HUDSON-RARITAN ESTUARY COMPREHENSIVE RESTORATION PLAN POTENTIAL RESTORATION OPPORTUNITIES PROJECT SUMMARY SHEETS Lower Raritan

Restoration Opportunities CRP Identification #: Site Name

- 60. Silver Lake
- 65. Dismal Swamp
- 529. Woodbrook Road *TBD
- 525. IT/El Paso/Tennaco Energy/Nuodex *TBD
- 526. Hatco Chemical
- 527. Renora, Inc.
- 528. South Plainfield Veterans Memorial Park
- 530. Chemsol, Inc.*TBD
- 532. Middlesex Sampling Plant *TBD
- 533. Factory Lane *TBD
- 534. Cornell Dubilier Superfund Site *TBD
- 536. Raritan Arsenal
- 537. National Lead
- 538. Evor Phillips Leasing Company *TBD
- 539. CPS/Madison Industries *TBD

- 541. Chemical Insecticide Superfund Site *TDB
- 543. 131 Jersey Ave *TBD
- 544. Iron Leaf *TBD
- 545. Kents Neck
- 546. Edgeboro Landfill *TBD
- 547. Kin-Buc & Edison Landfill *TBD
- 548. South Rivers
- 552. Raritan River Waterfront *TBD
- 553. South Brunswick Landfill
- 554. Fried Industries *TBD
- 555. Jones Industrial Service Landfill *TBD

CRP SITE 60. SILVER LAKE

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

Category: Tidal Wetland Acquisition, Enhancement & Restoration

Location: Wolton Street, 0.25 miles west of Lake View Boulevard in Edison, NJ, Middlesex County.

Watershed: Raritan River

Size:

Ownership: *PSE&G*

Site Description: Disturbed wooded stream corridor, the site lies in between a PSE&G active industrial facility.

Current Land Use: PSE&G property contains Silver Lake Solar Farm.

Available Habitat:

Proposed Project:

Projected/Estimated Costs:

Project Status:

Partners: Project Contact: Megan Callus, Baykeeper; Bob Speigel, Edison Wetlands Association Phone: (732) 888-9870 Website: www.nynjbaykeeper.org

Project Funding Source: HEP Ratification Date: 7/1/1997

B. HUDSON RARITAN ESTUARY ECOSYSTEM RESTORATION STUDY INFORMATION

Restoration Recommendations (Applicable Target Ecosystem Characteristics):

Coastal Wetlands – Assessment of fringe marsh along the Raritan for potential fill removal, invasive species and restoration of intertidal salt marsh. May include replanting the area with native vegetation and regrading the marsh and tidal channel to improve tidal hydrology.

Coastal and Maritime Forests – Stream corridor restoration, may include debris removal, regrading, increased riparian buffer width and revegetation with native species. **Habitat for Fish, Crab and Lobsters** – Assess flats for composition, level of degradation and potential enhancements

Benefits, Cost and Comparative Restoration Ratio:

- C. EXISTING SITE SPECIFIC DATA INVENTORY
- A. Survey, Maps and GIS:
- **B.** Site History and Land Use:
- C. Biological Studies/ Fauna:
- D. Biological Studies/ General Environment:
- E. Geotechnical:

*Work in progress

REFERENCES:

to increase habitat connectivity- such as addition of complex structure should take place along approximately x acres. **Tributary Connections** – Assessment of barriers for potential to restore natural stream flow.

Sediment Contamination – Potential removal/capping of contaminated sediment based on testing.

F. Hydraulics and Hydrology:G. Water and Sediment:H. Historical and Cultural Resources:I. Restoration Remediation and Design Plans:



CRP SITE 65. DISMAL SWAMP

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

Category: Existing acquisition, restoration, preservation, and/or mitigation site.

Location: Edison, South Plainfield, and Metuchen, NJ.

Watershed: Raritan River

Size: 1,240 acres

Ownership: Private, Corporation, Municipality

Site Description: The Dismal Swamp is the largest last remaining viable wetland ecosystem in the highly urbanized northeastern portion of New Jersey. With adjacent uplands it is one of the largest contiguous undeveloped areas remaining in Middlesex County. It is home to nearly 200 species of birds, such as the yellow-crowned night-heron, American bittern, and northern harrier, and two dozen species of mammals, amphibians and reptiles. A dozen threatened and endangered species also use the area, such as the American bittern, bald eagle, and spotted turtle. Dismal Swamps subwatershed and wetlands serve as the headwaters that drain to Bound Brook, a major tributary within the of the Lower Raritan River. In 1994, the USEPA and USFWS designated the Dismal Swamp as a National Priority Wetland for the State of New Jersey

Current Land Use:

Available Habitat: The New Jersey Department of Environmental Protection identifies the majority of the Dismal Swamp as deciduous forested wetlands, with some portions depicted as deciduous shrub/scrub wetlands, or mixed shrub/scrub wetlands dominated with conifers. The forested wetlands are dominated by red maple, sweetgum, green ash, swamp white oak, and pin oak. Upland forested areas in the Dismal Swamp are considered to be valuable mature forests, greater than 50 years old. The forest and wetlands in Edison Township have been specifically identified as core habitat areas.

The shrub layer is dominated by highbush blueberry, swamp azalea, and arrowwood. The herbaceous layer includes skunk cabbage, jewelweed, sensitive fern, and cinnamon fern. The emergent wetland communities include spikerush, sedges, bulrushes, pickerel weed, soft rush, burreed, tearthumb, and cattail.

Proposed Project: The Conservation Area Management Plan (EWA 2009) outlines short term and long term stewardship recommendations for the Dismal Swamp which specifically address: identifying areas where invasive plant species should be eradicated; enhancing the existing trail networks and park signs; conducting additional seasonal wildlife surveys; evaluating stormwater impacts to the Dismal Swamp and potential stormwater mitigation measures; and restoring specific wetland areas. In addition, the report outlines strategies to assist in prioritizing parcels for future open space acquisitions and coordinating efforts with local municipalities, the county, the NJDEP Green Acres program, and land trust organizations to secure appropriate funding.

Projected/Estimated Costs:

Project Status: In 2008 Middlesex County acquired a 69 acre parcel (CRP. 821) within Dismal Swamp (that opens up from Helen Street) through a partnership with the Borough of South Plainfield, the NY/NJ Baykeeper and the Port Authority of New York and New Jersey.

In 2009, the Dismal Swamp Conservation Area (DSCA) was recognized as a New Jersey's State Preservation Commission. This designation places regional protection on this area.

Partners: Edison Wetland Association, NY-NJ Baykeeper, New York-New Jersey Port Authority, and the Middlesex County.

Project Contact: Megan Callus, NY-NJ Baykeeper

Phone: (732) 888-9870 **Website**:

Project Funding Source: HEP Ratification Date:

B. HUDSON RARITAN ESTUARY ECOSYSTEM RESTORATION STUDY INFORMATION

Restoration Recommendations (Applicable Target Ecosystem Characteristics):

Coastal Wetlands – Support EWA master plans to improve stormwater management and wildlife habitats by creating wetlands or bioretention basins, excavating and restoring filled wetlands, removing invasive species, restore with native plants and converting mosquito ditches to open waters, marshes or wetlands.

Coastal and Maritime Forests - Support EWA maintenance and improvements to woodland habitat.

Benefits, Cost and Comparative Restoration Ratio:

C. EXISTING SITE SPECIFIC DATA INVENTORY

A. Survey, Maps and GIS: EWA 2009

- B. Site History and Land Use: EWA 2009
- C. Biological Studies/ Fauna: EWA 2009
- D. Biological Studies/ General Environment: EWA 2009

E. Geotechnical:

*Work in progress

Tributary Connections – Support EWA maintenance and improvements to stream channel flow and structure. Sediment Contamination - Potential removal and capping of sediment based on testing. Public Access – Support EWA endevours to enhance the

existing entry points, trail networks and signage on the property owned by Edison Wetlands Association, the municipalities, and Middlesex County.

F. Hydraulics and Hydrology:
G. Water and Sediment: EWA 2009
H. Historical and Cultural Resources: EWA 2009
I. Restoration Remediation and Design Plans: EWA 2009

REFERENCES:

Altomari C., Mark Gallagher, and Michael Rehman. 2009. Dismal Swamp Watershed Management Plan. Edison Wetlands Association.

Endangered New Jersey, retrieved on 8.1.12: <u>http://endangerednj.blogspot.com/2010/01/dismal-swamp-conservation-area.html</u>

Dismal Swamp Conservation Area: http://njdismalswamp.org/?page_id=15



CRP SITE 529. WOODBROOK ROAD

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

Category: Existing restoration, preservation, and/or mitigation site.

Location: 1 mile southwest of the intersection of Stephenville Parkway and Plainfield Road in South Plainfield, NJ. Bordered by Bound Brook and wetlands of the Dismal Swamp.

Watershed: Bound Brook

Size: 70 acres

Ownership: Texas Eastern Transmission

Site Description: The Woodbrook Road Dump site (a.k.a. Dismal Swamp) is an inactive, illegal dumping area located in South Plainfield, New Jersey. The site is located on two properties north of Woodbrook Road. The site, totaling approximately 70 acres in size, is heavily wooded and undeveloped, and is bordered by the Bound Brook and wetlands of the Dismal Swamp. One residence is located on the site. These two properties were operated as dumps by previous owners during the 1940s and 1950s, accepting household and industrial wastes until shut down by the State of New Jersey in 1958. The current owner of the properties is Texas Eastern Transmission Corporation (TETCO). Partially buried, leaking capacitors were discovered in September 1999. After completion of a removal action to address these buried capacitors, a soil investigation revealed soil and sediments at the site were contaminated with VOCs, semi-volatile organic constituents, and PCBs. In addition, the ground water is contaminated with VOCs, inorganic constituents, and PCBs.

Current Land Use: Heavily wooded and undeveloped.

Available Habitat: Proposed Project: *This site is being addressed through Federal and potential responsible parties' actions.*

Projected/Estimated Costs:

Project Status: The site was designated Superfund in 2003. The site is being addressed in two stages: emergency actions and a long term remedial phase directed at cleanup of the entire site.

Partners: Project Contact: Phone: Website:

Project Funding Source: HEP Ratification Date:

B. HUDSON RARITAN ESTUARY ECOSYSTEM RESTORATION STUDY INFORMATION TBD **Restoration Recommendations (Applicable Target Ecosystem Characteristics): Coastal Wetlands -**Habitat for Fish, Crab and Lobsters -Islands for Waterbirds -**Tributary Connections -Enclosed and Confined Waters -Coastal and Maritime Forests -Oyster Reefs -Sediment Contamination -Eelgrass Beds -Public Access -**Shorelines and Shallows -**Benefits, Cost and Comparative Restoration Ratio:** C. EXISTING SITE SPECIFIC DATA INVENTORY F. Hydraulics and Hydrology: A. Survey, Maps and GIS: **B. Site History and Land Use:** G. Water and Sediment: C. Biological Studies/ Fauna: H. Historical and Cultural Resources: **D. Biological Studies/ General Environment:** I. Restoration Remediation and Design Plans: E. Geotechnical:

*Work in progress

REFERENCES:

http://www.epa.gov/region02/superfund/npl/0204260c.pdf

TRC Solutions, Inc. 2004. Wetland Delineation Summary: Woodbrook Road Dump Site.

*TBD- Superfund

CRP SITE 525. IT/EL PASO/TENNACO ENERGY/NUODEX (FORMER NUODEX CORPORATION FACILITY)

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

Category: Existing restoration, preservation, and/or mitigation site.

Location: 1070 Riverside Drive, Keasbey, NJ, 08832. The Site is bounded on the north by Riverside Drive (also known as Industrial Avenue), by other industrial properties to the east and west, and by the Raritan River to the south. Block 62, Lots 2 and 3; Block 93, Lot 100. Lat. Long. 40.512/-74.319

Watershed:

Size: 184 acres

Ownership: EPEC Polymers, Inc.

Site Description: The area proposed for restoration is predominantly disturbed freshwater wetland characterized by a near-monoculture of common reed (*Phragmites australis*, hereafter "*Phragmites*"). Two berms run across the width of the property, altering water flow and dividing the wetland into two distinct sections. Along the eastern and western property boundaries there are scrub-shrub, forest, and old field upland habitats. A small remnant of salt marsh is located along the southern property boundary. There is a 6.6-acre emergent pond area, covered with shallow open water and emergent marsh, in the central western section of the property.

Contaminants onsite include lead-containing fill materials (battery casings and slag), chlorotoluene, xylenes, toxaphene, toluene, chlorobenzene, benzene, tertiary-butyl alcohol, and radiological material. Contaminants are present in non-aqueous phase liquids, soils, sediments, and ground water. (Brown and Caldwell 2010). The radiological contamination is located in two separate areas of the Site, one associated with historic Site activities and the other with dredge spoil placed on the Site by USACE. The location associated with the onsite source contains uranium, while the dredge materials (located in the central wetland area) contain uranium and thorium.

Current Land Use: Industrial, contains some development.

Available Habitat: Freshwater Wetland, Tidal Wetland, Shrub/Scrub, Forest, Field/Grassland Impacts include; Invasive Species, Hydrologic Alteration, Construction Debris, Encroachment of Development, Filling, Soil and sediment contamination- from Light Industry, Landfills, US Army Corps of Engineers dredge placement

Proposed Project: Site topography and natural drainage patterns have been altered as a result of historic clay mining, as well as dredge material placement by the US Army Corps of Engineers (USACE) in the 1940s and 1950s. Creation and restoration of approximately 80 acres of freshwater wetland and wetland buffer habitats has been proposed as mitigation for remedial impacts to low-functioning freshwater wetlands in the northern section of the property. Approximately 2 acres of tidal habitat adjacent to the river are also proposed as part of the mitigation plan.

The mitigation plan is designed to improve wetland functions and values beyond current conditions by maximizing hydrological diversity, fostering habitat diversity, increasing vegetation biodiversity, creating complex vegetative strata, incorporating features that attract wildlife, and creating open water habitats suitable for fish. The conceptual mitigation design includes low and high salt marsh, maritime forest, meadow, and shrubland. It also includes an approximately 10-acre pond system surrounded by emergent marsh. The pond is designed to support critical life stages for fish and crustaceans. The mitigation plan includes a comprehensive *Phragmites* removal plan and maintenance and monitoring activities to prevent its re-establishment.

The proposed project will increase habitat suitability for special-status avian species such as osprey, which nest in waters adjacent to the Site, and yellow-crowned night-heron (*Nyctanassa vioalacea*). The restoration project will create a high-value habitat area in an otherwise industrial landscape along the Atlantic Flyway, to the benefit of migrating birds.

Projected/Estimated Costs:

Project Status: Site investigation is ongoing. A Supplemental Remedial Investigation Report is under review by NJDEP. A Remedial Action Workplan is currently being prepared for NJDEP approval. A Mitigation Plan is being developed by GEE and is in the planning, design, and permitting phase. Remediation and mitigation activities are scheduled to begin in 2011.

Partners: EPEC Polymers, Inc., Great Ecology and Environments, Inc.

Project Contact: Michael Parkes, Great Ecology & Environments, Inc. (GEE) **Phone:** (212) 579-6800 **Website:** <u>www.greatecologyandenvironments.com/</u>

Project Funding Source: HEP Ratification Date:

B. HUDSON RARITAN ESTUARY ECOSYSTEM RESTORATION STUDY INFORMATION

Restoration Recommendations (Applicable Target Ecosystem Characteristics): TBD Coastal Wetlands - Sediment Contamination -Coastal and Maritime Forests - Public Access -Shorelines and Shallows -Habitat for Fish, Crab and Lobsters -

Benefits, Cost and Comparative Restoration Ratio:

C. EXISTING SITE SPECIFIC DATA INVENTORY

A. Survey, Maps and GIS: GEE, 2010
B. Site History and Land Use: GEE, 2010
C. Biological Studies/ Fauna: GEE, 2010
D. Biological Studies/ General Environment: GEE, 2010
E. Geotechnical:

F. Hydraulics and Hydrology:
G. Water and Sediment: GEE, 2010
H. Historical and Cultural Resources: GEE, 2010
I. Restoration Remediation and Design Plans: GEE, 2010

*Work in progress

REFERENCES:

HEP Nomination form, 10/25/10- Great Ecology & Environments, Inc. (GEE)

Great Ecology and Environments. 2010. Ecological Synthesis Report. Prepared on behalf of EPEC Polymers, Inc., 1001 Louisiana St., Houston, Texas. Submitted to NJDEP Freshwater Wetlands and Mitigation Units. April 2010.

Brown and Caldwell. 2010. Supplemental Remedial Investigation Report, Former Nuodex Property, Program Interest No. G000001659, Fords, Woodbridge Township, New Jersey. Prepared for EPEC Polymers, Inc.

*TBD- In progress

CRP SITE 526. HATCO CHEMICAL

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

Category: Existing restoration, preservation, and/or mitigation site.

Location: 1.5 miles south on King George Road in Fords, NJ.

Watershed:

Size:

Ownership: Hatco Co.

Site Description: *W. R. Grace & Co. (Grace) owned and operated the site from 1959 to 1978 as the Hatco Chemical Division. On August 21, 1978, Grace sold the assets of the Hatco Chemical Division to (an entity that became known as) Hatco Chemical Corporation. Hatco Chemical Corporation changed its name to Hatco Corporation (Hatco) in 1986. Since the late 1980s and pursuant to a 1992 administrative consent order between DEP and Hatco, the Woodbridge site has undergone significant investigation and interim emergency cleanups to address environmental contamination with an associated cost of \$5 million undertaken by the responsible parties.*

Grace and Hatco entered into an environmental liability transfer with Weston and its insurer, ACE USA, to allow a cleanup of the site to proceed and to avoid significant transaction costs and delays. Grace and Hatco negotiated an agreement with Weston and an environmental insurance policy with Weston and ACE USA where Weston and ACE USA will accept responsibility for essentially all historical environmental liability in exchange for the up-front funding of the remediation and the purchase of the insurance policy. Consequently, the liability transfer will result in a cleanup by a nationally recognized environmental remediation company backed by a multi-billion dollar insurance company that may otherwise have cleanup significantly delayed by the bankruptcy filing of Grace and possibly end up requiring public funding

In September 2004, DEP included the Hatco site as part of a Raritan River initiative that requires specific cleanup work by responsible parties at five contaminated sites along the river's lower section to improve water quality. DEP worked with the Edison Wetlands Association to identify the sites where cleanup work had lagged for years.

The damages associated with the Hatco site include 3.46 acres of contaminated wetland and a plume of ground water contamination as large as 16 acres.

Current Land Use:

Available Habitat: Disturbed wooded wetland and forest.

Proposed Project:

Projected/Estimated Costs:

Project Status: In 2005, NJ DEP announced approval of a privately funded \$13.2 million PCB-contaminated soil cleanup at the Hatco site in Woodbridge Township and a settlement for preservation of a separate 34-acre land parcel to compensate the state for injuries to natural resources in connection with wetland and ground water contamination at the former industrial site.

The property being acquired as part of the settlement is a 34-acre parcel of land in Montgomery Township, which is a mix of wetland and upland habitat. This land is within the Raritan drainage area, as is the location of the contamination in Woodbridge Township. The Montgomery property contains both meadow and forest communities, with Rock Brook flowing along the rear of the property.

Partners: Project Contact: Phone: Website:

Project Funding Source: HEP Ratification Date:

B. HUDSON RARITAN ESTUARY ECOSYSTEM RESTORATION STUDY INFORMATION

Restoration Recommendations (Applicable Target Ecosystem Characteristics):

Sediment Contamination – Formerly contaminated sitethe following habitat restoration concepts should not be explored until appropriate sediment and water qualities standards have been attained.

Coastal Wetlands - Restoration of forested wetland area. Potential removal of invasives with native species plantings.

Benefits, Cost and Comparative Restoration Ratio:

C. EXISTING SITE SPECIFIC DATA INVENTORY

- A. Survey, Maps and GIS:
- **B.** Site History and Land Use:
- C. Biological Studies/ Fauna:
- D. Biological Studies/ General Environment:
- E. Geotechnical:

*Work in progress

REFERENCES:

NJ DPE News Release 2005- http://www.nj.gov/dep/newsrel/2005/05_0047.htm

Coastal and Maritime Forests -

Preservation/restoration of upland forested area. Potential removal of invasives with native species plantings.

F. Hydraulics and Hydrology:G. Water and Sediment:H. Historical and Cultural Resources:I. Restoration Remediation and Design Plans:



CRP SITE 527. RENORA, INC.

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

Category: Existing restoration, preservation, and/or mitigation site.

Location: The Renora, Inc. site is located at 83 South Main Street in a heavily populated area of the Bonhamtown section of Edison Township, New Jersey.

Watershed:

Size: 1 acre

Ownership:

Site Description: The site was used for the collection and hauling of waste oil and hazardous wastes from 1978 to 1982. During its operation, oils and hazardous waste materials were accepted for transfer storage and blending. Contamination of the site occurred as a result of transfer spills and container leaks from accumulated wastes. In 1980, the NJDEP ordered Renora to cease all activities and clean up the site. Subsequent investigation by the NJDEP showed that, while Renora had ceased operations, it had not begun any efforts to clean up the site. As a result, Renora's license was revoked. All cleanup activities at the site by the owner ceased in 1980 due to lack of funds. The site was abandoned in 1982, after more than a year of inactivity. The site is bordered by Mill Creek, Conrail Railroad Tracks, New Jersey Turnpike, and South Main Street. About 1,300 drums and 21 containers on-site contained solvents, resins, and oils. Because of leaking drums and tank trucks, Mill Creek has been contaminated from site run-off. In 1983 the State re-established an earthen berm along Mill Creek (1983) to prevent further contamination from site run-off. Prior to cleanup, the site soils were contaminated with PCBs, PAHs, VOCs, and metals. Metals, VOCs and semi-VOCs were detected at low levels in site groundwater.

From 1984 to 1985, a group of parties responsible for the contamination removed visibly contaminated soils and the contents of drums, tankers and truck trailers, and arranged for the proper off-site shipment and disposal of the wastes. In addition, a fence was installed around the perimeter of the site to prevent public access. This work was performed with EPA oversight under the terms of a consent order with the federal government.

In 1990, the responsible parties removed and disposed of more than 2,000 cubic yards of polychlorinated biphenyl (PCB)contaminated soil under the terms of a second Superfund consent order. A follow-up action, covered under the same order, was taken in 1995 in which 3,900 cubic yards of soil polluted with polyaromatic hydrocarbons (PAHs) were removed from the site. These cleanups eliminated any potential threat the soils may have posed to public health and the environment.

Current Land Use:

Available Habitat: *Mill Brook is the north boundary of the site, the original meandering path of the stream was straightened to allow more of the site to be usable.*

Proposed Project:

Projected/Estimated Costs:

Project Status: This site has been addressed through Federal, State, and potentially responsible parties' actions and was deleted from the NPL list in 2000 and all known sources of contamination at the site have been removed.

Partners: Project Contact: Phone: Website:

Project Funding Source: HEP Ratification Date:

B. HUDSON RARITAN ESTUARY ECOSYSTEM RESTORATION STUDY INFORMATION

Restoration Recommendations (Applicable Target Ecosystem Characteristics):

Sediment Contamination – Former Superfund- the following habitat restoration concepts should not be explored until appropriate sediment and water qualities standards have been attained.

Tributary Connections – Potential stream bank stabilization and improvements to the river bed through debris removal, increased riparian buffer width, addition of vegetation and assessment of flow.

Benefits, Cost and Comparative Restoration Ratio:

C. EXISTING SITE SPECIFIC DATA INVENTORY

A. Survey, Maps and GIS:

- **B. Site History and Land Use:**
- C. Biological Studies/ Fauna:
- **D. Biological Studies/ General Environment:**
- E. Geotechnical:

F. Hydraulics and Hydrology:
G. Water and Sediment:
H. Historical and Cultural Resources:
I. Restoration Remediation and Design Plans:

*Work in progress

REFERENCES:

USEPA NPL Fact Sheet- www.epa.gov/region2/superfund/npl/0200429c.pdf

ROD- http://www.epa.gov/superfund/sites/rods/fulltext/a0294242.pdf

http://www.nj.gov/health/eohs/middlesex/edison/renora/renora_sru_11_95.pdf

*Former superfund, deleted from NPL in 2000.



CRP SITE 528. SOUTH PLAINFIELD VETERANS MEMORIAL PARK (SPRING LAKE PARK)

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

Category: Existing restoration, preservation, and/or mitigation site.

Location: 0.5 miles east of intersection of Plainfield and Sampton Avenues in South Plainfield, NJ.

Watershed: Cedar Brook (Sub watershed)

Size: 121 acres

Ownership:

Site Description:

Current Land Use: Site contains 4 tennis courts, 3 basketball courts, 1 playground, Bik/walkways, a performance gazebo and a 5 acre fishing lake.

Available Habitat:

Proposed Project:

Projected/Estimated Costs:

Project Status:

Partners: Project Contact: Phone: Website:

Project Funding Source: HEP Ratification Date:

B. HUDSON RARITAN ESTUARY ECOSYSTEM RESTORATION STUDY INFORMATION

Restoration Recommendations (Applicable Target Ecosystem Characteristics):

Tributary Connections – Spring Lake Park presents an opportunity for restoration of \approx x linear feet of stream bed and banks and \approx x acres of forested and wet meadow flood plain preservation/ restoration. Activities would include; regrading stream edges, re-vegetating slopes, removing invasive species and re-planting with native species.

Benefits, Cost and Comparative Restoration Ratio:

C. EXISTING SITE SPECIFIC DATA INVENTORY

A. Survey, Maps and GIS:

- **B. Site History and Land Use:**
- C. Biological Studies/ Fauna:
- **D. Biological Studies/ General Environment:**
- E. Geotechnical:

*Work in progress

REFERENCES:

Sediment Contamination - Potential dredging and/or capping of contaminated sediment based on sediment sampling. Public Access – Support to Union County Parks public access initiatives.





CRP SITE 530. CHEMSOL, INC.

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

Category: Existing restoration, preservation, and/or mitigation site.

Location: The Chemsol, Inc. site is located at the end of Fleming Street, in the Township of Piscataway, Middlesex County, New Jersey. Interstate 287 is located approximately one-half mile south of the site, and the site is bounded on the south by the Reading Railroad right-of-way.

Watershed:

Size: 40 acres

Ownership: Tang Realty Corporation

Site Description: The site covers approximately 40 acres. Land use in the vicinity of the site is commercial and residential. Single family residences are located immediately west and southwest of the site. Industrial and retail/wholesale businesses are located south and east of the site. An apartment complex is located north of the site. The site was operated as a solvent recovery and waste reprocessing facility in the 1950's through approximately 1964. Recovery and reprocessing activities included operations such as mixing, blending and distillation. The facility was closed after a series of industrial accidents, explosions and fires. In 1978, the site was purchased by Tang Realty Corporation. In 1984, the New Jersey Department of Environmental Protection (NJDEP) entered into an Administrative *Consent Order with Tang Realty requiring that Tang Realty perform an investigation to evaluate contamination at the site* and develop a remedial action plan for the site. Approximately 40 groundwater monitoring wells were installed by Tang Realty on-site or downgradient from the site. Sampling from these monitoring wells indicated that groundwater was contaminated with organic compounds. Furthermore, sampling and analysis of soils revealed the presence of polychlorinated biphenyls (PCBs) and organic compounds. In the summer of 1988, Tang Realty removed approximately 3,700 cubic yards of PCB-contaminated soils for off-site disposal. During the soil excavations for removal of PCB contaminated soils, several thousand small (less than 1 gallon) containers of unknown substances were discovered. These unknown substances were stored in a trailer on-site. Sampling was conducted by Tang Realty and the Middlesex County Health Department at private (residential) wells located downgradient of the site (in the "Nova Ukraine" area of Piscataway). The results of sampling performed in January 1990 indicated the presence of organic contaminants in residential wells. The Township extended municipal water service into the Nova Ukraine area during the Fall of 1990. In the Fall of 1990, EPA and the NJDEP agreed that EPA should perform site investigations and federally fund the remainder of the investigatory work.

Current Land Use:

Available Habitat:

Proposed Project: *This site is being addressed through Federal and potentially responsible parties actions.*

Projected/Estimated Costs:

Project Status: *The site was designated Superfund in 1983. The site is being addressed through an immediate removal action and through a two-phase long-term remedial action.*

Partners: Project Contact: Phone: Website:

Project Funding Source: HEP Ratification Date:

B. HUDSON RARITAN ESTUARY ECOSYSTEM RESTORATION STUDY INFORMATION TBD

Restoration Recommendations (Applicable Target Ecosystem Characteristics):

Coastal Wetlands -Islands for Waterbirds -Coastal and Maritime Forests -Oyster Reefs -Eelgrass Beds -Shorelines and Shallows -

Public Access -

Benefits, Cost and Comparative Restoration Ratio:

C. EXISTING SITE SPECIFIC DATA INVENTORY

A. Survey, Maps and GIS:

- **B.** Site History and Land Use:
- C. Biological Studies/ Fauna:
- **D. Biological Studies/ General Environment:**

E. Geotechnical: *Work in progress F. Hydraulics and Hydrology:

Habitat for Fish, Crab and Lobsters -

Enclosed and Confined Waters -

Tributary Connections -

Sediment Contamination -

G. Water and Sediment:

- H. Historical and Cultural Resources:
- I. Restoration Remediation and Design Plans:

REFERENCES:

EPA NPL Fact Sheet- www.epa.gov/region2/superfund/npl/0200607c.pdf

*TBD- Superfund

CRP SITE 532. MIDDLESEX SAMPLING PLANT

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

Category: Existing restoration, preservation, and/or mitigation site.

Location: 0.25 miles northeast of intersection of Mountain Avenue and South Avenue in Middlesex, NJ. *The east side of the facility borders fields and residential areas, and the west side borders an industrial site. The property to the south consists of marshy land and fields, and includes the drainage ditch that carries surface water runoff from the site. The main entrance to the MSP (Mountain Avenue) is to the north and adjacent to the Lehigh Valley Railroad right-of-way property.*

Watershed:

Size: 9.6 acres

Ownership: Department of Energy

Site Description: The Middlesex Sampling Plant (MSP) is situated on approximately 9.6 acres in Middlesex, Middlesex County, New Jersey. The facility was established in 1943 by the Manhattan Engineer District (MED) to sample, store, and/or ship uranium, thorium, and beryllium ores. In 1955, the Atomic Energy Commission (AEC), successor to the MED, terminated the operation and later used the site for storage and limited sampling of thorium residues. In 1967, the AEC activities ceased, on-site structures were decontaminated, and the site was certified for unrestricted use under applicable criteria in effect at that time. Between 1968 and 1980, the site ownership changed, first to the General Services Administration, and then to the Department of the Navy for use as a U.S. Marine Corps reserve training center. From 1976 to 1980, many radiological surveys were conducted in the Middlesex area to determine the extent of radiological contamination which may have occurred as a result of MSP activities. In 1980, custody of the MSP was given to the Department of Energy (DOE). DOE placed the site in its Formerly Utilized Sites Remedial Action Program (FUSRAP). The purpose of the FUSRAP program was to cleanup contaminated sites where work was performed as part of the Nation's early atomic energy program. Contamination was determined to be present on both the MSP and surrounding land parcels. Two of these parcels had apparently been contaminated by fill that was transported to these locations during the 1940's. The remaining contaminated parcels (adjacent to the MSP) were contaminated by wind and water erosion transporting radioactive materials. Removal actions to address this contamination were undertaken in the early 1980's. Contaminated materials were excavated from these vicinity properties (VP) and placed them into interim storage at MSP which resulted in the VP "pile" containing approximately 35,000 cubic yards. By 1981, remediation at the VPs was considered complete.

The Middlesex Municipal Landfill (MML), a nearby former FUSRAP site, was established in the mid-1940's. In addition to municipal waste soils contaminated with pitchblende (high grade uranium ore) from MSP were disposed at MML. By 1974, solid waste disposal ceased at MML. By 1986, remediation at MML was considered complete.

The Energy and Water Appropriations Act of 1998 (PL 105-62) provided appropriations for the U.S. Army Corps of Engineers (USACE) to administer and execute the DOE's FUSRAP program. Responsibility for cleanup of the MSP site transferred from DOE to the USACE in October, 1997.

Current Land Use:

Available Habitat:

Proposed Project: This site is being addressed by the US Army Corp of Engineers (USACE) FUSRAP through federal actions, with EPA oversight.

Projected/Estimated Costs:

Project Status: Site was designated Superfund in 1999 and contains radioactive particles in the uranium and radium decay series as well as various metals and volatile organic compounds. As of 2007, the USACE is doing ground water testing and has proposed a remedial action plan with the USEPA and NJDEP. Closure of the site is pending, and long-term surveillance and maintenance requirements will be determined once final site conditions are known.

Partners:

Project Contact: Phone: Website:

Project Funding Source: HEP Ratification Date:

B. HUDSON RARITAN ESTUARY ECOSYSTEM RESTORATION STUDY INFORMATION TBD

Restoration Recommendations (Applicable Target Ecosystem Characteristics):

Coastal Wetlands -Islands for Waterbirds -Coastal and Maritime Forests -Oyster Reefs -Eelgrass Beds -Shorelines and Shallows -

Benefits, Cost and Comparative Restoration Ratio:

C. EXISTING SITE SPECIFIC DATA INVENTORY

A. Survey, Maps and GIS:

- **B.** Site History and Land Use:
- C. Biological Studies/ Fauna: D. Biological Studies/ General Environment:
- E. Geotechnical:

*Work in progress

REFERENCES:

http://www.epa.gov/region2/superfund/npl/0202755c.pdf

*TBD- SUPERFUND/ FUSRAP

Habitat for Fish, Crab and Lobsters -Tributary Connections -Enclosed and Confined Waters -Sediment Contamination -Public Access -

F. Hydraulics and Hydrology:G. Water and Sediment:H. Historical and Cultural Resources:I. Restoration Remediation and Design Plans:

CRP SITE 533. FACTORY LANE

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

Category: Existing restoration, preservation, and/or mitigation site.

Location: 0.1 mile south of intersection at Lincoln Boulevard and A Street in Middlesex, NJ. *The site is bounded to the north by the Conrail (Lehigh Valley) and New Jersey Transit railroad lines and industrial properties further north, to the east by Reagent Chemical (Reagent) and other industrial properties further east, to the south by Factory Lane, the Conrail (Port Reading) railroad line and commercial/industrial properties further south; and to the west by vacant land owned by Reagent.*

Watershed:

Size: 25 acres

Ownership: Marisol Inc.

Site Description: Operations by past occupants of the current Reagent Chemical property east of Marisol resulted in widespread contamination of soil, groundwater, surface water and sediment with pesticide compounds, principally arsenic. This property and 30 surrounding properties impacted by the past pesticide production are referred to as the Factory Lane Site (FLS) – Main Site and Peripheral Properties, respectively.

Following use in the early 20th century as a railroad engine maintenance yard, the site was purchased and developed into its current configuration by Marisol, beginning in 1968. During the 1970s, the western portion of the site was leased to a hazardous waste trucking firm. Marisol's historical and current operations have focused primarily on solvent recycling and blending of fuels for use in cement kilns. Additional activities performed during recent years include sale of virgin solvents and the repackaging and recycling of lab pack wastes.

Current Land Use: Former industrial property undergoing contaminants clean up under RCRA.

Veolia is located at 125 Factory Lane in Middlesex, New Jersey. Veolia owns and operates a solvent-reprocessing facility that is located on a four-acre site in an industrial area of Middlesex Borough. The property was used as a railroad steam engine plant in the early 1900's. In 1967, Marisol began operations at the site. Operations at the facility include the blending of spent solvents for industrial fuels and reclaiming spent solvents through distillation. The facility has a permit to treat and store hazardous waste solvents for blending and processing. Veolia is surrounded by Conrail, Reagent Chemical and Rhone Poulenc.

Available Habitat: *The property is situated in an industrially zoned area and the nearest residential properties are located approximately 400 feet to the north.*

Proposed Project:

Projected/Estimated Costs:

Project Status: The FLS responsible party, Bayer AG, successor to Aventis CropScience and Rhone- Poulenc Inc. and their consultants, URS Corporation (URS), S.S. Papadopulous & Associates, Inc. and Arcadis, has performed extensive environmental investigation and remediation at theFLS since the early 1980s (Ref's 4 through 10). As of 2005 the site was still determined to have groundwater contamination with monitoring and treatment ongoing.

There have been releases of contaminants to the soil and groundwater as a result of activities at Veolia. The contaminants include organic constituents, such as benzene, toluene, methylene chloride, tetrachloroethene, trichloroethene and chlorobenzene. The groundwater contamination under the Veolia facility can be partly attributed to activities at the adjacent Rhone-Poulenc facility. New Jersey Department of Environmental Protection (NJDEP) is overseeing the cleanup at Rhone-Poulenc.

Groundwater recovery and treatment is ongoing.

Partners: Project Contact: Warren W. Faure Phone: (732) 469-5100 Website:

Project Funding Source: HEP Ratification Date:

B. HUDSON RARITAN ESTUARY ECOSYSTEM RESTORATION STUDY INFORMATION TBD			
Restoration Recommendations (Applicable Target Ecosystem Characteristics):			
Coastal Wetlands -	Habitat for Fish, Crab and Lobsters -		
Islands for Waterbirds -	Tributary Connections -		
Coastal and Maritime Forests -	Enclosed and Confined Waters -		
Oyster Reefs -	Sediment Contamination -		
Eelgrass Beds -	Public Access -		
Shorelines and Shallows -			
Benefits, Cost and Comparative Restoration Ratio:			
C. EXISTING SITE SPECIFIC DATA INVENTORY			
A. Survey, Maps and GIS: B. Site History and Land Use:	F. Hydraulics and Hydrology: G. Water and Sediment:		
C. Biological Studies/ Fauna:	H. Historical and Cultural Resources:		
D. Biological Studies/ General Environment:	I. Restoration Remediation and Design Plans:		

E. Geotechnical:

*Work in progress

REFERENCES:

USEPA RCRA Fact Sheet- http://www.epa.gov/region2/waste/fsmarisol.htm

http://www.epa.gov/region2/waste/maris750.pdf

*TBD- Active industrial use, RCRA site.

CRP SITE 534. CORNELL DUBILIER SUPERFUND SITE

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

Category: Existing restoration, preservation, and/or mitigation site.

Location: 333 Hamilton Boulevard in South Plainfield, New Jersey.

Watershed:

Size: 25 acres

Ownership:

Site Description: During its years of operation at the site (1936 to 1962), Cornell Dubilier Electronics, Inc. manufactured electronic parts and components, including capacitors. It is reported that transformer oils were tested for an unknown period of time during plant operations. It is alleged that during their operations, Cornell Dubilier Electronics, Inc. dumped material contaminated with polychlorinated biphenyls (PCBs) and other hazardous substances directly onto site soils. The site is currently known as Hamilton Industrial Park. Through the years, numerous companies have operated at the site as tenants. It is estimated that approximately 540 people reside within 0.25 miles of the site, and the nearest residential homes are less than 200 feet from the site. The total population estimated to live within one mile of the site is 8,700. An unnamed tributary to the Bound Brook traverses the southeast corner of the site property. Water bodies that join the unnamed tributary are designated by the State of New Jersey for the maintenance, migration, and propagation of the natural and established biota. An investigation conducted by the New Jersey Department of Environmental Protection (NJDEP) in the vicinity of Hamilton Boulevard prior to 1991 revealed significant ground water contamination consisting of mainly the volatile organic compounds (VOCs) trichloroethylene and tetrachloroethylene. Due to widespread contamination, residential wells in the area were closed and residents were hooked up to a municipal water supply.

The initial emergency response (constructing a fence to limit site access, fixing surface water run-off problems, and paving driveways and parking areas within the industrial park) reduced the potential for exposure to and off-site migration of hazardous materials while site studies could be performed. Since they were installed in 1997, these site control features have been maintained and upgraded by the property owner, under EPA's direction. Removing PCB contamination from nearby residential lots removed the potential for exposure to PCBs on these properties. EPA has recently completed remedial actions to remove contaminated soil at four additional properties, pursuant to the 2003 Record of Decision, bringing the total number of off-site property cleanups to 18. The 2003 remedy also required additional investigations to screen a small group of homes, to assure that no other off-site properties need to be addressed. These investigations began in 2008. As required by the OU2 remedy for the 25-acre facility, EPA began relocating tenants from the industrial park in October 2006, and initiated the building demolition in January 2007. As of July 2007, all of the tenants at the industrial park have been relocated. The U.S. Army Corps of Engineers is providing day-to-day field management of the OU2 remedy for EPA, and Sevenson Environmental Services, Inc., is the prime contractor. In May 2008, demolition of the 18 buildings at the industrial park was completed. Excavation of the "capacitor disposal area," an area of buried debris and the most highly contaminated portion of the site, was completed in June 2008. The current phase of the OU2 remedy addresses contaminiated soils that will be treated on site by low temperature thermal desorption. The remedial design for this component of the remedy was completed in September 2008. On-site treatment of contaminated soils by low temperature thermal desorption began in November 2009. The Cornell site received American Resource and Recovery Act (ARRA) funding in fiscal year 2009. The \$30 million in ARRA funding for this site is being used to accelerate the cleanup of the contaminated soil and debris, which are principal threat wastes, at the former CDE facility. Mobilization for the initiation of field activities occurred in August 2009. As reported in recovery.gov, approximately 50 jobs were created at this site during the current reporting period. For additional information regarding jobs created please refer to the recovery.gov website.

Current Land Use:

Available Habitat:

Proposed Project: This site is being addressed through Federal and potentially responsible party actions.

Projected/Estimated Costs:

Project Status: *The site was designated Superfund in 1998 and contains contaminated ground water, sediment and building interiors. The site is being addressed in multiple stages: removal actions and long term remedial phases directed at cleanup of the entire site.*

Partners: Project Contact: Phone: Website:

Project Funding Source: HEP Ratification Date:

B. HUDSON RARITAN ESTUARY ECOSYSTEM RESTORATION STUDY INFORMATION TBD

Restoration Recommendations (Applicable Target Ecosystem Characteristics):Coastal Wetlands -Habitat for Fish, Crab and Lobsters -Islands for Waterbirds -Tributary Connections -Coastal and Maritime Forests -Enclosed and Confined Waters -Oyster Reefs -Sediment Contamination -Eelgrass Beds -Public Access -Shorelines and Shallows -Shorelines and Shallows -

Benefits, Cost and Comparative Restoration Ratio:

C. EXISTING SITE SPECIFIC DATA INVENTORY

A. Survey, Maps and GIS:

- **B.** Site History and Land Use:
- C. Biological Studies/ Fauna:
- **D. Biological Studies/ General Environment:**
- E. Geotechnical:

*Work in progress

F. Hydraulics and Hydrology:G. Water and Sediment:H. Historical and Cultural Resources:I. Restoration Remediation and Design Plans:

REFERENCES:

EPA NPL Fact Sheet- http://www.epa.gov/Region2/superfund/npl/0201112c.pdf

*TBD- Superfund

CRP SITE 536. RARITAN ARSENAL

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

Category: Existing restoration, preservation and/mitigation acquisition.

Location: The majority of this site is located in Edison Township, with a portion of the site located in Woodbridge Township, in Middlesex County, New Jersey, on the north bank of the Raritan River, approximately 20 miles southwest of lower Manhattan. The former Raritan Arsenal is bordered to the north and northwest by Woodbridge Avenue, to the southwest by Mill Road and the Industrial Land Reclamation (ILR) Landfill, and to the east by vacant and industrial properties. The majority of the northern portion of the former Arsenal is extensively developed into what is now known as the Raritan Center Industrial Park. The southern half of this site remains primarily freshwater and tidal marshlands (USACE 2012).

Watershed: Lower Raritan River, New Jersey

Size: 3,200 acres

Block	Lot	Acreage	Ownership	Value	
395 395	3C2 3B	615 177			

Ownership: The property is owned and/or used by Middlesex County College, Thomas A. Edison County Park, the U.S. General Services Administration, the U.S. Environmental Protection Agency (EPA)Region 2, Raritan Center Industrial Park, Federal Business Centers, Summit Associates, Inc. and several privately owned light industrial, warehousing and hotel operations.

Site Description: The U.S. Army Corps of Engineers (USACE 2012, 2011b) used the Raritan Arsenal from 1917 to 1963. Operations included receipt, storage, and maintenance of ammunition shipped from other ordnance facilities or returned from overseas; renovation of ammunition designated for long-term storage; the salvage of outmoded or seriously deteriorated ammunition; ordnance research and development; and shipment and receipt of weapons. Ordnance and waste materials were buried on site, as per routine disposal practices of the time.

Funds that are presently being used to clean up the former Raritan Arsenal, have been appropriated via the Defense Environmental Restoration Program (DERP), Formerly Used Defense Sites (FUDS) program, authorized in 1986 by Congress (USACE 2012). Hundreds of tons of contaminated soils and buried debris have already been removed from several areas at this site. So far, approximately \$75 million (as of FY 12) has been expended for remediation at this site. At this time, it's estimated an additional \$53 million is need to complete site remediation (USACE 2011a).

The U.S. Army Corps of Engineers wants the public to be a part of study efforts as we work hard to ensure the Public's safety, the safety of on-site workers, and to protect the environment.

Current Land Use: Most of the land of the former Arsenal is currently zoned industrial (USACE 2012). It is extensively developed in its northern half, with considerable areas of Phragmites and Spartina wetlands in the southern portion of this site.

Available Habitat: Freshwater (Palustrine) Forested Wetland; Deciduous Forest Upland; Estuarine Emergent Wetland (Phragmites); Estuarine Emergent Wetland (Spartina); Freshwater Emergent Wetland; Old Field and Disturbed Old Field; Open Water; numerous riparian creeks and ditches, as well as significant developed lands(USACE 2008).

Natural Resources

Vegetative communities: Mostly freshwater marsh (tide gate holds back salt water from the Raritan). Common reed marsh is the prevalent herbaceous vegetation type in the area. The site also includes open water bodies, channeled

waterways and reed grasses. The upland area consists of sparsely forested, grassland, and barren land areas, which occur along unpaved roads, railroad beds, former bunkers and fill areas.

Threatened and Endangered Species: Black-crowned Night Heron, Yellow-crowned night heron, Savannah sparrow, Bobolink, American Bittern, pied-billed grebe, Cooper's Hawk, Osprey, Northern Harrier

Songbirds: Various sparrows swallows, and warblers, American Goldfinch, Northern Flicker, Black-capped Chickadee, Carolina Chickadee, Hermit Thrush, Golden-crowned Kinglet, Ruby-crowned Kinglet, Water Pipit, Cedar Waxwing among others

Waterfowl and shorebirds: Numerous plovers, sandpipers, gulls, terns, herons, egrets and ducks, and mergansers (See Schmid, &Co. 1987 for complete NRI)

Access

The Arsenal can be accessed through Thomas Edison Park and the Exposition Hall. Perimeter Road goes around the arsenal from one end to another.

Proposed Project:

Projected/Estimated Costs:

Project Status: Current site remediation is on-going under the USACE DERP-FUDS program (USACE 2012 2011a&b).

Partners:

Project Contact: Ms. Sandra Piettro, USACE Raritan Arsenal DERP FUDS Project Manager. **Phone:** 917-790-8487 **Email:** Sandra.L.Piettro@usace.army.mil

Website: http://www.nan.usace.army.mil/business/buslinks/raritan/index.php?descr

Project Funding Source: HEP Ratification Date:

B. HUDSON RARITAN ESTUARY ECOSYSTEM RESTORATION STUDY INFORMATION

Restoration Recommendations (Applicable Target Ecosystem Characteristics):

Coastal Wetlands - *Hydrological improvements through removal of old rail lines and impervious areas to appropriate coastal wetland elevations, ditch improvements, restoration of disturbed uplands to coastal wetlands and establish coastal creeks and linkages to existing ditches and open water areas to optimize unimpeded tidal sinuosity as well as restore macro invertebrates (crabs), benthos and fish habitats to increased heron foraging areas. Improve existing and establish additional marshland connections to the Raritan River to facilitate tidal flushing of coastal wetlands. Improved tidal flushing and institute improved sinuosity should lead to recovery of fish, macro invertebrate and benthos habitats also adding additional heron foraging areas.*

Coastal and Maritime Forests - Land acquisition- reestablish elevations of disturbed uplands and old rail lines to maritime elevations to plant marsh trees and scrub-shrubs. **Shorelines and Shallows** – Plans exist to remove all or portions of the existing burned pier along the shoreline and replace with new piers and boat ramps for boating and fishing. Keeping some portions of the burned pier would remain habitat for fish, macro invertebrate and benthos. Shallow areas not planned for piers and boat ramps could be restored to recover fish and macro invertebrate habitats also adding additional heron foraging areas.

Sediment Contamination - It is imperative to recognize that the on-going USACE DERP FUDS remediation at this site meets this short-term TEC objective established within the HRE. Information collected did not provide evidence of site impacts to the Raritan River. Although several metals in creeks at this site exceeded water quality criteria, no contamination gradient was evident in surface water. In general, concentrations of metals were higher in river sediments than on this site and hazard quotient modeling of fiddler crabs to herons did not indicate significant risks relative to the estuarine reference area (USACE 2008). Since introduction of Raritan River water is a fundamental restoration constituent, serious discussion with unified stakeholder consensus is vital to agree to allow Raritan River water into this site, which was cleaned-up.

Public Access - Acquisition of several undeveloped disturbed uplands, as well as developed properties adjacent to the Raritan River. There are existing roads to these properties thus already linking these sites. With some repairs to one road a linkage of these public proprieties to the existing Thomas A. Edison County Park would be achieved. Establish trails along tops of a few old rail lines for picnicking, hiking, bird watching, education and handicap access. Remove all or portion of the existing burned pier along the shoreline and

Benefits, Cost and Comparative Restoration Ratio:

C. EXISTING SITE SPECIFIC DATA INVENTORY

A. Survey, Maps and GIS: USAC2E 2012, 2009, 2008, 2007.

B. Site History and Land Use: USACE 2012, 2009, 2008.

C. Biological Studies/ Fauna: USACE 2008

D. Biological Studies/ General Environment: USACE 2008.

E. Geotechnical:

*Work in progress

REFERENCES:

replace with new piers and boat ramps for boating and fishing. Construct elevated wooden walkways within some portions of coastal wetlands and trails in coastal and maritime forests containing educational signs and materials.

F. Hydraulics and Hydrology: USACE 2009, 2008.
G. Water and Sediment: USACE 2009, 2008.
H. Historical and Cultural Resources: USACE 211b
I. Restoration Remediation and Design Plans: USACE 2009, 2007, 1999.

USACE 2012. http://www.nan.usace.army.mil/business/buslinks/raritan/index.php?descr

USACE 2011a: http://www.nan.usace.army.mil/business/buslinks/raritan/pdf/raritan0911.pdf

USACE 2011b: http://www.nan.usace.army.mil/business/buslinks/raritan/pdf/PublicInfoMtg110911.pdf

USACE, 2009a. The Hudson-Raritan Estuary Comprehensive Plan, US Army Corps of Engineers, NY District, March

USACE 2009b. VOLUME I (Text, Figures, Tables) Final Human Health Risk Assessment Former Raritan Arsenal Edison, New Jersey. Contract No.: W912WJ-05-D-0004Task Order No.: 2.

USACE 2008. FINAL BASELINE ECOLOGICAL RISK ASSESSMENT REPORT FORMER RARITAN ARSENAL EDISON, NEW JERSEY. Contract Number W912DR-05-D-0022. Delivery Order 0001.

USACE. 2007. Revised Draft Management Action Plan for the Former Raritan Arsenal, Edison, New Jersey.

USACE 1999. Risk Assessment Handbook, Volume I: Human Health Evaluation. Engineer Manual 200-1-4.



CRP SITE 537. NATIONAL LEAD

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

Category: Existing restoration, preservation, and/or mitigation site.

Location: Garden State Parkway, south shore of Driscoll Bridge in Sayreville, NJ.

Watershed: Lower Raritan River

Size: 400 acre

Ownership: National Lead

Block	Lot	Acreage	Ownership	Value
257.03 2			National Lead	
258	1 & 2			
259-262	1 & 3			
266-272	1 & 2			
280	1.01			
257	3.04			
257.01	1, 4, 5 & 6			
257.02	, ,			
257.02 1				
275.02 1 & 2				
Total		400		

Site Description: National Lead had operated a paint manufacturing plant on the site until about 30 years ago. The site, which once served as an industrial center for Sayreville, has been vacant since 1982. The Middlesex County Improvement Authority (MCIA) has worked with the Sayreville Economic Redevelopment Agency to facilitate the revitalization and redevelopment of the property. The National Lead site is surrounded on three sides by the Raritan River, including the crossings of the Garden State Parkway, Route 9 and Route 35. It is currently being redeveloped by O'Neill Properties Group.

The Sayreville Waterfront Redevelopment project was designated a Brownfield Development Area (BDA) by the New Jersey Department of Environmental Protection (DEP) in 2008. The BDA consists of three sites along the Raritan River: the former National Lead (NL) Industries site, the Atlantic Resources Corporation/Atlantic Development Company and the Horseshoe Road Drum Dump. The Horseshoe Road Drum Dump and the Atlantic Resources Corporation/Atlantic Development Company were added to the United States Environmental Protection Agency's National Priority List of Superfund sites (NPL) in 1995. The Garden State Parkway, Route 9 and Route 35 transect the former NL Industries site, dividing it into two parcels. These parcels are being remediated by Sayreville Seaport Associates (SSA) under contract with the Sayreville Economic and Redevelopment Agency (SERA). Remedial efforts are currently focused on the two parcels formerly owned by NL Industries. The sites are contaminated with radionuclides, heavy metals, polyaromatic hydrocarbons (PAHs) and polychlorinated biphenyls (PCBs). The two NL Industries parcels have been divided into three major remedial areas: Parcel A, Parcel B and Parcel C. Parcel C is further divided into a number of sub-areas.

Current Land Use:

Available Habitat:

Vegetative communities: Approximately 61 acres of tidal wetlands are present adjacent to the Raritan River on the site. Berms form a barrier between the tidal wetlands and industrial use in most cases. There is approximately 47 acres of open water in bermed impoundments on the site. Migratory waterfowl utilize

these lagoons. The ponds and impoundments on the site represent potential feeding, resting and nesting sites for migrating waterfowl. The successional woodlands and thickets provide habitat for a number of small mammals and birds.

Wetland community types: Spartina Alterniflora salt marsh, Spartina Patens salt marsh, Distichlis Spicata (Spikegrass) salt marsh, and Phragites Austalis tidal marsh.

Threatened and Endangered Species: Peregrine Falcon and Black-crowned Night Heron **Songbirds:** N/A

Waterfowl and shorebirds: Mute Swan, Canada Goose, Mallard, American Black Duck, Scaup, and Common Goldeneye. Proposed Project:

Projected/Estimated Costs:

Project Status: The status of the remediation is as follows: Parcel A: Remedial action is 95% completed (capping with clean fill and wetland vegetation) Parcel B: Additional remedial investigation is required, which is scheduled to be conducted in the spring of 2012 Parcel C: Remedial action started in February 2011 with site clearing, importation of offsite fill material (110,000 cubic vards), excavation/removal of building foundations, installation of remedial action storm water management controls, and the ongoing removal of soils contaminated with PCBs and radiological contamination for off site disposal. The cost to remediate the NL Parcels is estimated at \$40 million. To facilitate the remediation, SERA, NL Industries, Middlesex County and SSA entered into a "Four Party Agreement." Pursuant to that agreement, SSA obtained a loan of \$20 million, and SERA was awarded grants totaling \$20 million from the Hazardous Discharge Site Remediation Fund (HDSRF). In addition, SSA executed a Brownfield Redevelopment Agreement with the State that provides for reimbursement of 75 percent of the cost to remediate the NL Parcels from new taxes generated by the development. Under the terms of the Four Party Agreement, SSA is required to deposit the first \$10 million of payments from the reimbursement into an escrow account to provide for remediation cost overruns. The next \$20 million will be used to fully reimburse the State for the HDSRF grant awarded to SERA. The successful remediation and redevelopment of these brownfield parcels will create jobs, revitalize the community, generate ratables, create recreation and openspace, and restore approximately 425 acres of heavily contaminated land that has lain vacant for decades. The re-development project called The Point at Savreville, is being constructed by O'Neill Properties' Savreville Seaport Associates (SSA) of King of Prussia, Pa. The development plan includes 3 million square feet of retail space, 837,000 square feet of hotel space, and 650,000 square feet of office space. There will also be 2,000 residential units, a community center, performing arts center, emergency service facility, outdoor amphitheater and a variety of other amenities. The Point is also designed to incorporate a marina, an entertainment complex and a riverfront promenade along the Raritan Bay. It is estimates that it will take 10 years to complete.

Partners: Project Contact: Phone: Website:

Project Funding Source: HEP Ratification Date:

B. HUDSON RARITAN ESTUARY ECOSYSTEM RESTORATION STUDY INFORMATION

Restoration Recommendations (Applicable Target Ecosystem Characteristics):

Coastal Wetlands – Fringe marsh along development and low/high marsh development throughout the 70 acre public parcel east of the Garden State Parkway. Support creation BMP structures to reduce pollution and storm water inputs from the development. **Habitat for Fish, Crab and Lobsters** – Improvements to the shallow water habitat and addition of complex structure will facilitate connectivity with the fringe marsh habitat.

Sediment Contamination – National Lead is responsible for remediation of the coastal portion of the

Benefits, Cost and Comparative Restoration Ratio:

C. EXISTING SITE SPECIFIC DATA INVENTORY

A. Survey, Maps and GIS: Rutgers 2010, Alderson & Bowers 2012.
B. Site History and Land Use: Rutgers 2010
C. Biological Studies/ Fauna: Rutgers 2010
D. Biological Studies/ General Environment: Rutgers 2010

Public Access – Support creation of public access along the waterfront.

E. Geotechnical:
F. Hydraulics and Hydrology:
G. Water and Sediment:
H. Historical and Cultural Resources:
I. Restoration Remediation and Design Plans: Rutgers 2010, Alderson & Bowers 2012.

*Work in progress

REFERENCES:

property

NJDEP Sayerville Waterfront BDP- http://www.nj.gov/dep/srp/community/sites/sayrevillebda/sayreville_bda_fs2012.pdf

Rutgers University- Edward J. Bloustein School of Planning and Public Policy. 2010. Visioning the Future Raritan River: Sustainable Raritan River Studio Report.

http://www.mciauth.com/waterfront_redevelopment.htm

Alderson, Carl and Justin Bowers. 2012. Reaching for the Past in Pursuit of the future: how can our present and past efforts inform the Hudson-Raritan Estuary Comprehensive Restoration Plan and the direction of habitat restoration going forward. A project for the New York-New Jersey Harbor & Estuary Program and New England Interstate Water Pollution Control Commission.

* wetland upland mitigation was completed in 2011, remove this from the concept plan.



CRP SITE 538. EVOR PHILLIPS LEASING COMPANY

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

Category: Existing restoration, preservation, and/or mitigation site.

Location: On Route 615, 2 miles North of Route 675 in Old Bridge, NJ.

Watershed:

Size: 6 acres

Ownership:

Site Description: The Evor Phillips Leasing (EPL) site covers six acres in Old Bridge Township. The surrounding area is largely industrial. In the early 1970s, the site was used for various waste treatment, hauling and disposal businesses. The site also contained nineteen horizontal furnaces which were used for the incineration of photographic film and printed circuit boards. Two former surface impoundments, used for the neutralization of caustic and acidic waste waters, were located in the northeast area of the site. The area was unlined, enabling contaminants to migrate through the soil, ground water, and surface water. A State investigation conducted in 1982 estimated that approximately 150 drums containing chemicals were buried at the site. The Sayreville municipal wellfield is located approximately 1,000 feet southwest, and the City of Perth Amboy wellfield is located approximately 3,000 feet southwest of the site. All nearby residents have discontinued use of private wells and are now served by a municipal water supply.

Volatile organic compounds (VOCs), including dichloroethane and trichloroethylene (TCE), have contaminated the ground water. The soil is contaminated with VOCs and metals. Direct contact with the soil, or accidental ingestion of contaminated soil or contaminated ground water, could pose a health threat. Municipal well data confirms the presence of site-related contaminants in the ground water. On-site contaminants leaching into the underlying aquifer may be causing contamination of nearby wellfields.

Earlier removals of contaminated drums have reduced risks at the Evor Phillips site. Site cleanup is now in a long-term remedial phase focusing on cleanup of the entire site. In addition, EPA has determined that the site does not pose an immediate threat to the surrounding community or the environment while interim remedial work and further site studies are taking place. In 1983, the State of New Jersey excavated 30 to 40 drums and removed them from the site. Excavations initiated in January 1996 by some of the PRPs unearthed over 1,000 buried waste containers in six areas of the Site through May 1997. From February to April 1997, EPA conducted a removal action that required a temporary 10,000 square foot containmnet structure and resulted in the excavation of 34 drums and approximately 300 laboratory-sized containers. PRP excavation activities, on hold during EPA work, were completed in May 1997. Following completion of excavation, a total of twelve post-excavation samples were collected at depths of 7 feet and 11 feet and the results of the laboratory analyses on those samples showed no substantial contamination above background. All wastes generated by cleanup activities to date have been characterized and disposed of off-site at permitted facilities. A groundwater treatment plant has been constructed at the Site and extraction and treatment of contaminated groundwater with discharge to the POTW was initiated in late 1999.

Current Land Use:

Available Habitat:

Proposed Project: This site is being addressed through Federal, State and potentially responsible party (PRP) actions.

Projected/Estimated Costs:

Project Status: The site was designated Superfund in 1983 and contains contaminated ground water and sediment. The site is being addressed in three stages: initial actions, an interim remedy, and a long-term remedial phase focusing on cleanup of the entire site.

Partners: Project Contact: Phone: Website:

Project Funding Source: HEP Ratification Date:

B. HUDSON RARITAN ESTUARY ECOSYSTEM RESTORATIO	N STUDY INFORMATION TBD
Restoration Recommendations (Applicable Target Ecosy	vstem Characteristics):
Coastal Wetlands -	Habitat for Fish, Crab and Lobsters -
Islands for Waterbirds -	Tributary Connections -
Coastal and Maritime Forests -	Enclosed and Confined Waters -
Oyster Reefs -	Sediment Contamination -
Eelgrass Beds -	Public Access -
Shorelines and Shallows -	
Benefits, Cost and Comparative Restoration Ratio: C. EXISTING SITE SPECIFIC DATA INVENTORY	
A. Survey, Maps and GIS:	F. Hydraulics and Hydrology:
B. Site History and Land Use:	G. Water and Sediment:
C. Biological Studies/ Fauna:	H. Historical and Cultural Resources:
D. Biological Studies/ General Environment:	I. Restoration Remediation and Design Plans:
E. Geotechnical:	, in the second s
*Work in progress	

REFERENCES:

EPA NPL Fact Sheet- http://www.epa.gov/region2/superfund/npl/0200776c.pdf

*TBD- Superfund

CRP SITE 539. CPS/MADISON INDUSTRIES

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

Category: Existing restoration, preservation, and/or mitigation site.

Location: Off of Water Works Road, 2 miles North of Route 18 in Old Bridge, NJ.

Watershed:

Size: 35 acres

Ownership: In 2010, the property was taken over by BASF which has taken over the RI/FS and groundwater pump and treat system.

Site Description: The CPS/Madison Industries site consists of two adjacent manufacturing facilities located on a 35-acre tract of land. The CPS Chemical plant, which was acquired by Ciba in 1998 and operated until 2001, processed, treated, and stored organic chemicals used in the production of water treatment agents, lubricants, oil field chemicals, and anticorrosive agents. Madison Industries and a related business, Old Bridge Chemical, are still in operation. Madison Industries produces zinc compounds for fertilizers, pharmaceuticals, and food additives, and Old Bridge Chemical produces copper compounds used in fertilizers, and food additives. Since at least 1967, careless handling of hazardous substances on the two manufacturing facilities, including discharges into the public sewer system, have resulted in soil and groundwater contamination. The municipal wellfield for the city of Perth Amboy is down gradient of the site, and thirty-two municipal wells have been closed due to contamination attributed to the site. Prickett's Brook and Prickett's Pond, are also down gradient of the site, and may have been contaminated by the site from upwelling of contaminated groundwater; neither are used for recreation or as a drinking water source.

Soil contamination at the closed CPS facility may pose direct contact risks to trespassers. The Madison/Old Bridge facility is still in use and the companies maintain health and safety plans to protect on-site workers; however, inadvertent exposure to hazardous substances and trespasser exposure are potential site risks. Groundwater is contaminated with various volatile organic compounds (VOCs) and heavy metals including zinc, cadmium, copper, and lead. People who drink or are exposed to contaminated groundwater from the site may be at risk. The sediments and surface waters of Prickett's Pond and Prickett's Brook (in the area near the site) are contaminated with zinc. While neither water body is available for recreational use, ingestion of water or contact with sediments may pose a health risk to children who play in the pond.

In addition to various on-site actions directed by NJDEP, interim groundwater recovery systems have been installed to contain the spread of groundwater contamination and protect the Perth Amboy wellfield, which provides a public drinking water supply. In addition, the municipal wellfield has added an air stripper to protect against VOC contamination. The recovery well system operated by Madison Industries is currently pumping and treating groundwater at a rate of approximately 80 gallons per minute and a CPS system is currently withdrawing about 30 gallons per minute. These interim measures, along with site security measures, may be required until comprehensive site remedies are selected and implemented.

Current Land Use:

Available Habitat:

Proposed Project: *This site is being addressed through Federal, State and private party actions.*

Projected/Estimated Costs:

Project Status: The site was designated Superfund in 1983 and contains contaminated surface water, ground water and sediment. Response Action Status.

Partners: Project Contact: Phone: Website:

Project Funding Source: HEP Ratification Date:

B. HUDSON RARITAN ESTUARY ECOSYSTEM RESTORATION STUDY INFORMATION TBD			
Restoration Recommendations (Applicable Target Ecosystem Cha	racteristics):		
Coastal Wetlands -	Habitat for Fish, Crab and Lobsters -		
Islands for Waterbirds -	Tributary Connections -		
Coastal and Maritime Forests -	Enclosed and Confined Waters -		
Oyster Reefs -	Sediment Contamination -		
Eelgrass Beds -	Public Access -		
Shorelines and Shallows -			
Benefits, Cost and Comparative Restoration Ratio: C. EXISTING SITE SPECIFIC DATA INVENTORY			
A. Survey, Maps and GIS:	F. Hydraulics and Hydrology:		
B. Site History and Land Use:	G. Water and Sediment:		
C. Biological Studies/ Fauna:	H. Historical and Cultural Resources:		
D. Biological Studies/ General Environment:	I. Restoration Remediation and Design Plans:		
E. Geotechnical:			
*Work in progress			
REFERENCES:			

EPA NPL Fact Sheet- http://www.epa.gov/Region2/superfund/npl/0200109c.pdf

*TBD- Superfund

CRP SITE 541. CHEMICAL INSECTISIDE SUPERFUND SITE

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

Category: Existing restoration, preservation, and/or mitigation site.

Location: 30 Whitman Avenue, Edison, NJ. South of I-287.

Watershed:

Size: 5.8 acres

Ownership:

Site Description: The Chemical Insecticide Corporation (CIC) site is located in Edison Township. CIC owned the property located at 30 Whitman Avenue from 1954 to 1970 and used it for processing various pesticides. In the mid-1960s, the Edison Department of Health became concerned about odors, wastewater discharges and on-site fires. The Department ordered the facility to stop discharging wastewater, oversaw disposal of leaking drums to eliminate an odor problem, and ordered the closing of on-site lagoons. CIC declared bankruptcy in 1970. Subsequently, Piscataway Associates bought the 6-acre CIC property and demolished the production facilities. As part of a State-wide dioxin screening program, the New Jersey Department of Environmental Protection sampled soil from the site and found contamination, triggering more detailed investigations by EPA. Approximately 77,000 people live within 3 miles of the site. There are no permanent surface water bodies on the CIC site. Surface water run-off drains toward the northeast corner of the site where it discharges into an underground conduit, which flows into an unnamed tributary of Mill Brook. Previously collected samples from the surface run-off indicated that ground water contained arsenic, organic pesticides and other hazardous substances. It was noted that this run-off eventually entered an unnamed tributary of Mill Brook, ultimately the contaminats would bind to the creek (tributary) sediments. The site does not pose a threat to any existing potable water source since the limited mobility of the contaminated groundwater at the site minimizes the potential for off-site migration. Final groundwater actions (Operable Unit 4 - OU4) include a long-term groundwater monitoring program and the implementation of Institutional Controls (ICs) in and around the area of the former CIC site. The residents near these tributaries and the residents directly surrounding the site obtain potable water from a public water supply system located eight miles from the site.

Current Land Use:

Available Habitat:

Proposed Project: This site is being addressed through Federal and State actions.

Projected/Estimated Costs:

Project Status: Site was designated Superfund in 1990 and contains contaminated soils and ground water.

Partners: Project Contact: Phone: Website:

Project Funding Source: HEP Ratification Date:

B. HUDSON RARITAN ESTUARY ECOSYSTEM RESTORATION STUDY INFORMATION TBD

Restoration Recommendations (Applicable Target Ecosystem Characteristics):

Coastal Wetlands -Islands for Waterbirds -Coastal and Maritime Forests -Oyster Reefs -Eelgrass Beds -Shorelines and Shallows -

Benefits, Cost and Comparative Restoration Ratio:

C. EXISTING SITE SPECIFIC DATA INVENTORY

A. Survey, Maps and GIS:

- **B.** Site History and Land Use:
- C. Biological Studies/ Fauna:
- **D. Biological Studies/ General Environment:**

E. Geotechnical: *Work in progress Habitat for Fish, Crab and Lobsters -Tributary Connections -Enclosed and Confined Waters -Sediment Contamination -Public Access -

F. Hydraulics and Hydrology:G. Water and Sediment:H. Historical and Cultural Resources:I. Restoration Remediation and Design Plans:

REFERENCES:

EPA NPL Fact Sheet- http://www.epa.gov/Region2/superfund/npl/0200517c.pdf

*TBD-Superfund

CRP SITE 543. 131 JERSEY AVE.

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

Category: Existing restoration, preservation, and/or mitigation site.

Location: New Brunswick, NJ

Watershed:

Size:

Ownership:

Site Description:

Current Land Use:

Available Habitat:

Proposed Project:

Projected/Estimated Costs:

Project Status:

Partners:
Project Contact:
Phone:
Website:

Project Funding Source: HEP Ratification Date:

B. HUDSON RARITAN ESTUARY ECOSYSTEM RESTORATION STUDY INFORMATION TBD

Restoration Recommendations (Applicable Target Ecosystem Characteristics):

Coastal Wetlands -Islands for Waterbirds -Coastal and Maritime Forests -Oyster Reefs -Eelgrass Beds -Shorelines and Shallows - Habitat for Fish, Crab and Lobsters -Tributary Connections -Enclosed and Confined Waters -Sediment Contamination -Public Access -

Benefits, Cost and Comparative Restoration Ratio:

C. EXISTING SITE SPECIFIC DATA INVENTORY

A. Survey, Maps and GIS:

B. Site History and Land Use:

C. Biological Studies/ Fauna:

D. Biological Studies/ General Environment:

E. Geotechnical:

*Work in progress

REFERENCES:

*TBD- no information.

F. Hydraulics and Hydrology:G. Water and Sediment:H. Historical and Cultural Resources:I. Restoration Remediation and Design Plans:

CRP SITE 544. IRON LEAF

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

Category: Existing restoration, preservation, and/or mitigation site.

Location: 327 Meadow Road Edison, NJ.

Watershed:

Size:

Ownership:

Site Description:

Current Land Use:

Available Habitat:

Proposed Project:

Projected/Estimated Costs:

Project Status:

Partners:
Project Contact:
Phone:
Website:

Project Funding Source: HEP Ratification Date:

B. HUDSON RARITAN ESTUARY ECOSYSTEM RESTORATION STUDY INFORMATION TBD **Restoration Recommendations (Applicable Target Ecosystem Characteristics): Coastal Wetlands -**Habitat for Fish, Crab and Lobsters -Islands for Waterbirds -**Tributary Connections -Enclosed and Confined Waters -Coastal and Maritime Forests -Oyster Reefs -Sediment Contamination -Eelgrass Beds -Public Access -**Shorelines and Shallows -**Benefits, Cost and Comparative Restoration Ratio:** C. EXISTING SITE SPECIFIC DATA INVENTORY F. Hydraulics and Hydrology: A. Survey, Maps and GIS: **B. Site History and Land Use:** G. Water and Sediment: C. Biological Studies/ Fauna: H. Historical and Cultural Resources: **D. Biological Studies/ General Environment:** I. Restoration Remediation and Design Plans: E. Geotechnical:

*Work in progress

REFERENCES:

*TBD- recycling company is actively functioning on the property. Lack information on environmental site history or future restoration opportunities.

CRP SITE 545. KENTS NECK

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

Category: Existing restoration, preservation, and/or mitigation site.

Location: 0.1 miles west from Valley Place and South Adelaide Avenue in Highland Park, NJ

Watershed: Lower Raritan

Size: Approximately 200 acres

Ownership:

Block	Lot	Acreage	0	wnership	Value
	399	60	4.38	Edison Township	
		61	4.20	Filcrest Realty	
		62	6.30	Edison Township	
		63	5.13	Filcrest Realty	
		64	2.00	Edison Township	
		65	2.00	Filcrest Realty	
		66	1.72	Edison Township	
		67	4.25	JCP & L Real Estate	e
		68	1.50	Filcrest Realty	
		69	1.40	JCP & L Real Estat	e
		70-71	3.70	Edison Township	
		72	6.00	JCP&L	
		73	6.00	Filcrest Realty	
		74-75	8.7	Edison Township	
		76	1.00	Filcrest Realty	
		77	4.50	Edison Township	
		78	3.52	Filcrest Realty	
		79	5.09	Edison Township	
		80	3.49	Filcrest Realty	
		81-83	11.97	Edison Township	
		84	5.18	Filcrest Realty	
		85-89	31.22	Edison Township	
		90	1.50	ILR	
		91	1.04	Filcrest Realty	
		92-105	64.50	Edison Township	
		106-107	1.66	Filcrest Realty	
		108	.93	Filcrest Realty	

Site Description: Site is known as Valley Place Ravine and is located on the north shore of the Raritan in Highland Park and contains a steep sloped forested strip surrounding a small tributary to the Raritan. Valley Place Ravine was Highland Park's first public Green Acres property it is a wooded area that is full of wildlife. This wooded stream corridor contains a footpath leading down to the Raritan River and offers a rare public access point to the river.

The Highland Park Greenway (also known as Highland Park's section of the Middlesex County Greenway) links riverfront open space and adjoining uplands and is planned to have environmental education centers and perhaps a sculpture garden. Chief components are (from north to south): Johnson Park, Native Plant Reserve, Valley Place Ravine,

Ayres Beach Natural Area (Red's Marina), Donaldson Park, wooded wetlands downstream of Donaldson Park ("The Meadows"), and at least the lower part of the Buck Woods Ravine.

Current Land Use:

Available Habitat:

Proposed Project:

Projected/Estimated Costs:

Project Status: Recently, Water Watch group created a trail that ran down from South Adelaide Road to the Raritan River. Local community groups stage clean up efforts and invasive plant removals and hope to partner with the town of Highland Parks to restore this area even further by clearing away underbrush, planting native plants, and putting in benches so that the residents of Highland Park can enjoy this spot.

Partners: Project Contact: Phone: Website:

Project Funding Source: HEP Ratification Date:

B. HUDSON RARITAN ESTUARY ECOSYSTEM RESTORATION STUDY INFORMATION

Restoration Recommendations (Applicable Target Ecosystem Characteristics):

Coastal and Maritime Forests – Maintain forest habitat by removing invasives and planting native species. **Tributary Connections** – Assess flow and capacity of tributary barrier at S. Adalaide road crossing. Assess stream for potential corridor improvements which may include biostabilization of banks.

Benefits, Cost and Comparative Restoration Ratio:

C. EXISTING SITE SPECIFIC DATA INVENTORY

A. Survey, Maps and GIS: Highlands Park 2011, Rutgers 2010
B. Site History and Land Use: Highlands Park 2011, Rutgers 2010

C. Biological Studies/ Fauna: Highlands Park 2011 D. Biological Studies/ General Environment: NYNJ Botany

*Work in progress

REFERENCES:

https://files.nyu.edu/mnh223/public/pictures.html

Sediment Contamination – Potential removal and capping of sediment based on testing.

Public Access – Support local recreation efforts to maintain trails, create signage and installing benches.

E. Geotechnical:

F. Hydraulics and Hydrology:

G. Water and Sediment:

H. Historical and Cultural Resources:

I. Restoration Remediation and Design Plans:

Borough of Highland Park Middlesex County New Jersey. February 2011. Environmental Resource Inventory, Draft. http://leoraw.com/env/wp-content/uploads/2011/02/HighlandPark_ERI_Presentation_Feb_17_2011.pdf

NYNJ Botany- http://nynjctbotany.org/njnbtofc/valleyplaceravine.html

Rutgers University- Edward J. Bloustein School of Planning and Public Policy. 2010. Visioning the Future Raritan River: Sustainable Raritan River Studio Report.



CRP SITE 546. EDGEBORO LANDFILL

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

Category: Existing restoration, preservation, and/or mitigation site.

Location: 1 mile southeast from Schoolhouse Lane and Weston Place in East Brunswick, NJ. Landfill area abuts the South River to the east and the Raritan River to the north.

Watershed:

Size:

Ownership: A portion of the landfill is privately owned by Edgeboro Disposal Inc. The section currently in use was purchased by the county in 1988 and is operated by the Middlesex County Utilities Authority (MCUA).

Site Description: The MCUA has operated an active sanitary landfill over the former Edgeboro Landfill since 1992. As part of the Solid Waste Management Plan in Middlesex County, the MCUA carried out an expansion of its landfill, which includes the construction of new cells on an approximately 125-acre area over and around the central and southeast portions of the Edgeboro Landfill. This new construction brings the total number of cells to 9. With the new cells, the landfill is expected to be in use at least until 2015, when it will cover more than 300 acres of land and reach its permitted maximum height of 165 feet above sea level.

The landfill has a double-liner system designed to allow no more than 1 inch of water to seep through every 30 years, and other safeguards to prevent leaks. The county compacts and covers dumped materials each day to conserve space and prevent odors and leaching. However, local residents environmental groups question the safety of landfill practices and compliance with environmental laws. The state Department of Environmental Protected cited the landfill last year for discharge of solid waste into the river, though the violation was from a portion of the landfill owned privately by Edgeboro Disposal Inc. and has been closed since 1987.

Current Land Use: Active landfill area which takes in about 2,350 tons of garbage a day from 335 trucks (based on data from 2005).

Available Habitat:

Proposed Project:

Projected/Estimated Costs:

Project Status:

Partners: Project Contact: Phone: Website:

Project Funding Source: HEP Ratification Date:

B. HUDSON RARITAN ESTUARY ECOSYSTEM RESTORATION STUDY INFORMATION TBD

Restoration Recommendations (Applicable Target Ecosystem Characteristics):

Coastal Wetlands -Islands for Waterbirds -Coastal and Maritime Forests -Oyster Reefs -Eelgrass Beds -Shorelines and Shallows -

Benefits, Cost and Comparative Restoration Ratio:

C. EXISTING SITE SPECIFIC DATA INVENTORY

A. Survey, Maps and GIS:

- **B. Site History and Land Use:**
- C. Biological Studies/ Fauna:
- **D. Biological Studies/ General Environment:**

E. Geotechnical:

Habitat for Fish, Crab and Lobsters -Tributary Connections -Enclosed and Confined Waters -Sediment Contamination -Public Access -

F. Hydraulics and Hydrology:G. Water and Sediment:H. Historical and Cultural Resources:I. Restoration Remediation and Design Plans:

*Work in progress

REFERENCES:

Sadat Associates Inc. Project History Landfill-Gas-To Energy, 2008- Retrieved on 7-13-12 from: http://www.sadat.com/PDF's/Project%20Histories/Landfill/Edgeboro%20gas%20to%20energy.pdf

http://eb.gmnews.com/news/2007-08-30/front_page/002.html

*TBD- site is an active landfill.

CRP SITE 547. KIN-BUC & EDISON LANDFILLS

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

Category: Existing restoration, preservation, and/or mitigation site.

Location: 0.5 miles south from Meadow Road in Edison, NJ.

Watershed:

Size: 220 acres

Ownership:

Site Description: Kin-Buc Landfill is one of the largest and most contaminated superfund sites in New Jersey. Site consists of three landfill mounds located in a wetland area adjacent to the Raritan River. Low-lying Edmonds Creek/Marsh area is situated between one of the mounds and the adjacent Edison Landfill and a wetlands area. Portions of the site lie within both the 100-year floodplain of the Raritan River. The 220-acre Kin-Buc Landfill site is an inactive landfill that operated from the late 1940s to 1976. From 1971 to 1976, the site was a State-approved landfill for industrial and municipal wastes, both solid and liquid. The site accepted hazardous waste during this period, until the State revoked its permit in 1976 because of violations of several environmental statutes. An estimated 70 million gallons of liquid wastes, including 3 million gallons of oily waste, and over 1 million tons of solid waste, were disposed of between 1973 and 1976. The Kin-Buc site includes two major mounds (Kin-Buc I and Kin-Buc II) and one minor mound (Mound B). Site activities included burying and compacting contained wastes in Kin-Buc II and discharging hazardous liquid wastes into bulldozed pits at the top of Kin-Buc I. Three pits of black, oily leachate, designated Pits A, B, and C were previously located at an edge of Kin-Buc I. Adjacent to the pits was an impoundment referred to as Pool C. Oil, heavily laden with polychlorinated biphenyls (PCBs), accumulated in Pool C and then discharged into Edmonds Creek, a tributary of the Raritan River. The pond also held leachate that contained chlorinated volatile organic compounds (VOCs) which are believed to have come from the landfill. The Edison Township Municipal Landfill lies 600 feet to the south of the site. There is a refuse-filled low-lying area between Kin-Buc I and the Edison Landfill. Historically, aqueous and oily leachate seeped from the landfill into adjoining wetlands, contaminating the wetlands with PCBs. The Site was listed on EPA's National Priorities List in 1983, and is a PRP-lead site. There are 3,000 people living within 3 miles of the site.

The Edison Landfill operated from 1958 to 1990. Municipal waste, construction debris, and industrial dry waste were deposited in the landfill, which was built over tidal marsh areas. The landfill proper covers 35 acres, with additional vegetation-covered fill extending to the river. Contaminants of concern include metals, PAHs, VOCs, and semi-VOCs. Though it was closed at that time, waste from the site has continued to spill into the Raritan River during the last 20 years.

Current Land Use:

Available Habitat:

Proposed Project:

Projected/Estimated Costs:

Project Status: The Raritan Riverfront Restoration and Park will transform the Kin-Buc Landfill Superfund Site and Edison Landfill into a waterfront park with restored wetlands, passive recreation, a kayak and canoe launch, and expanded public access to the riverfront for the first time in decades.

Edison Township will work to complete Phase I of the Raritan Riverfront Restoration and Park. Phase I includes restoration of wetlands where the Mill Brook enters the Raritan River, directly adjacent to the only current public access point on the Edison waterfront, The Edison Boat Basin. A 100-foot footbridge will also be built across Mill Brook, and a

570-foot recycled plastic walkway will wind around the restored wetlands to a new gazebo and informational display along the Raritan River. Two short wood chip trails will lead to the wetlands from the main walkway, alongside butterfly gardens planted with native plants and wildflower species. From the gazebo, a 1,300-foot gravel walkway will be created along the riverside with additional informational displays, benches, and native trees.

The design of Phase I—the riverfront walkway—is complete. Edison Township is currently bidding out the project and planned to begin construction in the Spring 2008.

The township of Edison has sealed the landfill and replaced leaking garbage with stable wetlands, allowing members of the public to have riverfront access to an ecosystem with a wide range of recreational options, including kayaking and canoeing, bird watching and hiking.

Partners: NJDEP, NOAA, USFWS Project Contact: Phone: Website:

Project Funding Source: HEP Ratification Date:

B. HUDSON RARITAN ESTUARY ECOSYSTEM RESTORATION STUDY INFORMATION TBD

Restoration Recommendations (Applicable Target Ecosystem	Characteristics):
Coastal Wetlands -	Habitat for Fish, Crab and Lobsters -
Islands for Waterbirds -	Tributary Connections -
Coastal and Maritime Forests -	Enclosed and Confined Waters -
Oyster Reefs -	Sediment Contamination -
Eelgrass Beds -	Public Access -
Shorelines and Shallows -	
Benefits, Cost and Comparative Restoration Ratio: C. EXISTING SITE SPECIFIC DATA INVENTORY	
A. Survey, Maps and GIS: Alderson & Bowers 2012	F. Hydraulics and Hydrology:
B. Site History and Land Use:	G. Water and Sediment:
C. Biological Studies/ Fauna:	H. Historical and Cultural Resources:
D. Biological Studies/ General Environment:	I. Restoration Remediation and Design Pla
E. Geotechnical:	Alderson & Bowers 2012

*Work in progress

REFERENCES:

Rutgers University- Edward J. Bloustein School of Planning and Public Policy. 2010. Visioning the Future Raritan River: Sustainable Raritan River Studio Report.

ans:

EPA- http://www.epa.gov/region2/superfund/npl/0200346c.pdf

GMC Newspapers Sentinel 'Riverfront Walkway opening heralded' Retrieved on 7/2/12 from: http://em.gmnews.com/news/2010-04-28/Front_Page/Riverfront_Walkway_opening_heralded.html

Alderson, Carl and Justin Bowers. 2012. Reaching for the Past in Pursuit of the future: how can our present and past efforts inform the Hudson-Raritan Estuary Comprehensive Restoration Plan and the direction of habitat restoration going forward. A project for the New York-New Jersey Harbor & Estuary Program and New England Interstate Water Pollution Control Commission.



CRP SITE 548. RARITAN/SOUTH RIVERS

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

Category: Existing restoration, preservation, and/or mitigation site.

Location: 1 mile east from Brick Plant Road and William Street in South River, NJ.

Watershed:

Size: 6800 acres

Ownership: New Jersey, Private

Site Description: Habitat is mixed grasslands, forests, and wetlands. This tidal river system is characterized by wide, meandering channels, dredged material islands, and extensive Phragmites-dominated marshes. Portions of the shoreline are bulkheaded or otherwise modified, particularly in urban/residential areas. *The project area is located within the lower Raritan Basin in Middlesex County, New Jersey. The South River is the first major tributary of the Raritan River, located approximately 8.3 miles upstream of the Raritan River's mouth at Raritan Bay. The South River is tidally controlled from its mouth upstream to Duhernal Lake Dam. Fluvial conditions prevail upstream of the dam. The area is prone to imminent and severe flooding from hurricanes and other storms, with significant flood events occurring in March 1962, May 1968, <i>August and September 1971, April 1984, December 1992, March 1993. For example, the March '93 northeaster (a 25-year) event resulted in approximately \$17 million in damages (2001 dollars) and closed the highway bridge connecting the Boroughs of South River and Sayreville. Based on coordination with the New Jersey Department of Environmental Protection (NJDEP), county and local interests, it was determined that there are no widespread flooding problems in the South River watershed upstream of the Duhernal Lake Dam. Consequently, the study area focused on river reaches downstream of the dam, specifically flood-prone areas within the Boroughs of South River and Sayreville, the Township of Old Bridge, and the Historic Village of Old Bridge (located within the Township of East Brunswick). This portion of South River also includes the areas of greatest ecological degradation (and greatest potential for ecosystem restoration).*

Current Land Use:

Available Habitat:

Proposed Project: South River Restoration

Projected/Estimated Costs: It was projected, in 2002, that implementation of the NER plan will cost approximately \$50.6 million with an average annual cost of approximately \$3.3 million.

Project Status: In 2002, USACE New York District released the 'South River, Raritan River Basin Hurricane & Storm Damage Reduction and Ecosystem Restoration Integrated Feasibility Report and Environmental Impact Statement.

This report has 2 components, the Hurricane and storm damage protection from a 500 year event and ecosystem restoration. The study area includes the South River to the west, the Washington Canal to the east, and the 380-acre Clancy Island bounded by these waterways and by the Raritan River. Investigations included flood-prone areas w/in the Boroughs of South River and Sayreville, the Township of Old Bridge, and the Historic Village of Old Bridge. The HSD protection component of the plan consists of a storm surge barrier spanning the South River for a length of 320 feet, with a clear opening of 80 feet, two combined levees [10,712 feet long]/floodwalls [1,655 feet long] constructed along the east and west bank of the South River in the boroughs of Sayreville and South River, and interior drainage facilities [i.e., pump station, outlets, etc.]. The ecosystem restoration consists of returning 379.3 acres of Common Reed [Phragmites sp.] wetlands to wetland forest, upland forest, low emergent marsh, mudflat, and open water. A ROD completing the NEPA process for this project was published in 2009. Mitigation includes the restoration and conversion of 11+ acres of a non-native giant reed dominated environment to a more natural mix of salt marsh, freshwater wetlands, open water,

intertidal mudflats & terrestrial habitats. Additionally, this project has an extensive ecosystem restoration component that includes

Partners: Baykeeper, USACE **Project Contact**: *Ronald Pinzon* **Phone**: (917) 790–8627 **Website**:

Project Funding Source: HEP Ratification Date:

B. HUDSON RARITAN ESTUARY ECOSYSTEM RESTORATION STUDY INFORMATION

Restoration Recommendations (Applicable Target Ecosystem Characteristics):

Coastal Wetlands -151.7 acres low emergent marsh, 170.7 acres wetland forest/scrub-shrub, 9.5 acres tidal creeks, 9.5 acres tidal ponds. **Coastal and Maritime Forests** -19.0 acres upland forest/scrub-shrub.

Benefits, Cost and Comparative Restoration Ratio:

C. EXISTING SITE SPECIFIC DATA INVENTORY

A. Survey, Maps and GIS: Rutgers 2010

- B. Site History and Land Use: Rutgers 2010
- C. Biological Studies/ Fauna:
- **D. Biological Studies/ General Environment:**

E. Geotechnical:

*Work in progress

REFERENCES:

USACE New York District. 2002. South River, Raritan River Basin Hurricane & Storm Damage Reduction and Ecosystem Restoration Integrated Feasibility Report and Environmental Impact Statement.

http://www.nan.usace.army.mil/project/newjers/factsh/pdf/southriv.pdf

Rutgers University- Edward J. Bloustein School of Planning and Public Policy. 2010. Visioning the Future Raritan River: Sustainable Raritan River Studio Report.

Characteristics): Habitat for Fish, Crab and Lobsters -19.0 acres mudflat.

Sediment Contamination - Potential removal and capping of sediment based on testing.

F. Hydraulics and Hydrology:G. Water and Sediment:H. Historical and Cultural Resources:I. Restoration Remediation and Design Plans:



CRP SITE 552. RARITAN RIVER WATERFRONT

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

Category: Existing restoration, preservation, and/or mitigation site.

Location: Multiple cities in Middlesex County, NJ.

Watershed:

Size:

Ownership: Site Description: Mixed estuarine and riverine.

Current Land Use:

Available Habitat:

Proposed Project:

Projected/Estimated Costs:

Project Status:

Partners: NJDEP, Edison Wetlands Association Project Contact: Phone: Website:

Project Funding Source: HEP Ratification Date: **B.** HUDSON RARITAN ESTUARY ECOSYSTEM RESTORATION STUDY INFORMATION TBD

Restoration Recommendations (Applicable Target Ecosystem Characteristics):Coastal Wetlands -Habitat forIslands for Waterbirds -Tributary OCoastal and Maritime Forests -Enclosed andOyster Reefs -Sediment OEelgrass Beds -Public AcceeShorelines and Shallows -Shorelines

Benefits, Cost and Comparative Restoration Ratio:

C. EXISTING SITE SPECIFIC DATA INVENTORY

A. Survey, Maps and GIS:

- **B.** Site History and Land Use:
- C. Biological Studies/ Fauna:
- **D. Biological Studies/ General Environment:**

E. Geotechnical: *Work in progress Habitat for Fish, Crab and Lobsters -Tributary Connections -Enclosed and Confined Waters -Sediment Contamination -Public Access -

F. Hydraulics and Hydrology:G. Water and Sediment:H. Historical and Cultural Resources:I. Restoration Remediation and Design Plans:

REFERENCES:

Edison Wetland Association- http://www.blueraritan.org/resources/HDR_Dredging_Study[1].pdf

*TBD- no restoration planning at this time.

CRP SITE 553. SOUTH BRUNSWICK LANDFILL

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

Category: Existing restoration, preservation, and/or mitigation site.

Location: 0.5 miles northwest of Route 1 in South Brunswick, NJ.

Watershed:

Size: 68 acres

Ownership: Republic Services Inc.

Site Description: The South Brunswick Landfill covers 68 acres in Middlesex County. The site was a landfill for over 20 years before it was closed by the State in 1978. The landfill received municipal refuse, pesticides, chemical wastes, and hazardous wastes. In 1980, the EPA conducted an investigation and found volatile organic compounds (VOCs) and iron in the groundwater and surface water. The landfill is adjacent to a school, a park, and private residences, although a substantial portion of the property is surrounded by woods. Residences are located as close as 100 to 200 feet from the site. A nearby brook feeds into a public drinking water supply 10 miles downstream. The landfill leachate is contaminated with VOCs and heavy metals including iron. Systems to collect the leachate are in place; therefore, the threat of contaminants migrating from the site is minimal.

Current Land Use: Inactive, capped landfill.

Available Habitat:

Proposed Project: Republic Services Inc. is exploring options for solar power generation at the site. EPA strongly encourages renewable energy development in this area, however, initial planning to begin the development were not approved by NY DEP in February 2012.

Projected/Estimated Costs:

Project Status: The site was deleted from the National Priority List in 1998.

The site has been addressed through federal and PRP actions in two long-term remedial phases in 1983 focusing on controlling the source of contamination and investigation/cleanup of any potential off-site contamination. The selected remedy for the South Brunswick Landfill site is on-site containment and long term monitoring. A Record of Decision (ROD) was issued by EPA in September 1987 stating satisfactory containment. In May 1993, under EPA oversight, BFI began investigating the extent of contamination that migrated off the site. The investigation revealed minimal contamination in one well. The leachate collection system pumping rate has been increased to address this contamination. Also, during routine monitoring, VOC contamination was determined to be present in a small area outside of the slurry wall. After further investigation and evaluation of options for addressing the contamination found outside of the slurry wall, EPA required the PRP to construct a groundwater interception trench to collect contamination from the area. Collected leachate from the trench is combined with the existing waste stream and sent to the POTW for treatment. During the course of the monitoring presence of contamination outside the slurry wall in the southeastern portion of the site, near monitoring well R-10 was confirmed. EPA then required the PRP to install an infiltration trench in the area of concern which will prevent any further migration of the contaminants into unaffected areas of the site. Construction of the interception trench began in August 2005 and was completed in February 2006. All work required to control the source of contamination has been completed. The site is monitored to determine the effectiveness of the selected remedy. EPA issues a report on the status and effectiveness of the remedy every five years. Four such reports have been issued since 1993. The next Five-Year Review Report will be issued in 2012.

Partners: Project Contact:

Phone: Website:

Project Funding Source: HEP Ratification Date:

B. HUDSON RARITAN ESTUARY ECOSYSTEM RESTORATION STUDY INFORMATION

Restoration Recommendations (Applicable Target Ecosystem Characteristics):

Coastal and Maritime Forests – Assess ~91.4 acre site for potential forest, grassland, shrub habitat creation through further plantings of native vegetation. **Sediment Contamination** - The landfills were capped with an impermeable membrane and covered with treated soil. Ensure monitoring is ongoing.

Benefits, Cost and Comparative Restoration Ratio:

C. EXISTING SITE SPECIFIC DATA INVENTORY

A. Survey, Maps and GIS:

- **B.** Site History and Land Use:
- C. Biological Studies/ Fauna:
- **D. Biological Studies/ General Environment:**

E. Geotechnical:

F. Hydraulics and Hydrology: G. Water and Sediment: H. Historical and Cultural Resources:

Public Access - Once remediation and monitoring is

complete, site should be assessed for use as potential

parkland.

I. Restoration Remediation and Design Plans:

*Work in progress

REFERENCES:

EPA Region 2 fact sheet: http://www.epa.gov/Region2/superfund/npl/0200724c.pdf



CRP SITE 554. FRIED INDUSTRIES

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

Category: Existing restoration, preservation, and/or mitigation site.

Location: The Fried Industries site is located at 11 Fresh Ponds Road, in the Township of East Brunswick, Middlesex County, New Jersey, 0.25 miles from Starkin Road.

Watershed:

Size: 26 acres

Ownership: Private

Site Description: The site consists of a "man-made" pond, a marsh area, and several other separate wetlands areas and formerly housed a building complex. Wetlands occupy approximately 70% of the total acreage of the site. The Fried Industries site was originally a clay quarry which operated until about 1920. In 1965, the Unichem Corporation began the manufacture of detergents and floor finishes. Operations continued at the site through 1978 (Fried Industries) up until 1985 when Mr. Philip Fried agreed to cease all manufacturing and production activities. At various times before the site closed, Mr. Fried leased the facility to other companies which were involved in product manufacturing. It is known that the NOAL Corporation manufactured antifreeze products at facilities leased at the site. At least one other company, the See Corporation, also leased facilities, but it is not known what the facilities were used for. The site is in a residential setting with approximately 25,000 persons living within 3/4 of a mile. The closest community is Milltown which lies about 3/4 of a mile north of the site. Portions of the site contain elements of the recharge zone for the Farrington Sand Aquifer System. This aquifer no longer supports the local township's drinking water supply. The Township of East Brunswick presently obtains all of its potable water from surface water supplies.

The ground water is contaminated with a number of VOCs, including benzene, toluene, xylenes, vinyl chloride and other contaminants. The soil was contaminated with VOCs and some heavy metals, in particular arsenic. People were at risk from direct contact with contaminated soil. They are also at risk of accidental ingestion of contaminated ground water. Most of the soil contamination was eliminated via a combined remedial-removal action that excavated portions of the Site where buried drums and containers were located. Contaminated. Recent sampling indicates that the ground water is still contaminated, especially in the deep bedrock aquifer. Current remedial actions are focused on ground water cleanup. The engineering design of the pump and treat system was conducted in three stages (preliminary, intermendiat and final) and completed in September 2010. The contract for the work was awarded in May 2011 and construction activities began in Fall 2011. The surface aquifer is being sampled on a quarterly basis.

Current Land Use:

Available Habitat: Over grown, partially wooded and wetland industrial area. The site lies near Farrington Lake and Lawrence Brook.

Proposed Project: This site is being addressed through Federal and municipal actions.

Projected/Estimated Costs:

Project Status: Site was designated Superfund in 1986 and contains contaminated ground water and soil. This site is being addressed in two stages: immediate actions and a long-term remedial phase focusing on final cleanup of the entire site.

Partners: Project Contact: Phone: Website:

Project Funding Source: HEP Ratification Date:

B. HUDSON RARITAN ESTUARY ECOSYSTEM RESTORATION STUDY INFORMATION TBD

Restoration Recommendations (Applicable Target Ecosystem Characteristics):

Coastal Wetlands -Habitat for Fish, Crab and Lobsters -Islands for Waterbirds -Tributary Connections -Coastal and Maritime Forests -Enclosed and Confined Waters -Oyster Reefs -Sediment Contamination -Eelgrass Beds -Public Access -Shorelines and Shallows -Shorelines and Shallows -

Benefits, Cost and Comparative Restoration Ratio:

C. EXISTING SITE SPECIFIC DATA INVENTORY

A. Survey, Maps and GIS:B. Site History and Land Use:C. Biological Studies/ Fauna:D. Biological Studies/ General Environment:E. Geotechnical:

F. Hydraulics and Hydrology:G. Water and Sediment:H. Historical and Cultural Resources:I. Restoration Remediation and Design Plans:

*Work in progress

REFERENCES:

New Jersey Department of Health Environmental Health Service. Site Review and Update: Fried Industries East Brunswick Township, Middlesex County, New Jersey. http://www.state.nj.us/health/eoh/hhazweb/friedsru.pdf

EPA NPL Fact Sheet- http://www.epa.gov/Region2/superfund/npl/0200303c.pdf

*TBD-Superfund

CRP SITE 555. JONES INDUSTRIAL SERVICE (JIS) LANDFILL

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

Category: Existing restoration, preservation, and/or mitigation site.

Location: The Jones Industrial Services (JIS) Landfill site is located in South Brunswick Township, near the border of Monroe Township, 1.5 miles south of Browns Corner Road in South Brunswick, NJ.

Watershed:

Size: 24 acres.

Ownership:

Site Description: Jones Industrial Service operated a landfill in an agricultural area of Middlesex County, New Jersey from 1956-1980. The landfill, originally a borrow pit, received liquid chemical wastes from the 1960s until the State closed it in 1980. EPA added the Jones Industrial Services (JIS) Landfill site in South Brunswick, New Jersey to the Superfund National Priorities List on September 1, 1983 because hazardous chemicals were found in the soil and ground water.

The JIS Landfill superfund site covers approximately 24 acres, which includes a 7.8 acre landfill and a waste transfer operation. Landfilling operations began in 1956 within a former borrow pit. Excavated material from the borrow pit provided fill needed for the construction of the New Jersey Turnpike. From 1960 through the early 1970's, the JIS Landfill accepted chemical, municipal and industrial wastes, including broken battery casings, paint sludges, solvents and pesticides. Approximately 50,000 cubic yards of waste were disposed of annually until landfilling operations ceased in 1980. JIS placed a cap over the northern half of the landfill in 1983. The southern half of the landfill was capped in 1985. Ground-water sampling revealed that private wells on nine properties down gradient of the site were contaminated.

Ground water is contaminated with metals and volatile organic compounds (VOCs), including vinyl chloride, methylene chloride, acetone, tetrachloroethene, trichloroethane, chlorobenzene and benzene. Aldrin, a pesticide, was also detected in the ground water. The concentrations of contaminants are above Federal and State drinking water standards. Contaminants have been detected in the groundwater from the site to Manalapan Brook, which is roughly a mile and a half downgradient of the site. Close to the landfill property, contamination is present from the water table to the base of the aquifer, a thickness of roughly 60 feet. Downgradient, contamination is largely limited to the bottom 15 feet of the unit. Ingestion of the contaminated ground water would present a risk, although all businesses and residents whose wells could potentially be impacted have been connected to the municipal water supply.

In 1995, an investigation into the long term cleanup began. EPA decided on a remedy that consisted of extraction and onsite treatment of contaminated ground water, installation of a hazardous waste cap, and the arrangement of an alternative water supply to residents with contaminated drinking water wells. The new cap was installed in 2001. An additional ground water investigation took place in 2005. The design for the ground water pump and treat systems is complete.

A group of PRPs has undertaken the remedial design and remedial action under an administrative consent order with the State. The landfill cap remedial action was constructed in 2001 and was certified as complete in January 2005. A Groundwater Biosparge Treatment system has been operating at the Site since March 2005. The system has significantly reduced migration of volatile organic compounds in groundwater from the landfill Site. Monitored Natural Attentuation has been reducing concentrations further downgradient. In September 2009 a Preliminary Close Out Report was approved for the site which documented construction completion in accordance with the 1995 Record of Decision and the 2009 Record of Decision Amendment. The remaining remedial activities include long-term operation and maintenance of the biosparge system, Monitored Natural Attenuation, and implementation of Institutional Controls.

Current Land Use: Site consists of several inactive disposal sites and 24 acres which have been designated Superfund.

Available Habitat:

Proposed Project: This site is being addressed through Federal, State and private party actions.

Projected/Estimated Costs:

Project Status: The site was designated Superfund in 1983. Response Action Status.

Partners: Project Contact: Phone: Website:

Project Funding Source: HEP Ratification Date:

B. HUDSON RARITAN ESTUARY ECOSYSTEM RESTORATION STUDY INFORMATION TBD

Restoration Recommendations (Applicable Target Ecosystem Characteristics):

Coastal Wetlands -Islands for Waterbirds -Coastal and Maritime Forests -Oyster Reefs -Eelgrass Beds -Shorelines and Shallows -

Benefits, Cost and Comparative Restoration Ratio:

C. EXISTING SITE SPECIFIC DATA INVENTORY

A. Survey, Maps and GIS:

- **B.** Site History and Land Use:
- C. Biological Studies/ Fauna:
- **D. Biological Studies/ General Environment:**
- E. Geotechnical:

F. Hydraulics and Hydrology:G. Water and Sediment:H. Historical and Cultural Resources:I. Restoration Remediation and Design Plans:

Habitat for Fish, Crab and Lobsters -

Enclosed and Confined Waters -

Tributary Connections -

Public Access -

Sediment Contamination -

*Work in progress

REFERENCES:

EPA NPL Fact Sheet- http://www.epa.gov/Region2/superfund/npl/0200499c.pdf

*TBD- Superfund