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-034	Mummichog (MU)	88	8.6	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-035	Mummichog (MU)	89	7.7	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-036	Mummichog (MU)	58	3.1	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-037	Mummichog (MU)	56	2.1	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-038	Mummichog (MU)	73	4.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-039	Mummichog (MU)	61	3.3	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-040	Mummichog (MU)	58	2.6	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-041	Mummichog (MU)	65	2.9	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-042	Mummichog (MU)	58	2.1	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-043	Mummichog (MU)	65	3.2	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-044	Mummichog (MU)	74	5.5	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-045	Mummichog (MU)	65	3.3	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-046	Mummichog (MU)	67	3.3	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-047	Mummichog (MU)	46	1.5	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-048	Mummichog (MU)	58	2.1	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-049	Mummichog (MU)	80	6.6	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-050	Mummichog (MU)	55	2.0	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-051	Mummichog (MU)	71	4.9	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-052	Mummichog (MU)	83	8.7	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-053	Mummichog (MU)	95	12.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-054	Mummichog (MU)	63	3.1	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-055	Mummichog (MU)	48	0.9	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-056	Mummichog (MU)	90	9.5	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-057	Mummichog (MU)	64	2.7	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-058	Mummichog (MU)	42	0.7	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-059	Mummichog (MU)	75	4.9	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-060	Mummichog (MU)	59	2.1	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-061	Mummichog (MU)	38	0.6	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-062	Mummichog (MU)	50	1.2	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-063	Mummichog (MU)	48	1.2	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-064	Mummichog (MU)	57	2.5	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-065	Mummichog (MU)	58	3.3	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-066	Mummichog (MU)	50	1.4	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-067	Mummichog (MU)	48	1.3	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-068	Mummichog (MU)	48	1.1	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-069	Mummichog (MU)	42	0.9	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-070	Mummichog (MU)	51	1.5	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Comments
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-071	Mummichog (MU)	48	1.1	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-072	Mummichog (MU)	45	0.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-073	Mummichog (MU)	48	1.3	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-074	Mummichog (MU)	51	1.3	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-075	Mummichog (MU)	52	1.6	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-076	Mummichog (MU)	48	1.4	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-077	Mummichog (MU)	44	0.9	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-078	Mummichog (MU)	52	1.4	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-079	Mummichog (MU)	35	0.1	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-080	Mummichog (MU)	50	1.3	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-081	Mummichog (MU)	56	1.6	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-082	Mummichog (MU)	48	1.1	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-083	Mummichog (MU)	50	1.1	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-084	Mummichog (MU)	55	1.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-085	Mummichog (MU)	45	1.0	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-086	Mummichog (MU)	42	0.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-087	Mummichog (MU)	47	1.3	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-088	Mummichog (MU)	55	2.0	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-089	Mummichog (MU)	46	1.1	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-090	Mummichog (MU)	56	1.3	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-091	Mummichog (MU)	62	3.9	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-092	Mummichog (MU)	61	2.4	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-093	Mummichog (MU)	55	2.0	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-094	Mummichog (MU)	57	2.7	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-095	Mummichog (MU)	51	1.4	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-096	Mummichog (MU)	48	1.2	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-097	Mummichog (MU)	43	1.2	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-098	Mummichog (MU)	55	2.2	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-099	Mummichog (MU)	44	0.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-100	Mummichog (MU)	52	1.5	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-101	Mummichog (MU)	48	1.1	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-102	Mummichog (MU)	55	2.0	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-103	Mummichog (MU)	45	1.2	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-104	Mummichog (MU)	40	0.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-105	Mummichog (MU)	59	2.4	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-106	Mummichog (MU)	40	0.4	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-107	Mummichog (MU)	38	0.7	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-108	Mummichog (MU)	40	0.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-109	Mummichog (MU)	49	1.4	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-110	Mummichog (MU)	50	1.3	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-111	Mummichog (MU)	43	0.9	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-112	Mummichog (MU)	42	0.5	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-113	Mummichog (MU)	55	1.7	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-114	Mummichog (MU)	41	0.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-115	Mummichog (MU)	37	0.7	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Comments
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-116	Mummichog (MU)	41	1.0	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-117	Mummichog (MU)	48	1.5	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-118	Mummichog (MU)	45	0.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-119	Mummichog (MU)	55	1.9	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-120	Mummichog (MU)	52	1.9	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-121	Mummichog (MU)	49	1.2	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-122	Mummichog (MU)	62	2.7	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-123	Mummichog (MU)	50	1.4	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-124	Mummichog (MU)	48	0.7	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-125	Mummichog (MU)	53	1.9	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-126	Mummichog (MU)	48	1.4	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-127	Mummichog (MU)	46	0.9	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-128	Mummichog (MU)	40	0.7	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-129	Mummichog (MU)	53	1.6	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-130	Mummichog (MU)	51	1.5	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-131	Mummichog (MU)	45	1.0	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-132	Mummichog (MU)	40	0.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-133	Mummichog (MU)	35	0.4	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-134	Mummichog (MU)	48	1.2	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-135	Mummichog (MU)	38	0.4	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-136	Mummichog (MU)	52	1.5	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-137	Mummichog (MU)	52	1.7	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-138	Mummichog (MU)	50	1.3	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-139	Mummichog (MU)	52	1.6	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-140	Mummichog (MU)	41	0.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-141	Mummichog (MU)	45	1.1	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-142	Mummichog (MU)	55	1.9	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-143	Mummichog (MU)	53	1.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-144	Mummichog (MU)	44	0.9	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-145	Mummichog (MU)	45	1.0	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-146	Mummichog (MU)	48	1.2	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-147	Mummichog (MU)	35	0.5	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-148	Mummichog (MU)	48	0.9	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-149	Mummichog (MU)	48	0.9	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-150	Mummichog (MU)	58	2.5	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-151	Mummichog (MU)	48	1.2	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-152	Mummichog (MU)	47	1.2	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-153	Mummichog (MU)	43	0.7	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-154	Mummichog (MU)	37	0.3	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-155	Mummichog (MU)	41	0.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-156	Mummichog (MU)	51	1.5	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-157	Mummichog (MU)	34	0.3	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-158	Mummichog (MU)	43	0.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-159	Mummichog (MU)	34	0.3	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-160	Mummichog (MU)	40	0.7	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Comments
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-161	Mummichog (MU)	40	0.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-162	Mummichog (MU)	45	1.1	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-163	Mummichog (MU)	60	1.6	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-164	Mummichog (MU)	50	1.3	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-165	Mummichog (MU)	51	1.4	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-166	Mummichog (MU)	50	1.3	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-167	Mummichog (MU)	46	1.0	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-168	Mummichog (MU)	47	1.2	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-169	Mummichog (MU)	51	1.3	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-170	Mummichog (MU)	48	1.0	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-171	Mummichog (MU)	40	0.6	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-172	Mummichog (MU)	45	0.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-173	Mummichog (MU)	60	3.9	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-174	Mummichog (MU)	52	1.6	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-175	Mummichog (MU)	48	1.4	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-176	Mummichog (MU)	65	3.0	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-177	Mummichog (MU)	55	1.9	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-178	Mummichog (MU)	53	2.2	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-179	Mummichog (MU)	57	1.9	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-180	Mummichog (MU)	48	1.1	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-181	Mummichog (MU)	48	1.0	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-182	Mummichog (MU)	55	1.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-183	Mummichog (MU)	56	2.0	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-184	Mummichog (MU)	48	1.3	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-185	Mummichog (MU)	46	1.1	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-186	Mummichog (MU)	41	0.6	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-187	Mummichog (MU)	50	1.5	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-188	Mummichog (MU)	57	2.0	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-189	Mummichog (MU)	53	1.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-190	Mummichog (MU)	40	0.7	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-191	Mummichog (MU)	45	1.0	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-192	Mummichog (MU)	50	1.7	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-193	Mummichog (MU)	40	0.6	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-194	Mummichog (MU)	46	1.2	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-195	Mummichog (MU)	47	1.0	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-196	Mummichog (MU)	55	1.3	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-197	Mummichog (MU)	50	1.1	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-198	Mummichog (MU)	40	0.7	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-199	Mummichog (MU)	54	2.0	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-200	Mummichog (MU)	43	0.9	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-201	Mummichog (MU)	55	1.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-202	Mummichog (MU)	45	0.1	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-203	Mummichog (MU)	40	0.6	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-204	Mummichog (MU)	55	2.0	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-205	Mummichog (MU)	45	0.8	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Comments
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-206	Mummichog (MU)	41	0.6	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-207	Mummichog (MU)	66	3.1	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-208	Mummichog (MU)	45	0.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-209	Mummichog (MU)	38	0.5	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-210	Mummichog (MU)	45	1.1	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-211	Mummichog (MU)	42	0.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-212	Mummichog (MU)	43	0.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-213	Mummichog (MU)	51	1.4	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-214	Mummichog (MU)	51	1.5	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-215	Mummichog (MU)	54	1.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-216	Mummichog (MU)	48	1.2	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-217	Mummichog (MU)	36	0.5	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-218	Mummichog (MU)	57	1.9	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-219	Mummichog (MU)	52	1.4	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-220	Mummichog (MU)	34	0.3	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-221	Mummichog (MU)	42	0.7	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-222	Mummichog (MU)	55	1.6	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-223	Mummichog (MU)	46	0.9	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-224	Mummichog (MU)	52	1.3	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-225	Mummichog (MU)	50	1.2	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-226	Mummichog (MU)	45	0.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-227	Mummichog (MU)	44	0.9	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-228	Mummichog (MU)	41	0.7	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-229	Mummichog (MU)	47	1.0	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-230	Mummichog (MU)	42	0.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-231	Mummichog (MU)	40	0.7	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-232	Mummichog (MU)	52	1.4	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-233	Mummichog (MU)	61	2.0	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-234	Mummichog (MU)	60	2.3	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-235	Mummichog (MU)	55	1.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-236	Mummichog (MU)	52	1.3	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-237	Mummichog (MU)	41	0.7	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-238	Mummichog (MU)	37	0.6	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-239	Mummichog (MU)	45	0.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-240	Mummichog (MU)	44	0.7	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-241	Mummichog (MU)	47	1.2	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-242	Mummichog (MU)	45	1.0	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-243	Mummichog (MU)	40	0.7	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-244	Mummichog (MU)	55	1.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-245	Mummichog (MU)	50	1.6	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-246	Mummichog (MU)	44	0.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-247	Mummichog (MU)	34	0.5	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-248	Mummichog (MU)	42	0.6	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-249	Mummichog (MU)	40	0.6	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-250	Mummichog (MU)	38	0.5	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Comments
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-251	Mummichog (MU)	48	0.9	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-252	Mummichog (MU)	35	0.4	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-253	Mummichog (MU)	73	4.6	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-254	Mummichog (MU)	47	1.1	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-255	Mummichog (MU)	42	0.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-256	Mummichog (MU)	55	3.3	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-257	Mummichog (MU)	67	3.5	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-258	Mummichog (MU)	50	1.4	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-259	Mummichog (MU)	50	1.5	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-260	Mummichog (MU)	60	2.5	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-261	Mummichog (MU)	51	1.3	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-262	Mummichog (MU)	52	1.7	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-263	Mummichog (MU)	43	0.9	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-264	Mummichog (MU)	73	5.6	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-265	Mummichog (MU)	45	1.0	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-266	Mummichog (MU)	41	0.7	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-267	Mummichog (MU)	44	1.1	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-268	Mummichog (MU)	33	0.4	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-269	Mummichog (MU)	68	3.4	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-270	Mummichog (MU)	58	2.6	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-271	Mummichog (MU)	45	0.9	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-272	Mummichog (MU)	50	1.4	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-273	Mummichog (MU)	45	0.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-274	Mummichog (MU)	48	1.2	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-275	Mummichog (MU)	44	0.9	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-276	Mummichog (MU)	50	1.6	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-277	Mummichog (MU)	41	0.7	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-278	Mummichog (MU)	45	0.9	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-279	Mummichog (MU)	46	1.2	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-280	Mummichog (MU)	46	1.0	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-281	Mummichog (MU)	50	1.3	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-282	Mummichog (MU)	40	0.7	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-283	Mummichog (MU)	39	0.5	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-284	Mummichog (MU)	56	2.1	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-285	Mummichog (MU)	49	1.2	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-286	Mummichog (MU)	41	0.6	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-287	Mummichog (MU)	43	0.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-288	Mummichog (MU)	45	0.9	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-289	Mummichog (MU)	45	0.9	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-290	Mummichog (MU)	52	1.4	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-291	Mummichog (MU)	58	1.7	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-292	Mummichog (MU)	41	0.7	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-293	Mummichog (MU)	51	1.5	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-294	Mummichog (MU)	44	0.3	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-295	Mummichog (MU)	41	0.7	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Comments
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-296	Mummichog (MU)	51	1.3	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-297	Mummichog (MU)	42	0.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-298	Mummichog (MU)	41	0.7	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-299	Mummichog (MU)	43	0.9	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-300	Mummichog (MU)	48	1.2	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-301	Mummichog (MU)	44	1.1	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-302	Mummichog (MU)	42	0.7	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-303	Mummichog (MU)	38	0.6	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-304	Mummichog (MU)	56	1.4	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-305	Mummichog (MU)	53	1.5	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-306	Mummichog (MU)	53	1.5	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-307	Mummichog (MU)	51	1.4	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-308	Mummichog (MU)	49	1.2	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-309	Mummichog (MU)	38	0.6	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-310	Mummichog (MU)	50	1.4	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-311	Mummichog (MU)	44	0.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-312	Mummichog (MU)	43	1.1	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-313	Mummichog (MU)	37	0.4	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-314	Mummichog (MU)	42	0.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-315	Mummichog (MU)	45	1.0	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-316	Mummichog (MU)	45	1.0	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-317	Mummichog (MU)	33	0.5	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-318	Mummichog (MU)	40	0.7	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-319	Mummichog (MU)	43	0.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-320	Mummichog (MU)	48	1.3	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-321	Mummichog (MU)	40	0.7	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-322	Mummichog (MU)	35	0.5	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-323	Mummichog (MU)	38	0.6	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-324	Mummichog (MU)	38	0.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-325	Mummichog (MU)	47	0.9	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-326	Mummichog (MU)	42	0.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-327	Mummichog (MU)	48	1.2	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-328	Mummichog (MU)	65	3.1	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-329	Mummichog (MU)	43	0.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-330	Mummichog (MU)	47	0.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-331	Mummichog (MU)	46	1.0	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-332	Mummichog (MU)	48	1.3	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-333	Mummichog (MU)	56	1.6	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-334	Mummichog (MU)	35	0.4	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-335	Mummichog (MU)	42	0.9	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-336	Mummichog (MU)	39	0.5	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-337	Mummichog (MU)	48	1.5	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-338	Mummichog (MU)	58	2.0	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-339	Mummichog (MU)	55	2.1	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-340	Mummichog (MU)	42	1.1	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Comments
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-341	Mummichog (MU)	45	1.1	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-342	Mummichog (MU)	50	1.5	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-343	Mummichog (MU)	52	1.7	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-344	Mummichog (MU)	48	1.3	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-345	Mummichog (MU)	50	1.4	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-346	Mummichog (MU)	46	1.0	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-347	Mummichog (MU)	42	0.6	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-348	Mummichog (MU)	38	0.5	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-349	Mummichog (MU)	46	1.3	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-350	Mummichog (MU)	43	0.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-351	Mummichog (MU)	36	0.6	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-352	Mummichog (MU)	41	0.7	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-353	Mummichog (MU)	48	1.2	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-354	Mummichog (MU)	40	0.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-355	Mummichog (MU)	56	1.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-356	Mummichog (MU)	41	0.7	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-357	Mummichog (MU)	57	2.0	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-358	Mummichog (MU)	41	0.6	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-359	Mummichog (MU)	42	1.0	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-360	Mummichog (MU)	59	2.4	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-361	Mummichog (MU)	45	1.0	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-362	Mummichog (MU)	42	0.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-363	Mummichog (MU)	44	1.0	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-364	Mummichog (MU)	43	0.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-365	Mummichog (MU)	35	0.5	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-366	Mummichog (MU)	41	0.7	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-367	Mummichog (MU)	41	0.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-368	Mummichog (MU)	35	0.5	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-369	Mummichog (MU)	46	1.1	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-370	Mummichog (MU)	44	0.7	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-371	Mummichog (MU)	42	0.6	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-372	Mummichog (MU)	51	1.4	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-373	Mummichog (MU)	43	0.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-374	Mummichog (MU)	68	3.0	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-375	Mummichog (MU)	46	0.9	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-376	Mummichog (MU)	46	1.0	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-377	Mummichog (MU)	55	2.0	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-378	Mummichog (MU)	51	1.6	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-379	Mummichog (MU)	40	0.5	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-380	Mummichog (MU)	52	1.5	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-381	Mummichog (MU)	41	1.3	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-382	Mummichog (MU)	60	2.0	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-383	Mummichog (MU)	51	1.5	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-384	Mummichog (MU)	51	1.6	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-385	Mummichog (MU)	43	0.9	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Comments
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-386	Mummichog (MU)	42	0.7	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-387	Mummichog (MU)	58	2.3	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-388	Mummichog (MU)	55	1.9	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-389	Mummichog (MU)	45	0.9	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-390	Mummichog (MU)	53	1.7	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-391	Mummichog (MU)	51	1.5	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-392	Mummichog (MU)	41	0.7	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-393	Mummichog (MU)	51	1.5	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-394	Mummichog (MU)	42	0.7	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-395	Mummichog (MU)	41	0.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-396	Mummichog (MU)	45	1.0	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-397	Mummichog (MU)	43	0.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-398	Mummichog (MU)	48	1.5	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-399	Mummichog (MU)	38	0.5	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-400	Mummichog (MU)	52	1.4	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-401	Mummichog (MU)	51	1.3	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-402	Mummichog (MU)	42	0.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-403	Mummichog (MU)	47	1.3	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-404	Mummichog (MU)	50	1.4	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-405	Mummichog (MU)	51	1.2	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-406	Mummichog (MU)	46	1.2	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-407	Mummichog (MU)	56	1.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-408	Mummichog (MU)	52	1.3	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-409	Mummichog (MU)	45	0.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-410	Mummichog (MU)	44	1.1	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-411	Mummichog (MU)	48	1.1	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-412	Mummichog (MU)	42	0.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-413	Mummichog (MU)	48	1.2	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-414	Mummichog (MU)	46	1.1	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-415	Mummichog (MU)	44	0.9	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-416	Mummichog (MU)	48	1.2	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-417	Mummichog (MU)	46	1.1	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-418	Mummichog (MU)	42	0.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-419	Mummichog (MU)	41	0.6	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-420	Mummichog (MU)	45	0.9	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-421	Mummichog (MU)	51	1.4	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-422	Mummichog (MU)	52	0.9	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-423	Mummichog (MU)	45	1.2	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-424	Mummichog (MU)	47	1.2	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-425	Mummichog (MU)	57	2.2	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-426	Mummichog (MU)	62	2.2	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-427	Mummichog (MU)	48	1.2	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-428	Mummichog (MU)	49	1.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-429	Mummichog (MU)	44	0.9	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-430	Mummichog (MU)	43	0.9	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Comments
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-431	Mummichog (MU)	60	2.0	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-432	Mummichog (MU)	52	1.6	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-433	Mummichog (MU)	43	0.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-434	Mummichog (MU)	45	0.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-435	Mummichog (MU)	45	1.0	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-436	Mummichog (MU)	50	1.1	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-437	Mummichog (MU)	53	1.3	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-438	Mummichog (MU)	41	0.7	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-439	Mummichog (MU)	43	0.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-440	Mummichog (MU)	38	0.5	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-441	Mummichog (MU)	45	1.0	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-442	Mummichog (MU)	45	1.0	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-443	Mummichog (MU)	40	0.5	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-444	Mummichog (MU)	36	0.4	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-445	Mummichog (MU)	32	0.4	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-446	Mummichog (MU)	41	0.7	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-447	Mummichog (MU)	41	0.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-448	Mummichog (MU)	37	0.5	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-449	Mummichog (MU)	44	1.0	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-450	Mummichog (MU)	52	1.5	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-451	Mummichog (MU)	42	1.1	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-452	Mummichog (MU)	55	1.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-453	Mummichog (MU)	45	1.1	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-454	Mummichog (MU)	42	0.7	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-455	Mummichog (MU)	38	0.5	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-456	Mummichog (MU)	41	0.5	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-457	Mummichog (MU)	41	0.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-458	Mummichog (MU)	43	0.9	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-459	Mummichog (MU)	48	1.2	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-460	Mummichog (MU)	52	1.5	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-461	Mummichog (MU)	50	1.2	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-462	Mummichog (MU)	50	1.3	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-463	Mummichog (MU)	51	1.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-464	Mummichog (MU)	55	1.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-465	Mummichog (MU)	45	0.9	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-466	Mummichog (MU)	40	0.6	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-467	Mummichog (MU)	46	0.9	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-468	Mummichog (MU)	45	1.0	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-469	Mummichog (MU)	46	1.1	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-470	Mummichog (MU)	46	0.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-471	Mummichog (MU)	41	0.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-472	Mummichog (MU)	50	1.3	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-473	Mummichog (MU)	36	0.5	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-474	Mummichog (MU)	43	0.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-475	Mummichog (MU)	48	1.2	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Comments
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-476	Mummichog (MU)	44	0.9	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-477	Mummichog (MU)	48	1.2	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-478	Mummichog (MU)	41	0.7	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-479	Mummichog (MU)	55	1.3	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-480	Mummichog (MU)	56	1.5	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-481	Mummichog (MU)	45	0.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-482	Mummichog (MU)	40	0.7	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-483	Mummichog (MU)	55	1.5	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-484	Mummichog (MU)	46	0.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-485	Mummichog (MU)	41	0.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-486	Mummichog (MU)	51	1.3	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-487	Mummichog (MU)	42	0.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-488	Mummichog (MU)	43	0.7	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-489	Mummichog (MU)	51	1.0	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-490	Mummichog (MU)	50	1.1	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-491	Mummichog (MU)	49	1.0	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-492	Mummichog (MU)	50	1.4	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-493	Mummichog (MU)	40	0.5	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-494	Mummichog (MU)	37	0.5	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-495	Mummichog (MU)	41	0.6	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-496	Mummichog (MU)	41	0.7	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-497	Mummichog (MU)	40	0.6	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-498	Mummichog (MU)	45	1.0	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-499	Mummichog (MU)	53	1.9	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-500	Mummichog (MU)	48	1.0	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-501	Mummichog (MU)	48	1.3	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-502	Mummichog (MU)	40	1.1	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-503	Mummichog (MU)	45	0.9	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-504	Mummichog (MU)	43	0.9	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-505	Mummichog (MU)	51	1.3	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-506	Mummichog (MU)	48	1.2	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-507	Mummichog (MU)	52	1.4	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-508	Mummichog (MU)	51	1.3	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-509	Mummichog (MU)	52	1.4	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-510	Mummichog (MU)	51	1.2	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-511	Mummichog (MU)	51	1.6	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-512	Mummichog (MU)	48	1.2	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-513	Mummichog (MU)	45	0.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-514	Mummichog (MU)	41	0.7	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-515	Mummichog (MU)	42	0.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-516	Mummichog (MU)	46	1.0	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-517	Mummichog (MU)	41	0.7	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-518	Mummichog (MU)	46	1.3	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-519	Mummichog (MU)	42	0.9	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-520	Mummichog (MU)	45	1.3	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Comments
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-521	Mummichog (MU)	44	0.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-522	Mummichog (MU)	55	1.6	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-523	Mummichog (MU)	55	1.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-524	Mummichog (MU)	42	1.0	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-525	Mummichog (MU)	41	1.0	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-526	Mummichog (MU)	41	1.1	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-527	Mummichog (MU)	43	1.0	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-528	Mummichog (MU)	51	1.3	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-529	Mummichog (MU)	50	1.3	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-530	Mummichog (MU)	45	0.9	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-531	Mummichog (MU)	41	0.5	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-532	Mummichog (MU)	53	1.9	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-533	Mummichog (MU)	42	0.7	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-534	Mummichog (MU)	49	1.3	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-535	Mummichog (MU)	49	1.2	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-536	Mummichog (MU)	52	1.5	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-537	Mummichog (MU)	43	0.6	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-538	Mummichog (MU)	44	1.4	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-539	Mummichog (MU)	42	0.6	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-540	Mummichog (MU)	63	2.5	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-541	Mummichog (MU)	50	1.1	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-542	Mummichog (MU)	35	0.7	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-543	Mummichog (MU)	40	0.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-544	Mummichog (MU)	45	0.8	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-545	Mummichog (MU)	55	2.0	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-546	Mummichog (MU)	95	12.4	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-547	Mummichog (MU)	97	11.7	
NBS	129	NBS-MT-1017	NB03WMU129	NB03WMU129-548	Mummichog (MU)	65	3.4	
NBS	135	NBS-SN-1014	NB03WMU135	NB03WMU135-001	Mummichog (MU)	115	18.4	
NBS	135	NBS-SN-1014	NB03WMU135	NB03WMU135-002	Mummichog (MU)	80	6.5	
NBS	135	NBS-SN-1014	NB03WMU135	NB03WMU135-003	Mummichog (MU)	58	2.3	
NBS	135	NBS-SN-1014	NB03WMU135	NB03WMU135-004	Mummichog (MU)	31	0.3	
NBS	135	NBS-SN-1014	NB03WMU135	NB03WMU135-005	Mummichog (MU)	48	1.2	
NBS	135	NBS-SN-1014	NB03WMU135	NB03WMU135-006	Mummichog (MU)	39	0.6	
NBS	135	NBS-SN-1014	NB03WMU135	NB03WMU135-007	Mummichog (MU)	41	0.8	
NBS	135	NBS-SN-1014	NB03WMU135	NB03WMU135-008	Mummichog (MU)	50	0.9	
NBS	135	NBS-SN-1014	NB03WMU135	NB03WMU135-009	Mummichog (MU)	40	0.6	
NBS	135	NBS-SN-1014	NB03WMU135	NB03WMU135-010	Mummichog (MU)	38	0.7	
NBS	135	NBS-SN-1014	NB03WMU135	NB03WMU135-011	Mummichog (MU)	37	0.7	
NBS	135	NBS-SN-1014	NB03WMU135	NB03WMU135-012	Mummichog (MU)	50	1.3	
NBS	135	NBS-SN-1014	NB03WMU135	NB03WMU135-013	Mummichog (MU)	48	1.1	
NBS	135	NBS-SN-1014	NB03WMU135	NB03WMU135-014	Mummichog (MU)	37	0.6	
NBS	135	NBS-SN-1014	NB03WMU135	NB03WMU135-015	Mummichog (MU)	45	1.0	
NBS	135	NBS-SN-1014	NB03WMU135	NB03WMU135-016	Mummichog (MU)	44	0.8	
NBS	135	NBS-SN-1014	NB03WMU135	NB03WMU135-017	Mummichog (MU)	36	0.5	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Comments
NBS	135	NBS-SN-1014	NB03WMU135	NB03WMU135-018	Mummichog (MU)	38	0.6	
NBS	135	NBS-SN-1014	NB03WMU135	NB03WMU135-019	Mummichog (MU)	34	0.3	
NBS	135	NBS-SN-1014	NB03WMU135	NB03WMU135-020	Mummichog (MU)	45	0.7	
NBS	135	NBS-SN-1014	NB03WMU135	NB03WMU135-021	Mummichog (MU)	50	1.2	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-001	Killifish, Striped (SK)	88	8.0	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-002	Killifish, Striped (SK)	90	9.2	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-003	Killifish, Striped (SK)	97	10.7	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-004	Killifish, Striped (SK)	85	7.3	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-005	Killifish, Striped (SK)	83	6.8	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-006	Killifish, Striped (SK)	80	6.1	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-007	Killifish, Striped (SK)	80	6.6	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-008	Killifish, Striped (SK)	56	1.8	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-009	Killifish, Striped (SK)	68	3.6	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-010	Killifish, Striped (SK)	64	3.1	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-011	Killifish, Striped (SK)	71	3.9	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-012	Killifish, Striped (SK)	85	7.0	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-013	Killifish, Striped (SK)	50	1.1	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-014	Killifish, Striped (SK)	85	7.5	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-015	Killifish, Striped (SK)	85	7.4	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-016	Killifish, Striped (SK)	76	5.1	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-017	Killifish, Striped (SK)	76	5.4	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-018	Killifish, Striped (SK)	90	9.5	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-019	Killifish, Striped (SK)	85	7.2	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-020	Killifish, Striped (SK)	51	1.5	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-021	Killifish, Striped (SK)	81	6.4	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-022	Killifish, Striped (SK)	85	7.3	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-023	Killifish, Striped (SK)	89	8.2	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-024	Killifish, Striped (SK)	82	6.3	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-025	Killifish, Striped (SK)	77	6.3	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-026	Killifish, Striped (SK)	81	6.2	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-027	Killifish, Striped (SK)	80	5.9	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-028	Killifish, Striped (SK)	68	3.3	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-029	Killifish, Striped (SK)	56	1.5	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-030	Killifish, Striped (SK)	78	5.0	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-031	Killifish, Striped (SK)	83	4.8	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-032	Killifish, Striped (SK)	81	4.4	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-033	Killifish, Striped (SK)	70	4.0	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-034	Killifish, Striped (SK)	80	6.0	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-035	Killifish, Striped (SK)	88	8.0	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-036	Killifish, Striped (SK)	84	7.0	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-037	Killifish, Striped (SK)	97	11.2	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-038	Killifish, Striped (SK)	86	8.5	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-039	Killifish, Striped (SK)	80	6.3	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-040	Killifish, Striped (SK)	70	4.2	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-041	Killifish, Striped (SK)	83	6.6	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Comments
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-042	Killifish, Striped (SK)	59	2.0	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-043	Killifish, Striped (SK)	62	2.8	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-044	Killifish, Striped (SK)	75	5.0	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-045	Killifish, Striped (SK)	72	4.7	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-046	Killifish, Striped (SK)	73	4.3	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-047	Killifish, Striped (SK)	79	5.8	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-048	Killifish, Striped (SK)	75	4.6	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-049	Killifish, Striped (SK)	62	2.7	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-050	Killifish, Striped (SK)	101	11.4	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-051	Killifish, Striped (SK)	57	2.1	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-052	Killifish, Striped (SK)	90	8.1	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-053	Killifish, Striped (SK)	56	1.9	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-054	Killifish, Striped (SK)	54	1.8	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-055	Killifish, Striped (SK)	76	5.1	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-056	Killifish, Striped (SK)	93	9.1	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-057	Killifish, Striped (SK)	87	7.4	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-058	Killifish, Striped (SK)	91	8.9	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-059	Killifish, Striped (SK)	80	5.9	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-060	Killifish, Striped (SK)	92	9.5	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-061	Killifish, Striped (SK)	75	5.1	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-062	Killifish, Striped (SK)	83	7.0	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-063	Killifish, Striped (SK)	86	8.0	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-064	Killifish, Striped (SK)	85	7.4	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-065	Killifish, Striped (SK)	82	6.6	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-066	Killifish, Striped (SK)	83	7.0	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-067	Killifish, Striped (SK)	81	6.5	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-068	Killifish, Striped (SK)	60	2.2	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-069	Killifish, Striped (SK)	79	5.9	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-070	Killifish, Striped (SK)	82	6.2	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-071	Killifish, Striped (SK)	80	6.0	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-072	Killifish, Striped (SK)	86	6.9	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-073	Killifish, Striped (SK)	72	4.8	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-074	Killifish, Striped (SK)	79	5.4	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-075	Killifish, Striped (SK)	81	6.1	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-076	Killifish, Striped (SK)	80	6.3	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-077	Killifish, Striped (SK)	82	6.5	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-078	Killifish, Striped (SK)	81	6.4	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-079	Killifish, Striped (SK)	87	7.8	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-080	Killifish, Striped (SK)	90	9.1	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-081	Killifish, Striped (SK)	75	5.3	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-082	Killifish, Striped (SK)	84	7.3	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-083	Killifish, Striped (SK)	80	6.5	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-084	Killifish, Striped (SK)	83	7.0	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-085	Killifish, Striped (SK)	63	2.9	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-086	Killifish, Striped (SK)	77	5.3	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Comments
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-087	Killifish, Striped (SK)	80	6.0	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-088	Killifish, Striped (SK)	76	4.7	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-089	Killifish, Striped (SK)	69	3.5	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-090	Killifish, Striped (SK)	82	6.8	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-091	Killifish, Striped (SK)	79	5.6	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-092	Killifish, Striped (SK)	92	10.0	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-093	Killifish, Striped (SK)	80	5.5	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-094	Killifish, Striped (SK)	79	5.7	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-095	Killifish, Striped (SK)	80	5.9	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-096	Killifish, Striped (SK)	85	7.0	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-097	Killifish, Striped (SK)	72	4.5	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-098	Killifish, Striped (SK)	78	5.3	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-099	Killifish, Striped (SK)	80	6.2	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-100	Killifish, Striped (SK)	74	4.6	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-101	Killifish, Striped (SK)	75	5.0	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-102	Killifish, Striped (SK)	68	3.7	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-103	Killifish, Striped (SK)	72	4.3	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-104	Killifish, Striped (SK)	61	2.3	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-105	Killifish, Striped (SK)	68	3.5	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-106	Killifish, Striped (SK)	63	3.0	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-107	Killifish, Striped (SK)	70	4.7	
NBS	131B	NBS-SN-1017	NB03WSK131B	NB03WSK131B-108	Killifish, Striped (SK)	68	3.2	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-058	Mummichog (MU)	56	2.5	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-059	Mummichog (MU)	88	11.2	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-060	Mummichog (MU)	68	4.8	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-061	Mummichog (MU)	62	3.3	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-062	Mummichog (MU)	55	2.1	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-063	Mummichog (MU)	45	0.8	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-064	Mummichog (MU)	96	12.4	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-065	Mummichog (MU)	88	9.4	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-066	Mummichog (MU)	82	7.8	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-067	Mummichog (MU)	76	4.9	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-068	Mummichog (MU)	68	3.1	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-069	Mummichog (MU)	58	2.6	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-070	Mummichog (MU)	73	4.1	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-071	Mummichog (MU)	66	4.1	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-072	Mummichog (MU)	60	2.3	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-073	Mummichog (MU)	62	3.1	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-074	Mummichog (MU)	65	3.6	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-075	Mummichog (MU)	51	1.4	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-076	Mummichog (MU)	42	0.5	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-077	Mummichog (MU)	44	1.0	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-078	Mummichog (MU)	52	1.3	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-079	Mummichog (MU)	56	1.6	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-080	Mummichog (MU)	78	6.7	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Comments
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-081	Mummichog (MU)	54	1.8	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-082	Mummichog (MU)	65	2.7	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-083	Mummichog (MU)	50	1.9	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-084	Mummichog (MU)	49	1.2	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-085	Mummichog (MU)	54	1.7	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-086	Mummichog (MU)	60	2.5	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-087	Mummichog (MU)	58	2.3	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-088	Mummichog (MU)	44	1.3	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-089	Mummichog (MU)	53	1.9	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-090	Mummichog (MU)	40	0.8	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-091	Mummichog (MU)	51	1.3	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-092	Mummichog (MU)	50	1.5	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-093	Mummichog (MU)	50	1.4	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-094	Mummichog (MU)	78	6.1	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-095	Mummichog (MU)	78	5.4	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-096	Mummichog (MU)	72	4.9	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-097	Mummichog (MU)	70	4.8	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-098	Mummichog (MU)	73	5.1	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-099	Mummichog (MU)	68	4.1	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-100	Mummichog (MU)	55	2.3	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-101	Mummichog (MU)	70	5.3	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-102	Mummichog (MU)	52	1.9	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-103	Mummichog (MU)	44	1.2	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-104	Mummichog (MU)	46	1.3	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-105	Mummichog (MU)	50	1.4	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-106	Mummichog (MU)	55	1.7	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-107	Mummichog (MU)	47	0.8	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-108	Mummichog (MU)	46	1.0	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-109	Mummichog (MU)	44	0.9	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-110	Mummichog (MU)	42	0.9	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-111	Mummichog (MU)	51	1.3	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-112	Mummichog (MU)	60	2.5	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-113	Mummichog (MU)	62	3.0	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-114	Mummichog (MU)	58	3.4	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-115	Mummichog (MU)	48	1.1	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-116	Mummichog (MU)	45	0.8	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-117	Mummichog (MU)	68	4.5	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-118	Mummichog (MU)	53	1.8	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-119	Mummichog (MU)	48	1.6	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-120	Mummichog (MU)	60	2.8	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-121	Mummichog (MU)	50	1.6	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-122	Mummichog (MU)	55	1.8	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-123	Mummichog (MU)	52	1.4	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-124	Mummichog (MU)	53	1.9	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-125	Mummichog (MU)	46	1.2	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Comments
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-126	Mummichog (MU)	45	1.0	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-127	Mummichog (MU)	40	0.6	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-128	Mummichog (MU)	42	0.8	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-129	Mummichog (MU)	53	1.4	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-130	Mummichog (MU)	44	1.2	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-131	Mummichog (MU)	42	0.9	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-132	Mummichog (MU)	44	1.0	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-133	Mummichog (MU)	45	1.2	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-134	Mummichog (MU)	42	0.8	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-135	Mummichog (MU)	48	1.4	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-136	Mummichog (MU)	41	0.8	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-137	Mummichog (MU)	38	0.5	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-138	Mummichog (MU)	48	1.2	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-139	Mummichog (MU)	49	1.5	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-140	Mummichog (MU)	51	1.5	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-141	Mummichog (MU)	45	1.0	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-142	Mummichog (MU)	42	0.6	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-143	Mummichog (MU)	46	0.9	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-144	Mummichog (MU)	43	0.8	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-145	Mummichog (MU)	38	0.6	
NBS	135	NBS-MT-1017	NB03WMU135	NB03WMU135-146	Mummichog (MU)	43	0.6	

Fish Sampling
Newark Bay Study Area **Draft: For Discussion Purposes Only**
BYCATCH

Zone	Intertidal Area	Catch Code	Specimen ID	Count	Species	Length (mm)	Weight (g)	Comments
NBN		NBN-TW-1006	WE-001	1	Weakfish (WE)	130	22.6	
NBN		NBN-TW-1006	WE-002	1	Weakfish (WE)	172	46.7	
NBN		NBN-TW-1006	WE-003	1	Weakfish (WE)	125	18.1	
NBN		NBN-TW-1006	WE-004	1	Weakfish (WE)	132	22.0	
NBN		NBN-TW-1006	WE-005	1	Weakfish (WE)	132	21.5	
NBN		NBN-TW-1006	WE-006	1	Weakfish (WE)	131	21.4	
NBN		NBN-TW-1006	WE-007	1	Weakfish (WE)	132	23.0	
NBN		NBN-TW-1006	WE-008	1	Weakfish (WE)	109	11.0	
NBN		NBN-TW-1006	WE-009	1	Weakfish (WE)	111	12.3	
NBN		NBN-TW-1006	WE-010	1	Weakfish (WE)	115	13.0	
NBN		NBN-TW-1006	WE-011	1	Weakfish (WE)	122	17.9	
NBN		NBN-TW-1006	WE-012	1	Weakfish (WE)	120	16.7	
NBN		NBN-TW-1006	WE-013	1	Weakfish (WE)	116	14.5	
NBN		NBN-TW-1006	NK-001	1	Kingfish, Northern (NK)	80	4.3	
NBN		NBN-TW-1006	SC-001	1	Scup (SC)	79	7.6	
NBN		NBN-TW-1006	HC-001	1	Hogchoker (HC)	140	53.2	
NBN		NBN-TW-1006	HC-002	1	Hogchoker (HC)	120	36.4	
NBN		NBN-TW-1006	WW-001	1	Flounder, Windowpane (WW)	142	32.7	
NBN		NBN-TW-1006	HA-001	1	Hake, Spotted (HA)	222	103.3	Not included in sample due to use for pathology
NBN		NBN-TW-1006	SF-001	1	Flounder, Summer (SF)	167	33.1	Not included in sample due to use for pathology
NBN		NBN-TW-1006	SF-002	1	Flounder, Summer (SF)	199	82.3	Not included in sample due to use for pathology
NBN		NBN-TW-1006	SF-003	1	Flounder, Summer (SF)	161	37.9	Not included in sample due to use for pathology
NBN		NBN-TW-1007	SB-001	1	Bass, Striped (SB)	268	208.0	
NBN		NBN-TW-1007	OT-001	1	Toadfish, Oyster (OT)	198	181.2	
NBN		NBN-TW-1007	OT-002	1	Toadfish, Oyster (OT)	199	166.6	
NBN		NBN-TW-1007	OT-003	1	Toadfish, Oyster (OT)	185	148.0	
NBN		NBN-TW-1007	OT-004	1	Toadfish, Oyster (OT)	162	77.7	
NBN		NBN-TW-1007	OT-005	1	Toadfish, Oyster (OT)	200	185.7	
NBN		NBN-TW-1007	GS-001	1	Shad, Gizzard (GS)	132	22.3	
NBN		NBN-TW-1007	HC-003	1	Hogchoker (HC)	152	65.8	
NBN		NBN-TW-1007	HC-004	1	Hogchoker (HC)	122	35.5	
NBN		NBN-TW-1007	SP-001	1	Perch, Silver (SP)	92	10.3	
NBN		NBN-TW-1007	SP-002	1	Perch, Silver (SP)	90	9.9	
NBN		NBN-TW-1007	HC-005	1	Hogchoker (HC)	88	9.1	
NBN		NBN-TW-1007	SR-001	1	Sea Robin, Striped (SR)	112	17.4	
NBN		NBN-TW-1007	SR-002	1	Sea Robin, Striped (SR)	111	15.6	
NBN		NBN-TW-1007	MF-001	1	Moonfish (MF)	58	2.5	
NBN	122	NBN-CT-1007	OT-006	1	Toadfish, Oyster (OT)	221	175.0	
NBN		NBN-TW-1007	WE-014	1	Weakfish (WE)	165	50.0	
NBN		NBN-TW-1007	WE-015	1	Weakfish (WE)	155	45.0	
NBN		NBN-TW-1007	WE-016	1	Weakfish (WE)	160	45.0	

Zone	Intertidal Area	Catch Code	Specimen ID	Count	Species	Length (mm)	Weight (g)	Comments
NBN		NBN-TW-1007	WE-017	1	Weakfish (WE)	130	25.0	
NBN		NBN-TW-1007	WE-018	1	Weakfish (WE)	110	20.0	
NBN		NBN-TW-1007	WE-019	1	Weakfish (WE)	88	5.0	
NBN		NBN-TW-1007	WE-020	1	Weakfish (WE)	90	5.0	
NBN		NBN-TW-1007	WE-021	1	Weakfish (WE)	106	10.0	
NBN		NBN-TW-1007	WE-022	1	Weakfish (WE)	93	5.0	
NBN		NBN-TW-1007	WE-023	1	Weakfish (WE)	134	20.0	
NBN		NBN-TW-1007	WE-024	1	Weakfish (WE)	160	40.0	
NBN		NBN-TW-1007	WE-025	1	Weakfish (WE)	155	35.0	
NBN		NBN-TW-1007	WE-026	1	Weakfish (WE)	115	20.0	
NBN		NBN-TW-1007	WE-027	1	Weakfish (WE)	108	5.0	
NBN		NBN-TW-1007	WE-028	1	Weakfish (WE)	84	4.0	
NBN		NBN-TW-1007	WE-029	1	Weakfish (WE)	133	25.0	
NBN		NBN-TW-1008	WE-030	1	Weakfish (WE)	145	50.0	
NBN		NBN-TW-1008	WE-031	1	Weakfish (WE)	120	30.0	
NBN		NBN-TW-1008	WE-032	1	Weakfish (WE)	167	60.0	
NBN		NBN-TW-1008	WE-033	1	Weakfish (WE)	130	40.0	
NBN		NBN-TW-1008	WE-034	1	Weakfish (WE)	134	40.0	
NBN		NBN-TW-1008	WE-035	1	Weakfish (WE)	105	25.0	
NBN		NBN-TW-1008	WE-036	1	Weakfish (WE)	117	25.0	
NBN		NBN-TW-1008	WE-037	1	Weakfish (WE)	115	25.0	
NBN		NBN-TW-1008	WE-038	1	Weakfish (WE)	135	40.0	
NBN		NBN-TW-1008	WE-039	1	Weakfish (WE)	130	30.0	
NBN		NBN-TW-1008	WE-040	1	Weakfish (WE)	125	30.0	
NBN		NBN-TW-1008	WE-041	1	Weakfish (WE)	135	30.0	
NBN		NBN-TW-1008	WE-042	1	Weakfish (WE)	145	30.0	
NBN		NBN-TW-1008	WE-043	1	Weakfish (WE)	165	45.0	
NBN		NBN-TW-1008	WE-044	1	Weakfish (WE)	126	35.0	
NBN		NBN-TW-1008	WE-045	1	Weakfish (WE)	120	15.0	
NBN		NBN-TW-1008	WE-046	1	Weakfish (WE)	124	20.0	
NBN		NBN-TW-1008	WE-047	1	Weakfish (WE)	113	15.0	
NBN		NBN-TW-1008	WE-048	1	Weakfish (WE)	115	15.0	
NBN		NBN-TW-1008	WE-049	1	Weakfish (WE)	128	20.0	
NBN		NBN-TW-1008	WE-050	1	Weakfish (WE)	108	15.0	
NBN		NBN-TW-1008	WE-051	1	Weakfish (WE)	110	15.0	
NBN		NBN-TW-1008	WE-052	1	Weakfish (WE)	105	14.0	
NBN		NBN-TW-1008	SR-003	1	Sea Robin, Striped (SR)	132	28.2	
NBN		NBN-TW-1008	SR-004	1	Sea Robin, Striped (SR)	140	34.3	
NBN		NBN-TW-1008	SR-005	1	Sea Robin, Striped (SR)	118	22.4	
NBN		NBN-TW-1008	SR-006	1	Sea Robin, Striped (SR)	68	3.2	
NBN		NBN-TW-1008	SR-007	1	Sea Robin, Striped (SR)	49	1.7	
NBN		NBN-TW-1008	SR-008	1	Sea Robin, Striped (SR)	56	2.3	
NBN		NBN-TW-1008	SR-009	1	Sea Robin, Striped (SR)	68	3.4	
NBN		NBN-TW-1008	SR-010	1	Sea Robin, Striped (SR)	75	4.0	
NBN		NBN-TW-1008	SR-011	1	Sea Robin, Striped (SR)	84	6.5	

Zone	Intertidal Area	Catch Code	Specimen ID	Count	Species	Length (mm)	Weight (g)	Comments
NBN		NBN-TW-1008	SR-012	1	Sea Robin, Striped (SR)	50	1.8	
NBN		NBN-TW-1008	NK-002	1	Kingfish, Northern (NK)	111	14.0	
NBN		NBN-TW-1008	NK-003	1	Kingfish, Northern (NK)	88	5.8	
NBN		NBN-TW-1008	BS-001	1	Bass, Black Sea (BS)	72	5.3	
NBN		NBN-TW-1008	NG-001	1	Goby, Naked (NG)	41	0.7	
NBN		NBN-TW-1008	SM-001	1	Flounder, Smallmouth (SM)	57	1.4	
NBN		NBN-TW-1008	SM-002	1	Flounder, Smallmouth (SM)	53	1.1	
NBN		NBN-TW-1008	SM-003	1	Flounder, Smallmouth (SM)	61	1.9	
NBN	123	NBN-CT-1008	SB-002	1	Bass, Striped (SB)	282	218.0	
NBN	123	NBN-CT-1008	SB-003	1	Bass, Striped (SB)	268	189.0	
NBC		NBC-TW-1009	SC-002	1	Scup (SC)	100	17.4	
NBC		NBC-TW-1009	SC-003	1	Scup (SC)	88	10.7	
NBC		NBC-TW-1009	SC-004	1	Scup (SC)	100	16.0	
NBC		NBC-TW-1009	SC-005	1	Scup (SC)	94	15.0	
NBC		NBC-TW-1009	SC-006	1	Scup (SC)	110	21.0	
NBC		NBC-TW-1009	SC-007	1	Scup (SC)	98	16.0	
NBC		NBC-TW-1009	SC-008	1	Scup (SC)	92	13.0	
NBC		NBC-TW-1009	SC-009	1	Scup (SC)	96	14.7	
NBC		NBC-TW-1009	SC-010	1	Scup (SC)	76	8.0	
NBC		NBC-TW-1009	SC-011	1	Scup (SC)	97	14.0	
NBC		NBC-TW-1009	SC-012	1	Scup (SC)	87	10.9	
NBC		NBC-TW-1009	SC-013	1	Scup (SC)	102	18.0	
NBC		NBC-TW-1009	SC-014	1	Scup (SC)	82	10.1	
NBC		NBC-TW-1009	SC-015	1	Scup (SC)	85	10.1	
NBC		NBC-TW-1009	SC-016	1	Scup (SC)	86	10.5	
NBC		NBC-TW-1009	SC-017	1	Scup (SC)	105	17.0	
NBC		NBC-TW-1009	SC-018	1	Scup (SC)	100	17.6	
NBC		NBC-TW-1009	SC-019	1	Scup (SC)	108	19.8	
NBC		NBC-TW-1009	SC-020	1	Scup (SC)	95	14.7	
NBC		NBC-TW-1009	SC-021	1	Scup (SC)	97	13.3	
NBC		NBC-TW-1009	SC-022	1	Scup (SC)	90	12.7	
NBC		NBC-TW-1009	SC-023	1	Scup (SC)	80	8.6	
NBC		NBC-TW-1009	SC-024	1	Scup (SC)	100	18.0	
NBC		NBC-TW-1009	SC-025	1	Scup (SC)	93	13.0	
NBC		NBC-TW-1009	SC-026	1	Scup (SC)	70	5.5	
NBC		NBC-TW-1009	SC-027	1	Scup (SC)	91	13.3	
NBC		NBC-TW-1009	SC-028	1	Scup (SC)	95	15.3	
NBC		NBC-TW-1009	SC-029	1	Scup (SC)	87	11.7	
NBC		NBC-TW-1009	SC-030	1	Scup (SC)	91	11.0	
NBC		NBC-TW-1009	SC-031	1	Scup (SC)	72	7.0	
NBC		NBC-TW-1009	SC-032	1	Scup (SC)	80	9.2	
NBC		NBC-TW-1009	SC-033	1	Scup (SC)	77	8.0	
NBC		NBC-TW-1009	SC-034	1	Scup (SC)	85	9.7	
NBC		NBC-TW-1009	SC-035	1	Scup (SC)	92	12.3	
NBC		NBC-TW-1009	SC-036	1	Scup (SC)	77	7.7	

Zone	Intertidal Area	Catch Code	Specimen ID	Count	Species	Length (mm)	Weight (g)	Comments
NBC		NBC-TW-1009	SC-037	1	Scup (SC)	90	12.5	
NBC		NBC-TW-1009	SC-038	1	Scup (SC)	88	11.1	
NBC		NBC-TW-1009	SC-039	1	Scup (SC)	82	10.0	
NBC		NBC-TW-1009	SC-040	1	Scup (SC)	69	5.0	
NBC		NBC-TW-1009	SC-041	1	Scup (SC)	77	7.2	
NBC		NBC-TW-1009	SC-042	1	Scup (SC)	89	11.3	
NBC		NBC-TW-1009	SC-043	1	Scup (SC)	100	17.2	
NBC		NBC-TW-1009	SC-044	1	Scup (SC)	87	10.7	
NBC		NBC-TW-1009	SC-045	1	Scup (SC)	95	14.0	
NBC		NBC-TW-1009	SC-046	1	Scup (SC)	92	14.0	
NBC		NBC-TW-1009	SC-047	1	Scup (SC)	78	7.6	
NBC		NBC-TW-1009	MF-002	1	Moonfish (MF)	115	17.8	
NBC		NBC-TW-1009	WE-053	1	Weakfish (WE)	135	29.8	
NBC		NBC-TW-1009	WE-054	1	Weakfish (WE)	132	24.5	
NBC		NBC-TW-1009	WE-055	1	Weakfish (WE)	115	16.6	
NBC		NBC-TW-1009	WE-056	1	Weakfish (WE)	133	24.0	
NBC		NBC-TW-1009	WE-057	1	Weakfish (WE)	130	22.9	
NBC		NBC-TW-1009	WE-058	1	Weakfish (WE)	145	34.4	
NBC		NBC-TW-1009	WE-059	1	Weakfish (WE)	145	28.6	
NBC		NBC-TW-1009	WE-060	1	Weakfish (WE)	145	27.3	
NBC		NBC-TW-1009	WE-061	1	Weakfish (WE)	131	25.0	
NBC		NBC-TW-1009	WE-062	1	Weakfish (WE)	135	23.0	
NBC		NBC-TW-1009	WE-063	1	Weakfish (WE)	115	12.7	
NBC		NBC-TW-1009	WE-064	1	Weakfish (WE)	158	38.0	
NBC		NBC-TW-1009	WE-065	1	Weakfish (WE)	133	21.7	
NBC		NBC-TW-1009	WE-066	1	Weakfish (WE)	116	18.5	
NBC		NBC-TW-1009	WE-067	1	Weakfish (WE)	130	22.3	
NBC		NBC-TW-1009	WE-068	1	Weakfish (WE)	132	25.7	
NBC		NBC-TW-1009	WE-069	1	Weakfish (WE)	142	31.0	
NBC		NBC-TW-1009	WE-070	1	Weakfish (WE)	113	14.0	
NBC		NBC-TW-1009	WE-071	1	Weakfish (WE)	137	25.0	
NBC		NBC-TW-1009	WE-072	1	Weakfish (WE)	130	24.0	
NBC		NBC-TW-1009	WE-073	1	Weakfish (WE)	118	16.5	
NBC		NBC-TW-1009	WE-074	1	Weakfish (WE)	141	28.0	
NBC		NBC-TW-1009	WE-075	1	Weakfish (WE)	143	26.7	
NBC		NBC-TW-1009	SR-013	1	Sea Robin, Striped (SR)	120	21.4	
NBC		NBC-TW-1009	NK-004	1	Kingfish, Northern (NK)	195	75.7	
NBN		NBN-EP-1009	BS-002	1	Bass, Black Sea (BS)	80	8.2	
NBN		NBN-EP-1009	OT-007	1	Toadfish, Oyster (OT)	280	180.0	
NBN		NBN-EP-1009	SB-004	1	Bass, Striped (SB)	317	318.0	
NBC		NBC-TW-1009	SC-048	1	Scup (SC)	91	10.9	
NBC		NBC-TW-1009	SC-049	1	Scup (SC)	84	8.2	
NBC		NBC-TW-1009	SC-050	1	Scup (SC)	95	12.5	
NBC		NBC-TW-1009	SC-051	1	Scup (SC)	96	13.6	
NBC		NBC-TW-1009	SC-052	1	Scup (SC)	88	10.6	

Zone	Intertidal Area	Catch Code	Specimen ID	Count	Species	Length (mm)	Weight (g)	Comments
NBC		NBC-TW-1009	MF-003	1	Moonfish (MF)	65	3.5	
NBC		NBC-TW-1009	MF-004	1	Moonfish (MF)	81	6.4	
NBC		NBC-TW-1009	MF-005	1	Moonfish (MF)	83	7.2	
NBC		NBC-TW-1009	MF-006	1	Moonfish (MF)	60	3.1	
NBC		NBC-TW-1009	BS-003	1	Bass, Black Sea (BS)	79	6.6	
NBC		NBC-TW-1009	BF-001	1	Butterfish (BF)	172	67.8	
NBC		NBC-TW-1009	BF-002	1	Butterfish (BF)	145	25.6	
NBC		NBC-TW-1009	NK-005	1	Kingfish, Northern (NK)	168	39.6	
NBC		NBC-TW-1009	NK-006	1	Kingfish, Northern (NK)	183	57.5	
NBS		NBS-SN-1010	BB-001	1	Herring, Blueback (BB)	80	2.6	
NBS		NBS-SN-1010	NK-007	1	Kingfish, Northern (NK)	115	14.0	
NBS		NBS-SN-1010	NK-008	1	Kingfish, Northern (NK)	106	12.3	
NBS		NBS-SN-1010	NK-009	1	Kingfish, Northern (NK)	60	1.8	
NBS		NBS-SN-1010	WM-001	1	Mullet, White (WM)	141	29.6	
NBS		NBS-SN-1010	WM-002	1	Mullet, White (WM)	125	26.0	
NBS		NBS-SN-1010	WM-003	1	Mullet, White (WM)	160	46.8	
NBS		NBS-SN-1010	WM-004	1	Mullet, White (WM)	131	23.9	
NBS		NBS-SN-1010	WM-005	1	Mullet, White (WM)	117	14.7	
NBS		NBS-SN-1010	SB-005	1	Bass, Striped (SB)	155	40.0	
NBS		NBS-SN-1010	SB-006	1	Bass, Striped (SB)	110	12.0	
NBS		NBS-SN-1010	SB-007	1	Bass, Striped (SB)	118	16.1	
NBS	134	NBS-SN-1013	AS-001-085	85	Silverside, Atlantic (AS)	NA	138.0	
NBN	132B	NBN-SN-1013	SK-001-051	51	Killifish, Striped (SK)	NA	162.0	
NBN	132B	NBN-SN-1013	MU-001-002	2	Mummichog (MU)	NA	2.1	
NBN	132B	NBN-SN-1013	AS-086-151	66	Silverside, Atlantic (AS)	NA	168.0	
NBN	123B	NBN-SN-1013	SK-052-088	37	Killifish, Striped (SK)	NA	327.0	
NBN	123B	NBN-SN-1013	AS-152-174	23	Silverside, Atlantic (AS)	NA	42.0	
NBN	132A	NBN-SN-1013	AS-175-217	43	Silverside, Atlantic (AS)	NA	115.0	
NBN	132A	NBN-SN-1013	SK-089-102	14	Killifish, Striped (SK)	NA	18.0	
NBN	132A	NBN-SN-1013	MU-003-007	5	Mummichog (MU)	NA	2.3	
NBN	133	NBN-SN-1013	AS-218-273	56	Silverside, Atlantic (AS)	NA	84.0	
NBN	123A	NBN-SN-1013	SB-008	1	Bass, Striped (SB)	150	33.2	
NBN	123A	NBN-SN-1013	SB-009	1	Bass, Striped (SB)	138	25.6	
NBN	123A	NBN-SN-1013	SB-010	1	Bass, Striped (SB)	113	14.0	
NBN	123A	NBN-SN-1013	SB-011	1	Bass, Striped (SB)	127	18.1	
NBN	123A	NBN-SN-1013	SB-012	1	Bass, Striped (SB)	118	16.6	
NBN	123A	NBN-SN-1013	SB-013	1	Bass, Striped (SB)	135	24.5	
NBN	123A	NBN-SN-1013	SB-014	1	Bass, Striped (SB)	133	21.7	
NBN	123A	NBN-SN-1013	SB-015	1	Bass, Striped (SB)	148	32.1	
NBN	123A	NBN-SN-1013	SB-016	1	Bass, Striped (SB)	110	13.0	
NBN	123A	NBN-SN-1013	SB-017	1	Bass, Striped (SB)	110	14.2	
NBN	123A	NBN-SN-1013	SB-018	1	Bass, Striped (SB)	126	20.0	
NBN	123A	NBN-SN-1013	SB-019	1	Bass, Striped (SB)	121	17.9	
NBN	123A	NBN-SN-1013	SB-020	1	Bass, Striped (SB)	117	15.3	
NBN	123A	NBN-SN-1013	SB-021	1	Bass, Striped (SB)	115	15.4	

Zone	Intertidal Area	Catch Code	Specimen ID	Count	Species	Length (mm)	Weight (g)	Comments
NBN	123A	NBN-SN-1013	SB-022	1	Bass, Striped (SB)	108	11.8	
NBN	123A	NBN-SN-1013	SB-023	1	Bass, Striped (SB)	112	15.0	
NBN	123A	NBN-SN-1013	SB-024	1	Bass, Striped (SB)	111	13.5	
NBN	123A	NBN-SN-1013	SB-025	1	Bass, Striped (SB)	106	11.0	
NBN	123A	NBN-SN-1013	SB-026	1	Bass, Striped (SB)	140	27.6	
NBN	123A	NBN-SN-1013	SB-027	1	Bass, Striped (SB)	111	14.3	
NBN	123A	NBN-SN-1013	SB-028	1	Bass, Striped (SB)	105	11.1	
NBN	123A	NBN-SN-1013	SB-029	1	Bass, Striped (SB)	103	10.3	
NBN	123A	NBN-SN-1013	SB-030	1	Bass, Striped (SB)	108	13.3	
NBN	123A	NBN-SN-1013	SB-031	1	Bass, Striped (SB)	125	17.9	
NBN	123A	NBN-SN-1013	SB-032	1	Bass, Striped (SB)	102	10.4	
NBN	123A	NBN-SN-1013	NK-010	1	Kingfish, Northern (NK)	75	4.2	
NBN	123A	NBN-SN-1013	NK-011	1	Kingfish, Northern (NK)	86	6.0	
NBN	123A	NBN-SN-1013	BB-002	1	Herring, Blueback (BB)	85	3.1	
NBN	123A	NBN-SN-1013	ME-001	1	Menhaden, Atlantic (ME)	85	6.1	
NBN	123A	NBN-SN-1013	ME-002	1	Menhaden, Atlantic (ME)	84	5.8	
NBN	123A	NBN-SN-1013	ME-003	1	Menhaden, Atlantic (ME)	90	5.6	
NBN	133	NBN-SN-1013	SB-033	1	Bass, Striped (SB)	128	21.0	
NBN	133	NBN-SN-1013	SB-034	1	Bass, Striped (SB)	95	7.4	
NBN	133	NBN-SN-1013	SB-035	1	Bass, Striped (SB)	105	10.7	
NBC		NBC-SN-1014	AS-274-566	293	Silverside, Atlantic (AS)	NA	773.0	
NBN		NBN-TW-1015	AS-567	1	Silverside, Atlantic (AS)	-	-	Count only, length and weight not recorded
NBC		NBC-TW-1015	BA-001-069	69	Anchovy, Bay (BA)	NA	-	Count only, length and weight not recorded
NBC		NBC-TW-1015	SC-053-057	5	Scup (SC)	NA	-	Count only, length and weight not recorded
NBC		NBC-TW-1015	WE-076	1	Weakfish (WE)	-	-	Count only, length and weight not recorded
NBC		NBC-TW-1015	SR-014-016	3	Sea Robin, Striped (SR)	NA	-	Count only, length and weight not recorded
NBC		NBC-TW-1015	NK-012	1	Kingfish, Northern (NK)	-	-	Count only, length and weight not recorded
NBC		NBC-TW-1015	SB-036-037	2	Bass, Striped (SB)	NA	-	Count only, length and weight not recorded
NBC		NBC-TW-1015	SM-004	1	Flounder, Smallmouth (SM)	-	-	Count only, length and weight not recorded
NBC	125	NBC-SN-1016	AS-568	1	Silverside, Atlantic (AS)	97	4.2	
NBC	125	NBC-SN-1016	AS-569	1	Silverside, Atlantic (AS)	80	2.1	
NBC	125	NBC-SN-1016	AS-570	1	Silverside, Atlantic (AS)	75	1.8	
NBC	125	NBC-SN-1016	AS-571	1	Silverside, Atlantic (AS)	85	3.0	
NBC	125	NBC-SN-1016	AS-572	1	Silverside, Atlantic (AS)	67	1.4	
NBC	125	NBC-SN-1016	AS-573	1	Silverside, Atlantic (AS)	85	2.8	
NBC	125	NBC-SN-1016	AS-574	1	Silverside, Atlantic (AS)	72	1.8	
NBC	125	NBC-SN-1016	AS-575	1	Silverside, Atlantic (AS)	83	2.6	
NBC	125	NBC-SN-1016	AS-576	1	Silverside, Atlantic (AS)	79	2.1	
NBC	125	NBC-SN-1016	AS-577	1	Silverside, Atlantic (AS)	80	2.2	
NBC	125	NBC-SN-1016	AS-578	1	Silverside, Atlantic (AS)	78	2.1	
NBC	125	NBC-SN-1016	AS-579	1	Silverside, Atlantic (AS)	94	3.9	
NBC	125	NBC-SN-1016	AS-580	1	Silverside, Atlantic (AS)	65	1.4	
NBC	125	NBC-SN-1016	AS-581	1	Silverside, Atlantic (AS)	85	2.8	
NBC	124	NBC-SN-1016	AS-582	1	Silverside, Atlantic (AS)	65	1.0	
NBC	124	NBC-SN-1016	AS-583	1	Silverside, Atlantic (AS)	69	1.2	

Zone	Intertidal Area	Catch Code	Specimen ID	Count	Species	Length (mm)	Weight (g)	Comments
NBC	124	NBC-SN-1016	AS-584	1	Silverside, Atlantic (AS)	55	1.2	
NBC	124	NBC-SN-1016	AS-585	1	Silverside, Atlantic (AS)	62	0.8	
NBC	124	NBC-SN-1016	AS-586	1	Silverside, Atlantic (AS)	54	0.7	
NBC	124	NBC-SN-1016	AS-587	1	Silverside, Atlantic (AS)	62	1.1	
NBC	124	NBC-SN-1016	AS-588	1	Silverside, Atlantic (AS)	80	2.3	
NBC	124	NBC-SN-1016	AS-589	1	Silverside, Atlantic (AS)	67	1.2	
NBC	124	NBC-SN-1016	AS-590	1	Silverside, Atlantic (AS)	67	1.3	
NBC	124	NBC-SN-1016	AS-591	1	Silverside, Atlantic (AS)	55	0.7	
NBC	124	NBC-SN-1016	AS-592	1	Silverside, Atlantic (AS)	64	1.3	
NBC	124	NBC-SN-1016	AS-593	1	Silverside, Atlantic (AS)	59	0.9	
NBC	124	NBC-SN-1016	AS-594	1	Silverside, Atlantic (AS)	66	1.1	
NBC	124	NBC-SN-1016	AS-595	1	Silverside, Atlantic (AS)	57	0.8	
NBC	124	NBC-SN-1016	AS-596	1	Silverside, Atlantic (AS)	55	0.7	
NBC	124	NBC-SN-1016	AS-597	1	Silverside, Atlantic (AS)	73	1.6	
NBC	124	NBC-SN-1016	AS-598	1	Silverside, Atlantic (AS)	62	1.1	
NBC	124	NBC-SN-1016	AS-599	1	Silverside, Atlantic (AS)	63	1.1	
NBC	124	NBC-SN-1016	AS-600	1	Silverside, Atlantic (AS)	60	1.0	
NBC	124	NBC-SN-1016	AS-601	1	Silverside, Atlantic (AS)	66	1.2	
NBC	124	NBC-SN-1016	AS-602	1	Silverside, Atlantic (AS)	58	1.0	
NBC	124	NBC-SN-1016	AS-603	1	Silverside, Atlantic (AS)	55	1.3	
NBC	124	NBC-SN-1016	AS-604	1	Silverside, Atlantic (AS)	58	0.9	
NBC	124	NBC-SN-1016	AS-605	1	Silverside, Atlantic (AS)	74	1.8	
NBC	124	NBC-SN-1016	AS-606	1	Silverside, Atlantic (AS)	71	1.2	
NBC	124	NBC-SN-1016	AS-607	1	Silverside, Atlantic (AS)	68	1.3	
NBC	124	NBC-SN-1016	AS-608	1	Silverside, Atlantic (AS)	48	0.3	
NBC	124	NBC-SN-1016	AS-609	1	Silverside, Atlantic (AS)	75	1.4	
NBC	124	NBC-SN-1016	BB-003	1	Herring, Blueback (BB)	71	2.3	
NBC	124	NBC-SN-1016	BB-004	1	Herring, Blueback (BB)	78	2.3	
NBC	124	NBC-SN-1016	BB-005	1	Herring, Blueback (BB)	83	3.0	
NBC	124	NBC-SN-1016	BB-006	1	Herring, Blueback (BB)	74	2.2	
NBC	124	NBC-SN-1016	BB-007	1	Herring, Blueback (BB)	76	2.3	
NBC	124	NBC-SN-1016	BB-008	1	Herring, Blueback (BB)	78	2.3	
NBC	124	NBC-SN-1016	SA-001	1	Anchovy, Striped (SA)	65	1.8	
NBS		NBS-EP-1016	BS-004	1	Bass, Black Sea (BS)	101	16.1	
NBS		NBS-EP-1016	BS-005	1	Bass, Black Sea (BS)	85	7.1	
NBS		NBS-EP-1016	BS-006	1	Bass, Black Sea (BS)	71	4.8	
NBS		NBS-EP-1016	BS-007	1	Bass, Black Sea (BS)	71	4.5	
NBS		NBS-EP-1016	BS-008	1	Bass, Black Sea (BS)	70	4.4	
NBS	131B	NBS-SN-1017	SK-103	1	Killifish, Striped (SK)	61	2.4	
NBS	131B	NBS-SN-1017	SK-104	1	Killifish, Striped (SK)	56	2.0	
NBS	131B	NBS-SN-1017	SK-105	1	Killifish, Striped (SK)	63	2.7	
NBS	131B	NBS-SN-1017	SK-106	1	Killifish, Striped (SK)	58	2.2	
NBS	131B	NBS-SN-1017	SK-107	1	Killifish, Striped (SK)	55	1.8	
NBS	131B	NBS-SN-1017	SK-108	1	Killifish, Striped (SK)	55	1.7	
NBS	131B	NBS-SN-1017	SK-109	1	Killifish, Striped (SK)	63	3.2	

Zone	Intertidal Area	Catch Code	Specimen ID	Count	Species	Length (mm)	Weight (g)	Comments
NBS	131B	NBS-SN-1017	SK-110	1	Killifish, Striped (SK)	54	1.8	
NBS	131B	NBS-SN-1017	SK-111	1	Killifish, Striped (SK)	52	1.5	
NBS	131B	NBS-SN-1017	SK-112	1	Killifish, Striped (SK)	51	1.4	
NBS	131B	NBS-SN-1017	SK-113	1	Killifish, Striped (SK)	55	1.6	
NBS	131B	NBS-SN-1017	SK-114	1	Killifish, Striped (SK)	52	1.4	
NBS	131B	NBS-SN-1017	SK-115	1	Killifish, Striped (SK)	59	2.2	
NBS	131B	NBS-SN-1017	SK-116	1	Killifish, Striped (SK)	51	1.4	
NBS	131B	NBS-SN-1017	SK-117	1	Killifish, Striped (SK)	60	2.3	
NBS	131B	NBS-SN-1017	SK-118	1	Killifish, Striped (SK)	61	2.4	
NBS	131B	NBS-SN-1017	SK-119	1	Killifish, Striped (SK)	56	1.8	
NBS	131B	NBS-SN-1017	SK-120	1	Killifish, Striped (SK)	57	2.0	
NBS	131B	NBS-SN-1017	SK-121	1	Killifish, Striped (SK)	53	1.7	
NBS	131B	NBS-SN-1017	SK-122	1	Killifish, Striped (SK)	61	2.5	
NBS	131B	NBS-SN-1017	SK-123-200	78	Killifish, Striped (SK)	NA	136.0	
NBS	131B	NBS-SN-1017	MU-008	1	Mummichog (MU)	88	8.1	
NBS	131B	NBS-SN-1017	MU-009	1	Mummichog (MU)	78	6.4	
NBS	131B	NBS-SN-1017	MU-010	1	Mummichog (MU)	67	3.7	
NBS	131B	NBS-SN-1017	MU-011	1	Mummichog (MU)	39	0.7	
NBS	131B	NBS-SN-1017	MU-012	1	Mummichog (MU)	48	1.2	
NBS	131B	NBS-SN-1017	MU-013	1	Mummichog (MU)	43	0.8	
NBS	131B	NBS-SN-1017	MU-014	1	Mummichog (MU)	28	0.3	
NBS	131B	NBS-SN-1017	MU-015	1	Mummichog (MU)	30	0.3	
NBS	131B	NBS-SN-1017	MU-016	1	Mummichog (MU)	36	0.5	
NBS	131B	NBS-SN-1017	MU-017	1	Mummichog (MU)	40	0.9	
NBS	131B	NBS-SN-1017	MU-018	1	Mummichog (MU)	33	0.5	
NBS	131B	NBS-SN-1017	MU-019	1	Mummichog (MU)	43	1.0	
NBS	131B	NBS-SN-1017	MU-020	1	Mummichog (MU)	40	0.7	
NBS	131B	NBS-SN-1017	MU-021	1	Mummichog (MU)	53	1.9	
NBS	131B	NBS-SN-1017	MU-022	1	Mummichog (MU)	49	1.3	
NBS	131B	NBS-SN-1017	MU-023	1	Mummichog (MU)	28	0.3	
NBS	131B	NBS-SN-1017	MU-024	1	Mummichog (MU)	40	0.7	
NBS	131B	NBS-SN-1017	MU-025	1	Mummichog (MU)	35	0.5	
NBS	131B	NBS-SN-1017	MU-026	1	Mummichog (MU)	46	1.3	
NBS	131B	NBS-SN-1017	MU-027	1	Mummichog (MU)	61	3.0	
NBS	131B	NBS-SN-1017	MU-028-1313	1286	Mummichog (MU)	NA	890.0	
NBS	131B	NBS-SN-1017	AS-610	1	Silverside, Atlantic (AS)	38	0.3	
NBS	131B	NBS-SN-1017	AS-611	1	Silverside, Atlantic (AS)	60	1.0	
NBS	131B	NBS-SN-1017	AS-612	1	Silverside, Atlantic (AS)	90	3.9	
NBS	131B	NBS-SN-1017	AS-613	1	Silverside, Atlantic (AS)	111	7.3	
NBS	131B	NBS-SN-1017	AS-614	1	Silverside, Atlantic (AS)	101	5.1	
NBS	131B	NBS-SN-1017	AS-615	1	Silverside, Atlantic (AS)	85	3.3	
NBS	131B	NBS-SN-1017	AS-616	1	Silverside, Atlantic (AS)	96	4.5	
NBS	131B	NBS-SN-1017	AS-617	1	Silverside, Atlantic (AS)	106	6.1	
NBS	131B	NBS-SN-1017	AS-618	1	Silverside, Atlantic (AS)	95	4.1	
NBS	131B	NBS-SN-1017	AS-619	1	Silverside, Atlantic (AS)	107	6.0	

Zone	Intertidal Area	Catch Code	Specimen ID	Count	Species	Length (mm)	Weight (g)	Comments
NBS	131B	NBS-SN-1017	AS-620	1	Silverside, Atlantic (AS)	80	2.6	
NBS	131B	NBS-SN-1017	AS-621	1	Silverside, Atlantic (AS)	83	2.9	
NBS	131B	NBS-SN-1017	AS-622	1	Silverside, Atlantic (AS)	101	5.3	
NBS	131B	NBS-SN-1017	AS-623	1	Silverside, Atlantic (AS)	100	5.0	
NBS	131B	NBS-SN-1017	AS-624	1	Silverside, Atlantic (AS)	108	5.8	
NBS	131B	NBS-SN-1017	AS-625	1	Silverside, Atlantic (AS)	91	3.7	
NBS	131B	NBS-SN-1017	AS-626	1	Silverside, Atlantic (AS)	86	3.3	
NBS	131B	NBS-SN-1017	AS-627	1	Silverside, Atlantic (AS)	102	5.2	
NBN	133	NBN-SN-1020	MU-1314	1	Mummichog (MU)	34	0.5	
NBN	133	NBN-SN-1020	MU-1315	1	Mummichog (MU)	30	0.1	
NBN	133	NBN-SN-1020	MU-1316	1	Mummichog (MU)	40	0.5	
NBN	133	NBN-SN-1020	MU-1317	1	Mummichog (MU)	37	0.4	
NBN	133	NBN-SN-1020	MU-1318	1	Mummichog (MU)	45	1.2	
NBN	133	NBN-SN-1020	MU-1319	1	Mummichog (MU)	40	0.7	
NBN	133	NBN-SN-1020	MU-1320	1	Mummichog (MU)	50	1.6	
NBN	133	NBN-SN-1020	MU-1321	1	Mummichog (MU)	46	1.2	
NBN	133	NBN-SN-1020	MU-1322	1	Mummichog (MU)	48	1.1	
NBN	133	NBN-SN-1020	MU-1323	1	Mummichog (MU)	43	1.1	
NBN	133	NBN-SN-1020	MU-1324	1	Mummichog (MU)	41	1.0	
NBN	133	NBN-SN-1020	MU-1325	1	Mummichog (MU)	36	0.6	
NBN	133	NBN-SN-1020	MU-1326	1	Mummichog (MU)	41	0.9	
NBN	133	NBN-SN-1020	MU-1327	1	Mummichog (MU)	46	1.0	
NBN	133	NBN-SN-1020	MU-1328	1	Mummichog (MU)	41	0.7	
NBN	133	NBN-SN-1020	MU-1329	1	Mummichog (MU)	36	0.6	
NBN	133	NBN-SN-1020	MU-1330	1	Mummichog (MU)	39	0.6	
NBN	133	NBN-SN-1020	MU-1331	1	Mummichog (MU)	33	0.5	
NBN	133	NBN-SN-1020	MU-1332	1	Mummichog (MU)	30	0.3	
NBN	133	NBN-SN-1020	MU-1333	1	Mummichog (MU)	40	0.7	
NBN	133	NBN-SN-1020	MU-1334	1	Mummichog (MU)	40	0.6	
NBN	133	NBN-SN-1020	MU-1335	1	Mummichog (MU)	42	0.8	
NBN	133	NBN-SN-1020	MU-1336	1	Mummichog (MU)	42	0.7	
NBN	133	NBN-SN-1020	MU-1337	1	Mummichog (MU)	43	0.8	
NBN	133	NBN-SN-1020	MU-1338	1	Mummichog (MU)	35	0.5	
NBN	133	NBN-SN-1020	MU-1339	1	Mummichog (MU)	33	0.3	
NBN	133	NBN-SN-1020	MU-1340	1	Mummichog (MU)	46	1.1	
NBN	133	NBN-SN-1020	MU-1341	1	Mummichog (MU)	39	0.7	
NBN	133	NBN-SN-1020	MU-1342	1	Mummichog (MU)	40	0.7	
NBN	133	NBN-SN-1020	MU-1343	1	Mummichog (MU)	36	0.5	
NBN	133	NBN-SN-1020	MU-1344	1	Mummichog (MU)	36	0.6	
NBN	133	NBN-SN-1020	MU-1345	1	Mummichog (MU)	40	0.7	
NBN	133	NBN-SN-1020	MU-1346	1	Mummichog (MU)	46	1.0	
NBN	133	NBN-SN-1020	MU-1347	1	Mummichog (MU)	38	0.6	
NBN	133	NBN-SN-1020	MU-1348	1	Mummichog (MU)	38	0.6	
NBN	133	NBN-SN-1020	MU-1349	1	Mummichog (MU)	35	0.4	
NBN	133	NBN-SN-1020	MU-1350	1	Mummichog (MU)	40	0.7	

Zone	Intertidal Area	Catch Code	Specimen ID	Count	Species	Length (mm)	Weight (g)	Comments
NBN	133	NBN-SN-1020	MU-1351	1	Mummichog (MU)	43	0.9	
NBN	133	NBN-SN-1020	MU-1352	1	Mummichog (MU)	40	0.8	
NBN	133	NBN-SN-1020	MU-1353	1	Mummichog (MU)	39	0.7	
NBN	133	NBN-SN-1020	MU-1354	1	Mummichog (MU)	46	0.9	
NBN	133	NBN-SN-1020	MU-1355	1	Mummichog (MU)	45	1.0	
NBN	133	NBN-SN-1020	MU-1356	1	Mummichog (MU)	35	0.3	
NBN	133	NBN-SN-1020	NP-001	1	Pipefish, Northern (NP)	186	2.4	
NBN	133	NBN-SN-1020	NP-002	1	Pipefish, Northern (NP)	145	0.7	
NBN	133	NBN-SN-1020	GB-001	1	Goby (GB)	43	0.8	
NBN	133	NBN-SN-1020	GB-002	1	Goby (GB)	38	0.5	
NBN	133	NBN-SN-1020	SK-201	1	Killifish, Striped (SK)	36	0.3	
NBN	133	NBN-SN-1020	SK-202	1	Killifish, Striped (SK)	56	1.8	
NBN	133	NBN-SN-1020	SK-203	1	Killifish, Striped (SK)	71	3.5	
NBN	133	NBN-SN-1020	SK-204	1	Killifish, Striped (SK)	65	2.6	
NBN	133	NBN-SN-1020	SK-205	1	Killifish, Striped (SK)	64	2.5	
NBN	133	NBN-SN-1020	SK-206	1	Killifish, Striped (SK)	88	7.5	
NBN	133	NBN-SN-1020	SK-207	1	Killifish, Striped (SK)	83	5.4	
NBN	133	NBN-SN-1020	SK-208	1	Killifish, Striped (SK)	65	2.8	
NBN	133	NBN-SN-1020	SK-209	1	Killifish, Striped (SK)	66	2.8	
NBN	133	NBN-SN-1020	SK-210	1	Killifish, Striped (SK)	58	1.9	
NBN	133	NBN-SN-1020	SK-211	1	Killifish, Striped (SK)	75	4.1	
NBN	133	NBN-SN-1020	SK-212	1	Killifish, Striped (SK)	70	3.8	
NBN	133	NBN-SN-1020	SK-213	1	Killifish, Striped (SK)	65	2.5	
NBN	133	NBN-SN-1020	SK-214	1	Killifish, Striped (SK)	56	1.9	
NBN	133	NBN-SN-1020	SK-215	1	Killifish, Striped (SK)	65	2.8	
NBN	133	NBN-SN-1020	SK-216	1	Killifish, Striped (SK)	61	2.4	
NBN	133	NBN-SN-1020	AS-628	1	Silverside, Atlantic (AS)	69	1.5	
NBN	133	NBN-SN-1020	AS-629	1	Silverside, Atlantic (AS)	45	0.4	
NBN	133	NBN-SN-1020	AS-630	1	Silverside, Atlantic (AS)	39	0.3	
NBN	133	NBN-SN-1020	AS-631	1	Silverside, Atlantic (AS)	66	1.3	
NBN	133	NBN-SN-1020	AS-632	1	Silverside, Atlantic (AS)	96	4.2	
NBN	133	NBN-SN-1020	AS-633	1	Silverside, Atlantic (AS)	85	2.9	
NBN	133	NBN-SN-1020	AS-634	1	Silverside, Atlantic (AS)	102	5.9	
NBN	133	NBN-SN-1020	AS-635	1	Silverside, Atlantic (AS)	70	1.6	
NBN	133	NBN-SN-1020	AS-636	1	Silverside, Atlantic (AS)	90	3.8	
NBN	133	NBN-SN-1020	AS-637	1	Silverside, Atlantic (AS)	75	2.0	
NBN	133	NBN-SN-1020	AS-638	1	Silverside, Atlantic (AS)	75	1.8	
NBN	133	NBN-SN-1020	AS-639	1	Silverside, Atlantic (AS)	72	1.8	
NBN	133	NBN-SN-1020	AS-640	1	Silverside, Atlantic (AS)	88	3.2	
NBN	133	NBN-SN-1020	AS-641	1	Silverside, Atlantic (AS)	85	2.6	
NBN	133	NBN-SN-1020	AS-642	1	Silverside, Atlantic (AS)	58	1.0	
NBN	133	NBN-SN-1020	AS-643	1	Silverside, Atlantic (AS)	83	2.6	
NBN	133	NBN-SN-1020	AS-644	1	Silverside, Atlantic (AS)	92	3.3	
NBN	133	NBN-SN-1020	AS-645	1	Silverside, Atlantic (AS)	81	2.5	
NBN	133	NBN-SN-1020	AS-646	1	Silverside, Atlantic (AS)	70	1.7	

Zone	Intertidal Area	Catch Code	Specimen ID	Count	Species	Length (mm)	Weight (g)	Comments
NBN	133	NBN-SN-1020	AS-647	1	Silverside, Atlantic (AS)	80	2.4	
NBN	133	NBN-SN-1020	AS-648	1	Silverside, Atlantic (AS)	76	2.1	
NBN	133	NBN-SN-1020	AS-649	1	Silverside, Atlantic (AS)	53	0.8	
NBN	133	NBN-SN-1020	AS-650-776	127	Silverside, Atlantic (AS)	NA	205.2	
NBN	123A	NBN-SN-1020	AS-777	1	Silverside, Atlantic (AS)	61	1.0	
NBN	123A	NBN-SN-1020	MU-1357	1	Mummichog (MU)	95	11.1	
NBN	123A	NBN-SN-1020	MU-1358	1	Mummichog (MU)	97	7.9	
NBN	123A	NBN-SN-1020	MU-1359	1	Mummichog (MU)	83	6.3	
NBN	123A	NBN-SN-1020	MU-1360	1	Mummichog (MU)	60	2.5	
NBN	123A	NBN-SN-1020	MU-1361	1	Mummichog (MU)	33	1.3	
NBN	123A	NBN-SN-1020	MU-1362	1	Mummichog (MU)	41	1.2	
NBN	123A	NBN-SN-1020	MU-1363	1	Mummichog (MU)	55	2.0	
NBN	123A	NBN-SN-1020	MU-1364	1	Mummichog (MU)	41	0.8	
NBN	123A	NBN-SN-1020	MU-1365	1	Mummichog (MU)	46	1.4	
NBN	123A	NBN-SN-1020	MU-1366	1	Mummichog (MU)	63	3.0	
NBN	123A	NBN-SN-1020	MU-1367	1	Mummichog (MU)	55	1.8	
NBN	123A	NBN-SN-1020	MU-1368	1	Mummichog (MU)	85	8.8	
NBN	123A	NBN-SN-1020	MU-1369	1	Mummichog (MU)	60	2.7	
NBN	123A	NBN-SN-1020	MU-1370	1	Mummichog (MU)	57	2.0	
NBN	123A	NBN-SN-1020	MU-1371	1	Mummichog (MU)	62	2.1	
NBN	123A	NBN-SN-1020	MU-1372	1	Mummichog (MU)	44	1.0	
NBN	123A	NBN-SN-1020	MU-1373	1	Mummichog (MU)	53	1.8	
NBN	123A	NBN-SN-1020	MU-1374	1	Mummichog (MU)	55	1.9	
NBN	123A	NBN-SN-1020	MU-1375	1	Mummichog (MU)	36	0.6	
NBN	123A	NBN-SN-1020	MU-1376	1	Mummichog (MU)	61	2.8	
NBN	123A	NBN-SN-1020	MU-1377	1	Mummichog (MU)	65	3.2	
NBN	123A	NBN-SN-1020	MU-1378	1	Mummichog (MU)	68	4.1	
NBN	123A	NBN-SN-1020	MU-1379	1	Mummichog (MU)	65	3.5	
NBN	123A	NBN-SN-1020	MU-1380	1	Mummichog (MU)	45	1.4	
NBN	123A	NBN-SN-1020	MU-1381	1	Mummichog (MU)	49	1.6	
NBN	123A	NBN-SN-1020	MU-1382	1	Mummichog (MU)	78	5.4	
NBN	123A	NBN-SN-1020	MU-1383	1	Mummichog (MU)	76	5.3	
NBN	123A	NBN-SN-1020	MU-1384	1	Mummichog (MU)	59	2.3	
NBN	123A	NBN-SN-1020	MU-1385	1	Mummichog (MU)	56	2.1	
NBN	123A	NBN-SN-1020	MU-1386	1	Mummichog (MU)	80	6.5	
NBN	123A	NBN-SN-1020	MU-1387	1	Mummichog (MU)	67	3.9	
NBN	123A	NBN-SN-1020	MU-1388	1	Mummichog (MU)	49	1.5	
NBN	123A	NBN-SN-1020	MU-1389	1	Mummichog (MU)	52	1.7	
NBN	123A	NBN-SN-1020	MU-1390	1	Mummichog (MU)	55	1.9	
NBN	123A	NBN-SN-1020	MU-1391	1	Mummichog (MU)	46	1.4	
NBN	123A	NBN-SN-1020	MU-1392	1	Mummichog (MU)	49	1.5	
NBN	123A	NBN-SN-1020	MU-1393	1	Mummichog (MU)	78	5.5	
NBN	123A	NBN-SN-1020	MU-1394	1	Mummichog (MU)	48	1.3	
NBN	123A	NBN-SN-1020	MU-1395	1	Mummichog (MU)	78	5.6	
NBN	123A	NBN-SN-1020	MU-1396	1	Mummichog (MU)	72	4.2	

Zone	Intertidal Area	Catch Code	Specimen ID	Count	Species	Length (mm)	Weight (g)	Comments
NBN	123A	NBN-SN-1020	MU-1397	1	Mummichog (MU)	54	1.2	
NBN	123A	NBN-SN-1020	MU-1398	1	Mummichog (MU)	49	1.5	
NBN	123A	NBN-SN-1020	MU-1399	1	Mummichog (MU)	47	1.2	
NBN	123A	NBN-SN-1020	MU-1400	1	Mummichog (MU)	56	2.3	
NBN	123A	NBN-SN-1020	MU-1401	1	Mummichog (MU)	51	1.4	
NBN	123A	NBN-SN-1020	MU-1402	1	Mummichog (MU)	70	3.8	
NBN	123A	NBN-SN-1020	MU-1403	1	Mummichog (MU)	39	0.9	
NBN	123A	NBN-SN-1020	MU-1404	1	Mummichog (MU)	50	1.8	
NBN	123A	NBN-SN-1020	MU-1405	1	Mummichog (MU)	63	2.4	
NBN	123A	NBN-SN-1020	MU-1406	1	Mummichog (MU)	47	1.3	
NBN	123A	NBN-SN-1020	MU-1407	1	Mummichog (MU)	80	5.4	
NBN	123A	NBN-SN-1020	MU-1408	1	Mummichog (MU)	75	4.4	
NBN	123A	NBN-SN-1020	MU-1409	1	Mummichog (MU)	56	3.2	
NBN	123A	NBN-SN-1020	MU-1410	1	Mummichog (MU)	62	2.6	
NBN	123A	NBN-SN-1020	MU-1411	1	Mummichog (MU)	55	2.2	
NBN	123A	NBN-SN-1020	MU-1412	1	Mummichog (MU)	45	0.9	
NBN	123A	NBN-SN-1020	MU-1413	1	Mummichog (MU)	54	1.9	
NBN	123A	NBN-SN-1020	MU-1414	1	Mummichog (MU)	60	2.3	
NBN	123A	NBN-SN-1020	MU-1415	1	Mummichog (MU)	58	2.3	
NBN	123A	NBN-SN-1020	MU-1416	1	Mummichog (MU)	65	3.6	
NBN	123A	NBN-SN-1020	MU-1417	1	Mummichog (MU)	52	2.1	
NBN	123A	NBN-SN-1020	MU-1418	1	Mummichog (MU)	61	2.5	
NBN	123A	NBN-SN-1020	MU-1419	1	Mummichog (MU)	65	3.1	
NBN	123A	NBN-SN-1020	MU-1420	1	Mummichog (MU)	55	2.0	
NBN	123A	NBN-SN-1020	MU-1421	1	Mummichog (MU)	39	0.9	
NBN	123A	NBN-SN-1020	MU-1422	1	Mummichog (MU)	38	0.8	
NBN	123A	NBN-SN-1020	MU-1423	1	Mummichog (MU)	68	4.1	
NBN	123A	NBN-SN-1020	MU-1424	1	Mummichog (MU)	45	1.0	
NBN	123A	NBN-SN-1020	MU-1425	1	Mummichog (MU)	49	0.9	
NBN	123A	NBN-SN-1020	MU-1426	1	Mummichog (MU)	46	0.8	
NBN	122C	NBN-SN-1020	SB-038	1	Bass, Striped (SB)	121	17.9	
NBN	122C	NBN-SN-1020	AS-778	1	Silverside, Atlantic (AS)	111	7.9	
NBN	122C	NBN-SN-1020	SK-217	1	Killifish, Striped (SK)	82	7.0	
NBN	122C	NBN-SN-1020	SK-218	1	Killifish, Striped (SK)	85	8.0	
NBN	122C	NBN-SN-1020	SK-219	1	Killifish, Striped (SK)	79	6.1	
NBN	122C	NBN-SN-1020	SK-220	1	Killifish, Striped (SK)	51	1.3	
NBN	122B	NBN-SN-1020	MU-1427	1	Mummichog (MU)	96	11.3	
NBN	122B	NBN-SN-1020	MU-1428	1	Mummichog (MU)	72	4.7	
NBN	122B	NBN-SN-1020	MU-1429	1	Mummichog (MU)	58	2.4	
NBN	122B	NBN-SN-1020	MU-1430	1	Mummichog (MU)	58	2.3	
NBN	122B	NBN-SN-1020	MU-1431	1	Mummichog (MU)	45	0.9	
NBN	122B	NBN-SN-1020	MU-1432	1	Mummichog (MU)	46	1.0	
NBN	122B	NBN-SN-1020	MU-1433	1	Mummichog (MU)	34	0.4	
NBN	122B	NBN-SN-1020	MU-1434	1	Mummichog (MU)	41	0.6	
NBN	122B	NBN-SN-1020	MU-1435	1	Mummichog (MU)	44	1.0	

Zone	Intertidal Area	Catch Code	Specimen ID	Count	Species	Length (mm)	Weight (g)	Comments
NBN	122B	NBN-SN-1020	MU-1436	1	Mummichog (MU)	36	0.5	
NBN	122B	NBN-SN-1020	MU-1437	1	Mummichog (MU)	50	1.3	
NBN	122B	NBN-SN-1020	MU-1438	1	Mummichog (MU)	53	1.7	
NBN	122B	NBN-SN-1020	MU-1439	1	Mummichog (MU)	34	0.4	
NBN	122B	NBN-SN-1020	MU-1440	1	Mummichog (MU)	43	1.0	
NBN	122B	NBN-SN-1020	MU-1441	1	Mummichog (MU)	69	3.9	
NBN	122B	NBN-SN-1020	MU-1442	1	Mummichog (MU)	42	0.8	
NBN	122B	NBN-SN-1020	MU-1443	1	Mummichog (MU)	51	1.4	
NBN	122B	NBN-SN-1020	MU-1444	1	Mummichog (MU)	43	0.9	
NBN	122B	NBN-SN-1020	MU-1445	1	Mummichog (MU)	35	0.4	
NBN	122B	NBN-SN-1020	MU-1446	1	Mummichog (MU)	42	0.9	
NBN	122B	NBN-SN-1020	MU-1447-1792	346	Mummichog (MU)	NA	435.0	
NBN	122A	NBN-SN-1020	MU-1793	1	Mummichog (MU)	99	13.6	
NBN	122A	NBN-SN-1020	MU-1794	1	Mummichog (MU)	72	4.3	
NBN	122A	NBN-SN-1020	MU-1795	1	Mummichog (MU)	92	11.3	
NBN	122A	NBN-SN-1020	MU-1796	1	Mummichog (MU)	51	1.6	
NBN	122A	NBN-SN-1020	MU-1797	1	Mummichog (MU)	36	0.5	
NBN	122A	NBN-SN-1020	MU-1798	1	Mummichog (MU)	52	1.6	
NBN	122A	NBN-SN-1020	MU-1799	1	Mummichog (MU)	55	1.8	
NBN	122A	NBN-SN-1020	MU-1800	1	Mummichog (MU)	37	0.5	
NBN	122A	NBN-SN-1020	MU-1801	1	Mummichog (MU)	56	2.2	
NBN	122A	NBN-SN-1020	MU-1802	1	Mummichog (MU)	59	2.3	
NBN	122A	NBN-SN-1020	MU-1803	1	Mummichog (MU)	50	1.2	
NBN	122A	NBN-SN-1020	MU-1804	1	Mummichog (MU)	70	3.7	
NBN	122A	NBN-SN-1020	MU-1805	1	Mummichog (MU)	65	3.9	
NBN	122A	NBN-SN-1020	MU-1806	1	Mummichog (MU)	82	7.0	
NBN	122A	NBN-SN-1020	MU-1807	1	Mummichog (MU)	60	2.6	
NBN	122A	NBN-SN-1020	MU-1808	1	Mummichog (MU)	47	1.3	
NBN	122A	NBN-SN-1020	MU-1809	1	Mummichog (MU)	42	0.8	
NBN	122A	NBN-SN-1020	MU-1810	1	Mummichog (MU)	40	0.8	
NBN	122A	NBN-SN-1020	MU-1811	1	Mummichog (MU)	30	0.3	
NBN	122A	NBN-SN-1020	MU-1812	1	Mummichog (MU)	46	1.2	
NBN	122A	NBN-SN-1020	MU-1813-1969	157	Mummichog (MU)	NA	330.0	
NBS		NBS-EP-1020	BS-009-012	4	Bass, Black Sea (BS)	NA	-	Count only, length and weight not recorded
NBS		NBS-EP-1020	OT-008	1	Toadfish, Oyster (OT)	-	-	Count only, length and weight not recorded
NBS		NBS-EP-1021	SC-058	1	Scup (SC)	85	8.5	
NBS		NBS-EP-1021	BS-013	1	Bass, Black Sea (BS)	102	14.9	
NBS		NBS-EP-1021	BS-014	1	Bass, Black Sea (BS)	72	4.6	
NBS		NBS-EP-1021	BS-015	1	Bass, Black Sea (BS)	87	8.9	
NBS		NBS-EP-1021	BS-016	1	Bass, Black Sea (BS)	86	9.0	
NBS		NBS-EP-1021	BS-017	1	Bass, Black Sea (BS)	77	6.0	
NBS		NBS-EP-1021	BS-018	1	Bass, Black Sea (BS)	71	5.0	
NBS		NBS-EP-1021	BS-019	1	Bass, Black Sea (BS)	87	8.1	
NBS		NBS-EP-1021	BS-020	1	Bass, Black Sea (BS)	95	11.8	
NBS		NBS-EP-1021	BS-021	1	Bass, Black Sea (BS)	71	4.8	

Zone	Intertidal Area	Catch Code	Specimen ID	Count	Species	Length (mm)	Weight (g)	Comments
NBS		NBS-EP-1021	BS-022	1	Bass, Black Sea (BS)	74	4.6	
NBS		NBS-EP-1021	BS-023	1	Bass, Black Sea (BS)	93	9.9	
NBS		NBS-EP-1021	BS-024-046	23	Bass, Black Sea (BS)	NA	-	Count only, length and weight not recorded
NBS		NBS-EP-1021	OT-009-011	3	Toadfish, Oyster (OT)	NA	-	Count only, length and weight not recorded
NBS		NBS-CT-1022	OT-012	1	Toadfish, Oyster (OT)	180	250.0	
NBS		NBS-CT-1022	OT-013	1	Toadfish, Oyster (OT)	230	325.0	
NBS		NBS-CT-1022	OT-014	1	Toadfish, Oyster (OT)	295	600.0	
NBS		NBS-CT-1022	OT-015	1	Toadfish, Oyster (OT)	225	350.0	
NBS		NBS-CT-1022	OT-016	1	Toadfish, Oyster (OT)	230	450.0	
NBS		NBS-EP-1022	OT-017	1	Toadfish, Oyster (OT)	185	200.0	
NBS		NBS-EP-1022	OT-018	1	Toadfish, Oyster (OT)	185	200.0	
NBS		NBS-EP-1022	OT-019	1	Toadfish, Oyster (OT)	215	250.0	
NBS		NBS-EP-1022	BS-047	1	Bass, Black Sea (BS)	85	6.0	
NBS		NBS-EP-1022	BS-048	1	Bass, Black Sea (BS)	95	10.0	
NBS		NBS-EP-1022	BS-049	1	Bass, Black Sea (BS)	110	11.0	
NBS		NBS-CT-1023	OT-020	1	Toadfish, Oyster (OT)	250	440.0	
NBS		NBS-CT-1023	SB-039	1	Bass, Striped (SB)	325	350.0	
NBS		NBS-EP-1023	BS-050	1	Bass, Black Sea (BS)	70	10.0	Individual too light for scale, 10g represents weight of 3 fish
NBS		NBS-EP-1023	BS-051	1	Bass, Black Sea (BS)	85	10.0	Individual too light for scale, 10g represents weight of 3 fish
NBS		NBS-EP-1023	BS-052	1	Bass, Black Sea (BS)	86	10.0	Individual too light for scale, 10g represents weight of 3 fish
NBC	124	NBC-SN-1024	MS-001	1	Mullet, Striped (MS)	230	136.6	
NBC	124	NBC-SN-1024	ME-004	1	Menhaden, Atlantic (ME)	90	6.4	
NBC	124	NBC-SN-1024	ME-005	1	Menhaden, Atlantic (ME)	88	6.4	
NBC	124	NBC-SN-1024	ME-006	1	Menhaden, Atlantic (ME)	87	6.6	
NBS		NBS-GN-1024	GS-002	1	Shad, Gizzard (GS)	407	950.0	
NBS		NBS-GN-1024	ME-007	1	Menhaden, Atlantic (ME)	331	375.0	
NBC	124	NBC-SN-1024	BB-009-014	6	Herring, Blueback (BB)	NA	-	Count only, length and weight not recorded
NBC	124	NBC-SN-1024	SK-221-228	8	Killifish, Striped (SK)	NA	-	Count only, length and weight not recorded

Fish Sampling
Newark Bay Study Area
FISH SPECIES LIST

Sorted Name	Common Name	Scientific Name	Nomenclature
Anchovy, Bay	Bay Anchovy	Anchoa mitchilli	BA
Anchovy, Striped	Striped Anchovy	Anchoa hepsetus	SA
Bass, Black Sea	Black Sea Bass	Centropristis striata	BS
Bass, Striped	Striped Bass	Morone saxatilis	SB
Bluefish	Bluefish	Pomatomus saltatrix	BL
Butterfish	Butterfish	Peprilus triacanthus	BF
Eel, American	American Eel	Anguilla rostrata	AE
Flounder, Smallmouth	Smallmouth Flounder	Etropus microstomus	SM
Flounder, Summer	Summer Flounder	Paralichthys dentatus	SF
Flounder, Windowpane	Windowpane	Scophthalmus aquosus	WW
Flounder, Winter	Winter Flounder	Pseudopleuronectes americanus	WF
Goby	Goby	Family: Gobiidae	GB
Goby, Naked	Naked Goby	Gobiosoma bosc	NG
Hake, Spotted	Spotted Hake	Urophycis regia	HA
Herring, Blueback	Blueback Herring	Alosa aestivalis	BB
Hogchoker	Hogchoker	Trinectes maculatus	HC
Killifish, Striped	Striped Killifish	Fundulus majalis	SK
Kingfish, Northern	Northern Kingfish	Menticirrhus saxatilis	NK
Menhaden, Atlantic	Atlantic Menhaden	Brevoortia tyrannus	ME
Moonfish	Moonfish	Selene setapinnis	MF
Mullet, Striped	Striped Mullet	Mugil cephalus	MS
Mullet, White	White Mullet	Mugil curema	WM
Mummichog	Mummichog	Fundulus heteroclitus	MU
Perch, Silver	Silver Perch	Bairdiella chrysoura	SP
Perch, White	White Perch	Morone americana	WP
Pipefish, Northern	Northern Pipefish	Syngnathus fuscus	NP
Scup	Scup	Stenotomus chrysops	SC
Sea Robin, Striped	Striped Sea Robin	Prionotus evolans	SR
Shad, Gizzard	Gizzard Shad	Dorosoma cepedianum	GS
Silverside, Atlantic	Atlantic Silverside	Menidia menidia	AS
Toadfish, Oyster	Oyster Toadfish	Opsanus tau	OT
Weakfish	Weakfish	Cynoscion regalis	WE

Fish Sampling
Newark Bay Study Area **Draft: For Discussion Purposes Only**
VARIABLE DESCRIPTION

Location Coordinate Tab

Zone	Code indicating the project location (Newark Bay = NB) and Zone (N = North, C= Central, S = South)
Intertidal Area	If applicable, Intertidal Area where the sample was collected
Collection Method	Method (or equipment, i.e., gear type) used to collect the organism
Catch Code	A unique identifier for the organisms that were collected that includes the Zone, collection method, and collection date used to relate the location coordinate data and associated catch list
Deployment Date	Date when collection equipment was deployed at a sample location
Deployment Time	Time when collection equipment was deployed at a sample location
Depolyment Easting (X)	Easting coordinate[1] of the deployed collection equipment
Deployment Northing (Y)	Northing coordinate[1] of the deployed collection equipment
Deployment Count	Count of the deployments of each type of equipment by Zone or Intertidal Area (CT = Crab Trap, EP = Eel Pot, GN = Gillnet, MT = Minnow Trap, SN = Seine, TW=Trawl)
Collection Date	Date when collection equipment was retrieved from a sample location
Collection Time	Time when collection equipment was retrieved from a sample location. For seines, NA=not applicable since the collection time was essentially the same as the deployment time.
Collection Easting (X)	If applicable, easting coordinate[1] of the retrieved collection equipment
Collection Northing (Y)	If applicable, northing coordinate[1] of the retrieved collection equipment
Depth (ft)	Water depth (ft) where organism was collected
Comments	

Specimen Tally Tab

Zone	Code indicating the project location (Newark Bay = NB) and Zone (N = North, C= Central, S = South)
Intertidal Area	If applicable, Intertidal Area where the sample was collected
Catch Code	A unique identifier for the organisms that were collected that includes the Zone, collection method, and collection date used to relate the location coordinate data and associated catch list
Tissue Sample ID	The tissue sample ID used on the chain of custody
Specimen ID	A unique identifier that combines the sample ID and consecutive numbering of the organisms within the sample
Species	Species of the organism
Length (mm)	Length (mm) of the organism
Weight (g)	Weight of the individual organism prior to any sample processing
Comments	

Bycatch[2] Tab

Zone	Code indicating the project location (Newark Bay = NB) and Zone (N = North, C= Central, S = South)
Intertidal Area	If applicable, Intertidal Area where the sample was collected
Catch Code	A unique identifier for the organisms that were collected that includes the Zone, collection method, and collection date used to relate the location coordinate data and associated catch list
Specimen ID	A unique identifier that combines the species code and consecutive numbering of the species caught
Count	Number of organisms that comprise the weight
Species	Species of the organism
Length (mm)	Length (mm) of the organism; NA=not applicable if the count was more than one
Weight (g)	Weight of the organism(s) prior to any sample processing
Comments	

Notes:

1. **All coordinates are provided in the following coordinate system: US State Plane, NAD 83 (US survey feet), zone NJ 2900**
2. **Includes target species that did not meet size requirements**

2015

Fish Sampling
Newark Bay Study Area **Draft: For Discussion Purposes Only**
LOCATION COORDINATE DATA (Field observed coordinates)

Zone	Intertidal Area	Collection Method	Catch Code	Deployment Date	Deployment Time	Deployment Easting (X)	Deployment Northing (Y)	Deployment Count	Collection Date	Collection Time	Collection Easting (X)	Collection Northing (Y)	Depth (ft)	Comments
NBC		Angling	NBC-AG-0407	4/7/2015	12:10	595260.459	674088.182	NBC-AG-001	4/7/2015	14:30	595028.750	673847.022	25	No catch
NBC		Angling	NBC-AG-0407	4/7/2015	14:45	595028.750	673847.022	NBC-AG-002	4/7/2015	15:20	592306.925	665714.309	20-50	No catch
NBC		Angling	NBC-AG-0428	4/28/2015	15:00	*	*	NBC-AG-003	4/28/2015	16:00	*	*	20-30	GPS not recorded; no catch
NBC		Angling	NBC-AG-0602	6/2/2015	12:00	592105.276	665942.568	NBC-AG-004	6/2/2015	13:55	*	*	30	GPS not recorded
NBC		Angling	NBC-AG-0602	6/2/2015	15:00	587162.446	661005.218	NBC-AG-005	6/2/2015	16:30	581437.907	660928.708	30	
NBC		Angling	NBC-AG-0603	6/3/2015	11:35	592222.075	666015.208	NBC-AG-006	6/3/2015	12:50	594153.242	671071.468	*	Depth not recorded
NBC		Angling	NBC-AG-0604	6/4/2015	9:00	591161.558	664508.201	NBC-AG-007	6/4/2015	11:20	594153.242	671071.468	*	Depth not recorded; overlap between Central and South
NBC		Angling	NBC-AG-0604	6/4/2015	15:00	596162.448	676390.267	NBC-AG-008	6/4/2015	15:45	593659.982	669444.881	*	Depth not recorded; overlap between Central and North
NBC		Angling	NBC-AG-0604	6/4/2015	16:15	591161.558	664508.201	NBC-AG-009	6/4/2015	17:50	594153.242	671071.468	*	Depth not recorded; overlap between Central and South
NBC		Angling	NBC-AG-0605	6/5/2015	8:15	593247.983	668546.733	NBC-AG-010	6/5/2015	9:45	592283.225	666375.127	20-30	
NBC		Angling	NBC-AG-0608	6/8/2015	9:30	592277.686	666312.757	NBC-AG-011	6/8/2015	11:45	593500.543	669417.191	20-30	
NBC		Angling	NBC-AG-0729	7/29/2015	12:00	594541.671	671898.666	NBC-AG-012	7/29/2015	12:50			*	Depth not recorded
NBC		Angling	NBC-AG-0729	7/29/2015	13:10	594036.512	673484.712	NBC-AG-013	7/29/2015	14:00			*	Depth not recorded
NBC		Angling	NBC-AG-0731	7/31/2015	8:30	593377.393	671915.446	NBC-AG-014	7/31/2015	9:00			*	Depth not recorded
NBC		Angling	NBC-AG-0803	8/3/2015	16:10	593146.033	671611.147	NBC-AG-015	8/3/2015	17:10			*	Depth not recorded
NBC		Angling	NBC-AG-0804	8/4/2015	7:40	593357.553	671826.156	NBC-AG-016	8/4/2015	8:40			*	Depth not recorded
NBC		Eel Pot	NBC-EP-0603	6/1/2015	15:15	593611.903	665967.918	NBC-EP-001	6/3/2015	14:30			3.5	No catch
NBC		Eel Pot	NBC-EP-0603	6/1/2015	15:20	594412.671	667792.214	NBC-EP-002	6/3/2015	14:30			5	No catch
NBC		Eel Pot	NBC-EP-0603	6/1/2015	15:25	595307.430	669111.292	NBC-EP-003	6/3/2015	14:30			5	No catch
NBC		Eel Pot	NBC-EP-0603	6/1/2015	15:28	595932.178	670085.710	NBC-EP-004	6/3/2015	14:30			5	No catch
NBC		Eel Pot	NBC-EP-0603	6/1/2015	15:38	594802.660	675271.260	NBC-EP-005	6/3/2015	14:30			10	No catch
NBC		Eel Pot	NBC-EP-0603	6/1/2015	15:42	594151.892	675870.488	NBC-EP-006	6/3/2015	14:30			11	No catch
NBC		Eel Pot	NBC-EP-0605	6/3/2015	14:35	593611.903	665967.918	NBC-EP-007	6/5/2015	7:45			3.5	No catch
NBC		Eel Pot	NBC-EP-0605	6/3/2015	14:35	594412.671	667792.214	NBC-EP-008	6/5/2015	7:45			5	No catch
NBC		Eel Pot	NBC-EP-0605	6/3/2015	14:35	595307.430	669111.292	NBC-EP-009	6/5/2015	7:45			5	No catch
NBC		Eel Pot	NA	6/3/2015	14:35	595932.178	670085.710	NBC-EP-010	NA	NA			5	Lost
NBC		Eel Pot	NBC-EP-0605	6/3/2015	14:35	594802.660	675271.260	NBC-EP-011	6/5/2015	7:45			10	No catch
NBC		Eel Pot	NBC-EP-0605	6/3/2015	14:35	594151.892	675870.488	NBC-EP-012	6/5/2015	7:45			11	No catch
NBC		Eel Pot	NBC-EP-0608	6/5/2015	7:45	594412.671	667792.214	NBC-EP-013	6/8/2015	12:00			5	No catch
NBC		Eel Pot	NBC-EP-0608	6/5/2015	7:45	595307.430	669111.292	NBC-EP-014	6/8/2015	12:00			5	No catch
NBC		Eel Pot	NBC-EP-0608	6/5/2015	7:45	594802.660	675271.260	NBC-EP-015	6/8/2015	12:00			10	No catch
NBC		Eel Pot	NBC-EP-0608	6/5/2015	7:45	594151.892	675870.488	NBC-EP-016	6/8/2015	12:00			11	No catch
NBC		Eel Pot	NBC-EP-0730	7/29/2015	9:35	594161.651	675851.248	NBC-EP-017	7/30/2015	10:40			21	No catch
NBC		Eel Pot	NBC-EP-0730	7/29/2015	9:35	594190.402	675810.568	NBC-EP-018	7/30/2015	10:40			20	No catch
NBC		Eel Pot	NBC-EP-0730	7/29/2015	9:35	594211.102	675776.128	NBC-EP-019	7/30/2015	10:40			21	No catch
NBC		Eel Pot	NBC-EP-0730	7/29/2015	9:35	594109.142	675890.609	NBC-EP-020	7/30/2015	10:40			13	No catch
NBC		Eel Pot	NBC-EP-0731	7/30/2015	10:40	594161.651	675851.248	NBC-EP-021	7/31/2015	8:00			21	
NBC		Eel Pot	NBC-EP-0731	7/30/2015	10:40	594190.402	675810.568	NBC-EP-022	7/31/2015	8:00			20	
NBC		Eel Pot	NBC-EP-0731	7/30/2015	10:40	594211.102	675776.128	NBC-EP-023	7/31/2015	8:00			21	
NBC		Eel Pot	NBC-EP-0731	7/30/2015	10:40	594109.142	675890.609	NBC-EP-024	7/31/2015	8:00			13	
NBC		Eel Pot	NBC-EP-0803	7/31/2015	8:00	594161.651	675851.248	NBC-EP-025	8/3/2015	10:40			21	
NBC		Eel Pot	NBC-EP-0803	7/31/2015	8:00	594190.402	675810.568	NBC-EP-026	8/3/2015	10:40			20	
NBC		Eel Pot	NBC-EP-0803	7/31/2015	8:00	594211.102	675776.128	NBC-EP-027	8/3/2015	10:40			21	
NBC		Eel Pot	NBC-EP-0803	7/31/2015	8:00	594109.142	675890.609	NBC-EP-028	8/3/2015	10:40			13	
NBC		Eel Pot	NBC-EP-0804	8/3/2015	10:20	593932.472	676141.057	NBC-EP-029	8/4/2015	9:40			21	
NBC		Eel Pot	NBC-EP-0804	8/3/2015	10:20	593607.872	672237.535	NBC-EP-030	8/4/2015	10:05			19	
NBC		Eel Pot	NBC-EP-0804	8/3/2015	10:20	594030.362	670414.389	NBC-EP-031	8/4/2015	10:05			29	
NBC		Eel Pot	NBC-EP-0804	8/3/2015	10:20	593788.713	669726.530	NBC-EP-032	8/4/2015	10:05			28	
NBC		Eel Pot	NBC-EP-0804	8/3/2015	10:20	593680.253	669412.121	NBC-EP-033	8/4/2015	10:20			15	
NBC		Eel Pot	NBC-EP-0804	8/3/2015	10:20	593520.543	669180.442	NBC-EP-034	8/4/2015	10:20			20	
NBC		Eel Pot	NBC-EP-0804	8/3/2015	10:20	593347.423	668748.492	NBC-EP-035	8/4/2015	10:20			28	
NBC		Eel Pot	NBC-EP-0804	8/3/2015	10:20	593232.173	668511.083	NBC-EP-036	8/4/2015	10:20			30	
NBC		Eel Pot	NBC-EP-0804	8/3/2015	10:20	593121.024	668167.534	NBC-EP-037	8/4/2015	10:30			28	
NBC		Eel Pot	NBC-EP-0804	8/3/2015	10:20	592969.264	667904.504	NBC-EP-038	8/4/2015	10:30			29	
NBC		Eel Pot	NBC-EP-0804	8/3/2015	10:40	594161.651	675851.248	NBC-EP-039	8/4/2015	9:55			21	

Zone	Intertidal Area	Collection Method	Catch Code	Deployment Date	Deployment Time	Deployment Easting (X)	Deployment Northing (Y)	Deployment Count	Collection Date	Collection Time	Collection Easting (X)	Collection Northing (Y)	Depth (ft)	Comments
NBC		Eel Pot	NBC-EP-0804	8/3/2015	10:40	594190.402	675810.568	NBC-EP-040	8/4/2015	9:55			20	
NBC		Eel Pot	NBC-EP-0804	8/3/2015	10:40	594211.102	675776.128	NBC-EP-041	8/4/2015	9:55			21	
NBC		Eel Pot	NBC-EP-0804	8/3/2015	10:40	594109.142	675890.609	NBC-EP-042	8/4/2015	9:55			13	
NBC		Eel Pot	NBC-EP-0805	8/4/2015	9:40	593932.472	676141.057	NBC-EP-043	8/5/2015	7:45			21	
NBC		Eel Pot	NBC-EP-0805	8/4/2015	9:50	594109.142	675890.609	NBC-EP-044	8/5/2015	7:45			12	
NBC		Eel Pot	NBC-EP-0805	8/4/2015	9:55	594161.651	675851.248	NBC-EP-045	8/5/2015	7:45			21	
NBC		Eel Pot	NBC-EP-0805	8/4/2015	9:55	594190.402	675810.568	NBC-EP-046	8/5/2015	7:45			20	
NBC		Eel Pot	NBC-EP-0805	8/4/2015	9:55	594211.102	675776.128	NBC-EP-047	8/5/2015	7:45			21	
NBC		Eel Pot	NBC-EP-0805	8/4/2015	10:05	593607.872	672237.535	NBC-EP-048	8/5/2015	7:45			19	
NBC		Eel Pot	NBC-EP-0805	8/4/2015	10:05	594030.362	670414.389	NBC-EP-049	8/5/2015	7:45			29	
NBC		Eel Pot	NBC-EP-0805	8/4/2015	10:20	593788.713	669726.530	NBC-EP-050	8/5/2015	7:45			28	
NBC		Eel Pot	NBC-EP-0805	8/4/2015	10:20	593680.253	669412.121	NBC-EP-051	8/5/2015	7:45			15	
NBC		Eel Pot	NBC-EP-0805	8/4/2015	10:20	593520.543	669180.442	NBC-EP-052	8/5/2015	7:45			20	
NBC		Eel Pot	NBC-EP-0805	8/4/2015	10:20	593347.423	668748.492	NBC-EP-053	8/5/2015	7:45			28	
NBC		Eel Pot	NBC-EP-0805	8/4/2015	10:20	593232.173	668511.083	NBC-EP-054	8/5/2015	7:45			30	
NBC		Eel Pot	NBC-EP-0805	8/4/2015	10:30	593121.024	668167.534	NBC-EP-055	8/5/2015	7:45			28	
NBC		Eel Pot	NBC-EP-0805	8/4/2015	10:30	592969.264	667904.504	NBC-EP-056	8/5/2015	7:45			29	
NBC		Gillnet	NBC-GN-0331	3/30/2015	15:35	594431.231	668019.804	NBC-GN-002	3/31/2015	10:10	594745.881	668138.644	8-10	
NBC		Gillnet	NA	3/31/2015	10:30	593902.462	667397.565	NBC-GN-003	NA	NA			10	Lost
NBC		Gillnet	NBC-GN-0409	4/8/2015	11:30	597297.485	672463.895	NBC-GN-004	4/9/2015	9:50	597062.046	672301.085	9	
NBC		Gillnet	NBC-GN-0409	4/8/2015	11:45	595384.490	672828.365	NBC-GN-005	4/9/2015	10:15	595330.070	672703.245	11	
NBC		Gillnet	NBC-GN-0409	4/8/2015	12:15	592149.836	665448.369	NBC-GN-006	4/9/2015	10:50	591970.846	665269.300	20	
NBC		Gillnet	NBC-GN-0602	6/1/2015	12:30	593734.803	668059.644	NBC-GN-007	6/2/2015	11:30	593723.632	667811.914	8	
NBC		Gillnet	NBC-GN-0602	6/1/2015	12:55	591505.227	664229.762	NBC-GN-008	6/2/2015	10:30	591444.277	663991.552	42-53	
NBC		Gillnet	NBC-GN-0603	6/2/2015	10:30	591423.997	664251.572	NBC-GN-009	6/3/2015	10:00	591594.597	664506.991	15	No catch
NBC		Gillnet	NBC-GN-0603	6/2/2015	11:35	593734.803	668059.644	NBC-GN-010	6/3/2015	9:30	593723.632	667811.914	10	No catch
NBC		Trawl	NBC-TW-0330	3/30/2015	16:50	599015.122	675818.349	NBC-TW-012	3/30/2015	17:00	598354.053	674411.991	8	
NBC		Trawl	NBC-TW-0331	3/31/2015	9:18	593655.532	669577.172	NBC-TW-013	3/31/2015	9:29	594465.417	672434.945	34	
NBC		Trawl	NBC-TW-0331	3/31/2015	9:44	594422.064	672115.336	NBC-TW-014	3/31/2015	9:54	595250.193	674598.969	32-39	
NBC		Trawl	NBC-TW-0331	3/31/2015	10:05	595305.666	671806.649	NBC-TW-015	3/31/2015	10:16	595946.897	674375.050	8	
NBC		Trawl	NBC-TW-0331	3/31/2015	10:30	593869.372	670891.463	NBC-TW-016	3/31/2015	10:42	594872.910	673796.172	40-55	
NBC		Trawl	NBC-TW-0331	3/31/2015	10:55	593125.447	668839.931	NBC-TW-017	3/31/2015	10:59	592827.371	667700.070	45-53	
NBC		Trawl	NBC-TW-0331	3/31/2015	11:10	594235.543	671065.975	NBC-TW-018	3/31/2015	11:15	593612.208	669979.241	32-47	
NBC		Trawl	NBC-TW-0331	3/31/2015	11:27	594181.108	670917.221	NBC-TW-019	3/31/2015	11:37	593132.505	668593.898	50	
NBC		Trawl	NBC-TW-0331	3/31/2015	12:08	592017.128	665435.851	NBC-TW-020	3/31/2015	12:13	591368.745	664273.963	16-20	
NBC		Trawl	NBC-TW-0331	3/31/2015	12:28	595033.666	674031.260	NBC-TW-021	3/31/2015	12:45	593790.167	669597.766	30-35	
NBC		Trawl	NBC-TW-0331	3/31/2015	13:07	595077.296	674310.574	NBC-TW-022	3/31/2015	13:23	593874.953	670348.517	38-50	
NBC		Trawl	NBC-TW-0401	4/1/2015	9:09	594118.962	670863.989	NBC-TW-023	4/1/2015	9:11	594158.373	670896.462	37-40	
NBC		Trawl	NBC-TW-0401	4/1/2015	9:23	594630.495	672828.032	NBC-TW-024	4/1/2015	9:34	595270.516	674734.227	34-35	
NBC		Trawl	NBC-TW-0401	4/1/2015	9:45	594483.814	672818.824	NBC-TW-025	4/1/2015	9:55	595114.548	674579.160	40-45	
NBC		Trawl	NBC-TW-0401	4/1/2015	13:31	594428.383	672365.654	NBC-TW-026	4/1/2015	13:42	595307.770	674519.278	30-31	
NBC		Trawl	NBC-TW-0401	4/1/2015	13:56	594291.632	672677.276	NBC-TW-027	4/1/2015	14:06	595217.691	674593.184	38-40	
NBC		Trawl	NBC-TW-0401	4/1/2015	14:19	594471.237	672761.843	NBC-TW-028	4/1/2015	14:28	595227.632	674824.837	36-38	
NBC		Trawl	NBC-TW-0401	4/1/2015	14:42	594519.861	673038.057	NBC-TW-029	4/1/2015	14:50	595157.712	674765.310	35-39	
NBC		Trawl	NBC-TW-0401	4/1/2015	15:07	595232.989	674859.831	NBC-TW-030	4/1/2015	15:20	594510.803	672601.391	33-40	
NBC		Trawl	NBC-TW-0401	4/1/2015	15:33	595421.136	674774.861	NBC-TW-031	4/1/2015	15:43	594828.318	672950.371	25-30	
NBC		Trawl	NBC-TW-0402	4/2/2015	8:37	595034.581	675076.247	NBC-TW-032	4/2/2015	8:55	594255.589	671375.291	48-54	
NBC		Trawl	NBC-TW-0402	4/2/2015	9:25	595247.556	675369.059	NBC-TW-033	4/2/2015	9:45	594173.548	670906.031	40-42	
NBC		Trawl	NBC-TW-0402	4/2/2015	10:11	594353.628	672567.568	NBC-TW-034	4/2/2015	10:26	595133.083	674927.602	41-42	
NBC		Trawl	NBC-TW-0406	4/6/2015	14:36	594035.347	671761.659	NBC-TW-035	4/6/2015	14:51	594788.015	674571.416	45-52	
NBC		Trawl	NBC-TW-0406	4/6/2015	15:08	594245.519	673242.157	NBC-TW-036	4/6/2015	15:20	595203.477	675154.942	38-40	
NBC		Trawl	NBC-TW-0406	4/6/2015	15:41	594590.313	673514.967	NBC-TW-037	4/6/2015	15:51	595385.546	675665.638	38-41	
NBC		Trawl	NBC-TW-0407	4/7/2015	9:06	595306.560	675035.758	NBC-TW-038	4/7/2015	9:20	594680.182	672977.866	40	
NBC		Trawl	NBC-TW-0407	4/7/2015	9:37	595280.703	674977.603	NBC-TW-039	4/7/2015	9:50	594747.196	672976.885	40	
NBC		Trawl	NBC-TW-0407	4/7/2015	10:12	594968.377	674592.112	NBC-TW-040	4/7/2015	10:25	594544.061	672836.601	40-46	
NBC		Trawl	NBC-TW-0407	4/7/2015	12:15	594450.857	672970.293	NBC-TW-041	4/7/2015	12:32	595309.849	675314.572	40-45	
NBC		Trawl	NBC-TW-0407	4/7/2015	12:54	594259.657	673294.099	NBC-TW-042	4/7/2015	13:05	594721.513	674550.054	40-43	
NBC		Trawl	NBC-TW-0407	4/7/2015	13:48	594508.744	673035.357	NBC-TW-043	4/7/2015	14:02	595209.616	674780.983	40-43	
NBC		Trawl	NBC-TW-0407	4/7/2015	14:36	594573.277	672540.108	NBC-TW-044	4/7/2015	14:45	595172.647	673759.724	14-32	

Zone	Intertidal Area	Collection Method	Catch Code	Deployment Date	Deployment Time	Deployment Easting (X)	Deployment Northing (Y)	Deployment Count	Collection Date	Collection Time	Collection Easting (X)	Collection Northing (Y)	Depth (ft)	Comments
NBC		Trawl	NBC-TW-0408	4/8/2015	11:20	595019.361	674264.880	NBC-TW-045	4/8/2015	11:38	594094.316	671639.885	47-56	
NBC		Trawl	NBC-TW-0408	4/8/2015	11:50	595084.324	674153.290	NBC-TW-046	4/8/2015	12:09	594248.788	671790.555	42-55	
NBC		Trawl	NBC-TW-0408	4/8/2015	13:22	593147.574	665953.388	NBC-TW-047	4/8/2015	13:32	593834.792	667369.775	8-11	
NBC		Trawl	NBC-TW-0408	4/8/2015	13:28	594191.247	672278.242	NBC-TW-048	4/8/2015	13:43	594979.213	674675.368	44-48	
NBC		Trawl	NBC-TW-0408	4/8/2015	13:36	593680.823	667187.806	NBC-TW-049	4/8/2015	13:46	594219.882	668348.453	12-14	
NBC		Trawl	NBC-TW-0408	4/8/2015	13:56	593374.113	667687.965	NBC-TW-050	4/8/2015	14:06	593949.582	669175.592	10-12	
NBC		Trawl	NBC-TW-0408	4/8/2015	14:11	594164.590	672855.344	NBC-TW-051	4/8/2015	14:25	594981.355	674791.790	43-47	
NBC		Trawl	NBC-TW-0408	4/8/2015	14:17	594452.771	668180.794	NBC-TW-052	4/8/2015	14:27	594933.060	669603.531	8-9	
NBC		Trawl	NBC-TW-0408	4/8/2015	14:36	595522.879	669798.200	NBC-TW-053	4/8/2015	14:46	596832.596	671181.418	7-9	
NBC		Trawl	NBC-TW-0408	4/8/2015	14:53	594006.670	671994.170	NBC-TW-054	4/8/2015	15:10	594843.103	674182.929	45-46	
NBC		Trawl	NBC-TW-0408	4/8/2015	15:01	594701.971	670541.839	NBC-TW-055	4/8/2015	15:11	594505.861	671790.716	11	
NBC		Trawl	NBC-TW-0408	4/8/2015	15:22	593850.982	670169.420	NBC-TW-056	4/8/2015	15:32	594344.442	671591.427	54	
NBC		Trawl	NBC-TW-0408	4/8/2015	15:30	594011.267	672147.722	NBC-TW-057	4/8/2015	15:50	594991.861	674693.869	42-46	
NBC		Trawl	NBC-TW-0408	4/8/2015	15:49	593847.382	670076.660	NBC-TW-058	4/8/2015	15:59	594397.891	671669.706	49-53	
NBC		Trawl	NBC-TW-0409	4/9/2015	11:59	595151.137	674682.402	NBC-TW-059	4/9/2015	12:16	594097.045	671496.998	47-55	
NBC		Trawl	NBC-TW-0409	4/9/2015	13:21	591325.077	664389.711	NBC-TW-060	4/9/2015	13:36	592316.436	666709.587	48-52	
NBC		Trawl	NBC-TW-0409	4/9/2015	13:29	594427.805	672877.257	NBC-TW-061	4/9/2015	13:39	595255.886	675114.195	42-46	
NBC		Trawl	NBC-TW-0409	4/9/2015	13:48	592265.555	666918.526	NBC-TW-062	4/9/2015	13:59	592751.385	667912.884	56-57	
NBC		Trawl	NBC-TW-0409	4/9/2015	14:16	591844.976	666524.717	NBC-TW-063	4/9/2015	14:33	591487.697	665169.690	56	
NBC		Trawl	NBC-TW-0409	4/9/2015	14:20	594384.931	672902.047	NBC-TW-064	4/9/2015	14:32	595145.323	675000.522	45-46	
NBC		Trawl	NBC-TW-0409	4/9/2015	14:49	591487.697	665169.690	NBC-TW-065	4/9/2015	15:08	592388.235	667209.556	55-57	
NBC		Trawl	NBC-TW-0409	4/9/2015	15:10	594216.481	671765.479	NBC-TW-066	4/9/2015	15:36	595211.691	675256.149	42-53	
NBC		Trotline	NBC-TL-0603	6/3/2015	9:10	593025.984	667619.745	NBC-TL-001	6/3/2015	15:25			20	No catch
NBC		Trotline	NBC-TL-0603	6/3/2015	10:50	593185.653	667884.244	NBC-TL-002	6/3/2015	15:25			21	No catch
NBC		Trotline	NBC-TL-0603	6/3/2015	11:05	593169.673	667219.045	NBC-TL-003	6/3/2015	15:25			12	No catch
NBC		Trotline	NBC-TL-0604	6/4/2015	8:55	592824.304	667450.715	NBC-TL-004	6/4/2015	18:00			12	No catch
NBC		Trotline	NBC-TL-0604	6/4/2015	9:10	591445.667	664749.601	NBC-TL-005	6/4/2015	18:30			18	No catch
NBN		Angling	NBN-AG-0604	6/4/2015	12:00	598222.594	683209.504	NBN-AG-001	6/4/2015	14:00	601784.236	686765.987	20-30	
NBN		Angling	NBN-AG-0604	6/4/2015	14:00	598817.582	683190.413	NBN-AG-002	6/4/2015	14:45	*	*	8	GPS not recorded
NBN		Angling	NBC-AG-0604	6/4/2015	15:00	596162.448	676390.267	NBN-AG-003	6/4/2015	15:45	593659.982	669444.881	*	Depth not recorded; overlap between Central and North
NBN		Angling	NBN-AG-0727	7/27/2015	15:15	600780.638	686218.649	NBN-AG-004	7/27/2015	15:35			*	Depth not recorded; no catch
NBN		Angling	NBN-AG-0728	7/28/2015	9:30	595212.310	676136.408	NBN-AG-005	7/28/2015	11:50			*	Depth not recorded
NBN		Angling	NBN-AG-0728	7/28/2015	15:20	595212.310	676136.408	NBN-AG-006	7/28/2015	16:30			*	Depth not recorded
NBN		Angling	NBN-AG-0730	7/30/2015	9:30	595041.079	675921.588	NBN-AG-007	7/30/2015	9:45			*	Depth not recorded
NBN		Angling	NBN-AG-0730	7/30/2015	9:50	600448.450	685952.188	NBN-AG-008	7/30/2015	10:30			*	Depth not recorded
NBN		Angling	NBN-AG-0804	8/4/2015	8:45	599048.662	684725.810	NBN-AG-009	8/4/2015	9:10			*	Depth not recorded
NBN		Angling	NBN-AG-0804	8/4/2015	9:15	594804.200	675601.829	NBN-AG-010	8/4/2015	9:30			*	Depth not recorded
NBN		Eel Pot	NBN-EP-0729	7/27/2015	14:45	598659.263	684646.000	NBN-EP-028	7/29/2015	8:20			13	
NBN		Eel Pot	NBN-EP-0729	7/27/2015	14:46	598743.553	684610.260	NBN-EP-029	7/29/2015	8:20			9	
NBN		Eel Pot	NBN-EP-0729	7/27/2015	14:50	598723.512	685044.449	NBN-EP-030	7/29/2015	8:20			8	
NBN		Eel Pot	NBN-EP-0729	7/27/2015	14:51	598673.582	685047.781	NBN-EP-031	7/29/2015	8:25			8	
NBN		Eel Pot	NBN-EP-0729	7/27/2015	14:52	600516.680	686007.598	NBN-EP-032	7/29/2015	8:25			12	
NBN		Eel Pot	NBN-EP-0729	7/27/2015	14:53	600527.549	686127.707	NBN-EP-033	7/29/2015	8:25			18	
NBN		Eel Pot	NBN-EP-0729	7/27/2015	14:54	600609.389	686118.058	NBN-EP-034	7/29/2015	8:25			14	
NBN		Eel Pot	NBN-EP-0729	7/27/2015	14:56	602421.615	686694.548	NBN-EP-035	7/29/2015	8:45			9	
NBN		Eel Pot	NBN-EP-0729	7/27/2015	14:58	602054.227	686712.887	NBN-EP-036	7/29/2015	8:45			9	
NBN		Eel Pot	NBN-EP-0729	7/27/2015	15:01	601214.567	687046.457	NBN-EP-037	7/29/2015	9:05			20	
NBN		Eel Pot	NBN-EP-0729	7/27/2015	15:02	601332.107	687063.765	NBN-EP-038	7/29/2015	9:05			20	
NBN		Gillnet	NBN-GN-0429	4/28/2015	9:45	597406.789	680554.376	NBN-GN-003	4/29/2015	10:05	597401.308	680709.816	15	
NBN		Trawl	NBN-TW-0330	3/30/2015	14:06	600764.762	685533.718	NBN-TW-009	3/30/2015	14:16	600384.873	685276.960	28-34	
NBN		Trawl	NBN-TW-0330	3/30/2015	14:26	601011.848	685360.031	NBN-TW-010	3/30/2015	14:36	599225.972	683676.307	10-16	
NBN		Trawl	NBN-TW-0330	3/30/2015	14:48	601435.015	686274.390	NBN-TW-011	3/30/2015	15:02	599247.005	684530.746	34-35	
NBN		Trawl	NBN-TW-0330	3/30/2015	15:16	599462.089	684898.537	NBN-TW-012	3/30/2015	15:28	598108.717	682335.517	36-40	
NBN		Trawl	NBN-TW-0330	3/30/2015	15:48	599288.707	684681.440	NBN-TW-013	3/30/2015	16:00	598036.949	682251.528	37-41	
NBN		Trawl	NBN-TW-0330	3/30/2015	16:14	598915.138	684056.471	NBN-TW-014	3/30/2015	16:25	597950.510	681540.104	30-35	
NBN		Trawl	NBN-TW-0330	3/30/2015	16:43	598989.365	684151.185	NBN-TW-015	3/30/2015	16:55	598114.275	681500.314	28-42	
NBN		Trawl	NBN-TW-0406	4/6/2015	9:38	598193.155	682587.646	NBN-TW-016	4/6/2015	9:55	599466.982	684963.068	37	
NBN		Trawl	NBN-TW-0406	4/6/2015	10:21	599614.683	684710.841	NBN-TW-017	4/6/2015	10:35	598228.853	682434.492	37-42	
NBN		Trawl	NBN-TW-0406	4/6/2015	11:00	598804.390	684180.719	NBN-TW-018	4/6/2015	11:15	598040.195	681103.699	38-46	

Zone	Intertidal Area	Collection Method	Catch Code	Deployment Date	Deployment Time	Deployment Easting (X)	Deployment Northing (Y)	Deployment Count	Collection Date	Collection Time	Collection Easting (X)	Collection Northing (Y)	Depth (ft)	Comments
NBN		Trawl	NBN-TW-0406	4/6/2015	11:37	598261.064	682416.155	NBN-TW-019	4/6/2015	11:52	599663.332	684975.929	38-41	
NBN		Trawl	NBN-TW-0406	4/6/2015	12:27	597908.761	681581.028	NBN-TW-020	4/6/2015	12:44	598892.247	684439.271	38-39	
NBN		Trawl	NBN-TW-0406	4/6/2015	13:00	597580.010	680754.212	NBN-TW-021	4/6/2015	13:12	597821.660	682479.667	28-36	
NBN		Trawl	NBN-TW-0406	4/6/2015	13:26	598019.758	680577.665	NBN-TW-022	4/6/2015	13:38	598010.105	682158.257	41-44	
NBN		Trawl	NBN-TW-0406	4/6/2015	13:56	597438.724	680685.650	NBN-TW-023	4/6/2015	14:10	597846.207	682652.542	20-26	
NBN		Trawl	NBN-TW-0407	4/7/2015	10:48	599328.377	684742.354	NBN-TW-024	4/7/2015	11:12	597663.469	681828.906	30-39	
NBN		Trawl	NBN-TW-0407	4/7/2015	11:26	597628.629	681197.244	NBN-TW-025	4/7/2015	11:41	598251.472	683585.262	28-32	
NBN		Trawl	NBN-TW-0407	4/7/2015	15:08	597731.565	681354.479	NBN-TW-026	4/7/2015	15:23	598167.965	683113.666	30-34	
NBN		Trawl	NBN-TW-0407	4/7/2015	15:43	597549.948	680555.906	NBN-TW-027	4/7/2015	15:53	597794.877	682153.930	30-31	
NBN		Trawl	NBN-TW-0408	4/8/2015	9:24	598864.506	684308.905	NBN-TW-028	4/8/2015	9:41	597914.093	682110.961	39-41	
NBN		Trawl	NBN-TW-0408	4/8/2015	9:57	598739.240	684012.681	NBN-TW-029	4/8/2015	10:11	597707.799	681826.988	36-39	
NBN		Trawl	NBN-TW-0408	4/8/2015	10:35	599018.975	684387.914	NBN-TW-030	4/8/2015	10:52	597716.959	681816.298	33-39	
NBN		Trawl	NBN-TW-0409	4/9/2015	9:18	598876.161	684255.244	NBN-TW-031	4/9/2015	9:40	597831.981	681335.553	35-38	
NBN		Trawl	NBN-TW-0409	4/9/2015	10:06	599721.637	684990.358	NBN-TW-032	4/9/2015	10:30	597827.937	681333.407	35-38	
NBN		Trawl	NBN-TW-0409	4/9/2015	11:01	595229.769	675054.270	NBN-TW-033	4/9/2015	11:22	594198.377	671819.435	42-55	
NBN		Trawl	NBN-TW-0409	4/9/2015	15:28	597903.864	681524.666	NBN-TW-034	4/9/2015	15:44	598748.203	683334.713	13-40	
NBN		Trawl	NBN-TW-0409	4/9/2015	15:52	597974.264	682376.886	NBN-TW-035	4/9/2015	16:08	599213.921	684439.791	30-41	
NBN		Trawl	NBN-TW-0409	4/9/2015	16:17	598408.523	683960.322	NBN-TW-036	4/9/2015	16:30	599921.890	685283.589	28-34	
NBN		Trawl	NBN-TW-0409	4/9/2015	16:45	598409.913	683817.323	NBN-TW-037	4/9/2015	17:00	600351.800	685580.829	25-35	
NBN		Trawl	NBN-TW-0727	7/27/2015	11:30	598329.013	683396.673	NBN-TW-038	7/27/2015	11:45	600076.190	685295.400	30-35	
NBN		Trawl	NBN-TW-0727	7/27/2015	12:02	599012.081	684364.811	NBN-TW-039	7/27/2015	*	599163.760	684529.200	30-35	Collection hung up
NBN		Trawl	NBN-TW-0727	7/27/2015	12:22	599071.621	684263.992	NBN-TW-040	7/27/2015	12:33	600954.660	686172.529	30-35	
NBS		Angling	NBS-AG-0406	4/6/2015	11:05	587240.986	664206.482	NBS-AG-001	4/6/2015	13:10	*	*	12	GPS not recorded; no catch
NBS		Angling	NBS-AG-0406	4/6/2015	13:30	587670.245	665675.899	NBS-AG-002	4/6/2015	15:20	*	*	49	GPS not recorded; no catch
NBS		Angling	NBS-AG-0428	4/28/2015	13:40	585518.730	661136.628	NBS-AG-003	4/28/2015	17:30	588030.924	661199.298	20-30	
NBS		Angling	NBS-AG-0429	4/29/2015	8:30	584504.691	661072.938	NBS-AG-004	4/29/2015	12:45	588743.962	662168.616	20-30	
NBS		Angling	NBS-AG-0430	4/30/2015	14:00	584360.791	661050.468	NBS-AG-005	4/30/2015	19:00	587684.704	663189.404	20-30	
NBS		Angling	NBS-AG-0504	5/4/2015	16:00	583590.113	661013.008	NBS-AG-006	5/4/2015	20:00	590409.909	664582.441	20-30	No catch
NBS		Angling	NBS-AG-0505	5/5/2015	8:00	583277.083	660984.748	NBS-AG-007	5/5/2015	11:50	588030.924	661199.298	20-30	
NBS		Angling	NBS-AG-0505	5/5/2015	16:20	579856.980	660695.039	NBS-AG-008	5/5/2015	19:00	587928.114	660947.078	20-30	
NBS		Angling	NBS-AG-0506	5/6/2015	9:30	587375.415	660922.548	NBS-AG-009	5/6/2015	13:10	580270.919	660767.078	20-30	
NBS		Angling	NBS-AG-0506	5/6/2015	15:00	587375.415	660922.548	NBS-AG-010	5/6/2015	17:20	580270.919	660767.078	20-30	
NBS		Angling	NBS-AG-0507	5/7/2015	8:40	588048.614	661324.957	NBS-AG-011	5/7/2015	12:30	587903.284	661171.548	20-30	
NBS		Angling	NBS-AG-0507	5/7/2015	16:40	587761.554	661024.608	NBS-AG-012	5/7/2015	18:30	581192.418	660928.328	20-30	
NBS		Angling	NBS-AG-0604	6/4/2015	9:00	591161.558	664508.201	NBS-AG-013	6/4/2015	11:20	594153.242	671071.468	*	Depth not recorded; overlap between Central and South
NBS		Angling	NBS-AG-0604	6/4/2015	16:15	591161.558	664508.201	NBS-AG-014	6/4/2015	17:50	594153.242	671071.468	*	Depth not recorded; overlap between Central and South
NBS		Angling	NBS-AG-0727	7/27/2015	15:45	588323.494	663332.153	NBS-AG-015	7/27/2015	17:35			*	Depth not recorded
NBS		Angling	NBS-AG-0728	7/28/2015	8:30	587998.684	661963.226	NBS-AG-016	7/28/2015	9:20			*	Depth not recorded
NBS		Angling	NBS-AG-0728	7/28/2015	12:45	587998.684	661963.226	NBS-AG-017	7/28/2015	15:10			*	Depth not recorded
NBS		Angling	NBS-AG-0729	7/29/2015	10:30	588994.022	662489.595	NBS-AG-018	7/29/2015	11:40			*	Depth not recorded
NBS		Angling	NBS-AG-0729	7/29/2015	17:00	585181.240	661118.648	NBS-AG-019	7/29/2015	17:30			*	Depth not recorded
NBS		Angling	NBS-AG-0730	7/30/2015	8:10	583908.702	661258.727	NBS-AG-020	7/30/2015	8:55			*	Depth not recorded
NBS		Angling	NBS-AG-0730	7/30/2015	9:00	585552.929	661145.838	NBS-AG-021	7/30/2015	9:20			*	Depth not recorded
NBS		Angling	NBS-AG-0731	7/31/2015	9:20	583439.723	660936.638	NBS-AG-022	7/31/2015	10:20			*	Depth not recorded
NBS		Angling	NBS-AG-0803	8/3/2015	12:30	583591.093	661170.518	NBS-AG-023	8/3/2015	14:00			*	Depth not recorded
NBS		Angling	NBS-AG-0803	8/3/2015	14:00	588842.022	662287.385	NBS-AG-024	8/3/2015	15:40			*	Depth not recorded
NBS		Angling	NBS-AG-0803	8/3/2015	15:55	583591.093	661170.518	NBS-AG-025	8/3/2015	16:00			*	Depth not recorded
NBS		Eel Pot	NBS-EP-0331	3/30/2015	13:41	578201.430	659647.800	NBS-EP-042	3/31/2015	9:32			7	No catch
NBS		Eel Pot	NBS-EP-0331	3/30/2015	13:55	577694.060	659206.890	NBS-EP-043	3/31/2015	9:36			11	No catch
NBS		Eel Pot	NBS-EP-0331	3/30/2015	14:03	578632.350	659996.330	NBS-EP-044	3/31/2015	9:26			7	No catch
NBS		Eel Pot	NBS-EP-0331	3/30/2015	14:12	579635.390	659753.670	NBS-EP-045	3/31/2015	9:44			8.5	No catch
NBS		Eel Pot	NBS-EP-0331	3/30/2015	14:17	579743.640	659745.360	NBS-EP-046	3/31/2015	9:49			8.4	No catch
NBS		Eel Pot	NBS-EP-0331	3/30/2015	14:34	581006.370	660058.080	NBS-EP-047	3/31/2015	9:55			7	No catch
NBS		Eel Pot	NBS-EP-0331	3/30/2015	14:41	581666.900	660116.560	NBS-EP-048	3/31/2015	10:04			10	No catch
NBS		Eel Pot	NBS-EP-0331	3/30/2015	14:52	582477.650	660151.290	NBS-EP-049	3/31/2015	10:08			10	No catch
NBS		Eel Pot	NBS-EP-0331	3/30/2015	15:12	581748.290	661256.670	NBS-EP-050	3/31/2015	11:30			8.2	No catch
NBS		Eel Pot	NBS-EP-0331	3/30/2015	15:17	582087.380	661480.870	NBS-EP-051	3/31/2015	11:25			6.5	No catch
NBS		Eel Pot	NBS-EP-0331	3/30/2015	15:25	585395.800	663750.290	NBS-EP-052	3/31/2015	11:10			7.5	No catch
NBS		Eel Pot	NBS-EP-0331	3/30/2015	15:30	585240.940	663621.650	NBS-EP-053	3/31/2015	11:14			7.5	No catch

Zone	Intertidal Area	Collection Method	Catch Code	Deployment Date	Deployment Time	Deployment Easting (X)	Deployment Northing (Y)	Deployment Count	Collection Date	Collection Time	Collection Easting (X)	Collection Northing (Y)	Depth (ft)	Comments
NBS		Eel Pot	NBS-EP-0331	3/30/2015	15:40	587354.550	665753.230	NBS-EP-054	3/31/2015	10:44			11	No catch
NBS		Eel Pot	NBS-EP-0331	3/30/2015	15:47	587280.490	665804.620	NBS-EP-055	3/31/2015	10:57			9	No catch
NBS		Eel Pot	NBS-EP-0331	3/30/2015	15:50	587209.350	665849.700	NBS-EP-056	3/31/2015	11:00			6.5	No catch
NBS		Eel Pot	NBS-EP-0331	3/30/2015	16:10	583444.160	659965.670	NBS-EP-057	3/31/2015	10:27			7.5	No catch
NBS		Eel Pot	NBS-EP-0331	3/30/2015	16:12	583126.880	660074.700	NBS-EP-058	3/31/2015	10:17			7.5	No catch
NBS		Eel Pot	NBS-EP-0331	3/30/2015	16:15	582752.100	660094.100	NBS-EP-059	3/31/2015	10:11			8	No catch
NBS		Eel Pot	NBS-EP-0331	3/30/2015	16:27	579397.150	660657.490	NBS-EP-060	3/31/2015	11:37			10	No catch
NBS		Eel Pot	NBS-EP-0331	3/30/2015	16:35	579093.870	660413.210	NBS-EP-061	3/31/2015	9:17			11	No catch
NBS		Eel Pot	NBS-EP-0331	3/30/2015	16:40	579139.350	660565.180	NBS-EP-062	3/31/2015	9:05			7	No catch
NBS		Eel Pot	NBS-EP-0401	3/31/2015	9:06	579139.350	660565.180	NBS-EP-063	4/1/2015	8:55			4	No catch
NBS		Eel Pot	NBS-EP-0401	3/31/2015	9:18	579093.870	660413.210	NBS-EP-064	4/1/2015	9:01			9	No catch
NBS		Eel Pot	NBS-EP-0401	3/31/2015	9:27	578632.350	659996.330	NBS-EP-065	4/1/2015	10:01			8.7	No catch
NBS		Eel Pot	NBS-EP-0401	3/31/2015	9:33	578201.430	659647.800	NBS-EP-066	4/1/2015	9:09			9.7	No catch
NBS		Eel Pot	NBS-EP-0401	3/31/2015	9:37	577694.060	659206.890	NBS-EP-067	4/1/2015	9:16			10.6	No catch
NBS		Eel Pot	NBS-EP-0401	3/31/2015	9:45	579635.390	659753.670	NBS-EP-068	4/1/2015	10:06			7	No catch
NBS		Eel Pot	NBS-EP-0401	3/31/2015	9:50	579743.640	659745.360	NBS-EP-069	4/1/2015	10:10			6.5	No catch
NBS		Eel Pot	NBS-EP-0401	3/31/2015	9:56	581006.370	660058.080	NBS-EP-070	4/1/2015	10:15			8	No catch
NBS		Eel Pot	NBS-EP-0401	3/31/2015	10:05	581666.900	660116.560	NBS-EP-071	4/1/2015	10:18			6.5	No catch
NBS		Eel Pot	NBS-EP-0401	3/31/2015	10:09	582477.650	660151.290	NBS-EP-072	4/1/2015	10:23			8	No catch
NBS		Eel Pot	NBS-EP-0401	3/31/2015	10:12	582752.100	660094.100	NBS-EP-073	4/1/2015	10:26			7.4	No catch
NBS		Eel Pot	NBS-EP-0401	3/31/2015	10:28	583444.160	659965.670	NBS-EP-074	4/1/2015	10:47			7.2	No catch
NBS		Eel Pot	NBS-EP-0401	3/31/2015	10:45	587354.550	665753.230	NBS-EP-075	4/1/2015	10:58			11	No catch
NBS		Eel Pot	NBS-EP-0401	3/31/2015	10:58	587280.490	665804.620	NBS-EP-076	4/1/2015	11:03			7.5	No catch
NBS		Eel Pot	NBS-EP-0401	3/31/2015	11:01	587209.350	665849.700	NBS-EP-077	4/1/2015	11:06			6	No catch
NBS		Eel Pot	NBS-EP-0401	3/31/2015	11:11	585395.800	663750.290	NBS-EP-078	4/1/2015	11:15			8	No catch
NBS		Eel Pot	NBS-EP-0401	3/31/2015	11:15	585240.940	663621.650	NBS-EP-079	4/1/2015	11:19			7	No catch
NBS		Eel Pot	NBS-EP-0401	3/31/2015	11:26	582087.380	661480.870	NBS-EP-080	4/1/2015	11:37			5.7	No catch
NBS		Eel Pot	NBS-EP-0401	3/31/2015	11:31	581748.290	661256.670	NBS-EP-081	4/1/2015	11:42			7.1	No catch
NBS		Eel Pot	NBS-EP-0401	3/31/2015	11:38	579397.150	660657.490	NBS-EP-082	4/1/2015	11:48			9.5	No catch
NBS		Eel Pot	NBS-EP-0402	4/1/2015	8:56	579139.350	660565.180	NBS-EP-083	4/2/2015	8:18			6	No catch
NBS		Eel Pot	NBS-EP-0402	4/1/2015	9:02	579093.870	660413.210	NBS-EP-084	4/2/2015	8:30			10	No catch
NBS		Eel Pot	NBS-EP-0402	4/1/2015	9:40	578235.110	659687.970	NBS-EP-085	4/2/2015	8:42			6	No catch
NBS		Eel Pot	NBS-EP-0402	4/1/2015	9:49	577694.060	659206.890	NBS-EP-086	4/2/2015	8:48			7	No catch
NBS		Eel Pot	NBS-EP-0402	4/1/2015	10:02	578632.350	659996.330	NBS-EP-087	4/2/2015	8:38			8	No catch
NBS		Eel Pot	NBS-EP-0402	4/1/2015	10:07	579635.390	659753.670	NBS-EP-088	4/2/2015	8:55			7	No catch
NBS		Eel Pot	NBS-EP-0402	4/1/2015	10:11	579743.640	659745.360	NBS-EP-089	4/2/2015	8:59			5.5	No catch
NBS		Eel Pot	NBS-EP-0402	4/1/2015	10:16	581006.370	660058.080	NBS-EP-090	4/2/2015	9:06			8	No catch
NBS		Eel Pot	NBS-EP-0402	4/1/2015	10:19	581666.900	660116.560	NBS-EP-091	4/2/2015	9:12			5.5	No catch
NBS		Eel Pot	NBS-EP-0402	4/1/2015	10:24	582477.650	660151.290	NBS-EP-092	4/2/2015	9:17			7	No catch
NBS		Eel Pot	NBS-EP-0402	4/1/2015	10:27	582752.100	660094.100	NBS-EP-093	4/2/2015	9:21			7	No catch
NBS		Eel Pot	NBS-EP-0402	4/1/2015	10:43	583126.880	660074.700	NBS-EP-094	4/2/2015	9:30			7	No catch
NBS		Eel Pot	NBS-EP-0402	4/1/2015	10:48	583444.160	659965.670	NBS-EP-095	4/2/2015	9:34			8	No catch
NBS		Eel Pot	NBS-EP-0402	4/1/2015	10:59	587354.550	665753.230	NBS-EP-096	4/2/2015	9:50			12	No catch
NBS		Eel Pot	NBS-EP-0402	4/1/2015	11:04	587280.490	665804.620	NBS-EP-097	4/2/2015	10:02			8	No catch
NBS		Eel Pot	NBS-EP-0402	4/1/2015	11:07	587209.350	665849.700	NBS-EP-098	4/2/2015	10:06			6	No catch
NBS		Eel Pot	NBS-EP-0402	4/1/2015	11:16	585395.800	663750.290	NBS-EP-099	4/2/2015	10:16			8	No catch
NBS		Eel Pot	NBS-EP-0402	4/1/2015	11:20	585240.940	663621.650	NBS-EP-100	4/2/2015	10:24			6	No catch
NBS		Eel Pot	NBS-EP-0402	4/1/2015	11:38	582087.380	661480.870	NBS-EP-101	4/2/2015	10:34			6.2	No catch
NBS		Eel Pot	NBS-EP-0402	4/1/2015	11:43	581748.290	661256.670	NBS-EP-102	4/2/2015	10:38			6.8	No catch
NBS		Eel Pot	NBS-EP-0402	4/1/2015	11:49	579397.150	660657.490	NBS-EP-103	4/2/2015	10:45			10	No catch
NBS		Eel Pot	NA	4/2/2015	8:19	579139.350	660565.180	NBS-EP-104	NA	NA			6	Stolen
NBS		Eel Pot	NA	4/2/2015	8:31	579093.870	660413.210	NBS-EP-105	NA	NA			10.5	Stolen
NBS		Eel Pot	NBS-EP-0406	4/2/2015	8:39	578632.350	659996.330	NBS-EP-106	4/6/2015	9:48			7.5	No catch
NBS		Eel Pot	NBS-EP-0406	4/2/2015	8:43	578235.110	659687.970	NBS-EP-107	4/6/2015	9:52			5.5	No catch
NBS		Eel Pot	NBS-EP-0406	4/2/2015	8:49	577694.060	659206.890	NBS-EP-108	4/6/2015	9:55			8.5	No catch
NBS		Eel Pot	NBS-EP-0406	4/2/2015	8:56	579635.390	659753.670	NBS-EP-109	4/6/2015	9:58			8	No catch
NBS		Eel Pot	NBS-EP-0406	4/2/2015	9:00	579743.640	659745.360	NBS-EP-110	4/6/2015	10:00			6	No catch
NBS		Eel Pot	NBS-EP-0406	4/2/2015	9:07	581006.370	660058.080	NBS-EP-111	4/6/2015	10:04			9.5	No catch
NBS		Eel Pot	NBS-EP-0406	4/2/2015	9:13	581666.900	660116.560	NBS-EP-112	4/6/2015	10:07			8	No catch

Zone	Intertidal Area	Collection Method	Catch Code	Deployment Date	Deployment Time	Deployment Easting (X)	Deployment Northing (Y)	Deployment Count	Collection Date	Collection Time	Collection Easting (X)	Collection Northing (Y)	Depth (ft)	Comments
NBS		Eel Pot	NBS-EP-0406	4/2/2015	9:18	582477.650	660151.290	NBS-EP-113	4/6/2015	10:11			9.5	No catch
NBS		Eel Pot	NBS-EP-0406	4/2/2015	9:22	582752.100	660094.100	NBS-EP-114	4/6/2015	*			9	Collection hung up; no catch
NBS		Eel Pot	NBS-EP-0406	4/2/2015	9:31	583126.880	660074.700	NBS-EP-115	4/6/2015	10:20			9.5	No catch
NBS		Eel Pot	NBS-EP-0406	4/2/2015	9:35	583444.160	659965.670	NBS-EP-116	4/6/2015	10:21			9.5	No catch
NBS		Eel Pot	NBS-EP-0406	4/2/2015	9:51	587354.550	665753.230	NBS-EP-117	4/6/2015	10:33			13	No catch
NBS		Eel Pot	NBS-EP-0406	4/2/2015	10:03	587280.490	665804.620	NBS-EP-118	4/6/2015	10:36			10.1	No catch
NBS		Eel Pot	NBS-EP-0406	4/2/2015	10:07	587209.350	665849.700	NBS-EP-119	4/6/2015	10:41			7.2	No catch
NBS		Eel Pot	NBS-EP-0406	4/2/2015	10:17	585395.800	663750.290	NBS-EP-120	4/6/2015	10:50			7.5	No catch
NBS		Eel Pot	NBS-EP-0406	4/2/2015	10:25	585240.940	663621.650	NBS-EP-121	4/6/2015	10:52			7	No catch
NBS		Eel Pot	NBS-EP-0406	4/2/2015	10:35	582087.380	661480.870	NBS-EP-122	4/6/2015	10:55			7	No catch
NBS		Eel Pot	NBS-EP-0406	4/2/2015	10:39	581748.290	661256.670	NBS-EP-123	4/6/2015	10:58			7.5	No catch
NBS		Eel Pot	NBS-EP-0406	4/2/2015	10:46	579397.150	660657.490	NBS-EP-124	4/6/2015	11:03			8.5	No catch
NBS		Eel Pot	NBS-EP-0407	4/6/2015	9:49	578632.350	659996.330	NBS-EP-125	4/7/2015	8:37			9.5	No catch
NBS		Eel Pot	NBS-EP-0407	4/6/2015	9:53	578235.110	659687.970	NBS-EP-126	4/7/2015	8:41			7.5	No catch
NBS		Eel Pot	NA	4/6/2015	9:56	577694.060	659206.890	NBS-EP-127	NA	NA			10.5	Lost
NBS		Eel Pot	NBS-EP-0407	4/6/2015	9:59	579635.390	659753.670	NBS-EP-128	4/7/2015	8:54			10	No catch
NBS		Eel Pot	NBS-EP-0407	4/6/2015	10:01	579743.640	659745.360	NBS-EP-129	4/7/2015	8:56			8	No catch
NBS		Eel Pot	NBS-EP-0407	4/6/2015	10:05	581006.370	660058.080	NBS-EP-130	4/7/2015	9:00			11.5	No catch
NBS		Eel Pot	NBS-EP-0407	4/6/2015	10:08	581666.900	660116.560	NBS-EP-131	4/7/2015	9:04			10	No catch
NBS		Eel Pot	NBS-EP-0407	4/6/2015	10:21	583126.880	660074.700	NBS-EP-132	4/7/2015	9:17			11.5	No catch
NBS		Eel Pot	NBS-EP-0407	4/6/2015	10:22	583444.160	659965.670	NBS-EP-133	4/7/2015	9:24			11.5	No catch
NBS		Eel Pot	NBS-EP-0407	4/6/2015	10:26	585240.940	663621.650	NBS-EP-134	4/7/2015	10:04			9	No catch
NBS		Eel Pot	NBS-EP-0407	4/6/2015	10:34	587354.550	665753.230	NBS-EP-135	4/7/2015	9:37			15	No catch
NBS		Eel Pot	NBS-EP-0407	4/6/2015	10:36	582087.380	661480.870	NBS-EP-136	4/7/2015	10:12			9	No catch
NBS		Eel Pot	NBS-EP-0407	4/6/2015	10:37	587280.490	665804.620	NBS-EP-137	4/7/2015	9:43			12	No catch
NBS		Eel Pot	NBS-EP-0407	4/6/2015	10:39	581748.290	661256.670	NBS-EP-138	4/7/2015	10:15			9.5	No catch
NBS		Eel Pot	NBS-EP-0407	4/6/2015	10:42	587209.350	665849.700	NBS-EP-139	4/7/2015	9:49			9	No catch
NBS		Eel Pot	NBS-EP-0407	4/6/2015	10:46	579397.150	660657.490	NBS-EP-140	4/7/2015	10:26			8.5	No catch
NBS		Eel Pot	NBS-EP-0407	4/6/2015	10:51	585395.800	663750.290	NBS-EP-141	4/7/2015	10:01			9.5	No catch
NBS		Eel Pot	NBS-EP-0407	4/6/2015	11:12	582477.650	660151.290	NBS-EP-142	4/7/2015	9:12			11.5	No catch
NBS		Eel Pot	NBS-EP-0407	4/6/2015	*	582752.100	660094.100	NBS-EP-143	4/7/2015	9:15			11	Deployment hung up; no catch
NBS		Eel Pot	NBS-EP-0409	4/7/2015	8:38	587280.490	665804.620	NBS-EP-144	4/9/2015	8:45			5.5	No catch
NBS		Eel Pot	NBS-EP-0409	4/7/2015	8:42	585240.940	663621.650	NBS-EP-145	4/9/2015	8:49			8.5	No catch
NBS		Eel Pot	NBS-EP-0409	4/7/2015	8:55	587354.550	665753.230	NBS-EP-146	4/9/2015	8:55			5.5	No catch
NBS		Eel Pot	NBS-EP-0409	4/7/2015	8:57	581748.290	661256.670	NBS-EP-147	4/9/2015	8:59			5.5	No catch
NBS		Eel Pot	NBS-EP-0409	4/7/2015	9:01	585395.800	663750.290	NBS-EP-148	4/9/2015	9:10			10	No catch
NBS		Eel Pot	NBS-EP-0409	4/7/2015	9:05	582477.650	660151.290	NBS-EP-149	4/9/2015	9:03			10.5	No catch
NBS		Eel Pot	NBS-EP-0409	4/7/2015	9:13	582087.380	661480.870	NBS-EP-150	4/9/2015	9:14			9	No catch
NBS		Eel Pot	NBS-EP-0409	4/7/2015	9:16	579743.640	659745.360	NBS-EP-151	4/9/2015	11:30			10	No catch
NBS		Eel Pot	NBS-EP-0409	4/7/2015	9:18	581666.900	660116.560	NBS-EP-152	4/9/2015	9:19			9.5	No catch
NBS		Eel Pot	NBS-EP-0409	4/7/2015	9:25	581006.370	660058.080	NBS-EP-153	4/9/2015	9:27			9.5	No catch
NBS		Eel Pot	NBS-EP-0409	4/7/2015	9:38	579635.390	659753.670	NBS-EP-154	4/9/2015	9:36			13	No catch
NBS		Eel Pot	NBS-EP-0409	4/7/2015	9:44	578632.350	659996.330	NBS-EP-155	4/9/2015	9:40			11	No catch
NBS		Eel Pot	NBS-EP-0409	4/7/2015	9:50	587209.350	665849.700	NBS-EP-156	4/9/2015	9:46			8	No catch
NBS		Eel Pot	NBS-EP-0409	4/7/2015	10:02	582752.100	660094.100	NBS-EP-157	4/9/2015	9:51			6	No catch
NBS		Eel Pot	NBS-EP-0409	4/7/2015	10:27	579397.150	660657.490	NBS-EP-158	4/9/2015	9:55			9.5	No catch
NBS		Eel Pot	NBS-EP-0409	4/7/2015	10:37	583126.880	660074.700	NBS-EP-159	4/9/2015	10:02			9.5	No catch
NBS		Eel Pot	NBS-EP-0409	4/7/2015	10:40	583444.160	659965.670	NBS-EP-160	4/9/2015	11:35			10.5	No catch
NBS		Eel Pot	NBS-EP-0409	4/7/2015	10:47	578235.110	659687.970	NBS-EP-161	4/9/2015	10:11			13	No catch
NBS		Eel Pot	NBS-EP-0603	6/1/2015	14:30	581782.186	661206.968	NBS-EP-162	6/3/2015	13:20			7	
NBS		Eel Pot	NBS-EP-0603	6/1/2015	14:33	582057.156	661383.107	NBS-EP-163	6/3/2015	13:20			6	
NBS		Eel Pot	NBS-EP-0603	6/1/2015	14:40	583274.034	661094.178	NBS-EP-164	6/3/2015	13:20			7	
NBS		Eel Pot	NBS-EP-0603	6/1/2015	14:45	582078.636	660154.150	NBS-EP-165	6/3/2015	13:20			13	
NBS		Eel Pot	NBS-EP-0603	6/1/2015	14:50	585128.900	660239.430	NBS-EP-166	6/3/2015	13:20			8	
NBS		Eel Pot	NBS-EP-0603	6/1/2015	14:58	591240.717	663636.913	NBS-EP-167	6/3/2015	13:20			10	
NBS		Eel Pot	NBS-EP-0603	6/1/2015	15:03	587357.925	665728.029	NBS-EP-168	6/3/2015	13:20			10	
NBS		Eel Pot	NBS-EP-0605	6/3/2015	13:25	581782.186	661206.968	NBS-EP-169	6/5/2015	7:10			7	No catch
NBS		Eel Pot	NBS-EP-0605	6/3/2015	13:25	582057.156	661383.107	NBS-EP-170	6/5/2015	7:10			6	No catch
NBS		Eel Pot	NBS-EP-0605	6/3/2015	13:25	583274.034	661094.178	NBS-EP-171	6/5/2015	7:10			7	No catch

Zone	Intertidal Area	Collection Method	Catch Code	Deployment Date	Deployment Time	Deployment Easting (X)	Deployment Northing (Y)	Deployment Count	Collection Date	Collection Time	Collection Easting (X)	Collection Northing (Y)	Depth (ft)	Comments
NBS		Eel Pot	NBS-EP-0605	6/3/2015	13:25	582078.636	660154.150	NBS-EP-172	6/5/2015	7:10			13	No catch
NBS		Eel Pot	NBS-EP-0605	6/3/2015	13:25	585128.900	660239.430	NBS-EP-173	6/5/2015	7:10			8	No catch
NBS		Eel Pot	NBS-EP-0605	6/3/2015	13:25	591240.717	663636.913	NBS-EP-174	6/5/2015	7:10			10	No catch
NBS		Eel Pot	NBS-EP-0605	6/3/2015	13:25	587357.925	665728.029	NBS-EP-175	6/5/2015	7:10			10	No catch
NBS		Eel Pot	NBS-EP-0608	6/5/2015	7:10	581782.186	661206.968	NBS-EP-176	6/8/2015	12:00			7	
NBS		Eel Pot	NBS-EP-0608	6/5/2015	7:10	582057.156	661383.107	NBS-EP-177	6/8/2015	12:00			6	
NBS		Eel Pot	NBS-EP-0608	6/5/2015	7:10	583274.034	661094.178	NBS-EP-178	6/8/2015	12:00			7	
NBS		Eel Pot	NBS-EP-0608	6/5/2015	7:10	582078.636	660154.150	NBS-EP-179	6/8/2015	12:00			13	
NBS		Eel Pot	NBS-EP-0608	6/5/2015	7:10	585128.900	660239.430	NBS-EP-180	6/8/2015	12:00			8	
NBS		Eel Pot	NBS-EP-0608	6/5/2015	7:10	591240.717	663636.913	NBS-EP-181	6/8/2015	12:00			10	
NBS		Eel Pot	NBS-EP-0608	6/5/2015	7:10	587357.925	665728.029	NBS-EP-182	6/8/2015	12:00			10	
NBS		Eel Pot	NBS-EP-0608	6/5/2015	7:45	578922.832	660355.649	NBS-EP-183	6/8/2015	12:00			3	
NBS		Eel Pot	NBS-EP-0730	7/29/2015	9:50	585312.719	660095.080	NBS-EP-184	7/30/2015	11:00			7	
NBS		Eel Pot	NBS-EP-0730	7/29/2015	9:50	585168.080	660150.910	NBS-EP-185	7/30/2015	11:00			9	
NBS		Eel Pot	NBS-EP-0730	7/29/2015	10:05	583139.604	660955.628	NBS-EP-186	7/30/2015	11:15			9	
NBS		Eel Pot	NBS-EP-0730	7/29/2015	10:05	581898.486	660162.270	NBS-EP-187	7/30/2015	11:15			15	
NBS		Eel Pot	NBS-EP-0730	7/29/2015	10:05	582014.676	660150.560	NBS-EP-188	7/30/2015	11:15			12	
NBS		Eel Pot	NBS-EP-0730	7/29/2015	10:15	578180.684	659624.101	NBS-EP-189	7/30/2015	11:30			6	
NBS		Eel Pot	NBS-EP-0730	7/29/2015	10:15	578074.464	659509.931	NBS-EP-190	7/30/2015	11:30			6	
NBS		Eel Pot	NBS-EP-0731	7/30/2015	11:00	585312.719	660095.080	NBS-EP-191	7/31/2015	7:45			7	
NBS		Eel Pot	NBS-EP-0731	7/30/2015	11:00	585168.080	660150.910	NBS-EP-192	7/31/2015	7:45			9	
NBS		Eel Pot	NBS-EP-0731	7/30/2015	11:15	583139.604	660955.628	NBS-EP-193	7/31/2015	7:35			9	
NBS		Eel Pot	NBS-EP-0731	7/30/2015	11:15	581898.486	660162.270	NBS-EP-194	7/31/2015	7:30			15	
NBS		Eel Pot	NBS-EP-0731	7/30/2015	11:15	582014.676	660150.560	NBS-EP-195	7/31/2015	7:30			12	
NBS		Eel Pot	NBS-EP-0731	7/30/2015	11:30	578180.684	659624.101	NBS-EP-196	7/31/2015	7:30			6	
NBS		Eel Pot	NBS-EP-0731	7/30/2015	11:30	578074.464	659509.931	NBS-EP-197	7/31/2015	7:10			10	
NBS		Eel Pot	NBS-EP-0803	7/31/2015	11:00	585312.719	660095.080	NBS-EP-198	8/3/2015	11:00			7	
NBS		Eel Pot	NBS-EP-0803	7/31/2015	11:00	585168.080	660150.910	NBS-EP-199	8/3/2015	11:00			9	
NBS		Eel Pot	NBS-EP-0803	7/31/2015	11:15	583139.604	660955.628	NBS-EP-200	8/3/2015	11:00			9	
NBS		Eel Pot	NBS-EP-0803	7/31/2015	11:15	581898.486	660162.270	NBS-EP-201	8/3/2015	11:00			15	
NBS		Eel Pot	NBS-EP-0803	7/31/2015	11:15	582014.676	660150.560	NBS-EP-202	8/3/2015	11:00			12	
NBS		Eel Pot	NA	7/31/2015	11:30	578180.684	659624.101	NBS-EP-203	NA	NA			6	Lost
NBS		Eel Pot	NBS-EP-0803	7/31/2015	11:30	578074.464	659509.931	NBS-EP-204	8/3/2015	11:00			10	
NBS		Eel Pot	NBS-EP-0804	8/3/2015	11:10	581420.747	660929.358	NBS-EP-205	8/4/2015	11:00			15	
NBS		Eel Pot	NBS-EP-0804	8/3/2015	11:10	579773.830	659865.650	NBS-EP-206	8/4/2015	11:45			6	
NBS		Eel Pot	NBS-EP-0804	8/3/2015	11:10	585039.880	661043.468	NBS-EP-207	8/4/2015	10:40			9	
NBS		Eel Pot	NBS-EP-0804	8/3/2015	11:10	585829.938	661113.188	NBS-EP-208	8/4/2015	10:40			7	
NBS		Eel Pot	NBS-EP-0804	8/3/2015	11:10	586818.536	661157.948	NBS-EP-209	8/4/2015	10:40			9	
NBS		Eel Pot	NBS-EP-0804	8/3/2015	11:10	585312.719	660095.080	NBS-EP-210	8/4/2015	10:40			7	
NBS		Eel Pot	NBS-EP-0804	8/3/2015	11:10	585168.080	660150.910	NBS-EP-211	8/4/2015	10:40			9	
NBS		Eel Pot	NBS-EP-0804	8/3/2015	11:10	583139.604	660955.628	NBS-EP-212	8/4/2015	10:40			9	
NBS		Eel Pot	NBS-EP-0804	8/3/2015	11:10	581898.486	660162.270	NBS-EP-213	8/4/2015	11:00			15	
NBS		Eel Pot	NBS-EP-0804	8/3/2015	11:10	582014.676	660150.560	NBS-EP-214	8/4/2015	11:00			12	
NBS		Eel Pot	NBS-EP-0804	8/3/2015	11:10	578074.464	659509.931	NBS-EP-215	8/4/2015	11:45			10	
NBS		Eel Pot	NBS-EP-0804	8/3/2015	12:00	581820.056	661241.297	NBS-EP-216	8/4/2015	11:10			12	
NBS		Eel Pot	NBS-EP-0804	8/3/2015	12:00	582973.664	661732.927	NBS-EP-217	8/4/2015	11:10			10	
NBS		Eel Pot	NBS-EP-0804	8/3/2015	12:00	583515.003	662331.755	NBS-EP-218	8/4/2015	11:10			10	
NBS		Eel Pot	NBS-EP-0805	8/4/2015	11:25	583484.413	662457.645	NBS-EP-219	8/5/2015	9:05			13	
NBS		Eel Pot	NBS-EP-0805	8/4/2015	11:40	583515.003	662331.755	NBS-EP-220	8/5/2015	9:05			10	
NBS		Eel Pot	NBS-EP-0805	8/4/2015	11:40	581701.587	660980.058	NBS-EP-221	8/5/2015	9:05			25	
NBS		Eel Pot	NBS-EP-0805	8/4/2015	11:40	581420.747	660929.358	NBS-EP-222	8/5/2015	9:05			25	
NBS		Eel Pot	NBS-EP-0805	8/4/2015	11:50	579773.830	659865.650	NBS-EP-223	8/5/2015	9:05			28	
NBS		Eel Pot	NBS-EP-0805	8/4/2015	11:50	585039.880	661043.468	NBS-EP-224	8/5/2015	9:05			26	
NBS		Eel Pot	NBS-EP-0805	8/4/2015	11:50	585829.938	661113.188	NBS-EP-225	8/5/2015	9:05			27	
NBS		Eel Pot	NA	8/4/2015	12:05	586818.536	661157.948	NBS-EP-226	NA	NA			25	Lost
NBS		Eel Pot	NBS-EP-0805	8/4/2015	12:05	582014.676	660150.560	NBS-EP-227	8/5/2015	8:50			12	
NBS		Gillnet	NBS-GN-0331	3/30/2015	14:10	586592.217	663609.093	NBS-GN-006	3/31/2015	9:25	586844.156	663461.723	7	
NBS		Gillnet	NBS-GN-0331	3/30/2015	14:50	581408.007	661170.328	NBS-GN-007	3/31/2015	9:05	581546.767	661169.898	9	
NBS		Gillnet	NBS-GN-0401	3/31/2015	9:05	581408.007	661170.328	NBS-GN-008	4/1/2015	9:25	581546.767	661169.898	9	No catch

Zone	Intertidal Area	Collection Method	Catch Code	Deployment Date	Deployment Time	Deployment Easting (X)	Deployment Northing (Y)	Deployment Count	Collection Date	Collection Time	Collection Easting (X)	Collection Northing (Y)	Depth (ft)	Comments
NBS		Gillnet	NBS-GN-0401	3/31/2015	9:45	590390.969	661293.287	NBS-GN-009	4/1/2015	10:15	590401.699	661187.918	9-12	No catch
NBS		Gillnet	NBS-GN-0402	4/1/2015	9:25	578204.943	659684.891	NBS-GN-010	4/2/2015	8:30	578041.164	659465.641	15	
NBS		Gillnet	NBS-GN-0402	4/1/2015	9:54	585414.649	663256.973	NBS-GN-011	4/2/2015	10:00	585259.790	663260.403	9	
NBS		Gillnet	NBS-GN-0402	4/1/2015	10:30	590390.969	661293.287	NBS-GN-012	4/2/2015	9:30	590401.699	661187.918	10	
NBS		Gillnet	NBS-GN-0402	4/1/2015	11:39	587672.435	665641.429	NBS-GN-013	4/2/2015	10:30	587520.615	665698.989	36	
NBS		Gillnet	NBS-GN-0402	4/1/2015	12:16	581336.717	661084.188	NBS-GN-014	4/2/2015	9:00	581640.167	661155.778	8	
NBS		Gillnet	NBS-GN-0407	4/6/2015	9:25	587623.585	665612.269	NBS-GN-015	4/7/2015	9:00	587486.825	665740.489	35	
NBS		Gillnet	NBS-GN-0407	4/6/2015	9:35	587363.175	665893.698	NBS-GN-016	4/7/2015	10:00	587289.095	665988.208	18	
NBS		Gillnet	NBS-GN-0407	4/6/2015	9:45	587975.274	665329.099	NBS-GN-017	4/7/2015	10:40	587696.995	665444.719	12	
NBS		Gillnet	NBS-GN-0408	4/7/2015	9:35	587749.984	665495.669	NBS-GN-018	4/8/2015	9:00	587632.645	665587.819	37	
NBS		Gillnet	NBS-GN-0408	4/7/2015	10:05	587459.625	665859.198	NBS-GN-019	4/8/2015	9:45	587379.405	665924.088	31	
NBS		Gillnet	NBS-GN-0408	4/7/2015	10:45	588124.124	665224.250	NBS-GN-020	4/8/2015	10:40	587875.834	665358.089	20	
NBS		Gillnet	NBS-GN-0409	4/8/2015	9:35	587819.794	665445.219	NBS-GN-021	4/9/2015	9:10	587651.005	665586.919	45	
NBS		Gillnet	NBS-GN-0428	4/27/2015	10:30	587332.729	658721.979	NBS-GN-022	4/28/2015	8:50	587548.744	658786.442	15	
NBS		Gillnet	NBS-GN-0428	4/27/2015	11:15	587598.177	665579.659	NBS-GN-023	4/28/2015	10:20	587729.238	665419.404	12	
NBS		Gillnet	NBS-GN-0428	4/27/2015	11:55	587968.126	665628.781	NBS-GN-024	4/28/2015	10:35	588157.825	665493.190	45	
NBS		Gillnet	NBS-GN-0428	4/27/2015	12:20	590119.304	660777.669	NBS-GN-025	4/28/2015	9:20	590204.420	660711.802	8	
NBS		Gillnet	NBS-GN-0428	4/27/2015	13:30	581469.772	661308.559	NBS-GN-026	4/28/2015	11:15	581465.023	661183.990	8	
NBS		Gillnet	NBS-GN-0429	4/28/2015	9:00	587332.729	658721.979	NBS-GN-027	4/29/2015	8:45	587548.744	658786.442	15	
NBS		Gillnet	NBS-GN-0429	4/28/2015	10:30	587968.126	665628.781	NBS-GN-028	4/29/2015	9:15	588157.825	665493.190	15	
NBS		Gillnet	NBS-GN-0429	4/28/2015	10:45	590119.304	660777.669	NBS-GN-029	4/29/2015	10:45	590204.420	660711.802	47	
NBS		Gillnet	NBS-GN-0429	4/28/2015	11:30	587563.484	658713.331	NBS-GN-030	4/29/2015	11:30	587660.154	658715.472	16	
NBS		Gillnet	NBS-GN-0429	4/29/2015	8:55	586122.458	661035.758	NBS-GN-031	4/29/2015	16:45	586242.938	661052.758	35	
NBS		Gillnet	NBS-GN-0430	4/29/2015	9:45	590992.478	662962.984	NBS-GN-032	4/30/2015	13:00	591036.098	663273.963	8	
NBS		Gillnet	NBS-GN-0430	4/29/2015	10:50	590119.304	660777.669	NBS-GN-033	4/30/2015	12:20	590204.420	660711.802	45	
NBS		Gillnet	NBS-GN-0430	4/29/2015	11:50	584765.840	659755.690	NBS-GN-034	4/30/2015	11:50	584551.541	660009.420	10	
NBS		Gillnet	NBS-GN-0506	5/5/2015	15:30	582664.045	661028.288	NBS-GN-035	5/6/2015	13:30	582917.334	661015.488	10	
NBS		Gillnet	NBS-GN-0506	5/5/2015	16:00	584584.081	660106.840	NBS-GN-036	5/6/2015	14:40	584334.591	660210.620	10-17	
NBS		Gillnet	NBS-GN-0602	6/1/2015	13:10	587627.885	665603.119	NBS-GN-037	6/2/2015	9:45	587753.544	665541.769	23-28	No catch
NBS		Gillnet	NBS-GN-0603	6/2/2015	9:50	587626.365	665439.199	NBS-GN-038	6/3/2015	8:40	587497.025	665573.359	12	
NBS		Trawl	NBS-TW-0330	3/30/2015	17:13	597869.024	673712.473	NBS-TW-001	3/30/2015	17:23	597528.945	672240.846	8-12	No catch
NBS		Trawl	NBS-TW-0331	3/31/2015	10:55	588822.172	663915.142	NBS-TW-002	3/31/2015	11:05	587280.505	663202.134	7-9	
NBS		Trawl	NBS-TW-0331	3/31/2015	12:29	581204.388	660906.108	NBS-TW-003	3/31/2015	12:30	*	*	26	GPS not recorded
NBS		Trawl	NBS-TW-0331	3/31/2015	13:00	581946.066	661113.488	NBS-TW-004	3/31/2015	13:10	583520.653	661370.197	5-10	
NBS		Trawl	NBS-TW-0331	3/31/2015	13:23	586312.657	663248.373	NBS-TW-005	3/31/2015	13:33	587564.155	664337.991	5-8	
NBS		Trawl	NBS-TW-0331	3/31/2015	13:55	587612.535	665968.248	NBS-TW-006	3/31/2015	14:05	588560.443	665029.240	32-47	
NBS		Trawl	NBS-TW-0331	3/31/2015	14:00	582092.949	660831.880	NBS-TW-007	3/31/2015	14:12	585351.758	661093.827	27-52	
NBS		Trawl	NBS-TW-0331	3/31/2015	14:28	587548.785	665954.188	NBS-TW-008	3/31/2015	14:38	588571.333	665037.230	28-48	
NBS		Trawl	NBS-TW-0331	3/31/2015	15:11	590624.749	662647.635	NBS-TW-009	3/31/2015	15:19	591001.348	663522.073	12	
NBS		Trawl	NBS-TW-0331	3/31/2015	15:54	587703.044	665866.272	NBS-TW-010	3/31/2015	16:06	590007.819	663931.865	50-57	
NBS		Trawl	NBS-TW-0401	4/1/2015	10:11	590489.857	662528.831	NBS-TW-011	4/1/2015	10:16	590924.149	663094.450	8-13	
NBS		Trawl	NBS-TW-0401	4/1/2015	11:05	587898.955	665601.501	NBS-TW-012	4/1/2015	11:12	589554.112	664704.217	48-50	
NBS		Trawl	NBS-TW-0401	4/1/2015	11:30	587900.842	665414.950	NBS-TW-013	4/1/2015	11:35	*	*	41	GPS not recorded
NBS		Trawl	NBS-TW-0401	4/1/2015	11:56	588276.164	665545.172	NBS-TW-014	4/1/2015	12:03	589639.609	664633.246	48-53	
NBS		Trawl	NBS-TW-0401	4/1/2015	12:20	588230.229	665556.451	NBS-TW-015	4/1/2015	12:27	589597.541	664676.184	52-53	
NBS		Trawl	NBS-TW-0401	4/1/2015	13:25	583315.343	662093.666	NBS-TW-016	4/1/2015	13:35	584650.601	662634.415	4	
NBS		Trawl	NBS-TW-0401	4/1/2015	13:41	585131.700	663159.594	NBS-TW-017	4/1/2015	13:51	586809.566	662662.355	3-5	
NBS		Trawl	NBS-TW-0401	4/1/2015	14:03	587458.745	665539.249	NBS-TW-018	4/1/2015	14:13	589119.902	664576.501	7	
NBS		Trawl	NBS-TW-0401	4/1/2015	14:28	587599.675	665823.238	NBS-TW-019	4/1/2015	14:38	588794.012	664967.140	16-46	
NBS		Trawl	NBS-TW-0401	4/1/2015	14:55	587623.435	665751.358	NBS-TW-020	4/1/2015	15:05	589011.962	665137.870	47-52	
NBS		Trawl	NBS-TW-0401	4/1/2015	15:18	589261.952	664425.441	NBS-TW-021	4/1/2015	15:34	587480.445	666092.558	48-51	
NBS		Trawl	NBS-TW-0401	4/1/2015	15:52	592701.084	665854.978	NBS-TW-022	4/1/2015	16:02	591965.776	664876.150	10	
NBS		Trawl	NBS-TW-0406	4/6/2015	16:03	583766.092	661059.018	NBS-TW-023	4/6/2015	16:11	584599.541	661037.088	17-18	
NBS		Trawl	NBS-TW-0406	4/6/2015	16:19	583583.423	660996.828	NBS-TW-024	4/6/2015	16:30	584620.371	660996.358	21-41	
NBS		Trawl	NBS-TW-0406	4/6/2015	16:45	584902.070	660967.928	NBS-TW-025	4/6/2015	16:52	583371.263	660919.868	52	
NBS		Trawl	NBS-TW-0727	7/27/2015	9:30	588572.353	662035.876	NBS-TW-026	7/27/2015	9:44	*	*	10	GPS not recorded
NBS		Trawl	NBS-TW-0727	7/27/2015	9:52	588194.694	664704.201	NBS-TW-027	7/27/2015	10:00	588693.910	663610.520	8	
NBS		Trawl	NBS-TW-0727	7/27/2015	10:09	587557.115	665706.298	NBS-TW-028	7/27/2015	10:18	589055.350	664927.430	30-50	
NBS		Trawl	NBS-TW-0727	7/27/2015	10:24	589244.391	664753.541	NBS-TW-029	7/27/2015	10:40	588667.350	662516.110	8-20	

Zone	Intertidal Area	Collection Method	Catch Code	Deployment Date	Deployment Time	Deployment Easting (X)	Deployment Northing (Y)	Deployment Count	Collection Date	Collection Time	Collection Easting (X)	Collection Northing (Y)	Depth (ft)	Comments
NBS		Trawl	NBS-TW-0727	7/27/2015	10:59	587108.476	662198.116	NBS-TW-030	7/27/2015	11:11	*	*	5-7	GPS not recorded
NBS		Trotline	NBS-TL-0602	6/1/2015	13:30	588242.454	665235.190	NBS-TL-001	6/2/2015	9:30			20	No catch
NBS		Trotline	NBS-TL-0602	6/1/2015	15:55	593049.904	667828.364	NBS-TL-002	6/2/2015	10:45			20	No catch
NBS		Trotline	NBS-TL-0602	6/1/2015	16:20	581258.278	660971.128	NBS-TL-003	6/2/2015	9:00			12	No catch
NBS		Trotline	NBS-TL-0602	6/2/2015	9:00	581258.278	660971.128	NBS-TL-004	6/2/2015	16:30			12	No catch
NBS		Trotline	NBS-TL-0603	6/2/2015	9:30	588190.364	665279.879	NBS-TL-005	6/3/2015	8:45			22	No catch
NBS		Trotline	NBS-TL-0602	6/2/2015	11:00	593008.464	667692.404	NBS-TL-006	6/2/2015	18:00			23	No catch
NBS		Trotline	NBS-TL-0603	6/2/2015	17:00	590396.289	661385.007	NBS-TL-007	6/3/2015	10:30			15	No catch
NBS		Trotline	NBS-TL-0604	6/4/2015	8:15	589033.092	664751.720	NBS-TL-008	6/4/2015	16:00			15	No catch

Fish Sampling
Newark Bay Study Area **Draft: For Discussion Purposes Only**
SPECIMEN TALLY

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Tissue Weight (if applicable) (g)	Comments
NBC		NBC-GN-0331	NB03WWPC036	NB03WWPC036-001	Perch, White (WP)	220	151.9	-	
NBC		NBC-TW-0331	NB03WWPC037	NB03WWPC037-001	Perch, White (WP)	195	88.1	-	
NBC		NBC-TW-0331	NB03WWFC038	NB03WWFC038-001	Flounder, Winter (WF)	100	12	-	
NBC		NBC-TW-0331	NB03WWFC039	NB03WWFC039-001	Flounder, Winter (WF)	75	3.8	-	
NBC		NBC-TW-0331	NB03WSFC040	NB03WSFC040-001	Flounder, Summer (SF)	65	1.8	-	
NBC		NBC-TW-0331	NB03WHCC041	NB03WHCC041-001	Hogchoker (HC)	125	34	-	
NBC		NBC-TW-0401	NB03WWFC042	NB03WWFC042-001	Flounder, Winter (WF)	230	131.7	-	
NBC		NBC-TW-0401	NB03WWFC043	NB03WWFC043-001	Flounder, Winter (WF)	115	17.0	-	
NBC		NBC-TW-0401	NB03WWFC044	NB03WWFC044-001	Flounder, Winter (WF)	85	6.8	-	
NBC		NBC-TW-0401	NB03WWPC045	NB03WWPC045-001	Perch, White (WP)	120	17.0	-	
NBC		NBC-TW-0401	NB03WWPC046	NB03WWPC046-001	Perch, White (WP)	150	45.8	-	
NBC		NBC-TW-0401	NB03FWPC047	NB03FWPC047-001	Perch, White (WP)	235	195	55.6	Liver weight = 4.0g
NBC		NBC-TW-0402	NB03WWPC048	NB03WWPC048-001	Perch, White (WP)	132	28	-	
NBC		NBC-TW-0402	NB03WWPC049	NB03WWPC049-001	Perch, White (WP)	122	20	-	
NBC		NBC-TW-0402	NB03WWPC050	NB03WWPC050-001	Perch, White (WP)	105	12.0	-	
NBC		NBC-TW-0402	NB03WWPC051	NB03WWPC051-001	Perch, White (WP)	135	30.0	-	
NBC		NBC-TW-0402	NB03WWPC052	NB03WWPC052-001	Perch, White (WP)	138	35.0	-	
NBC		NBC-TW-0402	NB03WWPC053	NB03WWPC053-001	Perch, White (WP)	158	50.0	-	
NBC		NBC-TW-0402	NB03WWPC054	NB03WWPC054-001	Perch, White (WP)	158	55.0	-	
NBC		NBC-TW-0402	NB03WWPC055	NB03WWPC055-001	Perch, White (WP)	118	20	-	
NBC		NBC-TW-0402	NB03WWPC056	NB03WWPC056-001	Perch, White (WP)	87	8.0	-	
NBC		NBC-TW-0402	NB03WWPC057	NB03WWPC057-001	Perch, White (WP)	100	12.0	-	
NBC		NBC-TW-0402	NB03WWPC058	NB03WWPC058-001	Perch, White (WP)	175	60.0	-	
NBC		NBC-TW-0402	NB03WWPC059	NB03WWPC059-001	Perch, White (WP)	158	60.0	-	
NBC		NBC-TW-0402	NB03WWPC060	NB03WWPC060-001	Perch, White (WP)	110	12.0	-	
NBC		NBC-TW-0402	NB03WWPC061	NB03WWPC061-001	Perch, White (WP)	155	48.0	-	
NBC		NBC-TW-0402	NB03WWPC062	NB03WWPC062-001	Perch, White (WP)	172	70.0	-	
NBC		NBC-TW-0402	NB03WWPC063	NB03WWPC063-001	Perch, White (WP)	168	60	-	
NBC		NBC-TW-0402	NB03WWPC064	NB03WWPC064-001	Perch, White (WP)	186	100	-	
NBC		NBC-TW-0402	NB03WWPC065	NB03WWPC065-001	Perch, White (WP)	202	110	-	
NBC		NBC-TW-0402	NB03WWPC066	NB03WWPC066-001	Perch, White (WP)	195	98	-	
NBC		NBC-TW-0402	NB03FWPC067	NB03FWPC067-001	Perch, White (WP)	262	258	76.0	Liver weight = 7.2g
NBC		NBC-TW-0402	NB03FWPC068	NB03FWPC068-001	Perch, White (WP)	232	180	51.3	Liver weight = 3.7g
NBC		NBC-TW-0402	NB03FWPC069	NB03FWPC069-001	Perch, White (WP)	230	150	41.0	Liver weight = 3.4g
NBC		NBC-TW-0402	NB03WHAC070	NB03WHAC070-001	Hake, Spotted (HA)	72	2.7	-	
NBC		NBC-TW-0402	NB03WWFC071	NB03WWFC071-001	Flounder, Winter (WF)	215	105	-	
NBC		NBC-TW-0402	NB03WWFC072	NB03WWFC072-001	Flounder, Winter (WF)	135	30.0	-	
NBC		NBC-TW-0402	NB03WWFC073	NB03WWFC073-001	Flounder, Winter (WF)	100	11.5	-	
NBC		NBC-TW-0402	NB03WWFC074	NB03WWFC074-001	Flounder, Winter (WF)	80	5.8	-	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Tissue Weight (if applicable) (g)	Comments
NBC		NBC-TW-0402	NB03WWWC075	NB03WWWC075-001	Flounder, Windowpane (WW)	155	35	-	
NBC		NBC-TW-0402	NB03FAEC076	NB03FAEC076-001	Eel, American (AE)	900	720	255	
NBC		NBC-TW-0406	NB03WWFC077	NB03WWFC077-001	Flounder, Winter (WF)	138	30	-	
NBC		NBC-TW-0406	NB03WWFC078	NB03WWFC078-001	Flounder, Winter (WF)	135	28	-	
NBC		NBC-TW-0406	NB03WWFC079	NB03WWFC079-001	Flounder, Winter (WF)	118	10	-	
NBC		NBC-TW-0406	NB03WWFC080	NB03WWFC080-001	Flounder, Winter (WF)	120	24	-	
NBC		NBC-TW-0406	NB03WWFC081	NB03WWFC081-001	Flounder, Winter (WF)	122	23	-	
NBC		NBC-TW-0406	NB03WWFC082	NB03WWFC082-001	Flounder, Winter (WF)	117	18	-	
NBC		NBC-TW-0406	NB03WWFC083	NB03WWFC083-001	Flounder, Winter (WF)	165	55	-	
NBC		NBC-TW-0406	NB03WWFC084	NB03WWFC084-001	Flounder, Winter (WF)	122	26	-	
NBC		NBC-TW-0406	NB03WWFC085	NB03WWFC085-001	Flounder, Winter (WF)	109	17	-	
NBC		NBC-TW-0406	NB03WWFC086	NB03WWFC086-001	Flounder, Winter (WF)	130	25	-	
NBC		NBC-TW-0406	NB03WWFC087	NB03WWFC087-001	Flounder, Winter (WF)	130	27	-	
NBC		NBC-TW-0406	NB03WWFC088	NB03WWFC088-001	Flounder, Winter (WF)	102	13	-	
NBC		NBC-TW-0406	NB03WWFC089	NB03WWFC089-001	Flounder, Winter (WF)	205	109	-	
NBC		NBC-TW-0406	NB03WHAC090	NB03WHAC090-001	Hake, Spotted (HA)	70	2.0	-	
NBC		NBC-TW-0406	NB03WHAC091	NB03WHAC091-001	Hake, Spotted (HA)	70	3.0	-	
NBC		NBC-TW-0406	NB03WWPC092	NB03WWPC092-001	Perch, White (WP)	95	6	-	
NBC		NBC-TW-0406	NB03WWPC093	NB03WWPC093-001	Perch, White (WP)	85	6	-	
NBC		NBC-TW-0406	NB03WWPC094	NB03WWPC094-001	Perch, White (WP)	98	12	-	
NBC		NBC-TW-0406	NB03WWPC095	NB03WWPC095-001	Perch, White (WP)	135	28	-	
NBC		NBC-TW-0406	NB03WWPC096	NB03WWPC096-001	Perch, White (WP)	157	52	-	
NBC		NBC-TW-0406	NB03WWPC097	NB03WWPC097-001	Perch, White (WP)	150	44	-	
NBC		NBC-TW-0406	NB03WWPC098	NB03WWPC098-001	Perch, White (WP)	84	6	-	
NBC		NBC-TW-0406	NB03WWPC099	NB03WWPC099-001	Perch, White (WP)	176	75	-	
NBC		NBC-TW-0406	NB03WWPC100	NB03WWPC100-001	Perch, White (WP)	121	19	-	
NBC		NBC-TW-0406	NB03WWPC101	NB03WWPC101-001	Perch, White (WP)	169	58	-	
NBC		NBC-TW-0406	NB03WWPC102	NB03WWPC102-001	Perch, White (WP)	125	14	-	
NBC		NBC-TW-0406	NB03WWPC103	NB03WWPC103-001	Perch, White (WP)	115	17	-	
NBC		NBC-TW-0406	NB03WWPC104	NB03WWPC104-001	Perch, White (WP)	122	23	-	
NBC		NBC-TW-0406	NB03WWPC105	NB03WWPC105-001	Perch, White (WP)	147	41	-	
NBC		NBC-TW-0406	NB03WWPC106	NB03WWPC106-001	Perch, White (WP)	161	54	-	
NBC		NBC-TW-0406	NB03WWPC107	NB03WWPC107-001	Perch, White (WP)	178	70	-	
NBC		NBC-TW-0406	NB03WWPC108	NB03WWPC108-001	Perch, White (WP)	173	72	-	
NBC		NBC-TW-0406	NB03WWPC109	NB03WWPC109-001	Perch, White (WP)	180	84	-	
NBC		NBC-TW-0406	NB03WWPC110	NB03WWPC110-001	Perch, White (WP)	191	92	-	
NBC		NBC-TW-0406	NB03WWPC111	NB03WWPC111-001	Perch, White (WP)	171	67	-	
NBC		NBC-TW-0406	NB03WWPC112	NB03WWPC112-001	Perch, White (WP)	176	71	-	
NBC		NBC-TW-0406	NB03WWPC113	NB03WWPC113-001	Perch, White (WP)	176	70	-	
NBC		NBC-TW-0406	NB03WWPC114	NB03WWPC114-001	Perch, White (WP)	162	50	-	
NBC		NBC-TW-0406	NB03WWPC115	NB03WWPC115-001	Perch, White (WP)	160	58	-	
NBC		NBC-TW-0406	NB03WWPC116	NB03WWPC116-001	Perch, White (WP)	165	59	-	
NBC		NBC-TW-0406	NB03WWPC117	NB03WWPC117-001	Perch, White (WP)	176	77	-	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Tissue Weight (if applicable) (g)	Comments
NBC		NBC-TW-0406	NB03WWPC118	NB03WWPC118-001	Perch, White (WP)	155	48	-	
NBC		NBC-TW-0406	NB03WWPC119	NB03WWPC119-001	Perch, White (WP)	188	89	-	
NBC		NBC-TW-0406	NB03WWPC120	NB03WWPC120-001	Perch, White (WP)	183	77	-	
NBC		NBC-TW-0406	NB03WWPC121	NB03WWPC121-001	Perch, White (WP)	165	59	-	
NBC		NBC-TW-0406	NB03WWPC122	NB03WWPC122-001	Perch, White (WP)	175	66	-	
NBC		NBC-TW-0406	NB03WWPC123	NB03WWPC123-001	Perch, White (WP)	174	68	-	
NBC		NBC-TW-0406	NB03FWPC124	NB03FWPC124-001	Perch, White (WP)	211	127	44.7	Liver weight = 2.3g
NBC		NBC-TW-0406	NB03FWPC125	NB03FWPC125-001	Perch, White (WP)	218	157	58.4	Liver weight = 4.5g
NBC		NBC-TW-0407	NB03WHAC126	NB03WHAC126-001	Hake, Spotted (HA)	88	6	-	
NBC		NBC-TW-0407	NB03WHAC127	NB03WHAC127-001	Hake, Spotted (HA)	88	6	-	
NBC		NBC-TW-0407	NB03WHAC128	NB03WHAC128-001	Hake, Spotted (HA)	80	4	-	
NBC		NBC-TW-0407	NB03WHAC129	NB03WHAC129-001	Hake, Spotted (HA)	95	7	-	
NBC		NBC-TW-0407	NB03WHAC130	NB03WHAC130-001	Hake, Spotted (HA)	73	4	-	
NBC		NBC-TW-0407	NB03WHAC131	NB03WHAC131-001	Hake, Spotted (HA)	91	7	-	
NBC		NBC-TW-0407	NB03WHAC132	NB03WHAC132-001	Hake, Spotted (HA)	77	4	-	
NBC		NBC-TW-0407	NB03WHAC133	NB03WHAC133-001	Hake, Spotted (HA)	82	5	-	
NBC		NBC-TW-0407	NB03WHAC134	NB03WHAC134-001	Hake, Spotted (HA)	71	4	-	
NBC		NBC-TW-0407	NB03WHAC135	NB03WHAC135-001	Hake, Spotted (HA)	62	2	-	
NBC		NBC-TW-0407	NB03WHAC136	NB03WHAC136-001	Hake, Spotted (HA)	66	4	-	
NBC		NBC-TW-0407	NB03WHCC137	NB03WHCC137-001	Hogchoker (HC)	119	34	-	
NBC		NBC-TW-0407	NB03WWWC138	NB03WWWC138-001	Flounder, Windowpane (WW)	132	23	-	
NBC		NBC-TW-0407	NB03WSFC139	NB03WSFC139-001	Flounder, Summer (SF)	192	60	-	
NBC		NBC-TW-0407	NB03WSFC140	NB03WSFC140-001	Flounder, Summer (SF)	260	155	-	
NBC		NBC-TW-0407	NB03WWFC141	NB03WWFC141-001	Flounder, Winter (WF)	159	44	-	
NBC		NBC-TW-0407	NB03WWFC142	NB03WWFC142-001	Flounder, Winter (WF)	131	26	-	
NBC		NBC-TW-0407	NB03WWFC143	NB03WWFC143-001	Flounder, Winter (WF)	119	20	-	
NBC		NBC-TW-0407	NB03WWFC144	NB03WWFC144-001	Flounder, Winter (WF)	120	19	-	
NBC		NBC-TW-0407	NB03WWFC145	NB03WWFC145-001	Flounder, Winter (WF)	101	11	-	
NBC		NBC-TW-0407	NB03WWFC146	NB03WWFC146-001	Flounder, Winter (WF)	98	12	-	
NBC		NBC-TW-0407	NB03WWFC147	NB03WWFC147-001	Flounder, Winter (WF)	88	8	-	
NBC		NBC-TW-0407	NB03WWFC148	NB03WWFC148-001	Flounder, Winter (WF)	115	18	-	
NBC		NBC-TW-0407	NB03WWFC149	NB03WWFC149-001	Flounder, Winter (WF)	99	11	-	
NBC		NBC-TW-0407	NB03WWFC150	NB03WWFC150-001	Flounder, Winter (WF)	86	8	-	
NBC		NBC-TW-0407	NB03WWFC151	NB03WWFC151-001	Flounder, Winter (WF)	94	10	-	
NBC		NBC-TW-0407	NB03WWFC152	NB03WWFC152-001	Flounder, Winter (WF)	100	12	-	
NBC		NBC-TW-0407	NB03WWFC153	NB03WWFC153-001	Flounder, Winter (WF)	102	13	-	
NBC		NBC-TW-0407	NB03WWFC154	NB03WWFC154-001	Flounder, Winter (WF)	95	12	-	
NBC		NBC-TW-0407	NB03WWFC155	NB03WWFC155-001	Flounder, Winter (WF)	86	8	-	
NBC		NBC-TW-0407	NB03WWFC156	NB03WWFC156-001	Flounder, Winter (WF)	66	2	-	
NBC		NBC-TW-0407	NB03WWFC157	NB03WWFC157-001	Flounder, Winter (WF)	55	2	-	
NBC		NBC-TW-0407	NB03WWFC158	NB03WWFC158-001	Flounder, Winter (WF)	112	17	-	
NBC		NBC-TW-0407	NB03WWFC159	NB03WWFC159-001	Flounder, Winter (WF)	108	15	-	
NBC		NBC-TW-0407	NB03WWFC160	NB03WWFC160-001	Flounder, Winter (WF)	92	8	-	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Tissue Weight (if applicable) (g)	Comments
NBC		NBC-TW-0407	NB03WWFC161	NB03WWFC161-001	Flounder, Winter (WF)	119	20	-	
NBC		NBC-TW-0407	NB03WWFC162	NB03WWFC162-001	Flounder, Winter (WF)	97	12	-	
NBC		NBC-TW-0407	NB03WWFC163	NB03WWFC163-001	Flounder, Winter (WF)	87	8	-	
NBC		NBC-TW-0407	NB03WWFC164	NB03WWFC164-001	Flounder, Winter (WF)	102	14	-	
NBC		NBC-TW-0407	NB03WWFC165	NB03WWFC165-001	Flounder, Winter (WF)	95	13	-	
NBC		NBC-TW-0407	NB03WWFC166	NB03WWFC166-001	Flounder, Winter (WF)	105	15	-	
NBC		NBC-TW-0407	NB03WWFC167	NB03WWFC167-001	Flounder, Winter (WF)	95	11	-	
NBC		NBC-TW-0407	NB03WWFC168	NB03WWFC168-001	Flounder, Winter (WF)	111	14	-	
NBC		NBC-TW-0407	NB03WWFC169	NB03WWFC169-001	Flounder, Winter (WF)	124	21	-	
NBC		NBC-TW-0407	NB03WWFC170	NB03WWFC170-001	Flounder, Winter (WF)	74	5	-	
NBC		NBC-TW-0407	NB03WWFC171	NB03WWFC171-001	Flounder, Winter (WF)	79	6	-	
NBC		NBC-TW-0407	NB03WWFC172	NB03WWFC172-001	Flounder, Winter (WF)	82	8	-	
NBC		NBC-TW-0407	NB03WWFC173	NB03WWFC173-001	Flounder, Winter (WF)	112	17	-	
NBC		NBC-TW-0407	NB03WWPC174	NB03WWPC174-001	Perch, White (WP)	160	48	-	
NBC		NBC-TW-0407	NB03WWPC175	NB03WWPC175-001	Perch, White (WP)	164	54	-	
NBC		NBC-TW-0407	NB03WWPC176	NB03WWPC176-001	Perch, White (WP)	177	75	-	
NBC		NBC-TW-0407	NB03WWPC177	NB03WWPC177-001	Perch, White (WP)	175	65	-	
NBC		NBC-TW-0407	NB03WWPC178	NB03WWPC178-001	Perch, White (WP)	121	16	-	
NBC		NBC-TW-0407	NB03WWPC179	NB03WWPC179-001	Perch, White (WP)	115	18	-	
NBC		NBC-TW-0407	NB03WWPC180	NB03WWPC180-001	Perch, White (WP)	98	10	-	
NBC		NBC-TW-0407	NB03FWPC181	NB03FWPC181-001	Perch, White (WP)	201	132	50.5	Liver weight = 2.9g
NBC		NBC-TW-0408	NB03FWPC182	NB03FWPC182-001	Perch, White (WP)	194	99	34.9	Liver weight = 2.0g
NBC		NBC-TW-0408	NB03FWPC183	NB03FWPC183-001	Perch, White (WP)	190	82	29.1	Liver weight = 1.3g
NBC		NBC-TW-0408	NB03FWPC184	NB03FWPC184-001	Perch, White (WP)	196	102	40.5	Liver weight = 0.9g
NBC		NBC-TW-0408	NB03FWPC185	NB03FWPC185-001	Perch, White (WP)	201	104	37.9	Liver weight = 2.1g
NBC		NBC-TW-0408	NB03FWPC186	NB03FWPC186-001	Perch, White (WP)	211	152	56.9	Liver weight = 3.2g
NBC		NBC-TW-0408	NB03LWPC187	NB03LWPC187-001	Perch, White (WP)	97	10	0.2	
NBC		NBC-TW-0408	NB03LWPC188	NB03LWPC188-001	Perch, White (WP)	157	49	0.7	
NBC		NBC-TW-0408	NB03LWPC189	NB03LWPC189-001	Perch, White (WP)	100	12	0.1	
NBC		NBC-TW-0408	NB03LWPC190	NB03LWPC190-001	Perch, White (WP)	84	7	0.1	
NBC		NBC-TW-0408	NB03LWPC191	NB03LWPC191-001	Perch, White (WP)	121	21	0.6	
NBC		NBC-TW-0408	NB03LWPC192	NB03LWPC192-001	Perch, White (WP)	110	15	0.2	
NBC		NBC-TW-0408	NB03WSMC192	NB03WSMC192-001	Flounder, Smallmouth (SM)	58	1.3	-	
NBC		NBC-TW-0408	NB03LWPC193	NB03LWPC193-001	Perch, White (WP)	109	15	0.4	
NBC		NBC-TW-0408	NB03WSMC193	NB03WSMC193-001	Flounder, Smallmouth (SM)	42	0.4	-	
NBC		NBC-TW-0408	NB03LWPC194	NB03LWPC194-001	Perch, White (WP)	96	11	0.2	
NBC		NBC-TW-0408	NB03WWFC194	NB03WWFC194-001	Flounder, Winter (WF)	100	9.5	-	
NBC		NBC-TW-0408	NB03LWPC195	NB03LWPC195-001	Perch, White (WP)	114	17	0.3	
NBC		NBC-TW-0408	NB03WWFC195	NB03WWFC195-001	Flounder, Winter (WF)	86	6.4	-	
NBC		NBC-TW-0408	NB03LWPC196	NB03LWPC196-001	Perch, White (WP)	103	14	0.2	
NBC		NBC-TW-0408	NB03WWFC196	NB03WWFC196-001	Flounder, Winter (WF)	82	6.3	-	
NBC		NBC-TW-0408	NB03LWPC197	NB03LWPC197-001	Perch, White (WP)	112	16	0.3	
NBC		NBC-TW-0408	NB03WWFC197	NB03WWFC197-001	Flounder, Winter (WF)	85	6.0	-	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Tissue Weight (if applicable) (g)	Comments
NBC		NBC-TW-0408	NB03LWPC198	NB03LWPC198-001	Perch, White (WP)	95	10	0.1	
NBC		NBC-TW-0408	NB03WWFC198	NB03WWFC198-001	Flounder, Winter (WF)	112	15.5	-	
NBC		NBC-TW-0408	NB03LWPC199	NB03LWPC199-001	Perch, White (WP)	175	72	1.5	
NBC		NBC-TW-0408	NB03WHAC199	NB03WHAC199-001	Hake, Spotted (HA)	83	4.2	-	
NBC		NBC-TW-0408	NB03LWPC200	NB03LWPC200-001	Perch, White (WP)	130	26	0.3	
NBC		NBC-TW-0408	NB03WHAC200	NB03WHAC200-001	Hake, Spotted (HA)	91	5.7	-	
NBC		NBC-TW-0408	NB03LWPC201	NB03LWPC201-001	Perch, White (WP)	162	58	0.8	
NBC		NBC-TW-0408	NB03WHAC201	NB03WHAC201-001	Hake, Spotted (HA)	70	3.0	-	
NBC		NBC-TW-0408	NB03WHAC202	NB03WHAC202-001	Hake, Spotted (HA)	80	3.8	-	
NBC		NBC-TW-0408	NB03WHAC203	NB03WHAC203-001	Hake, Spotted (HA)	85	4.7	-	
NBC		NBC-TW-0408	NB03WHAC204	NB03WHAC204-001	Hake, Spotted (HA)	71	2.5	-	
NBC		NBC-TW-0408	NB03WHAC205	NB03WHAC205-001	Hake, Spotted (HA)	65	2.2	-	
NBC		NBC-TW-0408	NB03WHAC206	NB03WHAC206-001	Hake, Spotted (HA)	73	2.7	-	
NBC		NBC-TW-0408	NB03WHAC207	NB03WHAC207-001	Hake, Spotted (HA)	70	2.9	-	
NBC		NBC-TW-0408	NB03WHAC208	NB03WHAC208-001	Hake, Spotted (HA)	73	2.5	-	
NBC		NBC-TW-0408	NB03WHAC209	NB03WHAC209-001	Hake, Spotted (HA)	82	3.6	-	
NBC		NBC-TW-0408	NB03WHAC210	NB03WHAC210-001	Hake, Spotted (HA)	81	4.0	-	
NBC		NBC-TW-0408	NB03WHAC211	NB03WHAC211-001	Hake, Spotted (HA)	81	4.4	-	
NBC		NBC-TW-0408	NB03WHAC212	NB03WHAC212-001	Hake, Spotted (HA)	75	3.2	-	
NBC		NBC-TW-0408	NB03WHAC213	NB03WHAC213-001	Hake, Spotted (HA)	76	3.5	-	
NBC		NBC-TW-0408	NB03WHAC214	NB03WHAC214-001	Hake, Spotted (HA)	85	4.5	-	
NBC		NBC-TW-0408	NB03WHAC215	NB03WHAC215-001	Hake, Spotted (HA)	81	4.8	-	
NBC		NBC-TW-0408	NB03WHAC216	NB03WHAC216-001	Hake, Spotted (HA)	77	3.8	-	
NBC		NBC-TW-0408	NB03WHAC217	NB03WHAC217-001	Hake, Spotted (HA)	76	3.5	-	
NBC		NBC-TW-0408	NB03WHAC218	NB03WHAC218-001	Hake, Spotted (HA)	86	5.5	-	
NBC		NBC-TW-0408	NB03WHAC219	NB03WHAC219-001	Hake, Spotted (HA)	85	4.5	-	
NBC		NBC-TW-0408	NB03WHAC220	NB03WHAC220-001	Hake, Spotted (HA)	79	3.8	-	
NBC		NBC-TW-0408	NB03WHAC221	NB03WHAC221-001	Hake, Spotted (HA)	80	3.8	-	
NBC		NBC-TW-0408	NB03WHAC222	NB03WHAC222-001	Hake, Spotted (HA)	70	2.4	-	
NBC		NBC-TW-0408	NB03WHAC223	NB03WHAC223-001	Hake, Spotted (HA)	61	1.9	-	
NBC		NBC-TW-0408	NB03WHAC224	NB03WHAC224-001	Hake, Spotted (HA)	94	5.9	-	
NBC		NBC-TW-0408	NB03WHAC225	NB03WHAC225-001	Hake, Spotted (HA)	70	3.0	-	
NBC		NBC-TW-0408	NB03WHAC226	NB03WHAC226-001	Hake, Spotted (HA)	94	6.2	-	
NBC		NBC-TW-0408	NB03WHAC227	NB03WHAC227-001	Hake, Spotted (HA)	63	2.0	-	
NBC		NBC-TW-0408	NB03WHAC228	NB03WHAC228-001	Hake, Spotted (HA)	79	3.9	-	
NBC		NBC-TW-0408	NB03WHAC229	NB03WHAC229-001	Hake, Spotted (HA)	60	1.7	-	
NBC		NBC-TW-0408	NB03WHAC230	NB03WHAC230-001	Hake, Spotted (HA)	65	1.7	-	
NBC		NBC-TW-0408	NB03WWWC231	NB03WWWC231-001	Flounder, Windowpane (WW)	150	32.4	-	
NBC		NBC-TW-0408	NB03WWWC232	NB03WWWC232-001	Flounder, Windowpane (WW)	160	40.9	-	
NBC		NBC-TW-0408	NB03WSFC233	NB03WSFC233-001	Flounder, Summer (SF)	205	68.5	-	
NBC		NBC-TW-0408	NB03WSFC234	NB03WSFC234-001	Flounder, Summer (SF)	190	52.8	-	
NBC		NBC-TW-0408	NB03WSFC235	NB03WSFC235-001	Flounder, Summer (SF)	216	87.0	-	
NBC		NBC-TW-0408	NB03WSFC236	NB03WSFC236-001	Flounder, Summer (SF)	180	44.8	-	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Tissue Weight (if applicable) (g)	Comments
NBC		NBC-TW-0408	NB03WHCC237	NB03WHCC237-001	Hogchoker (HC)	120	26.5	-	
NBC		NBC-TW-0408	NB03WHCC238	NB03WHCC238-001	Hogchoker (HC)	98	18.2	-	
NBC		NBC-TW-0408	NB03WHCC239	NB03WHCC239-001	Hogchoker (HC)	110	25.0	-	
NBC		NBC-TW-0408	NB03WWFC240	NB03WWFC240-001	Flounder, Winter (WF)	138	29.7	-	
NBC		NBC-TW-0408	NB03WWFC241	NB03WWFC241-001	Flounder, Winter (WF)	100	11.7	-	
NBC		NBC-TW-0408	NB03WWFC242	NB03WWFC242-001	Flounder, Winter (WF)	80	6.4	-	
NBC		NBC-TW-0408	NB03WWFC243	NB03WWFC243-001	Flounder, Winter (WF)	90	7.3	-	
NBC		NBC-TW-0408	NB03WWFC244	NB03WWFC244-001	Flounder, Winter (WF)	80	5.4	-	
NBC		NBC-TW-0408	NB03WWFC245	NB03WWFC245-001	Flounder, Winter (WF)	100	10.4	-	
NBC		NBC-TW-0408	NB03WWFC246	NB03WWFC246-001	Flounder, Winter (WF)	110	14.5	-	
NBC		NBC-TW-0408	NB03WWFC247	NB03WWFC247-001	Flounder, Winter (WF)	115	17.6	-	
NBC		NBC-TW-0408	NB03WWFC248	NB03WWFC248-001	Flounder, Winter (WF)	90	9.0	-	
NBC		NBC-TW-0408	NB03WWFC249	NB03WWFC249-001	Flounder, Winter (WF)	105	12.3	-	
NBC		NBC-TW-0408	NB03WWFC250	NB03WWFC250-001	Flounder, Winter (WF)	170	55.1	-	
NBC		NBC-TW-0408	NB03WWFC251	NB03WWFC251-001	Flounder, Winter (WF)	86	6.1	-	
NBC		NBC-TW-0408	NB03WWFC252	NB03WWFC252-001	Flounder, Winter (WF)	100	11.6	-	
NBC		NBC-TW-0408	NB03WWFC253	NB03WWFC253-001	Flounder, Winter (WF)	95	8.6	-	
NBC		NBC-TW-0408	NB03WWFC254	NB03WWFC254-001	Flounder, Winter (WF)	85	7.2	-	
NBC		NBC-TW-0408	NB03WWFC255	NB03WWFC255-001	Flounder, Winter (WF)	82	6.5	-	
NBC		NBC-TW-0408	NB03WWFC256	NB03WWFC256-001	Flounder, Winter (WF)	91	8.1	-	
NBC		NBC-TW-0408	NB03WWFC257	NB03WWFC257-001	Flounder, Winter (WF)	102	12.4	-	
NBC		NBC-TW-0408	NB03WWFC258	NB03WWFC258-001	Flounder, Winter (WF)	93	8.9	-	
NBC		NBC-TW-0408	NB03WWFC259	NB03WWFC259-001	Flounder, Winter (WF)	80	4.8	-	
NBC		NBC-TW-0408	NB03WWFC260	NB03WWFC260-001	Flounder, Winter (WF)	81	5.8	-	
NBC		NBC-TW-0408	NB03WWFC261	NB03WWFC261-001	Flounder, Winter (WF)	101	11.1	-	
NBC		NBC-TW-0408	NB03WWFC262	NB03WWFC262-001	Flounder, Winter (WF)	122	20.9	-	
NBC		NBC-TW-0408	NB03WWFC263	NB03WWFC263-001	Flounder, Winter (WF)	170	60.6	-	
NBC		NBC-TW-0408	NB03WWFC264	NB03WWFC264-001	Flounder, Winter (WF)	132	22.9	-	
NBC		NBC-TW-0408	NB03WWFC265	NB03WWFC265-001	Flounder, Winter (WF)	142	34.5	-	
NBC		NBC-TW-0408	NB03WWFC266	NB03WWFC266-001	Flounder, Winter (WF)	212	127.0	-	
NBC		NBC-TW-0408	NB03WWFC267	NB03WWFC267-001	Flounder, Winter (WF)	128	25.8	-	
NBC		NBC-TW-0408	NB03WWFC268	NB03WWFC268-001	Flounder, Winter (WF)	105	12.7	-	
NBC		NBC-TW-0408	NB03WWFC269	NB03WWFC269-001	Flounder, Winter (WF)	105	11.8	-	
NBC		NBC-TW-0408	NB03WWFC270	NB03WWFC270-001	Flounder, Winter (WF)	125	19.8	-	
NBC		NBC-TW-0408	NB03WWFC271	NB03WWFC271-001	Flounder, Winter (WF)	119	20.0	-	
NBC		NBC-TW-0408	NB03WWFC272	NB03WWFC272-001	Flounder, Winter (WF)	97	10.1	-	
NBC		NBC-TW-0408	NB03WWFC273	NB03WWFC273-001	Flounder, Winter (WF)	82	6.6	-	
NBC		NBC-TW-0408	NB03WWFC274	NB03WWFC274-001	Flounder, Winter (WF)	91	8.2	-	
NBC		NBC-TW-0408	NB03WWFC275	NB03WWFC275-001	Flounder, Winter (WF)	110	14.7	-	
NBC		NBC-TW-0408	NB03WWFC276	NB03WWFC276-001	Flounder, Winter (WF)	82	6.9	-	
NBC		NBC-TW-0408	NB03WWFC277	NB03WWFC277-001	Flounder, Winter (WF)	88	8.4	-	
NBC		NBC-TW-0408	NB03WWFC278	NB03WWFC278-001	Flounder, Winter (WF)	85	7.7	-	
NBC		NBC-TW-0408	NB03WWFC279	NB03WWFC279-001	Flounder, Winter (WF)	100	12.1	-	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Tissue Weight (if applicable) (g)	Comments
NBC		NBC-TW-0408	NB03WWFC280	NB03WWFC280-001	Flounder, Winter (WF)	100	10.7	-	
NBC		NBC-TW-0408	NB03WSMC281	NB03WSMC281-001	Flounder, Smallmouth (SM)	95	6.5	-	
NBC		NBC-TW-0408	NB03WSMC282	NB03WSMC282-001	Flounder, Smallmouth (SM)	60	1.6	-	
NBC		NBC-TW-0408	NB03WSMC283	NB03WSMC283-001	Flounder, Smallmouth (SM)	57	1.3	-	
NBC		NBC-GN-0409	NB03FWPC284	NB03FWPC284-001	Perch, White (WP)	235	170	64.3	Liver weight = 3.6g
NBC		NBC-GN-0409	NB03FWPC285	NB03FWPC285-001	Perch, White (WP)	230	200	64.4	Liver weight = 5.5g
NBC		NBC-GN-0409	NB03FWPC286	NB03FWPC286-001	Perch, White (WP)	220	170	48.6	Liver weight = 3.8g
NBC		NBC-GN-0409	NB03FWPC287	NB03FWPC287-001	Perch, White (WP)	242	220	66.5	Liver weight = 4.3g
NBC		NBC-GN-0409	NB03FWPC288	NB03FWPC288-001	Perch, White (WP)	230	210	86.9	Liver weight = 2.6g
NBC		NBC-GN-0409	NB03FWPC289	NB03FWPC289-001	Perch, White (WP)	245	245	88.1	Liver weight = 2.3g
NBC		NBC-TW-0409	NB03FWPC290	NB03FWPC290-001	Perch, White (WP)	255	290	108.8	Liver weight = 8.7g
NBC		NBC-TW-0409	NB03FWPC291	NB03FWPC291-001	Perch, White (WP)	200	108	28.4	Liver weight = 3.0g
NBC		NBC-TW-0409	NB03FWPC292	NB03FWPC292-001	Perch, White (WP)	200	112	34.3	Liver weight = 2.6g
NBC		NBC-TW-0409	NB03FWPC293	NB03FWPC293-001	Perch, White (WP)	190	90	17.9	Liver weight = 1.6g
NBC		NBC-TW-0409	NB03FWPC294	NB03FWPC294-001	Perch, White (WP)	200	100	28.4	Liver weight = 2.3g
NBC		NBC-TW-0409	NB03FWPC295	NB03FWPC295-001	Perch, White (WP)	192	90	21.4	Liver weight = 1.2g
NBC		NBC-TW-0409	NB03FWPC296	NB03FWPC296-001	Perch, White (WP)	188	80	30.8	Liver weight = 1.6g
NBC		NBC-TW-0409	NB03FWPC297	NB03FWPC297-001	Perch, White (WP)	181	90	31.5	Liver weight = 2.5g
NBC		NBC-TW-0409	NB03LWPC298	NB03LWPC298-001	Perch, White (WP)	162	55	1.3	
NBC		NBC-TW-0409	NB03LWPC299	NB03LWPC299-001	Perch, White (WP)	180	80	1.3	
NBC		NBC-TW-0409	NB03LWPC300	NB03LWPC300-001	Perch, White (WP)	168	60	1.2	
NBC		NBC-TW-0409	NB03LWPC301	NB03LWPC301-001	Perch, White (WP)	163	55	0.7	
NBC		NBC-TW-0409	NB03LWPC302	NB03LWPC302-001	Perch, White (WP)	168	60	1.4	
NBC		NBC-TW-0409	NB03LWPC303	NB03LWPC303-001	Perch, White (WP)	170	70	1.7	
NBC		NBC-TW-0409	NB03LWPC304	NB03LWPC304-001	Perch, White (WP)	170	70	1.4	
NBC		NBC-TW-0409	NB03LWPC305	NB03LWPC305-001	Perch, White (WP)	182	80	2.2	
NBC		NBC-TW-0409	NB03LWPC306	NB03LWPC306-001	Perch, White (WP)	180	80	1.4	
NBC		NBC-TW-0409	NB03LWPC307	NB03LWPC307-001	Perch, White (WP)	160	50	1.0	
NBC		NBC-TW-0409	NB03LWPC308	NB03LWPC308-001	Perch, White (WP)	182	80	1.9	
NBC		NBC-TW-0409	NB03LWPC309	NB03LWPC309-001	Perch, White (WP)	165	70	1.9	
NBC		NBC-TW-0409	NB03LWPC310	NB03LWPC310-001	Perch, White (WP)	160	55	1.3	
NBC		NBC-TW-0409	NB03LWPC311	NB03LWPC311-001	Perch, White (WP)	175	65	1.2	
NBC		NBC-TW-0409	NB03LWPC312	NB03LWPC312-001	Perch, White (WP)	162	65	1.3	
NBC		NBC-TW-0409	NB03WWPC313	NB03WWPC313-001	Perch, White (WP)	152	40	-	
NBC		NBC-TW-0409	NB03WWPC314	NB03WWPC314-001	Perch, White (WP)	138	30	-	
NBC		NBC-TW-0409	NB03WWPC315	NB03WWPC315-001	Perch, White (WP)	110	11	-	
NBC		NBC-TW-0409	NB03WWPC316	NB03WWPC316-001	Perch, White (WP)	110	10	-	
NBC		NBC-TW-0409	NB03WWPC317	NB03WWPC317-001	Perch, White (WP)	138	30	-	
NBC		NBC-TW-0409	NB03WWPC318	NB03WWPC318-001	Perch, White (WP)	112	12	-	
NBC		NBC-TW-0409	NB03WWPC319	NB03WWPC319-001	Perch, White (WP)	136	30	-	
NBC		NBC-TW-0409	NB03WWPC320	NB03WWPC320-001	Perch, White (WP)	98	5	-	
NBC		NBC-TW-0409	NB03WWPC321	NB03WWPC321-001	Perch, White (WP)	102	8	-	
NBC		NBC-TW-0409	NB03WWPC322	NB03WWPC322-001	Perch, White (WP)	111	11	-	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Tissue Weight (if applicable) (g)	Comments
NBC		NBC-TW-0409	NB03WWPC323	NB03WWPC323-001	Perch, White (WP)	115	18	-	
NBC		NBC-TW-0409	NB03WWPC324	NB03WWPC324-001	Perch, White (WP)	85	3	-	
NBC		NBC-TW-0409	NB03WWPC325	NB03WWPC325-001	Perch, White (WP)	122	21	-	
NBC		NBC-TW-0409	NB03WWPC326	NB03WWPC326-001	Perch, White (WP)	113	12	-	
NBC		NBC-TW-0409	NB03WWPC327	NB03WWPC327-001	Perch, White (WP)	108	10	-	
NBC		NBC-TW-0409	NB03WWPC328	NB03WWPC328-001	Perch, White (WP)	128	21	-	
NBC		NBC-TW-0409	NB03WWPC329	NB03WWPC329-001	Perch, White (WP)	118	12	-	
NBC		NBC-TW-0409	NB03WWPC330	NB03WWPC330-001	Perch, White (WP)	112	11	-	
NBC		NBC-TW-0409	NB03WWPC331	NB03WWPC331-001	Perch, White (WP)	108	11	-	
NBC		NBC-TW-0409	NB03WWPC332	NB03WWPC332-001	Perch, White (WP)	85	2	-	
NBC		NBC-TW-0409	NB03WWPC333	NB03WWPC333-001	Perch, White (WP)	82	5.7	-	
NBC		NBC-TW-0409	NB03WSFC334	NB03WSFC334-001	Flounder, Summer (SF)	170	37	-	
NBC		NBC-TW-0409	NB03WSFC334	NB03WSFC334-001	Flounder, Summer (SF)	195	58	-	
NBC		NBC-TW-0409	NB03WSFC334	NB03WSFC334-001	Flounder, Summer (SF)	172	38	-	
NBC		NBC-TW-0409	NB03WSMC337	NB03WSMC337-001	Flounder, Smallmouth (SM)	61	1.6	-	
NBC		NBC-TW-0409	NB03WHCC338	NB03WHCC338-001	Hogchoker (HC)	120	44	-	
NBC		NBC-TW-0409	NB03WHCC339	NB03WHCC339-001	Hogchoker (HC)	105	23	-	
NBC		NBC-TW-0409	NB03WWWC340	NB03WWWC340-001	Flounder, Windowpane (WW)	195	93	-	
NBC		NBC-TW-0409	NB03WWWC341	NB03WWWC341-001	Flounder, Windowpane (WW)	125	21	-	
NBC		NBC-TW-0409	NB03WWWC342	NB03WWWC342-001	Flounder, Windowpane (WW)	140	25.6	-	
NBC		NBC-TW-0409	NB03WWWC343	NB03WWWC343-001	Flounder, Windowpane (WW)	180	68	-	
NBC		NBC-TW-0409	NB03WWWC344	NB03WWWC344-001	Flounder, Windowpane (WW)	134	26	-	
NBC		NBC-TW-0409	NB03WWFC345	NB03WWFC345-001	Flounder, Winter (WF)	100	11	-	
NBC		NBC-TW-0409	NB03WWFC346	NB03WWFC346-001	Flounder, Winter (WF)	120	20	-	
NBC		NBC-TW-0409	NB03WWFC347	NB03WWFC347-001	Flounder, Winter (WF)	122	24	-	
NBC		NBC-TW-0409	NB03WWFC348	NB03WWFC348-001	Flounder, Winter (WF)	252	204	-	
NBC		NBC-TW-0409	NB03WWFC349	NB03WWFC349-001	Flounder, Winter (WF)	92	10	-	
NBC		NBC-TW-0409	NB03WWFC350	NB03WWFC350-001	Flounder, Winter (WF)	135	27	-	
NBC		NBC-TW-0409	NB03WWFC351	NB03WWFC351-001	Flounder, Winter (WF)	140	37	-	
NBC		NBC-TW-0409	NB03WWFC352	NB03WWFC352-001	Flounder, Winter (WF)	115	18	-	
NBC		NBC-TW-0409	NB03WWFC353	NB03WWFC353-001	Flounder, Winter (WF)	92	9.6	-	
NBC		NBC-TW-0409	NB03WWFC354	NB03WWFC354-001	Flounder, Winter (WF)	82	6.8	-	
NBC		NBC-TW-0409	NB03WWFC355	NB03WWFC355-001	Flounder, Winter (WF)	175	60	-	
NBC		NBC-TW-0409	NB03WWFC356	NB03WWFC356-001	Flounder, Winter (WF)	102	12.5	-	
NBC		NBC-TW-0409	NB03WWFC357	NB03WWFC357-001	Flounder, Winter (WF)	125	23	-	
NBC		NBC-TW-0409	NB03WWFC358	NB03WWFC358-001	Flounder, Winter (WF)	95	9	-	
NBC		NBC-TW-0409	NB03WWFC359	NB03WWFC359-001	Flounder, Winter (WF)	120	20	-	
NBC		NBC-TW-0409	NB03WWFC360	NB03WWFC360-001	Flounder, Winter (WF)	80	5.6	-	
NBC		NBC-TW-0409	NB03WWFC361	NB03WWFC361-001	Flounder, Winter (WF)	85	8.0	-	
NBC		NBC-TW-0409	NB03WWFC362	NB03WWFC362-001	Flounder, Winter (WF)	118	17.5	-	
NBC		NBC-TW-0409	NB03WWFC363	NB03WWFC363-001	Flounder, Winter (WF)	122	21	-	
NBC		NBC-TW-0409	NB03WWFC364	NB03WWFC364-001	Flounder, Winter (WF)	75	4.5	-	
NBC		NBC-TW-0409	NB03WWFC365	NB03WWFC365-001	Flounder, Winter (WF)	98	11	-	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Tissue Weight (if applicable) (g)	Comments
NBC		NBC-TW-0409	NB03WWFC366	NB03WWFC366-001	Flounder, Winter (WF)	82	6.7	-	
NBC		NBC-TW-0409	NB03WWFC367	NB03WWFC367-001	Flounder, Winter (WF)	140	33	-	
NBC		NBC-TW-0409	NB03WWFC368	NB03WWFC368-001	Flounder, Winter (WF)	105	14	-	
NBC		NBC-TW-0409	NB03WWFC369	NB03WWFC369-001	Flounder, Winter (WF)	115	19	-	
NBC		NBC-TW-0409	NB03WWFC370	NB03WWFC370-001	Flounder, Winter (WF)	85	6.3	-	
NBC		NBC-TW-0409	NB03WWFC371	NB03WWFC371-001	Flounder, Winter (WF)	90	9.0	-	
NBC		NBC-TW-0409	NB03WWFC372	NB03WWFC372-001	Flounder, Winter (WF)	95	8.7	-	
NBC		NBC-TW-0409	NB03WWFC373	NB03WWFC373-001	Flounder, Winter (WF)	115	21.6	-	
NBC		NBC-TW-0409	NB03WWFC374	NB03WWFC374-001	Flounder, Winter (WF)	92	8.1	-	
NBC		NBC-TW-0409	NB03WWFC375	NB03WWFC375-001	Flounder, Winter (WF)	108	14.3	-	
NBC		NBC-TW-0409	NB03WWFC376	NB03WWFC376-001	Flounder, Winter (WF)	118	17.7	-	
NBC		NBC-TW-0409	NB03WWFC377	NB03WWFC377-001	Flounder, Winter (WF)	66	3.0	-	
NBC		NBC-TW-0409	NB03WWFC378	NB03WWFC378-001	Flounder, Winter (WF)	92	8.7	-	
NBC		NBC-TW-0409	NB03WWFC379	NB03WWFC379-001	Flounder, Winter (WF)	125	22.6	-	
NBC		NBC-TW-0409	NB03WWFC380	NB03WWFC380-001	Flounder, Winter (WF)	80	5.6	-	
NBC		NBC-TW-0409	NB03WWFC381	NB03WWFC381-001	Flounder, Winter (WF)	80	6.2	-	
NBC		NBC-TW-0409	NB03WWFC382	NB03WWFC382-001	Flounder, Winter (WF)	92	8.7	-	
NBC		NBC-TW-0409	NB03WWFC383	NB03WWFC383-001	Flounder, Winter (WF)	83	6.7	-	
NBC		NBC-TW-0409	NB03WWFC384	NB03WWFC384-001	Flounder, Winter (WF)	92	9.1	-	
NBC		NBC-TW-0409	NB03WWFC385	NB03WWFC385-001	Flounder, Winter (WF)	142	37.1	-	
NBC		NBC-TW-0409	NB03WWFC386	NB03WWFC386-001	Flounder, Winter (WF)	105	11.7	-	
NBC		NBC-TW-0409	NB03WWFC387	NB03WWFC387-001	Flounder, Winter (WF)	110	15.7	-	
NBC		NBC-TW-0409	NB03WWFC388	NB03WWFC388-001	Flounder, Winter (WF)	110	16.3	-	
NBC		NBC-TW-0409	NB03WWFC389	NB03WWFC389-001	Flounder, Winter (WF)	98	10.9	-	
NBC		NBC-TW-0409	NB03WWFC390	NB03WWFC390-001	Flounder, Winter (WF)	102	12.5	-	
NBC		NBC-TW-0409	NB03WWFC391	NB03WWFC391-001	Flounder, Winter (WF)	115	18.8	-	
NBC		NBC-TW-0409	NB03WWFC392	NB03WWFC392-001	Flounder, Winter (WF)	82	6.3	-	
NBC		NBC-TW-0409	NB03WWFC393	NB03WWFC393-001	Flounder, Winter (WF)	92	10.2	-	
NBC		NBC-TW-0409	NB03WWFC394	NB03WWFC394-001	Flounder, Winter (WF)	88	7.5	-	
NBC		NBC-TW-0409	NB03WWFC395	NB03WWFC395-001	Flounder, Winter (WF)	112	17	-	
NBC		NBC-TW-0409	NB03WWFC396	NB03WWFC396-001	Flounder, Winter (WF)	98	10.5	-	
NBC		NBC-TW-0409	NB03WWFC397	NB03WWFC397-001	Flounder, Winter (WF)	102	11.2	-	
NBC		NBC-TW-0409	NB03WWFC398	NB03WWFC398-001	Flounder, Winter (WF)	110	14.8	-	
NBC		NBC-TW-0409	NB03WWFC399	NB03WWFC399-001	Flounder, Winter (WF)	105	12.5	-	
NBC		NBC-TW-0409	NB03WWFC400	NB03WWFC400-001	Flounder, Winter (WF)	98	10	-	
NBC		NBC-TW-0409	NB03WHAC401	NB03WHAC401-001	Hake, Spotted (HA)	92	6.9	-	
NBC		NBC-TW-0409	NB03WHAC402	NB03WHAC402-001	Hake, Spotted (HA)	88	5.8	-	
NBC		NBC-TW-0409	NB03WHAC403	NB03WHAC403-001	Hake, Spotted (HA)	75	3.5	-	
NBC		NBC-TW-0409	NB03WHAC404	NB03WHAC404-001	Hake, Spotted (HA)	75	3.4	-	
NBC		NBC-TW-0409	NB03WHAC405	NB03WHAC405-001	Hake, Spotted (HA)	92	6.7	-	
NBC		NBC-TW-0409	NB03WHAC406	NB03WHAC406-001	Hake, Spotted (HA)	80	3.9	-	
NBC		NBC-TW-0409	NB03WHAC407	NB03WHAC407-001	Hake, Spotted (HA)	90	5.6	-	
NBC		NBC-TW-0409	NB03WHAC408	NB03WHAC408-001	Hake, Spotted (HA)	82	5.0	-	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Tissue Weight (if applicable) (g)	Comments
NBC		NBC-TW-0409	NB03WHAC409	NB03WHAC409-001	Hake, Spotted (HA)	70	2.7	-	
NBC		NBC-TW-0409	NB03WHAC410	NB03WHAC410-001	Hake, Spotted (HA)	70	2.9	-	
NBC		NBC-TW-0409	NB03WHAC411	NB03WHAC411-001	Hake, Spotted (HA)	80	3.8	-	
NBC		NBC-TW-0409	NB03WHAC412	NB03WHAC412-001	Hake, Spotted (HA)	75	3.7	-	
NBC		NBC-TW-0409	NB03WHAC413	NB03WHAC413-001	Hake, Spotted (HA)	72	3.1	-	
NBC		NBC-TW-0409	NB03WHAC414	NB03WHAC414-001	Hake, Spotted (HA)	72	3.1	-	
NBC		NBC-TW-0409	NB03WHAC415	NB03WHAC415-001	Hake, Spotted (HA)	75	3.7	-	
NBC		NBC-TW-0409	NB03WHAC416	NB03WHAC416-001	Hake, Spotted (HA)	78	3.8	-	
NBC		NBC-TW-0409	NB03WHAC417	NB03WHAC417-001	Hake, Spotted (HA)	88	5.8	-	
NBC		NBC-TW-0409	NB03WHAC418	NB03WHAC418-001	Hake, Spotted (HA)	87	4.5	-	
NBC		NBC-TW-0409	NB03WHAC419	NB03WHAC419-001	Hake, Spotted (HA)	70	2.7	-	
NBC		NBC-TW-0409	NB03WHAC420	NB03WHAC420-001	Hake, Spotted (HA)	72	2.8	-	
NBC		NBC-TW-0409	NB03WHAC421	NB03WHAC421-001	Hake, Spotted (HA)	78	3.7	-	
NBC		NBC-TW-0409	NB03WHAC422	NB03WHAC422-001	Hake, Spotted (HA)	75	3.1	-	
NBC		NBC-TW-0409	NB03WHAC423	NB03WHAC423-001	Hake, Spotted (HA)	72	3.6	-	
NBC		NBC-TW-0409	NB03WHAC424	NB03WHAC424-001	Hake, Spotted (HA)	90	5.7	-	
NBC		NBC-TW-0409	NB03WHAC425	NB03WHAC425-001	Hake, Spotted (HA)	68	2.7	-	
NBC		NBC-TW-0409	NB03WHAC426	NB03WHAC426-001	Hake, Spotted (HA)	90	5.7	-	
NBC		NBC-TW-0409	NB03WHAC427	NB03WHAC427-001	Hake, Spotted (HA)	80	3.9	-	
NBC		NBC-TW-0409	NB03WHAC428	NB03WHAC428-001	Hake, Spotted (HA)	75	3.3	-	
NBC		NBC-TW-0409	NB03WHAC429	NB03WHAC429-001	Hake, Spotted (HA)	88	5.9	-	
NBC		NBC-TW-0409	NB03WHAC430	NB03WHAC430-001	Hake, Spotted (HA)	80	4.3	-	
NBC		NBC-TW-0409	NB03WHAC431	NB03WHAC431-001	Hake, Spotted (HA)	70	3.0	-	
NBC		NBC-TW-0409	NB03WHAC432	NB03WHAC432-001	Hake, Spotted (HA)	90	5.9	-	
NBC		NBC-TW-0409	NB03WHAC433	NB03WHAC433-001	Hake, Spotted (HA)	75	4.2	-	
NBC		NBC-TW-0409	NB03WHAC434	NB03WHAC434-001	Hake, Spotted (HA)	72	3.0	-	
NBC		NBC-TW-0409	NB03WHAC435	NB03WHAC435-001	Hake, Spotted (HA)	90	6.3	-	
NBC		NBC-TW-0409	NB03WHAC436	NB03WHAC436-001	Hake, Spotted (HA)	72	3.1	-	
NBC		NBC-TW-0409	NB03WHAC437	NB03WHAC437-001	Hake, Spotted (HA)	75	3.1	-	
NBC		NBC-TW-0409	NB03WHAC438	NB03WHAC438-001	Hake, Spotted (HA)	70	2.6	-	
NBC		NBC-TW-0409	NB03WHAC439	NB03WHAC439-001	Hake, Spotted (HA)	75	3.3	-	
NBC		NBC-TW-0409	NB03WHAC440	NB03WHAC440-001	Hake, Spotted (HA)	68	2.6	-	
NBC		NBC-TW-0409	NB03WHAC441	NB03WHAC441-001	Hake, Spotted (HA)	72	2.9	-	
NBC		NBC-TW-0409	NB03WHAC442	NB03WHAC442-001	Hake, Spotted (HA)	80	3.3	-	
NBC		NBC-TW-0409	NB03WHAC443	NB03WHAC443-001	Hake, Spotted (HA)	82	4.1	-	
NBC		NBC-TW-0409	NB03WHAC444	NB03WHAC444-001	Hake, Spotted (HA)	90	4.6	-	
NBC		NBC-TW-0409	NB03WHAC445	NB03WHAC445-001	Hake, Spotted (HA)	82	3.9	-	
NBC		NBC-TW-0409	NB03WHAC446	NB03WHAC446-001	Hake, Spotted (HA)	102	9.6	-	
NBC		NBC-TW-0409	NB03WHAC447	NB03WHAC447-001	Hake, Spotted (HA)	71	3.1	-	
NBC		NBC-TW-0409	NB03WHAC448	NB03WHAC448-001	Hake, Spotted (HA)	82	4.4	-	
NBC		NBC-TW-0409	NB03WHAC449	NB03WHAC449-001	Hake, Spotted (HA)	78	3.7	-	
NBC		NBC-TW-0409	NB03WHAC450	NB03WHAC450-001	Hake, Spotted (HA)	81	4.4	-	
NBC		NBC-TW-0409	NB03WHAC451	NB03WHAC451-001	Hake, Spotted (HA)	86	4.8	-	

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NBC		NBC-TW-0409	NB03WHAC452	NB03WHAC452-001	Hake, Spotted (HA)	91	6.5	-	
NBC		NBC-TW-0409	NB03WHAC453	NB03WHAC453-001	Hake, Spotted (HA)	108	10.6	-	
NBC		NBC-TW-0409	NB03WHAC454	NB03WHAC454-001	Hake, Spotted (HA)	98	7.7	-	
NBC		NBC-TW-0409	NB03WHAC455	NB03WHAC455-001	Hake, Spotted (HA)	95	6.8	-	
NBC		NBC-TW-0409	NB03WHAC456	NB03WHAC456-001	Hake, Spotted (HA)	92	6.6	-	
NBC		NBC-TW-0409	NB03WHAC457	NB03WHAC457-001	Hake, Spotted (HA)	78	3.9	-	
NBC		NBC-TW-0409	NB03WHAC458	NB03WHAC458-001	Hake, Spotted (HA)	70	2.9	-	
NBC		NBC-TW-0409	NB03WHAC459	NB03WHAC459-001	Hake, Spotted (HA)	80	3.7	-	
NBC		NBC-TW-0409	NB03WHAC460	NB03WHAC460-001	Hake, Spotted (HA)	70	2.6	-	
NBC		NBC-TW-0409	NB03WHAC461	NB03WHAC461-001	Hake, Spotted (HA)	72	3.3	-	
NBC		NBC-TW-0409	NB03WHAC462	NB03WHAC462-001	Hake, Spotted (HA)	82	5.2	-	
NBC		NBC-TW-0409	NB03WHAC463	NB03WHAC463-001	Hake, Spotted (HA)	90	6.6	-	
NBC		NBC-TW-0409	NB03WHAC464	NB03WHAC464-001	Hake, Spotted (HA)	71	3.0	-	
NBC		NBC-TW-0409	NB03WHAC465	NB03WHAC465-001	Hake, Spotted (HA)	85	4.9	-	
NBC		NBC-TW-0409	NB03WHAC466	NB03WHAC466-001	Hake, Spotted (HA)	82	4.2	-	
NBC		NBC-TW-0409	NB03WHAC467	NB03WHAC467-001	Hake, Spotted (HA)	80	3.8	-	
NBC		NBC-AG-0602	NB03FBLC468	NB03FBLC468-001	Bluefish (BL)	362	460	200	
NBC		NBC-AG-0602	NB03FBLC469	NB03FBLC469-001	Bluefish (BL)	378	530	235	
NBC		NBC-AG-0602	NB03FBLC470	NB03FBLC470-001	Bluefish (BL)	368	420	184	
NBC		NBC-AG-0602	NB03FBLC471	NB03FBLC471-001	Bluefish (BL)	368	460	212	
NBC		NBC-TL-0602	NB03FBLC472	NB03FBLC472-001	Bluefish (BL)	342	370	170	
NBC		NBC-TL-0602	NB03FBLC473	NB03FBLC473-001	Bluefish (BL)	351	376	175	
NBC		NBC-AG-0603	NB03FBLC474	NB03FBLC474-001	Bluefish (BL)	309	275	116	
NBC		NBC-AG-0603	NB03FBLC475	NB03FBLC475-001	Bluefish (BL)	415	610	245	
NBC		NBC-AG-0604	NB03FBLC476	NB03FBLC476-001	Bluefish (BL)	358	408	194	
NBC		NBC-AG-0604	NB03FBLC477	NB03FBLC477-001	Bluefish (BL)	335	390	176	
NBC		NBC-AG-0604	NB03FBLC478	NB03FBLC478-001	Bluefish (BL)	452	490	336	
NBC		NBC-AG-0605	NB03FBLC479	NB03FBLC479-001	Bluefish (BL)	360	490	224	
NBC		NBC-AG-0605	NB03FBLC480	NB03FBLC480-001	Bluefish (BL)	310	264	112	
NBC		NBC-AG-0605	NB03FBLC481	NB03FBLC481-001	Bluefish (BL)	379	454	184	
NBC		NBC-AG-0605	NB03FBLC482	NB03FBLC482-001	Bluefish (BL)	357	402	170	
NBC		NBC-AG-0608	NB03FBLC483	NB03FBLC483-001	Bluefish (BL)	331	326	146	
NBC		NBC-AG-0608	NB03FBLC484	NB03FBLC484-001	Bluefish (BL)	342	362	152	
NBC		NBC-AG-0608	NB03FBLC485	NB03FBLC485-001	Bluefish (BL)	351	394	164	
NBC		NBC-AG-0729	NB03FSFC486	NB03FSFC486-001	Flounder, Summer (SF)	426	730	340	
NBC		NBC-AG-0729	NB03FSFC487	NB03FSFC487-001	Flounder, Summer (SF)	412	750	230	
NBC		NBC-AG-0729	NB03FSFC488	NB03FSFC488-001	Flounder, Summer (SF)	512	1750	735	
NBC		NBC-AG-0729	NB03FSFC489	NB03FSFC489-001	Flounder, Summer (SF)	397	570	220	
NBC		NBC-AG-0729	NB03FSFC490	NB03FSFC490-001	Flounder, Summer (SF)	391	624	292	
NBC		NBC-AG-0730	NB03FSFC491	NB03FSFC491-001	Flounder, Summer (SF)	572	1930	770	
NBC		NBC-EP-0731	NB03WAEC492	NB03WAEC492-001	Eel, American (AE)	382	95	-	
NBC		NBC-AG-0803	NB03WSFC493	NB03WSFC493-001	Flounder, Summer (SF)	390	468	-	
NBC		NBC-EP-0803	NB03WAEC494	NB03WAEC494-001	Eel, American (AE)	514	207	-	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Tissue Weight (if applicable) (g)	Comments
NBC		NBC-EP-0803	NB03FAEC495	NB03FAEC495-001	Eel, American (AE)	564	384	200	
NBC		NBC-EP-0804	NB03WAEC496	NB03WAEC496-001	Eel, American (AE)	459	196	-	
NBC		NBC-EP-0804	NB03WAEC497	NB03WAEC497-001	Eel, American (AE)	355	88	-	
NBC		NBC-EP-0804	NB03WAEC498	NB03WAEC498-001	Eel, American (AE)	334	80	-	
NBC		NBC-EP-0804	NB03WAEC499	NB03WAEC499-001	Eel, American (AE)	382	116	-	
NBC		NBC-EP-0804	NB03WAEC500	NB03WAEC500-001	Eel, American (AE)	337	79	-	
NBC		NBC-EP-0804	NB03WAEC501	NB03WAEC501-001	Eel, American (AE)	342	76	-	
NBC		NBC-EP-0804	NB03FAEC502	NB03FAEC502-001	Eel, American (AE)	552	399	196	
NBC		NBC-EP-0804	NB03FAEC503	NB03FAEC503-001	Eel, American (AE)	570	400	150	
NBC		NBC-EP-0804	NB03FAEC504	NB03FAEC504-001	Eel, American (AE)	540	320	138	
NBC		NBC-EP-0804	NB03FAEC505	NB03FAEC505-001	Eel, American (AE)	520	290	90	
NBC		NBC-EP-0804	NB03FAEC506	NB03FAEC506-001	Eel, American (AE)	535	292	136	
NBC		NBC-EP-0804	NB03FAEC507	NB03FAEC507-001	Eel, American (AE)	470	208	86	
NBC		NBC-EP-0805	NB03FAEC508	NB03FAEC508-001	Eel, American (AE)	700	800	288	
NBC		NBC-EP-0805	NB03FAEC509	NB03FAEC509-001	Eel, American (AE)	590	425	130	
NBC		NBC-EP-0805	NB03WAEC510	NB03WAEC510-001	Eel, American (AE)	515	270	-	
NBC		NBC-EP-0805	NB03WAEC511	NB03WAEC511-001	Eel, American (AE)	458	190	-	
NBC		NBC-EP-0805	NB03WAEC512	NB03WAEC512-001	Eel, American (AE)	445	170	-	
NBC		NBC-EP-0805	NB03WAEC513	NB03WAEC513-001	Eel, American (AE)	490	250	-	
NBC		NBC-EP-0805	NB03WAEC514	NB03WAEC514-001	Eel, American (AE)	505	240	-	
NBC		NBC-EP-0805	NB03WAEC515	NB03WAEC515-001	Eel, American (AE)	390	115	-	
NBC		NBC-EP-0805	NB03WAEC516	NB03WAEC516-001	Eel, American (AE)	382	100	-	
NBN		NBN-TW-0330	NB03WWPN037	NB03WWPN037-001	Perch, White (WP)	160	55	-	
NBN		NBN-TW-0330	NB03WWPN038	NB03WWPN038-001	Perch, White (WP)	223	170	-	
NBN		NBN-TW-0330	NB03WWPN039	NB03WWPN039-001	Perch, White (WP)	160	60	-	
NBN		NBN-TW-0330	NB03WWPN040	NB03WWPN040-001	Perch, White (WP)	230	185	-	
NBN		NBN-TW-0330	NB03WWPN041	NB03WWPN041-001	Perch, White (WP)	255	288	-	
NBN		NBN-TW-0330	NB03WWPN042	NB03WWPN042-001	Perch, White (WP)	230	190	-	
NBN		NBN-TW-0330	NB03WWPN043	NB03WWPN043-001	Perch, White (WP)	255	275	-	
NBN		NBN-TW-0330	NB03WWPN044	NB03WWPN044-001	Perch, White (WP)	183	85	-	
NBN		NBN-TW-0330	NB03WWPN045	NB03WWPN045-001	Perch, White (WP)	235	180	-	
NBN		NBN-TW-0330	NB03WWPN046	NB03WWPN046-001	Perch, White (WP)	190	100	-	
NBN		NBN-TW-0330	NB03WWPN047	NB03WWPN047-001	Perch, White (WP)	260	275	-	
NBN		NBN-TW-0330	NB03WWPN048	NB03WWPN048-001	Perch, White (WP)	240	210	-	
NBN		NBN-TW-0330	NB03WWPN049	NB03WWPN049-001	Perch, White (WP)	170	70	-	
NBN		NBN-TW-0330	NB03WWPN050	NB03WWPN050-001	Perch, White (WP)	170	62	-	
NBN		NBN-TW-0330	NB03WWPN051	NB03WWPN051-001	Perch, White (WP)	195	115	-	
NBN		NBN-TW-0330	NB03FWPN052	NB03FWPN052-001	Perch, White (WP)	235	210	60.7	Liver weight = 4.2g
NBN		NBN-TW-0330	NB03FWPN053	NB03FWPN053-001	Perch, White (WP)	242	260	80.0	Liver weight = 7.1g
NBN		NBN-TW-0330	NB03FWPN054	NB03FWPN054-001	Perch, White (WP)	230	190	62.5	Liver weight = 5.1g
NBN		NBN-TW-0330	NB03FWPN055	NB03FWPN055-001	Perch, White (WP)	245	250	92.0	Liver weight = 3.6g
NBN		NBN-TW-0330	NB03FWPN056	NB03FWPN056-001	Perch, White (WP)	280	360	119.5	Liver weight = 8.3g
NBN		NBN-TW-0330	NB03FWPN057	NB03FWPN057-001	Perch, White (WP)	235	240	80.0	Liver weight = 6.5g

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Tissue Weight (if applicable) (g)	Comments
NBN		NBN-TW-0330	NB03FWPN058	NB03FWPN058-001	Perch, White (WP)	230	200	72.1	Liver weight = 4.7g
NBN		NBN-TW-0330	NB03FWPN059	NB03FWPN059-001	Perch, White (WP)	250	245	64.0	Liver weight = 3.8g
NBN		NBN-TW-0330	NB03FWPN060	NB03FWPN060-001	Perch, White (WP)	250	245	86.0	Liver weight = 5.4g
NBN		NBN-TW-0330	NB03FWPN061	NB03FWPN061-001	Perch, White (WP)	250	230	80.0	Liver weight = 4.2g
NBN		NBN-TW-0330	NB03FWPN062	NB03FWPN062-001	Perch, White (WP)	230	230	83.7	Liver weight = 6.2g
NBN		NBN-TW-0330	NB03FWPN063	NB03FWPN063-001	Perch, White (WP)	215	150	55.0	Liver weight = 3.4g
NBN		NBN-TW-0330	NB03FWPN064	NB03FWPN064-001	Perch, White (WP)	245	240	78.4	Liver weight = 5.5g
NBN		NBN-TW-0330	NB03FWPN065	NB03FWPN065-001	Perch, White (WP)	225	195	67.0	Liver weight = 4.6g
NBN		NBN-TW-0330	NB03FWPN066	NB03FWPN066-001	Perch, White (WP)	225	225	84.0	Liver weight = 7.4g
NBN		NBN-TW-0330	NB03FWPN067	NB03FWPN067-001	Perch, White (WP)	248	248	75.0	Liver weight = 5.8g
NBN		NBN-TW-0330	NB03FWPN068	NB03FWPN068-001	Perch, White (WP)	225	175	58.0	Liver weight = 3.0g
NBN		NBN-TW-0330	NB03FWPN069	NB03FWPN069-001	Perch, White (WP)	215	150	50.0	Liver weight = 2.1g
NBN		NBN-TW-0330	NB03LWPN070	NB03LWPN070-001	Perch, White (WP)	230	180	3.4	
NBN		NBN-TW-0330	NB03LWPN071	NB03LWPN071-001	Perch, White (WP)	210	140	3.2	
NBN		NBN-TW-0330	NB03LWPN072	NB03LWPN072-001	Perch, White (WP)	174	80	1.7	
NBN		NBN-TW-0330	NB03LWPN073	NB03LWPN073-001	Perch, White (WP)	210	148	4.1	
NBN		NBN-TW-0330	NB03LWPN074	NB03LWPN074-001	Perch, White (WP)	250	275	8.2	
NBN		NBN-TW-0330	NB03LWPN075	NB03LWPN075-001	Perch, White (WP)	190	100	2.4	
NBN		NBN-TW-0330	NB03LWPN076	NB03LWPN076-001	Perch, White (WP)	210	160	5.3	
NBN		NBN-TW-0330	NB03LWPN077	NB03LWPN077-001	Perch, White (WP)	200	110	1.7	
NBN		NBN-TW-0330	NB03LWPN078	NB03LWPN078-001	Perch, White (WP)	180	90	1.0	
NBN		NBN-TW-0330	NB03LWPN079	NB03LWPN079-001	Perch, White (WP)	180	80	1.8	
NBN		NBN-TW-0330	NB03LWPN080	NB03LWPN080-001	Perch, White (WP)	190	90	2.6	
NBN		NBN-TW-0330	NB03LWPN081	NB03LWPN081-001	Perch, White (WP)	180	85	1.7	
NBN		NBN-TW-0330	NB03LWPN082	NB03LWPN082-001	Perch, White (WP)	170	70	1.7	
NBN		NBN-TW-0330	NB03LWPN083	NB03LWPN083-001	Perch, White (WP)	230	180	3.7	
NBN		NBN-TW-0330	NB03LWPN084	NB03LWPN084-001	Perch, White (WP)	175	80	2.4	
NBN		NBN-TW-0330	NB03LWPN085	NB03LWPN085-001	Perch, White (WP)	170	65	1.7	
NBN		NBN-TW-0330	NB03LWPN086	NB03LWPN086-001	Perch, White (WP)	200	130	3.1	
NBN		NBN-TW-0330	NB03LWPN087	NB03LWPN087-001	Perch, White (WP)	240	240	5.0	
NBN		NBN-TW-0330	NB03LWPN088	NB03LWPN088-001	Perch, White (WP)	215	150	3.1	
NBN		NBN-TW-0330	NB03LWPN089	NB03LWPN089-001	Perch, White (WP)	170	65	1.4	
NBN		NBN-TW-0330	NB03LWPN090	NB03LWPN090-001	Perch, White (WP)	165	75	1.9	
NBN		NBN-TW-0330	NB03LWPN091	NB03LWPN091-001	Perch, White (WP)	170	80	2.2	
NBN		NBN-TW-0330	NB03LWPN092	NB03LWPN092-001	Perch, White (WP)	190	100	2.0	
NBN		NBN-TW-0330	NB03LWPN093	NB03LWPN093-001	Perch, White (WP)	180	75	1.9	
NBN		NBN-TW-0330	NB03LWPN094	NB03LWPN094-001	Perch, White (WP)	170	70	1.9	
NBN		NBN-TW-0330	NB03LWPN095	NB03LWPN095-001	Perch, White (WP)	170	60	1.6	
NBN		NBN-TW-0330	NB03LWPN096	NB03LWPN096-001	Perch, White (WP)	185	90	2.1	
NBN		NBN-TW-0330	NB03LWPN097	NB03LWPN097-001	Perch, White (WP)	160	60	1.6	
NBN		NBN-TW-0330	NB03LWPN098	NB03LWPN098-001	Perch, White (WP)	160	55	1.3	
NBN		NBN-TW-0330	NB03LWPN099	NB03LWPN099-001	Perch, White (WP)	146	45	0.8	
NBN		NBN-TW-0330	NB03LWPN100	NB03LWPN100-001	Perch, White (WP)	155	50	0.6	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Tissue Weight (if applicable) (g)	Comments
NBN		NBN-TW-0330	NB03LWPN101	NB03LWPN101-001	Perch, White (WP)	158	50	1.5	
NBN		NBN-TW-0330	NB03LWPN102	NB03LWPN102-001	Perch, White (WP)	180	80	2.3	
NBN		NBN-TW-0330	NB03LWPN103	NB03LWPN103-001	Perch, White (WP)	155	55	1.6	
NBN		NBN-TW-0330	NB03LWPN104	NB03LWPN104-001	Perch, White (WP)	120	20	0.4	
NBN		NBN-TW-0330	NB03LWPN105	NB03LWPN105-001	Perch, White (WP)	110	15	0.3	
NBN		NBN-TW-0330	NB03LWPN106	NB03LWPN106-001	Perch, White (WP)	100	10	0.2	
NBN		NBN-TW-0330	NB03LWPN107	NB03LWPN107-001	Perch, White (WP)	180	90	3.1	
NBN		NBN-TW-0330	NB03LWPN108	NB03LWPN108-001	Perch, White (WP)	195	120	2.9	
NBN		NBN-TW-0330	NB03LWPN109	NB03LWPN109-001	Perch, White (WP)	175	90	2.0	
NBN		NBN-TW-0330	NB03LWPN110	NB03LWPN110-001	Perch, White (WP)	170	63	1.7	
NBN		NBN-TW-0330	NB03LWPN111	NB03LWPN111-001	Perch, White (WP)	185	91	2.1	
NBN		NBN-TW-0330	NB03LWPN112	NB03LWPN112-001	Perch, White (WP)	180	70	2.1	
NBN		NBN-TW-0330	NB03LWPN113	NB03LWPN113-001	Perch, White (WP)	170	70	1.9	
NBN		NBN-TW-0330	NB03LWPN114	NB03LWPN114-001	Perch, White (WP)	170	70	1.4	
NBN		NBN-TW-0330	NB03LWPN115	NB03LWPN115-001	Perch, White (WP)	155	50	1.2	
NBN		NBN-TW-0330	NB03LWPN116	NB03LWPN116-001	Perch, White (WP)	175	70	1.6	
NBN		NBN-TW-0330	NB03LWPN117	NB03LWPN117-001	Perch, White (WP)	190	100	2.3	
NBN		NBN-TW-0330	NB03LWPN118	NB03LWPN118-001	Perch, White (WP)	175	85	1.9	
NBN		NBN-TW-0330	NB03LWPN119	NB03LWPN119-001	Perch, White (WP)	170	70	1.7	
NBN		NBN-TW-0330	NB03LWPN120	NB03LWPN120-001	Perch, White (WP)	180	95	2.7	
NBN		NBN-TW-0330	NB03LWPN121	NB03LWPN121-001	Perch, White (WP)	165	65	1.5	
NBN		NBN-TW-0330	NB03LWPN122	NB03LWPN122-001	Perch, White (WP)	170	70	1.6	
NBN		NBN-TW-0330	NB03LWPN123	NB03LWPN123-001	Perch, White (WP)	165	60	1.1	
NBN		NBN-TW-0330	NB03LWPN124	NB03LWPN124-001	Perch, White (WP)	175	70	1.6	
NBN		NBN-TW-0330	NB03LWPN125	NB03LWPN125-001	Perch, White (WP)	175	85	2.2	
NBN		NBN-TW-0330	NB03LWPN126	NB03LWPN126-001	Perch, White (WP)	260	290	5.1	
NBN		NBN-TW-0330	NB03LWPN127	NB03LWPN127-001	Perch, White (WP)	230	180	4.2	
NBN		NBN-TW-0330	NB03LWPN128	NB03LWPN128-001	Perch, White (WP)	205	180	2.7	
NBN		NBN-TW-0330	NB03LWPN129	NB03LWPN129-001	Perch, White (WP)	190	110	2.8	
NBN		NBN-TW-0330	NB03LWPN130	NB03LWPN130-001	Perch, White (WP)	205	140	3.5	
NBN		NBN-TW-0330	NB03LWPN131	NB03LWPN131-001	Perch, White (WP)	230	200	3.9	
NBN		NBN-TW-0330	NB03LWPN132	NB03LWPN132-001	Perch, White (WP)	225	160	3.4	
NBN		NBN-TW-0330	NB03LWPN133	NB03LWPN133-001	Perch, White (WP)	110	15	0.3	
NBN		NBN-TW-0330	NB03LWPN134	NB03LWPN134-001	Perch, White (WP)	218	160	3.5	
NBN		NBN-TW-0330	NB03LWPN135	NB03LWPN135-001	Perch, White (WP)	120	20	0.5	
NBN		NBN-TW-0330	NB03LWPN136	NB03LWPN136-001	Perch, White (WP)	210	170	2.7	
NBN		NBN-TW-0330	NB03LWPN137	NB03LWPN137-001	Perch, White (WP)	189	100	2.3	
NBN		NBN-TW-0330	NB03LWPN138	NB03LWPN138-001	Perch, White (WP)	180	90	1.9	
NBN		NBN-TW-0330	NB03LWPN139	NB03LWPN139-001	Perch, White (WP)	200	140	2.4	
NBN		NBN-TW-0330	NB03LWPN140	NB03LWPN140-001	Perch, White (WP)	190	110	2.1	
NBN		NBN-TW-0330	NB03LWPN141	NB03LWPN141-001	Perch, White (WP)	190	115	2.5	
NBN		NBN-TW-0330	NB03LWPN142	NB03LWPN142-001	Perch, White (WP)	175	75	1.7	
NBN		NBN-TW-0330	NB03LWPN143	NB03LWPN143-001	Perch, White (WP)	152	50	1.0	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Tissue Weight (if applicable) (g)	Comments
NBN		NBN-TW-0330	NB03LWPN144	NB03LWPN144-001	Perch, White (WP)	175	80	2.1	
NBN		NBN-TW-0330	NB03LWPN145	NB03LWPN145-001	Perch, White (WP)	210	150	4.3	
NBN		NBN-TW-0330	NB03LWPN146	NB03LWPN146-001	Perch, White (WP)	180	80	1.7	
NBN		NBN-TW-0330	NB03LWPN147	NB03LWPN147-001	Perch, White (WP)	165	60	1.6	
NBN		NBN-TW-0330	NB03LWPN148	NB03LWPN148-001	Perch, White (WP)	112	20	0.4	
NBN		NBN-TW-0330	NB03LWPN149	NB03LWPN149-001	Perch, White (WP)	120	20	0.5	
NBN		NBN-TW-0330	NB03LWPN150	NB03LWPN150-001	Perch, White (WP)	165	60	1.4	
NBN		NBN-TW-0330	NB03LWPN151	NB03LWPN151-001	Perch, White (WP)	130	30	0.6	
NBN		NBN-TW-0330	NB03LWPN152	NB03LWPN152-001	Perch, White (WP)	160	60	1.3	
NBN		NBN-TW-0330	NB03LWPN153	NB03LWPN153-001	Perch, White (WP)	158	50	0.6	
NBN		NBN-TW-0330	NB03LWPN154	NB03LWPN154-001	Perch, White (WP)	200	105	2.2	
NBN		NBN-TW-0330	NB03LWPN155	NB03LWPN155-001	Perch, White (WP)	185	90	2.4	
NBN		NBN-TW-0330	NB03LWPN156	NB03LWPN156-001	Perch, White (WP)	195	110	2.6	
NBN		NBN-TW-0330	NB03LWPN157	NB03LWPN157-001	Perch, White (WP)	220	170	5.2	
NBN		NBN-TW-0330	NB03LWPN158	NB03LWPN158-001	Perch, White (WP)	205	100	2.0	
NBN		NBN-TW-0330	NB03LWPN159	NB03LWPN159-001	Perch, White (WP)	165	65	1.5	
NBN		NBN-TW-0330	NB03LWPN160	NB03LWPN160-001	Perch, White (WP)	175	70	1.8	
NBN		NBN-TW-0330	NB03LWPN161	NB03LWPN161-001	Perch, White (WP)	250	240	4.1	
NBN		NBN-TW-0330	NB03LWPN162	NB03LWPN162-001	Perch, White (WP)	150	50	1.4	
NBN		NBN-TW-0330	NB03LWPN163	NB03LWPN163-001	Perch, White (WP)	175	70	1.8	
NBN		NBN-TW-0330	NB03LWPN164	NB03LWPN164-001	Perch, White (WP)	275	350	5.6	
NBN		NBN-TW-0330	NB03LWPN165	NB03LWPN165-001	Perch, White (WP)	190	100	2.4	
NBN		NBN-TW-0330	NB03LWPN166	NB03LWPN166-001	Perch, White (WP)	150	50	0.9	
NBN		NBN-TW-0330	NB03LWPN167	NB03LWPN167-001	Perch, White (WP)	195	100	2.4	
NBN		NBN-TW-0330	NB03LWPN168	NB03LWPN168-001	Perch, White (WP)	185	90	2.1	
NBN		NBN-TW-0330	NB03LWPN169	NB03LWPN169-001	Perch, White (WP)	170	70	1.9	
NBN		NBN-TW-0330	NB03LWPN170	NB03LWPN170-001	Perch, White (WP)	175	80	1.8	
NBN		NBN-TW-0330	NB03LWPN171	NB03LWPN171-001	Perch, White (WP)	110	20	0.5	
NBN		NBN-TW-0330	NB03LWPN172	NB03LWPN172-001	Perch, White (WP)	220	160	3.3	
NBN		NBN-TW-0330	NB03LWPN173	NB03LWPN173-001	Perch, White (WP)	110	20	0.3	
NBN		NBN-TW-0330	NB03LWPN174	NB03LWPN174-001	Perch, White (WP)	245	180	3.8	
NBN		NBN-TW-0330	NB03LWPN175	NB03LWPN175-001	Perch, White (WP)	195	100	2.1	
NBN		NBN-TW-0330	NB03LWPN176	NB03LWPN176-001	Perch, White (WP)	190	100	2.1	
NBN		NBN-TW-0330	NB03LWPN177	NB03LWPN177-001	Perch, White (WP)	190	90	1.9	
NBN		NBN-TW-0330	NB03LWPN178	NB03LWPN178-001	Perch, White (WP)	225	155	3.0	
NBN		NBN-TW-0330	NB03LWPN179	NB03LWPN179-001	Perch, White (WP)	200	110	2.5	
NBN		NBN-TW-0330	NB03LWPN180	NB03LWPN180-001	Perch, White (WP)	180	90	2.6	
NBN		NBN-TW-0330	NB03LWPN181	NB03LWPN181-001	Perch, White (WP)	200	120	3.4	
NBN		NBN-TW-0330	NB03LWPN182	NB03LWPN182-001	Perch, White (WP)	210	140	2.8	
NBN		NBN-TW-0330	NB03LWPN183	NB03LWPN183-001	Perch, White (WP)	215	170	3.3	
NBN		NBN-TW-0330	NB03LWPN184	NB03LWPN184-001	Perch, White (WP)	230	170	3.3	
NBN		NBN-TW-0330	NB03LWPN185	NB03LWPN185-001	Perch, White (WP)	160	65	1.6	
NBN		NBN-TW-0330	NB03LWPN186	NB03LWPN186-001	Perch, White (WP)	175	80	1.5	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Tissue Weight (if applicable) (g)	Comments
NBN		NBN-TW-0330	NB03LWPN187	NB03LWPN187-001	Perch, White (WP)	180	70	1.4	
NBN		NBN-TW-0330	NB03LWPN188	NB03LWPN188-001	Perch, White (WP)	150	45	1.0	
NBN		NBN-TW-0330	NB03LWPN189	NB03LWPN189-001	Perch, White (WP)	210	125	2.4	
NBN		NBN-TW-0330	NB03LWPN190	NB03LWPN190-001	Perch, White (WP)	200	120	3.6	
NBN		NBN-TW-0330	NB03LWPN191	NB03LWPN191-001	Perch, White (WP)	225	190	3.5	
NBN		NBN-TW-0330	NB03LWPN192	NB03LWPN192-001	Perch, White (WP)	200	120	2.6	
NBN		NBN-TW-0330	NB03LWPN193	NB03LWPN193-001	Perch, White (WP)	205	150	3.7	
NBN		NBN-TW-0330	NB03LWPN194	NB03LWPN194-001	Perch, White (WP)	215	160	4.2	
NBN		NBN-TW-0330	NB03LWPN195	NB03LWPN195-001	Perch, White (WP)	230	180	4.3	
NBN		NBN-TW-0330	NB03LWPN196	NB03LWPN196-001	Perch, White (WP)	185	95	1.8	
NBN		NBN-TW-0330	NB03LWPN197	NB03LWPN197-001	Perch, White (WP)	200	120	2.6	
NBN		NBN-TW-0330	NB03LWPN198	NB03LWPN198-001	Perch, White (WP)	205	125	2.3	
NBN		NBN-TW-0330	NB03LWPN199	NB03LWPN199-001	Perch, White (WP)	230	200	4.3	
NBN		NBN-TW-0330	NB03LWPN200	NB03LWPN200-001	Perch, White (WP)	180	90	2.2	
NBN		NBN-TW-0330	NB03LWPN201	NB03LWPN201-001	Perch, White (WP)	165	65	1.9	
NBN		NBN-TW-0330	NB03LWPN202	NB03LWPN202-001	Perch, White (WP)	150	50	1.4	
NBN		NBN-TW-0330	NB03WWFN203	NB03WWFN203-001	Flounder, Winter (WF)	115	15.3	-	
NBN		NBN-TW-0330	NB03WSFN204	NB03WSFN204-001	Flounder, Summer (SF)	205	77.1	-	
NBN		NBN-TW-0406	NB03WHAN205	NB03WHAN205-001	Hake, Spotted (HA)	78	3.0	-	
NBN		NBN-TW-0406	NB03WHAN206	NB03WHAN206-001	Hake, Spotted (HA)	107	10.0	-	
NBN		NBN-TW-0406	NB03WWFN207	NB03WWFN207-001	Flounder, Winter (WF)	111	15	-	
NBN		NBN-TW-0406	NB03WWFN208	NB03WWFN208-001	Flounder, Winter (WF)	112	12	-	
NBN		NBN-TW-0406	NB03WWFN209	NB03WWFN209-001	Flounder, Winter (WF)	90	7	-	
NBN		NBN-TW-0406	NB03WWFN210	NB03WWFN210-001	Flounder, Winter (WF)	132	28	-	
NBN		NBN-TW-0406	NB03WWFN211	NB03WWFN211-001	Flounder, Winter (WF)	102	11	-	
NBN		NBN-TW-0406	NB03WWFN212	NB03WWFN212-001	Flounder, Winter (WF)	119	22	-	
NBN		NBN-TW-0406	NB03WWFN213	NB03WWFN213-001	Flounder, Winter (WF)	80	6	-	
NBN		NBN-TW-0406	NB03WWFN214	NB03WWFN214-001	Flounder, Winter (WF)	71	4	-	
NBN		NBN-TW-0406	NB03WWPN215	NB03WWPN215-001	Perch, White (WP)	101	12	-	
NBN		NBN-TW-0406	NB03WWPN216	NB03WWPN216-001	Perch, White (WP)	150	42	-	
NBN		NBN-TW-0406	NB03WWPN217	NB03WWPN217-001	Perch, White (WP)	153	47	-	
NBN		NBN-TW-0406	NB03WWPN218	NB03WWPN218-001	Perch, White (WP)	147	39	-	
NBN		NBN-TW-0406	NB03WWPN219	NB03WWPN219-001	Perch, White (WP)	151	45	-	
NBN		NBN-TW-0406	NB03WWPN220	NB03WWPN220-001	Perch, White (WP)	122	19	-	
NBN		NBN-TW-0406	NB03WWPN221	NB03WWPN221-001	Perch, White (WP)	111	16	-	
NBN		NBN-TW-0406	NB03WWPN222	NB03WWPN222-001	Perch, White (WP)	112	17	-	
NBN		NBN-TW-0406	NB03WWPN223	NB03WWPN223-001	Perch, White (WP)	110	16	-	
NBN		NBN-TW-0406	NB03WWPN224	NB03WWPN224-001	Perch, White (WP)	101	12	-	
NBN		NBN-TW-0406	NB03WWPN225	NB03WWPN225-001	Perch, White (WP)	103	14	-	
NBN		NBN-TW-0406	NB03WWPN226	NB03WWPN226-001	Perch, White (WP)	90	8	-	
NBN		NBN-TW-0406	NB03WWPN227	NB03WWPN227-001	Perch, White (WP)	88	9	-	
NBN		NBN-TW-0406	NB03WWPN228	NB03WWPN228-001	Perch, White (WP)	85	7	-	
NBN		NBN-TW-0406	NB03WWPN229	NB03WWPN229-001	Perch, White (WP)	89	8	-	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Tissue Weight (if applicable) (g)	Comments
NBN		NBN-TW-0406	NB03WWPN230	NB03WWPN230-001	Perch, White (WP)	100	12	-	
NBN		NBN-TW-0406	NB03WWPN231	NB03WWPN231-001	Perch, White (WP)	87	7	-	
NBN		NBN-TW-0406	NB03WWPN232	NB03WWPN232-001	Perch, White (WP)	88	11	-	
NBN		NBN-TW-0406	NB03WWPN233	NB03WWPN233-001	Perch, White (WP)	88	8	-	
NBN		NBN-TW-0406	NB03FWPN234	NB03FWPN234-001	Perch, White (WP)	185	81	27.7	Liver weight = 1.0g
NBN		NBN-TW-0406	NB03FWPN235	NB03FWPN235-001	Perch, White (WP)	188	88	30.4	Liver weight = 1.3g
NBN		NBN-TW-0406	NB03FWPN236	NB03FWPN236-001	Perch, White (WP)	186	82	27.3	Liver weight = 1.3g
NBN		NBN-TW-0407	NB03WHAN237	NB03WHAN237-001	Hake, Spotted (HA)	91	9	-	
NBN		NBN-TW-0407	NB03WSFN238	NB03WSFN238-001	Flounder, Summer (SF)	188	48	-	
NBN		NBN-TW-0407	NB03WWFN239	NB03WWFN239-001	Flounder, Winter (WF)	143	34	-	
NBN		NBN-TW-0407	NB03WWFN240	NB03WWFN240-001	Flounder, Winter (WF)	121	18	-	
NBN		NBN-TW-0407	NB03WWFN241	NB03WWFN241-001	Flounder, Winter (WF)	89	10	-	
NBN		NBN-TW-0407	NB03WWFN242	NB03WWFN242-001	Flounder, Winter (WF)	106	14	-	
NBN		NBN-TW-0407	NB03WWPN243	NB03WWPN243-001	Perch, White (WP)	157	48	-	
NBN		NBN-TW-0407	NB03WWPN244	NB03WWPN244-001	Perch, White (WP)	118	20	-	
NBN		NBN-TW-0407	NB03WWPN245	NB03WWPN245-001	Perch, White (WP)	101	13	-	
NBN		NBN-TW-0407	NB03WWPN246	NB03WWPN246-001	Perch, White (WP)	120	19	-	
NBN		NBN-TW-0407	NB03WWPN247	NB03WWPN247-001	Perch, White (WP)	84	7	-	
NBN		NBN-TW-0407	NB03WWPN248	NB03WWPN248-001	Perch, White (WP)	91	9	-	
NBN		NBN-TW-0407	NB03WWPN249	NB03WWPN249-001	Perch, White (WP)	76	5	-	
NBN		NBN-TW-0407	NB03WWPN250	NB03WWPN250-001	Perch, White (WP)	94	10	-	
NBN		NBN-TW-0407	NB03LWPN251	NB03LWPN251-001	Perch, White (WP)	190	102	2.5	
NBN		NBN-TW-0407	NB03LWPN252	NB03LWPN252-001	Perch, White (WP)	217	162	3.5	
NBN		NBN-TW-0408	NB03FWPN253	NB03FWPN253-001	Perch, White (WP)	215	161	58.7	Liver weight = 3.1g
NBN		NBN-TW-0408	NB03FWPN254	NB03FWPN254-001	Perch, White (WP)	205	138	47.8	Liver weight = 2.7g
NBN		NBN-TW-0408	NB03FWPN255	NB03FWPN255-001	Perch, White (WP)	190	98	38.6	Liver weight = 1.8g
NBN		NBN-TW-0408	NB03FWPN256	NB03FWPN256-001	Perch, White (WP)	195	96	37.9	Liver weight = 2.1g
NBN		NBN-TW-0408	NB03LWPN257	NB03LWPN257-001	Perch, White (WP)	180	75	1.5	
NBN		NBN-TW-0408	NB03LWPN258	NB03LWPN258-001	Perch, White (WP)	182	55	2.5	
NBN		NBN-TW-0408	NB03LWPN259	NB03LWPN259-001	Perch, White (WP)	175	68	1.4	
NBN		NBN-TW-0408	NB03LWPN260	NB03LWPN260-001	Perch, White (WP)	167	50	1.2	
NBN		NBN-TW-0408	NB03LWPN261	NB03LWPN261-001	Perch, White (WP)	192	103	2.3	
NBN		NBN-TW-0408	NB03LWPN262	NB03LWPN262-001	Perch, White (WP)	163	55	1.2	
NBN		NBN-TW-0408	NB03LWPN263	NB03LWPN263-001	Perch, White (WP)	169	57	0.6	
NBN		NBN-TW-0408	NB03LWPN264	NB03LWPN264-001	Perch, White (WP)	160	52	0.5	
NBN		NBN-TW-0408	NB03LWPN265	NB03LWPN265-001	Perch, White (WP)	144	35	0.9	
NBN		NBN-TW-0408	NB03LWPN266	NB03LWPN266-001	Perch, White (WP)	135	25	0.7	
NBN		NBN-TW-0408	NB03LWPN267	NB03LWPN267-001	Perch, White (WP)	123	18	0.5	
NBN		NBN-TW-0408	NB03LWPN268	NB03LWPN268-001	Perch, White (WP)	110	12	0.1	
NBN		NBN-TW-0408	NB03LWPN269	NB03LWPN269-001	Perch, White (WP)	116	14	0.5	
NBN		NBN-TW-0408	NB03LWPN270	NB03LWPN270-001	Perch, White (WP)	134	22	0.4	
NBN		NBN-TW-0408	NB03LWPN271	NB03LWPN271-001	Perch, White (WP)	111	12	0.3	
NBN		NBN-TW-0408	NB03LWPN272	NB03LWPN272-001	Perch, White (WP)	111	15	0.3	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Tissue Weight (if applicable) (g)	Comments
NBN		NBN-TW-0408	NB03LWPN273	NB03LWPN273-001	Perch, White (WP)	114	15	0.2	
NBN		NBN-TW-0408	NB03LWPN274	NB03LWPN274-001	Perch, White (WP)	110	11	0.2	
NBN		NBN-TW-0408	NB03LWPN275	NB03LWPN275-001	Perch, White (WP)	118	15	0.4	
NBN		NBN-TW-0408	NB03LWPN276	NB03LWPN276-001	Perch, White (WP)	116	13	0.3	
NBN		NBN-TW-0408	NB03LWPN277	NB03LWPN277-001	Perch, White (WP)	114	12	0.3	
NBN		NBN-TW-0408	NB03LWPN278	NB03LWPN278-001	Perch, White (WP)	115	12	0.3	
NBN		NBN-TW-0408	NB03LWPN279	NB03LWPN279-001	Perch, White (WP)	113	11	0.3	
NBN		NBN-TW-0408	NB03LWPN280	NB03LWPN280-001	Perch, White (WP)	119	14	0.3	
NBN		NBN-TW-0408	NB03LWPN281	NB03LWPN281-001	Perch, White (WP)	109	12	0.2	
NBN		NBN-TW-0408	NB03LWPN282	NB03LWPN282-001	Perch, White (WP)	114	11	0.3	
NBN		NBN-TW-0408	NB03LWPN283	NB03LWPN283-001	Perch, White (WP)	108	11	0.4	
NBN		NBN-TW-0408	NB03LWPN284	NB03LWPN284-001	Perch, White (WP)	103	11	0.2	
NBN		NBN-TW-0408	NB03LWPN285	NB03LWPN285-001	Perch, White (WP)	102	11	0.2	
NBN		NBN-TW-0408	NB03LWPN286	NB03LWPN286-001	Perch, White (WP)	109	10	0.3	
NBN		NBN-TW-0408	NB03LWPN287	NB03LWPN287-001	Perch, White (WP)	100	10	0.2	
NBN		NBN-TW-0408	NB03LWPN288	NB03LWPN288-001	Perch, White (WP)	101	10	0.2	
NBN		NBN-TW-0408	NB03LWPN289	NB03LWPN289-001	Perch, White (WP)	94	8	0.1	
NBN		NBN-TW-0408	NB03LWPN290	NB03LWPN290-001	Perch, White (WP)	96	9	0.2	
NBN		NBN-TW-0408	NB03LWPN291	NB03LWPN291-001	Perch, White (WP)	88	6	0.2	
NBN		NBN-TW-0408	NB03LWPN292	NB03LWPN292-001	Perch, White (WP)	96	5	0.1	
NBN		NBN-TW-0408	NB03LWPN293	NB03LWPN293-001	Perch, White (WP)	103	5	0.2	
NBN		NBN-TW-0408	NB03LWPN294	NB03LWPN294-001	Perch, White (WP)	100	5	0.1	
NBN		NBN-TW-0408	NB03LWPN295	NB03LWPN295-001	Perch, White (WP)	85	3	0.1	
NBN		NBN-TW-0408	NB03LWPN296	NB03LWPN296-001	Perch, White (WP)	86	3	0.1	
NBN		NBN-TW-0408	NB03LWPN297	NB03LWPN297-001	Perch, White (WP)	93	4	0.1	
NBN		NBN-TW-0408	NB03LWPN298	NB03LWPN298-001	Perch, White (WP)	91	4	0.1	
NBN		NBN-TW-0408	NB03LWPN299	NB03LWPN299-001	Perch, White (WP)	95	4	0.1	
NBN		NBN-TW-0408	NB03LWPN300	NB03LWPN300-001	Perch, White (WP)	96	4	0.1	
NBN		NBN-TW-0408	NB03LWPN301	NB03LWPN301-001	Perch, White (WP)	85	3	0.1	
NBN		NBN-TW-0408	NB03LWPN302	NB03LWPN302-001	Perch, White (WP)	85	4	0.1	
NBN		NBN-TW-0408	NB03LWPN303	NB03LWPN303-001	Perch, White (WP)	84	3	0.1	
NBN		NBN-TW-0408	NB03LWPN304	NB03LWPN304-001	Perch, White (WP)	100	5	0.1	
NBN		NBN-TW-0408	NB03LWPN305	NB03LWPN305-001	Perch, White (WP)	95	5	0.1	
NBN		NBN-TW-0408	NB03LWPN306	NB03LWPN306-001	Perch, White (WP)	88	3	0.2	
NBN		NBN-TW-0408	NB03LWPN307	NB03LWPN307-001	Perch, White (WP)	89	4	0.1	
NBN		NBN-TW-0408	NB03LWPN308	NB03LWPN308-001	Perch, White (WP)	80	3	0.2	
NBN		NBN-TW-0408	NB03LWPN309	NB03LWPN309-001	Perch, White (WP)	85	4	0.1	
NBN		NBN-TW-0408	NB03LWPN310	NB03LWPN310-001	Perch, White (WP)	86	3	0.2	
NBN		NBN-TW-0408	NB03LWPN311	NB03LWPN311-001	Perch, White (WP)	87	3	0.1	
NBN		NBN-TW-0408	NB03WHAN312	NB03WHAN312-001	Hake, Spotted (HA)	71	3	-	
NBN		NBN-TW-0408	NB03WHAN313	NB03WHAN313-001	Hake, Spotted (HA)	78	3.4	-	
NBN		NBN-TW-0408	NB03WHAN314	NB03WHAN314-001	Hake, Spotted (HA)	74	3	-	
NBN		NBN-TW-0408	NB03WHAN315	NB03WHAN315-001	Hake, Spotted (HA)	70	2.6	-	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Tissue Weight (if applicable) (g)	Comments
NBN		NBN-TW-0408	NB03WHAN316	NB03WHAN316-001	Hake, Spotted (HA)	67	2.5	-	
NBN		NBN-TW-0408	NB03WHAN317	NB03WHAN317-001	Hake, Spotted (HA)	88	5.4	-	
NBN		NBN-TW-0408	NB03WHAN318	NB03WHAN318-001	Hake, Spotted (HA)	65	2.0	-	
NBN		NBN-TW-0408	NB03WHAN319	NB03WHAN319-001	Hake, Spotted (HA)	77	3.7	-	
NBN		NBN-TW-0408	NB03WHAN320	NB03WHAN320-001	Hake, Spotted (HA)	72	2.8	-	
NBN		NBN-TW-0408	NB03WWFN321	NB03WWFN321-001	Flounder, Winter (WF)	106	14	-	
NBN		NBN-TW-0408	NB03WWFN322	NB03WWFN322-001	Flounder, Winter (WF)	93	9	-	
NBN		NBN-TW-0408	NB03WWFN323	NB03WWFN323-001	Flounder, Winter (WF)	116	17.9	-	
NBN		NBN-TW-0408	NB03WWFN324	NB03WWFN324-001	Flounder, Winter (WF)	100	11.2	-	
NBN		NBN-TW-0408	NB03WWFN325	NB03WWFN325-001	Flounder, Winter (WF)	115	17.6	-	
NBN		NBN-TW-0408	NB03WWFN326	NB03WWFN326-001	Flounder, Winter (WF)	115	19.3	-	
NBN		NBN-TW-0409	NB03WHAN327	NB03WHAN327-001	Hake, Spotted (HA)	192	6.8	-	
NBN		NBN-TW-0409	NB03WHAN328	NB03WHAN328-001	Hake, Spotted (HA)	90	5.9	-	
NBN		NBN-TW-0409	NB03WHAN329	NB03WHAN329-001	Hake, Spotted (HA)	86	4.7	-	
NBN		NBN-TW-0409	NB03WHAN330	NB03WHAN330-001	Hake, Spotted (HA)	82	4.7	-	
NBN		NBN-TW-0409	NB03WHAN331	NB03WHAN331-001	Hake, Spotted (HA)	100	8.6	-	
NBN		NBN-TW-0409	NB03WHAN332	NB03WHAN332-001	Hake, Spotted (HA)	88	5.6	-	
NBN		NBN-TW-0409	NB03WHAN333	NB03WHAN333-001	Hake, Spotted (HA)	75	3.4	-	
NBN		NBN-TW-0409	NB03WSFN334	NB03WSFN334-001	Flounder, Summer (SF)	168	43.5	-	
NBN		NBN-TW-0409	NB03WWFN335	NB03WWFN335-001	Flounder, Winter (WF)	97	11.3	-	
NBN		NBN-TW-0409	NB03WWFN336	NB03WWFN336-001	Flounder, Winter (WF)	82	7.1	-	
NBN		NBN-TW-0409	NB03WWFN337	NB03WWFN337-001	Flounder, Winter (WF)	105	13.3	-	
NBN		NBN-TW-0409	NB03WWFN338	NB03WWFN338-001	Flounder, Winter (WF)	90	9.7	-	
NBN		NBN-TW-0409	NB03WWFN339	NB03WWFN339-001	Flounder, Winter (WF)	90	9.1	-	
NBN		NBN-TW-0409	NB03WWFN340	NB03WWFN340-001	Flounder, Winter (WF)	100	13.6	-	
NBN		NBN-TW-0409	NB03WWFN341	NB03WWFN341-001	Flounder, Winter (WF)	78	5.7	-	
NBN		NBN-TW-0409	NB03WWFN342	NB03WWFN342-001	Flounder, Winter (WF)	102	12.7	-	
NBN		NBN-TW-0409	NB03WWFN343	NB03WWFN343-001	Flounder, Winter (WF)	98	11.7	-	
NBN		NBN-TW-0409	NB03WWFN344	NB03WWFN344-001	Flounder, Winter (WF)	95	9.8	-	
NBN		NBN-TW-0409	NB03WWFN345	NB03WWFN345-001	Flounder, Winter (WF)	98	11.2	-	
NBN		NBN-TW-0409	NB03WWFN346	NB03WWFN346-001	Flounder, Winter (WF)	110	17.1	-	
NBN		NBN-TW-0409	NB03WWFN347	NB03WWFN347-001	Flounder, Winter (WF)	106	15.2	-	
NBN		NBN-TW-0409	NB03WWFN348	NB03WWFN348-001	Flounder, Winter (WF)	88	8.7	-	
NBN		NBN-TW-0409	NB03WWFN349	NB03WWFN349-001	Flounder, Winter (WF)	130	26.8	-	
NBN		NBN-TW-0409	NB03WWFN350	NB03WWFN350-001	Flounder, Winter (WF)	145	41.2	-	
NBN		NBN-TW-0409	NB03WWFN351	NB03WWFN351-001	Flounder, Winter (WF)	260	245	-	
NBN		NBN-TW-0409	NB03WWFN352	NB03WWFN352-001	Flounder, Winter (WF)	225	133.1	-	
NBN		NBN-TW-0409	NB03WWFN353	NB03WWFN353-001	Flounder, Winter (WF)	200	102	-	
NBN		NBN-TW-0409	NB03WWFN354	NB03WWFN354-001	Flounder, Winter (WF)	62	3.0	-	
NBN		NBN-TW-0409	NB03WWPN355	NB03WWPN355-001	Perch, White (WP)	155	51.7	-	
NBN		NBN-TW-0409	NB03WWPN356	NB03WWPN356-001	Perch, White (WP)	145	38.6	-	
NBN		NBN-TW-0409	NB03WWPN357	NB03WWPN357-001	Perch, White (WP)	158	51	-	
NBN		NBN-TW-0409	NB03WWPN358	NB03WWPN358-001	Perch, White (WP)	157	58	-	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Tissue Weight (if applicable) (g)	Comments
NBN		NBN-TW-0409	NB03WWPN359	NB03WWPN359-001	Perch, White (WP)	105	8	-	
NBN		NBN-TW-0409	NB03WWPN360	NB03WWPN360-001	Perch, White (WP)	155	47.5	-	
NBN		NBN-TW-0409	NB03WWPN361	NB03WWPN361-001	Perch, White (WP)	120	19	-	
NBN		NBN-TW-0409	NB03WWPN362	NB03WWPN362-001	Perch, White (WP)	110	15.1	-	
NBN		NBN-TW-0409	NB03WWPN363	NB03WWPN363-001	Perch, White (WP)	120	19.8	-	
NBN		NBN-TW-0409	NB03WWPN364	NB03WWPN364-001	Perch, White (WP)	102	12.7	-	
NBN		NBN-TW-0409	NB03WWPN365	NB03WWPN365-001	Perch, White (WP)	140	33.8	-	
NBN		NBN-TW-0409	NB03WWPN366	NB03WWPN366-001	Perch, White (WP)	151	50.8	-	
NBN		NBN-TW-0409	NB03WWPN367	NB03WWPN367-001	Perch, White (WP)	152	27.6	-	
NBN		NBN-TW-0409	NB03WWPN368	NB03WWPN368-001	Perch, White (WP)	158	49	-	
NBN		NBN-TW-0409	NB03WWPN369	NB03WWPN369-001	Perch, White (WP)	158	47	-	
NBN		NBN-TW-0409	NB03WWPN370	NB03WWPN370-001	Perch, White (WP)	110	14.8	-	
NBN		NBN-TW-0409	NB03WWPN371	NB03WWPN371-001	Perch, White (WP)	112	15.3	-	
NBN		NBN-TW-0409	NB03WWPN372	NB03WWPN372-001	Perch, White (WP)	128	22.6	-	
NBN		NBN-TW-0409	NB03WWPN373	NB03WWPN373-001	Perch, White (WP)	85	5.4	-	
NBN		NBN-TW-0409	NB03WWPN374	NB03WWPN374-001	Perch, White (WP)	112	15.4	-	
NBN		NBN-TW-0409	NB03WWPN375	NB03WWPN375-001	Perch, White (WP)	140	34	-	
NBN		NBN-TW-0409	NB03WWPN376	NB03WWPN376-001	Perch, White (WP)	130	26.9	-	
NBN		NBN-TW-0409	NB03WWPN377	NB03WWPN377-001	Perch, White (WP)	140	40	-	
NBN		NBN-TW-0409	NB03WWPN378	NB03WWPN378-001	Perch, White (WP)	122	22.4	-	
NBN		NBN-TW-0409	NB03WWPN379	NB03WWPN379-001	Perch, White (WP)	110	15.5	-	
NBN		NBN-TW-0409	NB03WWPN380	NB03WWPN380-001	Perch, White (WP)	103	14.1	-	
NBN		NBN-TW-0409	NB03LWPN381	NB03LWPN381-001	Perch, White (WP)	255	280	7.5	
NBN		NBN-TW-0409	NB03LWPN382	NB03LWPN382-001	Perch, White (WP)	228	200	3.8	
NBN		NBN-TW-0409	NB03LWPN383	NB03LWPN383-001	Perch, White (WP)	235	180	3.3	
NBN		NBN-TW-0409	NB03LWPN384	NB03LWPN384-001	Perch, White (WP)	210	150	3.0	
NBN		NBN-TW-0409	NB03LWPN385	NB03LWPN385-001	Perch, White (WP)	175	75	1.8	
NBN		NBN-TW-0409	NB03LWPN386	NB03LWPN386-001	Perch, White (WP)	185	90	1.8	
NBN		NBN-TW-0409	NB03LWPN387	NB03LWPN387-001	Perch, White (WP)	198	115	3.7	
NBN		NBN-TW-0409	NB03LWPN388	NB03LWPN388-001	Perch, White (WP)	190	110	2.2	
NBN		NBN-TW-0409	NB03LWPN389	NB03LWPN389-001	Perch, White (WP)	180	80	1.1	
NBN		NBN-TW-0409	NB03LWPN390	NB03LWPN390-001	Perch, White (WP)	165	60	1.3	
NBN		NBN-TW-0409	NB03LWPN391	NB03LWPN391-001	Perch, White (WP)	164	70	1.7	
NBN		NBN-TW-0409	NB03LWPN392	NB03LWPN392-001	Perch, White (WP)	170	65	1.4	
NBN		NBN-TW-0409	NB03LWPN393	NB03LWPN393-001	Perch, White (WP)	202	120	3.0	
NBN		NBN-TW-0409	NB03LWPN394	NB03LWPN394-001	Perch, White (WP)	178	80	0.7	
NBN		NBN-TW-0409	NB03LWPN395	NB03LWPN395-001	Perch, White (WP)	160	60	1.4	
NBN		NBN-TW-0409	NB03LWPN396	NB03LWPN396-001	Perch, White (WP)	180	70	1.7	
NBN		NBN-TW-0409	NB03LWPN397	NB03LWPN397-001	Perch, White (WP)	175	70	1.6	
NBN		NBN-TW-0409	NB03LWPN398	NB03LWPN398-001	Perch, White (WP)	165	55	1.2	
NBN		NBN-TW-0409	NB03LWPN399	NB03LWPN399-001	Perch, White (WP)	166	62	1.2	
NBN		NBN-TW-0409	NB03LWPN400	NB03LWPN400-001	Perch, White (WP)	172	60	1.4	
NBN		NBN-TW-0409	NB03LWPN401	NB03LWPN401-001	Perch, White (WP)	160	50	0.9	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Tissue Weight (if applicable) (g)	Comments
NBN		NBN-TW-0409	NB03LWPN402	NB03LWPN402-001	Perch, White (WP)	168	60	1.4	
NBN		NBN-TW-0409	NB03LWPN403	NB03LWPN403-001	Perch, White (WP)	165	65	1.6	
NBN		NBN-AG-0604	NB03FBLN404	NB03FBLN404-001	Bluefish (BL)	465	1210	340	
NBN		NBN-AG-0604	NB03FBLN405	NB03FBLN405-001	Bluefish (BL)	470	860	375	
NBN		NBN-AG-0604	NB03FBLN406	NB03FBLN406-001	Bluefish (BL)	387	570	270	
NBN		NBN-AG-0728	NB03FSFN407	NB03FSFN407-001	Flounder, Summer (SF)	382	550	210	
NBN		NBN-AG-0728	NB03FSFN408	NB03FSFN408-001	Flounder, Summer (SF)	408	660	225	Small blue crab in stomach
NBN		NBN-AG-0728	NB03FSFN409	NB03FSFN409-001	Flounder, Summer (SF)	460	1000	380	
NBN		NBN-AG-0728	NB03FSFN410	NB03FSFN410-001	Flounder, Summer (SF)	475	1150	480	
NBN		NBN-AG-0728	NB03FSFN411	NB03FSFN411-001	Flounder, Summer (SF)	410	665	240	
NBN		NBN-AG-0730	NB03FSFN412	NB03FSFN412-001	Flounder, Summer (SF)	389	541	248	
NBN		NBN-EP-0729	NB03WAEN413	NB03WAEN413-001	Eel, American (AE)	405	110	-	
NBN		NBN-EP-0729	NB03WAEN414	NB03WAEN414-001	Eel, American (AE)	435	153	-	
NBN		NBN-EP-0729	NB03WAEN415	NB03WAEN415-001	Eel, American (AE)	321	57	-	
NBN		NBN-EP-0729	NB03WAEN416	NB03WAEN416-001	Eel, American (AE)	342	69	-	
NBN		NBN-EP-0729	NB03WAEN417	NB03WAEN417-001	Eel, American (AE)	249	28	-	
NBN		NBN-EP-0729	NB03WAEN418	NB03WAEN418-001	Eel, American (AE)	326	54	-	
NBN		NBN-EP-0729	NB03WAEN419	NB03WAEN419-001	Eel, American (AE)	266	35	-	
NBN		NBN-EP-0729	NB03WAEN420	NB03WAEN420-001	Eel, American (AE)	300	47	-	
NBN		NBN-EP-0729	NB03WAEN421	NB03WAEN421-001	Eel, American (AE)	341	69	-	
NBN		NBN-EP-0729	NB03WAEN422	NB03WAEN422-001	Eel, American (AE)	376	89	-	
NBN		NBN-EP-0729	NB03WAEN423	NB03WAEN423-001	Eel, American (AE)	346	81	-	
NBN		NBN-EP-0729	NB03WAEN424	NB03WAEN424-001	Eel, American (AE)	428	128	-	
NBN		NBN-EP-0729	NB03WAEN425	NB03WAEN425-001	Eel, American (AE)	382	98	-	
NBN		NBN-EP-0729	NB03WAEN426	NB03WAEN426-001	Eel, American (AE)	403	106	-	
NBN		NBN-EP-0729	NB03FAEN427	NB03FAEN427-001	Eel, American (AE)	580	455	176	
NBN		NBN-EP-0729	NB03FAEN428	NB03FAEN428-001	Eel, American (AE)	545	309	108	
NBN		NBN-EP-0729	NB03FAEN429	NB03FAEN429-001	Eel, American (AE)	575	490	200	
NBN		NBN-EP-0729	NB03FAEN430	NB03FAEN430-001	Eel, American (AE)	562	395	140	
NBN		NBN-EP-0729	NB03FAEN431	NB03FAEN431-001	Eel, American (AE)	620	404	169	
NBN		NBN-EP-0729	NB03FAEN432	NB03FAEN432-001	Eel, American (AE)	535	310	120	
NBN		NBN-EP-0729	NB03FAEN433	NB03FAEN433-001	Eel, American (AE)	595	416	202	
NBN		NBN-EP-0729	NB03FAEN434	NB03FAEN434-001	Eel, American (AE)	582	400	170	
NBN		NBN-EP-0729	NB03FAEN435	NB03FAEN435-001	Eel, American (AE)	560	321	152	
NBN		NBN-EP-0729	NB03FAEN436	NB03FAEN436-001	Eel, American (AE)	556	297	150	
NBN		NBN-EP-0729	NB03WAEN437	NB03WAEN437-001	Eel, American (AE)	442	152	-	
NBN		NBN-EP-0729	NB03WAEN438	NB03WAEN438-001	Eel, American (AE)	443	181	-	
NBN		NBN-EP-0729	NB03WAEN439	NB03WAEN439-001	Eel, American (AE)	504	244	-	
NBN		NBN-EP-0729	NB03WAEN440	NB03WAEN440-001	Eel, American (AE)	513	224	-	
NBN		NBN-EP-0729	NB03WAEN441	NB03WAEN441-001	Eel, American (AE)	494	256	-	
NBS		NBS-GN-0331	NB03WWPS024	NB03WWPS024-001	Perch, White (WP)	250	262	-	
NBS		NBS-GN-0331	NB03WWPS025	NB03WWPS025-001	Perch, White (WP)	215	135.8	-	
NBS		NBS-TW-0331	NB03WWPS026	NB03WWPS026-001	Perch, White (WP)	115	15.5	-	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Tissue Weight (if applicable) (g)	Comments
NBS		NBS-TW-0331	NB03WWPS027	NB03WWPS027-001	Perch, White (WP)	105	12.2	-	
NBS		NBS-TW-0331	NB03WWPS028	NB03WWPS028-001	Perch, White (WP)	105	13.1	-	
NBS		NBS-TW-0331	NB03WWPS029	NB03WWPS029-001	Perch, White (WP)	90	8.9	-	
NBS		NBS-TW-0331	NB03WHAS030	NB03WHAS030-001	Hake, Spotted (HA)	75	2.7	-	
NBS		NBS-TW-0331	NB03WHAS031	NB03WHAS031-001	Hake, Spotted (HA)	75	3.4	-	
NBS		NBS-TW-0331	NB03WHAS032	NB03WHAS032-001	Hake, Spotted (HA)	75	2.9	-	
NBS		NBS-TW-0331	NB03WHAS033	NB03WHAS033-001	Hake, Spotted (HA)	80	3.4	-	
NBS		NBS-TW-0331	NB03WWFS034	NB03WWFS034-001	Flounder, Winter (WF)	100	11.1	-	
NBS		NBS-TW-0331	NB03WWFS035	NB03WWFS035-001	Flounder, Winter (WF)	85	6.6	-	
NBS		NBS-TW-0331	NB03WWFS036	NB03WWFS036-001	Flounder, Winter (WF)	115	16.7	-	
NBS		NBS-TW-0331	NB03WWFS037	NB03WWFS037-001	Flounder, Winter (WF)	105	11.3	-	
NBS		NBS-TW-0331	NB03WWFS038	NB03WWFS038-001	Flounder, Winter (WF)	105	10.8	-	
NBS		NBS-TW-0331	NB03WWFS039	NB03WWFS039-001	Flounder, Winter (WF)	115	15.4	-	
NBS		NBS-TW-0331	NB03WWFS040	NB03WWFS040-001	Flounder, Winter (WF)	145	33.5	-	
NBS		NBS-TW-0331	NB03WWFS041	NB03WWFS041-001	Flounder, Winter (WF)	100	10.1	-	
NBS		NBS-TW-0331	NB03WWFS042	NB03WWFS042-001	Flounder, Winter (WF)	110	14.2	-	
NBS		NBS-TW-0331	NB03WWFS043	NB03WWFS043-001	Flounder, Winter (WF)	135	26.7	-	
NBS		NBS-TW-0331	NB03WWFS044	NB03WWFS044-001	Flounder, Winter (WF)	130	27.5	-	
NBS		NBS-TW-0331	NB03WWFS045	NB03WWFS045-001	Flounder, Winter (WF)	110	14.4	-	
NBS		NBS-TW-0331	NB03WWFS046	NB03WWFS046-001	Flounder, Winter (WF)	60	2.7	-	
NBS		NBS-TW-0331	NB03WWFS047	NB03WWFS047-001	Flounder, Winter (WF)	105	11.8	-	
NBS		NBS-TW-0331	NB03WWFS048	NB03WWFS048-001	Flounder, Winter (WF)	80	5.0	-	
NBS		NBS-TW-0331	NB03WWFS049	NB03WWFS049-001	Flounder, Winter (WF)	105	11.8	-	
NBS		NBS-TW-0331	NB03WWFS050	NB03WWFS050-001	Flounder, Winter (WF)	90	7.8	-	
NBS		NBS-TW-0331	NB03WWFS051	NB03WWFS051-001	Flounder, Winter (WF)	85	6.0	-	
NBS		NBS-TW-0401	NB03WWFS052	NB03WWFS052-001	Flounder, Winter (WF)	110	13.1	-	
NBS		NBS-TW-0401	NB03WHAS053	NB03WHAS053-001	Hake, Spotted (HA)	70	2.1	-	
NBS		NBS-TW-0401	NB03WHCS054	NB03WHCS054-001	Hogchoker (HC)	105	23.4	-	
NBS		NBS-TW-0401	NB03WWWS055	NB03WWWS055-001	Flounder, Windowpane (WW)	130	20.3	-	
NBS		NBS-TW-0401	NB03WHAS056	NB03WHAS056-001	Hake, Spotted (HA)	100	7.9	-	
NBS		NBS-TW-0401	NB03WHAS057	NB03WHAS057-001	Hake, Spotted (HA)	70	2.6	-	
NBS		NBS-TW-0401	NB03WWFS058	NB03WWFS058-001	Flounder, Winter (WF)	105	11.7	-	
NBS		NBS-TW-0401	NB03WWFS059	NB03WWFS059-001	Flounder, Winter (WF)	135	29.4	-	
NBS		NBS-TW-0401	NB03WWFS060	NB03WWFS060-001	Flounder, Winter (WF)	85	5.2	-	
NBS		NBS-TW-0401	NB03WWFS061	NB03WWFS061-001	Flounder, Winter (WF)	115	15.5	-	
NBS		NBS-TW-0401	NB03WWFS062	NB03WWFS062-001	Flounder, Winter (WF)	105	10.7	-	
NBS		NBS-TW-0401	NB03WWFS063	NB03WWFS063-001	Flounder, Winter (WF)	100	9.2	-	
NBS		NBS-GN-0402	NB03FWPS064	NB03FWPS064-001	Perch, White (WP)	250	240	75.0	Liver weight = 6.6g
NBS		NBS-GN-0402	NB03FWPS065	NB03FWPS065-001	Perch, White (WP)	280	360	105	Liver weight = 5.4g
NBS		NBS-GN-0402	NB03FWPS066	NB03FWPS066-001	Perch, White (WP)	285	350	115	Liver weight = 6.5g
NBS		NBS-GN-0402	NB03FWPS067	NB03FWPS067-001	Perch, White (WP)	310	560	155	Liver weight = 14.0g
NBS		NBS-GN-0402	NB03FWPS068	NB03FWPS068-001	Perch, White (WP)	240	220	70.0	Liver weight = 5.4g
NBS		NBS-GN-0402	NB03FWPS069	NB03FWPS069-001	Perch, White (WP)	275	315	85.0	Liver weight = 6.6g

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Tissue Weight (if applicable) (g)	Comments
NBS		NBS-GN-0402	NB03FWPS070	NB03FWPS070-001	Perch, White (WP)	278	340	100	Liver weight = 7.9g
NBS		NBS-GN-0402	NB03FWPS071	NB03FWPS071-001	Perch, White (WP)	235	190	53.0	Liver weight = 3.0g
NBS		NBS-GN-0402	NB03FWPS072	NB03FWPS072-001	Perch, White (WP)	225	170	51.0	Liver weight = 2.5g
NBS		NBS-GN-0402	NB03FWPS073	NB03FWPS073-001	Perch, White (WP)	255	285	91.0	Liver weight = 2.0g
NBS		NBS-GN-0402	NB03FWPS074	NB03FWPS074-001	Perch, White (WP)	230	190	58.0	Liver weight = 3.1g
NBS		NBS-GN-0402	NB03FWPS075	NB03FWPS075-001	Perch, White (WP)	215	155	45.0	Liver weight = 2.7g
NBS		NBS-GN-0402	NB03FWPS076	NB03FWPS076-001	Perch, White (WP)	215	165	47.0	Liver weight = 2.5g
NBS		NBS-GN-0402	NB03WWFS077	NB03WWFS077-001	Flounder, Winter (WF)	220	140	-	
NBS		NBS-TW-0406	NB03WSMS078	NB03WSMS078-001	Flounder, Smallmouth (SM)	110	11	-	
NBS		NBS-GN-0407	NB03FWPS079	NB03FWPS079-001	Perch, White (WP)	315	473	176.0	Liver weight = 7.8g
NBS		NBS-GN-0407	NB03FWPS080	NB03FWPS080-001	Perch, White (WP)	280	368	115.1	Liver weight = 8.7g
NBS		NBS-GN-0407	NB03FWPS081	NB03FWPS081-001	Perch, White (WP)	272	315	111.2	Liver weight = 5.0g
NBS		NBS-GN-0407	NB03FWPS082	NB03FWPS082-001	Perch, White (WP)	270	330	117.0	Liver weight = 7.3g
NBS		NBS-GN-0407	NB03FWPS083	NB03FWPS083-001	Perch, White (WP)	263	283	104.2	Liver weight = 6.8g
NBS		NBS-GN-0407	NB03FWPS084	NB03FWPS084-001	Perch, White (WP)	256	290	100.0	Liver weight = 7.6g
NBS		NBS-GN-0407	NB03FWPS085	NB03FWPS085-001	Perch, White (WP)	258	261	104.4	Liver weight = 4.4g
NBS		NBS-GN-0407	NB03FWPS086	NB03FWPS086-001	Perch, White (WP)	262	279	90.8	Liver weight = 4.9g
NBS		NBS-GN-0407	NB03FWPS087	NB03FWPS087-001	Perch, White (WP)	262	274	97.9	Liver weight = 4.5g
NBS		NBS-GN-0407	NB03FWPS088	NB03FWPS088-001	Perch, White (WP)	242	227	85.4	Liver weight = 3.5g
NBS		NBS-GN-0407	NB03FWPS089	NB03FWPS089-001	Perch, White (WP)	245	218	77.6	Liver weight = 3.9g
NBS		NBS-GN-0407	NB03FWPS090	NB03FWPS090-001	Perch, White (WP)	246	217	81.0	Liver weight = 3.4g
NBS		NBS-GN-0407	NB03FWPS091	NB03FWPS091-001	Perch, White (WP)	223	180	67.6	Liver weight = 2.7g
NBS		NBS-GN-0407	NB03FWPS092	NB03FWPS092-001	Perch, White (WP)	222	183	66.0	Liver weight = 5.4g
NBS		NBS-GN-0407	NB03WWPS093	NB03WWPS093-001	Perch, White (WP)	215	147	-	
NBS		NBS-GN-0407	NB03WWPS094	NB03WWPS094-001	Perch, White (WP)	203	158	-	
NBS		NBS-GN-0407	NB03WWPS095	NB03WWPS095-001	Perch, White (WP)	219	167	-	
NBS		NBS-GN-0407	NB03WWPS096	NB03WWPS096-001	Perch, White (WP)	235	200	-	
NBS		NBS-GN-0407	NB03WWPS097	NB03WWPS097-001	Perch, White (WP)	217	170	-	
NBS		NBS-GN-0407	NB03WWPS098	NB03WWPS098-001	Perch, White (WP)	231	195	-	
NBS		NBS-GN-0407	NB03WWPS099	NB03WWPS099-001	Perch, White (WP)	221	148	-	
NBS		NBS-GN-0407	NB03WWPS100	NB03WWPS100-001	Perch, White (WP)	229	171	-	
NBS		NBS-GN-0407	NB03WWPS101	NB03WWPS101-001	Perch, White (WP)	232	192	-	
NBS		NBS-GN-0407	NB03WWPS102	NB03WWPS102-001	Perch, White (WP)	225	181	-	
NBS		NBS-GN-0407	NB03WWPS103	NB03WWPS103-001	Perch, White (WP)	212	158	-	
NBS		NBS-GN-0407	NB03WWPS104	NB03WWPS104-001	Perch, White (WP)	215	160	-	
NBS		NBS-GN-0407	NB03WWPS105	NB03WWPS105-001	Perch, White (WP)	222	173	-	
NBS		NBS-GN-0407	NB03WWPS106	NB03WWPS106-001	Perch, White (WP)	206	151	-	
NBS		NBS-GN-0407	NB03WWPS107	NB03WWPS107-001	Perch, White (WP)	218	160	-	
NBS		NBS-GN-0407	NB03LWPS108	NB03LWPS108-001	Perch, White (WP)	235	200	5.2	
NBS		NBS-GN-0407	NB03LWPS109	NB03LWPS109-001	Perch, White (WP)	236	195	3.9	
NBS		NBS-GN-0407	NB03LWPS110	NB03LWPS110-001	Perch, White (WP)	261	250	6.7	
NBS		NBS-GN-0407	NB03LWPS111	NB03LWPS111-001	Perch, White (WP)	230	195	6.3	
NBS		NBS-GN-0407	NB03LWPS112	NB03LWPS112-001	Perch, White (WP)	233	175	4.0	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Tissue Weight (if applicable) (g)	Comments
NBS		NBS-GN-0407	NB03LWPS113	NB03LWPS113-001	Perch, White (WP)	242	225	5.7	
NBS		NBS-GN-0407	NB03LWPS114	NB03LWPS114-001	Perch, White (WP)	225	175	3.6	
NBS		NBS-GN-0407	NB03LWPS115	NB03LWPS115-001	Perch, White (WP)	230	200	4.0	
NBS		NBS-GN-0407	NB03LWPS116	NB03LWPS116-001	Perch, White (WP)	260	305	8.0	
NBS		NBS-GN-0407	NB03LWPS117	NB03LWPS117-001	Perch, White (WP)	235	225	8.6	
NBS		NBS-GN-0407	NB03LWPS118	NB03LWPS118-001	Perch, White (WP)	240	200	4.2	
NBS		NBS-GN-0407	NB03LWPS119	NB03LWPS119-001	Perch, White (WP)	228	175	4.2	
NBS		NBS-GN-0407	NB03LWPS120	NB03LWPS120-001	Perch, White (WP)	222	200	4.6	
NBS		NBS-GN-0407	NB03LWPS121	NB03LWPS121-001	Perch, White (WP)	212	155	4.0	
NBS		NBS-GN-0407	NB03LWPS122	NB03LWPS122-001	Perch, White (WP)	235	200	5.0	
NBS		NBS-GN-0407	NB03LWPS123	NB03LWPS123-001	Perch, White (WP)	242	250	4.7	
NBS		NBS-GN-0407	NB03LWPS124	NB03LWPS124-001	Perch, White (WP)	248	250	6.7	
NBS		NBS-GN-0407	NB03LWPS125	NB03LWPS125-001	Perch, White (WP)	286	425	12.3	
NBS		NBS-GN-0407	NB03LWPS126	NB03LWPS126-001	Perch, White (WP)	258	255	7.5	
NBS		NBS-GN-0407	NB03LWPS127	NB03LWPS127-001	Perch, White (WP)	231	200	4.6	
NBS		NBS-GN-0407	NB03LWPS128	NB03LWPS128-001	Perch, White (WP)	257	310	7.7	
NBS		NBS-GN-0407	NB03LWPS129	NB03LWPS129-001	Perch, White (WP)	253	275	8.2	
NBS		NBS-GN-0407	NB03LWPS130	NB03LWPS130-001	Perch, White (WP)	240	210	4.9	
NBS		NBS-GN-0407	NB03LWPS131	NB03LWPS131-001	Perch, White (WP)	240	200	4.3	
NBS		NBS-GN-0407	NB03LWPS132	NB03LWPS132-001	Perch, White (WP)	260	290	3.8	
NBS		NBS-GN-0407	NB03LWPS133	NB03LWPS133-001	Perch, White (WP)	244	240	5.6	
NBS		NBS-GN-0407	NB03LWPS134	NB03LWPS134-001	Perch, White (WP)	245	220	6.2	
NBS		NBS-GN-0407	NB03LWPS135	NB03LWPS135-001	Perch, White (WP)	243	225	3.2	
NBS		NBS-GN-0407	NB03LWPS136	NB03LWPS136-001	Perch, White (WP)	264	290	6.9	
NBS		NBS-GN-0407	NB03LWPS137	NB03LWPS137-001	Perch, White (WP)	214	150	2.6	
NBS		NBS-GN-0407	NB03LWPS138	NB03LWPS138-001	Perch, White (WP)	290	450	11.8	
NBS		NBS-GN-0407	NB03LWPS139	NB03LWPS139-001	Perch, White (WP)	230	200	5.0	
NBS		NBS-GN-0407	NB03LWPS140	NB03LWPS140-001	Perch, White (WP)	252	260	7.3	
NBS		NBS-GN-0407	NB03LWPS141	NB03LWPS141-001	Perch, White (WP)	244	220	3.4	
NBS		NBS-GN-0407	NB03LWPS142	NB03LWPS142-001	Perch, White (WP)	216	180	4.1	
NBS		NBS-GN-0407	NB03LWPS143	NB03LWPS143-001	Perch, White (WP)	245	240	6.0	
NBS		NBS-GN-0407	NB03LWPS144	NB03LWPS144-001	Perch, White (WP)	243	210	4.8	
NBS		NBS-GN-0407	NB03LWPS145	NB03LWPS145-001	Perch, White (WP)	240	230	4.2	
NBS		NBS-GN-0407	NB03WWPS146	NB03WWPS146-001	Perch, White (WP)	240	200	-	
NBS		NBS-GN-0407	NB03WWPS147	NB03WWPS147-001	Perch, White (WP)	228	180	-	
NBS		NBS-GN-0407	NB03WWPS148	NB03WWPS148-001	Perch, White (WP)	218	175	-	
NBS		NBS-GN-0407	NB03WWPS149	NB03WWPS149-001	Perch, White (WP)	231	180	-	
NBS		NBS-GN-0407	NB03WWPS150	NB03WWPS150-001	Perch, White (WP)	226	210	-	
NBS		NBS-GN-0407	NB03WWPS151	NB03WWPS151-001	Perch, White (WP)	225	190	-	
NBS		NBS-GN-0407	NB03WWPS152	NB03WWPS152-001	Perch, White (WP)	230	180	-	
NBS		NBS-GN-0407	NB03WWPS153	NB03WWPS153-001	Perch, White (WP)	239	190	-	
NBS		NBS-GN-0407	NB03WWPS154	NB03WWPS154-001	Perch, White (WP)	218	170	-	
NBS		NBS-GN-0407	NB03WWPS155	NB03WWPS155-001	Perch, White (WP)	228	160	-	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Tissue Weight (if applicable) (g)	Comments
NBS		NBS-GN-0407	NB03WWPS156	NB03WWPS156-001	Perch, White (WP)	230	175	-	
NBS		NBS-GN-0407	NB03WWPS157	NB03WWPS157-001	Perch, White (WP)	232	200	-	
NBS		NBS-GN-0407	NB03WWPS158	NB03WWPS158-001	Perch, White (WP)	246	220	-	
NBS		NBS-GN-0407	NB03WWPS159	NB03WWPS159-001	Perch, White (WP)	241	200	-	
NBS		NBS-GN-0407	NB03WWPS160	NB03WWPS160-001	Perch, White (WP)	232	190	-	
NBS		NBS-GN-0407	NB03WWPS161	NB03WWPS161-001	Perch, White (WP)	205	160	-	
NBS		NBS-GN-0407	NB03WWFS162	NB03WWFS162-001	Flounder, Winter (WF)	190	70	-	
NBS		NBS-GN-0408	NB03LWPS163	NB03LWPS163-001	Perch, White (WP)	228	180	3.6	
NBS		NBS-GN-0408	NB03LWPS164	NB03LWPS164-001	Perch, White (WP)	260	310	5.4	
NBS		NBS-GN-0408	NB03LWPS165	NB03LWPS165-001	Perch, White (WP)	255	260	4.7	
NBS		NBS-GN-0408	NB03LWPS166	NB03LWPS166-001	Perch, White (WP)	230	190	4.6	
NBS		NBS-GN-0408	NB03LWPS167	NB03LWPS167-001	Perch, White (WP)	265	310	6.9	
NBS		NBS-GN-0408	NB03LWPS168	NB03LWPS168-001	Perch, White (WP)	252	260	7.2	
NBS		NBS-GN-0408	NB03LWPS169	NB03LWPS169-001	Perch, White (WP)	220	170	3.8	
NBS		NBS-GN-0408	NB03LWPS170	NB03LWPS170-001	Perch, White (WP)	245	230	4.9	
NBS		NBS-GN-0408	NB03LWPS171	NB03LWPS171-001	Perch, White (WP)	275	330	3.9	
NBS		NBS-GN-0408	NB03LWPS172	NB03LWPS172-001	Perch, White (WP)	245	230	5.4	
NBS		NBS-GN-0408	NB03LWPS173	NB03LWPS173-001	Perch, White (WP)	275	370	8.6	
NBS		NBS-GN-0408	NB03LWPS174	NB03LWPS174-001	Perch, White (WP)	260	295	4.7	
NBS		NBS-GN-0408	NB03LWPS175	NB03LWPS175-001	Perch, White (WP)	240	220	7.0	
NBS		NBS-GN-0408	NB03LWPS176	NB03LWPS176-001	Perch, White (WP)	230	180	2.7	
NBS		NBS-GN-0408	NB03LWPS177	NB03LWPS177-001	Perch, White (WP)	235	240	3.3	
NBS		NBS-GN-0408	NB03LWPS178	NB03LWPS178-001	Perch, White (WP)	240	200	3.8	
NBS		NBS-GN-0408	NB03LWPS179	NB03LWPS179-001	Perch, White (WP)	230	200	4.8	
NBS		NBS-GN-0408	NB03LWPS180	NB03LWPS180-001	Perch, White (WP)	240	220	5.1	
NBS		NBS-GN-0408	NB03LWPS181	NB03LWPS181-001	Perch, White (WP)	230	200	4.4	
NBS		NBS-GN-0408	NB03LWPS182	NB03LWPS182-001	Perch, White (WP)	230	210	4.7	
NBS		NBS-GN-0408	NB03LWPS183	NB03LWPS183-001	Perch, White (WP)	290	460	13.6	
NBS		NBS-GN-0408	NB03LWPS184	NB03LWPS184-001	Perch, White (WP)	230	190	3.8	
NBS		NBS-GN-0408	NB03LWPS185	NB03LWPS185-001	Perch, White (WP)	235	180	2.4	
NBS		NBS-GN-0408	NB03LWPS186	NB03LWPS186-001	Perch, White (WP)	230	205	4.2	
NBS		NBS-GN-0408	NB03LWPS187	NB03LWPS187-001	Perch, White (WP)	270	330	9.1	
NBS		NBS-GN-0408	NB03LWPS188	NB03LWPS188-001	Perch, White (WP)	275	370	8.5	
NBS		NBS-GN-0408	NB03LWPS189	NB03LWPS189-001	Perch, White (WP)	225	170	4.3	
NBS		NBS-GN-0408	NB03LWPS190	NB03LWPS190-001	Perch, White (WP)	245	235	6.2	
NBS		NBS-GN-0408	NB03LWPS191	NB03LWPS191-001	Perch, White (WP)	280	375	9.3	
NBS		NBS-GN-0408	NB03LWPS192	NB03LWPS192-001	Perch, White (WP)	245	245	3.7	
NBS		NBS-GN-0408	NB03LWPS193	NB03LWPS193-001	Perch, White (WP)	245	235	6.0	
NBS		NBS-GN-0408	NB03LWPS194	NB03LWPS194-001	Perch, White (WP)	245	210	4.4	
NBS		NBS-GN-0408	NB03LWPS195	NB03LWPS195-001	Perch, White (WP)	235	200	3.3	
NBS		NBS-GN-0408	NB03LWPS196	NB03LWPS196-001	Perch, White (WP)	245	240	4.0	
NBS		NBS-GN-0408	NB03LWPS197	NB03LWPS197-001	Perch, White (WP)	220	170	3.0	
NBS		NBS-GN-0408	NB03LWPS198	NB03LWPS198-001	Perch, White (WP)	270	330	4.2	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Tissue Weight (if applicable) (g)	Comments
NBS		NBS-GN-0408	NB03LWPS199	NB03LWPS199-001	Perch, White (WP)	212	150	4.2	
NBS		NBS-GN-0408	NB03LWPS200	NB03LWPS200-001	Perch, White (WP)	240	220	3.9	
NBS		NBS-GN-0408	NB03LWPS201	NB03LWPS201-001	Perch, White (WP)	225	200	4.5	
NBS		NBS-GN-0408	NB03LWPS202	NB03LWPS202-001	Perch, White (WP)	225	180	4.2	
NBS		NBS-GN-0408	NB03LWPS203	NB03LWPS203-001	Perch, White (WP)	235	210	3.4	
NBS		NBS-GN-0408	NB03LWPS204	NB03LWPS204-001	Perch, White (WP)	212	150	3.3	
NBS		NBS-GN-0408	NB03LWPS205	NB03LWPS205-001	Perch, White (WP)	250	245	4.0	
NBS		NBS-GN-0408	NB03LWPS206	NB03LWPS206-001	Perch, White (WP)	225	190	3.4	
NBS		NBS-GN-0408	NB03LWPS207	NB03LWPS207-001	Perch, White (WP)	230	170	4.3	
NBS		NBS-GN-0408	NB03LWPS208	NB03LWPS208-001	Perch, White (WP)	245	215	4.9	
NBS		NBS-GN-0408	NB03LWPS209	NB03LWPS209-001	Perch, White (WP)	230	200	3.1	
NBS		NBS-GN-0408	NB03LWPS210	NB03LWPS210-001	Perch, White (WP)	225	185	3.4	
NBS		NBS-GN-0408	NB03LWPS211	NB03LWPS211-001	Perch, White (WP)	230	170	3.1	
NBS		NBS-GN-0408	NB03LWPS212	NB03LWPS212-001	Perch, White (WP)	250	250	4.1	
NBS		NBS-GN-0408	NB03LWPS213	NB03LWPS213-001	Perch, White (WP)	225	170	2.7	
NBS		NBS-GN-0408	NB03LWPS214	NB03LWPS214-001	Perch, White (WP)	220	175	3.8	
NBS		NBS-GN-0408	NB03LWPS215	NB03LWPS215-001	Perch, White (WP)	295	450	11.0	
NBS		NBS-GN-0408	NB03LWPS216	NB03LWPS216-001	Perch, White (WP)	235	200	4.5	
NBS		NBS-GN-0408	NB03LWPS217	NB03LWPS217-001	Perch, White (WP)	230	200	3.2	
NBS		NBS-GN-0408	NB03LWPS218	NB03LWPS218-001	Perch, White (WP)	225	190	4.3	
NBS		NBS-GN-0408	NB03LWPS219	NB03LWPS219-001	Perch, White (WP)	275	370	7.4	
NBS		NBS-GN-0408	NB03LWPS220	NB03LWPS220-001	Perch, White (WP)	220	180	3.5	
NBS		NBS-GN-0408	NB03LWPS221	NB03LWPS221-001	Perch, White (WP)	265	340	8.7	
NBS		NBS-GN-0408	NB03LWPS222	NB03LWPS222-001	Perch, White (WP)	240	240	5.8	
NBS		NBS-GN-0408	NB03LWPS223	NB03LWPS223-001	Perch, White (WP)	225	180	3.1	
NBS		NBS-GN-0408	NB03LWPS224	NB03LWPS224-001	Perch, White (WP)	225	190	4.3	
NBS		NBS-GN-0408	NB03LWPS225	NB03LWPS225-001	Perch, White (WP)	230	200	5.1	
NBS		NBS-GN-0408	NB03LWPS226	NB03LWPS226-001	Perch, White (WP)	245	270	4.9	
NBS		NBS-GN-0408	NB03LWPS227	NB03LWPS227-001	Perch, White (WP)	245	250	6.5	
NBS		NBS-GN-0408	NB03LWPS228	NB03LWPS228-001	Perch, White (WP)	225	180	4.1	
NBS		NBS-GN-0408	NB03LWPS229	NB03LWPS229-001	Perch, White (WP)	240	220	5.5	
NBS		NBS-GN-0408	NB03LWPS230	NB03LWPS230-001	Perch, White (WP)	270	360	8.4	
NBS		NBS-GN-0408	NB03LWPS231	NB03LWPS231-001	Perch, White (WP)	220	180	3.8	
NBS		NBS-GN-0408	NB03LWPS232	NB03LWPS232-001	Perch, White (WP)	220	170	2.7	
NBS		NBS-GN-0408	NB03LWPS233	NB03LWPS233-001	Perch, White (WP)	245	255	7.2	
NBS		NBS-GN-0408	NB03LWPS234	NB03LWPS234-001	Perch, White (WP)	252	295	4.5	
NBS		NBS-GN-0408	NB03LWPS235	NB03LWPS235-001	Perch, White (WP)	230	220	4.1	
NBS		NBS-GN-0408	NB03LWPS236	NB03LWPS236-001	Perch, White (WP)	250	255	6.4	
NBS		NBS-GN-0408	NB03LWPS237	NB03LWPS237-001	Perch, White (WP)	240	205	7.0	
NBS		NBS-GN-0408	NB03LWPS238	NB03LWPS238-001	Perch, White (WP)	240	220	5.0	
NBS		NBS-GN-0408	NB03LWPS239	NB03LWPS239-001	Perch, White (WP)	250	260	5.1	
NBS		NBS-GN-0408	NB03LWPS240	NB03LWPS240-001	Perch, White (WP)	215	170	3.7	
NBS		NBS-GN-0408	NB03LWPS241	NB03LWPS241-001	Perch, White (WP)	245	240	6.5	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Tissue Weight (if applicable) (g)	Comments
NBS		NBS-GN-0408	NB03LWPS242	NB03LWPS242-001	Perch, White (WP)	230	200	5.1	
NBS		NBS-GN-0408	NB03LWPS243	NB03LWPS243-001	Perch, White (WP)	220	180	3.0	
NBS		NBS-GN-0408	NB03LWPS244	NB03LWPS244-001	Perch, White (WP)	235	210	4.5	
NBS		NBS-GN-0408	NB03LWPS245	NB03LWPS245-001	Perch, White (WP)	245	250	8.0	
NBS		NBS-GN-0408	NB03LWPS246	NB03LWPS246-001	Perch, White (WP)	275	370	10.7	
NBS		NBS-GN-0408	NB03LWPS247	NB03LWPS247-001	Perch, White (WP)	230	180	4.4	
NBS		NBS-GN-0408	NB03LWPS248	NB03LWPS248-001	Perch, White (WP)	225	170	3.0	
NBS		NBS-GN-0408	NB03LWPS249	NB03LWPS249-001	Perch, White (WP)	244	220	5.8	
NBS		NBS-GN-0408	NB03LWPS250	NB03LWPS250-001	Perch, White (WP)	225	200	4.8	
NBS		NBS-GN-0408	NB03LWPS251	NB03LWPS251-001	Perch, White (WP)	240	200	3.5	
NBS		NBS-GN-0408	NB03LWPS252	NB03LWPS252-001	Perch, White (WP)	240	220	3.9	
NBS		NBS-GN-0408	NB03LWPS253	NB03LWPS253-001	Perch, White (WP)	240	220	5.7	
NBS		NBS-GN-0408	NB03LWPS254	NB03LWPS254-001	Perch, White (WP)	220	160	2.6	
NBS		NBS-GN-0408	NB03LWPS255	NB03LWPS255-001	Perch, White (WP)	235	220	5.7	
NBS		NBS-GN-0408	NB03LWPS256	NB03LWPS256-001	Perch, White (WP)	240	210	5.3	
NBS		NBS-GN-0408	NB03LWPS257	NB03LWPS257-001	Perch, White (WP)	240	240	6.0	
NBS		NBS-GN-0408	NB03LWPS258	NB03LWPS258-001	Perch, White (WP)	210	160	3.4	
NBS		NBS-GN-0408	NB03LWPS259	NB03LWPS259-001	Perch, White (WP)	250	270	6.6	
NBS		NBS-GN-0408	NB03LWPS260	NB03LWPS260-001	Perch, White (WP)	282	400	10.5	
NBS		NBS-GN-0408	NB03LWPS261	NB03LWPS261-001	Perch, White (WP)	232	195	4.4	
NBS		NBS-GN-0408	NB03LWPS262	NB03LWPS262-001	Perch, White (WP)	248	250	5.2	
NBS		NBS-GN-0408	NB03LWPS263	NB03LWPS263-001	Perch, White (WP)	230	210	4.5	
NBS		NBS-GN-0408	NB03LWPS264	NB03LWPS264-001	Perch, White (WP)	250	250	6.7	
NBS		NBS-GN-0408	NB03LWPS265	NB03LWPS265-001	Perch, White (WP)	250	300	7.0	
NBS		NBS-GN-0408	NB03LWPS266	NB03LWPS266-001	Perch, White (WP)	238	210	3.5	
NBS		NBS-GN-0408	NB03LWPS267	NB03LWPS267-001	Perch, White (WP)	230	190	4.3	
NBS		NBS-GN-0408	NB03LWPS268	NB03LWPS268-001	Perch, White (WP)	215	165	4.6	
NBS		NBS-GN-0408	NB03LWPS269	NB03LWPS269-001	Perch, White (WP)	218	160	4.5	
NBS		NBS-GN-0408	NB03LWPS270	NB03LWPS270-001	Perch, White (WP)	280	340	6.2	
NBS		NBS-GN-0409	NB03LWPS271	NB03LWPS271-001	Perch, White (WP)	235	190	5.4	
NBS		NBS-GN-0409	NB03LWPS272	NB03LWPS272-001	Perch, White (WP)	215	150	2.4	
NBS		NBS-GN-0409	NB03LWPS273	NB03LWPS273-001	Perch, White (WP)	215	170	5.1	
NBS		NBS-GN-0409	NB03LWPS274	NB03LWPS274-001	Perch, White (WP)	225	190	5.2	
NBS		NBS-GN-0409	NB03LWPS275	NB03LWPS275-001	Perch, White (WP)	225	170	3.3	
NBS		NBS-GN-0409	NB03LWPS276	NB03LWPS276-001	Perch, White (WP)	265	290	5.9	
NBS		NBS-GN-0409	NB03LWPS277	NB03LWPS277-001	Perch, White (WP)	235	200	5.0	
NBS		NBS-GN-0409	NB03LWPS278	NB03LWPS278-001	Perch, White (WP)	235	230	3.4	
NBS		NBS-GN-0409	NB03LWPS279	NB03LWPS279-001	Perch, White (WP)	255	270	6.0	
NBS		NBS-GN-0409	NB03LWPS280	NB03LWPS280-001	Perch, White (WP)	230	195	3.2	
NBS		NBS-GN-0409	NB03LWPS281	NB03LWPS281-001	Perch, White (WP)	268	340	9.2	
NBS		NBS-GN-0409	NB03LWPS282	NB03LWPS282-001	Perch, White (WP)	225	185	4.3	
NBS		NBS-GN-0409	NB03LWPS283	NB03LWPS283-001	Perch, White (WP)	235	205	3.4	
NBS		NBS-GN-0409	NB03LWPS284	NB03LWPS284-001	Perch, White (WP)	220	170	3.0	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Tissue Weight (if applicable) (g)	Comments
NBS		NBS-GN-0409	NB03LWPS285	NB03LWPS285-001	Perch, White (WP)	235	220	4.3	
NBS		NBS-GN-0409	NB03LWPS286	NB03LWPS286-001	Perch, White (WP)	250	240	4.6	
NBS		NBS-GN-0409	NB03LWPS287	NB03LWPS287-001	Perch, White (WP)	205	150	2.7	
NBS		NBS-GN-0409	NB03LWPS288	NB03LWPS288-001	Perch, White (WP)	245	255	5.1	
NBS		NBS-GN-0409	NB03LWPS289	NB03LWPS289-001	Perch, White (WP)	230	190	3.4	
NBS		NBS-GN-0409	NB03LWPS290	NB03LWPS290-001	Perch, White (WP)	235	200	3.1	
NBS		NBS-GN-0409	NB03LWPS291	NB03LWPS291-001	Perch, White (WP)	222	180	3.1	
NBS		NBS-GN-0409	NB03LWPS292	NB03LWPS292-001	Perch, White (WP)	225	180	2.4	
NBS		NBS-GN-0409	NB03LWPS293	NB03LWPS293-001	Perch, White (WP)	232	190	4.4	
NBS		NBS-GN-0409	NB03LWPS294	NB03LWPS294-001	Perch, White (WP)	230	190	3.9	
NBS		NBS-GN-0409	NB03LWPS295	NB03LWPS295-001	Perch, White (WP)	235	230	6.5	
NBS		NBS-GN-0409	NB03LWPS296	NB03LWPS296-001	Perch, White (WP)	240	240	6.3	
NBS		NBS-GN-0409	NB03LWPS297	NB03LWPS297-001	Perch, White (WP)	265	290	6.8	
NBS		NBS-GN-0409	NB03LWPS298	NB03LWPS298-001	Perch, White (WP)	225	160	4.6	
NBS		NBS-GN-0409	NB03LWPS299	NB03LWPS299-001	Perch, White (WP)	222	190	4.7	
NBS		NBS-GN-0409	NB03LWPS300	NB03LWPS300-001	Perch, White (WP)	228	220	7.3	
NBS		NBS-GN-0409	NB03LWPS301	NB03LWPS301-001	Perch, White (WP)	218	170	4.0	
NBS		NBS-GN-0409	NB03LWPS302	NB03LWPS302-001	Perch, White (WP)	238	190	2.9	
NBS		NBS-GN-0409	NB03LWPS303	NB03LWPS303-001	Perch, White (WP)	270	315	7.5	
NBS		NBS-GN-0409	NB03LWPS304	NB03LWPS304-001	Perch, White (WP)	222	165	2.5	
NBS		NBS-GN-0409	NB03LWPS305	NB03LWPS305-001	Perch, White (WP)	235	225	5.3	
NBS		NBS-GN-0409	NB03LWPS306	NB03LWPS306-001	Perch, White (WP)	220	205	5.5	
NBS		NBS-GN-0409	NB03LWPS307	NB03LWPS307-001	Perch, White (WP)	235	200	4.1	
NBS		NBS-GN-0409	NB03LWPS308	NB03LWPS308-001	Perch, White (WP)	238	215	3.7	
NBS		NBS-GN-0409	NB03LWPS309	NB03LWPS309-001	Perch, White (WP)	230	165	3.1	
NBS		NBS-GN-0409	NB03LWPS310	NB03LWPS310-001	Perch, White (WP)	260	275	4.2	
NBS		NBS-GN-0409	NB03LWPS311	NB03LWPS311-001	Perch, White (WP)	220	165	2.4	
NBS		NBS-GN-0409	NB03LWPS312	NB03LWPS312-001	Perch, White (WP)	245	250	4.1	
NBS		NBS-GN-0409	NB03LWPS313	NB03LWPS313-001	Perch, White (WP)	262	355	9.6	
NBS		NBS-GN-0409	NB03LWPS314	NB03LWPS314-001	Perch, White (WP)	235	240	4.7	
NBS		NBS-GN-0409	NB03LWPS315	NB03LWPS315-001	Perch, White (WP)	230	210	5.3	
NBS		NBS-GN-0409	NB03LWPS316	NB03LWPS316-001	Perch, White (WP)	240	240	5.8	
NBS		NBS-GN-0409	NB03LWPS317	NB03LWPS317-001	Perch, White (WP)	335	190	3.6	
NBS		NBS-GN-0409	NB03LWPS318	NB03LWPS318-001	Perch, White (WP)	222	185	4.9	
NBS		NBS-GN-0409	NB03WWWS319	NB03WWWS319-001	Flounder, Windowpane (WW)	288	215	-	
NBS		NBS-AG-0428	NB03FSBS320	NB03FSBS320-001	Bass, Striped (BS)	978	9526	1690	Gravid
NBS		NBS-AG-0430	NB03FSBS321	NB03FSBS321-001	Bass, Striped (BS)	876	8676	2220	Gravid
NBS		NBS-AG-0430	NB03FSBS322	NB03FSBS322-001	Bass, Striped (BS)	737	4706	1120	
NBS		NBS-AG-0430	NB03FSBS323	NB03FSBS323-001	Bass, Striped (BS)	787	4706	1260	
NBS		NBS-AG-0430	NB03FSBS324	NB03FSBS324-001	Bass, Striped (BS)	800	5443	1375	Scar (line) toward caudal fin
NBS		NBS-AG-0430	NB03FSBS325	NB03FSBS325-001	Bass, Striped (BS)	889	7852	1480	
NBS		NBS-GN-0430	NB03WWWS326	NB03WWWS326-001	Flounder, Windowpane (WW)	324	550	-	
NBS		NBS-AG-0505	NB03FSBS327	NB03FSBS327-001	Bass, Striped (BS)	820	4706	1290	Gravid

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Tissue Weight (if applicable) (g)	Comments
NBS		NBS-AG-0506	NB03FSBS328	NB03FSBS328-001	Bass, Striped (BS)	770	4536	1020	
NBS		NBS-AG-0506	NB03FSBS329	NB03FSBS329-001	Bass, Striped (BS)	750	2948	1020	
NBS		NBS-AG-0506	NB03FSBS330	NB03FSBS330-001	Bass, Striped (BS)	692	2920	1170	
NBS		NBS-AG-0507	NB03FSBS331	NB03FSBS331-001	Bass, Striped (BS)	638	2806	1160	
NBS		NBS-AG-0507	NB03FSBS332	NB03FSBS332-001	Bass, Striped (BS)	620	2098	530	
NBS		NBS-AG-0507	NB03FSBS333	NB03FSBS333-001	Bass, Striped (BS)	787	4990	1760	Immature; missing pectoral fin
NBS		NBS-AG-0507	NB03FSBS334	NB03FSBS334-001	Bass, Striped (BS)	845	6180	1300	
NBS		NBS-AG-0507	NB03FSBS335	NB03FSBS335-001	Bass, Striped (BS)	838	6577	2105	
NBS		NBS-AG-0507	NB03FSBS336	NB03FSBS336-001	Bass, Striped (BS)	667	3856	1340	Ripe eggs
NBS		NBS-AG-0507	NB03FSBS337	NB03FSBS337-001	Bass, Striped (BS)	743	3657	1172	
NBS		NBS-AG-0507	NB03FSBS338	NB03FSBS338-001	Bass, Striped (BS)	707	3232	1330	
NBS		NBS-GN-0603	NB03FBLS339	NB03FBLS339-001	Bluefish (BL)	420	575	245	
NBS		NBS-AG-0603	NB03WSFS340	NB03WSFS340-001	Flounder, Summer (SF)	350	480	-	
NBS		NBS-AG-0603	NB03WSFS341	NB03WSFS341-001	Flounder, Summer (SF)	365	478	-	
NBS		NBS-AG-0603	NB03WSFS342	NB03WSFS342-001	Flounder, Summer (SF)	385	570	-	
NBS		NBS-AG-0603	NB03WSFS343	NB03WSFS343-001	Flounder, Summer (SF)	340	390	-	
NBS		NBS-AG-0603	NB03WSFS344	NB03WSFS344-001	Flounder, Summer (SF)	342	410	-	
NBS		NBS-AG-0603	NB03WSFS345	NB03WSFS345-001	Flounder, Summer (SF)	308	220	-	
NBS		NBS-AG-0603	NB03WSFS346	NB03WSFS346-001	Flounder, Summer (SF)	248	126	-	
NBS		NBS-EP-0603	NB03FAES347	NB03FAES347-001	Eel, American (AE)	790	950	250	
NBS		NBS-AG-0604	NB03WSFS348	NB03WSFS348-001	Flounder, Summer (SF)	345	380	-	
NBS		NBS-AG-0604	NB03FBLS349	NB03FBLS349-001	Bluefish (BL)	377	478	210	
NBS		NBS-EP-0608	NB03WAES350	NB03WAES350-001	Eel, American (AE)	610	374	-	
NBS		NBS-AG-0727	NB03FSFS351	NB03FSFS351-001	Flounder, Summer (SF)	398	630	290	
NBS		NBS-AG-0727	NB03FSFS352	NB03FSFS352-001	Flounder, Summer (SF)	380	522	220	
NBS		NBS-AG-0728	NB03FSFS353	NB03FSFS353-001	Flounder, Summer (SF)	386	490	210	
NBS		NBS-AG-0728	NB03FSFS354	NB03FSFS354-001	Flounder, Summer (SF)	405	670	255	
NBS		NBS-AG-0729	NB03FSFS355	NB03FSFS355-001	Flounder, Summer (SF)	405	640	270	
NBS		NBS-AG-0730	NB03FSFS356	NB03FSFS356-001	Flounder, Summer (SF)	392	610	310	
NBS		NBS-AG-0730	NB03FSFS357	NB03FSFS357-001	Flounder, Summer (SF)	400	610	250	
NBS		NBS-EP-0730	NB03WAES358	NB03WAES358-001	Eel, American (AE)	388	94	-	
NBS		NBS-AG-0731	NB03FSFS359	NB03FSFS359-001	Flounder, Summer (SF)	463	1080	460	
NBS		NBS-EP-0731	NB03WAES360	NB03WAES360-001	Eel, American (AE)	250	30	-	
NBS		NBS-EP-0731	NB03FAES361	NB03FAES361-001	Eel, American (AE)	520	390	120	Tail shorter, deformed slightly
NBS		NBS-EP-0731	NB03FAES362	NB03FAES362-001	Eel, American (AE)	475	230	85	
NBS		NBS-EP-0803	NB03WAES363	NB03WAES363-001	Eel, American (AE)	466	135	-	
NBS		NBS-EP-0804	NB03FAES364	NB03FAES364-001	Eel, American (AE)	610	485	204	
NBS		NBS-EP-0805	NB03FAES365	NB03FAES365-001	Eel, American (AE)	620	500	220	
NBS		NBS-EP-0805	NB03WAES366	NB03WAES366-001	Eel, American (AE)	550	350	-	
NBS		NBS-EP-0805	NB03WAES367	NB03WAES367-001	Eel, American (AE)	480	230	-	
NBS		NBS-EP-0805	NB03WAES368	NB03WAES368-001	Eel, American (AE)	345	80	-	
NBS		NBS-EP-0805	NB03WAES369	NB03WAES369-001	Eel, American (AE)	385	120	-	
NBS		NBS-EP-0805	NB03WAES370	NB03WAES370-001	Eel, American (AE)	502	210	-	

Fish Sampling
Newark Bay Study Area **Draft: For Discussion Purposes Only**
BYCATCH

Zone	Intertidal Area	Catch Code	Specimen ID	Count	Species	Length (mm)	Weight (g)	Comments
NBC		NBC-TW-0330	CRB-001	1	Crab, Blue (CRB)	110	45	
NBN		NBN-TW-0330	AL-001	1	Alewife (AL)	105	2	
NBN		NBN-TW-0330	AL-002	1	Alewife (AL)	126	2.5	
NBN		NBN-TW-0330	AL-003	1	Alewife (AL)	81	1	
NBN		NBN-TW-0330	AL-004	1	Alewife (AL)	78	1	
NBN		NBN-TW-0330	AL-005	1	Alewife (AL)	84	1	
NBN		NBN-TW-0330	AL-006	1	Alewife (AL)	200	50	
NBN		NBN-TW-0330	AL-007	1	Alewife (AL)	130	30	
NBN		NBN-TW-0330	AL-008	1	Alewife (AL)	152	30	
NBN		NBN-TW-0330	AL-009	1	Alewife (AL)	270	180	
NBN		NBN-TW-0330	AL-010	1	Alewife (AL)	278	150	
NBN		NBN-TW-0330	AM-001	1	Shad, American (AM)	100	2	
NBN		NBN-TW-0330	AM-002	1	Shad, American (AM)	137	10	
NBN		NBN-TW-0330	CRB-002	1	Crab, Blue (CRB)	111	50	
NBN		NBN-TW-0330	CRB-003	1	Crab, Blue (CRB)	121	90	
NBN		NBN-TW-0330	CRB-004	1	Crab, Blue (CRB)	120	-	
NBN		NBN-TW-0330	CRB-005	1	Crab, Blue (CRB)	120	70	
NBN		NBN-TW-0330	CRB-006	1	Crab, Blue (CRB)	97	50	
NBN		NBN-TW-0330	CRB-007	1	Crab, Blue (CRB)	115	65	
NBN		NBN-TW-0330	CRB-008	1	Crab, Blue (CRB)	108	55	
NBN		NBN-TW-0330	CRB-009	1	Crab, Blue (CRB)	123	80	
NBN		NBN-TW-0330	CRB-010	1	Crab, Blue (CRB)	35	4	
NBN		NBN-TW-0330	CRB-011	1	Crab, Blue (CRB)	110	90	
NBN		NBN-TW-0330	CRB-012	1	Crab, Blue (CRB)	120	110	
NBN		NBN-TW-0330	LH-001	1	Sculpin, Longhorn (LH)	90	5	
NBN		NBN-TW-0330	SB-040	1	Bass, Striped (SB)	181	80	
NBN		NBN-TW-0330	SB-041	1	Bass, Striped (SB)	320	300	
NBN		NBN-TW-0330	SB-042	1	Bass, Striped (SB)	78	4	
NBC		NBC-TW-0331	CRB-013	1	Crab, Blue (CRB)	120	35	
NBC		NBC-TW-0331	CRB-014	1	Crab, Blue (CRB)	110	30	
NBC		NBC-TW-0331	BB-015	1	Herring, Blueback (BB)	75	1	
NBC		NBC-TW-0331	BB-016	1	Herring, Blueback (BB)	65	1	
NBC		NBC-TW-0331	BB-017	1	Herring, Blueback (BB)	95	1.5	
NBC		NBC-TW-0331	SH-001	1	Shad (SH)	120	1.5	
NBS		NBS-TW-0331	CRB-015	1	Crab, Blue (CRB)	96	55	
NBS		NBS-TW-0331	CRB-016	1	Crab, Blue (CRB)	28	< 5	
NBS		NBS-TW-0331	CRB-017	1	Crab, Blue (CRB)	36	< 5	
NBS		NBS-TW-0331	CRB-018	1	Crab, Blue (CRB)	44	< 5	
NBS		NBS-TW-0331	CRB-019	1	Crab, Blue (CRB)	41	< 5	

Zone	Intertidal Area	Catch Code	Specimen ID	Count	Species	Length (mm)	Weight (g)	Comments
NBS		NBS-TW-0331	CRB-020	1	Crab, Blue (CRB)	36	< 5	
NBS		NBS-TW-0331	CRB-021	1	Crab, Blue (CRB)	29	< 5	
NBS		NBS-TW-0331	CRB-022	1	Crab, Blue (CRB)	36	< 5	
NBS		NBS-TW-0331	CRB-023	1	Crab, Blue (CRB)	40	< 5	
NBS		NBS-TW-0331	CRB-024	1	Crab, Blue (CRB)	100	30	
NBS		NBS-TW-0331	MCR-001	1	Crab, Mud (MCR)	37	< 5	
NBS		NBS-TW-0331	SCR-001	1	Crab, Spider (SCR)	60	100	
NBS		NBS-TW-0331	SB-043	1	Bass, Striped (SB)	155	34	
NBC		NBC-TW-0401	AL-011	1	Alewife (AL)	90	1	
NBC		NBC-TW-0401	AL-012	1	Alewife (AL)	96	1	
NBC		NBC-TW-0401	AL-013	1	Alewife (AL)	86	1	
NBC		NBC-TW-0401	AL-014	1	Alewife (AL)	82	1	
NBC		NBC-TW-0401	AL-015	1	Alewife (AL)	85	1	
NBC		NBC-TW-0401	AL-016	1	Alewife (AL)	91	1	
NBC		NBC-TW-0401	AM-003	1	Shad, American (AM)	107	2	
NBC		NBC-TW-0401	CRB-025	1	Crab, Blue (CRB)	100	30	
NBC		NBC-TW-0401	CRB-026	1	Crab, Blue (CRB)	105	30	
NBC		NBC-TW-0401	BB-018	1	Herring, Blueback (BB)	75	1	
NBC		NBC-TW-0401	BB-019	1	Herring, Blueback (BB)	80	1	
NBC		NBC-TW-0401	BB-020	1	Herring, Blueback (BB)	70	1	
NBC		NBC-TW-0401	BB-021	1	Herring, Blueback (BB)	75	1	
NBC		NBC-TW-0401	BB-022	1	Herring, Blueback (BB)	70	1	
NBC		NBC-TW-0401	BB-023	1	Herring, Blueback (BB)	77	1	
NBC		NBC-TW-0401	BB-024	1	Herring, Blueback (BB)	80	1	
NBC		NBC-TW-0401	BB-025	1	Herring, Blueback (BB)	72	1	
NBC		NBC-TW-0401	BB-026	1	Herring, Blueback (BB)	71	1	
NBC		NBC-TW-0401	SB-044	1	Bass, Striped (SB)	160	30	
NBC		NBC-TW-0401	SB-045	1	Bass, Striped (SB)	125	16	
NBC		NBC-TW-0401	SB-046	1	Bass, Striped (SB)	152	32	
NBC		NBC-TW-0401	SB-047	1	Bass, Striped (SB)	175	25	
NBS		NBS-TW-0401	LH-002	1	Sculpin, Longhorn (LH)	77	< 5	
NBS		NBS-TW-0401	LH-003	1	Sculpin, Longhorn (LH)	72	< 5	
NBS		NBS-TW-0401	SB-048	1	Bass, Striped (SB)	86	< 5	
NBC		NBC-TW-0402	AL-017	1	Alewife (AL)	101	4	
NBC		NBC-TW-0402	AL-018	1	Alewife (AL)	80	3	
NBC		NBC-TW-0402	AL-019	1	Alewife (AL)	81	4	
NBC		NBC-TW-0402	AL-020	1	Alewife (AL)	119	10	
NBC		NBC-TW-0402	AL-021	1	Alewife (AL)	95	6	
NBC		NBC-TW-0402	AL-022	1	Alewife (AL)	80	1	
NBC		NBC-TW-0402	AL-023	1	Alewife (AL)	86	1	
NBC		NBC-TW-0402	AL-024	1	Alewife (AL)	115	7	
NBC		NBC-TW-0402	AL-025	1	Alewife (AL)	105	5	
NBC		NBC-TW-0402	AL-026	1	Alewife (AL)	129	9	

Zone	Intertidal Area	Catch Code	Specimen ID	Count	Species	Length (mm)	Weight (g)	Comments
NBC		NBC-TW-0402	AL-027	1	Alewife (AL)	70	1	
NBC		NBC-TW-0402	AL-028	1	Alewife (AL)	94	1	
NBC		NBC-TW-0402	AL-029	1	Alewife (AL)	100	1	
NBC		NBC-TW-0402	AL-030	1	Alewife (AL)	107	1	
NBC		NBC-TW-0402	AL-031	1	Alewife (AL)	74	1	
NBC		NBC-TW-0402	AL-032	1	Alewife (AL)	75	1	
NBC		NBC-TW-0402	AL-033	1	Alewife (AL)	81	1	
NBC		NBC-TW-0402	AL-034	1	Alewife (AL)	82	1	
NBC		NBC-TW-0402	AM-004	1	Shad, American (AM)	165	21	
NBC		NBC-TW-0402	AM-005	1	Shad, American (AM)	139	17	
NBC		NBC-TW-0402	AM-006	1	Shad, American (AM)	110	5	
NBC		NBC-TW-0402	AM-007	1	Shad, American (AM)	110	5	
NBC		NBC-TW-0402	AM-008	1	Shad, American (AM)	127	7	
NBC		NBC-TW-0402	AM-009	1	Shad, American (AM)	180	25	
NBC		NBC-TW-0402	AM-010	1	Shad, American (AM)	165	15	
NBC		NBC-TW-0402	AM-011	1	Shad, American (AM)	110	2	
NBC		NBC-TW-0402	CRB-028	1	Crab, Blue (CRB)	125	30	
NBC		NBC-TW-0402	BB-027	1	Herring, Blueback (BB)	81	1	
NBC		NBC-TW-0402	BB-028	1	Herring, Blueback (BB)	67	1	
NBC		NBC-TW-0402	BB-029	1	Herring, Blueback (BB)	71	1	
NBC		NBC-TW-0402	BB-030	1	Herring, Blueback (BB)	85	1	
NBC		NBC-TW-0402	BB-031	1	Herring, Blueback (BB)	65	1	
NBC		NBC-TW-0402	BB-032	1	Herring, Blueback (BB)	70	1	
NBC		NBC-TW-0402	BB-033	1	Herring, Blueback (BB)	77	1	
NBC		NBC-TW-0402	BB-034	1	Herring, Blueback (BB)	74	1	
NBC		NBC-TW-0402	BB-035	1	Herring, Blueback (BB)	75	1	
NBC		NBC-TW-0402	BB-036	1	Herring, Blueback (BB)	71	1	
NBC		NBC-TW-0402	BB-037	1	Herring, Blueback (BB)	70	1	
NBC		NBC-TW-0402	BB-038	1	Herring, Blueback (BB)	77	1	
NBC		NBC-TW-0402	BB-039	1	Herring, Blueback (BB)	73	1	
NBC		NBC-TW-0402	BB-040	1	Herring, Blueback (BB)	70	1	
NBC		NBC-TW-0402	BB-041	1	Herring, Blueback (BB)	70	1	
NBC		NBC-TW-0402	BB-042	1	Herring, Blueback (BB)	69	1	
NBC		NBC-TW-0402	BB-043	1	Herring, Blueback (BB)	75	1	
NBC		NBC-TW-0402	BB-044	1	Herring, Blueback (BB)	65	1	
NBC		NBC-TW-0402	BB-045	1	Herring, Blueback (BB)	74	1	
NBC		NBC-TW-0402	BB-046	1	Herring, Blueback (BB)	73	1	
NBC		NBC-TW-0402	BB-047	1	Herring, Blueback (BB)	66	1	
NBC		NBC-TW-0402	BB-048	1	Herring, Blueback (BB)	71	1	
NBC		NBC-TW-0402	BB-049	1	Herring, Blueback (BB)	80	1	
NBC		NBC-TW-0402	BB-050	1	Herring, Blueback (BB)	80	1	
NBC		NBC-TW-0402	BB-051	1	Herring, Blueback (BB)	71	1	
NBC		NBC-TW-0402	BB-052	1	Herring, Blueback (BB)	90	1	

Zone	Intertidal Area	Catch Code	Specimen ID	Count	Species	Length (mm)	Weight (g)	Comments
NBC		NBC-TW-0402	BB-053	1	Herring, Blueback (BB)	81	1	
NBC		NBC-TW-0402	CU-001	1	Cunner (CU)	77	7	
NBC		NBC-TW-0402	SB-049	1	Bass, Striped (SB)	150	20	
NBC		NBC-TW-0402	SB-050	1	Bass, Striped (SB)	158	30	
NBC		NBC-TW-0402	SB-051	1	Bass, Striped (SB)	181	42	
NBC		NBC-TW-0402	SB-052	1	Bass, Striped (SB)	155	29	
NBC		NBC-TW-0402	SB-053	1	Bass, Striped (SB)	124	18	
NBC		NBC-TW-0402	SB-054	1	Bass, Striped (SB)	132	21	
NBC		NBC-TW-0402	SB-055	1	Bass, Striped (SB)	115	15	
NBC		NBC-TW-0402	SB-056	1	Bass, Striped (SB)	110	15	
NBS		NBS-GN-0402	SB-057	1	Bass, Striped (SB)	355	425	
NBC		NBC-TW-0406	BB-054	1	Herring, Blueback (BB)	220	70	
NBC		NBC-TW-0406	CU-002	1	Cunner (CU)	170	70	
NBC		NBC-TW-0406	SB-058	1	Bass, Striped (SB)	205	50	
NBC		NBC-TW-0406	SB-059	1	Bass, Striped (SB)	140	20	
NBC		NBC-TW-0406	SB-060	1	Bass, Striped (SB)	130	20	
NBC		NBC-TW-0406	SB-061	1	Bass, Striped (SB)	130	20	
NBC		NBC-TW-0406	SB-062	1	Bass, Striped (SB)	120	10	
NBC		NBC-TW-0406	SB-063	1	Bass, Striped (SB)	140	20	
NBC		NBC-TW-0406	SB-064	1	Bass, Striped (SB)	120	10	
NBC		NBC-TW-0406	SB-065	1	Bass, Striped (SB)	175	40	
NBC		NBC-TW-0406	SB-066	1	Bass, Striped (SB)	160	30	
NBC		NBC-TW-0406	SB-067	1	Bass, Striped (SB)	115	10	
NBC		NBC-TW-0406	SB-068	1	Bass, Striped (SB)	90	10	
NBC		NBC-TW-0406	SB-069	1	Bass, Striped (SB)	210	70	
NBC		NBC-TW-0406	SB-070	1	Bass, Striped (SB)	220	80	
NBC		NBC-TW-0406	SB-071	1	Bass, Striped (SB)	200	60	
NBC		NBC-TW-0406	SB-072	1	Bass, Striped (SB)	190	50	
NBC		NBC-TW-0406	SB-073	1	Bass, Striped (SB)	180	50	
NBC		NBC-TW-0406	SB-074	1	Bass, Striped (SB)	150	30	
NBC		NBC-TW-0406	SB-075	1	Bass, Striped (SB)	145	30	
NBC		NBC-TW-0406	SB-076	1	Bass, Striped (SB)	125	20	
NBC		NBC-TW-0406	SB-077	1	Bass, Striped (SB)	120	20	
NBC		NBC-TW-0406	SB-078	1	Bass, Striped (SB)	105	10	
NBC		NBC-TW-0406	SB-079	1	Bass, Striped (SB)	100	10	
NBC		NBC-TW-0406	SB-080	1	Bass, Striped (SB)	90	10	
NBC		NBC-TW-0406	SB-081	1	Bass, Striped (SB)	90	10	
NBC		NBC-TW-0406	SB-082	1	Bass, Striped (SB)	105	10	
NBC		NBC-TW-0406	SB-083	1	Bass, Striped (SB)	95	5	
NBC		NBC-TW-0406	SB-084	1	Bass, Striped (SB)	225	70	
NBC		NBC-TW-0406	SB-085	1	Bass, Striped (SB)	75	5	
NBC		NBC-TW-0406	SB-086	1	Bass, Striped (SB)	70	5	
NBC		NBC-TW-0406	SB-087	1	Bass, Striped (SB)	80	5	

Zone	Intertidal Area	Catch Code	Specimen ID	Count	Species	Length (mm)	Weight (g)	Comments
NBC		NBC-TW-0406	SB-088	1	Bass, Striped (SB)	120	10	
NBC		NBC-TW-0406	SB-089	1	Bass, Striped (SB)	185	50	
NBC		NBC-TW-0406	SB-090	1	Bass, Striped (SB)	130	20	
NBN		NBN-TW-0406	AL-035	1	Alewife (AL)	80	2	
NBN		NBN-TW-0406	CRB-029	1	Crab, Blue (CRB)	35	1	
NBN		NBN-TW-0406	CRB-030	1	Crab, Blue (CRB)	35	1	
NBN		NBN-TW-0406	CRB-031	1	Crab, Blue (CRB)	75	30	
NBN		NBN-TW-0406	CRB-032	1	Crab, Blue (CRB)	110	60	
NBN		NBN-TW-0406	CRB-033	1	Crab, Blue (CRB)	120	90	
NBN		NBN-TW-0406	CRB-034	1	Crab, Blue (CRB)	100	60	
NBN		NBN-TW-0406	CRB-035	1	Crab, Blue (CRB)	120	80	
NBN		NBN-TW-0406	CRB-036	1	Crab, Blue (CRB)	90	50	
NBN		NBN-TW-0406	CRB-037	1	Crab, Blue (CRB)	111	90	
NBN		NBN-TW-0406	CRB-038	1	Crab, Blue (CRB)	120	100	
NBN		NBN-TW-0406	CRB-039	1	Crab, Blue (CRB)	120	90	
NBN		NBN-TW-0406	CRB-040	1	Crab, Blue (CRB)	100	60	
NBN		NBN-TW-0406	CRB-041	1	Crab, Blue (CRB)	80	30	
NBN		NBN-TW-0406	CRB-042	1	Crab, Blue (CRB)	35	10	
NBN		NBN-TW-0406	CRB-043	1	Crab, Blue (CRB)	50	10	
NBN		NBN-TW-0406	CRB-044	1	Crab, Blue (CRB)	110	60	
NBN		NBN-TW-0406	CRB-045	1	Crab, Blue (CRB)	95	40	
NBN		NBN-TW-0406	CRB-046	1	Crab, Blue (CRB)	120	80	
NBN		NBN-TW-0406	CRB-047	1	Crab, Blue (CRB)	100	60	
NBN		NBN-TW-0406	CRB-048	1	Crab, Blue (CRB)	120	90	
NBN		NBN-TW-0406	CRB-049	1	Crab, Blue (CRB)	110	80	
NBN		NBN-TW-0406	CRB-050	1	Crab, Blue (CRB)	140	150	
NBN		NBN-TW-0406	CRB-051	1	Crab, Blue (CRB)	40	2	
NBN		NBN-TW-0406	CRB-052	1	Crab, Blue (CRB)	140	120	
NBN		NBN-TW-0406	SB-091	1	Bass, Striped (SB)	100	10	
NBN		NBN-TW-0406	SB-092	1	Bass, Striped (SB)	305	300	
NBN		NBN-TW-0406	SB-093	1	Bass, Striped (SB)	150	30	
NBN		NBN-TW-0406	SB-094	1	Bass, Striped (SB)	205	100	
NBN		NBN-TW-0406	SB-095	1	Bass, Striped (SB)	165	50	
NBN		NBN-TW-0406	SB-096	1	Bass, Striped (SB)	100	20	
NBN		NBN-TW-0406	SB-097	1	Bass, Striped (SB)	100	20	
NBN		NBN-TW-0406	SB-098	1	Bass, Striped (SB)	80	10	
NBN		NBN-TW-0406	SB-099	1	Bass, Striped (SB)	175	50	
NBN		NBN-TW-0406	SB-100	1	Bass, Striped (SB)	255	160	
NBS		NBS-TW-0406	CRB-053	1	Crab, Blue (CRB)	85	50	
NBC		NBC-TW-0407	AL-036	1	Alewife (AL)	80	1	
NBC		NBC-TW-0407	AL-037	1	Alewife (AL)	150	30	
NBC		NBC-TW-0407	AL-038	1	Alewife (AL)	125	10	
NBC		NBC-TW-0407	AL-039	1	Alewife (AL)	110	10	

Zone	Intertidal Area	Catch Code	Specimen ID	Count	Species	Length (mm)	Weight (g)	Comments
NBC		NBC-TW-0407	AL-040	1	Alewife (AL)	130	20	
NBC		NBC-TW-0407	AL-041	1	Alewife (AL)	125	20	
NBC		NBC-TW-0407	AL-042	1	Alewife (AL)	100	10	
NBC		NBC-TW-0407	AL-043	1	Alewife (AL)	100	10	
NBC		NBC-TW-0407	AL-044	1	Alewife (AL)	90	10	
NBC		NBC-TW-0407	AL-045	1	Alewife (AL)	120	20	
NBC		NBC-TW-0407	AL-046	1	Alewife (AL)	115	10	
NBC		NBC-TW-0407	AL-047	1	Alewife (AL)	90	5	
NBC		NBC-TW-0407	AL-048	1	Alewife (AL)	90	5	
NBC		NBC-TW-0407	AL-049	1	Alewife (AL)	140	20	
NBC		NBC-TW-0407	AL-050	1	Alewife (AL)	95	5	
NBC		NBC-TW-0407	AL-051	1	Alewife (AL)	105	5	
NBC		NBC-TW-0407	AL-052	1	Alewife (AL)	80	2	
NBC		NBC-TW-0407	AL-053	1	Alewife (AL)	80	2	
NBC		NBC-TW-0407	AL-054	1	Alewife (AL)	90	2	
NBC		NBC-TW-0407	AL-055	1	Alewife (AL)	90	2	
NBC		NBC-TW-0407	AL-056	1	Alewife (AL)	75	1	
NBC		NBC-TW-0407	AL-057	1	Alewife (AL)	75	1	
NBC		NBC-TW-0407	AL-058	1	Alewife (AL)	80	2	
NBC		NBC-TW-0407	AL-059	1	Alewife (AL)	80	2	
NBC		NBC-TW-0407	AM-012	1	Shad, American (AM)	140	20	
NBC		NBC-TW-0407	AM-013	1	Shad, American (AM)	130	20	
NBC		NBC-TW-0407	AM-014	1	Shad, American (AM)	130	10	
NBC		NBC-TW-0407	AM-015	1	Shad, American (AM)	125	10	
NBC		NBC-TW-0407	AM-016	1	Shad, American (AM)	140	20	
NBC		NBC-TW-0407	AM-017	1	Shad, American (AM)	140	20	
NBC		NBC-TW-0407	AM-018	1	Shad, American (AM)	155	30	
NBC		NBC-TW-0407	AM-019	1	Shad, American (AM)	140	20	
NBC		NBC-TW-0407	AM-020	1	Shad, American (AM)	125	10	
NBC		NBC-TW-0407	AM-021	1	Shad, American (AM)	120	10	
NBC		NBC-TW-0407	AM-022	1	Shad, American (AM)	110	10	
NBC		NBC-TW-0407	AM-023	1	Shad, American (AM)	115	10	
NBC		NBC-TW-0407	AM-024	1	Shad, American (AM)	120	10	
NBC		NBC-TW-0407	AM-025	1	Shad, American (AM)	110	10	
NBC		NBC-TW-0407	AM-026	1	Shad, American (AM)	125	10	
NBC		NBC-TW-0407	AM-027	1	Shad, American (AM)	125	10	
NBC		NBC-TW-0407	AM-028	1	Shad, American (AM)	120	10	
NBC		NBC-TW-0407	AM-029	1	Shad, American (AM)	120	10	
NBC		NBC-TW-0407	AM-030	1	Shad, American (AM)	120	10	
NBC		NBC-TW-0407	AM-031	1	Shad, American (AM)	125	20	
NBC		NBC-TW-0407	AM-032	1	Shad, American (AM)	125	20	
NBC		NBC-TW-0407	AM-033	1	Shad, American (AM)	135	20	
NBC		NBC-TW-0407	CRB-054	1	Crab, Blue (CRB)	150	130	

Zone	Intertidal Area	Catch Code	Specimen ID	Count	Species	Length (mm)	Weight (g)	Comments
NBC		NBC-TW-0407	CRB-055	1	Crab, Blue (CRB)	145	100	
NBC		NBC-TW-0407	CRB-056	1	Crab, Blue (CRB)	150	130	
NBC		NBC-TW-0407	CRB-057	1	Crab, Blue (CRB)	140	130	
NBC		NBC-TW-0407	CRB-058	1	Crab, Blue (CRB)	120	70	
NBC		NBC-TW-0407	CRB-059	1	Crab, Blue (CRB)	140	190	
NBC		NBC-TW-0407	CRB-060	1	Crab, Blue (CRB)	135	140	
NBC		NBC-TW-0407	CRB-061	1	Crab, Blue (CRB)	130	120	
NBC		NBC-TW-0407	CRB-062	1	Crab, Blue (CRB)	120	100	
NBC		NBC-TW-0407	CRB-063	1	Crab, Blue (CRB)	120	90	
NBC		NBC-TW-0407	CRB-064	1	Crab, Blue (CRB)	150	150	
NBC		NBC-TW-0407	CRB-065	1	Crab, Blue (CRB)	130	130	
NBC		NBC-TW-0407	CRB-066	1	Crab, Blue (CRB)	100	50	
NBC		NBC-TW-0407	BB-055	1	Herring, Blueback (BB)	70	1	
NBC		NBC-TW-0407	BB-056	1	Herring, Blueback (BB)	90	2	
NBC		NBC-TW-0407	NP-003	1	Pipefish, Northern (NP)	190	1	
NBC		NBC-TW-0407	SL-001	1	Sculpin (SL)	85	10	
NBC		NBC-TW-0407	SL-002	1	Sculpin (SL)	80	5	
NBC		NBC-TW-0407	SH-002	1	Shad (SH)	125	5	
NBC		NBC-TW-0407	SH-003	1	Shad (SH)	125	5	
NBC		NBC-TW-0407	SB-101	1	Bass, Striped (SB)	100	5	
NBC		NBC-TW-0407	SB-102	1	Bass, Striped (SB)	105	5	
NBC		NBC-TW-0407	SB-103	1	Bass, Striped (SB)	105	5	
NBC		NBC-TW-0407	SB-104	1	Bass, Striped (SB)	195	50	
NBC		NBC-TW-0407	SB-105	1	Bass, Striped (SB)	210	90	
NBC		NBC-TW-0407	SB-106	1	Bass, Striped (SB)	115	20	
NBC		NBC-TW-0407	SB-107	1	Bass, Striped (SB)	100	10	
NBC		NBC-TW-0407	SB-108	1	Bass, Striped (SB)	130	20	
NBC		NBC-TW-0407	SB-109	1	Bass, Striped (SB)	165	40	
NBC		NBC-TW-0407	SB-110	1	Bass, Striped (SB)	125	20	
NBC		NBC-TW-0407	SB-111	1	Bass, Striped (SB)	215	90	
NBC		NBC-TW-0407	SB-112	1	Bass, Striped (SB)	135	20	
NBC		NBC-TW-0407	SB-113	1	Bass, Striped (SB)	90	10	
NBN		NBN-TW-0407	AL-060	1	Alewife (AL)	100	10	
NBN		NBN-TW-0407	AL-061	1	Alewife (AL)	100	5	
NBN		NBN-TW-0407	AL-062	1	Alewife (AL)	90	5	
NBN		NBN-TW-0407	AL-063	1	Alewife (AL)	80	2	
NBN		NBN-TW-0407	AL-064	1	Alewife (AL)	80	2	
NBN		NBN-TW-0407	CRB-067	1	Crab, Blue (CRB)	115	80	
NBN		NBN-TW-0407	CRB-068	1	Crab, Blue (CRB)	105	50	
NBN		NBN-TW-0407	CRB-069	1	Crab, Blue (CRB)	95	40	
NBN		NBN-TW-0407	CRB-070	1	Crab, Blue (CRB)	120	90	
NBN		NBN-TW-0407	SL-003	1	Sculpin (SL)	110	10	
NBN		NBN-TW-0407	SB-114	1	Bass, Striped (SB)	210	90	

Zone	Intertidal Area	Catch Code	Specimen ID	Count	Species	Length (mm)	Weight (g)	Comments
NBN		NBN-TW-0407	SB-115	1	Bass, Striped (SB)	210	80	
NBN		NBN-TW-0407	SB-116	1	Bass, Striped (SB)	195	60	
NBN		NBN-TW-0407	SB-117	1	Bass, Striped (SB)	125	20	
NBN		NBN-TW-0407	SB-118	1	Bass, Striped (SB)	210	90	
NBN		NBN-TW-0407	SB-119	1	Bass, Striped (SB)	170	40	
NBN		NBN-TW-0407	SB-120	1	Bass, Striped (SB)	135	20	
NBS		NBS-GN-0407	SB-121	1	Bass, Striped (SB)	327	360	
NBS		NBS-GN-0407	SB-122	1	Bass, Striped (SB)	348	400	
NBS		NBS-GN-0407	SB-123	1	Bass, Striped (SB)	340	395	
NBC		NBC-TW-0408	AL-065	1	Alewife (AL)	100	2	
NBC		NBC-TW-0408	AL-066	1	Alewife (AL)	85	2	
NBC		NBC-TW-0408	AL-067	1	Alewife (AL)	105	5	
NBC		NBC-TW-0408	AL-068	1	Alewife (AL)	90	2	
NBC		NBC-TW-0408	AL-069	1	Alewife (AL)	100	2	
NBC		NBC-TW-0408	AL-070	1	Alewife (AL)	100	2	
NBC		NBC-TW-0408	AL-071	1	Alewife (AL)	110	2	
NBC		NBC-TW-0408	AL-072	1	Alewife (AL)	90	2	
NBC		NBC-TW-0408	AL-073	1	Alewife (AL)	100	2	
NBC		NBC-TW-0408	AL-074	1	Alewife (AL)	80	1	
NBC		NBC-TW-0408	AL-075	1	Alewife (AL)	90	1	
NBC		NBC-TW-0408	AL-076	1	Alewife (AL)	88	1	
NBC		NBC-TW-0408	AL-077	1	Alewife (AL)	110	5	
NBC		NBC-TW-0408	AL-078	1	Alewife (AL)	105	5	
NBC		NBC-TW-0408	AL-079	1	Alewife (AL)	85	2	
NBC		NBC-TW-0408	AL-080	1	Alewife (AL)	95	103	
NBC		NBC-TW-0408	AL-081	1	Alewife (AL)	80	2	
NBC		NBC-TW-0408	AL-082	1	Alewife (AL)	75	2	
NBC		NBC-TW-0408	AL-083	1	Alewife (AL)	90	2	
NBC		NBC-TW-0408	AL-084	1	Alewife (AL)	70	1	
NBC		NBC-TW-0408	AL-085	1	Alewife (AL)	85	2	
NBC		NBC-TW-0408	AL-086	1	Alewife (AL)	75	1	
NBC		NBC-TW-0408	AL-087-128	42	Alewife (AL)	-	160	
NBC		NBC-TW-0408	AL-129	1	Alewife (AL)	76	< 5	
NBC		NBC-TW-0408	AL-130	1	Alewife (AL)	87	< 5	
NBC		NBC-TW-0408	AL-131	1	Alewife (AL)	114	12	
NBC		NBC-TW-0408	AL-132	1	Alewife (AL)	127	10	
NBC		NBC-TW-0408	AL-133	1	Alewife (AL)	96	6	
NBC		NBC-TW-0408	AL-134	1	Alewife (AL)	118	8	
NBC		NBC-TW-0408	AL-135	1	Alewife (AL)	91	6	
NBC		NBC-TW-0408	AL-136	1	Alewife (AL)	90	< 5	
NBC		NBC-TW-0408	AL-137	1	Alewife (AL)	86	< 5	
NBC		NBC-TW-0408	AL-138	1	Alewife (AL)	94	8	
NBC		NBC-TW-0408	AL-139	1	Alewife (AL)	92	6	

Zone	Intertidal Area	Catch Code	Specimen ID	Count	Species	Length (mm)	Weight (g)	Comments
NBC		NBC-TW-0408	AL-140	1	Alewife (AL)	86	< 5	
NBC		NBC-TW-0408	AL-141	1	Alewife (AL)	71	< 5	
NBC		NBC-TW-0408	AL-142	1	Alewife (AL)	88	< 5	
NBC		NBC-TW-0408	AL-143	1	Alewife (AL)	87	6	
NBC		NBC-TW-0408	AL-144	1	Alewife (AL)	86	< 5	
NBC		NBC-TW-0408	CRB-071	1	Crab, Blue (CRB)	160	200	
NBC		NBC-TW-0408	CRB-072	1	Crab, Blue (CRB)	140	180	
NBC		NBC-TW-0408	CRB-073	1	Crab, Blue (CRB)	110	70	
NBC		NBC-TW-0408	CRB-074	1	Crab, Blue (CRB)	160	200	
NBC		NBC-TW-0408	CRB-075	1	Crab, Blue (CRB)	150	130	
NBC		NBC-TW-0408	CRB-076	1	Crab, Blue (CRB)	140	140	
NBC		NBC-TW-0408	BB-057	1	Herring, Blueback (BB)	100	3	
NBC		NBC-TW-0408	BB-058	1	Herring, Blueback (BB)	75	1	
NBC		NBC-TW-0408	BB-059	1	Herring, Blueback (BB)	70	1	
NBC		NBC-TW-0408	BB-060	1	Herring, Blueback (BB)	70	1	
NBC		NBC-TW-0408	BB-061	1	Herring, Blueback (BB)	75	1	
NBC		NBC-TW-0408	BB-062	1	Herring, Blueback (BB)	75	1	
NBC		NBC-TW-0408	BB-063	1	Herring, Blueback (BB)	85	2	
NBC		NBC-TW-0408	BB-064	1	Herring, Blueback (BB)	70	1	
NBC		NBC-TW-0408	BB-065	1	Herring, Blueback (BB)	75	1	
NBC		NBC-TW-0408	BB-066	1	Herring, Blueback (BB)	60	1	
NBC		NBC-TW-0408	BB-067	1	Herring, Blueback (BB)	70	1	
NBC		NBC-TW-0408	LS-001	1	Skate, Little (LS)	90	5	
NBC		NBC-TW-0408	NP-004	1	Pipefish, Northern (NP)	130	< 5	
NBC		NBC-TW-0408	NP-005	1	Pipefish, Northern (NP)	210	5	
NBC		NBC-TW-0408	SL-004	1	Sculpin (SL)	100	2	
NBC		NBC-TW-0408	SH-004	1	Shad (SH)	155	20	
NBC		NBC-TW-0408	SH-005	1	Shad (SH)	160	20	
NBC		NBC-TW-0408	SH-006	1	Shad (SH)	110	5	
NBC		NBC-TW-0408	SH-007	1	Shad (SH)	110	5	
NBC		NBC-TW-0408	SB-124	1	Bass, Striped (SB)	110	30	
NBC		NBC-TW-0408	SB-125	1	Bass, Striped (SB)	110	20	
NBC		NBC-TW-0408	SB-126	1	Bass, Striped (SB)	105	20	
NBC		NBC-TW-0408	SB-127	1	Bass, Striped (SB)	135	40	
NBC		NBC-TW-0408	SB-128	1	Bass, Striped (SB)	130	40	
NBC		NBC-TW-0408	SB-129	1	Bass, Striped (SB)	130	30	
NBC		NBC-TW-0408	SB-130	1	Bass, Striped (SB)	110	20	
NBC		NBC-TW-0408	SB-131	1	Bass, Striped (SB)	120	30	
NBC		NBC-TW-0408	SB-132	1	Bass, Striped (SB)	95	20	
NBC		NBC-TW-0408	SB-133	1	Bass, Striped (SB)	310	270	
NBC		NBC-TW-0408	SB-134	1	Bass, Striped (SB)	120	20	
NBC		NBC-TW-0408	SB-135	1	Bass, Striped (SB)	185	60	
NBC		NBC-TW-0408	SB-136	1	Bass, Striped (SB)	140	30	

Zone	Intertidal Area	Catch Code	Specimen ID	Count	Species	Length (mm)	Weight (g)	Comments
NBC		NBC-TW-0408	SB-137	1	Bass, Striped (SB)	125	20	
NBC		NBC-TW-0408	SB-138	1	Bass, Striped (SB)	110	10	
NBC		NBC-TW-0408	SB-139	1	Bass, Striped (SB)	200	70	
NBC		NBC-TW-0408	SB-140	1	Bass, Striped (SB)	135	20	
NBC		NBC-TW-0408	SB-141	1	Bass, Striped (SB)	120	10	
NBC		NBC-TW-0408	SB-142	1	Bass, Striped (SB)	105	20	
NBC		NBC-TW-0408	SB-143	1	Bass, Striped (SB)	115	10	
NBC		NBC-TW-0408	SB-144	1	Bass, Striped (SB)	95	10	
NBC		NBC-TW-0408	SB-145	1	Bass, Striped (SB)	90	10	
NBC		NBC-TW-0408	SB-146	1	Bass, Striped (SB)	110	10	
NBC		NBC-TW-0408	SB-147	1	Bass, Striped (SB)	89	10	
NBC		NBC-TW-0408	SB-148	1	Bass, Striped (SB)	107	12	
NBC		NBC-TW-0408	SB-149	1	Bass, Striped (SB)	98	9	
NBC		NBC-TW-0408	SB-150	1	Bass, Striped (SB)	107	10	
NBC		NBC-TW-0408	SB-151	1	Bass, Striped (SB)	100	8	
NBC		NBC-TW-0408	SB-152	1	Bass, Striped (SB)	100	8	
NBN		NBN-TW-0408	AL-145	1	Alewife (AL)	100	2	
NBN		NBN-TW-0408	AL-146	1	Alewife (AL)	105	2	
NBN		NBN-TW-0408	AL-147	1	Alewife (AL)	105	2	
NBN		NBN-TW-0408	AL-148	1	Alewife (AL)	105	2	
NBN		NBN-TW-0408	AL-149	1	Alewife (AL)	90	2	
NBN		NBN-TW-0408	CRB-077	1	Crab, Blue (CRB)	120	100	
NBN		NBN-TW-0408	CRB-078	1	Crab, Blue (CRB)	110	50	
NBN		NBN-TW-0408	CRB-079	1	Crab, Blue (CRB)	95	40	
NBN		NBN-TW-0408	SB-153	1	Bass, Striped (SB)	330	370	
NBN		NBN-TW-0408	SB-154	1	Bass, Striped (SB)	220	100	
NBN		NBN-TW-0408	SB-155	1	Bass, Striped (SB)	250	150	
NBN		NBN-TW-0408	SB-156	1	Bass, Striped (SB)	190	50	
NBN		NBN-TW-0408	SB-157	1	Bass, Striped (SB)	220	90	
NBN		NBN-TW-0408	SB-158	1	Bass, Striped (SB)	210	60	
NBN		NBN-TW-0408	SB-159	1	Bass, Striped (SB)	140	20	
NBN		NBN-TW-0408	SB-160	1	Bass, Striped (SB)	160	20	
NBN		NBN-TW-0408	SB-161	1	Bass, Striped (SB)	150	30	
NBN		NBN-TW-0408	SB-162	1	Bass, Striped (SB)	170	40	
NBN		NBN-TW-0408	SB-163	1	Bass, Striped (SB)	175	40	
NBN		NBN-TW-0408	SB-164	1	Bass, Striped (SB)	170	30	
NBN		NBN-TW-0408	SB-165	1	Bass, Striped (SB)	150	30	
NBN		NBN-TW-0408	SB-166	1	Bass, Striped (SB)	180	50	
NBN		NBN-TW-0408	SB-167	1	Bass, Striped (SB)	135	30	
NBN		NBN-TW-0408	SB-168	1	Bass, Striped (SB)	150	30	
NBN		NBN-TW-0408	SB-169	1	Bass, Striped (SB)	110	10	
NBN		NBN-TW-0408	SB-170	1	Bass, Striped (SB)	120	10	
NBN		NBN-TW-0408	SB-171	1	Bass, Striped (SB)	140	20	

Zone	Intertidal Area	Catch Code	Specimen ID	Count	Species	Length (mm)	Weight (g)	Comments
NBN		NBN-TW-0408	SB-172	1	Bass, Striped (SB)	90	10	
NBN		NBN-TW-0408	SB-173	1	Bass, Striped (SB)	120	10	
NBN		NBN-TW-0408	SB-174	1	Bass, Striped (SB)	105	10	
NBN		NBN-TW-0408	SB-175	1	Bass, Striped (SB)	95	10	
NBN		NBN-TW-0408	SB-176	1	Bass, Striped (SB)	100	10	
NBN		NBN-TW-0408	SB-177	1	Bass, Striped (SB)	185	60	
NBN		NBN-TW-0408	SB-178	1	Bass, Striped (SB)	160	40	
NBN		NBN-TW-0408	SB-179	1	Bass, Striped (SB)	120	20	
NBN		NBN-TW-0408	SB-180	1	Bass, Striped (SB)	135	20	
NBN		NBN-TW-0408	SB-181	1	Bass, Striped (SB)	145	30	
NBN		NBN-TW-0408	SB-182	1	Bass, Striped (SB)	140	30	
NBN		NBN-TW-0408	SB-183	1	Bass, Striped (SB)	130	30	
NBN		NBN-TW-0408	SB-184	1	Bass, Striped (SB)	105	10	
NBS		NBS-GN-0408	AL-150	1	Alewife (AL)	305	270	
NBS		NBS-GN-0408	SB-185	1	Bass, Striped (SB)	331	340	
NBS		NBS-GN-0408	SB-186	1	Bass, Striped (SB)	375	540	
NBS		NBS-GN-0408	SB-187	1	Bass, Striped (SB)	321	320	
NBS		NBS-GN-0408	SB-188	1	Bass, Striped (SB)	380	580	
NBS		NBS-GN-0408	SB-189	1	Bass, Striped (SB)	315	310	
NBC		NBC-GN-0409	AL-151	1	Alewife (AL)	291	285	
NBC		NBC-GN-0409	AL-152	1	Alewife (AL)	280	260	
NBC		NBC-GN-0409	AL-153	1	Alewife (AL)	290	300	
NBC		NBC-GN-0409	AL-154	1	Alewife (AL)	300	310	
NBC		NBC-GN-0409	SB-190	1	Bass, Striped (SB)	346	390	
NBC		NBC-GN-0409	SB-191	1	Bass, Striped (SB)	311	310	
NBC		NBC-TW-0409	AL-155	1	Alewife (AL)	71	< 5	
NBC		NBC-TW-0409	AL-156	1	Alewife (AL)	103	10	
NBC		NBC-TW-0409	AL-157	1	Alewife (AL)	120	10	
NBC		NBC-TW-0409	AL-158	1	Alewife (AL)	145	10	
NBC		NBC-TW-0409	AL-159	1	Alewife (AL)	105	5	
NBC		NBC-TW-0409	AL-160	1	Alewife (AL)	105	5	
NBC		NBC-TW-0409	AL-161	1	Alewife (AL)	130	5	
NBC		NBC-TW-0409	AL-162	1	Alewife (AL)	95	3	
NBC		NBC-TW-0409	AL-163	1	Alewife (AL)	95	3	
NBC		NBC-TW-0409	AL-164	1	Alewife (AL)	100	3	
NBC		NBC-TW-0409	AL-165	1	Alewife (AL)	85	2	
NBC		NBC-TW-0409	AL-166-204	39	Alewife (AL)	-	320	
NBC		NBC-TW-0409	AL-205	1	Alewife (AL)	105	10	
NBC		NBC-TW-0409	AL-206	1	Alewife (AL)	110	10	
NBC		NBC-TW-0409	AL-207	1	Alewife (AL)	125	15	
NBC		NBC-TW-0409	AL-208	1	Alewife (AL)	90	5	
NBC		NBC-TW-0409	AL-209	1	Alewife (AL)	80	3	
NBC		NBC-TW-0409	AL-210	1	Alewife (AL)	85	3	

Zone	Intertidal Area	Catch Code	Specimen ID	Count	Species	Length (mm)	Weight (g)	Comments
NBC		NBC-TW-0409	AL-211	1	Alewife (AL)	85	3	
NBC		NBC-TW-0409	AL-212	1	Alewife (AL)	85	3	
NBC		NBC-TW-0409	AL-213	1	Alewife (AL)	95	5	
NBC		NBC-TW-0409	AL-214	1	Alewife (AL)	90	5	
NBC		NBC-TW-0409	AL-215	1	Alewife (AL)	80	2	
NBC		NBC-TW-0409	AL-216	1	Alewife (AL)	80	2	
NBC		NBC-TW-0409	AL-217	1	Alewife (AL)	85	3	
NBC		NBC-TW-0409	AL-218	1	Alewife (AL)	95	5	
NBC		NBC-TW-0409	AL-219	1	Alewife (AL)	75	2	
NBC		NBC-TW-0409	AL-220	1	Alewife (AL)	80	2	
NBC		NBC-TW-0409	AL-221	1	Alewife (AL)	70	2	
NBC		NBC-TW-0409	AL-222	1	Alewife (AL)	100	5	
NBC		NBC-TW-0409	AL-223	1	Alewife (AL)	155	30	
NBC		NBC-TW-0409	AL-224	1	Alewife (AL)	110	20	
NBC		NBC-TW-0409	AL-225	1	Alewife (AL)	110	20	
NBC		NBC-TW-0409	AL-226	1	Alewife (AL)	110	20	
NBC		NBC-TW-0409	AL-227	1	Alewife (AL)	85	5	
NBC		NBC-TW-0409	AL-228	1	Alewife (AL)	105	15	
NBC		NBC-TW-0409	AL-229	1	Alewife (AL)	100	15	
NBC		NBC-TW-0409	AL-230	1	Alewife (AL)	90	5	
NBC		NBC-TW-0409	AL-231	1	Alewife (AL)	85	5	
NBC		NBC-TW-0409	AL-232	1	Alewife (AL)	90	10	
NBC		NBC-TW-0409	AL-233	1	Alewife (AL)	85	5	
NBC		NBC-TW-0409	AL-234	1	Alewife (AL)	95	10	
NBC		NBC-TW-0409	AL-235	1	Alewife (AL)	100	10	
NBC		NBC-TW-0409	AL-236	1	Alewife (AL)	120	20	
NBC		NBC-TW-0409	AL-237	1	Alewife (AL)	100	10	
NBC		NBC-TW-0409	AL-238	1	Alewife (AL)	135	20	
NBC		NBC-TW-0409	AL-239	1	Alewife (AL)	80	5	
NBC		NBC-TW-0409	AL-240	1	Alewife (AL)	140	30	
NBC		NBC-TW-0409	AL-241	1	Alewife (AL)	90	10	
NBC		NBC-TW-0409	AL-242	1	Alewife (AL)	120	20	
NBC		NBC-TW-0409	AL-243	1	Alewife (AL)	90	5	
NBC		NBC-TW-0409	AL-244	1	Alewife (AL)	90	5	
NBC		NBC-TW-0409	AL-245	1	Alewife (AL)	100	20	
NBC		NBC-TW-0409	AL-246	1	Alewife (AL)	140	30	
NBC		NBC-TW-0409	AL-247	1	Alewife (AL)	105	10	
NBC		NBC-TW-0409	AL-248	1	Alewife (AL)	105	10	
NBC		NBC-TW-0409	AL-249	1	Alewife (AL)	90	10	
NBC		NBC-TW-0409	AL-250-298	49	Alewife (AL)	-	400	
NBC		NBC-TW-0409	AM-034	1	Shad, American (AM)	155	20	
NBC		NBC-TW-0409	AM-035	1	Shad, American (AM)	130	10	
NBC		NBC-TW-0409	AM-036	1	Shad, American (AM)	120	5	

Zone	Intertidal Area	Catch Code	Specimen ID	Count	Species	Length (mm)	Weight (g)	Comments
NBC		NBC-TW-0409	AM-037	1	Shad, American (AM)	155	10	
NBC		NBC-TW-0409	AM-038	1	Shad, American (AM)	160	10	
NBC		NBC-TW-0409	AM-039	1	Shad, American (AM)	160	10	
NBC		NBC-TW-0409	AM-040	1	Shad, American (AM)	120	5	
NBC		NBC-TW-0409	AM-041	1	Shad, American (AM)	155	10	
NBC		NBC-TW-0409	AM-042	1	Shad, American (AM)	135	5	
NBC		NBC-TW-0409	AM-043	1	Shad, American (AM)	140	5	
NBC		NBC-TW-0409	AM-044	1	Shad, American (AM)	120	3	
NBC		NBC-TW-0409	AM-045	1	Shad, American (AM)	120	3	
NBC		NBC-TW-0409	AM-046	1	Shad, American (AM)	150	10	
NBC		NBC-TW-0409	AM-047	1	Shad, American (AM)	135	10	
NBC		NBC-TW-0409	AM-048	1	Shad, American (AM)	135	5	
NBC		NBC-TW-0409	AM-049	1	Shad, American (AM)	125	3	
NBC		NBC-TW-0409	AM-050	1	Shad, American (AM)	140	20	
NBC		NBC-TW-0409	AM-051	1	Shad, American (AM)	120	30	
NBC		NBC-TW-0409	AM-052	1	Shad, American (AM)	130	30	
NBC		NBC-TW-0409	AM-053	1	Shad, American (AM)	120	20	
NBC		NBC-TW-0409	AM-054	1	Shad, American (AM)	135	30	
NBC		NBC-TW-0409	AM-055	1	Shad, American (AM)	110	10	
NBC		NBC-TW-0409	AM-056	1	Shad, American (AM)	135	20	
NBC		NBC-TW-0409	AM-057	1	Shad, American (AM)	120	20	
NBC		NBC-TW-0409	AM-058	1	Shad, American (AM)	115	15	
NBC		NBC-TW-0409	AM-059	1	Shad, American (AM)	145	30	
NBC		NBC-TW-0409	AM-060	1	Shad, American (AM)	110	10	
NBC		NBC-TW-0409	AM-061	1	Shad, American (AM)	110	15	
NBC		NBC-TW-0409	AM-062	1	Shad, American (AM)	105	10	
NBC		NBC-TW-0409	AM-063	1	Shad, American (AM)	160	40	
NBC		NBC-TW-0409	AM-064	1	Shad, American (AM)	120	20	
NBC		NBC-TW-0409	AM-065-78	14	Shad, American (AM)	-	180	
NBC		NBC-TW-0409	CRB-080	1	Crab, Blue (CRB)	125	110	
NBC		NBC-TW-0409	CRB-081	1	Crab, Blue (CRB)	140	150	
NBC		NBC-TW-0409	CRB-082	1	Crab, Blue (CRB)	110	120	
NBC		NBC-TW-0409	CRB-083	1	Crab, Blue (CRB)	75	50	
NBC		NBC-TW-0409	CRB-084	1	Crab, Blue (CRB)	110	120	
NBC		NBC-TW-0409	BB-068	1	Herring, Blueback (BB)	65	1	
NBC		NBC-TW-0409	LH-004	1	Sculpin, Longhorn (LH)	75	10	
NBC		NBC-TW-0409	NP-006	1	Pipefish, Northern (NP)	190	10	
NBC		NBC-TW-0409	SB-192	1	Bass, Striped (SB)	91	10	
NBC		NBC-TW-0409	SB-193	1	Bass, Striped (SB)	335	380	
NBC		NBC-TW-0409	SB-194	1	Bass, Striped (SB)	300	310	
NBC		NBC-TW-0409	SB-195	1	Bass, Striped (SB)	260	200	
NBC		NBC-TW-0409	SB-196	1	Bass, Striped (SB)	250	180	
NBC		NBC-TW-0409	SB-197	1	Bass, Striped (SB)	255	190	

Zone	Intertidal Area	Catch Code	Specimen ID	Count	Species	Length (mm)	Weight (g)	Comments
NBC		NBC-TW-0409	SB-198	1	Bass, Striped (SB)	200	80	
NBC		NBC-TW-0409	SB-199	1	Bass, Striped (SB)	210	110	
NBC		NBC-TW-0409	SB-200	1	Bass, Striped (SB)	190	80	
NBC		NBC-TW-0409	SB-201	1	Bass, Striped (SB)	160	60	
NBC		NBC-TW-0409	SB-202	1	Bass, Striped (SB)	170	70	
NBC		NBC-TW-0409	SB-203	1	Bass, Striped (SB)	150	50	
NBC		NBC-TW-0409	SB-204	1	Bass, Striped (SB)	150	50	
NBC		NBC-TW-0409	SB-205	1	Bass, Striped (SB)	130	40	
NBC		NBC-TW-0409	SB-206	1	Bass, Striped (SB)	100	20	
NBC		NBC-TW-0409	SB-207	1	Bass, Striped (SB)	110	30	
NBC		NBC-TW-0409	SB-208	1	Bass, Striped (SB)	90	20	
NBC		NBC-TW-0409	SB-209	1	Bass, Striped (SB)	110	30	
NBC		NBC-TW-0409	SB-210	1	Bass, Striped (SB)	120	30	
NBC		NBC-TW-0409	SB-211	1	Bass, Striped (SB)	125	40	
NBC		NBC-TW-0409	SB-212	1	Bass, Striped (SB)	120	30	
NBC		NBC-TW-0409	SB-213	1	Bass, Striped (SB)	160	50	
NBC		NBC-TW-0409	SB-214	1	Bass, Striped (SB)	130	40	
NBC		NBC-TW-0409	SB-215	1	Bass, Striped (SB)	130	30	
NBC		NBC-TW-0409	SB-216	1	Bass, Striped (SB)	170	60	
NBC		NBC-TW-0409	SB-217	1	Bass, Striped (SB)	180	70	
NBC		NBC-TW-0409	SB-218	1	Bass, Striped (SB)	125	40	
NBC		NBC-TW-0409	SB-219	1	Bass, Striped (SB)	120	30	
NBC		NBC-TW-0409	SB-220	1	Bass, Striped (SB)	120	30	
NBC		NBC-TW-0409	SB-221	1	Bass, Striped (SB)	95	20	
NBC		NBC-TW-0409	SB-222	1	Bass, Striped (SB)	90	20	
NBC		NBC-TW-0409	SB-223	1	Bass, Striped (SB)	120	30	
NBC		NBC-TW-0409	SB-224	1	Bass, Striped (SB)	100	20	
NBC		NBC-TW-0409	SB-225	1	Bass, Striped (SB)	100	20	
NBC		NBC-TW-0409	SB-226	1	Bass, Striped (SB)	135	40	
NBC		NBC-TW-0409	SB-227	1	Bass, Striped (SB)	135	30	
NBC		NBC-TW-0409	SB-228	1	Bass, Striped (SB)	120	30	
NBC		NBC-TW-0409	SB-229	1	Bass, Striped (SB)	110	20	
NBC		NBC-TW-0409	SB-230	1	Bass, Striped (SB)	100	20	
NBC		NBC-TW-0409	SB-231	1	Bass, Striped (SB)	100	20	
NBC		NBC-TW-0409	SB-232	1	Bass, Striped (SB)	160	50	
NBC		NBC-TW-0409	SB-233	1	Bass, Striped (SB)	95	15	
NBC		NBC-TW-0409	SB-234	1	Bass, Striped (SB)	175	50	
NBC		NBC-TW-0409	SB-235	1	Bass, Striped (SB)	240	160	
NBC		NBC-TW-0409	SB-236	1	Bass, Striped (SB)	170	60	
NBC		NBC-TW-0409	SB-237	1	Bass, Striped (SB)	135	40	
NBC		NBC-TW-0409	SB-238	1	Bass, Striped (SB)	155	40	
NBC		NBC-TW-0409	SB-239	1	Bass, Striped (SB)	150	40	
NBC		NBC-TW-0409	SB-240	1	Bass, Striped (SB)	100	20	

Zone	Intertidal Area	Catch Code	Specimen ID	Count	Species	Length (mm)	Weight (g)	Comments
NBC		NBC-TW-0409	SB-241	1	Bass, Striped (SB)	105	20	
NBC		NBC-TW-0409	SB-242	1	Bass, Striped (SB)	285	240	
NBC		NBC-TW-0409	SB-243	1	Bass, Striped (SB)	230	140	
NBC		NBC-TW-0409	SB-244	1	Bass, Striped (SB)	200	70	
NBC		NBC-TW-0409	SB-245	1	Bass, Striped (SB)	185	60	
NBC		NBC-TW-0409	SB-246	1	Bass, Striped (SB)	210	100	
NBC		NBC-TW-0409	SB-247	1	Bass, Striped (SB)	165	50	
NBC		NBC-TW-0409	SB-248	1	Bass, Striped (SB)	100	20	
NBC		NBC-TW-0409	SB-249	1	Bass, Striped (SB)	220	110	
NBC		NBC-TW-0409	SB-250	1	Bass, Striped (SB)	110	20	
NBC		NBC-TW-0409	SB-251	1	Bass, Striped (SB)	150	50	
NBC		NBC-TW-0409	SB-252	1	Bass, Striped (SB)	210	100	
NBC		NBC-TW-0409	SB-253	1	Bass, Striped (SB)	220	120	
NBC		NBC-TW-0409	SB-254	1	Bass, Striped (SB)	120	30	
NBC		NBC-TW-0409	SB-255	1	Bass, Striped (SB)	100	20	
NBC		NBC-TW-0409	SB-256	1	Bass, Striped (SB)	105	20	
NBC		NBC-TW-0409	SB-257	1	Bass, Striped (SB)	90	15	
NBC		NBC-TW-0409	SB-258	1	Bass, Striped (SB)	170	50	
NBC		NBC-TW-0409	SB-259	1	Bass, Striped (SB)	110	30	
NBC		NBC-TW-0409	SB-260	1	Bass, Striped (SB)	125	30	
NBC		NBC-TW-0409	SB-261	1	Bass, Striped (SB)	135	40	
NBC		NBC-TW-0409	SB-262	1	Bass, Striped (SB)	105	20	
NBC		NBC-TW-0409	SB-263	1	Bass, Striped (SB)	170	50	
NBN		NBN-TW-0409	AM-079	1	Shad, American (AM)	160	30	
NBN		NBN-TW-0409	AH-001	1	Herring, Atlantic (AH)	280	120	
NBN		NBN-TW-0409	CRB-085	1	Crab, Blue (CRB)	48	< 5	
NBN		NBN-TW-0409	CRB-086	1	Crab, Blue (CRB)	130	140	
NBN		NBN-TW-0409	CRB-087	1	Crab, Blue (CRB)	90	50	
NBN		NBN-TW-0409	CRB-088	1	Crab, Blue (CRB)	85	40	
NBN		NBN-TW-0409	CRB-089	1	Crab, Blue (CRB)	110	90	
NBN		NBN-TW-0409	CRB-090	1	Crab, Blue (CRB)	90	50	
NBN		NBN-TW-0409	CRB-091	1	Crab, Blue (CRB)	125	100	
NBN		NBN-TW-0409	SB-264	1	Bass, Striped (SB)	105	7	
NBN		NBN-TW-0409	SB-265	1	Bass, Striped (SB)	93	6	
NBN		NBN-TW-0409	SB-266	1	Bass, Striped (SB)	75	< 5	
NBN		NBN-TW-0409	SB-267	1	Bass, Striped (SB)	84	5	
NBN		NBN-TW-0409	SB-268	1	Bass, Striped (SB)	109	10	
NBN		NBN-TW-0409	SB-269	1	Bass, Striped (SB)	122	16	
NBN		NBN-TW-0409	SB-270	1	Bass, Striped (SB)	160	30	
NBN		NBN-TW-0409	SB-271	1	Bass, Striped (SB)	81	< 5	
NBN		NBN-TW-0409	SB-272	1	Bass, Striped (SB)	120	20	
NBN		NBN-TW-0409	SB-273	1	Bass, Striped (SB)	145	30	
NBN		NBN-TW-0409	SB-274	1	Bass, Striped (SB)	165	50	

Zone	Intertidal Area	Catch Code	Specimen ID	Count	Species	Length (mm)	Weight (g)	Comments
NBN		NBN-TW-0409	SB-275	1	Bass, Striped (SB)	230	110	
NBN		NBN-TW-0409	SB-276	1	Bass, Striped (SB)	275	220	
NBN		NBN-TW-0409	SB-277	1	Bass, Striped (SB)	200	90	
NBN		NBN-TW-0409	SB-278	1	Bass, Striped (SB)	220	110	
NBN		NBN-TW-0409	SB-279	1	Bass, Striped (SB)	175	50	
NBN		NBN-TW-0409	SB-280	1	Bass, Striped (SB)	170	50	
NBN		NBN-TW-0409	SB-281	1	Bass, Striped (SB)	185	60	
NBN		NBN-TW-0409	SB-282	1	Bass, Striped (SB)	205	70	
NBN		NBN-TW-0409	SB-283	1	Bass, Striped (SB)	210	90	
NBN		NBN-TW-0409	SB-284	1	Bass, Striped (SB)	175	50	
NBN		NBN-TW-0409	SB-285	1	Bass, Striped (SB)	180	60	
NBN		NBN-TW-0409	SB-286	1	Bass, Striped (SB)	180	60	
NBN		NBN-TW-0409	SB-287	1	Bass, Striped (SB)	145	30	
NBN		NBN-TW-0409	SB-288	1	Bass, Striped (SB)	180	50	
NBN		NBN-TW-0409	SB-289	1	Bass, Striped (SB)	230	130	
NBN		NBN-TW-0409	SB-290	1	Bass, Striped (SB)	145	40	
NBN		NBN-TW-0409	SB-291	1	Bass, Striped (SB)	165	50	
NBN		NBN-TW-0409	SB-292	1	Bass, Striped (SB)	130	40	
NBN		NBN-TW-0409	SB-293	1	Bass, Striped (SB)	140	40	
NBN		NBN-TW-0409	SB-294	1	Bass, Striped (SB)	135	30	
NBN		NBN-TW-0409	SB-295	1	Bass, Striped (SB)	160	40	
NBN		NBN-TW-0409	WP-001	1	Perch, White (WP)	81	6	
NBN		NBN-TW-0409	WP-002	1	Perch, White (WP)	104	14	
NBN		NBN-TW-0409	WP-003	1	Perch, White (WP)	96	6	
NBN		NBN-TW-0409	WP-004	1	Perch, White (WP)	93	8	
NBN		NBN-TW-0409	WP-005	1	Perch, White (WP)	100	11	
NBN		NBN-TW-0409	WP-006	1	Perch, White (WP)	95	8	
NBN		NBN-TW-0409	WP-007	1	Perch, White (WP)	116	15	
NBN		NBN-TW-0409	WP-008	1	Perch, White (WP)	100	14	
NBN		NBN-TW-0409	WP-009	1	Perch, White (WP)	98	15	
NBN		NBN-TW-0409	WP-010	1	Perch, White (WP)	95	6	
NBN		NBN-TW-0409	WP-011	1	Perch, White (WP)	99	7	
NBN		NBN-TW-0409	WP-012	1	Perch, White (WP)	84	< 5	
NBN		NBN-TW-0409	WP-013	1	Perch, White (WP)	120	15	
NBN		NBN-TW-0409	WP-014	1	Perch, White (WP)	98	8	
NBN		NBN-TW-0409	WP-015	1	Perch, White (WP)	117	10	
NBN		NBN-TW-0409	WP-016	1	Perch, White (WP)	106	8	
NBN		NBN-TW-0409	WP-017	1	Perch, White (WP)	109	8	
NBN		NBN-TW-0409	WP-018	1	Perch, White (WP)	106	8	
NBN		NBN-TW-0409	WP-019	1	Perch, White (WP)	95	6	
NBN		NBN-TW-0409	WP-020	1	Perch, White (WP)	91	5	
NBN		NBN-TW-0409	WP-021	1	Perch, White (WP)	97	5	
NBN		NBN-TW-0409	WP-022	1	Perch, White (WP)	101	6	

Zone	Intertidal Area	Catch Code	Specimen ID	Count	Species	Length (mm)	Weight (g)	Comments
NBN		NBN-TW-0409	WP-023	1	Perch, White (WP)	101	9	
NBN		NBN-TW-0409	WP-024	1	Perch, White (WP)	91	5	
NBN		NBN-TW-0409	WP-025	1	Perch, White (WP)	92	5	
NBN		NBN-TW-0409	WP-026	1	Perch, White (WP)	94	6	
NBS		NBS-GN-0409	SB-296	1	Bass, Striped (SB)	300	300	
NBC		NBC-AG-0428	SB-297	1	Bass, Striped (SB)	530	1300	
NBS		NBS-GN-0428	ME-008	1	Menhaden, Atlantic (ME)	328	350	
NBS		NBS-GN-0428	ME-009	1	Menhaden, Atlantic (ME)	335	320	
NBS		NBS-GN-0428	ME-010	1	Menhaden, Atlantic (ME)	318	360	
NBS		NBS-GN-0428	ME-011	1	Menhaden, Atlantic (ME)	350	500	
NBS		NBS-GN-0428	ME-012	1	Menhaden, Atlantic (ME)	331	350	
NBS		NBS-GN-0428	ME-013	1	Menhaden, Atlantic (ME)	295	295	
NBS		NBS-GN-0428	ME-014	1	Menhaden, Atlantic (ME)	335	350	
NBS		NBS-GN-0428	ME-015	1	Menhaden, Atlantic (ME)	322	400	
NBS		NBS-GN-0428	ME-016	1	Menhaden, Atlantic (ME)	334	400	
NBS		NBS-GN-0428	ME-017	1	Menhaden, Atlantic (ME)	328	350	
NBS		NBS-GN-0428	ME-018	1	Menhaden, Atlantic (ME)	332	325	
NBS		NBS-GN-0428	ME-019	1	Menhaden, Atlantic (ME)	350	400	
NBS		NBS-GN-0428	ME-020	1	Menhaden, Atlantic (ME)	331	300	
NBS		NBS-GN-0428	ME-021	1	Menhaden, Atlantic (ME)	315	300	
NBS		NBS-GN-0428	ME-022-037	16	Menhaden, Atlantic (ME)	300-350	-	Not weighed
NBS		NBS-GN-0428	ME-038	1	Menhaden, Atlantic (ME)	335	350	
NBS		NBS-GN-0428	ME-039	1	Menhaden, Atlantic (ME)	347	400	
NBS		NBS-GN-0428	ME-040	1	Menhaden, Atlantic (ME)	339	350	
NBS		NBS-GN-0428	ME-041	1	Menhaden, Atlantic (ME)	343	400	
NBS		NBS-GN-0428	ME-042	1	Menhaden, Atlantic (ME)	360	450	
NBS		NBS-GN-0428	ME-043	1	Menhaden, Atlantic (ME)	331	370	
NBS		NBS-GN-0428	ME-044	1	Menhaden, Atlantic (ME)	339	390	
NBS		NBS-GN-0428	ME-045	1	Menhaden, Atlantic (ME)	372	550	
NBS		NBS-GN-0428	ME-046	1	Menhaden, Atlantic (ME)	344	370	
NBS		NBS-GN-0428	ME-047	1	Menhaden, Atlantic (ME)	355	450	
NBS		NBS-GN-0428	ME-048	1	Menhaden, Atlantic (ME)	330	340	
NBS		NBS-GN-0428	ME-049	1	Menhaden, Atlantic (ME)	336	345	
NBS		NBS-GN-0428	ME-050-073	24	Menhaden, Atlantic (ME)	325-375	-	Not weighed
NBS		NBS-GN-0428	LS-002	1	Skate, Little (LS)	445	600	
NBN		NBN-GN-0429	ME-074	1	Menhaden, Atlantic (ME)	349	400	
NBN		NBN-GN-0429	ME-075	1	Menhaden, Atlantic (ME)	355	350	
NBN		NBN-GN-0429	HCR-001	1	Crab, Horseshoe (HCR)	250	-	
NBN		NBN-GN-0429	HCR-002	1	Crab, Horseshoe (HCR)	200	-	
NBN		NBN-GN-0429	HCR-003	1	Crab, Horseshoe (HCR)	225	-	
NBS		NBS-AG-0429	SB-298	1	Bass, Striped (SB)	635	4990	
NBS		NBS-GN-0429	ME-076	1	Menhaden, Atlantic (ME)	345	400	
NBS		NBS-GN-0429	ME-077	1	Menhaden, Atlantic (ME)	337	350	

Zone	Intertidal Area	Catch Code	Specimen ID	Count	Species	Length (mm)	Weight (g)	Comments
NBS		NBS-GN-0429	ME-078	1	Menhaden, Atlantic (ME)	365	400	
NBS		NBS-GN-0429	ME-079	1	Menhaden, Atlantic (ME)	329	350	
NBS		NBS-GN-0429	ME-080	1	Menhaden, Atlantic (ME)	330	320	
NBS		NBS-GN-0429	ME-081	1	Menhaden, Atlantic (ME)	355	450	
NBS		NBS-GN-0429	ME-082	1	Menhaden, Atlantic (ME)	340	350	
NBS		NBS-GN-0429	ME-083	1	Menhaden, Atlantic (ME)	335	400	
NBS		NBS-GN-0429	ME-084	1	Menhaden, Atlantic (ME)	337	320	
NBS		NBS-GN-0429	ME-085	1	Menhaden, Atlantic (ME)	339	350	
NBS		NBS-GN-0429	ME-086	1	Menhaden, Atlantic (ME)	320	400	
NBS		NBS-GN-0429	ME-087	1	Menhaden, Atlantic (ME)	315	350	
NBS		NBS-GN-0429	ME-088	1	Menhaden, Atlantic (ME)	327	400	
NBS		NBS-GN-0429	ME-089	1	Menhaden, Atlantic (ME)	332	450	
NBS		NBS-GN-0429	ME-090	1	Menhaden, Atlantic (ME)	329	400	
NBS		NBS-GN-0429	ME-091	1	Menhaden, Atlantic (ME)	341	400	
NBS		NBS-GN-0429	ME-092	1	Menhaden, Atlantic (ME)	330	380	
NBS		NBS-GN-0429	ME-093	1	Menhaden, Atlantic (ME)	310	320	
NBS		NBS-GN-0429	ME-094	1	Menhaden, Atlantic (ME)	332	400	
NBS		NBS-GN-0429	ME-095-221	127	Menhaden, Atlantic (ME)	300-375	-	Not weighed
NBS		NBS-AG-0430	SB-299	1	Bass, Striped (SB)	530	-	
NBS		NBS-AG-0430	SB-300	1	Bass, Striped (SB)	525	-	
NBS		NBS-AG-0430	SB-301	1	Bass, Striped (SB)	600	-	
NBS		NBS-AG-0430	SB-302	1	Bass, Striped (SB)	650	-	
NBS		NBS-GN-0430	ME-222	1	Menhaden, Atlantic (ME)	317	350	
NBS		NBS-GN-0430	ME-223	1	Menhaden, Atlantic (ME)	326	350	
NBS		NBS-GN-0430	ME-224	1	Menhaden, Atlantic (ME)	344	400	
NBS		NBS-GN-0430	ME-225	1	Menhaden, Atlantic (ME)	345	375	
NBS		NBS-GN-0430	ME-226	1	Menhaden, Atlantic (ME)	310	310	
NBS		NBS-GN-0430	ME-227	1	Menhaden, Atlantic (ME)	329	350	
NBS		NBS-GN-0430	ME-228	1	Menhaden, Atlantic (ME)	331	375	
NBS		NBS-GN-0430	ME-229	1	Menhaden, Atlantic (ME)	334	410	
NBS		NBS-GN-0430	ME-230	1	Menhaden, Atlantic (ME)	330	400	
NBS		NBS-GN-0430	ME-231	1	Menhaden, Atlantic (ME)	333	390	
NBS		NBS-GN-0430	ME-232	1	Menhaden, Atlantic (ME)	325	300	
NBS		NBS-GN-0430	ME-233	1	Menhaden, Atlantic (ME)	335	410	
NBS		NBS-GN-0430	ME-234	1	Menhaden, Atlantic (ME)	336	300	
NBS		NBS-GN-0430	ME-235	1	Menhaden, Atlantic (ME)	344	400	
NBS		NBS-GN-0430	ME-236	1	Menhaden, Atlantic (ME)	351	370	
NBS		NBS-GN-0430	ME-237	1	Menhaden, Atlantic (ME)	340	400	
NBS		NBS-GN-0430	ME-238	1	Menhaden, Atlantic (ME)	337	400	
NBS		NBS-GN-0430	ME-239	1	Menhaden, Atlantic (ME)	325	300	
NBS		NBS-GN-0430	ME-240	1	Menhaden, Atlantic (ME)	319	290	
NBS		NBS-GN-0430	ME-241	1	Menhaden, Atlantic (ME)	333	400	
NBS		NBS-GN-0430	ME-242	1	Menhaden, Atlantic (ME)	326	350	

Zone	Intertidal Area	Catch Code	Specimen ID	Count	Species	Length (mm)	Weight (g)	Comments
NBS		NBS-GN-0430	ME-243	1	Menhaden, Atlantic (ME)	319	310	
NBS		NBS-GN-0430	ME-244	1	Menhaden, Atlantic (ME)	339	410	
NBS		NBS-GN-0430	ME-245	1	Menhaden, Atlantic (ME)	337	400	
NBS		NBS-GN-0430	ME-246	1	Menhaden, Atlantic (ME)	303	300	
NBS		NBS-GN-0430	ME-247	1	Menhaden, Atlantic (ME)	319	310	
NBS		NBS-GN-0430	ME-248	1	Menhaden, Atlantic (ME)	326	400	
NBS		NBS-GN-0430	ME-249	1	Menhaden, Atlantic (ME)	341	400	
NBS		NBS-GN-0430	ME-250	1	Menhaden, Atlantic (ME)	323	400	
NBS		NBS-GN-0430	ME-251	1	Menhaden, Atlantic (ME)	339	390	
NBS		NBS-GN-0430	ME-252	1	Menhaden, Atlantic (ME)	319	300	
NBS		NBS-GN-0430	SB-303	1	Bass, Striped (SB)	656	2892	
NBS		NBS-AG-0505	SB-304	1	Bass, Striped (SB)	511	1134	
NBS		NBS-AG-0505	SB-305	1	Bass, Striped (SB)	600	2523	
NBS		NBS-AG-0505	SB-306	1	Bass, Striped (SB)	675	2466	
NBS		NBS-AG-0505	SB-307	1	Bass, Striped (SB)	635	2155	
NBS		NBS-AG-0505	SB-308	1	Bass, Striped (SB)	595	1843	
NBS		NBS-GN-0506	ME-253	1	Menhaden, Atlantic (ME)	335	284	
NBS		NBS-GN-0506	ME-254	1	Menhaden, Atlantic (ME)	323	284	
NBS		NBS-GN-0506	ME-255	1	Menhaden, Atlantic (ME)	323	284	
NBS		NBS-GN-0506	ME-256	1	Menhaden, Atlantic (ME)	310	284	
NBS		NBS-GN-0506	ME-257	1	Menhaden, Atlantic (ME)	321	284	
NBS		NBS-GN-0506	ME-258	1	Menhaden, Atlantic (ME)	327	312	
NBS		NBS-AG-0601	SB-309	1	Bass, Striped (SB)	823	7257	
NBC		NBC-GN-0602	ME-259	1	Menhaden, Atlantic (ME)	325	300	
NBC		NBC-GN-0602	ME-260	1	Menhaden, Atlantic (ME)	300	310	
NBS		NBS-AG-0603	SB-310	1	Bass, Striped (SB)	533	1814	
NBS		NBS-AG-0603	SB-311	1	Bass, Striped (SB)	457	1361	
NBS		NBS-GN-0603	HCR-004	1	Crab, Horseshoe (HCR)	250	1400	
NBS		NBS-GN-0603	HCR-005	1	Crab, Horseshoe (HCR)	270	2000	
NBC		NBC-AG-0604	SB-312	1	Bass, Striped (SB)	590	2268	
NBC		NBC-AG-0604	SB-313	1	Bass, Striped (SB)	508	1361	
NBN		NBN-AG-0604	SB-314	1	Bass, Striped (SB)	650	2722	
NBS		NBS-AG-0604	SB-315	1	Bass, Striped (SB)	380	705	
NBC		NBC-AG-0608	SB-316	1	Bass, Striped (SB)	400	454.0	
NBN		NBN-TW-0727	AT-001	1	Tomcod, Atlantic (AT)	96	6	Evaluated by pathologist (AT01)
NBN		NBN-TW-0727	AT-002	1	Tomcod, Atlantic (AT)	101	9	Evaluated by pathologist (AT02)
NBN		NBN-TW-0727	AT-003	1	Tomcod, Atlantic (AT)	102	8	Evaluated by pathologist (AT03)
NBN		NBN-TW-0727	AT-004	1	Tomcod, Atlantic (AT)	96	8	Evaluated by pathologist (AT04)
NBN		NBN-TW-0727	AT-005	1	Tomcod, Atlantic (AT)	90	5	Evaluated by pathologist (AT05)
NBN		NBN-TW-0727	AT-006	1	Tomcod, Atlantic (AT)	78	3	
NBN		NBN-TW-0727	AT-007	1	Tomcod, Atlantic (AT)	76	3	
NBN		NBN-TW-0727	AT-008	1	Tomcod, Atlantic (AT)	75	3	
NBN		NBN-TW-0727	CRB-092	1	Crab, Blue (CRB)	135	160	

Zone	Intertidal Area	Catch Code	Specimen ID	Count	Species	Length (mm)	Weight (g)	Comments
NBN		NBN-TW-0727	CRB-093	1	Crab, Blue (CRB)	105	60	
NBN		NBN-TW-0727	CRB-094	1	Crab, Blue (CRB)	130	90	
NBN		NBN-TW-0727	CRB-095	1	Crab, Blue (CRB)	95	40	
NBN		NBN-TW-0727	CRB-096	1	Crab, Blue (CRB)	70	10	
NBN		NBN-TW-0727	CRB-097	1	Crab, Blue (CRB)	135	130	
NBN		NBN-TW-0727	CRB-098	1	Crab, Blue (CRB)	80	20	
NBN		NBN-TW-0727	CRB-099	1	Crab, Blue (CRB)	145	160	
NBN		NBN-TW-0727	CRB-100	1	Crab, Blue (CRB)	130	100	
NBN		NBN-TW-0727	CRB-101	1	Crab, Blue (CRB)	115	80	
NBN		NBN-TW-0727	CRB-102	1	Crab, Blue (CRB)	95	30	
NBN		NBN-TW-0727	CRB-103	1	Crab, Blue (CRB)	140	150	
NBN		NBN-TW-0727	CRB-104-112	9	Crab, Blue (CRB)	80-140	-	
NBN		NBN-TW-0727	CL-001	1	Clupeidae (CL)	35	-	
NBN		NBN-TW-0727	CL-002	1	Clupeidae (CL)	32	-	
NBN		NBN-TW-0727	CL-003	1	Clupeidae (CL)	30	-	
NBN		NBN-TW-0727	CL-004-008	5	Clupeidae (CL)	-	-	Not measured
NBN		NBN-TW-0727	LK-001	1	Lookdown (LK)	40	1	
NBN		NBN-TW-0727	LK-002	1	Lookdown (LK)	35	1	
NBN		NBN-TW-0727	OT-021	1	Toadfish, Oyster (OT)	84	10	
NBN		NBN-TW-0727	OT-022	1	Toadfish, Oyster (OT)	75	8	
NBN		NBN-TW-0727	SF-004	1	Flounder, Summer (SF)	168	40	
NBN		NBN-TW-0727	WW-002	1	Flounder, Windowpane (WW)	35	-	
NBN		NBN-TW-0727	WF-001	1	Flounder, Winter (WF)	155	52	Evaluated by pathologist (WF01)
NBN		NBN-TW-0727	WF-002	1	Flounder, Winter (WF)	141	39	Evaluated by pathologist (WF02)
NBN		NBN-TW-0727	WF-003	1	Flounder, Winter (WF)	142	29	Evaluated by pathologist (WF03)
NBN		NBN-TW-0727	WF-004	1	Flounder, Winter (WF)	156	41	Evaluated by pathologist (WF04)
NBN		NBN-TW-0727	WF-005	1	Flounder, Winter (WF)	160	51	Evaluated by pathologist (WF05)
NBN		NBN-TW-0727	WF-006	1	Flounder, Winter (WF)	147	40	
NBN		NBN-TW-0727	WF-007	1	Flounder, Winter (WF)	135	40	
NBN		NBN-TW-0727	WF-008	1	Flounder, Winter (WF)	150	50	
NBS		NBS-AG-0727	SB-317	1	Bass, Striped (SB)	435	810	
NBS		NBS-AG-0727	SF-005	1	Flounder, Summer (SF)	319	250	
NBS		NBS-AG-0727	SF-006	1	Flounder, Summer (SF)	300	250	
NBS		NBS-AG-0727	SF-007	1	Flounder, Summer (SF)	355	400	
NBS		NBS-AG-0727	SF-008	1	Flounder, Summer (SF)	375	490	
NBS		NBS-AG-0727	SF-009	1	Flounder, Summer (SF)	350	350	
NBS		NBS-AG-0727	SF-010	1	Flounder, Summer (SF)	310	220	
NBS		NBS-AG-0727	SF-011	1	Flounder, Summer (SF)	305	230	
NBS		NBS-AG-0727	SF-012	1	Flounder, Summer (SF)	320	300	
NBS		NBS-AG-0727	SF-013	1	Flounder, Summer (SF)	310	310	
NBS		NBS-AG-0727	SF-014	1	Flounder, Summer (SF)	375	450	
NBS		NBS-AG-0727	SF-015	1	Flounder, Summer (SF)	320	300	
NBS		NBS-AG-0727	SF-016	1	Flounder, Summer (SF)	318	300	

Zone	Intertidal Area	Catch Code	Specimen ID	Count	Species	Length (mm)	Weight (g)	Comments
NBS		NBS-TW-0727	CRB-113	1	Crab, Blue (CRB)	85	40	
NBS		NBS-TW-0727	CRB-114	1	Crab, Blue (CRB)	80	30	
NBS		NBS-TW-0727	CRB-115	1	Crab, Blue (CRB)	135	140	
NBS		NBS-TW-0727	CRB-116	1	Crab, Blue (CRB)	60	10	
NBS		NBS-TW-0727	CRB-117	1	Crab, Blue (CRB)	135	140	
NBS		NBS-TW-0727	CRB-118	1	Crab, Blue (CRB)	120	100	
NBS		NBS-TW-0727	CRB-119	1	Crab, Blue (CRB)	115	90	
NBS		NBS-TW-0727	CRB-120	1	Crab, Blue (CRB)	105	55	
NBS		NBS-TW-0727	CRB-121	1	Crab, Blue (CRB)	80	20	
NBS		NBS-TW-0727	CRB-122	1	Crab, Blue (CRB)	110	100	
NBS		NBS-TW-0727	PU-001	1	Pufferfish, Northern (PU)	178	146	Evaluated by pathologist (PU01)
NBS		NBS-TW-0727	HA-002	1	Hake, Spotted (HA)	147	32	Evaluated by pathologist (HA03)
NBZ		NBZ-TW-0727	SR-017	1	Sea Robin, Striped (SR)	135	30	Zone not recorded
NBZ		NBZ-TW-0727	SF-017	1	Flounder, Summer (SF)	295	218	Evaluated by pathologist (SF10); zone not recorded
NBZ		NBZ-TW-0727	SF-018	1	Flounder, Summer (SF)	270	168	Evaluated by pathologist (SF11); zone not recorded
NBZ		NBZ-TW-0727	SF-019	1	Flounder, Summer (SF)	262	155	Evaluated by pathologist (SF12); zone not recorded
NBZ		NBZ-TW-0727	SF-020	1	Flounder, Summer (SF)	305	264	Evaluated by pathologist (SF13); zone not recorded
NBZ		NBZ-TW-0727	SF-021	1	Flounder, Summer (SF)	257	134	Evaluated by pathologist (SF14); zone not recorded
NBZ		NBZ-TW-0727	SF-022	1	Flounder, Summer (SF)	288	208	Evaluated by pathologist (SF15); zone not recorded
NBZ		NBZ-TW-0727	SF-023	1	Flounder, Summer (SF)	312	263	Evaluated by pathologist (SF16); zone not recorded
NBZ		NBZ-TW-0727	SF-024	1	Flounder, Summer (SF)	324	308	Evaluated by pathologist (SF17); zone not recorded
NBZ		NBZ-TW-0727	SF-025	1	Flounder, Summer (SF)	312	273	Evaluated by pathologist (SF18); zone not recorded
NBZ		NBZ-TW-0727	SF-026	1	Flounder, Summer (SF)	265	168	Evaluated by pathologist (SF19); zone not recorded
NBZ		NBZ-TW-0727	SF-027	1	Flounder, Summer (SF)	270	192	Evaluated by pathologist (SF20); zone not recorded
NBN		NBN-AG-0728	CRB-123-125	3	Crab, Blue (CRB)	-	-	Hooked but not landed
NBN		NBN-AG-0728	SF-028	1	Flounder, Summer (SF)	302	320	
NBN		NBN-AG-0728	SF-029	1	Flounder, Summer (SF)	260	150	
NBN		NBN-AG-0728	SF-030	1	Flounder, Summer (SF)	340	350	
NBN		NBN-AG-0728	SF-031	1	Flounder, Summer (SF)	350	390	
NBN		NBN-AG-0728	SF-032	1	Flounder, Summer (SF)	325	310	
NBN		NBN-AG-0728	SF-033	1	Flounder, Summer (SF)	286	240	
NBN		NBN-AG-0728	SF-034	1	Flounder, Summer (SF)	340	340	
NBN		NBN-AG-0728	SF-035	1	Flounder, Summer (SF)	300	300	
NBN		NBN-AG-0728	SF-036	1	Flounder, Summer (SF)	320	310	
NBN		NBN-AG-0728	SF-037	1	Flounder, Summer (SF)	375	540	
NBN		NBN-AG-0728	SF-038	1	Flounder, Summer (SF)	280	200	
NBN		NBN-AG-0728	SF-039	1	Flounder, Summer (SF)	355	400	
NBN		NBN-AG-0728	SF-040	1	Flounder, Summer (SF)	335	360	
NBN		NBN-AG-0728	SF-041	1	Flounder, Summer (SF)	285	230	
NBN		NBN-AG-0728	SF-042	1	Flounder, Summer (SF)	290	210	
NBN		NBN-AG-0728	SF-043	1	Flounder, Summer (SF)	295	235	
NBN		NBN-AG-0728	SF-044	1	Flounder, Summer (SF)	240	140	
NBN		NBN-AG-0728	SF-045	1	Flounder, Summer (SF)	273	170	

Zone	Intertidal Area	Catch Code	Specimen ID	Count	Species	Length (mm)	Weight (g)	Comments
NBN		NBN-AG-0728	SF-046	1	Flounder, Summer (SF)	285	230	
NBN		NBN-AG-0728	SF-047	1	Flounder, Summer (SF)	325	380	
NBN		NBN-AG-0728	SF-048	1	Flounder, Summer (SF)	260	150	
NBN		NBN-AG-0728	SF-049	1	Flounder, Summer (SF)	340	380	
NBN		NBN-AG-0728	SF-050	1	Flounder, Summer (SF)	275	180	
NBN		NBN-AG-0728	SF-051	1	Flounder, Summer (SF)	344	360	
NBN		NBN-AG-0728	SF-052	1	Flounder, Summer (SF)	352	380	
NBS		NBS-AG-0728	SF-053	1	Flounder, Summer (SF)	330	300	
NBS		NBS-AG-0728	SF-054	1	Flounder, Summer (SF)	294	220	
NBS		NBS-AG-0728	SF-055	1	Flounder, Summer (SF)	320	310	
NBS		NBS-AG-0728	SF-056	1	Flounder, Summer (SF)	339	350	
NBS		NBS-AG-0728	SF-057	1	Flounder, Summer (SF)	325	350	
NBS		NBS-AG-0728	SF-058	1	Flounder, Summer (SF)	365	460	
NBC		NBC-AG-0729	SF-059	1	Flounder, Summer (SF)	380	525	
NBC		NBC-AG-0729	SF-060	1	Flounder, Summer (SF)	340	360	
NBC		NBC-AG-0729	SF-061	1	Flounder, Summer (SF)	325	310	
NBC		NBC-AG-0729	SF-062	1	Flounder, Summer (SF)	290	200	
NBC		NBC-AG-0729	SF-063	1	Flounder, Summer (SF)	330	300	
NBC		NBC-AG-0729	SF-064	1	Flounder, Summer (SF)	330	350	
NBC		NBC-AG-0729	SF-065	1	Flounder, Summer (SF)	350	400	
NBC		NBC-AG-0729	SF-066	1	Flounder, Summer (SF)	300	300	
NBC		NBC-AG-0729	SF-067	1	Flounder, Summer (SF)	341	400	
NBC		NBC-AG-0729	SF-068	1	Flounder, Summer (SF)	325	425	
NBC		NBC-AG-0729	SF-069	1	Flounder, Summer (SF)	320	320	
NBC		NBC-AG-0729	SF-070	1	Flounder, Summer (SF)	355	420	
NBC		NBC-AG-0729	SF-071	1	Flounder, Summer (SF)	340	300	
NBC		NBC-AG-0729	SF-072	1	Flounder, Summer (SF)	285	225	
NBC		NBC-AG-0729	SF-073	1	Flounder, Summer (SF)	350	400	
NBC		NBC-AG-0729	SF-074	1	Flounder, Summer (SF)	300	250	
NBC		NBC-AG-0729	SF-075	1	Flounder, Summer (SF)	300	250	
NBC		NBC-AG-0729	SF-076	1	Flounder, Summer (SF)	350	440	
NBC		NBC-AG-0729	SF-077	1	Flounder, Summer (SF)	365	520	
NBC		NBC-AG-0729	SF-078	1	Flounder, Summer (SF)	375	450	
NBC		NBC-AG-0729	SF-079	1	Flounder, Summer (SF)	370	450	
NBC		NBC-AG-0729	SF-080	1	Flounder, Summer (SF)	310	300	
NBC		NBC-AG-0729	SF-081	1	Flounder, Summer (SF)	320	300	
NBC		NBC-AG-0729	SF-082	1	Flounder, Summer (SF)	340	375	
NBN		NBN-AG-0729	SB-318	1	Bass, Striped (SB)	595	2268	
NBN		NBN-AG-0729	SF-083	1	Flounder, Summer (SF)	310	250	
NBN		NBN-AG-0729	SF-084	1	Flounder, Summer (SF)	360	430	
NBN		NBN-AG-0729	SF-085	1	Flounder, Summer (SF)	305	245	
NBN		NBN-AG-0729	SF-086	1	Flounder, Summer (SF)	265	160	
NBN		NBN-AG-0729	SF-087	1	Flounder, Summer (SF)	255	155	

Zone	Intertidal Area	Catch Code	Specimen ID	Count	Species	Length (mm)	Weight (g)	Comments
NBN		NBN-AG-0729	SF-088	1	Flounder, Summer (SF)	263	180	
NBS		NBS-AG-0729	SF-089	1	Flounder, Summer (SF)	308	250	
NBS		NBS-AG-0729	SF-090	1	Flounder, Summer (SF)	300	200	
NBS		NBS-AG-0729	SF-091	1	Flounder, Summer (SF)	368	410	
NBS		NBS-AG-0729	SF-092	1	Flounder, Summer (SF)	340	400	
NBS		NBS-AG-0729	SF-093	1	Flounder, Summer (SF)	348	370	
NBS		NBS-AG-0729	SF-094	1	Flounder, Summer (SF)	343	400	
NBS		NBS-AG-0729	SF-095	1	Flounder, Summer (SF)	300	250	
NBS		NBS-AG-0729	SF-096	1	Flounder, Summer (SF)	370	500	
NBS		NBS-AG-0729	SF-097	1	Flounder, Summer (SF)	320	300	
NBS		NBS-AG-0729	SF-098	1	Flounder, Summer (SF)	350	400	
NBS		NBS-AG-0729	SF-099	1	Flounder, Summer (SF)	330	300	
NBS		NBS-AG-0729	SF-100	1	Flounder, Summer (SF)	326	360	
NBS		NBS-AG-0729	SF-101	1	Flounder, Summer (SF)	344	400	
NBS		NBS-AG-0729	SF-102	1	Flounder, Summer (SF)	345	360	
NBS		NBS-AG-0729	SF-103	1	Flounder, Summer (SF)	360	450	
NBS		NBS-AG-0729	SF-104	1	Flounder, Summer (SF)	300	290	
NBS		NBS-AG-0729	SF-105	1	Flounder, Summer (SF)	372	480	
NBS		NBS-AG-0729	SF-106	1	Flounder, Summer (SF)	310	250	
NBS		NBS-AG-0729	SF-107	1	Flounder, Summer (SF)	330	370	
NBS		NBS-AG-0729	SF-108	1	Flounder, Summer (SF)	345	360	
NBS		NBS-AG-0729	SF-109	1	Flounder, Summer (SF)	355	400	
NBS		NBS-AG-0729	SF-110	1	Flounder, Summer (SF)	345	380	
NBS		NBS-AG-0729	SF-111	1	Flounder, Summer (SF)	340	360	
NBS		NBS-AG-0729	SF-112	1	Flounder, Summer (SF)	320	320	
NBS		NBS-AG-0729	SF-113	1	Flounder, Summer (SF)	360	520	
NBS		NBS-AG-0729	SF-114	1	Flounder, Summer (SF)	368	500	
NBS		NBS-AG-0729	SF-115	1	Flounder, Summer (SF)	335	400	
NBS		NBS-AG-0729	SF-116	1	Flounder, Summer (SF)	324	320	
NBS		NBS-AG-0729	SF-117	1	Flounder, Summer (SF)	327	360	
NBN		NBN-AG-0730	SF-118	1	Flounder, Summer (SF)	335	370	
NBN		NBN-AG-0730	SF-119	1	Flounder, Summer (SF)	290	175	
NBN		NBN-AG-0730	SF-120	1	Flounder, Summer (SF)	253	140	
NBN		NBN-AG-0730	SF-121	1	Flounder, Summer (SF)	254	150	
NBN		NBN-AG-0730	SF-122	1	Flounder, Summer (SF)	310	340	
NBN		NBN-AG-0730	SF-123	1	Flounder, Summer (SF)	360	400	
NBS		NBS-AG-0730	SB-319	1	Bass, Striped (SB)	420	720	
NBS		NBS-AG-0730	SF-124	1	Flounder, Summer (SF)	365	410	
NBS		NBS-AG-0730	SF-125	1	Flounder, Summer (SF)	330	380	
NBS		NBS-AG-0730	SF-126	1	Flounder, Summer (SF)	315	320	
NBS		NBS-AG-0730	SF-127	1	Flounder, Summer (SF)	335	375	
NBS		NBS-AG-0730	SF-128	1	Flounder, Summer (SF)	305	300	
NBS		NBS-AG-0730	SF-129	1	Flounder, Summer (SF)	330	360	

Zone	Intertidal Area	Catch Code	Specimen ID	Count	Species	Length (mm)	Weight (g)	Comments
NBS		NBS-AG-0730	SF-130	1	Flounder, Summer (SF)	365	490	
NBS		NBS-AG-0730	SF-131	1	Flounder, Summer (SF)	285	200	
NBS		NBS-AG-0730	SF-132	1	Flounder, Summer (SF)	327	360	
NBS		NBS-AG-0730	SF-133	1	Flounder, Summer (SF)	330	375	
NBS		NBS-AG-0730	SF-134	1	Flounder, Summer (SF)	330	330	
NBS		NBS-AG-0730	SF-135	1	Flounder, Summer (SF)	335	370	
NBS		NBS-AG-0730	SF-136	1	Flounder, Summer (SF)	350	400	
NBS		NBS-AG-0730	SF-137	1	Flounder, Summer (SF)	310	310	
NBS		NBS-AG-0730	SF-138	1	Flounder, Summer (SF)	350	430	
NBS		NBS-AG-0730	SF-139	1	Flounder, Summer (SF)	360	460	
NBS		NBS-AG-0730	SF-140	1	Flounder, Summer (SF)	340	430	
NBS		NBS-AG-0730	SF-141	1	Flounder, Summer (SF)	310	320	
NBS		NBS-AG-0730	SF-142	1	Flounder, Summer (SF)	300	240	
NBS		NBS-AG-0730	SF-143	1	Flounder, Summer (SF)	295	230	
NBS		NBS-AG-0730	SF-144	1	Flounder, Summer (SF)	300	250	
NBS		NBS-AG-0730	SF-145	1	Flounder, Summer (SF)	330	330	
NBS		NBS-AG-0730	SF-146	1	Flounder, Summer (SF)	410	680	
NBS		NBS-AG-0730	SF-147	1	Flounder, Summer (SF)	384	560	
NBS		NBS-AG-0730	SF-148	1	Flounder, Summer (SF)	350	400	
NBC		NBC-AG-0731	SF-149	1	Flounder, Summer (SF)	324	360	
NBC		NBC-AG-0731	SF-150	1	Flounder, Summer (SF)	310	300	
NBC		NBC-AG-0731	SF-151	1	Flounder, Summer (SF)	330	360	
NBC		NBC-AG-0731	SF-152	1	Flounder, Summer (SF)	310	230	
NBC		NBC-AG-0731	SF-153	1	Flounder, Summer (SF)	280	200	
NBC		NBC-AG-0731	SF-154	1	Flounder, Summer (SF)	295	230	
NBC		NBC-AG-0731	SF-155	1	Flounder, Summer (SF)	320	300	
NBC		NBC-AG-0731	SF-156	1	Flounder, Summer (SF)	300	300	
NBS		NBS-AG-0731	SF-157	1	Flounder, Summer (SF)	350	350	
NBS		NBS-AG-0731	SF-158	1	Flounder, Summer (SF)	315	290	
NBS		NBS-AG-0731	SF-159	1	Flounder, Summer (SF)	365	420	
NBS		NBS-AG-0731	SF-160	1	Flounder, Summer (SF)	330	340	
NBS		NBS-AG-0731	SF-161	1	Flounder, Summer (SF)	400	540	
NBS		NBS-AG-0731	SF-162	1	Flounder, Summer (SF)	330	400	
NBS		NBS-AG-0731	SF-163	1	Flounder, Summer (SF)	293	240	
NBS		NBS-AG-0731	SF-164	1	Flounder, Summer (SF)	330	350	
NBS		NBS-AG-0731	SF-165	1	Flounder, Summer (SF)	365	425	
NBS		NBS-AG-0731	SF-166	1	Flounder, Summer (SF)	330	350	
NBS		NBS-AG-0731	SF-167	1	Flounder, Summer (SF)	335	350	
NBS		NBS-AG-0731	SF-168	1	Flounder, Summer (SF)	317	320	
NBS		NBS-AG-0731	SF-169	1	Flounder, Summer (SF)	340	400	
NBS		NBS-AG-0731	SF-170	1	Flounder, Summer (SF)	350	425	
NBS		NBS-AG-0731	SF-171	1	Flounder, Summer (SF)	280	180	
NBS		NBS-AG-0731	SF-172	1	Flounder, Summer (SF)	405	585	

Zone	Intertidal Area	Catch Code	Specimen ID	Count	Species	Length (mm)	Weight (g)	Comments
NBS		NBS-AG-0731	SF-173	1	Flounder, Summer (SF)	322	300	
NBS		NBS-AG-0731	SF-174	1	Flounder, Summer (SF)	341	360	
NBS		NBS-AG-0731	SF-175	1	Flounder, Summer (SF)	348	360	
NBC		NBC-AG-0803	SF-176	1	Flounder, Summer (SF)	320	300	
NBC		NBC-AG-0803	SF-177	1	Flounder, Summer (SF)	320	360	
NBC		NBC-AG-0803	SF-178	1	Flounder, Summer (SF)	320	370	
NBC		NBC-AG-0803	SF-179	1	Flounder, Summer (SF)	340	380	
NBC		NBC-AG-0803	SF-180	1	Flounder, Summer (SF)	330	310	
NBC		NBC-AG-0803	SF-181	1	Flounder, Summer (SF)	330	380	
NBC		NBC-AG-0803	SF-182	1	Flounder, Summer (SF)	310	310	
NBC		NBC-AG-0803	SF-183	1	Flounder, Summer (SF)	330	370	
NBC		NBC-AG-0803	SF-184	1	Flounder, Summer (SF)	340	350	
NBC		NBC-AG-0803	SF-185	1	Flounder, Summer (SF)	310	310	
NBC		NBC-AG-0803	SF-186	1	Flounder, Summer (SF)	295	250	
NBS		NBS-AG-0803	SF-187	1	Flounder, Summer (SF)	330	380	
NBS		NBS-AG-0803	SF-188	1	Flounder, Summer (SF)	305	310	
NBS		NBS-AG-0803	SF-189	1	Flounder, Summer (SF)	350	300	
NBS		NBS-AG-0803	SF-190	1	Flounder, Summer (SF)	370	500	
NBS		NBS-AG-0803	SF-191	1	Flounder, Summer (SF)	350	400	
NBS		NBS-AG-0803	SF-192	1	Flounder, Summer (SF)	310	320	
NBS		NBS-AG-0803	SF-193	1	Flounder, Summer (SF)	384	550	
NBS		NBS-AG-0803	SF-194	1	Flounder, Summer (SF)	330	400	
NBS		NBS-AG-0803	SF-195	1	Flounder, Summer (SF)	310	375	
NBS		NBS-AG-0803	SF-196	1	Flounder, Summer (SF)	350	400	
NBS		NBS-AG-0803	SF-197	1	Flounder, Summer (SF)	300	275	
NBS		NBS-AG-0803	SF-198	1	Flounder, Summer (SF)	420	700	
NBS		NBS-AG-0803	SF-199	1	Flounder, Summer (SF)	330	380	
NBS		NBS-AG-0803	SF-200	1	Flounder, Summer (SF)	292	260	
NBS		NBS-AG-0803	SF-201	1	Flounder, Summer (SF)	395	600	
NBS		NBS-AG-0803	SF-202	1	Flounder, Summer (SF)	310	330	
NBS		NBS-AG-0803	SF-203	1	Flounder, Summer (SF)	300	350	
NBS		NBS-AG-0803	SF-204	1	Flounder, Summer (SF)	370	550	
NBS		NBS-AG-0803	SF-205	1	Flounder, Summer (SF)	320	320	
NBS		NBS-AG-0803	SF-206	1	Flounder, Summer (SF)	400	600	
NBS		NBS-AG-0803	SF-207	1	Flounder, Summer (SF)	422	650	
NBS		NBS-AG-0803	SF-208	1	Flounder, Summer (SF)	350	400	
NBS		NBS-AG-0803	SF-209	1	Flounder, Summer (SF)	430	710	
NBS		NBS-AG-0803	SF-210	1	Flounder, Summer (SF)	330	400	
NBS		NBS-AG-0803	SF-211	1	Flounder, Summer (SF)	300	320	
NBS		NBS-AG-0803	SF-212	1	Flounder, Summer (SF)	325	310	
NBS		NBS-AG-0803	SF-213	1	Flounder, Summer (SF)	300	300	
NBS		NBS-AG-0803	SF-214	1	Flounder, Summer (SF)	350	360	
NBS		NBS-AG-0803	SF-215	1	Flounder, Summer (SF)	300	275	

Zone	Intertidal Area	Catch Code	Specimen ID	Count	Species	Length (mm)	Weight (g)	Comments
NBS		NBS-AG-0803	SF-216	1	Flounder, Summer (SF)	320	300	
NBS		NBS-AG-0803	SF-217	1	Flounder, Summer (SF)	320	300	
NBS		NBS-AG-0803	SF-218	1	Flounder, Summer (SF)	200	220	
NBS		NBS-AG-0803	SF-219	1	Flounder, Summer (SF)	370	340	
NBS		NBS-AG-0803	SF-220	1	Flounder, Summer (SF)	370	500	
NBS		NBS-AG-0803	SF-221	1	Flounder, Summer (SF)	365	450	
NBS		NBS-AG-0803	SF-222	1	Flounder, Summer (SF)	382	600	
NBS		NBS-AG-0803	SF-223	1	Flounder, Summer (SF)	370	570	
NBS		NBS-AG-0803	SF-224	1	Flounder, Summer (SF)	350	400	
NBS		NBS-AG-0803	SF-225	1	Flounder, Summer (SF)	300	290	
NBS		NBS-AG-0803	SF-226	1	Flounder, Summer (SF)	310	310	
NBS		NBS-AG-0803	SF-227	1	Flounder, Summer (SF)	365	400	
NBS		NBS-AG-0803	SF-228	1	Flounder, Summer (SF)	365	400	
NBS		NBS-AG-0803	SF-229	1	Flounder, Summer (SF)	387	600	
NBS		NBS-AG-0803	SF-230	1	Flounder, Summer (SF)	370	440	
NBS		NBS-AG-0803	SF-231	1	Flounder, Summer (SF)	382	550	
NBS		NBS-AG-0803	SF-232	1	Flounder, Summer (SF)	330	350	
NBS		NBS-AG-0803	SF-233	1	Flounder, Summer (SF)	320	320	
NBS		NBS-AG-0803	SF-234	1	Flounder, Summer (SF)	300	350	
NBS		NBS-AG-0803	SF-235	1	Flounder, Summer (SF)	310	300	
NBS		NBS-AG-0803	SF-236	1	Flounder, Summer (SF)	350	380	
NBS		NBS-AG-0803	SF-237	1	Flounder, Summer (SF)	300	350	
NBS		NBS-AG-0803	SF-238	1	Flounder, Summer (SF)	320	340	
NBS		NBS-AG-0803	SF-239	1	Flounder, Summer (SF)	300	260	
NBS		NBS-AG-0803	SF-240	1	Flounder, Summer (SF)	335	350	
NBS		NBS-AG-0803	SF-241	1	Flounder, Summer (SF)	360	450	
NBS		NBS-AG-0803	SF-242	1	Flounder, Summer (SF)	350	350	
NBC		NBC-AG-0804	SF-243	1	Flounder, Summer (SF)	290	250	
NBC		NBC-AG-0804	SF-244	1	Flounder, Summer (SF)	350	400	
NBC		NBC-AG-0804	SF-245	1	Flounder, Summer (SF)	330	350	
NBC		NBC-AG-0804	SF-246	1	Flounder, Summer (SF)	270	200	
NBC		NBC-AG-0804	SF-247	1	Flounder, Summer (SF)	300	300	
NBC		NBC-AG-0804	SF-248	1	Flounder, Summer (SF)	305	300	
NBC		NBC-AG-0804	SF-249	1	Flounder, Summer (SF)	330	300	
NBC		NBC-AG-0804	SF-250	1	Flounder, Summer (SF)	310	300	
NBC		NBC-AG-0804	SF-251	1	Flounder, Summer (SF)	274	160	
NBC		NBC-AG-0804	SF-252	1	Flounder, Summer (SF)	320	320	
NBC		NBC-AG-0804	SF-253	1	Flounder, Summer (SF)	290	320	
NBC		NBC-AG-0804	SF-254	1	Flounder, Summer (SF)	300	300	
NBC		NBC-AG-0804	SF-255	1	Flounder, Summer (SF)	315	315	
NBC		NBC-AG-0804	SF-256	1	Flounder, Summer (SF)	300	250	
NBC		NBC-AG-0804	SF-257	1	Flounder, Summer (SF)	330	375	
NBC		NBC-AG-0804	SF-258	1	Flounder, Summer (SF)	300	320	

Zone	Intertidal Area	Catch Code	Specimen ID	Count	Species	Length (mm)	Weight (g)	Comments
NBC		NBC-AG-0804	SF-259	1	Flounder, Summer (SF)	310	320	
NBC		NBC-AG-0804	SF-260	1	Flounder, Summer (SF)	320	350	
NBC		NBC-EP-0804	SCR-002	1	Crab, Spider (SCR)	-	-	
NBN		NBN-AG-0804	SB-320	1	Bass, Striped (SB)	405	680	
NBN		NBN-AG-0804	SF-261	1	Flounder, Summer (SF)	350	380	
NBN		NBN-AG-0804	SF-262	1	Flounder, Summer (SF)	379	625	
NBN		NBN-AG-0804	SF-263	1	Flounder, Summer (SF)	391	-	Jumped off boat prior to weighing
NBN		NBN-AG-0804	SF-264	1	Flounder, Summer (SF)	250	150	
NBS		NBS-EP-0804	SCR-003	1	Crab, Spider (SCR)	-	-	
NBS		NBS-EP-0804	TA-001	1	Tautog (TA)	134	50	
NBS		NBS-EP-0804	TA-002	1	Tautog (TA)	110	35	
NBC		NBC-EP-0805	CRB-126-132	7	Crab, Blue (CRB)	80-130	-	
NBC		NBC-EP-0805	OT-023	1	Toadfish, Oyster (OT)	210	240	
NBC		NBC-EP-0805	OT-024	1	Toadfish, Oyster (OT)	180	200	
NBS		NBS-EP-0805	CRB-132-135	4	Crab, Blue (CRB)	90-120	-	

Fish Sampling
Newark Bay Study Area
FISH SPECIES LIST

Sorted Name	Common Name	Scientific Name	Nomenclature
Alewife	Alewife	Alosa pseudoharengus	AL
Anchovy, Bay	Bay Anchovy	Anchoa mitchilli	BA
Anchovy, Striped	Striped Anchovy	Anchoa hepsetus	SA
Bass, Black Sea	Black Sea Bass	Centropristis striata	BS
Bass, Striped	Striped Bass	Morone saxatilis	SB
Bluefish	Bluefish	Pomatomus saltatrix	BL
Butterfish	Butterfish	Peprilus triacanthus	BF
Clupeidae	Clupeidae	Clupeidae	CL
Crab, Blue	Blue Crab	Callinectes sapidus	CRB
Crab, Horseshoe	Horseshoe Crab	Limulidae	HCR
Crab, Mud	Mud Crab	Scylla serrata	MCR
Crab, Spider	Spider Crab	Libinia emarginata	SCR
Cunner	Cunner	Tautogolabrus adspersus	CU
Eel, American	American Eel	Anguilla rostrata	AE
Flounder, Smallmouth	Smallmouth Flounder	Etropus microstomus	SM
Flounder, Summer	Summer Flounder	Paralichthys dentatus	SF
Flounder, Windowpane	Windowpane	Scophthalmus aquosus	WW
Flounder, Winter	Winter Flounder	Pseudopleuronectes americanus	WF
Goby	Goby	Family: Gobiidae	GB
Goby, Naked	Naked Goby	Gobiosoma bosc	NG
Hake, Spotted	Spotted Hake	Urophycis regia	HA
Herring, Atlantic	Atlantic Herring	Clupea harengus	AH
Herring, Blueback	Blueback Herring	Alosa aestivalis	BB
Hogchoker	Hogchoker	Trinectes maculatus	HC
Killifish, Striped	Striped Killifish	Fundulus majalis	SK
Kingfish, Northern	Northern Kingfish	Menticirrhus saxatilis	NK
Lookdown	Lookdown	Selene vomer	LK
Menhaden, Atlantic	Atlantic Menhaden	Brevoortia tyrannus	ME
Moonfish	Moonfish	Selene setapinnis	MF
Mullet, Striped	Striped Mullet	Mugil cephalus	MS
Mullet, White	White Mullet	Mugil curema	WM
Mummichog	Mummichog	Fundulus heteroclitus	MU
Perch, Silver	Silver Perch	Bairdiella chrysoura	SP
Perch, White	White Perch	Morone americana	WP
Pipefish, Northern	Northern Pipefish	Syngnathus fuscus	NP
Pufferfish, Northern	Northern Pufferfish	Sphoeroides maculatus	PU
Sculpin	Sculpin	Cottoidea	SL
Sculpin, Longhorn	Longhorn Sculpin	Myoxocephalus octodecimspinosus	LH
Scup	Scup	Stenotomus chrysops	SC
Sea Robin, Striped	Striped Sea Robin	Prionotus evolans	SR
Shad	Shad	Alosinae	SH
Shad, American	American Shad	Alosa sapidissima	AM
Shad, Gizzard	Gizzard Shad	Dorosoma cepedianum	GS
Silverside, Atlantic	Atlantic Silverside	Menidia menidia	AS

Sorted Name	Common Name	Scientific Name	Nomenclature
Skate, Little	Little Skate	Leucoraja erinacea	LS
Tautog	Tautog	Tautoga onitis	TA
Toadfish, Oyster	Oyster Toadfish	Opsanus tau	OT
Tomcod, Atlantic	Atlantic Tomcod	Microgadus tomcod	AT
Weakfish	Weakfish	Cynoscion regalis	WE

Fish Sampling
Newark Bay Study Area **Draft: For Discussion Purposes Only**
VARIABLE DESCRIPTION

Location Coordinate Tab

Zone	Code indicating the project location (Newark Bay = NB) and Zone (N = North, C= Central, S = South, Z = Zone not recorded)
Intertidal Area	If applicable, Intertidal Area where the sample was collected
Collection Method	Method (or equipment, i.e., gear type) used to collect the organism
Catch Code	A unique identifier for the organisms that were collected that includes the Zone, collection method, and collection date used to relate the location coordinate data and associated catch list
Deployment Date	Date when collection equipment was deployed at a sample location
Deployment Time	Time when collection equipment was deployed at a sample location
Depolyment Easting (X)	Easting coordinate[1] of the deployed collection equipment
Deployment Northing (Y)	Northing coordinate[1] of the deployed collection equipment
Deployment Count	Count of the deployments of each type of equipment by Zone or Intertidal Area (AG = Angling, CT = Crab Trap, EP = Eel Pot, GN = Gillnet, MT = Minnow Trap, SN = Seine, TL = Trotline, TW=Trawl)
Collection Date	Date when collection equipment was retrieved from a sample location
Collection Time	Time when collection equipment was retrieved from a sample location. For seines, NA=not applicable since the collection time was essentially the same as the deployment time.
Collection Easting (X)	If applicable, easting coordinate[1] of the retrieved collection equipment
Collection Northing (Y)	If applicable, northing coordinate[1] of the retrieved collection equipment
Depth (ft)	Water depth (ft) where organism was collected
Comments	

Specimen Tally Tab

Zone	Code indicating the project location (Newark Bay = NB) and Zone (N = North, C= Central, S = South, Z = Zone not recorded)
Intertidal Area	If applicable, Intertidal Area where the sample was collected
Catch Code	A unique identifier for the organisms that were collected that includes the Zone, collection method, and collection date used to relate the location coordinate data and associated catch list
Tissue Sample ID	The tissue sample ID used on the chain of custody
Specimen ID	A unique identifier that combines the sample ID and consecutive numbering of the organisms within the sample
Species	Species of the organism
Length (mm)	Length (mm) of the organism
Weight (g)	Weight of the individual organism prior to any sample processing
Tissue Weight (g)	If applicable, the tissue weight for the specific tissue that was sampled (e.g., fillet, liver)
Comments	

Bycatch[2] Tab

Zone	Code indicating the project location (Newark Bay = NB) and Zone (N = North, C= Central, S = South, Z = Zone not recorded)
Intertidal Area	If applicable, Intertidal Area where the sample was collected
Catch Code	A unique identifier for the organisms that were collected that includes the Zone, collection method, and collection date used to relate the location coordinate data and associated catch list
Specimen ID	A unique identifier that combines the species code and consecutive numbering of the species caught
Count	Number of organisms that comprise the weight
Species	Species of the organism
Length (mm)	Length (mm) of the organism; if the count was more than one, either NA was used for not applicable, or a range of lengths was given
Weight (g)	Weight of the organism(s)
Comments	

Notes:

1. **All coordinates are provided in the following coordinate system: US State Plane, NAD 83 (US survey feet), zone NJ 2900**
2. **Includes target species that did not meet size requirements**

2016

Fish Sampling
Newark Bay Study Area **Draft: For Discussion Purposes Only**
LOCATION COORDINATE DATA (Field observed coordinates)

Zone	Intertidal Area	Collection Method	Catch Code	Deployment Date	Deployment Time	Deployment Easting (X)	Deployment Northing (Y)	Deployment Count	Collection Date	Collection Time	Collection Easting (X)	Collection Northing (Y)	Depth (ft)	Comments
NBC		Gillnet	NBC-GN-0315	3/14/16	11:00	593123.160	668117.300	NBC-GN-011	3/15/16	11:30	593248.190	668416.850	28	
NBC		Gillnet	NBC-GN-0315	3/14/16	11:20	594026.370	670368.340	NBC-GN-012	3/15/16	10:25	594110.370	670516.340	28-34	
NBC		Gillnet	NBC-GN-0316	3/15/16	1:15	594027.830	670354.020	NBC-GN-013	3/16/16	9:45	594085.040	670259.900	28	
NBC		Gillnet	NBC-GN-0316	3/15/16	12:10	593585.380	669383.290	NBC-GN-014	3/16/16	10:20	593652.960	669543.910	38	
NBC		Gillnet	NBC-GN-0316	3/15/16	14:00	591575.200	664767.840	NBC-GN-015	3/16/16	11:05	591666.950	664997.250	24	
NBC		Gillnet	NBC-GN-0317	3/16/16	9:30	594083.740	670745.570	NBC-GN-016	3/17/16	11:20	594130.760	671056.060	30-45	
NBC		Gillnet	NBC-GN-0317	3/16/16	10:00	593884.220	670049.280	NBC-GN-017	3/17/16	8:50	593911.900	670186.600	32-38	
NBC		Gillnet	NBC-GN-0317	3/16/16	10:45	593394.420	669013.140	NBC-GN-018	3/17/16	9:45	593394.420	669013.140	38	
NBC		Gillnet	NBC-GN-0317	3/16/16	12:45	594929.020	673013.499	NBC-GN-019	3/17/16	13:30	594938.111	673192.920	30	
NBC		Gillnet	NBC-GN-0317	3/16/16	15:55	593174.760	668680.090	NBC-GN-020	3/17/16	8:15	593260.190	668820.990	55	
NBC		Gillnet	NBC-GN-0317	3/16/16	16:05	593936.940	670399.170	NBC-GN-021	3/17/16	10:09	593991.220	670500.970	50	
NBC		Gillnet	NBC-GN-0318	3/17/16	9:20	593455.080	669168.130	NBC-GN-022	3/18/16	8:35	593615.620	669397.470	30-40	
NBC		Gillnet	NBC-GN-0318	3/17/16	10:15	594010.940	670246.620	NBC-GN-023	3/18/16	9:15	594016.100	670300.260	30-40	
NBC		Gillnet	NBC-GN-0318	3/17/16	14:35	594912.230	672891.720	NBC-GN-024	3/18/16	9:35	594954.511	673001.470	20	
NBN		Gillnet	NBN-GN-0315	3/14/16	11:50	601281.860	686860.321	NBN-GN-004	3/15/16	9:50	601356.730	686903.351	22	
NBN		Gillnet	NBN-GN-0316	3/15/16	9:40	596323.180	676581.999	NBN-GN-005	3/16/16	13:20	596244.149	676478.080	15	
NBN		Gillnet	NBN-GN-0316	3/15/16	14:15	595596.780	675038.990	NBN-GN-006	3/16/16	13:00	595580.560	674961.350	20	
NBN		Gillnet	NBN-GN-0323	3/22/16	9:18	595745.889	675224.790	NBN-GN-007	3/23/16	8:15	595598.771	674906.900	15-25	
NBN		Gillnet	NBN-GN-0323	3/22/16	9:32	596034.310	675863.670	NBN-GN-008	3/23/16	8:45	595840.990	675619.631	15-30	
NBN		Gillnet	NBN-GN-0323	3/22/16	9:44	596281.540	676448.530	NBN-GN-009	3/23/16	9:10	596090.060	676182.980	30	
NBN		Gillnet	NBN-GN-0323	3/22/16	9:55	596604.909	676958.350	NBN-GN-010	3/23/16	9:40	596474.570	676820.690	15-30	
NBN		Gillnet	NBN-GN-0324	3/23/16	10:00	596413.580	676597.050	NBN-GN-011	3/24/16	8:25	596196.860	676384.930	20-35	
NBN		Gillnet	NBN-GN-0324	3/23/16	16:00	596065.560	676091.830	NBN-GN-012	3/24/16	8:13	595973.080	676033.370	25-35	
NBN		Trawl	NBN-TW-0314	3/14/16	12:13	601523.051	686600.340	NBN-TW-041	3/14/16	12:24	600003.459	685391.999	36	
NBN		Trawl	NBN-TW-0314	3/14/16	13:11	600369.571	685494.780	NBN-TW-042	3/14/16	13:19	600940.630	686066.751	35	
NBN		Trawl	NBN-TW-0314	3/14/16	13:56	598307.729	682972.170	NBN-TW-043	3/14/16	14:06	599298.730	684485.029	38	
NBN		Trawl	NBN-TW-0314	3/14/16	14:33	599711.380	685106.710	NBN-TW-044	3/14/16	14:43	601446.510	686460.690	38	
NBN		Trawl	NBN-TW-0315	3/15/16	14:41	601574.119	686545.770	NBN-TW-045	3/15/16	14:51	600184.501	685232.639	40	
NBN		Trawl	NBN-TW-0315	3/15/16	15:07	600295.860	685435.499	NBN-TW-046	3/15/16	15:17	599408.900	684711.010	38	
NBN		Trawl	NBN-TW-0315	3/15/16	15:37	599140.410	684343.581	NBN-TW-047	3/15/16	15:48	600940.650	685643.241	35	
NBN		Trawl	NBN-TW-0316	3/16/16	13:51	597574.341	677626.150	NBN-TW-048	3/16/16	13:57	597228.380	677210.790	12	Hung up
NBN		Trawl	NBN-TW-0316	3/16/16	16:17	596143.851	676592.570	NBN-TW-049	3/16/16	16:27	595411.220	675712.549	40	
NBN		Trawl	NBN-TW-0316	3/16/16	16:51	600793.270	685954.981	NBN-TW-050	3/16/16	17:01	599056.150	684550.280	37	
NBN		Trawl	NBN-TW-0318	3/18/16	10:03	595610.550	675076.790	NBN-TW-051	3/18/16	10:13	596559.870	677040.750	15	
NBN		Trawl	NBN-TW-0318	3/18/16	10:28	598887.429	684119.130	NBN-TW-052	3/18/16	10:39	601013.031	685992.130	30-35	
NBN		Trawl	NBN-TW-0322	3/22/16	10:10	598185.039	680768.990	NBN-TW-053	3/22/16	10:20	598887.780	683137.730	30-40	
NBN		Trawl	NBN-TW-0322	3/22/16	10:46	598185.090	683184.539	NBN-TW-054	3/22/16	10:56	598512.571	683893.240	30-40	
NBN		Trawl	NBN-TW-0322	3/22/16	11:18	599914.741	685107.240	NBN-TW-055	3/22/16	11:32	601319.170	686134.251	30-40	
NBN		Trawl	NBN-TW-0322	3/22/16	11:51	598536.200	683587.791	NBN-TW-056	3/22/16	12:05	600972.030	685557.660	20-30	
NBN		Trawl	NBN-TW-0322	3/22/16	13:27	595268.061	674793.560	NBN-TW-057	3/22/16	13:37	596359.830	677084.479	30-40	
NBN		Trawl	NBN-TW-0322	3/22/16	13:47	598100.040	680531.240	NBN-TW-058	3/22/16	13:59	598170.760	682779.399	30-40	
NBN		Trawl	NBN-TW-0322	3/22/16	14:10	598229.100	683619.481	NBN-TW-059	3/22/16	14:23	600952.729	686065.170	30-40	
NBN		Trawl	NBN-TW-0322	3/22/16	14:41	598691.030	683978.939	NBN-TW-060	3/22/16	14:55	601037.171	686190.371	30-40	
NBN		Trawl	NBN-TW-0322	3/22/16	15:22	598865.101	684267.460	NBN-TW-061	3/22/16	15:34	601221.929	686343.789	30-40	
NBN		Trawl	NBN-TW-0323	3/23/16	11:13	598403.191	683732.799	NBN-TW-062	3/23/16	11:28	600458.531	685581.759	30-40	
NBN		Trawl	NBN-TW-0323	3/23/16	11:56	598797.050	684115.621	NBN-TW-063	3/23/16	12:10	601104.800	686262.029	30-40	
NBN		Trawl	NBN-TW-0323	3/23/16	12:36	598984.211	684325.139	NBN-TW-064	3/23/16	12:52	601078.109	686193.599	30-40	
NBN		Trawl	NBN-TW-0323	3/23/16	13:25	599017.040	684332.369	NBN-TW-065	3/23/16	13:40	601211.491	686262.410	30-40	
NBN		Trawl	NBN-TW-0323	3/23/16	14:14	599383.450	684708.609	NBN-TW-066	3/23/16	14:26	601190.730	686320.110	30-40	
NBN		Trawl	NBN-TW-0323	3/23/16	14:49	599258.301	684573.870	NBN-TW-067	3/23/16	15:03	601347.721	686531.959	30-40	

Zone	Intertidal Area	Collection Method	Catch Code	Deployment Date	Deployment Time	Deployment Easting (X)	Deployment Northing (Y)	Deployment Count	Collection Date	Collection Time	Collection Easting (X)	Collection Northing (Y)	Depth (ft)	Comments
NBN		Trawl	NBN-TW-0323	3/23/16	15:23	599378.901	684757.399	NBN-TW-068	3/23/16	15:35	601293.639	686424.789	30-40	
NBN		Trawl	NBN-TW-0324	3/24/16	8:50	601296.370	686179.100	NBN-TW-069	3/24/16	9:02	598969.729	684412.269	30-40	
NBN		Trawl	NBN-TW-0324	3/24/16	9:16	601386.509	686408.901	NBN-TW-070	3/24/16	9:33	598878.361	684312.110	30-40	
NBN		Trawl	NBN-TW-0324	3/24/16	9:54	598803.040	684175.319	NBN-TW-071	3/24/16	10:09	601367.981	686549.621	30-40	
NBN		Trawl	NBN-TW-0324	3/24/16	10:28	599623.041	685052.389	NBN-TW-072	3/24/16	10:38	601404.509	686514.959	30-40	
NBN		Trawl	NBN-TW-0324	3/24/16	10:56	599016.221	684214.839	NBN-TW-073	3/24/16	11:09	601325.280	686472.080	30-40	
NBN		Trawl	NBN-TW-0324	3/24/16	11:30	599238.450	684456.540	NBN-TW-074	3/24/16	11:43	601403.449	686488.740	30-40	
NBN		Trawl	NBN-TW-0324	3/24/16	12:06	599153.380	684480.939	NBN-TW-075	3/24/16	12:20	601178.120	686362.811	30-40	
NBN		Trawl	NBN-TW-0324	3/24/16	12:53	598233.601	683243.451	NBN-TW-076	3/24/16	13:18	601416.491	686473.169	30-40	
NBN		Trawl	NBN-TW-0324	3/24/16	13:50	598666.770	683910.110	NBN-TW-077	3/24/16	14:10	601294.610	686280.059	30-40	
NBS		Gillnet	NBS-GN-0315	3/14/16	10:13	587688.690	665606.190	NBS-GN-039	3/15/16	8:45	587988.250	665499.690	50	
NBS		Gillnet	NBS-GN-0315	3/14/16	10:35	587482.080	665812.470	NBS-GN-040	3/15/16	9:10	587561.620	665739.530	27-33	
NBS		Gillnet	NBS-GN-0316	3/15/16	8:55	588170.130	665311.590	NBS-GN-041	3/16/16	8:15	587845.320	665605.540	48	

Fish Sampling
Newark Bay Study Area **Draft: For Discussion Purposes Only**
SPECIMEN TALLY

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Tissue Weight (if applicable) (g)	Photo #	Sex	Comments
NBN		NBN-TW-0314	NB03FWPN442	NB03FWPN442-001	Perch, White (WP)	293	482	129.8	116-1218	Female	
NBN		NBN-TW-0314	NB03FWPN443	NB03FWPN443-001	Perch, White (WP)	191	99	28.5	116-1218	Male	
NBN		NBN-TW-0314	NB03FWPN444	NB03FWPN444-001	Perch, White (WP)	246	223	74.8	116-1218	Female	
NBN		NBN-TW-0314	NB03FWPN445	NB03FWPN445-001	Perch, White (WP)	274	334	97.3	116-1218	Male	
NBN		NBN-TW-0314	NB03FWPN446	NB03FWPN446-001	Perch, White (WP)	235	210	61.1	116-1219	Female	
NBN		NBN-TW-0314	NB03FWPN447	NB03FWPN447-001	Perch, White (WP)	211	140	46.5	116-1219	Male	
NBN		NBN-TW-0314	NB03FWPN448	NB03FWPN448-001	Perch, White (WP)	192	102	33.0	116-1219	Male	
NBN		NBN-TW-0315	NB03FWPN449	NB03FWPN449-001	Perch, White (WP)	222	140	37.6	116-1226	Female	
NBN		NBN-TW-0316	NB03FWPN450	NB03FWPN450-001	Perch, White (WP)	199	117	33.6	116-1238	Female	
NBN		NBN-TW-0316	NB03FWPN451	NB03FWPN451-001	Perch, White (WP)	198	120	27.6	116-1238	Female	
NBN		NBN-GN-0316	NB03FWPN452	NB03FWPN452-001	Perch, White (WP)	219	165	47.3	116-1239	Female	
NBN		NBN-GN-0316	NB03FWPN453	NB03FWPN453-001	Perch, White (WP)	221	184	43.2	116-1239	Female	
NBN		NBN-GN-0316	NB03FWPN454	NB03FWPN454-001	Perch, White (WP)	210	156	43.7	116-1239	Female	
NBN		NBN-GN-0316	NB03FWPN455	NB03FWPN455-001	Perch, White (WP)	199	174	45.2	116-1239	Female	
NBN		NBN-TW-0318	NB03FWPN456	NB03FWPN456-001	Perch, White (WP)	192	100	29.5	116-1275	Male	
NBN		NBN-TW-0318	NB03FWPN457	NB03FWPN457-001	Perch, White (WP)	195	110	32.7	116-1275	Female	
NBN		NBN-TW-0322	NB03FWPN458	NB03FWPN458-001	Perch, White (WP)	185	76	22.8	116-1281	Male	
NBN		NBN-TW-0322	NB03FWPN459	NB03FWPN459-001	Perch, White (WP)	219	150	40.9	116-1281	Female	
NBN		NBN-TW-0322	NB03FWPN460	NB03FWPN460-001	Perch, White (WP)	178	75	21.3	116-1281	Male	
NBN		NBN-TW-0322	NB03FWPN461	NB03FWPN461-001	Perch, White (WP)	182	92	26.5	116-1281	Male	
NBN		NBN-GN-0323	NB03FWPN462	NB03FWPN462-001	Perch, White (WP)	276	322	85.9	116-1282	Female	
NBN		NBN-GN-0323	NB03FWPN463	NB03FWPN463-001	Perch, White (WP)	251	283	87.9	116-1282	Female	
NBN		NBN-GN-0323	NB03FWPN464	NB03FWPN464-001	Perch, White (WP)	272	338	110.0	116-1282	Female	
NBN		NBN-GN-0323	NB03FWPN465	NB03FWPN465-001	Perch, White (WP)	270	350	111.1	116-1283	Female	
NBN		NBN-GN-0323	NB03FWPN466	NB03FWPN466-001	Perch, White (WP)	242	251	73.4	116-1283	Female	
NBN		NBN-GN-0323	NB03FWPN467	NB03FWPN467-001	Perch, White (WP)	252	238	69.5	116-1283	Female	
NBN		NBN-GN-0323	NB03FWPN468	NB03FWPN468-001	Perch, White (WP)	248	229	65.4	116-1283	Female	
NBN		NBN-GN-0323	NB03FWPN469	NB03FWPN469-001	Perch, White (WP)	226	202	59.3	116-1284	Female	
NBN		NBN-GN-0323	NB03FWPN470	NB03FWPN470-001	Perch, White (WP)	232	208	67.6	116-1284	Female	
NBN		NBN-GN-0323	NB03FWPN471	NB03FWPN471-001	Perch, White (WP)	213	171	56.6	116-1284	Male	
NBN		NBN-GN-0323	NB03FWPN472	NB03FWPN472-001	Perch, White (WP)	240	226	66.4	116-1284	Female	
NBN		NBN-TW-0323	NB03FWPN473	NB03FWPN473-001	Perch, White (WP)	225	184	58.1	116-1285	Female	
NBN		NBN-TW-0323	NB03FWPN474	NB03FWPN474-001	Perch, White (WP)	231	207	63.2	116-1285	Female	
NBN		NBN-TW-0323	NB03FWPN475	NB03FWPN475-001	Perch, White (WP)	238	210	63.9	116-1285	Male	
NBC		NBC-GN-0315	NB03FWPC517	NB03FWPC517-001	Perch, White (WP)	215	160	42.5	116-1220	Female	
NBC		NBC-GN-0315	NB03FWPC518	NB03FWPC518-001	Perch, White (WP)	216	155	52.0	116-1220	Female	
NBC		NBC-GN-0315	NB03FWPC519	NB03FWPC519-001	Perch, White (WP)	214	163	52.7	116-1220	Female	
NBC		NBC-GN-0315	NB03FWPC520	NB03FWPC520-001	Perch, White (WP)	237	218	69.5	116-1220	Female	
NBC		NBC-GN-0315	NB03FWPC521	NB03FWPC521-001	Perch, White (WP)	218	180	63.1	116-1221	Male	
NBC		NBC-GN-0315	NB03FWPC522	NB03FWPC522-001	Perch, White (WP)	217	164	59.8	116-1221	Male	
NBC		NBC-GN-0315	NB03FWPC523	NB03FWPC523-001	Perch, White (WP)	228	186	69.6	116-1221	Male	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Tissue Weight (if applicable) (g)	Photo #	Sex	Comments
NBC		NBC-GN-0315	NB03FWPC524	NB03FWPC524-001	Perch, White (WP)	232	222	70.7	116-1221	Female	
NBC		NBC-GN-0315	NB03FWPC525	NB03FWPC525-001	Perch, White (WP)	212	154	50.4	116-1222	Female	
NBC		NBC-GN-0315	NB03FWPC526	NB03FWPC526-001	Perch, White (WP)	206	148	38.9	116-1222	Female	
NBC		NBC-GN-0315	NB03FWPC527	NB03FWPC527-001	Perch, White (WP)	221	185	58.1	116-1222	Female	
NBC		NBC-GN-0315	NB03FWPC528	NB03FWPC528-001	Perch, White (WP)	253	285	85.2	116-1222	Female	
NBC		NBC-GN-0315	NB03FWPC529	NB03FWPC529-001	Perch, White (WP)	245	244	79.2	116-1223	Female	
NBC		NBC-GN-0315	NB03FWPC530	NB03FWPC530-001	Perch, White (WP)	250	260	82.8	116-1223	Female	
NBC		NBC-GN-0315	NB03FWPC531	NB03FWPC531-001	Perch, White (WP)	227	190	55.6	116-1224	Female	
NBC		NBC-GN-0315	NB03FWPC532	NB03FWPC532-001	Perch, White (WP)	219	168	46.4	116-1224	Male	
NBC		NBC-GN-0315	NB03FWPC533	NB03FWPC533-001	Perch, White (WP)	225	177	40.3	116-1224	Male	
NBC		NBC-GN-0315	NB03FWPC534	NB03FWPC534-001	Perch, White (WP)	252	201	55.3	116-1224	Female	
NBC		NBC-GN-0315	NB03FWPC535	NB03FWPC535-001	Perch, White (WP)	220	164	45.7	116-1225	Female	
NBC		NBC-GN-0315	NB03FWPC536	NB03FWPC536-001	Perch, White (WP)	240	233	68.8	116-1225	Female	
NBC		NBC-GN-0315	NB03FWPC537	NB03FWPC537-001	Perch, White (WP)	237	212	54.4	116-1225	Male	
NBC		NBC-GN-0316	NB03FWPC538	NB03FWPC538-001	Perch, White (WP)	218	160	46.5	116-1240	Male	
NBC		NBC-GN-0316	NB03FWPC539	NB03FWPC539-001	Perch, White (WP)	248	224	58.6	116-1240	Female	
NBC		NBC-GN-0316	NB03FWPC540	NB03FWPC540-001	Perch, White (WP)	231	208	59.0	116-1240	Male	
NBC		NBC-GN-0316	NB03FWPC541	NB03FWPC541-001	Perch, White (WP)	230	184	44.5	116-1240	Female	
NBC		NBC-GN-0316	NB03FWPC542	NB03FWPC542-001	Perch, White (WP)	278	381	101.5	116-1241	Female	
NBC		NBC-GN-0316	NB03FWPC543	NB03FWPC543-001	Perch, White (WP)	272	372	97.3	116-1241	Female	
NBC		NBC-GN-0316	NB03FWPC544	NB03FWPC544-001	Perch, White (WP)	242	240	60.2	116-1241	Female	
NBS		NBS-GN-0315	NB03FWPS371	NB03FWPS371-001	Perch, White (WP)	235	212	58.2	116-1227	Male	
NBS		NBS-GN-0315	NB03FWPS372	NB03FWPS372-001	Perch, White (WP)	218	164	50.8	116-1227	Female	
NBS		NBS-GN-0315	NB03FWPS373	NB03FWPS373-001	Perch, White (WP)	278	316	89.1	116-1227	Female	
NBS		NBS-GN-0315	NB03FWPS374	NB03FWPS374-001	Perch, White (WP)	231	174	49.5	116-1227	Male	
NBS		NBS-GN-0315	NB03FWPS375	NB03FWPS375-001	Perch, White (WP)	232	194	56.1	116-1230	Female	
NBS		NBS-GN-0315	NB03FWPS376	NB03FWPS376-001	Perch, White (WP)	229	198	58.3	116-1230	Female	
NBS		NBS-GN-0315	NB03FWPS377	NB03FWPS377-001	Perch, White (WP)	232	185	47.1	116-1230	Male	
NBS		NBS-GN-0315	NB03FWPS378	NB03FWPS378-001	Perch, White (WP)	226	177	44.8	116-1230	Female	
NBS		NBS-GN-0315	NB03FWPS379	NB03FWPS379-001	Perch, White (WP)	222	173	52.4	116-1231	Male	
NBS		NBS-GN-0315	NB03FWPS380	NB03FWPS380-001	Perch, White (WP)	258	282	72.4	116-1231	Female	
NBS		NBS-GN-0315	NB03FWPS381	NB03FWPS381-001	Perch, White (WP)	245	226	68.0	116-1232	Male	
NBS		NBS-GN-0315	NB03FWPS382	NB03FWPS382-001	Perch, White (WP)	248	285	80.3	116-1232	Female	
NBS		NBS-GN-0315	NB03FWPS383	NB03FWPS383-001	Perch, White (WP)	239	190	49.0	116-1232	Male	
NBS		NBS-GN-0315	NB03FWPS384	NB03FWPS384-001	Perch, White (WP)	265	350	100.3	116-1233	Female	
NBS		NBS-GN-0315	NB03FWPS385	NB03FWPS385-001	Perch, White (WP)	270	402	131.4	116-1233	Female	
NBS		NBS-GN-0315	NB03FWPS386	NB03FWPS386-001	Perch, White (WP)	222	208	47.4	116-1233	Female	
NBS		NBS-GN-0315	NB03FWPS387	NB03FWPS387-001	Perch, White (WP)	245	231	66.8	116-1233	Female	
NBS		NBS-GN-0315	NB03FWPS388	NB03FWPS388-001	Perch, White (WP)	228	190	53.0	116-1234	Female	
NBS		NBS-GN-0315	NB03FWPS389	NB03FWPS389-001	Perch, White (WP)	232	206	69.4	116-1234	Female	
NBS		NBS-GN-0315	NB03FWPS390	NB03FWPS390-001	Perch, White (WP)	258	264	76.7	116-1234	Female	
NBS		NBS-GN-0315	NB03FWPS391	NB03FWPS391-001	Perch, White (WP)	241	232	69.8	116-1235	Female	
NBS		NBS-GN-0315	NB03FWPS392	NB03FWPS392-001	Perch, White (WP)	221	160	43.8	116-1235	Female	
NBS		NBS-GN-0315	NB03FWPS393	NB03FWPS393-001	Perch, White (WP)	270	354	89.6	116-1235	Female	
NBS		NBS-GN-0316	NB03FWPS394	NB03FWPS394-001	Perch, White (WP)	238	235	75.2	116-1236	Male	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Tissue Weight (if applicable) (g)	Photo #	Sex	Comments
NBS		NBS-GN-0316	NB03FWPS395	NB03FWPS395-001	Perch, White (WP)	242	226	61.2	116-1236	Male	
NBS		NBS-GN-0316	NB03FWPS396	NB03FWPS396-001	Perch, White (WP)	265	379	114.3	116-1236	Female	
NBS		NBS-GN-0316	NB03FWPS397	NB03FWPS397-001	Perch, White (WP)	232	251	75.4	116-1236	Female	
NBS		NBS-GN-0316	NB03FWPS398	NB03FWPS398-001	Perch, White (WP)	298	424	120.8	116-1237	Female	
NBS		NBS-GN-0316	NB03FWPS399	NB03FWPS399-001	Perch, White (WP)	261	235	74.0	116-1237	Male	
NBS		NBS-GN-0316	NB03FWPS400	NB03FWPS400-001	Perch, White (WP)	239	210	53.2	116-1237	Female	
NBN		NBN-TW-0314	NB03LWPN442	NB03LWPN442-001	Perch, White (WP)	293	482	3.0	116-1218	Female	
NBN		NBN-TW-0314	NB03LWPN443	NB03LWPN443-001	Perch, White (WP)	191	99	1.2	116-1218	Male	
NBN		NBN-TW-0314	NB03LWPN444	NB03LWPN444-001	Perch, White (WP)	246	223	3.9	116-1218	Female	
NBN		NBN-TW-0314	NB03LWPN445	NB03LWPN445-001	Perch, White (WP)	274	334	5.6	116-1218	Male	
NBN		NBN-TW-0314	NB03LWPN446	NB03LWPN446-001	Perch, White (WP)	235	210	3.9	116-1219	Female	
NBN		NBN-TW-0314	NB03LWPN447	NB03LWPN447-001	Perch, White (WP)	211	140	2.8	116-1219	Male	
NBN		NBN-TW-0314	NB03LWPN448	NB03LWPN448-001	Perch, White (WP)	192	102	2.0	116-1219	Male	
NBN		NBN-TW-0315	NB03LWPN449	NB03LWPN449-001	Perch, White (WP)	222	140	2.8	116-1226	Female	
NBN		NBN-TW-0316	NB03LWPN450	NB03LWPN450-001	Perch, White (WP)	199	117	3.0	116-1238	Female	
NBN		NBN-TW-0316	NB03LWPN451	NB03LWPN451-001	Perch, White (WP)	198	120	2.7	116-1238	Female	
NBN		NBN-GN-0316	NB03LWPN452	NB03LWPN452-001	Perch, White (WP)	219	165	3.7	116-1239	Female	
NBN		NBN-GN-0316	NB03LWPN453	NB03LWPN453-001	Perch, White (WP)	221	184	3.6	116-1239	Female	
NBN		NBN-GN-0316	NB03LWPN454	NB03LWPN454-001	Perch, White (WP)	210	156	2.9	116-1239	Female	
NBN		NBN-GN-0316	NB03LWPN455	NB03LWPN455-001	Perch, White (WP)	199	174	4.3	116-1239	Female	
NBN		NBN-TW-0318	NB03LWPN456	NB03LWPN456-001	Perch, White (WP)	192	100	1.6	116-1275	Male	
NBN		NBN-TW-0318	NB03LWPN457	NB03LWPN457-001	Perch, White (WP)	195	110	2.7	116-1275	Female	
NBN		NBN-TW-0322	NB03LWPN458	NB03LWPN458-001	Perch, White (WP)	185	76	1.2	116-1281	Male	
NBN		NBN-TW-0322	NB03LWPN459	NB03LWPN459-001	Perch, White (WP)	219	150	3.1	116-1281	Female	
NBN		NBN-TW-0322	NB03LWPN460	NB03LWPN460-001	Perch, White (WP)	178	75	1.8	116-1281	Male	
NBN		NBN-TW-0322	NB03LWPN461	NB03LWPN461-001	Perch, White (WP)	182	92	2.3	116-1281	Male	
NBN		NBN-GN-0323	NB03LWPN462	NB03LWPN462-001	Perch, White (WP)	276	322	7.1	116-1282	Female	
NBN		NBN-GN-0323	NB03LWPN463	NB03LWPN463-001	Perch, White (WP)	251	283	8.3	116-1282	Female	
NBN		NBN-GN-0323	NB03LWPN464	NB03LWPN464-001	Perch, White (WP)	272	338	8.3	116-1282	Female	
NBN		NBN-GN-0323	NB03LWPN465	NB03LWPN465-001	Perch, White (WP)	270	350	9.3	116-1283	Female	
NBN		NBN-GN-0323	NB03LWPN466	NB03LWPN466-001	Perch, White (WP)	242	251	6.9	116-1283	Female	
NBN		NBN-GN-0323	NB03LWPN467	NB03LWPN467-001	Perch, White (WP)	252	238	4.6	116-1283	Female	
NBN		NBN-GN-0323	NB03LWPN468	NB03LWPN468-001	Perch, White (WP)	248	229	5.1	116-1283	Female	
NBN		NBN-GN-0323	NB03LWPN469	NB03LWPN469-001	Perch, White (WP)	226	202	4.6	116-1284	Female	
NBN		NBN-GN-0323	NB03LWPN470	NB03LWPN470-001	Perch, White (WP)	232	208	3.9	116-1284	Female	
NBN		NBN-GN-0323	NB03LWPN471	NB03LWPN471-001	Perch, White (WP)	213	171	2.1	116-1284	Male	
NBN		NBN-GN-0323	NB03LWPN472	NB03LWPN472-001	Perch, White (WP)	240	226	5.3	116-1284	Female	
NBN		NBN-TW-0323	NB03LWPN473	NB03LWPN473-001	Perch, White (WP)	225	184	3.6	116-1285	Female	
NBN		NBN-TW-0323	NB03LWPN474	NB03LWPN474-001	Perch, White (WP)	231	207	3.2	116-1285	Female	
NBN		NBN-TW-0323	NB03LWPN475	NB03LWPN475-001	Perch, White (WP)	238	210	2.7	116-1285	Male	
NBN		NBN-TW-0323	NB03LWPN476	NB03LWPN476-001	Perch, White (WP)	231	201	4.7	116-1286	Female	
NBN		NBN-TW-0323	NB03LWPN477	NB03LWPN477-001	Perch, White (WP)	212	161	2.7	116-1286	Male	
NBN		NBN-TW-0323	NB03LWPN478	NB03LWPN478-001	Perch, White (WP)	195	96	1.6	116-1286	Male	
NBN		NBN-TW-0323	NB03LWPN479	NB03LWPN479-001	Perch, White (WP)	190	95	2.2	116-1287	Female	
NBN		NBN-TW-0323	NB03LWPN480	NB03LWPN480-001	Perch, White (WP)	176	84	2.1	116-1287	Female	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Tissue Weight (if applicable) (g)	Photo #	Sex	Comments
NBN		NBN-TW-0323	NB03LWPN481	NB03LWPN481-001	Perch, White (WP)	218	170	4.2	116-1287	Female	
NBN		NBN-TW-0323	NB03LWPN482	NB03LWPN482-001	Perch, White (WP)	175	85	2.3	116-1287	Female	
NBN		NBN-TW-0323	NB03LWPN483	NB03LWPN483-001	Perch, White (WP)	210	158	5.4	116-1288	Female	
NBN		NBN-TW-0323	NB03LWPN484	NB03LWPN484-001	Perch, White (WP)	198	122	2.7	116-1288	Male	
NBN		NBN-TW-0323	NB03LWPN485	NB03LWPN485-001	Perch, White (WP)	200	108	2.7	116-1288	Female	
NBN		NBN-TW-0323	NB03LWPN486	NB03LWPN486-001	Perch, White (WP)	190	108	2.6	116-1289	Male	
NBN		NBN-TW-0323	NB03LWPN487	NB03LWPN487-001	Perch, White (WP)	202	143	3.2	116-1289	Male	
NBN		NBN-TW-0323	NB03LWPN488	NB03LWPN488-001	Perch, White (WP)	196	114	2.4	116-1289	Male	
NBN		NBN-TW-0323	NB03LWPN489	NB03LWPN489-001	Perch, White (WP)	180	80	1.3	116-1289	Male	
NBN		NBN-TW-0324	NB03LWPN490	NB03LWPN490-001	Perch, White (WP)	208	126	3.5	116-1290	Female	
NBN		NBN-TW-0324	NB03LWPN491	NB03LWPN491-001	Perch, White (WP)	192	90	1.6	116-1290	Female	
NBN		NBN-TW-0324	NB03LWPN492	NB03LWPN492-001	Perch, White (WP)	192	94	1.9	116-1290	Female	
NBN		NBN-TW-0324	NB03LWPN493	NB03LWPN493-001	Perch, White (WP)	193	111	2.8	116-1290	Female	
NBN		NBN-TW-0324	NB03LWPN494	NB03LWPN494-001	Perch, White (WP)	205	122	3.7	116-1291	Female	
NBN		NBN-TW-0324	NB03LWPN495	NB03LWPN495-001	Perch, White (WP)	191	101	1.3	116-1291	Male	
NBN		NBN-TW-0324	NB03LWPN496	NB03LWPN496-001	Perch, White (WP)	198	124	2.7	116-1291	Female	
NBN		NBN-TW-0324	NB03LWPN497	NB03LWPN497-001	Perch, White (WP)	202	140	3.5	116-1291	Female	
NBN		NBN-TW-0324	NB03LWPN498	NB03LWPN498-001	Perch, White (WP)	230	214	5.1	116-1292	Female	
NBN		NBN-TW-0324	NB03LWPN499	NB03LWPN499-001	Perch, White (WP)	188	92	1.6	116-1292	Male	
NBN		NBN-TW-0324	NB03LWPN500	NB03LWPN500-001	Perch, White (WP)	184	88	1.8	116-1292	Female	
NBN		NBN-TW-0324	NB03LWPN501	NB03LWPN501-001	Perch, White (WP)	188	84	2.4	116-1292	Female	
NBN		NBN-TW-0324	NB03LWPN502	NB03LWPN502-001	Perch, White (WP)	216	136	3.4	116-1293	Male	
NBN		NBN-TW-0324	NB03LWPN503	NB03LWPN503-001	Perch, White (WP)	190	103	2.7	116-1293	Male	
NBN		NBN-TW-0324	NB03LWPN504	NB03LWPN504-001	Perch, White (WP)	225	191	4.5	116-1293	Female	
NBN		NBN-TW-0324	NB03LWPN505	NB03LWPN505-001	Perch, White (WP)	255	275	7.2	116-1293	Female	
NBC		NBC-GN-0315	NB03LWPC517	NB03LWPC517-001	Perch, White (WP)	215	160	5.0	116-1220	Female	
NBC		NBC-GN-0315	NB03LWPC518	NB03LWPC518-001	Perch, White (WP)	216	155	3.5	116-1220	Female	
NBC		NBC-GN-0315	NB03LWPC519	NB03LWPC519-001	Perch, White (WP)	214	163	4.2	116-1220	Female	
NBC		NBC-GN-0315	NB03LWPC520	NB03LWPC520-001	Perch, White (WP)	237	218	4.2	116-1220	Female	
NBC		NBC-GN-0315	NB03LWPC521	NB03LWPC521-001	Perch, White (WP)	218	180	3.5	116-1221	Male	
NBC		NBC-GN-0315	NB03LWPC522	NB03LWPC522-001	Perch, White (WP)	217	164	4.2	116-1221	Male	
NBC		NBC-GN-0315	NB03LWPC523	NB03LWPC523-001	Perch, White (WP)	228	186	2.9	116-1221	Male	
NBC		NBC-GN-0315	NB03LWPC524	NB03LWPC524-001	Perch, White (WP)	232	222	4.4	116-1221	Female	
NBC		NBC-GN-0315	NB03LWPC525	NB03LWPC525-001	Perch, White (WP)	212	154	3.7	116-1222	Female	
NBC		NBC-GN-0315	NB03LWPC526	NB03LWPC526-001	Perch, White (WP)	206	148	3.3	116-1222	Female	
NBC		NBC-GN-0315	NB03LWPC527	NB03LWPC527-001	Perch, White (WP)	221	185	3.9	116-1222	Female	
NBC		NBC-GN-0315	NB03LWPC528	NB03LWPC528-001	Perch, White (WP)	253	285	5.9	116-1222	Female	
NBC		NBC-GN-0315	NB03LWPC529	NB03LWPC529-001	Perch, White (WP)	245	244	3.9	116-1223	Female	
NBC		NBC-GN-0315	NB03LWPC530	NB03LWPC530-001	Perch, White (WP)	250	260	5.6	116-1223	Female	
NBC		NBC-GN-0315	NB03LWPC531	NB03LWPC531-001	Perch, White (WP)	227	190	3.5	116-1224	Female	
NBC		NBC-GN-0315	NB03LWPC532	NB03LWPC532-001	Perch, White (WP)	219	168	3.0	116-1224	Male	
NBC		NBC-GN-0315	NB03LWPC533	NB03LWPC533-001	Perch, White (WP)	225	177	2.6	116-1224	Male	
NBC		NBC-GN-0315	NB03LWPC534	NB03LWPC534-001	Perch, White (WP)	252	201	2.9	116-1224	Female	
NBC		NBC-GN-0315	NB03LWPC535	NB03LWPC535-001	Perch, White (WP)	220	164	2.7	116-1225	Female	
NBC		NBC-GN-0315	NB03LWPC536	NB03LWPC536-001	Perch, White (WP)	240	233	5.7	116-1225	Female	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Tissue Weight (if applicable) (g)	Photo #	Sex	Comments
NBC		NBC-GN-0315	NB03LWPC537	NB03LWPC537-001	Perch, White (WP)	237	212	3.4	116-1225	Male	
NBC		NBC-GN-0316	NB03LWPC538	NB03LWPC538-001	Perch, White (WP)	218	160	5.1	116-1240	Male	
NBC		NBC-GN-0316	NB03LWPC539	NB03LWPC539-001	Perch, White (WP)	248	224	5.9	116-1240	Female	
NBC		NBC-GN-0316	NB03LWPC540	NB03LWPC540-001	Perch, White (WP)	231	208	3.4	116-1240	Male	
NBC		NBC-GN-0316	NB03LWPC541	NB03LWPC541-001	Perch, White (WP)	230	184	3.2	116-1240	Female	
NBC		NBC-GN-0316	NB03LWPC542	NB03LWPC542-001	Perch, White (WP)	278	381	9.9	116-1241	Female	
NBC		NBC-GN-0316	NB03LWPC543	NB03LWPC543-001	Perch, White (WP)	272	372	9.0	116-1241	Female	
NBC		NBC-GN-0316	NB03LWPC544	NB03LWPC544-001	Perch, White (WP)	242	240	5.5	116-1241	Female	
NBC		NBC-GN-0316	NB03LWPC545	NB03LWPC545-001	Perch, White (WP)	241	252	6.4	116-1242	Female	
NBC		NBC-GN-0316	NB03LWPC546	NB03LWPC546-001	Perch, White (WP)	201	142	3.6	116-1242	Female	
NBC		NBC-GN-0316	NB03LWPC547	NB03LWPC547-001	Perch, White (WP)	218	163	4.4	116-1242	Female	
NBC		NBC-GN-0316	NB03LWPC548	NB03LWPC548-001	Perch, White (WP)	223	200	3.6	116-1242	Female	
NBC		NBC-GN-0316	NB03LWPC549	NB03LWPC549-001	Perch, White (WP)	248	262	5.6	116-1243	Female	
NBC		NBC-GN-0316	NB03LWPC550	NB03LWPC550-001	Perch, White (WP)	235	204	3.4	116-1243	Female	
NBC		NBC-GN-0316	NB03LWPC551	NB03LWPC551-001	Perch, White (WP)	260	305	7.1	116-1243	Female	
NBC		NBC-GN-0316	NB03LWPC552	NB03LWPC552-001	Perch, White (WP)	232	201	5.7	116-1243	Female	
NBC		NBC-GN-0316	NB03LWPC553	NB03LWPC553-001	Perch, White (WP)	228	192	4.2	116-1243	Female	
NBC		NBC-GN-0316	NB03LWPC554	NB03LWPC554-001	Perch, White (WP)	235	230	6.2	116-1243	Female	
NBC		NBC-GN-0316	NB03LWPC555	NB03LWPC555-001	Perch, White (WP)	230	192	5.1	116-1244	Female	
NBC		NBC-GN-0316	NB03LWPC556	NB03LWPC556-001	Perch, White (WP)	251	245	3.8	116-1244	Male	
NBC		NBC-GN-0316	NB03LWPC557	NB03LWPC557-001	Perch, White (WP)	216	168	2.9	116-1244	Male	
NBC		NBC-GN-0316	NB03LWPC558	NB03LWPC558-001	Perch, White (WP)	220	184	3.4	116-1244	Female	
NBC		NBC-GN-0316	NB03LWPC559	NB03LWPC559-001	Perch, White (WP)	224	158	2.5	116-1245	Male	
NBC		NBC-GN-0316	NB03LWPC560	NB03LWPC560-001	Perch, White (WP)	227	170	3.4	116-1245	Female	
NBC		NBC-GN-0316	NB03LWPC561	NB03LWPC561-001	Perch, White (WP)	210	144	4.0	116-1245	Male	
NBC		NBC-GN-0316	NB03LWPC562	NB03LWPC562-001	Perch, White (WP)	215	172	3.7	116-1245	Female	
NBC		NBC-GN-0316	NB03LWPC563	NB03LWPC563-001	Perch, White (WP)	223	171	2.8	116-1245	Male	
NBC		NBC-GN-0317	NB03LWPC564	NB03LWPC564-001	Perch, White (WP)	250	240	2.7	116-1251	Male	
NBC		NBC-GN-0317	NB03LWPC565	NB03LWPC565-001	Perch, White (WP)	241	200	3.4	116-1251	Female	
NBC		NBC-GN-0317	NB03LWPC566	NB03LWPC566-001	Perch, White (WP)	252	243	4.7	116-1251	Female	
NBC		NBC-GN-0317	NB03LWPC567	NB03LWPC567-001	Perch, White (WP)	219	185	3.5	116-1251	Female	
NBC		NBC-GN-0317	NB03LWPC568	NB03LWPC568-001	Perch, White (WP)	238	195	2.6	116-1252	Male	
NBC		NBC-GN-0317	NB03LWPC569	NB03LWPC569-001	Perch, White (WP)	226	162	3.1	116-1252	Female	
NBC		NBC-GN-0317	NB03LWPC570	NB03LWPC570-001	Perch, White (WP)	255	239	4.6	116-1252	Female	
NBC		NBC-GN-0317	NB03LWPC571	NB03LWPC571-001	Perch, White (WP)	250	244	4.5	116-1252	Male	
NBC		NBC-GN-0317	NB03LWPC572	NB03LWPC572-001	Perch, White (WP)	252	260	5.4	116-1252	Female	
NBC		NBC-GN-0317	NB03LWPC573	NB03LWPC573-001	Perch, White (WP)	235	226	4.9	116-1252	Female	
NBC		NBC-GN-0317	NB03LWPC574	NB03LWPC574-001	Perch, White (WP)	238	225	5.1	116-1253	Female	
NBC		NBC-GN-0317	NB03LWPC575	NB03LWPC575-001	Perch, White (WP)	260	270	3.1	116-1253	Male	
NBC		NBC-GN-0317	NB03LWPC576	NB03LWPC576-001	Perch, White (WP)	262	300	5.9	116-1253	Female	
NBC		NBC-GN-0317	NB03LWPC577	NB03LWPC577-001	Perch, White (WP)	235	200	4.1	116-1253	Male	
NBC		NBC-GN-0317	NB03LWPC578	NB03LWPC578-001	Perch, White (WP)	241	242	7.5	116-1253	Female	
NBC		NBC-GN-0317	NB03LWPC579	NB03LWPC579-001	Perch, White (WP)	217	164	2.8	116-1253	Male	
NBC		NBC-GN-0317	NB03LWPC580	NB03LWPC580-001	Perch, White (WP)	231	190	4.2	116-1253	Female	
NBC		NBC-GN-0317	NB03LWPC581	NB03LWPC581-001	Perch, White (WP)	247	220	6.0	116-1253	Female	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Tissue Weight (if applicable) (g)	Photo #	Sex	Comments
NBC		NBC-GN-0317	NB03LWPC582	NB03LWPC582-001	Perch, White (WP)	245	215	3.6	116-1254	Male	
NBC		NBC-GN-0317	NB03LWPC583	NB03LWPC583-001	Perch, White (WP)	248	215	4.2	116-1254	Male	
NBC		NBC-GN-0317	NB03LWPC584	NB03LWPC584-001	Perch, White (WP)	255	295	5.6	116-1254	Female	
NBC		NBC-GN-0317	NB03LWPC585	NB03LWPC585-001	Perch, White (WP)	248	220	2.6	116-1254	Female	
NBC		NBC-GN-0317	NB03LWPC586	NB03LWPC586-001	Perch, White (WP)	225	185	5.1	116-1254	Female	
NBC		NBC-GN-0317	NB03LWPC587	NB03LWPC587-001	Perch, White (WP)	245	260	7.3	116-1254	Female	
NBC		NBC-GN-0317	NB03LWPC588	NB03LWPC588-001	Perch, White (WP)	240	230	4.1	116-1254	Female	
NBC		NBC-GN-0317	NB03LWPC589	NB03LWPC589-001	Perch, White (WP)	238	225	4.7	116-1254	Male	
NBC		NBC-GN-0317	NB03LWPC590	NB03LWPC590-001	Perch, White (WP)	220	185	4.0	116-1255	Female	
NBC		NBC-GN-0317	NB03LWPC591	NB03LWPC591-001	Perch, White (WP)	232	210	4.4	116-1255	Female	
NBC		NBC-GN-0317	NB03LWPC592	NB03LWPC592-001	Perch, White (WP)	220	160	2.5	116-1255	Male	
NBC		NBC-GN-0317	NB03LWPC593	NB03LWPC593-001	Perch, White (WP)	230	210	4.8	116-1255	Female	
NBC		NBC-GN-0317	NB03LWPC594	NB03LWPC594-001	Perch, White (WP)	223	180	3.1	116-1255	Female	
NBC		NBC-GN-0317	NB03LWPC595	NB03LWPC595-001	Perch, White (WP)	225	180	2.6	116-1255	Male	
NBC		NBC-GN-0317	NB03LWPC596	NB03LWPC596-001	Perch, White (WP)	250	270	6.1	116-1255	Female	
NBC		NBC-GN-0317	NB03LWPC597	NB03LWPC597-001	Perch, White (WP)	260	330	8.4	116-1255	Female	
NBC		NBC-GN-0317	NB03LWPC598	NB03LWPC598-001	Perch, White (WP)	265	310	7.0	116-1255	Female	
NBC		NBC-GN-0317	NB03LWPC599	NB03LWPC599-001	Perch, White (WP)	231	178	2.9	116-1255	Female	
NBC		NBC-GN-0317	NB03LWPC600	NB03LWPC600-001	Perch, White (WP)	185	95	1.5	116-1262	Female	
NBC		NBC-GN-0317	NB03LWPC601	NB03LWPC601-001	Perch, White (WP)	232	230	3.8	116-1262	Male	
NBC		NBC-GN-0317	NB03LWPC602	NB03LWPC602-001	Perch, White (WP)	230	205	4.6	116-1262	Female	
NBC		NBC-GN-0317	NB03LWPC603	NB03LWPC603-001	Perch, White (WP)	225	190	3.5	116-1262	Female	
NBC		NBC-GN-0317	NB03LWPC604	NB03LWPC604-001	Perch, White (WP)	248	250	3.8	116-1262	Male	
NBC		NBC-GN-0317	NB03LWPC605	NB03LWPC605-001	Perch, White (WP)	240	220	4.1	116-1262	Male	
NBC		NBC-GN-0317	NB03LWPC606	NB03LWPC606-001	Perch, White (WP)	245	245	4.0	116-1262	Female	
NBC		NBC-GN-0317	NB03LWPC607	NB03LWPC607-001	Perch, White (WP)	245	250	6.2	116-1262	Female	
NBC		NBC-GN-0317	NB03LWPC608	NB03LWPC608-001	Perch, White (WP)	260	285	6.0	116-1263	Female	
NBC		NBC-GN-0317	NB03LWPC609	NB03LWPC609-001	Perch, White (WP)	235	190	2.9	116-1263	Male	
NBC		NBC-GN-0317	NB03LWPC610	NB03LWPC610-001	Perch, White (WP)	265	305	6.3	116-1263	Female	
NBC		NBC-GN-0317	NB03LWPC611	NB03LWPC611-001	Perch, White (WP)	268	318	7.0	116-1263	Female	
NBC		NBC-GN-0317	NB03LWPC612	NB03LWPC612-001	Perch, White (WP)	236	220	5.2	116-1263	Female	
NBC		NBC-GN-0317	NB03LWPC613	NB03LWPC613-001	Perch, White (WP)	228	215	4.3	116-1263	Male	
NBC		NBC-GN-0317	NB03LWPC614	NB03LWPC614-001	Perch, White (WP)	250	280	6.8	116-1263	Female	
NBC		NBC-GN-0317	NB03LWPC615	NB03LWPC615-001	Perch, White (WP)	230	164	3.6	116-1264	Female	
NBC		NBC-GN-0317	NB03LWPC616	NB03LWPC616-001	Perch, White (WP)	236	200	6.0	116-1264	Female	
NBC		NBC-GN-0317	NB03LWPC617	NB03LWPC617-001	Perch, White (WP)	236	202	4.7	116-1264	Female	
NBC		NBC-GN-0317	NB03LWPC618	NB03LWPC618-001	Perch, White (WP)	240	186	4.9	116-1264	Female	
NBC		NBC-GN-0317	NB03LWPC619	NB03LWPC619-001	Perch, White (WP)	228	180	5.1	116-1264	Female	
NBC		NBC-GN-0317	NB03LWPC620	NB03LWPC620-001	Perch, White (WP)	248	199	3.8	116-1264	Male	
NBC		NBC-GN-0317	NB03LWPC621	NB03LWPC621-001	Perch, White (WP)	252	247	4.6	116-1264	Female	
NBC		NBC-GN-0317	NB03LWPC622	NB03LWPC622-001	Perch, White (WP)	212	150	2.7	116-1264	Female	
NBC		NBC-GN-0317	NB03LWPC623	NB03LWPC623-001	Perch, White (WP)	219	161	2.4	116-1264	Female	
NBC		NBC-GN-0317	NB03LWPC624	NB03LWPC624-001	Perch, White (WP)	238	192	2.4	116-1264	Male	
NBC		NBC-GN-0317	NB03LWPC625	NB03LWPC625-001	Perch, White (WP)	217	160	2.9	116-1264	Male	
NBC		NBC-GN-0317	NB03LWPC626	NB03LWPC626-001	Perch, White (WP)	220	190	3.4	116-1264	Female	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Tissue Weight (if applicable) (g)	Photo #	Sex	Comments
NBC		NBC-GN-0318	NB03LWPC627	NB03LWPC627-001	Perch, White (WP)	248	230	3.7	116-1265	Female	
NBC		NBC-GN-0318	NB03LWPC628	NB03LWPC628-001	Perch, White (WP)	195	115	2.3	116-1265	Female	
NBC		NBC-GN-0318	NB03LWPC629	NB03LWPC629-001	Perch, White (WP)	280	335	6.7	116-1265	Unknown	
NBC		NBC-GN-0318	NB03LWPC630	NB03LWPC630-001	Perch, White (WP)	228	210	4.3	116-1265	Female	
NBC		NBC-GN-0318	NB03LWPC631	NB03LWPC631-001	Perch, White (WP)	252	245	2.8	116-1265	Female	
NBC		NBC-GN-0318	NB03LWPC632	NB03LWPC632-001	Perch, White (WP)	215	175	3.8	116-1265	Male	
NBC		NBC-GN-0318	NB03LWPC633	NB03LWPC633-001	Perch, White (WP)	235	250	5.2	116-1265	Female	
NBC		NBC-GN-0318	NB03LWPC634	NB03LWPC634-001	Perch, White (WP)	247	250	3.3	116-1265	Male	
NBC		NBC-GN-0318	NB03LWPC635	NB03LWPC635-001	Perch, White (WP)	220	180	2.9	116-1265	Female	
NBC		NBC-GN-0318	NB03LWPC636	NB03LWPC636-001	Perch, White (WP)	228	190	3.1	116-1265	Female	
NBC		NBC-GN-0318	NB03LWPC637	NB03LWPC637-001	Perch, White (WP)	271	330	7.3	116-1274	Female	
NBC		NBC-GN-0318	NB03LWPC638	NB03LWPC638-001	Perch, White (WP)	230	190	2.9	116-1274	Female	
NBC		NBC-GN-0318	NB03LWPC639	NB03LWPC639-001	Perch, White (WP)	238	210	3.5	116-1274	Female	
NBC		NBC-GN-0318	NB03LWPC640	NB03LWPC640-001	Perch, White (WP)	228	200	4.7	116-1274	Female	
NBC		NBC-GN-0318	NB03LWPC641	NB03LWPC641-001	Perch, White (WP)	248	255	3.5	116-1274	Male	
NBC		NBC-GN-0318	NB03LWPC642	NB03LWPC642-001	Perch, White (WP)	238	215	3.4	116-1274	Female	
NBC		NBC-GN-0318	NB03LWPC643	NB03LWPC643-001	Perch, White (WP)	262	290	4.6	116-1274	Female	Missing eye
NBC		NBC-GN-0318	NB03LWPC644	NB03LWPC644-001	Perch, White (WP)	212	180	5.0	116-1274	Female	
NBS		NBS-GN-0315	NB03LWPS371	NB03LWPS371-001	Perch, White (WP)	235	212	3.2	116-1227	Male	
NBS		NBS-GN-0315	NB03LWPS372	NB03LWPS372-001	Perch, White (WP)	218	164	4.8	116-1227	Female	
NBS		NBS-GN-0315	NB03LWPS373	NB03LWPS373-001	Perch, White (WP)	278	316	5.8	116-1227	Female	
NBS		NBS-GN-0315	NB03LWPS374	NB03LWPS374-001	Perch, White (WP)	231	174	2.2	116-1227	Male	
NBS		NBS-GN-0315	NB03LWPS375	NB03LWPS375-001	Perch, White (WP)	232	194	3.9	116-1230	Female	
NBS		NBS-GN-0315	NB03LWPS376	NB03LWPS376-001	Perch, White (WP)	229	198	4.1	116-1230	Female	
NBS		NBS-GN-0315	NB03LWPS377	NB03LWPS377-001	Perch, White (WP)	232	185	2.6	116-1230	Male	
NBS		NBS-GN-0315	NB03LWPS378	NB03LWPS378-001	Perch, White (WP)	226	177	4.0	116-1230	Female	
NBS		NBS-GN-0315	NB03LWPS379	NB03LWPS379-001	Perch, White (WP)	222	173	3.1	116-1231	Male	
NBS		NBS-GN-0315	NB03LWPS380	NB03LWPS380-001	Perch, White (WP)	258	282	5.5	116-1231	Female	
NBS		NBS-GN-0315	NB03LWPS381	NB03LWPS381-001	Perch, White (WP)	245	226	3.8	116-1232	Male	
NBS		NBS-GN-0315	NB03LWPS382	NB03LWPS382-001	Perch, White (WP)	248	285	4.2	116-1232	Female	
NBS		NBS-GN-0315	NB03LWPS383	NB03LWPS383-001	Perch, White (WP)	239	190	3.2	116-1232	Male	
NBS		NBS-GN-0315	NB03LWPS384	NB03LWPS384-001	Perch, White (WP)	265	350	10.3	116-1233	Female	
NBS		NBS-GN-0315	NB03LWPS385	NB03LWPS385-001	Perch, White (WP)	270	402	7.8	116-1233	Female	
NBS		NBS-GN-0315	NB03LWPS386	NB03LWPS386-001	Perch, White (WP)	222	208	8.2	116-1233	Female	
NBS		NBS-GN-0315	NB03LWPS387	NB03LWPS387-001	Perch, White (WP)	245	231	3.7	116-1233	Female	
NBS		NBS-GN-0315	NB03LWPS388	NB03LWPS388-001	Perch, White (WP)	228	190	4.1	116-1234	Female	
NBS		NBS-GN-0315	NB03LWPS389	NB03LWPS389-001	Perch, White (WP)	232	206	3.9	116-1234	Female	
NBS		NBS-GN-0315	NB03LWPS390	NB03LWPS390-001	Perch, White (WP)	258	264	5.1	116-1234	Female	
NBS		NBS-GN-0315	NB03LWPS391	NB03LWPS391-001	Perch, White (WP)	241	232	4.2	116-1235	Female	
NBS		NBS-GN-0315	NB03LWPS392	NB03LWPS392-001	Perch, White (WP)	221	160	3.1	116-1235	Female	
NBS		NBS-GN-0315	NB03LWPS393	NB03LWPS393-001	Perch, White (WP)	270	354	7.9	116-1235	Female	
NBS		NBS-GN-0316	NB03LWPS394	NB03LWPS394-001	Perch, White (WP)	238	235	3.1	116-1236	Male	
NBS		NBS-GN-0316	NB03LWPS395	NB03LWPS395-001	Perch, White (WP)	242	226	4.0	116-1236	Male	
NBS		NBS-GN-0316	NB03LWPS396	NB03LWPS396-001	Perch, White (WP)	265	379	7.7	116-1236	Female	
NBS		NBS-GN-0316	NB03LWPS397	NB03LWPS397-001	Perch, White (WP)	232	251	8.1	116-1236	Female	

Zone	Intertidal Area	Catch Code	Tissue Sample ID	Specimen ID	Species	Length (mm)	Weight (g)	Tissue Weight (if applicable) (g)	Photo #	Sex	Comments
NBS		NBS-GN-0316	NB03LWPS398	NB03LWPS398-001	Perch, White (WP)	298	424	8.7	116-1237	Female	
NBS		NBS-GN-0316	NB03LWPS399	NB03LWPS399-001	Perch, White (WP)	261	235	4.6	116-1237	Male	
NBS		NBS-GN-0316	NB03LWPS400	NB03LWPS400-001	Perch, White (WP)	239	210	3.2	116-1237	Female	
NBS		NBS-GN-0316	NB03LWPS401	NB03LWPS401-001	Perch, White (WP)	221	189	3.8	116-1246	Female	
NBS		NBS-GN-0316	NB03LWPS402	NB03LWPS402-001	Perch, White (WP)	225	200	3.7	116-1246	Male	
NBS		NBS-GN-0316	NB03LWPS403	NB03LWPS403-001	Perch, White (WP)	250	272	7.5	116-1246	Male	
NBS		NBS-GN-0316	NB03LWPS404	NB03LWPS404-001	Perch, White (WP)	225	193	2.5	116-1246	Male	
NBS		NBS-GN-0316	NB03LWPS405	NB03LWPS405-001	Perch, White (WP)	226	162	2.6	116-1247	Male	
NBS		NBS-GN-0316	NB03LWPS406	NB03LWPS406-001	Perch, White (WP)	201	143	2.3	116-1247	Male	
NBS		NBS-GN-0316	NB03LWPS407	NB03LWPS407-001	Perch, White (WP)	232	179	2.7	116-1247	Male	
NBS		NBS-GN-0316	NB03LWPS408	NB03LWPS408-001	Perch, White (WP)	240	212	5.4	116-1247	Female	
NBS		NBS-GN-0316	NB03LWPS409	NB03LWPS409-001	Perch, White (WP)	231	199	3.8	116-1247	Female	
NBS		NBS-GN-0316	NB03LWPS410	NB03LWPS410-001	Perch, White (WP)	233	188	2.7	116-1247	Male	
NBS		NBS-GN-0316	NB03LWPS411	NB03LWPS411-001	Perch, White (WP)	239	218	3.9	116-1248	Female	
NBS		NBS-GN-0316	NB03LWPS412	NB03LWPS412-001	Perch, White (WP)	245	232	3.5	116-1248	Male	
NBS		NBS-GN-0316	NB03LWPS413	NB03LWPS413-001	Perch, White (WP)	225	179	1.4	116-1248	Male	
NBS		NBS-GN-0316	NB03LWPS414	NB03LWPS414-001	Perch, White (WP)	245	232	3.7	116-1248	Male	

Fish Sampling
Newark Bay Study Area **Draft: For Discussion Purposes Only**
BYCATCH

Zone	Intertidal Area	Catch Code	Specimen ID	Count	Species	Length (mm)	Weight (g)	Comments
NBN		NBN-TW-0314	SB-321	1	Bass, Striped (SB)	210	150	
NBN		NBN-TW-0314	SB-322	1	Bass, Striped (SB)	250	200	
NBN		NBN-TW-0314	SB-323	1	Bass, Striped (SB)	235	175	
NBN		NBN-TW-0314	SB-324	1	Bass, Striped (SB)	125	25	
NBN		NBN-TW-0314	SB-325	1	Bass, Striped (SB)	130	30	
NBN		NBN-TW-0314	SB-326	1	Bass, Striped (SB)	135	30	
NBN		NBN-TW-0314	SB-327	1	Bass, Striped (SB)	210	100	
NBN		NBN-TW-0314	SB-328	1	Bass, Striped (SB)	280	225	
NBN		NBN-TW-0314	HA-003	1	Hake, Spotted (HA)	135	20	
NBN		NBN-TW-0314	HA-004	1	Hake, Spotted (HA)	85	7	
NBN		NBN-TW-0314	HA-005	1	Hake, Spotted (HA)	120	35	
NBN		NBN-TW-0314	HA-006	1	Hake, Spotted (HA)	100	30	
NBN		NBN-TW-0314	HA-007	1	Hake, Spotted (HA)	85	5	
NBN		NBN-TW-0314	HA-008	1	Hake, Spotted (HA)	70	5	
NBN		NBN-TW-0314	WP-027	1	Perch, White (WP)	165	80	
NBN		NBN-TW-0314	WP-028	1	Perch, White (WP)	125	50	
NBN		NBN-TW-0314	WP-029	1	Perch, White (WP)	125	50	
NBN		NBN-TW-0314	WP-030	1	Perch, White (WP)	130	60	
NBN		NBN-TW-0314	WP-031	1	Perch, White (WP)	130	50	
NBN		NBN-TW-0314	WP-032	1	Perch, White (WP)	110	20	
NBN		NBN-TW-0314	WP-033	1	Perch, White (WP)	115	20	
NBN		NBN-TW-0314	WP-034	1	Perch, White (WP)	110	15	
NBN		NBN-TW-0314	WP-035	1	Perch, White (WP)	105	10	
NBN		NBN-TW-0314	WP-036	1	Perch, White (WP)	105	10	
NBN		NBN-TW-0314	WP-037	1	Perch, White (WP)	105	N/A	Fish too light to weigh accurately on boat
NBN		NBN-TW-0314	WP-038	1	Perch, White (WP)	105	12	
NBN		NBN-TW-0314	WP-039	1	Perch, White (WP)	110	15	
NBN		NBN-TW-0314	HA-009	1	Hake, Spotted (HA)	80	5	
NBN		NBN-TW-0314	HA-010	1	Hake, Spotted (HA)	65	2	
NBN		NBN-TW-0314	HA-011	1	Hake, Spotted (HA)	85	10	
NBN		NBN-TW-0314	HA-012	1	Hake, Spotted (HA)	75	7	
NBN		NBN-TW-0314	HA-013	1	Hake, Spotted (HA)	80	9	
NBN		NBN-TW-0314	SB-329	1	Bass, Striped (SB)	210	100	

Zone	Intertidal Area	Catch Code	Specimen ID	Count	Species	Length (mm)	Weight (g)	Comments
NBN		NBN-TW-0314	SB-330	1	Bass, Striped (SB)	230	150	
NBN		NBN-TW-0314	SB-331	1	Bass, Striped (SB)	135	20	
NBN		NBN-TW-0314	SB-332	1	Bass, Striped (SB)	155	30	
NBN		NBN-TW-0314	WP-040-69	30	Perch, White (WP)	-	-	Count only
NBN		NBN-TW-0314	HA-014-018	5	Hake, Spotted (HA)	-	-	Count only
NBN		NBN-TW-0314	AM-080	1	Shad, American (AM)	125	15	
NBN		NBN-TW-0314	SB-333	1	Bass, Striped (SB)	160	75	
NBN		NBN-TW-0314	SB-334	1	Bass, Striped (SB)	160	70	
NBN		NBN-TW-0314	SB-335	1	Bass, Striped (SB)	210	150	
NBN		NBN-TW-0314	SB-336	1	Bass, Striped (SB)	155	60	
NBN		NBN-TW-0314	SB-337	1	Bass, Striped (SB)	155	55	
NBN		NBN-TW-0314	SB-338	1	Bass, Striped (SB)	158	75	
NBN		NBN-TW-0314	SB-339	1	Bass, Striped (SB)	125	40	
NBN		NBN-TW-0314	SB-340	1	Bass, Striped (SB)	130	25	
NBN		NBN-TW-0314	SB-341	1	Bass, Striped (SB)	118	20	
NBN		NBN-TW-0314	GS-003	1	Shad, Gizzard (GS)	200	110	
NBN		NBN-TW-0314	AL-299	1	Alewife (AL)	80	10	
NBN		NBN-TW-0314	HA-019	1	Hake, Spotted (HA)	120	50	
NBN		NBN-TW-0314	HA-020	1	Hake, Spotted (HA)	140	45	
NBN		NBN-TW-0314	WP-070	1	Perch, White (WP)	160	70	Non-filletable
NBN		NBN-TW-0314	WP-071	1	Perch, White (WP)	130	50	Non-filletable
NBN		NBN-TW-0314	WP-072	1	Perch, White (WP)	130	60	Non-filletable
NBN		NBN-TW-0314	WP-073	1	Perch, White (WP)	140	70	Non-filletable
NBN		NBN-TW-0314	HA-021	1	Hake, Spotted (HA)	100	20	
NBN		NBN-TW-0314	HA-022	1	Hake, Spotted (HA)	90	20	
NBN		NBN-TW-0314	HA-023	1	Hake, Spotted (HA)	50	N/A	Fish too light to weigh accurately on boat
NBN		NBN-TW-0314	WP-074	1	Perch, White (WP)	150	50	Non-filletable
NBN		NBN-TW-0314	WP-075	1	Perch, White (WP)	120	40	Non-filletable
NBN		NBN-TW-0314	WP-076	1	Perch, White (WP)	115	30	Non-filletable
NBN		NBN-TW-0314	WP-077	1	Perch, White (WP)	135	40	Non-filletable
NBN		NBN-TW-0314	WP-078	1	Perch, White (WP)	95	15	Non-filletable
NBN		NBN-TW-0314	WP-079-108	30	Perch, White (WP)	95-130	-	Non-filletable
NBN		NBN-TW-0314	SB-342	1	Bass, Striped (SB)	390	750	
NBN		NBN-TW-0314	SB-343	1	Bass, Striped (SB)	255	200	
NBN		NBN-TW-0314	SB-344	1	Bass, Striped (SB)	195	125	
NBN		NBN-TW-0314	SB-345	1	Bass, Striped (SB)	190	75	
NBN		NBN-TW-0314	SB-346	1	Bass, Striped (SB)	180	80	

Zone	Intertidal Area	Catch Code	Specimen ID	Count	Species	Length (mm)	Weight (g)	Comments
NBN		NBN-TW-0314	SB-347	1	Bass, Striped (SB)	215	120	
NBN		NBN-TW-0314	SB-348	1	Bass, Striped (SB)	170	60	
NBN		NBN-TW-0314	SB-349	1	Bass, Striped (SB)	140	40	
NBN		NBN-TW-0314	SB-350	1	Bass, Striped (SB)	145	40	
NBN		NBN-TW-0314	SB-351	1	Bass, Striped (SB)	140	35	
NBN		NBN-TW-0314	SB-352	1	Bass, Striped (SB)	130	40	
NBN		NBN-TW-0314	SB-353	1	Bass, Striped (SB)	145	50	
NBN		NBN-TW-0314	WP-109	1	Perch, White (WP)	170	90	Non-filletable
NBN		NBN-TW-0314	WP-110	1	Perch, White (WP)	155	70	Non-filletable
NBN		NBN-TW-0314	WW-003	1	Flounder, Windowpane (WW)	200	125	
NBN		NBN-TW-0314	WF-009	1	Flounder, Winter (WF)	140	N/A	Fish too light to weigh accurately on boat
NBN		NBN-TW-0314	AL-300	1	Alewife (AL)	95	N/A	Fish too light to weigh accurately on boat
NBN		NBN-TW-0314	SB-354-385	32	Bass, Striped (SB)	-	-	Count only
NBN		NBN-TW-0314	HA-024-033	10	Hake, Spotted (HA)	-	-	Count only
NBN		NBN-TW-0314	WP-111-218	108	Perch, White (WP)	-	-	Count only; non-filletable
NBN		NBN-TW-0314	HA-034	1	Hake, Spotted (HA)	75	3	
NBN		NBN-TW-0314	HA-035	1	Hake, Spotted (HA)	65	2	
NBN		NBN-TW-0314	SB-386	1	Bass, Striped (SB)	115	15	
NBN		NBN-TW-0314	WP-219-327	109	Perch, White (WP)	-	-	Count only; non-filletable
NBN		NBN-TW-0314	HA-036-041	6	Hake, Spotted (HA)	-	-	Count only
NBN		NBN-TW-0314	SB-387-392	6	Bass, Striped (SB)	-	-	Count only
NBS		NBS-GN-0315	SB-393	1	Bass, Striped (SB)	310	325	
NBS		NBS-GN-0315	SB-394	1	Bass, Striped (SB)	308	300	
NBS		NBS-GN-0315	SB-395	1	Bass, Striped (SB)	290	270	
NBS		NBS-GN-0315	SB-396	1	Bass, Striped (SB)	310	320	
NBS		NBS-GN-0315	SB-397	1	Bass, Striped (SB)	305	300	
NBS		NBS-GN-0315	SB-398	1	Bass, Striped (SB)	325	320	
NBS		NBS-GN-0315	AL-301	1	Alewife (AL)	290	275	
NBS		NBS-GN-0315	AL-302	1	Alewife (AL)	300	290	
NBS		NBS-GN-0315	AL-303	1	Alewife (AL)	275	220	
NBS		NBS-GN-0315	AL-304	1	Alewife (AL)	275	220	
NBS		NBS-GN-0315	ME-261	1	Menhaden, Atlantic (ME)	300	275	
NBS		NBS-GN-0315	WF-010	1	Flounder, Winter (WF)	210	120	
NBS		NBS-GN-0315	WF-011	1	Flounder, Winter (WF)	200	110	
NBS		NBS-GN-0315	SB-399	1	Bass, Striped (SB)	325	400	
NBS		NBS-GN-0315	SB-400	1	Bass, Striped (SB)	355	530	
NBS		NBS-GN-0315	SB-401	1	Bass, Striped (SB)	320	400	

Zone	Intertidal Area	Catch Code	Specimen ID	Count	Species	Length (mm)	Weight (g)	Comments
NBS		NBS-GN-0315	SB-402	1	Bass, Striped (SB)	325	450	
NBS		NBS-GN-0315	SB-403	1	Bass, Striped (SB)	315	360	
NBS		NBS-GN-0315	SB-404	1	Bass, Striped (SB)	315	400	
NBS		NBS-GN-0315	SB-405	1	Bass, Striped (SB)	320	350	
NBS		NBS-GN-0315	MH-001	1	Menhaden (MH)	330	350	
NBS		NBS-GN-0315	AL-305	1	Alewife (AL)	280	210	
NBS		NBS-GN-0315	AL-306	1	Alewife (AL)	310	300	
NBS		NBS-GN-0315	AL-307	1	Alewife (AL)	295	250	
NBS		NBS-GN-0315	AL-308	1	Alewife (AL)	310	300	
NBS		NBS-GN-0315	AL-309	1	Alewife (AL)	310	290	
NBN		NBN-GN-0315	ME-262	1	Menhaden, Atlantic (ME)	330	370	
NBC		NBC-GN-0315	ME-263	1	Menhaden, Atlantic (ME)	355	400	
NBC		NBC-GN-0315	ME-264	1	Menhaden, Atlantic (ME)	305	350	
NBC		NBC-GN-0315	ME-265	1	Menhaden, Atlantic (ME)	280	250	
NBC		NBC-GN-0315	ME-266	1	Menhaden, Atlantic (ME)	325	315	
NBC		NBC-GN-0315	ME-267	1	Menhaden, Atlantic (ME)	300	275	
NBC		NBC-GN-0315	SB-406	1	Bass, Striped (SB)	300	300	
NBC		NBC-GN-0315	SB-407	1	Bass, Striped (SB)	345	415	
NBC		NBC-GN-0315	SB-408	1	Bass, Striped (SB)	315	300	
NBC		NBC-GN-0315	SB-409	1	Bass, Striped (SB)	310	315	
NBC		NBC-GN-0315	SB-410	1	Bass, Striped (SB)	340	500	
NBC		NBC-GN-0315	SB-411	1	Bass, Striped (SB)	310	300	
NBC		NBC-GN-0315	SB-412	1	Bass, Striped (SB)	315	325	
NBC		NBC-GN-0315	SB-413	1	Bass, Striped (SB)	325	400	
NBC		NBC-GN-0315	SB-414-454	41	Bass, Striped (SB)	-	-	Released; not measured or weighed
NBC		NBC-GN-0315	SB-455	1	Bass, Striped (SB)	285	300	
NBC		NBC-GN-0315	SB-456	1	Bass, Striped (SB)	320	350	
NBC		NBC-GN-0315	SB-457	1	Bass, Striped (SB)	310	300	
NBC		NBC-GN-0315	SB-458	1	Bass, Striped (SB)	305	400	
NBC		NBC-GN-0315	SB-459	1	Bass, Striped (SB)	315	300	
NBC		NBC-GN-0315	ME-268	1	Menhaden, Atlantic (ME)	305	300	
NBC		NBC-GN-0315	ME-269	1	Menhaden, Atlantic (ME)	325	350	
NBC		NBC-GN-0315	ME-270	1	Menhaden, Atlantic (ME)	295	275	
NBC		NBC-GN-0315	ME-271	1	Menhaden, Atlantic (ME)	300	400	
NBC		NBC-GN-0315	ME-272	1	Menhaden, Atlantic (ME)	295	350	
NBC		NBC-GN-0315	ME-273	1	Menhaden, Atlantic (ME)	330	325	
NBC		NBC-GN-0315	SB-460	1	Bass, Striped (SB)	280	300	

Zone	Intertidal Area	Catch Code	Specimen ID	Count	Species	Length (mm)	Weight (g)	Comments
NBC		NBC-GN-0315	AL-310	1	Alewife (AL)	305	300	
NBC		NBC-GN-0315	AL-311	1	Alewife (AL)	285	250	
NBC		NBC-GN-0315	AL-312	1	Alewife (AL)	280	250	
NBC		NBC-GN-0315	AL-313	1	Alewife (AL)	285	250	
NBC		NBC-GN-0315	AL-314	1	Alewife (AL)	320	300	
NBC		NBC-GN-0315	AL-315	1	Alewife (AL)	275	200	
NBC		NBC-GN-0315	AL-316	1	Alewife (AL)	270	200	
NBC		NBC-GN-0315	ME-274	1	Menhaden, Atlantic (ME)	335	300	
NBC		NBC-GN-0315	ME-275	1	Menhaden, Atlantic (ME)	315	350	
NBC		NBC-GN-0315	ME-276	1	Menhaden, Atlantic (ME)	345	350	
NBC		NBC-GN-0315	ME-277	1	Menhaden, Atlantic (ME)	330	300	
NBC		NBC-GN-0315	ME-278	1	Menhaden, Atlantic (ME)	340	300	
NBC		NBC-GN-0315	ME-279-284	6	Menhaden, Atlantic (ME)	-	-	Count only
NBC		NBC-GN-0315	SB-461	1	Bass, Striped (SB)	320	400	
NBC		NBC-GN-0315	SB-462	1	Bass, Striped (SB)	335	300	
NBC		NBC-GN-0315	SB-463	1	Bass, Striped (SB)	300	300	
NBC		NBC-GN-0315	SB-464	1	Bass, Striped (SB)	305	350	
NBC		NBC-GN-0315	SB-465	1	Bass, Striped (SB)	300	300	
NBC		NBC-GN-0315	SB-466	1	Bass, Striped (SB)	310	350	
NBC		NBC-GN-0315	SB-467	1	Bass, Striped (SB)	305	315	
NBC		NBC-GN-0315	SB-468	1	Bass, Striped (SB)	320	400	
NBC		NBC-GN-0315	SB-469-497	29	Bass, Striped (SB)	-	-	Count only
NBC		NBC-GN-0315	AL-317	1	Alewife (AL)	275	150	
NBC		NBC-GN-0315	AL-318	1	Alewife (AL)	280	125	
NBC		NBC-GN-0315	AL-319	1	Alewife (AL)	275	125	
NBC		NBC-GN-0315	AL-320	1	Alewife (AL)	310	275	
NBC		NBC-GN-0315	AL-321	1	Alewife (AL)	285	200	
NBC		NBC-GN-0315	AL-322	1	Alewife (AL)	285	250	
NBC		NBC-GN-0315	AL-323-329	7	Alewife (AL)	-	-	
NBC		NBC-GN-0315	ME-285	1	Menhaden, Atlantic (ME)	N/A	N/A	
NBC		NBC-GN-0315	SB-498	1	Bass, Striped (SB)	N/A	N/A	
NBN		NBN-TW-0315	WP-328	1	Perch, White (WP)	100	N/A	Non-filletable
NBN		NBN-TW-0315	WP-329	1	Perch, White (WP)	95	N/A	Non-filletable
NBN		NBN-TW-0315	WP-330-428	99	Perch, White (WP)	-	-	Non-filletable
NBN		NBN-TW-0315	AS-779	1	Silverside, Atlantic (AS)	112	N/A	
NBN		NBN-TW-0315	AL-330	1	Alewife (AL)	125	N/A	
NBN		NBN-TW-0315	AM-081	1	Shad, American (AM)	160	10	

Zone	Intertidal Area	Catch Code	Specimen ID	Count	Species	Length (mm)	Weight (g)	Comments
NBN		NBN-TW-0315	AL-331	1	Alewife (AL)	80	N/A	
NBN		NBN-TW-0315	HA-042	1	Hake, Spotted (HA)	78	N/A	
NBN		NBN-TW-0315	HA-043	1	Hake, Spotted (HA)	71	N/A	
NBN		NBN-TW-0315	HA-044	1	Hake, Spotted (HA)	78	N/A	
NBN		NBN-TW-0315	HA-045	1	Hake, Spotted (HA)	88	N/A	
NBN		NBN-TW-0315	HA-046	1	Hake, Spotted (HA)	90	N/A	
NBN		NBN-TW-0315	HA-047	1	Hake, Spotted (HA)	82	N/A	
NBN		NBN-TW-0315	HA-048-051	4	Hake, Spotted (HA)	-	N/A	
NBN		NBN-TW-0315	CRB-136	1	Crab, Blue (CRB)	140	N/A	
NBN		NBN-TW-0315	SB-499	1	Bass, Striped (SB)	125	N/A	
NBN		NBN-TW-0315	SB-500	1	Bass, Striped (SB)	190	N/A	
NBN		NBN-TW-0315	SB-501	1	Bass, Striped (SB)	145	N/A	
NBN		NBN-TW-0315	SB-502	1	Bass, Striped (SB)	175	N/A	
NBN		NBN-TW-0315	SB-503	1	Bass, Striped (SB)	130	N/A	
NBN		NBN-TW-0315	SB-504	1	Bass, Striped (SB)	148	N/A	
NBN		NBN-TW-0315	SB-505	1	Bass, Striped (SB)	260	175	
NBN		NBN-TW-0315	SB-506-516	11	Bass, Striped (SB)	-	-	Count only
NBN		NBN-TW-0315	WP-429	1	Perch, White (WP)	140	N/A	Non-filletable
NBN		NBN-TW-0315	WP-430	1	Perch, White (WP)	100	N/A	Non-filletable
NBN		NBN-TW-0315	WP-431	1	Perch, White (WP)	120	N/A	Non-filletable
NBN		NBN-TW-0315	WP-432	1	Perch, White (WP)	135	N/A	Non-filletable
NBN		NBN-TW-0315	WP-433	1	Perch, White (WP)	125	N/A	Non-filletable
NBN		NBN-TW-0315	AM-082	1	Shad, American (AM)	155	7	
NBN		NBN-TW-0315	AL-332	1	Alewife (AL)	80	N/A	
NBN		NBN-TW-0315	AL-333	1	Alewife (AL)	78	N/A	
NBN		NBN-TW-0315	SB-517	1	Bass, Striped (SB)	185	50	
NBN		NBN-TW-0315	HA-052	1	Hake, Spotted (HA)	90	N/A	
NBN		NBN-TW-0315	HA-053	1	Hake, Spotted (HA)	75	N/A	
NBN		NBN-TW-0315	HA-054	1	Hake, Spotted (HA)	82	N/A	
NBN		NBN-TW-0315	HA-055	1	Hake, Spotted (HA)	72	N/A	
NBN		NBN-TW-0315	WP-434	1	Perch, White (WP)	160	40	Non-filletable
NBN		NBN-TW-0315	WP-435	1	Perch, White (WP)	130	20	Non-filletable
NBN		NBN-TW-0315	WP-436	1	Perch, White (WP)	128	15	Non-filletable
NBN		NBN-TW-0315	WP-437	1	Perch, White (WP)	125	15	Non-filletable
NBN		NBN-TW-0315	HA-056	1	Hake, Spotted (HA)	75	N/A	
NBN		NBN-TW-0315	HA-057	1	Hake, Spotted (HA)	80	N/A	
NBN		NBN-TW-0315	WF-012	1	Flounder, Winter (WF)	160	15	

Zone	Intertidal Area	Catch Code	Specimen ID	Count	Species	Length (mm)	Weight (g)	Comments
NBN		NBN-TW-0315	SF-265	1	Flounder, Summer (SF)	255	140	
NBN		NBN-TW-0315	SB-518	1	Bass, Striped (SB)	112	N/A	Scoliosis
NBN		NBN-TW-0315	SB-519	1	Bass, Striped (SB)	130	N/A	Scoliosis
NBS		NBS-GN-0316	AM-083	1	Shad, American (AM)	515	1450	Photo
NBS		NBS-GN-0316	SB-520	1	Bass, Striped (SB)	340	380	
NBS		NBS-GN-0316	SB-521	1	Bass, Striped (SB)	315	340	
NBS		NBS-GN-0316	SB-522	1	Bass, Striped (SB)	335	480	
NBS		NBS-GN-0316	WF-013	1	Flounder, Winter (WF)	170	20	
NBS		NBS-GN-0316	ME-286	1	Menhaden, Atlantic (ME)	340	420	
NBS		NBS-GN-0316	ME-287	1	Menhaden, Atlantic (ME)	340	420	
NBS		NBS-GN-0316	ME-288	1	Menhaden, Atlantic (ME)	315	330	
NBS		NBS-GN-0316	ME-289	1	Menhaden, Atlantic (ME)	330	410	
NBS		NBS-GN-0316	AL-334	1	Alewife (AL)	285	275	
NBS		NBS-GN-0316	AL-335	1	Alewife (AL)	300	280	
NBS		NBS-GN-0316	AL-336	1	Alewife (AL)	300	290	
NBS		NBS-GN-0316	AL-337	1	Alewife (AL)	280	190	Photo
NBS		NBS-GN-0316	AL-338	1	Alewife (AL)	295	300	
NBS		NBS-GN-0316	AL-339	1	Alewife (AL)	295	250	
NBC		NBC-GN-0316	ME-290	1	Menhaden, Atlantic (ME)	335	380	
NBC		NBC-GN-0316	ME-291	1	Menhaden, Atlantic (ME)	340	430	
NBC		NBC-GN-0316	ME-292	1	Menhaden, Atlantic (ME)	335	370	
NBC		NBC-GN-0316	ME-293	1	Menhaden, Atlantic (ME)	350	440	
NBC		NBC-GN-0316	ME-294-300	7	Menhaden, Atlantic (ME)	275-335	2300	Group weight
NBC		NBC-GN-0316	AL-340	1	Alewife (AL)	295	270	
NBC		NBC-GN-0316	AL-341	1	Alewife (AL)	290	250	
NBC		NBC-GN-0316	AL-342	1	Alewife (AL)	300	270	
NBC		NBC-GN-0316	AL-343	1	Alewife (AL)	300	290	
NBC		NBC-GN-0316	SB-523	1	Bass, Striped (SB)	360	550	
NBC		NBC-GN-0316	SB-524	1	Bass, Striped (SB)	290	280	
NBC		NBC-GN-0316	SB-525	1	Bass, Striped (SB)	310	320	
NBC		NBC-GN-0316	SB-526	1	Bass, Striped (SB)	310	330	
NBC		NBC-GN-0316	SB-527	1	Bass, Striped (SB)	315	340	
NBS		NBS-GN-0316	WF-014	1	Flounder, Winter (WF)	155	30	
NBC		NBC-GN-0316	SB-528	1	Bass, Striped (SB)	330	350	
NBC		NBC-GN-0316	SB-529	1	Bass, Striped (SB)	345	440	
NBC		NBC-GN-0316	SB-530	1	Bass, Striped (SB)	325	370	
NBC		NBC-GN-0316	SB-531	1	Bass, Striped (SB)	335	410	

Zone	Intertidal Area	Catch Code	Specimen ID	Count	Species	Length (mm)	Weight (g)	Comments
NBC		NBC-GN-0316	TA-003	1	Tautog (TA)	300	530	
NBC		NBC-GN-0316	SB-532	1	Bass, Striped (SB)	355	540	
NBC		NBC-GN-0316	SB-533	1	Bass, Striped (SB)	300	330	
NBC		NBC-GN-0316	SB-534	1	Bass, Striped (SB)	310	350	
NBC		NBC-GN-0316	SB-535	1	Bass, Striped (SB)	350	500	
NBC		NBC-GN-0316	SB-536	1	Bass, Striped (SB)	320	350	
NBC		NBC-GN-0316	ME-301	1	Menhaden, Atlantic (ME)	380	440	
NBC		NBC-GN-0316	ME-302	1	Menhaden, Atlantic (ME)	325	380	
NBC		NBC-GN-0316	ME-303	1	Menhaden, Atlantic (ME)	305	290	
NBC		NBC-GN-0316	TA-004	1	Tautog (TA)	430	1300	
NBC		NBC-GN-0316	SB-537-571	35	Bass, Striped (SB)	290-375	-	Released alive
NBC		NBC-GN-0316	SB-572-584	13	Bass, Striped (SB)	330-395	5500	Group weight
NBC		NBC-GN-0316	WF-015	1	Flounder, Winter (WF)	190	70	
NBC		NBC-GN-0316	ME-304-329	26	Menhaden, Atlantic (ME)	295-335	9400	Group weight
NBC		NBC-GN-0316	AL-344	1	Alewife (AL)	310	250	
NBC		NBC-GN-0316	AL-345	1	Alewife (AL)	280	220	
NBC		NBC-GN-0316	AL-346	1	Alewife (AL)	290	240	
NBC		NBC-GN-0316	AL-347-349	3	Alewife (AL)	280-300	675	Group weight
NBC		NBC-GN-0316	ME-330-339	10	Menhaden, Atlantic (ME)	300-330	4000	Group weight
NBN		NBN-GN-0316	SB-585	1	Bass, Striped (SB)	305	320	
NBN		NBN-GN-0316	ME-340	1	Menhaden, Atlantic (ME)	300	220	
NBN		NBN-GN-0316	SB-586	1	Bass, Striped (SB)	295	290	
NBN		NBN-GN-0316	ME-341	1	Menhaden, Atlantic (ME)	320	340	
NBC		NBC-GN-0316	SB-587-591	5	Bass, Striped (SB)	290-350	2100	Group weight
NBC		NBC-GN-0316	WF-016	1	Flounder, Winter (WF)	160	50	
NBC		NBC-GN-0316	SB-592-596	5	Bass, Striped (SB)	300-370	1950	Group weight
NBC		NBC-GN-0316	SB-597-600	4	Bass, Striped (SB)	330-340	1500	Group weight
NBC		NBC-GN-0316	GS-004	1	Shad, Gizzard (GS)	230	140	
NBC		NBC-GN-0316	ME-342	1	Menhaden, Atlantic (ME)	335	390	
NBC		NBC-GN-0316	AL-350-357	8	Alewife (AL)	175-300	1900	Group weight
NBC		NBC-GN-0316	SB-601-620	20	Bass, Striped (SB)	290-370	-	Released alive
NBN		NBN-GN-0316	SB-621	1	Bass, Striped (SB)	335	400	
NBN		NBN-GN-0316	SB-622	1	Bass, Striped (SB)	325	360	
NBN		NBN-GN-0316	SB-623	1	Bass, Striped (SB)	295	290	
NBN		NBN-GN-0316	SB-624	1	Bass, Striped (SB)	300	300	
NBN		NBN-GN-0316	SB-625	1	Bass, Striped (SB)	335	400	
NBN		NBN-TW-0316	BB-069	1	Herring, Blueback (BB)	80	-	

Zone	Intertidal Area	Catch Code	Specimen ID	Count	Species	Length (mm)	Weight (g)	Comments
NBN		NBN-TW-0316	SB-626	1	Bass, Striped (SB)	110	-	
NBN		NBN-TW-0316	WF-017	1	Flounder, Winter (WF)	145	20	
NBN		NBN-TW-0316	BA-070	1	Anchovy, Bay (BA)	60	-	
NBN		NBN-TW-0316	BB-070	1	Herring, Blueback (BB)	85	-	
NBN		NBN-TW-0316	WF-018	1	Flounder, Winter (WF)	155	30	
NBN		NBN-TW-0316	SB-627	1	Bass, Striped (SB)	165	20	
NBN		NBN-TW-0316	SB-628	1	Bass, Striped (SB)	165	15	
NBN		NBN-TW-0316	SB-629	1	Bass, Striped (SB)	145	10	
NBN		NBN-TW-0316	WP-438-442	5	Perch, White (WP)	105-120	50	Group weight; non-filletable
NBN		NBN-TW-0316	HA-058-072	15	Hake, Spotted (HA)	60-150	100	Group weight
NBN		NBN-TW-0316	WF-019	1	Flounder, Winter (WF)	220	130	
NBN		NBN-TW-0316	WP-443-461	19	Perch, White (WP)	100-145	400	Group weight; non-filletable
NBN		NBN-TW-0316	SB-630	1	Bass, Striped (SB)	155	20	
NBN		NBN-TW-0316	HA-073-075	3	Hake, Spotted (HA)	90-110	30	Group weight
NBC		NBC-GN-0317	KT-001	1	Skate (KT)	410	800	
NBC		NBC-GN-0317	WF-020	1	Flounder, Winter (WF)	205	100	
NBC		NBC-GN-0317	SB-631	1	Bass, Striped (SB)	330	410	
NBC		NBC-GN-0317	SB-632	1	Bass, Striped (SB)	340	440	
NBC		NBC-GN-0317	SB-633	1	Bass, Striped (SB)	295	290	
NBC		NBC-GN-0317	SB-634	1	Bass, Striped (SB)	320	310	
NBC		NBC-GN-0317	SB-635	1	Bass, Striped (SB)	300	300	
NBC		NBC-GN-0317	SB-636	1	Bass, Striped (SB)	315	370	
NBC		NBC-GN-0317	SB-637	1	Bass, Striped (SB)	305	350	
NBC		NBC-GN-0317	SB-638	1	Bass, Striped (SB)	345	570	
NBC		NBC-GN-0317	SB-639	1	Bass, Striped (SB)	300	320	
NBC		NBC-GN-0317	SB-640	1	Bass, Striped (SB)	300	290	
NBC		NBC-GN-0317	SB-641	1	Bass, Striped (SB)	315	350	
NBC		NBC-GN-0317	SB-642	1	Bass, Striped (SB)	300	350	
NBC		NBC-GN-0317	SB-643	1	Bass, Striped (SB)	295	300	
NBC		NBC-GN-0317	ME-343	1	Menhaden, Atlantic (ME)	305	240	
NBC		NBC-GN-0317	AM-084	1	Shad, American (AM)	290	170	
NBC		NBC-GN-0317	AL-358	1	Alewife (AL)	300	240	
NBC		NBC-GN-0317	AL-359	1	Alewife (AL)	300	230	
NBC		NBC-GN-0317	AL-360	1	Alewife (AL)	300	280	
NBC		NBC-GN-0317	AL-361	1	Alewife (AL)	295	230	
NBC		NBC-GN-0317	AL-362	1	Alewife (AL)	300	230	
NBC		NBC-GN-0317	AL-363	1	Alewife (AL)	290	220	

Zone	Intertidal Area	Catch Code	Specimen ID	Count	Species	Length (mm)	Weight (g)	Comments
NBC		NBC-GN-0317	ST-001	1	Sturgeon, Atlantic (ST)	737	1650	
NBC		NBC-GN-0317	SB-644-649	6	Bass, Striped (SB)	290-340	2100	Group weight
NBC		NBC-GN-0317	SB-650-654	5	Bass, Striped (SB)	290-340	1850	Group weight
NBC		NBC-GN-0317	SB-655-659	5	Bass, Striped (SB)	290-340	1800	Group weight
NBC		NBC-GN-0317	ME-344	1	Menhaden, Atlantic (ME)	295	300	
NBC		NBC-GN-0317	AL-364	1	Alewife (AL)	295	240	
NBC		NBC-GN-0317	AL-365	1	Alewife (AL)	285	230	
NBC		NBC-GN-0317	HA-076	1	Hake, Spotted (HA)	165	20	
NBC		NBC-GN-0317	WW-004	1	Flounder, Windowpane (WW)	-	-	Lost; not measured or weighed
NBC		NBC-GN-0317	SB-660	1	Bass, Striped (SB)	290	300	
NBC		NBC-GN-0317	SB-661	1	Bass, Striped (SB)	305	320	
NBC		NBC-GN-0317	SB-662	1	Bass, Striped (SB)	290	270	
NBC		NBC-GN-0317	SB-663-667	5	Bass, Striped (SB)	310-345	1900	Group weight
NBC		NBC-GN-0317	SB-668-672	5	Bass, Striped (SB)	310-345	1900	Group weight
NBC		NBC-GN-0317	SB-673-677	5	Bass, Striped (SB)	310-345	2000	Group weight
NBC		NBC-GN-0317	SB-678-681	4	Bass, Striped (SB)	310-345	1850	Group weight
NBC		NBC-GN-0317	SB-682-685	4	Bass, Striped (SB)	310-345	1850	Group weight
NBC		NBC-GN-0317	SB-686-746	61	Bass, Striped (SB)	-	-	Released; not measured or weighed
NBC		NBC-GN-0317	AL-366	1	Alewife (AL)	285	250	
NBC		NBC-GN-0317	AL-367	1	Alewife (AL)	300	310	
NBC		NBC-GN-0317	SB-747-771	25	Bass, Striped (SB)	-	-	Released; not measured or weighed
NBC		NBC-GN-0317	SB-772	1	Bass, Striped (SB)	600	1900	
NBC		NBC-GN-0317	SB-773-777	5	Bass, Striped (SB)	315-350	2100	Group weight
NBC		NBC-GN-0317	AL-368-375	8	Alewife (AL)	290-310	1950	Group weight
NBC		NBC-GN-0317	ME-345-350	6	Menhaden, Atlantic (ME)	270-340	1850	Group weight
NBC		NBC-GN-0317	ME-351-354	4	Menhaden, Atlantic (ME)	270-340	1300	Group weight
NBC		NBC-GN-0318	SB-778-797	20	Bass, Striped (SB)	-	-	Released; not measured or weighed
NBC		NBC-GN-0318	AL-376	1	Alewife (AL)	280	150	
NBC		NBC-GN-0318	AM-085	1	Shad, American (AM)	215	40	
NBC		NBC-GN-0318	ME-355	1	Menhaden, Atlantic (ME)	350	450	
NBC		NBC-GN-0318	ME-356	1	Menhaden, Atlantic (ME)	320	300	
NBC		NBC-GN-0318	ME-357	1	Menhaden, Atlantic (ME)	330	310	
NBC		NBC-GN-0318	GS-005	1	Shad, Gizzard (GS)	245	125	
NBC		NBC-GN-0318	SB-798	1	Bass, Striped (SB)	325	300	
NBC		NBC-GN-0318	SB-799	1	Bass, Striped (SB)	345	400	
NBC		NBC-GN-0318	SB-800	1	Bass, Striped (SB)	340	375	
NBC		NBC-GN-0318	WF-021	1	Flounder, Winter (WF)	155	40	

Zone	Intertidal Area	Catch Code	Specimen ID	Count	Species	Length (mm)	Weight (g)	Comments
NBC		NBC-GN-0318	WF-022	1	Flounder, Winter (WF)	155	50	
NBC		NBC-GN-0318	SB-801-808	8	Bass, Striped (SB)	-	-	Released; not measured or weighed
NBC		NBC-GN-0318	ME-358-360	3	Menhaden, Atlantic (ME)	-	-	Fell out of net
NBC		NBC-GN-0318	SB-809-823	15	Bass, Striped (SB)	-	-	Released; not measured or weighed
NBC		NBC-GN-0318	SB-824-828	5	Bass, Striped (SB)	310-380	2100	Group weight
NBC		NBC-GN-0318	ME-361-367	7	Menhaden, Atlantic (ME)	285-350	2150	Group weight
NBC		NBC-GN-0318	ME-368-372	5	Menhaden, Atlantic (ME)	285-350	1900	Group weight
NBC		NBC-GN-0318	ME-373-377	5	Menhaden, Atlantic (ME)	285-350	1850	Group weight
NBC		NBC-GN-0318	AL-377	1	Alewife (AL)	325	350	
NBC		NBC-GN-0318	AL-378	1	Alewife (AL)	290	250	
NBC		NBC-GN-0318	AL-379	1	Alewife (AL)	295	230	
NBN		NBN-TW-0318	CU-003	1	Cunner (CU)	80	N/A	
NBN		NBN-TW-0318	HA-077	1	Hake, Spotted (HA)	70	N/A	
NBN		NBN-TW-0318	SB-829-838	10	Bass, Striped (SB)	125-295	850	Group weight
NBN		NBN-TW-0318	NP-007	1	Pipefish, Northern (NP)	180	N/A	
NBN		NBN-TW-0318	SB-839-850	12	Bass, Striped (SB)	115-235	450	Group weight
NBN		NBN-TW-0318	HA-078-090	13	Hake, Spotted (HA)	80-115	120	Group weight
NBN		NBN-TW-0318	WF-023	1	Flounder, Winter (WF)	260	250	
NBN		NBN-TW-0318	AM-086	1	Shad, American (AM)	160	30	
NBN		NBN-TW-0318	NP-008	1	Pipefish, Northern (NP)	110	N/A	
NBN		NBN-TW-0318	WP-462-525	64	Perch, White (WP)	95-170	1500	Group weight; non-filletable
NBN		NBN-TW-0318	HA-091	1	Hake, Spotted (HA)	-	-	
NBN		NBN-TW-0322	SB-851	1	Bass, Striped (SB)	265	150	
NBN		NBN-TW-0322	SB-852	1	Bass, Striped (SB)	215	90	
NBN		NBN-TW-0322	SB-853	1	Bass, Striped (SB)	155	50	
NBN		NBN-TW-0322	SB-854	1	Bass, Striped (SB)	170	70	
NBN		NBN-TW-0322	SB-855	1	Bass, Striped (SB)	170	70	
NBN		NBN-TW-0322	SB-856-872	17	Bass, Striped (SB)	130-195	550	Group weight
NBN		NBN-TW-0322	ME-378	1	Menhaden, Atlantic (ME)	145	30	
NBN		NBN-TW-0322	HA-092	1	Hake, Spotted (HA)	245	120	
NBN		NBN-TW-0322	HA-093	1	Hake, Spotted (HA)	165	30	
NBN		NBN-TW-0322	HA-094	1	Hake, Spotted (HA)	150	20	
NBN		NBN-TW-0322	HA-095	1	Hake, Spotted (HA)	130	20	
NBN		NBN-TW-0322	WF-024	1	Flounder, Winter (WF)	140	30	
NBN		NBN-TW-0322	WP-526	1	Perch, White (WP)	115	30	Non-filletable
NBN		NBN-TW-0322	WP-527	1	Perch, White (WP)	125	30	Non-filletable
NBN		NBN-TW-0322	WP-528	1	Perch, White (WP)	150	40	Non-filletable

Zone	Intertidal Area	Catch Code	Specimen ID	Count	Species	Length (mm)	Weight (g)	Comments
NBN		NBN-TW-0322	WP-529	1	Perch, White (WP)	130	30	Non-filletable
NBN		NBN-TW-0322	WP-530	1	Perch, White (WP)	140	30	Non-filletable
NBN		NBN-TW-0322	WP-531	1	Perch, White (WP)	180	100	Non-filletable
NBN		NBN-TW-0322	WP-532-581	50	Perch, White (WP)	110-140	1100	Group weight; non-filletable
NBN		NBN-TW-0322	WP-582-602	21	Perch, White (WP)	100-130	550	Group weight; non-filletable
NBN		NBN-TW-0322	WF-025	1	Flounder, Winter (WF)	130	20	
NBN		NBN-TW-0322	SB-873-884	12	Bass, Striped (SB)	100-145	300	Group weight
NBN		NBN-TW-0322	SB-885	1	Bass, Striped (SB)	145	40	
NBN		NBN-TW-0322	SB-886	1	Bass, Striped (SB)	180	100	
NBN		NBN-TW-0322	HA-096	1	Hake, Spotted (HA)	120	30	
NBN		NBN-TW-0322	SB-887	1	Bass, Striped (SB)	90	10	
NBN		NBN-TW-0322	GS-006	1	Shad, Gizzard (GS)	245	180	
NBN		NBN-TW-0322	WF-026	1	Flounder, Winter (WF)	160	50	
NBN		NBN-TW-0322	CRB-137	1	Crab, Blue (CRB)	140	150	
NBN		NBN-TW-0322	SB-888	1	Bass, Striped (SB)	160	40	
NBN		NBN-TW-0322	WP-603	1	Perch, White (WP)	145	40	Non-filletable
NBN		NBN-TW-0322	WP-604	1	Perch, White (WP)	125	20	Non-filletable
NBN		NBN-TW-0322	WP-605	1	Perch, White (WP)	115	10	Non-filletable
NBN		NBN-TW-0322	WP-606	1	Perch, White (WP)	140	35	Non-filletable
NBN		NBN-TW-0322	WP-607	1	Perch, White (WP)	100	10	Non-filletable
NBN		NBN-TW-0322	WP-608-656	49	Perch, White (WP)	95-145	1050	Group weight; non-filletable
NBN		NBN-TW-0322	SB-889	1	Bass, Striped (SB)	105	10	
NBN		NBN-TW-0322	WP-657-724	68	Perch, White (WP)	85-130	1200	Group weight; non-filletable
NBN		NBN-TW-0322	SB-890	1	Bass, Striped (SB)	110	10	
NBN		NBN-TW-0322	SB-891	1	Bass, Striped (SB)	110	10	
NBN		NBN-TW-0322	SB-892	1	Bass, Striped (SB)	105	10	
NBN		NBN-TW-0322	SB-893	1	Bass, Striped (SB)	210	100	
NBN		NBN-TW-0322	SB-894	1	Bass, Striped (SB)	205	100	
NBN		NBN-TW-0322	SB-895	1	Bass, Striped (SB)	205	90	
NBN		NBN-TW-0322	SB-896	1	Bass, Striped (SB)	170	50	
NBN		NBN-TW-0322	SB-897	1	Bass, Striped (SB)	120	15	
NBN		NBN-TW-0322	SF-266	1	Flounder, Summer (SF)	185	70	
NBN		NBN-TW-0322	HA-097	1	Hake, Spotted (HA)	160	50	
NBN		NBN-TW-0322	HA-098	1	Hake, Spotted (HA)	180	75	
NBN		NBN-TW-0322	HA-099	1	Hake, Spotted (HA)	95	10	
NBN		NBN-TW-0322	HA-100	1	Hake, Spotted (HA)	105	10	
NBN		NBN-TW-0322	HA-101	1	Hake, Spotted (HA)	130	50	

Zone	Intertidal Area	Catch Code	Specimen ID	Count	Species	Length (mm)	Weight (g)	Comments
NBN		NBN-TW-0322	HA-102-114	13	Hake, Spotted (HA)	55-145	200	Group weight
NBN		NBN-TW-0322	NP-009	1	Pipefish, Northern (NP)	185	N/A	
NBN		NBN-TW-0322	WP-725	1	Perch, White (WP)	140	40	Non-filletable
NBN		NBN-TW-0322	WP-726	1	Perch, White (WP)	150	40	Non-filletable
NBN		NBN-TW-0322	WP-727	1	Perch, White (WP)	115	30	Non-filletable
NBN		NBN-TW-0322	WP-728	1	Perch, White (WP)	135	50	Non-filletable
NBN		NBN-TW-0322	WP-729	1	Perch, White (WP)	100	10	Non-filletable
NBN		NBN-TW-0322	WP-730-763	34	Perch, White (WP)	110-150	950	Group weight; non-filletable
NBN		NBN-TW-0322	WF-027	1	Flounder, Winter (WF)	135	30	
NBN		NBN-TW-0322	HA-115	1	Hake, Spotted (HA)	140	40	
NBN		NBN-TW-0322	HA-116	1	Hake, Spotted (HA)	100	10	
NBN		NBN-TW-0322	HA-117	1	Hake, Spotted (HA)	85	8	
NBN		NBN-TW-0322	HA-118	1	Hake, Spotted (HA)	100	10	
NBN		NBN-TW-0322	NP-010	1	Pipefish, Northern (NP)	210	N/A	
NBN		NBN-TW-0322	WP-764	1	Perch, White (WP)	105	25	Non-filletable
NBN		NBN-TW-0322	WP-765	1	Perch, White (WP)	115	40	Non-filletable
NBN		NBN-TW-0322	SR-018	1	Sea Robin, Striped (SR)	80	5	
NBN		NBN-TW-0322	MH-002	1	Menhaden (MH)	340	400	
NBN		NBN-TW-0322	AM-087	1	Shad, American (AM)	165	30	
NBN		NBN-TW-0322	NP-011	1	Pipefish, Northern (NP)	160	N/A	
NBN		NBN-TW-0322	SB-898	1	Bass, Striped (SB)	115	20	
NBN		NBN-TW-0322	SB-899	1	Bass, Striped (SB)	240	140	
NBN		NBN-TW-0322	SB-900	1	Bass, Striped (SB)	175	70	
NBN		NBN-TW-0322	SB-901	1	Bass, Striped (SB)	150	30	
NBN		NBN-TW-0322	SB-902	1	Bass, Striped (SB)	135	20	
NBN		NBN-TW-0322	SB-903-908	6	Bass, Striped (SB)	110-215	200	Group weight
NBN		NBN-TW-0322	WF-028	1	Flounder, Winter (WF)	220	110	
NBN		NBN-TW-0322	WP-766	1	Perch, White (WP)	110	20	Non-filletable
NBN		NBN-TW-0322	WP-767	1	Perch, White (WP)	135	40	Non-filletable
NBN		NBN-TW-0322	WP-768	1	Perch, White (WP)	125	40	Non-filletable
NBN		NBN-TW-0322	WP-769	1	Perch, White (WP)	130	35	Non-filletable
NBN		NBN-TW-0322	WP-770	1	Perch, White (WP)	135	30	Non-filletable
NBN		NBN-TW-0322	WP-771-781	11	Perch, White (WP)	115-170	300	Group weight; non-filletable
NBN		NBN-TW-0322	SB-909	1	Bass, Striped (SB)	240	150	
NBN		NBN-TW-0322	SB-910	1	Bass, Striped (SB)	170	50	
NBN		NBN-TW-0322	SB-911	1	Bass, Striped (SB)	170	45	
NBN		NBN-TW-0322	SB-912	1	Bass, Striped (SB)	120	15	

Zone	Intertidal Area	Catch Code	Specimen ID	Count	Species	Length (mm)	Weight (g)	Comments
NBN		NBN-TW-0322	SB-913	1	Bass, Striped (SB)	150	50	
NBN		NBN-TW-0322	SB-914	1	Bass, Striped (SB)	155	40	
NBN		NBN-TW-0322	WF-029	1	Flounder, Winter (WF)	155	30	
NBN		NBN-TW-0322	HA-119	1	Hake, Spotted (HA)	130	20	
NBN		NBN-TW-0322	HA-120	1	Hake, Spotted (HA)	130	20	
NBN		NBN-TW-0322	HA-121	1	Hake, Spotted (HA)	150	40	
NBN		NBN-TW-0322	HA-122	1	Hake, Spotted (HA)	110	10	
NBN		NBN-TW-0322	HA-123	1	Hake, Spotted (HA)	100	15	
NBN		NBN-TW-0322	HA-124	1	Hake, Spotted (HA)	90	10	
NBN		NBN-TW-0322	HA-125	1	Hake, Spotted (HA)	70	5	
NBN		NBN-TW-0322	RH-001	1	Hake, Red (RH)	95	10	
NBN		NBN-TW-0322	WP-782	1	Perch, White (WP)	115	20	
NBN		NBN-TW-0322	WP-783	1	Perch, White (WP)	130	40	
NBN		NBN-TW-0322	WP-784	1	Perch, White (WP)	150	40	
NBN		NBN-TW-0322	WP-785	1	Perch, White (WP)	155	60	
NBN		NBN-TW-0322	WP-786-812	27	Perch, White (WP)	115-165	600	Group weight; non-filletable
NBN		NBN-TW-0322	WP-813	1	Perch, White (WP)	90	15	Non-filletable
NBN		NBN-TW-0322	WP-814	1	Perch, White (WP)	110	20	Non-filletable
NBN		NBN-TW-0322	WP-815	1	Perch, White (WP)	130	35	Non-filletable
NBN		NBN-TW-0322	WP-816	1	Perch, White (WP)	140	40	Non-filletable
NBN		NBN-TW-0322	WP-817	1	Perch, White (WP)	110	20	Non-filletable
NBN		NBN-TW-0322	WP-818-865	48	Perch, White (WP)	90-155	1100	Group weight; non-filletable
NBN		NBN-TW-0322	WP-866-930	65	Perch, White (WP)	100-145	1300	Group weight; non-filletable
NBN		NBN-TW-0322	HA-126-130	5	Hake, Spotted (HA)	80-110	80	Group weight
NBN		NBN-TW-0322	HA-131	1	Hake, Spotted (HA)	170	30	
NBN		NBN-TW-0322	HA-132	1	Hake, Spotted (HA)	150	25	
NBN		NBN-TW-0322	HA-133	1	Hake, Spotted (HA)	110	10	
NBN		NBN-TW-0322	HA-134	1	Hake, Spotted (HA)	100	7	
NBN		NBN-TW-0322	HA-135	1	Hake, Spotted (HA)	145	20	
NBN		NBN-TW-0322	HA-136-146	11	Hake, Spotted (HA)	95-170	225	
NBN		NBN-TW-0322	NP-012	1	Pipefish, Northern (NP)	175	N/A	
NBN		NBN-TW-0322	SB-915	1	Bass, Striped (SB)	230	90	
NBN		NBN-TW-0322	SB-916	1	Bass, Striped (SB)	150	35	
NBN		NBN-TW-0322	SB-917	1	Bass, Striped (SB)	205	80	
NBN		NBN-TW-0322	SB-918	1	Bass, Striped (SB)	120	20	
NBN		NBN-TW-0322	SB-919	1	Bass, Striped (SB)	170	50	
NBN		NBN-TW-0322	SB-920	1	Bass, Striped (SB)	155	40	

Zone	Intertidal Area	Catch Code	Specimen ID	Count	Species	Length (mm)	Weight (g)	Comments
NBN		NBN-TW-0322	SB-921-928	8	Bass, Striped (SB)	130-200	350	
NBN		NBN-TW-0322	HA-147	1	Hake, Spotted (HA)	155	40	
NBN		NBN-TW-0322	WF-030	1	Flounder, Winter (WF)	140	40	
NBN		NBN-TW-0322	WF-031	1	Flounder, Winter (WF)	145	50	
NBN		NBN-TW-0322	SB-929	1	Bass, Striped (SB)	230	130	
NBN		NBN-TW-0322	SB-930	1	Bass, Striped (SB)	225	120	
NBN		NBN-TW-0322	SB-931	1	Bass, Striped (SB)	190	70	
NBN		NBN-TW-0322	SB-932	1	Bass, Striped (SB)	150	60	
NBN		NBN-TW-0322	SB-933	1	Bass, Striped (SB)	155	25	
NBN		NBN-TW-0322	SB-934-952	19	Bass, Striped (SB)	130-290	1250	Group weight; non-filletable
NBN		NBN-TW-0322	RH-002	1	Hake, Red (RH)	100	10	
NBN		NBN-TW-0322	HA-148	1	Hake, Spotted (HA)	80	10	
NBN		NBN-TW-0322	HA-149	1	Hake, Spotted (HA)	155	40	
NBN		NBN-TW-0322	HA-150	1	Hake, Spotted (HA)	175	60	
NBN		NBN-TW-0322	HA-151	1	Hake, Spotted (HA)	135	30	
NBN		NBN-TW-0322	HA-152-157	6	Hake, Spotted (HA)	110-155	120	Group weight
NBN		NBN-TW-0322	RH-003	1	Hake, Red (RH)	120	15	
NBN		NBN-TW-0322	SB-953	1	Bass, Striped (SB)	120	30	
NBN		NBN-TW-0322	AL-380	1	Alewife (AL)	90	10	
NBN		NBN-TW-0322	WF-032	1	Flounder, Winter (WF)	200	80	
NBN		NBN-TW-0322	WF-033	1	Flounder, Winter (WF)	210	100	
NBN		NBN-TW-0322	WP-931	1	Perch, White (WP)	170	70	Non-filletable
NBN		NBN-TW-0322	WP-932	1	Perch, White (WP)	140	35	Non-filletable
NBN		NBN-TW-0322	WP-933	1	Perch, White (WP)	125	30	Non-filletable
NBN		NBN-TW-0322	WP-934	1	Perch, White (WP)	130	40	Non-filletable
NBN		NBN-TW-0322	WP-935	1	Perch, White (WP)	120	25	Non-filletable
NBN		NBN-TW-0322	WP-936-986	51	Perch, White (WP)	100-165	1300	Group weight; non-filletable
NBN		NBN-GN-0323	SB-954	1	Bass, Striped (SB)	325	350	
NBN		NBN-GN-0323	SB-955	1	Bass, Striped (SB)	340	400	
NBN		NBN-GN-0323	SB-956	1	Bass, Striped (SB)	300	340	
NBN		NBN-GN-0323	SB-957	1	Bass, Striped (SB)	330	390	
NBN		NBN-GN-0323	SB-958	1	Bass, Striped (SB)	320	370	
NBN		NBN-GN-0323	WF-034	1	Flounder, Winter (WF)	205	120	
NBN		NBN-GN-0323	ME-379	1	Menhaden, Atlantic (ME)	340	450	
NBN		NBN-GN-0323	ME-380	1	Menhaden, Atlantic (ME)	330	400	
NBN		NBN-GN-0323	ME-381	1	Menhaden, Atlantic (ME)	335	350	
NBN		NBN-GN-0323	ME-382	1	Menhaden, Atlantic (ME)	320	330	

Zone	Intertidal Area	Catch Code	Specimen ID	Count	Species	Length (mm)	Weight (g)	Comments
NBN		NBN-GN-0323	ME-383	1	Menhaden, Atlantic (ME)	325	350	
NBN		NBN-GN-0323	ME-384	1	Menhaden, Atlantic (ME)	280	240	
NBN		NBN-GN-0323	SB-959	1	Bass, Striped (SB)	490	1150	
NBN		NBN-GN-0323	SB-960	1	Bass, Striped (SB)	320	370	
NBN		NBN-GN-0323	SB-961	1	Bass, Striped (SB)	350	450	
NBN		NBN-GN-0323	ME-385	1	Menhaden, Atlantic (ME)	350	370	
NBN		NBN-GN-0323	ME-386	1	Menhaden, Atlantic (ME)	310	270	
NBN		NBN-GN-0323	ME-387	1	Menhaden, Atlantic (ME)	330	400	
NBN		NBN-GN-0323	ME-388	1	Menhaden, Atlantic (ME)	310	370	
NBN		NBN-GN-0323	ME-389	1	Menhaden, Atlantic (ME)	335	350	
NBN		NBN-GN-0323	ME-390	1	Menhaden, Atlantic (ME)	320	300	
NBN		NBN-GN-0323	ME-391	1	Menhaden, Atlantic (ME)	320	310	
NBN		NBN-GN-0323	SB-962	1	Bass, Striped (SB)	310	350	
NBN		NBN-GN-0323	SB-963	1	Bass, Striped (SB)	310	350	
NBN		NBN-GN-0323	SB-964	1	Bass, Striped (SB)	310	320	
NBN		NBN-GN-0323	SB-965	1	Bass, Striped (SB)	305	300	
NBN		NBN-GN-0323	SB-966	1	Bass, Striped (SB)	310	310	
NBN		NBN-GN-0323	SB-967	1	Bass, Striped (SB)	305	300	
NBN		NBN-GN-0323	SB-968	1	Bass, Striped (SB)	305	300	
NBN		NBN-GN-0323	SB-969	1	Bass, Striped (SB)	290	275	
NBN		NBN-GN-0323	SB-970	1	Bass, Striped (SB)	305	330	
NBN		NBN-GN-0323	AL-381	1	Alewife (AL)	305	230	
NBN		NBN-GN-0323	ME-392	1	Menhaden, Atlantic (ME)	335	310	
NBN		NBN-GN-0323	WF-035	1	Flounder, Winter (WF)	165	50	
NBN		NBN-GN-0323	SB-971	1	Bass, Striped (SB)	365	510	
NBN		NBN-GN-0323	SB-972	1	Bass, Striped (SB)	315	400	
NBN		NBN-GN-0323	SB-973	1	Bass, Striped (SB)	320	350	
NBN		NBN-GN-0323	ME-393	1	Menhaden, Atlantic (ME)	300	270	
NBN		NBN-GN-0323	ME-394	1	Menhaden, Atlantic (ME)	335	380	
NBN		NBN-GN-0323	ME-395	1	Menhaden, Atlantic (ME)	320	310	
NBN		NBN-GN-0323	ME-396	1	Menhaden, Atlantic (ME)	330	350	
NBN		NBN-TW-0323	SB-974	1	Bass, Striped (SB)	255	120	
NBN		NBN-TW-0323	SB-975	1	Bass, Striped (SB)	255	130	
NBN		NBN-TW-0323	SB-976	1	Bass, Striped (SB)	230	100	
NBN		NBN-TW-0323	SB-977	1	Bass, Striped (SB)	150	30	
NBN		NBN-TW-0323	SB-978	1	Bass, Striped (SB)	145	30	
NBN		NBN-TW-0323	SB-979-981	3	Bass, Striped (SB)	115-185	150	Group weight

Zone	Intertidal Area	Catch Code	Specimen ID	Count	Species	Length (mm)	Weight (g)	Comments
NBN		NBN-TW-0323	SF-267	1	Flounder, Summer (SF)	220	70	
NBN		NBN-TW-0323	WF-036	1	Flounder, Winter (WF)	125	20	
NBN		NBN-TW-0323	WF-037	1	Flounder, Winter (WF)	140	30	
NBN		NBN-TW-0323	HA-158	1	Hake, Spotted (HA)	135	20	
NBN		NBN-TW-0323	HA-159	1	Hake, Spotted (HA)	150	40	
NBN		NBN-TW-0323	GS-007	1	Shad, Gizzard (GS)	155	40	
NBN		NBN-TW-0323	AM-088	1	Shad, American (AM)	170	50	
NBN		NBN-TW-0323	SB-982	1	Bass, Striped (SB)	145	25	
NBN		NBN-TW-0323	SB-983	1	Bass, Striped (SB)	100	10	
NBN		NBN-TW-0323	HA-160	1	Hake, Spotted (HA)	120	15	
NBN		NBN-TW-0323	AM-089	1	Shad, American (AM)	140	20	
NBN		NBN-TW-0323	AM-090	1	Shad, American (AM)	180	50	
NBN		NBN-TW-0323	AM-091	1	Shad, American (AM)	130	20	
NBN		NBN-TW-0323	AM-092	1	Shad, American (AM)	150	30	
NBN		NBN-TW-0323	AM-093	1	Shad, American (AM)	140	30	
NBN		NBN-TW-0323	AM-094	1	Shad, American (AM)	150	35	
NBN		NBN-TW-0323	BA-071	1	Anchovy, Bay (BA)	65	2	
NBN		NBN-TW-0323	AL-382	1	Alewife (AL)	85	5	
NBN		NBN-TW-0323	AL-383	1	Alewife (AL)	90	8	
NBN		NBN-TW-0323	AL-384	1	Alewife (AL)	75	5	
NBN		NBN-TW-0323	AL-385	1	Alewife (AL)	100	10	
NBN		NBN-TW-0323	AL-386	1	Alewife (AL)	105	12	
NBN		NBN-TW-0323	AL-387-392	6	Alewife (AL)	80-90	50	Group weight
NBN		NBN-TW-0323	WP-987	1	Perch, White (WP)	130	25	
NBN		NBN-TW-0323	WP-988	1	Perch, White (WP)	125	20	
NBN		NBN-TW-0323	WP-989	1	Perch, White (WP)	130	20	
NBN		NBN-TW-0323	WP-990	1	Perch, White (WP)	120	20	
NBN		NBN-TW-0323	WP-991	1	Perch, White (WP)	140	30	
NBN		NBN-TW-0323	WP-992-1023	32	Perch, White (WP)	85-130	575	Group weight; non-filletable
NBN		NBN-TW-0323	SB-984	1	Bass, Striped (SB)	380	600	
NBN		NBN-TW-0323	SB-985	1	Bass, Striped (SB)	330	375	
NBN		NBN-TW-0323	SB-986	1	Bass, Striped (SB)	275	225	
NBN		NBN-TW-0323	SB-987	1	Bass, Striped (SB)	270	230	
NBN		NBN-TW-0323	SB-988	1	Bass, Striped (SB)	165	30	
NBN		NBN-TW-0323	SB-989-994	6	Bass, Striped (SB)	165-330	1050	Group weight
NBN		NBN-TW-0323	CRB-138	1	Crab, Blue (CRB)	105	100	Male
NBN		NBN-TW-0323	AL-393	1	Alewife (AL)	120	20	

Zone	Intertidal Area	Catch Code	Specimen ID	Count	Species	Length (mm)	Weight (g)	Comments
NBN		NBN-TW-0323	HA-161	1	Hake, Spotted (HA)	125	20	
NBN		NBN-TW-0323	HA-162	1	Hake, Spotted (HA)	105	10	
NBN		NBN-TW-0323	HA-163	1	Hake, Spotted (HA)	90	7	
NBN		NBN-TW-0323	HA-164	1	Hake, Spotted (HA)	90	7	
NBN		NBN-TW-0323	HA-165	1	Hake, Spotted (HA)	80	5	
NBN		NBN-TW-0323	WP-1024	1	Perch, White (WP)	150	50	
NBN		NBN-TW-0323	WP-1025	1	Perch, White (WP)	135	40	
NBN		NBN-TW-0323	WP-1026	1	Perch, White (WP)	135	40	
NBN		NBN-TW-0323	WP-1027	1	Perch, White (WP)	125	30	
NBN		NBN-TW-0323	WP-1028	1	Perch, White (WP)	120	15	
NBN		NBN-TW-0323	WP-1029-1054	26	Perch, White (WP)	95-170	650	Group weight; non-filletable
NBN		NBN-TW-0323	SB-995	1	Bass, Striped (SB)	330	420	
NBN		NBN-TW-0323	SB-996	1	Bass, Striped (SB)	320	350	
NBN		NBN-TW-0323	SB-997	1	Bass, Striped (SB)	280	330	
NBN		NBN-TW-0323	SB-998	1	Bass, Striped (SB)	130	20	
NBN		NBN-TW-0323	SB-999	1	Bass, Striped (SB)	140	20	
NBN		NBN-TW-0323	SB-1000-1016	17	Bass, Striped (SB)	125-270	1850	Group weight
NBN		NBN-TW-0323	SB-1017-1026	10	Bass, Striped (SB)	145-245	600	Group weight
NBN		NBN-TW-0323	HA-166	1	Hake, Spotted (HA)	145	40	
NBN		NBN-TW-0323	HA-167	1	Hake, Spotted (HA)	165	50	
NBN		NBN-TW-0323	HA-168	1	Hake, Spotted (HA)	80	7	
NBN		NBN-TW-0323	HA-169	1	Hake, Spotted (HA)	80	7	
NBN		NBN-TW-0323	HA-170	1	Hake, Spotted (HA)	105	10	
NBN		NBN-TW-0323	HA-171-175	5	Hake, Spotted (HA)	105-130	60	Group weight
NBN		NBN-TW-0323	WW-005	1	Flounder, Windowpane (WW)	220	120	
NBN		NBN-TW-0323	WP-1055	1	Perch, White (WP)	110	25	
NBN		NBN-TW-0323	WP-1056	1	Perch, White (WP)	120	30	
NBN		NBN-TW-0323	WP-1057	1	Perch, White (WP)	125	30	
NBN		NBN-TW-0323	WP-1058	1	Perch, White (WP)	160	50	
NBN		NBN-TW-0323	WP-1059	1	Perch, White (WP)	165	70	
NBN		NBN-TW-0323	WP-1060-1118	59	Perch, White (WP)	95-160	1550	Group weight; non-filletable
NBN		NBN-TW-0323	AC-001	1	Croaker, Atlantic (AC)	125	15	
NBN		NBN-TW-0323	SB-1027	1	Bass, Striped (SB)	210	100	
NBN		NBN-TW-0323	SB-1028	1	Bass, Striped (SB)	160	50	
NBN		NBN-TW-0323	SB-1029	1	Bass, Striped (SB)	135	20	
NBN		NBN-TW-0323	SB-1030	1	Bass, Striped (SB)	245	140	
NBN		NBN-TW-0323	SB-1031	1	Bass, Striped (SB)	280	170	

Zone	Intertidal Area	Catch Code	Specimen ID	Count	Species	Length (mm)	Weight (g)	Comments
NBN		NBN-TW-0323	SB-1032-1048	17	Bass, Striped (SB)	125-340	1900	Group weight
NBN		NBN-TW-0323	SB-1049-1076	28	Bass, Striped (SB)	120-240	1800	Group weight
NBN		NBN-TW-0323	SB-1077-1083	7	Bass, Striped (SB)	105-220	300	Group weight
NBN		NBN-TW-0323	HA-176	1	Hake, Spotted (HA)	155	40	
NBN		NBN-TW-0323	HA-177	1	Hake, Spotted (HA)	115	20	
NBN		NBN-TW-0323	HA-178	1	Hake, Spotted (HA)	105	10	
NBN		NBN-TW-0323	HA-179	1	Hake, Spotted (HA)	85	7	
NBN		NBN-TW-0323	HA-180	1	Hake, Spotted (HA)	165	50	
NBN		NBN-TW-0323	HA-181-215	35	Hake, Spotted (HA)	100-150	500	
NBN		NBN-TW-0323	GS-008	1	Shad, Gizzard (GS)	150	45	
NBN		NBN-TW-0323	WF-038	1	Flounder, Winter (WF)	140	30	
NBN		NBN-TW-0323	WF-039	1	Flounder, Winter (WF)	165	50	
NBN		NBN-TW-0323	WF-040	1	Flounder, Winter (WF)	160	50	
NBN		NBN-TW-0323	WF-041	1	Flounder, Winter (WF)	165	50	
NBN		NBN-TW-0323	SB-1084	1	Bass, Striped (SB)	120	15	
NBN		NBN-TW-0323	WP-1119	1	Perch, White (WP)	155	60	
NBN		NBN-TW-0323	WP-1120	1	Perch, White (WP)	135	25	
NBN		NBN-TW-0323	WP-1121	1	Perch, White (WP)	140	40	
NBN		NBN-TW-0323	WP-1122	1	Perch, White (WP)	125	20	
NBN		NBN-TW-0323	WP-1123	1	Perch, White (WP)	90	10	
NBN		NBN-TW-0323	WP-1124-1192	69	Perch, White (WP)	90-170	1500	Group weight; non-filletable
NBN		NBN-TW-0323	WP-1193-1254	62	Perch, White (WP)	110-160	1500	Group weight; non-filletable
NBN		NBN-TW-0323	HA-216	1	Hake, Spotted (HA)	80	10	
NBN		NBN-TW-0323	SB-1085	1	Bass, Striped (SB)	335	430	
NBN		NBN-TW-0323	SB-1086	1	Bass, Striped (SB)	270	140	
NBN		NBN-TW-0323	SB-1087	1	Bass, Striped (SB)	220	110	
NBN		NBN-TW-0323	SB-1088	1	Bass, Striped (SB)	145	40	
NBN		NBN-TW-0323	SB-1089	1	Bass, Striped (SB)	145	40	
NBN		NBN-TW-0323	SB-1090-1100	11	Bass, Striped (SB)	105-255	1000	Group weight
NBN		NBN-TW-0323	WF-042	1	Flounder, Winter (WF)	175	70	
NBN		NBN-TW-0323	AL-394	1	Alewife (AL)	185	60	
NBN		NBN-TW-0323	HA-217	1	Hake, Spotted (HA)	150	40	
NBN		NBN-TW-0323	HA-218	1	Hake, Spotted (HA)	145	40	
NBN		NBN-TW-0323	HA-219	1	Hake, Spotted (HA)	125	20	
NBN		NBN-TW-0323	HA-220	1	Hake, Spotted (HA)	105	10	
NBN		NBN-TW-0323	HA-221	1	Hake, Spotted (HA)	85	7	
NBN		NBN-TW-0323	HA-222-231	10	Hake, Spotted (HA)	75-160	160	Group weight

Zone	Intertidal Area	Catch Code	Specimen ID	Count	Species	Length (mm)	Weight (g)	Comments
NBN		NBN-TW-0323	WP-1255	1	Perch, White (WP)	145	50	
NBN		NBN-TW-0323	WP-1256	1	Perch, White (WP)	145	40	
NBN		NBN-TW-0323	WP-1257	1	Perch, White (WP)	140	40	
NBN		NBN-TW-0323	WP-1258	1	Perch, White (WP)	115	25	
NBN		NBN-TW-0323	WP-1259	1	Perch, White (WP)	130	25	
NBN		NBN-TW-0323	WP-1260-1280	21	Perch, White (WP)	95-150	470	Group weight; non-filletable
NBN		NBN-TW-0323	SB-1101	1	Bass, Striped (SB)	215	120	
NBN		NBN-TW-0323	SB-1102	1	Bass, Striped (SB)	225	130	
NBN		NBN-TW-0323	SB-1103	1	Bass, Striped (SB)	195	90	
NBN		NBN-TW-0323	SB-1104	1	Bass, Striped (SB)	145	40	
NBN		NBN-TW-0323	SB-1105	1	Bass, Striped (SB)	125	20	
NBN		NBN-TW-0323	SB-1106-1125	20	Bass, Striped (SB)	105-260	1600	Group weight
NBN		NBN-TW-0323	HA-232	1	Hake, Spotted (HA)	125	30	
NBN		NBN-TW-0323	HA-233	1	Hake, Spotted (HA)	125	30	
NBN		NBN-TW-0323	HA-234	1	Hake, Spotted (HA)	115	20	
NBN		NBN-TW-0323	HA-235	1	Hake, Spotted (HA)	95	15	
NBN		NBN-TW-0323	HA-236	1	Hake, Spotted (HA)	80	10	
NBN		NBN-TW-0323	HA-237-243	7	Hake, Spotted (HA)	90-140	100	Group weight
NBN		NBN-TW-0323	WF-043	1	Flounder, Winter (WF)	170	40	
NBN		NBN-TW-0323	AL-395	1	Alewife (AL)	95	10	
NBN		NBN-TW-0323	WP-1281	1	Perch, White (WP)	130	30	
NBN		NBN-TW-0323	WP-1282	1	Perch, White (WP)	125	25	
NBN		NBN-TW-0323	WP-1283	1	Perch, White (WP)	120	25	
NBN		NBN-TW-0323	WP-1284	1	Perch, White (WP)	140	30	
NBN		NBN-TW-0323	WP-1285	1	Perch, White (WP)	100	10	
NBN		NBN-TW-0323	WP-1286-1313	28	Perch, White (WP)	100-170	600	Group weight; non-filletable
NBN		NBN-TW-0323	AT-009	1	Tomcod, Atlantic (AT)	225	120	
NBN		NBN-TW-0323	GS-009	1	Shad, Gizzard (GS)	270	190	
NBN		NBN-TW-0323	AL-396	1	Alewife (AL)	270	170	
NBN		NBN-TW-0323	AL-397	1	Alewife (AL)	150	30	
NBN		NBN-TW-0323	SB-1126	1	Bass, Striped (SB)	240	130	
NBN		NBN-TW-0323	SB-1127	1	Bass, Striped (SB)	185	70	
NBN		NBN-TW-0323	SB-1128	1	Bass, Striped (SB)	145	30	
NBN		NBN-TW-0323	SB-1129	1	Bass, Striped (SB)	110	10	
NBN		NBN-TW-0323	SB-1130	1	Bass, Striped (SB)	110	10	
NBN		NBN-TW-0323	SB-1131-1139	9	Bass, Striped (SB)	120-245	480	Group weight
NBN		NBN-TW-0323	AL-398	1	Alewife (AL)	85	10	

Zone	Intertidal Area	Catch Code	Specimen ID	Count	Species	Length (mm)	Weight (g)	Comments
NBN		NBN-TW-0323	WF-044	1	Flounder, Winter (WF)	180	60	
NBN		NBN-TW-0323	HA-244	1	Hake, Spotted (HA)	140	20	
NBN		NBN-TW-0323	HA-245	1	Hake, Spotted (HA)	140	20	
NBN		NBN-TW-0323	HA-246	1	Hake, Spotted (HA)	120	15	
NBN		NBN-TW-0323	HA-247	1	Hake, Spotted (HA)	110	12	
NBN		NBN-TW-0323	HA-248	1	Hake, Spotted (HA)	110	15	
NBN		NBN-TW-0323	HA-249-256	8	Hake, Spotted (HA)	65-160	100	Group weight
NBN		NBN-TW-0323	WP-1314	1	Perch, White (WP)	140	30	
NBN		NBN-TW-0323	WP-1315	1	Perch, White (WP)	130	25	
NBN		NBN-TW-0323	WP-1316	1	Perch, White (WP)	135	25	
NBN		NBN-TW-0323	WP-1317	1	Perch, White (WP)	120	20	
NBN		NBN-TW-0323	WP-1318	1	Perch, White (WP)	105	15	
NBN		NBN-TW-0323	WP-1319-1352	34	Perch, White (WP)	95-140	850	Group weight; non-filletable
NBN		NBN-TW-0324	SB-1140	1	Bass, Striped (SB)	370	550	
NBN		NBN-TW-0324	SB-1141	1	Bass, Striped (SB)	180	70	
NBN		NBN-TW-0324	HA-257	1	Hake, Spotted (HA)	175	40	
NBN		NBN-TW-0324	HA-258	1	Hake, Spotted (HA)	165	40	
NBN		NBN-TW-0324	HA-259	1	Hake, Spotted (HA)	110	20	
NBN		NBN-TW-0324	AL-399	1	Alewife (AL)	80	10	
NBN		NBN-TW-0324	WP-1353	1	Perch, White (WP)	120	25	
NBN		NBN-TW-0324	WP-1354	1	Perch, White (WP)	130	40	
NBN		NBN-TW-0324	SB-1142	1	Bass, Striped (SB)	320	380	
NBN		NBN-TW-0324	SB-1143	1	Bass, Striped (SB)	290	300	
NBN		NBN-TW-0324	SB-1144	1	Bass, Striped (SB)	195	70	
NBN		NBN-TW-0324	SB-1145	1	Bass, Striped (SB)	130	20	
NBN		NBN-TW-0324	SB-1146	1	Bass, Striped (SB)	175	50	
NBN		NBN-TW-0324	SB-1147	1	Bass, Striped (SB)	270	200	
NBN		NBN-TW-0324	SB-1148	1	Bass, Striped (SB)	235	150	
NBN		NBN-TW-0324	HA-260	1	Hake, Spotted (HA)	170	50	
NBN		NBN-TW-0324	HA-261	1	Hake, Spotted (HA)	140	35	
NBN		NBN-TW-0324	HA-262	1	Hake, Spotted (HA)	110	15	
NBN		NBN-TW-0324	HA-263	1	Hake, Spotted (HA)	95	10	
NBN		NBN-TW-0324	HA-264	1	Hake, Spotted (HA)	85	7	
NBN		NBN-TW-0324	HA-265	1	Hake, Spotted (HA)	70	5	
NBN		NBN-TW-0324	HA-266	1	Hake, Spotted (HA)	85	5	
NBN		NBN-TW-0324	AL-400	1	Alewife (AL)	100	10	
NBN		NBN-TW-0324	SF-268	1	Flounder, Summer (SF)	195	50	

Zone	Intertidal Area	Catch Code	Specimen ID	Count	Species	Length (mm)	Weight (g)	Comments
NBN		NBN-TW-0324	WP-1355	1	Perch, White (WP)	155	50	
NBN		NBN-TW-0324	WP-1356	1	Perch, White (WP)	115	20	
NBN		NBN-TW-0324	WP-1357	1	Perch, White (WP)	125	20	
NBN		NBN-TW-0324	WP-1358	1	Perch, White (WP)	120	15	
NBN		NBN-TW-0324	WP-1359	1	Perch, White (WP)	105	10	
NBN		NBN-TW-0324	WP-1360-1395	36	Perch, White (WP)	90-170	825	Group weight; non-filletable
NBN		NBN-TW-0324	SB-1149	1	Bass, Striped (SB)	390	610	
NBN		NBN-TW-0324	SB-1150	1	Bass, Striped (SB)	295	270	
NBN		NBN-TW-0324	SB-1151	1	Bass, Striped (SB)	165	130	
NBN		NBN-TW-0324	SB-1152	1	Bass, Striped (SB)	155	20	
NBN		NBN-TW-0324	SB-1153	1	Bass, Striped (SB)	220	110	
NBN		NBN-TW-0324	SB-1154-1161	8	Bass, Striped (SB)	170-275	1350	Group weight
NBN		NBN-TW-0324	HA-267	1	Hake, Spotted (HA)	65	5	
NBN		NBN-TW-0324	HA-268	1	Hake, Spotted (HA)	70	5	
NBN		NBN-TW-0324	AM-095	1	Shad, American (AM)	140	20	
NBN		NBN-TW-0324	WF-045	1	Flounder, Winter (WF)	225	150	
NBN		NBN-TW-0324	WP-1396	1	Perch, White (WP)	140	30	
NBN		NBN-TW-0324	WP-1397	1	Perch, White (WP)	100	10	
NBN		NBN-TW-0324	WP-1398	1	Perch, White (WP)	140	30	
NBN		NBN-TW-0324	WP-1399-1408	10	Perch, White (WP)	110-135	260	Group weight; non-filletable
NBN		NBN-TW-0324	AL-401	1	Alewife (AL)	85	5	
NBN		NBN-TW-0324	AM-096	1	Shad, American (AM)	140	20	
NBN		NBN-TW-0324	AM-097	1	Shad, American (AM)	120	15	
NBN		NBN-TW-0324	WF-046	1	Flounder, Winter (WF)	155	25	
NBN		NBN-TW-0324	HA-269	1	Hake, Spotted (HA)	135	20	
NBN		NBN-TW-0324	HA-270	1	Hake, Spotted (HA)	130	20	
NBN		NBN-TW-0324	WP-1409	1	Perch, White (WP)	160	90	
NBN		NBN-TW-0324	WP-1410	1	Perch, White (WP)	130	30	
NBN		NBN-TW-0324	WP-1411	1	Perch, White (WP)	135	30	
NBN		NBN-TW-0324	WP-1412	1	Perch, White (WP)	130	25	
NBN		NBN-TW-0324	WP-1413	1	Perch, White (WP)	100	10	
NBN		NBN-TW-0324	WP-1414-1461	48	Perch, White (WP)	105-160	1300	Group weight; non-filletable
NBN		NBN-TW-0324	WP-1462-1498	37	Perch, White (WP)	90-155	850	Group weight; non-filletable
NBN		NBN-TW-0324	AL-402	1	Alewife (AL)	80	5	
NBN		NBN-TW-0324	SB-1162	1	Bass, Striped (SB)	250	180	
NBN		NBN-TW-0324	SB-1163	1	Bass, Striped (SB)	205	100	
NBN		NBN-TW-0324	SB-1164	1	Bass, Striped (SB)	190	80	

Zone	Intertidal Area	Catch Code	Specimen ID	Count	Species	Length (mm)	Weight (g)	Comments
NBN		NBN-TW-0324	SB-1165	1	Bass, Striped (SB)	110	15	
NBN		NBN-TW-0324	SB-1166	1	Bass, Striped (SB)	105	10	
NBN		NBN-TW-0324	SB-1167-1190	24	Bass, Striped (SB)	110-255	1700	Group weight
NBN		NBN-TW-0324	SB-1191-1194	4	Bass, Striped (SB)	120-160	300	Group weight
NBN		NBN-TW-0324	AL-403	1	Alewife (AL)	245	140	
NBN		NBN-TW-0324	AL-404	1	Alewife (AL)	205	70	
NBN		NBN-TW-0324	AL-405	1	Alewife (AL)	90	7	
NBN		NBN-TW-0324	SB-1195	1	Bass, Striped (SB)	125	10	
NBN		NBN-TW-0324	CRB-139	1	Crab, Blue (CRB)	130	130	Male
NBN		NBN-TW-0324	SB-1196	1	Bass, Striped (SB)	135	30	
NBN		NBN-TW-0324	SB-1197	1	Bass, Striped (SB)	135	30	
NBN		NBN-TW-0324	AL-406	1	Alewife (AL)	70	5	
NBN		NBN-TW-0324	AL-407	1	Alewife (AL)	75	5	
NBN		NBN-TW-0324	AM-098	1	Shad, American (AM)	140	30	
NBN		NBN-TW-0324	AM-099	1	Shad, American (AM)	120	25	
NBN		NBN-TW-0324	AM-100	1	Shad, American (AM)	110	10	
NBN		NBN-TW-0324	AM-101	1	Shad, American (AM)	110	10	
NBN		NBN-TW-0324	WF-047	1	Flounder, Winter (WF)	140	30	
NBN		NBN-TW-0324	WP-1499	1	Perch, White (WP)	175	70	
NBN		NBN-TW-0324	WP-1500	1	Perch, White (WP)	170	60	
NBN		NBN-TW-0324	WP-1501	1	Perch, White (WP)	130	35	
NBN		NBN-TW-0324	WP-1502	1	Perch, White (WP)	115	20	
NBN		NBN-TW-0324	WP-1503	1	Perch, White (WP)	120	20	
NBN		NBN-TW-0324	WP-1504-1552	49	Perch, White (WP)	95-160	950	Group weight; non-filletable
NBN		NBN-TW-0324	HA-271	1	Hake, Spotted (HA)	310	250	
NBN		NBN-TW-0324	HA-272	1	Hake, Spotted (HA)	140	30	
NBN		NBN-TW-0324	HA-273	1	Hake, Spotted (HA)	135	20	
NBN		NBN-TW-0324	HA-274	1	Hake, Spotted (HA)	130	15	
NBN		NBN-TW-0324	HA-275	1	Hake, Spotted (HA)	80	5	
NBN		NBN-TW-0324	HA-276-280	5	Hake, Spotted (HA)	85-105	50	Group weight
NBN		NBN-TW-0324	SB-1198	1	Bass, Striped (SB)	285	250	
NBN		NBN-TW-0324	SB-1199	1	Bass, Striped (SB)	220	120	
NBN		NBN-TW-0324	SB-1200	1	Bass, Striped (SB)	155	40	
NBN		NBN-TW-0324	SB-1201	1	Bass, Striped (SB)	135	20	
NBN		NBN-TW-0324	SB-1202	1	Bass, Striped (SB)	170	30	
NBN		NBN-TW-0324	SB-1203-1215	13	Bass, Striped (SB)	140-270	800	Group weight
NBN		NBN-TW-0324	AL-408	1	Alewife (AL)	180	50	

Zone	Intertidal Area	Catch Code	Specimen ID	Count	Species	Length (mm)	Weight (g)	Comments
NBN		NBN-TW-0324	AL-409	1	Alewife (AL)	120	30	
NBN		NBN-TW-0324	AM-102	1	Shad, American (AM)	180	40	
NBN		NBN-TW-0324	AM-103	1	Shad, American (AM)	160	35	
NBN		NBN-TW-0324	AM-104	1	Shad, American (AM)	115	10	
NBN		NBN-TW-0324	AM-105	1	Shad, American (AM)	115	10	
NBN		NBN-TW-0324	HA-281	1	Hake, Spotted (HA)	195	70	
NBN		NBN-TW-0324	HA-282	1	Hake, Spotted (HA)	175	50	
NBN		NBN-TW-0324	HA-283	1	Hake, Spotted (HA)	135	25	
NBN		NBN-TW-0324	HA-284	1	Hake, Spotted (HA)	130	20	
NBN		NBN-TW-0324	HA-285-297	13	Hake, Spotted (HA)	95-165	250	Group weight
NBN		NBN-TW-0324	NP-013	1	Pipefish, Northern (NP)	170	N/A	
NBN		NBN-TW-0324	WP-1553	1	Perch, White (WP)	140	30	
NBN		NBN-TW-0324	WP-1554	1	Perch, White (WP)	130	25	
NBN		NBN-TW-0324	WP-1555	1	Perch, White (WP)	135	25	
NBN		NBN-TW-0324	WP-1556-1593	38	Perch, White (WP)	95-165	800	Group weight; non-filletable
NBN		NBN-TW-0324	SB-1216	1	Bass, Striped (SB)	285	250	
NBN		NBN-TW-0324	SB-1217	1	Bass, Striped (SB)	230	120	
NBN		NBN-TW-0324	SB-1218	1	Bass, Striped (SB)	250	130	
NBN		NBN-TW-0324	SB-1219	1	Bass, Striped (SB)	175	50	
NBN		NBN-TW-0324	SB-1220	1	Bass, Striped (SB)	150	20	
NBN		NBN-TW-0324	SB-1221-1247	27	Bass, Striped (SB)	120-250	1700	Group weight
NBN		NBN-TW-0324	WF-048	1	Flounder, Winter (WF)	200	90	
NBN		NBN-TW-0324	WF-049	1	Flounder, Winter (WF)	135	20	
NBN		NBN-TW-0324	WW-006	1	Flounder, Windowpane (WW)	320	400	
NBN		NBN-TW-0324	AE-001	1	Eel, American (AE)	750	550	
NBN		NBN-TW-0324	GS-010	1	Shad, Gizzard (GS)	150	30	
NBN		NBN-TW-0324	AL-410	1	Alewife (AL)	145	20	
NBN		NBN-TW-0324	AL-411	1	Alewife (AL)	115	20	
NBN		NBN-TW-0324	AL-412-429	18	Alewife (AL)	80-100	100	Group weight
NBN		NBN-TW-0324	SF-269	1	Flounder, Summer (SF)	260	170	
NBN		NBN-TW-0324	HA-298	1	Hake, Spotted (HA)	240	130	
NBN		NBN-TW-0324	HA-299	1	Hake, Spotted (HA)	150	40	
NBN		NBN-TW-0324	HA-300	1	Hake, Spotted (HA)	165	30	
NBN		NBN-TW-0324	HA-301	1	Hake, Spotted (HA)	100	10	
NBN		NBN-TW-0324	HA-302-317	16	Hake, Spotted (HA)	40-140	200	Group weight
NBN		NBN-TW-0324	GS-011	1	Shad, Gizzard (GS)	185	40	
NBN		NBN-TW-0324	AL-430	1	Alewife (AL)	190	50	

Zone	Intertidal Area	Catch Code	Specimen ID	Count	Species	Length (mm)	Weight (g)	Comments
NBN		NBN-TW-0324	AL-431	1	Alewife (AL)	125	20	
NBN		NBN-TW-0324	AL-432	1	Alewife (AL)	125	20	
NBN		NBN-TW-0324	AL-433	1	Alewife (AL)	95	10	
NBN		NBN-TW-0324	AL-434	1	Alewife (AL)	105	10	
NBN		NBN-TW-0324	AL-435-475	41	Alewife (AL)	85-115	300	Group weight
NBN		NBN-TW-0324	AM-106	1	Shad, American (AM)	145	20	
NBN		NBN-TW-0324	SB-1248	1	Bass, Striped (SB)	230	120	
NBN		NBN-TW-0324	SB-1249	1	Bass, Striped (SB)	200	90	
NBN		NBN-TW-0324	SB-1250	1	Bass, Striped (SB)	230	40	
NBN		NBN-TW-0324	SB-1251	1	Bass, Striped (SB)	125	20	
NBN		NBN-TW-0324	SB-1252	1	Bass, Striped (SB)	135	15	
NBN		NBN-TW-0324	SB-1253-1279	27	Bass, Striped (SB)	110-260	1400	Group weight
NBN		NBN-TW-0324	SB-1280-1289	10	Bass, Striped (SB)	130-210	550	Group weight
NBN		NBN-TW-0324	WW-007	1	Flounder, Windowpane (WW)	215	110	
NBN		NBN-TW-0324	WF-050	1	Flounder, Winter (WF)	210	110	
NBN		NBN-TW-0324	WF-051	1	Flounder, Winter (WF)	180	90	
NBN		NBN-TW-0324	WF-052	1	Flounder, Winter (WF)	155	40	
NBN		NBN-TW-0324	SF-270	1	Flounder, Summer (SF)	135	20	
NBN		NBN-TW-0324	SB-1290	1	Bass, Striped (SB)	195	80	
NBN		NBN-TW-0324	SB-1291	1	Bass, Striped (SB)	155	30	
NBN		NBN-TW-0324	SB-1292	1	Bass, Striped (SB)	90	10	
NBN		NBN-TW-0324	WP-1594	1	Perch, White (WP)	120	20	
NBN		NBN-TW-0324	WP-1595	1	Perch, White (WP)	110	20	
NBN		NBN-TW-0324	WP-1596	1	Perch, White (WP)	100	10	
NBN		NBN-TW-0324	WP-1597-1661	65	Perch, White (WP)	100-150	1200	Group weight; non-filletable
NBN		NBN-TW-0324	AC-002	1	Croaker, Atlantic (AC)	130	30	
NBN		NBN-TW-0324	HA-318	1	Hake, Spotted (HA)	140	20	
NBN		NBN-TW-0324	HA-319	1	Hake, Spotted (HA)	105	10	
NBN		NBN-TW-0324	HA-320-382	63	Hake, Spotted (HA)	95-240	1250	Group weight
NBN		NBN-TW-0324	AL-476	1	Alewife (AL)	250	130	
NBN		NBN-TW-0324	AL-477	1	Alewife (AL)	115	30	
NBN		NBN-TW-0324	AM-107	1	Shad, American (AM)	140	40	
NBN		NBN-TW-0324	BS-053	1	Bass, Black Sea (BS)	100	15	
NBN		NBN-TW-0324	CU-004	1	Cunner (CU)	85	20	
NBN		NBN-TW-0324	WF-053	1	Flounder, Winter (WF)	215	110	
NBN		NBN-TW-0324	WF-054	1	Flounder, Winter (WF)	200	90	
NBN		NBN-TW-0324	WF-055	1	Flounder, Winter (WF)	155	60	

Zone	Intertidal Area	Catch Code	Specimen ID	Count	Species	Length (mm)	Weight (g)	Comments
NBN		NBN-TW-0324	WF-056	1	Flounder, Winter (WF)	135	30	
NBN		NBN-TW-0324	WP-1662	1	Perch, White (WP)	145	40	
NBN		NBN-TW-0324	WP-1663	1	Perch, White (WP)	130	30	
NBN		NBN-TW-0324	SB-1293	1	Bass, Striped (SB)	240	130	
NBN		NBN-TW-0324	SB-1294	1	Bass, Striped (SB)	320	380	
NBN		NBN-TW-0324	SB-1295	1	Bass, Striped (SB)	155	40	
NBN		NBN-TW-0324	SB-1296	1	Bass, Striped (SB)	130	20	
NBN		NBN-TW-0324	SB-1297	1	Bass, Striped (SB)	120	10	
NBN		NBN-TW-0324	SB-1298-1317	20	Bass, Striped (SB)	105-200	800	Group weight
NBN		NBN-TW-0324	CRB-140	1	Crab, Blue (CRB)	155	200	
NBN		NBN-TW-0324	SB-1318	1	Bass, Striped (SB)	155	30	
NBN		NBN-TW-0324	SB-1319	1	Bass, Striped (SB)	140	20	
NBN		NBN-TW-0324	SB-1320	1	Bass, Striped (SB)	120	15	
NBN		NBN-TW-0324	SB-1321	1	Bass, Striped (SB)	90	10	
NBN		NBN-TW-0324	HA-383	1	Hake, Spotted (HA)	280	190	
NBN		NBN-TW-0324	HA-384	1	Hake, Spotted (HA)	185	70	
NBN		NBN-TW-0324	HA-385	1	Hake, Spotted (HA)	120	20	
NBN		NBN-TW-0324	AM-108	1	Shad, American (AM)	115	10	
NBN		NBN-TW-0324	AM-109	1	Shad, American (AM)	115	10	
NBN		NBN-TW-0324	WP-1664	1	Perch, White (WP)	130	30	
NBN		NBN-TW-0324	WP-1665	1	Perch, White (WP)	130	30	
NBN		NBN-TW-0324	WP-1666	1	Perch, White (WP)	110	20	
NBN		NBN-TW-0324	WP-1667	1	Perch, White (WP)	100	15	
NBN		NBN-TW-0324	WP-1668	1	Perch, White (WP)	100	15	
NBN		NBN-TW-0324	WP-1669-1723	55	Perch, White (WP)	95-155	1400	
NBN		NBN-TW-0324	WP-1724-1777	54	Perch, White (WP)	95-135	950	
NBN		NBN-GN-0324	SB-1322	1	Bass, Striped (SB)	325	350	
NBN		NBN-GN-0324	SB-1323	1	Bass, Striped (SB)	330	370	
NBN		NBN-GN-0324	WF-057	1	Flounder, Winter (WF)	155	40	

Fish Sampling
Newark Bay Study Area
FISH SPECIES LIST

Sorted Name	Common Name	Scientific Name	Nomenclature
Alewife	Alewife	Alosa pseudoharengus	AL
Anchovy, Bay	Bay Anchovy	Anchoa mitchilli	BA
Anchovy, Striped	Striped Anchovy	Anchoa hepsetus	SA
Bass, Black Sea	Black Sea Bass	Centropristis striata	BS
Bass, Striped	Striped Bass	Morone saxatilis	SB
Bluefish	Bluefish	Pomatomus saltatrix	BL
Butterfish	Butterfish	Peprilus triacanthus	BF
Clupeidae	Clupeidae	Clupeidae	CL
Crab, Blue	Blue Crab	Callinectes sapidus	CRB
Crab, Horseshoe	Horseshoe Crab	Limulidae	HCR
Crab, Mud	Mud Crab	Scylla serrata	MCR
Crab, Spider	Spider Crab	Libinia emarginata	SCR
Croaker, Atlantic	Atlantic Croaker	Micropogonias undulatus	AC
Cunner	Cunner	Tautogolabrus adspersus	CU
Eel, American	American Eel	Anguilla rostrata	AE
Flounder, Smallmouth	Smallmouth Flounder	Etropus microstomus	SM
Flounder, Summer	Summer Flounder	Paralichthys dentatus	SF
Flounder, Windowpane	Windowpane	Scophthalmus aquosus	WW
Flounder, Winter	Winter Flounder	Pseudopleuronectes americanus	WF
Goby	Goby	Family: Gobiidae	GB
Goby, Naked	Naked Goby	Gobiosoma bosc	NG
Hake, Red	Red Hake	Urophycis chuss	RH
Hake, Spotted	Spotted Hake	Urophycis regia	HA
Herring, Atlantic	Atlantic Herring	Clupea harengus	AH
Herring, Blueback	Blueback Herring	Alosa aestivalis	BB
Hogchoker	Hogchoker	Trinectes maculatus	HC
Killifish, Striped	Striped Killifish	Fundulus majalis	SK
Kingfish, Northern	Northern Kingfish	Menticirrhus saxatilis	NK
Lookdown	Lookdown	Selene vomer	LK
Menhaden	Menhaden		MH
Menhaden, Atlantic	Atlantic Menhaden	Brevoortia tyrannus	ME
Moonfish	Moonfish	Selene setapinnis	MF
Mullet, Striped	Striped Mullet	Mugil cephalus	MS
Mullet, White	White Mullet	Mugil curema	WM
Mummichog	Mummichog	Fundulus heteroclitus	MU
Perch, Silver	Silver Perch	Bairdiella chrysoura	SP
Perch, White	White Perch	Morone americana	WP
Pipefish, Northern	Northern Pipefish	Syngnathus fuscus	NP
Pufferfish, Northern	Northern Pufferfish	Sphoeroides maculatus	PU
Sculpin	Sculpin	Cottoidea	SL
Sculpin, Longhorn	Longhorn Sculpin	Myoxocephalus octodecimspinosus	LH

Sorted Name	Common Name	Scientific Name	Nomenclature
Scup	Scup	Stenotomus chrysops	SC
Sea Robin, Striped	Striped Sea Robin	Prionotus evolans	SR
Shad	Shad	Alosinae	SH
Shad, American	American Shad	Alosa sapidissima	AM
Shad, Gizzard	Gizzard Shad	Dorosoma cepedianum	GS
Silverside, Atlantic	Atlantic Silverside	Menidia menidia	AS
Skate	Skate	Rajidae	KT
Skate, Little	Little Skate	Leucoraja erinacea	LS
Sturgeon, Atlantic	Atlantic Sturgeon	Acipenser oxyrhynchus oxyrhynchus	ST
Tautog	Tautog	Tautoga onitis	TA
Toadfish, Oyster	Oyster Toadfish	Opsanus tau	OT
Tomcod, Atlantic	Atlantic Tomcod	Microgadus tomcod	AT
Weakfish	Weakfish	Cynoscion regalis	WE

Fish Sampling
Newark Bay Study Area **Draft: For Discussion Purposes Only**
VARIABLE DESCRIPTION

Location Coordinate Tab

Zone	Code indicating the project location (Newark Bay = NB) and Zone (N = North, C= Central, S = South)
Intertidal Area	If applicable, Intertidal Area where the sample was collected
Collection Method	Method (or equipment, i.e., gear type) used to collect the organism
Catch Code	A unique identifier for the organisms that were collected that includes the Zone, collection method, and collection date used to relate the location coordinate data and associated catch list
Deployment Date	Date when collection equipment was deployed at a sample location
Deployment Time	Time when collection equipment was deployed at a sample location
Depolyment Easting (X)	Easting coordinate[1] of the deployed collection equipment
Deployment Northing (Y)	Northing coordinate[1] of the deployed collection equipment
Deployment Count	Count of the deployments of each type of equipment by Zone or Intertidal Area (CT = Crab Trap, EP = Eel Pot, GN = Gillnet, MT = Minnow Trap, SN = Seine, TW=Trawl)
Collection Date	Date when collection equipment was retrieved from a sample location
Collection Time	Time when collection equipment was retrieved from a sample location. For seines, NA=not applicable since the collection time was essentially the same as the deployment time.
Collection Easting (X)	If applicable, easting coordinate[1] of the retrieved collection equipment
Collection Northing (Y)	If applicable, northing coordinate[1] of the retrieved collection equipment
Depth (ft)	Water depth (ft) where organism was collected
Comments	

Specimen Tally Tab

Zone	Code indicating the project location (Newark Bay = NB) and Zone (N = North, C= Central, S = South)
Intertidal Area	If applicable, Intertidal Area where the sample was collected
Catch Code	A unique identifier for the organisms that were collected that includes the Zone, collection method, and collection date used to relate the location coordinate data and associated catch list
Tissue Sample ID	The tissue sample ID used on the chain of custody
Specimen ID	A unique identifier that combines the sample ID and consecutive numbering of the organisms within the sample
Species	Species of the organism
Length (mm)	Length (mm) of the organism
Weight (g)	Weight of the individual organism prior to any sample processing
Tissue Weight (if applicable) (g)	Weight of the applicable tissue (i.e., fillet or liver) after sample processing
Comments	

Bycatch[2] Tab

Zone	Code indicating the project location (Newark Bay = NB) and Zone (N = North, C= Central, S = South)
Intertidal Area	If applicable, Intertidal Area where the sample was collected
Catch Code	A unique identifier for the organisms that were collected that includes the Zone, collection method, and collection date used to relate the location coordinate data and associated catch list
Specimen ID	A unique identifier that combines the species code and consecutive numbering of the species caught
Count	Number of organisms that comprise the weight
Species	Species of the organism
Length (mm)	Length (mm) of the organism; NA=not applicable if the count was more than one
Weight (g)	Weight of the organism(s) prior to any sample processing
Comments	

Notes:

1. **All coordinates are provided in the following coordinate system: US State Plane, NAD 83 (US survey feet), zone NJ 2900**
2. **Includes target species that did not meet size requirements**

APPENDIX G

Protocol Modification Form

Project Name and Number: *Newark Bay*

Material to be Sampled: *Sediment*

Measurement Parameter: Top and bottom depths of Sediment Sample Location

Standard Procedure for Field Collection & Laboratory Analysis (cite reference):

SOP No. 9: Sediment Sample Collection, page 6 of 8.

Reason for Change in Field Procedure or Analysis Variation:

Paragraph 2.2, 5.b.iii of SOP No. 9 states, for a sediment sample collected adjacent to the collected clam: "Use a tape measure to verify that the sample is collected to the correct depth and record the top and bottom depths from the ground surface." However, Section 3 of the QAPP, Data Use, states, with emphasis added: "Surface sediment samples will also be collected ***from the same locations as the clam samples****, from the top 6 inches (15 centimeters) of sediment." There are other examples of the intent for co-location elsewhere in the QAPP. The "top…depth" is meaningless and the depth of the clam hole has no data use objective (DUO). Operationally, the field crew has been collecting the clam-associated sediment sample from the sediment overlying the collected clam to comply, to the greatest extent possible, with the data quality objective in the Data Use section.*

Variation from Field or Analytical Procedure:

Measurements of "…top and bottom depths from the ground surface" will not be recorded. The sediment composite was generated by taking an aliquot of sediment from each pile of disturbed sediment (i.e., borehole cuttings) that was previously placed beside the clam hole.

Special Equipment, Materials or Personnel Required:

No additional special equipment, materials or personnel are required as a result of this change.

Initiator's Name:	Clifford Firstenberg, Tierra Solutions	Date:	09-18-14
Project Manager:	Clifford Firstenberg, Tierra Solutions	Date:	09-18-14
QA Manager:	Jane O. Rowan, Normandeau Associates, Inc.	Date:	9/23/2014
USEPA Authority:		Date:	

Protocol Modification Form

Project Name and Number: *Newark Bay*

Material to be Sampled: *Crabs, clams and co-located sediment*

Measurement Parameter: *X and Y coordinates of sampling locations*

Standard Procedure for Field Collection & Laboratory Analysis (cite reference):

In Appendix C, SOP No. 2 – Positioning (Revision 0, October 2013), the procedures state "A DGPS will be used to establish locations during implementation activities specified in the Crab/Clam QAPP. Two DGPS units will be required: one on board the vessel with a receiving antenna to be aligned with the deployment of the sampling apparatus, and the other at a known fixed location (monument or temporary benchmark) to provide corrections to the standard GPS signal." The SOP continues with "Establish a DGPS base station over a shore-based marker prior to sampling operations. The operation and horizontal/vertical accuracy of the vessel-mounted DGPS will be verified at another shore-based marker by recording observed horizontal and vertical (XYZ) data and comparing these data to the published XYZ data for a given point. After initial DGPS system verification, a temporary benchmark may be established at a location convenient to the vessel to facilitate daily DGPS system performance verification. DGPS system performance verification will be conducted twice per day and documented in the field notebook and vessel data logger. The horizontal and vertical accuracy will be compared to shore-based markers to verify performance. Elevations will be recorded in North American Vertical Datum of 1988 with an accuracy of +/- 1 foot."

Reason for Change in Field Procedure or Analysis Variation:

The data use objectives (DUOs) for this QAPP do not require elevation whereas the DUO for the previous QAPP, from which this SOP was copied (vibracoring) required elevation. The data quality objective (DQO) does not need a real-time location to the accuracy in the vibracoring QAPP.

Variation from Field or Analytical Procedure:

The following revisions are proposed for the SOP, "A DGPS will be used to establish locations during implementation of activities specified in the Crab/Clam QAPP. ~~Two~~ One handheld DGPS unit~~s~~ will be ~~required: one~~ on board the vessel. ~~with a~~ Its receiving antenna ~~to~~ will be aligned with the sample to be collected (sediment grab sample, crab, or clam) ~~deployment of the sampling apparatus, and the other at a known fixed location (monument or temporary benchmark) to provide corrections to the standard GPS signal~~." The following would also be revised as indicated, "~~Establish a DGPS base station over a shore-based marker prior to sampling operations.~~ The operation and horizontal~~/vertical~~ accuracy of the ~~vessel-mounted~~ handheld DGPS will be verified at a~~nother~~ shore-based marker by recording observed horizontal ~~and vertical~~ (XY~~Z~~) data and comparing these data to the published XY~~Z~~ data for ~~a given~~ that point. ~~After initial DGPS system verification, a~~ A temporary benchmark may be established at a location convenient to the vessel to facilitate daily DGPS system performance

verification. DGPS system performance verification will be conducted twice per day and documented in the field notebook and ~~vessel~~ data logger. The horizontal ~~and vertical~~ accuracy will be compared to shore-based markers to verify performance. ~~Elevations will be recorded in North American Vertical Datum of 1988 with an accuracy of +/- 1 foot.~~

Special Equipment, Materials or Personnel Required:

No additional special equipment, materials or personnel are required as a result of this change.

Initiator's Name:	Clifford Firstenberg, Tierra Solutions	Date:	09-18-14
Project Manager:	Clifford Firstenberg, Tierra Solutions	Date:	09-18-14
QA Manager:	Jane O. Rowan, Normandeau Associates, Inc.	Date:	9-23-2014
USEPA Authority:		Date:	

Protocol Modification Form

Project Name and Number: *Newark Bay*

Material to be Sampled: *Sediment*

Measurement Parameter: *Grain Size*

Standard Procedure for Field Collection & Laboratory Analysis (cite reference):

Worksheet #19-2 lists the container for grain size analysis as 16-ounce amber glass.

Reason for Change in Field Procedure or Analysis Variation:

The typical container used for this analysis is a 500mL wide mouth clear glass jar. The wide mouth helps with analysis and the lab does not have wide mouth amber jars. The use of amber or clear glass would not affect the results of the analysis.

Variation from Field or Analytical Procedure:

The container in Worksheet #19-2 would be changed to 500mL clear glass.

Special Equipment, Materials or Personnel Required:

No additional special equipment, materials or personnel are required as a result of this change.

Initiator's Name:	Clifford Firstenberg	Date:	09-18-14
Project Manager:	Clifford Firstenberg	Date:	09-18-14
QA Manager:	Jane O. Rowan	Date:	9/23/2014
USEPA Authority:		Date:	

Protocol Modification Form

Project Name and Number: *Newark Bay*

Material to be Sampled: *Tissue*

Measurement Parameter: All analytes

Standard Procedure for Field Collection & Laboratory Analysis (cite reference):

SOP No. 6: Crab Collection, page 6 of 8

Reason for Change in Field Procedure or Analysis Variation:

Section 2.2 states: "Verify the crab traps have been decontaminated in accordance with SOP No. 3 – Decontamination, using the soap and water method." Since crab pots do not come into direct contact with the tissue to be sampled, in discussions with USEPA's observer and oversight personnel, the data quality objective of a soap/water decontamination of crab pots between stations was determined to be unnecessary and overly burdensome.

Variation from Field or Analytical Procedure:

An ambient water rinse and, if necessary brushing with ambient water, was agreed to be satisfactory for crab pots.

Special Equipment, Materials or Personnel Required:

No additional special equipment, materials or personnel are required as a result of this change.

Initiator's Name:	Clifford Firstenberg, Tierra Solutions	Date:	09-18-14
Project Manager:	Clifford Firstenberg, Tierra Solutions	Date:	09-18-14
QA Manager:	Jane O. Rowan, Normandeau Associates, Inc.	Date:	9-23-2014
USEPA Authority:		Date:	

Protocol Modification Form

Project Name and Number: *Newark Bay*

Material to be Sampled: *Tissue*

Measurement Parameter: Normandeau Health and Safety Plan

Standard Procedure for Field Collection & Laboratory Analysis (cite reference):

QAPP Worksheet #14 (UFP-QAPP Manual Section 2.8.1): Summary of Project Tasks; Documentations and Records.

Reason for Change in Field Procedure or Analysis Variation:

After review of the tissue processing procedure at the 80/120 Lister Avenue facility, we determined in conjunction with Tierra that wearing Tyvek® or poly-coated suits during the tissue preparation was not necessary. A splash-proof apron was used and provided ample protection for the lab tech(s).

Variation from Field or Analytical Procedure:

The Normandeau Project-Specific Health and Safety Plan required the use of Tyvek when processing clam, crab, and fish tissue.

Special Equipment, Materials or Personnel Required:

No additional special equipment, materials or personnel are required as a result of this change.

Initiator's Name:	Richard Kling, Normandeau Health and Safety Manager	Date:	9/18/2014
Project Manager:	Clifford Firstenberg, Tierra Solutions	Date:	9/18/2014
QA Manager:	Jane Rowan, Normandeau	Date:	9/18/2014
USEPA Authority:		Date:	

Protocol Modification Form

Project Name and Number: *Newark Bay*

Material to be Sampled: *Tissue, Sediment*

Measurement Parameter: Internal Field Audit

Standard Procedure for Field Collection & Laboratory Analysis (cite reference):

QAPP Worksheet #31 (UFP-QAPP Manual Section 4.1): Planned Project Assessments

Reason for Change in Field Procedure or Analysis Variation:

The Internal Field Audit was not conducted on the first day of sampling, as indicated in Worksheet #31.

Variation from Field or Analytical Procedure:

Field sampling was initiated on September 8; the Internal Field Audit was conducted on September 17.

For reference, the Field Sampling Technical Systems Audit was conducted on September 10.

Special Equipment, Materials or Personnel Required:

No additional special equipment, materials or personnel are required as a result of this change.

Initiator's Name:	Clifford Firstenberg, Tierra Solutions	Date:	09-18-14
Project Manager:	Clifford Firstenberg, Tierra Solutions	Date:	09-18-14
QA Manager:	Jane O. Rowan, Normandeau Associates, Inc.	Date:	9/23/2014
USEPA Authority:		Date:	

Protocol Modification Form

Project Name and Number: *Newark Bay*

Material to be Sampled: *Crabs and clams – location and timing of tissue processing*

Measurement Parameter: *N/A*

Standard Procedure for Field Collection & Laboratory Analysis (cite reference):

In Section 4.1, the QAPP states "Retained crab samples will be shipped whole to the laboratory, where they will be processed and homogenized." In Section 4.4, the QAPP states "The blue crabs captured and retained for analysis will be shipped to the analytical laboratory for processing and homogenization. In Appendix E, SOP No. 7 – Clam Collection (Revision 3, August 2014), the collection procedures state "Clams will be shipped overnight to the analytical laboratory on wet ice…" In Appendix O, SOP No. 8 – Crab and Clam Tissue Processing (Revision 3, August 2014), the procedures state "It is anticipated that tissue processing will be conducted at the end of each sampling day." and "Clam and crab tissue samples will be processed in a timely manner to meet the specified holding times detailed within the QAPP." There are also numerous references within SOP No. 8 to a laboratory logbook.

Reason for Change in Field Procedure or Analysis Variation:

Consistent with the CPG and work Tierra performed in 1999-2000, initial tissue processing will be conducted in the field (i.e., shucking clams, dissecting crabs) at the field processing area set up at the 80 Lister Avenue site. Due to the low tide occurring later in the day on some of the sampling days, it may not be possible to process crabs and clams the same day they are collected.

Variation from Field or Analytical Procedure:

USEPA approved the tissue processing in the field, but the language in the QAPP was not changed throughout from a previous revision that had tissue processing occurring at the laboratory. Crab and clam samples will be processed at the Lister Ave field processing area and shipped frozen to one laboratory for homogenization and distribution to other laboratories, as necessary. Information noted as being recorded in a laboratory logbook will be noted in the field logbook at the processing facility. Also, because of the timing of the tides, crab and clam samples may not be processed at the end of each sampling day. If they cannot be processed on the day collected, they will be kept on ice and processed the following day.

Special Equipment, Materials or Personnel Required:

No additional special equipment, materials or personnel are required as a result of this change.

Initiator's Name:	Clifford Firstenberg, Tierra Solutions	Date:	09-18-14
Project Manager:	Clifford Firstenberg, Tierra Solutions	Date:	09-18-14
QA Manager:	Jane O. Rowan, Normandeau Associates, Inc.	Date:	9/23/2014
USEPA Authority:		Date:	

Protocol Modification Form

Project Name and Number: *Newark Bay*

Material to be Sampled: *Fish Tissue*

Measurement Parameter: *Whole Body Eel*

Standard Procedure for Field Collection & Laboratory Analysis (cite reference):

Standard Operating Procedure 4: Fish Sample Collection- states that fish traps will be checked at least once per day (i.e., every 24 hours).

Reason for Change in Field Procedure or Analysis Variation:

In an effort to increase eel catch, eel traps were deployed over a weekend (from October 17, 2014 until October 20, 2014).

Variation from Field or Analytical Procedure:

This was a one-time occurrence in an effort to obtain more eel tissue, therefore no change is required to Standard Operating Procedure 4: Fish Sample Collection.

Special Equipment, Materials or Personnel Required:

No additional special equipment, materials or personnel are required as a result of this change.

Initiator's Name:	Brian Mikucki	Date:	12-05-14
Project Manager:	Clifford Firstenberg	Date:	12-05-14
QA Manager:	Jane O. Rowan	Date:	12-05-14
USEPA Authority:		Date:	

Protocol Modification Form

Project Name and Number: *Newark Bay*

Material to be Sampled: *Fish Tissue*

Measurement Parameter: *Sample Processing Form*

Standard Procedure for Field Collection & Laboratory Analysis (cite reference):

Processed fish are recorded on the Sample Processing Form provided in Appendix D of the Fish QAPP.

Reason for Change in Field Procedure or Analysis Variation:

The Sample Processing Form was modified for the sample processing team to record the information necessary during processing of the fish to help with tracking the fish from capture to analysis and recording consistent information for each fish processed.

Variation from Field or Analytical Procedure:

A revised Sample Processing Form was used for processing fish in 2015 thus far and will be used for future fish processing.

Special Equipment, Materials or Personnel Required:

No additional special equipment, materials or personnel are required as a result of this change.

Initiator's Name:	Carlie Thompson	Date:	7/7/15
Project Manager:	Clifford Firstenberg	Date:	7/21/15
QA Manager:	Jane O. Rowan, Normandeau Associates, Inc.	Date:	7/10/15
USEPA Authority:		Date:	

Sample Processing Form

Project: NBO3 Fish Study

Sample Location: _____

Sample Date: _____ Sampled by: _____

Processing Date: _____ Processed by: _____

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)										Notes

Notes:

g = gram
mm = millimeters
SF = skin-on fillet; SF* = skin-off fillet (eel); WBC = whole-body composite; WBI = whole-body individual

MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

Sample Processing Form

Project: NB03 Fish Study
Sample Location: _____
Sample Date: _____
Processing Date: _____

Sampled By: _____
Processed By: _____

Sample ID	Species	Sample Type	Number of Organisms	Length (mm) / Weight (g)					Gear Type	Photo #	Comments
Notes:											

g = gram
mm = millimeters

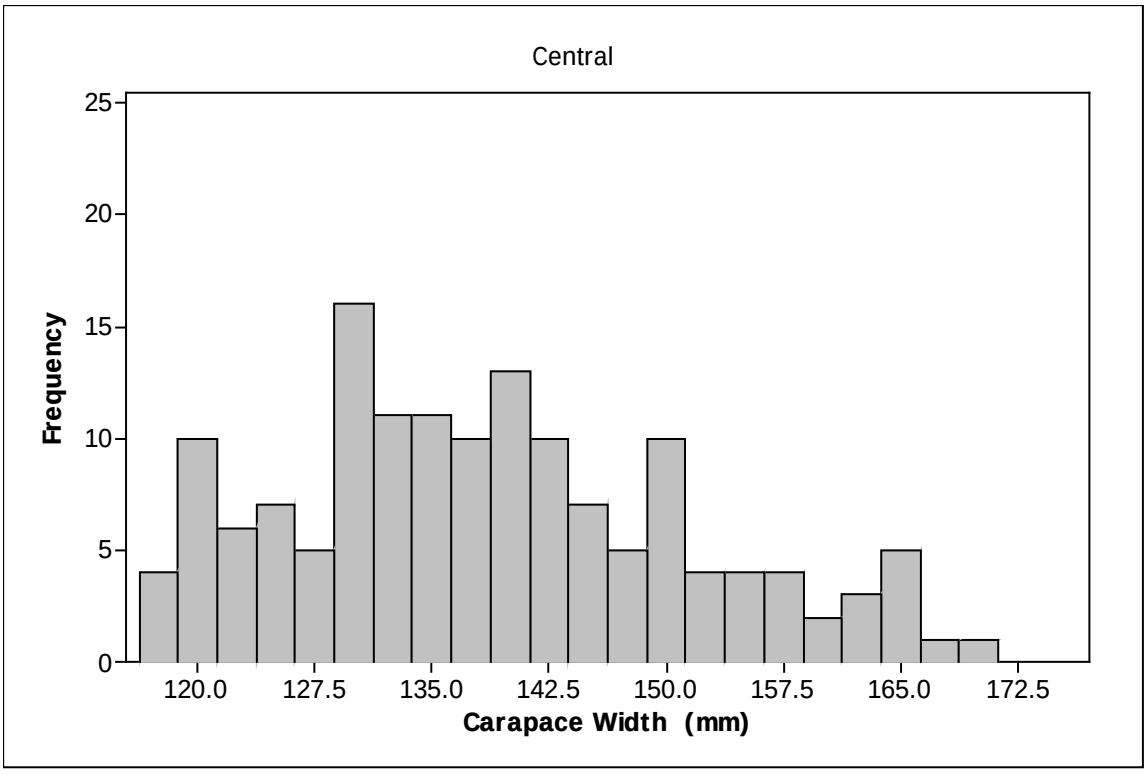
Sample Type: W=whole body, F=fillet, L=liver

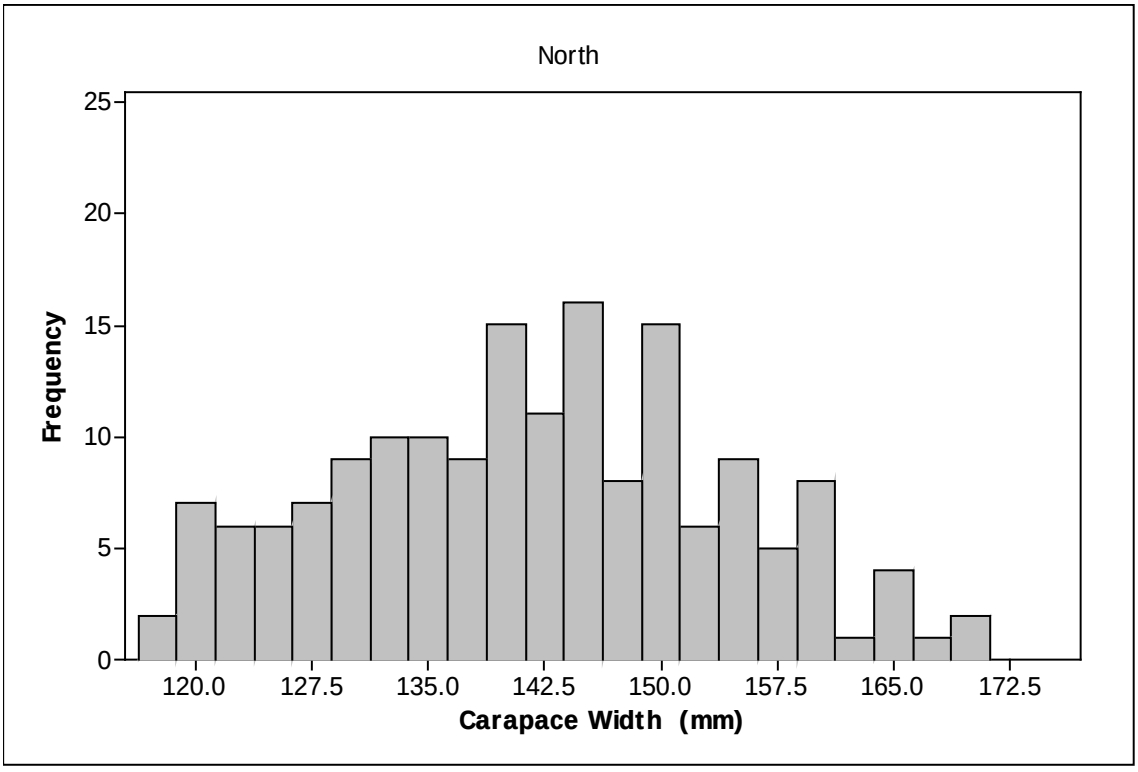
Gear Type: Trawl=TW, Eel Pot=EP, Gill Net=GN

Species Codes:
MU=Mummichog SK=Striped Killifish BA=Bay Anchovy AS=Atlantic Silverside ME=Menhaden
WP=White Perch AE=American Eel SB=Striped Bass BL=Bluefish SF=Summer Flounder
WF=Winter Founder WE=Weakfish

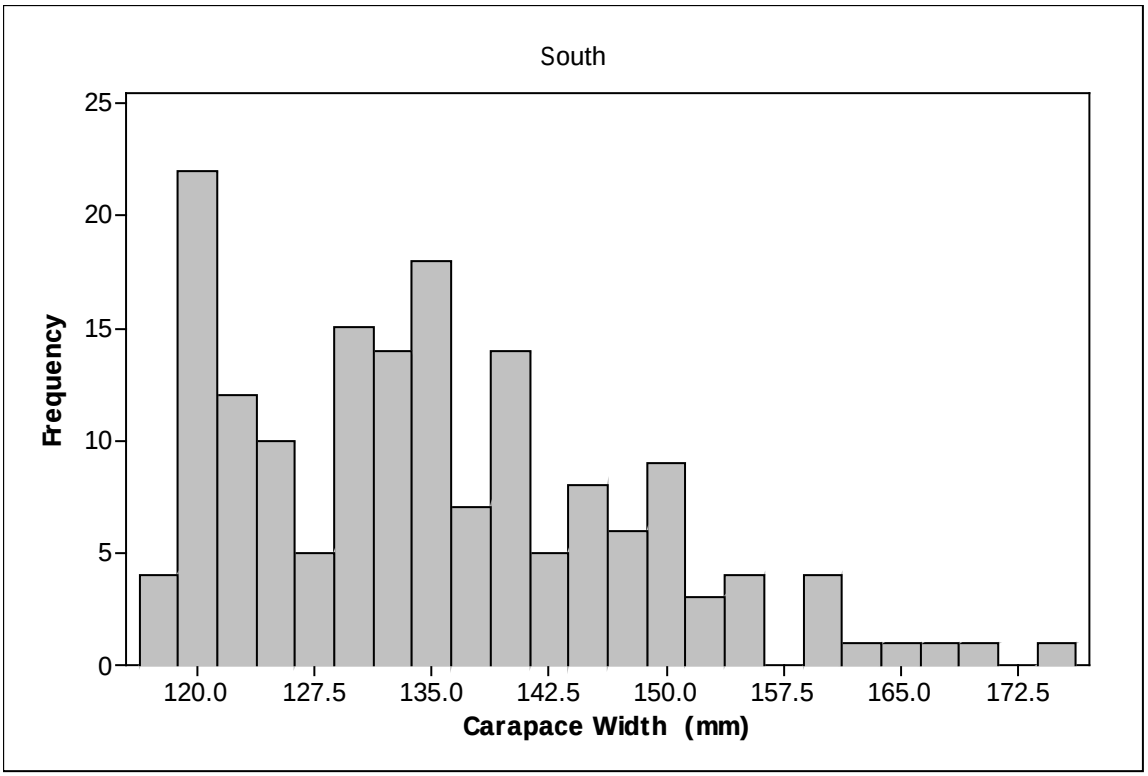
APPENDIX H

Appendix H. Carapace width-frequency histograms for blue crab collected from bay zones in Newark Bay.



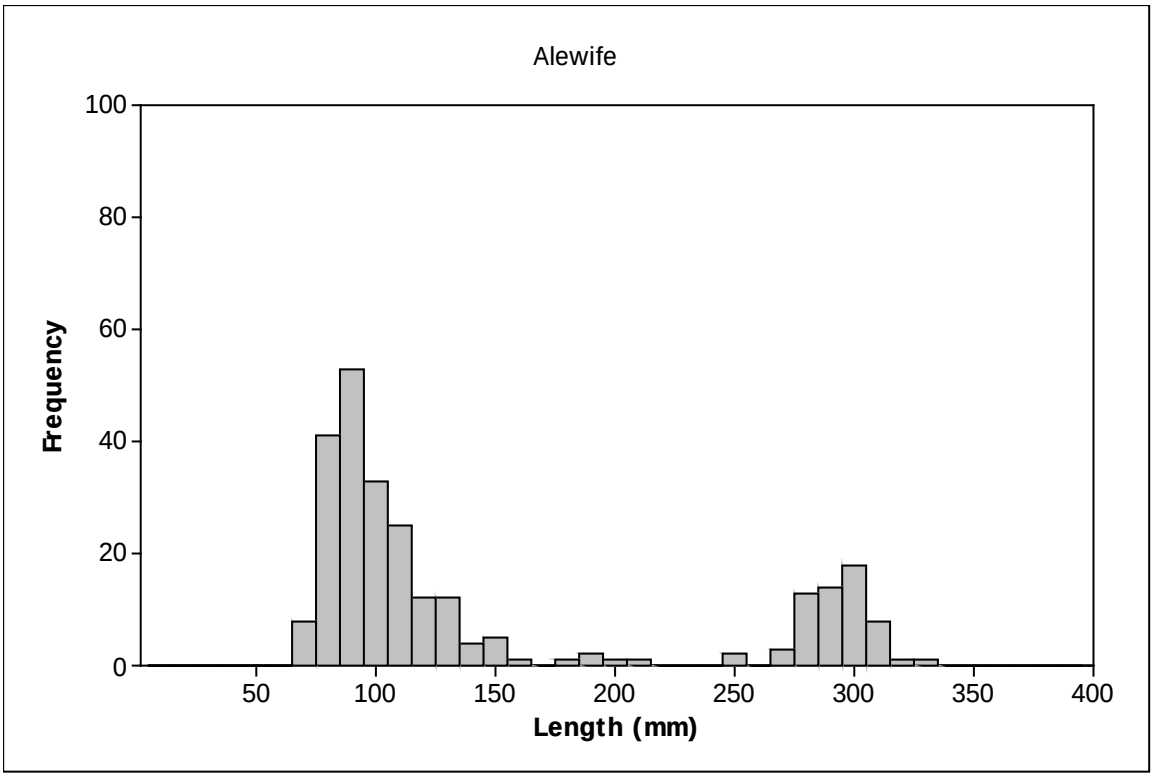


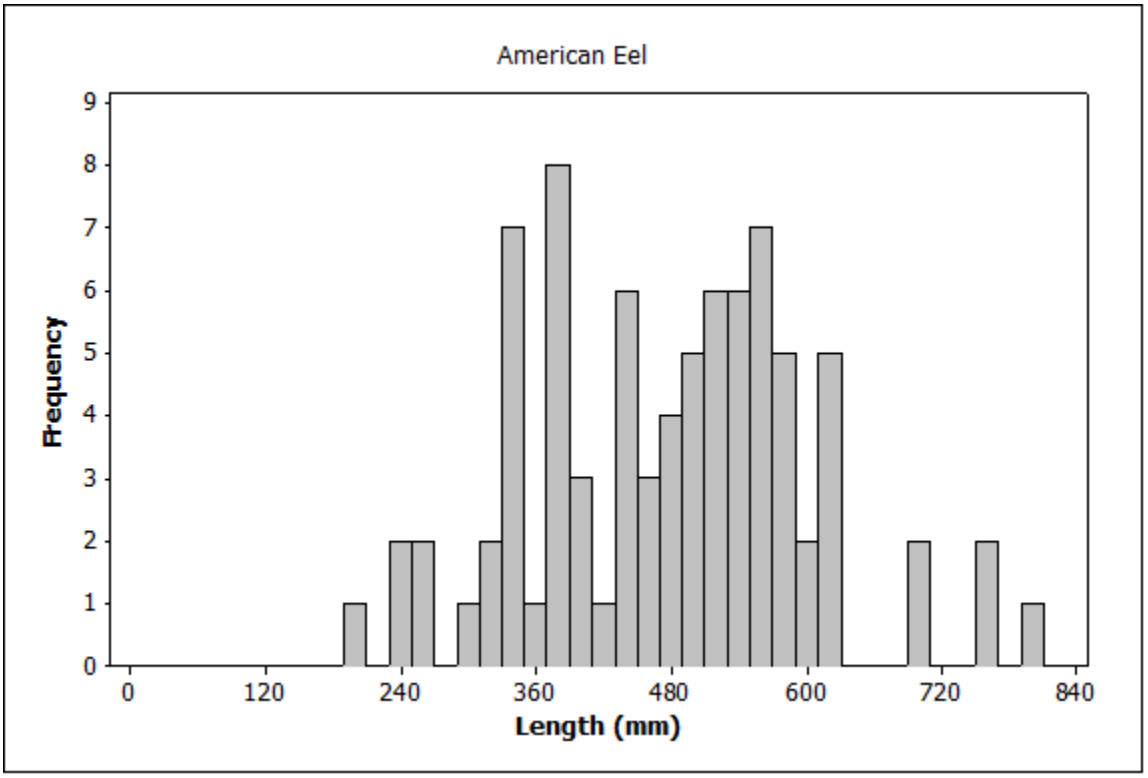
Appendix H. Carapace width-frequency histograms for blue crab collected from bay zones in Newark Bay.



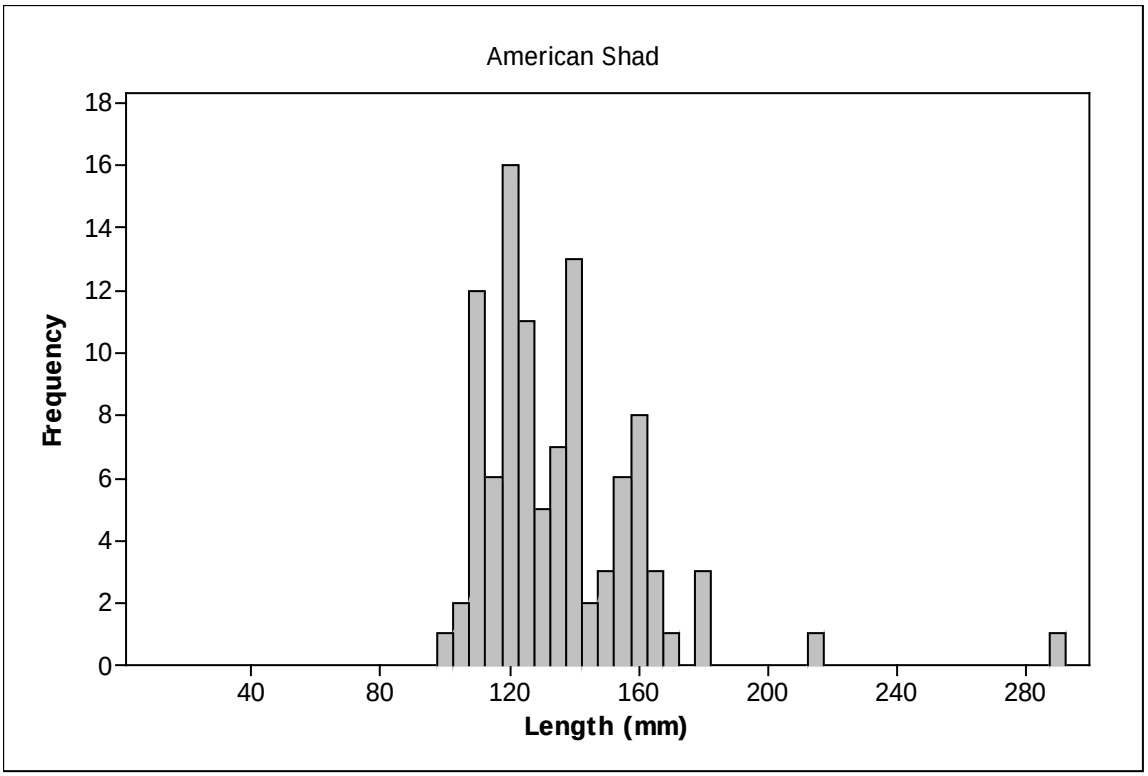
APPENDIX I

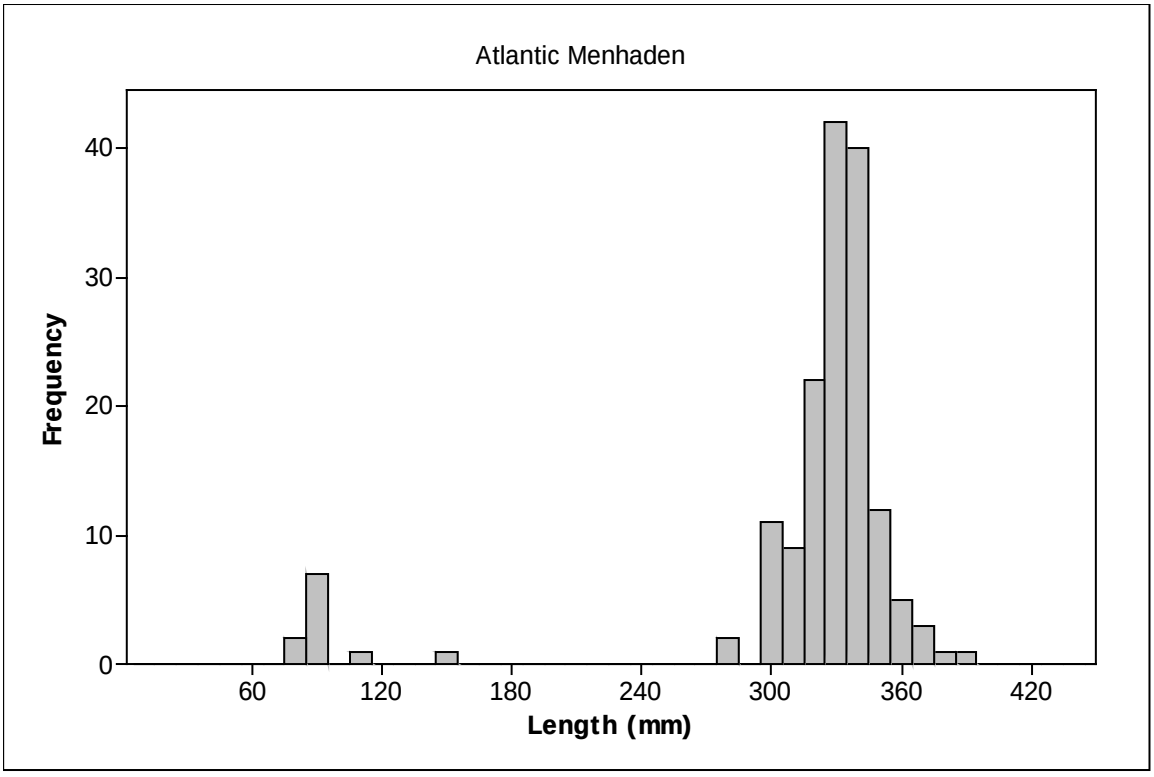
Appendix I. Length-frequency histograms for select fish species collected in Newark Bay.



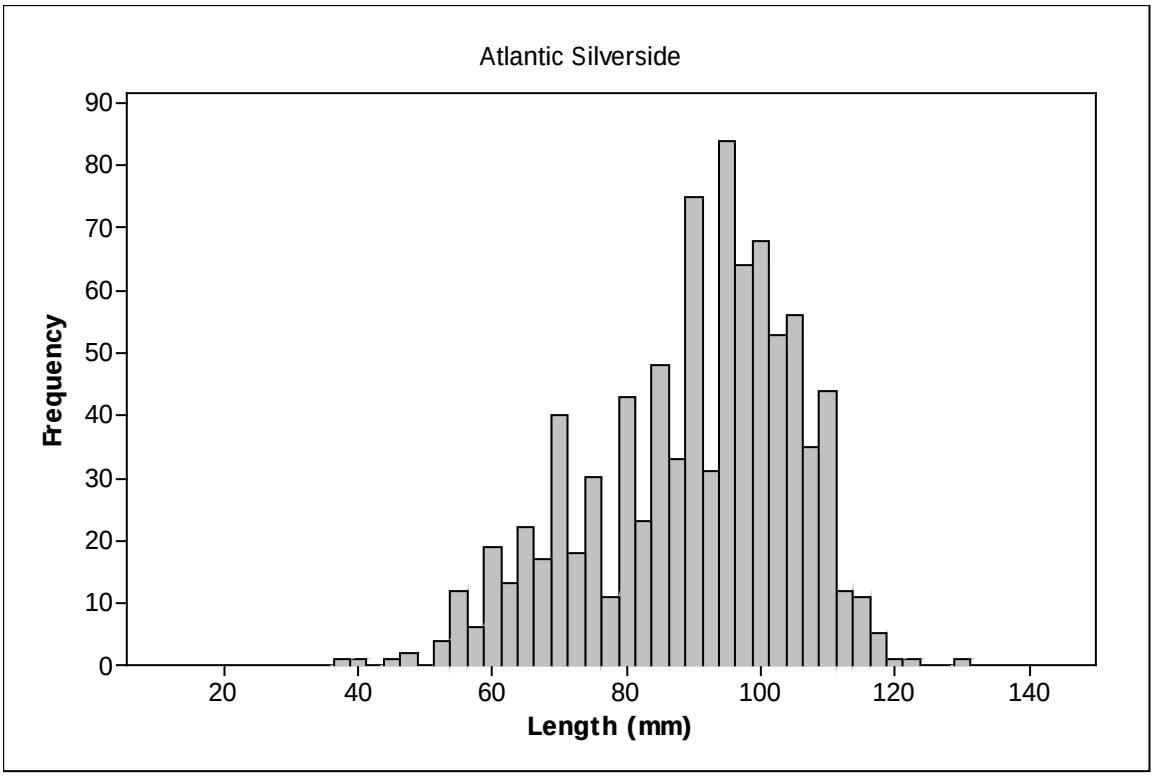


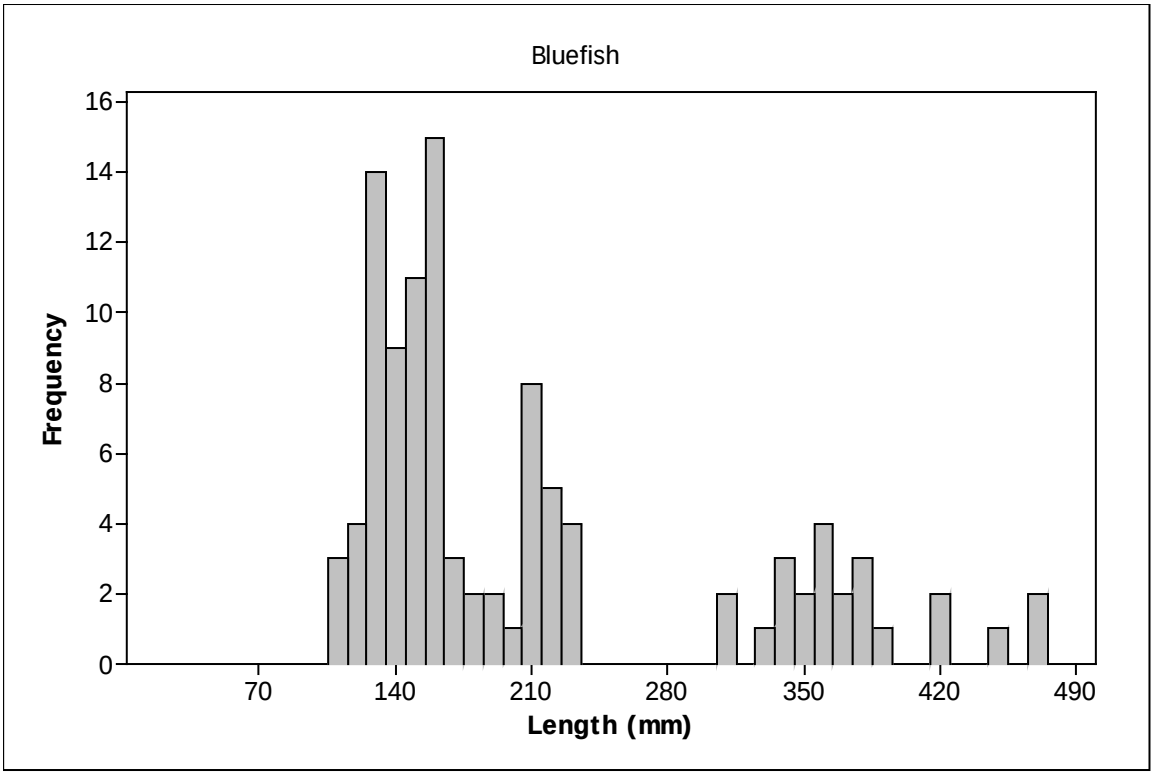
Appendix I. Length-frequency histograms for select fish species collected in Newark Bay.



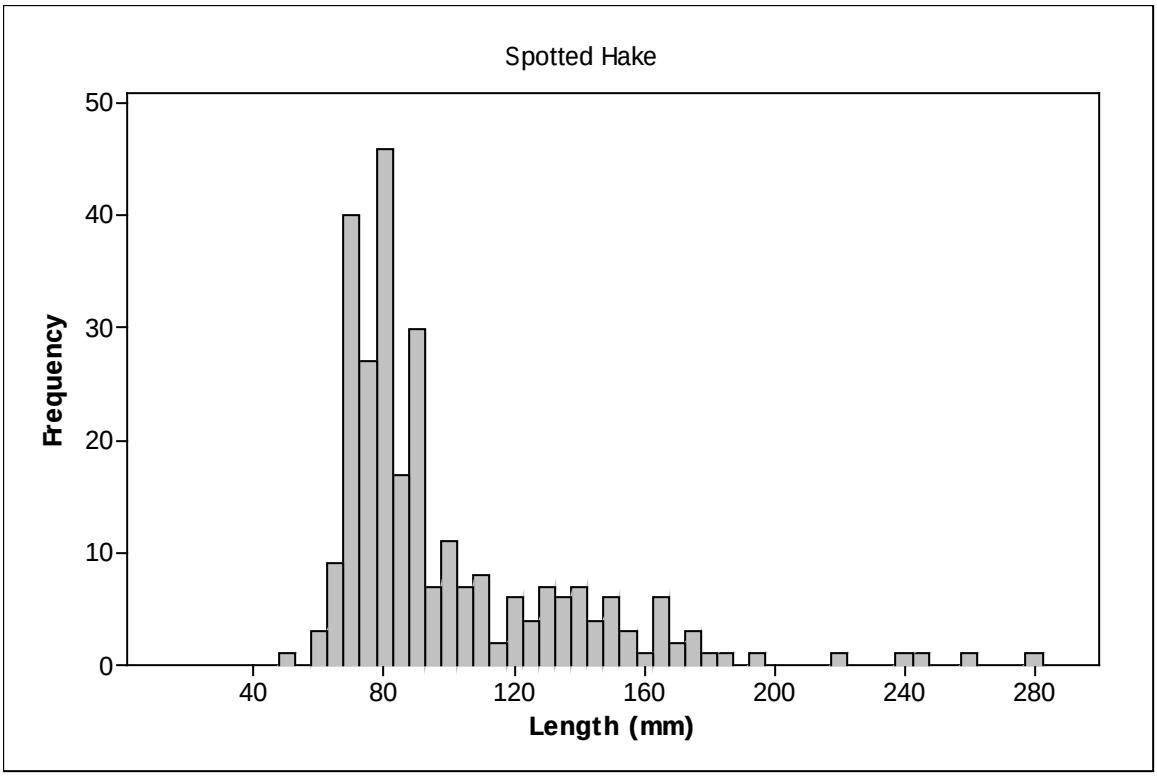


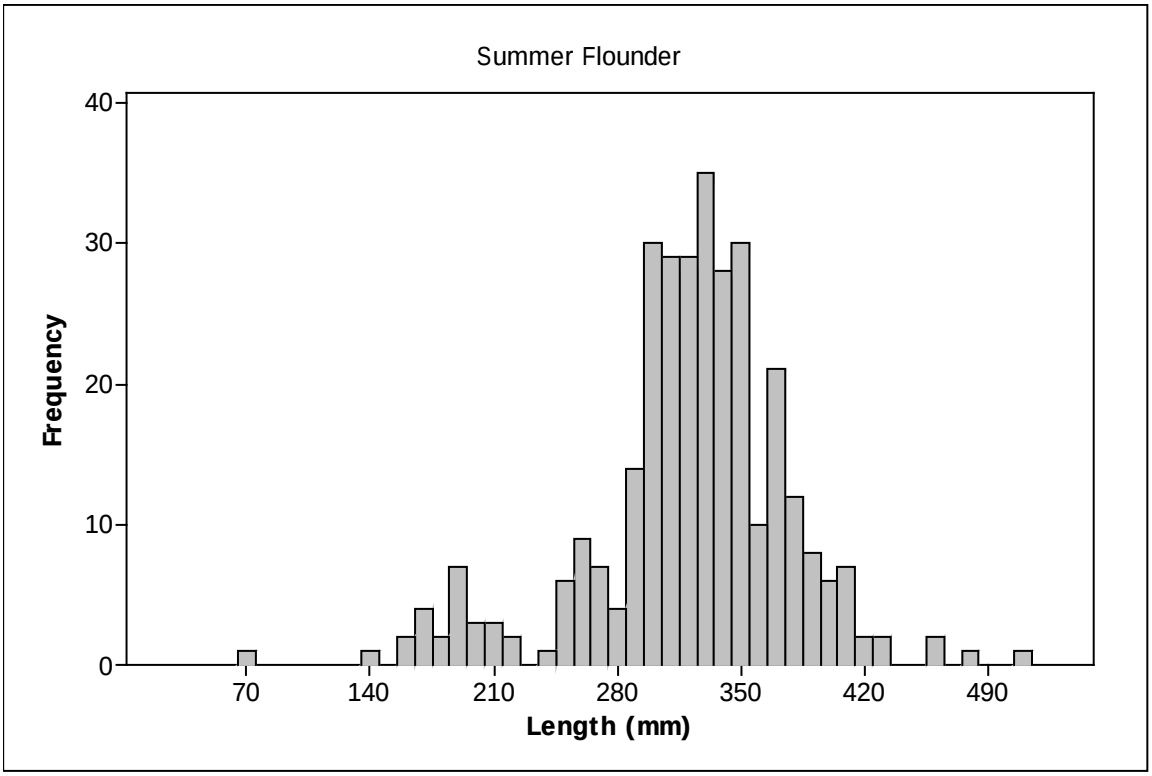
Appendix I. Length-frequency histograms for select fish species collected in Newark Bay.



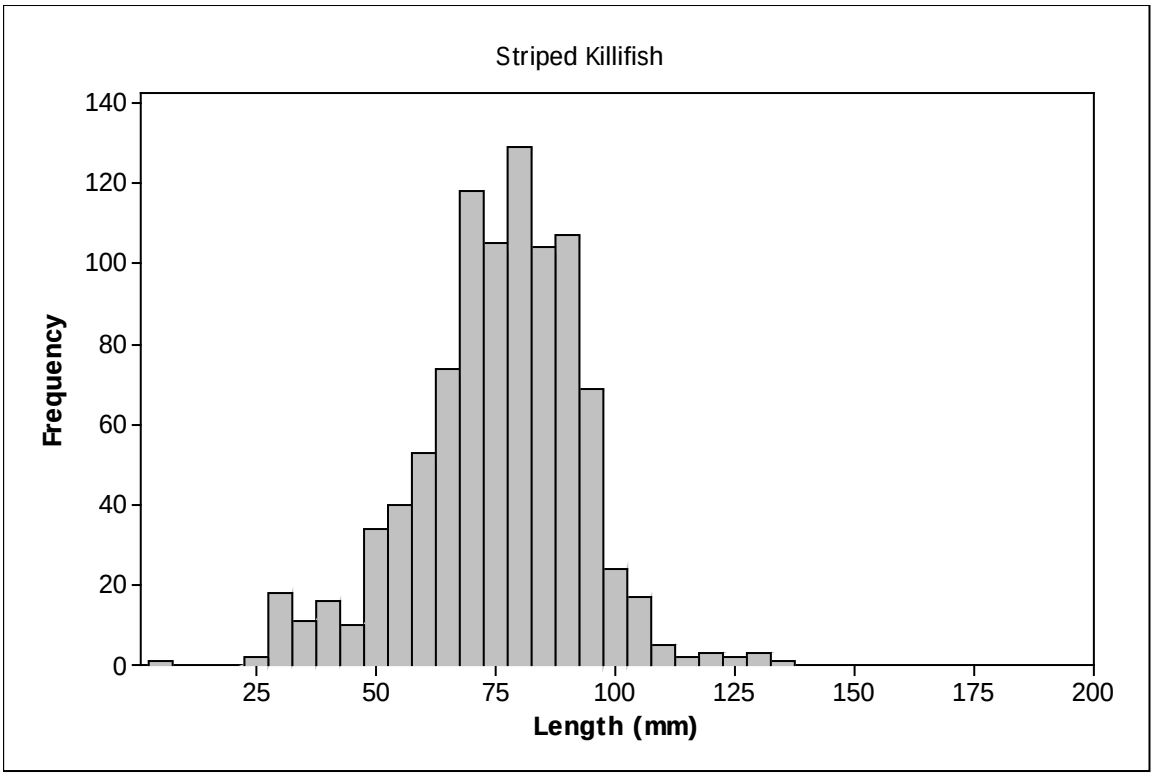


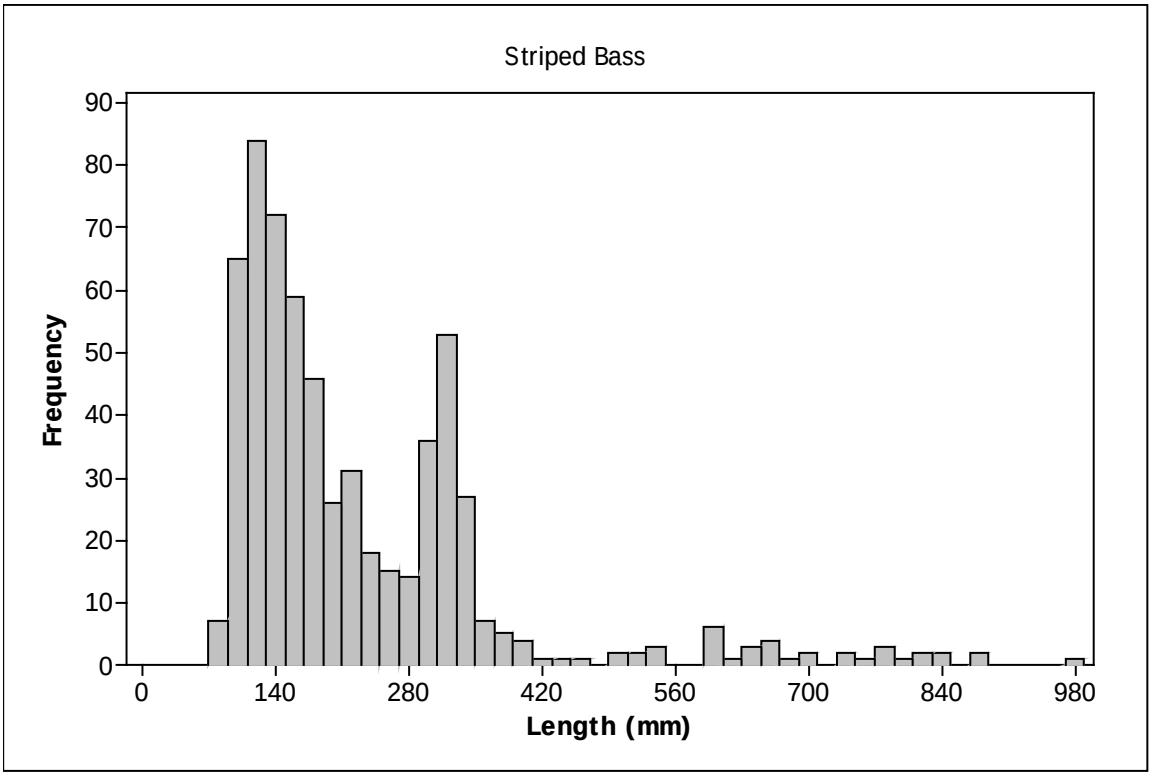
Appendix I. Length-frequency histograms for select fish species collected in Newark Bay.



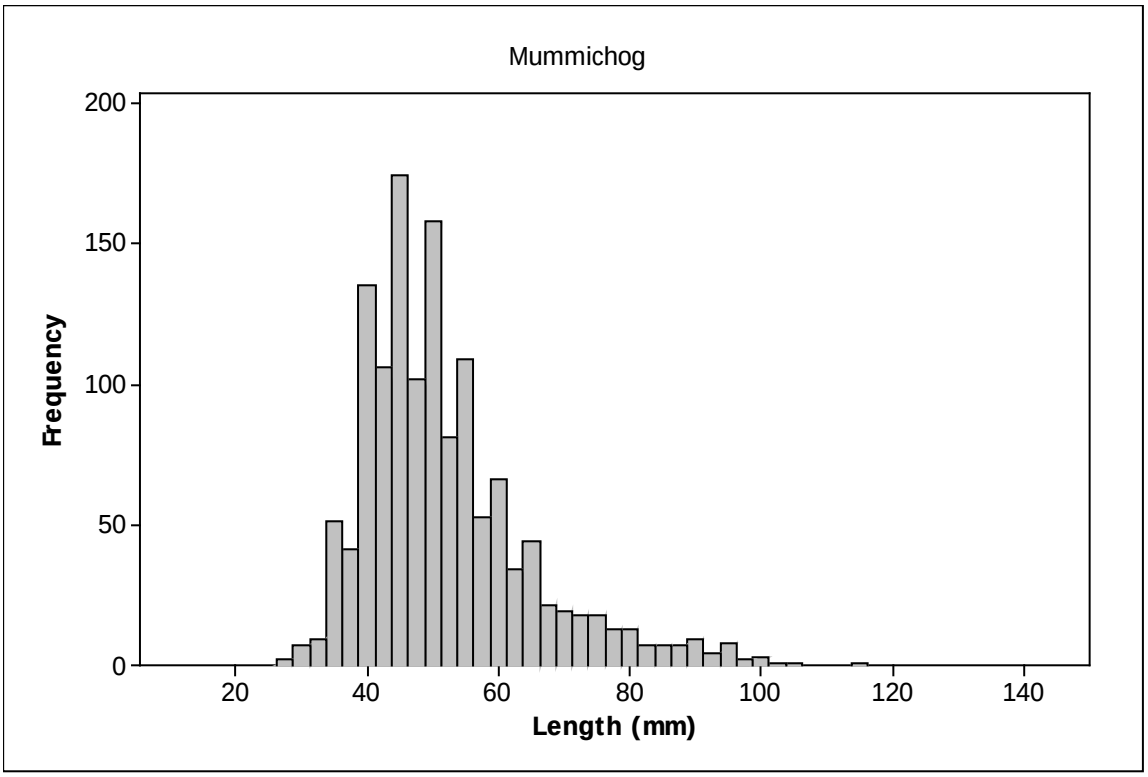


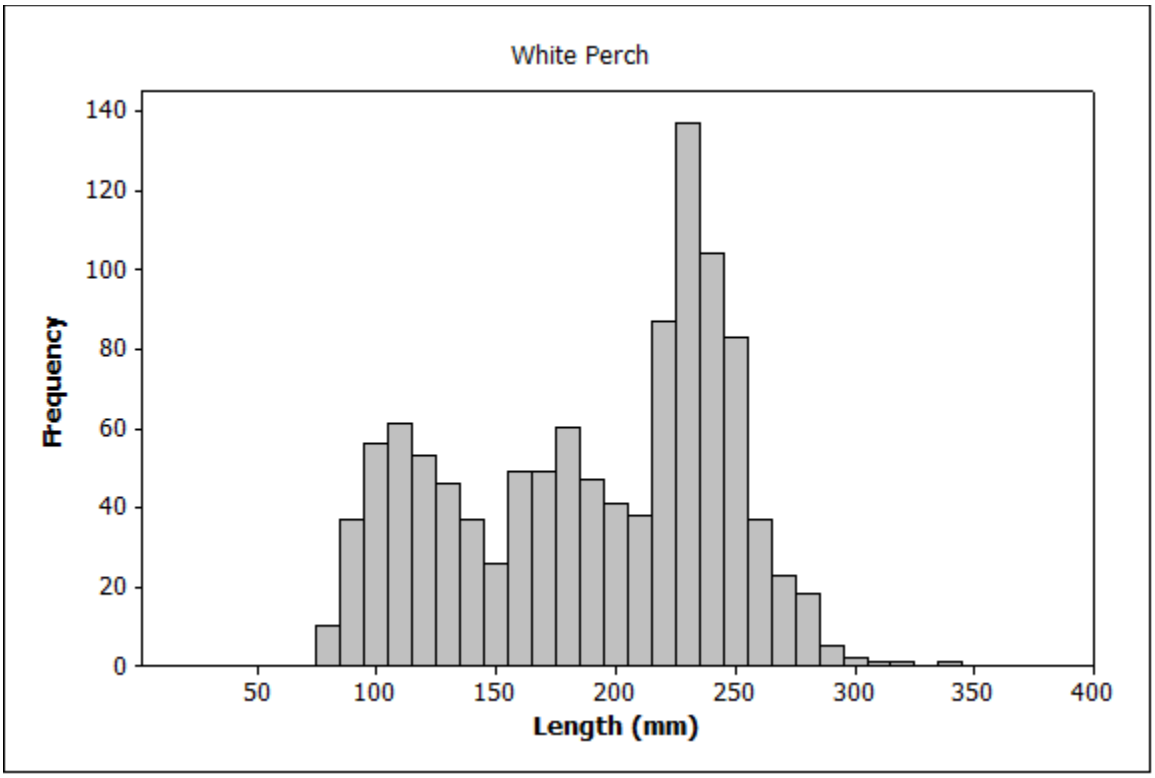
Appendix I. Length-frequency histograms for select fish species collected in Newark Bay.



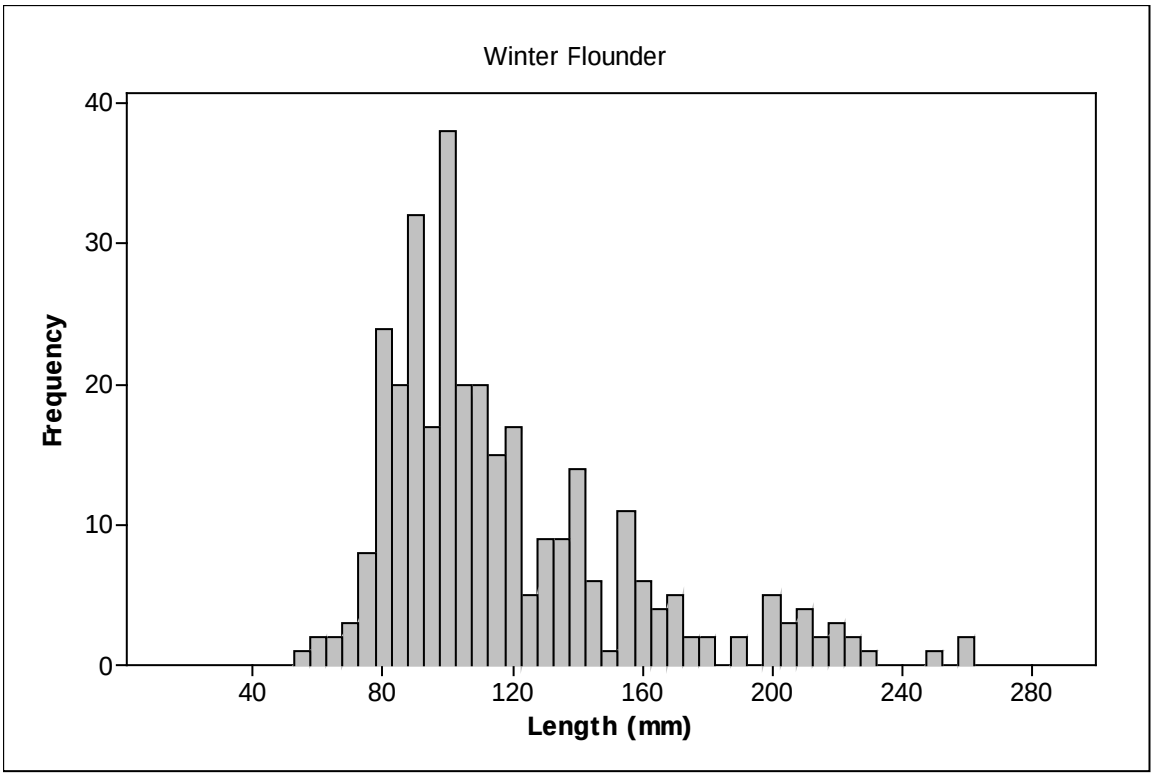


Appendix I. Length-frequency histograms for select fish species collected in Newark Bay.





Appendix I. Length-frequency histograms for select fish species collected in Newark Bay.



APPENDIX J

Appendix J. Observations of gross external anomalies on fish during the sampling program, 6 October 2014 through 24 March 2016.

Bay Zone	Date	Species	Total Length (mm)	Weight (g)	External Anomalies [1]
NBS	5/1/15	Striped Bass	800	5,443	Scar on body near caudal fin
NBS	5/7/15	Striped Bass	787	4,990	Missing pectoral fin
NBS	7/31/15	American Eel	520	390	Caudal fin deformed
NBN	3/15/16	Striped Bass	112	*	Scoliosis
NBN	3/15/16	Striped Bass	130	*	Scoliosis
NBC	3/18/16	White Perch	262	290	Missing eye

[1] includes both bycatch and target species collected and used for tissue samples but does not include fish examined by pathologist

* not recorded

APPENDIX K

Appendix K. Catch per unit effort (CPUE) for fish species by gear type and year.

Year	Common Name	Eel Pot (#/24hr set)	Gillnet (#/24hr set)	Minnow Trap (#/set)	Seine (#/haul)	Trawl (#/10 minute tow)	Trotline (#/24hr set)	Angling (#/ hour)
2015	Alewife	0.00	0.13	0.00	0.00	1.18	0.00	0.00
2016	Alewife	0.00	3.13	0.00	0.00	2.22	0.00	0.00
2014	American Eel	0.16	0.00	0.03	0.00	0.05	0.00	0.00
2015	American Eel	0.17	0.00	0.00	0.00	0.01	0.00	0.00
2016	American Eel	0.00	0.00	0.00	0.00	0.02	0.00	0.00
2015	American Shad	0.00	0.00	0.00	0.00	0.51	0.00	0.00
2016	American Shad	0.00	0.12	0.00	0.00	0.58	0.00	0.00
2016	Atlantic Croaker	0.00	0.00	0.00	0.00	0.04	0.00	0.00
2015	Atlantic Herring	0.00	0.00	0.00	0.00	0.01	0.00	0.00
2014	Atlantic Menhaden	0.00	0.23	0.00	0.30	0.21	0.00	0.00
2015	Atlantic Menhaden	0.00	2.26	0.00	0.00	0.00	0.00	0.00
2016	Atlantic Menhaden	0.00	5.61	0.00	0.00	0.04	0.00	0.00
2014	Atlantic Moonfish	0.00	0.00	0.00	0.00	0.32	0.00	0.00
2014	Atlantic Silverside	0.00	0.00	0.31	47.42	0.05	0.00	0.00
2016	Atlantic Silverside	0.00	0.00	0.00	0.00	0.02	0.00	0.00
2016	Atlantic Sturgeon	0.00	0.04	0.00	0.00	0.00	0.00	0.00
2015	Atlantic Tomcod	0.00	0.00	0.00	0.00	0.06	0.00	0.00
2016	Atlantic Tomcod	0.00	0.00	0.00	0.00	0.02	0.00	0.00
2014	Bay Anchovy	0.00	0.00	0.00	0.00	6.55	0.00	0.00
2016	Bay Anchovy	0.00	0.00	0.00	0.00	0.04	0.00	0.00
2016	Black Sea Bass	0.00	0.00	0.00	0.00	0.02	0.00	0.00
2014	Black Seabass	0.65	0.00	0.00	0.00	0.11	0.00	0.00
2016	Blue Crab	0.00	0.00	0.00	0.00	0.11	0.00	0.00
2014	Blueback Herring	0.00	0.00	0.00	0.42	0.00	0.00	0.00
2015	Blueback Herring	0.00	0.00	0.00	0.00	0.38	0.00	0.00
2016	Blueback Herring	0.00	0.00	0.00	0.00	0.04	0.00	0.00
2014	Bluefish	0.00	0.00	0.00	2.42	0.05	0.00	0.00
2015	Bluefish	0.00	0.03	0.00	0.00	0.00	0.32	0.25
2014	Butterfish	0.00	0.00	0.00	0.00	0.11	0.00	0.00
2015	Clupeidae	0.00	0.00	0.00	0.00	0.03	0.00	0.00
2015	Cunner	0.00	0.00	0.00	0.00	0.01	0.00	0.00
2016	Cunner	0.00	0.00	0.00	0.00	0.04	0.00	0.00
2014	Gizzard Shad	0.00	0.23	0.00	0.00	0.05	0.00	0.00
2016	Gizzard Shad	0.00	0.08	0.00	0.00	0.15	0.00	0.00
2014	Gobiidae	0.00	0.00	0.00	0.06	0.00	0.00	0.00
2014	Hogchoker	0.00	0.00	0.00	0.00	0.21	0.00	0.00
2015	Hogchoker	0.00	0.00	0.00	0.00	0.06	0.00	0.00
2015	Little Skate	0.00	0.03	0.00	0.00	0.01	0.00	0.00
2016	Little Skate	0.00	0.04	0.00	0.00	0.00	0.00	0.00
2015	Longhorn Sculpin	0.00	0.00	0.00	0.00	0.06	0.00	0.00
2015	Lookdown	0.00	0.00	0.00	0.00	0.01	0.00	0.00
2014	Mummichog	0.00	0.00	16.44	75.15	0.00	0.00	0.00
2014	Naked Goby	0.00	0.00	0.00	0.00	0.05	0.00	0.00
2014	Northern Kingfish	0.00	0.00	0.00	0.15	0.37	0.00	0.00
2015	Northern Pipefish	0.00	0.00	0.00	0.00	0.03	0.00	0.00
2016	Northern Pipefish	0.00	0.00	0.00	0.00	0.15	0.00	0.00
2014	Northern Pipefish	0.00	0.00	0.00	0.06	0.00	0.00	0.00
2015	Northern Pufferfish	0.00	0.00	0.00	0.00	0.01	0.00	0.00
2014	Oyster Toadfish	0.10	0.00	0.00	0.00	0.27	0.00	0.00
2015	Oyster Toadfish	0.01	0.00	0.00	0.00	0.01	0.00	0.00
2016	Red Hake	0.00	0.00	0.00	0.00	0.06	0.00	0.00

Appendix K. Catch per unit effort (CPUE) for fish species by gear type and year.

Year	Common Name	Eel Pot (#/24hr set)	Gillnet (#/24hr set)	Minnow Trap (#/set)	Seine (#/haul)	Trawl (#/10 minute tow)	Trotline (#/24hr set)	Angling (#/ hour)
2014	Scup	0.01	0.00	0.00	0.00	3.04	0.00	0.00
2014	Silver Perch	0.00	0.00	0.00	0.00	0.16	0.00	0.00
2014	Smallmouth Flounder	0.00	0.00	0.00	0.00	0.21	0.00	0.00
2015	Smallmouth Flounder	0.00	0.00	0.00	0.00	0.05	0.00	0.00
2014	Spotted Hake	0.00	0.00	0.00	0.00	0.11	0.00	0.00
2015	Spotted Hake	0.00	0.00	0.00	0.00	0.98	0.00	0.00
2016	Spotted Hake	0.00	0.04	0.00	0.00	8.23	0.00	0.00
2014	Striped Anchovy	0.00	0.00	0.00	0.03	0.00	0.00	0.00
2014	Striped Bass	0.01	0.00	0.00	0.97	0.16	0.00	0.00
2015	Striped Bass	0.00	0.33	0.00	0.00	1.68	0.00	0.51
2016	Striped Bass	0.00	17.81	0.00	0.00	12.31	0.00	0.00
2014	Striped Killifish	0.00	0.00	0.00	41.36	0.00	0.00	0.00
2014	Striped Mullet	0.00	0.00	0.00	0.03	0.00	0.00	0.00
2016	Striped Sea Robin	0.00	0.00	0.00	0.00	0.02	0.00	0.00
2014	Striped Searobin	0.00	0.00	0.00	0.00	0.85	0.00	0.00
2015	Striped Searobin	0.00	0.00	0.00	0.00	0.01	0.00	0.00
2014	Summer Flounder	0.00	0.47	0.00	0.00	0.53	0.00	0.00
2015	Summer Flounder	0.00	0.00	0.00	0.00	0.16	0.00	3.45
2016	Summer Flounder	0.00	0.00	0.00	0.00	0.13	0.00	0.00
2016	Tautog	0.00	0.08	0.00	0.00	0.00	0.00	0.00
2014	Weakfish	0.00	0.00	0.00	0.00	4.05	0.00	0.00
2014	White Mullet	0.00	0.00	0.00	0.15	0.00	0.00	0.00
2014	White Perch	0.00	0.00	0.00	0.12	0.00	0.00	0.00
2015	White Perch	0.00	6.62	0.00	0.00	3.27	0.00	0.00
2016	White Perch	0.00	7.71	0.00	0.00	38.79	0.00	0.00
2014	Windowpane Flounder	0.00	0.00	0.00	0.00	0.32	0.00	0.00
2015	Windowpane Flounder	0.00	0.05	0.00	0.00	0.08	0.00	0.00
2016	Windowpane Flounder	0.00	0.04	0.00	0.00	0.09	0.00	0.00
2014	Winter Flounder	0.00	0.00	0.00	1.12	0.16	0.00	0.00
2015	Winter Flounder	0.00	0.05	0.00	0.00	1.59	0.00	0.00
2016	Winter Flounder	0.00	0.49	0.00	0.00	0.80	0.00	0.00

ATTACHMENT 5

Newark Bay Fish Sampling and Analysis, Amended Pathology Report (EPL 2016a. 2016b)

TIERRA SOLUTIONS, INC.
EPL PROJECT NUMBER A41-001

NEWARK BAY STUDY AREA FISH SAMPLING AND ANALYSIS

AMENDED PATHOLOGY REPORT

Submitted by:

Experimental Pathology Laboratories, Inc.

Street Address:
45600 Terminal Drive
Sterling, VA 20166

Mailing Address:
P.O. Box 169
Sterling, VA 20167-0169

(703) 471-7060

Submitted to:

Tierra Solutions, Inc.
East Brunswick, NJ 08816

July 12, 2016

AMENDED FINAL REPORT

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APPENDIX B: SPECIMEN DATA FORMS	B-1

AMENDED PATHOLOGY SUMMARY

TIERRA SOLUTIONS, INC.
EPL PROJECT NUMBER A41-001

NEWARK BAY STUDY AREA FISH SAMPLING AND ANALYSIS

AMENDED PATHOLOGY SUMMARY

INTRODUCTION

The purpose of this project was to conduct gross external and internal examinations of wild caught marine and estuarine fish obtained as part of the Newark Bay Study Area Baseline Human Health and Ecological Risk Assessment Fish Sampling and Analysis conducted by Tierra Solutions, Inc. (Tierra) in accordance with the Fish Sampling and Analysis Quality Assurance Project Plan (QAPP) Revision 2, October 2014.

METHODS

During a five-day consecutive period (October 6-10, 2014), a total of 122 fish, representing 26 distinct species (Table 1), were necropsied by an American College of Veterinary Pathologists board-certified veterinary pathologist who has expertise in the pathologic evaluation of fish. The Fish Sampling and Analysis QAPP required fish pathology evaluations be conducted on the first five fish of each species, as well as a "representative sample of individual non-forage fish – up to at least 20 individuals for each of two different species." In accordance with the QAPP, the first five fish obtained for each species in 2014 (unless they were kept for chemical analysis) and 20 scup were examined.

In some cases, fish were identified using animal identifiers in accordance with the QAPP, and were used both for pathology and chemical analysis (e.g., "NB03WAEN016"); in other instances where fish were obtained as group samples, individual animal identifiers were not provided, and the pathologist instead assigned unique consecutive number identifiers using abbreviated Tierra species codes (e.g.,

"SC01"). These fish were not used for chemical analysis, and only for pathology examinations.

External examinations included the general body condition ("body form"), body surfaces, lips and jaws, snout, barbels (where present), operculum ("opercle"), isthmus, eyes, fins, gills, pseudobranch, branchial cavity, and urogenital opening. Intra-abdominal examinations included the body cavity, mesenteric fat, liver, gallbladder (where present), stomach (true stomach in some species, proximal intestines in others, also gizzard where present), intestines, spleen, gas bladder, kidneys, ovaries (where present), skeletal muscle, pyloric caeca (where present), and testis (where present). Although heart was not indicated as a target tissue in the provided necropsy form, the pathologist examined hearts also. In fish where the gonads were recovered, these tissues were excised and gonad weights (g) were obtained. These were used in conjunction with total body weights (g) to determine gonadosomatic indices (GSI). A representative color photograph (labeled with the animal identifier) was acquired of each gross pathologic finding.

Table 1. Necropsy Results

Species	Scientific Name	Animal ID#	Body Weight (g)	Gonad Weight (g)	GSI	Sex	Capture Date	Necropsy Date	Gross Finding
American Eel	*Anguilla rostrata*	NBO3WAEN016	340	0.22	0.06%	M	10/9/2014	10/9/2014	-
American Eel	*Anguilla rostrata*	NBO3WAEN017	27.9	UD	NA	NR	10/9/2014	10/9/2014	Swim bladder: nematode parasites
American Eel	*Anguilla rostrata*	NBO3WAEN024	273	0.35	0.13%	M	10/10/2014	10/10/2014	-
American Eel	*Anguilla rostrata*	NBO3WAEN025	472	3.51	0.82%	F	10/10/2014	10/10/2014	Heart: pale nodule
Bay Anchovy	*Anchoa mitchilli*	NBO3WBAC001-01	4.6	0.01	0.22%	M	10/9/2014	10/9/2014	-
Bay Anchovy	*Anchoa mitchilli*	NBO3WBAC001-02	3	0.02	0.67%	M	10/9/2014	10/9/2014	Skin of dorsum and head: anchor worms
Bay Anchovy	*Anchoa mitchilli*	NBO3WBAC001-03	2.4	0.01	0.42%	M	10/9/2014	10/9/2014	Skin of dorsum and head: anchor worms
Bay Anchovy	*Anchoa mitchilli*	NBO3WBAC001-04	3	0.01	0.33%	M	10/9/2014	10/9/2014	-
Bay Anchovy	*Anchoa mitchilli*	NBO3WBAC001-05	2.7	0.01	0.37%	M	10/9/2014	10/9/2014	-
Black Sea Bass	*Centropristis striata*	BS01	5.3	UD	NA	NR	10/8/2014	10/8/2014	-
Black Sea Bass	*Centropristis striata*	BS02	6.6	UD	NA	NR	10/9/2014	10/9/2014	-
Black Sea Bass	*Centropristis striata*	BS03	8.2	UD	NA	NR	10/9/2014	10/9/2014	-
Blueback Herring	*Alosa aestivalis*	BB01	2.6	UD	NA	NR	10/10/2014	10/10/2014	-
Bluefish	*Pomatomus saltatrix*	NBO3FBLC002	25.2	0.02	0.08%	TI	10/9/2014	10/9/2014	-
Bluefish	*Pomatomus saltatrix*	NBO3FBLS003-01	111.4	0.04	0.04%	M	10/10/2014	10/10/2014	Branchial cavity: isopod parasite ("sea louse")
Bluefish	*Pomatomus saltatrix*	NBO3FBLS003-02	27.9	UD	NA	NR	10/10/2014	10/10/2014	-

- = no findings; GSI = gonadosomatic index; M = male; F = female; UD = undetermined; NA = not applicable; NR = gonad tissue not recovered; TI = gonad tissue too immature for gender determination

Table 1. Necropsy Results (Continued)

Species	Scientific Name	Animal ID#	Body Weight (g)	Gonad Weight (g)	GSI	Sex	Capture Date	Necropsy Date	Gross Finding
Bluefish	*Pomatomus saltatrix*	NBO3FBLS003-03	94.4	0.31	0.33%	F	10/10/2014	10/10/2014	Right ovary: enlarged and discolored
Bluefish	*Pomatomus saltatrix*	NBO3FBLS003-04	30.3	0.04	0.13%	TI	10/10/2014	10/10/2014	-
Butterfish	*Peprilus triacanthus*	BF01	25.6	UD	NA	NR	10/9/2014	10/9/2014	-
Butterfish	*Peprilus triacanthus*	BF02	67.8	UD	NA	NR	10/9/2014	10/9/2014	-
Gizzard Shad	*Dorosoma cepedianum*	GS01	22.3	0.01	0.04%	M	10/7/2014	10/7/2014	-
Spotted Hake	*Urophycis regia*	NBO3WHAN019	158	1.11	0.70%	F	10/9/2014	10/9/2014	-
Spotted Hake	*Urophycis regia*	HA01	103.3	0.68	0.66%	F	10/6/2014	10/6/2014	-
Hog Choker	*Trinectes maculatus*	HC01	53.2	0.01	0.02%	TI	10/6/2014	10/6/2014	-
Hog Choker	*Trinectes maculatus*	HC02	36.4	0.4	1.10%	F	10/6/2014	10/6/2014	-
Hog Choker	*Trinectes maculatus*	HC03	65.8	1.08	1.64%	F	10/7/2014	10/7/2014	-
Hog Choker	*Trinectes maculatus*	HC04	35.5	0.6	1.69%	F	10/7/2014	10/7/2014	-
Menhaden	*Brevoortia tyrannus*	NBO3WMES008-01	4.1	UD	NA	NR	10/10/2014	10/10/2014	-
Menhaden	*Brevoortia tyrannus*	NBO3WMES008-02	10.9	UD	NA	NR	10/10/2014	10/10/2014	-
Menhaden	*Brevoortia tyrannus*	NBO3WMES008-03	5.2	UD	NA	NR	10/10/2014	10/10/2014	-
Menhaden	*Brevoortia tyrannus*	NBO3WMES008-04	4.7	UD	NA	NR	10/10/2014	10/10/2014	-
Moonfish	*Selene setapinnis*	MF01	2.5	UD	NA	NR	10/7/2014	10/7/2014	-
Moonfish	*Selene setapinnis*	MF02	3.1	UD	NA	NR	10/9/2014	10/9/2014	-

- = no findings; GSI = gonadosomatic index; M = male; F = female; UD = undetermined; NA = not applicable; NR = gonad tissue not recovered; TI = gonad tissue too immature for gender determination

Table 1. Necropsy Results (Continued)

Species	Scientific Name	Animal ID#	Body Weight (g)	Gonad Weight (g)	GSI	Sex	Capture Date	Necropsy Date	Gross Finding
Moonfish	*Selene setapinnis*	MF03	7.2	UD	NA	NR	10/9/2014	10/9/2014	-
Moonfish	*Selene setapinnis*	MF04	6.4	UD	NA	NR	10/9/2014	10/9/2014	-
Moonfish	*Selene setapinnis*	MF05	3.5	UD	NA	NR	10/9/2014	10/9/2014	-
Mummichog	*Fundulus heteroclitus*	NBO3WMU131A-01	1.5	UD	NA	NR	10/10/2014	10/10/2014	-
Mummichog	*Fundulus heteroclitus*	NBO3WMU131A-02	0.6	UD	NA	NR	10/10/2014	10/10/2014	
Mummichog	*Fundulus heteroclitus*	NBO3WMUN015-01	7.6	0.12	1.58%	M	10/9/2014	10/9/2014	-
Mummichog	*Fundulus heteroclitus*	NBO3WMUN015-02	3.3	0.02	0.61%	F	10/9/2014	10/9/2014	-
Mummichog	*Fundulus heteroclitus*	NBO3WMUN015-03	13.2	UD	NA	NR	10/9/2014	10/9/2014	-
Naked Goby	*Gobiosoma bosc*	NG01	0.7	UD	NA	NR	10/8/2014	10/8/2014	-
Northern Kingfish	*Menticirrhus saxatilis*	NK01	4.3	UD	NA	NR	10/6/2014	10/6/2014	-
Northern Kingfish	*Menticirrhus saxatilis*	NK02	14	UD	NA	NR	10/8/2014	10/8/2014	-
Northern Kingfish	*Menticirrhus saxatilis*	NK03	5.8	0.01	0.17%	TI	10/8/2014	10/8/2014	-
Northern Kingfish	*Menticirrhus saxatilis*	NK04	57.5	0.11	0.19%	M	10/9/2014	10/9/2014	-
Northern Kingfish	*Menticirrhus saxatilis*	NK05	39.6	0.1	0.25%	M	10/9/2014	10/9/2014	-
Oyster Toadfish	*Opsanus tau*	OT01	181.2	UD	NA	NR	10/7/2014	10/7/2014	-
Oyster Toadfish	*Opsanus tau*	OT02	166.6	1.06	0.64%	M	10/7/2014	10/7/2014	-
Oyster Toadfish	*Opsanus tau*	OT03	148	7.94	5.36%	F	10/7/2014	10/7/2014	-
Oyster Toadfish	*Opsanus tau*	OT04	77.7	6.76	8.70%	F	10/7/2014	10/7/2014	-
Oyster Toadfish	*Opsanus tau*	OT05	185.7	14.89	8.02%	F	10/7/2014	10/7/2014	-

- = no findings; GSI = gonadosomatic index; M = male; F = female; UD = undetermined; NA = not applicable; NR = gonad tissue not recovered; TI = gonad tissue too immature for gender determination

Table 1. Necropsy Results (Continued)

Species	Scientific Name	Animal ID#	Body Weight (g)	Gonad Weight (g)	GSI	Sex	Capture Date	Necropsy Date	Gross Finding
Scup	*Stenotomus chrysops*	SC01	7.6	0.01	0.13%	TI	10/6/2014	10/6/2014	-
Scup	*Stenotomus chrysops*	SC02	10.9	0.01	0.09%	TI	10/9/2014	10/9/2014	-
Scup	*Stenotomus chrysops*	SC03	12.5	0.01	0.08%	TI	10/9/2014	10/9/2014	-
Scup	*Stenotomus chrysops*	SC04	13.6	UD	NA	NR	10/9/2014	10/9/2014	-
Scup	*Stenotomus chrysops*	SC05	10.6	UD	NA	NR	10/9/2014	10/9/2014	-
Scup	*Stenotomus chrysops*	SC06	15.3	UD	NA	NR	10/9/2014	10/10/2014	-
Scup	*Stenotomus chrysops*	SC07	17	0.01	0.06%	TI	10/9/2014	10/10/2014	-
Scup	*Stenotomus chrysops*	SC08	17.7	UD	NA	NR	10/9/2014	10/10/2014	-
Scup	*Stenotomus chrysops*	SC09	17.5	UD	NA	NR	10/9/2014	10/10/2014	-
Scup	*Stenotomus chrysops*	SC10	21.3	UD	NA	NR	10/9/2014	10/10/2014	-
Scup	*Stenotomus chrysops*	SC11	19	UD	NA	NR	10/9/2014	10/10/2014	-
Scup	*Stenotomus chrysops*	SC12	15.3	UD	NA	NR	10/9/2014	10/10/2014	-
Scup	*Stenotomus chrysops*	SC13	17.2	0.01	0.06%	TI	10/9/2014	10/10/2014	-
Scup	*Stenotomus chrysops*	SC14	16	UD	NA	NR	10/9/2014	10/10/2014	-
Scup	*Stenotomus chrysops*	SC15	13.2	UD	NA	NR	10/9/2014	10/10/2014	-
Scup	*Stenotomus chrysops*	SC16	12.5	UD	NA	NR	10/9/2014	10/10/2014	-
Scup	*Stenotomus chrysops*	SC17	17.7	UD	NA	NR	10/9/2014	10/10/2014	-
Scup	*Stenotomus chrysops*	SC18	14.6	UD	NA	NR	10/9/2014	10/10/2014	-
Scup	*Stenotomus chrysops*	SC19	14.4	UD	NA	NR	10/9/2014	10/10/2014	-

- = no findings; GSI = gonadosomatic index; M = male; F = female; UD = undetermined; NA = not applicable; NR = gonad tissue not recovered; TI = gonad tissue too immature for gender determination

Table 1. Necropsy Results (Continued)

Species	Scientific Name	Animal ID#	Body Weight (g)	Gonad Weight (g)	GSI	Sex	Capture Date	Necropsy Date	Gross Finding
Scup	*Stenotomus chrysops*	SC20	17.1	UD	NA	NR	10/9/2014	10/10/2014	-
Silver Perch	*Bairdiella chrysoura*	SP01	10.3	0.02	0.19%	TI	10/7/2014	10/7/2014	-
Silver Perch	*Bairdiella chrysoura*	SP02	9.9	0.04	0.40%	TI	10/7/2014	10/7/2014	-
Silver Perch	*Bairdiella chrysoura*	SP03	9.1	0.02	0.22%	TI	10/7/2014	10/7/2014	-
Silverside	*Menidia menidia*	NBO3WASN014-01	6.1	0.04	0.66%	M	10/9/2014	10/9/2014	-
Silverside	*Menidia menidia*	NBO3WASN014-02	6.9	0.03	0.43%	M	10/9/2014	10/9/2014	-
Silverside	*Menidia menidia*	NBO3WASN014-03	4.7	UD	NA	NR	10/9/2014	10/9/2014	-
Silverside	*Menidia menidia*	NBO3WASN014-04	5.4	UD	NA	NR	10/9/2014	10/9/2014	-
Silverside	*Menidia menidia*	NBO3WASN014-05	3.4	UD	NA	NR	10/9/2014	10/9/2014	-
Smallmouth Flounder	*Etropus microstomus*	SM01	1.4	UD	NA	NR	10/8/2014	10/8/2014	-
Smallmouth Flounder	*Etropus microstomus*	SM02	1.1	UD	NA	NR	10/8/2014	10/8/2014	-
Smallmouth Flounder	*Etropus microstomus*	SM03	1.9	UD	NA	NR	10/8/2014	10/8/2014	-
Striped Bass	*Morone saxatilis*	SB01	208	0.66	0.32%	M	10/7/2014	10/7/2014	-
Striped Bass	*Morone saxatilis*	SB02	189	0.87	0.46%	F	10/8/2014	10/8/2014	-
Striped Bass	*Morone saxatilis*	SB03	218	0.12	0.06%	M	10/8/2014	10/8/2014	-
Striped Bass	*Morone saxatilis*	SB04	318	0.85	0.27%	M	10/9/2014	10/10/2014	-
Striped Bass	*Morone saxatilis*	SB05	40	UD	NA	NR	10/10/2014	10/10/2014	-
Striped Killifish	*Fundulus majalis*	NBO3WSK130-01	7.7	0.08	1.04%	M	10/10/2014	10/10/2014	-

- = no findings; GSI = gonadosomatic index; M = male; F = female; UD = undetermined; NA = not applicable; NR = gonad tissue not recovered; TI = gonad tissue too immature for gender determination

Table 1. Necropsy Results (Continued)

Species	Scientific Name	Animal ID#	Body Weight (g)	Gonad Weight (g)	GSI	Sex	Capture Date	Necropsy Date	Gross Finding
Striped Killifish	*Fundulus majalis*	NBO3WSK130-02	6.9	0.09	1.30%	F	10/10/2014	10/10/2014	-
Striped Killifish	*Fundulus majalis*	NBO3WSK130-03	5.9	0.06	1.02%	F	10/10/2014	10/10/2014	-
Striped Killifish	*Fundulus majalis*	NBO3WSK130-04	6.7	0.08	1.19%	F	10/10/2014	10/10/2014	-
Striped Killifish	*Fundulus majalis*	NBO3WSK130-05	7.3	0.08	1.10%	F	10/10/2014	10/10/2014	-
Striped Sea Robin	*Prionotus evolans*	SR01	17.4	UD	NA	NR	10/7/2014	10/7/2014	-
Striped Sea Robin	*Prionotus evolans*	SR02	15.6	UD	NA	NR	10/7/2014	10/7/2014	-
Striped Sea Robin	*Prionotus evolans*	SR03	28.2	0.03	0.10%	TI	10/8/2014	10/8/2014	-
Striped Sea Robin	*Prionotus evolans*	SR04	34.3	0.05	0.15%	TI	10/8/2014	10/8/2014	-
Striped Sea Robin	*Prionotus evolans*	SR05	22.4	0.02	0.09%	TI	10/8/2014	10/8/2014	-
Summer Flounder	*Paralichthys dentatus*	NBO3WSFC004	94.1	0.07	0.07%	TI	10/9/2014	10/9/2014	-
Summer Flounder	*Paralichthys dentatus*	NBO3WSFC005	50.7	0.02	0.04%	TI	10/9/2014	10/9/2014	-
Summer Flounder	*Paralichthys dentatus*	NBO3WSFC003	145.8	0.16	0.11%	TI	10/9/2014	10/9/2014	-
Summer Flounder	*Paralichthys dentatus*	NBO3WSFN018	50.3	0.02	0.04%	TI	10/9/2014	10/9/2014	-
Summer Flounder	*Paralichthys dentatus*	NBO3WSFS001	60.7	0.07	0.12%	TI	10/9/2014	10/9/2014	-
Summer Flounder	*Paralichthys dentatus*	NBO3WSFS002	370	1.13	0.31%	F	10/9/2014	10/9/2014	-
Summer Flounder	*Paralichthys dentatus*	SF01	33.1	0.01	0.03%	TI	10/6/2014	10/6/2014	-
Summer Flounder	*Paralichthys dentatus*	SF02	82.3	0.01	0.01%	TI	10/6/2014	10/6/2014	-
Summer Flounder	*Paralichthys dentatus*	SF03	37.9	0.01	0.03%	TI	10/6/2014	10/6/2014	-
Weakfish	*Cynoscion regalis*	WE01	17.6	0.03	0.17%	TI	10/6/2014	10/6/2014	-

- = no findings; GSI = gonadosomatic index; M = male; F = female; UD = undetermined; NA = not applicable; NR = gonad tissue not recovered; TI = gonad tissue too immature for gender determination

Table 1. Necropsy Results (Continued)

Species	Scientific Name	Animal ID#	Body Weight (g)	Gonad Weight (g)	GSI	Sex	Capture Date	Necropsy Date	Gross Finding
Weakfish	*Cynoscion regalis*	WE02	21.8	0.05	0.23%	TI	10/6/2014	10/6/2014	-
Weakfish	*Cynoscion regalis*	WE03	46.7	0.02	0.04%	TI	10/6/2014	10/6/2014	Heart: 1mm pale nodule
Weakfish	*Cynoscion regalis*	WE04	22.7	0.03	0.13%	TI	10/6/2014	10/6/2014	Tail Fin: erosion
Weakfish	*Cynoscion regalis*	WE05	21.3	0.05	0.23%	TI	10/6/2014	10/6/2014	Skin of caudal peduncle: erosion
White Mullet	*Mugil curema*	WM01	29.6	UD	NA	NR	10/10/2014	10/10/2014	-
White Mullet	*Mugil curema*	WM02	26	UD	NA	NR	10/10/2014	10/10/2014	Ventral skin: anchor worm
White Mullet	*Mugil curema*	WM03	46.8	0.04	0.09%	TI	10/10/2014	10/10/2014	-
White Mullet	*Mugil curema*	WM04	23.9	0.05	0.21%	TI	10/10/2014	10/10/2014	Tail Fin: erosion
White Mullet	*Mugil curema*	WM05	14.7	UD	NA	NR	10/10/2014	10/10/2014	-
Windowpane Flounder	*Scophthalmus aquosus*	NBO3WWWN020	37	0.14	0.38%	F	10/9/2014	10/9/2014	-
Windowpane Flounder	*Scophthalmus aquosus*	NBO3WWWN021	28.3	UD	NA	NR	10/9/2014	10/9/2014	-
Windowpane Flounder	*Scophthalmus aquosus*	NBO3WWWN022	22.1	0.03	0.14%	M	10/9/2014	10/9/2014	-
Windowpane Flounder	*Scophthalmus aquosus*	NBO3WWWN023	6.5	UD	NA	NR	10/9/2014	10/9/2014	-
Windowpane Flounder	*Scophthalmus aquosus*	WW01	32.7	UD	NA	NR	10/6/2014	10/6/2014	-

- = no findings; GSI = gonadosomatic index; M = male; F = female; UD = undetermined; NA = not applicable; NR = gonad tissue not recovered; TI = gonad tissue too immature for gender determination

RESULTS AND DISCUSSION

Gross external and internal examinations revealed abnormal findings in 11 of 122 fish (9%). In 5 of 11 cases, findings consisted of external or internal parasite infections. Other findings included fin or skin erosions (three fish), pale nodular areas in the heart (two fish), and an enlarged and discolored right ovary (one fish).

Overall, most findings were of mild severity and likely of minimal pathological significance. One exception was a single American eel (*Anguilla rostrata*) in which the gas bladder was heavily infected by nematode parasites presumed to be *Anguillicoloides crassus*; these parasites have been reported to cause substantial debilitation in eels.[1,2]

Gonads were not recovered from 54 of 122 fish, and in 30 additional fish, the sex (gender) could not be determined. There were two reasons for this: 1) the majority of fish in this study were reproductively immature, and thus, the gonads typically consisted of fine strands of sexually undifferentiated tissue that were challenging to excise intact; and 2) in fewer instances, recovery of the gonads was hampered by post-mortem autolysis.

The fish collected and analyzed under this program represent the various types of fish that have been reported to occur in Newark Bay, including: 1) forage, predatory, benthic, demersal, and pelagic species, 2) both resident and migratory fish, and 3) a range of size and age within the fish sampled. Adequate replication was achieved per the QAPP specifications. The results show only low percentage incidences of relatively minor pathologies across this spectrum of species. Fish pathology examinations will continue in 2015 to complete the QAPP requirements, particularly evaluation of the first five fish obtained for each species and completion of the target goal of 20 summer flounder.

7-12-16

JEFFREY C. WOLF, DVM, Diplomate, ACVP — Date
Senior Pathologist

JCW/skh

REFERENCES

[1]Denny SK, Denny A, Paul T. (2013). Distribution, prevalence and intensity of *Anguillicoloides crassus* in the American eel, *Anguilla rostrata*, in the Bras d'Or Lakes, Nova Scotia. BioInvasions Records. **2(1):**19-26.

[2]Lefebvre F, Fazio G, Mounaix B, Crivelli AJ. (2013). Is the continental life of the European eel *Anguilla anguilla* affected by the parasitic invader *Anguillicoloides crassus*? Proc R Soc B**. 280:**20122916. http://dx.doi.org/10.1098/rspb.2012.2916.

REASON(S) FOR CHANGE

This report was amended due to the following reasons:

- Replaced "Necropsy Report" and "Necropsy Summary" with "Pathology Report" and "Pathology Summary" throughout.
- Page 1, Methods section, 1st paragraph: Revised third sentence and deleted last sentence.
- Page 10, Results and Discussion section, last paragraph: Revised last sentence.
- Added Appendix B: Specimen Data Forms.

JEFFREY C. WOLF, DVM, Diplomate, ACVP
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7-12-16
Date

APPENDIX A: FIGURES AND LEGENDS

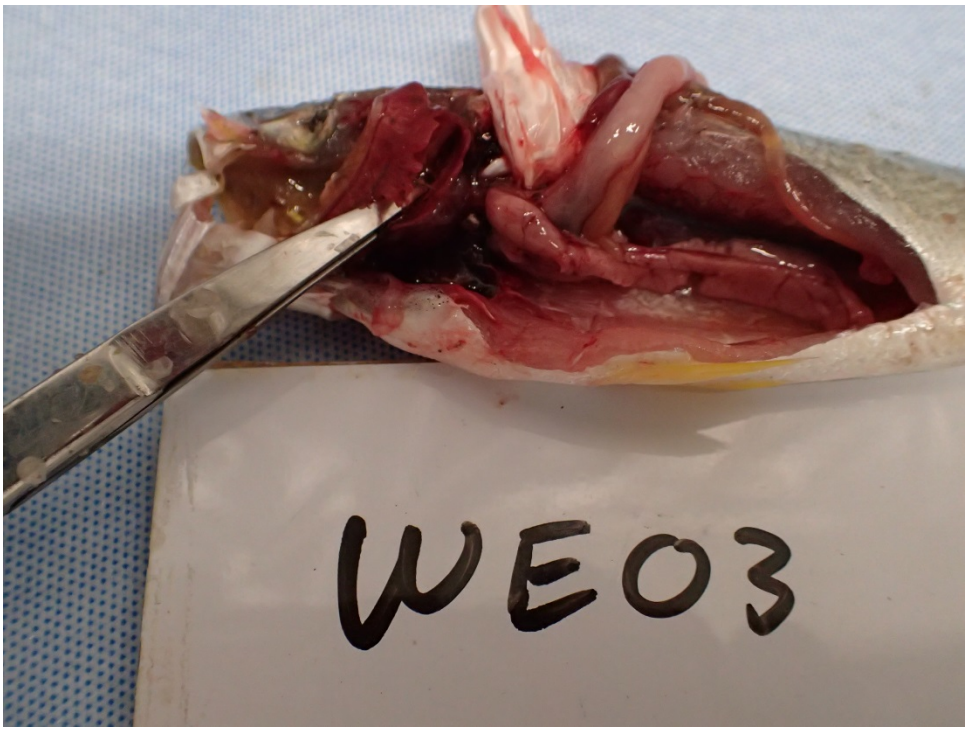


Figure 1. Nodule in the heart of a weakfish, Animal ID: WE03. Difficult to appreciate in this image.

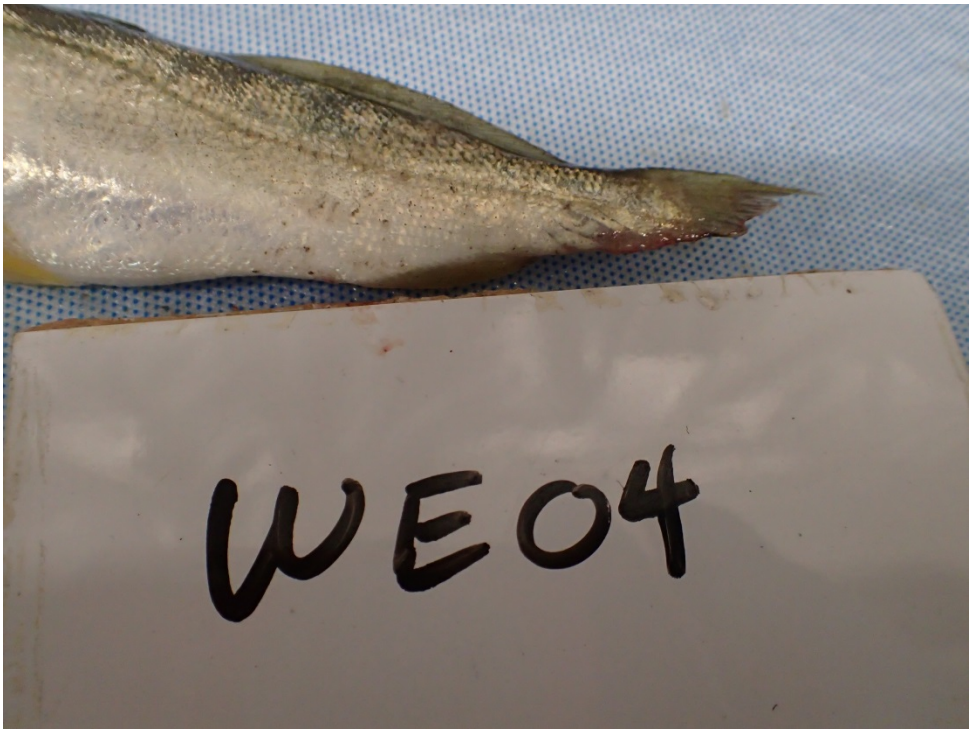


Figure 2. Tail erosion in a weakfish, Animal ID: WE04.



Figure 3. Skin erosion at the caudal peduncle in a weakfish, Animal ID: WE05.

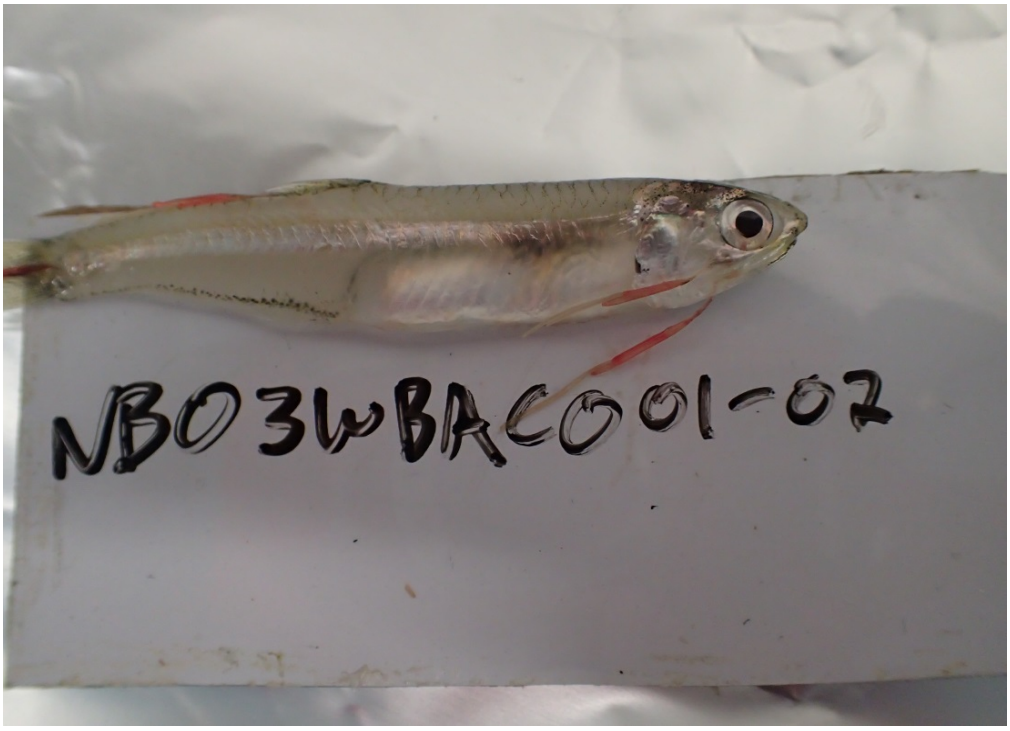


Figure 4. Anchor worms attached to the dorsum and head of a bay anchovy, Animal ID: NB03WBAC001-02.

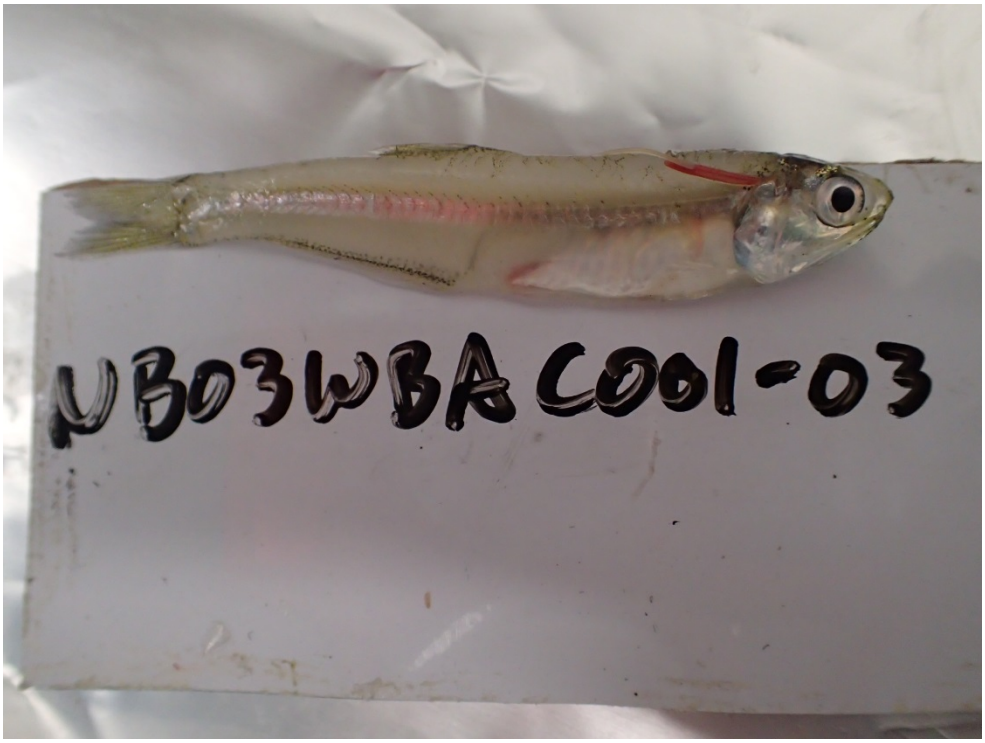


Figure 5. Anchor worm attached to the head of a bay anchovy, Animal ID: NB03WBAC001-03.

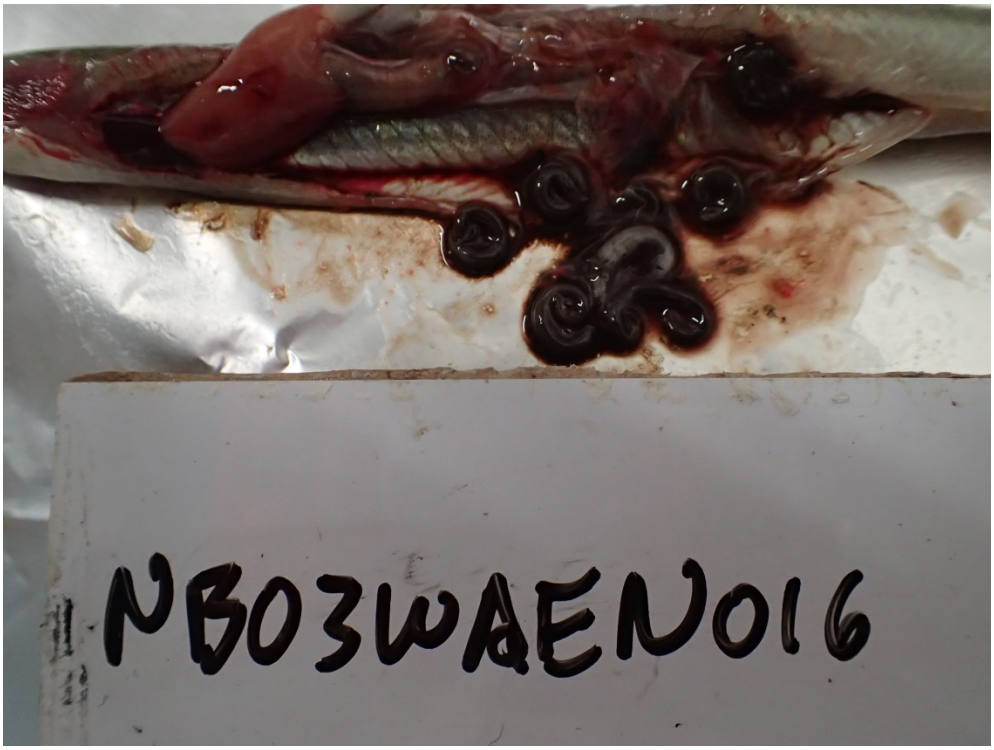


Figure 6. Nematodes in the gas bladder of an American eel, Animal ID: NB03WAEN017. Note: The Animal ID in the photograph is incorrect.



Figure 7. Isopod in the branchial cavity of a bluefish, Animal ID: NB03FBLS003-01.



Figure 8. Enlarged discolored right ovary in a bluefish, Animal ID: NB03FBLS003-03.



Figure 9. Anchor worm attached to the ventrum of a white mullet, Animal ID: WM02.

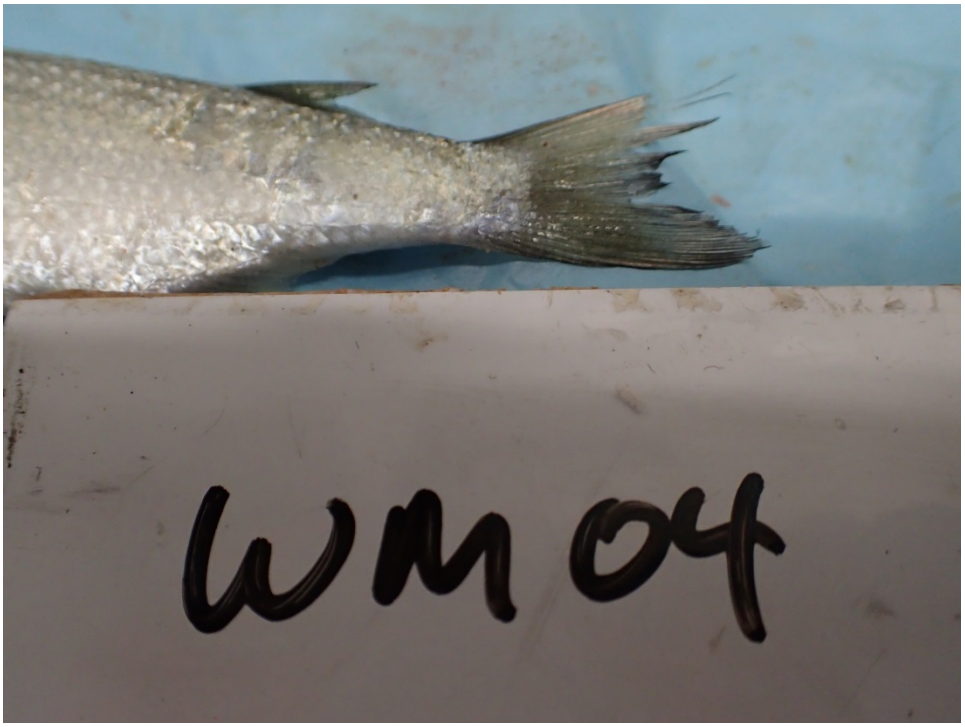


Figure 10. Tail erosion in a white mullet, Animal ID: WM04.

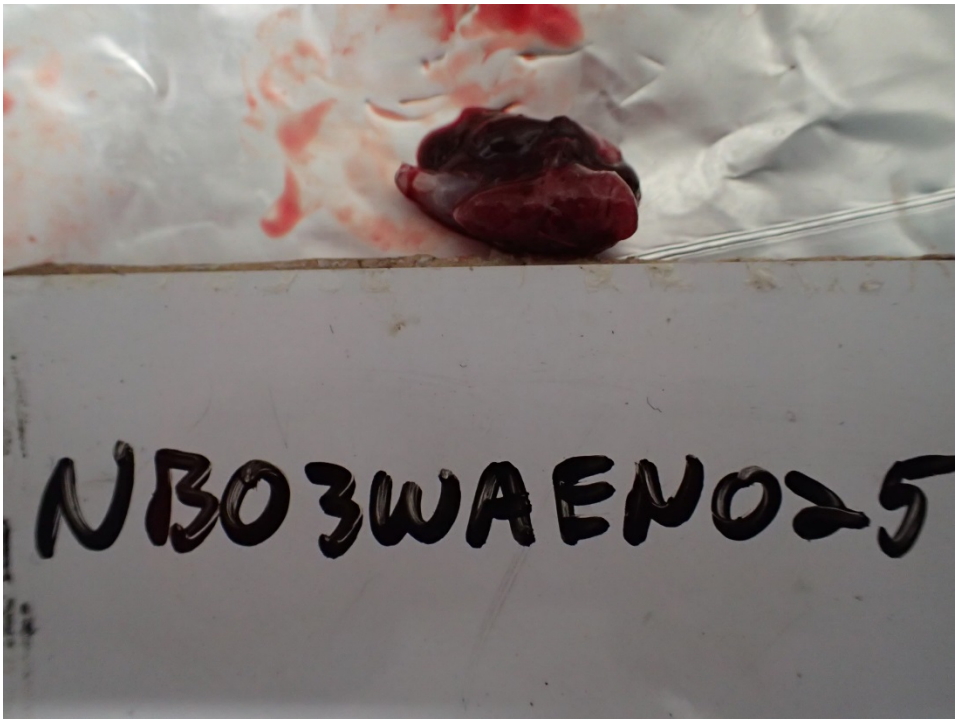


Figure 11. Pale nodule in the heart of an American eel, Animal ID: NB03WAEN025.

APPENDIX B: SPECIMEN DATA FORMS

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-6-14	Examined By:	Camera: NE (b) NA
Exam Date: 10-6-14	Recorded By:	Photo numbers: NE (b) NA
Sex: F	Body Weight (g): 103.3	Tissues Photographed: NE (b) NA
Specimen ID: NB03WHAN001 (d) (b)	Gonad Weight (g): 0.65	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
✓	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES	
✓	Unremarkable	✓	Unremarkable	✓	Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody	✓	Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	(c) NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
	Empty	✓	Unremarkable	TESTIS	
✓	Full		Pale	NA	Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: (a) RE JW 10-6-14 (b) NA = habit JW 10-6-14 (c) RE JW 10-6-14			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

(d) Specimen ID corrected based on client review JW 6-14-14

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-6-14	Examined By:	Camera: NE ⑤ ⑥ NA
Exam Date: 10-6-14	Recorded By:	Photo numbers: NE ⑤ NA
Sex: Too immature to sex UD	Body Weight (g): 7.6 ②	Tissues Photographed: NE NA
Specimen ID: SC01 ①	Gonad Weight (g): 0.01	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable	NE ③	Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy		Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
✓	Empty	✓	Unremarkable	TESTIS UD	
	Full		Pale	NE ③	Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: ⓐ Rewritten for clarity DW 10-6-14			
	Mucous	⑤ RE DW 10-6-14 ⓒ RE DW 10-6-14 ⓓ SC = Scup DW 10-6-14			
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-6-14	Examined By:	Camera: NA
Exam Date: 10-6-14	Recorded By:	Photo numbers: NA
Sex: Gonad not observed UD	Body Weight (g): 4.3	Tissues Photographed: NA
Specimen ID: NKD1 (b)	Gonad Weight (g): -.00 UD	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
(c) NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody	✓	Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	(d)	PYLORIC CAECA
	Parasites		Growths	NK	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
✓	Empty	✓	Unremarkable	TESTIS UD	
	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: @ RE JW 10-6-14 ©RE JW 10-6-14			
	Mucous	(b) NK = Northern Khafish JW 10-6-14 @RE JW 10-6-14			
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-6-14	Examined By:	Camera: NA
Exam Date: 10-6-14	Recorded By:	Photo numbers: NA
Sex: F	Body Weight (g): 36.4	Tissues Photographed: NA
Specimen ID: HC07 (2)	Gonad Weight (g): 0.40	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scollosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES	
✓	Unremarkable	✓	Unremarkable	✓	Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy		Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	NA	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
✓	Empty	✓	Unremarkable	TESTIS	
	Full		Pale	NA	Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
	Empty		Parasites (urinary bladder)		
✓	Food	COMMENTS: @ HC = hog chokers TW 10-6-14			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-6-14	Examined By:	Camera: NA
Exam Date: 10-6-14	Recorded By:	Photo numbers: NA
Sex: Too immature to sex UD	Body Weight (g): 53.2	Tissues Photographed: NA
Specimen ID: HC01 (a)	Gonad Weight (g): 0.01	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody	✓	Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	NA	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
✓	Empty	✓	Unremarkable	TESTIS UD	
✓	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
✓	Food	COMMENTS: (a) HC = hog ~~chocker~~ Chicken (b) JW 10-6-14 (b) RE JW 10-6-14			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-6-14	Examined By:	Camera: NA
Exam Date: 10-6-14	Recorded By:	Photo numbers: NA
Sex: could not locate gonads UD	Body Weight (g): 32.7	Tissues Photographed: NA
Specimen ID: WF01 WW01 (a) (b)	Gonad Weight (g): UD	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy		Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	NA	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
	Empty	✓	Unremarkable	TESTIS UD	
✓	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
	Empty		Parasites (urinary bladder)		
✓	Food	COMMENTS: (a) RE TW 10-6-14			
	Mucous	(b) WW = Windowpane Flounder TW 10-6-14			
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

(c) Duplicate footnote reprinted inadvertently TW 10-20-14

(a) RE TW 10-6-14 (c)

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-6-14	Examined By:	Camera: NA
Exam Date: 10-6-14	Recorded By:	Photo numbers: NA
Sex: Too immature to sex UD	Body Weight (g): 37.9	Tissues Photographed: NA
Specimen ID: SF03 (a)	Gonad Weight (g): 0.01	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy		Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	NA	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
(a) ✓	Empty	✓	Unremarkable	TESTIS UD	
✓	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constricted
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
	Empty		Parasites (urinary bladder)		
✓	Food	COMMENTS: (a) SF = Summer flounder TW 10-6-14			
	Mucous	(b) Duplicate footnote recorded inadvertently TW 10-20-14			
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

(a) RE TW 10-6-14 (b)

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-6-14	Examined By:	Camera: NA
Exam Date: 10-6-14	Recorded By:	Photo numbers: NA
Sex: Too Immature to tell UD	Body Weight (g): 21.8	Tissues Photographed: NA
Specimen ID: WE03 (b)	Gonad Weight (g): 0.05	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS (a)		✓	Unremarkable		Head-tail whirling
NA ✓	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable	NA	Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
✓	Empty	✓	Unremarkable	TESTIS UD	
	Full		Pale	NE (c)	Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: (a) RE TW 10-6-14			
	Mucous	(b) WE = Weakfish TW 10-6-14 (c) RE TW 10-6-14			
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

(c) RE TW 10-6-14

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-6-14	Examined By:	Camera: Olympus T6 3
Exam Date: 10-6-14	Recorded By:	Photo numbers: 1
Sex: Too immature to sex UD	Body Weight (g): 46.7	Tissues Photographed: Heart
Specimen ID: WE 03 (b)	Gonad Weight (g): 0.02	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scollosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reorlented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES (a) UD	
✓	Unremarkable	✓	Unremarkable	NE	Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
✓	Empty	✓	Unremarkable	TESTIS (a) UD	
	Full		Pale	NE	Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts	Heart, liver pale nodule	
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: (a) RE TW 10-6-14			
	Mucous	(b) WE = weakfish TW 10-6-14			
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-6-14	Examined By:	Camera: NA
Exam Date: 10-6-14	Recorded By:	Photo numbers: NA
Sex: Too immature to tell UD	Body Weight (g): 17.6	Tissues Photographed: NA
Specimen ID: WE.01 (b)	Gonad Weight (g): 0103	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS (a)		✓	Unremarkable		Head-tail whirling
NA ✓	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable	NE (a)	Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy		Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Cerold Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
✓	Empty	✓	Unremarkable	TESTIS (a) UD	
	Full		Pale	NE	Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: @RE JW 10-6-14		©Duplicate footnote recorded inadvertently JW 10-30-14	
	Mucous	ⓑ WE = weakfish JW 10-6-14			
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

@RE JW 10-6-14 ©

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-6-14	Examined By:	Camera: Olympus TG3
Exam Date: 10-6-14	Recorded By:	Photo numbers: 3.
Sex: Too Immature to sex (UD)	Body Weight (g): 22.7	Tissues Photographed: Tail fin
Specimen ID: WE04 (b)	Gonad Weight (g): 0.03	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	✓	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites	✓	Frayed – eroded Tail		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed		Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths	✓	Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable	NE (a)	Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
✓	Empty	✓	Unremarkable	TESTIS UD	
	Full		Pale	NE (a)	Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: (a) RE TW 10-6-14			
	Mucous	(b) WE = Wet weight TW 10-6-14			
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-6-14	Examined By:	Camera: Olympus T63
Exam Date: 10-6-14	Recorded By:	Photo numbers: 3
Sex: Too Immature to sex UD	Body Weight (g): 21.3	Tissues Photographed: Skin
Specimen ID: WE06 (2)	Gonad Weight (g): 0.105	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract		Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
✓	Wounds Dorsal peduncle		Parasites	✓	Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
✓	Empty	✓	Unremarkable	TESTIS UD	
	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
✓	Food	COMMENTS: (2) WE = weathfish DW 10-6-14			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-6-14	Examined By:	Camera: NA
Exam Date: 10-6-14	Recorded By:	Photo numbers: NA
Sex: Too Immature to sex UD	Body Weight (g): 33.1	Tissues Photographed: NA
Specimen ID: SF01 B	Gonad Weight (g): 0.01	

EXTERNAL PHYSICAL EXAMINATION

BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION

BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	NA	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
✓	Empty	✓	Unremarkable	TESTIS UD	
	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: @SF = Summer flounder JW 10-6-14			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-6-14	Examined By:	Camera: NA
Exam Date: 10-6-14	Recorded By:	Photo numbers: NA
Sex: Too Immature to sex UD	Body Weight (g): 82.3	Tissues Photographed: NA
Specimen ID: SFO2 (a)	Gonad Weight (g): 0.01	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody	✓	Mucous		Ripe
	Fluid – cloudy		Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	NA	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
	Empty	✓	Unremarkable	TESTIS UD	
✓	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: (a) SF = Summer flounder JW 10-6-14			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-7-14	Examined By:	Camera: NA
Exam Date: 10-7-14	Recorded By:	Photo numbers: NA
Sex: M	Body Weight (g): 205.0	Tissues Photographed: NA
Specimen ID: SB01 @	Gonad Weight (g): 0.66	

EXTERNAL PHYSICAL EXAMINATION

BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION

BODY CAVITY		INTESTINES		OVARIES	
✓	Unremarkable	✓	Unremarkable	NA	Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy		Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
✓	Empty	✓	Unremarkable	TESTIS	
	Full		Pale	✓	Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
✓	Food	COMMENTS: @ SB = striped bass JW 10-7-14			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-7-14	Examined By:	Camera: NA
Exam Date: 10-7-14	Recorded By:	Photo numbers: NA
Sex: Gonad not recovered UD	Body Weight (g): 181.2	Tissues Photographed: NA
Specimen ID: @OT01	Gonad Weight (g): UD	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	NA	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
✓	Empty	✓	Unremarkable	TESTIS UD	
	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: @OT = oyster toadfish JW 10-7-14			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-7-14	Examined By:	Camera: NA
Exam Date: 10-7-14	Recorded By:	Photo numbers: NA
Sex: M	Body Weight (g): 166.0 166.6	Tissues Photographed: NA
Specimen ID: OT02 (a)	Gonad Weight (g): 1.026 (b)	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES	
✓	Unremarkable	✓	Unremarkable	NA	Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	NA	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
✓	Empty	✓	Unremarkable	TESTIS	
	Full		Pale		Immature
	Yellow		Swollen	✓	Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: (a) OT = oyster toadfish DW 10-7-14			
	Mucous	(b) Body weight corrected based on client review DW 6-14-16			
	Fluid	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			
	Hemorrhagic				

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-7-14	Examined By:	Camera: NA
Exam Date: 10-7-14	Recorded By:	Photo numbers: NA
Sex: F	Body Weight (g): 148.10	Tissues Photographed: NA
Specimen ID: OTO3 (2)	Gonad Weight (g): 7.94	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES	
✓	Unremarkable	✓	Unremarkable	✓	Immature
	Fluid – clear		Flaccid	✓	Mature
	Fluid – bloody	✓	Mucous	✓	Ripe
	Fluid – cloudy		Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	NA	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
✓	Empty	✓	Unremarkable	TESTIS	
	Full		Pale	NA	Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: (2) OT = oyster toadfish SW 10-7-14			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-7-14	Examined By:	Camera: NA
Exam Date: 10-7-14	Recorded By:	Photo numbers: NA
Sex: F	Body Weight (g): 77.7	Tissues Photographed: NA
Specimen ID: OT04 (ex)	Gonad Weight (g): 6.76	

EXTERNAL PHYSICAL EXAMINATION

BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION

BODY CAVITY		INTESTINES		OVARIES	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid	✓	Mature
	Fluid – bloody		Mucous	✓	Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	NA	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
✓	Empty	✓	Unremarkable	TESTIS	
	Full		Pale	NA	Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: (ex) OT = cyster headfish TW 10-7-14			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-7-14	Examined By:	Camera: NA
Exam Date: 10-7-14	Recorded By:	Photo numbers: NA
Sex: F	Body Weight (g): 185.7	Tissues Photographed: NA
Specimen ID: OTO5 (a)	Gonad Weight (g): 14.89	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scollosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid	✓	Mature
	Fluid – bloody		Mucous	✓	Ripe
	Fluid – cloudy		Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	NA	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
✓	Empty	✓	Unremarkable	TESTIS	
	Full		Pale	NA	Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: @OT= Oyster toadfish JW 10-7-14			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-7-14	Examined By:	Camera: NA
Exam Date: 10-7-14	Recorded By:	Photo numbers: NA
Sex: M	Body Weight (g): 22.3	Tissues Photographed: NA
Specimen ID: GS01 @	Gonad Weight (g): 0.01	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES	
✓	Unremarkable	✓	Unremarkable	NA	Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
UD	Empty	✓	Unremarkable	TESTIS	
	Full		Pale	✓	Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: @ GS = gizzard shad JW 10-7-14			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-7-14	Examined By:	Camera: NA
Exam Date: 10-7-14	Recorded By:	Photo numbers: NA
Sex: UD Too immature to sex	Body Weight (g): 10.3	Tissues Photographed: NA
Specimen ID: SP01 (b)	Gonad Weight (g): 0.02	

EXTERNAL PHYSICAL EXAMINATION

BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION

BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	(a) PYLORIC CAECA	
	Parasites		Growths	(a) ✓	Unremarkable
GALLBLADDER		KIDNEYS		NA	Parasites
✓	Empty	✓	Unremarkable	TESTIS UD	
	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: (a) RE TW 10-7-14			
	Mucous	(b) SP = silver perch TW 10-7-14			
	Fluid	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			
	Hemorrhagic				

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-7-14	Examined By:	Camera: NA
Exam Date: 10-7-14	Recorded By:	Photo numbers: NA
Sex: UD Too immature to sex	Body Weight (g): 9.9	Tissues Photographed: NA
Specimen ID: SF02 @	Gonad Weight (g): 0.04	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
UD	Empty	✓	Unremarkable	TESTIS UD	
	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: @ SF = silver perch DW 10-7-14			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-7-14	Examined By:	Camera: NA
Exam Date: 10-7-14	Recorded By:	Photo numbers: NA
Sex: UD Too immature to sex	Body Weight (g): 9.1	Tissues Photographed: NA
Specimen ID: SP03 (2)	Gonad Weight (g): 0.07	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody	✓	Mucous		Ripe
	Fluid – cloudy		Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
✓	Empty	✓	Unremarkable	TESTIS UD	
	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: (2) SP = Silver perch JW 10-7-14			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-7-14	Examined By:	Camera: NA
Exam Date: 10-7-14	Recorded By:	Photo numbers: NA
Sex: UD Gonads not recovered	Body Weight (g): 17.4	Tissues Photographed: NA
Specimen ID: SR01 (b)	Gonad Weight (g): UD	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy		Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	NA	Unremarkable		
	Growths		Fluid	(a) PYLORIC CAECA	
	Parasites		Growths	NA ✓	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
✓	Empty	✓	Unremarkable	TESTIS UD	
	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: (a) RE TW 10-7-14 (b) SR = striped sea robin TW 10-7-14			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-7-14	Examined By:	Camera: NA
Exam Date: 10-7-14	Recorded By:	Photo numbers: NA
Sex: UD Gonads not recovered	Body Weight (g): 1516	Tissues Photographed: NA
Specimen ID: SR02 @	Gonad Weight (g):	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy		Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	NA	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	✓	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
✓	Empty	✓	Unremarkable	TESTIS UD	
	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constricted
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: @ SR = Striped sea robin JW 10-7-14			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-7-14	Examined By:	Camera: NA
Exam Date: 10-7-14	Recorded By:	Photo numbers: NA
Sex: UD Gonads not recovered	Body Weight (g): 2.5	Tissues Photographed: NA
Specimen ID: MF01 (a)	Gonad Weight (g): UD	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
UD	Empty	✓	Unremarkable	TESTIS UD	
	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: (a) MF = Mountain Whitefish JW 10-7-14			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-7-14	Examined By:	Camera: NA
Exam Date: 10-7-14	Recorded By:	Photo numbers: NA
Sex: F	Body Weight (g): 69.3	Tissues Photographed: NA
Specimen ID: NC03 (b)	Gonad Weight (g): 0.43 1.08 (a)	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid	✓	Mature
	Fluid – bloody		Mucous	✓	Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	NA	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
UD	Empty	✓	Unremarkable	TESTIS	
	Full		Pale	NA	Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: (a) RE JW 10-7-14			
	Mucous	(b) NC = hog choker JW 10-7-14			
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-7-14	Examined By:	Camera: NA
Exam Date: 10-7-14	Recorded By:	Photo numbers: NA
Sex: F	Body Weight (g): 35.5	Tissues Photographed: NA
Specimen ID: HC04 @	Gonad Weight (g): 0.60	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid	✓	Mature
	Fluid – bloody		Mucous	✓	Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	NA	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
UD	Empty	✓	Unremarkable	TESTIS	
	Full		Pale	NA	Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: @ HC = hog chalker TW 10-7-14			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-8-14	Examined By:	Camera: NA
Exam Date: 10-8-14	Recorded By:	Photo numbers: NA
Sex: UD Too Immature to sex	Body Weight (g): 5.8	Tissues Photographed: NA
Specimen ID: NK03 (a)	Gonad Weight (g): 0.01	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
✓	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy		Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	(b) PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
UD	Empty	✓	Unremarkable	TESTIS UD	
	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: (a) NK = northern kingfish TW 10-8-14			
	Mucous	(b) RE TW 10-8-14			
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-5-14	Examined By:	Camera: NA
Exam Date: 10-5-14	Recorded By:	Photo numbers: NA
Sex: M	Body Weight (g): 218	Tissues Photographed: NA
Specimen ID: SB03 @	Gonad Weight (g): 0.12	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES	
✓	Unremarkable	✓	Unremarkable	NA	Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
	Empty	✓	Unremarkable	TESTIS	
✓	Full		Pale	✓	Immature
	Yellow		Swollen		Mature
✓	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: @SB = striped bass DW 10-5-14			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-8-14	Examined By:	Camera: NA
Exam Date: 10-8-14	Recorded By:	Photo numbers: NA
Sex: UD Gonad not recovered	Body Weight (g): 14.0	Tissues Photographed: NA
Specimen ID: NK02 (b)	Gonad Weight (g): UD	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
✓	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable	(c)	Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	(c) NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
✓	Empty	✓	Unremarkable	TESTIS UD	
	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
✓	Food	COMMENTS: (a) RE JW 10-8-14 (b) NK = northern kingfish JW 10-8-14 (c) RE JW 10-8-14			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-8-14	Examined By:	Camera: NA
Exam Date: 10-8-14	Recorded By:	Photo numbers: NA
Sex: UD Gonad not recovered	Body Weight (g): 5.3	Tissues Photographed: NA
Specimen ID: BS01 (a)	Gonad Weight (g): UD	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody	✓	Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
UD	Empty	✓	Unremarkable	TESTIS UD	
	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: @BS = black sea bass AW 10-8-14			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-03-14	Examined By:	Camera: NA
Exam Date: 10-8-14	Recorded By:	Photo numbers: NA
Sex: UD Gonad not recovered	Body Weight (g): 1.9	Tissues Photographed: NA
Specimen ID: SM03 @	Gonad Weight (g): UD	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	NA	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
UD	Empty	✓	Unremarkable	TESTIS UD	
	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: @SM = Smallmouth flounder JW 10-8-14			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-8-14	Examined By:	Camera: NA
Exam Date: 10-8-14	Recorded By:	Photo numbers: NA
Sex: UD Gonad not recovered	Body Weight (g): 1.1	Tissues Photographed: NA
Specimen ID: SMO2 (b)	Gonad Weight (g): UD	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	(a) PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	NA UD	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy		Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	NA	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
UD	Empty	✓	Unremarkable	TESTIS UD	
	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: (a) RE JW 10-8-14			
	Mucous	(b) SM = small mouth flounder JW 10-8-14 (c)			
	Fluid	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			
	Hemorrhagic	(c) RE JW 10-8-14			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-5-14	Examined By:	Camera: NA
Exam Date: 10-5-14	Recorded By:	Photo numbers: NA
Sex: UD Gonad Not Recovered	Body Weight (g): 1.4	Tissues Photographed: NA
Specimen ID: SM01 @	Gonad Weight (g): UD	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NA	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	NA	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
UD	Empty	✓	Unremarkable	TESTIS UD	
	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constricted
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: @SM = smallmouth flounder TW 10-8-14			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-5-14	Examined By:	Camera: NA
Exam Date: 10-5-14	Recorded By:	Photo numbers: NA
Sex: UD Gonad not recovered	Body Weight (g): 0.7	Tissues Photographed: NA
Specimen ID: NG01 (2)	Gonad Weight (g): UD	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	UD	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy		Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	UD	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
UD	Empty	✓	Unremarkable	TESTIS UD	
	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: NG = naked goby DW 10-8-14			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-5-14	Examined By:	Camera: NA
Exam Date: 10-5-14	Recorded By:	Photo numbers: NA
Sex: UD Too immature to sex	Body Weight (g): 22.4	Tissues Photographed: NA
Specimen ID: SR05 (a)	Gonad Weight (g): 0.02	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy		Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	✓	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
✓	Empty	✓	Unremarkable	TESTIS UD	
	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
	Empty		Parasites (urinary bladder)		
✓	Food	COMMENTS: @ SR = Striped Sea robin DW 10-8-14			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-8-14	Examined By:	Camera: NA
Exam Date: 10-8-14	Recorded By:	Photo numbers: NA
Sex: UD Two immature to check	Body Weight (g): 34.3	Tissues Photographed: NA
Specimen ID: SR04 @	Gonad Weight (g): 0.05	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	✓	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
✓	Empty	✓	Unremarkable	TESTIS UD	
	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
	Empty		Parasites (urinary bladder)		
✓	Food	COMMENTS: @ SR = Striped Sea robin JW 10-8-14			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-5-14	Examined By:	Camera: NA
Exam Date: 10-5-14	Recorded By:	Photo numbers: NA
Sex: UD Too immature to sex	Body Weight (g): ~~38.6~~ 28.2	Tissues Photographed: NA
Specimen ID: SR03 (b)	Gonad Weight (g): 0.03 (c)	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reorlented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody	✓	Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	(a) GAS BLADDER			III
	Enlarged	NA	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	✓	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
✓	Empty	✓	Unremarkable	TESTIS UD	
	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
~	Empty		Parasites (urinary bladder)		
	Food	COMMENTS:			
	Mucous	(a) RE JW 10-8-14			
	Fluid	(b) SR = striped sea robin JW 10-5-14			
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

(c) Body weight corrected based on client review JW 6-14-19

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES

Collection Date: 10-9-14	Examined By:	Camera: NA
Exam Date: 10-9-14	Recorded By:	Photo numbers: NA
Sex: F	Body Weight (g): 158	Tissues Photographed: NA
Specimen ID: NBO3LKSAN019 (b) HA (a)	Gonad Weight (g): 1.41	

EXTERNAL PHYSICAL EXAMINATION

BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
✓	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION

BODY CAVITY		INTESTINES		OVARIES	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid	✓	Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy		Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	✓	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
✓	Empty	✓	Unremarkable	TESTIS	
	Full		Pale	NA	Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
	Empty		Parasites (urinary bladder)		
✓	Food	COMMENTS	(a) RE TW 10-9-14		
	Mucous		(b) HA = hake TW 10-9-14		
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES

Collection Date: 10-4-14	Examined By:	Camera: NA
Exam Date: 10-4-14	Recorded By:	Photo numbers: (b) NA
Sex: M	Body Weight (g): 340	Tissues Photographed: ~~Swim Bladder~~ (b) NA
Specimen ID: NB03WAENO16 (c)	Gonad Weight (g): 0.12	

EXTERNAL PHYSICAL EXAMINATION

BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION

BODY CAVITY		INTESTINES		OVARIES (a)	
✓	Unremarkable	✓	Unremarkable	NA	Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
	Empty	✓	Unremarkable	TESTIS	
✓	Full		Pale		Immature
	Yellow		Swollen	✓	Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: (a) RE JW 10-9-14 (c) AE = Amerlinn 221 JW 10-9-14			
	Mucous	(b) RE JW 10-9-14			
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-8-14	Examined By:	Camera: NA
Exam Date: 10-8-14	Recorded By:	Photo numbers: NA
Sex: F	Body Weight (g): 189	Tissues Photographed: NA
Specimen ID: SB02 @	Gonad Weight (g): 0.87	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES	
✓	Unremarkable	✓	Unremarkable	✓	Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody	✓	Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
	Empty	✓	Unremarkable	TESTIS	
✓	Full		Pale	NA	Immature
	Yellow		Swollen		Mature
✓	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: @ SB = striped bass JW 10-8-14			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES

Collection Date: 10-9-14	Examined By:	Camera: TG3 Olympus
Exam Date: 10-9-14	Recorded By:	Photo numbers: 6
Sex: UD Gonads Not Recovered	Body Weight (g): 27.9	Tissues Photographed: Swim Bladder Parasites
Specimen ID: NB03WAEN017	Gonad Weight (g): UD	

EXTERNAL PHYSICAL EXAMINATION

BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION

BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody	✓	Mucous		Ripe
	Fluid – cloudy		Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER See other			III
	Enlarged		Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
UD	Empty	✓	Unremarkable	TESTIS UD	
	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts	Gas (swim) Bladder Parasites	
	Empty		Parasites (urinary bladder)		
✓	Food	COMMENTS: (12) AE = American eel TW 10-9-14			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-9-14	Examined By:	Camera: NA
Exam Date: 10-9-14	Recorded By:	Photo numbers: NA
Sex: F	Body Weight (g): 37.0	Tissues Photographed: NA
Specimen ID: NBO3WWWN0720 @	Gonad Weight (g): 0.14	

EXTERNAL PHYSICAL EXAMINATION		
BODY FORM	**ISTHMUS**	**BRANCHIAL CAVITY**
✓ Unremarkable	✓ Unremarkable	✓ Unremarkable
Emaciated	Enlarged	Growths
Truncate	Hemorrhagic	Parasites
Scoliosis	**EYES**	**UROGENITAL OPENING**
Lordosis	✓ Unremarkable	✓ Unremarkable
BODY SURFACE	Popeye	Inflamed
✓ Unremarkable	Cloudy cornea	**ANUS**
Raised scales	Missing	✓ Unremarkable
Swollen	Lens deformed	Inflamed
Lesions	Lens parasites	**LESIONS – Location(s)**
Excess mucous	Lens cataract	NA Fins
Reoriented scales	**FINS**	Head
Growths	✓ Unremarkable	Eyes
Parasites	Frayed – eroded	Mouth
Wounds	Parasites	Peduncle
Wounds - lamprey	Hemorrhagic	Ventral
LIPS AND JAWS	Gas Bubbles	Dorsal
✓ Unremarkable	**FINS - ERODED**	Lateral
Deformed	NA Dorsal	**BEHAVIOR**
Growths	Pectoral	NE Gasping
SNOUT	Pelvic	Flashing
✓ Unremarkable	Anal	Lethargic
Pugnose (Pughead)	Adipose	Fin twitching
Growths	Caudal	Convulsions
Abrasions	**GILLS**	Head Up-Tail Down
BARBELS	✓ Unremarkable	Head-tail whirling
NA Unremarkable	Bright red	Pectoral fins folded forwarded
Deformed	Brown	Belly up
Missing	Gas bubbles	Loss of balance
OPERCLE	Parasites	Long axis whirling
✓ Unremarkable	**PSEUDOBRANCH**	**OTHER OBSERVATIONS**
Incomplete	✓ Unremarkable	
Deformed	Enlarged	

INTERNAL PHYSICAL EXAMINATION		
BODY CAVITY	**INTESTINES**	**OVARIES**
✓ Unremarkable	✓ Unremarkable	✓ Immature
Fluid – clear	Flaccid	Mature
Fluid – bloody	Mucous	Ripe
Fluid – cloudy	✓ Feces	Reabsorbing
Adhesions	Fluid	Growth
MESENTERIC FAT	Hemorrhagic	**MUSCLE**
✓ Unremarkable	Parasites	✓ Unremarkable
None	**SPLEEN**	Soft
Excessive	✓ Unremarkable	Parasites
LIVER	Enlarged	**TUMORS**
✓ Unremarkable	Shrunken	NA Liver
Discolored	Discolored	I Baumann
Yellowish	Ceroid Pigment Centers	II Scale
Pale	**GAS BLADDER**	III
Enlarged	NA Unremarkable	
Growths	Fluid	**PYLORIC CAECA**
Parasites	Growths	NA Unremarkable
GALLBLADDER	**KIDNEYS**	Parasites
✓ Empty	✓ Unremarkable	**TESTIS**
Full	Pale	NA Immature
Yellow	Swollen	Mature
Green	Soft	Ripe
Enlarged	Hemorrhagic	Constructed
Parasites	Stones	Growth
STOMACH	Growths	**OTHER OBSERVATIONS**
✓ Unremarkable	Cysts	
Empty	Parasites (urinary bladder)	
✓ Food	COMMENTS: @ WW = Windowpane flounder TW 10-9-14	
✓ Mucous		
Fluid		
Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined	

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES

Collection Date: 10-9-14	Examined By:	Camera: NA
Exam Date: 10-9-14	Recorded By:	Photo numbers: NA
Sex: UD Gonad Not Recovered	Body Weight (g): 28.3	Tissues Photographed: NA
Specimen ID: NB03WWN021 (a)	Gonad Weight (g): UD	

EXTERNAL PHYSICAL EXAMINATION

BODY FORM		**ISTHMUS**		**BRANCHIAL CAVITY**	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	**EYES**		**UROGENITAL OPENING**	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	**ANUS**	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	**LESIONS – Location(s)**	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	**FINS**			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	**FINS - ERODED**			Lateral
	Deformed	NA	Dorsal	**BEHAVIOR**	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	**GILLS**			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	**PSEUDOBRANCH**		**OTHER OBSERVATIONS**	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION

BODY CAVITY		**INTESTINES**		**OVARIES** UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	**MUSCLE**	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	**SPLEEN**			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	**TUMORS**	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	**GAS BLADDER**			III
	Enlarged	NA	Unremarkable		
	Growths		Fluid	**PYLORIC CAECA**	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		**KIDNEYS**			Parasites
UD	Empty	✓	Unremarkable	**TESTIS** UD	
	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	**OTHER OBSERVATIONS**	
✓	Unremarkable		Cysts		
	Empty		Parasites (urinary bladder)		
✓	Food	**COMMENTS:** (a) WW = window pane flounder JE 10-9-14			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-9-14	Examined By:	Camera: NA
Exam Date: 10-9-14	Recorded By:	Photo numbers: NA
Sex: NB03WWWW023 ⓒ M	Body Weight (g): 22.1	Tissues Photographed: NA
Specimen ID: NB03WWWW022 ⓐⓑ	Gonad Weight (g): 0.03	

EXTERNAL PHYSICAL EXAMINATION

BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION

BODY CAVITY		INTESTINES		OVARIES	
✓	Unremarkable	✓	Unremarkable	NA	Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	NA	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
	Empty	✓	Unremarkable	TESTIS	
✓	Full		Pale	✓	Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
	Empty		Parasites (urinary bladder)		
✓	Food	COMMENTS: ⓐ RE TW 10-9-14 ⓑ WW = Willowpane Hts Elementary TW 10-9-14			
✓	Mucous	ⓒ RE TW 10-9-14 ⓓ RE TW 10-9-14			
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-9-14	Examined By:	Camera: NA
Exam Date: 10-9-14	Recorded By:	Photo numbers: NA
Sex: UD Gonad Not Recovered	Body Weight (g): 6.5	Tissues Photographed: NA
Specimen ID: NBO3WSHNO14 (a) HA (b)	Gonad Weight (g): UD	

NBO3WSHWNO23d

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reorlented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NB	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Cerold Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	NA	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA ✓	Unremarkable
GALLBLADDER		KIDNEYS		(c)	Parasites
UD	Empty	NA	Unremarkable	TESTIS UD	
	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: (a) SH = hake JW 10-9-14 (c) RE JW 10-9-14			
	Mucous	(b) ~~Corrected to~~ HA = hake JW ~~10-9-14~~ (c) WW = whitebone flounder			
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

(d) Specimen ID corrected based on client review JW 6-14-16
(e) Species corrected based on client review JW 6-14-16

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES

Collection Date: 10-9-14	Examined By:	Camera: NA
Exam Date: 10-9-14	Recorded By:	Photo numbers: NA
Sex: UD Two Immature to sex	Body Weight (g): 50.3	Tissues Photographed: NA
Specimen ID: NB03WSFN018 (a)	Gonad Weight (g): 0.07	

EXTERNAL PHYSICAL EXAMINATION

BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION

BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	NA	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
✓	Empty	✓	Unremarkable	TESTIS UD	
✓	Full		Pale		Immature
✓	Yellow		Swollen		Mature
✓	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS	SF = Summer flounder RW 10-9-14		
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES

Collection Date: 10-9-14	Examined By:	Camera: NA
Exam Date: 10-9-14	Recorded By:	Photo numbers: NA
Sex: UD Gonad Not Recovered	Body Weight (g): 9.2	Tissues Photographed: NA
Specimen ID: B503 @	Gonad Weight (g): UD	

EXTERNAL PHYSICAL EXAMINATION

BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION

BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy		Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
	Empty	✓	Unremarkable	TESTIS UD	
✓	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: @ BS = black sea bass DW 10-9-14			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-9-14	Examined By:	Camera: NA
Exam Date: 10-9-14	Recorded By:	Photo numbers: NA
Sex: UD Gonads Not Recovered	Body Weight (g): 6.4 (a) 7.2	Tissues Photographed: NA
Specimen ID: MF03 (b)	Gonad Weight (g): UD	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
UD	Empty	✓	Unremarkable	TESTIS UD	
	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
	Empty		Parasites (urinary bladder)		
✓	Food	COMMENTS:			
	Mucous	(a) RE JW 10-9-14		© Footnote date entered incorrectly JW 10-20-14	
	Fluid	(b) MF = moonfish JW 10-9-14			
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-9-14	Examined By:	Camera: NA
Exam Date: 10-9-14	Recorded By:	Photo numbers: NA
Sex: UD Too immature to sex	Body Weight (g): 10.9	Tissues Photographed: NA
Specimen ID: 5402 (b)	Gonad Weight (g): 0.01	

EXTERNAL PHYSICAL EXAMINATION

BODY FORM	ISTHMUS	BRANCHIAL CAVITY
✓ Unremarkable	✓ Unremarkable	✓ Unremarkable
Emaciated	Enlarged	Growths
Truncate	Hemorrhagic	Parasites
Scoliosis	EYES	UROGENITAL OPENING
Lordosis	✓ Unremarkable	✓ Unremarkable
BODY SURFACE	Popeye	Inflamed
✓ Unremarkable	Cloudy cornea	ANUS
Raised scales	Missing	✓ Unremarkable
Swollen	Lens deformed	Inflamed
Lesions	Lens parasites	LESIONS – Location(s)
Excess mucous	Lens cataract	NA Fins
Reoriented scales	FINS	Head
Growths	✓ Unremarkable	Eyes
Parasites	Frayed – eroded	Mouth
Wounds	Parasites	Peduncle
Wounds - lamprey	Hemorrhagic	Ventral
LIPS AND JAWS	Gas Bubbles	Dorsal
✓ Unremarkable	FINS - ERODED	Lateral
Deformed	NA Dorsal	BEHAVIOR
Growths	Pectoral	NE Gasping
SNOUT	Pelvic	Flashing
✓ Unremarkable	Anal	Lethargic
Pugnose (Pughead)	Adipose	Fin twitching
Growths	Caudal	Convulsions
Abrasions	GILLS	Head Up-Tail Down
BARBELS	✓ Unremarkable	Head-tail whirling
NA Unremarkable	Bright red	Pectoral fins folded forwarded
Deformed	Brown	Belly up
Missing	Gas bubbles	Loss of balance
OPERCLE	Parasites	Long axis whirling
✓ Unremarkable	PSEUDOBRANCH	OTHER OBSERVATIONS
Incomplete	✓ Unremarkable	
Deformed	Enlarged	

INTERNAL PHYSICAL EXAMINATION

BODY CAVITY	INTESTINES	OVARIES UD
✓ Unremarkable	✓ Unremarkable	Immature
Fluid – clear	Flaccid	Mature
Fluid – bloody	Mucous	Ripe
Fluid – cloudy	✓ Feces	Reabsorbing
Adhesions	Fluid	Growth
MESENTERIC FAT	Hemorrhagic	MUSCLE
✓ Unremarkable	Parasites	✓ Unremarkable
None	SPLEEN	Soft
Excessive	✓ Unremarkable	Parasites
LIVER	Enlarged	TUMORS
✓ Unremarkable	Shrunken	NA Liver
Discolored	Discolored	I Baumann
Yellowish	Ceroid Pigment Centers	II Scale
Pale	GAS BLADDER	III
Enlarged	✓ Unremarkable	
Growths	Fluid	PYLORIC CAECA
Parasites	Growths	NA Unremarkable
(a) GALLBLADDER	KIDNEYS	Parasites
✓ Empty	✓ Unremarkable	TESTIS UD
✓ Full	Pale	Immature
Yellow	Swollen	Mature
Green	Soft	Ripe
Enlarged	Hemorrhagic	Constructed
Parasites	Stones	Growth
STOMACH	Growths	OTHER OBSERVATIONS
✓ Unremarkable	Cysts	
✓ Empty	Parasites (urinary bladder)	
Food		
Mucous		
Fluid		
Hemorrhagic		

COMMENTS: 14© (a) RE DW 10-9-14 (b) SL = Scup DW 10-9-14
© Footnote date entered incorrectly DW 10-20-14

NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES

Collection Date: 10-9-14	Examined By:	Camera: NA
Exam Date: 10-9-14	Recorded By:	Photo numbers: NA
Sex: M	Body Weight (g): 3.0	Tissues Photographed: NA
Specimen ID: MB03WBAC001-04 @	Gonad Weight (g): 0.01	

EXTERNAL PHYSICAL EXAMINATION

BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION

BODY CAVITY		INTESTINES		OVARIES	
✓	Unremarkable	✓	Unremarkable	NA	Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody	✓	Mucous		Ripe
	Fluid – cloudy		Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
UD	Empty	✓	Unremarkable	TESTIS	
	Full		Pale		Immature
	Yellow		Swollen	✓	Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
~	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: @ BA = bay anchovy TW 10-9-14			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES

Collection Date: 10-9-14	Examined By:	Camera: NA
Exam Date: 10-9-14	Recorded By:	Photo numbers: NA
Sex: UD Gonad Not Recovered	Body Weight (g): 25.6	Tissues Photographed: NA
Specimen ID: BF01 @	Gonad Weight (g): UD	

EXTERNAL PHYSICAL EXAMINATION

BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION

BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
	Empty	✓	Unremarkable	TESTIS UD	
✓	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: @ BF = butterfish DW 10-9-14			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES

Collection Date: 10-9-14	Examined By:	Camera: NA
Exam Date: 10-9-14	Recorded By:	Photo numbers: NA
Sex: UD Gonads Not Recovered	Body Weight (g): 67.5	Tissues Photographed: NA
Specimen ID: BF07 (2)	Gonad Weight (g): UD	

EXTERNAL PHYSICAL EXAMINATION

BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION

BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody	✓	Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
✓	Empty	✓	Unremarkable	TESTIS UD	
	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
✓	Food	COMMENTS: (2) BF = butterfish JW 10-9-14			
✓	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-9-14	Examined By:	Camera: NA
Exam Date: 10-9-14	Recorded By: (a)	Photo numbers: NA (b)
Sex: UD Too Immature to sex	Body Weight (g): 13.6 12.3	Tissues Photographed: NA
Specimen ID: SG03 (c)	Gonad Weight (g): 0.01	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
✓	Empty	✓	Unremarkable	TESTIS UD	
	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: (a) RE JW 10-9-14			
	Mucous	(b) RE JW 10-9-14 (c) SL = SLUP JW 10-9-14			
	Fluid	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			
	Hemorrhagic				

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-9-14	Examined By:	Camera: NA
Exam Date: 10-9-14	Recorded By:	Photo numbers: NA
Sex: UD Gonad not recovered	Body Weight (g): 13.6	Tissues Photographed: NA
Specimen ID: SC04 (SC)	Gonad Weight (g): UD	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
✓	Empty	✓	Unremarkable	TESTIS UD	
	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
	Empty		Parasites (urinary bladder)		
✓	Food	COMMENTS: @ SC = scup TW 10-9-14			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-9-14	Examined By:	Camera: NA
Exam Date: 10-9-14	Recorded By:	Photo numbers: NA
Sex: UD Gonad Not Recovered	Body Weight (g): ~~10.9~~ 10.6 (b)	Tissues Photographed: NA
Specimen ID: SC05 (a)	Gonad Weight (g): UD	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
✓	Empty	✓	Unremarkable	TESTIS UD	
	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
✓	Food	COMMENTS: @SC = Scup JW 10-9-14			
	Mucous	(b) Body weight corrected based on client review JW 6-14-16			
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-9-14	Examined By:	Camera: NA
Exam Date: 10-9-14	Recorded By:	Photo numbers: NA
Sex: UD Gonad Not Retrieved	Body Weight (g): 6.6	Tissues Photographed: NA
Specimen ID: BS02 @	Gonad Weight (g): UD	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody	✓	Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
✓	Empty	✓	Unremarkable	TESTIS UD	
✓	Full		Pale		Immature
✓	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
✓	Food	COMMENTS: @ BS = black sea bass JN 10-9-14			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-9-14	Examined By:	Camera: NA
Exam Date: 10-9-14	Recorded By:	Photo numbers: NA
Sex: UD Gonad NOT Recovered	Body Weight (g): 3.1	Tissues Photographed: NA
Specimen ID: MF02 (a)	Gonad Weight (g): UD	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody	✓	Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Cerold Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
✓	Empty	✓	Unremarkable	TESTIS UD	
	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
	Empty		Parasites (urinary bladder)		
✓	Food	COMMENTS: (a) MF = mountfish stu 10-9-14			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-9-14	Examined By:	Camera: NA
Exam Date: 10-9-14	Recorded By:	Photo numbers: NA
Sex: UD Gonad Not Removed	Body Weight (g): 6.4	Tissues Photographed: NA
Specimen ID: MF04 (b)	Gonad Weight (g): UD	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable	(a) X	Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy		Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
UD	Empty	✓	Unremarkable	TESTIS UD	
	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
✓	Food	COMMENTS: (a) RE JW 10-9-14			
	Mucous	(b) MF = mooneye JW 10-9-14			
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-9-14	Examined By:	Camera: NA
Exam Date: 10-9-14	Recorded By:	Photo numbers: NA
Sex: UD Gonad Not Recovered	Body Weight (g): 3.5	Tissues Photographed: NA
Specimen ID: MF-05 @	Gonad Weight (g): UD	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NA	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy		Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
✓	Empty	✓	Unremarkable	TESTIS UD	
✓	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: @ MF = moonfish JW 10-9-14			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES

Collection Date: 10-9-14	Examined By: [illegible]	Camera: NA
Exam Date: 10-9-14	Recorded By: [illegible]	Photo numbers: NA
Sex: M	Body Weight (g): 57.5	Tissues Photographed: NA
Specimen ID: NK04 (12)	Gonad Weight (g): 0.11	

EXTERNAL PHYSICAL EXAMINATION

BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
✓	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION

BODY CAVITY		INTESTINES		OVARIES	
✓	Unremarkable	✓	Unremarkable	NA	Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody	✓	Mucous		Ripe
	Fluid – cloudy		Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	✓	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
✓	Empty	✓	Unremarkable	TESTIS	
✓	Full		Pale	✓	Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS @NK = northern kingfish TW 10-9-14			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-9-14	Examined By:	Camera: NA
Exam Date: 10-9-14	Recorded By:	Photo numbers: NA
Sex: M	Body Weight (g): 39.6	Tissues Photographed: NA
Specimen ID: NK05 @	Gonad Weight (g): 0.10	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
✓	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES	
✓	Unremarkable	✓	Unremarkable	NA	Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy		Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	✓	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
✓	Empty	✓	Unremarkable	TESTIS	
	Full		Pale	✓	Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: @NK = Northern kingfish TW 10-9-14			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES

Collection Date: 10-9-14	Examined By:	Camera: NA
Exam Date: 10-9-14	Recorded By:	Photo numbers: NA
Sex: M	Body Weight (g): 4.6	Tissues Photographed: NA
Specimen ID: NB03WBAC001-01 @	Gonad Weight (g): 0.01	

EXTERNAL PHYSICAL EXAMINATION

BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION

BODY CAVITY		INTESTINES		OVARIES	
✓	Unremarkable	✓	Unremarkable	NA	Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody	✓	Mucous		Ripe
	Fluid – cloudy		Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
UD	Empty	✓	Unremarkable	TESTIS	
	Full		Pale		Immature
	Yellow		Swollen	✓	Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: @ BA = bay anchovy JW 10-9-14			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-9-14	Examined By:	Camera: Olympus TG-3
Exam Date: 10-9-14	Recorded By:	Photo numbers: 4
Sex: M	Body Weight (g): 3.0	Tissues Photographed: Skin
Specimen ID: NB03WBA2009-02 (2)	Gonad Weight (g): 0.03	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scollosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract		Fins
	Reoriented scales	FINS		✓	Head
	Growths	✓	Unremarkable		Eyes
✓	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles	✓	Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES	
✓	Unremarkable	✓	Unremarkable	NA	Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy		Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
UD	Empty	✓	Unremarkable	TESTIS	
	Full		Pale		Immature
	Yellow		Swollen	✓	Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: @ BA = bay anchovy TW 10-9-14			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-9-14	Examined By:	Camera: Olympus TG3
Exam Date: 10-9-14	Recorded By:	Photo numbers: 5
Sex: M	Body Weight (g): 2.14	Tissues Photographed: Sb. M
Specimen ID: PB03WBA(001-03 @	Gonad Weight (g): 0.01	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract		Fins
	Reoriented scales	FINS		✓	Head
	Growths	✓	Unremarkable		Eyes
✓	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles	✓	Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES	
✓	Unremarkable	✓	Unremarkable	NA	Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody	✓	Mucous		Ripe
	Fluid – cloudy		Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
UD	Empty	✓	Unremarkable	TESTIS	
	Full		Pale		Immature
	Yellow		Swollen	✓	Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: @ BA = bay anchovy SW 10-9-14			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-9-14	Examined By:	Camera: NA
Exam Date: 10-9-14	Recorded By:	Photo numbers: NA
Sex: M	Body Weight (g): 2.7	Tissues Photographed: NA
Specimen ID: NBO3WBAC001-05 (a)	Gonad Weight (g): 0.01	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES	
✓	Unremarkable	✓	Unremarkable	NA	Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody	✓	Mucous		Ripe
	Fluid – cloudy		Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
UD	Empty	✓	Unremarkable	TESTIS	
	Full		Pale		Immature
	Yellow		Swollen	✓	Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: @ BA = bay anchovy JW 10-9-14			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-9-14	Examined By:	Camera: NA
Exam Date: 10-9-14	Recorded By:	Photo numbers: NA
Sex: Tot: Immature 10 sex	Body Weight (g): 25.2	Tissues Photographed: NA
Specimen ID: NB03FBLC002 (2)	Gonad Weight (g): 0.02	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
✓	Empty	✓	Unremarkable	TESTIS UD	
	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: (2) BL= bluefish DV 10-9-14			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-9-14	Examined By:	Camera: NA
Exam Date: 10-9-14	Recorded By:	Photo numbers: NA
Sex: UD Too Immature to Sex	Body Weight (g): 145.8	Tissues Photographed: NA
Specimen ID: NB 0305FC003 (2)	Gonad Weight (g): 0.16	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody	✓	Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	NA	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
	Empty	✓	Unremarkable	TESTIS UD	
✓	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: @ SF = Summer flounder TW 10-9-14			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-9-14	Examined By:	Camera: NA
Exam Date: (b) 10-9-14	Recorded By:	Photo numbers: NA
Sex: F M	Body Weight (g): 6.1	Tissues Photographed: NA
Specimen ID: NBO3WASN014-01 (c)	Gonad Weight (g): 0.104	

EXTERNAL PHYSICAL EXAMINATION

BODY FORM	ISTHMUS	BRANCHIAL CAVITY
✓ Unremarkable	✓ Unremarkable	✓ Unremarkable
Emaciated	Enlarged	Growths
Truncate	Hemorrhagic	Parasites
Scoliosis	EYES	UROGENITAL OPENING
Lordosis	✓ Unremarkable	✓ Unremarkable
BODY SURFACE	Popeye	Inflamed
✓ Unremarkable	Cloudy cornea	ANUS
Raised scales	Missing	✓ Unremarkable
Swollen	Lens deformed	Inflamed
Lesions	Lens parasites	LESIONS – Location(s)
Excess mucous	Lens cataract	NA Fins
Reoriented scales	FINS	Head
Growths	✓ Unremarkable	Eyes
Parasites	Frayed – eroded	Mouth
Wounds	Parasites	Peduncle
Wounds - lamprey	Hemorrhagic	Ventral
LIPS AND JAWS	Gas Bubbles	Dorsal
✓ Unremarkable	FINS - ERODED	Lateral
Deformed	NA Dorsal	BEHAVIOR
Growths	Pectoral	NE Gasping
SNOUT	Pelvic	Flashing
✓ Unremarkable	Anal	Lethargic
Pugnose (Pughead)	Adipose	Fin twitching
Growths	Caudal	Convulsions
Abrasions	GILLS	Head Up-Tail Down
BARBELS	✓ Unremarkable	Head-tail whirling
NA Unremarkable	Bright red	Pectoral fins folded forwarded
Deformed	Brown	Belly up
Missing	Gas bubbles	Loss of balance
OPERCLE	Parasites	Long axis whirling
✓ Unremarkable	PSEUDOBRANCH	OTHER OBSERVATIONS
Incomplete	✓ Unremarkable	
Deformed	Enlarged	

INTERNAL PHYSICAL EXAMINATION

BODY CAVITY	INTESTINES	OVARIES
✓ Unremarkable	✓ Unremarkable	(b) ✓ Immature
Fluid – clear	Flaccid	✓ Mature
Fluid – bloody	Mucous	Ripe
Fluid – cloudy	Feces	Reabsorbing
Adhesions	Fluid	Growth
MESENTERIC FAT	Hemorrhagic	MUSCLE
✓ Unremarkable	Parasites	✓ Unremarkable
None	SPLEEN	Soft
Excessive	✓ Unremarkable	Parasites
LIVER	Enlarged	TUMORS
✓ Unremarkable	Shrunken	NA Liver
Discolored	Discolored	I Baumann
Yellowish	Ceroid Pigment Centers	II Scale
Pale	GAS BLADDER	III
Enlarged	✓ Unremarkable	
Growths	Fluid	PYLORIC CAECA
Parasites	Growths	NA Unremarkable
GALLBLADDER	KIDNEYS	Parasites
(d) MUD Empty	✓ Unremarkable	TESTIS
Full	Pale	(b) NA Immature
Yellow	Swollen	✓ Mature
Green	Soft	Ripe
Enlarged	Hemorrhagic	Constructed
Parasites	Stones	Growth
STOMACH	Growths	OTHER OBSERVATIONS
✓ Unremarkable	Cysts	
✓ Empty	Parasites (urinary bladder)	
Food		
Mucous		
Fluid		
Hemorrhagic		

(a) COMMENTS: (a) RE TW 10-9-14 (b) RE TW 10-9-14
(c) AS = silverside TW 10-9-14 (d) Rewritten for clarity TW 10-9-14

NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES

Collection Date: 10-9-14	Examined By:	Camera: NA
Exam Date: 10-9-14	Recorded By:	Photo numbers: NA
Sex: UD Too Immature to Sex	Body Weight (g): 50.7	Tissues Photographed: NA
Specimen ID: NB03WSFC004	Gonad Weight (g): 0.62	

(c) NB03WSFC005 (c)

EXTERNAL PHYSICAL EXAMINATION

BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION

BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy		Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	(d) NA	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
✓	Empty	✓	Unremarkable	TESTIS UD	
	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
✓	Food	COMMENTS: (a) RE DW 10-9-14			
	Mucous	(b) SF = Summer flounder DW 10-20-14			
	Fluid	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			
	Hemorrhagic				

(c) Specimen ID corrected based on client review DW 6-14-16

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-9-14	Examined By:	Camera: NA
Exam Date: 10-9-14	Recorded By:	Photo numbers: NA
Sex: UD Too Immature to sex	Body Weight (g): 94.1	Tissues Photographed: NA
Specimen ID: NB03WSFC0004 (a)	Gonad Weight (g): 0.07	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody	✓	Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	NA	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
	Empty	✓	Unremarkable	TESTIS UD	
✓	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
	Empty		Parasites (urinary bladder)		
✓	Food	COMMENTS: @ SF = Summer flounder JW 10-9-14			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-9-14	Examined By:	Camera: NA
Exam Date: 10-9-14	Recorded By:	Photo numbers: NA
Sex: M	Body Weight (g): 6.9	Tissues Photographed: NA
Specimen ID: NB036UASN014-02 (2)	Gonad Weight (g): 0.03	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES	
✓	Unremarkable	✓	Unremarkable	NA	Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy		Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
UD	Empty	✓	Unremarkable	TESTIS	
	Full		Pale		Immature
	Yellow		Swollen	✓	Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: @AS = silverside AW 10-9-14			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-9-14	Examined By:	Camera: NA
Exam Date: 10-9-14	Recorded By:	Photo numbers: NA
Sex: UD Gonad Not Received	Body Weight (g): 4.7	Tissues Photographed: NA
Specimen ID: NB03WASSN014-05 (22)	Gonad Weight (g): UD	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy		Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
UD	Empty	✓	Unremarkable	TESTIS UD	
	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: @AS = silverside dw 10-9-14			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES

Collection Date: 10-9-14	Examined By:	Camera: NA
Exam Date: 10-9-14	Recorded By:	Photo numbers: NA
Sex: UD Gonad Not Recovered	Body Weight (g): 5.4	Tissues Photographed: NA
Specimen ID: NB03WASN2014-04@	Gonad Weight (g): UD	

@ AS = silverside JW 10-9-14

EXTERNAL PHYSICAL EXAMINATION

BODY FORM		**ISTHMUS**		**BRANCHIAL CAVITY**	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	**EYES**		**UROGENITAL OPENING**	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	**ANUS**	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	**LESIONS – Location(s)**	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	**FINS**			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	**FINS - ERODED**			Lateral
	Deformed	NA	Dorsal	**BEHAVIOR**	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	**GILLS**			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	**PSEUDOBRANCH**		**OTHER OBSERVATIONS**	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION

BODY CAVITY		**INTESTINES**		**OVARIES** UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	**MUSCLE**	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	**SPLEEN**			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	**TUMORS**	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	**GAS BLADDER**			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	**PYLORIC CAECA**	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		**KIDNEYS**			Parasites
UD	Empty	✓	Unremarkable	**TESTIS** UD	
	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	**OTHER OBSERVATIONS**	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	**COMMENTS:**			
	Mucous				
	Fluid	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			
	Hemorrhagic				

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-9-14	Examined By:	Camera: NA
Exam Date: 10-9-14	Recorded By:	Photo numbers: NA
Sex: UD Gonads Not Recovered	Body Weight (g): 6.1 (a) 3.4	Tissues Photographed: NA
Specimen ID: NT03WASN014-06 (b)	Gonad Weight (g): UD	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy		Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
UD	Empty	✓	Unremarkable	TESTIS UD	
	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: (a) RE DW 10-9-14			
	Mucous	(b) AS = Silverside DW 10-9-14			
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-9-14	Examined By:	Camera: NA
Exam Date: 10-9-14	Recorded By:	Photo numbers: NA
Sex: M	Body Weight (g): 7.6	Tissues Photographed: NA
Specimen ID: NB03WMUN015-01 (a)	Gonad Weight (g): 0.12	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES	
✓	Unremarkable	✓	Unremarkable	NA	Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
UD	Empty	✓	Unremarkable	TESTIS	
	Full		Pale		Immature
	Yellow		Swollen	✓	Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
✓	Food	COMMENTS: (a) MU = mummichog JW 10-9-14			
✓	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-9-14	Examined By:	Camera: NA
Exam Date: 10-9-14	Recorded By:	Photo numbers: NA
Sex: F	Body Weight (g): 3.3	Tissues Photographed: NA
Specimen ID: NB03WMUNC15-02 @	Gonad Weight (g): 0.02	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES	
✓	Unremarkable	✓	Unremarkable	✓	Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
UD	Empty	✓	Unremarkable	TESTIS	
	Full		Pale	NA	Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: @MU = mummichog TW 10-9-14			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-9-14	Examined By:	Camera: NA
Exam Date: 10-9-14	Recorded By:	Photo numbers: NA
Sex: UD Too Immature to Sex	Body Weight (g): 60.7	Tissues Photographed: NA
Specimen ID: NB03WSFS001 @	Gonad Weight (g): 0.07	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy		Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	NA	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
✓	Empty	✓	Unremarkable	TESTIS UD	
	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: @SF = Summer Flounder JW 10-9-14			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES

Collection Date: 10-9-14	Examined By:	Camera: NA
Exam Date: 10-9-14	Recorded By:	Photo numbers: NA
Sex: F	Body Weight (g): 370	Tissues Photographed: NA
Specimen ID: NB03W5F5002 @	Gonad Weight (g): 1.13	

EXTERNAL PHYSICAL EXAMINATION

BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION

BODY CAVITY		INTESTINES		OVARIES	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid	✓	Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	NA	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
	Empty	✓	Unremarkable	TESTIS	
✓	Full		Pale	NA	Immature
	Yellow		Swollen		Mature
✓	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: @SF = Summer flounder AW 10-9-14			
	Mucous				
	Fluid	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			
	Hemorrhagic				

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES

Collection Date: 10-9-14	Examined By:	Camera: NA
Exam Date: 10-9-14	Recorded By:	Photo numbers: NA
Sex: UD Gonad Not Recovered	Body Weight (g): 13.2	Tissues Photographed: NA
Specimen ID: NG03WMUN015-03 (a)	Gonad Weight (g): UD	

EXTERNAL PHYSICAL EXAMINATION

BODY FORM	ISTHMUS	BRANCHIAL CAVITY
✓ Unremarkable	✓ Unremarkable	✓ Unremarkable
Emaciated	Enlarged	Growths
Truncate	Hemorrhagic	Parasites
Scoliosis	EYES	UROGENITAL OPENING
Lordosis	✓ Unremarkable	✓ Unremarkable
BODY SURFACE	Popeye	Inflamed
✓ Unremarkable	Cloudy cornea	ANUS
Raised scales	Missing	✓ Unremarkable
Swollen	Lens deformed	Inflamed
Lesions	Lens parasites	LESIONS – Location(s)
Excess mucous	Lens cataract	NA Fins
Reoriented scales	FINS	Head
Growths	✓ Unremarkable	Eyes
Parasites	Frayed – eroded	Mouth
Wounds	Parasites	Peduncle
Wounds - lamprey	Hemorrhagic	Ventral
LIPS AND JAWS	Gas Bubbles	Dorsal
✓ Unremarkable	FINS - ERODED	Lateral
Deformed	NA Dorsal	BEHAVIOR
Growths	Pectoral	NE Gasping
SNOUT	Pelvic	Flashing
✓ Unremarkable	Anal	Lethargic
Pugnose (Pughead)	Adipose	Fin twitching
Growths	Caudal	Convulsions
Abrasions	GILLS	Head Up-Tail Down
BARBELS	✓ Unremarkable	Head-tail whirling
NA Unremarkable	Bright red	Pectoral fins folded forwarded
Deformed	Brown	Belly up
Missing	Gas bubbles	Loss of balance
OPERCLE	Parasites	Long axis whirling
✓ Unremarkable	PSEUDOBRANCH	OTHER OBSERVATIONS
Incomplete	✓ Unremarkable	
Deformed	Enlarged	

INTERNAL PHYSICAL EXAMINATION

BODY CAVITY	INTESTINES	OVARIES UD
✓ Unremarkable	✓ Unremarkable	Immature
Fluid – clear	Flaccid	Mature
Fluid – bloody	✓ Mucous	Ripe
Fluid – cloudy	Feces	Reabsorbing
Adhesions	Fluid	Growth
MESENTERIC FAT	Hemorrhagic	MUSCLE
✓ Unremarkable	Parasites	✓ Unremarkable
None	SPLEEN	Soft
Excessive	✓ Unremarkable	Parasites
LIVER	Enlarged	TUMORS
✓ Unremarkable	Shrunken	NA Liver
Discolored	Discolored	I Baumann
Yellowish	Ceroid Pigment Centers	II Scale
Pale	GAS BLADDER	III
Enlarged	✓ Unremarkable	
Growths	Fluid	PYLORIC CAECA
Parasites	Growths	NA Unremarkable
GALLBLADDER	KIDNEYS	Parasites
UD Empty	✓ Unremarkable	TESTIS UD
Full	Pale	Immature
Yellow	Swollen	Mature
Green	Soft	Ripe
Enlarged	Hemorrhagic	Constructed
Parasites	Stones	Growth
STOMACH	Growths	OTHER OBSERVATIONS
✓ Unremarkable	Cysts	
✓ Empty	Parasites (urinary bladder)	
Food	COMMENTS: (a) MU = Mummichog JW 10-9-14	
Mucous		
Fluid	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined	
Hemorrhagic		

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES

Collection Date: 10-10-14	Examined By:	Camera: Olympus TG 3
Exam Date: 10-10-14	Recorded By:	Photo numbers: 11
Sex: F	Body Weight (g): 472.0 (b)	Tissues Photographed: Heart
Specimen ID: NB03WAFN025 (a)	Gonad Weight (g): 3.51	

EXTERNAL PHYSICAL EXAMINATION

BODY FORM		**ISTHMUS**		**BRANCHIAL CAVITY**	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	**EYES**		**UROGENITAL OPENING**	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	**ANUS**	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	**LESIONS – Location(s)**	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	**FINS**			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	**FINS - ERODED**			Lateral
	Deformed	NA	Dorsal	**BEHAVIOR**	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	**GILLS**			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	**PSEUDOBRANCH**		**OTHER OBSERVATIONS**	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION

BODY CAVITY		**INTESTINES**		**OVARIES**	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid	✓	Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	**MUSCLE**	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	**SPLEEN**			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	**TUMORS**	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	**GAS BLADDER**			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	**PYLORIC CAECA**	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		**KIDNEYS**			Parasites
	Empty	✓	Unremarkable	**TESTIS**	
✓	Full		Pale	NA	Immature
	Yellow		Swollen		Mature
✓	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	**OTHER OBSERVATIONS**	
✓	Unremarkable		Cysts	Pale nodule in heart	
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: (a) AE = American eel 10-10-14 JW			
	Mucous	(b) Body weight corrected based on client review JW 6-14-16			
	Fluid	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			
	Hemorrhagic				

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-10-14	Examined By:	Camera: NA
Exam Date: 10-10-14	Recorded By:	Photo numbers: NA
Sex: F	Body Weight (g): 5.9	Tissues Photographed: NA
Specimen ID: ~~SFF03~~ @ NB03WSK130-03©	Gonad Weight (g): 0.06	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid	✓	Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
✓	Empty	✓	Unremarkable	TESTIS	
	Full		Pale	NA	Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH (b)			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
	Empty		Parasites (urinary bladder)		
✓	Food	COMMENTS: (a) SF = striped flathead DW 10-10-14			
	Mucous	(b) Proximal intestine, no true stomach DW 10-10-14			
	Fluid	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			
	Hemorrhagic				

© Specimen ID corrected based on client review DW 6-14-16

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-4-14	Examined By:	Camera: NA
Exam Date: 10-10-14	Recorded By:	Photo numbers: NA
Sex: UD Gonad not recovered	Body Weight (g): 15.3	Tissues Photographed: NA
Specimen ID: SC06 @	Gonad Weight (g): UD	

EXTERNAL PHYSICAL EXAMINATION		
BODY FORM	ISTHMUS	BRANCHIAL CAVITY
✓ Unremarkable	✓ Unremarkable	✓ Unremarkable
Emaciated	Enlarged	Growths
Truncate	Hemorrhagic	Parasites
Scoliosis	EYES	UROGENITAL OPENING
Lordosis	✓ Unremarkable	✓ Unremarkable
BODY SURFACE	Popeye	Inflamed
✓ Unremarkable	Cloudy cornea	ANUS
Raised scales	Missing	✓ Unremarkable
Swollen	Lens deformed	Inflamed
Lesions	Lens parasites	LESIONS – Location(s)
Excess mucous	Lens cataract	NA Fins
Reoriented scales	FINS	Head
Growths	✓ Unremarkable	Eyes
Parasites	Frayed – eroded	Mouth
Wounds	Parasites	Peduncle
Wounds - lamprey	Hemorrhagic	Ventral
LIPS AND JAWS	Gas Bubbles	Dorsal
✓ Unremarkable	FINS - ERODED	Lateral
Deformed	NA Dorsal	BEHAVIOR
Growths	Pectoral	NE Gasping
SNOUT	Pelvic	Flashing
✓ Unremarkable	Anal	Lethargic
Pugnose (Pughead)	Adipose	Fin twitching
Growths	Caudal	Convulsions
Abrasions	GILLS	Head Up-Tail Down
BARBELS	✓ Unremarkable	Head-tail whirling
NA Unremarkable	Bright red	Pectoral fins folded forwarded
Deformed	Brown	Belly up
Missing	Gas bubbles	Loss of balance
OPERCLE	Parasites	Long axis whirling
✓ Unremarkable	PSEUDOBRANCH	OTHER OBSERVATIONS
Incomplete	✓ Unremarkable	
Deformed	Enlarged	

INTERNAL PHYSICAL EXAMINATION		
BODY CAVITY	INTESTINES	OVARIES UD
✓ Unremarkable	✓ Unremarkable	Immature
Fluid – clear	Flaccid	Mature
Fluid – bloody	✓ Mucous	Ripe
Fluid – cloudy	✓ Feces	Reabsorbing
Adhesions	Fluid	Growth
MESENTERIC FAT	Hemorrhagic	MUSCLE
✓ Unremarkable	Parasites	✓ Unremarkable
None	SPLEEN	Soft
Excessive	✓ Unremarkable	Parasites
LIVER	Enlarged	TUMORS
✓ Unremarkable	Shrunken	NA Liver
Discolored	Discolored	I Baumann
Yellowish	Ceroid Pigment Centers	II Scale
Pale	GAS BLADDER	III
Enlarged	✓ Unremarkable	
Growths	Fluid	PYLORIC CAECA
Parasites	Growths	NA Unremarkable
GALLBLADDER	KIDNEYS	Parasites
✓ Empty	✓ Unremarkable	TESTIS UD
Full	Pale	Immature
Yellow	Swollen	Mature
Green	Soft	Ripe
Enlarged	Hemorrhagic	Constructed
Parasites	Stones	Growth
STOMACH	Growths	OTHER OBSERVATIONS
✓ Unremarkable	Cysts	
✓ Empty	Parasites (urinary bladder)	
Food	COMMENTS: @ SC = Scup 10-10-14	
Mucous		
Fluid		
Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined	

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-9-14 (a)	Examined By:	Camera: NA
Exam Date: 10-10-14	Recorded By:	Photo numbers: NA
Sex: UD Too immature to sex	Body Weight (g): 17.0	Tissues Photographed: NA
Specimen ID: SC07 (b)	Gonad Weight (g): 0.01	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
	Empty	✓	Unremarkable	TESTIS UD	
✓	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: (a) RE JW 10-10-14 (b) SC = Scup 10-10-14			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES

Collection Date: 10-9-14	Examined By:	Camera: NA
Exam Date: 10-10-14	Recorded By:	Photo numbers: NA
Sex: UD Gonad not recovered	Body Weight (g): 17.7	Tissues Photographed: NA
Specimen ID: SC08 (2)	Gonad Weight (g): UD	

EXTERNAL PHYSICAL EXAMINATION

BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION

BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
✓	Empty	✓	Unremarkable	TESTIS UD	
	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
	Empty		Parasites (urinary bladder)		
✓	Food	COMMENTS: (2) SC = Scup JW 10-10-14			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-9-14	Examined By:	Camera: NA
Exam Date: 10-10-14	Recorded By:	Photo numbers: NA
Sex: UD Gonad not received	Body Weight (g): 17.5	Tissues Photographed: NA
Specimen ID: SC09 (b)	Gonad Weight (g): UD	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
NA	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES UD	
(a) NA ✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody	✓	Mucous		Ripe
	Fluid – cloudy		Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
(a) NA ✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
(a) NA ✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
	Empty	✓	Unremarkable	TESTIS UD	
✓	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: (a) RE JW 10-10-14			
	Mucous	(b) SC = scup JW 10-10-14			
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES

Collection Date: 10-9-14	Examined By:	Camera: NA
Exam Date: 10-10-14	Recorded By:	Photo numbers: NA
Sex: UD Gonads not recovered	Body Weight (g): 21.3	Tissues Photographed: NA
Specimen ID: SC10 @	Gonad Weight (g): UD	

EXTERNAL PHYSICAL EXAMINATION

BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION

BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
✓	Empty	✓	Unremarkable	TESTIS UD	
	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: @ SC = Scup JW 10-10-14			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-9-14	Examined By:	Camera: NA
Exam Date: 10-10-14	Recorded By:	Photo numbers: NA
Sex: UD Gonad not recovered	Body Weight (g): 19.0	Tissues Photographed: NA
Specimen ID: SC11 @	Gonad Weight (g): UD	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
✓	Empty	✓	Unremarkable	TESTIS UD	
	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
	Empty		Parasites (urinary bladder)		
✓	Food	COMMENTS: @ SC = Scup JW 10-10-14			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-4-14 14 ⓒ	Examined By:	Camera: NA
Exam Date: 10-10-14 14 ⓒ	Recorded By:	Photo numbers: NA
Sex: UD Gonad not recovered	Body Weight (g): 14.4	Tissues Photographed: NA
Specimen ID: SCSP19 ⓑ ⓒ	Gonad Weight (g): UI	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	~	Unremarkable	~	Unremarkable
BODY SURFACE			Popeye		Inflamed
~	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
~	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
~	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	~	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
~	Empty	✓	Unremarkable	TESTIS UI	
	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: ⓐ RE JW 10-10-14 ⓑ SC = SCUP JW 10-10-14			
✓	Mucous	ⓒ Incorrect dates recorded JW 10-20-14			
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-9-14	Examined By:	Camera: NA
Exam Date: 10-10-14	Recorded By:	Photo numbers: NA
Sex: UD Gonad not recovered	Body Weight (g): 15.3	Tissues Photographed: NA
Specimen ID: SC12 @	Gonad Weight (g): UD	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reorlented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
✓	Empty	✓	Unremarkable	TESTIS UD	
	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: @SC = Scup on 10-10-14			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-9-14	Examined By:	Camera: NA
Exam Date: 10-10-14	Recorded By:	Photo numbers: NA
Sex: UD Too immature to sex	Body Weight (g): 17.2	Tissues Photographed: NA
Specimen ID: 5613 @	Gonad Weight (g): 0.01	

EXTERNAL PHYSICAL EXAMINATION

BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION

BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Cerold Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
	Empty	✓	Unremarkable	TESTIS UD	
✓	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: @SC = Scup KW 10-10-14			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES

Collection Date: 10-9-14	Examined By:	Camera: NA
Exam Date: 10-10-14	Recorded By:	Photo numbers: NA
Sex: UD Gonad not recovered	Body Weight (g): 16.0	Tissues Photographed: NA
Specimen ID: SC14 (a)	Gonad Weight (g): UD	

EXTERNAL PHYSICAL EXAMINATION

BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION

BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
✓	Empty	✓	Unremarkable	TESTIS UD	
	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: (a) SC = Scup DW 10-10-14			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-9-14	Examined By:	Camera: NA
Exam Date: 10-10-14	Recorded By:	Photo numbers: NA
Sex: UD Gonad not recovered	Body Weight (g): 13.2	Tissues Photographed: NA
Specimen ID: 36 15 (a)	Gonad Weight (g): UD	

EXTERNAL PHYSICAL EXAMINATION		
BODY FORM	ISTHMUS	BRANCHIAL CAVITY
✓ Unremarkable	✓ Unremarkable	✓ Unremarkable
Emaciated	Enlarged	Growths
Truncate	Hemorrhagic	Parasites
Scoliosis	EYES	UROGENITAL OPENING
Lordosis	✓ Unremarkable	✓ Unremarkable
BODY SURFACE	Popeye	Inflamed
✓ Unremarkable	Cloudy cornea	ANUS
Raised scales	Missing	✓ Unremarkable
Swollen	Lens deformed	Inflamed
Lesions	Lens parasites	LESIONS – Location(s)
Excess mucous	Lens cataract	NA Fins
Reoriented scales	FINS	Head
Growths	✓ Unremarkable	Eyes
Parasites	Frayed – eroded	Mouth
Wounds	Parasites	Peduncle
Wounds - lamprey	Hemorrhagic	Ventral
LIPS AND JAWS	Gas Bubbles	Dorsal
✓ Unremarkable	FINS - ERODED	Lateral
Deformed	NA Dorsal	BEHAVIOR
Growths	Pectoral	NE Gasping
SNOUT	Pelvic	Flashing
✓ Unremarkable	Anal	Lethargic
Pugnose (Pughead)	Adipose	Fin twitching
Growths	Caudal	Convulsions
Abrasions	GILLS	Head Up-Tail Down
BARBELS	✓ Unremarkable	Head-tail whirling
NA Unremarkable	Bright red	Pectoral fins folded forwarded
Deformed	Brown	Belly up
Missing	Gas bubbles	Loss of balance
OPERCLE	Parasites	Long axis whirling
✓ Unremarkable	PSEUDOBRANCH	OTHER OBSERVATIONS
Incomplete	✓ Unremarkable	
Deformed	Enlarged	

INTERNAL PHYSICAL EXAMINATION		
BODY CAVITY	INTESTINES	OVARIES UD
✓ Unremarkable	✓ Unremarkable	Immature
Fluid – clear	Flaccid	Mature
Fluid – bloody	✓ Mucous	Ripe
Fluid – cloudy	Feces	Reabsorbing
Adhesions	Fluid	Growth
MESENTERIC FAT	Hemorrhagic	MUSCLE
✓ Unremarkable	Parasites	✓ Unremarkable
None	SPLEEN	Soft
Excessive	✓ Unremarkable	Parasites
LIVER	Enlarged	TUMORS
✓ Unremarkable	Shrunken	NA Liver
Discolored	Discolored	I Baumann
Yellowish	Ceroid Pigment Centers	II Scale
Pale	GAS BLADDER	III
Enlarged	✓ Unremarkable	
Growths	Fluid	PYLORIC CAECA
Parasites	Growths	NA Unremarkable
GALLBLADDER	KIDNEYS	Parasites
✓ Empty	✓ Unremarkable	TESTIS UD
Full	Pale	Immature
Yellow	Swollen	Mature
Green	Soft	Ripe
Enlarged	Hemorrhagic	Constructed
Parasites	Stones	Growth
STOMACH	Growths	OTHER OBSERVATIONS
✓ Unremarkable	Cysts	
Empty	Parasites (urinary bladder)	
✓ Food	COMMENTS (a) SC = Scup DN 10-10-14	
✓ Mucous		
Fluid		
Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined	

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-9-14	Examined By: [illegible]	Camera: NA
Exam Date: 10-10-14	Recorded By: [illegible]	Photo numbers: NA
Sex: UD Gonad not recovered	Body Weight (g): 12.5	Tissues Photographed: NA
Specimen ID: SC16 @	Gonad Weight (g): UD	

EXTERNAL PHYSICAL EXAMINATION		
BODY FORM	**ISTHMUS**	**BRANCHIAL CAVITY**
✓ Unremarkable	✓ Unremarkable	✓ Unremarkable
Emaciated	Enlarged	Growths
Truncate	Hemorrhagic	Parasites
Scoliosis	**EYES**	**UROGENITAL OPENING**
Lordosis	✓ Unremarkable	✓ Unremarkable
BODY SURFACE	Popeye	Inflamed
✓ Unremarkable	Cloudy cornea	**ANUS**
Raised scales	Missing	✓ Unremarkable
Swollen	Lens deformed	Inflamed
Lesions	Lens parasites	**LESIONS – Location(s)**
Excess mucous	Lens cataract	NA Fins
Reoriented scales	**FINS**	Head
Growths	✓ Unremarkable	Eyes
Parasites	Frayed – eroded	Mouth
Wounds	Parasites	Peduncle
Wounds - lamprey	Hemorrhagic	Ventral
LIPS AND JAWS	Gas Bubbles	Dorsal
✓ Unremarkable	**FINS - ERODED**	Lateral
Deformed	NA Dorsal	**BEHAVIOR**
Growths	Pectoral	NE Gasping
SNOUT	Pelvic	Flashing
✓ Unremarkable	Anal	Lethargic
Pugnose (Pughead)	Adipose	Fin twitching
Growths	Caudal	Convulsions
Abrasions	**GILLS**	Head Up-Tail Down
BARBELS	✓ Unremarkable	Head-tail whirling
NA Unremarkable	Bright red	Pectoral fins folded forwarded
Deformed	Brown	Belly up
Missing	Gas bubbles	Loss of balance
OPERCLE	Parasites	Long axis whirling
✓ Unremarkable	**PSEUDOBRANCH**	**OTHER OBSERVATIONS**
Incomplete	✓ Unremarkable	
Deformed	Enlarged	

INTERNAL PHYSICAL EXAMINATION		
BODY CAVITY	**INTESTINES**	**OVARIES** UD
✓ Unremarkable	✓ Unremarkable	Immature
Fluid – clear	Flaccid	Mature
Fluid – bloody	Mucous	Ripe
Fluid – cloudy	✓ Feces	Reabsorbing
Adhesions	Fluid	Growth
MESENTERIC FAT	Hemorrhagic	**MUSCLE**
✓ Unremarkable	Parasites	✓ Unremarkable
None	**SPLEEN**	Soft
Excessive	✓ Unremarkable	Parasites
LIVER	Enlarged	**TUMORS**
✓ Unremarkable	Shrunken	NA Liver
Discolored	Discolored	I Baumann
Yellowish	Ceroid Pigment Centers	II Scale
Pale	**GAS BLADDER**	III
Enlarged	✓ Unremarkable	
Growths	Fluid	**PYLORIC CAECA**
Parasites	Growths	NA Unremarkable
GALLBLADDER	**KIDNEYS**	Parasites
✓ Empty	✓ Unremarkable	**TESTIS** UD
Full	Pale	Immature
Yellow	Swollen	Mature
Green	Soft	Ripe
Enlarged	Hemorrhagic	Constructed
Parasites	Stones	Growth
STOMACH	Growths	**OTHER OBSERVATIONS**
✓ Unremarkable	Cysts	
✓ Empty	Parasites (urinary bladder)	
✓ Food	COMMENTS: @ JW 10-10-14 SC = Scup	
Mucous		
Fluid		
Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined	

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES

Collection Date: 10-9-14	Examined By: [illegible]	Camera: NA
Exam Date: 10-10-14	Recorded By: [illegible]	Photo numbers: NA
Sex: UD Gonad not received	Body Weight (g): 17.7	Tissues Photographed: NA
Specimen ID: SC17 (b)	Gonad Weight (g): UD	

EXTERNAL PHYSICAL EXAMINATION

BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION

BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS (a)	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
✓	Empty	✓	Unremarkable	TESTIS UD	
	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: (a) RE JW 10-10-14 (b) SC = Scup JW 10-10-14			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-9-14	Examined By:	Camera: NA
Exam Date: 10-10-14	Recorded By:	Photo numbers: NA
Sex: UD Gonad not recovered	Body Weight (g): 14.6	Tissues Photographed: NA
Specimen ID: SC 18 @	Gonad Weight (g): UD	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable	✓	Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	NA	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
✓	Empty	✓	Unremarkable	TESTIS UD	
	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: @ SC = Scup JW 10-10-14			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-9-14	Examined By:	Camera: NA
Exam Date: 10-10-14	Recorded By:	Photo numbers: NA
Sex: UD Gonad not recovered	Body Weight (g): 17.1	Tissues Photographed: NA
Specimen ID: SC20 @	Gonad Weight (g): UD	

EXTERNAL PHYSICAL EXAMINATION

BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION

BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody	✓	Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
✓	Empty	✓	Unremarkable	TESTIS UD	
	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: @ SC = scup JW 10-10-14			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-9-14	Examined By:	Camera: NA
Exam Date: 10-10-14	Recorded By:	Photo numbers: NA
Sex: M	Body Weight (g): 318	Tissues Photographed: NA
Specimen ID: SB04 @	Gonad Weight (g): 0.155	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES	
✓	Unremarkable	✓	Unremarkable	NA	Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody	✓	Mucous		Ripe
	Fluid – cloudy		Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
	Empty	✓	Unremarkable	TESTIS	
✓	Full		Pale	✓	Immature
	Yellow		Swollen		Mature
✓	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: @ SB = Striped bass HW 10-10-14			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-10-14	Examined By:	Camera: Olympus TG 3
Exam Date: 10-10-14	Recorded By:	Photo numbers: 7
Sex: M	Body Weight (g): 111.4	Tissues Photographed: Branchial Cavity
Specimen ID: NBO3FBLS003-01 @	Gonad Weight (g): 0.04	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable		Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic	✓	Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES	
✓	Unremarkable	✓	Unremarkable	NA	Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
✓	Empty	✓	Unremarkable	TESTIS	
	Full		Pale	✓	Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: @ BL = bluefish ON 10-10-14			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-10-14	Examined By:	Camera: NA
Exam Date: 10-10-14	Recorded By:	Photo numbers: NA
Sex: UD Gonad not recovered	Body Weight (g): 27.9	Tissues Photographed: NA
Specimen ID: NB03-BL5003-02 @	Gonad Weight (g): UD	

EXTERNAL PHYSICAL EXAMINATION		
BODY FORM	**ISTHMUS**	**BRANCHIAL CAVITY**
✓ Unremarkable	✓ Unremarkable	✓ Unremarkable
Emaciated	Enlarged	Growths
Truncate	Hemorrhagic	Parasites
Scoliosis	**EYES**	**UROGENITAL OPENING**
Lordosis	✓ Unremarkable	✓ Unremarkable
BODY SURFACE	Popeye	Inflamed
✓ Unremarkable	Cloudy cornea	**ANUS**
Raised scales	Missing	✓ Unremarkable
Swollen	Lens deformed	Inflamed
Lesions	Lens parasites	**LESIONS – Location(s)**
Excess mucous	Lens cataract	NA Fins
Reoriented scales	**FINS**	Head
Growths	✓ Unremarkable	Eyes
Parasites	Frayed – eroded	Mouth
Wounds	Parasites	Peduncle
Wounds - lamprey	Hemorrhagic	Ventral
LIPS AND JAWS	Gas Bubbles	Dorsal
✓ Unremarkable	**FINS - ERODED**	Lateral
Deformed	NA Dorsal	**BEHAVIOR**
Growths	Pectoral	NE Gasping
SNOUT	Pelvic	Flashing
✓ Unremarkable	Anal	Lethargic
Pugnose (Pughead)	Adipose	Fin twitching
Growths	Caudal	Convulsions
Abrasions	**GILLS**	Head Up-Tail Down
BARBELS	✓ Unremarkable	Head-tail whirling
NA Unremarkable	Bright red	Pectoral fins folded forwarded
Deformed	Brown	Belly up
Missing	Gas bubbles	Loss of balance
OPERCLE	Parasites	Long axis whirling
✓ Unremarkable	**PSEUDOBRANCH**	**OTHER OBSERVATIONS**
Incomplete	✓ Unremarkable	
Deformed	Enlarged	

INTERNAL PHYSICAL EXAMINATION		
BODY CAVITY	**INTESTINES**	**OVARIES** UD
✓ Unremarkable	✓ Unremarkable	Immature
Fluid – clear	Flaccid	Mature
Fluid – bloody	Mucous	Ripe
Fluid – cloudy	Feces	Reabsorbing
Adhesions	Fluid	Growth
MESENTERIC FAT	Hemorrhagic	**MUSCLE**
✓ Unremarkable	Parasites	✓ Unremarkable
None	**SPLEEN**	Soft
Excessive	✓ Unremarkable	Parasites
LIVER	Enlarged	**TUMORS**
✓ Unremarkable	Shrunken	NA Liver
Discolored	Discolored	I Baumann
Yellowish	Ceroid Pigment Centers	II Scale
Pale	**GAS BLADDER**	III
Enlarged	✓ Unremarkable	
Growths	Fluid	**PYLORIC CAECA**
Parasites	Growths	NA Unremarkable
GALLBLADDER	**KIDNEYS**	Parasites
✓ Empty	✓ Unremarkable	**TESTIS** UD
Full	Pale	Immature
Yellow	Swollen	Mature
Green	Soft	Ripe
Enlarged	Hemorrhagic	Constructed
Parasites	Stones	Growth
STOMACH	Growths	**OTHER OBSERVATIONS**
✓ Unremarkable	Cysts	
✓ Empty	Parasites (urinary bladder)	
Food	COMMENTS: @BL = blueish DW 10-10-14	
Mucous		
Fluid		
Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined	

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES

Collection Date: 10-10-14	Examined By:	Camera: Olympus T6.3
Exam Date: 10-10-14	Recorded By:	Photo numbers: 3
Sex: F	Body Weight (g): 94.4	Tissues Photographed: ovary (R)
Specimen ID: PB03-BL5003-03 (b)	Gonad Weight (g): 0.31	

EXTERNAL PHYSICAL EXAMINATION

BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION

BODY CAVITY		INTESTINES		OVARIES	
✓	Unremarkable	✓	Unremarkable	✓	Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy		Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
	Empty	✓	Unremarkable	TESTIS NA (a)	
✓	Full		Pale	(a) X	Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts	~~Testis~~ (a) ovary (R) enlarged and discolored	
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: (a) RE TW 10-10-14 (b) BL = bluefish TW 10-10-14			
	Mucous	(c) Inadvertently not recorded at time of necropsy TW 10-20-14			
	Fluid	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			
	Hemorrhagic				

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-10-14	Examined By:	Camera: NA
Exam Date: 10-10-14	Recorded By:	Photo numbers: NA
Sex: UD too immature to sex	Body Weight (g): 30.3	Tissues Photographed: NA
Specimen ID: NB03FB15003-04 @	Gonad Weight (g): 0.04	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scollosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reorlenled scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
	Empty	✓	Unremarkable	TESTIS UD	
✓	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: @ BL = bluefish TW 10-10-14			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-10-14	Examined By:	Camera: NA
Exam Date: 10-10-14	Recorded By:	Photo numbers: NA
Sex: UD Gonad not received	Body Weight (g): 216	Tissues Photographed: NA
Specimen ID: BBO1 @	Gonad Weight (g): UD	

EXTERNAL PHYSICAL EXAMINATION

BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION

BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy		Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
UD	Empty	✓	Unremarkable	TESTIS UD	
	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: @BB = blueback herring JM 10-10-14			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-10-14	Examined By:	Camera: NA
Exam Date: 10-10-14	Recorded By:	Photo numbers: NA
Sex: UD Gonad not recovered	Body Weight (g): 29.6	Tissues Photographed: NA
Specimen ID: WM01 (b)	Gonad Weight (g): UD	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable		Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy		Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
✓	Empty	✓	Unremarkable	TESTIS UD	
	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
(a) X	Empty		Parasites (urinary bladder)		
✓	Food	COMMENTS: (a) RE JW 10-10-14 (b) WM = white mulled JW 10-10-14			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-10-14	Examined By:	Camera: Olympus TG3
Exam Date: 10-10-14	Recorded By:	Photo numbers:
Sex: UD Gonad not recovered	Body Weight (g): 26.0	Tissues Photographed: Skin
Specimen ID: WM02 (b)	Gonad Weight (g): UD	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	(a) NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
✓	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic	✓	Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy		Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Cerold Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
	Empty	✓	Unremarkable	TESTIS UD	
✓	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
	Empty		Parasites (urinary bladder)		
✓	Food	COMMENTS: (a) RE DN 10-10-14			
	Mucous	(b) White mullet DN 10-20-14			
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-10-14	Examined By:	Camera: NA
Exam Date: 10-10-14	Recorded By:	Photo numbers: NA
Sex: UD Too immature to sex	Body Weight (g): 46.8	Tissues Photographed: NA
Specimen ID: WM03 (a)	Gonad Weight (g): 0.04	

EXTERNAL PHYSICAL EXAMINATION

BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scollosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION

BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable		Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
✓	Empty	✓	Unremarkable	TESTIS UD	
	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
	Empty		Parasites (urinary bladder)		
✓	Food	COMMENTS: (a) WM = white mullet dw 10-10-14			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES

Collection Date: 10-10-14	Examined By:	Camera: Olympus TG3
Exam Date: 10-10-14	Recorded By:	Photo numbers: 10
Sex: UD Too Immature to sex	Body Weight (g): 23.8	Tissues Photographed: FM
Specimen ID: WM04 @	Gonad Weight (g): 0.105	

EXTERNAL PHYSICAL EXAMINATION

BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	✓	Fins
	Reoriented scales	FINS			Head
	Growths		Unremarkable		Eyes
	Parasites	✓	Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed		Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths	✓	Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION

BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy		Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
	Empty	✓	Unremarkable	TESTIS UD	
✓	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
	Empty		Parasites (urinary bladder)		
✓	Food	COMMENTS: @ WM = white mullet JW 10-10-14			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-10-14	Examined By:	Camera: NA
Exam Date: 10-10-14	Recorded By:	Photo numbers: NA
Sex: UD Gonad not recovered	Body Weight (g): 14.7	Tissues Photographed: NA
Specimen ID: UWM05 (b)	Gonad Weight (g): UD	

EXTERNAL PHYSICAL EXAMINATION		
BODY FORM	**ISTHMUS**	**BRANCHIAL CAVITY**
✓ Unremarkable	✓ Unremarkable	✓ Unremarkable
Emaciated	Enlarged	Growths
Truncate	Hemorrhagic	Parasites
Scoliosis	**EYES**	**UROGENITAL OPENING**
Lordosis	✓ Unremarkable	✓ Unremarkable
BODY SURFACE	Popeye	Inflamed
✓ Unremarkable	Cloudy cornea	**ANUS**
Raised scales	Missing	✓ Unremarkable
Swollen	Lens deformed	Inflamed
Lesions	Lens parasites	**LESIONS – Location(s)**
Excess mucous	Lens cataract	NA Fins
Reoriented scales	**FINS**	Head
Growths	✓ Unremarkable	Eyes
Parasites	Frayed – eroded	Mouth
Wounds	Parasites	Peduncle
Wounds - lamprey	Hemorrhagic	Ventral
LIPS AND JAWS	Gas Bubbles	Dorsal
✓ Unremarkable	**FINS - ERODED**	Lateral
Deformed	NA Dorsal	**BEHAVIOR**
Growths	Pectoral	NA Gasping
SNOUT	Pelvic	Flashing
✓ Unremarkable	Anal	Lethargic
Pugnose (Pughead)	Adipose	Fin twitching
Growths	Caudal	Convulsions
Abrasions	**GILLS**	Head Up-Tail Down
BARBELS	✓ Unremarkable	Head-tail whirling
NA Unremarkable	Bright red	Pectoral fins folded forwarded
Deformed	Brown	Belly up
Missing	Gas bubbles	Loss of balance
OPERCLE	Parasites	Long axis whirling
✓ Unremarkable	**PSEUDOBRANCH**	**OTHER OBSERVATIONS**
Incomplete	✓ Unremarkable	
Deformed	Enlarged	

INTERNAL PHYSICAL EXAMINATION		
BODY CAVITY	**INTESTINES** X(a)	**OVARIES** UD
✓ Unremarkable	✓ Unremarkable	Immature
Fluid – clear	Flaccid	Mature
Fluid – bloody	Mucous X(a)	Ripe
Fluid – cloudy	✓ Feces	Reabsorbing
Adhesions	Fluid	Growth
MESENTERIC FAT	Hemorrhagic	**MUSCLE**
✓ Unremarkable	Parasites	✓ Unremarkable
None	**SPLEEN**	Soft
Excessive	✓ Unremarkable	Parasites
LIVER	Enlarged	**TUMORS**
✓ Unremarkable	Shrunken	NA Liver
Discolored	Discolored	I Baumann
Yellowish	Ceroid Pigment Centers	II Scale
Pale	**GAS BLADDER**	III
Enlarged	✓ Unremarkable	
Growths	Fluid	**PYLORIC CAECA**
Parasites	Growths	NA Unremarkable
GALLBLADDER	**KIDNEYS**	Parasites
Empty	✓ Unremarkable	**TESTIS** UD
✓ Full	Pale	Immature
Yellow	Swollen	Mature
Green	Soft	Ripe
Enlarged	Hemorrhagic	Constructed
Parasites	Stones	Growth
STOMACH	Growths	**OTHER OBSERVATIONS**
✓ Unremarkable	Cysts	
Empty	Parasites (urinary bladder)	
✓ Food	COMMENTS: (a) RE DW 10-10-14 (b) UWM = unrecovered jw 10-10-14	
Mucous		
Fluid		
Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined	

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-10-14	Examined By:	Camera: NA
Exam Date: 10-10-14	Recorded By:	Photo numbers: NA
Sex: M	Body Weight (g): 7.7	Tissues Photographed: NA
Specimen ID: ~~SK01~~ NB03WSK130-01 (c)	Gonad Weight (g): 0.08	

EXTERNAL PHYSICAL EXAMINATION

BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NO	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION

BODY CAVITY		INTESTINES		OVARIES	
✓	Unremarkable	✓	Unremarkable	NA	Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
	Empty	✓	Unremarkable	TESTIS	
✓	Full		Pale		Immature
	Yellow		Swollen	✓	Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH (b)			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: (a) SK = striped killifish JW 10-10-14			
	Mucous	(b) Proximal intestine, not true stomach JW 10-10-14			
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

(c) Specimen ID corrected based on client review JW 6-14-16

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-10-14	Examined By:	Camera: NA
Exam Date: 10-10-14	Recorded By:	Photo numbers: NA
Sex: ✓	Body Weight (g): 6.9	Tissues Photographed: NA
Specimen ID: 5507 ⓒ NB03WSK130-02 ⓒ	Gonad Weight (g): 0.09	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scollosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid	✓	Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
✓	Empty	✓	Unremarkable	TESTIS	
	Full		Pale	NA	Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH ⓑ			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
	Empty		Parasites (urinary bladder)		
✓	Food	COMMENTS: ⓐ SK = striped killifish JW 10-10-14			
	Mucous	ⓑ Proximal intestine, no true stomach JW 10-10-14			
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

ⓒ Specimen ID corrected based on client review JW 6-14-16

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-10-14	Examined By:	Camera: NA
Exam Date: 10-10-14	Recorded By:	Photo numbers: NA
Sex: F	Body Weight (g): 6.7	Tissues Photographed: NA
Specimen ID: SK04	Gonad Weight (g): 0.08	

(a) NB03WSK130-04 (c)

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reorlented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid	✓	Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
✓	Empty	✓	Unremarkable	TESTIS	
✓	Full		Pale	NA	Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH (b)			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: (a) SK = Striped Kivifish JW 10-10-14			
	Mucous	(b) Proximal Intestine, no true stomach JW 10-10-14			
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

(c) Specimen ID corrected based on client review JW 6-14-16

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-10-14	Examined By:	Camera: NA
Exam Date: 10-10-14	Recorded By:	Photo numbers: NA
Sex: F	Body Weight (g): 7.3	Tissues Photographed: NA
Specimen ID: SK05	Gonad Weight (g): 0.08	

ⓒ NB03WSK130-05 ⓒ

EXTERNAL PHYSICAL EXAMINATION

BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	WE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION

BODY CAVITY		INTESTINES		OVARIES	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid	✓	Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Cerold Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
✓	Empty	✓	Unremarkable	TESTIS	
	Full		Pale	NA	Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH (b)			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
	Empty		Parasites (urinary bladder)		
✓	Food	COMMENTS: ⓐ SK = striped killifish DW 10-10-14			
	Mucous	ⓑ Proximal Intestine, no true stomach DW 10-10-14			
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

ⓒ Specimen ID corrected based on client review DW 6-14-16

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES

Collection Date: 10-10-14	Examined By:	Camera: NA
Exam Date: 10-10-14	Recorded By:	Photo numbers: NA
Sex: UD Gonad not recovered	Body Weight (g): 40.0	Tissues Photographed: NA
Specimen ID: SB05 (a)	Gonad Weight (g): UD	

EXTERNAL PHYSICAL EXAMINATION

BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION

BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
✓	Empty	✓	Unremarkable	TESTIS UD	
	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: @SB = striped bass DW 10-10-14			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES

Collection Date: 10-10-14	Examined By:	Camera: NA
Exam Date: 10-10-14	Recorded By:	Photo numbers: NA
Sex: UD Gonad not recovered	Body Weight (g): 4.1	Tissues Photographed: NA
Specimen ID: NB03WMES005-01 @	Gonad Weight (g): UD	

EXTERNAL PHYSICAL EXAMINATION

BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION

BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
UD	Empty	✓	Unremarkable	TESTIS UD	
	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: @ ME = menhaden JW 10-10-14			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-10-14	Examined By: [illegible]	Camera: NA
Exam Date: 10-10-14	Recorded By: [illegible]	Photo numbers: NA
Sex: UD Gonads not recovered	Body Weight (g): ~~40.4~~ 10.9(b)	Tissues Photographed: NA
Specimen ID: PB03WME5008-02 (a)	Gonad Weight (g): UD	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
✓	Empty	✓	Unremarkable	TESTIS UD	
	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: (a) ME = methadone JW 10-10-14			
	Mucous	(b) Body weight corrected based on client review JW 6-14-16			
	Fluid	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			
	Hemorrhagic				

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-10-14	Examined By:	Camera: NA
Exam Date: 10-10-14	Recorded By:	Photo numbers: NA
Sex: UD Gonad not recovered	Body Weight (g): 5.2	Tissues Photographed: NA
Specimen ID: NB03WMS5018-03 (b)	Gonad Weight (g): UD	

EXTERNAL PHYSICAL EXAMINATION		
BODY FORM	ISTHMUS	BRANCHIAL CAVITY
✓ Unremarkable	✓ Unremarkable	✓ Unremarkable
Emaciated	Enlarged	Growths
Truncate	Hemorrhagic	Parasites
Scoliosis	EYES	UROGENITAL OPENING
Lordosis	✓ Unremarkable	✓ Unremarkable
BODY SURFACE	Popeye	Inflamed
✓ Unremarkable	Cloudy cornea	ANUS
Raised scales	Missing	✓ Unremarkable
Swollen	Lens deformed	Inflamed
Lesions	Lens parasites	LESIONS – Location(s)
Excess mucous	Lens cataract	NA Fins
Reoriented scales	FINS	Head
Growths	✓ Unremarkable	Eyes
Parasites	Frayed – eroded	Mouth
Wounds	Parasites	Peduncle
Wounds - lamprey	Hemorrhagic	Ventral
LIPS AND JAWS	Gas Bubbles	Dorsal
✓ Unremarkable	FINS - ERODED	Lateral
Deformed	NA Dorsal	BEHAVIOR
Growths	Pectoral	NE Gasping
SNOUT	Pelvic	Flashing
✓ Unremarkable	Anal	Lethargic
Pugnose (Pughead)	Adipose	Fin twitching
Growths	Caudal	Convulsions
Abrasions	GILLS	Head Up-Tail Down
BARBELS	✓ Unremarkable	Head-tail whirling
NA Unremarkable	Bright red	Pectoral fins folded forwarded
Deformed	Brown	Belly up
Missing	Gas bubbles	Loss of balance
OPERCLE	Parasites	Long axis whirling
✓ Unremarkable	PSEUDOBRANCH	OTHER OBSERVATIONS
Incomplete	✓ Unremarkable	
Deformed	Enlarged	

INTERNAL PHYSICAL EXAMINATION		
BODY CAVITY	INTESTINES	OVARIES UD
✓ Unremarkable	✓ Unremarkable (a)	✓ Immature
Fluid – clear	Flaccid	Mature
Fluid – bloody	Mucous	Ripe
Fluid – cloudy	✓ Feces	Reabsorbing
Adhesions	Fluid	Growth
MESENTERIC FAT	Hemorrhagic	MUSCLE
✓ Unremarkable	Parasites	✓ Unremarkable
None	SPLEEN	Soft
Excessive	✓ Unremarkable	Parasites
LIVER	Enlarged	TUMORS
✓ Unremarkable	Shrunken	NA Liver
Discolored	Discolored	I Baumann
Yellowish	Cerold Pigment Centers	II Scale
Pale	GAS BLADDER	III
Enlarged	✓ Unremarkable	
Growths	Fluid	PYLORIC CAECA
Parasites	Growths	NA Unremarkable
GALLBLADDER	KIDNEYS	Parasites
Empty	✓ Unremarkable	TESTIS UD
✓ Full	Pale	Immature
Yellow	Swollen	Mature
✓ Green	Soft	Ripe
Enlarged	Hemorrhagic	Constructed
Parasites	Stones	Growth
STOMACH	Growths	OTHER OBSERVATIONS
✓ Unremarkable	Cysts	
✓ Empty	Parasites (urinary bladder)	
Food	COMMENTS: (a) RE JW 10-10-14	
Mucous	(b) ME = manhandled JW 10-10-14	
Fluid		
Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined	

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-10-14	Examined By:	Camera: NA
Exam Date: 10-10-14	Recorded By:	Photo numbers: NA
Sex: UD Gonad not recovered	Body Weight (g): 4.6	Tissues Photographed: NA
Specimen ID: PB03WMES005-04 @	Gonad Weight (g): UD	

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	ME	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
✓	Empty	✓	Unremarkable	TESTIS UD	
	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: @ ME = menhaden AW 10-10-14			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 10-10-14	Examined By: [illegible]	Camera: NA
Exam Date: 10-10-14	Recorded By: [illegible]	Photo numbers: NA
Sex: UD Gonad not recovered	Body Weight (g): 1.5	Tissues Photographed: NA
Specimen ID: ~~NB03WMU131B-01~~	Gonad Weight (g): UD	

ⓐNB03WMU131A-01ⓑ

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
UD	Empty	✓	Unremarkable	TESTIS UD	
	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: ⓐMU = mummichog TW 10-10-14			
	Mucous	ⓑSpecimen ID corrected based on client review TW 6-14-16			
	Fluid	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			
	Hemorrhagic				

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES

Collection Date: 10-10-14	Examined By:	Camera: NA
Exam Date: 10-10-14	Recorded By:	Photo numbers: NA
Sex: UD Gonad not recovered	Body Weight (g): 0.6	Tissues Photographed: NA
Specimen ID: NB03WMU131B-02 @NB03WMU131A-02ⓑ	Gonad Weight (g): UD	

EXTERNAL PHYSICAL EXAMINATION

BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION

BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Cerold Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
UD	Empty	✓	Unremarkable	TESTIS UD	
	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
	Empty		Parasites (urinary bladder)		
✓	Food	COMMENTS: @ JW 10-10-14 MU = Mommichog			
	Mucous	ⓑ Specimen ID corrected based on client review JW 6-14-16			
	Fluid	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			
	Hemorrhagic				

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES

Collection Date: 10-10-14	Examined By:	Camera: NA
Exam Date: 10-10-14	Recorded By:	Photo numbers: NA
Sex: M	Body Weight (g): 273.0	Tissues Photographed: NA
Specimen ID: NB03WAEN024 (a)	Gonad Weight (g): 0.35	

EXTERNAL PHYSICAL EXAMINATION

BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION

BODY CAVITY		INTESTINES		OVARIES	
✓	Unremarkable	✓	Unremarkable	NA	Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
	Empty	✓	Unremarkable	TESTIS	
✓	Full		Pale		Immature
	Yellow		Swollen	✓	Mature
✓	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
	Empty		Parasites (urinary bladder)		
✓	Food	COMMENTS: (a) AE = American eel JW 10-10-14			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

TIERRA SOLUTIONS, INC.
EPL PROJECT NUMBER A41-002

NEWARK BAY STUDY AREA FISH SAMPLING AND ANALYSIS

AMENDED FINAL PATHOLOGY REPORT

Submitted by:

Experimental Pathology Laboratories, Inc.

Street Address:	Mailing Address:
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Sterling, VA 20166	Sterling, VA 20167-0169

(703) 471-7060

Submitted to:

Tierra Solutions, Inc.
East Brunswick, NJ 08816

July 12, 2016

AMENDED FINAL REPORT

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TIERRA SOLUTIONS, INC.
EPL PROJECT NUMBER A41-002

NEWARK BAY STUDY AREA FISH SAMPLING AND ANALYSIS

AMENDED FINAL PATHOLOGY SUMMARY

INTRODUCTION

The purpose of this project was to conduct gross external and internal examinations of wild caught marine and estuarine fish obtained as part of the Newark Bay Study Area Baseline Human Health and Ecological Risk Assessment Fish Sampling and Analysis conducted by Tierra Solutions, Inc. (Tierra) in accordance with the Fish Sampling and Analysis Quality Assurance Project Plan (QAPP) Revision 2, October 2014.

METHODS

During a five-day consecutive period (October 6-10, 2014), a total of 122 fish, representing 26 distinct species, were necropsied by an American College of Veterinary Pathologists board-certified veterinary pathologist who has expertise in the pathologic evaluation of fish. On July 27, 2015, an additional 23 fish, representing 5 distinct species, were necropsied by that same pathologist, and the current report concerns that latter sampling. The Fish Sampling and Analysis QAPP required fish pathology evaluations to be conducted on the first 5 fish of each species, as well as a "representative sample of individual non-forage fish – up to at least 20 individuals for each of 2 different species." In accordance with the QAPP, 11 summer flounder *Paralichthys dentatus* were collected on July 27, 2015 to supplement the initial collection of 9 summer flounder in October 2014. Additionally, up to the first 5 fish of each species obtained during the July 27 collection were examined. The fish examined included one spotted hake, five winter flounder, one northern pufferfish, and five Atlantic tomcod.

Individual fish were identified by assigning unique consecutive number identifiers using abbreviated Tierra species codes (e.g., “HA03”).

External examinations included the general body condition (“body form”), body surfaces, lips and jaws, snout, barbels (where present), operculum (“opercle”), isthmus, eyes, fins, gills, pseudobranch, branchial cavity, and urogenital opening. Intra-abdominal examinations included the body cavity, mesenteric fat, liver, gallbladder (where present), stomach (true stomach in some species, proximal intestines in others, also gizzard where present), intestines, spleen, gas bladder, kidneys, ovaries (where present), skeletal muscle, pyloric caeca (where present), and testis (where present). Although heart was not indicated as a target tissue in the provided necropsy form, the pathologist examined hearts also. In fish where the gonads were recovered, these tissues were excised and gonad weights (g) were obtained. These were used in conjunction with total body weights (g) to determine gonadosomatic indices (GSI). Fish lengths (mm) were also recorded. A representative color photograph (labeled with the animal identifier) was acquired for each gross pathologic finding.

Table 1. Necropsy Results

Species	Scientific Name	Animal ID#	Body Weight (g)	Gonad Weight (g)	GSI	Length (mm)	Sex	Capture Date	Necropsy Date	Gross Finding
Atlantic Tomcod	*Microgadus tomcod*	AT01	6	0.05	0.83%	96	TI	7/27/2015	7/27/2015	-
Atlantic Tomcod	*Microgadus tomcod*	AT02	9	UD	NA	101	NR	7/27/2015	7/27/2015	-
Atlantic Tomcod	*Microgadus tomcod*	AT03	8	0.04	0.50%	102	TI	7/27/2015	7/27/2015	-
Atlantic Tomcod	*Microgadus tomcod*	AT04	8	0.04	0.50%	96	TI	7/27/2015	7/27/2015	-
Atlantic Tomcod	*Microgadus tomcod*	AT05	5	UD	NA	90	NR	7/27/2015	7/27/2015	Dermal ulcer left trunk
Northern Pufferfish	*Sphoeroides maculatus*	PU01	146	1.82	1.25%	178	F	7/27/2015	7/27/2015	-
Spotted Hake	*Urophycis regia*	HA03	32	0.10	0.31%	147	TI	7/27/2015	7/27/2015	-
Summer Flounder	*Paralichthys dentatus*	SF10	218	0.57	0.26%	295	F	7/27/2015	7/27/2015	-
Summer Flounder	*Paralichthys dentatus*	SF11	168	0.34	0.20%	270	F	7/27/2015	7/27/2015	-
Summer Flounder	*Paralichthys dentatus*	SF12	155	0.38	0.25%	262	F	7/27/2015	7/27/2015	-
Summer Flounder	*Paralichthys dentatus*	SF13	264	0.21	0.08%	305	M	7/27/2015	7/27/2015	-
Summer Flounder	*Paralichthys dentatus*	SF14	134	0.30	0.22%	257	F	7/27/2015	7/27/2015	-
Summer Flounder	*Paralichthys dentatus*	SF15	208	0.41	0.20%	288	F	7/27/2015	7/27/2015	-
Summer Flounder	*Paralichthys dentatus*	SF16	263	0.84	0.32%	312	F	7/27/2015	7/27/2015	-
Summer Flounder	*Paralichthys dentatus*	SF17	308	0.97	0.31%	324	F	7/27/2015	7/27/2015	-
Summer Flounder	*Paralichthys dentatus*	SF18	273	1.15	0.42%	312	F	7/27/2015	7/27/2015	-
Summer Flounder	*Paralichthys dentatus*	SF19	168	0.55	0.33%	265	F	7/27/2015	7/27/2015	-
Summer Flounder	*Paralichthys dentatus*	SF20	192	0.55	0.29%	270	F	7/27/2015	7/27/2015	-
Winter Flounder	*Pseudopleuronectes americanus*	WF01	52	UD	NA	155	NR	7/27/2015	7/27/2015	-
Winter Flounder	*Pseudopleuronectes americanus*	WF02	39	UD	NA	141	NR	7/27/2015	7/27/2015	-
Winter Flounder	*Pseudopleuronectes americanus*	WF03	29	UD	NA	142	NR	7/27/2015	7/27/2015	-
Winter Flounder	*Pseudopleuronectes americanus*	WF04	41	UD	NA	156	NR	7/27/2015	7/27/2015	-
Winter Flounder	*Pseudopleuronectes americanus*	WF05	51	UD	NA	160	NR	7/27/2015	7/27/2015	-

- = no findings; GSI = gonadosomatic index; M = male; F = female; UD = undetermined; NA = not applicable; NR = gonad tissue not recovered; TI = gonad tissue too immature for gender determination

RESULTS AND DISCUSSION

Gross external and internal examinations revealed abnormal findings in 1 of 23 fish (4%). This finding consisted of a dermal ulcer in the left trunk of an Atlantic tomcod (Animal No. AT05).

Gonads were not recovered from 7 of 23 fish, and in 4 additional fish, the sex (gender) could not be determined. In all 11 of those cases, gonad collection and/or gender identification was impeded by the reproductive immaturity of the fish.

The fish collected and analyzed under this program represent the various types of fish that have been reported to occur in Newark Bay, including: 1) forage, predatory, benthic, demersal, and pelagic species; 2) both resident and migratory fish; and 3) a range of size and age within the fish sampled. Adequate replication was achieved per the QAPP specifications. The results are a very low incidence of relatively minor lesions across this spectrum of species. It is concluded that the pathology evaluation requirements in the QAPP have been met with the evaluation of the first 5 fish of each species, evaluation of 20 scup and evaluation of 20 summer flounder.

7-12-16

JEFFREY C. WOLF, DVM, Diplomate, ACVP — Date
Senior Pathologist

JCW/cb

Tierra Solutions, Inc.
Newark Bay Study Area Fish Sampling and Analysis
AMENDED FINAL

REASON(S) FOR CHANGE

This report has been amended for the following reasons:

- Added a Table of Contents
- Page 1, Methods: rephrased the last two sentences of the first paragraph to clarify numbers of fish examined.
- Added Appendix B: Specimen Data Forms.

7-12-16

JEFFREY C. WOLF, DVM, Diplomate, ACVP Date
Senior Pathologist

JCW/cb

APPENDIX A: FIGURES AND LEGENDS



Figure 1. Dermal ulcer on the left trunk of an Atlantic tomcod, Animal ID: AT05.

APPENDIX B: SPECIMEN DATA FORMS

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 7-27-15	Examined By:	Camera: NA
Exam Date: 7-27-15	Recorded By:	Photo numbers: NA
Sex: UD Too immature to sex	Body Weight (g): 32.0	Tissues Photographed: NA
Specimen ID: HA02 ②	Gonad Weight (g): 0.1	Length (mm): 147

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES	ⓒ	OVARIES UD	
✓	Unremarkable	✓	Unremarkable	NA	Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy		Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites ⓑ		Growths	✓	Unremarkable
GALLBLADDER UD NE		KIDNEYS			Parasites
	Empty	✓	Unremarkable	TESTIS UD	
	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
	Empty		Parasites (urinary bladder)		
✓	Food	COMMENTS: ⓐ HA = spotted hake ⓒ Inadvertantly recorded twice JW 7-27-15 ⓑ RE JW 7-27-15			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 7-27-15	Examined By:	Camera: NA
Exam Date: 7-27-15	Recorded By:	Photo numbers: NA
Sex: UD Gonads not recovered	Body Weight (g): 52	Tissues Photographed: NA
Specimen ID: IDF01 @	Gonad Weight (g): UD	Length (mm): 154

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody	✓	Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	NA	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
✓	Empty	✓	Unremarkable	TESTIS UD	
	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: @WF = Winter Flounder			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 7-27-15	Examined By:	Camera: NA
Exam Date: 7-27-15	Recorded By:	Photo numbers: NA
Sex: UD Gonads not removed	Body Weight (g): 39	Tissues Photographed: NA
Specimen ID: WF02 @	Gonad Weight (g): UD	Length (mm) 171

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NB	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable		Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody	✓	Mucous		Ripe
	Fluid – cloudy		Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	NA	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
✓	Empty	✓	Unremarkable	TESTIS UD	
	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: @ WF = Winter Flounder			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 7-27-15	Examined By:	Camera: NA
Exam Date: 7-27-15	Recorded By:	Photo numbers: NA
Sex: UD Gonads not reserved	Body Weight (g): 29	Tissues Photographed: NA
Specimen ID: WF03 ⑥	Gonad Weight (g): UD	Length (mm): 142

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed -- eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS @			Head Up-Tail Down
BARBELS		NE	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	NA	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
✓	Empty	✓	Unremarkable	TESTIS UD	
	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: ⑥ WF = Winter Flounder			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

@RE JW 7-27-15

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 7-27-15	Examined By:	Camera: NA
Exam Date: 7-27-15	Recorded By:	Photo numbers: NA
Sex: UD Gonads not recovered	Body Weight (g): 41	Tissues Photographed: NA
Specimen ID: WF-04@	Gonad Weight (g): UD	Length (mm): 156

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES (2D)	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	NA	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
✓	Empty	✓	Unremarkable	TESTIS (2D)	
	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: @WF = Winter Flounder			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 5-27-15	Examined By:	Camera: NA
Exam Date: 5-27-15	Recorded By:	Photo numbers: NA
Sex: UD Gonads not recovered	Body Weight (g): 51	Tissues Photographed: NA
Specimen ID: WF05@	Gonad Weight (g): UD	Length (mm): 160

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Cerold Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	NA	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
✓	Empty	✓	Unremarkable	TESTIS UD	
	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: @ WF = Winter Flounder			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 7-27-15	Examined By:	Camera: NA
Exam Date: 7-27-15	Recorded By:	Photo numbers: NA
Sex: F	Body Weight (g): 146.0	Tissues Photographed: NA
Specimen ID: PV01	Gonad Weight (g): 1.52	Length (mm): 178

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid	✓	Mature
	Fluid – bloody	✓	Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
	Empty	✓	Unremarkable	TESTIS NA	
✓	Full Partially		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: @ PV = Northern Pikeminnow			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 7-27-15	Examined By:	Camera: NA
Exam Date: 7-27-15	Recorded By:	Photo numbers: NA
Sex: UD Too immature to sex	Body Weight (g): 6.8	Tissues Photographed: NA
Specimen ID: AT01 (6)	Gonad Weight (g): 0.05	Length (mm): 96

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy		Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
(6) NE	Empty	✓	Unremarkable	TESTIS UD	
	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
✓	Food	COMMENTS: (6) AT = Atlantic Tomcod			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

@RE JW 7-27-15

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 7-27-15	Examined By:	Camera: NA
Exam Date: 7-27-15	Recorded By:	Photo numbers: NA
Sex: UD Gonads not received	Body Weight (g): 9.0	Tissues Photographed: NA
Specimen ID: A102 @	Gonad Weight (g): UD	length (mm): 101

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
NE	Empty	✓	Unremarkable	TESTIS UD	
	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: @AT = Atlantic Tomcod			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 7-27-15	Examined By:	Camera: NA
Exam Date: 7-27-15	Recorded By:	Photo numbers: NA
Sex: UD Too immature to sex	Body Weight (g): 8.0	Tissues Photographed: NA
Specimen ID: ATO3 (a)	Gonad Weight (g): 0.04	Length (mm): 102

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody	✓	Mucous		Ripe
	Fluid – cloudy		Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Cerold Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
NE	Empty	✓	Unremarkable	TESTIS UD	
	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: (a) ATO3 = Atlantic Tomcod			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 7-27-15	Examined By:	Camera: NA
Exam Date: 7-27-15	Recorded By:	Photo numbers: NA
Sex: UD Too Immature to sex	Body Weight (g): 3.0	Tissues Photographed: NA
Specimen ID: AT04 (b)	Gonad Weight (g): 0.04	Length (mm): 96

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
(a) NA	Empty NE	✓	Unremarkable	TESTIS UD	
	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
✓	Food	COMMENTS: (b) AT = Atlantic Tomcod			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

(a) RE DW 7-27-15

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 7-27-15	Examined By:	Camera: Olympus TG-3
Exam Date: 7-27-15	Recorded By:	Photo numbers: 1
Sex: UD Gonads not recovered	Body Weight (g): 5.0	Tissues Photographed: @ Left trunk
Specimen ID: AT05 (b)	Gonad Weight (g): UD	Length (mm): 490

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
✓	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES UD	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody	✓	Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	✓	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	NA	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
NE	Empty	✓	Unremarkable	TESTIS UD	
	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS (b) AT = Atlantic Tomcod			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

(a) RE DW 7-27-15

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 7-27-15	Examined By:	Camera: NA
Exam Date: 7-27-15	Recorded By:	Photo numbers: NA
Sex: F	Body Weight (g): 218.0	Tissues Photographed: NA
Specimen ID: SF10 (b)	Gonad Weight (g): 0.57	Length (mm): 295

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES	
✓	Unremarkable	✓	Unremarkable	✓	Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Cerold Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	NA (a)	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	✓	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
✓	Empty	✓	Unremarkable	TESTIS NA	
	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
✓	Food	COMMENTS: (b) SF = Summer Flounder			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

(a) RE DW 7-27-15

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 7-27-15	Examined By:	Camera: NA
Exam Date: 7-27-15	Recorded By:	Photo numbers: NA
Sex: F	Body Weight (g): 168.10	Tissues Photographed: NA
Specimen ID: SF11 ⑥	Gonad Weight (g): 0.34	Length (mm) 270

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES	
✓	Unremarkable	✓	Unremarkable	✓	Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	NA	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	✓	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
	Empty	✓	Unremarkable	TESTIS NA	
✓	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: ⑥ SF = Summer Flounder			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

⑦RE DW 7-27-15

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 7-27-15	Examined By:	Camera: NA
Exam Date: 7-27-15	Recorded By:	Photo numbers: NA
Sex: F	Body Weight (g): 155.0	Tissues Photographed: NA
Specimen ID: SF12 @	Gonad Weight (g): 0.138	Length (mm): 262

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES	
✓	Unremarkable	✓	Unremarkable	✓	Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	NA	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	✓	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
	Empty	✓	Unremarkable	TESTIS NA	
✓	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: @SF = Summer Flounder			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 7-27-15	Examined By:	Camera: NA
Exam Date: 7-27-15	Recorded By:	Photo numbers: NA
Sex: M	Body Weight (g): ~64.0	Tissues Photographed: NA
Specimen ID: SF13 @	Gonad Weight (g): 0.21	Length (mm): 305

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES NA	
✓	Unremarkable	✓	Unremarkable		Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy		Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Cerold Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	NA	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	✓	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
	Empty	✓	Unremarkable	TESTIS	
✓	Full		Pale	✓	Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
	Empty		Parasites (urinary bladder)		
✓	Food	COMMENTS: @ SF = Summer Flounder			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 7-27-15	Examined By:	Camera: NA
Exam Date: 7-27-15	Recorded By:	Photo numbers: NA
Sex: F	Body Weight (g): 134.0	Tissues Photographed: NA
Specimen ID: SF14 @	Gonad Weight (g): 0.30	Length (mm): 257

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES	
✓	Unremarkable	✓	Unremarkable	✓	Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	NA	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	✓	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
✓	Empty	✓	Unremarkable	TESTIS NA	
	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
	Empty		Parasites (urinary bladder)		
✓	Food	COMMENTS: @ SF = Summer Flounder			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 7-27-15	Examined By: [redacted]	Camera: NA
Exam Date: 7-27-15	Recorded By: [redacted]	Photo numbers: NA
Sex: F	Body Weight (g): 208.0	Tissues Photographed: NA
Specimen ID: SF15 (6)	Gonad Weight (g): 0.41	Length (mm): 258

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES	
✓	Unremarkable	✓	Unremarkable	✓	Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	(2) X	Liver NA
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	NA	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	✓	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
✓	Empty	✓	Unremarkable	TESTIS NA	
	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
✓	Food	COMMENTS (6) SF = Summer Flounder			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

@RBJW 7-27-15

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 7-27-15	Examined By:	Camera: NA
Exam Date: 7-27-15	Recorded By:	Photo numbers: NA
Sex: F	Body Weight (g): 263.0	Tissues Photographed: NA
Specimen ID: SF16 (c)	Gonad Weight (g): 0.184	Length (mm): 312

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES	
✓	Unremarkable	✓	Unremarkable	✓	Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy	~	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	(b) NA	Liver NA
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	(a) NA	Unremarkable NA		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	✓	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
✓	Empty	✓	Unremarkable	TESTIS NA	
	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
	Empty		Parasites (urinary bladder)		
✓	Food	COMMENTS: (c) SF = Summer Flounder			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

(a) RE DW 7-27-15
(b) RE DW 7-27-15

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 7-27-15	Examined By:	Camera: NA
Exam Date: 7-27-15	Recorded By:	Photo numbers: NA
Sex: F	Body Weight (g): 308.0	Tissues Photographed: NA
Specimen ID: SF17 @	Gonad Weight (g): 0.97	Length (mm): 324

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES	
✓	Unremarkable	✓	Unremarkable	✓	Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS NA	
✓	Unremarkable		Shrunken		Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	NA	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	✓	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
✓	Empty	✓	Unremarkable	TESTIS NA	
	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
	Empty		Parasites (urinary bladder)		
✓	Food	COMMENTS: @SF = Summer Flounder			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 7-27-15	Examined By:	Camera: NA
Exam Date: 7-27-15	Recorded By:	Photo numbers: NA
Sex: F	Body Weight (g): 273.0	Tissues Photographed: NA
Specimen ID: SF18 (b)	Gonad Weight (g): 1.15	Length (mm): 312

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES	
✓	Unremarkable	✓	Unremarkable	✓	Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	NA	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	✓	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
	Empty	✓	Unremarkable	TESTIS	UD (c) NA
✓	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: (b) SF = Summer Flounder			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

(c) RE JW 7-27-15

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 7-27-15	Examined By:	Camera: NA
Exam Date: 7-27-15	Recorded By:	Photo numbers: NA
Sex: F	Body Weight (g): 168.0	Tissues Photographed: NA
Specimen ID: SF19 @	Gonad Weight (g): 0.55	Length (mm): 265

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NA	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES	
✓	Unremarkable	✓	Unremarkable	✓	Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody	✓	Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS	
✓	Unremarkable		Shrunken	NA	Liver
	Discolored		Discolored		I Baumann
	Yellowish		Cerold Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	NA	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	✓	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
✓	Empty	✓	Unremarkable	TESTIS NA	
	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: @ SF = Summer Flounder			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

SPECIMEN DATA FORM

CHECKLIST FOR PHYSICAL EXAMINATION OF FISHES		
Collection Date: 7-27-15	Examined By:	Camera: NA
Exam Date: 7-27-15	Recorded By:	Photo numbers: NA
Sex: F	Body Weight (g): 192.0	Tissues Photographed: NA
Specimen ID: SF20 @	Gonad Weight (g): 0.156	Length (mm): 270

EXTERNAL PHYSICAL EXAMINATION					
BODY FORM		ISTHMUS		BRANCHIAL CAVITY	
✓	Unremarkable	✓	Unremarkable	✓	Unremarkable
	Emaciated		Enlarged		Growths
	Truncate		Hemorrhagic		Parasites
	Scoliosis	EYES		UROGENITAL OPENING	
	Lordosis	✓	Unremarkable	✓	Unremarkable
BODY SURFACE			Popeye		Inflamed
✓	Unremarkable		Cloudy cornea	ANUS	
	Raised scales		Missing	✓	Unremarkable
	Swollen		Lens deformed		Inflamed
	Lesions		Lens parasites	LESIONS – Location(s)	
	Excess mucous		Lens cataract	NA	Fins
	Reoriented scales	FINS			Head
	Growths	✓	Unremarkable		Eyes
	Parasites		Frayed – eroded		Mouth
	Wounds		Parasites		Peduncle
	Wounds - lamprey		Hemorrhagic		Ventral
LIPS AND JAWS			Gas Bubbles		Dorsal
✓	Unremarkable	FINS - ERODED			Lateral
	Deformed	NA	Dorsal	BEHAVIOR	
	Growths		Pectoral	NE	Gasping
SNOUT			Pelvic		Flashing
✓	Unremarkable		Anal		Lethargic
	Pugnose (Pughead)		Adipose		Fin twitching
	Growths		Caudal		Convulsions
	Abrasions	GILLS			Head Up-Tail Down
BARBELS		✓	Unremarkable		Head-tail whirling
NA	Unremarkable		Bright red		Pectoral fins folded forwarded
	Deformed		Brown		Belly up
	Missing		Gas bubbles		Loss of balance
OPERCLE			Parasites		Long axis whirling
✓	Unremarkable	PSEUDOBRANCH		OTHER OBSERVATIONS	
	Incomplete	✓	Unremarkable		
	Deformed		Enlarged		

INTERNAL PHYSICAL EXAMINATION					
BODY CAVITY		INTESTINES		OVARIES	
✓	Unremarkable	✓	Unremarkable	✓	Immature
	Fluid – clear		Flaccid		Mature
	Fluid – bloody		Mucous		Ripe
	Fluid – cloudy	✓	Feces		Reabsorbing
	Adhesions		Fluid		Growth
MESENTERIC FAT			Hemorrhagic	MUSCLE	
✓	Unremarkable		Parasites	✓	Unremarkable
	None	SPLEEN			Soft
	Excessive	✓	Unremarkable		Parasites
LIVER			Enlarged	TUMORS NA	
✓	Unremarkable		Shrunken		Liver
	Discolored		Discolored		I Baumann
	Yellowish		Ceroid Pigment Centers		II Scale
	Pale	GAS BLADDER			III
	Enlarged	NA	Unremarkable		
	Growths		Fluid	PYLORIC CAECA	
	Parasites		Growths	✓	Unremarkable
GALLBLADDER		KIDNEYS			Parasites
	Empty	✓	Unremarkable	TESTIS NA	
✓	Full		Pale		Immature
	Yellow		Swollen		Mature
	Green		Soft		Ripe
	Enlarged		Hemorrhagic		Constructed
	Parasites		Stones		Growth
STOMACH			Growths	OTHER OBSERVATIONS	
✓	Unremarkable		Cysts		
✓	Empty		Parasites (urinary bladder)		
	Food	COMMENTS: @SF = Summer Flounder			
	Mucous				
	Fluid				
	Hemorrhagic	NA = not applicable; NE = not evaluated; RE = recording error; UD = undetermined			

ATTACHMENT 6

Chemical Residues in Cormorants from New York Harbor and Control Location (Parsons 2003)

Chemical Residues in Cormorants from New York Harbor and Control Location

Contract No. C003858

Final Report submitted to:

New York State Department of Environmental Conservation

Division of Fish, Wildlife and Marine Resources

50 Wolf Road

Albany, NY 12233-4756

Prepared by:

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28 February 2003

1. INTRODUCTION

The Double-crested Cormorant (*Phalacrocorax auritus*) is at the top of the New York-New Jersey Harbor estuary aquatic food web, and, as a result, may be one species most highly affected by chemical contaminant exposures. Double-crested Cormorants normally contain the greatest concentrations of chemical contaminants among several waterbirds tested in the Great Lakes (Weseloh et al. 1995) although fish-eating mergansers were not examined. Cormorant populations underwent a major decline in population nationwide following the introduction of DDT in 1946 and was likely one of the first bird species to be substantially impacted by this contaminant. Analysis of egg tissues determined that DDT contamination was associated with cormorant reproductive failures in California (Gress et al. 1972) and Lake Huron (Weseloh et al. 1983) in the 1960s and 1970s. The weight of nesting birds crushed the eggs due to egg-shell thinning caused by excessive DDT concentrations. Egg concentrations of DDT residues ranged from 24-32 ug/g and were associated with 11-30% thinning of egg shells.

On other Great Lakes, the combination of PCB and dioxins has produced reproductive failures and congenital anomalies of cormorant colonies, particularly for Lake Ontario and in Green Bay, Lake Michigan. Price and Weseloh (1986) noted complete reproductive failures of cormorants in Canadian waters of Lake Ontario between 1954 and 1977. Since 1977, the breeding population has been reestablished and there has been a marked expansion of the populations (Price and Weseloh 1986,

Weseloh 1995). For Lake Ontario, the number of cormorant nests expanded from less than 100 in 1979 to over 10,000 in 1993, and the expansion is consistent with declining concentrations of DDT, PCB and dioxins. Similar declines in DDT, PCBs and dioxins have been associated with increasing reproductive success, and population expansion, in cormorants for the other Great Lakes (Ludwig 1984, Weseloh et al. 1986, Weseloh et al. 1988, Weseloh 1995).

Tillitt et al. (1992) and Yamashita et al. (1993) have suggested causative concentrations of PCB or planar PCB expressed as H4IIE rat hepatoma cell bioassay derived 2,3,7,8-TCDD equivalents, and 2,3,7,8-TCDD which can be associated with specific rates of Double-crested Cormorant embryo mortality. Other investigators have provided similar concentration-effect relationships for other species of waterbirds. For species common to the harbor estuary, sample citations are Gilbertson et al. (1991) and Norstrom et al. (1982) for Herring Gulls (*Larus argentatus*), and Hoffman et al. (1993) for Black-crowned Night-Herons (*Nycticorax nycticorax*) and Common Terns (*Sterna hirundo*).

Despite the resurgence of Double-crested Cormorant populations, bill deformities, and occasionally other hatching anomalies, still persist in cormorant populations, particularly for Green Bay, Lake Michigan (Fox et al. 1991a). In relatively uncontaminated populations of cormorants, bill anomalies are present at rates of less than 2 per 10,000 chicks. Chicks from Green Bay had a bill anomaly rate of 52 per 10,000 chicks whereas colonies from Lake Michigan and three of the other four Great Lakes had bill anomaly rates ranging from 2.4 to 12.3 chicks per 10,000 chicks. Green Bay has a mix of chemical contaminants including PCB and dioxins (Heinz et al. 1985,

Stalling et al. 1985). The bill anomalies appear to be associated with three of the more toxic non-ortho PCB congeners and possibly 2,3,7,8-tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD) (Fox et al. 1991a). The organic chemical mix at Green Bay is similar to that found in New York-New Jersey Harbor estuary fish (Skinner et al. 1996, 1997).

Given the sensitivity of this species to organochlorine contaminants in the food web, the cormorant is a key ecosystem indicator for the Great Lakes (Fox et al. 1991a, 1991b), and should be equally an indicator of ecosystem health in the harbor estuary. Breeding colonies of Double-crested Cormorants are present at several sites within the harbor estuary, including Swinburne Island and Shooters Island (Parsons et al. 1991). These colonies are logical sites for the assessment of chemical residues in eggs of cormorants or the evaluation of bill deformities in young cormorants. Cormorants within the basin are known to feed on harbor estuary fish during their breeding and rearing seasons; some birds are resident throughout the year.

Although they have maintained a nesting population in the New York Harbor estuary, cormorants in the estuary have experienced less than optimum reproductive success (Parsons 1994), and occurrence of deformed chicks has been documented during contaminants studies in the 1990s (Parsons, unpublished data). PCB, particularly the coplanar dioxin-like congeners, dioxins and DDE are suspected to be the main causes of historical lowered reproduction and fitness of cormorants nesting in the harbor estuary, as they were in Great Lakes populations of cormorants. Cormorant populations in the harbor estuary have remained stable in recent years although other populations on or around Long Island have been increasing in size since 1985 (Sommers et al. 1996). This observation suggests that contaminants may be adversely

affecting reproduction, or that some other factors are contributing to less than optimal reproductive success.

No information is available on current levels of persistent toxic contaminants present in tissues of harbor estuary cormorant populations. The USFWS (Cortland, NY office) conducted sampling of cormorant eggs and blood in 1995 but analytical results and findings are not yet available. As the top predator in the basin ecosystem, cormorant populations may be expected to have the greatest body burdens of persistent bioaccumulative toxic substances such as PCB, dioxins, DDE and chlordane. For this study, chemical analyses of eggs, and blood, down and feathers collected from young pre-fledging birds.

Objectives of this study are: 1) measure concentrations of bioaccumulative chemical compounds in Double-crested Cormorant eggs, blood, and feathers to determine whether chemical contaminants are present at levels of concern; 2) provide baseline information on current levels of toxic substances present in New York-New Jersey Harbor estuary cormorant populations which may be used in tracking long term contaminant trends; 3) assess the feasibility and potential benefit of developing a long term cormorant monitoring project to assist in the evaluation of harbor estuary ecosystem health; and 4) assess and compare the potential impact of chemical contaminants on reproductive success and bill deformities in Double-crested Cormorant populations.

ACKNOWLEDGMENTS

This study was made possible by the support of many people and organizations. In particular, the extraordinary efforts of Manomet's field team made it feasible to access nests of cormorants on the tops of decaying, 40 ft high dry docks at Shooters Island, and in less dangerous, but comparably inaccessible sites on Swinburne and Gardiner's Islands. I am indebted to Stephanie Schmidt and Jan Yacabucci for their dedication and leadership in all aspects of data collection. In addition, Elizabeth Wright provided able field assistance and Angela Matz assisted in design aspects of the study.

Much-appreciated field assistance was also received from Veronica Varela, US Fish and Wildlife Service and Dawn McReynolds, Division of Fish, Wildlife and Marine Resouces, NYS DEC.

I am grateful to the following for assistance in providing access to study sites: Mr. Robert Goelet ; Marc Matsil and David Kunstler, New York City Parks; Marcia Fowle, New York City Audubon Society; National Park Service. We thank Dr. Oppenheimer and Donna Gerstle for generously making laboratory facilities at the College of Staten Island available to us. In addition, we thank Rick Crawford at the Waquoit Bay National Estuarine Research Reserve for use of lab space at the Reserve.

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2. FIELD AND LABORATORY METHODS

STUDY SITES

Shooters Island (SH; 40° 38' N, 74° 09' W; Richmond County, New York; Hudson and Union Counties, New Jersey) is a 15 ha island located at the confluence of Newark Bay and Arthur Kill and Kill Van Kull channels in New York Harbor. It is currently owned by the City of New York and the City of Bayonne. Double-crested Cormorants first nested on Shooters in 1990 (66 birds). By 1993, cormorant numbers peaked at 280 (NYSDEC 1994), but declined to approximately 200 birds by the mid 1990s (Parsons 1997).

Shooters Island was accessed by boat from the Elizabeth Marina in Elizabeth, New Jersey. In 1999 the entire cormorant colony nested on an abandoned dry dock tower just west of the island at a height of approximately 11 m. An extension ladder and climbing equipment were necessary to access the nests. Approximately five securing stations were set up along the structure to secure the ladder. Due to researcher safety concerns, nests were chosen for monitoring based on accessibility from the ladder. Numbered metal tags were placed on reachable nests for identification purposes. We determined reproductive endpoints in a total of 61 nests; 20 of those nests were chosen for sample collection. Approximately 75% of all nests on the dry dock were studied. Nest contents were inspected by hand or with a pole and attached mirror.

Swinburne Island (SW; 40° 34' N 74° 03’ W; Richmond County, New York) is a 4 ha island located in the lower bay of New York Harbor. It is a saltwater non-barrier Island owned and managed by the National Park Service. In 1989, two cormorants were first

observed nesting on the island. By 1998 cormorant numbers had increased to 35-40 pairs (P. Kerliner, pers. comm.).

Access to Swinburne Island involved a 7 km boat trip from Great Kills, Staten Island. Landing on the island required the use of a canoe when a shallow boat was not available. In 1999, cormorants nested in six trees on the island. Nests were chosen based on accessibility from the ladder. Trees were numbered and each nest tagged with orange flagging and numbered uniquely. We determined reproductive endpoints in a total of 40 nests; 20 of those nests were chosen for sample collection.

Gardiners Island is located in Long Island Sound off the eastern tip of Long Island (GA; 41° 06' N; 72° 07' W; Suffolk County, New York). It is a 1,000 ha privately owned non-barrier island. Records of cormorants nesting on Gardiners Island date back to 1985 when 420 individuals were recorded. The population steadily increased to a total of 3000 individuals in 1993 (NYSDEC 1994). Subsequent years place the numbers around 1000-2000 pairs (M. Scheibel, pers. comm.).

In 1999, the cormorant colony on Gardiners spanned two small peninsulas, an islet and upland trees. Birds nested both in the trees and on the ground. Accessible study nests were randomly chosen in trees and at ground level. We determined reproductive endpoints in a total of 50 nests; 20 of those nests were chosen for sample collection.

CORMORANT PRODUCTIVITY

We determined productivity of Double-crested Cormorants by following the success of marked nests. Colonies were not visited or visits were terminated when it

rained, when wind speed was greater than 8 m/s, or when ambient temperatures were above 38°C or below 13°C.

Nests were visited approximately weekly with the greatest interval between nest checks spanning18 days (due to inclement weather). Because of the nesting configuration of the birds at Shooters and Swinburne Islands, the visitation schedule included short, multiple visits to the colony in order to minimize disturbance. Visits were also limited to morning hours to prevent young from overexposure to heat and cold stress. During nest checks and sample collections at Gardiners Island, we followed regular paths through the colony and did not return to a section of the colony within 1 hr of passing through.

Nest contents were recorded at each visit. In general, information was obtained during laying, incubation, hatching, and nestling periods at each visit. Eggs were marked with a unique symbol as they were laid using a non-toxic marker. Nestlings were banded with size 9 numbered poultry bands at approximately 2 weeks of age in order to identify individuals after they left the nest. At approximately 3 weeks of age, cormorant nestlings are capable of leaving the nest, but not capable of flight, and will form creches with young from other nests (Hatch and Weseloh, 1999). A US Fish and Wildlife Service band size 8 was placed on the tarsus when chicks were approximately 3 weeks old (or between 1000-1500 grams) when the tarsus was large enough to hold a band. Banding coincided with blood sampling. The condition of nestlings in accessible nests was recorded at each visit. Nestling mortality factors were assessed as possible. During sequential nest visits, eggs and young known to have died were documented as either present in or around the nest, or missing. Dead offspring available for

examination were assessed for obvious signs of predation (broken eggs, contents at least partially removed; nestlings with severe trauma) and inviability/starvation (intact eggs failing to hatch; intact nestlings usually found dead in the nest). Missing offspring were presumed to have been taken by a predator.

Collection of Specimens for Chemical Analysis

Equipment used for collecting samples was prepared at Waquoit Bay National Estuarine Research Reserve Laboratory in Waquoit, Massachusetts. All sample preparation work was conducted under a chemical hood. Acetone (Certified ACS, Fisher Scientific, Pittsburgh, PA) and hexane (Certified ACS, Fisher Scientific, Pittsburgh, PA) were dispensed into separate Teflon wash bottles to rinse equipment. Dull sides of squares of aluminum foil were rinsed, and excess chemicals ran off into a waste jar through a glass funnel. This procedure was repeated with hexane. The foil squares were air-dried (<5 min.) and folded with the rinsed side in for storage. Rinsed foils were then wrapped in a rinsed foil outerwrap and placed into a Ziploc® bag.

Eggs

Stainless steel instruments for egg contents extraction were prepared by holding instruments over the funnel and pipetting acetone and hexane over the instruments. Instruments were allowed to air dry and then stored in rinsed aluminum foil. ICHEM jars (300 series, Nalge Company, New Castle, DE) are already chemically clean, and did not need preparation.

Egg Collection. One intact, newly laid egg was collected from the selected study nests in each colony. Samples for each island were SH=16; SW=13; GA=15. Fresh eggs minimize variability in concentrations of contaminants, lipid, and moisture associated with egg development. Eggs lose moisture during incubation, affecting concentrations of egg constituents (Stickel et al. 1973). Eggs were considered fresh when they floated upright in fresh water.

In the field, eggs were wrapped in acetone and hexane rinsed aluminum foil and labeled with the date, nest number, and colony. Wrapped eggs were placed in individual plastic labeled Ziploc® bags. Eggs were transported to the laboratory on ice in a cooler with a foam insert with egg-sized holes cut in the foam to cradle the eggs. Eggs were stored (< 48 hr) in a refrigerator (4°C) until processed.

Egg Processing. After egg collection in the field, eggs were processed at The College of Staten Island of The City University of New York (Staten Island, New York) Laboratory. An Ainsworth model 300 balance (Denver Instruments, Arvada CO) was plugged in and allowed to adjust 1 ½ to 2 hours before calibrating. It was then calibrated with a 200g calibration weight (ASTM Class2, Denver Instruments) before measurements were taken. If debris was present on the egg, it was rinsed in cool water while gently scrubbing. Care was taken not to allow eggs to soak in water. Eggs were then dried with a paper towel.

Egg Measurements. Total egg weight (to 0.01 g) was measured. Three measurements each of egg length and maximum egg width were taken with metal,

acetone-hexane rinsed calipers (to 0.01 mm). We computed the average of three measurements for a final measurement. Total egg volume was measured by water displacement. A clean, dry beaker was tared and an immersion chamber filled with demineralized water. Water level was calibrated with the wire loops in the water chamber. The egg was immersed in the chamber with acetone-hexane rinsed wire loops until the top of the egg was just at the water surface. The beaker and water were weighed, and the tared beaker weight was subtracted for the egg contents weight. To calculate egg volume, we assumed that the egg contents were the same density as water. We obtained two measurements with this method and averaged them. Only two measurements were taken in order to minimize time the eggs spent in the water.

Egg Contents Extraction. ICHEM jars were tared with a completed label and no lid. The jars were placed in the center of the square of aluminum foil with edges turned up. This precaution was used in case egg contents should spill outside of the jar. Eggs were scored at the equator with an acetone-hexane rinsed hacksaw blade to cut the shell. Prior to use, hacksaw blades were pre-soaked in acetone. Once the shell was cut, eggshell membranes were cut through with an acetone-hexane rinsed scalpel, and egg contents were poured and gently scraped into the chemically clean jar. The membranes were left intact within the shell. The weight of the egg contents was measured along with the jar and completed label (no lid), and the tare weight was subtracted to compute egg contents weight.

If the egg was developed despite selecting for fresh eggs in the field, the age of embryo was estimated (Powell et. al. 1998) and the embryo was examined for gross

deformities. Using a dissecting scope, the embryo was examined for particular bill deformities such as crossed bills or lack of jaws, but also lack of skull bones, clubfeet, rotated ankles, or dwarfed appendages (Gilbertson et al. 1991).

ICHEM jars have a chemically cleaned Teflon-lined lid. The lid was used as a primary seal, then Teflon tape was placed around the lid and jar junction and the end was sealed with chain of custody security tape. Contents were stored frozen at –18°C until shipment overnight on dry ice to the analytical laboratory. Chain of Custody forms and Fish/Wildlife Collection records accompanied samples in shipment.

Measurement of Eggshell Thickness. Eggshells were rinsed gently with cool water and allowed to dry inverted on paper towels. Each shell half was then labeled with permanent marker (year, colony name, and nest number). Shells were allowed to dry for 4.5 – 5 months. Eggshell thickness of both membranes and shell was measured to 0.01 mm with a micrometer (No. 1010, Starrett, Athol, MA). We measured four random points near the equator and averaged these measurements for final eggshell thickness. Weight of dry shells (to 0.001 g) was determined (Ainsworth 300, Denver Instrument, Arvada, CO).

BLOOD

Glass syringes and pipettes (for plasma transfer) were prepared at Waquoit Bay National Estuarine Research Reserve Laboratory in Waquoit, Massachusetts. Acetone, then hexane, was squirted into pipettes and the excess was allowed to run into waste

jars. Needles and Vacutainer® tubes (Becton and Dickinson, Franklin Lakes, NJ) were not rinsed since they must remain sterile and may have additives.

Blood samples were taken from cormorant chicks at 3 weeks of age. Chicks were weighed to the nearest 25g using a 1kg or 2.5 kg Pesola® (Switzerland) scale. Tarsus and culmen length were measured with dial calipers. The puncture site on the jugular vein was cleaned with a sterile alcohol swab. The brachial vein was used if difficulty was encountered in obtaining blood from the jugular vein. A hub of sodium heparin (Elkins-Sinn, Inc. Cherry Hill, N. J.) was drawn into a glass syringe fitted with a 23g needle. This needle was then discarded, and a new needle placed on the glass syringe. In keeping with humane practices (Gaunt and Oring 1997), no more than 1% body weight of a bird (up to 10 ml) was collected. A sample of 1.5 – 2.0 ml blood was placed in a non-additive added royal blue topped Vacutainer® for metals analysis and the remainder of blood, approximately 7 ml was placed into a 100 U.S.P. unit sodium heparin green-topped Vacutainer® tube (Becton and Dickinson, Franklin Lakes, NJ). The Vacutainer® tops were removed and samples placed directly into the tubes. The samples were mixed by rolling the tubes between the fingers, and care was taken to avoid inverting the tubes. Tubes were then placed upright on ice for transport to field housing.

Blood Processing. Blood samples were processed the same day of collection. Heparinized blood samples (green-topped Vacutainer® tube) were spun at 1200rpm for 10 minutes in an IEC HN-SII Benchtop Centrifuge with swinging buckets (Fisher Scientific, Pittsburgh, PA). Plasma was removed with an acetone-hexane rinsed

pipette. Notations were made if the sample was lipemic or if hemolysis occurred. Plasma was decanted into another green-topped tube for storage at –18°C in a locked freezer (general lab freezer set at –18°C, REVCO, Asheville, NC). Blue-topped Vacutainer® tubes were not spun, as whole blood was needed for metals analysis. The tops of both blue and green Vacutainer® tubes were wrapped with Teflon tape and a masking tape security seal placed over loose ends. For samples previous to 1 July 1999, this tape was put in place after samples were frozen. In samples after 1 July 1999, this sealing method was employed at the time of sample processing prior to freezing. Samples were shipped overnight Federal Express on dry ice to the Hale Creek Field Station for storage, sample preparation and shipment to the contract laboratory. Chain of Custody forms and Fish/Wildlife Collection records accompanied samples in shipment.

FEATHERS

At three weeks of age when chicks were sampled for blood, both down and secondary feathers were collected for metals analysis. Because breast feathers were not present at age of blood sampling and secondary flight feathers were not fully developed, down and secondary feathers were sampled. Post-natal down (1 g) was collected from the breast of three week old cormorant chicks with acetone-hexane rinsed scissors. Samples were placed into a Whirl-Pak™(Nasco, Fort Atikinson, WI) bag labeled with date, colony, nest number and chick identification (band number). When possible, the largest secondary flight feather from each side was obtained and placed into a Whirl-Pak™ bag. Care was taken to not cut any post-natal down feathers.

Feather samples were stored in a light-inhibiting box until shipment to the contract laboratory. Chain of Custody forms and Fish/Wildlife Collection records accompanied samples in shipment.

CHEMICAL ANALYSES

Metals. Cormorant tissues were analyzed for mercury and cadmium by Frontier Geosciences, Inc. Mercury analyses were performed using cold vapor atomic fluorescence spectrometry. Methylmercury analyses were performed using aqueous phase ethylation, purging onto a carbo trap, isothermal isolation and CVAFs. Cadmium was analyzed using inductively coupled plasma-mass spectrometry. Further details may be found in the appendices.

Polynuclear Aromatic Hydrocarbons. Cormorant tissues were analyzed for polynuclear aromatic hydrocarbons by Axys Analytical Services, Inc. Samples were spiked with a suite of perdeuterated PAH surrogate standards and were solvent extracted. The raw extract was fractionated on silica into polar and non-polar fractions. The polar fraction was analyzed for polycyclic aromatic hydrocarbons by high resolution gas chromatography/high resolution mass spectrometry. Further details may be found in the appendices.

Chlorinated Pesticides. Cormorant tissues were analyzed for chlorinated pesticides by Axys Analytical Services, Inc. Samples were spiked with six isotopically labeled surrogate standards and solvent extracted. The extract was separated into two fractions using Florisil and each fraction was analyzed for a suite of organochlorine

pesticides by high resolution gas chromatography/high resolution mass spectrometry. Further details may be found in the appendices.

Polychlorinated Biphenyls, Dioxins and Furans. Cormorant tissues were analyzed for PCBs, dioxins and furans by Axys Analytical Services, Inc. Samples were spiked with isotopically labeled surrogate standards and solvent extracted by shaking with a solution of ethanol, hexane and saturated ammonium sulphate. The hexane extract was backwashed with water, concentrated and lipid content determined. The extract was loaded onto a carbon/Celite column and eluted as two fractions. One fraction was subsequently eluted through a Florisil column to yield two new fractions (F1/F2 and F3/F4). Each fraction was concentrated to a small volume, transferred to an autosampler vial and an aliquot of recovery (internal) standard added. The F3/F4 fraction was analyzed for the most polar chlorinated pesticides by GC/ECD or by HRGC/HRMS. The second fraction from the carbon/Celite column was loaded onto an alumina column and again eluted into two separate fractions. The first fraction collected was combined with the F1/F2 fraction from the Florisil column and analyzed for PCBs by HRGC/HRMS or by HRGC/LRMS. The second fraction was collected, concentrated and analyzed for polychlorinated dibenzodioxins and furans. Further details may be found in the appendices.

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3. REPRODUCTIVE SUCCESS

RESULTS

In all analyses of reproductive success, the nest was considered the basic unit of analysis. The fate of individual eggs and nestlings are not independent from each other if they occur in the same nest. Frequency data such as the proportions of successful and unsuccessful nests, the distribution of egg and nestling production, and the distribution of egg and nestling mortality were all analyzed with chi-square tests of independence. The survival of nestlings as measured by chick days (a continuous variable; see below) was examined with ANOVA. Unless otherwise noted, α=0.05.

Sample sizes for productivity endpoints are provided in Table 3.1. Although larger samples are available if all nests are included in analysis of productivity endpoints, we detected a difference in the number of eggs laid in nests selected for egg collection compared to nests not selected in two of three colonies (paired t-tests: GA t_{44}=-2.01, P=0.0502; SH t_{63}=-2.20, P=0.0313; SW t_{39}=-1.09, P=0.2833). In both cases, the number of eggs laid was larger in nests selected for egg collection than in nests not selected. Therefore, all productivity analyses were performed on nests not selected for egg collection.

In addition, because our ability to access the colonies differed between colonies (due to weather and boat access), we tested for differences in data “quality” from each colony. The variables CHKEGG and CHKYNG were defined as the maximum number of days between nest checks during the egg and nestling phases of nesting, respectively. Because CHKEGG and CHKYNG were not normally distributed and had unequal variances, we used a Kruskal-Wallis test to examine differences in nest check

intervals between colonies. No differences between colonies were detected in CHKEGG (x^2_2=4.4, P=0.109), however between colony differences were detected in CHKYNG (x^2_2=12.5, P=0.002). The difference was due to the small nest check intervals at Gardiner's Island compared to the other two colonies. Although it was not possible to eliminate this sampling bias, it will be considered in the interpretation of results. For example, if productivity on Gardiners Island is high relative to other sites, it may reflect better information resulting from more frequent nest visits. Conversely if productivity on Gardiners is low, we will evaluate the possible contribution of increased disturbance to nesting success.

We examined the proportions of successful and unsuccessful nests at each colony. Nests defined as successful at hatching eggs had at least one young observed throughout the study. Nests defined as successful at fledging young had at least one nestling that survived a minimum of 21 days (young known to have survived 21 da and young not known to have died at less than 21 da). Tests of independence showed that in both analyses, Gardiners Island produced more failing nests than the other sites (Table 3.2).

Two production endpoints (number of eggs laid ELAID, maximum number of young observed MAXYNG) and two nestling survival endpoints (total chick days TOTCHDA, maximum chick days MAXCHDA) per nest were evaluated. Chick days were calculated per nestling as the number of days the chick was known to be alive. Total chick days were the sum of chick days for all nestlings per nest. Maximum chick days were the maximum number of chick days observed for any nestling in a nest.

Eggs laid and maximum young were discrete variables that were not distributed normally (Table 3.3). Colony differences were examined with a Kruskal-Wallis test. Number of eggs laid did not differ between colonies (x^2_2=4.8, P=0.091), but maximum number of young was higher at Swinburne Island than at the other two colonies (x^2_2=14.9, P=0.0006; without SW x^2_1=2.1, P=0.147).

Total chick days and maximum chick days were continuous variables but also largely non-normal. A square root transformation improved normality and Bartlett's test on transformed variables was not significant (total chick days x^2_2=3.6, P=0.16; maximum chick days x^2_2=0.13, P=0.94). Differences were detected between colonies in both variables (total chick days $F_{2,77}$=13.5, P<0.0001; maximum chick days $F_{2,77}$=9.0, P<0.0001) (Figure 3.1).

Offspring mortality data were examined to elucidate patterns across colonies. Offspring (eggs or young) found dead in the nest or dead on the ground near the nest were compared to offspring missing from the nest (Table 3.4). No differences were detected in the proportions of nests showing either pattern of mortality for eggs (x^2_2=0.29, P=0.86) or young (x^2_2=4.6, P=0.10).

DISCUSSION

Productivity of Double-crested Cormorants nesting in coastal New York varied between sites; birds nesting on Swinburne Island were generally more successful than cormorants on Shooters or Gardiner's Islands. Although the number of eggs laid per nest was not different between sites, the maximum number of young observed per nest

(a measure of hatching success) and two measures of chick survival (total chick days and maximum chick day) were highest on Swinburne and lowest on Shooters Islands.

The number of eggs laid per nest was comparable to clutch sizes reported for cormorants across North America (reviewed in Hatch and Weseloh 1999), although the distribution of clutch sizes in the present study was somewhat skewed toward smaller clutches compared to an extensive study of cormorants nesting in Ontario (Peck and James 1983). Hatching success on Gardiner's Island, in particular appeared low compared to regional studies of cormorant reproduction (Hatch and Weseloh 1999). Eggs from a majority of study nests on both Gardiner's and Shooters Islands failed to hatch as a result of being lost from the nest—suggesting predation. On Gardiner's Island, both Herring and Great Black-backed Gulls (*Larus argentatus, L. marinus*) nested in close proximity to cormorants and potentially impacted nesting success (Kury and Gochfeld 1975).

Chick survival was highest on Swinburne Island where average maximum chick day and total chick days were twice that observed at the other two sites. Chick survival on Shooters Island in the early 1990s was comparable to that reported for Swinburne Island in 1999 (Parsons 1994). Although some studies suggest that chick mortality may be low relative to hatching failures (Hatch and Weseloh 1999), and that as few as 5% of hatched cormorants are lost before fledging (Drent et al. 1964), the present study found this pattern only at Swinburne Island. Although some nestlings were observed for up to four weeks after hatching, most nestlings at Shooters and Gardiner's Islands survived for less than two weeks. No differences were detected among colonies in the proportion of young that died in or near the nest (typically considered to be inviable

nestlings) and the proportion of young missing from the nest (considered to have been predated).

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Table 3.1. Sample sizes available for analysis of nesting productivity of Double-crested Cormorants in coastal New York, 1999. Shown are the number of nests with known information on the number of eggs laid, the number of nests in which an egg was collected for contaminant analysis, the number of nests with known information on the maximum number of young observed in the nest, and the number of nests with known information on the total and maximum number of chick days.

		Number of Nests				
	Colony	Eggs Laid	Eggs Collected	Max Young	Total Chick Days	Max Chick Days
All nests	Gardiner's	46	15	43	21	21
	Shooters	65	16	51	50	50
	Swinburne	41	13	39	38	38
Nests	Gardiner's	31	0	30	13	13
w/o egg	Shooters	49	0	41	40	40
collection	Swinburne	28	0	27	27	27

Table 3.2. Hatching and fledging success of Double-crested Cormorants in coastal New York, 1999. Comparisons across colonies made with chi-square (χ^2) test of independence. Given are the number of nests on Gardiner's Island, Shooters Island, and Swinburne Island that succeeded or failed to hatch and fledge nestlings, and cell chi-square values.

	Number of nests (cell chi-square)			
	Gardiners	Shooters	Swinburne	
Hatching				
Success	14 (4.3)	38 (0.7)	27 (1.3)	x^2_2=32
Failure	16 (17.8)	3 (3.1)	0 (5.2)	P<0.0001
Fledging				
Success	5 (2.8)	30 (0.1)	24 (0.7)	x^2_2=14
Failure	9 (8.4)	8 (0.3)	3 (2.2)	P=0.0007

Table 3.3. Egg and nestling production of Double-crested Cormorants in coastal New York, 1999. Given are the number of nests containing 0-4 offspring (eggs or young) at Gardiner's Island, Shooters Island, and Swinburne Island. Comparisons across colonies were performed with chi-square test of independence. Egg production did not differ between colonies but nestling production (Max Young) did.

	Number of nests					
Offspring	0	1	2	3	4	
Eggs Laid						
Gardiners		2	5	13	11	x^2_2=4.8
Shooters		2	9	27	11	P=0.091
Swinburne		0	4	10	14	
Max Young						
Gardiners	16	0	4	5	5	x^2_2=14.9
Shooters	3	11	17	9	1	P=0.0006
Swinburne	0	2	7	14	4	

Table 3.4. Egg and nestling mortality of Double-crested Cormorants in coastal New York, 1999. Given are the number of nests where inviable eggs and young were found at the nest, or were missing. Comparisons were made with chi-square test of independence. Offspring mortality did not differ across colonies.

	Number of nests			
	Gardiners	Shooters	Swinburne	
Eggs failing to hatch				
Found at nest	7	11	4	x^2_2=0.29
Missing from nest	17	36	11	P=0.86
Young failing to fledge				
Found at nest	7	1	3	x^2_2=4.6
Missing from nest	12	15	9	P=0.10

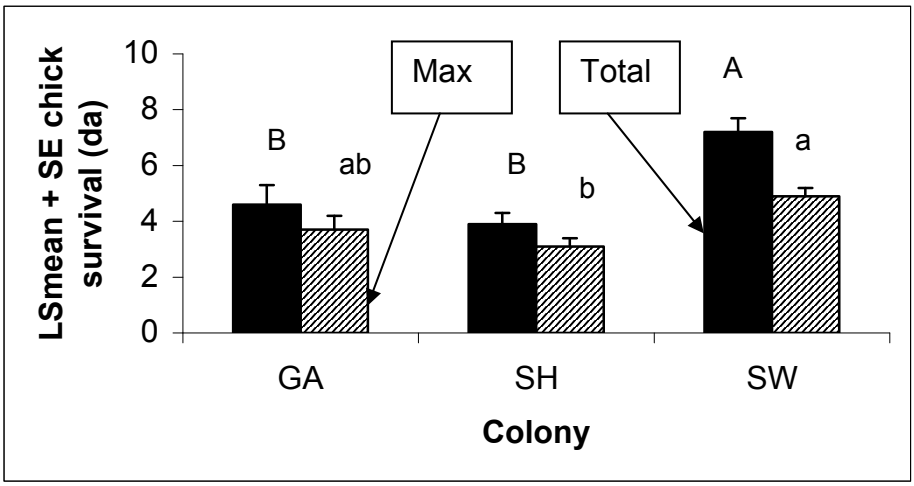


Figure 3.1. Chick survival of Double-crested Cormorants in coastal New York, 1999. Comparisons between colonies of total chick days and maximum chick days (square root transformed) were made with ANOVA and Tukey mean separation procedure. Shown are least square means ± SE. Unlike superscripts indicate significant differences. In general, nestlings on Swinburne Island survived longer than birds at the other two sites.

4. METALS

RESULTS

Descriptive statistics of total mercury, methylmercury, and cadmium concentrations detected in Double-crested Cormorant tissues are provided in Tables 4.1-4.3. Results are reported as non-lipid adjusted ng/g wet weight; detection limits ranged from 0.3 to 4.2 in eggs, 1.4 to 2.9 in whole blood, 0.58 to 1.3 in down, and 0.33 to 430 in feathers (see Appendix 1—Quality Assurance). Cadmium was not detected in any feather or blood samples. Metals were detected in most other samples; non-detects were adjusted to zero. Data from many sample populations were not distributed normally and did not show homogeneity of variance across colony sites. Log transformations of concentration data improved normality and stabilized variance sufficiently to allow use of parametric analysis. Unless otherwise noted, α=0.05. In analyses where multiple comparisons were made within related data sets, alpha levels were adjusted according to Sidak's method to control experimentwise error rate (α'=1-(1-α)$^{1/k}$ where k=number of comparisons).

Cormorant nestlings selected for down, feather, and whole blood sampling were not of uniform size across colony sites (Table 4.4). Tissue samples were taken from nestlings significantly smaller on Shooters Island compared to Swinburne Island. Nevertheless, no correlations were detected between nestling size and metal concentrations at any island (Table 4.5).

In general, metal concentrations were not correlated between tissue type except total mercury in down was positively correlated with mercury in whole blood (Table 4.6).

In contrast, metal concentrations differed between tissue types in all cases (Table 4.7; Figure 4.1).

Concentrations of egg and down mercury and cadmium were not related to each other within colonies (Table 4.8), nor throughout the study area (Table 4.9). Methylmercury averaged 87-130% of total mercury in egg, down, feather, and whole blood tissues (Table 4.10).

Cadmium concentrations in eggs differed across colonies, but no other comparison of metal/tissue showed spatial differences (Table 4.11; Figure 4.2). Cadmium levels in cormorant eggs on Gardiner's Island were significantly lower than levels detected on Shooters and Swinburne Islands.

Chick survival was negatively correlated with blood concentrations of total mercury and egg concentrations of methylmercury (Table 4.12). No other relationships between reproductive endpoints, including a measure of egg production (Eggs Laid), hatching success (Maximum Young Observed) and chick survival (Maximum Chick Days), were detected.

DISCUSSION

Mercury and methylmercury were detected in all cormorant egg, down, feather and blood samples collected from sites in coastal New York. Total mercury was comprised largely of methylmercury in all tissue types (87-100%). In contrast, cadmium was detected in most egg samples, all down samples, but not detected in any feather or blood samples.

Mercury concentrations in eggs were similar to levels detected in cormorant eggs in the maritime region of Canada (Pearce et al. 1979), South Dakota (Greichus et al 1973), and Washington (Henny et al. 1989). Levels detected in cormorant eggs from some colonies in the Great Lakes in the early 1970s were 1.5-2.5 times higher than the present study (Weseloh et al. 1983), but levels declined in eggs collected from the US Great Lakes during the late 1970s (Heinz et al. 1985).

Mercury levels were detected in nestling feathers in a study at Clear Lake, California (Wolfe and Norman 1998). Mean concentrations over a two-year period ranged from 2.95-4.05 ug/g wet weight. Cormorants sampled at inland reservoirs in New Mexico showed similar levels of mercury in feathers (Caldwell et al. 1999). Both studies detected feather levels of mercury that are somewhat lower than concentrations detected in New York cormorants. However, blood samples in New Mexico are about twice as high (approximately 0.35 ug/g wet weight; Caldwell et al. 1999) as levels detected in New York. Comparable assessments of mercury levels in cormorant down samples do not exist.

In addition, it is unknown in cormorants what levels of mercury in tissues are associated with adverse effects. In other fish-eating birds, egg mercury concentrations up to approximately 2.0 ug/g were not associated with reduced hatching or other reproductive effects (Fimreite 1974, Gilman 1977, King et al. 1991). Feather concentrations up to 32.4 ug/g have not been associated with detrimental effects in Great Skuas (*Catharacta skua*; Thompson et al. 1991).

If these approximate thresholds are relevant to the potentially species-specific responses of Double-crested Cormorants, it appears unlikely that mercury exposure in

any of the sites sampled in New York contributed significantly to acute toxicity in cormorants, although sublethal effects are unknown.

Cadmium levels detected in cormorant eggs and down in the present study were low. Cadmium detected in cormorant eggs and adult feathers in Minnesota averaged 390 and 957 ng/g dry weight, respectively (Burger and Gochfeld 1996), approximately an order of magnitude greater than concentrations detected in this study. Cadmium concentrations in eggs tend to be lower than in other tissues, such as kidney and liver (Furness 1996) and therefore egg cadmium concentrations are generally negligible. Furthermore, because concentrations detected in feathers may result from multiple routes of exposure (including deposition onto feather surfaces), levels are not always indicative of dietary exposure (Furness 1996). Threshold levels of 40 ug/g in liver and 100 ug/g in kidney have been proposed to protect avian species from deleterious effects of cadmium exposure (Furness 1996). Few conclusions can be drawn regarding potential effects of cadmium on cormorants because no data exist from liver and kidney tissue (tissues assessed in most toxicological studies to date).

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Table 4.1. Total mercury concentrations in tissues of Double-crested Cormorants collected in coastal New York, 1999. Eggs, down, feathers and whole blood were collected from study nests on Gardiner's Island (GA), Shooters Island (SH), and Swinburne Island (SW). Given are n samples, percent detection, minimum, maximum, range, median, mean (geometric mean GM) and standard deviation (s). Normality of sample population was tested with Shapiro-Wilk's test (S-W; probability P). Homogeneity of variance among islands was tested with Levene's test (F; probability P).

Double-crested Cormorants—Total mercury ng/g wet weight											
		n	%detc	min	max	range	median	mean (GM)	s	S-W	P
Eggs	GA	15	100	90.4	840	750	294	341 (273)	237	0.884	0.099
	SH	14	100	85.4	1130	1050	242	338 (260)	295	0.745	0.002
	SW	13	100	154	673	5190	285	342 (296)	193	0.862	0.081
									Levene's test $F_{2,39}$=0.22		0.800
Down	GA	12	100	2070	10100	8030	2856	3731 (3294)	2267	0.722	0.001
	SH	10	100	2540	5560	3020	3205	3672 (3533)	1044	0.887	0.155
	SW	12	100	2390	5060	2670	3440	3600 (3498)	826.4	0.951	0.649
									Levene's test $F_{2,31}$=2.43		0.105
Feath	GA	12	100	3340	8330	4990	4870	5150 (4950)	1560	0.908	0.202
	SH	11	100	2310	13800	11490	4530	5630 (4970)	3270	0.836	0.028
	SW	12	100	3350	5840	2490	4490	4590 (4540)	721	0.972	0.927
									Levene's test $F_{2,32}$=5.08		0.012
Blood	GA	12	100	72.5	198	125.5	138.5	139.6 (133.0)	42	0.951	0.646
	SH	11	100	65.9	401	335.1	200	195 (175.9)	89.2	0.918	0.305
	SW	14	100	99.7	198	98.3	174	168.3 (165.7)	28	0.881	0.060
									Levene's test $F_{2,34}$=3.85		0.031

Table 4.2. Methylmercury concentrations in tissues of Double-crested Cormorants collected in coastal New York, 1999. Eggs, down, feathers and whole blood were collected from study nests on Gardiner's Island (GA), Shooters Island (SH), and Swinburne Island (SW). Given are n samples, percent detection, minimum, maximum, range, median, mean and standard deviation (s). Normality of sample population was tested with Shapiro-Wilk's test (S-W; probability P).

Double-crested Cormorants—Methylmercury ng/g wet weight											
		n	%detc	min	max	range	median	mean	s	S-W	P
Eggs	GA	3	100	120	364	244	146	210	134	0.829	0.186
	SH	3	100	175	320	145	194	230	78.8	0.846	0.231
	SW	3	100	146	525	379	175	282	211	0.807	0.131
Down	GA	2	100	2330	7340	5010	4835	4835	3543	1	1
	SH	2	100	3160	5900	2740	4530	4530	1938	1	1
	SW	2	100	2890	4330	1440	3610	3610	1018	1	1
Feath	GA	2	100	3960	4510	550	4240	4240	389	1	1
	SH	2	100	2750	3310	560	3030	3030	396	1	1
	SW	2	100	3260	4400	1140	3830	3830	806	1	1
Blood	GA	2	100	96.6	164	67.4	130.3	130.3	47.7	1	1
	SH	2	100	160	167	7	163.5	163.5	4.9	1	1
	SW	2	100	169	204	35	186.5	186.5	24.7	1	1

Table 4.3. Total cadmium concentrations in tissues of Double-crested Cormorants collected in coastal New York, 1999. Eggs, down, feathers and whole blood were collected from study nests on Gardiner's Island (GA), Shooters Island (SH), and Swinburne Island (SW). Given are n samples, percent detection, minimum, maximum, range, median, mean (geometric mean GM) and standard deviation (s). In samples where percent detection >50, non-detect values were adjusted to one-half the detection limit. Normality of sample population was tested with Shapiro-Wilk's test (S-W; probability P). Homogeneity of variance among islands was tested with Levene's test (F; probability P).

Double-crested Cormorants—Total cadmium ng/g wet weight

		n	%detc	min	max	range	median	mean (GM)	s	S-W	P
Eggs	GA	15	40	ND	3.7						
	SH	14	93	ND	15.8	15.5	3.0	4.9 (3.1)	4.9	0.806	0.006
	SW	13	100	0.9	12.7	11.8	4.3	4.3 (3.5)	3.2	0.847	0.026
Down	GA	12	100	14	609	595	69.5	128.1 (65.0)	175.9	0.672	0.001
	SH	10	100	13	295	282	111	132.4 (90.0)	101.4	0.912	0.293
	SW	12	100	13	252	239	37.5	76.6 (47.5)	81.8	0.763	0.004
										Levene's test $F_{2,31}$=1.11	0.342
Feath	GA	12	0								
	SH	11	0								
	SW	12	0								
Blood	GA	12	0								
	SH	11	0								
	SW	14	0								

Table 4.4. Size of Double-crested Cormorants sampled in coastal New York, 1999. Shown are n nestlings, minimum, maximum, median, mean and standard deviation (s) tarsus length (mm) from study nests on Gardiner's Island (GA), Shooters Island (SH), and Swinburne Island (SW). Normality of sample population was tested with Shapiro-Wilk's test (S-W; probability P). Homogeneity of variance among islands was tested with Levene's test (F; probability P). Colony differences in tarsus length were determined with ANOVA and Tukey mean separation procedure.

Island	n	minimum	maximum	median	mean	s	S-W	P
GA	12	60.1	68.3	64.4	64.1	2.2	0.968	0.892
SH	11	59.5	68.4	61.0	62.1	2.7	0.850	0.043
SW	12	60.4	71.1	66.3	65.9	3.1	0.989	0.999
							Levene's test $F_{2, 32}$=0.85	0.439
							ANOVA $F_{2, 32}$=5.89	0.007
							Tukey mean separation procedure	
							SW^{A}	
							GA^{AB}	
							SH^{B}	

Table 4.5. Results of correlation analysis of nestling tarsus and metal concentrations (log transformed) within tissues of Double-crested Cormorants collected at colonies in coastal New York, 1999. Islands sampled include Gardiner's Island, Shooters Island, and Swinburne Island. Given are n samples, tissue/analyte, Pearson correlation coefficient (r), and probability (P).

Island	Analyte/tissue	n	r	P
Gardiner's Island	Total Hg-feathers	12	0.247	0.437
	Total Hg-down	12	0.062	0.848
	Total Hg-whole blood	12	0.295	0.353
	Total Cd-down	12	-0.433	0.159
Shooters Island	Total Hg-feathers	11	0.308	0.357
	Total Hg-down	10	0.062	0.864
	Total Hg-whole blood	11	0.449	0.166
	Total Cd-down	10	-0.220	0.542
Swinburne Island	Total Hg-feathers	12	-0.465	0.127
	Total Hg-down	12	-0.141	0.662
	Total Hg-whole blood	12	0.385	0.217
	Total Cd-down	12	0.413	0.183

Table 4.6. Results of correlation analysis of tissue types and metal concentrations (log transformed) within tissues of Double-crested Cormorants collected in coastal New York, 1999. Given are Pearson correlation coefficient (r) (n samples) and probability (P).

Total mercury	Down	Feather	Whole blood
Egg	r=0.440 (13)	r=-0.039 (14)	r=0.307 (15)
	P=0.133	P=0.894	P=0.265
Down		r=0.243 (34)	r=0.456 (34)
		P=0.166	P=0.007
Feather			r=0.267 (35)
			P=0.121
Total cadmium			
Egg	r=-0.285 (22)		
	P=0.199		

Table 4.7. Comparisons of metal concentrations within different tissues of Double-crested Cormorants collected in coastal New York, 1999. Comparisons were made with Wilcoxon Signed Rank test. Given are the statistic S (n samples) and probability (P).

Total mercury	Down	Feather	Whole blood
Egg	S=-45.5 (13)	S=-52.5 (14)	S=49 (15)
	P=0.0002	P=0.0001	P=0.0034
Down		S=-220.5 (34)	S=297.5 (34)
		P<0.0001	P<0.0001
Feather			S=315 (35)
			P<0.0001
Total cadmium			
Egg	S=-126.5 (22)		
	P<0.0001		

Table 4.8. Results of correlation analysis of log transformed total mercury and cadmium within tissues of Double-crested Cormorants collected at colonies in coastal New York, 1999. Given are n samples, Pearson correlation coefficient, and probability (P) of metals found in eggs and down.

Colony	Tissue	n samples	Pearson correlation coefficient	P
Gardiner's Island	Egg	15	-0.187	0.561
	Down	12	-0.043	0.895
Shooters Island	Egg	14	-0.053	0.877
	Down	10	-0.137	0.705
Swinburne Island	Egg	13	-0.518	0.126
	Down	12	0.570	0.053

Table 4.9. Results of correlation analysis of total mercury and cadmium (log transformed) within tissues of Double-crested Cormorants collected in coastal New York, 1999. Given are n samples, Pearson correlation coefficient, and probability (P) of metals found in eggs and down.

Tissue	n samples	Pearson Correlation Coefficient	P
Egg	33	-0.127	0.483
Down	34	0.071	0.690

Table 4.10. Relationship between methylmercury and total mercury in tissues of Double-crested Cormorants in coastal New York, 1999. Given are mean ± standard deviation (n) percent methylmercury for eggs, down, feathers and whole blood.

Egg	Down	Feathers	Whole Blood
97.7 ± 0.5 (9)	130.0 ± 43.1 (6)	86.7 ± 33.8 (6)	95.5 ± 20.9 (6)

Table 4.11. Colony differences in analyte concentration of Double-crested Cormorant tissues collected in coastal New York, 1999. Given are results of ANOVA performed on log transformed data. Means were separated by Tukey mean separation procedure ($P<0.05$) in significant models.

Analyte/Tissue	Model DF	Error DF	F	P	Tukey Mean Separation
Total Hg—Egg	2	32	0.10	0.906	
Total Hg—Down	2	31	0.13	0.876	
Total Hg—Feather	2	32	0.26	0.771	
Total Hg—Whole blood	2	34	2.13	0.134	
Total Cd—Egg	2	39	14.0	0.0001	SW[A]
					SH[A]
					GA[B]
Total Cd—Down	2	31	0.96	0.394	

Table 4.12. Results of correlation analysis of reproductive endpoints and total mercury, total cadmium, and methylmercury within tissues of Double-crested Cormorants collected in coastal New York, 1999. Given are n samples, Spearman correlation coefficient, and probability (P). Alpha'=0.017 (Sidak's method).

Tissue	Reproductive Endpoints	n samples	Spearman correlation coefficient	P
Egg-THg	Eggs Laid	33	0.030	0.867
	Max Young Observed	25	0.248	0.232
	Max Chick Days	19	0.037	0.880
Egg-TCd	Eggs Laid	42	0.088	0.579
	Max Young Observed	34	0.186	0.293
	Max Chick Days			
Egg-MHg	Eggs Laid	9	-0.742	0.022
	Max Young Observed	9	-0.534	0.139
	Max Chick Days	9	-0.793	0.011
Blood-THg	Eggs Laid	37	0.098	0.563
	Max Young Observed	36	0.030	0.862
	Max Chick Days	36	-0.414	0.012
Blood-MHg	Eggs Laid	6	0.093	0.862
	Max Young Observed	6	0.494	0.320
	Max Chick Days	6	0.657	0.156
Down-THg	Eggs Laid	34	0.130	0.464
	Max Young Observed	33	0.046	0.800
	Max Chick Days	33	-0.051	0.779
Down-TCd	Eggs Laid	34	-0.118	0.506
	Max Young Observed	33	-0.074	0.682
	Max Chick Days	33	-0.335	0.057
Down-MHg	Eggs Laid	6	0.309	0.552
	Max Young Observed	6	-0.293	0.573
	Max Chick Days	6	-0.714	0.111
Feather-THg	Eggs Laid	35	-0.062	0.723
	Max Young Observed	34	-0.018	0.919
	Max Chick Days	34	0.053	0.765
Feather-MHg	Eggs Laid	6	-0.414	0.414
	Max Young Observed	6	0.123	0.816
	Max Chick Days	6	-0.657	0.156

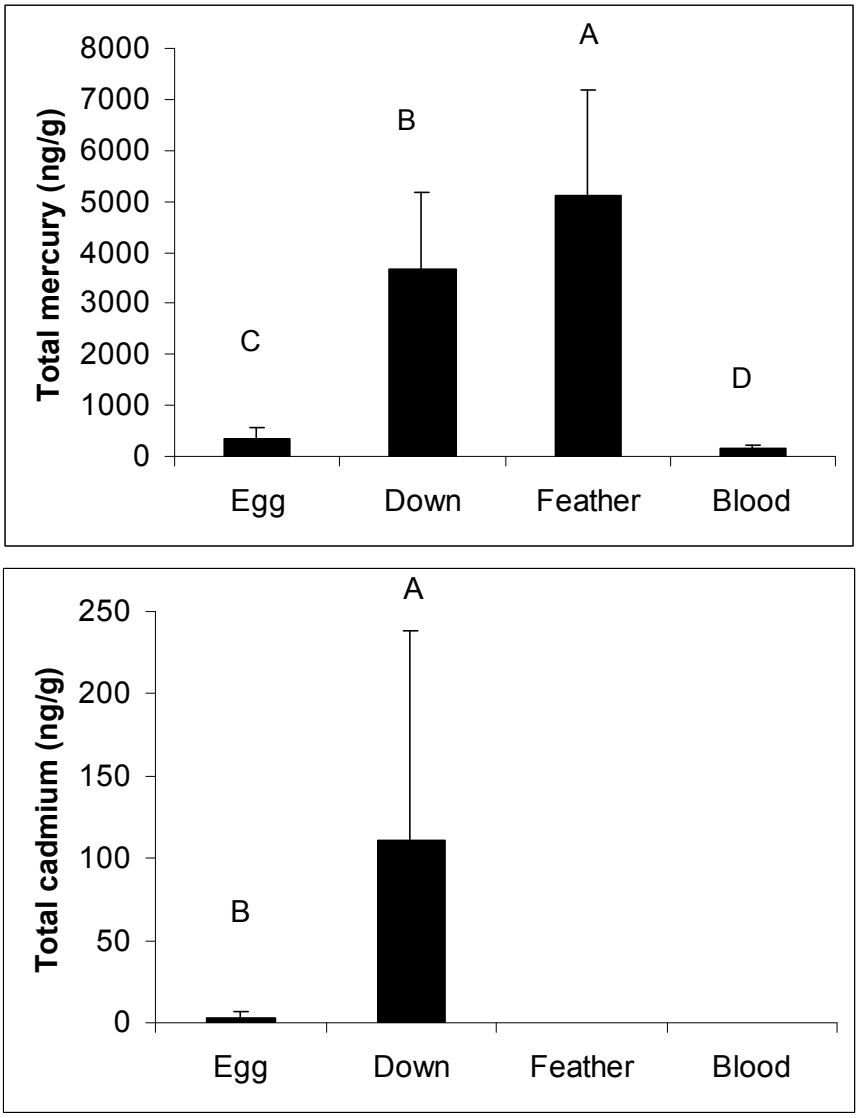


Figure 4.1. Comparison of metal concentrations in different tissues of Double-crested Cormorants in coastal New York, 1999. Shown are a) total mercury (mean + standard deviation ng/g wet weight) and b) total cadmium (mean + standard deviation ng/g wet weight) in egg, down, feather, and whole blood. Mercury and cadmium concentrations differed between tissue types (see text).

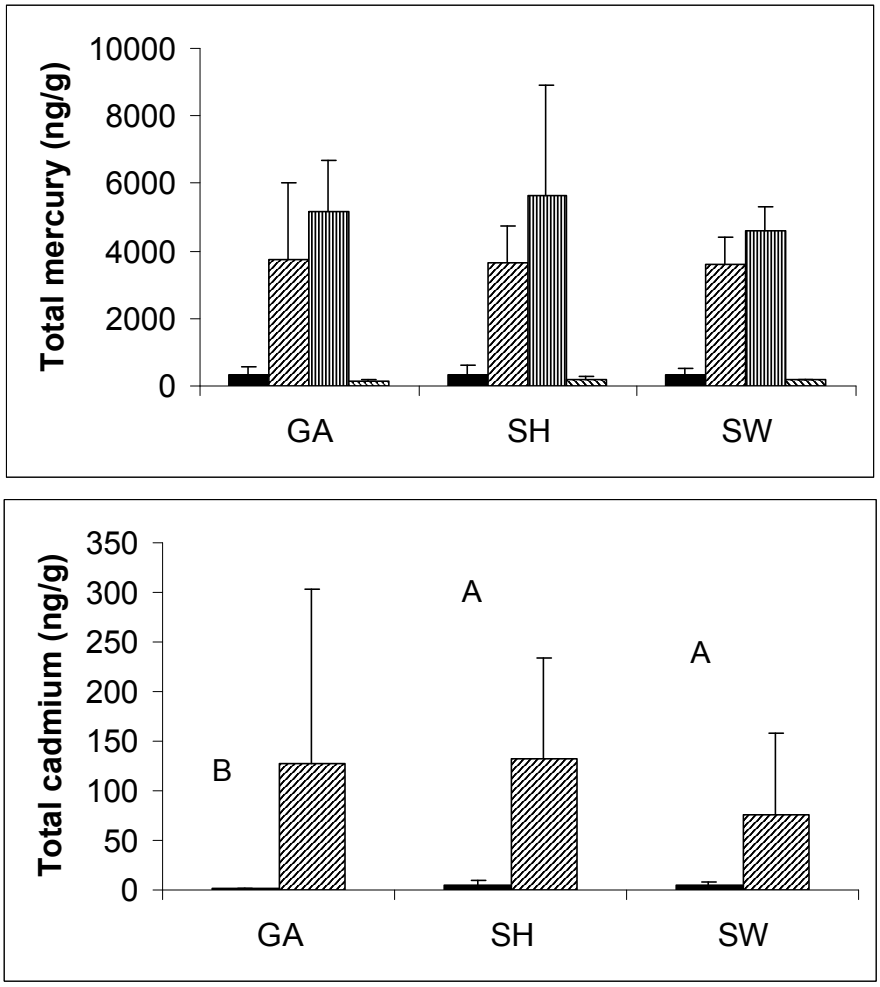


Figure 4.2. Comparison of metal concentrations in tissues of Double-crested Cormorant from different colonies in coastal New York, 1999. Shown are a) total mercury (mean + standard deviation ng/g wet weight) and b) total cadmium (mean + standard deviation ng/g wet weight) in egg (black), down (left cross hatch), feather (vertical stripes), and whole blood (right cross hatch) from Gardiner's Island (GA), Shooters Island (SH) and Swinburne Island (SW). Differences between colonies were detected only in egg cadmium (see text).

5. POLYNUCLEAR AROMATIC HYDROCARBONS

RESULTS

Double-crested Cormorant egg and plasma tissues were analyzed for 28 polynuclear aromatic hydrocarbons (PAHs) including 1-Methylnaphthalene, 1-Methylphenanthrene, 2,3,5-Trimethylnaphthalene, 2,6-Dimethylnaphthalene, 2-Methylnaphthalene, Acenaphthene, Acenaphthylene, Anthracene, Benz[a]anthracene, Benzo[a]pyrene, Benzo[b/j/k]fluoranthenes, Benzo[e]pyrene, Benzo[ghi]perylene, Biphenyl, C1 Naphthalene, C1 Phenanthrenes/Anthracenes, C2 Naphthalene, C2 Phenanthrenes/Anthracenes, C3 Naphthalene, Chrysene, Dibenz[ah]anthracene, Fluoranthene, Fluorene, Indeno[1,2,3-cd]pyrene, Naphthalene, Perylene, Phenanthrene, and Pyrene. Results are reported as non-lipid adjusted ng/g wet weight; detection limits ranged from 0.00259 to 0.1 in eggs and 0.0265 to 0.437 in plasma (see Appendix 1—Quality Assurance). Non-detects were adjusted to zero.

Due to laboratory problems, no results were obtained for 2-Methylnaphthalene, C1 Phenanthrenes/Anthracenes, C2 Phenanthrenes/Anthracenes and Perylene (see QA discussion). In addition, Dibenz[ah]anthracene and Indeno[1,2,3-cd]pyrene were non-detectable in all samples (both tissue types) from all sites.

Descriptive statistics of all PAHs detected in at least one sample from at least one site (22 analytes) are provided in Tables 5.1-5.6. Data from many sample populations were not distributed normally and did not show homogeneity of variance across colony sites. Transformations of concentration data improved normality and stabilized variance but not sufficiently to allow use of parametric analysis (Levene's test $P<0.05$). Therefore, the non-parametric Spearman correlation was used to examine

nestling size and PAH concentration, and the relationship between egg and plasma PAH concentration. Comparisons between colonies were performed on ranked concentration data (ANOVA, Tukey mean separation procedure). Total PAH concentration was calculated by summing Acenaphthene, Acenaphthylene, Anthracene, Benz[a]anthracene, Benzo[a]pyrene, Benzo[b/j/k]fluoranthenes, Benzo[e]pyrene, Benzo[ghi]perylene, Biphenyl, Chrysene, Dibenz[ah]anthracene, Fluoranthene, Fluorene, Indeno[1,2,3-cd]pyrene, Naphthalene, Perylene, Phenanthrene, and Pyrene . Unless otherwise noted, α=0.05.

Cormorant nestlings selected for plasma sampling were not of uniform size across colony sites (see Table 4.4). Tissue samples were taken from nestlings significantly smaller on Shooters Island compared to Swinburne Island. Nevertheless, no correlations were detected between nestling size and total PAH concentrations at any island (Table 5.7). Similarly, egg and plasma PAH concentrations were not correlated (Table 5.8).

Total PAH was higher in eggs at Gardiner's Island and Shooters Island than at Swinburne Island (Figure 5.1). In addition, Naphthalene, the PAH analyte contributing the greatest concentration to total PAH (30-42% of total PAH), was higher in Gardiner's Island eggs than in eggs collected at Swinburne Island (Figure 5.1). Other analytes were less important (contributing 14% or less to total PAH). Similarly, plasma total PAH and Naphthalene (23-30% of total PAH) concentrations were higher in Gardiner's Island cormorants than in nestlings from Shooters or Swinburne Islands (Figure 5.2). Biphenyl was higher in plasma from Gardiner's and Shooters Islands compared to Swinburne, but phenanthrene did not differ between sites (Figure 5.2).

No relationships between total PAH concentrations in eggs or plasma and reproductive endpoints, including a measure of egg production (Eggs Laid), hatching success (Maximum Young Observed) and chick survival (Maximum Chick Days), were detected (Table 5.9).

DISCUSSION

Polynuclear aromatic hydrocarbons were found in all egg and plasma tissues sampled at three cormorant colonies in coastal New York. Naphthalene comprised nearly 70% of total PAHs in egg tissues and was 53-65% of total PAHs in plasma. Phenanthrene (8-17%) and biphenyl (6-11%) were also important components of total PAHs in plasma.

Very few studies exist to aid in interpretation of these data. King et al. (1987) assessed a limited number of PAHs in Double-crested Cormorant adult carcasses collected in Galveston Bay, Texas. Although most analytes were not detected in a majority of the samples, the lower limit of quantification was high relative to the present study and those analytes detected occurred in concentrations up to several orders of magnitude greater than samples collected in coastal New York (e.g., benzo[a]pyrene, benzo[g,h,i]perylene). The analyte detected most frequently in Texas was naphthalene (65%; range=0.02-0.04 ppm), which occurred at concentrations approximately one order of magnitude greater than New York samples.

Similarly, in a study of Tree Swallows (*Tachycineta bicolor*) and House Wrens (*Troglodytes aedon*) near a petroleum refinery in Wyoming, Custer et al. (2001) were unable to detect many PAH analytes but total concentrations of PAHs in nestling

carcasses were similar to levels detected in cormorant eggs collected at Gardiner's and Shooters Islands.

Polynuclear aromatic hydrocarbons are highly embryotoxic—exposure to 0.036-0.018 ng/g total PAH in Mallard eggs can result in the death of the embryo, produce terrata, and/or retard embryo growth (Eisler 1987). Cormorant eggs from all sites in the present study had PAH concentrations exceeding this level, but no adverse effects thresholds are available that are specific to cormorants.

Benzo[a]pyrene, chrysene and 7,12-dimethylbenz[a]anthracene, in particular, are highly toxic to avian embryos (Hoffman and Gay 1981). Chrysene was present in most cormorant eggs and all plasma samples and contributed approximately 1-1.5% to total PAHs in plasma. Benzo[a]pyrene was present only in plasma but was a negligible component of total PAHs.

Total concentrations in eggs were higher at Shooters Island and Gardiner's Island than at Swinburne Island, and plasma concentrations were highest at Shooters Island compared to the other two sites, but no relationships between PAHs or tarsus length, and reproductive success were detected (Tables 7 and 9).

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Table 5.1. Polynuclear aromatic hydrocarbon concentrations (ng/g wet weight) in eggs of Double-crested Cormorants collected at Gardiner's Island, 1999. Given are n samples, percent detection, percent total PAH, minimum, maximum, range, mean, and standard deviation (s). Normality of sample population was tested with Shapiro-Wilk's test (S-W; probability P).

	n	%detect	% total	minimum	maximum	range	mean	s	S-W	P
1-Methylnaphthalene	15	100	4.6	0.213	0.739	0.526	0.406	0.156	0.938	0.357
1-Methylphenanthrene	15	100	1.5	0.039	0.362	0.323	0.136	0.093	0.860	0.024
2,3,5-Trimethylnaphthalene	15	100	2.0	0.117	0.280	0.163	0.165	0.054	0.773	0.002
2,6-Dimethylnaphthalene	15	100	2.7	0.116	0.459	0.343	0.230	0.097	0.782	0.002
Acenaphthene	15	100	1.4	0.057	0.374	0.317	0.122	0.076	0.651	<0.0001
Acenaphthylene	15	100	1.5	0.093	0.196	0.103	0.125	0.031	0.861	0.025
Anthracene	15	100	1.0	0.064	0.124	0.060	0.081	0.016	0.862	0.026
Benz[a]anthracene	15	80	0.2	0	0.308	0.031	0.018	0.010	0.826	0.008
Benzo[a]pyrene	15	0								
Benzo[b/j/k]fluoranthenes	15	0								
Benzo[e]pyrene	15	7	0.02	0	0.018	0.018	0.001	0.005	0.284	<0.0001
Benzo[ghi]perylene	15	80	0.2	0	0.035	0.035	0.018	0.012	0.924	0.223
Biphenyl	15	100	2.4	0.161	0.331	0.170	0.208	0.050	0.845	0.015
C1 Naphthalene	15	100	11.1	0.513	1.79	1.28	0.995	0.392	0.927	0.245
C2 Naphthalene	15	100	9.1	0.511	1.31	0.799	0.787	0.202	0.919	0.187
C3 Naphthalene	15	100	8.7	0.440	1.34	0.900	0.725	0.239	0.892	0.071
Chrysene	15	93	0.3	0	0.047	0.047	0.026	0.011	0.934	0.316
Fluoranthene	15	100	2.1	0.101	0.490	0.389	0.187	0.095	0.718	0.0004
Fluorene	15	100	1.0	0.040	0.138	0.098	0.082	0.029	0.963	0.752
Naphthalene	15	100	41.5	1.95	6.48	4.53	3.67	1.32	0.937	0.346
Phenanthrene	15	100	3.7	0.212	0.423	0.211	0.321	0.062	0.910	0.137
Pyrene	15	100	4.9	0.077	3.25	3.17	0.467	0.830	0.518	<0.0001

Table 5.2. Polynuclear aromatic hydrocarbon concentrations (ng/g wet weight) in eggs of Double-crested Cormorants collected at Shooters Island, 1999. Given are n samples, percent detection, percent of total PAH, minimum, maximum, range, mean, and standard deviation (s). Normality of sample population was tested with Shapiro-Wilk's test (S-W; probability P).

	n	%detect	% total	minimum	maximum	range	mean	s	S-W	P
1-Methylnaphthalene	14	100	6.4	0.309	5.56	5.251	1.42	1.64	0.729	0.0008
1-Methylphenanthrene	14	93	1.6	0	0.945	0.945	0.229	0.258	0.767	0.002
2,3,5-Trimethylnaphthalene	14	100	2.4	0.093	0.772	0.679	0.368	0.193	0.965	0.797
2,6-Dimethylnaphthalene	14	100	2.6	0.160	1.76	1.60	0.526	0.521	0.729	0.0007
Acenaphthene	14	100	3.0	0.078	1.46	1.38	0.587	0.522	0.831	0.012
Acenaphthylene	14	100	3.4	0.084	1.94	1.86	0.457	0.462	0.642	<0.0001
Anthracene	14	100	2.4	0.113	0.984	0.871	0.318	0.234	0.776	0.003
Benz[a]anthracene	14	71	0.3	0	0.139	0.139	0.035	0.037	0.827	0.011
Benzo[a]pyrene	14	0								
Benzo[b/j/k]fluoranthenes	14	7								
Benzo[e]pyrene	14	14	0.03	0	0.043	0.043	0.005	0.013	0.446	<0.0001
Benzo[ghi]perylene	14	43	0.09	0	0.039	0.039	0.011	0.014	0.771	0.002
Biphenyl	14	100	2.9	0.177	1.73	1.55	0.506	0.414	0.746	0.001
C1 Naphthalene	14	100	14.2	0.693	11.8	11.1	3.09	3.45	0.732	0.0008
C2 Naphthalene	14	100	13.2	0.600	11.1	10.5	2.96	3.38	0.732	0.0008
C3 Naphthalene	14	100	10.6	0.502	4.55	4.05	1.67	1.05	0.858	0.028
Chrysene	14	43	0.1	0	0.067	0.067	0.014	0.020	0.736	0.0009
Fluoranthene	14	100	1.3	0.117	0.261	0.144	0.169	0.044	0.929	0.295
Fluorene	14	100	1.1	0.065	0.489	0.424	0.183	0.124	0.858	0.029
Naphthalene	14	100	30.3	2.64	9.60	6.96	4.605	2.19	0.848	0.021
Phenanthrene	14	100	3.0	0.274	0.840	0.566	0.426	0.162	0.838	0.015
Pyrene	14	100	1.2	0.102	0.313	0.211	0.153	0.055	0.786	0.003

Table 5.3. Polynuclear aromatic hydrocarbon concentrations (ng/g wet weight) in eggs of Double-crested Cormorants collected at Swinburne Island, 1999. Given are n samples, percent detection, percent of total PAH, minimum, maximum, range, mean, and standard deviation (s). Normality of sample population was tested with Shapiro-Wilk's test (S-W; probability P).

	n	%detect	% total	minimum	maximum	range	mean	s	S-W	P
1-Methylnaphthalene	13	100	5.2	0.279	0.501	0.222	0.360	0.073	0.905	0.157
1-Methylphenanthrene	13	100	1.2	0.066	0.091	0.025	0.079	0.009	0.879	0.068
2,3,5-Trimethylnaphthalene	13	100	1.7	0.076	0.165	0.089	0.121	0.032	0.891	0.100
2,6-Dimethylnaphthalene	13	100	3.3	0.103	0.644	0.541	0.230	0.141	0.723	0.001
Acenaphthene	13	92	1.2	0	0.156	0.156	0.086	0.038	0.957	0.705
Acenaphthylene	13	100	2.1	0.070	0.217	0.147	0.145	0.047	0.961	0.771
Anthracene	13	100	2.0	0.082	0.196	0.114	0.133	0.035	0.926	0.304
Benz[a]anthracene	13	100	0.4	0.017	0.043	0.026	0.028	0.008	0.965	0.835
Benzo[a]pyrene	13	0								
Benzo[b/j/k]fluoranthenes	13	0								
Benzo[e]pyrene	13	8	0.01	0	0.015	0.015	0.001	0.004	0.311	<0.0001
Benzo[ghi]perylene	13	100	0.3	0.014	0.041	0.027	0.021	0.008	0.811	0.009
Biphenyl	13	100	2.5	0.144	0.222	0.078	0.172	0.029	0.829	0.016
C1 Naphthalene	13	100	13.9	0.783	1.32	0.537	0.953	0.174	0.868	0.050
C2 Naphthalene	13	100	10.2	0.454	1.10	0.646	0.702	0.190	0.941	0.465
C3 Naphthalene	13	100	8.6	0.394	0.778	0.384	0.596	0.154	0.861	0.040
Chrysene	13	92	0.4	0	0.040	0.040	0.025	0.009	0.871	0.054
Fluoranthene	13	100	2.0	0.122	0.154	0.032	0.134	0.010	0.934	0.379
Fluorene	13	100	1.1	0.057	0.102	0.045	0.072	0.011	0.856	0.034
Naphthalene	13	100	37.0	2.07	2.97	0.900	2.53	0.349	0.839	0.021
Phenanthrene	13	100	4.8	0.264	0.363	0.099	0.320	0.027	0.951	0.619
Pyrene	13	100	1.9	0.107	0.160	0.053	0.127	0.015	0.931	0.348

Table 5.4. Polynuclear aromatic hydrocarbon concentrations (ng/g wet weight) in plasma of Double-crested Cormorants collected at Gardiner's Island, 1999. Given are n samples, percent detection, percent total PAH, minimum, maximum, range, mean, and standard deviation (s). Normality of sample population was tested with Shapiro-Wilk's test (S-W; probability P).

	n	%detect	% total	minimum	maximum	range	mean	s	S-W	P
1-Methylnaphthalene	10	100	6.0	2.48	5.40	2.92	3.34	0.995	0.842	0.046
1-Methylphenanthrene	10	100	0.9	0.341	0.891	0.550	0.495	0.171	0.817	0.023
2,3,5-Trimethylnaphthalene	10	100	2.0	0.714	1.81	1.10	1.16	0.376	0.910	0.280
2,6-Dimethylnaphthalene	10	100	2.6	1.05	2.13	1.08	1.47	0.358	0.918	0.337
Acenaphthene	10	70	2.0	0.567	2.35	1.783	1.06	0.523	0.814	0.022
Acenaphthylene	10	100	0.5	0	0.851	0.851	0.269	0.293	0.853	0.064
Anthracene	10	70	0.3	0.127	0.335	0.208	0.195	0.067	0.865	0.088
Benz[a]anthracene	10	30	0.1	0	0.157	0.157	0.058	0.050	0.912	0.292
Benzo[a]pyrene	10	70	0.06	0	0.173	0.173	0.033	0.059	0.643	0.0002
Benzo[b/j/k]fluoranthenes	10	80	0.2	0	0.270	0.270	0.105	0.092	0.927	0.418
Benzo[e]pyrene	10	100	0.2	0	0.266	0.266	0.124	0.086	0.955	0.733
Benzo[ghi]perylene	10	100	0.3	0.079	0.402	0.323	0.143	0.095	0.620	<0.0001
Biphenyl	10	100	4.0	1.42	4.94	3.52	2.26	1.02	0.722	0.002
C1 Naphthalene	10	100	14.6	5.68	13.6	7.92	8.12	2.46	0.847	0.052
C2 Naphthalene	10	100	12.0	4.81	9.67	4.86	6.68	1.74	0.850	0.058
C3 Naphthalene	10	100	16.3	4.07	38.5	34.4	9.90	10.4	0.573	<0.0001
Chrysene	10	100	0.4	0.107	0.432	0.325	0.204	0.100	0.861	0.079
Fluoranthene	10	100	1.4	0.542	1.30	0.758	0.795	0.240	0.801	0.015
Fluorene	10	100	0.9	0.281	1.0	0.719	0.545	0.202	0.882	0.138
Naphthalene	10	100	30.2	7.81	30.7	22.9	17.533	7.71	0.941	0.568
Phenanthrene	10	100	3.6	1.54	3.54	2.0	2.01	0.721	0.676	0.0005
Pyrene	10	100	1.4	0.564	1.26	0.696	0.759	0.210	0.816	0.022

Table 5.5. Polynuclear aromatic hydrocarbon concentrations (ng/g wet weight) in plasma of Double-crested Cormorants collected at Shooters Island, 1999. Given are n samples, percent detection, percent total PAH, minimum, maximum, range, mean, and standard deviation (s). Normality of sample population was tested with Shapiro-Wilk's test (S-W; probability P).

	n	%detect	% total	minimum	maximum	range	mean	s	S-W	P
1-Methylnaphthalene	10	100	6.4	1.22	3.10	1.88	2.11	0.714	0.888	0.160
1-Methylphenanthrene	10	100	1.8	0.368	0.756	0.388	0.547	0.121	0.938	0.529
2,3,5-Trimethylnaphthalene	10	100	2.5	0.648	0.972	0.324	0.758	0.089	0.847	0.054
2,6-Dimethylnaphthalene	10	100	3.0	0.58	1.57	0.990	0.992	0.336	0.943	0.583
Acenaphthene	10	60	1.3	0	1.37	1.37	0.525	0.588	0.775	0.007
Acenaphthylene	10	100	1.0	0.201	0.573	0.372	0.329	0.148	0.782	0.009
Anthracene	10	100	0.8	0.142	0.521	0.379	0.226	0.112	0.706	0.001
Benz[a]anthracene	10	80	0.2	0	0.095	0.095	0.056	0.033	0.880	0.131
Benzo[a]pyrene	10	90	0.02	0	0.105	0.105	0.011	0.033	0.366	<0.0001
Benzo[b/j/k]fluoranthenes	10	40	0.2	0	0.193	0.193	0.066	0.086	0.712	0.001
Benzo[e]pyrene	10	50	0.2	0	0.157	0.157	0.067	0.075	0.740	0.003
Benzo[ghi]perylene	10	40	0.1	0	0.198	0.198	0.057	0.077	0.743	0.003
Biphenyl	10	100	4.6	0.785	2.6	1.82	1.57	0.750	0.818	0.024
C1 Naphthalene	10	100	17.0	3.17	8.34	5.17	5.64	1.99	0.869	0.099
C2 Naphthalene	10	100	13.4	2.36	6.45	4.09	4.45	1.56	0.918	0.339
C3 Naphthalene	10	100	12.7	2.82	6.17	3.35	4.15	1.17	0.904	0.243
Chrysene	10	100	0.6	0.112	0.243	0.131	0.179	0.052	0.878	0.123
Fluoranthene	10	100	2.2	0.574	0.773	0.199	0.657	0.055	0.939	0.540
Fluorene	10	100	1.0	0.253	0.378	0.125	0.308	0.045	0.924	0.396
Naphthalene	10	100	22.8	5.52	10.8	5.28	7.28	1.67	0.848	0.056
Phenanthrene	10	100	6.1	1.40	2.10	0.700	1.84	0.230	0.924	0.394
Pyrene	10	100	2.2	0.562	0.858	0.296	0.648	0.095	0.828	0.032

Table 5.6. Polynuclear aromatic hydrocarbon concentrations (ng/g wet weight) in plasma of Double-crested Cormorants collected at Swinburne Island, 1999. Given are n samples, percent detection, percent total PAH, minimum, maximum, range, mean, and standard deviation (s). Normality of sample population was tested with Shapiro-Wilk's test (S-W; probability P).

	n	%detect	% total	minimum	maximum	range	mean	s	S-W	P
1-Methylnaphthalene	12	100	6.2	1.42	3.14	1.72	1.84	0.448	0.712	0.001
1-Methylphenanthrene	11	100	2.1	0.432	0.994	0.562	0.683	0.169	0.947	0.609
2,3,5-Trimethylnaphthalene	12	100	1.9	0.485	1.36	0.875	0.714	0.297	0.764	0.004
2,6-Dimethylnaphthalene	12	100	2.8	0.668	1.24	0.572	0.887	0.201	0.866	0.058
Acenaphthene	11	45	0.3	0	0.523	0.523	0.138	0.184	0.787	0.006
Acenaphthylene	12	92	1.2	0	1.04	1.04	0.346	0.252	0.804	0.011
Anthracene	12	100	0.7	0.089	0.270	0.181	0.196	0.055	0.945	0.559
Benz[a]anthracene	12	92	0.2	0	0.155	0.155	0.081	0.044	0.932	0.398
Benzo[a]pyrene	12	17	0.03	0	0.105	0.105	0.015	0.036	0.486	<0.0001
Benzo[b/j/k]fluoranthenes	12	58	0.3	0	0.324	0.324	0.110	0.108	0.849	0.036
Benzo[e]pyrene	12	92	0.2	0	0.173	0.173	0.090	0.050	0.966	0.864
Benzo[ghi]perylene	12	75	0.2	0	0.263	0.263	0.083	0.071	0.815	0.014
Biphenyl	12	100	2.9	0.641	1.13	0.489	0.852	0.130	0.965	0.855
C1 Naphthalene	12	100	15.9	3.89	8.56	4.67	4.78	1.25	0.619	0.0002
C2 Naphthalene	12	100	13.2	3.21	6.3	3.09	4.42	1.15	0.850	0.036
C3 Naphthalene	11	100	12.1	2.62	7.61	4.99	4.12	1.54	0.774	0.004
Chrysene	12	100	0.6	0.127	0.456	0.329	0.214	0.097	0.809	0.012
Fluoranthene	12	100	2.0	0.296	1.01	0.714	0.626	0.160	0.841	0.029
Fluorene	12	100	1.0	0.208	0.638	0.430	0.353	0.150	0.770	0.004
Naphthalene	12	100	26.3	5.99	15.0	9.01	8.01	2.83	0.648	0.0003
Phenanthrene	12	100	7.3	1.61	2.80	1.19	2.22	0.359	0.965	0.857
Pyrene	12	100	2.3	0.357	1.09	0.733	0.707	0.169	0.888	0.111

Table 5.7. Results of correlation analysis of nestling tarsus and plasma total polynuclear aromatic hydrocarbons of Double-crested Cormorants sampled at colonies in coastal New York, 1999. Given are n samples, Spearman correlation coefficient (r), and probability (P).

Colony	n	r	P
Gardiner's Island	10	0.621	0.055
Shooters Island	10	0.164	0.650
Swinburne Island	10	0.394	0.260

Table 5.8. Results of correlation analysis of egg and plasma total polynuclear aromatic hydrocarbons of Double-crested Cormorants sampled at colonies in coastal New York, 1999. Given are n samples, correlation coefficient (r), and probability (P).

Colony	n	r	P
Gardiner's Island	6	-0.429	0.397
Shooters Island	7	0.643	0.119
Swinburne Island	7	-0.393	0.383

Table 5.9. Results of correlation analysis of reproductive endpoints and total PAHs within tissues of Double-crested Cormorants collected in coastal New York, 1999. Given are n samples, Spearman correlation coefficient, and probability (P). Alpha'=0.017 (Sidak's method).

Tissue	Reproductive Endpoints	n samples	Spearman correlation coefficient	P
Egg	Eggs Laid	42	0.060	0.705
	Max Young Observed	34	-0.086	0.629
	Max Chick Days	28	-0.111	0.573
Plasma	Eggs Laid	30	0.260	0.165
	Max Young Observed	29	0.229	0.231
	Max Chick Days	29	0.305	0.107

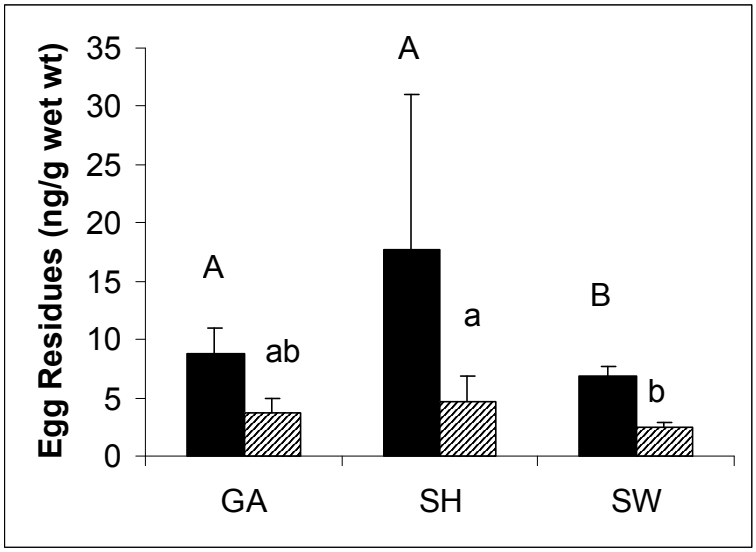


Figure 5.1. Comparison of polynuclear aromatic hydrocarbons in eggs of Double-crested Cormorant from different colonies in coastal New York, 1999. Shown are mean + standard deviation concentration (ng/g wet weight) total polynuclear aromatic hydrocarbons (solid) and naphthalene (hatched) detected in eggs from Gardiner's Island (GA), Shooters Island (SH), and Swinburne Island (SW). Unlike letters indicate colony differences.

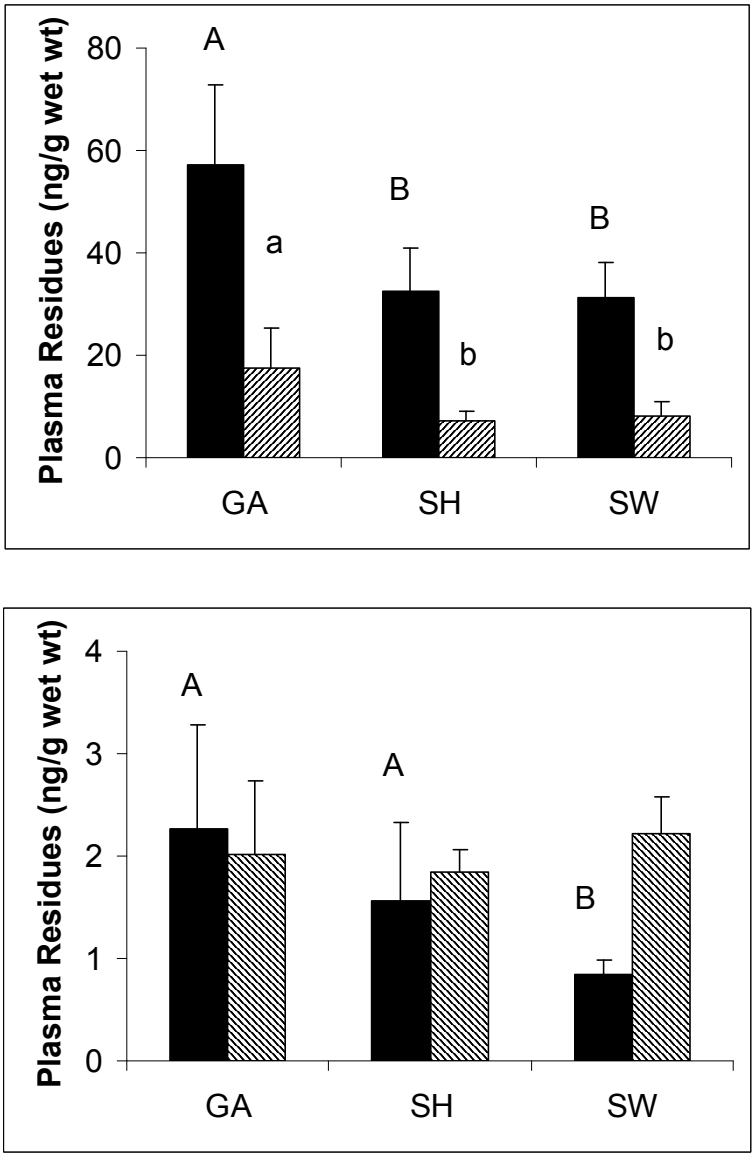


Figure 5.2. Comparison of polynuclear aromatic hydrocarbons in plasma of Double-crested Cormorant from different colonies in coastal New York, 1999. Shown are mean + standard deviation concentration (ng/g wet weight): top graph) total polynuclear aromatic hydrocarbons (solid) and naphthalene (hatched); bottom graph) biphenyl (solid) and phenanthrene (hatched) detected in eggs from Gardiner's Island (GA), Shooters Island (SH), and Swinburne Island (SW). Unlike letters indicate colony differences.

6. CHLORINATED PESTICIDES

RESULTS

Double-crested Cormorant egg and plasma tissues were analyzed for 29 organochlorine pesticides including DDT and analogues (2,4'-DDT, 4,4'-DDT, 2,4'-DDD, 4,4'-DDD, 2,4'-DDE, 4,4'-DDE, methoxychlor), hexachlorocyclohexane (α-BHC, β-BHC, δ-BHC, γ-BHC), mirex and photomirex, chlordane and related compounds (oxychlordane, α-chlordane, γ-chlordane, trans-nonachlor, cis-nonachlor, heptachlor, heptachlor epoxide), aldrin and related compounds (aldrin, dieldrin, endrin, endrin aldehyde, endrin ketone), endosulfan and related compounds (endosulfan sulfate, α-endosulfan, β-endosulfan) and hexachlorobenzene (HCB). Results are reported as non-lipid adjusted pg/g wet weight; detection limits ranged from 3.6-15,000 in eggs and 0.6-71.6 in plasma (see Appendix 1—Quality Assurance). Non-detects were adjusted to zero.

Due to laboratory problems, the concentration of heptachlor in one Swinburne Island egg sample (nest #6) and the concentration of heptachlor epoxide in one Shooters Island egg sample (nest #20) were eliminated from the dataset. β-endosulfan was non-detectable in all egg samples from all sites and endrin aldehyde was non-detectable in all plasma samples from all sites.

Descriptive statistics of all chlorinated pesticides detected in at least one sample from at least one site (28 analytes) are provided in Tables 6.1-6.6. Data from many sample populations were not distributed normally and did not show homogeneity of variance across colony sites.

Pesticide data were grouped by major chemical class (see above) to examine spatial patterns in tissue concentrations (Table 6.7 and 6.8). Log transformations of summed concentration data improved normality and stabilized variance sufficiently to allow use of parametric analysis (Levene's test $P<0.05$). The Pearson correlation was used to examine nestling size and summed pesticide concentrations (log transformed) of major groups. Comparisons between colonies were performed on summed concentration (log transformed) data (ANOVA, Tukey mean separation procedure). Unless otherwise noted, $\alpha=0.05$.

Cormorant nestlings selected for plasma sampling were not of uniform size across colony sites (see Table 4.4). Tissue samples were taken from nestlings significantly smaller on Shooters Island compared to Swinburne Island. Nevertheless, no correlations were detected between nestling size and total pesticide concentrations at any island (Table 6.9).

Chemical groups of chlorinated pesticides in eggs correlated with each other in many instances, especially in eggs from Shooters Island where mean concentrations were higher (Table 6.10). Summed concentrations of pesticides in plasma showed less co-linearity; none was detected in samples from Gardiner's Island (Table 6.11).

The relative contribution of different analytes to total concentrations of each chemical group differed between colony-sites (Figures 6.1 and 6.2). Although the Σ DDT group was dominated by 4,4'-DDE in both plasma and egg tissues at all sites, more parent compound (4,4'-DDT; 4,4'-DDD) was present in samples from Shooters Island than the other two sites. In addition, both plasma and egg samples from Gardiner's Island show greater contribution of heptachlor epoxide to Σ chlordane than at

the other two sites. The Σ HCH group was dominated at Shooters Island by β-BHC whereas α-BHC was relatively greater at Gardiner's and Swinburne Islands, especially in plasma samples. The Σ mirex group was dominated by mirex in both tissue types at all sites. Plasma and egg samples differed in the Σ aldrin group where egg concentrations from all sites resulted largely from dieldrin contamination, whereas plasma concentrations also contained endrin (except at Swinburne Island).

Summed organochlorine pesticides in general were higher in eggs from Shooters Island and lower in eggs from Gardiner's Island; samples from Swinburne Island were intermediate (Figure 6.3). Similarly, plasma summed concentrations of organochlorine pesticides in samples from Shooters Island were higher than samples from Swinburne and Gardiner's Islands (Figure 6.4). Total concentrations of the DDT and aldrin groups were especially high in samples from Shooters Island compared to the other two sites.

Egg shell thickness did not differ between colonies ($F_{2,39}$ =1.79; P=0.181) (Table 6.12), but thickness was negatively correlated with egg concentrations of 2,4' DDE and 4,4' DDE (Table 6.13).

No relationships between egg concentrations of chlorinated pesticides and reproductive endpoints were detected (Table 6.14). Chick survival was negatively correlated with plasma concentrations of total chlordane, total aldrin and total endosulfan (Table 6.15).

DISCUSSION

Chlorinated pesticides occurred in cormorant tissues from coastal New York, but generally not at levels expected to produce adverse effects. DDE occurred at the

greatest concentrations of all pesticides analyzed and was highest in cormorants from the two New York Harbor sites (Shooters and Swinburne Islands); mean values in eggs ranged from 1.78 to 3.6 ug/g wet weight. The mean concentration of DDE in cormorant eggs from Gardiner's Island was 0.8 ug/g wet weight. A pesticide manufacturing company operated in Newark Bay for many decades and it is likely that pesticide contamination in the harbor cormorants is, in part, a result of this point source.

DDE in cormorant eggs from the maritime region of Canada and coastal Maine in the 1960s to early 1970s ranged from approximately 6 to 30 ug/g wet weight (Kury 1969, Zitko et al. 1972). A later study in east coastal Canada documented mean DDE levels at 1.5-8.5 ug/g wet weight (Pearce et al. 1979). Peak concentrations in cormorant eggs from the Great Lakes in the early 1970s were 15 to 20 ug/g wet weight (Weseloh et al. 1983, Ryckman et al. 1998). Studies in the 1990s showed levels had subsided in Great Lakes cormorant eggs (approximately 2.5-4.0 ug/g wet weight; Ryckman et al. 1998, Custer et al. 1999). Levels of DDE in cormorant eggs from colonies in coastal New York are comparable to levels currently seen in the Great Lakes, as are concentrations of DDD and DDT (Meadows et al. 1996, Custer et al. 1999).

DDE can adversely impact avian reproduction, especially as a result of egg shell thinning. Shell thinning of 20% has been documented at 10 ug/g DDE concentrations in cormorant eggs (Pearce et al. 1979), but other studies have reported less thinning at higher concentrations (e.g. Gress et al. 1973, Weseloh et al. 1983). Although DDE concentrations were negatively correlated with shell thickness in the present study, mean DDE concentrations were generally below levels expected to produce thinning

sufficient to impact hatching. Shells from Shooter's Island averaged 10% thinner than pre-1947 shell thickness (Anderson and Hickey 1972). However, three eggs (21%) from Shooters Island had shells that were $\geq$ 20% thinned (the threshold for deleterious effects, Blus 1996). All eggs from the other two sites had < 20% thinning. DDE concentration was not associated with other reproductive endpoints, although DDE has been associated with reduced reproductive success in cormorants from the Great Lakes (Custer et al. 1999).

All other chlorinated pesticides detected in cormorant tissues from coastal New York occurred at concentrations generally below levels reported in other environmental field studies and known to impact avian reproduction, although information specific to Double-crested Cormorants is not available for all analytes. Dieldrin has been documented in cormorant eggs at levels up to 0.7 ug/g wet weight in studies conducted in the 1960s and 1970s (Vermeer and Reynolds 1970, Pearce et al. 1979, Weseloh et al. 1983, Ryckman et al. 1998). Recent investigations in the Great Lakes reported levels ranging from 0.02-0.09 ug/g wet weight (Meadows et al. 1996, Ryckman et al. 1998). A Green Bay, Wisconsin study reported dieldrin concentrations at 0.25 ug/g wet weight but determined that no adverse reproductive effects resulted from exposure to dieldrin (Custer et al. 1999). In Mallard (*Anas platyrhynchos*), levels of 45.2 ug/g in eggs was associated with a 40% drop in hatching (Peakall 1996). Mean dieldrin levels in the present study ranged from 0.03 to 0.43 ug/g.

Similarly, heptachlor epoxide was documented at relatively high levels in cormorant eggs from the Great Lakes in the 1970s (0.26 ug/g wet weight), but levels detected in the 1990s were < 0.1 ug/g (Ryckman et al. 1998). Mean heptachlor epoxide

concentrations in Green Bay were 0.08 ug/g (Custer et al. 1999). Levels detected in the present study ranged from 0.015-0.138 ug/g. Heptachlor epoxide concentrations greater than 10 ug/g caused significant declines in reproductive success in Canada Goose (*Branta canadensis*) and Japanese Quail (*Coturnix japonica*), but lower levels (1.5 ug/g) caused adverse reproductive effects in American Kestrel (*Falco sparverius*; summarized in Wiemeyer 1996).

Levels of the following pesticides detected in cormorant eggs in coastal New York were less than or comparable to levels detected in cormorants sampled in the Great Lakes and prairie regions of North America: β-BHC (Vermeer and Reynolds 1970, Custer et al. 1999), γ-BHC (lindane; Creichus et al. 1973, Custer et al. 1999), mirex and photomirex (Ryckman et al. 1998, Custer et al. 1999), oxychlordane (Meadows et al. 1996, Ryckman et al. 1998, Custer et al. 1999), HCB (Zitko 1976, Meadows et al. 1996, Ryckman et al. 1998, Custer et al. 1999), trans-nonachlor (Meadows et al. 1996, Ryckman et al. 1998, Custer et al. 1999), endrin (Custer et al. 1999). Cis-nonachlor was high in Shooters Island cormorant eggs relative to other studies (Meadows et al. 1996, Ryckman et al. 1998, Custer et al. 1999). No threshold data are available to predict adverse effects to cormorants, but levels determined for other avian species are orders of magnitude greater than levels detected in the present study (see review in Wiemeyer 1996).

No studies exist to aid in interpretation of pesticide levels in cormorant plasma, although information on nestling carcasses (Kury 1969, Stalling et al. 1985, Somers et al. 1993, Custer et al. 2001) and livers is available (Kuiken et al. 1999). Plasma levels reported in the present study were generally orders of magnitude lower than levels

detected in nestling carcasses and livers. It is unclear whether the negative relationships detected between plasma concentrations of Σaldrin (largely dieldrin), Σchlordane (approximately 50% oxychlordane, 30% cis-nonachlor), Σendosulfan and nestling survival represent significant impacts of pesticides on reproduction.

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Table 6.1. Chlorinated pesticide concentrations (pg/g wet weight) in eggs of Double-crested Cormorants collected at Gardiner's Island, 1999. Given are n samples, percent detection, minimum, maximum, range, median, mean, and standard deviation (s). Normality of sample population was tested with Shapiro-Wilk's test (S-W; probability P).

	n	%detect	minimum	maximum	range	median	mean	s	S-W	P
2,4'-DDT	15	93	0	748	748	237	238	164	0.780	0.002
4,4'-DDT	15	100	580	15700	15100	4460	5670	4360	0.905	0.115
2,4'-DDD	15	53	0	1000	1000	87	134	254	0.554	<0.0001
4,4'-DDD	15	100	109	13700	13600	2000	2330	3320	0.576	<0.0001
2,4'-DDE	15	47	0	353						
4,4'-DDE	15	100	200000	3630000	3430000	630000	823000	847000	0.649	<0.0001
methoxychlor	15	0								
α-BHC	15	100	413	1570	1160	744	783	328	0.905	0.115
β-BHC	15	100	138	2580	2440	633	900	773	0.819	0.007
γ-BHC	15	100	178	730	552	312	357	174	0.882	0.051
δ-BHC	15	0								
mirex	15	100	1250	6770	5520	3070	3340	1670	0.940	0.383
photomirex	15	100	106	581	475	245	278	151	0.914	0.157
oxychlordane	15	100	1970	23200	21200	6760	8080	5430	0.832	0.010
γ-chlordane	15	87	0	290	290	147	143	87	0.962	0.735
α-chlordane	15	100	210	944	734	446	473	225	0.921	0.203
trans-nonachlor	15	100	139	756	617	393	383	173	0.939	0.368
cis-nonachlor	15	100	1420	6290	4870	2820	3340	1580	0.905	0.114
heptachlor	15	0								
heptachlor epoxide	15	100	1130	9650	8520	4890	4930	2870	0.918	0.180
aldrin	15	20	0	52						
dieldrin	15	100	2720	22900	20200	9200	10500	7240	0.875	0.040
endrin	15	7	0	78						
endrin aldehyde	15	7	0	162						
endrin ketone	15	7	0	38						
α-endosulfan	15	7	0	240						
endosulfan sulfate	15	87	0	461	461	79	124	123	0.819	0.007
hexachlorobenzene	15	100	2080	13500	11400	5390	5650	3100	0.876	0.042

Table 6.2. Chlorinated pesticide concentrations (pg/g wet weight) in eggs of Double-crested Cormorants collected at Swinburne Island, 1999. Given are n samples, percent detection, minimum, maximum, range, median, mean, and standard deviation (s). Normality of sample population was tested with Shapiro-Wilk's test (S-W; probability P).

	n	%detect	minimum	maximum	range	median	mean	s	S-W	P
2,4'-DDT	13	92	0	439	439	248	252	118	0.969	0.883
4,4'-DDT	13	100	995	16700	15700	5750	7280	5150	0.905	0.157
2,4'-DDD	13	92	0	515	515	147	164	127	0.842	0.022
4,4'-DDD	13	100	433	6820	6390	2450	2930	1890	0.918	0.235
2,4'-DDE	13	46	0	977	0	0	0	0		
4,4'-DDE	13	100	300000	5700000	5400000	1360000	1780000	1500000	0.761	0.003
methoxychlor	13	8	0	33						
α-BHC	13	92	0	1240	1240	791	745	303	0.918	0.233
β-BHC	13	92	0	4230	4230	1020	1410	1240	0.817	0.011
γ-BHC	13	92	0	1700	1700	438	542	407	0.781	0.004
δ-BHC	13	8	0	33						
mirex	13	100	3750	190000	186000	9850	23700	50200	0.393	<0.0001
photomirex	13	100	194	27300	27100	754	2690	7390	0.341	<0.0001
oxychlordane	13	100	7460	9040	82900	27200	39500	28500	0.882	0.075
γ-chlordane	13	92	0	676	676	348	364	190	0.974	0.938
α-chlordane	13	92	0	3460	3460	1550	1720	1020	0.975	0.943
trans-nonachlor	13	92	0	2810	2810	844	1070	767	0.931	0.353
cis-nonachlor	13	100	2510	43400	40900	9000	12600	11800	0.730	0.001
heptachlor	12	8	0	22						
heptachlor epoxide	13	100	2310	42400	40100	5790	9860	10900	0.640	0.0001
aldrin	13	38	0	95						
dieldrin	13	100	3640	189000	185000	13400	33100	49700	0.584	<0.0001
endrin	13	8	0	72						
endrin aldehyde	13	8	0	24						
endrin ketone	13	8	0	48						
α-endosulfan	13	0								
endosulfan sulfate	13	38	0	101						
hexachlorobenzene	13	100	2350	35200	32900	8260	10700	9010	0.801	0.007

Table 6.3. Chlorinated pesticide concentrations (pg/g wet weight) in eggs of Double-crested Cormorants collected at Shooters Island, 1999. Given are n samples, percent detection, minimum, maximum, range, median, mean, and standard deviation (s). Normality of sample population was tested with Shapiro-Wilk's test (S-W; probability P).

	n	%detect	minimum	maximum	range	median	mean	s	S-W	P
2,4'-DDT	14	100	254	13900	13600	732	2600	4220	0.590	<0.0001
4,4'-DDT	14	100	3190	50200	47000	17200	18800	14000	0.924	0.253
2,4'-DDD	14	100	120	60500	60400	358	6440	16000	0.447	<0.0001
4,4'-DDD	14	100	2590	2150000	2150000	7470	181000	569000	0.349	<0.0001
2,4'-DDE	14	64	0	28900	28900	208	2640	7610	0.384	<0.0001
4,4'-DDE	14	100	487000	12100000	11600000	2520000	3660000	3280000	0.821	0.009
methoxychlor	14	7	0	30						
α-BHC	14	93	0	1320	1320	777	735	379	0.935	0.358
β-BHC	14	100	376	11600	11200	2230	3490	3420	0.792	0.004
γ-BHC	14	93	0	2690	2690	623	781	657	0.800	0.005
δ-BHC	14	14	0	40						
mirex	14	100	781	43400	42600	8050	10600	10900	0.747	0.001
photomirex	14	100	82	3480	3400	400	752	900	0.692	0.0003
oxychlordane	14	100	747	491000	490000	38700	87400	126000	0.619	<0.0001
γ-chlordane	14	100	160	4060	3900	474	989	1080	0.710	0.0005
α-chlordane	14	100	1090	47600	46500	4450	11400	13800	0.763	0.002
trans-nonachlor	14	100	324	28700	28400	2330	8220	9870	0.769	0.002
cis-nonachlor	14	100	4080	81100	72000	12400	19600	20000	0.701	0.0004
heptachlor	14	7	0	17						
heptachlor epoxide	13	100	2490	43100	40600	12100	15300	12100	0.891	0.101
aldrin	14	36	0	76						
dieldrin	14	100	5640	102000	96400	28600	34300	26400	0.861	0.031
endrin	14	29	0	236						
endrin aldehyde	14	0								
endrin ketone	14	0								
α-endosulfan	14	0								
endosulfan sulfate	14	43								
hexachlorobenzene	14	100	2280	49300	47000	10100	15700	13800	0.800	0.005

Table 6.4. Chlorinated pesticide concentrations (pg/g wet weight) in plasma of Double-crested Cormorants collected at Gardiner's Island, 1999. Given are n samples, percent detection, minimum, maximum, range, median, mean, and standard deviation (s). Normality of sample population was tested with Shapiro-Wilk's test (S-W; probability P).

	n	%detect	minimum	maximum	range	median	mean	s	S-W	P
2,4'-DDT	10	50	0	32.0	32.0	2.39	5.60	9.81	0.623	0.0001
4,4'-DDT	10	100	16.4	159	143	31.9	45.8	42.2	0.668	0.0004
2,4'-DDD	10	0								
4,4'-DDD	10	100	1.84	48.0	46.2	5.21	12.2	15.4	0.718	0.002
2,4'-DDE	10	0								
4,4'-DDE	10	100	1070	6400	5330	3700	3750	1610	0.977	0.945
methoxychlor	10	10	0	5.58						
α-BHC	10	100	11.3	74.0	62.7	30.3	35.7	18.9	0.903	0.237
β-BHC	10	80	0	19.8	19.8	14.6	12.5	7.21	0.824	0.029
γ-BHC	10	90	0	31.0	31.0	10.55	13.2	9.14	0.849	0.056
δ-BHC	10	0								
mirex	10	100	10.7	56.1	45.4	26.7	31.6	16.3	0.923	0.383
photomirex	10	100	0.880	7.00	6.12	2.06	3.23	2.28	0.850	0.059
oxychlordane	10	100	69.9	283	213	117	128	61.5	0.797	0.013
γ-chlordane	10	0								
α-chlordane	10	80	0	40.0	40.0	8.08	12.9	12.9	0.886	0.152
trans-nonachlor	10	60	0	37.0	37.0	6.88	11.3	12.9	0.852	0.062
cis-nonachlor	10	100	20.0	187	167	60.7	74.8	51.6	0.879	0.126
heptachlor	10	80	0	202	202	1.11	40.6	83.5	0.521	<0.0001
heptachlor epoxide	10	100	27.6	74.8	47.2	51.9	52.6	14.0	0.989	0.996
aldrin	10	20	0	20.9						
dieldrin	10	100	111	223	112	159	158	29.8	0.916	0.322
endrin	10	20	0	200						
endrin ketone	10	10	0	8.07						
α-endosulfan	10	20	0	200						
β-endosulfan	10	0								
endosulfan sulfate	10	80	0	13.6	13.6	7.68	7.12	4.56	0.930	0.446
hexachlorobenzene	10	100	91.0	171	80.0	144	140	23.8	0.954	0.714

Table 6.5. Chlorinated pesticide concentrations (pg/g wet weight) in plasma of Double-crested Cormorants collected at Swinburne Island, 1999. Given are n samples, percent detection, minimum, maximum, range, median, mean, and standard deviation (s). Normality of sample population was tested with Shapiro-Wilk's test (S-W; probability P).

	n	%detect	minimum	maximum	range	median	mean	s	S-W	P
2,4'-DDT	13	31	163							
4,4'-DDT	13	69	0	311	311	129	129	110	0.911	0.189
2,4'-DDD	13	0								
4,4'-DDD	13	92	0	110	110	64.0	62.0	30.1	0.948	0.570
2,4'-DDE	13	0								
4,4'-DDE	13	100	3400	16800	13400	9890	9490	3560	0.972	0.916
methoxychlor	13	0								
α-BHC	13	92	0	60.0	60.0	40.0	37.2	16.7	0.949	0.586
β-BHC	13	46	0	43.8						
γ-BHC	13	46	0	59.0						
δ-BHC	13	0								
mirex	13	100	56.0	168	112	86.0	103	44.3	0.836	0.019
photomirex	13	92	0	13.4	13.4	6.90	6.70	3.60	0.980	0.982
oxychlordane	13	100	262	1060	798	581	599	239	0.943	0.496
γ-chlordane	13	69	0	20.0	20.0	5.00	6.77	6.58	0.899	0.132
α-chlordane	13	100	28.0	67.0	39.0	43.0	42.1	10.6	0.925	0.295
trans-nonachlor	13	100	14.0	85.0	71.0	27.0	33.4	18.5	0.814	0.010
cis-nonachlor	13	100	185	351	166	263	272	53.7	0.934	0.383
heptachlor	13	0								
heptachlor epoxide	13	100	73.0	219	146	150	138	51.3	0.894	0.112
aldrin	13	23	0	5.00						
dieldrin	13	100	262	632	370	428	429	116	0.967	0.850
endrin	13	0								
endrin aldehyde	13	0								
endrin ketone	13	0								
α-endosulfan	13	31	0	200						
endosulfan sulfate	13	31	0	6.00						
hexachlorobenzene	13	100	97	304	207	166	169	50.9	0.879	0.069

Table 6.6. Chlorinated pesticide concentrations (pg/g wet weight) in plasma of Double-crested Cormorants collected at Shooters Island, 1999. Given are n samples, percent detection, minimum, maximum, range, median, mean, and standard deviation (s). Normality of sample population was tested with Shapiro-Wilk's test (S-W; probability P).

	n	%detect	minimum	maximum	range	median	mean	s	S-W	P
2,4'-DDT	11	91	0	310	310	42.0	78.8	92.8	0.705	0.0005
4,4'-DDT	11	100	128	2240	2110	811	1020	660	0.934	0.454
2,4'-DDD	11	82	0	422	422	25.0	126	155	0.785	0.006
4,4'-DDD	11	100	168	8000	7830	735	2540	3220	0.711	0.0007
2,4'-DDE	11	64	0	178	178	38.0	62.2	71.0	0.816	0.015
4,4'-DDE	11	100	12800	88900	76100	42000	44100	23400	0.962	0.793
methoxychlor	11	18	0	40.0						
α-BHC	11	100	18.0	55.0	37.0	26.0	30.5	11.5	0.878	0.097
β-BHC	11	100	32.0	289	257	53.0	92.9	76.5	0.776	0.005
γ-BHC	11	100	25.0	78.0	53.0	37.0	43.6	17.2	0.859	0.056
δ-BHC	11	9	0	476						
mirex	11	100	61.0	320	259	145	152	79.8	0.877	0.095
photomirex	11	100	3.00	17.0	14.0	10.0	8.89	4.03	0.952	0.672
oxychlordane	11	100	1570	6260	4690	2850	3300	1460	0.905	0.210
γ-chlordane	11	91	0	154	154	35.0	48.9	43.3	0.872	0.082
α-chlordane	11	100	105	1810	1700	368	720	658	0.830	0.023
trans-nonachlor	11	100	65.0	1570	1500	163	536	568	0.779	0.005
cis-nonachlor	11	100	766	3580	2810	1620	1940	991	0.903	0.201
heptachlor	11	0								
heptachlor epoxide	11	91	0	2500	2500	732	978	783	0.937	0.483
aldrin	11	64	0	15.0	15.0	7.0	6.63	5.80	0.864	0.065
dieldrin	11	91	0	4690	4690	1700	2060	1370	0.958	0.741
endrin	11	46	0	200						
endrin aldehyde	11	9	0	476						
endrin ketone	11	18	0	476						
α-endosulfan	11	82	0	3110	3110	196	425	894	0.410	<0.0001
endosulfan sulfate	11	55	0	476	476	7.00	64.5	148	0.514	<0.0001
hexachlorobenzene	11	100	209	1220	1010	457	563	326	0.879	0.101

Table 6.7. Summed chlorinated pesticide concentrations of major pesticide groups (see text) in eggs of Double-crested Cormorants collected at sites in coastal New York, 1999. Given are mean and standard deviation (pg/g wet weight). Normality of sample population was tested with Shapiro-Wilk's test (S-W; probability P).

	ΣDDT	ΣHCH	Σmirex	Σchlordane	Σaldrin	Σendosulfan
Gardiner's Island						
x	831000	2040	3620	17300	10600	140
s	850000	1040	1830	9250	7240	130
S-W	0.652	0.889	0.940	0.905	0.876	0.869
P	<0.0001	0.064	0.377	0.113	0.041	0.033
Swinburne Island						
x	1790000	2700	26400	62900	33200	30
S	1500000	1780	57500	46500	49700	40
S-W	0.761	0.860	0.386	0.838	0.585	0.733
P	0.003	0.038	<0.0001	0.026	<0.0001	0.001
Shooters Island						
x	3870000	5010	11400	148000	34400	30
s	3580000	3540	11800	183000	26500	40
S-W	0.812	0.905	0.742	0.687	0.861	0.735
P	0.007	0.135	0.001	0.0004	0.032	0.0009

Table 6.8. Summed chlorinated pesticide concentrations of major pesticide groups (see text) in plasma of Double-crested Cormorants collected at sites in coastal New York, 1999. Given are mean and standard deviation (pg/g wet weight). Normality of sample population was tested with Shapiro-Wilk's test (S-W; probability P).

	ΣDDT	ΣHCH	Σmirex	Σchlordane	Σaldrin	Σendosulfan
Gardiner's Island						
x	3820	61.3	34.8	320	198	46.9
s	1640	18.1	18.3	148	76.1	80.2
S-W	0.976	0.927	0.913	0.924	0.780	0.540
P	0.941	0.419	0.299	0.392	0.008	<0.0001
Swinburne Island						
x	9700	68.1	109	109	430	61.5
S	3640	41.4	47.1	314	116	95.1
S-W	0.965	0.962	0.840	0.953	0.968	0.610
P	0.835	0.781	0.021	0.650	0.864	<0.0001
Shooters Island						
x	48000	210	161	7520	2200	533
s	24500	167	83.4	3630	1280	951
S-W	0.958	0.743	0.885	0.953	0.946	0.489
P	0.745	0.002	0.119	0.688	0.597	<0.0001

Table 6.9. Results of correlation analysis of tarsus length and plasma total chlorinated pesticide concentrations of Double-crested Cormorants sampled at colonies in coastal New York, 1999. Given are n samples, correlation coefficient (r), and probability (P).

Colony	Pesticide group	r	P
Gardiner's Island	ΣDDT	0.068	0.853
(n=10)	ΣHCH	0.214	0.553
	Σmirex	0.134	0.712
	Σchlordane	-0.236	0.511
	Σaldrin	-0.328	0.354
Swinburne Island	ΣDDT	-0.040	0.903
(n=12)	ΣHCH	-0.045	0.891
	Σmirex	0.106	0.742
	Σchlordane	-0.069	0.831
	Σaldrin	0.142	0.659
Shooters Island	ΣDDT	-0.527	0.096
(n=11)	ΣHCH	-0.669	0.024
	Σmirex	-0.420	0.198
	Σchlordane	-0.275	0.413
	Σaldrin	-0.089	0.796

Table 6.10. Results of correlation analysis of egg concentrations of major pesticide groups in Double-crested Cormorants sampled at colonies in coastal New York, 1999. Given are Pearson correlation coefficient (r), and probability (P). Alpha=0.05.

	ΣHCH	Σmirex	Σchlordane	Σendosulfan
Gardiner's Island				
ΣDDT	n.s.	n.s.	r=0.724	r=0.668
			P=0.0023	P=0.007
ΣHCH		n.s	r=0.633	n.s
			P=0.011	
Σmirex			r=0.579	n.s.
			P=0.024	
Σchlordane				r=0.748
				P=0.001
Swinburne Island				
ΣDDT	n.s.	n.s.	r=0.884	r=0.742
			P=0.0001	P=0.004
ΣHCH		n.s	n.s.	n.s
Σmirex			n.s.	n.s.
Σchlordane				r=0.757
				P=0.004
Shooters Island				
ΣDDT	r=0.615	r=0.728	r=0.886	r=0.824
	P=0.019	P=0.003	P=<0.0001	P=0.0003
ΣHCH		r=0.633	r=0.655	r=0.770
		P=0.015	P=0.015	P=0.001
Σmirex			r=0.878	r=0.833
			P=0.0001	P=0.0002
Σchlordane				r=0.927
				P=<0.0001

Table 6.11. Results of correlation analysis of plasma concentrations of major pesticide groups in Double-crested Cormorants sampled at colonies in coastal New York, 1999. Given are Pearson correlation coefficient (r), and probability (P). Alpha=0.05.

	ΣHCH	Σmirex	Σchlordane	Σendosulfan
Gardiner's Island				
ΣDDT	n.s	n.s.	n.s.	n.s.
ΣHCH		n.s	n.s.	n.s
Σmirex			n.s.	n.s.
Σchlordane				n.s.
Swinburne Island				
ΣDDT	r=0.613	n.s.	r=0.783	r=0.583
	P=0.034		P=0.002	P=0.036
ΣHCH		n.s	r=0.730	r=0.827
			P=0.007	P=0.0009
Σmirex			n.s.	n.s.
Σchlordane				r=0.701
				P=0.008
Shooters Island				
ΣDDT	r=0.635	r=0.705	n.s.	n.s.
	P=0.039	P=0.016		
ΣHCH		n.s.	n.s.	n.s.
Σmirex			n.s.	n.s.
Σchlordane				r=0.715
				P= 0.013

Table 6.12. Egg shell thickness of Double-crested Cormorants sampled at colonies in coastal New York, 1999. Given are mean + standard deviation (n eggs), minimum, and maximum shell thickness (mm).

	Mean ± s (n)	Minimum	Maximum
Gardiner's Island	0.411 ± 0.0177 (15)	0.380	0.440
Shooters Island	0.396 ± 0.0369 (14)	0.340	0.470
Swinburne Island	0.414 ± 0.0198 (13)	0.380	0.460

Table 6.13. Results of correlation analysis of egg concentrations of 2,4' DDE and 4,4' DDE and egg shell thickness in Double-crested Cormorants sampled at colonies in coastal New York, 1999. Given are Spearman correlation coefficient (r), and probability (P) for n=42 eggs. Alpha'=0.025 (Sidak's method).

	r	P
2,4'-DDE	-0.488	0.001
4,4'-DDE	-0.391	0.011

Table 6.14. Results of correlation analysis of reproductive endpoints and chlorinated pesticides in eggs of Double-crested Cormorants collected in coastal New York, 1999. Given are n samples, Spearman correlation coefficient, and probability (P). Alpha'=0.017 (Sidak's method).

Tissue	Reproductive Endpoints	n samples	Spearman correlation coefficient	P
Σ DDT	Eggs Laid	42	0.088	0.581
	Max Young Observed	34	0.050	0.780
	Max Chick Days	28	-0.033	0.868
Σ HCH	Eggs Laid	42	0.153	0.332
	Max Young Observed	34	-0.047	0.793
	Max Chick Days	28	-0.082	0.679
Σ mirex	Eggs Laid	42	0.115	0.467
	Max Young Observed	34	-0.091	0.607
	Max Chick Days	28	0.009	0.966
Σ chlordane	Eggs Laid	42	0.096	0.544
	Max Young Observed	34	0.138	0.436
	Max Chick Days	28	-0.048	0.810
Σ aldrin	Eggs Laid	42	0.081	0.611
	Max Young Observed	34	0.108	0.543
	Max Chick Days	28	0.011	0.955
Σ endosulfan	Eggs Laid	42	-0.297	0.056
	Max Young Observed	34	-0.208	0.237
	Max Chick Days	28	0.208	0.289

Table 6.15. Results of correlation analysis of reproductive endpoints and chlorinated pesticides in plasma of Double-crested Cormorants collected in coastal New York, 1999. Given are n samples, Spearman correlation coefficient, and probability (P). Alpha'=0.017 (Sidak's method).

Tissue	Reproductive Endpoints	n samples	Spearman correlation coefficient	P
Σ DDT	Eggs Laid	34	-0.203	0.250
	Max Young Observed	33	-0.260	0.145
	Max Chick Days	33	-0.314	0.075
Σ HCH	Eggs Laid	34	-0.168	0.342
	Max Young Observed	33	-0.073	0.685
	Max Chick Days	33	-0.288	0.104
Σ mirex	Eggs Laid	34	-0.263	0.133
	Max Young Observed	33	-0.218	0.223
	Max Chick Days	33	-0.200	0.264
Σ chlordane	Eggs Laid	34	-0.201	0.254
	Max Young Observed	33	-0.266	0.134
	Max Chick Days	33	-0.470	0.006
Σ aldrin	Eggs Laid	34	-0.163	0.358
	Max Young Observed	33	-0.261	0.142
	Max Chick Days	33	-0.433	0.012
Σ endosulfan	Eggs Laid	34	-0.178	0.315
	Max Young Observed	33	-0.155	0.391
	Max Chick Days	33	-0.465	0.006

Figure 6.1. Comparison of organochlorine pesticide analytes in eggs of Double-crested Cormorant from different colonies in coastal New York, 1999. Shown are the percent contributions of individual analytes to summed concentrations of major chemical groups: A. Σ DDT; B. Σ chlordane (ACHLOR=α-chlordane; CNONA=cis-nonachlor; TNONA=trans-nonachlor; HEPEP=heptachlor epoxide; OXYCHL=oxychlordane); C. Σ HCH (DBHC=δ-BHC; GBHC=γ-BHC; BBHC=β-BHC; ABHC=α-BHC); D. Σ mirex (PHMIR=photomirex); E. Σ aldrin (DIELD=dieldrin).

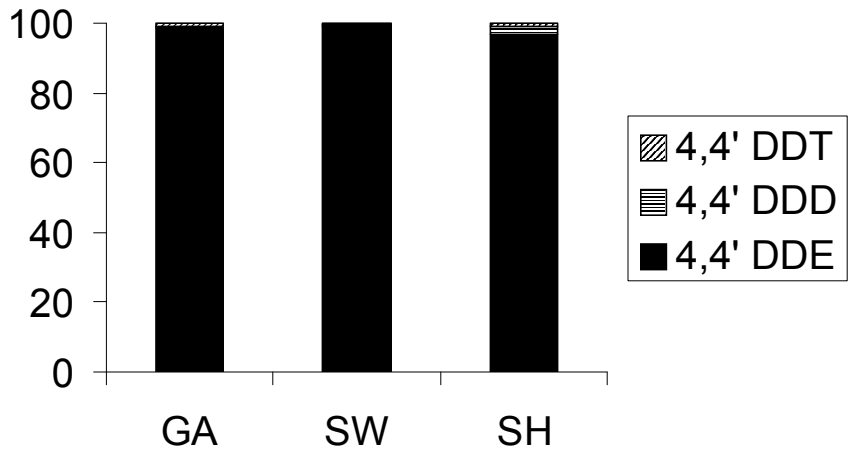


Figure 6.1A
Σ DDT eggs

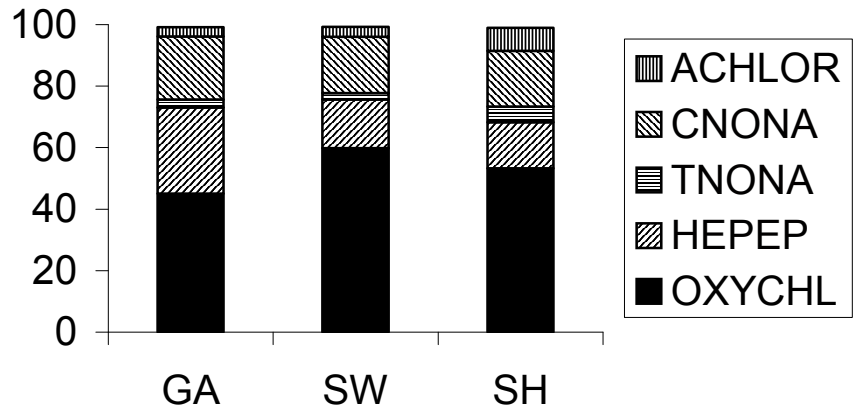


Figure 6.1B
Σ chlordane eggs

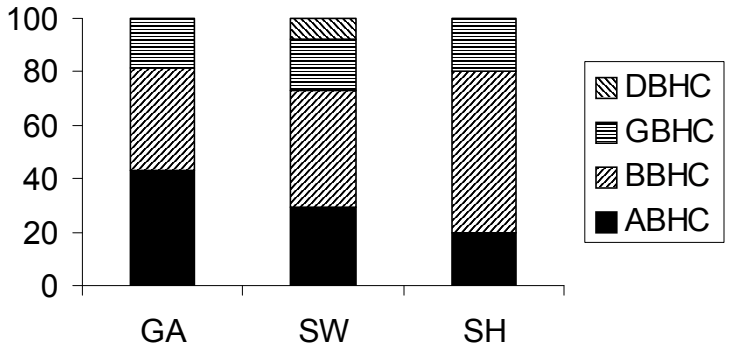


Figure 6.1C
∑ HCH

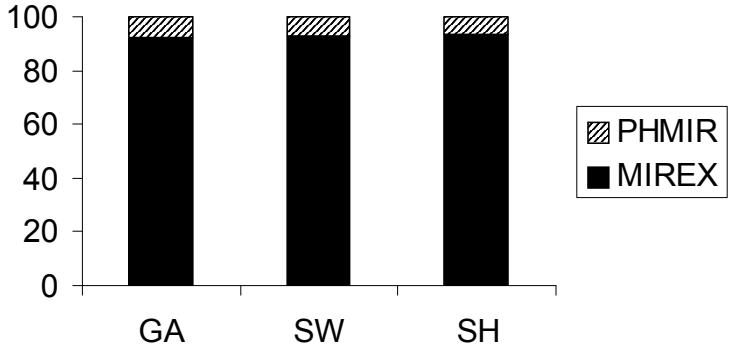


Figure 6.1D
∑ mirex

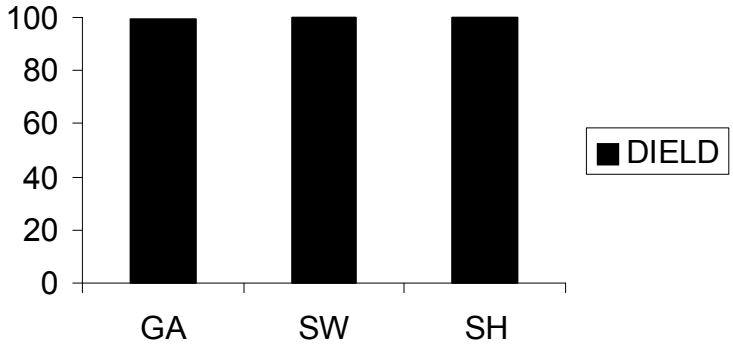


Figure 6.1E
∑ aldrin

Figure 6.2. Comparison of organochlorine pesticide analytes in plasma of Double-crested Cormorant from different colonies in coastal New York, 1999. Shown are the percent contributions of individual analytes to summed concentrations of major chemical groups: A. Σ DDT; B. Σ chlordane (ACHLOR=α-chlordane; CNONA=cis-nonachlor; TNONA=trans-nonachlor; HEPEP=heptachlor epoxide; OXYCHL=oxychlordane); C. Σ HCH (DBHC=δ-BHC; GBHC=γ-BHC; BBHC=β-BHC; ABHC=α-BHC); D. Σ mirex (PHMIR=photomirex); E. Σ aldrin (ENKET=endrin ketone; ENDRN=endrin; DIELD=dieldrin).

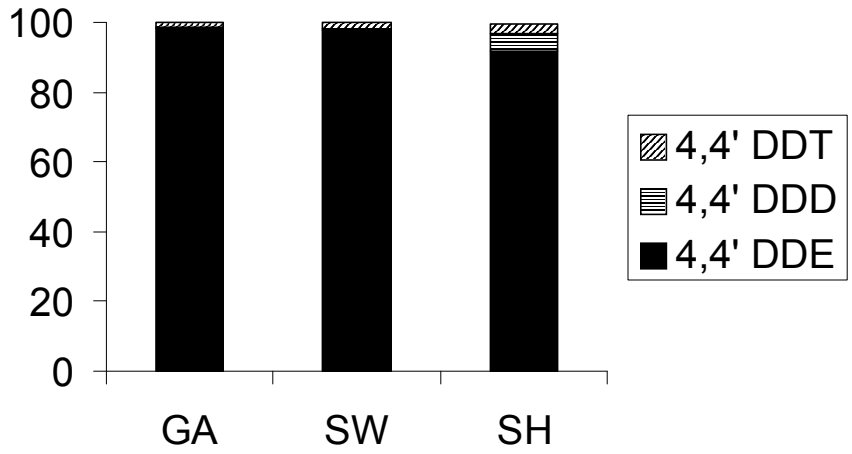


Figure 6.2A
Σ DDT plasma

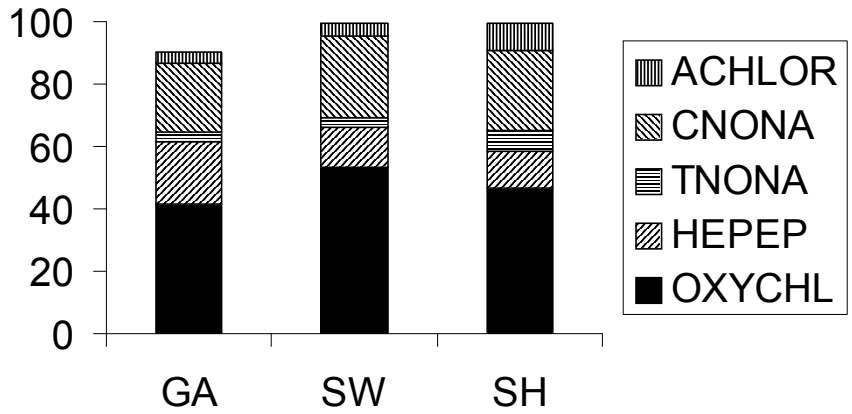


Figure 6.2B
Σ chlordane plasma

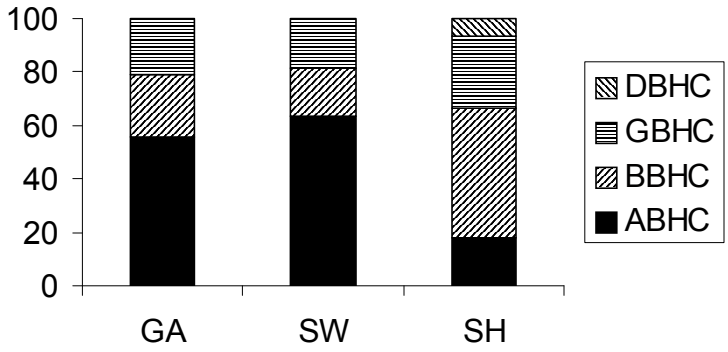


Figure 6.2C
Σ HCH plasma

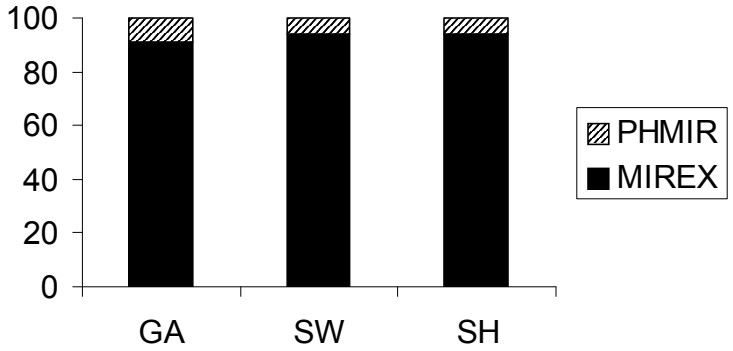


Figure 6.2D
Σ mirex plasma

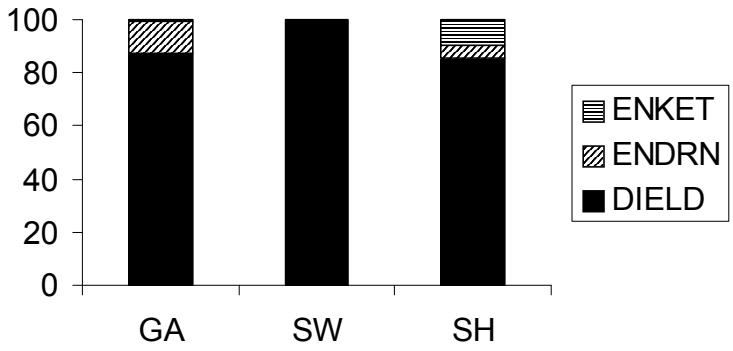
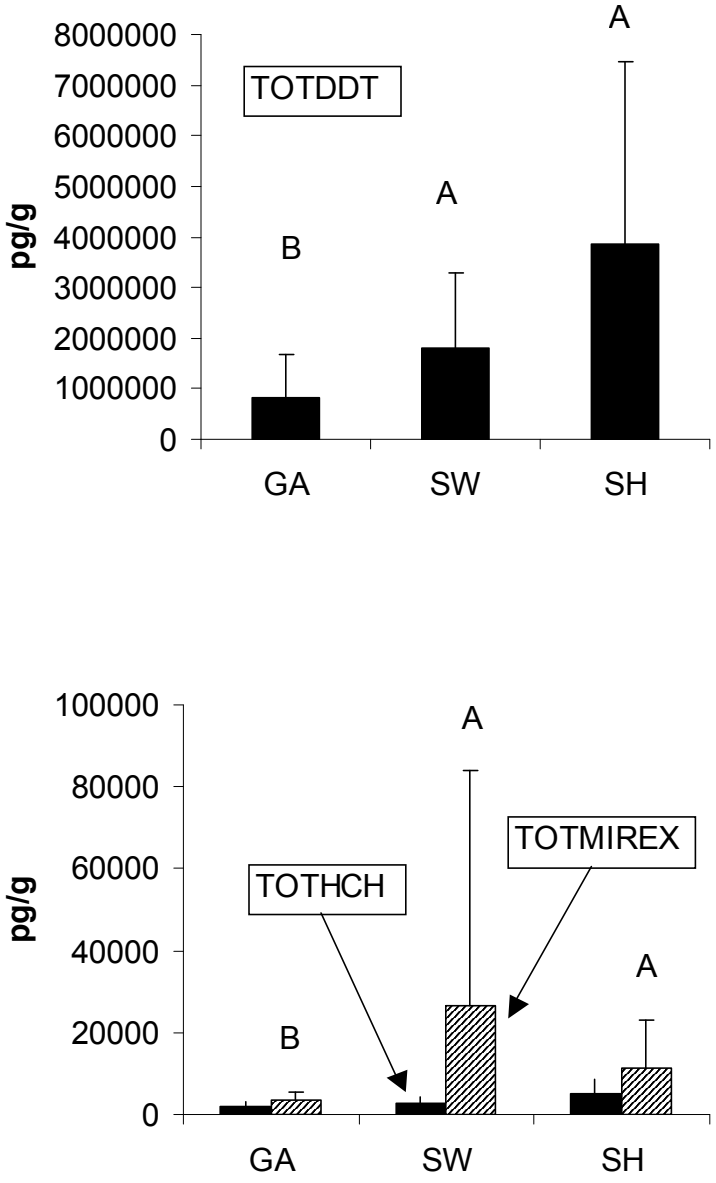


Figure 6.2E
Σ aldrin plasma

Figure 6.3. Comparison of chlorinated pesticides in eggs of Double-crested Cormorant from different colonies in coastal New York, 1999. Shown are mean + standard deviation concentration (pg/g wet weight) total major pesticide group (see text) detected in eggs from Gardiner's Island (GA), Shooters Island (SH), and Swinburne Island (SW). TOTDDT=Σ DDT; TOTHCH=Σ HCH; TOTMIREX=Σ mirex; TOTCHL=Σ chlordane; TOTDRN=Σ aldrin. Unlike letters indicate colony differences.



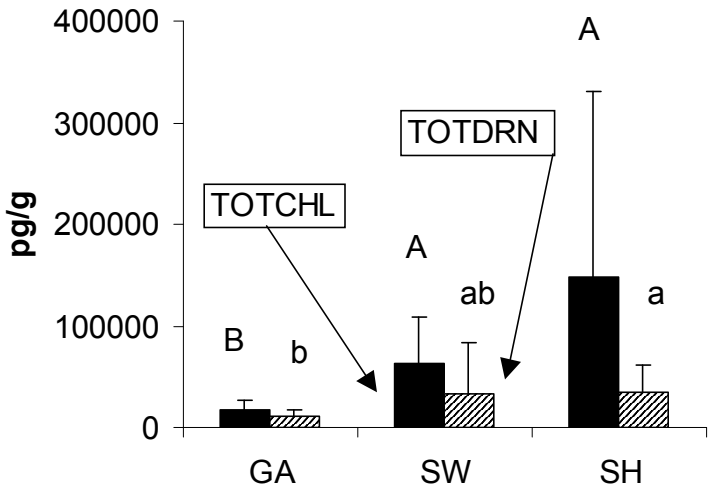
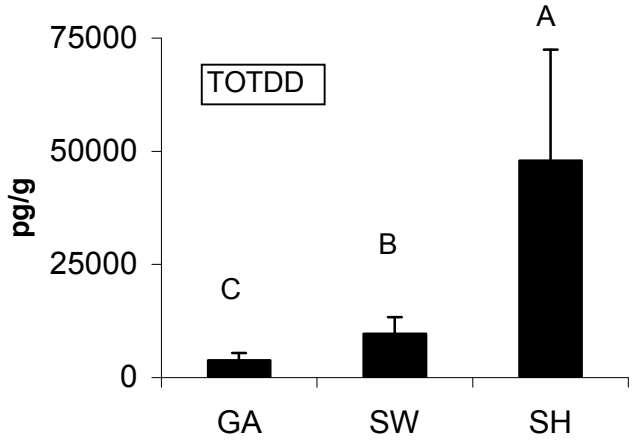
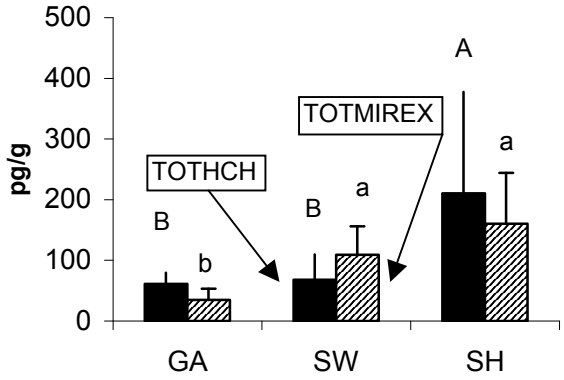
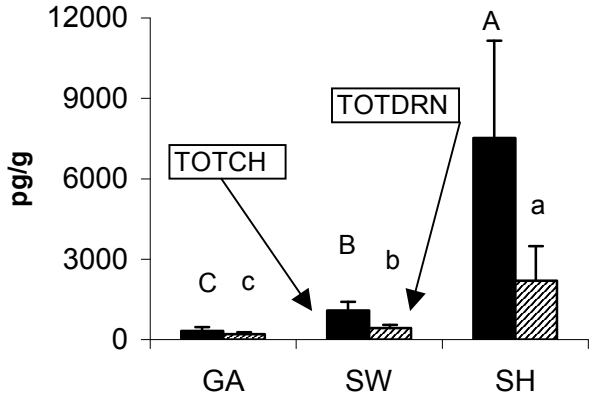

400000
300000
200000
100000
0
pg/g
TOTCHL
TOTDRN
A
A
ab
a
B
b
GA
SW
SH

Figure 6.4. Comparison of chlorinated pesticides in plasma of Double-crested Cormorant from different colonies in coastal New York, 1999. S Figure 4 -- plasma standard deviation concentration (pg/g wet weight) total major p detected in plasma from Gardiner's Island (GA), Shooters Islan Island (SW). TOTDDT=Σ DDT; TOTHCH=Σ HCH; TOTMIREX= chlordane; TOTDRN=Σ aldrin. Unlike letters indicate colony differences.




500
400
300
200
100
0
pg/g
TOTHCH
TOTMIREX
B
b
B
a
A
a
GA
SW
SH


12000
9000
6000
3000
0
pg/g
TOTCH
TOTDRN
C
c
B
b
A
a
GA
SW
SH

POLYCHLORINATED BIPHENYL AROCLORS

RESULTS

Double-crested Cormorant egg and plasma tissues were analyzed for four PCB Aroclors including AR1242, AR1248, AR1254 and AR1260. Results are reported as non-lipid adjusted ng/g wet weight; detection limits ranged from 0.0329-15.9 in eggs and 0.00272-1.65 in plasma (see Appendix 1—Quality Assurance). Non-detects were adjusted to zero. AR1248 was not detected in any samples from any site.

Descriptive statistics of all PCB Aroclors detected in at least one sample from at least one site are provided in Tables 7.1-7.2. Data from several sample populations of egg tissue were not distributed normally.

PCB Aroclor data were summed to provide a total concentration variable to examine spatial patterns in tissue concentrations (Tables 7.1-7.2). Log transformations of summed concentration data in plasma stabilized variance sufficiently to allow use of parametric analysis (Levene's test $P<0.05$). The Pearson correlation was used to examine nestling size and PCB Aroclors in plasma. Comparisons between colonies were performed on total PCB Aroclor concentration data (ANOVA, Tukey mean separation procedure). Plasma concentration data were log transformed. Unless otherwise noted, $\alpha=0.05$.

Cormorant nestlings selected for plasma sampling were not of uniform size across colony sites (see Table 4.4). Tissue samples were taken from nestlings significantly smaller on Shooters Island compared to Swinburne Island. Nevertheless, no correlations were detected between nestling size and PCB Aroclor concentrations at any island (Table 7.3). In addition, ANCOVA showed colony differences but detected

no relationship between tarsus length and total PCB Aroclor concentrations (F_{colony}=35.8, P<0.0001; F_{tarsus}=2.72, P=0.110)

PCB Aroclors in eggs and plasma correlated with each other in most instances (Tables 7.4-7.5). The relative contribution of different Aroclors to total PCB concentrations did not differ between colony-sites (Figure 7.1). PCB Aroclors 1260 and 1254 dominated total PCB Aroclor concentrations at all sites in both tissue types.

Total PCB Aroclor concentrations were highest in eggs and plasma from Shooters Island and lowest in eggs and plasma from Gardiner's Island; samples from Swinburne Island were intermediate (Figure 7.2). PCB Aroclor total concentrations in plasma were especially high in samples from Shooters Island compared to the other two sites.

No relationships between total PCB Aroclor concentrations in eggs or plasma and reproductive endpoints, including a measure of egg production (Eggs Laid), hatching success (Maximum Young Observed) and chick survival (Maximum Chick Days), were detected (Table 7.6).

DISCUSSION

Mean Aroclor concentrations were greatest in eggs and plasma from Shooters Island compared to the other two sites, and in eggs, comprised largely of AR1254. In contrast, plasma samples from all sites and eggs from Swinburne and Gardiner's Islands were dominated by AR1260.

Few environmental field data on AR1260 concentrations exist for birds and most dosing studies have focused on AR1254 (see review in Hoffman et al. 1996). AR1254

concentrations in Double-crested Cormorant eggs from colonies in the maritime region of Canada were 5-10 times greater than levels detected in the present study (Zitko et al. 1972). Similarly, levels of AR1254 detected in adult cormorant muscle, liver, and fat were orders of magnitude greater than nestling plasma concentrations detected in the present study (Zitko and Hutzinger 1972).

Dosing studies have failed to detect adverse reproductive effects at egg concentrations ranging from 10-81 ug/g AR1254 in Atlantic Puffins (*Fratercula artica* ; Harris and Osborn 1981), 4-18 ug/g AR1248 in Screech Owls (*Otus asio*; McLane and Hughes 1980), and 105 ug/g AR1242 in Mallards (*Anas platyrhynchos*; Haseltine and Prouty 1980). Egg injections resulting in 5 ug/g AR1248 produced approximately 80% mortality of chicken embryos (Brunstrom and Orberg 1982), but chickens are known to be highly sensitive to chlorinated hydrocarbons (Hoffman et al. 1996). AR1254 concentrations of 30 ug/g in Mallard ducklings also failed to produce adverse effects (Custer and Heinz 1980). No conclusions can be drawn regarding the potential effects of PCB Aroclors on cormorants in this study due to the lack of information available from the literature to interpret residue data.

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Table 7.1. Polychlorinated biphenyl (Aroclor) concentrations (ng/g wet weight) in eggs of Double-crested Cormorants collected at colonies in coastal New York, 1999. Given are n samples, percent detection, minimum, maximum, range, median, mean, and standard deviation (s). Normality of sample population was tested with Shapiro-Wilk's test (S-W; probability P).

	n	%detect	minimum	maximum	range	median	mean	s	S-W	P
Gardiner's Island										
AR1242	15	100	12.0	87.0	75.0	32.0	37.9	23.8	0.865	0.029
AR1248	15	0								
AR1254	15	100	450	2740	2290	1230	1270	670	0.938	0.363
AR1260	15	100	920	6690	5770	2100	2360	1490	0.825	0.008
Total PCB Aroclors	15		1390	9506	8120	3480	3670	2140	0.870	0.033
Swinburne Island										
AR1242	13	100	38.0	734	696	289	337	203	0.971	0.903
AR1248	13	0								
AR1254	13	100	1040	7910	6870	4690	4760	2370	0.934	0.380
AR1260	13	100	2050	11800	9750	7830	7592	3376	0.917	0.229
Total PCB Aroclors	13		3208	20300	17100	14300	12700	5850	0.926	0.301
Shooters Island										
AR1242	14	100	80.0	1840	1760	567	687	535	0.845	0.019
AR1248	14	0								
AR1254	14	100	588	23700	23100	8470	8930	5730	0.914	0.183
AR1260	14	100	2150	43700	41550	13800	1510	9980	0.831	0.012
Total PCB Aroclors	14		3380	69200	65900	22400	24700	15800	0.844	0.019

Table 7.2. Polychlorinated biphenyl (Aroclor) concentrations (ng/g wet weight) in plasma of Double-crested Cormorants collected at colonies in coastal New York, 1999. Given are n samples, percent detection, minimum, maximum, range, median, mean, and standard deviation (s). Normality of sample population was tested with Shapiro-Wilk's test (S-W; probability P).

	n	%detect	minimum	maximum	range	median	mean	s	S-W	P
Gardiner's Island										
AR1242	11	100	0.307	1.16	0.853	0.519	0.658	0.293	0.905	0.214
AR1248	11	0								
AR1254	11	100	6.81	28.2	21.4	14.5	16.1	6.91	0.909	0.236
AR1260	11	100	7.91	34.1	26.2	16.6	18.7	9.16	0.902	0.197
Total PCB Aroclors	11		15.0	61.3	46.3	31.8	35.5	15.4	0.926	0.368
Swinburne Island										
AR1242	13	100	1.74	9.05	7.31	4.26	5.15	2.03	0.949	0.578
AR1248	13	0								
AR1254	13	100	15.4	58.3	42.9	43.5	42.1	11.0	0.928	0.319
AR1260	13	100	22.1	86.2	64.1	60.2	59.8	18.5	0.967	0.854
Total PCB Aroclors	13		39.2	145	106	115	107	29.2	0.936	0.402
Shooters Island										
AR1242	11	100	8.30	34.3	26.0	14.7	17.3	8.97	0.811	0.013
AR1248	11	0								
AR1254	11	100	51.2	196	145	112	115	45.2	0.937	0.484
AR1260	11	100	96.5	390	294	176	190	86.0	0.889	0.134
Total PCB Aroclors	11		158	544	387	318	323	124	0.951	0.654

Table 7.3. Results of correlation analysis of tarsus length and plasma total PCB Aroclor concentrations of Double-crested Cormorants sampled at colonies in coastal New York, 1999. Given are n samples, correlation coefficient (r), and probability (P).

Colony	PCB Aroclor	r	P
Gardiner's Island	AR1242	0.384	0.244
	AR1254	0.371	0.262
	AR1260	0.110	0.747
Swinburne Island	AR1242	-0.256	0.447
	AR1254	-0.373	0.259
	AR1260	-0.432	0.185
Shooters Island	AR1242	-0.385	0.217
	AR1254	-0.345	0.273
	AR1260	-0.267	0.402

Table 7.4. Results of correlation analysis of egg concentrations of PCB Aroclors of Double-crested Cormorants sampled at colonies in coastal New York, 1999. Given are Pearson correlation coefficient (r), and probability (P).

	AR1254	AR1260
Gardiner's Island		
AR1242	r=0.842	r=0.800
	P<0.0001	P=0.0003
AR1254		r=0.879
		P<0.0001
Swinburne Island		
AR1242	r=0.846	r=0.960
	P=0.0003	P<0.0001
AR1254		r=0.905
		P<0.0001
Shooters Island		
AR1242	r=0.754	r=0.763
	P=0.002	P=0.002
AR1254		r=0.749
		P=0.002

Table 7.5. Results of correlation analysis of plasma concentrations of PCB Aroclors of Double-crested Cormorants sampled at colonies in coastal New York, 1999. Given are Pearson correlation coefficient (r), and probability (P).

	AR1254	AR1260
Gardiner's Island		
AR1242	r=0.638	r=0.592
	P=0.0351	P=0.055
AR1254		r=0.783
		P=0.004
Swinburne Island		
AR1242	r=0.811	r=0.568
	P=0.0008	P=0.043
AR1254		r=0.737
		P=0.004
Shooters Island		
AR1242	r=0.846	r=0.434
	P=0.001	P=0.182
AR1254		r=0.587
		P=0.058

Table 7.6. Results of correlation analysis of reproductive endpoints and total PCB Aroclors within tissues of Double-crested Cormorants collected in coastal New York, 1999. Given are n samples, Spearman correlation coefficient, and probability (P). Alpha'=0.017 (Sidak's method).

Tissue	Reproductive Endpoints	n samples	Spearman correlation coefficient	P
Egg	Eggs Laid	42	0.071	0.653
	Max Young Observed	34	0.102	0.566
	Max Chick Days	28	-0.129	0.513
Plasma	Eggs Laid	30	-0.149	0.393
	Max Young Observed	29	-0.250	0.154
	Max Chick Days	29	-0.295	0.090

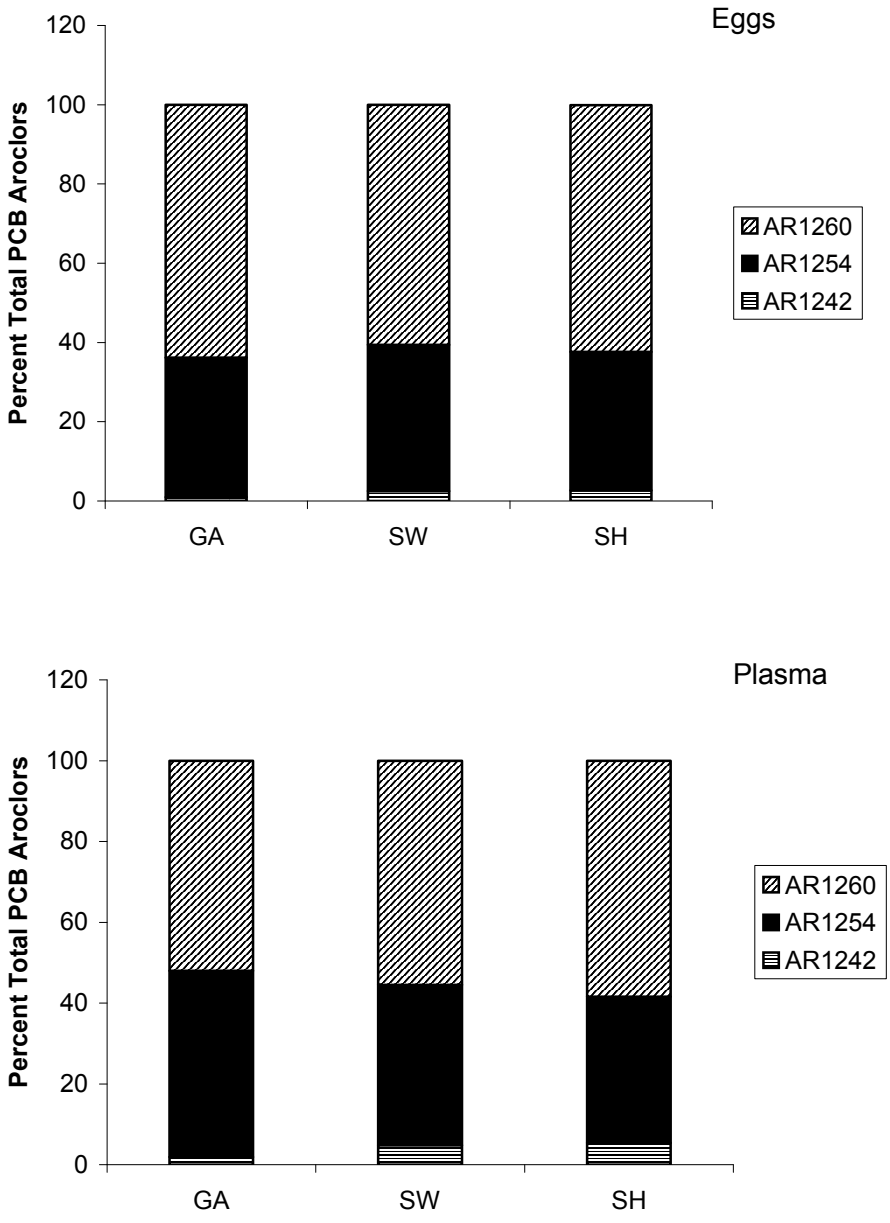


Figure 7.1. Comparison of PCB Aroclors in eggs and plasma of Double-crested Cormorant from different colonies in coastal New York, 1999. Shown are the percent contributions of individual Aroclors to summed concentrations of major chemical groups:

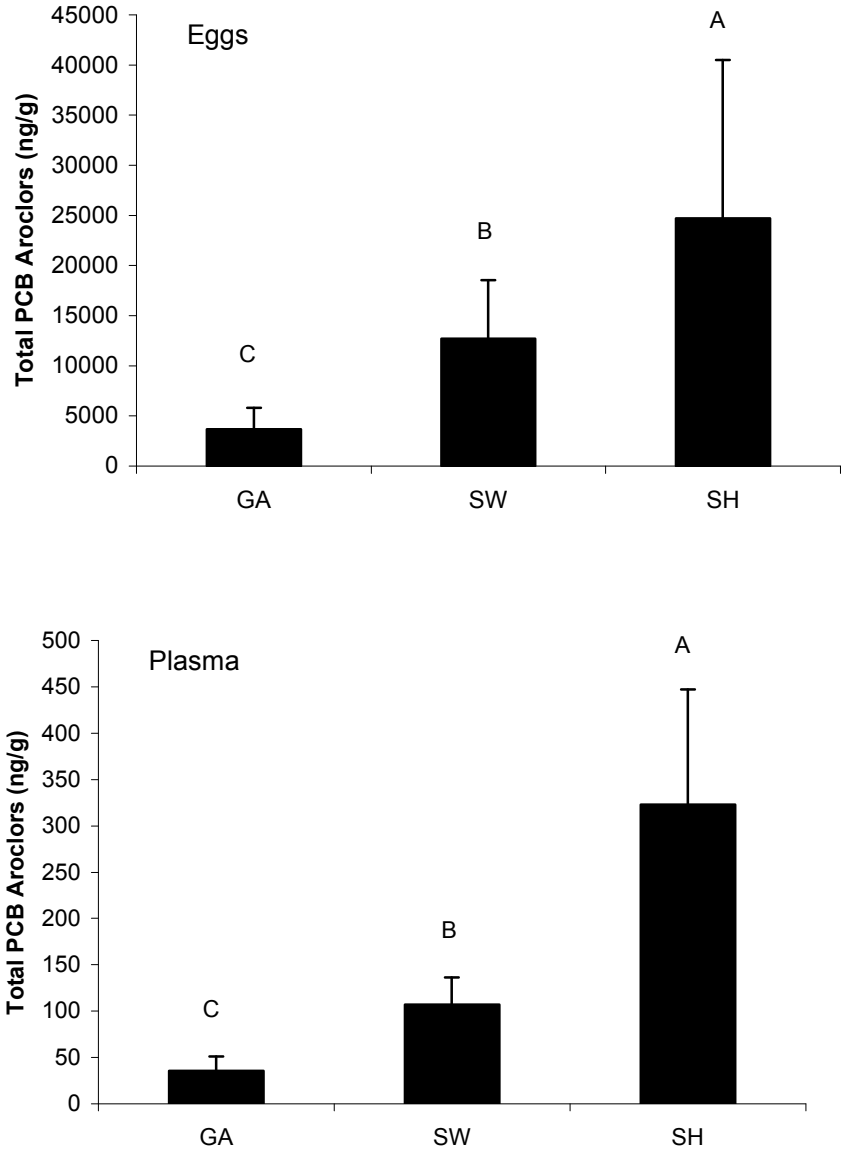


Figure 7.2. Comparison of total PCB Aroclors in eggs and plasma of Double-crested Cormorant from different colonies in coastal New York, 1999. Shown are mean + standard deviation concentration (ng/g wet weight) total PCB Aroclors (see text) detected in eggs and plasma from Gardiner's Island (GA), Shooters Island (SH), and Swinburne Island (SW). Unlike letters indicate colony differences.

8. POLYCHLORINATED BIPHENYL CONGENERS

RESULTS

Double-crested Cormorant egg and plasma tissues were analyzed for 209 PCB congeners. Results are reported as non-lipid adjusted ng/g wet weight. Detection limits ranged from 0.0017 to 8.89 ng/g in eggs and 0.000300 to 0.0402 ng/g in plasma (see Appendix 1—Quality Assurance). Non-detects (approximately 23-24% of all samples) were adjusted to zero. An additional 23-24% of all samples were reported as zero. Coeluting congeners are identified in Appendix 1—Quality Assurance. Descriptive statistics of all PCB congeners are provided in Tables 8.1-8.10.

The following congeners were not detected in any egg samples from any site: 2, 5, 7, 9, 10, 12, 13, 14, 28, 29, 30, 33, 39, 41, 47, 51, 53, 55, 57, 62, 65, 69, 70, 71, 74, 75, 76, 78, 87, 91, 95, 97, 98, 99, 100, 101, 102, 106, 108, 112, 113, 115, 116, 117, 119, 124, 125, 138, 140, 142, 143, 145, 149, 151, 154, 157, 160, 161, 163, 166, 168, 173, 185, 193, 199, 200 (Table 8.11). The following congeners were not detected in any plasma samples from any site: 5, 10, 12, 13, 14, 23, 24, 28, 29, 30, 33, 34, 35, 38, 39, 41, 46, 47, 51, 53, 55, 57, 58, 62, 65, 69, 70, 71, 74, 75, 76, 78, 80, 87, 89, 91, 95, 97, 98, 99, 100, 101, 102, 104, 106, 108, 112, 113, 115, 116, 117, 119, 122, 124, 125, 138, 140, 142, 143, 145, 149, 151, 152, 154, 157, 160, 161, 163, 166, 168, 173, 185, 186, 192, 193, 199, 200 (Table 8.12).

PCB congener data were summed to provide a total concentration variable to examine spatial patterns in tissue concentrations (Table 8.13). Log transformations of summed concentration data in plasma stabilized variance sufficiently to allow use of parametric analysis (Levene's test $P>0.05$). The Pearson correlation was used to

compare nestling size and PCB congener concentratons. Comparisons between colonies were performed on total PCB congener concentration data (ANOVA, Tukey mean separation procedure). Plasma concentration data were log transformed. Unless otherwise noted, α=0.05.

Cormorant nestlings selected for plasma sampling were not of uniform size across colony sites (see Table 4.4). Tissue samples were taken from nestlings significantly smaller on Shooters Island compared to Swinburne Island. Nevertheless, no correlations were detected between nestling size and total PCB congener concentrations at any island (Gardiner's Island: r=0.251, P=0.457; Swinburne Island: r=-0.152, P=0.638; Shooters Island: r=-0.411, P=0.210).

Toxic equivalents were highest in eggs (mean=0.322 ng/g) and plasma (mean=0.00848 ng/g) collected at Shooters Island, and were more than three times greater than samples from Gardiner's Island (Table 8.14). Samples from Swinburne Island were intermediate. Total homologue concentrations followed a similar pattern (Table 8.15).

The relative contribution of different congeners to total PCB concentrations did not differ between colony-sites (Figure 8.1). PCB congeners 83 (coeluting with 99), 118, 129 (coeluting with 138, 160, 163), 153 (coeluting with 168), and 180 (coeluting with 193) dominated total PCB congener concentrations at all sites in both tissue types. Total PCB congener concentrations were highest in eggs and plasma from Shooters Island and lowest in eggs and plasma from Gardiner's Island; samples from Swinburne Island were intermediate (Figure 8.2).

No relationships between total PCB concentrations in eggs or plasma and reproductive endpoints, including a measure of egg production (Eggs Laid), hatching success (Maximum Young Observed) and chick survival (Maximum Chick Days), were detected (Table 8.16).

DISCUSSION

Mean total PCB concentrations in cormorant eggs collected at coastal New York sites ranged from 2,490 to 13,900 ng/g wet weight, and are very similar to total PCB concentrations detected in cormorant eggs collected from the maritime region of Canada in the mid 1970s (5,660-19,300 ng/g wet weight; Pearce et al. 1979).

In addition, current study results are comparable to levels detected in Great Lakes cormorants over the past three decades. Mean total PCBs in cormorant eggs collected from colonies in heavily contaminated portions of the Great Lakes, such as Lake Erie and Lake Huron peaked at 35,000 ng/g and 23,800 ng/g in the 1970s (Weseloh et al. 1983, Ryckman et al. 1998). By the late 1980s, several studies reported PCB concentrations ranging from 100-15,000 ng/g (Tillitt et al. 1992, Ryckman et al. 1998), including sites in Green Bay, Wisconsin—a severely impacted system (Williams et al. 1995, Custer et al. 1999). By the late 1990s, levels were an order of magnitude lower in sites from Lake Huron and Lake Superior (Kannan et al. 2001). Although these declines represent reduced environmental concentrations of PCBs in the Great Lakes, unpolluted sites in Alaska and elsewhere have yielded egg levels ranging from 80-1,000 ng/g total PCBs (Ohlendorf et al. 1982, Tillitt et al. 1992).

Total PCB levels in plasma have not been reported for cormorant nestlings making it difficult to compare our results with other studies. However nestling concentrations in other tissues have been determined in two studies. Somers et al. (1993) detected 940 ng/g wet weight in lipid from 84 juvenile cormorants collected in western Canada. Nestlings collected from several sites in the upper midwest showed 130-3,450 ng/g wet weight (geometric mean whole carcass). Plasma levels of total PCBs in the present study ranged from 25-210 ng/g wet weight.

Few cormorant studies have reported congener-specific information. Concentrations found in cormorant eggs in British Columbia and Lake Ontario (Henshel et al. 1997) were similar to the present study for congeners 77, 126, and 169, but were greater for congeners 105 and 188. Cormorant eggs sampled in Green Bay, Wisconsin in the late 1980s had higher concentrations of congeners 77, 81, 126, 169, and 105, but lower levels of congener 118, than those detected in coastal New York cormorant eggs (Williams et al. 1995). Another sampling effort in Green Bay in the 1990s reported congener concentrations lower than those detected in coastal New York for congeners 167, 189, 118, 114, 156 (coeluting with 157) and 123, however congeners 81, 126, and 105 were higher (Meadows et al. 1996).

PCBs can adversely affect bird populations in a number of ways. They may reduce egg hatchability, affect reproductive behavior and nestling growth, and cause edema, porphyria and malformations. Total PCB concentrations in eggs and TCDD-equivalents within the range of values from this study (7-9 ug/g and 150-250 pg/g TCDD-equivalents) have resulted in 25% mortality of cormorant embryos (Yamashita et al. 1993). Threshold levels that are more protective (i.e. less than 25% mortality) have

been estimated as follows: 3.6-6.8 ug/g for total PCBs; 800-7900 pg/g for congener 126; 110-370 ng/g for congener 105; 350-1300 pg/g for TCDD-equivalents (summarized in Hoffman et al. 1996). Corresponding values from the present study (2.5-14 ug/g total PCBs; 1760 pg/g congener 126; 349 ng/g congener 105; 104-322 pg/g TCDD-equivalents) suggest that coastal New York cormorants are at risk for deleterious effects (e.g. 25% embryo mortality; Yamashita et al. 1993) from PCB exposure, although no relationships were detected between PCB concentrations and reproductive success.

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Table 8.1. Polychlorinated biphenyl (congeners 1-42) concentrations (ng/g wet weight) in eggs of Double-crested Cormorants collected at Gardiner's (n=15), Shooters (n=14), and Swinburne (n=13) Islands, 1999. Given are minimum, maximum, mean, and standard deviation.

	Gardiner's Island				Shooters Island				Swinburne Island			
Variable	Minimum	Maximum	Mean	Std Dev	Minimum	Maximum	Mean	Std Dev	Minimum	Maximum	Mean	Std Dev
CON1	0	0	0	0	0	0.0300	0.0100	0.0100	0	0.0100	0	0
CON2	0	0	0	0	0	0	0	0	0	0	0	0
CON3	0	0.0300	0	0.0100	0	0.0300	0.0100	0.0100	0	0.0300	0	0.0100
CON4	0	0	0	0	0	0.200	0.0200	0.0600	0	0	0	0
CON5	0	0	0	0	0	0	0	0	0	0	0	0
CON6	0	0	0	0	0	0.0500	0	0.0100	0	0	0	0
CON7	0	0	0	0	0	0	0	0	0	0	0	0
CON8	0	0	0	0	0	0.130	0.0400	0.0500	0	0	0	0
CON9	0	0	0	0	0	0	0	0	0	0	0	0
CON10	0	0	0	0	0	0	0	0	0	0	0	0
CON11	0	0	0	0	0	0.0600	0.0100	0.0200	0	0.0700	0.0100	0.0200
CON12	0	0	0	0	0	0	0	0	0	0	0	0
CON13	0	0	0	0	0	0	0	0	0	0	0	0
CON14	0	0	0	0	0	0	0	0	0	0	0	0
CON15	0	0.0300	0	0.0100	0	0	0	0	0	0	0	0
CON16	0	0.0100	0	0	0	0.140	0.0300	0.0400	0	0.0100	0	0
CON17	0	0.0200	0.0100	0.0100	0	0.530	0.140	0.170	0	0.0400	0.0100	0.0100
CON18	0	0.0200	0.0100	0.0100	0.0400	3.21	0.790	0.880	0.0200	0.150	0.0800	0.0300
CON19	0	0	0	0	0	0.230	0.0700	0.0600	0	0.0300	0.0100	0.0100
CON20	2.92	22.2	9.67	6.16	20.2	475	170	133	8.53	190	86.9	52.8
CON21	0	0.290	0.0600	0.0800	0	0	0	0	0	0.0800	0.0100	0.0200
CON22	0	0.0400	0.0100	0.0100	0	0.670	0.180	0.220	0	0.120	0.0400	0.0400
CON23	0	0	0	0	0	0	0	0	0	0.0100	0	0
CON24	0	0	0	0	0	0.0100	0	0	0	0	0	0
CON25	0	0.0100	0	0	0	0.970	0.200	0.310	0	0.0500	0.0200	0.0100
CON26	0	0.100	0.0400	0.0200	0.0900	4.39	0.840	1.18	0.0400	0.380	0.250	0.120
CON27	0	0	0	0	0	0.330	0.0900	0.0900	0	0.0300	0.0100	0.0100
CON28	0	0	0	0	0	0	0	0	0	0	0	0
CON29	0	0	0	0	0	0	0	0	0	0	0	0
CON30	0	0	0	0	0	0	0	0	0	0	0	0
CON31	0.0600	0.860	0.290	0.190	0.720	42.2	9.29	10.7	0.330	3.51	1.87	1.04
CON32	0	0.0100	0	0	0	1.12	0.370	0.330	0	0.0900	0.0400	0.0300
CON33	0	0	0	0	0	0	0	0	0	0	0	0
CON34	0	0	0	0	0	0.0400	0.0100	0.0100	0	0	0	0
CON35	0	0	0	0	0	0.0300	0.0000	0.0100	0	0	0	0
CON36	0	0	0	0	0	0	0	0	0	0.0100	0	0
CON37	0	0.0200	0.0100	0.0100	0	0.610	0.210	0.180	0	0.0700	0.0300	0.0300
CON38	0	0	0	0	0	0.340	0.0800	0.0900	0	0.0500	0.0200	0.0200
CON39	0	0	0	0	0	0	0	0	0	0	0	0
CON40	0	0.0500	0.0200	0.0100	0.0500	6.73	1.84	1.93	0.0300	0.480	0.170	0.130
CON41	0	0	0	0	0	0	0	0	0	0	0	0
CON42	0	0.0300	0.0100	0.0100	0	3.51	0.870	0.970	0	0.220	0.0800	0.0800

Table 8.2. Polychlorinated biphenyl (congeners 43-85) concentrations (ng/g wet weight) in eggs of Double-crested Cormorants collected at Gardiner's (n=15), Shooters (n=14), and Swinburne (n=13) Islands, 1999. Given are minimum, maximum, mean, and standard deviation.

	Gardiner's Island				Shooters Island				Swinburne Island			
Variable	Minimum	Maximum	Mean	Std Dev	Minimum	Maximum	Mean	Std Dev	Minimum	Maximum	Mean	Std Dev
CON43	0	0.0100	0	0	0	0.320	0.0500	0.100	0	0.0900	0.0100	0.0200
CON44	1.64	14.3	6.20	3.59	4.79	629	173	155	8.8	163	70.2	49.0
CON45	0	0.0100	0	0	0	2.22	0.460	0.600	0	0.100	0.0400	0.0300
CON46	0	0	0	0	0	0.290	0.0400	0.0800	0	0.0100	0	0
CON47	0	0	0	0	0	0	0	0	0	0	0	0
CON48	0	0.0300	0.0100	0.0100	0	1.09	0.230	0.280	0	0.0800	0.0200	0.0200
CON49	0.140	0.970	0.560	0.230	0.670	68.3	22.4	19.8	1.24	18.7	7.09	4.50
CON50	0	0.0100	0	0.0100	0	3.03	0.710	0.870	0.0200	0.150	0.0700	0.0300
CON51	0	0	0	0	0	0	0	0	0	0	0	0
CON52	0.170	1.19	0.610	0.300	1.14	121	31.5	32.0	1.55	15.3	7.90	3.75
CON53	0	0	0	0	0	0	0	0	0	0	0	0
CON54	0	0	0	0	0	0.0900	0.0300	0.0300	0	0.0100	0	0
CON55	0	0	0	0	0	0	0	0	0	0	0	0
CON56	0	0	0	0	0	1.57	0.250	0.430	0	0	0	0
CON57	0	0	0	0	0	0	0	0	0	0	0	0
CON58	0	0	0	0	0	0.980	0.130	0.290	0	0.0800	0.0100	0.0200
CON59	0.0800	0.700	0.280	0.170	0.170	40.7	8.97	10.1	0.340	7.44	3.34	2.29
CON60	0.670	4.22	2.08	1.17	4.46	207	59.5	51.2	1.97	37.3	18.2	11.5
CON61	7.77	43.9	20.3	10.9	27.4	873	281	206	13.3	287	146	80.4
CON62	0	0	0	0	0	0	0	0	0	0	0	0
CON63	0.200	1.69	0.650	0.410	0.600	12.6	4.88	2.96	0.640	8.35	4.21	2.44
CON64	0.0200	0.150	0.0800	0.0400	0.260	31.8	9.58	10.4	0.140	2.45	1.03	0.630
CON65	0	0	0	0	0	0	0	0	0	0	0	0
CON66	9.22	60.0	28.3	15.0	37.9	1400	443	338	19.4	331	182	101
CON67	0	0	0	0	0	0.360	0.0700	0.120	0	0	0	0
CON68	0.140	1.17	0.420	0.270	0.100	1.43	0.830	0.360	0.240	2.13	1.04	0.520
CON69	0	0	0	0	0	0	0	0	0	0	0	0
CON70	0	0	0	0	0	0	0	0	0	0	0	0
CON71	0	0	0	0	0	0	0	0	0	0	0	0
CON72	0.0600	0.380	0.150	0.0900	0	0.880	0.590	0.300	0.110	1.12	0.590	0.300
CON73	0	0	0	0	0	0.270	0.0200	0.0700	0	0.0200	0	0.0100
CON74	0	0	0	0	0	0	0	0	0	0	0	0
CON75	0	0	0	0	0	0	0	0	0	0	0	0
CON76	0	0	0	0	0	0	0	0	0	0	0	0
CON77	0.0500	0.270	0.160	0.0600	0	1.20	0.450	0.290	0	0.450	0.260	0.140
CON78	0	0	0	0	0	0	0	0	0	0	0	0
CON79	0	0.0200	0	0.0100	0	0.800	0.190	0.220	0	0.170	0.0100	0.0500
CON80	0	0	0	0	0	0	0	0	0	0	0	0
CON81	0	0.150	0.0700	0.0600	0	3.07	0.520	0.820	0	0.770	0.340	0.190
CON82	0	0.0200	0	0.01	0	1.23	0.300	0.340	0	0.0500	0.0100	0.0200
CON83	44.0	269	125	66.0	57.6	2260	864	548	98.8	775	465	231
CON84	0	0.0800	0.0400	0.0300	0.130	5.83	1.65	1.85	0.0700	0.850	0.320	0.200
CON85	1.21	7.65	3.34	1.84	2.83	270	62.3	66.2	3.33	62.5	23.6	16.7

Table 8.3. Polychlorinated biphenyl (congeners 86-127) concentrations (ng/g wet weight) in eggs of Double-crested Cormorants collected at Gardiner's (n=15), Shooters (n=14), and Swinburne (n=13) Islands, 1999. Given are minimum, maximum, mean, and standard deviation.

	Gardiner's Island				Shooters Island				Swinburne Island			
Variable	Minimum	Maximum	Mean	Std Dev	Minimum	Maximum	Mean	Std Dev	Minimum	Maximum	Mean	Std Dev
CON86	1.01	3.85	2.05	0.840	1.22	112	34.5	28.8	2.37	26.5	12.2	6.96
CON87	0	0	0	0	0	0	0	0	0	0	0	0
CON88	0.0400	0.220	0.120	0.0500	0.170	11.8	3.94	3.72	0.280	1.84	0.870	0.390
CON89	0	0	0	0	0	0.120	0.0200	0.0400	0	0	0	0
CON90	1.39	7.23	4.32	1.62	3.88	173	59.3	46.9	5.24	42.9	23.8	10.7
CON91	0	0	0	0	0	0	0	0	0	0	0	0
CON92	0.420	4.14	1.70	0.870	1.00	46.2	15.3	12.1	2.04	19.3	8.41	4.56
CON93	0.290	1.06	0.670	0.240	0.650	46.9	13.8	13.1	0.580	7.88	3.71	1.93
CON94	0	0	0	0	0	0.220	0.0300	0.0700	0	0	0	0
CON95	0	0	0	0	0	0	0	0	0	0	0	0
CON96	0	0	0	0	0	0.210	0.0500	0.0600	0	0.0100	0	0
CON97	0	0	0	0	0	0	0	0	0	0	0	0
CON98	0	0	0	0	0	0	0	0	0	0	0	0
CON99	0	0	0	0	0	0	0	0	0	0	0	0
CON100	0	0	0	0	0	0	0	0	0	0	0	0
CON101	0	0	0	0	0	0	0	0	0	0	0	0
CON102	0	0	0	0	0	0	0	0	0	0	0	0
CON103	0	0.0400	0.0200	0.0100	0	1.04	0.350	0.290	0.0200	0.230	0.110	0.0500
CON104	0	0	0	0	0	0.0600	0.0100	0.0200	0	0	0	0
CON105	15.7	103	41.8	24.0	47.6	1250	349	290	27.7	340	199	100.0
CON106	0	0	0	0	0	0	0	0	0	0	0	0
CON107	0	0.310	0.0600	0.100	0	1.06	0.260	0.320	0	0.470	0.140	0.170
CON108	0	0	0	0	0	0	0	0	0	0	0	0
CON109	3.22	28.1	9.04	6.12	3.75	19.1	11.4	4.17	4.21	25.9	14.1	5.72
CON110	0.590	2.59	1.46	0.580	2.89	134	46.8	41.8	2.89	25.4	11.0	5.82
CON111	0.240	1.58	0.660	0.350	0.160	2.57	1.10	0.650	0.380	2.72	1.37	0.630
CON112	0	0	0	0	0	0	0	0	0	0	0	0
CON113	0	0	0	0	0	0	0	0	0	0	0	0
CON114	1.03	5.91	2.54	1.36	3.48	111	30.1	26.0	2.04	28.3	15.7	8.67
CON115	0	0	0	0	0	0	0	0	0	0	0	0
CON116	0	0	0	0	0	0	0	0	0	0	0	0
CON117	0	0	0	0	0	0	0	0	0	0	0	0
CON118	85.5	660	243	147	214	4310	1350	983	123	1450	880	424
CON119	0	0	0	0	0	0	0	0	0	0	0	0
CON120	0.250	1.62	0.620	0.350	0.0800	1.46	0.770	0.360	0.290	1.08	0.700	0.210
CON121	0.0100	0.0900	0.0400	0.0200	0	0.580	0.220	0.150	0.0300	0.370	0.160	0.0900
CON122	0	0.190	0.0100	0.0500	0	1.33	0.100	0.360	0	0	0	0
CON123	0.950	6.40	2.47	1.43	2.72	80.9	22.7	18.8	1.52	24.2	13.4	7.30
CON124	0	0	0	0	0	0	0	0	0	0	0	0
CON125	0	0	0	0	0	0	0	0	0	0	0	0
CON126	0.240	2.13	0.790	0.480	0.540	4.87	1.76	1.04	0	2.67	1.58	0.850
CON127	0	0.140	0.0300	0.0500	0	3.97	1.14	0.950	0	1.02	0.320	0.380

Table 8.4. Polychlorinated biphenyl (congeners 128-169) concentrations (ng/g wet weight) in eggs of Double-crested Cormorants collected at Gardiner's (n=15), Shooters (n=14), and Swinburne (n=13) Islands, 1999. Given are minimum, maximum, mean, and standard deviation.

	Gardiner's Island				Shooters Island				Swinburne Island			
Variable	Minimum	Maximum	Mean	Std Dev	Minimum	Maximum	Mean	Std Dev	Minimum	Maximum	Mean	Std Dev
CON128	13.3	96.0	37.0	21.5	27.8	583	209	134	30.3	245	135	67.7
CON129	105	878	305	196	221	4580	1750	1080	255	1610	1030	461
CON130	1.19	13.5	3.74	2.99	3.50	97.1	31.5	23.2	3.61	36.2	17.8	10.5
CON131	0	0	0	0	0	0.240	0.0300	0.0700	0	0	0	0
CON132	0.0800	0.390	0.210	0.100	0.490	20.9	5.83	6.02	0.250	1.67	0.860	0.430
CON133	3.17	27.1	9.32	5.87	4.18	91.7	32.7	20.8	7.10	47.2	27.2	12.9
CON134	0	0.0700	0.0200	0.0300	0	2.91	0.810	0.750	0	0.330	0.190	0.130
CON135	1.87	9.40	4.98	2.13	1.34	75.0	35.0	19.8	5.60	29.7	16.9	6.85
CON136	0.0300	0.130	0.0700	0.0300	0.110	5.77	1.92	1.87	0.120	0.710	0.370	0.170
CON137	1.02	9.21	3.50	2.06	5.09	184	49.9	43.1	4.00	40.9	21.9	12.5
CON138	0	0	0	0	0	0	0	0	0	0	0	0
CON139	0.180	1.21	0.580	0.310	0.490	33.7	9.04	8.10	0.590	6.89	3.54	2.19
CON140	0	0	0	0	0	0	0	0	0	0	0	0
CON141	0	3.30	1.10	1.13	2.41	56.1	18.0	14.2	1.82	13.0	6.47	3.24
CON142	0	0	0	0	0	0	0	0	0	0	0	0
CON143	0	0	0	0	0	0	0	0	0	0	0	0
CON144	0.0700	0.290	0.170	0.0600	0.190	6.84	2.52	2.00	0.230	1.59	0.840	0.410
CON145	0	0	0	0	0	0	0	0	0	0	0	0
CON146	28.5	262	84.4	56.8	42.8	682	302	160	59.1	383	227	103
CON147	0.920	3.51	2.21	0.750	2.48	108	37.0	31.9	2.86	14.4	8.41	3.39
CON148	0.0500	0.280	0.120	0.0600	0	2.96	0.760	0.740	0.140	0.560	0.340	0.120
CON149	0	0	0	0	0	0	0	0	0	0	0	0
CON150	0	0.0300	0.0100	0.0100	0	0.540	0.150	0.150	0	0.100	0.0500	0.0300
CON151	0	0	0	0	0	0	0	0	0	0	0	0
CON152	0	0	0	0	0	0.0600	0.0100	0.0200	0	0.0100	0	0
CON153	218	1860	658	416	342	6750	2590	1590	365	2810	1710	769
CON154	0	0	0	0	0	0	0	0	0	0	0	0
CON155	0.0700	0.590	0.190	0.130	0	8.09	2.29	2.09	0.210	1.09	0.710	0.310
CON156	12.9	84.9	33.3	18.9	29.3	537	190	123	21.1	230	132	67.7
CON157	0	0	0	0	0	0	0	0	0	0	0	0
CON158	3.17	25.3	9.95	5.82	11.7	362	124	86.2	10.7	110	55.7	31.7
CON159	0	0.120	0.0500	0.0300	0	0.880	0.310	0.310	0	0.180	0.0400	0.0500
CON160	0	0	0	0	0	0	0	0	0	0	0	0
CON161	0	0	0	0	0	0	0	0	0	0	0	0
CON162	0.410	3.59	1.16	0.760	0.570	2.65	1.44	0.670	0.640	3.69	1.95	0.800
CON163	0	0	0	0	0	0	0	0	0	0	0	0
CON164	0	0.160	0.0500	0.0700	0	5.83	1.71	1.95	0	0.640	0.130	0.230
CON165	0.340	2.76	1.07	0.630	0.120	2.99	1.46	0.890	0.460	3.38	1.63	0.790
CON166	0	0	0	0	0	0	0	0	0	0	0	0
CON167	6.32	52.1	18.8	11.5	13.1	199	79.5	45.8	10.5	108	63.1	31.3
CON168	0	0	0	0	0	0	0	0	0	0	0	0
CON169	0	0.700	0.0500	0.180	0	0	0	0	0	0	0	0

Table 8.5. Polychlorinated biphenyl (congeners 170-209) concentrations (ng/g wet weight) in eggs of Double-crested Cormorants collected at Gardiner's (n=15), Shooters (n=14), and Swinburne (n=13) Islands, 1999. Given are minimum, maximum, mean, and standard deviation.

	Gardiner's Island				Shooters Island				Swinburne Island			
Variable	Minimum	Maximum	Mean	Std Dev	Minimum	Maximum	Mean	Std Dev	Minimum	Maximum	Mean	Std Dev
CON170	26.9	191	69.7	42.2	60.2	1110	402	255	55.4	347	208	95.8
CON171	3.55	29.6	11.0	6.52	10.3	267	87.1	62.7	9.28	72.2	42.8	21.8
CON172	4.39	35.3	11.9	7.63	9.77	167	61.9	38.5	9.55	53.6	32.3	14.1
CON173	0	0	0	0	0	0	0	0	0	0	0	0
CON174	0.210	0.800	0.520	0.170	1.08	23.1	8.40	7.58	0.530	3.20	1.53	0.750
CON175	0.340	4.34	1.38	0.930	0.820	31.6	9.73	7.47	1.23	8.92	4.73	2.54
CON176	0	0.0900	0.0500	0.0200	0.0800	2.16	0.820	0.670	0.0700	0.380	0.210	0.0900
CON177	5.53	61.0	19.9	13.4	14.5	261	107	68.4	14.0	125	59.6	30.7
CON178	9.15	59.6	24.6	13.6	9.19	258	92.9	58.8	19.1	117	65.2	29.4
CON179	0.0300	0.130	0.0800	0.0400	0.0800	3.71	1.01	1.11	0.0900	0.570	0.270	0.110
CON180	89.3	638	230	142	204	4150	1430	946	199	1090	713	315
CON181	0.0300	0.330	0.130	0.0700	0.150	5.83	1.68	1.41	0.100	1.08	0.620	0.350
CON182	0	0.560	0.120	0.160	0	4.07	0.880	1.04	0	0.65	0.200	0.280
CON183	0	99.8	35.3	26.3	32.3	885	288	207	32.7	262	148	72.6
CON184	0.0100	0.170	0.0500	0.0400	0	1.34	0.380	0.320	0.0700	0.420	0.180	0.100
CON185	0	0	0	0	0	0	0	0	0	0	0	0
CON186	0	0	0	0	0	0	0	0	0	0.0100	0	0
CON187	37.4	403	126	88.2	70.1	1520	579	350	102	607	355	161
CON188	0.0700	0.550	0.170	0.120	0	3.94	0.800	0.960	0.130	0.680	0.360	0.170
CON189	1.25	8.46	3.26	1.85	2.52	51.6	16.9	11.8	2.43	17.4	9.80	4.97
CON190	5.32	29.7	11.9	6.49	10.7	217	76.6	49.5	8.11	68.8	40.2	19.7
CON191	0.630	3.90	1.59	0.830	1.79	40.3	13.3	9.70	1.15	9.16	5.57	2.68
CON192	0	0	0	0	0	0.0400	0.0100	0.0100	0	0.0200	0	0.0100
CON193	0	0	0	0	0	0	0	0	0	0	0	0
CON194	14.4	96.3	40.1	22.7	32.5	635	213	144	36.3	196	114	55.5
CON195	4.23	22.1	10.3	5.26	9.14	182	64.7	42.5	6.78	48.6	29.8	14.7
CON196	4.88	36.8	15.0	8.60	10.1	390	98.6	92.3	15.7	68.3	42.1	18.3
CON197	1.16	8.89	3.78	2.09	0.870	35.1	12.2	8.06	3.07	15.9	8.44	3.97
CON198	22.5	187	69.6	45.6	33.6	975	293	221	65.5	274	155	69.1
CON199	0	0	0	0	0	0	0	0	0	0	0	0
CON200	0	0	0	0	0	0	0	0	0	0	0	0
CON201	1.86	18.8	7.32	4.49	1.68	144	33.3	33.9	6.51	33.6	19.6	8.80
CON202	2.24	18.3	7.48	4.19	0.850	262	48.9	64.7	9.76	48.1	26.4	11.5
CON203	11.2	68.4	31.8	17.9	20.2	773	199	181	34.6	197	101	49.0
CON204	0.0100	0.0800	0.0300	0.0200	0	0.420	0.130	0.100	0.0300	0.110	0.0600	0.0300
CON205	0.530	2.82	1.40	0.690	1.14	18.0	6.67	4.06	1.11	8.22	4.26	2.27
CON206	10.5	85.9	32.4	19.8	18.5	516	117	121	42.2	156	83.6	38.7
CON207	1.65	11.3	5.12	2.50	1.47	59.7	15.0	13.6	5.23	17.1	9.85	4.00
CON208	4.19	35.4	15.0	8.04	2.77	223	45.7	53.0	15.8	55.0	30.4	11.9
CON209	4.51	31.0	12.9	7.83	4.79	103	43.2	22.8	12.1	40.6	24.7	9.78

Table 8.6. Polychlorinated biphenyl (congeners 1-42) concentrations (ng/g wet weight) in plasma of Double-crested Cormorants collected at Gardiner's (n=11), Shooters (n=11), and Swinburne (n=13) Islands, 1999. Given are minimum, maximum, mean, and standard deviation.

	Gardiner's Island				Shooters Island				Swinburne Island			
Variable	Minimum	Maximum	Mean	Std Dev	Minimum	Maximum	Mean	Std Dev	Minimum	Maximum	Mean	Std Dev
CON1	0	0.0300	0	0.0100	0	0	0	0	0	0.0100	0	0
CON2	0	0.0100	0	0	0	0	0	0	0	0	0	0
CON3	0	0.0500	0.0100	0.0200	0	0	0	0	0	0.0100	0	0
CON4	0	0.0700	0.0100	0.0200	0	0.0100	0.0100	0.0100	0	0.0400	0	0.0100
CON5	0	0	0	0	0	0	0	0	0	0	0	0
CON6	0	0.0100	0	0	0	0	0	0	0	0.0100	0	0
CON7	0	0.0700	0.0100	0.0200	0	0.110	0.0200	0.0300	0	0.0200	0.0100	0.0100
CON8	0	0.0300	0.0100	0.0100	0.0100	0.0300	0.0100	0.0100	0.0100	0.0200	0.0100	0
CON9	0	0.0100	0	0	0	0	0	0	0	0	0	0
CON10	0	0	0	0	0	0	0	0	0	0	0	0
CON11	0	0.0800	0.0100	0.0200	0.0100	0.0600	0.0200	0.0200	0.0100	0.0200	0.0100	0
CON12	0	0	0	0	0	0	0	0	0	0	0	0
CON13	0	0	0	0	0	0	0	0	0	0	0	0
CON14	0	0	0	0	0	0	0	0	0	0	0	0
CON15	0	0.0100	0	0	0	0.0100	0	0	0	0.0100	0	0
CON16	0	0.0100	0	0	0	0.0200	0	0.0100	0	0.0100	0	0
CON17	0	0.0200	0.0100	0.0100	0	0.0300	0.0100	0.0100	0	0.0100	0	0
CON18	0	0.0400	0.0100	0.0100	0.0200	0.150	0.0500	0.0400	0.0100	0.0200	0.0100	0
CON19	0	0.0100	0	0	0	0.0100	0	0.0100	0	0.0100	0	0
CON20	0.0700	0.240	0.140	0.0600	2.01	8.88	4.18	2.32	0.360	2.30	1.26	0.530
CON21	0	0.0200	0.0100	0.0100	0	0.0500	0.0200	0.0100	0	0.0100	0.0100	0.0100
CON22	0	0.0100	0	0.0100	0	0.0300	0.0100	0.0100	0	0.0100	0	0
CON23	0	0	0	0	0	0	0	0	0	0	0	0
CON24	0	0	0	0	0	0	0	0	0	0	0	0
CON25	0	0.0500	0	0.0200	0	0.0200	0.0100	0.0100	0	0	0	0
CON26	0	0.0200	0.0100	0.0100	0.0200	0.300	0.0900	0.0800	0.0200	0.0500	0.0300	0.0100
CON27	0	0	0	0	0	0.0300	0.0100	0.0100	0	0	0	0
CON28	0	0	0	0	0	0	0	0	0	0	0	0
CON29	0	0	0	0	0	0	0	0	0	0	0	0
CON30	0	0	0	0	0	0	0	0	0	0	0	0
CON31	0.0100	0.0400	0.0200	0.0100	0.0800	0.790	0.310	0.210	0.0500	0.100	0.0800	0.0200
CON32	0	0.0100	0	0	0	0.0300	0.0100	0.0100	0	0	0	0
CON33	0	0	0	0	0	0	0	0	0	0	0	0
CON34	0	0	0	0	0	0	0	0	0	0	0	0
CON35	0	0	0	0	0	0	0	0	0	0	0	0
CON36	0	0	0	0	0	0	0	0	0	0.0100	0	0
CON37	0	0.0300	0.0100	0.0100	0	0.0400	0.0100	0.0100	0	0.0100	0.0100	0.0100
CON38	0	0	0	0	0	0	0	0	0	0	0	0
CON39	0	0	0	0	0	0	0	0	0	0	0	0
CON40	0	0.0100	0.0100	0	0.0200	0.210	0.0700	0.0700	0	0.0100	0.0100	0
CON41	0	0	0	0	0	0	0	0	0	0	0	0
CON42	0	0.0100	0.0100	0.0100	0	0.0500	0.0200	0.0200	0	0	0	0

Table 8.7. Polychlorinated biphenyl (congeners 43-85) concentrations (ng/g wet weight) in plasma of Double-crested Cormorants collected at Gardiner's (n=11), Shooters (n=11), and Swinburne (n=13) Islands, 1999. Given are minimum, maximum, mean, and standard deviation.

	Gardiner's Island				Shooters Island				Swinburne Island			
Variable	Minimum	Maximum	Mean	Std Dev	Minimum	Maximum	Mean	Std Dev	Minimum	Maximum	Mean	Std Dev
CON43	0	0	0	0	0	0.0100	0	0	0	0	0	0
CON44	0.0700	0.390	0.170	0.100	2.36	9.43	4.16	2.19	0.210	2.06	1.05	0.460
CON45	0	0.0500	0.0100	0.0200	0.0200	0.0800	0.0400	0.0200	0	0.0200	0.0100	0.0100
CON46	0	0	0	0	0	0	0	0	0	0	0	0
CON47	0	0	0	0	0	0	0	0	0	0	0	0
CON48	0	0.0100	0	0	0	0.0200	0.0100	0.0100	0	0	0	0
CON49	0.0200	0.0900	0.0500	0.0300	0.520	2.99	1.31	0.870	0.120	0.400	0.270	0.0900
CON50	0	0.0100	0	0	0.0100	0.100	0.0500	0.0400	0	0.0100	0.0100	0.0100
CON51	0	0	0	0	0	0	0	0	0	0	0	0
CON52	0.0200	0.160	0.0700	0.0400	0.360	4.13	1.92	1.48	0.160	0.730	0.400	0.190
CON53	0	0	0	0	0	0	0	0	0	0	0	0
CON54	0	0	0	0	0	0.0100	0	0	0	0	0	0
CON55	0	0	0	0	0	0	0	0	0	0	0	0
CON56	0	0.0200	0.0	0.0100	0	0.0400	0.0100	0.0100	0	0.0100	0	0
CON57	0	0	0	0	0	0	0	0	0	0	0	0
CON58	0	0	0	0	0	0	0	0	0	0	0	0
CON59	0	0.0300	0.0100	0.0100	0.130	0.560	0.260	0.130	0.0100	0.140	0.0700	0.0300
CON60	0.0300	0.140	0.0600	0.0300	0.530	2.55	1.28	0.630	0.100	0.550	0.320	0.130
CON61	0.150	0.800	0.340	0.190	2.24	9.07	5.01	2.33	0.550	2.93	1.85	0.670
CON62	0	0	0	0	0	0	0	0	0	0	0	0
CON63	0.0100	0.0500	0.0300	0.0100	0.130	0.350	0.210	0.0700	0.0400	0.210	0.130	0.0500
CON64	0	0.0200	0.0100	0	0.0700	0.820	0.300	0.270	0.0100	0.0400	0.0300	0.0100
CON65	0	0	0	0	0	0	0	0	0	0	0	0
CON66	0	0.790	0.350	0.210	2.86	14.4	6.45	3.68	0.470	3.23	2.01	0.760
CON67	0	0	0	0	0	0.0100	0	0.0100	0	0	0	0
CON68	0.0100	0.0300	0.0200	0.0100	0.0200	0.0800	0.0500	0.0200	0.0100	0.0600	0.0400	0.0100
CON69	0	0	0	0	0	0	0	0	0	0	0	0
CON70	0	0	0	0	0	0	0	0	0	0	0	0
CON71	0	0	0	0	0	0	0	0	0	0	0	0
CON72	0.0100	0.0400	0.0200	0.0100	0.0300	0.130	0.0700	0.0300	0.0300	0.100	0.0700	0.0200
CON73	0	0	0	0	0	0.0500	0.0100	0.0200	0	0	0	0
CON74	0	0	0	0	0	0	0	0	0	0	0	0
CON75	0	0	0	0	0	0	0	0	0	0	0	0
CON76	0	0	0	0	0	0	0	0	0	0	0	0
CON77	0.0100	0.0300	0.0100	0.0100	0.0100	0.0400	0.0200	0.0100	0.0100	0.0600	0.0300	0.0100
CON78	0	0	0	0	0	0	0	0	0	0	0	0
CON79	0	0.0100	0	0	0	0.0100	0	0	0	0	0	0
CON80	0	0	0	0	0	0	0	0	0	0	0	0
CON81	0	0.0100	0	0	0	0.0400	0.0200	0.0100	0	0.0100	0.0100	0
CON82	0	0.0100	0	0	0	0.0400	0.0200	0.0100	0	0.0100	0	0
CON83	0.640	2.70	1.53	0.650	4.05	17.4	10.2	4.15	1.39	5.54	3.94	1.06
CON84	0	0.0100	0.0100	0.0100	0.0100	0.230	0.0800	0.0800	0.0100	0.0100	0.0100	0
CON85	0.0500	0.240	0.130	0.0600	0.940	3.19	1.79	0.720	0.180	0.760	0.470	0.160

Table 8.8. Polychlorinated biphenyl (congeners 86-127) concentrations (ng/g wet weight) in plasma of Double-crested Cormorants collected at Gardiner's (n=11), Shooters (n=11), and Swinburne (n=13) Islands, 1999. Given are minimum, maximum, mean, and standard deviation.

	Gardiner's Island				Shooters Island				Swinburne Island			
Variable	Minimum	Maximum	Mean	Std Dev	Minimum	Maximum	Mean	Std Dev	Minimum	Maximum	Mean	Std Dev
CON86	0.0400	0.160	0.100	0.0400	0.600	2.83	1.38	0.800	0.150	0.370	0.280	0.060
CON87	0	0	0	0	0	0	0	0	0	0	0	0
CON88	0	0.0200	0.0100	0.0100	0.0200	0.390	0.150	0.130	0.0100	0.0400	0.0300	0.0100
CON89	0	0	0	0	0	0	0	0	0	0	0	0
CON90	0.0800	0.710	0.250	0.180	1.02	7.15	3.25	2.25	0.420	1.45	0.840	0.330
CON91	0	0	0	0	0	0	0	0	0	0	0	0
CON92	0.0300	0.320	0.110	0.0800	0.610	2.33	1.28	0.610	0.280	0.630	0.460	0.120
CON93	0.0200	0.110	0.0500	0.0300	0.210	2.11	0.900	0.750	0.0800	0.280	0.150	0.0500
CON94	0	0	0	0	0	0.0100	0	0	0	0	0	0
CON95	0	0	0	0	0	0	0	0	0	0	0	0
CON96	0	0	0	0	0	0.0100	0	0	0	0	0	0
CON97	0	0	0	0	0	0	0	0	0	0	0	0
CON98	0	0	0	0	0	0	0	0	0	0	0	0
CON99	0	0	0	0	0	0	0	0	0	0	0	0
CON100	0	0	0	0	0	0	0	0	0	0	0	0
CON101	0	0	0	0	0	0	0	0	0	0	0	0
CON102	0	0	0	0	0	0	0	0	0	0	0	0
CON103	0	0.0100	0	0	0	0.0400	0.0200	0.0100	0	0.0100	0	0.0100
CON104	0	0	0	0	0	0	0	0	0	0	0	0
CON105	0.200	1.03	0.520	0.250	2.39	9.31	5.76	2.30	0.770	3.50	2.18	0.730
CON106	0	0	0	0	0	0	0	0	0	0	0	0
CON107	0	0.0100	0.0100	0.0100	0.0100	0.0600	0.0300	0.0200	0.0100	0.0500	0.0200	0.0100
CON108	0	0	0	0	0	0	0	0	0	0	0	0
CON109	0.0800	0.350	0.210	0.0900	0.240	0.720	0.450	0.120	0.170	0.620	0.430	0.140
CON110	0.0200	0.120	0.0600	0.0300	0.490	3.47	1.42	1.09	0.0900	0.240	0.180	0.0400
CON111	0.0100	0.0200	0.0100	0.0100	0	0.0400	0.0200	0.0100	0.0100	0.0300	0.0200	0.0100
CON112	0	0	0	0	0	0	0	0	0	0	0	0
CON113	0	0	0	0	0	0	0	0	0	0	0	0
CON114	0.0100	0.0600	0.0300	0.0200	0.180	0.750	0.470	0.200	0.0500	0.260	0.160	0.0600
CON115	0	0	0	0	0	0	0	0	0	0	0	0
CON116	0	0	0	0	0	0	0	0	0	0	0	0
CON117	0	0	0	0	0	0	0	0	0	0	0	0
CON118	0.930	4.54	2.48	1.14	7.65	27.1	17.3	6.54	2.75	12.4	7.98	2.57
CON119	0	0	0	0	0	0	0	0	0	0	0	0
CON120	0.0100	0.0700	0.0300	0.0200	0.0200	0.0500	0.0300	0.0100	0.0200	0.0500	0.0400	0.0100
CON121	0	0.0100	0	0	0	0.0200	0.0100	0.0100	0	0.0100	0.0100	0.0100
CON122	0	0	0	0	0	0	0	0	0	0	0	0
CON123	0.0100	0.0600	0.0300	0.0200	0.160	0.740	0.400	0.180	0.0600	0.230	0.150	0.0500
CON124	0	0	0	0	0	0	0	0	0	0	0	0
CON125	0	0	0	0	0	0	0	0	0	0	0	0
CON126	0.0100	0.0300	0.0100	0.0100	0.0200	0.0700	0.0400	0.0200	0.0100	0.0400	0.0300	0.0100
CON127	0	0.0500	0	0.0200	0.0100	0.0500	0.0300	0.0100	0	0.0100	0.0100	0

Table 8.9. Polychlorinated biphenyl (congeners 128-169) concentrations (ng/g wet weight) in plasma of Double-crested Cormorants collected at Gardiner's (n=11), Shooters (n=11), and Swinburne (n=13) Islands, 1999. Given are minimum, maximum, mean, and standard deviation.

	Gardiner's Island				Shooters Island				Swinburne Island			
Variable	Minimum	Maximum	Mean	Std Dev	Minimum	Maximum	Mean	Std Dev	Minimum	Maximum	Mean	Std Dev
CON128	0.210	0.730	0.480	0.190	1.49	4.47	2.95	1.06	0.400	1.93	1.27	0.420
CON129	1.59	6.12	3.81	1.56	11.5	38.6	24.8	9.12	3.71	14.1	9.5	3.05
CON130	0.0300	0.170	0.0900	0.0500	0.370	1.13	0.650	0.240	0.130	0.450	0.260	0.0800
CON131	0	0	0	0	0	0.0200	0.0100	0.0100	0	0	0	0
CON132	0.0100	0.0300	0.0200	0.0100	0.0500	0.710	0.240	0.220	0.0200	0.0700	0.0400	0.0100
CON133	0.0600	0.160	0.110	0.0400	0.210	0.640	0.420	0.140	0.0800	0.310	0.220	0.0600
CON134	0	0.0100	0	0	0	0.110	0.0400	0.0400	0	0.0100	0.0100	0
CON135	0.0800	0.270	0.170	0.0700	0.450	3.41	1.31	0.920	0.220	0.500	0.340	0.0700
CON136	0	0.0100	0.0100	0	0.0100	0.280	0.0800	0.0800	0.0100	0.0300	0.0100	0.0100
CON137	0.0300	0.150	0.0800	0.0400	0.410	1.29	0.810	0.270	0.0900	0.390	0.270	0.0800
CON138	0	0	0	0	0	0	0	0	0	0	0	0
CON139	0.0100	0.0300	0.0200	0.0100	0.100	0.350	0.200	0.0800	0.0200	0.0700	0.0500	0.0100
CON140	0	0	0	0	0	0	0	0	0	0	0	0
CON141	0	0.130	0.0400	0.0400	0.480	3.92	1.25	1.00	0.0800	0.260	0.170	0.0500
CON142	0	0	0	0	0	0	0	0	0	0	0	0
CON143	0	0	0	0	0	0	0	0	0	0	0	0
CON144	0.0100	0.0300	0.0100	0.0100	0.0600	0.510	0.180	0.140	0.0200	0.0700	0.0400	0.0100
CON145	0	0	0	0	0	0	0	0	0	0	0	0
CON146	0.450	1.89	1.07	0.460	2.32	7.93	4.60	1.79	0.950	3.24	2.12	0.700
CON147	0.0400	0.170	0.110	0.0500	0.380	5.00	1.67	1.48	0.170	0.580	0.310	0.120
CON148	0	0.0200	0.0100	0.0100	0.0100	0.0500	0.0300	0.0100	0.0100	0.0200	0.0100	0
CON149	0	0	0	0	0	0	0	0	0	0	0	0
CON150	0	0.100	0.0200	0.0400	0	0.0100	0	0.0100	0	0	0	0
CON151	0	0	0	0	0	0	0	0	0	0	0	0
CON152	0	0	0	0	0	0	0	0	0	0	0	0
CON153	2.42	9.68	5.98	2.39	12.7	49.8	32.8	13.3	4.68	20.5	13.6	4.63
CON154	0	0	0	0	0	0	0	0	0	0	0	0
CON155	0	0.0200	0.0100	0	0.0100	0.0800	0.0400	0.0300	0.0100	0.0200	0.0100	0
CON156	0.130	0.600	0.310	0.150	1.21	4.16	2.56	0.940	0.390	1.62	1.10	0.360
CON157	0	0	0	0	0	0	0	0	0	0	0	0
CON158	0.0700	0.310	0.170	0.0800	0.940	3.31	2.09	0.810	0.200	0.880	0.580	0.200
CON159	0	0.100	0.0100	0.0300	0	0.140	0.0300	0.0400	0	0.0100	0	0
CON160	0	0	0	0	0	0	0	0	0	0	0	0
CON161	0	0	0	0	0	0	0	0	0	0	0	0
CON162	0.0100	0.0400	0.0200	0.0100	0.0300	0.0800	0.0500	0.0100	0.0200	0.0500	0.0400	0.0100
CON163	0	0	0	0	0	0	0	0	0	0	0	0
CON164	0	0.0200	0.0100	0.0100	0	1.34	0.370	0.400	0	0.0500	0.0300	0.0200
CON165	0.0100	0.0400	0.0200	0.0100	0.0100	0.0300	0.0200	0.0100	0.0100	0.0300	0.0200	0
CON166	0	0	0	0	0	0	0	0	0	0	0	0
CON167	0.0900	0.340	0.180	0.0800	0.550	1.78	1.16	0.420	0.200	0.830	0.540	0.170
CON168	0	0	0	0	0	0	0	0	0	0	0	0
CON169	0	0.0100	0	0.0100	0	0	0	0	0	0	0	0

Table 8.10. Polychlorinated biphenyl (congeners 170-209) concentrations (ng/g wet weight) in plasma of Double-crested Cormorants collected at Gardiner's (n=11), Shooters (n=11), and Swinburne (n=13) Islands, 1999. Given are minimum, maximum, mean, and standard deviation.

	Gardiner's Island				Shooters Island				Swinburne Island			
Variable	Minimum	Maximum	Mean	Std Dev	Minimum	Maximum	Mean	Std Dev	Minimum	Maximum	Mean	Std Dev
CON170	0.250	0.910	0.520	0.230	2.61	11.2	5.20	2.47	0.510	2.60	1.56	0.510
CON171	0.0600	0.230	0.140	0.0600	0.720	2.77	1.39	0.610	0.200	0.660	0.430	0.130
CON172	0.0500	0.190	0.110	0.0500	0.440	1.98	0.920	0.430	0.110	0.440	0.270	0.0800
CON173	0	0	0	0	0	0	0	0	0	0	0	0
CON174	0.0100	0.0500	0.0300	0.0100	0.100	2.42	0.590	0.680	0.0300	0.100	0.0600	0.0200
CON175	0.0100	0.0500	0.0300	0.0100	0.100	0.400	0.200	0.0900	0.0400	0.130	0.0800	0.0300
CON176	0	0.0100	0	0	0.0100	0.150	0.0500	0.0400	0	0.0200	0.0100	0
CON177	0.110	0.410	0.250	0.100	1.01	5.15	2.01	1.16	0.450	1.14	0.760	0.220
CON178	0.150	0.470	0.290	0.110	0.730	2.23	1.27	0.490	0.290	0.900	0.630	0.160
CON179	0	0.0100	0.0100	0	0.0100	0.220	0.0500	0.0600	0.0100	0.0400	0.0200	0.0100
CON180	0.870	3.10	1.78	0.790	8.76	35.7	17.5	7.94	1.96	9.55	5.70	1.91
CON181	0	0	0	0	0.0200	0.0500	0.0300	0.0100	0	0.0100	0.0100	0
CON182	0	0.0100	0	0	0.0200	0.0400	0.0300	0.0100	0.0100	0.0100	0.0100	0
CON183	0	0.800	0.360	0.290	2.12	8.00	4.12	1.76	0	2.09	1.17	0.650
CON184	0	0.0100	0	0	0	0.0200	0.0100	0.0100	0	0.0100	0	0.0100
CON185	0	0	0	0	0	0	0	0	0	0	0	0
CON186	0	0	0	0	0	0	0	0	0	0	0	0
CON187	0.690	2.51	1.40	0.610	4.29	16.3	8.55	3.62	1.96	6.39	3.80	1.32
CON188	0	0.0200	0.0100	0.0100	0.0100	0.0300	0.0100	0.0100	0.0100	0.0200	0.0100	0
CON189	0.0200	0.0500	0.0300	0.0100	0.130	0.450	0.240	0.100	0.0300	0.160	0.0900	0.0300
CON190	0.0500	0.170	0.100	0.0400	0.590	2.51	1.28	0.540	0.140	0.770	0.430	0.170
CON191	0.0100	0.0400	0.0200	0.0100	0.130	0.570	0.270	0.130	0.0300	0.110	0.0700	0.0200
CON192	0	0	0	0	0	0	0	0	0	0	0	0
CON193	0	0	0	0	0	0	0	0	0	0	0	0
CON194	0.200	0.610	0.350	0.150	1.31	5.18	2.66	1.18	0.360	1.72	0.940	0.330
CON195	0.0500	0.140	0.0900	0.0300	0.360	1.87	0.840	0.430	0.0900	0.460	0.240	0.0900
CON196	0.100	0.470	0.200	0.110	0.640	3.06	1.41	0.730	0.160	0.670	0.410	0.130
CON197	0.030	0.110	0.060	0.030	0.0800	0.400	0.190	0.100	0.0400	0.110	0.0700	0.0200
CON198	0.290	1.14	0.600	0.270	1.67	6.50	3.35	1.50	0.500	2.35	1.33	0.480
CON199	0	0	0	0	0	0	0	0	0	0	0	0
CON200	0	0	0	0	0	0	0	0	0	0	0	0
CON201	0.0500	0.220	0.110	0.0500	0.190	0.660	0.400	0.180	0.110	0.320	0.210	0.0700
CON202	0.0900	0.450	0.230	0.100	0.410	1.32	0.790	0.330	0.300	0.800	0.540	0.140
CON203	0.140	0.630	0.290	0.140	1.11	3.88	2.32	0.990	0.330	1.45	0.870	0.290
CON204	0	0.100	0.0100	0.0300	0	0.0100	0	0	0	0	0	0
CON205	0.0100	0.0200	0.0100	0.0100	0.0500	0.200	0.110	0.0500	0.0200	0.0800	0.0400	0.0200
CON206	0.140	0.600	0.400	0.140	0.860	3.07	1.75	0.800	0.57	1.63	0.930	0.290
CON207	0.0400	0.150	0.0800	0.0300	0.110	0.390	0.240	0.110	0.0700	0.210	0.120	0.0400
CON208	0.0900	0.320	0.210	0.0700	0.350	1.14	0.600	0.300	0.220	0.780	0.370	0.150
CON209	0.110	0.550	0.360	0.130	0.520	2.31	1.06	0.560	0.440	1.07	0.640	0.160

Table 8.11. Percent detections of PCB congeners in eggs of Double-crested Cormorants collected at Gardiner's (n=15), Shooters (n=14) and Swinburne (n=13) Islands, 1999.

Con	GA	SH	SW	Con	GA	SH	SW	Con	GA	SH	SW	Con	GA	SH	SW
1	0	57	15	**53**	0	0	0	**105**	100	100	100	**157**	0	0	0
2	0	0	0	**54**	0	79	8	**106**	0	0	0	**158**	100	100	100
3	13	64	15	**55**	0	0	0	**107**	33	50	46	**159**	80	71	46
4	0	14	0	**56**	0	50	0	**108**	0	0	0	**160**	0	0	0
5	0	0	0	**57**	0	0	0	**109**	100	100	100	**161**	0	0	0
6	0	7	0	**58**	0	36	8	**110**	100	100	100	**162**	100	100	100
7	0	0	0	**59**	100	100	100	**111**	100	100	100	**163**	0	0	0
8	0	43	0	**60**	100	100	100	**112**	0	0	0	**164**	40	64	31
9	0	0	0	**61**	100	100	100	**113**	0	0	0	**165**	100	100	100
10	0	0	0	**62**	0	0	0	**114**	100	100	100	**166**	0	0	0
11	0	14	8	**63**	100	100	100	**115**	0	0	0	**167**	100	100	100
12	0	0	0	**64**	100	100	100	**116**	0	0	0	**168**	0	0	0
13	0	0	0	**65**	0	0	0	**117**	0	0	0	**169**	7	0	0
14	0	0	0	**66**	100	100	100	**118**	100	100	100	**170**	100	100	100
15	7	0	0	**67**	0	36	0	**119**	0	0	0	**171**	100	100	100
16	13	86	8	**68**	100	100	100	**120**	100	100	100	**172**	100	100	100
17	53	93	62	**69**	0	0	0	**121**	100	93	100	**173**	0	0	0
18	53	100	100	**70**	0	0	0	**122**	7	7	0	**174**	100	100	100
19	0	86	62	**71**	0	0	0	**123**	100	100	100	**175**	100	100	100
20	100	100	100	**72**	100	86	100	**124**	0	0	0	**176**	93	100	100
21	67	0	8	**73**	0	7	8	**125**	0	0	0	**177**	100	100	100
22	53	64	62	**74**	0	0	0	**126**	100	100	92	**178**	100	100	100
23	0	0	8	**75**	0	0	0	**127**	27	93	54	**179**	100	100	100
24	0	29	0	**76**	0	0	0	**128**	100	100	100	**180**	100	100	100
25	33	93	85	**77**	100	100	92	**129**	100	100	100	**181**	100	100	100
26	93	100	100	**78**	0	0	0	**130**	100	100	100	**182**	53	71	38
27	0	86	62	**79**	7	64	8	**131**	0	21	0	**183**	87	100	100
28	0	0	0	**80**	0	0	0	**132**	100	100	100	**184**	100	100	100
29	0	0	0	**81**	67	64	92	**133**	100	100	100	**185**	0	0	0
30	0	0	0	**82**	27	79	31	**134**	40	93	77	**186**	0	0	8
31	100	100	100	**83**	100	100	100	**135**	100	100	100	**187**	100	100	100
32	13	93	85	**84**	80	100	100	**136**	100	100	100	**188**	100	93	100
33	0	0	0	**85**	100	100	100	**137**	100	100	100	**189**	100	100	100
34	0	29	0	**86**	100	100	100	**138**	0	0	0	**190**	100	100	100
35	0	7	0	**87**	0	0	0	**139**	100	100	100	**191**	100	100	100
36	0	0	8	**88**	100	100	100	**140**	0	0	0	**192**	0	29	8
37	40	93	85	**89**	0	21	0	**141**	60	100	100	**193**	0	0	0
38	0	86	62	**90**	100	100	100	**142**	0	0	0	**194**	100	100	100
39	0	0	0	**91**	0	0	0	**143**	0	0	0	**195**	100	100	100
40	73	100	100	**92**	100	100	100	**144**	100	100	100	**196**	100	100	100
41	0	0	0	**93**	100	100	100	**145**	0	0	0	**197**	100	100	100
42	67	93	69	**94**	0	29	0	**146**	100	100	100	**198**	100	100	100
43	7	36	31	**95**	0	0	0	**147**	100	100	100	**199**	0	0	0
44	100	100	100	**96**	0	86	15	**148**	100	100	100	**200**	0	0	0
45	7	93	77	**97**	0	0	0	**149**	0	0	0	**201**	100	100	100
46	0	71	8	**98**	0	0	0	**150**	80	93	92	**202**	100	100	100
47	0	0	0	**99**	0	0	0	**151**	0	0	0	**203**	100	100	100
48	73	93	69	**100**	0	0	0	**152**	0	36	8	**204**	100	100	100
49	100	100	100	**101**	0	0	0	**153**	100	100	100	**205**	100	100	100
50	47	93	100	**102**	0	0	0	**154**	0	0	0	**206**	100	100	100
51	0	0	0	**103**	73	93	100	**155**	100	93	100	**207**	100	100	100
52	100	100	100	**104**	0	57	0	**156**	100	100	100	**208**	100	100	100
												209	100	100	100

Table 8.12. Percent detections of PCB congeners in plasma of Double-crested Cormorants collected at Gardiner's (n=11), Shooters (n=11) and Swinburne (n=13) Islands, 1999.

Con	GA	SH	SW	Con	GA	SH	SW	Con	GA	SH	SW	Con	GA	SH	SW
1	9	0	8	**53**	0	0	0	**105**	100	100	100	**157**	0	0	0
2	9	0	0	**54**	0	9	0	**106**	0	0	0	**158**	100	100	100
3	18	0	8	**55**	0	0	0	**107**	64	100	100	**159**	9	82	23
4	9	64	23	**56**	36	64	23	**108**	0	0	0	**160**	0	0	0
5	0	0	0	**57**	0	0	0	**109**	100	100	100	**161**	0	0	0
6	9	0	8	**58**	0	0	0	**110**	100	100	100	**162**	100	100	100
7	27	64	77	**59**	82	100	100	**111**	100	91	100	**163**	0	0	0
8	27	100	100	**60**	100	100	100	**112**	0	0	0	**164**	55	82	85
9	9	0	0	**61**	100	100	100	**113**	0	0	0	**165**	100	100	100
10	0	0	0	**62**	0	0	0	**114**	100	100	100	**166**	0	0	0
11	27	100	100	**63**	100	100	100	**115**	0	0	0	**167**	100	100	100
12	0	0	0	**64**	91	100	100	**116**	0	0	0	**168**	0	0	0
13	0	0	0	**65**	0	0	0	**117**	0	0	0	**169**	36	0	0
14	0	0	0	**66**	91	100	100	**118**	100	100	100	**170**	100	100	100
15	9	9	8	**67**	0	36	0	**119**	0	0	0	**171**	100	100	100
16	18	18	8	**68**	100	100	100	**120**	100	100	100	**172**	100	100	100
17	45	82	15	**69**	0	0	0	**121**	27	91	54	**173**	0	0	0
18	82	100	100	**70**	0	0	0	**122**	0	0	0	**174**	100	100	100
19	18	36	8	**71**	0	0	0	**123**	100	100	100	**175**	100	100	100
20	100	100	100	**72**	100	100	100	**124**	0	0	0	**176**	18	100	92
21	82	82	62	**73**	0	45	0	**125**	0	0	0	**177**	100	100	100
22	45	73	8	**74**	0	0	0	**126**	100	100	100	**178**	100	100	100
23	0	0	0	**75**	0	0	0	**127**	9	100	77	**179**	82	100	100
24	0	0	0	**76**	0	0	0	**128**	100	100	100	**180**	100	100	100
25	9	45	0	**77**	100	100	100	**129**	100	100	100	**181**	0	100	92
26	64	100	100	**78**	0	0	0	**130**	100	100	100	**182**	27	100	100
27	0	45	0	**79**	9	27	0	**131**	0	55	0	**183**	91	100	85
28	0	0	0	**80**	0	0	0	**132**	100	100	100	**184**	9	8200	38
29	0	0	0	**81**	27	91	62	**133**	100	100	100	**185**	0	0	0
30	0	0	0	**82**	9	91	8	**134**	9	91	69	**186**	0	0	0
31	100	100	100	**83**	100	100	100	**135**	100	100	100	**187**	100	100	100
32	18	82	0	**84**	45	100	100	**136**	73	100	100	**188**	73	100	100
33	0	0	0	**85**	100	100	100	**137**	100	100	100	**189**	100	100	100
34	0	0	0	**86**	100	100	100	**138**	0	0	0	**190**	100	100	100
35	0	0	0	**87**	0	0	0	**139**	100	100	100	**191**	100	100	100
36	0	0	8	**88**	55	100	100	**140**	0	0	0	**192**	0	0	0
37	36	64	54	**89**	0	0	0	**141**	82	100	100	**193**	0	0	0
38	0	0	0	**90**	100	100	100	**142**	0	0	0	**194**	100	100	100
39	0	0	0	**91**	0	0	0	**143**	0	0	0	**195**	100	100	100
40	82	100	85	**92**	100	100	100	**144**	100	100	100	**196**	100	100	100
41	0	0	0	**93**	100	100	100	**145**	0	0	0	**197**	100	100	100
42	55	82	0	**94**	0	18	0	**146**	100	100	100	**198**	100	100	100
43	0	9	0	**95**	0	0	0	**147**	100	100	100	**199**	0	0	0
44	100	100	100	**96**	0	9	0	**148**	73	100	100	**200**	0	0	0
45	27	100	77	**97**	0	0	0	**149**	0	0	0	**201**	100	100	100
46	0	0	0	**98**	0	0	0	**150**	18	45	0	**202**	100	100	100
47	0	0	0	**99**	0	0	0	**151**	0	0	0	**203**	100	100	100
48	18	45	0	**100**	0	0	0	**152**	0	0	0	**204**	9	9	0
49	100	100	100	**101**	0	0	0	**153**	100	100	100	**205**	100	100	100
50	27	100	62	**102**	0	0	0	**154**	0	0	0	**206**	100	100	100
51	0	0	0	**103**	9	82	38	**155**	91	100	100	**207**	100	100	100
52	100	100	100	**104**	0	0	0	**156**	100	100	100	**208**	100	100	100
												209	100	100	100

Table 8.13. Total polychlorinated biphenyl (congener) concentrations (ng/g wet weight) in eggs and plasma of Double-crested Cormorants collected at Gardiner's, Shooters, and Swinburne Islands, 1999. Given are n samples, minimum, maximum, median, mean, and standard deviation (s). Normality of sample population was tested with Shapiro-Wilk's test (S-W; probability P).

	n	minimum	maximum	median	mean	s	S-W	P
Eggs								
GA	15	935	6770	2220	2490	1490	0.84	0.013
SH	14	1980	40400	12500	13900	9170	0.821	0.009
SW	13	1930	13200	8760	8000	3600	0.947	0.551
Plasma								
GA	11	12.3	44.4	26.8	27.8	10.8	0.946	0.594
SH	11	105	331	192	209	77.7	0.939	0.505
SW	13	30.3	108	78.6	77.5	22.2	0.951	0.616

Table 8.14. Predicted toxic equivalents of *Ah* receptor-active PCB congeners (77, 81, 105, 114, 118, 123, 126, 156, 157, 167, 169, 189) in eggs and plasma of Double-crested Cormorants, coastal New York 1999. Given are mean ± standard error (n samples) concentration (ng/g wet weight) based on WHO avian toxic equivalent factors (Van den Berg et al. 1998).

Colony	Eggs	Plasma
Gardiner's Island	0.104 ± 0.0154 (15)	0.00239 ± 0.000277 (11)
Swinburne Island	0.249 ± 0.0341 (13)	0.00539 ± 0.000499 (13)
Shooters Island	0.322 ± 0.0629 (14)	0.00848 ± 0.000964 (11)

Table 8.15. Total homologue PCB concentrations in eggs and plasma of Double-crested Cormorants collected at colonies in coastal New York, 1999. Given are mean + standard deviation (ng/g wet weight).

Homologue Group Eggs	Gardiner's Island (n=15)	Swinburne Island (n=13)	Shooters Island (n=14)
1-mono	0.00333 + 0.00900	0.00538 + 0.00967	0.0229 + 0.0164
2-dichloro	0.00200 + 0.00775	0.00538 + 0.0194	0.0650 + 0.105
3-trichloro	10.1 + 6.36	89.3 + 53.5	182 + 141
4-tetrachloro	59.8 + 31.4	443 + 248	1040 + 820
5-pentachloro	440 + 248	1680 + 788	2880 + 2030
6-hexachloro	1170 + 736	3460 + 1550	5480 + 3350
7-heptachloro	548 + 346	1690 + 749	3180 + 2060
8-octachloro	187 + 111	501 + 220	969 + 782
9-nonochloro	52.6 + 30.1	124 + 51.0	177 + 187
10-decachloro	12.9 + 7.83	24.7 + 9.78	43.2 + 22.8
Plasma	Gardiner's Island (n=11)	Swinburne Island (n=13)	Shooters Island (n=11)
1-mono	0.00909 + 0.0202	0.00154 + 0.00555	0 + 0
2-dichloro	0.0345 + 0.0552	0.0377 + 0.0188	0.0527 + 0.0502
3-trichloro	0.215 + 0.0792	1.40 + 0.529	4.71 + 2.39
4-tetrachloro	1.17 + 0.463	6.31 + 2.23	21.3 + 9.54
5-pentachloro	5.58 + 2.44	17.4 + 5.03	45.0 + 15.9
6-hexachloro	12.8 + 5.06	30.6 + 9.83	78.4 + 29.7
7-heptachloro	5.07 + 2.25	15.1 + 4.60	43.7 + 19.6
8-octachloro	1.96 + 0.859	4.65 + 1.43	12.1 + 5.27
9-nonochloro	0.694 + 0.233	1.42 + 0.457	2.59 + 1.20
10-decachloro	0.361 + 0.132	0.642 + 0.161	1.06 + 0.558

Table 8.16. Results of correlation analysis of reproductive endpoints and total PCB congener concentrations in tissues of Double-crested Cormorants collected in coastal New York, 1999. Given are n samples, Spearman correlation coefficient (r), and probability (P).

		n	r	P
Egg	Egg Laid	42	0.116	0.466
	Max Young	34	0.142	0.424
	Max Chick Days	28	-0.111	0.575
Plasma	Egg Laid	35	-0.139	0.427
	Max Young	34	-0.230	0.191
	Max Chick Days	34	-0.307	0.077

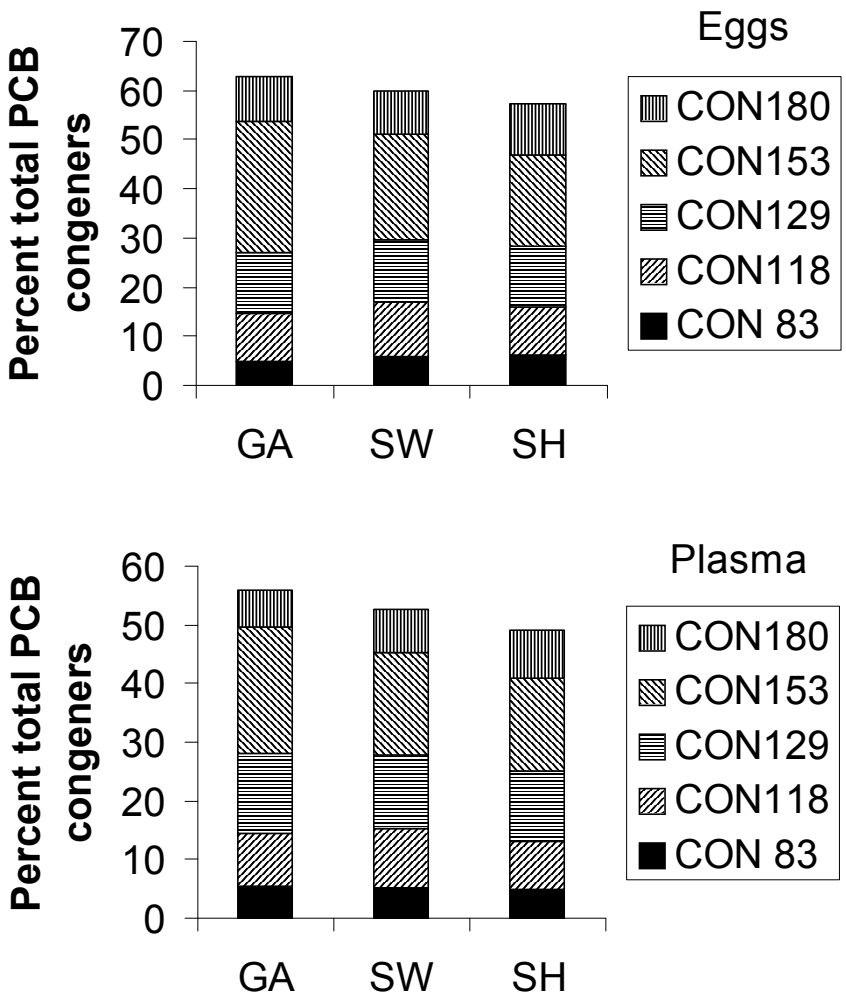


Figure 8.1. Comparison of PCB congeners in eggs and plasma of Double-crested Cormorant from different colonies in coastal New York, 1999. Shown are the percent contributions of individual congeners to total PCB concentrations.

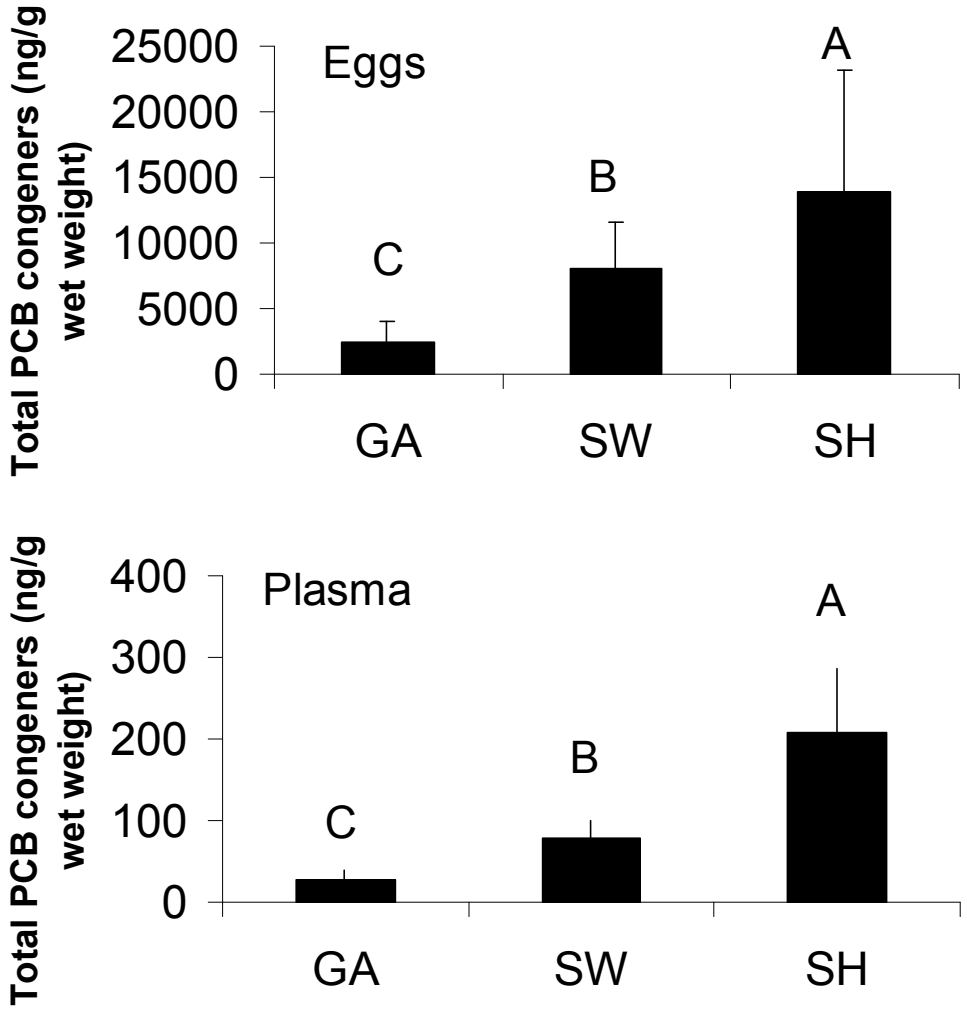


Figure 8.2. Comparison of total PCB congeners in eggs and plasma of Double-crested Cormorant from different colonies in coastal New York, 1999. Shown are mean + standard deviation concentration (ng/g wet weight) total PCB congeners (see text) detected in eggs and plasma from Gardiner's Island (GA), Shooters Island (SH), and Swinburne Island (SW). Unlike letters indicate colony differences.

DIOXINS AND FURANS

RESULTS

Double-crested Cormorant egg and plasma tissues were analyzed for seven dioxins and ten furans including 1,2,3,4,6,7,8-HpCDD; 1,2,3,4,6,7,8-HpCDF; 1,2,3,4,7,8,9-HpCDF; 1,2,3,4,7,8-HxCDD; 1,2,3,4,7,8-HxCDF; 1,2,3,6,7,8-HxCDD; 1,2,3,6,7,8-HxCDF; 1,2,3,7,8,9-HxCDD; 1,2,3,7,8,9-HxCDF; 1,2,3,7,8-PeCDD; 1,2,3,7,8-PeCDF; 2,3,4,6,7,8-HxCDF; 2,3,4,7,8-PeCDF; 2,3,7,8-TCDD; 2,3,7,8-TCDF; OCDD; OCDF. In addition, homologue groups HPCDD, HPCDF, HXCDD, HXCDF, PECDD, PECDF, TCDD and TCDF were analyzed for both tissue types. Results are reported as non-lipid adjusted pg/g wet weight for both egg and plasma. Detection limits ranged from 0 to 210 pg/g in eggs and 0.000422 to 13.7 pg/g in plasma (see Appendix 1—Quality Assurance). Non-detects were adjusted to zero.

Descriptive statistics of dioxin and furan analytes and homologue groups are provided in Tables 9.1-9.8. All dioxin and furan analytes were detected in at least one egg sample from all three colonies (Tables 9.1-9.3). All dioxin and furan analytes were detected in at least one plasma sample from Swinburne Island (Table 9.7), but 1,2,3,7,8-PeCDF was not detected in any plasma samples from Shooters or Gardiner's Islands and an additional six analytes (1,2,3,4,7,8,9-HpCDF; 1,2,3,4,7,8-HxCDD; 1,2,3,6,7,8-HxCDD; 1,2,3,7,8,9-HxCDD; 1,2,3,7,8-PeCDF; 2,3,7,8-TCDF) were not detected in any plasma samples from Gardiner's Island.

Total analyte (summed dioxin and furan analyte concentrations) and homologue (summed dioxin and furan homologue concentrations) variables were used to examine spatial patterns in tissue concentrations. Transformations of total variables in eggs

failed to stabilize variance (Levene's test; $P < 0.05$), so data were ranked. A Tukey mean separation procedure was used to identify colony differences in significant models (ANOVA).

Plasma analyte (total) data were homogeneous (Levene's test; $P > 0.05$), so unranked ANOVA and Tukey mean separation procedures were used to assess differences between colonies. Plasma homologue (total) data were log-transformed after examining residuals. The Pearson correlation coefficient was generated to examine the relationship between nestling size and plasma dioxins and furans. Unless otherwise noted, $\alpha=0.05$.

Cormorant nestlings selected for plasma sampling were not of uniform size across colony sites (see Table 4.4). Tissue samples were taken from nestlings significantly smaller on Shooters Island compared to Swinburne Island. Nevertheless, no correlations were detected between nestling size and total dioxin and furan concentrations (analyte and homologue) at any island ($P > 0.05$).

The relative contribution of different analytes to total dioxins and furans in eggs was similar at Shooters and Swinburne Islands, but eggs at Gardiner's Island had relatively more 1,2,3,6,7,8-HxCDD and 1,2,3,7,8-PeCDD and less 2,3,7,8-TCDD. Similarly, eggs from Gardiner's Island had relatively more of the HXCDD homologue group and less of TCDD than the other two sites (Figure 9.1).

Plasma concentrations of dioxin and furan analytes were dominated by OCDD with relatively little 2,3,7,8-TCDD at Gardiner's Island compared to Swinburne and Shooters Islands (Figure 9.2). Plasma homologues were dominated by TCDD at Shooters Island; detection of all homologues was very low at Gardiner's Island (Table

9.8). Although HxCDF dominated plasma homologues at Gardiner's Island, it was present in only 27% of all samples.

Toxic equivalents were highest in eggs (mean=92.0 pg/g) and plasma (mean=3.99 pg/g) collected at Shooters Island, and were nearly 100% greater than samples from Swinburne Island and 3-10 times greater than samples from Gardiner's Island (Table 9.9). Cormorant eggs from Shooters and Swinburne Islands had greater concentrations of total dioxins and furans (analytes and homologues) than eggs from Gardiner's Island (Figure 9.3). Similarly, nestling plasma collected at Shooters and Swinburne Islands had greater concentrations of homologue dioxins and furans than samples from Gardiner's Island, although analyte concentrations did not differ between sites (Figure 9.4).

No relationships between total dioxin/furan concentrations and reproductive endpoints, including a measure of egg production (Eggs Laid), hatching success (Maximum Young Observed) and chick survival (Maximum Chick Days), were detected (Table 9.10).

DISCUSSION

Most dioxins and furans were detected in a majority of eggs collected from all three coastal New York sites. The level of detection of these contaminants in plasma was lower, especially at Gardiner's Island. However, the highly toxic 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) was detected in all eggs and all plasma samples from the two New York Harbor sites (Shooters and Swinburne Islands). TCDD was detected in all eggs from Gardiner's Island, but in only 27% of plasma samples.

TCDD and octochlorodibenzo-p-dioxin (OCDD) contributed 40-50% of total dioxins and furans in eggs from Shooters and Swinburne Islands, but less than 30% in eggs from Gardiner's Island. Mean concentrations of TCDD in eggs ranged from 6-60 pg/g wet weight in the present study which is comparable to levels detected in cormorant eggs in the Great Lakes in the late 1990s (16-62 pg/g wet weight; Kannan et al. 2001), but somewhat higher than a study conducted in the Great Lakes in the early 1990s (9-20 pg/g wet weight; Ryckman et al. 1998). TCDD levels in eight cormorant eggs collected from Shooters Island in 1993 averaged 82.8 pg/g wet weight (range 46.5-161; Karwowski and Parsons, unpublished data). Mean TCDD concentrations in eggs of Neotropic Cormorant (*Phalacrocorax brasilianus*) collected in Texas in 1996 ranged from 10-106 pg/g wet weight (Frank et al. 2001).

Other dioxin isomers detected in cormorant eggs from Shooters and Swinburne Islands were comparable to levels detected in the Great Lakes with the exception of OCDD which was higher in coastal New York (Ryckman et al. 1998). Dioxins and furans were not detected in cormorant eggs collected from colonies in the Canadian maritime region in the early 1970s (Zitko et al. 1972).

Mean concentrations of 2,3,7,8-tetrachlorodibenzofuran (TCDF) in eggs were approximately 0.2-0.4 pg/g wet weight in the present study. Great Lakes studies of TCDF found ND-2 pg/g concentrations in the early 1990s (Ryckman et al. 1998) and 27-48 pg/g concentrations in the late 1990s (Kannan et al. 2001). In general, furan concentrations in cormorant eggs in the Great Lakes were greater than levels detected in coastal New York. TCDF was not detected in cormorant eggs in Texas (Frank et al. 2001).

Little information is available to aid in interpretation of plasma concentrations of dioxins and furans in the present study. Nestling carcass concentrations of TCDD, total dioxins, TCDF and total furans were 4, 25, 2, and 10 pg/g wet weight, respectively, in a study of Michigan cormorants (Stalling et al. 1985). With the exception of TCDD in plasma from Shooters Island, these levels are greater than levels detected in the present study.

Dioxins and furans exert acute and chronic toxicological effects in sensitive bird species at or below ng/g levels of concentration. TCDD, in particular, is highly embryotoxic and teratogenic. Concentrations in cormorant eggs from 5.3 to 22 pg/g may result in embryo mortality and a number of deformities (summarized in Hoffman et al. 1996). All eggs sampled at the New York Harbor sites and most eggs from Gardiner's Island showed TCDD concentrations within this range. The LD50 concentration of TCDD in bird eggs in general has been estimated at 147 pg/g (reviewed in Hoffman et al. 1996).

Potential toxic effects from all dioxins and furans may also be estimated using toxic equivalency factors (TEFs) which generate a TCDD-equivalent concentration. Standard factors are often used to calculate TCDD-equivalents, or species-specific factors may be derived from bioassays of detoxifying enzyme activity (e.g., Frank et al. 2001). Toxic equivalents from directly measured factors are generally up to 30% lower than those produced by standard TEFs (Hoffman et al. 1996, Frank et al. 2001). Toxic equivalents from dioxins and furans detected in coastal New York cormorants ranged from 25 to 92 pg/g wet weight. Comparable values from the Great Lakes ranged from 9.4 to 20.8 pg/g wet weight (Kannan et al. 2001). Toxic equivalents (bioassayed; TCDD

only) associated with adverse effects in cormorant eggs range from 85 to 413 pg/g (summarized in Hoffman et al. 1996).

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Table 9.1. Dioxin and furan concentrations (pg/g wet weight) in eggs (n=15) of Double-crested Cormorants collected at Gardiner's Island, 1999. Given are percent detection, minimum, maximum, range, mean, and standard deviation.

Analyte	% Detection	Minimum	Maximum	Range	Mean	Std Dev
2,3,7,8-TCDD	100	2.69	12.5	9.81	5.98	2.97
1,2,3,7,8-PeCDD	100	4.55	20.1	15.6	10.9	4.35
1,2,3,4,7,8-HxCDD	100	0.847	4.60	3.75	1.86	0.912
1,2,3,6,7,8-HxCDD	100	6.87	30.2	23.3	13.7	6.72
1,2,3,7,8,9-HxCDD	100	1.22	9.22	8.00	3.97	2.15
1,2,3,4,6,7,8-HpCDD	100	1.83	29.9	28.1	7.98	6.86
OCDD	100	6.23	66.5	60.3	15.2	14.8
TOTAL DIOXINS		29.7	172	142	59.6	34.7
2,3,7,8-TCDF	100	0.113	0.423	0.310	0.234	0.0868
1,2,3,4,6,7,8-HpCDF	100	0.158	1.54	1.38	0.615	0.488
1,2,3,4,7,8,9-HpCDF	13	0	0.264	0.264		
1,2,3,7,8-PeCDF	73	0	0.469	0.469	0.185	0.149
2,3,4,7,8-PeCDF	100	3.34	15.3	12.0	6.77	3.24
1,2,3,4,7,8-HxCDF	100	0.347	1.64	1.29	0.914	0.303
1,2,3,6,7,8-HxCDF	100	0.33	1.58	1.25	0.887	0.381
2,3,4,6,7,8-HxCDF	100	0.369	1.40	1.03	0.806	0.314
1,2,3,7,8,9-HxCDF	33	0	0.213	0.213		
OCDF	53	0	0.716	0.716	0.209	0.243
TOTAL FURANS		5.94	20.2	14.2	10.7	4.07
TOTAL		37.5	188	150	70.3	36.7

Table 9.2. Dioxin and furan concentrations (pg/g wet weight) in eggs (n=14) of Double-crested Cormorants collected at Shooters Island, 1999. Given are percent detection, minimum, maximum, range, mean, and standard deviation.

Analyte	% Detection	Minimum	Maximum	Range	Mean	Std Dev
2,3,7,8-TCDD	100	8.59	201	192	59.8	52.8
1,2,3,7,8-PeCDD	100	2.48	33.0	30.5	15.3	10.0
1,2,3,4,7,8-HxCDD	100	0.416	6.81	6.39	2.65	2.15
1,2,3,6,7,8-HxCDD	100	2.97	52.3	49.3	23.4	17.8
1,2,3,7,8,9-HxCDD	100	0.911	17.3	16.4	6.85	5.51
1,2,3,4,6,7,8-HpCDD	100	2.15	39.6	37.5	14.3	12.0
OCDD	100	12.9	70.2	57.3	34.5	18.1
TOTAL DIOXINS		38.3	353	314	157	105
2,3,7,8-TCDF	93	0	1.08	1.08	0.382	0.253
1,2,3,4,6,7,8-HpCDF	100	0.510	4.51	4.00	1.97	1.23
1,2,3,4,7,8,9-HpCDF	36	0	0.416	0.416		
1,2,3,7,8-PeCDF	86	0	0.419	0.419	0.211	0.137
2,3,4,7,8-PeCDF	100	1.49	36.6	35.1	13.7	10.6
1,2,3,4,7,8-HxCDF	100	1.04	45.0	44.0	11.1	12.7
1,2,3,6,7,8-HxCDF	100	0.670	10.2	9.53	3.51	3.12
2,3,4,6,7,8-HxCDF	100	0.454	6.15	5.70	1.99	1.60
1,2,3,7,8,9-HxCDF	57	0	0.832	0.832	0.170	0.237
OCDF	100	0.471	2.65	2.18	1.08	0.631
TOTAL FURANS		5.91	91.5	85.5	34.1	28.2
TOTAL		44.2	440	396	191	131

Table 9.3. Dioxin and furan concentrations (pg/g wet weight) in eggs (n=13) of Double-crested Cormorants collected at Swinburne Island, 1999. Given are percent detection, minimum, maximum, range, mean, and standard deviation.

Analyte	% Detection	Minimum	Maximum	Range	Mean	Std Dev
2,3,7,8-TCDD	100	7.76	48.1	40.3	28.2	13.6
1,2,3,7,8-PeCDD	100	9.87	22.8	12.9	15.0	4.30
1,2,3,4,7,8-HxCDD	100	0.777	3.93	3.15	2.09	0.918
1,2,3,6,7,8-HxCDD	100	9.18	32.5	23.3	18.6	6.31
1,2,3,7,8,9-HxCDD	100	2.18	7.82	5.64	4.60	1.88
1,2,3,4,6,7,8-HpCDD	100	3.64	16.1	12.5	9.42	4.68
OCDD	100	9.88	45.9	36.0	24.4	11.7
TOTAL DIOXINS		62.4	151	88.2	102	29.2
2,3,7,8-TCDF	100	0.252	0.599	0.347	0.405	0.129
1,2,3,4,6,7,8-HpCDF	100	0.154	2.15	2.00	0.943	0.656
1,2,3,4,7,8,9-HpCDF	8	0	0.378	0.378		
1,2,3,7,8-PeCDF	92	0	0.682	0.682	0.263	0.165
2,3,4,7,8-PeCDF	100	5.28	20.0	14.7	10.9	4.55
1,2,3,4,7,8-HxCDF	100	0.867	5.08	4.21	2.40	1.25
1,2,3,6,7,8-HxCDF	100	0.732	3.69	2.96	1.62	0.863
2,3,4,6,7,8-HxCDF	100	0.520	2.59	2.07	1.22	0.592
1,2,3,7,8,9-HxCDF	69	0	0.253	0.253	0.0957	0.0878
OCDF	92	0	2.19	2.19	0.690	0.630
TOTAL FURANS		8.35	35.4	27.1	18.6	8.05
TOTAL		70.7	186	115	121	35.4

Table 9.4. Total homologue dioxin and furan concentrations (pg/g wet weight) in eggs of Double-crested Cormorants collected at Gardiner's (n=15), Shooters (n=14) and Swinburne (n=13) Islands, 1999. Given are percent detection, minimum, maximum, range, mean, and standard deviation.

Homologue	% Detection	Minimum	Maximum	Range	Mean	Std Dev
Gardiner's Island						
TCDD	100	2.69	12.5	9.81	5.98	2.97
PECDD	100	4.55	20.1	15.6	10.9	4.35
HXCDD	100	8.90	44.1	35.2	19.1	9.90
HPCDD	100	0.789	33.0	32.2	8.74	7.56
TOTAL DIOXINS		20.0	109	88.6	44.8	22.6
TCDF	53	0	0.718	0.718	0.182	0.212
PECDF	93	0	15.6	15.6	6.45	3.69
HXCDF	100	0.797	3.88	3.08	2.45	0.999
HPCDF	20	0	0.421	0.421		
TOTAL FURANS		1.60	20.0	18.3	9.15	4.46
TOTAL		25.1	121	95.4	53.9	24.7
Shooters Island						
TCDD	100	8.59	201	192	59.9	52.8
PECDD	100	2.48	33.0	30.5	15.3	10.0
HXCDD	100	0.970	72.1	71.1	32.2	25.9
HPCDD	100	2.93	42.2	39.3	16.6	12.8
TOTAL DIOXINS		17.7	313	295	124	93.1
TCDF	86	0	0.777	0.777	0.273	0.199
PECDF	100	1.13	37.9	36.8	13.4	11.3
HXCDF	100	2.51	56.4	53.9	16.7	16.9
HPCDF	29	0	3.77	3.77		
TOTAL FURANS		4.72	91.1	86.4	31.2	27.9
TOTAL		23	393	370	155	119
Swinburne Island						
TCDD	100	7.76	48.1	40.3	28.2	13.6
PECDD	100	9.87	22.8	12.9	15.0	4.31
HXCDD	100	12.8	39.0	26.2	25.4	8.28
HPCDD	100	5.61	19.3	13.7	11.2	5.31
TOTAL DIOXINS		39.0	111	72.0	79.8	23.5
TCDF	85	0	0.694	0.694	0.398	0.220
PECDF	100	5.28	20.4	15.1	11.2	4.63
HXCDF	100	2.26	11.5	9.24	5.01	2.76
HPCDF	62	0	1.80	1.80	0.526	0.590
TOTAL FURANS		7.92	33.6	25.7	17.1	7.50
TOTAL		47.1	143	95.5	96.9	29.9

Table 9.5. Dioxin and furan concentrations (pg/g wet weight) in plasma (n=11) of Double-crested Cormorants collected at Gardiner's Island, 1999. Given are percent detection, minimum, maximum, range, mean, and standard deviation.

Analyte	% Detection	Minimum	Maximum	Range	Mean	Std Dev
2,3,7,8-TCDD	27	0	0.623	0.623		
1,2,3,7,8-PeCDD	9	0	0.755	0.755		
1,2,3,4,7,8-HxCDD	0					
1,2,3,6,7,8-HxCDD	0					
1,2,3,7,8,9-HxCDD	0					
1,2,3,4,6,7,8-HpCDD	64	0	1.61	1.61	0.703	0.634
OCDD	100	2.03	32.8	30.8	6.53	8.75
TOTAL DIOXINS		2.03	33.6	31.5	7.43	8.75
2,3,7,8-TCDF	0					
1,2,3,4,6,7,8-HpCDF	27	0	1.53	1.53		
1,2,3,4,7,8,9-HpCDF	0					
1,2,3,7,8-PeCDF	0					
2,3,4,7,8-PeCDF	18	0	0.759	0.759		
1,2,3,4,7,8-HxCDF	64	0	0.782	0.782	0.387	0.319
1,2,3,6,7,8-HxCDF	9	0	0.485	0.485		
2,3,4,6,7,8-HxCDF	9	0	1.04	1.04		
1,2,3,7,8,9-HxCDF	18	0	0.727	0.727		
OCDF	0					
TOTAL FURANS		0	3.44	3.44	1.01	1.11
TOTAL		2.03	37.0	35.0	8.44	9.63

Table 9.6. Dioxin and furan concentrations (pg/g wet weight) in plasma (n=11) of Double-crested Cormorants collected at Shooters Island, 1999. Given are percent detection, minimum, maximum, range, mean, and standard deviation.

Analyte	% Detection	Minimum	Maximum	Range	Mean	Std Dev
2,3,7,8-TCDD	100	1.13	10.1	8.97	3.14	2.70
1,2,3,7,8-PeCDD	45	0	0.463	0.463		
1,2,3,4,7,8-HxCDD	9	0	0.205	0.205		
1,2,3,6,7,8-HxCDD	55	0	0.534	0.534	0.222	0.219
1,2,3,7,8,9-HxCDD	9	0	0.2	0.2		
1,2,3,4,6,7,8-HpCDD	91	0	1.81	1.81	0.833	0.493
OCDD	100	1.41	7.7	6.29	3.89	2.03
TOTAL DIOXINS		3.64	14.6	11.0	8.31	3.65
2,3,7,8-TCDF	18	0	0.636	0.636		
1,2,3,4,6,7,8-HpCDF	82	0	2.76	2.76	0.781	0.731
1,2,3,4,7,8,9-HpCDF	18	0	0.291	0.291		
1,2,3,7,8-PeCDF	0					
2,3,4,7,8-PeCDF	82	0	0.722	0.722	0.444	0.237
1,2,3,4,7,8-HxCDF	100	0.569	1.33	0.761	0.849	0.279
1,2,3,6,7,8-HxCDF	18	0	0.34	0.34		
2,3,4,6,7,8-HxCDF	55	0	0.626	0.626	0.261	0.277
1,2,3,7,8,9-HxCDF	9	0	0.216	0.216		
OCDF	55	0	0.801	0.801	0.354	0.354
TOTAL FURANS		1.08	5.27	4.19	2.88	1.18
TOTAL		6.23	18.0	11.7	11.2	4.57

Table 9.7. Dioxin and furan concentrations (pg/g wet weight) in plasma (n=13) of Double-crested Cormorants collected at Swinburne Island, 1999. Given are percent detection, minimum, maximum, range, mean, and standard deviation.

Analyte	% Detection	Minimum	Maximum	Range	Mean	Std Dev
2,3,7,8-TCDD	100	0.581	1.63	1.05	1.03	0.345659
1,2,3,7,8-PeCDD	38	0	0.492	0.492		
1,2,3,4,7,8-HxCDD	31	0	0.452	0.452		
1,2,3,6,7,8-HxCDD	69	0	0.633	0.633	0.289	0.238
1,2,3,7,8,9-HxCDD	31	0	0.488	0.488		
1,2,3,4,6,7,8-HpCDD	100	0.388	2.73	2.34	0.814	0.592
OCDD	100	1.69	41.8	40.1	6.09	11.0
TOTAL DIOXINS		2.95	47.7	44.8	8.56	12.0
2,3,7,8-TCDF	31	0	0.448	0.448		
1,2,3,4,6,7,8-HpCDF	100	0.533	1.07	0.537	0.690	0.158
1,2,3,4,7,8,9-HpCDF	85	0	0.652	0.652	0.260	0.170
1,2,3,7,8-PeCDF	8	0	0.582	0.582		
2,3,4,7,8-PeCDF	92	0	0.885	0.885	0.519	0.215
1,2,3,4,7,8-HxCDF	100	0.593	1.42	0.827	0.783	0.208
1,2,3,6,7,8-HxCDF	77	0	0.479	0.479	0.188	0.136
2,3,4,6,7,8-HxCDF	85	0	0.575	0.575	0.266	0.154
1,2,3,7,8,9-HxCDF	92	0	0.839	0.839	0.301	0.194
OCDF	62	0	4.09	4.09	0.685	1.09
TOTAL FURANS		1.59	10.9	9.32	3.84	2.24
TOTAL		6.46	58.6	52.2	12.4	14.1

Table 9.8. Total homologue dioxin and furan concentrations (pg/g wet weight) in plasma of Double-crested Cormorants collected at Gardiner's (n=11), Shooters (n=11) and Swinburne (n=13) Islands, 1999. Given are percent detection, minimum, maximum, range, mean, and standard deviation.

Homologue	% Detection	Minimum	Maximum	Range	Mean	Std Dev
Gardiner's Island						
TCDD	0	0	0	0		
PECDD	0	0	0	0		
HXCDD	0	0	0	0		
HPCDD	9	0	1.13	1.13		
TOTAL DIOXINS		0	1.13	1.13		
TCDF	0	0	0	0		
PECDF	9	0	0.563	0.563		
HXCDF	27	0	0.782	0.782		
HPCDF	0	0	0	0		
TOTAL FURANS		0	1.35	1.35		
TOTAL	27	0	2.48	2.48		
Shooters Island						
TCDD	73	0	10.1	10.1	2.60	3.04
PECDD	18	0	0.463	0.463		
HXCDD	18	0	0.143	0.143		
HPCDD	55	0	1.63	1.63	0.571	0.613
TOTAL DIOXINS		0	10.1	10.1	3.28	2.97
TCDF	18	0	0.754	0.754		
PECDF	0	0	0	0		
HXCDF	55	0	2.14	2.14	0.562	0.705
HPCDF	0	0	0	0		
TOTAL FURANS		0	2.14	2.14	0.655	0.750
TOTAL	91	0	10.1	10.1	3.93	3.26
Swinburne Island						
TCDD	23	0	1.63	1.63		
PECDD	0	0	0	0		
HXCDD	31	0	0.557	0.557		
HPCDD	69	0	4.44	4.44	0.893	1.17
TOTAL DIOXINS		0	6.52	6.52	1.29	1.75
TCDF	38	0	0.432	0.432		
PECDF	46	0	0.885	0.885		
HXCDF	92	0	3.31	3.31	1.08	0.780
HPCDF	38	0	0.660	0.660		
TOTAL FURANS		0	4.20	4.20	1.65	1.04
TOTAL	100	0.852	10.7	9.87	2.94	2.51

Table 9.9. Predicted toxic equivalents of *Ah* receptor-active dioxins and furans in eggs and plasma of Double-crested Cormorants, coastal New York 1999. Given are mean ± standard error (n) concentration based on WHO avian toxic equivalent factors (Van den Berg 1998).

Colony	Eggs pg/g wet weight	Plasma pg/g wet weight
Gardiner's Island	24.9 + 2.20 (15)	0.387 + 0.161 (11)
Swinburne Island	55.8 + 5.50 (13)	2.00 + 0.172 (13)
Shooters Island	92.0 + 2.00 (14)	3.99 + 0.891 (11)

Table 9.10. Results of correlation analysis of reproductive endpoints and total dioxin/furan analytes and homologues within tissues of Double-crested Cormorants collected in coastal New York, 1999. Given are n samples, Spearman correlation coefficient, and probability (P). Alpha'=0.017 (Sidak's method).

Tissue	Reproductive Endpoints	n samples	Spearman correlation coefficient	P
Egg--Analytes	Eggs Laid	42	0.138	0.385
	Max Young Observed	34	0.124	0.483
	Max Chick Days	28	-0.046	0.818
Egg--Homologues	Eggs Laid	42	0.075	0.639
	Max Young Observed	34	0.021	0.906
	Max Chick Days	28	-0.032	0.871
Plasma--Analytes	Eggs Laid	35	-0.08	0.649
	Max Young Observed	34	-0.135	0.447
	Max Chick Days	34	-0.23	0.192
Plasma--Homologues	Eggs Laid	35	-0.062	0.724
	Max Young Observed	34	-0.177	0.318
	Max Chick Days	34	-0.264	0.132

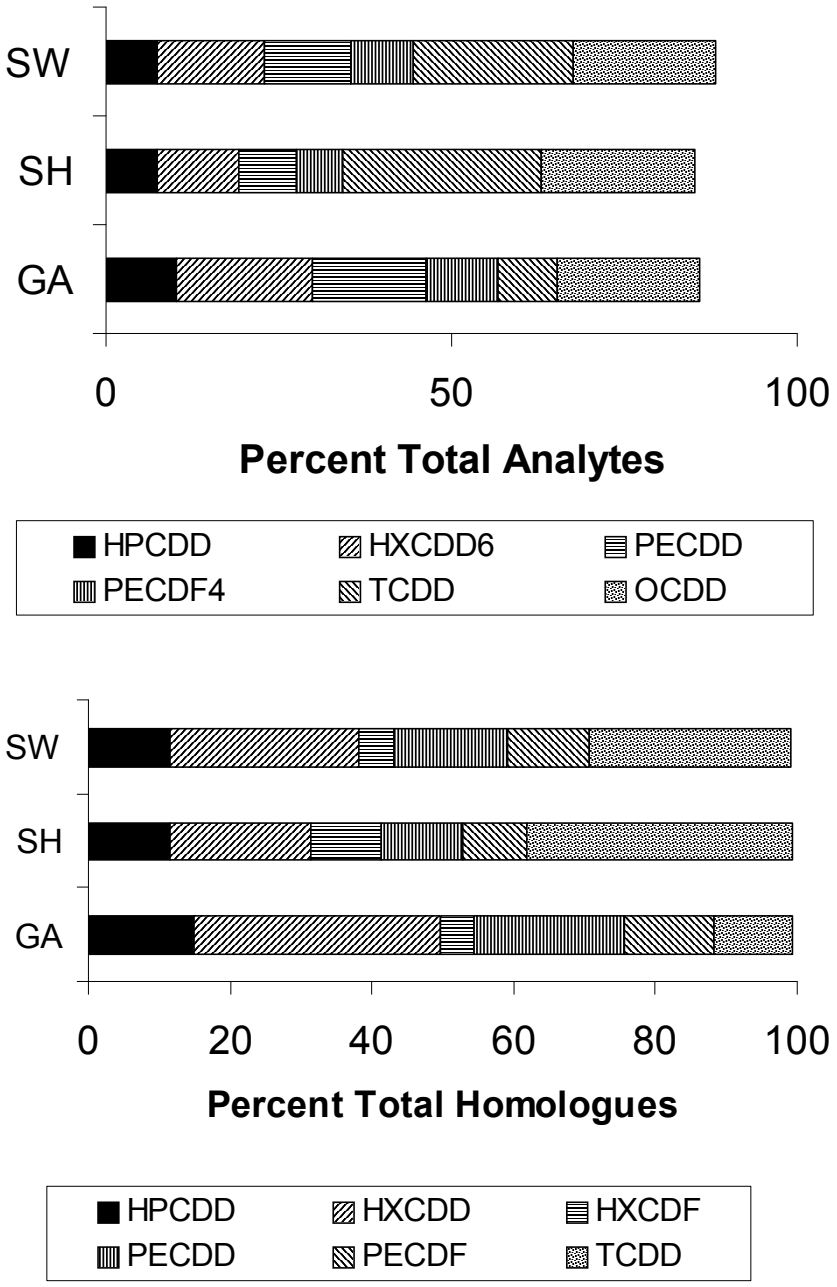
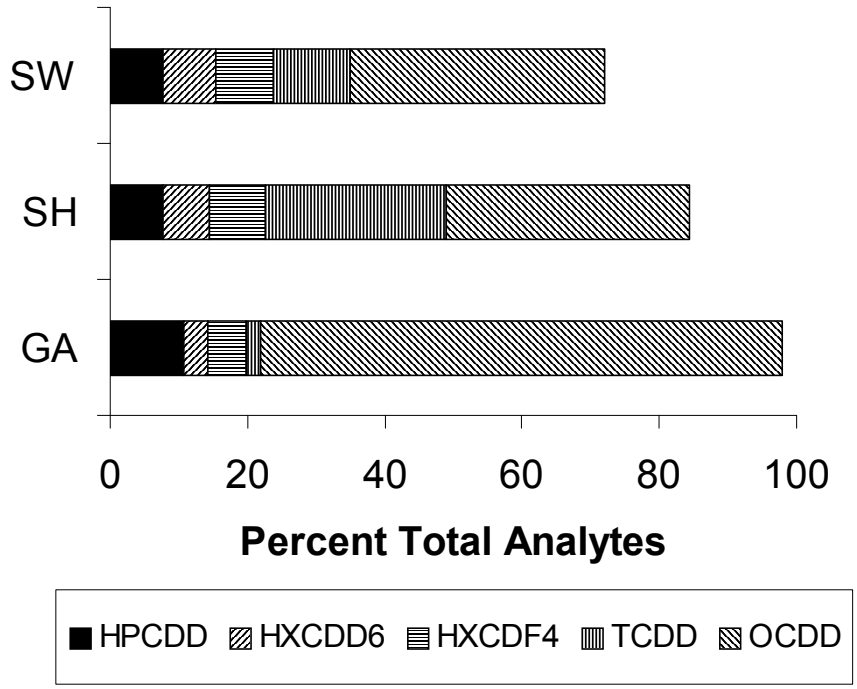


Figure 9.1. Comparison of dioxin and furan analytes and homologue groups in eggs of Double-crested Cormorant from different colonies in coastal New York, 1999. Shown are the percent contributions of individual analytes and homologues to total dioxins and furans. Analytes HPCDD=1,2,3,4,6,7,8-HpCDD; HXCDD6=1,2,3,6,7,8-HxCDD; PECDD=1,2,3,7,8-PeCDD; PECDF4=2,3,4,7,8-PeCDF; TCDD=2,3,7,8-TCDD; OCDD=OCDD.



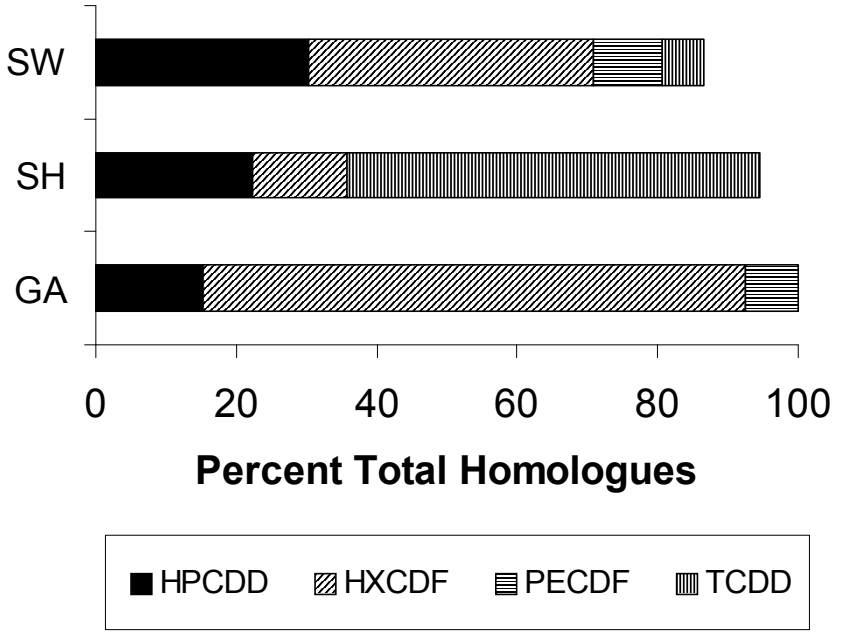


Figure 9.2. Comparison of dioxin and furan analytes and homologue groups in plasma of Double-crested Cormorant from different colonies in coastal New York, 1999. Shown are the percent contributions of individual analytes and homologues to total dioxins and furans. Analytes HPCDD=1,2,3,4,6,7,8-HpCDD; HXCDD6=1,2,3,6,7,8-HxCDD; HXCDF4=2,3,4,6,7,8-HxCDF; TCDD=2,3,7,8-TCDD; OCDD=OCDD.

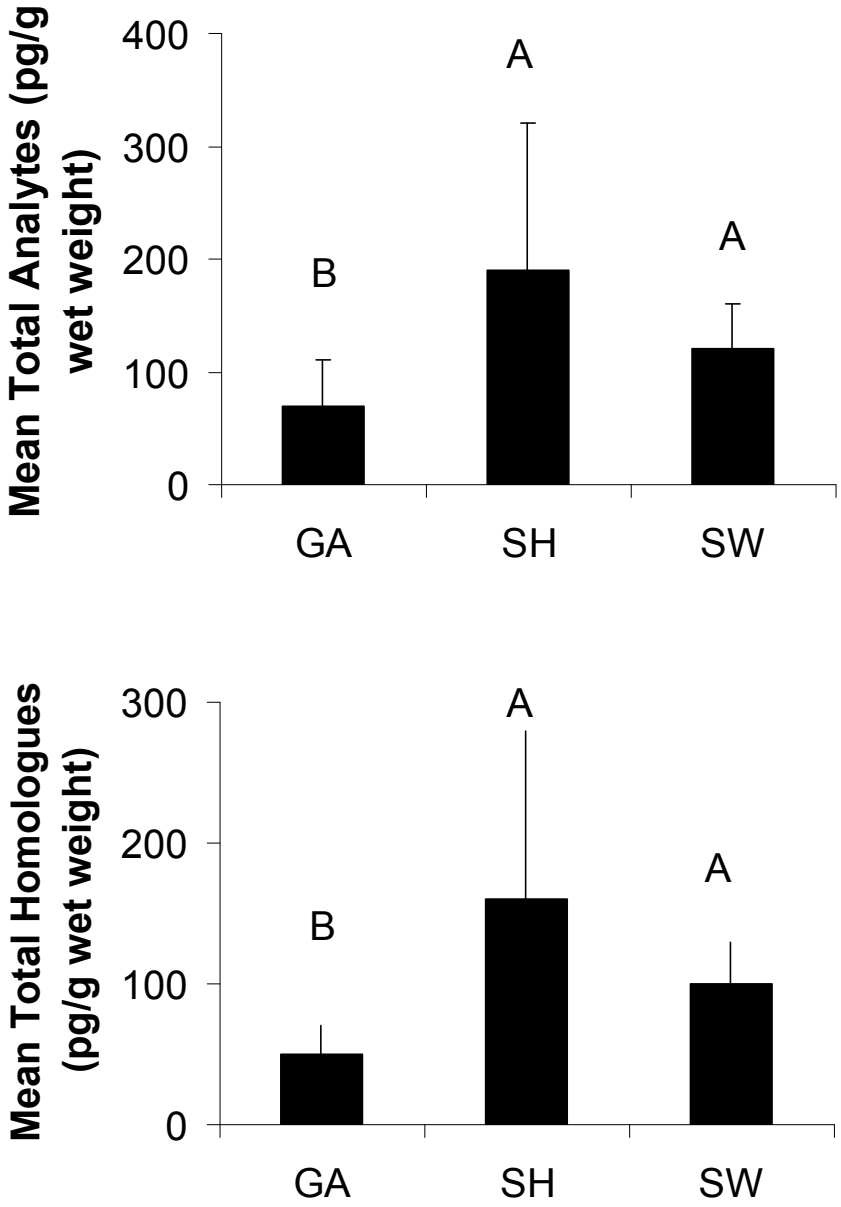


Figure 9.3. Comparison of total dioxin and furan analytes and homologue groups in eggs of Double-crested Cormorant from different colonies in coastal New York, 1999. Shown are mean + standard deviation concentration (ng/g wet weight) total analytes and homologues detected in eggs from Gardiner's Island (GA), Shooters Island (SH), and Swinburne Island (SW). Unlike letters indicate colony differences.

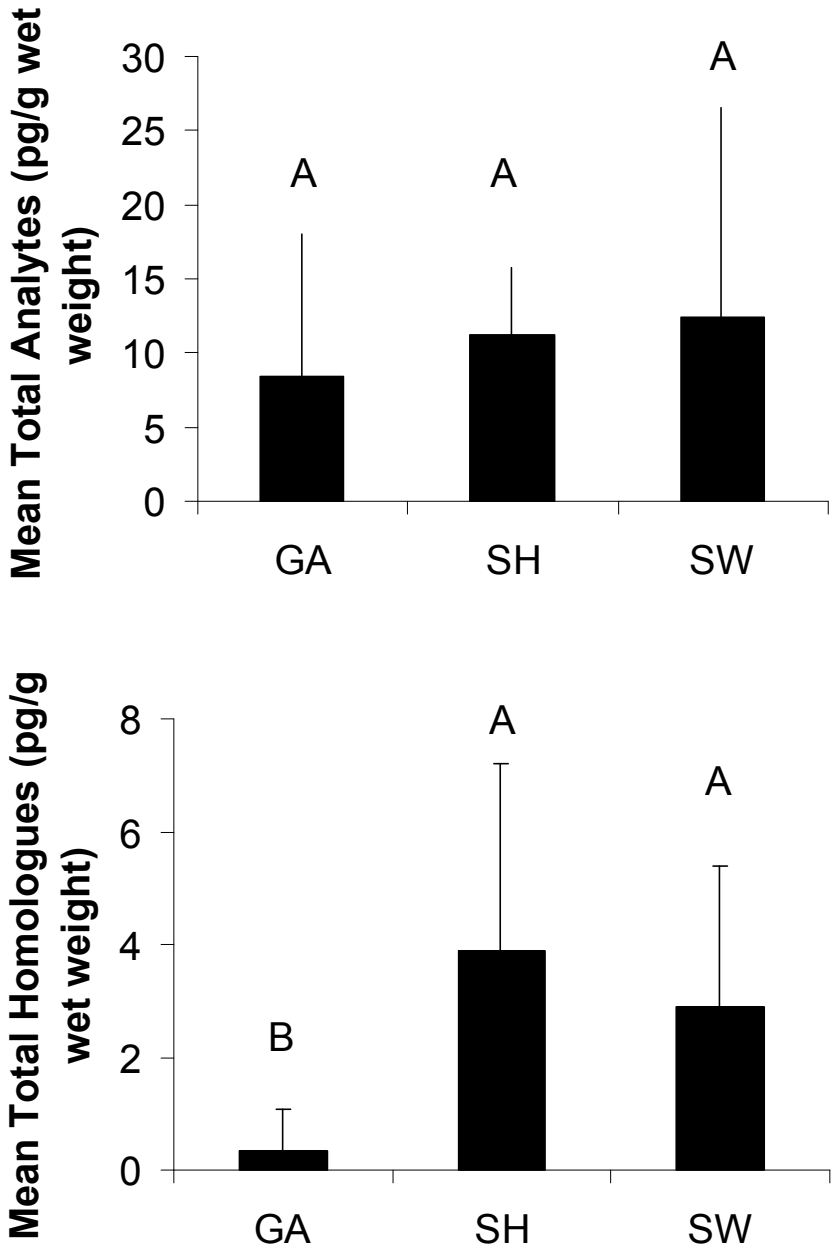


Figure 9.4. Comparison of total dioxin and furan analytes and homologue groups in plasma of Double-crested Cormorant from different colonies in coastal New York, 1999. Shown are mean + standard deviation concentration (ng/g wet weight) total analytes and homologues detected in plasma from Gardiner's Island (GA), Shooters Island (SH), and Swinburne Island (SW). Unlike letters indicate colony differences.

Appendix 1—Quality Assurance

Chemical Residues in Cormorants from New York Harbor and Control Location

Contract No. C003858

Quality Assurance Review

Below is a table of QA QC guidelines used in evaluating the various aspects of quality assurance samples completed throughout analysis of cormorant samples. This table identifies two sets of criteria, that which was established in the projects work plan and that which was established as laboratory method based criteria. Generally, the lab method criteria were used for final evaluation of quality control samples.

General Guidelines used for QAQC Review								
Quality Assurance Quality Control Sample Type	**Workplan Specified Organics Control Limits (PAH, Dioxins, Furans, Org Pest and PCB's)**		**PAH Lab Method Criteria**	**Pesticides and PCB Lab Method Criteria**	**Dioxin Lab Method Criteria**	**Work plan specified Control Limits (Metals)**		**Metals Lab Method Criteria**
Reference Materials Laboratory Control Sample (LCS), Ongoing Precison and recovery (OPR) (%Rec)	∀30%		70-130% or +_30 %	"70-120 % or +-30%	∀30%	∀20%		∀20%
Matrix Spike Carbon Labeled Surrogates (%Rec)	∀50%		20-120% napthalene and acenapthalene; 40-120 % for benzo(ghi) perylene and 50-120 % for all other compounds	Generally 30% - 130 % but for HCB 20-130 %	Generally, 30% - 130 % but for labelled TCDD/TCDF 40-130% and 50-200 % for compound without surrogates			∀25% MeHg ± 30%
	Limits by Concentration					**Limits by Concentration**		
	≥ 1 and < 6 MDL	**≥6 MDL**				**≥ 1 and < 6 MDL**	**≥6 MDL**	
Check Standard	∀51%	∀25%				∀48%	∀20%	∀25%
Duplicates Relative Percent Difference (RPD)	∀54	∀30	40	40	40	∀48	∀20	∀25

Metals

Detection Limits—Eggs

Detection Limits for egg metal analysis are given below. The detection limit for THg in one egg sample was 0.29 ng/g; all others were 1.3 ng/g. Nine samples were split for determination of THg and MeHg resulting in duplicate values of THg. Due to the high percentage of methyl mercury in tissue samples, it was decided to determine Total Hg in samples that would also be analyzed for methyl mercury using a different method. Hg (II) was determined, then THg was calculated as Hg(II) plus MeHg= Total Hg calc. Comparisons were made using the traditional THg method . Relative percent differences (RPD's) were calculated using these two methods and were within duplicate precision limits of <20 RPD with the exception of 1 sample that was slightly over limits with a RPD of 25.

TCd (ng/g)	THg (ng/g)	THg calc (ng/g)	MeHg (ng/g)
0.7	1.3	4.2	4.2
0.3	0.29		

Lab Control Sample—Eggs

The Laboratory control samples (LCS) given below are within both work plan specified and laboratory method criteria of +/- 20 % recovery.

	C-Eggs % Recovery	FF03200-Rev % Recovery	Average
MeHg	85.5		85.5
THg	87.9	87.9	87.9
THg		103.4	103.4
THg	105		105
TCd	118.8	95.8	107.3
TCd		89.8	89.8

Method Blank Review—Eggs

All method blanks were non-detects except the following sample delivery groups: C-Eggs-6 THg)=5.2 ng/g and FF03200-resub2 THg, all samples. Metals results are blank corrected by the lab.

DUPLICATE REVIEW—EGGS

The TCd duplicate RPD of 76.1 was outside control limits. However, the samples concentrations are <10 X MDL so no corrective action was taken. All others were within guidelines.

DETECTION LIMITS—WHOLE BLOOD

Below are the detection limits for metal analysis on cormorant whole blood.

TCd (ng/g)	THg (ng/g)	MeHg (ng/g)
1.6	2.9	1.4

LAB CONTROL SAMPLE—WHOLE BLOOD

Below are the laboratory control samples for metals analysis on cormorant whole blood. All samples were within both work plan specified and lab method control limits of +/- 20 % recovery.

PARAM_NAME	LCS (% Rec)
MEHG	91.9
TCD	100.0
THG	100.0

METHOD BLANK REVIEW—WHOLE BLOOD

There was nothing found in blanks for whole blood Cd, Hg and MeHg. All were qualified non-detect.

BLAND SPIKE REVIEW—WHOLE BLOOD

Below is the average blank spike % recovery for all whole blood metals analysis. All meet lab method criteria of +/- 25 % recovery for TCd and THg and +- 30 % for Me Hg.

PARAM_NAME	Blank Spike (Avg % Rec)
THg	106
TCd	108.8
MEHg	75.6

MATRIX SPIKES REVIEW – WHOLE BLOOD

Below are the average matrix spike results for all whole blood metals analysis. All results meet criteria of +/- 25% for THG and TCD and +- 30 % for MeHg. .

PARAM_NAME	Matrix Spike (Avg % Rec)
THg	99.2
TCd	104.65
MEHg	100.4

DUPLICATE REVIEW—WHOLE BLOOD

All duplicates for metals analysis on whole blood were within control guidelines. See Table above. TCd duplicates could not be calculated because concentrations on all samples were below detection limits. Therefore, RPD's could not be calculated. The THg precision was good with 16.8 % and 5.6 % recovery for duplicates and because a Thg analysis uses the same digestate as Cd, it suggests good precision of TCd. Me Hg had a RPD of 2.

DETECTION LIMITS—DOWN

Below are the detection limits for metals analysis of down. Due to different and very low sample weights one method detection limit (MDL) could not be established. Individual sample specific detection limits (SPDL's) were determined by dividing absolute MDL by the individual sample weight. In order to summarize those individual weights you will find below the SPDL's, n, min, max and average.

	TCd (ng/g)	THg (ng/g)	MeHg (ng/g)
		0.58	0.66
Minimum	1.9		
Maximum	32		
Average	7.6		
N	34		

LAB CONTROL SAMPLE—DOWN

Below are the lab control samples average % recoveries for metals analysis of down. All samples meet +/- 20 % criteria.

PARAM_NAME	LCS (Avg % Rec)
MEHg	104.5
THg	87.7
TCD	98.5

METHOD BLANK REVIEW—DOWN

There was nothing detected in the blanks associated with down sample analysis.

BLANK SPIKES REVIEW –DOWN

Below are the average blank spike recoveries for metals analysis of down. Blank spikes for TCd and THg met lab criteria of +/- 25 %. MeHg exceeded criteria of +/- 30 % with a recovery of 60.5 %. This extract was reanalyzed with a 61.5 % recovery. Two other blank spikes were extracted with this same batch and these blanks showed acceptable recoveries. A spiking error is suspected, and therefore no corrective action was taken.

PARAM_NAME	Blank Spike (Avg % Rec)
THg	84.6
TCd	115.15
MeHg	60.5

MATRIX SPIKES REVIEW—DOWN

Below are the average matrix spike recoveries for metals analysis of down. All matrix spikes meet the lab method criteria of +/- 25 % for THg and TCd and +/- 30 % for MeHg .

PARAM_NAME	Matrix Spikes (Avg % Rec)
THg	91.6
TCd	110.1
MeHg	116.3

DUPLICATE REVIEW—DOWN

All duplicates for metal analysis of down were within control limits. All RPD's were less than 13.3. Following analysis of samples for both THg and MeHg, the results were compared and it was noted that MeHg concentration was slightly higher than THg

concentrations for several samples. Since MeHg concentration in biological samples almost equals THg concentration, performing both analysis is analogous to running analytical replicates. Comparison of those 6 samples run for both MeHg and THg showed that none had exceeded the labs analytical criteria of 120 RPD. However, three exceeded metals duplicate criteria of +/- 25% for metals with RPD's of 31.7, 67.9 and 37.9. This variability can be due to, in part, the small samples sizes and increase sensitivity of the MeHg analysis.

DETECTION LIMITS—FEATHERS

Given below are the n, average, min, max for SPDL's for metals analysis of feathers. Detection limit were quite large for the analysis of TCd due to insufficient sample mass.

	TCd (ng/g)	THg (ng/g)	MeHg (ng/g)
		0.52	0.33
Minimum	7		
Maximum	430		
Average	74.2		
N	34		

LAB CONTROL SAMPLE—FEATHERS

Given below are the laboratory control samples for metals analysis of feathers. All samples meet the control limits of +/- 20 % recovery with the exception of MeHg at 74.9 %. This value is slightly under acceptable ranges.

PARAM_NAME	LCS (Avg % Rec)
MEHG	74.9
TCD	95.1
THG	100.6

METHOD BLANK REVIEW—FEATHERS

There was nothing found in metals analysis of feathers with the exception of one THg blank at .54 ng/g, J qualified. That is .02 ng/g above the detection limit.

BLANK SPIKES – FEATHERS

Below are the average blank spikes for metals analysis of feathers. All average blank spikes are within control limits of +/- 25 % for THg and TCd and +/- 30 % for Me Hg.

PARAM_CODE	PARAM_NAME	Blank Spike (Avg % Rec)
7439-97-6	THg	94.2
7440-43-9	TCd	102.3
CARP010	MEHg	78.6

MATRIX SPIKES- FEATHERS

Below are average matrix spike values for metals analysis of feathers. All matrix spikes are within control limits of +/- 25 % for THg and TCd and +/- 30 % for Me Hg.

PARAM_CODE	PARAM_NAME	Matrix Spike (Avg % Rec)
7439-97-6	THg	95.5
7440-43-9	TCd	107
CARP010	MEHg	126.2

Duplicate Review—Feathers

The RPD for TCd duplicates could not be calculated because concentrations on all samples were below detection limits. The THg precision was good with a mean RPD of 6.1 $\pm$ 5.3 and because THg analysis was performed from the same digestate as the Cd analysis, this suggests good precision for TCd. All duplicates for THg and Me Hg were within control limits.

Polynuclear Aromatic Hydrocarbons

DETECTION LIMITS—EGGS

Below are the n, min, max and average for the sample specific detection limits given for PAH analysis of eggs.

PARAM_NAME	SPDL Minimum (ng/g)	SPDL Maximum (ng/g)	SPDL Average (ng/g)	n Samples
1-Methylnaphthalene	0.0152	0.102	0.0416	42
1-Methylphenanthrene	0.0108	0.329	0.0507	42
2,3,5-Trimethylnaphthalene	0.00289	0.338	0.0554	42

2,6-Dimethylnaphthalene	0.00866	0.0367	0.0193	42
2-Methylnaphthalene	0.0155	0.0996	0.0411	42
Acenaphthene	0.0101	0.192	0.0398	42
Acenaphthylene	0.00474	0.0381	0.0191	42
Anthracene	0.00407	0.0623	0.0181	42
Benz[a]anthracene	0.00566	0.182	0.0284	42
Benzo[a]pyrene	0.017	0.136	0.0463	42
Benzo[b/j/k]fluoranthenes	0.0131	0.167	0.0525	42
Benzo[e]pyrene	0.0115	0.104	0.0331	42
Benzo[ghi]perylene	0.0071	0.04	0.0162	42
Biphenyl	0.00644	0.0527	0.0218	42
C1 Naphthalene	0.0155	0.0852	0.0393	42
C1 Phenanthrenes/Anthracenes	0.0108	0.329	0.0483	42
C2 Naphthalene	0.00585	0.0357	0.0194	42
C2 Phenanthrenes/Anthracenes	0.00797	0.252	0.0461	42
C3 Naphthalene	0.0154	0.126	0.0480	42
Chrysene	0.00641	0.211	0.0319	42
Dibenz[ah]anthracene	0.00755	0.0785	0.0287	42
Fluoranthene	0.00577	0.0631	0.0163	42
Fluorene	0.00459	0.0457	0.0177	42
Indeno[1,2,3-cd]pyrene	0.0091	0.0599	0.0225	42
Naphthalene	0.0162	0.318	0.0895	42
Perylene	0.0153	0.128	0.0435	42
Phenanthrene	0.00333	0.0552	0.0137	42
Pyrene	0.0054	0.0596	0.0158	42

LAB CONTROL SAMPLE—EGGS

Given below are the average % recoveries for laboratory control samples by PAH analyte, including carbon labeled surrogates. All recoveries for non carbon labeled compounds are within work plan specified control limits of +/- 30% with the exception of 1-methylnapthalene and 2-methylnapthalene. For average carbon labeled surrogate % recoveries all method criteria were met. See Table of guidelines above for all pertinent criteria.

PARAM_NAME	LCS (Avg % Rec)
1-Methylnaphthalene	110.47
1-Methylphenanthrene	149.61
2,3,5-Trimethylnaphthalene	117.15
2,6-Dimethylnaphthalene	104.17
2-Methylnaphthalene	138.37
Acenaphthene	99.93
Acenaphthylene	91.43
Anthracene	103.67

Biphenyl	109.78
Fluorene	79.38
Naphthalene	119.01
Phenanthrene	103.55
Benz[a]anthracene	100.33
Benzo[a]pyrene	83.97
Benzo[b/j/k]fluoranthenes	98.89
Benzo[e]pyrene	88.80
Benzo[ghi]perylene	105.38
Chrysene	105.49
Dibenz[ah]anthracene	101.02
Fluoranthene	111.58
Indeno[1,2,3-cd]pyrene	101.69
Perylene	97.15
Pyrene	114.76
C-labelled Surrogate Recoveries	
2,6-Dimethylnaphthalene d-12	54.02
2-Methylnaphthalene d-10	51.47
Acenaphthylene d-8	57.80
Benzo[a]anthracene d-12	95.00
Benzo[a]pyrene d-12	85.00
Benzo[bk]fluoranthene d-12	76.65
Benzo[ghi]perylene d-12	69.90
Chrysene d-12	80.35
Dibenz[ah]anthracene d-14	77.52
Fluoranthene d-10	74.03
Indeno[1,2,3-cd]pyrene d-12	76.40
Naphthalene d-8	44.02
Perylene d-12	78.98
Phenanthrene d-10	53.47

METHOD BLANK REVIEW—EGGS

Given below is the total method blank result for each analyte for the five sample delivery groups (n=5) submitted for PAH analysis of eggs. Results were not blank corrected as it was determined that these total method blank concentrations would not significantly alter interpretation of tissue concentrations.

PARAM_NAME	Total (ng/g)
1-Methylnaphthalene	1.343
1-Methylphenanthrene	0.4759
2,3,5-Trimethylnaphthalene	0.3093
2,6-Dimethylnaphthalene	0.5225
2-Methylnaphthalene	2.063
Acenaphthene	0.3943

Acenaphthylene	0.0756
Anthracene	0.1234
Benz[a]anthracene	0.0357
Benzo[a]pyrene	0.02162
Benzo[b/j/k]fluoranthenes	0.1194
Benzo[e]pyrene	0.07613
Benzo[ghi]perylene	0.1361
Biphenyl	0.868
C1 Naphthalene	3.315
C1 Phenanthrenes/Anthracenes	2.035
C2 Naphthalene	2.205
C2 Phenanthrenes/Anthracenes	1.742
C3 Naphthalene	1.662
Chrysene	0.0962
Dibenz[ah]anthracene	0
Fluoranthene	0.6411
Fluorene	0.2623
Indeno[1,2,3-cd]pyrene	0.026
Naphthalene	12.77
Perylene	0
Phenanthrene	1.436
Pyrene	0.6045

METHOD BLANK SURROGATE REVIEW—EGGS

Below are the average method blank carbon labeled surrogate recoveries for analysis of egg PAHs. All lab method criteria were met. See criteria table above.

PARAM_NAME	Method Blank Surrogates (Avg % Rec)
2,6-Dimethylnaphthalene d-12	48.96
2-Methylnaphthalene d-10	41.68
Acenaphthylene d-8	44.08
Benzo[a]anthracene d-12	94.04
Benzo[a]pyrene d-12	76.94
Benzo[bk]fluoranthene d-12	80.6
Benzo[ghi]perylene d-12	66.8
Chrysene d-12	83.22
Dibenz[ah]anthracene d-14	66.84
Fluoranthene d-10	70.94
Indeno[1,2,3-cd]pyrene d-12	66.92
Naphthalene d-8	41.38
Perylene d-12	70.56
Phenanthrene d-10	48.44

MATRIX SPIKE SURROGATE STANDARDS —EGGS

Shown below are the average matrix spikes carbon labeled surrogate standards for PAH analysis of egg samples. All lab method criteria were met. See criteria table above.

PARAM_NAME	Matrix Spikes Surrogates (Avg %Rec)
2,6-Dimethylnaphthalene d-12	51.5
2-Methylnaphthalene d-10	40.6
Acenaphthylene d-8	52.5
Benzo[a]anthracene d-12	102.3
Benzo[a]pyrene d-12	79.7
Benzo[bk]fluoranthene d-12	78.6
Benzo[ghi]perylene d-12	74.3
Chrysene d-12	81.0
Dibenz[ah]anthracene d-14	84.1
Fluoranthene d-10	75.4
Indeno[1,2,3-cd]pyrene d-12	86.1
Naphthalene d-8	33.0
Perylene d-12	80.3
Phenanthrene d-10	61.4

DUPLICATE REVIEW—EGGS

Comparisons of RPD's per analyte revealed that 1-methylnapthalene exceeded lab method criteria once with RPD of 58.9, 1-methylphenanthreene once with 112.1 RPD, 2 methylnapthalene once with RPD of 41.42, anthracene with a 47.7 RPD, benzo (e) pyrene with an RPD of 48 , C1Phenanthrenees/Anthracenes twice with RPD's of 111.1 and 42.46, C2Phenanthrenes/Anthracnes with an 88.9 RPD, Fluoranthene with a 52.9 RPD, and Pyrene twice with a 157.25 and 46.5 RPD. Work plan criteria being more stringent yielded a few more analyte specific comparisons that were over control limits. However, of the 5 duplicates samples conducted for PAH eggs, one sample exceeded the limit with an RPD of 45.7 when comparing each samples total PAH value. This sample only slightly exceed the limit of 40 RPD.

DETECTION LIMITS —PLASMA

Below are the sample specific detection limits (SPDL's n, min, max and average for PAH plasma samples.

PARAM_NAME	Minimum ng/g	Maximum ng/g	Average ng/g	n Samples
1-Methylnaphthalene	0.0631	45	1.425	34
1-Methylphenanthrene	0.056	1.84	0.169	34
2,3,5-Trimethylnaphthalene	0.0605	6.83	0.395	34
2,6-Dimethylnaphthalene	0.0461	9.47	0.379	34
2-Methylnaphthalene	0.0645	46.1	1.455	34
Acenaphthene	0.0714	4.28	0.340	34
Acenaphthylene	0.0506	0.191	0.115	34
Anthracene	0.0378	3.69	0.210	34
Benz[a]anthracene	0.0228	0.381	0.059	34
Benzo[a]pyrene	0.0567	85	7.384	34
Benzo[b/j/k]fluoranthenes	0.054	0.681	0.119	34
Benzo[e]pyrene	0.0379	0.415	0.074	34
Benzo[ghi]perylene	0.0322	0.161	0.082	34
Biphenyl	0.0419	2.01	0.163	34
C1 Naphthalene	0.0645	0.467	0.153	34
C1 Phenanthrenes/Anthracenes	0.056	12.9	0.499	34
C2 Naphthalene	0.0461	53.5	1.639	34
C2 Phenanthrenes/Anthracenes	0.0467	10.4	0.393	34
C3 Naphthalene	0.082	45.3	2.088	34
Chrysene	0.0217	0.386	0.057	34
Dibenz[ah]anthracene	0.061	0.215	0.118	34
Fluoranthene	0.0337	1.98	0.107	34
Fluorene	0.0411	18.1	0.641	34
Indeno[1,2,3-cd]pyrene	0.0419	0.28	0.128	34
Naphthalene	0.0796	285	8.326	34
Perylene	0.0417	85	7.365	34
Phenanthrene	0.0288	5.16	0.229	34
Pyrene	0.0312	1.77	0.099	34

LAB CONTROL SAMPLE- PLASMA

Shown below are the average % recoveries for laboratory control samples including their carbon labeled surrogate standard recoveries for plasma PAH analysis. All analytes meet the criteria of +/- 30 % with the exception of 1-methylphenanthrene and 2,3,5-Trimethylnaphthalene with percent recoveries of 142.5% and 139.7% respectively, slightly exceeding method criteria of 70-120 %. The only carbon labeled surrogate recoveries that exceed limitations were perylene d-12. See above section laboratory control samples-eggs for discussion of surrogate recoveries

PARAM_NAME	LCS (Avg % Rec)
1-Methylnaphthalene	128.9
1-Methylphenanthrene	142.5
2,3,5-Trimethylnaphthalene	139.7
2,6-Dimethylnaphthalene	116.6
2-Methylnaphthalene	122.4
Acenaphthene	118.7
Acenaphthylene	109.9
Anthracene	106.1
Biphenyl	113.2
Fluorene	97.2
Naphthalene	113.8
Phenanthrene	120.6
Benz[a]anthracene	115.9
Benzo[a]pyrene	103.5
Benzo[b/j/k]fluoranthenes	113.8
Benzo[e]pyrene	120.2
Benzo[ghi]perylene	114.0
Chrysene	123.4
Dibenz[ah]anthracene	112.6
Fluoranthene	114.8
Indeno[1,2,3-cd]pyrene	120.8
Perylene	104.8
Pyrene	119.6
C-labelled Surrogate Recoveries	
2,6-Dimethylnaphthalene d-12	57.3
2-Methylnaphthalene d-10	59.0
Acenaphthylene d-8	60.3
Benzo[a]anthracene d-12	83.3
Benzo[a]pyrene d-12	79.8
Benzo[bk]fluoranthene d-12	84.2
Benzo[ghi]perylene d-12	80.9
Chrysene d-12	78.1
Dibenz[ah]anthracene d-14	79.1
Fluoranthene d-10	76.4
Indeno[1,2,3-cd]pyrene d-12	75.9
Naphthalene d-8	63.0
Perylene d-12	8.4
Phenanthrene d-10	64.7

METHOD BLANK REVIEW—PLASMA

Below are the total method blank concentrations per analyte (n=5) for the five plasma sample delivery groups containing PAH plasma samples. One sample from sample batch 3231 was blank corrected by the lab. Some spurious contamination was noticed in the OPR, blank and all samples from batch WG3231. All samples originally in this batch were repeated except sample L2030-78 which had no available sample back-up. Blank correction was applied to the OPR and sample L2030-78, but due to the uncertainty in the level of contamination, the blank corrected concentrations in the sample were chosen as analyte detection limits. The detection limits represent maximum possible concentrations. The remaining results were not blank corrected, as it was determined that these total method blank concentrations would not significantly alter interpretation of tissue concentrations.

PARAM_NAME	Total ng/g
1-Methylnaphthalene	34.1
1-Methylphenanthrene	2.872
2,3,5-Trimethylnaphthalene	6.493
2,6-Dimethylnaphthalene	9.606
2-Methylnaphthalene	41.6
Acenaphthene	6.669
Acenaphthylene	1.111
Anthracene	2.532
Benz[a]anthracene	0.277
Benzo[a]pyrene	0.22
Benzo[b/j/k]fluoranthenes	0.471
Benzo[e]pyrene	0.786
Benzo[ghi]perylene	0.586
Biphenyl	9.596
C1 Naphthalene	75.7
C1 Phenanthrenes/Anthracenes	15.42
C2 Naphthalene	51.41
C2 Phenanthrenes/Anthracenes	15.53
C3 Naphthalene	43.08
Chrysene	1.016
Dibenz[ah]anthracene	0
Fluoranthene	4.465
Fluorene	12.036
Indeno[1,2,3-cd]pyrene	0.049
Naphthalene	254.95
Perylene	0
Phenanthrene	11
Pyrene	3.935

METHOD BLANK SURROGATE REVIEW—PLASMA

Shown are the average carbon labeled surrogate recoveries for method blanks. No criteria were exceeded for method blank surrogates.

PARAM_NAME	Method blank Surrogate (Avg % Rec)
2,6-Dimethylnaphthalene d-12	67.7
2-Methylnaphthalene d-10	72.82
Acenaphthylene d-8	64.94
Benzo[a]anthracene d-12	84
Benzo[a]pyrene d-12	72.14
Benzo[bk]fluoranthene d-12	77.02
Benzo[ghi]perylene d-12	71.78
Chrysene d-12	75.46
Dibenz[ah]anthracene d-14	66.34
Fluoranthene d-10	80.92
Indeno[1,2,3-cd]pyrene d-12	71.42
Naphthalene d-8	77.22
Perylene d-12	74.74
Phenanthrene d-10	70.12

MATRIX SPIKE SURROGATE STANDARDS —PLASMA

Shown below are the average matrix spike carbon labeled surrogate standard recoveries for plasma samples analyzed for PAH's. No criteria were exceeded for labeled surrogates

PARAM_NAME	Matrix Spike Surrogates (Avg % Rec)
2,6-Dimethylnaphthalene d-12	55.4
2-Methylnaphthalene d-10	61.3
Acenaphthylene d-8	55.2
Benzo[a]anthracene d-12	87.4
Benzo[a]pyrene d-12	71.3
Benzo[bk]fluoranthene d-12	72.5
Benzo[ghi]perylene d-12	68.2
Chrysene d-12	78.2
Dibenz[ah]anthracene d-14	65.4
Fluoranthene d-10	74.8
Indeno[1,2,3-cd]pyrene d-12	71.2
Naphthalene d-8	61.9
Perylene d-12	77.1
Phenanthrene d-10	62.0

DUPLICATE REVIEW—PLASMA

Three duplicate sample comparisons were performed for plasma PAH samples. A detailed per analyte comparison shows that 2,6 dimethynapthalene and naphthalene are slightly over work plan specified criteria of 30 RPD but within lab criteria of 40 RPD. Pyrene, for that same sample had an RPD of 75.6. Comparison of each duplicates total PAH RPD showed all samples meeting the lab method criteria of 40.

Chlorinated Pesticides

DETECTION LIMITS—EGGS

Below are the sample specific detection limits (SPDL's) for organochlorine pesticides analysis of egg samples. See discussion of SPDL's under detection limits metals-down . The differences in detection limits, in part, can be explained by the need to dilute two Shooters Island samples, thus increasing detection limits.

PARAM_NAME	Minimum pg/g	Maximum pg/g	Average pg/g	n samples
2,4-DDD	3.6	758	43.6	42
2,4-DDE	3.6	1820	87.5	42
2,4-DDT	3.6	758	43.6	42
4,4-DDD	32.4	15000	782.5	42
4,4-DDE	9.9	3910	207.9	42
4,4-DDT	19.6	2130	136.7	42
Aldrin	24.8	3020	187.8	42
BHC, alpha	41.3	3830	290.4	42
BHC, beta	13.3	4220	259.4	42
BHC, gamma	64.2	4430	342.9	42
Chlordane, alpha (cis)	11.9	3950	247.2	42
Chlordane, gamma (trans)	25.2	5080	313.2	42
Chlordane, oxy-	9.8	3420	211.2	42
Heptachlor	26.9	1950	147.8	42
Hexachlorobenzene	24.3	2650	168.4	42
Mirex	30.4	3620	254.4	42
Nonachlor, cis-	113	9940	2845.3	42
Nonachlor, trans-	11.1	9570	448.5	42
Photomirex	52.5	3530	276.3	42
BHC, delta	8.4	182	45.0	42
Dieldrin	14.3	282	55.4	42
Endosulphan sulfate	20	177	53.4	42
Endosulphan, alpha	103	1210	368.3	42

Endosulphan, beta	312	2220	817.2	42
Endrin	46.5	586	198.5	42
Endrin aldehyde	10	544	190.9	42
Endrin ketone	21.1	240	79.2	42
Heptachlor epoxide	11.1	146	65.9	42
Methoxychlor	10.7	119	32.8	42

LAB CONTROL SAMPLE—EGGS

Below are laboratory control samples for organochlorine pesticide analysis of eggs. Delta BHC, beta endosulphan, endrin and endrin aldehyde exceed 70-120 % criteria. Average lab control sample surrogates met lab criteria of 30-120 %. 13C hexachlorobenzene was a bit low and did not meet work plan specified +- 50 % criteria with an average of 43.7 % recovery. The OPR sample gave good quantification so these exceedence's should not affect validity of sample.

PARAM_NAME	LCS (Avg % Rec)
Hexachlorobenzene	116.0
Mirex	75.5
Chlordane, oxy-	113.7
Aldrin	97.5
BHC, alpha	101.2
BHC, beta	111.1
2,4-DDE	105.8
Nonachlor, trans-	95.8
4,4-DDT	101.6
Chlordane, alpha (cis)	95.0
Nonachlor, cis-	101.0
Chlordane, gamma (trans)	90.4
2,4-DDD	95.8
BHC, gamma	109.4
4,4-DDD	85.0
4,4-DDE	97.2
Heptachlor	97.4
2,4-DDT	104.4
BHC, delta	65.9
Dieldrin	118.2
Endosulphan sulfate	93.6
Endosulphan, alpha	114.7
Endosulphan, beta	125.5

Endrin	124.4
Endrin aldehyde	55.3
Endrin ketone	86.2
Heptachlor epoxide	102.5
Methoxychlor	77.6
Carbon Labeled Surrogates	
13C-Hexachlorobenzene	43.7
13C-PCB 101	84.8
13C-p,p'-DDT	93.6
13C-gamma HCH	54.0
13C-p,p'-DDE	78.9
D4-Alpa-Endosulphan	84.8

METHOD BLANK REVIEW—EGGS

Below are the total method blank values (n= 6) for all egg samples analyzed for organochlorine pesticides. Results were not blank corrected as it was determined that these total method blank concentrations would not significantly alter interpretation of tissue concentrations.

PARAM_NAME	Total pg/g
Photomirex	0
Hexachlorobenzene	11708
Mirex	11
Chlordane, oxy-	0
Aldrin	0
BHC, alpha	0
BHC, beta	0
2,4-DDE	81
Nonachlor, trans-	154
4,4-DDT	0
Chlordane, alpha (cis)	197
Nonachlor, cis-	0
Chlordane, gamma (trans)	81
2,4-DDD	219
BHC, gamma	101
4,4-DDD	270
4,4-DDE	521
Heptachlor	55
2,4-DDT	371
BHC, delta	0
Dieldrin	0
Endosulphan sulfate	183

Endosulphan, alpha	0
Endosulphan, beta	0
Endrin	0
Endrin aldehyde	453
Endrin ketone	98
Heptachlor epoxide	0
Methoxychlor	106

METHOD BLANK SURROGATE REVIEW—EGGS

Below are average carbon labeled surrogate recoveries for method blanks. All compounds meet criteria.

PARAM_NAME	Method blank Surrogate (Avg % Rec)
13C-hexachlorobenzene	46.3
13C-gamma HCH	57.9
13C-p,p'-DDE	73.5
13C-p,p'-DDT	82.8
13C-PCB 101	76.6
d4-alpha-Endosulphan	76.8

MATRIX SPIKE CARBON LABELED SURROGATE STANDARDS—EGGS

Below are matirx spike carbon labeled surrogates for all egg samples analyzed for organochlorine pesticides. 13C hexachlrobenze slightly exceeds work plan specified criteria. A lab method criterion has not been exceeded. See criteria table.

PARAM_NAME	Matrix Spike Surrogates (Avg % Rec)
13C-Hexachlorobenzene	42.8
13C-gamma HCH	50.8
13C-p,p'-DDE	75.1
13C-p,p'-DDT	63.1
13C-PCB 101	65.8
d4-alpha-Endosulphan	76.2

DUPLICATE REVIEW—EGGS

Work plan specified criteria of +/- 30 RPD were slightly exceeded for oxychlordane at 31.67 and 33.4 RPD in 2 of the 4 sample batches. Heptachlor epoxide in 3 of the 4 batches with RPD's of 46.4, 35.75 and 31.31. However, all four duplicate comparisons of total pesticides met criteria of +/- 40 RPD. Detailed comparisons by sample analyte indicates only hepachlor epoxide is slightly over criteria with RPD of 46.4 RPD. The sample duplicate comparisons were generally good with only a few just outside control limits.

DETECTION LIMITS—PLASMA

Below are sample specific detection limits n, min, max and average.

PARAM_NAME	Minimum pg/g	Maximum pg/g	Average pg/g	n samples
2,4-DDD	2.23	30.4	14.18	35
2,4-DDE	11.6	58.2	24.63	35
2,4-DDT	3.01	103	36.13	35
4,4-DDD	2.46	44	19.02	35
4,4-DDE	12.7	71.6	29.70	35
4,4-DDT	3.55	136	47.61	35
Aldrin	1.73	4.7	3.48	35
BHC, alpha	3.84	25.5	14.86	35
BHC, beta	5.51	35.9	20.15	35
BHC, gamma	5.1	32.9	17.95	35
Chlordane, alpha (cis)	3.7	10.2	6.31	35
Chlordane, gamma (trans)	3.5	9.3	5.61	35
Chlordane, oxy-	5.67	22.1	13.82	35
Heptachlor	0.801	5.3	3.83	35
Hexachlorobenzene	1.8	4.5	2.82	35
Mirex	0.6	3.4	2.05	35
Nonachlor, cis-	6.53	23.9	12.11	35
Nonachlor, trans-	5.1	11.3	7.00	35
Photomirex	0.6	3.4	2.05	35
BHC, delta	2.4	10.3	4.70	35
Dieldrin	3.4	10.7	7.13	35
Endosulphan sulfate	1.6	8.9	5.89	35
Endosulphan, alpha	25.2	51.2	38.85	35
Endosulphan, beta	39.8	121	77.88	35
Endrin	11.5	55.2	29.53	35
Endrin aldehyde	8.7	42.5	20.58	35
Endrin ketone	3.4	9.8	7.34	35
Heptachlor epoxide	3.2	10.4	6.39	35
Methoxychlor	4.78	18	11.27	35

LAB CONTROL SAMPLE—PLASMA

Below are average laboratory control samples for all plasma samples analyzed for organochlorine pesticides. Aldrin, Heptachlor, delta BHC and endrin exceeded criteria of +/- 30 % recovery. Heptachlor recovery was the lowest but it could not be repeated due to insufficient sample. 13 C Hexachlorobenze and 13 gamma HCH exceeded stricter work plan specified criteria of +/- 50 % However, only 13 C-Hexachlorobenzene exceeded lab method criteria with a low recovery of 17.7 %. This low value for Hexachlorobenzene could bias the sample results low.

PARAM_NAME	LCS (Avg % Rec)
2,4-DDD	90.9
2,4-DDE	93.1
2,4-DDT	91.9
4,4-DDD	87.6
4,4-DDE	92.8
4,4-DDT	99.4
Aldrin	68.6
BHC, alpha	86.3
BHC, beta	128.8
BHC, gamma	99.5
Chlordane, alpha (cis)	88.2
Chlordane, gamma (trans)	88.1
Chlordane, oxy-	87.6
Heptachlor	59.8
Hexachlorobenzene	108.9
Mirex	78.6
Nonachlor, cis-	90.2
Nonachlor, trans-	88.2
BHC, delta	65.4
Dieldrin	101.6
Endosulphan sulfate	104.6
Endosulphan, alpha	115.5
Endosulphan, beta	112.0
Endrin	153.0
Endrin aldehyde	80.9
Endrin ketone	94.6
Heptachlor epoxide	99.8
Methoxychlor	108.6
Carbon Labeled Surrogates	
13C-Gamma-HCH	52.98
13C-Hexachlorobenzene	19.87
13C-p,p-DDE	73.48

13C-p,p-DDT	80.68
13C-PCB 101	76.48
D4-alpha-Endosulphan	97.03

METHOD BLANK REVIEW—PLASMA

Below are the total method blank results (n= 5) for all plasma samples analyzed for organochlorine pesticides. Results were not blank corrected, as it was determined that these total method blank concentrations would not significantly alter interpretation of tissue concentrations.

PARAM_NAME	Total pg/g
2,4-DDD	0.00
2,4-DDE	0.00
2,4-DDT	3.95
4,4-DDD	4.99
4,4-DDE	19.00
4,4-DDT	0.00
Aldrin	0.00
BHC, alpha	0.00
BHC, beta	7.42
BHC, gamma	0.00
Chlordane, alpha (cis)	6.00
Chlordane, gamma (trans)	0.00
Chlordane, oxy-	0.00
Heptachlor	205.00
Hexachlorobenzene	128.20
Mirex	6.70
Nonachlor, cis-	0.00
Nonachlor, trans-	0.00
Photomirex	0.00
BHC, delta	0.00
Dieldrin	0.00
Endosulphan sulfate	10.00
Endosulphan, alpha	400.00
Endosulphan, beta	0.00
Endrin	200.00
Endrin aldehyde	10.00
Endrin ketone	0.00
Heptachlor epoxide	0.00
Methoxychlor	71.91

METHOD BLANK SURROGATE REVIEW—PLASMA

Below are the carbon labeled surrogates for all plasma samples analyzed for organochlorine pesticides. 13C hexachlorobenzene is slightly below lab method criteria by 0.1%. See above section laboratory control samples-eggs for discussion of surrogate recoveries.

PARAM_NAME	Method blank Surrogate (Avg % Rec)
13C-gamma HCH	53.0
13C-Hexachlorobenzene	19.9
13C-p,p'-DDE	73.5
13C-p,p'-DDT	80.7
13C-PCB 101	76.5
d4-alpha-Endosulphan	97.0

MATRIX SPIKE CARBON LABELED SURROGATE STANDARDS—PLASMA

Below are average matrix spike carbon labeled surrogate recoveries for all plasma samples analyzed for organochlorine pesticides. Even though some samples were below work plan specified limits, of +/- 50 %, the ongoing precision and recovery (OPR) or LCS sample showed good quantification and lab method criteria were met.

PARAM_NAME	Matrix Spike Surrogates (Avg % Rec)
13C-gamma HCH	47.2
13C-Hexachlorobenzene	22.9
13C-p,p'-DDE	69.8
13C-p,p'-DDT	76.7
13C-PCB 101	74.6
d4-alpha-Endosulphan	87.1

DUPLICATE REVIEW—PLASMA

No duplicates were run due to insufficient sample.

Polychlorinated Biphenyls—Aroclors

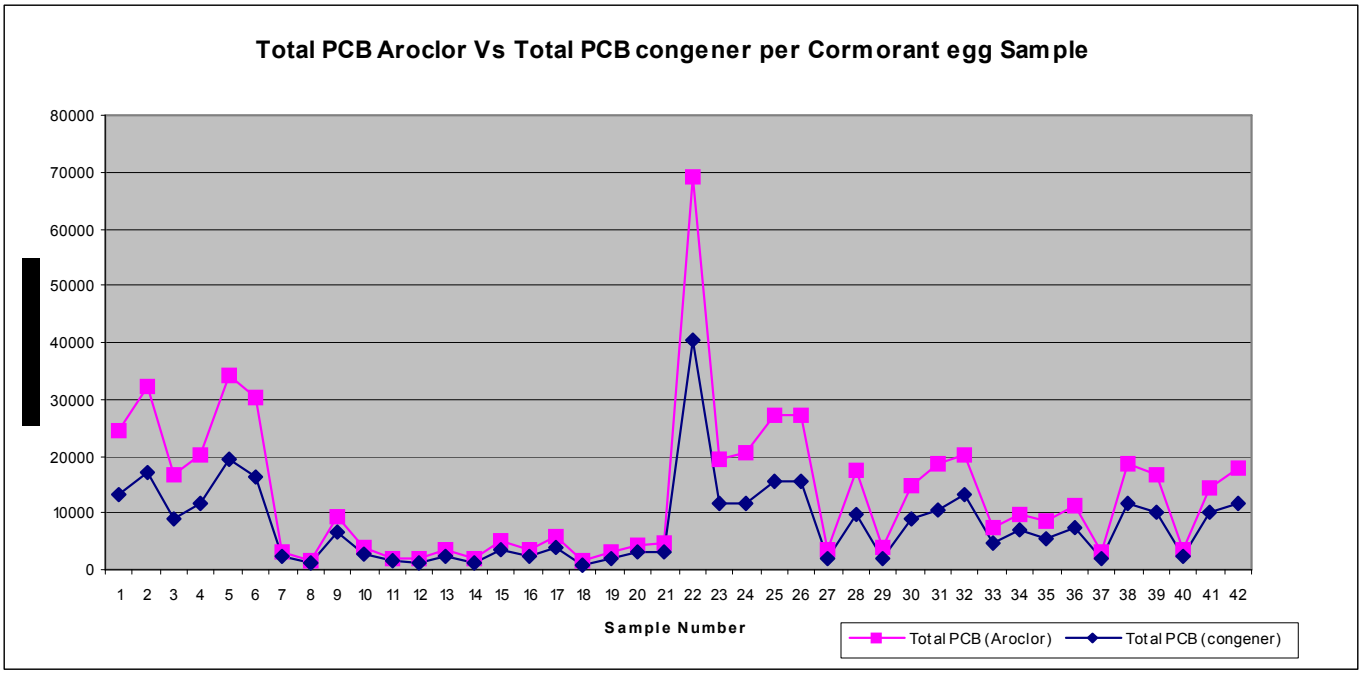
Identification of PCB Aroclors in environmental samples is complicated by similarities between various Aroclor formulations and compositional changes that can occur in the environment. Due to this, Axys Analytical Services Ltd. followed the convention that a single Aroclor is reported only when a unique Aroclor pattern can be identified; otherwise Aroclors are quantified and reported as a mixture of Aroclors 1242/1254/1260.

Axys Analytical Services, Ltd determines PCB Aroclor equivalent concentrations from the summed concentrations of a set of PCB congeners characteristic of the Aroclor formulation multiplied by an empirically determined quantification factor. The following congeners and empirical factors were used:

Aroclor	PCB Congeners	Quantification factor
1242	8/18/31/28	3.8
1248	66/44/49	5.5
1254	87/97/99	10
1260	183/180/170	7.1

A comparison of Total PCB Aroclors and Total PCB congeners for both the egg and plasma samples revealed Total PCBs determined by sum of the Arolcors were higher than Total PCBs as determined by sum of the 209 PCB congeners. Please see Figure 1 for those comparisons. The PCB congener patterns in these tissue samples do not resemble those of Aroclor formulations. Normally, Aroclor determinations for samples where the congener patterns do not match those of an Aroclor are considered approximate and in such cases determination of PCBs as congeners is a more reliable technique. (Dale Hoover, Axys Analytical Service Pers. Comm March 2003.) Differences in the total Aroclor and Total PCB congener calculations can be accounted for. Inherent in the interpretation of Aroclors is the assumption that relative peak heights, areas or concentrations stay the same, if there were changes that occurred they do not get accounted for and inputs of different Aroclors within a sample interfere with accurate interpretation of those mixtures. The sample type can also play a part in the difference. The birds could have a greater capacity to metabolize the PCBs. This metabolization could enhance the Aroclors dissimilarity to PCB congeners. Aroclor analyses of wildlife samples such as duck tissue, liver tissue and turtle tissue completed at NYSDEC's Hale Creek Field station have also shown variability between Aroclor totals and PCB congener totals. (Samuel Jackling, Personal communication , February 2003).

See section below on Polychlorinated Bipenyls- Congeners for associated lab Control samples and carbon labeled surrogate spikes.


Total PCB Aroclor Vs Total PCB congener per Cormorant egg Sample
80000
70000
60000
50000
40000
30000
20000
10000
0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42
Sample Number
Total PCB (Aroclor)
Total PCB (congener)

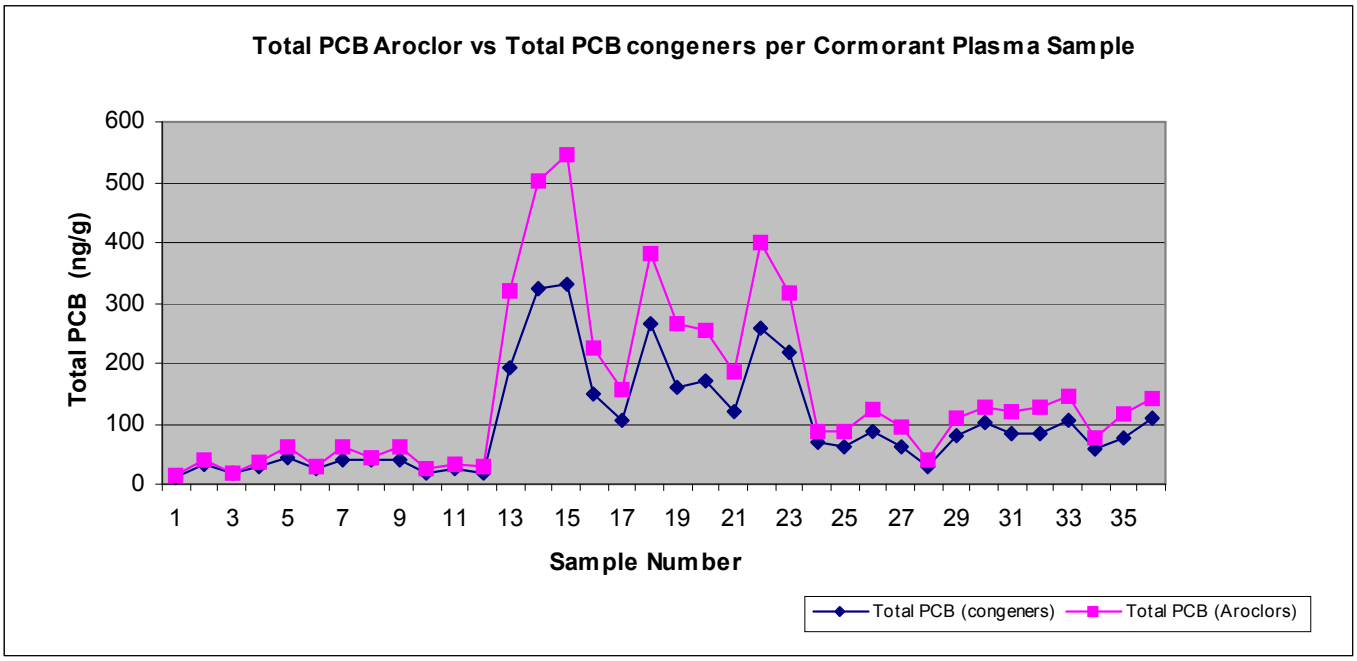

Total PCB Aroclor vs Total PCB congeners per Cormorant Plasma Sample
Total PCB (ng/g)
600
500
400
300
200
100
0
1 3 5 7 9 11 13 15 17 19 21 23 25 27 29 31 33 35
Sample Number
Total PCB (congeners)
Total PCB (Aroclors)

Figure 1

DETECTION LIMITS—EGGS

Given below are the n, min, max and average sample specific detection limits for Aroclor analysis of egg samples.

PARAM_NAME	Minimum ng/g	Maximum ng/g	Average ng/g	n samples
Aroclor 1242	0.0985	15.9	1.469	42
Aroclor 1248	0.0931	6.01	0.840	42
Aroclor 1254	0.0787	7.23	1.218	42
Aroclor 1260	0.0329	3.56	0.712	42

METHOD BLANK REVIEW—EGGS

Below are the total method blank concentrations (n=6) for the six sample delivery groups that contained Aroclor analysis of egg samples. Results were not blank corrected, as it was determined that these total method blank concentrations would not significantly alter interpretation of tissue concentrations.

PARAM_NAME	Total ng/g
Aroclor 1242	0.188
Aroclor 1248	0
Aroclor 1254	1.037
Aroclor 1260	2.267

DUPLICATE REVIEW—EGGS

Of the five duplicate comparisons compared, the total PCB RPD's ranged from 0.5 to 13.3 . This is well within criteria of +/- 40 RPD.

DETECTION LIMITS—PLASMA

Given below are the n, min, max and average sample specific detection limits for Aroclor analysis of plasma samples.

PARAM_NAME	Minimum ng/g	Maximum ng/g	Average ng/g	n Samples
Aroclor 1242	0.0108	0.246	0.0524	36
Aroclor 1248	0.00579	0.491	0.0559	36
Aroclor 1254	0.00272	1.65	0.1041	36
Aroclor 1260	0.00294	0.446	0.0459	36

METHOD BLANK REVIEW—PLASMA

Below are the total method blank concentrations (n=5) for the five sample delivery groups that contained Aroclor analysis of plasma samples. Results were not blank corrected, as it was determined that these total method blank concentrations would not significantly alter interpretation of tissue concentrations.

PARAM_NAME	Total ng/g
Aroclor 1242	1.1133
Aroclor 1248	0
Aroclor 1254	1.242
Aroclor 1260	0.7485

DUPLICATE REVIEW—PLASMA

Not available due to insufficient sample.

Polychlorinated Biphenyls—Congeners

COELUTORS—EGGS AND PLASMA

Below represents the groupings of PCB congeners, by BZ number, that coelute with other congeners. For example; 12 and 13 coelute and 90, 101 and 113 coelute. For reporting purposes the concentration of the coeluting congeners was given to the first congener of the grouping listed below. The remaining congeners have no reported concentrations and are just qualified as coeluting with its listed group.

BZ #	Param Code	BZ #	Param Code
12	2974-92-7	90	68194-07-0
13	2974-90-5	101	37680-73-2
		113	68194-10-5
18	37680-65-2		
30	35693-92-6	93	73575-56-1
		95	38379-99-6
20	38444-84-7	98	60233-25-2
28	7012-37-5	100	39485-83-1
		102	68194-06-9
21	55702-46-0		

33	38444-86-9	107	70424-68-9
		124	70424-70-3
26	38444-81-4		
29	15862-07-4	110	38380-03-9
		115	74472-38-1
40	38444-93-8		
41	52663-59-9	128	38380-07-3
71	41464-46-4	166	41411-63-6
44	41464-39-5	129	55215-18-4
47	2437-79-8	138	35065-28-2
65	33284-54-7	160	41411-62-5
		163	74472-44-9
45	70362-45-7		
51	68194-04-7	134	52704-70-8
		143	68194-15-0
49	41464-40-8		
69	60233-24-1	135	52744-13-5
		151	52663-63-5
50	62796-65-0	154	60145-22-4
53	41464-41-9		
		139	56030-56-9
59	74472-33-6	140	59291-64-4
62	54230-22-7		
75	32598-12-2	147	68194-13-8
		149	38380-04-0
61	33284-53-6		
70	32598-11-1	153	35065-27-1
74	32690-93-0	168	59291-65-5
76	70362-48-0		
		156	38380-08-4
83	60145-20-2	157	69782-90-7
99	38380-01-7		
		171	52663-71-5
85	65510-45-4	173	68194-16-1
116	18259-05-7		
117	68194-11-6	180	35065-29-3
		193	69782-91-8
86	55312-69-1		
87	38380-02-8	183	52663-69-1
97	41464-51-1	185	52712-05-7
108	70362-41-3		
119	56558-17-9	197	33091-17-7

125	74472-39-2	200	52663-73-7
88	55215-17-3	198	68194-17-2
91	68194-05-8	199	52663-75-9

DETECTION LIMITS—EGGS

Given below are the n, min, max and average sample specific detection limits for PCB congener analysis of egg samples.

PARAM_NAME	Minimum ng/g	Maximum ng/g	Average ng/g	n Samples
1	0.00642	0.0357	0.0115	42
2	0.00663	0.0369	0.0119	42
3	0.00719	0.04	0.0129	42
4	0.0446	0.424	0.1107	42
5	0.0339	0.315	0.0826	42
6	0.0306	0.274	0.0720	42
7	0.0281	0.284	0.0737	42
8	0.0283	0.268	0.0700	42
9	0.0307	0.285	0.0745	42
10	0.0298	0.27	0.0709	42
11	0.0327	0.283	0.0745	42
12	0.0322	0.294	0.0771	42
13	0.0322	0.294	0.0771	42
14	0.0318	0.29	0.0761	42
15	0.0274	0.239	0.0634	42
16	0.00449	0.0465	0.0111	42
17	0.00393	0.0407	0.0097	42
18	0.00336	0.0333	0.0082	42
19	0.00387	0.0368	0.0094	42
20	0.00447	1.1	0.0892	42
21	0.0041	0.0277	0.0093	42
22	0.00434	0.0302	0.0099	42
23	0.00423	0.0294	0.0096	42
24	0.003	0.0301	0.0074	42
25	0.00386	0.0263	0.0087	42
26	0.00382	0.0284	0.0088	42
27	0.00291	0.0288	0.0071	42
28	0.00447	1.1	0.0892	42
29	0.00382	0.0284	0.0088	42
30	0.00336	0.0333	0.0082	42
31	0.00384	0.0284	0.0089	42
32	0.00406	0.0275	0.0092	42
33	0.0041	0.0277	0.0093	42
34	0.00433	0.0294	0.0098	42

35	0.00454	0.0294	0.0106	42
36	0.00418	0.0278	0.0094	42
37	0.00458	0.0316	0.0104	42
38	0.00409	0.0301	0.0094	42
39	0.00398	0.0281	0.0091	42
40	0.00262	0.0268	0.0071	42
41	0.00262	0.0268	0.0071	42
42	0.00319	0.0281	0.0084	42
43	0.00343	0.0299	0.0089	42
44	0.00265	0.485	0.0300	42
45	0.00304	0.0265	0.0079	42
46	0.00336	0.0317	0.0089	42
47	0.00265	0.485	0.0300	42
48	0.00286	0.0259	0.0075	42
49	0.00254	0.484	0.0181	42
50	0.00296	0.0257	0.0077	42
51	0.00304	0.0265	0.0079	42
52	0.00272	0.524	0.0195	42
53	0.00296	0.0257	0.0077	42
54	0.00217	0.0199	0.0057	42
55	0.0179	0.531	0.1170	42
56	0.0181	0.535	0.1173	42
57	0.0182	0.526	0.1175	42
58	0.0168	0.522	0.1097	42
59	0.00217	0.0204	0.0057	42
60	0.0181	1.21	0.1521	42
61	0.0151	3.62	0.3652	42
62	0.00217	0.0204	0.0057	42
63	0.0172	0.503	0.1120	42
64	0.0021	0.0203	0.0056	42
65	0.00265	0.485	0.0300	42
66	0.0169	4.06	0.4195	42
67	0.0157	0.519	0.1046	42
68	0.0158	0.502	0.1039	42
69	0.00254	0.484	0.0181	42
70	0.0151	3.62	0.3652	42
71	0.00262	0.0268	0.0071	42
72	0.0164	0.483	0.1074	42
73	0.00209	0.0198	0.0056	42
74	0.0151	3.62	0.3652	42
75	0.00217	0.0204	0.0057	42
76	0.0151	3.62	0.3652	42
77	0.0194	0.661	0.1339	42
78	0.0176	0.554	0.1155	42
79	0.0169	0.474	0.1061	42
80	0.0146	0.499	0.0993	42
81	0.0183	0.538	0.1177	42

82	0.00658	0.0629	0.0213	42
83	0.00787	0.723	0.1218	42
84	0.007	0.0643	0.0225	42
85	0.005	0.644	0.0310	42
86	0.00505	0.62	0.0305	42
87	0.00505	0.62	0.0305	42
88	0.00597	0.056	0.0194	42
89	0.0065	0.061	0.0210	42
90	0.00548	0.638	0.0382	42
91	0.00597	0.056	0.0194	42
92	0.00601	0.0591	0.0196	42
93	0.00575	0.0544	0.0187	42
94	0.00618	0.06	0.0201	42
95	0.00575	0.0544	0.0187	42
96	0.00226	0.0373	0.0090	42
97	0.00505	0.62	0.0305	42
98	0.00575	0.0544	0.0187	42
99	0.00787	0.723	0.1218	42
100	0.00575	0.0544	0.0187	42
101	0.00548	0.638	0.0382	42
102	0.00575	0.0544	0.0187	42
103	0.00563	0.0504	0.0180	42
104	0.00226	0.0354	0.0088	42
105	0.069	8.37	0.9380	42
106	0.063	1.3	0.3241	42
107	0.0627	1.29	0.3163	42
108	0.00505	0.62	0.0305	42
109	0.0644	1.32	0.3225	42
110	0.00462	0.555	0.0327	42
111	0.00436	0.0409	0.0141	42
112	0.0045	0.0417	0.0146	42
113	0.00548	0.638	0.0382	42
114	0.0766	9.86	0.6328	42
115	0.00462	0.555	0.0327	42
116	0.005	0.644	0.0310	42
117	0.005	0.644	0.0310	42
118	0.0634	8.68	0.9971	42
119	0.00505	0.62	0.0305	42
120	0.00454	0.0402	0.0145	42
121	0.00469	0.0402	0.0149	42
122	0.0748	1.54	0.3650	42
123	0.0778	1.83	0.4097	42
124	0.0627	1.29	0.3163	42
125	0.00505	0.62	0.0305	42
126	0.0849	1.97	0.4187	42
127	0.0639	1.48	0.3192	42
128	0.0156	1.33	0.1634	42

129	0.0158	1.33	0.3595	42
130	0.0202	0.522	0.1091	42
131	0.0189	0.491	0.1023	42
132	0.0194	0.487	0.1041	42
133	0.0185	0.467	0.0993	42
134	0.0199	0.497	0.1071	42
135	0.0023	0.0545	0.0166	42
136	0.00193	0.0434	0.0138	42
137	0.0171	0.435	0.0921	42
138	0.0158	1.33	0.3595	42
139	0.0176	0.423	0.0934	42
140	0.0176	0.423	0.0934	42
141	0.0174	0.453	0.0940	42
142	0.0195	0.524	0.1061	42
143	0.0199	0.497	0.1071	42
144	0.00236	0.0569	0.0171	42
145	0.0018	0.0421	0.0130	42
146	0.0168	1.43	0.2461	42
147	0.0175	0.424	0.0931	42
148	0.00239	0.0577	0.0173	42
149	0.0175	0.424	0.0931	42
150	0.00174	0.0422	0.0126	42
151	0.0023	0.0545	0.0166	42
152	0.00186	0.0412	0.0133	42
153	0.0146	1.14	0.3219	42
154	0.0023	0.0545	0.0166	42
155	0.00171	0.0384	0.0122	42
156	0.0173	0.875	0.1148	42
157	0.0173	0.875	0.1148	42
158	0.0137	0.98	0.0996	42
159	0.0135	0.349	0.0728	42
160	0.0158	1.33	0.3595	42
161	0.0132	0.34	0.0712	42
162	0.0141	0.344	0.0753	42
163	0.0158	1.33	0.3595	42
164	0.0138	0.357	0.0744	42
165	0.0156	0.363	0.0823	42
166	0.0156	1.33	0.1634	42
167	0.0135	0.622	0.0818	42
168	0.0146	1.14	0.3219	42
169	0.0288	1.22	0.2594	42
170	0.0041	0.502	0.0673	42
171	0.00413	0.491	0.0242	42
172	0.00383	0.455	0.0226	42
173	0.00413	0.491	0.0242	42
174	0.00362	0.0576	0.0114	42
175	0.00372	0.0542	0.0115	42

176	0.00286	0.044	0.0089	42
177	0.00379	0.444	0.0256	42
178	0.00395	0.421	0.0219	42
179	0.00273	0.0412	0.0085	42
180	0.00362	0.394	0.0851	42
181	0.00364	0.0579	0.0115	42
182	0.00335	0.0559	0.0107	42
183	0.00354	0.414	0.0463	42
184	0.00257	0.039	0.0080	42
185	0.00354	0.414	0.0463	42
186	0.00294	0.0428	0.0091	42
187	0.00309	0.338	0.0745	42
188	0.00273	0.0401	0.0084	42
189	0.0214	0.209	0.0677	42
190	0.00299	0.314	0.0167	42
191	0.00289	0.0459	0.0091	42
192	0.00309	0.0474	0.0096	42
193	0.00362	0.394	0.0851	42
194	0.00939	0.891	0.1010	42
195	0.0106	1.07	0.0684	42
196	0.00226	1.25	0.0353	42
197	0.00171	0.0094	0.0043	42
198	0.00231	1.05	0.0609	42
199	0.00231	1.05	0.0609	42
200	0.00171	0.0094	0.0043	42
201	0.0016	0.936	0.0262	42
202	0.00169	0.931	0.0263	42
203	0.00199	1.12	0.0557	42
204	0.00165	0.0101	0.0043	42
205	0.0081	0.118	0.0356	42
206	0.00688	0.499	0.0387	42
207	0.00583	0.0341	0.0141	42
208	0.00546	0.428	0.0227	42
209	0.00178	0.011	0.0034	42

LAB CONTROL SAMPLE—EGGS

Given below are the average laboratory control samples and their surrogates for PCB congener analysis of egg samples. All are within control guideline of +/- 30 % recovery. All average carbon labeled surrogates meet criteria. See criteria table.

PARAM_NAME	LCS (Avg % Rec)
3	114.8
15	89.2

20	114.3
77	112.6
105	104.5
114	109.3
118	110.3
123	107.3
126	99.9
156	103.6
167	107.1
169	97.8
170	93.7
180	104.7
189	101.6
194	102.3
206	103.2
209	98.1
Carbon Labeled Surrogates	
105L	104.5667
111L	101.81
114L	100.84
118L	100.09
123L	99.44
126L	106.28
156L	102.75
15L	99.79
167L	104.61
169L	100.69
170L	99.33
180L	98.58
189L	98.26
194L	102.06
206L	105.08
209L	91.72
28L	65.33
3L	79.39
77L	100.48
81L	95.62

METHOD BLANK REVIEW—EGGS

Below are total method blank concentrations (n=6) for the six sample delivery groups that contained PCB congener analysis of egg samples . Results were not blank

corrected, as it was determined that these total method blank concentrations would not significantly alter interpretation of tissue concentrations

PARAM_NAME	Total ng/g
1	0.00732
2	0
3	0.0502
4	0
5	0
6	0
7	0
8	0
9	0
10	0
11	0
12	0
13	0
14	0
15	0
16	0.00983
17	0.00834
18	0.0276
19	0
20	0.18
21	0.0295
22	0.00611
23	0
24	0
25	0
26	0.0133
27	0
28	0
29	0
30	0
31	0.0732
32	0
33	0
34	0
35	0
36	0

37	0.00897
38	0
39	0
40	0.0275
41	0
42	0.0147
43	0
44	0.2403
45	0.0176
46	0.00397
47	0
48	0
49	0.07135
50	0
51	0
52	0.1141
53	0
54	0
55	0
56	0.00411
57	0
58	0
59	0
60	0
61	0.1324
62	0
63	0
64	0.03601
65	0
66	0.1068
67	0
68	0.0154
69	0
70	0
71	0
72	0
73	0
74	0
75	0
76	0
77	0
78	0
79	0
80	0

81	0
82	0.00587
83	0.2358
84	0.0258
85	0.0287
86	0.12375
87	0
88	0.0243
89	0
90	0.2461
91	0
92	0.06954
93	0.0457
94	0
95	0
96	0.00334
97	0
98	0
99	0
100	0
101	0
102	0
103	0
104	0
105	0.126
106	0
107	0
108	0
109	0.00952
110	0.2557
111	0.0027
112	0.00347
113	0
114	0.00645
115	0
116	0
117	0
118	0.3509
119	0
120	0
121	0
122	0
123	0.01961
124	0

125	0
126	0.00636
127	0
128	0.0555
129	0.4948
130	0
131	0
132	0.07946
133	0
134	0
135	0.08728
136	0.00968
137	0.0108
138	0
139	0
140	0
141	0.0498
142	0.00773
143	0
144	0.00737
145	0
146	0.08793
147	0.2358
148	0.003
149	0
150	0.00218
151	0
152	0.00208
153	0.53
154	0
155	0
156	0.0938
157	0
158	0.0395
159	0
160	0
161	0
162	0
163	0
164	0.02191
165	0
166	0
167	0.04196
168	0

169	0.03372
170	0.12
171	0.0333
172	0.01174
173	0
174	0.09785
175	0
176	0.00397
177	0.04052
178	0.01949
179	0.02777
180	0.3707
181	0
182	0
183	0.06508
184	0.102
185	0
186	0
187	0.21471
188	0
189	0.01213
190	0.01704
191	0
192	0
193	0
194	0.348
195	0.00476
196	0.01098
197	0
198	0.07513
199	0
200	0
201	0.00526
202	0.00776
203	0.03813
204	0.0022
205	0
206	0.0519
207	0
208	0
209	0.2896

Method Blank Surrogate Review—Eggs

Given below are the average carbon labeled surrogate recoveries for method blanks. All surrogates meet criteria. See criteria table.

PARAM_NAME	Average % Recovery
105L	97.7
111L	93.2
114L	90.6
118L	90.2
123L	89.1
126L	99.5
156L	104.1
157L	79.2
15L	101.2
167L	105.1
169L	96.1
170L	94.7
180L	95.2
189L	103.3
194L	101.1
206L	101.4
209L	66.0
28L	53.9
3L	100.5
77L	87.8
81L	97.7

MATRIX SPIKE LABELED SURROGATE STANDARDS—EGGS

Below are the average surrogate standard % recoveries for PCB analysis of eggs. All recoveries meet criteria. See criteria table.

PARAM_NAME	Matrix Spike Surrogates (Avg % Rec)
105L	90.4
111L	90.5
114L	80.0
118L	92.3
123L	78.5
126L	84.6
156L	94.0
15L	78.4
167L	89.4
169L	89.5
170L	92.9
180L	101.4
189L	90.7
194L	96.4
206L	96.2
209L	93.3
28L	69.4
3L	48.4
77L	96.6
81L	85.7

DUPLICATE REVIEW—EGGS

A detailed look at comparison of individual congeners shows that within 4 of the 5 groups of samples analyzed congeners: 45,93,135; 3; 48, 197 and 25,43, 48, 181, 184, and 197 were outside control limits of 40 RPD. However, comparisons of the total PCB values for each duplicate yielded RPD's that met the 40 RPD criteria.

DETECTION LIMITS—PLASMA

Given below are the n, min, max and average sample specific detection limits for PCB congener analysis of plasma samples.

PARAM_NAME	Minimum ng/g	Maximum ng/g	Average ng/g	n Samples
1	0.00126	1.79	0.0556	36
2	0.00147	2.08	0.0640	36
3	0.00158	2.25	0.0689	36
4	0.0045	9.58	0.2860	36
5	0.00311	6.69	0.2005	36
6	0.00296	6.47	0.1931	36

7	0.00294	6.32	0.1891	36
8	0.00283	6.13	0.1832	36
9	0.003	6.44	0.1959	36
10	0.00143	6.54	0.1943	36
11	0.00125	6.17	0.1844	36
12	0.00107	6.16	0.1843	36
13	0.00123	6.16	0.1844	36
14	0.00124	6.1	0.1825	36
15	0.00113	5.08	0.1519	36
16	0.00106	5.73	0.1637	36
17	0.000929	5.1	0.1457	36
18	0.000794	4.14	0.1184	36
19	0.000916	5.46	0.1559	36
20	0.000829	2.31	0.0670	36
21	0.00076	1.99	0.0578	36
22	0.000804	2.11	0.0613	36
23	0.000785	2.16	0.0626	36
24	0.000711	3.45	0.0988	36
25	0.000715	1.88	0.0545	36
26	0.000709	2.09	0.0605	36
27	0.000688	3.45	0.0987	36
28	0.000829	2.31	0.0668	36
29	0.000709	2.09	0.0605	36
30	0.000794	4.14	0.1183	36
31	0.000713	2.04	0.0591	36
32	0.000753	2.15	0.0621	36
33	0.00076	1.99	0.0577	36
34	0.000802	2.2	0.0636	36
35	0.000895	2.03	0.0591	36
36	0.000775	1.94	0.0564	36
37	0.00085	1.94	0.0565	36
38	0.000758	1.9	0.0553	36
39	0.000738	1.82	0.0529	36
40	0.000566	6.65	0.1883	36
41	0.000566	6.65	0.1883	36
42	0.00069	7.25	0.2053	36
43	0.00074	8.14	0.2303	36
44	0.000572	6.28	0.1775	36
45	0.000657	7.28	0.2060	36
46	0.000725	8.6	0.2431	36
47	0.000572	6.28	0.1775	36
48	0.000618	6.75	0.1911	36
49	0.000549	5.99	0.1694	36
50	0.00064	7.17	0.2026	36

51	0.000657	7.28	0.2060	36
52	0.000588	6.38	0.1807	36
53	0.00064	7.17	0.2027	36
54	0.000468	5.95	0.1680	36
55	0.00108	5.86	0.1701	36
56	0.00109	5.87	0.1702	36
57	0.00108	5.89	0.1711	36
58	0.00104	5.87	0.1697	36
59	0.000468	4.99	0.1414	36
60	0.00107	5.83	0.1691	36
61	0.000937	5.72	0.1654	36
62	0.000468	4.99	0.1416	36
63	0.00102	5.76	0.1671	36
64	0.000453	4.83	0.1370	36
65	0.000572	6.28	0.1778	36
66	0.00104	5.76	0.1671	36
67	0.00097	5.27	0.1529	36
68	0.000975	5.37	0.1558	36
69	0.000549	5.99	0.1696	36
70	0.000937	5.72	0.1653	36
71	0.000566	6.65	0.1882	36
72	0.00102	5.63	0.1632	36
73	0.000451	5.08	0.1439	36
74	0.000937	5.72	0.1654	36
75	0.000468	4.99	0.1414	36
76	0.000392	5.72	0.1653	36
77	0.000376	6.42	0.1862	36
78	0.000417	5.63	0.1636	36
79	0.000298	4.76	0.1389	36
80	0.000303	5.3	0.1534	36
81	0.000303	5.62	0.1633	36
82	0.000284	6.52	0.1849	36
83	0.000272	5.74	0.1630	36
84	0.000302	6.9	0.1957	36
85	0.000216	4.7	0.1335	36
86	0.000219	5.01	0.1422	36
87	0.000219	5.01	0.1422	36
88	0.00026	6.06	0.1718	36
89	0.000281	6.42	0.1819	36
90	0.000237	5.01	0.1479	36
91	0.00026	6.06	0.1783	36
92	0.000259	5.89	0.1732	36
93	0.00025	5.93	0.1681	36
94	0.000267	6.44	0.1890	36

95	0.00025	5.93	0.1681	36
96	0.00033	4.33	0.1226	36
97	0.000219	5.01	0.1421	36
98	0.00025	5.93	0.1681	36
99	0.000272	5.74	0.1698	36
100	0.00025	5.93	0.1682	36
101	0.000237	5.01	0.1423	36
102	0.00025	5.93	0.1681	36
103	0.000243	5.59	0.1644	36
104	0.000275	4.32	0.1223	36
105	0.00026	7.33	0.2195	36
106	0.000272	6.96	0.2119	36
107	0.000326	7.44	0.2384	36
108	0.000219	5.01	0.1487	36
109	0.000275	7.18	0.2241	36
110	0.000199	4.17	0.1185	36
111	0.000188	4.18	0.1249	36
112	0.000197	3.87	0.1154	36
113	0.000237	5.01	0.1432	36
114	0.000271	8.12	0.2455	36
115	0.000199	4.17	0.1198	36
116	0.000216	4.7	0.1348	36
117	0.000216	4.7	0.1348	36
118	0.00158	7.69	0.2519	36
119	0.000219	5.01	0.1435	36
120	0.000196	4.02	0.1144	36
121	0.000202	4.36	0.1239	36
122	0.00166	7.82	0.2390	36
123	0.00174	8	0.2410	36
124	0.00153	7.44	0.2325	36
125	0.000219	5.01	0.1435	36
126	0.00185	8.47	0.2549	36
127	0.00176	7.88	0.2362	36
128	0.00135	3.4	0.1016	36
129	0.000282	3.27	0.0987	36
130	0.000236	4.25	0.1252	36
131	0.00159	4.37	0.1294	36
132	0.0016	4.19	0.1245	36
133	0.00158	4.15	0.1221	36
134	0.0016	4.37	0.1297	36
135	0.000278	6.15	0.1740	36
136	0.000233	5.12	0.1450	36
137	0.00145	3.77	0.1110	36
138	0.000289	3.27	0.1008	36

139	0.00022	3.9	0.1146	36
140	0.00143	3.9	0.1147	36
141	0.00148	3.95	0.1174	36
142	0.000293	4.35	0.1290	36
143	0.0016	4.37	0.1294	36
144	0.000213	6.39	0.1814	36
145	0.000217	5.23	0.1488	36
146	0.000228	3.37	0.1003	36
147	0.00138	3.84	0.1138	36
148	0.000282	7	0.1987	36
149	0.000209	3.84	0.1136	36
150	0.00021	5.17	0.1472	36
151	0.000278	6.15	0.1751	36
152	0.000225	4.71	0.1342	36
153	0.00121	3.03	0.0933	36
154	0.000278	6.15	0.1799	36
155	0.000206	4.74	0.1342	36
156	0.00161	3.64	0.1078	36
157	0.00161	3.64	0.1078	36
158	0.00108	2.69	0.0797	36
159	0.00115	2.8	0.0828	36
160	0.00132	3.27	0.0988	36
161	0.00112	2.88	0.0848	36
162	0.00112	2.71	0.0804	36
163	0.00132	3.27	0.0988	36
164	0.000606	2.93	0.0863	36
165	0.000655	3.22	0.0949	36
166	0.000608	3.4	0.1001	36
167	0.000655	2.87	0.0846	36
168	0.000576	3.03	0.0909	36
169	0.00059	2.86	0.1147	36
170	0.000405	4.87	0.1388	36
171	0.000422	4.82	0.1374	36
172	0.000392	4.66	0.1329	36
173	0.000422	4.82	0.1374	36
174	0.000371	4.51	0.1292	36
175	0.00038	4.51	0.1284	36
176	0.000292	3.47	0.0989	36
177	0.000387	4.78	0.1362	36
178	0.000404	4.57	0.1303	36
179	0.000279	3.45	0.0986	36
180	0.000368	4.31	0.1239	36
181	0.000372	4.35	0.1239	36
182	0.000343	4.09	0.1165	36

183	0.000362	4.24	0.1208	36
184	0.000263	3.18	0.0905	36
185	0.000362	4.24	0.1207	36
186	0.0003	3.48	0.0990	36
187	0.000316	4.08	0.1160	36
188	0.00028	3.31	0.0942	36
189	0.000375	2.35	0.0701	36
190	0.000306	3.36	0.0962	36
191	0.000296	3.41	0.0974	36
192	0.000316	3.58	0.1022	36
193	0.000368	4.31	0.1235	36
194	0.000371	3.32	0.0962	36
195	0.000348	3.7	0.1085	36
196	0.000367	4.24	0.1206	36
197	0.000278	3.16	0.0899	36
198	0.000358	4.41	0.1269	36
199	0.000376	4.41	0.1270	36
200	0.000278	3.16	0.0899	36
201	0.00026	3.54	0.1006	36
202	0.000274	3.49	0.0992	36
203	0.000324	3.82	0.1100	36
204	0.000268	3.51	0.0998	36
205	0.000393	2.59	0.0773	36
206	0.00143	5.53	0.1588	36
207	0.00123	4.79	0.1375	36
208	0.00117	4.61	0.1322	36
209	0.000291	3.68	0.1043	36

LAB CONTROL SAMPLE—PLASMA

Given below are the average laboratory control samples (LCS) and average surrogate samples for PCB congener analysis of plasma samples. All samples meet the +/- 30 % criteria. LCS samples generally meet the criteria of 30-130 % with the exception of 3L at 19.5%. Monochlorobiphenyl is normally more difficult to reliably detect since recovery is frequently low.

PARAM_NAME	Average % Recovery
3	118.7
15	96.3
20	124.5
77	120.9
105	107.0

114	123.9
118	118.0
123	114.1
126	116.4
156	113.2
167	114.6
169	115.8
170	113.0
180	123.8
189	115.3
194	101.9
206	98.6
209	108.5
Carbon Labeled Surrogates	
105L	102.4
111L	96.6
114L	95.6
118L	96.2
123L	94.9
126L	105.7
156L	101.0
15L	45.6
167L	98.5
169L	112.1
170L	98.9
180L	98.2
189L	95.5
194L	101.0
206L	102.2
209L	100.3
28L	57.7
3L	19.5
77L	101.1
81L	93.6

METHOD BLANK REVIEW—PLASMA

Below are total method blank concentrations (n=5) from the five sample delivery groups that contained PCB congener analysis of plasma samples.. Results were not blank corrected, as it was determined that these total method blank concentrations would not significantly alter interpretation of tissue concentrations.

PARAM_NAME	Total ng/g
1	0.0275

2	0.0072
3	0.0131
4	0.1182
5	0.0000
6	0.0198
7	0.0000
8	0.0658
9	0.0123
10	0.0000
11	0.0647
12	0.0000
13	0.0000
14	0.0000
15	0.0050
16	0.0248
17	0.0354
18	0.0820
19	0.0150
20	0.0986
21	0.0413
22	0.0265
23	0.0000
24	0.0000
25	0.0089
26	0.0243
27	0.0051
28	0.0000
29	0.0000
30	0.0000
31	0.0782
32	0.0231
33	0.0000
34	0.0000
35	0.0024
36	0.0000
37	0.0173
38	0.0000
39	0.0000
40	0.0313
41	0.0000
42	0.0159
43	0.0000
44	0.1177
45	0.0288

46	0.0000
47	0.0000
48	0.0066
49	0.0547
50	0.0154
51	0.0000
52	0.1211
53	0.0000
54	0.0000
55	0.0031
56	0.0342
57	0.0022
58	0.0024
59	0.0087
60	0.0229
61	0.1239
62	0.0000
63	0.0030
64	0.0223
65	0.0000
66	0.0634
67	0.0035
68	0.0025
69	0.0000
70	0.0000
71	0.0000
72	0.0023
73	0.0000
74	0.0000
75	0.0000
76	0.0000
77	0.0181
78	0.0026
79	0.0031
80	0.0026
81	0.0035
82	0.0095
83	0.0573
84	0.0249
85	0.0197
86	0.0796
87	0.0000
88	0.0153
89	0.0033

90	0.1145
91	0.0000
92	0.0196
93	0.1197
94	0.0025
95	0.0000
96	0.0023
97	0.0000
98	0.0000
99	0.0000
100	0.0000
101	0.0000
102	0.0000
103	0.0043
104	0.0000
105	0.0317
106	0.0031
107	0.0075
108	0.0000
109	0.0051
110	0.0924
111	0.0051
112	0.0027
113	0.0000
114	0.0051
115	0.0000
116	0.0000
117	0.0000
118	0.0785
119	0.0000
120	0.0035
121	0.0032
122	0.0041
123	0.0051
124	0.0000
125	0.0000
126	0.0058
127	0.0032
128	0.0197
129	0.1257
130	0.0050
131	0.0051
132	0.0377
133	0.0032

134	0.0066
135	0.0473
136	0.0140
137	0.0070
138	0.0000
139	0.0060
140	0.0000
141	0.0272
142	0.0026
143	0.0000
144	0.0044
145	0.0027
146	0.0138
147	0.0900
148	0.0027
149	0.0000
150	0.0021
151	0.0000
152	0.0036
153	0.1101
154	0.0000
155	0.0025
156	0.0255
157	0.0000
158	0.0130
159	0.0033
160	0.0000
161	0.0031
162	0.0029
163	0.0000
164	0.0073
165	0.0033
166	0.0000
167	0.0072
168	0.0000
169	0.0088
170	0.0331
171	0.0087
172	0.0050
173	0.0000
174	0.0354
175	0.0000
176	0.0038
177	0.0148

178	0.0071
179	0.0157
180	0.0791
181	0.0039
182	0.0000
183	0.0232
184	0.0026
185	0.0000
186	0.0000
187	0.0402
188	0.0027
189	0.0051
190	0.0052
191	0.0037
192	0.0000
193	0.0000
194	0.0258
195	0.0055
196	0.0090
197	0.0064
198	0.0197
199	0.0000
200	0.0000
201	0.0059
202	0.0066
203	0.0099
204	0.0052
205	0.0050
206	0.0059
207	0.0052
208	0.0053
209	0.0128

METHOD BLANK SURROGATE REVIEW—PLASMA

Given below are the average carbon labeled surrogates for method blanks. All surrogates meet criteria of 30-130 % recovery with exception of 3 L.

PARAM_NAME	Average % Recovery
105L	97.1
111L	92.6

114L	89.7
118L	85.3
123L	88.0
126L	84.6
156L	93.4
15L	41.7
167L	89.2
169L	88.0
170L	96.3
180L	95.7
189L	83.4
194L	96.1
206L	96.4
209L	94.1
28L	58.1
3L	25.0
77L	79.0
81L	70.9

MATRIX SPIKES CARBON LABELED SURROGATE STANDARDS—PLASMA

Given below are the carbon labeled surrogates standards (matrix spikes) for PCB analysis of plasma samples. All surrogates meet criteria of 30-130 % recovery with exception of 3 L.

PARAM_NAME	Matrix Spike Surrogates (Avg % Rec)
105L	97.7
111L	96.8
114L	91.7
118L	94.3
123L	90.1
126L	88.6
156L	92.9
15L	47.0
167L	90.2
169L	100.3
170L	102.2
180L	96.7
189L	87.8
194L	98.7
206L	98.5
209L	99.5
28L	69.8
3L	21.2
77L	83.9

81L	77.0

DUPLICATE REVIEW—PLASMA

Duplicates were not available due to insufficient sample.

Dioxins and Furans

DETECTION LIMITS—EGGS

Given below are the n, min, max and average sample specific detection limits for dioxin and furan analysis of egg samples. See discussion of SPDL's under detection limits metals down. Differences in detection limits for dioxin and furan analysis of egg samples is due to one sample having high detection limits. TCDF (2) is Rep 2 confirmation analysis.

PARAM_NAME	Minimum pg/g	Maximum pg/g	Average pg/g	n Samples
1,2,3,4,6,7,8-HpCDD	0.00012	70	1.77	42
1,2,3,4,6,7,8-HpCDF	0.0002	210	5.17	42
1,2,3,4,7,8,9-HpCDF	0.0002	210	5.17	42
1,2,3,4,7,8-HxCDD	0.00009	60	1.50	42
1,2,3,4,7,8-HxCDF	0.00005	40	1.02	42
1,2,3,6,7,8-HxCDD	0.00009	60	1.50	42
1,2,3,6,7,8-HxCDF	0.00005	40	1.02	42
1,2,3,7,8,9-HxCDD	0.00009	60	1.50	42
1,2,3,7,8,9-HxCDF	0.00005	40	1.02	42
1,2,3,7,8-PeCDD	0.0001	50	1.26	42
1,2,3,7,8-PeCDF	0.00011	50	1.27	42
2,3,4,6,7,8-HxCDF	0.00005	40	1.02	42
2,3,4,7,8-PeCDF	0.00011	50	1.27	42
2,3,7,8-TCDD	0.00019	50	1.28	42
2,3,7,8-TCDF	0.00031	50	1.30	42
2,3,7,8-TCDF (2)	4.54E-05	67.7	1.67	42
OCDD	0.00021	190	4.74	42
OCDF	0.00015	100	2.62	42
Total HpCDD	0.00012	70	1.77	42
Total HpCDF	0.0002	210	5.17	42
Total HxCDD	0.00009	60	1.50	42
Total HxCDF	0.00005	40	1.02	42
Total PeCDD	0.0001	50	1.26	42
Total PeCDF	0.00011	50	1.27	42
Total TCDD	0.00019	50	1.28	42

Total TCDF	0.00031	50	1.30	42

LAB CONTROL SAMPLE—EGGS

Given below are the average laboratory control samples and carbon labeled surrogate samples for dioxin and furan analysis of egg samples. Both were within criteria of +/- 30 % recovery with the exception of 13C–OCDD . This compound typically has low recoveries.

PARAM_NAME	LCS (Avg % Rec)
1,2,3,4,6,7,8-HpCDD	104.3
1,2,3,4,6,7,8-HpCDF	106.8
1,2,3,4,7,8,9-HpCDF	103.8
1,2,3,4,7,8-HxCDD	107.6
1,2,3,4,7,8-HxCDF	104.5
1,2,3,6,7,8-HxCDD	103.8
1,2,3,6,7,8-HxCDF	103.8
1,2,3,7,8,9-HxCDD	100.9
1,2,3,7,8,9-HxCDF	106.0
1,2,3,7,8-PeCDD	108.0
1,2,3,7,8-PeCDF	103.9
2,3,4,6,7,8-HxCDF	105.6
2,3,4,7,8-PeCDF	105.5
2,3,7,8-TCDD	104.5
2,3,7,8-TCDF	106.7
OCDD	111.4
OCDF	113.4
Carbon Labeled Surrogates	
13C-1,2,3,4,6,7,8-HpCDD	75.5
13C-1,2,3,4,6,7,8-HpCDF	72.6
13C-1,2,3,4,7,8,9-HpCDF	73.4
13C-1,2,3,4,7,8-HxCDD	79.0
13C-1,2,3,4,7,8-HxCDF	79.2
13C-1,2,3,6,7,8-HxCDD	78.2
13C-1,2,3,6,7,8-HxCDF	79.1
13C-1,2,3,7,8,9-HxCDF	72.8
13C-1,2,3,7,8-PeCDD	74.0
13C-1,2,3,7,8-PeCDF	72.3
13C-2,3,4,6,7,8-HxCDF	75.3

13C-2,3,4,7,8-PeCDF	70.4
13C-2,3,7,8-TCDD	75.3
13C-2,3,7,8-TCDF	78.8
13C-OCDD	61.6
37Cl-2,3,7,8-TCDD	78.8

METHOD BLANK REVIEW—EGGS

Below are total Method blank concentrations (n=5) for the five sample delivery groups that contained dioxin and furan analysis of egg samples. Results were not blank corrected, as it was determined that these total method blank concentrations would not significantly alter interpretation of tissue concentrations.

PARAM_NAME	Total pg/g
1,2,3,4,6,7,8-HpCDD	3.716
1,2,3,4,6,7,8-HpCDF	3.39
1,2,3,4,7,8,9-HpCDF	1.041
1,2,3,4,7,8-HxCDD	0.518
1,2,3,4,7,8-HxCDF	1.189
1,2,3,6,7,8-HxCDD	1.49
1,2,3,6,7,8-HxCDF	0.595
1,2,3,7,8,9-HxCDD	0.997
1,2,3,7,8,9-HxCDF	0.863
1,2,3,7,8-PeCDD	1.136
1,2,3,7,8-PeCDF	0.864
2,3,4,6,7,8-HxCDF	4.566
2,3,4,7,8-PeCDF	0.671
2,3,7,8-TCDD	0.158
2,3,7,8-TCDF	2.798
OCDD	4.823
OCDF	2.006
Total HpCDD	6.638
Total HpCDF	1.364
Total HxCDD	5.173
Total HxCDF	2.593
Total PeCDD	0.719
Total PeCDF	2.595
Total TCDD	1.92
Total TCDF	0.168

METHOD BLANK SURROGATE REVIEW—EGGS

Below are the surrogate recoveries for method blanks. All method blank surrogates are within criteria of 30-130 % recovery with the exception of 13C-OCDD.

PARAM_NAME	Method Blank Surrogate (Avg % Recovery)
13C-1,2,3,4,6,7,8-HpCDD	78.5
13C-1,2,3,4,6,7,8-HpCDF	76.4
13C-1,2,3,4,7,8,9-HpCDF	77.8
13C-1,2,3,4,7,8-HxCDD	80.9
13C-1,2,3,4,7,8-HxCDF	82.4
13C-1,2,3,6,7,8-HxCDD	82.4
13C-1,2,3,6,7,8-HxCDF	81.2
13C-1,2,3,7,8,9-HxCDF	78.4
13C-1,2,3,7,8-PeCDD	79.2
13C-1,2,3,7,8-PeCDF	77.0
13C-2,3,4,6,7,8-HxCDF	79.7
13C-2,3,4,7,8-PeCDF	75.4
13C-2,3,7,8-TCDD	74.6
13C-2,3,7,8-TCDF	75.3
13C-OCDD	66.7
37Cl-2,3,7,8-TCDD	80.8

MATRIX SPIKE CARBON LABELED SURROGATE STANDARDS—EGGS

Below are the average carbon labeled surrogates for dioxin and furan analysis of egg samples. All meet criteria of 30-130% with the exception of 13C-OCDD. .

PARAM_NAME	Matrix Spike Surrogates (Avg % Rec)
13C-1,2,3,4,6,7,8-HpCDD	78.3
13C-1,2,3,4,6,7,8-HpCDF	77.0
13C-1,2,3,4,7,8,9-HpCDF	79.0
13C-1,2,3,4,7,8-HxCDD	82.3
13C-1,2,3,4,7,8-HxCDF	83.2
13C-1,2,3,6,7,8-HxCDD	79.9
13C-1,2,3,6,7,8-HxCDF	81.8
13C-1,2,3,7,8,9-HxCDF	79.5
13C-1,2,3,7,8-PeCDD	84.7
13C-1,2,3,7,8-PeCDF	81.9
13C-2,3,4,6,7,8-HxCDF	80.2
13C-2,3,4,7,8-PeCDF	78.1

13C-2,3,7,8-TCDD	79.5
13C-2,3,7,8-TCDF	82.0
13C-OCDD	65.5
37Cl-2,3,7,8-TCDD	85.8

DUPLICATE REVIEW—EGGS

Detailed comparisons of individual congeners RPD's showed that 1,2,3,4,6,7,8-HPCDF was outside control limits with RPD of 124 and 2,3,7,8 TCDF (2) was outside control limits with an RPD of 90.87. This sample was nearer detection limits so added variability can be assumed. In addition, comparison of total dioxins and furans RPD's were less than the established criteria of +/- 40 RPD.

DETECTION LIMITS—PLASMA

Given below are the n, min, max and average sample specific detection limits for dioxin and furan analysis of plasma samples. See discussion of SPDL's under detection limits metals down. TCDF (2) is Rep 2 confirmation analysis.

PARAM_NAME	Minimum pg/g	Maximum pg/g	Average pg/g	n Samples
1,2,3,4,6,7,8-HpCDD	0.1	3.28	0.366	36
1,2,3,4,6,7,8-HpCDF	0.14	3.06	0.469	36
1,2,3,4,7,8,9-HpCDF	0.14	3.06	0.468	36
1,2,3,4,7,8-HxCDD	0.1	0.81	0.361	36
1,2,3,4,7,8-HxCDF	0.1	0.6	0.262	36
1,2,3,6,7,8-HxCDD	0.1	0.81	0.361	36
1,2,3,6,7,8-HxCDF	0.1	0.6	0.262	36
1,2,3,7,8,9-HxCDD	0.1	0.81	0.361	36
1,2,3,7,8,9-HxCDF	0.1	0.6	0.262	36
1,2,3,7,8-PeCDD	0.16	1.06	0.418	36
1,2,3,7,8-PeCDF	0.13	0.98	0.333	36
2,3,4,6,7,8-HxCDF	0.1	0.6	0.262	36
2,3,4,7,8-PeCDF	0.13	0.98	0.334	36
2,3,7,8-TCDD	0.17	1.03	0.363	36
2,3,7,8-TCDF	0.1	0.56	0.284	36
2,3,7,8-TCDF (rep 2)	0.16	0.484	0.273	36
OCDD	0.00169	13.7	1.323	36
OCDF	0.000422	12.6	1.186	36
Total HpCDD	0.0495	3.28	0.365	36
Total HpCDF	0.0495	3.06	0.465	36
Total HxCDD	0.0495	0.81	0.356	36

Total HxCDF	0.00131	0.6	0.259	36
Total PeCDD	0.0495	1.06	0.410	36
Total PeCDF	0.0495	0.98	0.331	36
Total TCDD	0.0099	1.03	0.358	36
Total TCDF	0.000432	0.56	0.280	36

LAB CONTROL SAMPLE—PLASMA

Given below are the average laboratory control samples and carbon labeled surrogate samples for dioxin and furan analysis of plasma samples. Both were within criteria of +/- 30 % and 30-130 % recovery with the exception of 13C-OCDD.

PARAM_NAME	LCS (Avg % Rec)
1,2,3,4,6,7,8-HpCDD	101.5
1,2,3,4,6,7,8-HpCDF	101.2
1,2,3,4,7,8,9-HpCDF	99.4
1,2,3,4,7,8-HxCDD	100.3
1,2,3,4,7,8-HxCDF	100.7
1,2,3,6,7,8-HxCDD	102.3
1,2,3,6,7,8-HxCDF	100.8
1,2,3,7,8,9-HxCDD	100.5
1,2,3,7,8,9-HxCDF	101.9
1,2,3,7,8-PeCDD	100.1
1,2,3,7,8-PeCDF	101.0
2,3,4,6,7,8-HxCDF	100.4
2,3,4,7,8-PeCDF	102.5
2,3,7,8-TCDD	99.6
2,3,7,8-TCDF	103.6
OCDD	106.0
OCDF	117.0
Carbon Labeled Surrogates	
13C-1,2,3,4,6,7,8-HpCDD	75.5
13C-1,2,3,4,6,7,8-HpCDF	78.9
13C-1,2,3,4,7,8,9-HpCDF	77.0
13C-1,2,3,4,7,8-HxCDD	82.2
13C-1,2,3,4,7,8-HxCDF	81.5
13C-1,2,3,6,7,8-HxCDD	82.6
13C-1,2,3,6,7,8-HxCDF	81.9
13C-1,2,3,7,8,9-HxCDF	79.8
13C-1,2,3,7,8-PeCDD	90.7
13C-1,2,3,7,8-PeCDF	83.0
13C-2,3,4,6,7,8-HxCDF	82.1

13C-2,3,4,7,8-PeCDF	84.1
13C-2,3,7,8-TCDD	81.0
13C-2,3,7,8-TCDF	81.1
13C-OCDD	55.4
37Cl-2,3,7,8-TCDD	84.0

METHOD BLANK REVIEW—PLASMA

Below are the total Method blank concentrations (n=5) from the five sample delivery groups for dioxin and furan analysis of plasma samples . Results were not blank corrected, as it was determined that these total method blank concentrations would not significantly alter interpretation of tissue concentrations.

PARAM_NAME	Total pg/g
1,2,3,4,6,7,8-HpCDD	6.91
1,2,3,4,6,7,8-HpCDF	9.81
1,2,3,4,7,8,9-HpCDF	2.65
1,2,3,4,7,8-HxCDD	2.00
1,2,3,4,7,8-HxCDF	4.50
1,2,3,6,7,8-HxCDD	2.63
1,2,3,6,7,8-HxCDF	1.92
1,2,3,7,8,9-HxCDD	2.20
1,2,3,7,8,9-HxCDF	2.85
1,2,3,7,8-PeCDD	1.56
1,2,3,7,8-PeCDF	1.91
2,3,4,6,7,8-HxCDF	2.84
2,3,4,7,8-PeCDF	2.56
2,3,7,8-TCDD	1.90
2,3,7,8-TCDF	0.75
2,3,7,8-TCDF	0.67
OCDD	41.26
OCDF	11.63
Total HpCDD	8.25
Total HpCDF	3.47
Total HxCDD	4.02
Total HxCDF	6.91
Total PeCDD	1.56
Total PeCDF	1.49
Total TCDD	1.00
Total TCDF	0.00

METHOD BLANK SURROGATE REVIEW—PLASMA

Below are the surrogate recoveries for method blanks. All method blank surrogates are within criteria of 30-130 %.

PARAM_NAME	Method blank Surrogate (Avg % Rec)
13C-1,2,3,4,6,7,8-HpCDD	76.7
13C-1,2,3,4,6,7,8-HpCDF	76.1
13C-1,2,3,4,7,8,9-HpCDF	80.1
13C-1,2,3,4,7,8-HxCDD	82.6
13C-1,2,3,4,7,8-HxCDF	83.1
13C-1,2,3,6,7,8-HxCDD	83.1
13C-1,2,3,6,7,8-HxCDF	83.7
13C-1,2,3,7,8,9-HxCDF	80.5
13C-1,2,3,7,8-PeCDD	77.8
13C-1,2,3,7,8-PeCDF	75.2
13C-2,3,4,6,7,8-HxCDF	81.3
13C-2,3,4,7,8-PeCDF	73.9
13C-2,3,7,8-TCDD	77.0
13C-2,3,7,8-TCDF	75.7
13C-OCDD	55.7
37Cl-2,3,7,8-TCDD	79.7

MATRIX SPIKE CARBON LABELED SURROGATE STANDARDS—PLASMA

Below are the average matrix spike carbon labeled surrogates for dioxin and furan analysis of plasma egg samples. All meet criteria of 30-130%

PARAM_NAME	Matrix Spike Surrogates (Avg % Rec)
13C-1,2,3,4,6,7,8-HpCDD	70.0
13C-1,2,3,4,6,7,8-HpCDF	69.3
13C-1,2,3,4,7,8,9-HpCDF	72.0
13C-1,2,3,4,7,8-HxCDD	80.4
13C-1,2,3,4,7,8-HxCDF	78.1
13C-1,2,3,6,7,8-HxCDD	80.8
13C-1,2,3,6,7,8-HxCDF	77.6

13C-1,2,3,7,8,9-HxCDF	75.9
13C-1,2,3,7,8-PeCDD	81.2
13C-1,2,3,7,8-PeCDF	77.8
13C-2,3,4,6,7,8-HxCDF	79.7
13C-2,3,4,7,8-PeCDF	78.1
13C-2,3,7,8-TCDD	77.8
13C-2,3,7,8-TCDF	78.2
13C-OCDD	48.1
37Cl-2,3,7,8-TCDD	82.3

DUPLICATE REVIEW—PLASMA

Duplicate samples were not available due to limited amount of sample.