300 Broadacres Drive, Bloomfield, New Jersey 07003

February 28, 2005

Ms. Lisa Baron
New Jersey Department of Transportation
Office of Maritime Resources
1035 Parkway Avenue
MOB, 3rd Floor
Trenton, NJ 08625

Re: Report for December 14, 2004 – February 24, 2005 Field Reconnaissance
Lower Passaic River Restoration Project
NJDOT Agreement No. 2001-NJM02

Dear Ms. Baron:

Telephone
973.338.6680
Facsimile
973.338.1052

Sites have been identified by the project Partners and Trustees for consideration as restoration sites under the Lower Passaic River Restoration Project. To understand the potential for restoration opportunities for these sites, field reconnaissance (recon) is being conducted. The purpose of this report is to document the 2nd round of field recon, which took place December 2004 - February 2005. The 1st round of recon was conducted in October 2004 and reported by Malcolm Pirnie in a letter dated January 5, 2005. The data collected by the restoration team during the recon will provide basic information necessary to evaluate and screen sites for their potential as candidate restoration areas. In the future, a detailed summary report will be prepared to document all recon, site screening, and site selection processes.

This 2nd round of field recon was conducted on the Lower Passaic River as well as the Second River and Third River corridors between December 14, 2004 and February 24, 2005. Field data sheets were completed for each site visited; narrative forms were considered appropriate for Second River and Third River because of the spatial extent of these locations. These narratives are attached to their respective field data sheets in Attachment 1.

Data collected from Passaic River sites during the recon are included on the Field Data Sheets (Attachment 1). The field data sheets also include photographs that were taken during site reconnaissance. The data included on the field sheets are based on the observations made by the field team. In some cases, data were added to the field sheets from other sources (e.g., the project's geographic information system). Attachment 2 includes maps illustrating the site locations. All field surveys in this 2nd round were conducted via automobile or on foot.

Activities for Tuesday, December 14, 2004
Team members John Rollino of TAMS/EarthTech (TAMS) and Brian Gillen of Malcolm Pirnie, Inc (Malcolm Pirnie) met at the Earth/Tech office in Bloomfield, NJ. On this date, the team visited Passaic River sites 1C, 3N, 3TMS, 4C, 2C, 3C, 5C, 1N, 2N, 6C, and 5N. The team attempted to visit site 31N as well, but the location information available for this site was inaccurate. The team could not photograph sites 5N and 6C on this date because of a camera problem. Site 1C is in à highly disturbed industrial area – the possibility of contamination issues was noted.

Activities for Thursday, December 16, 2004
Field personnel again consisted of John Rollino of TAMS and Brian Gillen of Malcolm Pirnie. The team started out from the TAMS office in Bloomfield, NJ and re-visited sites 5N and 6C in order to photograph these sites. The team then went to visit Passaic River sites 4N, 2TMS, and 11N. There were signs of site utilization as encampments by homeless people at 5N, 6C, and 4N. The team then attempted to visit 32N, 33N, and 34N, but as in the case on December 16, 2004, the available location information regarding these sites was inaccurate. At this point, the team returned to the TAMS Bloomfield office to try to rectify the problem. By checking site descriptions in alternate sources, the correct location of sites 32N, 33N, and 34N was determined. Site 31N was not located and appears to be outside the study area. (The maps in Attachment 2 have been updated with the correct location information.) Sites 32N, 33N, and 34N are all located in the Third River corridor. Site 32N is known as "Clark's Pond" at a location where Third River is dammed; site 34N is also known as Scientific Glass; and site 33N is between sites 32N and 34N. Sites 32N and 33N are described on the same field data sheets.

Activities for Tuesday, December 21, 2004
Field personnel for this day consisted of John Rollino of TAMS and Brian Gillen (Malcolm Pirnie), who set out again from the TAMS Bloomfield office, and Bill Shadell of the US Army Corps of Engineers (USACE), who met Rollino and Gillen in the field. After driving out to the site, Rollino and Gillen started out on foot at approximately 9:30 AM from the Main Street/Old Route 21 Bridge in Belleville, NJ, and proceeded up the Second River corridor. Rollino and Gillen were met at approximately mid-morning by Bill Shadell. Second River observations and recommendations are presented in Attachment 1 as part of the Second River field sheet.

Activities for Friday, January 7, 2005
Team members John Rollino (TAMS) and Brian Gillen (Malcolm Pirnie) met at the TAMS office in Bloomfield. The team first attempted to visit site 35N, a location which is adjacent to the lower Passaic River. Upon arrival at the site, the team was stopped by Public Service Electric and Gas (PSE&G) employees who informed them that they could not take pictures of the location, which appeared to be a large, vacant

lot surrounded by industrial facilities, due to "national security" considerations (no field data sheet was completed for site 35N). The team also visited site 30N on this date.

For reasons of location and efficiency, the team next proceeded to revisit site 32N. A small wetland was noted adjacent to the Southwest border of the pond. The team then returned to Second River at Chestnut and Fullerton Avenues to complete reconnaissance of the river corridor. The team then proceeded to the Third River to initiate a survey of that river corridor. Second River and Third observations and recommendations are presented in the attached narrative.

Activities for Tuesday, January 11, 2005
Team members John Rollino (TAMS) and Brian Gillen (Malcolm Pirnie) met at the TAMS office in Bloomfield, and beginning at the Glen Ridge Country Club, Glen Ridge, NJ, they proceeded to complete their survey of the Third River corridor.

Activities for Thursday, February 24, 2005
Team member Mark Moese visited the City of Bloomfield Tax assessor and determined the location of the Scientific Glass Company site (formally named NOAA site American Scientific). The site is located on Lionsgate Drive. The parcel consist of two lots one with approximately 8.7 acres the other of 2.3 acres. Both lots are separated by a town home development.

Observations
The potential restoration sites observed during this five day survey could be categorized as:

- Parcels of varying size adjacent to or proximal to the Passaic River, e.g., 3N, 4N, 5N, 6C, etc. Some of these locations (4N, 5N, and 6C) appeared to be utilized as campsites by the homeless.
- Sites located in the corridors of the Second River and Third River. Large parts of the Second and Third rivers had concrete or stone walls. Many municipal parks are located on the rivers. The bed of the Second River is, in many reaches, composed of concrete slabs or anthropogenically installed cobblestones. Second River and Third River observations are discussed in detail in the attached narrative.

A number of restoration activities are possible at the Passaic River sites, such as (1) removal of invasive flora and replacement with native species, (2) creation of new wetland and open water areas, and (3) where possible creation of new tidal channels and re-establishment of tidal connections or improve existing hydrology. Contaminated soil/groundwater could be an issue at some of these sites.

Possible restoration activities in the Second River and Third River corridors include (1) debris removal, (2) upgrade or softening of the many outfalls, which discharge storm water, noted along both rivers, and (3) the removal of invasive flora with subsequent replacement with indigenous species. As many of these locations are adjacent to local parks, the possibility exists for restoration activities to result in an increase in public access and use of these areas.

Summary

A variety of potential restoration sites in the lower Passaic River, Second River, and Third River were observed during the 2nd round of field reconnaissance conducted between December 14, 2004 and February 24, 2005, many of which present a range of restoration possibilities. As the assessment process continues, it will be possible to make informed decisions regarding which sites make the best candidates for restoration activities and which should be evaluated in greater detail.

Recommendations

The information gathered in the two rounds of field reconnaissance should be used as the basis for further discussions (e.g., Restoration Workshops) and screening of sites. It is further recommended that the sites that are contiguous be grouped and renumbered for clarity.

If you have any questions regarding this submittal, please do not hesitate to contact me at 973-338-6680 or Scott Thompson of Malcolm Pirnie at 914-641-2628.

Very truly yours,

Earth Tech

Mark D. Moese, PhD
Project Manager

Attachment 1: Field Data Sheets
Attachment 2: Maps

cc: NJDOT/OMR: L. Baron (2 copies)
USACE: P. Sabalis (4 copies)
NOAA: R. Mehran (2 copies)
USEPA: A. Yeh (1 copy)
MP: S. Thompson (2 copies)
TAMS: M. Thigaram, J. Rollino

Attachment 1

LOWER PASSAIC RESTORATION PROJECT
POTENTIAL RESTORATION SITE FIELD DATA FORM

Date:	12/14/04	Field Personnel:	JR/BG
Time:	Approx 9:30am	Last High/Low Tide:	High tide
Photos: Attached			

Table 1 - General Information				
Site Name / Number: 1C				
Location Description: PASSAIC RIVER RIGHT BANK DESCENDING (Passaic, Passaic County) Passaic River near the Eighth Street Bridge				
Approx. Physical Dimensions of Site: Triangle with approximate dimensions of 1600′ × 700′				
System Elements (check one):	Marine ( )	Estuarine (X)	Riverine (X)	Palustrine (X)

Table 2 – Adjacent Land Use/Surrounding Land Use		
	X*	**Comments**
Commercial		
Industrial	75%	
Residential		
Recreational		
Community (school/church)		
Vacant		
Access (land or water)		
Pollution/Contamination		
Observations: Highly disturbed industrial area, disturbed vacant lots with opportunistic, urban vegetation to the north. Old factory(s) – likely contamination issues,		

**Throughout this form, check (X) all that apply (unless otherwise specified).*

Table 3 – Sources of Stress		
	X	**Comments**
Outfalls		No surface water discharge sites located within 500 ft
Storm Drains		
Dumping / Filling	X	
Debris	X	
Industrial Facilities / Uses	X	
Other: RCRA sites	X	Four RCRA sites located within 500 ft
Other: NJ Known Contaminated Site	X	14 NJ Known Contaminated Sites located within 500 ft

LOWER PASSAIC RESTORATION PROJECT
POTENTIAL RESTORATION SITE FIELD DATA FORM

Table 4 – Substrate			
Substrate Type	**Approx. Percent Composition (0-100%)**		
	1	**2**	**3**
Bedrock			See comments below
Boulder/Rip Rap			
Coarse (Cobble/Gravel)			
Fine (Sand/Silt/Clay)			
Organic			
Open Water (unknown)			

Table 5 – Hydrologic Features		
Classification	**X**	**Comments**
Tidal		See comments below
Subtidal		
Intertidal		
Lower Perennial		
Upper Perennial		
Intermittent		
Unknown		
Water Regime	**X**	**Comments**
Permanently Flooded		
Temporarily /Seasonally Flooded		
Intermittently Flooded (event dependant)		
Saturated		
Artificially Flooded		
Unknown		
Describe Hydrologic Features / Drainage Pathways:		

Table 6 – Bank Assessment (if applicable)								
Stability			**Percent Bank Erosion**	**Percent Composition (0-100%)**				
				1		**2**		**3**
Stable- bank stable; evidence of erosion or bank failure absent or minimal			< 5%					
Moderately Stable- infrequent small areas of erosion mostly healed			5 – 30%					
Moderately Unstable- areas of erosion present, unhealed			30 – 60%					
Unstable- eroded areas frequent along straight sections, obvious bank sloughing			60 – 100%					
Approx Slope:		Horizontal to 1 Vertical		Slope Dimensions:		ft Wide x		ft Long

LOWER PASSAIC RESTORATION PROJECT
POTENTIAL RESTORATION SITE FIELD DATA FORM

Table 7 – Vegetative Cover Components						
Vegetation Class	**Approx. % Cover**			**Dominant Species**		
UPLAND:	**1**	**2**	**3**	**1**	**2**	**3**
Forested				See comments below		
Scrub/Shrub						
Old Field						
Urban (describe:)						
WETLAND:						
Forested Wetland						
Scrub/Shrub Wetland						
Herbaceous Wetland						
Mud Flat						
Open Water / Emergent						

Table 8 – Faunal Observations			
Avian	**Type**	**Approx #**	**Habitat Association**
			See comments below
Mammalian			
Fish			
Herptiles			
Invertebrates			

Table 9 – Floral Observations			
Algal	**Type**	**Approx Cover**	**Habitat Association**
			See comments below
Emergent			
Shrub			
Trees			

LOWER PASSAIC RESTORATION PROJECT
POTENTIAL RESTORATION SITE FIELD DATA FORM

Table 10 – Potential Restoration Components		
	X	**Comments**
Remove Manmade Structures		
Remove Fill / Debris		
Lower Grade		
Raise Grade		
Remove Invasive Species		
Replant Indigenous Species	X	
Flatten Shoreline		
Biostabilize (Shoreline)		
Eliminate Stresses		
Hydrology Alterations / Improvements		
Other Habitat Enhancements		
Human Use	X	
Other	X	
Restoration Concept Narrative:		

Tables 11 and 12 to be completed at the Restoration Workshop

Table 11 - Potential to Achieve Restoration Goals		
Restoration Goal	**X**	**Comments**
Improve Water Quality		
Improve Flora		
Improve Fauna		
Improve Sediment Quality		
Improve Human Use		

Table 12 – Overall Evaluation of Site Potential	
	X (check one only)
Rank I: Good / Great Site – Merits Further Study	
Rank II: Poor Site – Unlikely Candidate for Restoration	
Unable to Determine Site Potential	
Rationale for Site Ranking:	

Attachment 1

LOWER PASSAIC RESTORATION PROJECT
POTENTIAL RESTORATION SITE FIELD DATA FORM

Date:	12/14/04	Field Personnel:	JR/BG
Time:	Approx 9:30am	Last High/Low Tide:	High tide
Photos: Attached			

Table 1 - General Information				
Site Name / Number: 1C				
Location Description: PASSAIC RIVER RIGHT BANK DESCENDING (Passaic, Passaic County) Passaic River near the Eighth Street Bridge				
Approx. Physical Dimensions of Site: Triangle with approximate dimensions of 1600′ × 700′				
System Elements (check one):	Marine ( )	Estuarine (X)	Riverine (X)	Palustrine (X)

Table 2 – Adjacent Land Use/Surrounding Land Use		
	X*	**Comments**
Commercial		
Industrial	75%	
Residential		
Recreational		
Community (school/church)		
Vacant		
Access (land or water)		
Pollution/Contamination		
Observations: Highly disturbed industrial area, disturbed vacant lots with opportunistic, urban vegetation to the north. Old factory(s) – likely contamination issues,		

**Throughout this form, check (X) all that apply (unless otherwise specified).*

Table 3 – Sources of Stress		
	X	**Comments**
Outfalls		No surface water discharge sites located within 500 ft
Storm Drains		
Dumping / Filling	X	
Debris	X	
Industrial Facilities / Uses	X	
Other: RCRA sites	X	Four RCRA sites located within 500 ft
Other: NJ Known Contaminated Site	X	14 NJ Known Contaminated Sites located within 500 ft

LOWER PASSAIC RESTORATION PROJECT
POTENTIAL RESTORATION SITE FIELD DATA FORM

Table 4 – Substrate			
Substrate Type	**Approx. Percent Composition (0-100%)**		
	1	**2**	**3**
Bedrock			See comments below
Boulder/Rip Rap			
Coarse (Cobble/Gravel)			
Fine (Sand/Silt/Clay)			
Organic			
Open Water (unknown)			

Table 5 – Hydrologic Features		
Classification	**X**	**Comments**
Tidal		See comments below
Subtidal		
Intertidal		
Lower Perennial		
Upper Perennial		
Intermittent		
Unknown		
Water Regime	**X**	**Comments**
Permanently Flooded		
Temporarily /Seasonally Flooded		
Intermittently Flooded (event dependant)		
Saturated		
Artificially Flooded		
Unknown		
Describe Hydrologic Features / Drainage Pathways:		

Table 6 – Bank Assessment (if applicable)								
Stability	**Percent Bank Erosion**	**Percent Composition (0-100%)**		
		1	**2**	**3**
Stable- bank stable; evidence of erosion or bank failure absent or minimal	< 5%			
Moderately Stable- infrequent small areas of erosion mostly healed	5 – 30%			
Moderately Unstable- areas of erosion present, unhealed	30 – 60%			
Unstable- eroded areas frequent along straight sections, obvious bank sloughing	60 – 100%			
Approx Slope:		Horizontal to 1 Vertical		Slope Dimensions:		ft Wide x		ft Long

LOWER PASSAIC RESTORATION PROJECT
POTENTIAL RESTORATION SITE FIELD DATA FORM

Table 7 – Vegetative Cover Components						
Vegetation Class	**Approx. % Cover**			**Dominant Species**		
UPLAND:	**1**	**2**	**3**	**1**	**2**	**3**
Forested				See comments below		
Scrub/Shrub						
Old Field						
Urban (describe:)						
WETLAND:						
Forested Wetland						
Scrub/Shrub Wetland						
Herbaceous Wetland						
Mud Flat						
Open Water / Emergent						

Table 8 – Faunal Observations			
Avian	**Type**	**Approx #**	**Habitat Association**
			See comments below
Mammalian			
Fish			
Herptiles			
Invertebrates			

Table 9 – Floral Observations			
Algal	**Type**	**Approx Cover**	**Habitat Association**
			See comments below
Emergent			
Shrub			
Trees			

Table 10 – Potential Restoration Components		
	X	**Comments**
Remove Manmade Structures		
Remove Fill / Debris		
Lower Grade		
Raise Grade		
Remove Invasive Species		
Replant Indigenous Species	X	
Flatten Shoreline		
Biostabilize (Shoreline)		
Eliminate Stresses		
Hydrology Alterations / Improvements		
Other Habitat Enhancements		
Human Use	X	
Other	X	
Restoration Concept Narrative:		

Tables 11 and 12 to be completed at the Restoration Workshop

Table 11 - Potential to Achieve Restoration Goals		
Restoration Goal	**X**	**Comments**
Improve Water Quality		
Improve Flora		
Improve Fauna		
Improve Sediment Quality		
Improve Human Use		

Table 12 – Overall Evaluation of Site Potential	
	X (check one only)
Rank I: Good / Great Site – Merits Further Study	
Rank II: Poor Site – Unlikely Candidate for Restoration	
Unable to Determine Site Potential	
Rationale for Site Ranking:	

Additional Comments and Observations (use additional sheets if necessary):

Site is currently a large factory.

Shoreline is steep with woody vegetation.

Restoration limited – potential contamination issues with factory.

Site 1C: Side of railroad tracks

LOWER PASSAIC RESTORATION PROJECT
POTENTIAL RESTORATION SITE FIELD DATA FORM

Date:	12/14/04	Field Personnel:	JR/BG
Time:	10:33AM	Last High/Low Tide:	High tide
Photos: Attached			

Table 1 - General Information				
Site Name / Number: 3TMS / 3N				
Location Description: PASSAIC RIVER RIGHT BANK DESCENDING (Passaic, Passaic County) Veterans CT – Passaic "Dundee Island Park"				
Approx. Physical Dimensions of Site: Rectangle with approximate dimensions of 1300′ × 300′ (3N is larger)				
System Elements (check one):	Marine ( )	Estuarine (X)	Riverine (X)	Palustrine ( )

Table 2 - Adjacent Land Use/Surrounding Land Use		
	X*	**Comments**
Commercial		
Industrial		
Residential		
Recreational	X	
Community (school/church)		
Vacant		
Access (land or water)		
Pollution/Contamination		
Observations:		

**Throughout this form, check (X) all that apply (unless otherwise specified).*

Table 3 - Sources of Stress		
	X	**Comments**
Outfalls	X	Two surface water discharges (industrial minor) located within 500 feet
Storm Drains	X	
Dumping / Filling		
Debris	X	
Industrial Facilities / Uses		
Other: RCRA sites	X	One RCRA site located within 500 feet
Other: NJ Known Contaminated Sites	X	Four NJ Known Contaminated Sites located within 500 ft

LOWER PASSAIC RESTORATION PROJECT
POTENTIAL RESTORATION SITE FIELD DATA FORM

Table 4 – Substrate			
Substrate Type	**Approx. Percent Composition (0-100%)**		
	1	**2**	**3**
Bedrock			
Boulder/Rip Rap			
Coarse (Cobble/Gravel)			
Fine (Sand/Silt/Clay)			
Organic			
Open Water (unknown)	X		

Table 5 - Hydrologic Features		
Classification	**X**	**Comments**
Tidal		
Subtidal		
Intertidal	X	If tidally, minimal variation
Lower Perennial		
Upper Perennial		
Intermittent		
Unknown		
Water Regime	**X**	**Comments**
Permanently Flooded		
Temporarily /Seasonally Flooded		
Intermittently Flooded (event dependant)		
Saturated		
Artificially Flooded		
Unknown		
Describe Hydrologic Features / Drainage Pathways:		

Table 6 - Bank Assessment (if applicable)								
Stability			**Percent Bank Erosion**		**Percent Composition (0-100%)**			
					1	**2**	**3**	
Stable- bank stable; evidence of erosion or bank failure absent or minimal			< 5%		X			
Moderately Stable- infrequent small areas of erosion mostly healed			5 - 30%					
Moderately Unstable- areas of erosion present, unhealed			30 - 60%					
Unstable- eroded areas frequent along straight sections, obvious bank sloughing			60 - 100%					
Approx Slope:		Horizontal to 1 Vertical		Slope Dimensions:		ft Wide x		ft Long

LOWER PASSAIC RESTORATION PROJECT
POTENTIAL RESTORATION SITE FIELD DATA FORM

Table 7 - Vegetative Cover Components						
Vegetation Class	**Approx. % Cover**			**Dominant Species**		
UPLAND:	**1**	**2**	**3**	**1**	**2**	**3**
Forested		1%				
Scrub/Shrub		1%				
Old Field						
Urban (describe: PARK)	98%					
WETLAND:						
Forested Wetland						
Scrub/Shrub Wetland						
Herbaceous Wetland						
Mud Flat	X					
Open Water / Emergent	X					

Table 8 - Faunal Observations			
Avian	**Type**	**Approx #**	**Habitat Association**
			Urban species
Mammalian			Urban species; however, site may support larger mammals such as raccoon or opossum.
Fish			Urban species
Herptiles			Urban species
Invertebrates			Urban species

Table 9 - Floral Observations			
Algal	**Type**	**Approx Cover**	**Habitat Association**
			Observations performed outside of growing season.
Emergent	minimal		Observations performed outside of growing season.
Shrub			Deciduous, woody, vegetation common to the Passaic River Banks
Trees			Oaks, maples, rosa multi-flora etc.

LOWER PASSAIC RESTORATION PROJECT
POTENTIAL RESTORATION SITE FIELD DATA FORM

Table 10 – Potential Restoration Components		
	X	**Comments**
Remove Manmade Structures		
Remove Fill / Debris		
Lower Grade		
Raise Grade		
Remove Invasive Species		
Replant Indigenous Species	X	
Flatten Shoreline		
Biostabilize (Shoreline)		
Eliminate Stresses		
Hydrology Alterations / Improvements		
Other Habitat Enhancements		
Human Use	X	
Other		
Restoration Concept Narrative: • Fish aggregate devices in shallows • Shrub/scrub species along river and in unused upland areas		

Tables 11 and 12 to be completed at Restoration Workshop

Table 11 - Potential to Achieve Restoration Goals		
Restoration Goal	**X**	**Comments**
Improve Water Quality		
Improve Flora		
Improve Fauna		
Improve Sediment Quality		
Improve Human Use		

Table 12 – Overall Evaluation of Site Potential	
	X (check one only)
Rank I: Good / Great Site – Merits Further Study	
Rank II: Poor Site – Unlikely Candidate for Restoration	
Unable to Determine Site Potential	
Rationale for Site Ranking:	

Additional Comments and Observations (use additional sheets if necessary):

Park has maintained grass lawns and trees.

Park includes playground and large field with diagonal fences of unknown purpose

River frontage includes a very thin step of un-maintained ground approximately 3 meters wide.

Boat ramp in park.

Vegetation/geomorphology of park is similar to park(s) on river in Lyndhurst, NJ (5TMS, 7TMS, and 8TMS).

Site 3TMS: Boat Ramp

Site 3TMS: Shore line

Site 3TMS: Fields near site

LOWER PASSAIC RESTORATION PROJECT
POTENTIAL RESTORATION SITE FIELD DATA FORM

Date:	12/14/04	Field Personnel:	JR/BG
Time:	10:42AM	Last High/Low Tide:	High tide
Photos: Attached			

Table 1 - General Information				
Site Name / Number: 4C				
Location Description: PASSAIC RIVER LEFT BANK DESCENDING (Garfield, Bergen County) Gravel parking lot on a bluff (approximately 10 feet above river). Slope to river nearly vertical and covered with trees and shrubs.				
Approx. Physical Dimensions of Site: Rectangle with approximate dimensions of 500′ × 200′				
System Elements (check one):	Marine ( )	Estuarine ( )	Riverine (X)	Palustrine ( )

Table 2 – Adjacent Land Use/Surrounding Land Use		
	X*	**Comments**
Commercial	X	
Industrial		
Residential		
Recreational		
Community (school/church)		
Vacant		
Access (land or water)	X	
Pollution/Contamination		
Observations:		

**Throughout this form, check (X) all that apply (unless otherwise specified).*

Table 3 – Sources of Stress		
	X	**Comments**
Outfalls	X	Two surface water discharge sites (industrial minor) located within 500 feet
Storm Drains		
Dumping / Filling		
Debris	X	
Industrial Facilities / Uses		
Other: **STEEP SLOPE/RUNOFF**	X	
Other: RCRA Sites	X	Four RCRA sites located within 500 feet
Other: NJ Known Contaminated	X	Four NJ Known Contaminated Sites located within 500 ft

LOWER PASSAIC RESTORATION PROJECT
POTENTIAL RESTORATION SITE FIELD DATA FORM

Table 4 – Substrate			
Substrate Type	**Approx. Percent Composition (0-100%)**		
	1	**2**	**3**
Bedrock	PARKING LOT		
Boulder/Rip Rap			
Coarse (Cobble/Gravel)			
Fine (Sand/Silt/Clay)			
Organic			
Open Water (unknown)			

Table 5 – Hydrologic Features		
Classification	**X**	**Comments**
Tidal		
Subtidal		
Intertidal	X	
Lower Perennial		
Upper Perennial		
Intermittent		
Unknown		
Water Regime	**X**	**Comments**
Permanently Flooded	X	
Temporarily /Seasonally Flooded		
Intermittently Flooded (event dependant)		
Saturated		
Artificially Flooded		
Unknown		
Describe Hydrologic Features / Drainage Pathways:		

Table 6 – Bank Assessment (if applicable)									
Stability				**Percent Bank Erosion**	**Percent Composition (0-100%)**		
					1	**2**	**3**
Stable- bank stable; evidence of erosion or bank failure absent or minimal				< 5%	X		
Moderately Stable- infrequent small areas of erosion mostly healed				5 – 30%			
Moderately Unstable- areas of erosion present, unhealed				30 – 60%			
Unstable- eroded areas frequent along straight sections, obvious bank sloughing				60 – 100%			
Approx Slope:		Horizontal to 1 Vertical		Slope Dimensions:		ft Wide x		ft Long	

LOWER PASSAIC RESTORATION PROJECT
POTENTIAL RESTORATION SITE FIELD DATA FORM

Table 7 – Vegetative Cover Components						
Vegetation Class	**Approx. % Cover**			**Dominant Species**		
UPLAND:	**1**	**2**	**3**	**1**	**2**	**3**
Forested			3.3% vegetative slope			
Scrub/Shrub			3.3% vegetative slope			
Old Field			3.3% vegetative slope			
Urban (describe: **GRAVEL LOT**)	90%					
WETLAND:						
Forested Wetland						
Scrub/Shrub Wetland						
Herbaceous Wetland						
Mud Flat						
Open Water / Emergent						

Table 8 – Faunal Observations			
Avian	**Type**	**Approx #**	**Habitat Association**
			See comments below
Mammalian			
Fish			
Herptiles			
Invertebrates			

Table 9 – Floral Observations			
Algal	**Type**	**Approx Cover**	**Habitat Association**
			See comments below
Emergent			
Shrub			
Trees			

LOWER PASSAIC RESTORATION PROJECT
POTENTIAL RESTORATION SITE FIELD DATA FORM

Table 10 – Potential Restoration Components		
	X	**Comments**
Remove Manmade Structures	X	
Remove Fill / Debris	X	
Lower Grade		
Raise Grade		
Remove Invasive Species		
Replant Indigenous Species	X	
Flatten Shoreline		
Biostabilize (Shoreline)		
Eliminate Stresses		
Hydrology Alterations / Improvements		
Other Habitat Enhancements	X	
Human Use	X	
Other		
Restoration Concept Narrative: • Possibly planting upland woody species in gravel lot		

Tables 11 and 12 to be completed at the Restoration Workshop

Table 11 - Potential to Achieve Restoration Goals		
Restoration Goal	**X**	**Comments**
Improve Water Quality		
Improve Flora		
Improve Fauna		
Improve Sediment Quality		
Improve Human Use		

Table 12 – Overall Evaluation of Site Potential	
	X (check one only)
Rank I: Good / Great Site – Merits Further Study	
Rank II: Poor Site – Unlikely Candidate for Restoration	
Unable to Determine Site Potential	
Rationale for Site Ranking:	

Additional Comments and Observations (use additional sheets if necessary):

The site contains a gravel parking lot on a bluff (approximately 10 feet above the river).

River bank is nearly vertical and covered with woody species.

Provided no existing contamination issues or other existing problems; hence, restoration potential is vast.

Site 4C: Bank which is a "cliff"

Site 4C: Flat area acting as a parking lot

LOWER PASSAIC RESTORATION PROJECT
POTENTIAL RESTORATION SITE FIELD DATA FORM

Date:	12/14/04	Field Personnel:	JR/BG
Time:	10:57am	Last High/Low Tide:	High tide
Photos: Attached			

Table 1 - General Information				
Site Name / Number: 2C				
Location Description: SADDLE RIVER RIGHT BANK DESCENDING (Garfield, Bergen County) Vegetated point with deciduous trees and shrub species				
Approx. Physical Dimensions of Site: Triangle with approximate dimensions of 500′ × 300′				
System Elements (check one):	Marine ( )	Estuarine ( )	Riverine (X)	Palustrine ( )

Table 2 - Adjacent Land Use/Surrounding Land Use		
	X*	**Comments**
Commercial	X	
Industrial		
Residential		
Recreational		
Community (school/church)		
Vacant	X	
Access (land or water)		
Pollution/Contamination		
Observations:		

**Throughout this form, check (X) all that apply (unless otherwise specified).*

Table 3 - Sources of Stress		
	X	**Comments**
Outfalls		No surface water discharge sites located within 500 ft
Storm Drains		
Dumping / Filling		
Debris	X	Minor Amounts
Industrial Facilities / Uses		
Other: _____		No RCRA sites and no NJ Known Contaminated Sites located within 500 feet.

LOWER PASSAIC RESTORATION PROJECT
POTENTIAL RESTORATION SITE FIELD DATA FORM

Table 4 – Substrate			
Substrate Type	**Approx. Percent Composition (0-100%)**		
	1	**2**	**3**
Bedrock			
Boulder/Rip Rap			
Coarse (Cobble/Gravel)	X		
Fine (Sand/Silt/Clay)			
Organic			
Open Water (unknown)			

Table 5 - Hydrologic Features		
Classification	**X**	**Comments**
Tidal		
Subtidal		
Intertidal		
Lower Perennial		
Upper Perennial	X	
Intermittent		
Unknown		
Water Regime	**X**	**Comments**
Permanently Flooded	X	
Temporarily /Seasonally Flooded		
Intermittently Flooded (event dependant)		
Saturated		
Artificially Flooded		
Unknown		
Describe Hydrologic Features / Drainage Pathways:		

Table 6 - Bank Assessment (if applicable)								
Stability			**Percent Bank Erosion**	**Percent Composition (0-100%)**				
				1	**2**	**3**		
Stable- bank stable; evidence of erosion or bank failure absent or minimal			< 5%	X				
Moderately Stable- infrequent small areas of erosion mostly healed			5 - 30%	X				
Moderately Unstable- areas of erosion present, unhealed			30 - 60%					
Unstable- eroded areas frequent along straight sections, obvious bank sloughing			60 - 100%					
Approx Slope:		Horizontal to 1 Vertical		Slope Dimensions:		ft Wide x		ft Long

LOWER PASSAIC RESTORATION PROJECT
POTENTIAL RESTORATION SITE FIELD DATA FORM

Table 7 - Vegetative Cover Components						
Vegetation Class	**Approx. % Cover**			**Dominant Species**		
UPLAND:	**1**	**2**	**3**	**1**	**2**	**3**
Forested	50%					
Scrub/Shrub	50%					
Old Field						
Urban (describe:)						
WETLAND:						
Forested Wetland						
Scrub/Shrub Wetland						
Herbaceous Wetland						
Mud Flat	X					
Open Water / Emergent	X					

Table 8 - Faunal Observations			
Avian	**Type**	**Approx #**	**Habitat Association**
			Urban species
Mammalian			Urban species; although area likely to support deer
Fish			Urban species
Herptiles			Urban species
Invertebrates			Urban species

Table 9 - Floral Observations			
Algal	**Type**	**Approx Cover**	**Habitat Association**
			Observations made in winter; none observed
Emergent			Observations made in winter; none observed
Shrub			Deciduous trees and shrub species common to area
Trees			Deciduous trees and shrub species common to area

LOWER PASSAIC RESTORATION PROJECT
POTENTIAL RESTORATION SITE FIELD DATA FORM

Table 10 – Potential Restoration Components		
	X	**Comments**
Remove Manmade Structures		
Remove Fill / Debris		
Lower Grade		
Raise Grade		
Remove Invasive Species	X	
Replant Indigenous Species	X	
Flatten Shoreline		
Biostabilize (Shoreline)		
Eliminate Stresses		
Hydrology Alterations / Improvements		
Other Habitat Enhancements	X	
Human Use		
Other		

Restoration Concept Narrative:

- Area likely functions as good habitat for local flora
- Some invasive species observed that could be removed
- Also removal of trash would be beneficial

Tables 11 and 12 to be completed at the Restoration Workshop

Table 11 - Potential to Achieve Restoration Goals		
Restoration Goal	**X**	**Comments**
Improve Water Quality		
Improve Flora		
Improve Fauna		
Improve Sediment Quality		
Improve Human Use		

Table 12 – Overall Evaluation of Site Potential	
	X (check one only)
Rank I: Good / Great Site – Merits Further Study	
Rank II: Poor Site – Unlikely Candidate for Restoration	
Unable to Determine Site Potential	

Rationale for Site Ranking:

Additional Comments and Observations (use additional sheets if necessary):

Site 2C: Bank of the Saddle River

Site 2C: Opposite wall at the site

LOWER PASSAIC RESTORATION PROJECT
POTENTIAL RESTORATION SITE FIELD DATA FORM

Date:	12/14/04	Field Personnel:	JR/BG
Time:	11:17AM	Last High/Low Tide:	High tide
Photos: Attached			

Table 1 - General Information				
Site Name / Number: 3C				
Location Description: SADDLE RIVER LEFT BANK DESCENDING (South Hackensack, Bergen County) Large field on bluff next to cemetery Parking lot (south of tributary) next to industrial area (lot with concrete blocks)				
Approx. Physical Dimensions of Site: Polygon with approximate dimensions of 1000′ × 1100′				
System Elements (check one):	Marine ( )	Estuarine ( )	Riverine (X)	Palustrine ( )

Table 2 - Adjacent Land Use/Surrounding Land Use		
	X*	**Comments**
Commercial		
Industrial	X	
Residential		
Recreational		
Community (school/church)		
Vacant	X	
Access (land or water)		
Pollution/Contamination		
Observations:		

**Throughout this form, check (X) all that apply (unless otherwise specified).*

Table 3 - Sources of Stress		
	X	**Comments**
Outfalls	X	One surface water discharge site (industrial minor) located within 500 feet.
Storm Drains		
Dumping / Filling		
Debris		
Industrial Facilities / Uses	X	
Other: **CEMETERY**	X	
Other: RCRA sites	X	Six RCRA sites located within 500 feet
Other: NJ Known Contaminated Sites	X	One NJ Known Contaminated Site located within 500 ft

LOWER PASSAIC RESTORATION PROJECT
POTENTIAL RESTORATION SITE FIELD DATA FORM

Table 4 – Substrate			
Substrate Type	**Approx. Percent Composition (0-100%)**		
	1	**2**	**3**
Bedrock			
Boulder/Rip Rap			
Coarse (Cobble/Gravel)			
Fine (Sand/Silt/Clay)	X		
Organic			
Open Water (unknown)			

Table 5 - Hydrologic Features		
Classification	**X**	**Comments**
Tidal		
Subtidal		
Intertidal		
Lower Perennial		
Upper Perennial	X	
Intermittent		
Unknown		
Water Regime	**X**	**Comments**
Permanently Flooded	X	
Temporarily /Seasonally Flooded		
Intermittently Flooded (event dependant)		
Saturated		
Artificially Flooded		
Unknown		
Describe Hydrologic Features / Drainage Pathways:		

Table 6 - Bank Assessment (if applicable)								
Stability			**Percent Bank Erosion**	**Percent Composition (0-100%)**				
				1	**2**	**3**		
Stable- bank stable; evidence of erosion or bank failure absent or minimal			< 5%	X				
Moderately Stable- infrequent small areas of erosion mostly healed			5 - 30%	X				
Moderately Unstable- areas of erosion present, unhealed			30 - 60%					
Unstable- eroded areas frequent along straight sections, obvious bank sloughing			60 - 100%					
Approx Slope:		Horizontal to 1 Vertical		Slope Dimensions:		ft Wide x		ft Long

LOWER PASSAIC RESTORATION PROJECT
POTENTIAL RESTORATION SITE FIELD DATA FORM

Table 7 - Vegetative Cover Components						
Vegetation Class	**Approx. % Cover**			**Dominant Species**		
UPLAND:	**1**	**2**	**3**	**1**	**2**	**3**
Forested	2.5%					
Scrub/Shrub	2.5%					
Old Field	5-10%					
Urban (describe: **INDUSTRIAL – OLD FIELD**)	90%					
WETLAND:						
Forested Wetland						
Scrub/Shrub Wetland						
Herbaceous Wetland						
Mud Flat						
Open Water / Emergent						

Table 8 - Faunal Observations			
Avian	**Type**	**Approx #**	**Habitat Association**
			Species common to an urban environment
Mammalian			Species common to an urban environment
Fish			Species common to an urban environment
Herptiles			Species common to an urban environment
Invertebrates			Species common to an urban environment

Table 9 - Floral Observations			
Algal	**Type**	**Approx Cover**	**Habitat Association**
			Species common to an urban environment
Emergent			Species common to an urban environment
Shrub			Species common to an urban environment
Trees			Species common to an urban environment

Table 10 – Potential Restoration Components		
	X	**Comments**
Remove Manmade Structures		
Remove Fill / Debris		
Lower Grade		
Raise Grade		
Remove Invasive Species		
Replant Indigenous Species	X	
Flatten Shoreline		
Biostabilize (Shoreline)		
Eliminate Stresses	X	
Hydrology Alterations / Improvements		
Other Habitat Enhancements	X	
Human Use		
Other		
Restoration Concept Narrative: • Planting of upland woody species in cemetery field		

Tables 11 and 12 to be completed at the Restoration Workshop

Table 11 - Potential to Achieve Restoration Goals		
Restoration Goal	**X**	**Comments**
Improve Water Quality		
Improve Flora		
Improve Fauna		
Improve Sediment Quality		
Improve Human Use		

Table 12 – Overall Evaluation of Site Potential	
	X (check one only)
Rank I: Good / Great Site – Merits Further Study	
Rank II: Poor Site – Unlikely Candidate for Restoration	
Unable to Determine Site Potential	
Rationale for Site Ranking:	

Additional Comments and Observations (use additional sheets if necessary):

Site 3C: Area acting as a parking lot

Site 3C: Confluence on adjacent site

Site 3C: Wetland area adjacent to site

LOWER PASSAIC RESTORATION PROJECT
POTENTIAL RESTORATION SITE FIELD DATA FORM

Date:	12/14/04	Field Personnel:	JR/BG
Time:	11:42AM	Last High/Low Tide:	High tide
Photos: Attached			

Table 1 - General Information				
Site Name / Number: 5C/Island				
Location Description: PASSAIC RIVER LEFT BANK DESCENDING (Garfield, Bergen County) Low, flat island in Passaic River. Island vegetated with deciduous woody species.				
Approx. Physical Dimensions of Site: Island with approximate dimensions of 1200′ × 300′				
System Elements (check one):	Marine ( )	Estuarine ( )	Riverine (X)	Palustrine ( )

Table 2 - Adjacent Land Use/Surrounding Land Use		
	X*	**Comments**
Commercial	X	
Industrial		
Residential		
Recreational		
Community (school/church)		
Vacant		
Access (land or water)		
Pollution/Contamination		
Observations:		

**Throughout this form, check (X) all that apply (unless otherwise specified).*

Table 3 - Sources of Stress		
	X	**Comments**
Outfalls	X	One surface water discharge site (industrial minor) located within 500 feet
Storm Drains		
Dumping / Filling		
Debris	X	Minor
Industrial Facilities / Uses		
Other: RCRA sites	X	Three RCRA sites located within 500 ft
Other: NJ Known Contaminated Site	X	Three NJ Known Contaminated Sites located within 500 ft

LOWER PASSAIC RESTORATION PROJECT
POTENTIAL RESTORATION SITE FIELD DATA FORM

Table 4 – Substrate			
Substrate Type	**Approx. Percent Composition (0-100%)**		
	1	**2**	**3**
Bedrock			
Boulder/Rip Rap			
Coarse (Cobble/Gravel)			
Fine (Sand/Silt/Clay)			
Organic			
Open Water (unknown)	X		

Table 5 - Hydrologic Features		
Classification	**X**	**Comments**
Tidal		
Subtidal		
Intertidal		
Lower Perennial		
Upper Perennial	X	
Intermittent		
Unknown		
Water Regime	**X**	**Comments**
Permanently Flooded	X	
Temporarily /Seasonally Flooded		
Intermittently Flooded (event dependant)		
Saturated		
Artificially Flooded		
Unknown		
Describe Hydrologic Features / Drainage Pathways:		

Table 6 - Bank Assessment (if applicable)								
Stability	**Percent Bank Erosion**	**Percent Composition (0-100%)**		
		1	**2**	**3**
Stable- bank stable; evidence of erosion or bank failure absent or minimal	< 5%			
Moderately Stable- infrequent small areas of erosion mostly healed	5 - 30%	X		
Moderately Unstable- areas of erosion present, unhealed	30 - 60%			
Unstable- eroded areas frequent along straight sections, obvious bank sloughing	60 - 100%			
Approx Slope:		Horizontal to 1 Vertical		Slope Dimensions:		ft Wide x		ft Long

LOWER PASSAIC RESTORATION PROJECT
POTENTIAL RESTORATION SITE FIELD DATA FORM

Table 7 - Vegetative Cover Components						
Vegetation Class	**Approx. % Cover**			**Dominant Species**		
UPLAND:	**1**	**2**	**3**	**1**	**2**	**3**
Forested	60%					
Scrub/Shrub	20%					
Old Field	20%					
Urban (describe:)						
WETLAND:						
Forested Wetland						
Scrub/Shrub Wetland						
Herbaceous Wetland						
Mud Flat						
Open Water / Emergent						

Table 8 - Faunal Observations			
Avian	**Type**	**Approx #**	**Habitat Association**
	Passorino		
	Waterfowl		
	Raptors		
Mammalian	Deer		
	Smaller Mammal		
Fish			Common to Passaic
Herptiles			Common to Passaic
Invertebrates			Common to Passaic

Table 9 - Floral Observations			
Algal	**Type**	**Approx Cover**	**Habitat Association**
			Observations in winter; none observed
Emergent			Observations in winter; none observed
Shrub			Deciduous hardwood species
Trees			Deciduous hardwood species

LOWER PASSAIC RESTORATION PROJECT
POTENTIAL RESTORATION SITE FIELD DATA FORM

Table 10 – Potential Restoration Components		
	X	**Comments**
Remove Manmade Structures		
Remove Fill / Debris		
Lower Grade		
Raise Grade		
Remove Invasive Species		
Replant Indigenous Species		
Flatten Shoreline		
Biostabilize (Shoreline)		
Eliminate Stresses		
Hydrology Alterations / Improvements		
Other Habitat Enhancements		
Human Use		
Other	X	
Restoration Concept Narrative: • Island appears to be undeveloped – land untouched • Possible potential for shallow waters area enhancement near island • Removal of minor debris and trash		

Tables 11 and 12 to be completed at the Restoration Workshop

Table 11 - Potential to Achieve Restoration Goals		
Restoration Goal	**X**	**Comments**
Improve Water Quality		
Improve Flora		
Improve Fauna		
Improve Sediment Quality		
Improve Human Use		

Table 12 – Overall Evaluation of Site Potential	
	X (check one only)
Rank I: Good / Great Site – Merits Further Study	
Rank II: Poor Site – Unlikely Candidate for Restoration	
Unable to Determine Site Potential	
Rationale for Site Ranking:	

Additional Comments and Observations (use additional sheets if necessary):

Site likely functions as a good habitat resource

As an island, it is isolated from surrounding land areas and has low anthropogenic disturbances.

Minimal removal of trash would be beneficial.

Habitat untouched

Site 5C: Island (view from east looking west from River Road in Garfield, NJ)

LOWER PASSAIC RESTORATION PROJECT
POTENTIAL RESTORATION SITE FIELD DATA FORM

Date:	12/14/04	Field Personnel:	JR/BG
Time:	2:19pm	Last High/Low Tide:	Outgoing tide
Photos: Attached			

Table 1 - General Information				
Site Name / Number: 1N				
Location Description: PASSAIC RIVER LEFT BANK DESCENDING (Garfield, Bergen County) North of Dundee Dam – thin strip of land along bank north of the dam. Land consists of a steep slope approximately 10 feet high vegetated with trees and shrub species. Bank consists of a lot owned by "Wave Complex"				
Approx. Physical Dimensions of Site: Rectangle with approximate dimensions of 800′ × 100′				
System Elements (check one):	Marine ( )	Estuarine ( )	Riverine (X)	Palustrine ( )

Table 2 – Adjacent Land Use/Surrounding Land Use		
	X*	**Comments**
Commercial	X	
Industrial		
Residential		
Recreational	X	
Community (school/church)		
Vacant	X	
Access (land or water)		
Pollution/Contamination		
Observations:		

**Throughout this form, check (X) all that apply (unless otherwise specified).*

Table 3 – Sources of Stress		
	X	**Comments**
Outfalls	X	One surface discharge site (industrial minor) located within 500 ft
Storm Drains		
Dumping / Filling		
Debris		
Industrial Facilities / Uses		
Other: RCRA sites	X	One RCRA site located within 500 feet
Other: NJ Known Contaminated Site	X	Two NJ Known Contaminated Sites located within 500 ft

LOWER PASSAIC RESTORATION PROJECT
POTENTIAL RESTORATION SITE FIELD DATA FORM

Table 4 – Substrate			
Substrate Type	**Approx. Percent Composition (0-100%)**		
	1	**2**	**3**
Bedrock			
Boulder/Rip Rap			
Coarse (Cobble/Gravel)			
Fine (Sand/Silt/Clay)	X		
Organic			
Open Water (unknown)			

Table 5 – Hydrologic Features		
Classification	**X**	**Comments**
Tidal		
Subtidal		
Intertidal		
Lower Perennial		
Upper Perennial	X	
Intermittent		
Unknown		
Water Regime	**X**	**Comments**
Permanently Flooded	X	
Temporarily /Seasonally Flooded		
Intermittently Flooded (event dependant)		
Saturated		
Artificially Flooded		
Unknown		
Describe Hydrologic Features / Drainage Pathways: • Bank of Passaic River		

Table 6 – Bank Assessment (if applicable)									
Stability				**Percent Bank Erosion**	**Percent Composition (0-100%)**				
					1	**2**	**3**		
Stable- bank stable; evidence of erosion or bank failure absent or minimal				< 5%					
Moderately Stable- infrequent small areas of erosion mostly healed				5 – 30%	X				
Moderately Unstable- areas of erosion present, unhealed				30 – 60%					
Unstable- eroded areas frequent along straight sections, obvious bank sloughing				60 – 100%					
Approx Slope:		Horizontal to 1 Vertical		Slope Dimensions:		ft Wide x		ft Long	

LOWER PASSAIC RESTORATION PROJECT
POTENTIAL RESTORATION SITE FIELD DATA FORM

Table 7 – Vegetative Cover Components						
Vegetation Class	**Approx. % Cover**			**Dominant Species**		
UPLAND:	**1**	**2**	**3**	**1**	**2**	**3**
Forested	5%					
Scrub/Shrub						
Old Field	20%					
Urban (describe: VACANT LOT)	25%					
WETLAND:						
Forested Wetland						
Scrub/Shrub Wetland						
Herbaceous Wetland						
Mud Flat	X					
Open Water / Emergent	X					

Table 8 – Faunal Observations			
Avian	**Type**	**Approx #**	**Habitat Association**
			Not applicable
Mammalian			Not applicable
Fish			Not applicable
Herptiles			Not applicable
Invertebrates			Not applicable

Table 9 – Floral Observations			
Algal	**Type**	**Approx Cover**	**Habitat Association**
			Not applicable
Emergent			Not applicable
Shrub			Deciduous trees and shrubs species are common to the area
Trees			Deciduous trees and shrubs species are common to the area

Table 10 – Potential Restoration Components		
	X	**Comments**
Remove Manmade Structures		
Remove Fill / Debris		
Lower Grade		
Raise Grade		
Remove Invasive Species		
Replant Indigenous Species	X	
Flatten Shoreline		
Biostabilize (Shoreline)		
Eliminate Stresses		
Hydrology Alterations / Improvements		
Other Habitat Enhancements	X	
Human Use		
Other		
Restoration Concept Narrative: • Plant native trees • Fish/benthic habitat enhancement		

Tables 11 and 12 to be completed at the Restoration Workshop

Table 11 - Potential to Achieve Restoration Goals		
Restoration Goal	**X**	**Comments**
Improve Water Quality		
Improve Flora		
Improve Fauna		
Improve Sediment Quality		
Improve Human Use		

Table 12 – Overall Evaluation of Site Potential	
	X (check one only)
Rank I: Good / Great Site – Merits Further Study	
Rank II: Poor Site – Unlikely Candidate for Restoration	
Unable to Determine Site Potential	
Rationale for Site Ranking:	

Additional Comments and Observations (use additional sheets if necessary):

Land area small – limited restoration potential

Site consists of a thin strip of river bank.

Site 2N (Dundee Dam) and Site 1N

LOWER PASSAIC RESTORATION PROJECT
POTENTIAL RESTORATION SITE FIELD DATA FORM

Date:	12/14/04	Field Personnel:	JR/BG
Time:	2:19PM	Last High/Low Tide:	Outgoing tide
Photos: Attached			

Table 1 - General Information				
Site Name / Number: 2N				
Location Description: DUNDEE DAM (located at river mile 17.5); (Clifton, Passaic County and Garfield, Bergen County)				
Approx. Physical Dimensions of Site: Dam with approximate dimensions of 500′ × 100′				
System Elements (check one):	Marine ( )	Estuarine ( )	Riverine (X)	Palustrine ( )

Table 2 – Adjacent Land Use/Surrounding Land Use		
	X*	**Comments**
Commercial	X	
Industrial		
Residential		
Recreational	X	
Community (school/church)		
Vacant	X	
Access (land or water)		
Pollution/Contamination		
Observations:		

**Throughout this form, check (X) all that apply (unless otherwise specified).*

Table 3 – Sources of Stress		
	X	**Comments**
Outfalls		No surface water discharge sites located within 500 ft
Storm Drains		
Dumping / Filling		
Debris		
Industrial Facilities / Uses		
Other: DAM	X	
Other: NJ Known Contaminated Site	X	One NJ Known Contaminated Site located within 500 ft

LOWER PASSAIC RESTORATION PROJECT
POTENTIAL RESTORATION SITE FIELD DATA FORM

Table 4 – Substrate			
Substrate Type	**Approx. Percent Composition (0-100%)**		
	1	**2**	**3**
Bedrock			
Boulder/Rip Rap	X		
Coarse (Cobble/Gravel)	X		
Fine (Sand/Silt/Clay)	X		
Organic			
Open Water (unknown)			

Table 5 – Hydrologic Features		
Classification	**X**	**Comments**
Tidal		
Subtidal		
Intertidal		
Lower Perennial		
Upper Perennial	X	
Intermittent		
Unknown		
Water Regime	**X**	**Comments**
Permanently Flooded	X	
Temporarily /Seasonally Flooded		
Intermittently Flooded (event dependant)		
Saturated		
Artificially Flooded		
Unknown		
Describe Hydrologic Features / Drainage Pathways:		

Table 6 – Bank Assessment (if applicable)								
Stability			**Percent Bank Erosion**	**Percent Composition (0-100%)**				
				1	**2**	**3**		
Stable- bank stable; evidence of erosion or bank failure absent or minimal			< 5%	X				
Moderately Stable- infrequent small areas of erosion mostly healed			5 – 30%	X				
Moderately Unstable- areas of erosion present, unhealed			30 – 60%					
Unstable- eroded areas frequent along straight sections, obvious bank sloughing			60 – 100%					
Approx Slope:		Horizontal to 1 Vertical		Slope Dimensions:		ft Wide x		ft Long

LOWER PASSAIC RESTORATION PROJECT
POTENTIAL RESTORATION SITE FIELD DATA FORM

Table 7 – Vegetative Cover Components						
Vegetation Class	**Approx. % Cover**			**Dominant Species**		
UPLAND:	**1**	**2**	**3**	**1**	**2**	**3**
Forested						
Scrub/Shrub						
Old Field						
Urban (describe:)						
WETLAND:						
Forested Wetland	X					
Scrub/Shrub Wetland						
Herbaceous Wetland	X					
Mud Flat	X					
Open Water / Emergent	X					

Table 8 – Faunal Observations			
Avian	**Type**	**Approx #**	**Habitat Association**
			Not Applicable
Mammalian			Not Applicable
Fish			Those common to the Passaic River
Herptiles			Not Applicable
Invertebrates			Not Applicable

Table 9 – Floral Observations			
Algal	**Type**	**Approx Cover**	**Habitat Association**
			Not Applicable
Emergent			Not Applicable
Shrub			Not Applicable
Trees			Not Applicable

LOWER PASSAIC RESTORATION PROJECT
POTENTIAL RESTORATION SITE FIELD DATA FORM

Table 10 – Potential Restoration Components		
	X	**Comments**
Remove Manmade Structures		
Remove Fill / Debris		
Lower Grade		
Raise Grade		
Remove Invasive Species		
Replant Indigenous Species	X	
Flatten Shoreline		
Biostabilize (Shoreline)		
Eliminate Stresses		
Hydrology Alterations / Improvements		
Other Habitat Enhancements		
Human Use		
Other		
Restoration Concept Narrative: • Possible planting of indigenous species near dam (on a small island downstream and along banks)		

Tables 11 and 12 to be completed at the Restoration Workshop

Table 11 - Potential to Achieve Restoration Goals		
Restoration Goal	**X**	**Comments**
Improve Water Quality		
Improve Flora		
Improve Fauna		
Improve Sediment Quality		
Improve Human Use		

Table 12 – Overall Evaluation of Site Potential	
	X (check one only)
Rank I: Good / Great Site – Merits Further Study	
Rank II: Poor Site – Unlikely Candidate for Restoration	
Unable to Determine Site Potential	
Rationale for Site Ranking:	

Additional Comments and Observations (use additional sheets if necessary):

Site 2N: Dundee Dam

Site 2N (Dundee Dam) and Site 1N

LOWER PASSAIC RESTORATION PROJECT
POTENTIAL RESTORATION SITE FIELD DATA FORM

Date:	12/14/04 at 2:30pm 12/16/04 at 9:07am	Field Personnel:	JR/BG
Time:	See above	Last High/Low Tide:	Outgoing tide
Photos: Attached			

Table 1 - General Information				
Site Name / Number: 6C and 5N				
Location Description: PASSAIC RIVER LEFT BANK DESCENDING (Garfield, Bergen County) Large tract of land along eastern bank (south of dam). Lower 1/3 of polygon is a steep, wooded bank with trees. Upper 2/3 of polygon is home to a floodplain with woods and with homeless camps.				
Approx. Physical Dimensions of Site: Triangle with approximate dimensions of 1800′ × 200′				
System Elements (check one):	Marine ( )	Estuarine ( )	Riverine (X)	Palustrine ( )

Table 2 - Adjacent Land Use/Surrounding Land Use		
	X*	**Comments**
Commercial	X	
Industrial		
Residential		
Recreational	X	
Community (school/church)		
Vacant	X	
Access (land or water)		
Pollution/Contamination		
Observations:		

**Throughout this form, check (X) all that apply (unless otherwise specified).*

Table 3 - Sources of Stress		
	X	**Comments**
Outfalls	X	
Storm Drains		
Dumping / Filling		
Debris	X	
Industrial Facilities / Uses		
Other: __HOMELESS_____	X	
Other: RCRA sites	X	Seven RCRA sites located within 500 ft
Other: NJ Known Contaminated Site	X	Three NJ Known Contaminated Sites located within 500 ft

LOWER PASSAIC RESTORATION PROJECT
POTENTIAL RESTORATION SITE FIELD DATA FORM

Table 4 – Substrate			
Substrate Type	**Approx. Percent Composition (0-100%)**		
	1	**2**	**3**
Bedrock			
Boulder/Rip Rap			
Coarse (Cobble/Gravel)	X		
Fine (Sand/Silt/Clay)	X		
Organic			
Open Water (unknown)			

Table 5 - Hydrologic Features		
Classification	**X**	**Comments**
Tidal		
Subtidal		
Intertidal		
Lower Perennial		
Upper Perennial	X	
Intermittent		
Unknown		
Water Regime	**X**	**Comments**
Permanently Flooded	X	
Temporarily /Seasonally Flooded		
Intermittently Flooded (event dependant)		
Saturated		
Artificially Flooded		
Unknown		
Describe Hydrologic Features / Drainage Pathways:		

Table 6 - Bank Assessment (if applicable)								
Stability	**Percent Bank Erosion**	**Percent Composition (0-100%)**		
		1	**2**	**3**
Stable- bank stable; evidence of erosion or bank failure absent or minimal	< 5%	X		
Moderately Stable- infrequent small areas of erosion mostly healed	5 - 30%	X		
Moderately Unstable- areas of erosion present, unhealed	30 - 60%			
Unstable- eroded areas frequent along straight sections, obvious bank sloughing	60 - 100%			
Approx Slope:		Horizontal to 1 Vertical	___	Slope Dimensions:		ft Wide x		ft Long

LOWER PASSAIC RESTORATION PROJECT
POTENTIAL RESTORATION SITE FIELD DATA FORM

Table 7 - Vegetative Cover Components						
Vegetation Class	**Approx. % Cover**			**Dominant Species**		
UPLAND:	**1**	**2**	**3**	**1**	**2**	**3**
Forested	10%					
Scrub/Shrub	10%					
Old Field	5%					
Urban (describe: LOTS AND COMMERCIAL)	75%					
WETLAND:						
Forested Wetland	X					
Scrub/Shrub Wetland	X					
Herbaceous Wetland	X					
Mud Flat	X					
Open Water / Emergent	X					

Table 8 - Faunal Observations			
Avian	**Type**	**Approx #**	**Habitat Association**
			Species common to the area
Mammalian			Species common to the area
Fish			Species common to the area
Herptiles			Species common to the area
Invertebrates			Species common to the area

Table 9 - Floral Observations			
Algal	**Type**	**Approx Cover**	**Habitat Association**
			Species common to the area
Emergent			Species common to the area
Shrub			Deciduous tree and shrub species
Trees			Deciduous tree and shrub species

Table 10 – Potential Restoration Components		
	X	**Comments**
Remove Manmade Structures		
Remove Fill / Debris		
Lower Grade		
Raise Grade		
Remove Invasive Species		
Replant Indigenous Species	X	
Flatten Shoreline		
Biostabilize (Shoreline)		
Eliminate Stresses		
Hydrology Alterations / Improvements		
Other Habitat Enhancements		
Human Use	X	Homeless population
Other	X	Homeless population
Restoration Concept Narrative: • Lower 1/3 - steep bank; hence, limited, if any, restoration possibilities – possibly remove trash • Upper 2/3 - homeless population currently using the wooded floodplain		

Tables 11 and 12 to be completed at Restoration Workshop

Table 11 - Potential to Achieve Restoration Goals		
Restoration Goal	**X**	**Comments**
Improve Water Quality		
Improve Flora		
Improve Fauna		
Improve Sediment Quality		
Improve Human Use		

Table 12 – Overall Evaluation of Site Potential	
	X (check one only)
Rank I: Good / Great Site – Merits Further Study	
Rank II: Poor Site – Unlikely Candidate for Restoration	
Unable to Determine Site Potential	
Rationale for Site Ranking:	

Additional Comments and Observations (use additional sheets if necessary):

Site 6C/5N: Bank of Passaic River

Site 6C/5N: Outfall located at site

Site 6C/5N: Shoreline with homeless camps in background

LOWER PASSAIC RESTORATION PROJECT
POTENTIAL RESTORATION SITE FIELD DATA FORM

Date:	12/16/04	Field Personnel:	JR/BG
Time:	9:09am	Last High/Low Tide:	Low tide
Photos: Attached			

Table 1 - General Information				
Site Name / Number: 4N				
Location Description: PASSAIC RIVER RIGHT BANK DESCENDING (Clifton, Passaic County) West bank of Passaic River – south of dam				
Approx. Physical Dimensions of Site: Polygon with approximate dimensions of 1700′ × 300′				
System Elements (check one):	Marine ( )	Estuarine ( )	Riverine (X)	Palustrine ( )

Table 2 - Adjacent Land Use/Surrounding Land Use		
	X*	**Comments**
Commercial	X	
Industrial	X	
Residential		
Recreational		
Community (school/church)		
Vacant	X	
Access (land or water)	X	
Pollution/Contamination		
Observations:		

**Throughout this form, check (X) all that apply (unless otherwise specified).*

Table 3 - Sources of Stress		
	X	**Comments**
Outfalls		No surface water discharge points within 500 feet.
Storm Drains		
Dumping / Filling		
Debris	X	
Industrial Facilities / Uses	X	
Other: RCRA sites	X	Three RCRA sites located within 500 feet.
Other: NJ Known Contaminated	X	Two NJ Known Contaminated Sites located within 500 ft

LOWER PASSAIC RESTORATION PROJECT
POTENTIAL RESTORATION SITE FIELD DATA FORM

Table 4 – Substrate			
Substrate Type	**Approx. Percent Composition (0-100%)**		
	1	**2**	**3**
Bedrock			
Boulder/Rip Rap			
Coarse (Cobble/Gravel)	X		
Fine (Sand/Silt/Clay)	X		
Organic			
Open Water (unknown)			

Table 5 - Hydrologic Features		
Classification	**X**	**Comments**
Tidal		
Subtidal		
Intertidal		
Lower Perennial		
Upper Perennial	X	
Intermittent		
Unknown		
Water Regime	**X**	**Comments**
Permanently Flooded	X	
Temporarily /Seasonally Flooded		
Intermittently Flooded (event dependant)		
Saturated		
Artificially Flooded		
Unknown		
Describe Hydrologic Features / Drainage Pathways:		

Table 6 - Bank Assessment (if applicable)								
Stability	**Percent Bank Erosion**	**Percent Composition (0-100%)**		
		1	**2**	**3**
Stable- bank stable; evidence of erosion or bank failure absent or minimal	< 5%	X		
Moderately Stable- infrequent small areas of erosion mostly healed	5 - 30%	X		
Moderately Unstable- areas of erosion present, unhealed	30 - 60%			
Unstable- eroded areas frequent along straight sections, obvious bank sloughing	60 - 100%			
Approx Slope:		Horizontal to 1 Vertical		Slope Dimensions:		ft Wide x		ft Long

LOWER PASSAIC RESTORATION PROJECT
POTENTIAL RESTORATION SITE FIELD DATA FORM

Table 7 - Vegetative Cover Components						
Vegetation Class	**Approx. % Cover**			**Dominant Species**		
UPLAND:	**1**	**2**	**3**	**1**	**2**	**3**
Forested	60%					
Scrub/Shrub	30%					
Old Field	10%					
Urban (describe:)						
WETLAND:						
Forested Wetland	X					
Scrub/Shrub Wetland						
Herbaceous Wetland	X					
Mud Flat						
Open Water / Emergent	X					

Table 8 - Faunal Observations			
Avian	**Type**	**Approx #**	**Habitat Association**
			Not applicable
Mammalian			Not applicable
Fish			Not applicable
Herptiles			Not applicable
Invertebrates			Not applicable

Table 9 - Floral Observations			
Algal	**Type**	**Approx Cover**	**Habitat Association**
			Not applicable
Emergent			Not applicable
Shrub			Not applicable
Trees			Not applicable

Table 10 – Potential Restoration Components		
	X	**Comments**
Remove Manmade Structures		
Remove Fill / Debris		
Lower Grade		
Raise Grade		
Remove Invasive Species	X	If present
Replant Indigenous Species	X	
Flatten Shoreline		
Biostabilize (Shoreline)		
Eliminate Stresses	X	
Hydrology Alterations / Improvements		
Other Habitat Enhancements		
Human Use	X	Homeless population
Other		

Restoration Concept Narrative:

- Upland portion of site contains piles of rock and construction debris – could be removed
- Homeless population is inhabiting site – social issues

Tables 11 and 12 to be completed at the Restoration Workshop

Table 11 - Potential to Achieve Restoration Goals		
Restoration Goal	**X**	**Comments**
Improve Water Quality		
Improve Flora		
Improve Fauna		
Improve Sediment Quality		
Improve Human Use		

Table 12 – Overall Evaluation of Site Potential	
	X (check one only)
Rank I: Good / Great Site – Merits Further Study	
Rank II: Poor Site – Unlikely Candidate for Restoration	
Unable to Determine Site Potential	
Rationale for Site Ranking:	

Additional Comments and Observations (use additional sheets if necessary):

Site 4N: General shoreline

Site 4N: Interior of site - more flat area than opposite bank (sites 6C/5N). Evidence of homeless camps here as well.

LOWER PASSAIC RESTORATION PROJECT
POTENTIAL RESTORATION SITE FIELD DATA FORM

Date:	12/16/04	Field Personnel:	JR/BG
Time:	9:53am	Last High/Low Tide:	Low tide
Photos: Attached			

Table 1 - General Information				
Site Name / Number: 2TMS				
Location Description: PASSAIC RIVER RIGHT BANK DESCENDING (Passaic, Passaic County) Small inland channel and riverbank. Island vegetated with trees and shrubs. Fences on island. Channel leads to intake structure. Northern portion of site: steep hill with trees and shrubs.				
Approx. Physical Dimensions of Site: Polygon with approximate dimensions of 900′ × 200′				
System Elements (check one):	Marine ( )	Estuarine ( )	Riverine (X)	Palustrine ( )

Table 2 – Adjacent Land Use/Surrounding Land Use		
	X*	**Comments**
Commercial		
Industrial	X	
Residential		
Recreational		
Community (school/church)		
Vacant		
Access (land or water)	X	
Pollution/Contamination		
Observations:		

**Throughout this form, check (X) all that apply (unless otherwise specified).*

Table 3 – Sources of Stress		
	X	**Comments**
Outfalls	X	One surface water discharge site (industrial minor) located within 500 feet
Storm Drains	X	Unknown
Dumping / Filling		
Debris		
Industrial Facilities / Uses		
Other: WATER CONTROL FACILITY	X	
Other: RCRA sites	X	Six RCRA sites located within 500 feet
Other: NJ Known Contaminated Sites	X	One NJ Known Contaminated Site located within 500 ft

LOWER PASSAIC RESTORATION PROJECT
POTENTIAL RESTORATION SITE FIELD DATA FORM

Table 4 – Substrate			
Substrate Type	**Approx. Percent Composition (0-100%)**		
	1	**2**	**3**
Bedrock			
Boulder/Rip Rap			
Coarse (Cobble/Gravel)	X		
Fine (Sand/Silt/Clay)	X		
Organic			
Open Water (unknown)	X		

Table 5 – Hydrologic Features		
Classification	**X**	**Comments**
Tidal		
Subtidal		
Intertidal		
Lower Perennial		
Upper Perennial		
Intermittent		
Unknown	X	
Water Regime	**X**	**Comments**
Permanently Flooded	X	Probable
Temporarily /Seasonally Flooded		
Intermittently Flooded (event dependant)		
Saturated		
Artificially Flooded		
Unknown	X	
Describe Hydrologic Features / Drainage Pathways:		

Table 6 – Bank Assessment (if applicable)									
Stability				**Percent Bank Erosion**	**Percent Composition (0-100%)**				
					1	**2**	**3**		
Stable- bank stable; evidence of erosion or bank failure absent or minimal				< 5%					
Moderately Stable- infrequent small areas of erosion mostly healed				5 – 30%					
Moderately Unstable- areas of erosion present, unhealed				30 – 60%					
Unstable- eroded areas frequent along straight sections, obvious bank sloughing				60 – 100%					
Approx Slope:		Horizontal to 1 Vertical		Slope Dimensions:		ft Wide x		ft Long	

LOWER PASSAIC RESTORATION PROJECT
POTENTIAL RESTORATION SITE FIELD DATA FORM

Table 7 – Vegetative Cover Components						
Vegetation Class	**Approx. % Cover**			**Dominant Species**		
UPLAND:	**1**	**2**	**3**	**1**	**2**	**3**
Forested	50%					
Scrub/Shrub	50%					
Old Field						
Urban (describe:)						
WETLAND:						
Forested Wetland						
Scrub/Shrub Wetland						
Herbaceous Wetland	X (unknown, possible)					
Mud Flat	X (unknown, possible)					
Open Water / Emergent	X (unknown, possible)					

Table 8 – Faunal Observations			
Avian	**Type**	**Approx #**	**Habitat Association**
			Species common to area – likely inhabit area.
Mammalian			Species common to area – likely inhabit area.
			Location may support larger mammal population
Fish			Species common to area – likely inhabit area.
Herptiles			Species common to area – likely inhabit area.
Invertebrates			Species common to area – likely inhabit area.

Table 9 – Floral Observations			
Algal	**Type**	**Approx Cover**	**Habitat Association**
			Not applicable
Emergent			Not applicable
Shrub			Deciduous tree and shrub species common to area
Trees			Deciduous tree and shrub species common to area

LOWER PASSAIC RESTORATION PROJECT
POTENTIAL RESTORATION SITE FIELD DATA FORM

Table 10 – Potential Restoration Components		
	X	**Comments**
Remove Manmade Structures		
Remove Fill / Debris		
Lower Grade		
Raise Grade		
Remove Invasive Species	X	If possible
Replant Indigenous Species	X	If possible
Flatten Shoreline		
Biostabilize (Shoreline)		
Eliminate Stresses		
Hydrology Alterations / Improvements		
Other Habitat Enhancements		
Human Use		
Other		
Restoration Concept Narrative: First, must determine use of site – upland areas have good vegetation cover by woody species.		

Tables 11 and 12 to be completed at the Restoration Workshop

Table 11 - Potential to Achieve Restoration Goals		
Restoration Goal	**X**	**Comments**
Improve Water Quality		
Improve Flora		
Improve Fauna		
Improve Sediment Quality		
Improve Human Use		

Table 12 – Overall Evaluation of Site Potential	
	X (check one only)
Rank I: Good / Great Site – Merits Further Study	
Rank II: Poor Site – Unlikely Candidate for Restoration	
Unable to Determine Site Potential	
Rationale for Site Ranking:	

Additional Comments and Observations (use additional sheets if necessary):

Site 2TMS: Shoreline (channel looking east from road)

Site 2TMS: Northern end of 2TMS taken from site 21N

LOWER PASSAIC RESTORATION PROJECT
POTENTIAL RESTORATION SITE FIELD DATA FORM

Date:	12/16/04	Field Personnel:	JR/BG
Time:	10:24am	Last High/Low Tide:	Low tide
Photos Attached			

Table 1 - General Information				
Site Name / Number: 11N				
Location Description: Site located in a narrow park along a shallow tributary of the Passaic River (Passaic, Passaic County)				
Approx. Physical Dimensions of Site: Polygon with approximate dimensions of 5500′ × 400′				
System Elements (check one):	Marine ( )	Estuarine ( )	Riverine (X)	Palustrine ( )

Table 2 - Adjacent Land Use/Surrounding Land Use		
	X*	**Comments**
Commercial	X	
Industrial		
Residential		
Recreational	X	
Community (school/church)	X	
Vacant		
Access (land or water)		
Pollution/Contamination		
Observations: Site is a well-maintained park.		

**Throughout this form, check (X) all that apply (unless otherwise specified).*

Table 3 - Sources of Stress		
	X	**Comments**
Outfalls		No surface water discharge sites located within 500 feet
Storm Drains	X	
Dumping / Filling		
Debris		
Industrial Facilities / Uses		
Other: DEBRIS WASHED IN BY STORM WATER	X	
Other: RCRA Sites	X	Three RCRA sites located within 500 feet
Other: NJ Known Contaminated Site	X	Two NJ Known Contaminated Siteslocated within 500 ft

LOWER PASSAIC RESTORATION PROJECT
POTENTIAL RESTORATION SITE FIELD DATA FORM

Table 4 – Substrate			
Substrate Type	**Approx. Percent Composition (0-100%)**		
	1	**2**	**3**
Bedrock			
Boulder/Rip Rap	X		
Coarse (Cobble/Gravel)	X		
Fine (Sand/Silt/Clay)	X		
Organic			
Open Water (unknown)			

Table 5 - Hydrologic Features		
Classification	**X**	**Comments**
Tidal		
Subtidal		
Intertidal		
Lower Perennial		
Upper Perennial	X	
Intermittent		
Unknown		
Water Regime	**X**	**Comments**
Permanently Flooded	X	
Temporarily /Seasonally Flooded		
Intermittently Flooded (event dependant)		
Saturated		
Artificially Flooded		
Unknown		
Describe Hydrologic Features / Drainage Pathways: Small, swift-flowing brook with dammed ponds and pools		

Table 6 - Bank Assessment (if applicable)								
Stability			**Percent Bank Erosion**	**Percent Composition (0-100%)**				
				1	**2**	**3**		
Stable- bank stable; evidence of erosion or bank failure absent or minimal			< 5%	X				
Moderately Stable- infrequent small areas of erosion mostly healed			5 - 30%	X				
Moderately Unstable- areas of erosion present, unhealed			30 - 60%					
Unstable- eroded areas frequent along straight sections, obvious bank sloughing			60 - 100%					
Approx Slope:		Horizontal to 1 Vertical		Slope Dimensions:		ft Wide x		ft Long

LOWER PASSAIC RESTORATION PROJECT
POTENTIAL RESTORATION SITE FIELD DATA FORM

Table 7 - Vegetative Cover Components						
Vegetation Class	**Approx. % Cover**			**Dominant Species**		
UPLAND:	**1**	**2**	**3**	**1**	**2**	**3**
Forested						
Scrub/Shrub						
Old Field						
Urban (describe: PARK)	X					
WETLAND:						
Forested Wetland						
Scrub/Shrub Wetland						
Herbaceous Wetland						
Mud Flat						
Open Water / Emergent	X					

Table 8 - Faunal Observations			
Avian	**Type**	**Approx #**	**Habitat Association**
			See comments and observations below
Mammalian			See comments and observations below
Fish			See comments and observations below
Herptiles			See comments and observations below
Invertebrates			See comments and observations below

Table 9 - Floral Observations			
Algal	**Type**	**Approx Cover**	**Habitat Association**
			See comments and observations below
Emergent			See comments and observations below
Shrub			See comments and observations below
Trees			See comments and observations below

LOWER PASSAIC RESTORATION PROJECT
POTENTIAL RESTORATION SITE FIELD DATA FORM

Table 10 – Potential Restoration Components		
	X	**Comments**
Remove Manmade Structures		
Remove Fill / Debris		
Lower Grade		
Raise Grade		
Remove Invasive Species		
Replant Indigenous Species	X	
Flatten Shoreline		
Biostabilize (Shoreline)	X	
Eliminate Stresses		
Hydrology Alterations / Improvements		
Other Habitat Enhancements		
Human Use	X	
Other		
Restoration Concept Narrative: See comments and observations below.		

Tables 11 and 12 to be completed at the Restoration Workshop

Table 11 - Potential to Achieve Restoration Goals		
Restoration Goal	**X**	**Comments**
Improve Water Quality		
Improve Flora		
Improve Fauna		
Improve Sediment Quality		
Improve Human Use		

Table 12 – Overall Evaluation of Site Potential	
	X (check one only)
Rank I: Good / Great Site – Merits Further Study	
Rank II: Poor Site – Unlikely Candidate for Restoration	
Unable to Determine Site Potential	
Rationale for Site Ranking:	

Additional Comments and Observations (use additional sheets if necessary):

FIELD NOTES ON SITE 11N

This site contains a small brook that is a tributary of the Passaic River. For almost the entire length of the site, the brook flows through Memorial Park in the municipality of Passaic. The brook is approximately 20 feet wide and usually less than 1 foot in depth. Numerous riffles are present throughout the brook. The brook's bed was rocky with coarse sediment material. No evidence of rooted aquatic vegetation or facultative vegetation was observed in the brook. If facultative vegetation is present within the brook's bed during the growing season, it is likely sparsely vegetated.

The brook's banks are approximately 2 to 4 feet in height and nearly vertical. The banks are comprised of maintained or dilapidated rock walls and natural materials subject to active scour. The tops of the banks are vegetated with a combination of maintained lawns, isolated native trees, and ornamental tree and shrub species. Within the entire area of the park, no wooded areas were observed.

In the western half of site 11N there is a large, man-made reflecting pond. The pond is the result of the damming of the brook. Here too,no evidence of rooted aquatic vegetation or facultative vegetation was observed on the pond's shore. Numerous waterfowl were observed utilizing the pond. As such, organic nutrients, fecal coli, etc., likely occur at high levels in the pond.

<u>Restoration Activities – Site 11N</u>

Restoration activities that could occur in site 11N are vast and include the following:

- Planting of native trees and shrubs for anupland forested and scrub/shrub habitat.
- Minor damming and widening of the stream in select locations to permit herbaceous and scrub/shrub facultative species.
- Cleanup of reflecting pond (removal of nuisance water fowl, planting of rooted aquatic vegetation, addition of fish).
- Installation of nature/interpretive walk along river.
- Bank stabilization.

Site 11N

Site 11N

Site 11N

LOWER PASSAIC RESTORATION PROJECT
POTENTIAL RESTORATION SITE FIELD DATA FORM

Date:	1/07/05	Field Personnel:	JR/BG
Time:	10:27am	Last High/Low Tide:	Low tide
Photos: Attached			

Table 1 - General Information				
Site Name / Number: Site 32N (Clark's Pond) and Third River (including 33N)				
Location Description: Site located off a tributary of the Passaic River (Bloomfield, Essex County)				
Approx. Physical Dimensions of Site: Oval with approximate dimensions of 1000′ × 250′				
System Elements (check one):	Marine ( )	Estuarine ( )	Riverine (X)	Palustrine ( )

Table 2 - Adjacent Land Use/Surrounding Land Use		
	X*	**Comments**
Commercial		
Industrial		
Residential	X	50%
Recreational	X	50%
Community (school/church)		
Vacant		
Access (land or water)		
Pollution/Contamination		
Observations:		

**Throughout this form, check (X) all that apply (unless otherwise specified).*

Table 3 - Sources of Stress		
	X	**Comments**
Outfalls	X	
Storm Drains		
Dumping / Filling	X	Sedimentation in pond
Debris	X	
Industrial Facilities / Uses		
Other: _____		No RCRA or NJ Known Contaminated Sites within 500 ft
Other: _____		

LOWER PASSAIC RESTORATION PROJECT
POTENTIAL RESTORATION SITE FIELD DATA FORM

Table 4 – Substrate			
Substrate Type	**Approx. Percent Composition (0-100%)**		
	1	**2**	**3**
Bedrock			
Boulder/Rip Rap			
Coarse (Cobble/Gravel)			
Fine (Sand/Silt/Clay)	X		
Organic	X		
Open Water (unknown)	X		

Table 5 - Hydrologic Features		
Classification	**X**	**Comments**
Tidal		
Subtidal		
Intertidal		
Lower Perennial		
Upper Perennial	X	
Intermittent		
Unknown		
Water Regime	**X**	**Comments**
Permanently Flooded	X	
Temporarily /Seasonally Flooded		
Intermittently Flooded (event dependant)		
Saturated		
Artificially Flooded		
Unknown		
Describe Hydrologic Features / Drainage Pathways:		

Table 6 - Bank Assessment (if applicable)								
Stability	**Percent Bank Erosion**	**Percent Composition (0-100%)**		
		1	**2**	**3**
Stable- bank stable; evidence of erosion or bank failure absent or minimal	< 5%	X		
Moderately Stable- infrequent small areas of erosion mostly healed	5 - 30%	X		
Moderately Unstable- areas of erosion present, unhealed	30 - 60%			
Unstable- eroded areas frequent along straight sections, obvious bank sloughing	60 - 100%			
Approx Slope:		Horizontal to 1 Vertical		Slope Dimensions:		ft Wide x		ft Long

LOWER PASSAIC RESTORATION PROJECT
POTENTIAL RESTORATION SITE FIELD DATA FORM

Table 7 - Vegetative Cover Components						
Vegetation Class	**Approx. % Cover**			**Dominant Species**		
UPLAND:	**1**	**2**	**3**	**1**	**2**	**3**
Forested	25%					
Scrub/Shrub	25%					
Old Field	25%					
Urban (describe: PARK)	25%					
WETLAND:						
Forested Wetland						
Scrub/Shrub Wetland	X					
Herbaceous Wetland	X					
Mud Flat	X					
Open Water / Emergent	X					

Table 8 - Faunal Observations			
Avian	**Type**	**Approx #**	**Habitat Association**
			See comments below
Mammalian			See comments below
Fish			See comments below
Herptiles			See comments below
Invertebrates			See comments below

Table 9 - Floral Observations			
Algal	**Type**	**Approx Cover**	**Habitat Association**
			See comments below
Emergent			See comments below
Shrub			See comments below
Trees			See comments below

LOWER PASSAIC RESTORATION PROJECT
POTENTIAL RESTORATION SITE FIELD DATA FORM

Table 10 – Potential Restoration Components		
	X	**Comments**
Remove Manmade Structures		
Remove Fill / Debris		
Lower Grade		
Raise Grade		
Remove Invasive Species		
Replant Indigenous Species		
Flatten Shoreline		
Biostabilize (Shoreline)		
Eliminate Stresses	X	
Hydrology Alterations / Improvements		
Other Habitat Enhancements	X	Dredging
Human Use	X	
Other	X	
Restoration Concept Narrative: • Pond and surrounding areas function as good habitats. • Debris removal and dredging of sediments may increase the ecological value of the habitat.		

Tables 11 and 12 to be completed at the Restoration Workshop

Table 11 - Potential to Achieve Restoration Goals		
Restoration Goal	**X**	**Comments**
Improve Water Quality		
Improve Flora		
Improve Fauna		
Improve Sediment Quality		
Improve Human Use		

Table 12 – Overall Evaluation of Site Potential	
	X (check one only)
Rank I: Good / Great Site – Merits Further Study	
Rank II: Poor Site – Unlikely Candidate for Restoration	
Unable to Determine Site Potential	
Rationale for Site Ranking:	

Additional Comments and Observations (use additional sheets if necessary):

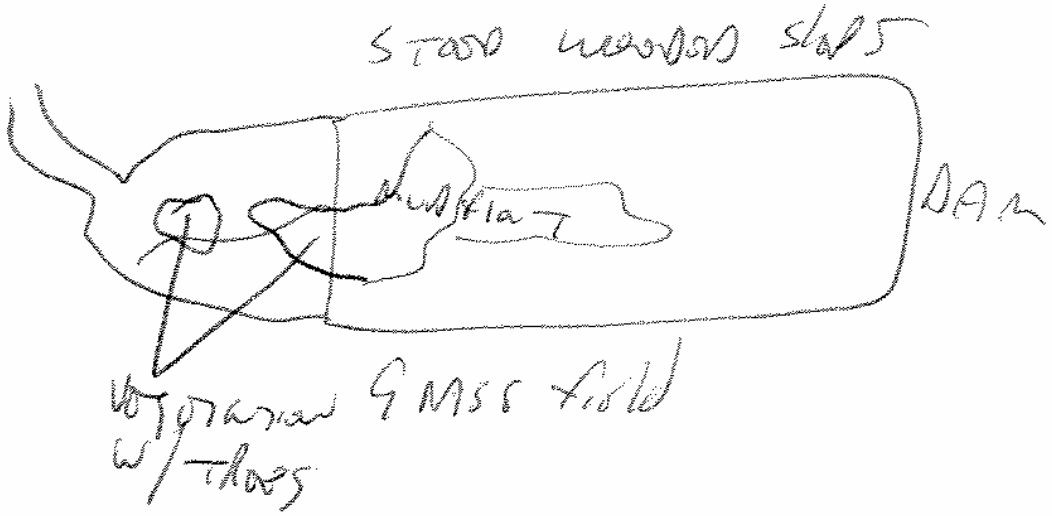
FIELD NOTES ON CLARK'S POND

Clark's Pond is a broad, shallow pond that was formed by the damming of Third River. The pond's eastern bank is comprised of a steep-sided, wooded cliff approximately 10-20 ft in height. Residential homes occur on the top of the cliff.

The northern bank consists of a low area with tress and scrub/shrub species. The eastern bank is vegetated with grasses, ornamental tree, and shrub species and is part of recreational field associated with Bloomfield Middle School. A dam is located in the southern portion of the pond. The dam is approximately four feet in height.

In the north-central portion of the pond, there is a vegetated island. The island consists of a mix of facultative herbaceous and woody vegetation. The bottom of the pond consists of soft sediments. These sediments likely have built up since the presence of the dam. It is anticipated that sedimentation will become an issue in the future with the pond. Also, shopping carts and other trash were located along bottom and shoreline of the pond.

The pond is utilized by a variety of avifauna. Fish, herptofauna, invertebrate, and mammal species are likely limited to those that can survive in an urban/stressed environment.



Schematic drawing of Clark's Pond and Third River by Field Crew (north is to the left side of the page).

Middle of pond (west bank looking east) island in center of pond

North edge of pond looking southwest

FIELD NOTES ON THIRD RIVER

(Unless otherwise noted, the Third River is shallow, moderate to swift flowing with numerous riffles. Rocks and coarse materials comprise the bed. Minimal, if any rooted aquatic vegetation or emergent vegetation was observed within the river bed.)

From the dam that forms the southern boundary of Clark's Pond to the northern border of the Glen Ridge Country Club golf course, the river flows through a dense wooded area. The area is vegetated with deciduous tree and shrub species common to the area (oaks, maple, sycamore, multifloral rose, etc.). Within this wooded area, pockets of forested, scrub/shrub, and emergent wetlands occur. This section of the river currently serves as a mix of upland and wetland wooded habitats, which are limited to the region. Moreover, the river is approximately 300 ft (100 m) from a major road, which provides some isolation to the area.

Within the Glen Ridge Country Club golf course, the river flows through a rock lined swale. The banks are vegetated with grasses and "greens" associated with the golf course. Also, in the western portion of the golf course there is a small pond. A small stream flows out of this pond and joins the Third River north of Bay Street.

South of the Golf Course to Bay Street, the river and its banks are similar to that of the area between Clark's Pond and the Golf Course's northern boundary. Here too, the River is isolated from major roadways by a wooded buffer and homes. The banks of the brook are home to forested upland and wetland habitats. In between the Third River and the small stream that flows from the Golf course's western portion, there is an isolated wooded piece of land.

From Bay Street south to Foley Park, the river flows through a small park and behind businesses. The banks often consist of concrete vertical walls or limited natural banks. The banks are often vegetated with grasses or wooded species common to an urban environment and provide limited habitat value to local fauna.

From Foley Park to approximately Fairway Street (Bellville), the river is located in a ravine about 20 feet in depth. The ravine is steeply-sided and vegetated with deciduous tree and shrub species. The tops of the banks primarily consist of ball fields, golf courses, residences, or maintained areas associated with the Garden State Parkway.

Where the river crosses Hoover Street, there is evidence of vegetation maintenance as underbrush has been cleared and ornamental saplings have been planted. Some riprap occurs upstream and downstream of Hoover Street.

Starting near Sergeant Street the river flows between concrete-lined walls or gabions that are approximately 8 feet in height. This structure continues until the river meets Booth Park in Nutley. From this park south through Nutley, the river flows through a parkland. The banks consists of rock lined-vertical walls or concrete culverts. Periodically, the river is diverted into two channels for aesthetic purposes and/or to create a small pond. All the vegetation within the park(s) consist of maintained grasses and ornamental tree and shrub species. No rooted aquatic or emergent hydrophytic vegetation was observed.

At the northern portion of the park is Lake Kingsland. The lake was formed by the installation of a dam on the Third River. The lake empties over an approximately 8-foot high spillway. The river continues to flow north, past the Clifton Commons Mall, in a shallow ravine. The ravine is steeply-sided and vegetated with deciduous tree and shrub species. These conditions persist until the river meets Rt. 3.

North of Route 3, the river flows into a large undeveloped parcel. This parcel is vegetated with wooded, shrub/shrub, and herbaceous habitats. This area may be one of the few remaining areas of the river that have not been significantly altered by anthropogenic activities. The banks of the river are natural and scoured by erosion. The river is shallow with numerous riffles and with rocks and coarse materials comprising its bed. Several gravel/sand bars were observed in the river. This area is likely utilized by a variety of fauna as it is one of the few contiguous wooded habitats near the Passaic River in eastern Essex County/Southwestern Passaic County.

South of Rt. 3, the river flows through a small wooded area until flowing through an industrial area and meeting the Passaic River. The tidal portion of the Third River is limited and occurs downstream of the River Road bridge in Nutley. Riffles were observed immediately down stream of the bridge.

Third River looking southeast

Third River looking southwest

Wetlands on southwest edge of pond / Third River

LOWER PASSAIC RESTORATION PROJECT
POTENTIAL RESTORATION SITE FIELD DATA FORM

Restoration Activities

- For the isolated wooded areas along the Third River that currently serve as higher ecological valuable habitat for the region:
    - Bloomfield (Clark's Pond to the Glen Ridge Country Club, and the Glen Ridge Country Club to Bay Street) and
    - Clifton (the area of the Third River north of Rt 3).
- Restoration activities should be limited to trash and debris removal as well as the removal of invasive species. Japanese knotweed and common reed were observed in these areas. Replanting of native species in select locations too would be beneficial. However, large-scale changes to the topography should be closely studied as the area currently serves as an oasis for fauna in a dense urban area.
- Clark's Pond – removal of excess sediment may improve water quality and fish habitat. Also, planting of emergent vegetation along the river banks would increase the habitat valuePlanting of native trees and shrubs for a upland forested and scrub/shrub habitat.
- Minor damming and widening of the stream in select locations to permit herbaceous and scrub/shrub facultative species.
- Cleanup of ornamental ponds and Lake Kingsland (removal of nuisance water fowl, planting of rooted aquatic vegetation, and addition of fish).
- Bank stabilization in select locations.
- Water quality improvements – storm water outfalls affect the river.

LOWER PASSAIC RESTORATION PROJECT
POTENTIAL RESTORATION SITE FIELD DATA FORM

Date:	12/21/04	Field Personnel:	JR/BG
Time:	Approx 9:50am	Last High/Low Tide:	Low tide
Photos # Attached			

Table 1 - General Information				
Site Name / Number: Second River by Main Street Bridge				
Location Description: Second River is a tributary of the Passaic River (mouth located in Newark, Essex County) Second River approximately 40 feet wide with alluvial, deposited rocks/coarse material. (Just below bridge, there is a 1-foot waterfall and then river confluence.) Second River: concrete walled or steeply, sided sloop with urban vegetation.				
Approx. Physical Dimensions of Site: Second River				
System Elements (check one):	Marine ( )	Estuarine (X)	Riverine ( )	Palustrine (X)

Table 2 - Adjacent Land Use/Surrounding Land Use		
	X*	**Comments**
Commercial	X	
Industrial	X	
Residential		
Recreational		
Community (school/church)		
Vacant		
Access (land or water)		
Pollution/Contamination		
Observations:		

**Throughout this form, check (X) all that apply (unless otherwise specified).*

Table 3 - Sources of Stress		
	X	**Comments**
Outfalls	X	
Storm Drains	X	
Dumping / Filling	X	
Debris	X	
Industrial Facilities / Uses	X	
Other: _____		
Other: _____		

LOWER PASSAIC RESTORATION PROJECT
POTENTIAL RESTORATION SITE FIELD DATA FORM

Table 4 – Substrate			
Substrate Type	**Approx. Percent Composition (0-100%)**		
	1	**2**	**3**
Bedrock			
Boulder/Rip Rap	X		
Coarse (Cobble/Gravel)	X		
Fine (Sand/Silt/Clay)			
Organic			
Open Water (unknown)			

Table 5 - Hydrologic Features		
Classification	**X**	**Comments**
Tidal		
Subtidal		
Intertidal	X	
Lower Perennial	X	
Upper Perennial		
Intermittent		
Unknown		
Water Regime	**X**	**Comments**
Permanently Flooded	X	
Temporarily /Seasonally Flooded		
Intermittently Flooded (event dependant)		
Saturated		
Artificially Flooded		
Unknown		
Describe Hydrologic Features / Drainage Pathways:		

Table 6 - Bank Assessment (if applicable)									
Stability				**Percent Bank Erosion**	**Percent Composition (0-100%)**		
					1	**2**	**3**
Stable- bank stable; evidence of erosion or bank failure absent or minimal				< 5%	X		
Moderately Stable- infrequent small areas of erosion mostly healed				5 - 30%	X		
Moderately Unstable- areas of erosion present, unhealed				30 - 60%			
Unstable- eroded areas frequent along straight sections, obvious bank sloughing				60 - 100%			
Approx Slope:		Horizontal to 1 Vertical		Slope Dimensions:		ft Wide x		ft Long

LOWER PASSAIC RESTORATION PROJECT
POTENTIAL RESTORATION SITE FIELD DATA FORM

Table 7 - Vegetative Cover Components						
Vegetation Class	**Approx. % Cover**			**Dominant Species**		
UPLAND:	**1**	**2**	**3**	**1**	**2**	**3**
Forested						
Scrub/Shrub						
Old Field						
Urban (describe:)						
WETLAND:						
Forested Wetland						
Scrub/Shrub Wetland						
Herbaceous Wetland	<5%					
Mud Flat	X					
Open Water / Emergent	X					

Table 8 - Faunal Observations			
Avian	**Type**	**Approx #**	**Habitat Association**
			Not applicable
Mammalian			Not applicable
Fish			Not applicable
Herptiles			Not applicable
Invertebrates			Not applicable

Table 9 - Floral Observations			
Algal	**Type**	**Approx Cover**	**Habitat Association**
			Not applicable
Emergent			Not applicable
Shrub			Not applicable
Trees			Not applicable

LOWER PASSAIC RESTORATION PROJECT
POTENTIAL RESTORATION SITE FIELD DATA FORM

Table 10 – Potential Restoration Components		
	X	**Comments**
Remove Manmade Structures	X	
Remove Fill / Debris	X	
Lower Grade		
Raise Grade		
Remove Invasive Species		
Replant Indigenous Species	X	
Flatten Shoreline		
Biostabilize (Shoreline)	X	
Eliminate Stresses	X	
Hydrology Alterations / Improvements		
Other Habitat Enhancements	X	
Human Use		
Other		
Restoration Concept Narrative: Remove debris. Also stabilize shoreline. Site is surrounded by industrial uses. Limited natural areas would make large-scale mitigation not possible. Best case solution is to remove trash and stabilize shoreline to protect against future sedimentation.		

Tables 11 and 12 to be completed at the Restoration Workshop

Table 11 - Potential to Achieve Restoration Goals		
Restoration Goal	**X**	**Comments**
Improve Water Quality		
Improve Flora		
Improve Fauna		
Improve Sediment Quality		
Improve Human Use		

Table 12 – Overall Evaluation of Site Potential	
	X (check one only)
Rank I: Good / Great Site – Merits Further Study	
Rank II: Poor Site – Unlikely Candidate for Restoration	
Unable to Determine Site Potential	
Rationale for Site Ranking:	

Additional Comments and Observations (use additional sheets if necessary):

The site is affected by outfalls and surface runoff from industrial sites.

Questions arise as to water quality of runoff.

From Bloomfield Avenue to Chestnut Street (Montclaire): river flows in a concrete lined swale to Chestnut Street. Banks are formed by stones and vegetation (trees, park on bank (sporadic))

From Chestnut Street to Memorial Park: stone line culvert

Memorial Park contains a large pond with island. Uplands and islands subject to landscaping.

North of pond: brook flows through rock culvert

From pond to Parkway Street: opportunities for riparian plantings.

FIELD NOTES ON SECOND RIVER

The Second River flows generally west to east from Watsessing Park in Bloomfield to its confluence with the Passaic River. Within this stretch, the river's banks are abutted by numerous local parks. From Watsessing Park to approximately the Main Street Bridge (Belleville/Newark), the river's banks almost completely consist of concrete vertical walls and bulkheads of differing heights (approx 6-15 ft) in height. Numerous stormwater outfalls were observed within the culverts, walls, and bulkheads along the Second River.

Often the tops of the river's banks are flat and vegetated with maintained mowed lawns and with ornamental tree and shrub species. The river's bottom consists of the following:

- Cobble stones (of anthropogenic placement) or concrete blocks. The cobblestones and blocks are laid perfectly flat to (presumably) assist in water flow. Little available benthic habitat occurs in these areas. Much of the river's bottom in Belleville is comprised of cobblestones.

- Rocks and coarse-grained materials. This material occurs in Newark and in Bloomfield and some areas in Belleville.

Immediately south of the Main St/McCarter Highway Bridge along the Belleville-Newark Border, there is a 1ft (0.3 meter) vertical drop in the stream bed. It is believed that this drop demarcates the area where the Second River becomes tidal. Upstream, the river has numerous riffles and is non-tidal. Near the confluence of the Passaic River, the Second River's banks are vegetated with species common to an urban environment. The banks are strewn with debris and garbage. Also, industrial and commercial sites abut the river banks in this area of the river.

The river's headwaters occur in Watsessing Park in Bloomfield. In the park, the river is formed by the confluence of two brooks: the Wigwam Brook and the Torres brook. The confluence of these two brooks forms an isolated wooded spit of land, south of a rail line.

The Wigwam brook flows from East Orange and is abutted by the maintained lawns of local parks and businesses. In a few isolated areas, a stand of Japanese knotweed occurs on the top of the banks. No wooded areas abut the brook. The bottom consists of rocks and coarse-sediments. Also, metal signs indicate that other federal, state, and local agencies have conducted and/or are conducting restoration activities along this brook. Several newly planted trees were observed.

The Torres Brook flows from its headwaters in Upper Montclair (north of the NJ transit train Station on Bellevue Ave) through the municipalities of Montclair, Glen Ridge, and Bloomfield.

In Watsessing Park, the brook flows through a flat area with maintained lawns and ornamental tree species. The banks are a combination of natural banks and/or stabilized areas. The tops of the banks are predominately vegetated with maintained lawns, ornamental tree, and shrub species. A few areas are unmaintained with vegetation common to an urban environment.

Proceeding upstream from Watsessing Park in Bloomfield, the Torres Brook is a culverted waterbody that flows through a densely populated and developed area. Here the banks consists of concrete-lined walls, and little, if any, natural areas occur on the tops of the banks. In Glen Ridge, the brook parallels Bloomfield Avenue and flows through a deep, isolated, wooded ravine. The only anthropogenic disturbances in this area are NJ transit trains and passive pedestrian activity.

Proceeding upstream from the Montclair/Glen Ridge border to Chestnut Street in Montclair, the brook is culverted in concrete-lined walls. Between Chestnut St and Memorial Park the brook flows through a stone-lined culvert. The culvert flows through and/or adjacent to the back yards of numerous up-scale residential homes.

Memorial Park contains a large pond with islands. Both the island's and park's surrounding land are landscaped and vegetated with grasses and ornamental tree species. Upstream of the pond to Parkway Street, the Torres Brook flows through channel with natural banks.

Upstream of Parkway Street to the brook's headwaters north of the Upper Montclair train station, the brook narrows in width from six to two feet. The banks of the brook from its headwaters to Parkway Street are often culverted or highly developed. One exception is in Anderson Park where the brook flows between the park and the embankment of the rail line. Here the west bank is vegetated with grasses and trees associated with the park.

<u>Restoration Activities – Second River</u>

- Removal of garbage and debris through the entire length of the water body.
- Water quality improvements – upgrade/removal of outfalls along the river banks.
- Removal of invasive species. Japanese knotweed observed periodically along the river banks.

- In the eastern portion of the Second River near its confluence with the Passaic Removal, the removal of debris and garbage and the planting of native species would be beneficial. Also, the removal of industrial contaminants/runoff, if present, would too be beneficial.

- As stated previously, the rivers bank's are often comprised of concrete and bulkheads and offer little ecological value. The tops of the river's banks have low species diversity do to active landscaping activities. The planting of wooded and shrub/scrub habitats would enhance the ecological value of the area. The addition of natural banks and the installation of a natural bottom (i.e. rocks and coarse-grained materials) would increase the ecological value of the habitat for aquatic fauna.

  However, prior to the construction of a natural bank or river bottom, local and county flooding regulations should be consulted. Due to the high degree of anthropogenic development in the area, the Second River assists in conveying stormwater runoff away from residential areas.

- Along the ravine in Glen Ridge, there are numerous rock outcrops of tertiary red sand stone and siltstone. A geological interpretive walk can be placed in this area.

- In the segment of the Torres Brook from Parkway Street to the pond in Memorial Park, a narrow channel with natural banks is present. In this segment there may be the opportunities for riparian restoration as the area. Also, in Anderson Park along the railroad embankment, restoration possibilities occur.

Second River (looking upstream) at the Main Street Bridge

Outfall on the Second River

LOWER PASSAIC RESTORATION PROJECT
POTENTIAL RESTORATION SITE FIELD DATA FORM

Date:	1/07/05	Field Personnel:	JR/BG
Time:	9:48am	Last High/Low Tide:	Outgoing tide
Photos: Attached			

Table 1 - General Information				
Site Name / Number: 30N				
Location Description: Site located at the south end of Branch Brook Lake (Newark, Essex County)				
Approx. Physical Dimensions of Site: Polygon with approximate dimensions of 2000′ × 300′				
System Elements (check one):	Marine ( )	Estuarine ( )	Riverine ( )	Palustrine (X)

Table 2 – Adjacent Land Use/Surrounding Land Use		
	X*	**Comments**
Commercial		
Industrial		
Residential		
Recreational	X	Branch Brook Park
Community (school/church)		
Vacant		
Access (land or water)		
Pollution/Contamination		
Observations:		

**Throughout this form, check (X) all that apply (unless otherwise specified).*

Table 3 – Sources of Stress		
	X	**Comments**
Outfalls	X	No surface water discharge sites located within 500 ft
Storm Drains	X	
Dumping / Filling	X	
Debris	X	
Industrial Facilities / Uses	X	
Other: NJ Known Contaminated Sites	X	One NJ Known Contaminated Site located within 500 ft
Other: _____		

LOWER PASSAIC RESTORATION PROJECT
POTENTIAL RESTORATION SITE FIELD DATA FORM

Table 4 – Substrate			
Substrate Type	**Approx. Percent Composition (0-100%)**		
	1	**2**	**3**
Bedrock			
Boulder/Rip Rap	X		
Coarse (Cobble/Gravel)	X		
Fine (Sand/Silt/Clay)	X		
Organic			
Open Water (unknown)			

Table 5 – Hydrologic Features		
Classification	**X**	**Comments**
Tidal		
Subtidal		
Intertidal		
Lower Perennial		
Upper Perennial		
Intermittent		
Unknown		
Water Regime	**X**	**Comments**
Permanently Flooded	X	Lake
Temporarily /Seasonally Flooded		
Intermittently Flooded (event dependant)		
Saturated		
Artificially Flooded		
Unknown		
Describe Hydrologic Features / Drainage Pathways:		

Table 6 – Bank Assessment (if applicable)								
Stability			**Percent Bank Erosion**	**Percent Composition (0-100%)**				
				1	**2**	**3**		
Stable- bank stable; evidence of erosion or bank failure absent or minimal			< 5%	X				
Moderately Stable- infrequent small areas of erosion mostly healed			5 – 30%					
Moderately Unstable- areas of erosion present, unhealed			30 – 60%					
Unstable- eroded areas frequent along straight sections, obvious bank sloughing			60 – 100%					
Approx Slope:		Horizontal to 1 Vertical		Slope Dimensions:		ft Wide x		ft Long

LOWER PASSAIC RESTORATION PROJECT
POTENTIAL RESTORATION SITE FIELD DATA FORM

Table 7 – Vegetative Cover Components						
Vegetation Class	**Approx. % Cover**			**Dominant Species**		
UPLAND:	**1**	**2**	**3**	**1**	**2**	**3**
Forested	X					
Scrub/Shrub	X					
Old Field	X					
Urban (describe:)	X					
WETLAND:						
Forested Wetland						
Scrub/Shrub Wetland						
Herbaceous Wetland	X					
Mud Flat	X					
Open Water / Emergent	X					

Table 8 – Faunal Observations			
Avian	**Type**	**Approx #**	**Habitat Association**
			Urban fauna
Mammalian			Urban fauna
Fish			Unknown
Herptiles			Probably limited
Invertebrates			Probably limited

Table 9 – Floral Observations			
Algal	**Type**	**Approx Cover**	**Habitat Association**
			Not applicable
Emergent			Not applicable
Shrub			Not applicable
Trees			Not applicable

LOWER PASSAIC RESTORATION PROJECT
POTENTIAL RESTORATION SITE FIELD DATA FORM

Table 10 – Potential Restoration Components		
	X	**Comments**
Remove Manmade Structures		
Remove Fill / Debris		
Lower Grade		
Raise Grade		
Remove Invasive Species	X	
Replant Indigenous Species	X	
Flatten Shoreline		
Biostabilize (Shoreline)		
Eliminate Stresses		
Hydrology Alterations / Improvements	X	
Other Habitat Enhancements	X	
Human Use		
Other		
Restoration Concept Narrative: See comments below		

Tables 11 and 12 to be completed at the Restoration Workshop

Table 11 - Potential to Achieve Restoration Goals		
Restoration Goal	**X**	**Comments**
Improve Water Quality		
Improve Flora		
Improve Fauna		
Improve Sediment Quality		
Improve Human Use		

Table 12 – Overall Evaluation of Site Potential	
	X (check one only)
Rank I: Good / Great Site – Merits Further Study	
Rank II: Poor Site – Unlikely Candidate for Restoration	
Unable to Determine Site Potential	
Rationale for Site Ranking:	

Additional Comments and Observations (use additional sheets if necessary):

The site is a broad, shallow lake.

Wetlands consist of open water, limited herbaceous species.

Uplands are steep to flat, are wooded in seep area, and consist of un-maintained grass lawns in other areas.

Restoration would consist of removal of storm water outfalls, removal of debris, and planting of natural forested, shrubs/scrubs upland.

Wetlands could consist of herbaceous vegetation.

Site 30N: Eastern shore of lake looking north

Site 30N: Western shore of lake looking north

Attachment 2

N

24N

6

Kearny Marsh

25N

3

12TMS

5

18TMS

19TMS

20TMS

2

17TMS

35N

27N

21TMS

26N

7HP

4

16TMS

15TMS

13TMS

28N

14TMS

1

29N

22TMS

23TMS

Kearny Point/Marsh

10HP

0

Oak Island Yards Tidal Creek
and Wetlands Area
(See Figure B)

24TMS

0 1,000 2,000 4,000 Feet

Aerial photography shown is Digital color infrared (CIR) orthophotography of New Jersey in State Plane NAD83 Coordinates, U.S. Survey Feet.

Site 31N was not located during field activities - location shown on map is inaccurate.

US Army Corps of Engineers

MALCOLM PIRNIE

TAMS
AN EARTH TECH COMPANY

Lower Passaic River Restoration Study

Potential Restoration Sites

Figure A: Tile 1 of 5

- add_noaa_sites
- hre_sites
- studyarea
- tams_sites
- coalition_sites
- usace_sites
- noaa_sites
- Passaic Project Centerline

N

9
19N
2nd River Greenway
8
20N
22N
21N
11TMS
7
23N
7HM
24N
30N
6
Kea
25N
3
12TMS
5
18TMS
17TMS
19TMS
20TMS
2
35N
27N
21TMS
26N
7HP
4
16TMS
15TMS
13TMS
28N
14TMS
1
29
22
23TMS

0 1,000 2,000 4,000 Feet

Aerial photography shown is Digital color infrared (CIR) orthophotography of New Jersey in State Plane NAD83 Coordinates, U.S. Survey Feet.

Site 31N was not located during field activities - location shown on map is inaccurate.

US Army Corps of Engineers

MALCOLM PIRNIE

TAMS
AN EARTH TECH COMPANY

Lower Passaic River Restoration Study

Potential Restoration Sites

Figure A: Tile 2 of 5

- add_noaa_sites
- hre_sites
- studyarea
- tams_sites
- coalition_sites
- usace_sites
- noaa_sites
- Passaic Project Centerline

N

13N
14N
15N
16N
3PRC
6TMS
17N
Riverbank Parcel
7TMS
PowerLine ROW
8TMS
18N
9TMS
10TMS
19N
2nd River Greenway
20N
22N
21N
11TMS
23N
7HM
24N

12
11
10
9
8
7
6

0 1,000 2,000 4,000 Feet

Aerial photography shown is Digital color infrared (CIR) orthophotography of New Jersey in State Plane NAD83 Coordinates, U.S. Survey Feet.

Site 31N was not located during field activities - location shown on map is inaccurate.

US Army Corps of Engineers

MALCOLM PIRNIE

TAMS
AN EARTH TECH COMPANY

Lower Passaic River Restoration Study

Potential Restoration Sites

Figure A: Tile 3 of 5

- add_noaa_sites
- hre_sites
- studyarea
- tams_sites
- coalition_sites
- usace_sites
- noaa_sites
- Passaic Project Centerline

N

6N
4TMS
14
8N
7N
Waterfront Acces
11N
9N
10N
13
5TMS
12N
12
32N
13N
14N
33N
15N
11
16N
3PRC
34N
6TMS
17N
Riverbank Parcel
7TMS
10
PowerLine ROW
8TMS
18N
9TMS
10TMS
9

0 1,000 2,000 4,000 Feet

Aerial photography shown is Digital color infrared (CIR) orthophotography of New Jersey in State Plane NAD83 Coordinates, U.S. Survey Feet.

Site 31N was not located during field activities - location shown on map is inaccurate.

US Army Corps of Engineers

MALCOLM PIRNIE

TAMS
AN EARTH TECH COMPANY

Lower Passaic River Restoration Study

Potential Restoration Sites

Figure A: Tile 4 of 5

- add_noaa_sites
- hre_sites
- studyarea
- tams_sites
- coalition_sites
- usace_sites
- noaa_sites
- Passaic Project Centerline

N

31N
1N
3HP
6C
5N
2N
1PRC
4N
1TMS
5C
Island
2TMS
4C
16
3TMS
2C
3C
3N
Saddle River
6N
1C
4TMS
2PRC
15
14
8N
7N
Waterfront Acces
11N
9N
10N
13
5TMS
12N

0 1,000 2,000 4,000 Feet

Aerial photography shown is Digital color infrared (CIR) orthophotography of New Jersey in State Plane NAD83 Coordinates, U.S. Survey Feet.

Site 31N was not located during field activities - location shown on map is inaccurate.

US Army Corps of Engineers

MALCOLM PIRNIE

TAMS
AN EARTH TECH COMPANY

Lower Passaic River Restoration Study

Potential Restoration Sites

Figure A: Tile 5 of 5

- add_noaa_sites
- hre_sites
- studyarea
- tams_sites
- coalition_sites
- usace_sites
- noaa_sites
- Passaic Project Centerline