

# NEWARK BAY CONTAMINATED SEDIMENT STUDY

U.S. Environmental Protection Agency

## PROJECT UPDATE

Newark Bay Study-Diamond Alkali Superfund Site

Winter 2008



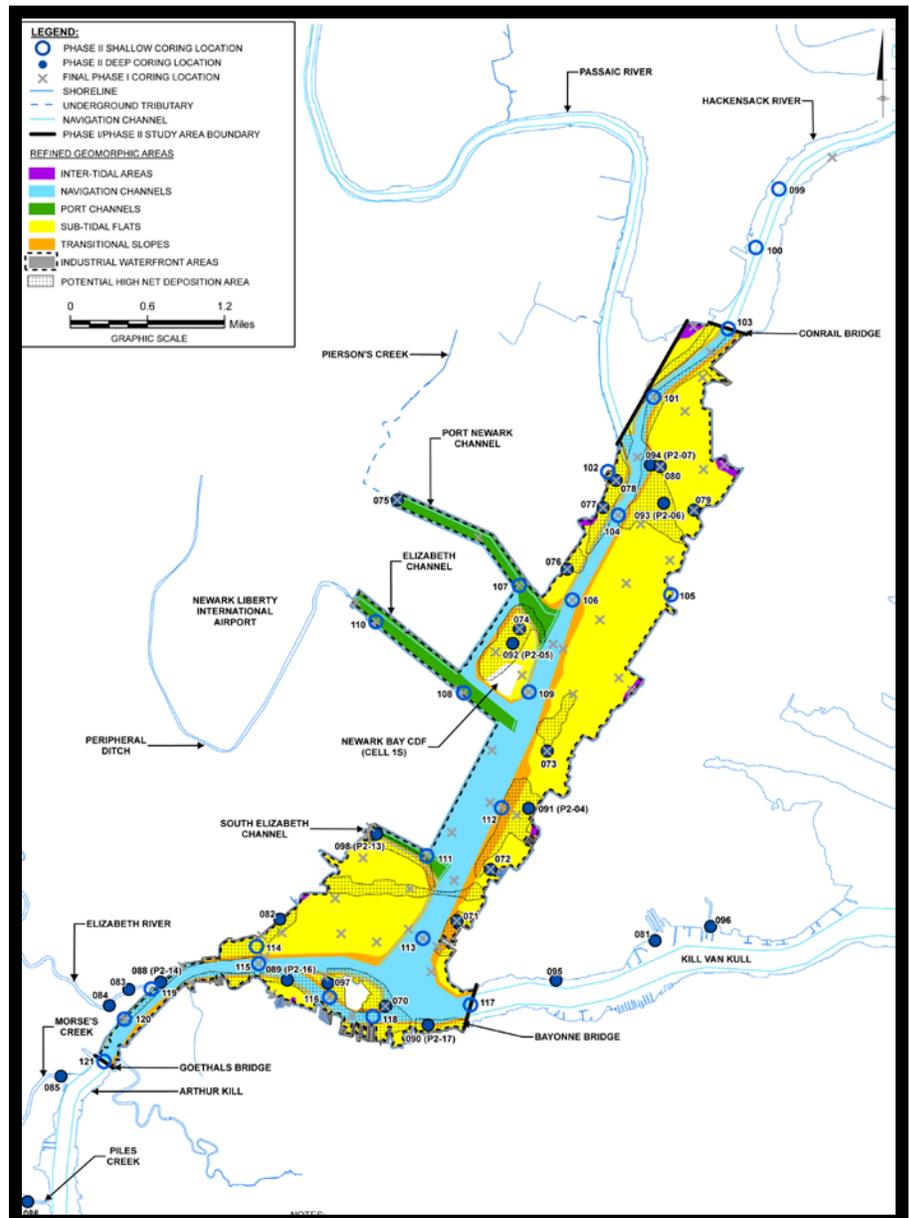
### Second Phase of Sediment Sampling Completed

A comprehensive investigation of sediment contamination in Newark Bay is currently underway. In December 2007 a major milestone was reached in this important study with the completion of Phase 2 of the sediment sampling field work. The investigation is part of a multi-year, multi-phase effort to assess the nature and extent of contamination in Newark Bay and portions of the Hackensack River, the Arthur Kill and the Kill Van Kull. Sediment cleanup plans may be developed, as necessary, based on the findings of this investigation. EPA is overseeing the work of Tierra Solutions, Inc., which is performing the work for Occidental Chemical Corporation, a signatory to an agreement with EPA in 2004.

### Sediment Studies Will Help Answer the "Where, When and How" of Contamination in Newark Bay

Phase 1 sampling and other field work began in the fall of 2005. Phase 2 work is generally considered to be an extension of Phase 1 work. The primary purpose of Phase 2 is to characterize sediments in select areas of Newark Bay that have had significant accumulation of sediments since 1940. The characterization of sediments during Phase 2 will enhance EPA's understanding of contaminant deposition and distribution patterns over time in Newark Bay and it will help identify sources of contaminants.

Collection and analysis of sediment cores began on October 23, 2007 within varied geomorphic units in Newark Bay (e.g., navigation channels, sub-tidal flats). Fifty sediment cores were collected from October through December 2007. Those cores produced 360 sediment samples that were analyzed for a variety of contaminants, including PCBs, dioxin, pesticides, mercury and metals and 451 samples that were analyzed for "radiochemistry" parameters to determine how long ago the sediments were deposited. A Phase 3 effort is needed to fully accomplish all of the goals of the Newark Bay Study.



**Stakeholder Meetings to be Held Regularly Starting in March 2008**

Public outreach and information sharing on the Newark Bay Study are an important part of site decision-making. EPA will convene "Project Delivery Team" meetings on a regular basis, such as once per quarter, beginning on March 5, 2008. These meetings will be devoted to information sharing and input on the Newark Bay Study among stakeholders and federal and state agencies. Information on the meeting dates and locations will be distributed electronically and posted on the project Web site at [www.ournewarkbay.org](http://www.ournewarkbay.org)

## Phase 1 & Phase 2 Findings to be Ready by Fall 2008

A detailed evaluation of the Phase 1 and 2 results will be performed once all of the Phase 2 data are validated. Sample data will be summarized and evaluation results included in a preliminary remedial investigation report that will be prepared by Tierra Solutions, Inc under EPA oversight. The report is scheduled for completion in fall 2008. Once it is approved by EPA, the remedial investigation report will be made available to the public.

Work plans detailing both phases of sediment sampling work that have been conducted are available on the "Project Activities" page on the project Web site at [www.ournewarkbay.org](http://www.ournewarkbay.org). The sediment sample analytical results from the Phase 1 effort are also available on the "Project Activities" page.

## What's Next?

- Samples collected in Phase 2 are currently going through a laboratory analysis and data validation process. The Phase 2 data will also be compared to data from a group of split samples collected by EPA.
- Data evaluation and interpretation will begin when the validated data are received from the labs. Interpretation of the data is a routine step in the remedial investigation process that is necessary to determine the big picture as to nature and extent of contamination, including the determination of what pieces of information may still need to be gathered to complete the picture.
- A report will be prepared which will contain a data assessment for Phases 1 and 2 of the Newark Bay Study and a Conceptual Site Model, which identifies what is known and unknown about a site, such as contaminant distribution and potential sources, transport pathways, exposure pathways and who or what may be exposed. A Conceptual Site Model is used to help organize information about a site, focus resources and communicate site information, as well as to help test assumptions and identify data gaps.
- Plans will be developed for Phase 3 of the remedial investigation. A third round of site investigation work is necessary in order to fully accomplish the Newark Bay remedial investigation goals.
- Public outreach in fall 2008 will focus on Newark Bay remedial investigation results to-date and plans for additional site work.

## PROJECT UPDATE

### A Legacy of Urbanization & Industrialization

Newark Bay is part of the New York/New Jersey Harbor Estuary, which is in the center of one of the most urbanized and industrialized parts of the nation. The urbanization and industrialization of the Newark Bay area came, however, at a cost. Newark Bay and surrounding areas suffer from habitat loss, sediment contamination, degraded water quality, and are under fish and shellfish consumption bans and advisories.

In the early 1980's, EPA found soil contaminated with dioxin at Diamond Alkali Company - a former pesticides manufacturing site located on the Lower Passaic River in Newark. EPA added the Diamond Alkali site to its Superfund National Priorities List in 1984, making it eligible for federal cleanup funds under the Superfund program. Dioxin, pesticides and other hazardous substances were found in sediment samples taken from the Passaic River. Because of river flow and the tidal nature of the Passaic River, EPA had reason to believe that the contaminants had migrated beyond the boundary created for the Lower Passaic River study, and signed an agreement with Occidental in February 2004 to study the Newark Bay watershed.

### Fish & Shellfish Advisories Are in Effect

There are fish and shellfish consumption advisories in place for the Newark Bay region. Most importantly, everyone should be aware that eating blue claw crabs from this area may cause cancer and harm brain development in unborn and young children. People found catching crabs in this area can be fined by the state of New Jersey. For additional information on the Newark Bay area advisories, please call toll free 1-866-DEP-KNOW, or visit [www.state.nj.us/dep/dsr/njmainfish.htm](http://www.state.nj.us/dep/dsr/njmainfish.htm).

### How to Get Information

If you have questions regarding EPA's public outreach activities, please call David Kluesner, the Community Involvement Coordinator for the site, at 212-637-3653 or toll free at 1-800-346-5009. If you would like more information on the Newark Bay Study, please call Elizabeth Butler, EPA Project Manager, at 212-637-4396. Additional information about the project, including the Community Involvement Plan for the Newark Bay Study and Lower Passaic River Restoration Project, are available on the project Web site at [www.ournewarkbay.org](http://www.ournewarkbay.org). You can also visit the following information repositories for the Diamond Alkali site:

#### U.S. EPA Records Center

290 Broadway, 18th Floor New York, N.Y. 10007  
Hours: Mon - Fri.: 9AM - 4PM Phone: (212) 637-3000

#### Newark Public Library

NJ Reference Section 5 Washington Street Newark, N.J. 07101  
Phone: (201) 733-7775

#### Elizabeth Public Library

11 South Broad Street Elizabeth, N.J. 07202  
Phone: (908) 354-6060