

Appendix: Partner Contributions to the HEP Agenda in 2014

Total Contributions

\$553,509,714

HEP Role

Primary

Subtotal

\$1,447,427

Project Name: IEC Staff support for HEP

Project Partner(s): Interstate Environmental Commission

HEP Role: Primary

Goals addressed: Water Quality

Project Description:

The Interstate Environmental Commission provided staff time for a variety of HEP activities, including: attending HEP meetings, assisting in HEP's June 3rd Restoration Symposium, reviewing documents and materials, and providing a variety of resources, contacts, and suggestions.

Project Amount: \$21,965

Project Name: NJDEP In-kind program support

Project Partner(s): NJ Department of Environmental Protection

HEP Role: Primary

Goals addressed: Water Quality, Habitat & Ecological Health, Public Education & Community Engagement

Project Description:

The New Jersey Department of Environmental Protection (NJDEP) provided staff time and resources from several of its divisions for work on a wide variety of HEP activities and commitment to implementation of CCMP. NJDEP participated in various HEP work groups, committees, and other meetings and assisted with planning, technical review, administration, technical support, Natural Resource Damages, and risk assessment, among other activities. In addition, this FY NJDEP collaborated with the Citizen Science Project.

Project Amount: \$7,586

Project Name: NJDEP Office of Science In-Kind Program Support

Project Partner(s): NJ Department of Environmental Protection

HEP Role: Primary

Goals addressed: Water Quality, Habitat & Ecological Health, Public Access, Public Education & Community Engagement

Project Description:

The NJ Department of Environmental Protection (NJDEP) Office of Science contributed resources and time for work on a wide variety of HEP-related activities, including fish advisories, outreach, risk assessment, and technical support on the Passaic River and Newark Bay Superfund sites. Additional efforts included technical assistance on grants, follow-up to the Public Access Grants and Living Shoreline Projects, reviewing and commenting on documents on the transition of HEP from EPA to Hudson River Foundation; reviewing the Restoration Guidelines/Action Plan and reviewing and commenting on the post Sandy Waterfront Development Guidelines for both NY and NJ.

Project Amount: \$41,800

Project Name: NJHDG long-term ambient water quality monitoring in NJ

Project Partner(s): NJ Harbor Dischargers Group

HEP Role: Primary

Goals addressed: Water Quality

Project Description:

The New Jersey Harbor Dischargers Group (HJHDG) provided laboratory services, staff, maintenance, sampling equipment and vessels for water quality sampling of the New Jersey portion of the NY-NJ Harbor Estuary.

Project Amount: \$884,022

Project Name: NOAA - Contributions to HEP - primary

Project Partner(s): National Oceanic and Atmospheric Administration

HEP Role: Primary

Goals addressed: Habitat & Ecological Health

Project Description:

National Oceanic and Atmospheric Administration in-kind contributions to the Program, including attending meetings of the Restoration Work Group; maintaining, and providing information about, the Harbor History Database; and providing technical advisory related to the Comprehensive Restoration Plan and other related restoration efforts in the region.

Project Amount: \$5,000

Project Name: NYC Audubon - HEP Harbor Herons Annual Meeting

Project Partner(s): New York City Audubon

HEP Role: Primary

Goals addressed: Habitat & Ecological Health

Project Description:

New York City Audubon contributed resources to carry out the 2013-2014 Harbor Herons Annual Subcommittee Meeting: Greater NY/NJ Harbor Colonial Waterbirds Working Group. The meeting took place at Fort Wadsworth, Staten Island. HEP co-sponsored the event. Participants included Harbor Heron subcommittee members, member organizations, and invited researchers from neighboring states.

Project Amount: \$5,000

Project Name: NYC Parks - Bronx River restoration

Project Partner(s): NYC Parks Department

HEP Role: Primary

Goals addressed: Habitat & Ecological Health

Project Description:

New York City Department of Parks and Recreation match towards a HEP grant to create final designs for fish passages at the Bronx Zoo Dam and the Snuff Mill Dam on the Bronx River.

Project Amount: \$10,000

Project Name: NYC Parks - Habitat for wading birds match

Project Partner(s): NYC Parks Department

HEP Role: Primary

Goals addressed: Habitat & Ecological Health

Project Description:

New York City Department of Parks and Recreation match towards a HEP grants to study of habitat for wading birds in Pralls Island.

Project Amount: \$27,264

Project Name: NYC Parks - Sunset Cove restoration

Project Partner(s): NYC Parks Department

HEP Role: Primary

Goals addressed: Habitat & Ecological Health

Project Description:

New York City Department of Parks and Recreation in-kind contributions towards restoration activities at Sunset Cove, including planning, site visits, permitting meetings, and review of soils sampling results.

Project Amount: \$4,050

Project Name: NYC Parks staff support of HEP

Project Partner(s): NYC Parks Department

HEP Role: Primary

Goals addressed: Habitat & Ecological Health

Project Description:

In kind staff support provided by New York City Department of Parks and Recreation for HEP's restoration work group and HEP's Restoration Conference, including meeting attendance, planning, technical review, and administration.

Project Amount: \$7,400

Project Name: NYSDEC staff support for HEP

Project Partner(s): NY State Department of Environmental Conservation

HEP Role: Primary

Goals addressed: Water Quality, Habitat & Ecological Health

Project Description:

In kind staff support provided by New York State Department of Environmental Conservation (NYSDEC) for various HEP work groups and committees, including planning, technical review, and administration.

Project Amount: \$12,000

Project Name: NYSDEC, Bureau of Water Assessment and Management - In-kind program support

Project Partner(s): NY State Department of Environmental Conservation

HEP Role: Primary

Goals addressed: Water Quality, Habitat & Ecological Health

Project Description:

New York State Department of Environmental Conservation staff resources/time for work on a wide variety of HEP activities and commitment to implementation of CCMP (Technical support, Natural Resource Damages, risk assessment, TMDL Oversight Committees, No Discharge Zone).

Project Amount: \$12,000

Project Name: PVSC continuous monitoring of the Passaic River with Hudson River Environmental Conditions Observing System

Project Partner(s): Passaic Valley Sewerage Commission

HEP Role: Primary

Goals addressed: Water Quality

Project Description:

The Passaic Valley Sewerage Commission (PVSC) received a HEP grant for the purchase of continuous monitoring equipment and the installation of a permanent monitoring station on PVSC's dock. PVSC provided additional monitoring supplies and equipment, staff for maintenance, and funds for HRECOS data management and cellular modem fees.

Project Amount: \$23,693

Project Name: PVSC targeted continuous dissolved oxygen monitoring in NY/NJ Harbor

Project Partner(s): Passaic Valley Sewerage Commission

HEP Role: Primary

Goals addressed: Water Quality

Project Description:

The Passaic Valley Sewerage Commissioners provided monitoring and mooring equipment, staff for maintenance, and funds to hire workboat and crew for deployment for targeted continuous dissolved oxygen monitoring in the NY-NJ Harbor for confirmation of SWEM nutrient modeling outputs.

Project Amount: \$55,073

Project Name: Stewardship & Public Access Grants - NJ Projects

Project Partner(s): Various

HEP Role: Primary

Goals addressed: Public Access, Public Education & Community Involvement

Project Description:

Grantees provided match for projects aimed at fostering stewardship of the NY-NJ Harbor Estuary and/or promoting access to the water or waterfront. Projects in New Jersey included: 1) Hudson River Waterfront Conservancy of New Jersey's symposium on NJ's Lower Hudson River Waterfront with a focus on the challenges for the Next 25 years in a Post-Sandy Era; 2) Middlesex County Improvement Authority conducting events at public access sites along the Raritan River; 3) Monmouth County Park System's series of field trips and hands-on educational activities in the Bayshore area in the Raritan Bay; and 4) Ironbound Community Corporation's "Newark Goes Back to the River" Boat Tours & Walkshops.

Project Amount: \$41,319

Project Name: Stewardship & Public Access Grants - NY Projects

Project Partner(s): Various

HEP Role: Primary

Goals addressed: Habitat & Ecological Health, Public Access, Public Education & Community Involvement

Project Description:

Grantees provided match for projects aimed at fostering stewardship of the New York-New Jersey Harbor Estuary and/or promoting access to the water or waterfront. Projects in New York included: 1) Rocking the Boat's Bronx River American Eel Monitoring; 2) Gowanus Canal Conservancy's Urban Ecology Lecture Series; 3) Eastern Queens Alliance's Man With Nature/Man Against Nature in Idlewild Park Preserve; 4) Human Impacts Institute' North Brooklyn Estuary Exploration Program; 5) Groundwork Hudson Valley's Building Stewardship at the "Daylighted" Water's Edge; 6) Hester Street Collaborative's Paths to Pier 42; and 7) Newtown Creek Alliance's Plank Road Cleanup and Access.

Project Amount: \$174,705

Project Name: Support for Day in the Life of the Bronx River Event

Project Partner(s): Various

HEP Role: Primary

Goals addressed: Public Education & Community Involvement

Project Description:

Numerous local researchers and citizen scientists collaborated and volunteered their time to plan, advertise, and conduct a full day of research and monitoring activities along the Bronx River. Teams from Columbia University, NY State Department of Environmental Conservation, NY City Department of Environmental Protection, NYC Parks, NY Botanical Garden, Natural Areas Conservancy, Fordham University, the Wildlife Conservation Society, Hudson River Foundation, U.S. Environmental Protection Agency, Bronx River Alliance, and Rocking the Boat, together with HEP, coordinated efforts to showcase their research projects to the community and elected officials.

Project Amount: \$20,750

Project Name: Support for HEP's Grants Programs, CAC and events

Project Partner(s): Various

HEP Role: Primary

Goals addressed: Public Education & Community Involvement

Project Description:

In kind support provided by HEP's Citizen Advisory Committee Co-Chairs (to plan for and conduct meetings), and by volunteers and presenters at HEP's Restoration Symposium.

Project Amount: \$17,000

Project Name: USACE, PANYNJ - Hudson-Raritan Estuary Ecosystem Restoration Feasibility Study - primary

Project Partner(s): U.S. Army Corps of Engineers, The Port Authority of NY & NJ

HEP Role: Primary

Goals addressed: Habitat & Ecological Health

Project Description:

The U.S. Army Corps of Engineers provided staff time and resources to chair and participate in HEP's Restoration Work Group and committees, and to help plan and carry out HEP's Restoration Conference, as part of their commitment to the Hudson-Raritan Estuary Ecosystem Restoration Feasibility Study, which includes the Comprehensive Restoration Plan (CRP). The local sponsor for this project is the The Port Authority of NY & NJ (cost share: 50/50; total project cost \$19 million).

Project Amount: \$21,800

Project Name: USEPA Support of Citizen Science Project

Project Partner(s): U.S. Environmental Protection Agency

HEP Role: Primary

Goals addressed: Water Quality, Public Education & Community Involvement

Project Description:

The U.S Environmental Protection Agency has contributed staff time and resources for HEP's "Citizen Science Monitoring for Pathogen Indicators in NY-NJ Harbor Tributaries" project. EPA has contributed resources to: 1) Develop an umbrella quality assurance project plan that can serve as a model for similar future efforts; 2) Provide grantees with lab space, equipment, and supplies for water quality analyses; 3) develop and conduct training for grantees on quality assurance/control procedures, sampling, analyses, data management and interpretation, and data upload to the STORET/WQX database; 4) conduct field and lab audits; and 5) provide assistance with field, lab, data management, and other issues throughout the project period.

Project Amount: \$55,000

HEP Role	Significant	Subtotal	\$3,889,137
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Project Name: IEC activities in support of Pathogens and Nutrients Work Groups

Project Partner(s): Interstate Environmental Commission

HEP Role: Significant

Goals addressed: Water Quality, Public Education & Community Involvement

Project Description:

The Interstate Environmental Commission conducted municipal and industrial compliance monitoring, hypoxia and nutrients monitoring, water quality-related research involving CSOs and stormwater, and educational and public outreach activities. In cooperation with HEP, IEC District held a summit to discuss ongoing water quality monitoring initiatives and to identify regional data priorities within the waters of the Interstate Environmental District.

Project Amount: \$374,037

Project Name: NOAA - Contributions to HEP - Significant

Project Partner(s): National Oceanic and Atmospheric Administration

HEP Role: Significant

Goals addressed: Habitat & Ecological Health

Project Description:

The National Oceanic and Atmospheric Administration provided in-kind contributions to HEP, including advising and providing support to coastal resiliency partners engaged in grant writing, planning documents, design plans within the HEP boundary.

Project Amount: \$10,000

Project Name: USACE - Management of Historic Area Remediation Site

Project Partner(s): U.S. Army Corps of Engineers

HEP Role: Significant

Goals addressed: Economically & Ecologically Viable Estuary and Port

Project Description:

U.S. Army Corps of Engineers contributions towards the management and monitoring of the Historic Area Remediation Site (HARS), which is located six miles east of Sandy Hook, New Jersey. Using dredged material from the Harbor to cover existing sediments at the recently designated Historic Area Remediation Site represents an environmentally beneficial use of this resource. HEP has supported this project, which advances CCMP goals. HARS management is a major role of several HEP partners including the Corps and EPA.

Project Amount: \$3,400,000

Project Name: USACE, PANYNJ - Hudson-Raritan Estuary Ecosystem Restoration Feasibility Study - significant

Project Partner(s): U.S. Army Corps of Engineers, The Port Authority of NY & NJ

HEP Role: Significant

Goals addressed: Habitat & Ecological Health

Project Description:

The U.S. Army Corps of Engineers (USACE) and other partners have conducted work to advance the common goals of the Hudson-Raritan Estuary (HRE) Ecosystem Restoration Feasibility Study, which includes the Comprehensive Restoration Plan (CRP). Work completed this FY includes: 1) Public Outreach meetings for the CRP, including agency meetings and other public events; 2) Advancement of the Tributary Connections Target Ecosystem Characteristic (specifically related to fish passage) through identification of additional impediments (culverts and dams) to fish passage throughout the HRE Study Area working with USACE Engineering Research and Development Center; and 3) Revisions to the Comprehensive Restoration Plan based on Restoration Work Group review and preparation of a Sandy Chapter for the CRP. Funding was provided by the USACE and the Port Authority of NY & NJ, the local partner (cost share: 50/50; total project cost \$19 million as indicated above).

Project Amount: \$105,100

HEP Role	Support	Subtotal	\$548,173,150
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Project Name: City of Water Day - Metropolitan Waterfront Alliance

Project Partner(s): Metropolitan Waterfront Alliance

HEP Role: Support

Goals addressed: Public Access, Public Education & Community Involvement

Project Description:

The Metropolitan Waterfront Alliance (MWA) carried out its 2014 City of Water Day event, a daylong celebration of the waterfront at multiple locations throughout the estuary. MWA is a long-time HEP partner and has been working closely with HEP on public access issues. HEP contributed funds to this year's event to facilitate tabling by local nonprofit groups providing estuary-related content, and to enhance satellite locations of the event throughout the estuary.

Project Amount: \$100,000

Project Name: Future City, Inc. Estuary Day

Project Partner(s): Future City, Inc.

HEP Role: Support

Goals addressed: Public Education & Community Involvement

Project Description:

Future City, Inc. conducted its annual Estuary Day public outreach and education programs to engage and educate students and residents from the Elizabeth River watershed area about the health of the NY-NJ Harbor Estuary, the effects of pollution, the connection to their daily lives, and community-based solutions. Future City is a long-time HEP supporter and took upon itself to continue hosting annual Estuary Day events, which were initially held in collaboration with HEP. HEP provides support by attending and conducting educational and outreach activities at the event, providing educational materials, and helping publicize the event.

Project Amount: \$65,000

Project Name: HRF - Support of Scientific Research on the Hudson River Ecosystem

Project Partner(s): Hudson River Foundation

HEP Role: Support

Goals addressed: Water Quality, Habitat & Ecological Health, Economically & Ecologically Viable Estuary and Port

Project Description:

The Hudson River Foundation supported several research projects to advance the understanding of the Hudson River ecosystem. The objectives of the Foundation's grant programs and the geographic focus areas are consistent with, and complimentary to, the goals and objectives of the New York-New Jersey Harbor & Estuary Program. The topics of the projects funded include: 1) evaluation of essential fish habitat for shallow shorelines, 2) Estimating effects of Hudson River contaminants and climate change on critical early life-stages of Atlantic and shortnose sturgeons, 3) Sediment Delivery, Trapping and Storage during Extreme Flow Events in the Hudson River, 4) Assessing Impacts of Recent Storm Activity on Sediment Transport and Storage in the Hudson River, 5) Sewage loading to the Hudson River as a determinant of microbial air quality, 6) Individual Movement Behaviors of New York Harbor Striped Bass and Their Response to Extreme Events, and 7) Zebra Mussel Effects on Diet of Early-Stage Fishes in the Hudson River.

Project Amount: \$512,000

Project Name: NJDEP - Blue Acres Acquisitions

Project Partner(s): NJ Department of Environmental Protection

HEP Role: Support

Goals addressed: Habitat & Ecological Health

Project Description:

The NJ Dept of Environmental Protection purchased 161 properties totaling over 28 acres within the Raritan River and Passaic River watersheds in Middlesex and Passaic counties as part of its Blue Acres Program. These properties are located within the floodplains of the rivers and that were damaged by storms or storm-related flooding, or that may buffer or protect other lands from such damage. These properties will be evaluated on a case by case basis for their potential for habitat restoration and protection, and recreation opportunities.

Project Amount: \$32,920,859

Project Name: NJDEP aerial surveillance for floatables

Project Partner(s): NJ Department of Environmental Protection

HEP Role: Support

Goals addressed: Water Quality

Project Description:

NJ Dept. of Environmental Protection Bureau of Marine Water Monitoring contributions (operational costs) towards aerial monitoring for floatable debris monitoring as part of the bi-state Floatables Action Plan. HEP has been supporting a variety of efforts to address floatables in the Estuary, including the Floatables Action Plan, of which this program is a major part.

Project Amount: \$28,634

Project Name: NJDEP Clean Shores program

Project Partner(s): NJ Department of Environmental Protection

HEP Role: Support

Goals addressed: Water Quality

Project Description:

The NJ Department of Environmental Protection carried out its ongoing Clean Shores Program. This program relies on New Jersey inmates, supervised by state correctional officers and a NJDEP site manager, to collect shoreline floatable debris before it became resuspended due to tidal influences. This FY, the program engaged 10 inmates who removed 3.3 million pounds of trash and debris from 88.2 miles of shoreline. HEP has been supporting a variety of efforts to address floatables in the Estuary, including the Floatables Action Plan, of which this program is part.

Project Amount: \$485,000

Project Name: NYC Audubon Research Projects

Project Partner(s): New York City Audubon

HEP Role: Support

Goals addressed: Habitat & Ecological Health

Project Description:

New York City Audubon conducted a variety of research projects, including: 1) Potential Impact of Double-crested Cormorants to their NY Harbor Habitat and Co-occurring species, 2) Bird Migration through New York City, 3) Study of birds as bioindicators of the NY Harbor, 4) Harbor Herons Webcam, providing video access to Harbor Heron nests within a core area of the colony on Goose Island, Bronx. On-going expenses include maintenance of hardware, internet use, and website hosting, 5) Conducting 2014 Nesting Survey, preparing and publishing the report, 6) Conducting the 2014 Foraging Survey for Waterbirds and Population Surveys for passerines, and 7) Conducted American Oystercatcher productivity study on Breezy Point. HEP has been supportive of NYC Audubon survey and research efforts, which advance important CCMP goals and provide data to track environmental indicator trends. NYC Audubon actively participates in HEP's Restoration Work Group and co-chairs the Harbor Herons Subcommittee.

Project Amount: \$184,500

Project Name: NYC Parks - Restoration Projects

Project Partner(s): NYC Parks Department

HEP Role: Support

Goals addressed: Habitat & Ecological Health

Project Description:

The NYC Dept of Parks and Recreation completed two restoration projects this FY: 1) an anadromous fish passage in the Bronx River-182nd St Dam and 2) a riparian habitat restoration project along the Bronx River.

Project Amount: \$3,179,091

Project Name: NYCDEP - Jamaica Bay Atlas

Project Partner(s): NY City Department of Environmental Protection

HEP Role: Support

Goals addressed: Habitat & Ecological Health

Project Description:

Building on the completed Jamaica Bay Watershed Protection Plan (JBWPP), the NYC Dept of Env Protection (NYCDEP) developed a Jamaica Bay Watershed Ecological Atlas. Work included developing an inventory of existing City-owned Block and Lot data, field verifying the information, collecting additional information about existing ecological and stormwater characteristics, and developing and prioritizing potential ecological and stormwater restoration opportunities. The database contains information on nearly 1,000 vacant properties within the Jamaica Bay watershed. Consistent with New York City's Waterfront Revitalization Plan (WRP), the Jamaica Bay Watershed Ecological Atlas project provides (1) a complete and updated inventory of all vacant City-owned properties and a characterization of their habitat and stormwater attributes; (2) a GIS-mapping and information data layer that can be used by stormwater managers and restoration practitioners to develop and leverage future stormwater management ecological restoration designs; and (3) a prioritized list and map of potential sites for stormwater management and ecological restoration and conservation. The restoration and conservation actions enabled by this project will provide critical benefits for plant and animal species, and will be integrated with urban stormwater runoff management practices to benefit comprehensive ecological improvements for the Jamaica Bay watershed. Geographic Information System (GIS) data shapefiles of the Ecological Atlas will be available on DEP's website in early fall 2014.

Project Amount: \$607,000

Project Name: NYCDEP - Restoration Projects

Project Partner(s): NY City Department of Environmental Protection

HEP Role: Support

Goals addressed: Habitat & Ecological Health

Project Description:

The NYC Dept of Environmental Protection completed two restoration projects during this FY: 1) the restoration of the Brookfield landfill in Staten Island and 2) the creation of the Paerdegat Basin Natural Area Park and Ecology Park in Jamaica Bay.

Project Amount: \$289,000,000

Project Name: NYSDEC - CSO Abatement and N reduction

Project Partner(s): NY State Department of Environmental Conservation

HEP Role: Support

Goals addressed: Water Quality

Project Description:

In kind staff support provided by the New York State Department of Environmental Conservation for the planning, review, oversight and compliance enforcement related to New York City Combined Sewer Overflow abatement and nitrogen reduction programs. These are two important CCMP objectives and HEP has facilitated communication and cooperation between the state and city agencies to carry out these activities. Staff contributions come largely from NYSDEC Bureau of Water Compliance, but Bureau of Water Assessment & Management, Bureau of Water Resource Management, and Bureau of Water Permits are also involved in NY Harbor-related efforts regarding SPDES permits, Combined Sewer Overflow (CSO) abatement, water quality standards, Sandy storm recovery and resiliency, stormwater and green infrastructure.

Project Amount: \$75,000

Project Name: NYSDEC - Operation of the HRECOS Network

Project Partner(s): NY State Department of Environmental Conservation

HEP Role: Support

Goals addressed: Water Quality

Project Description:

The NY State Dept of Environmental Conservation (Hudson River Estuary Program and Division of Water) has continued to contribute to the operation of the Hudson River Environmental Conditions Observing System (HRECOS) stations. These stations monitor hydrologic and meteorological conditions at high frequency and report these values in near-real time to a public website (www.hrecos.org). Data collected from these stations provide information necessary to understand river conditions and dynamics including threats of hypoxia and toxics. The NYSDEC has contributed to equipment and maintenance costs, database maintenance, station improvements, and salaries for the HRECOS staff.

Project Amount: \$80,000

Project Name: NYSDEC - Sediment Monitoring in the Hudson Mainstem and Tributaries

Project Partner(s): NY State Department of Environmental Conservation

HEP Role: Support

Goals addressed: Economically & Ecologically Viable Estuary and Port

Project Description:

NY State Dept. of Environmental Conservation (NYSDEC) continued to contribute to gauging/ monitoring sites at Mid-Hudson (Poughkeepsie) and on Mohawk River to monitor the relative contribution of several large-watershed sources of suspended sediment to the Hudson River Estuary. This project, a component of the Hudson River Environmental Conditions Observing System (HRECOS), will provide information needed to understand the timing and magnitude of sediment movement from these watersheds and through the freshwater reach of the Estuary. HEP funds leveraged funding already provided by the Harbor Estuary Program, the NYS Department of Environmental Conservation and the U.S. Geological Survey.

Project Amount: \$60,000

Project Name: Port Authority - Public access improvements at the North Shore Marina

Project Partner(s): The Port Authority of NY & NJ

HEP Role: Support

Goals addressed: Habitat & Ecological Health

Project Description:

The Port Authority of NY and NJ (PANYNJ), through its Hudson-Raritan Estuary Resources Program (HRE RP) has provided funds to the Trust for Public Land (TPL) for improvements to the North Shore Marina in Staten Island, NY (aka Blissenbach property). The site along the Kill Van Kull had been acquired with HRE RP funding (\$2.999 M). This is the last contribution as per a 2010 MOU with the TPL (over the course of four years, the PANYNJ has provided \$2,923,176.34 for improvements to the site). The new waterfront park- now known as Heritage Park-officially opened In May 2014 and is operated by the New York City Department of Parks and Recreation. The park offers dramatic views of the Bayonne Bridge and Staten Island’s working waterfront, contains a meadow, fully integrated activity lawn, a pervious pathway circulating throughout the site, and ample bike and vehicle parking. The park also addresses community concerns over the loss of public access to the waterfront and the lack of natural resource areas. This is the first post-Hurricane Sandy resilient waterfront park and serves as a model for converting former industrial sites into usable open space.

Project Amount: \$563,383

Project Name: PVSC Education & Outreach Program

Project Partner(s): Passaic Valley Sewerage Commission

HEP Role: Support

Goals addressed: Public Education & Community Involvement

Project Description:

Passaic Valley Sewerage Commissioners (PVSC) contributions towards running their Educational Outreach Department to provide in-class lectures to children in grades K-8 on Point and Non Point Source Pollution Prevention using interactive environmental models. HEP has been supportive of PVSC efforts, which help advance HEP CCMP goals of building community awareness, appreciation, and understanding of the ecosystem and its importance, as well as encouraging action at the community level.

Project Amount: \$140,472

Project Name: PVSC River Restoration Program: Floatable Debris Removal

Project Partner(s): Passaic Valley Sewerage Commission

HEP Role: Support

Goals addressed: Water Quality

Project Description:

Passaic Valley Sewerage Commissioners (PVSC) operates two skimmer boats to patrol the Passaic River and Newark Bay and remove floatable debris. PVSC provides staff, equipment, maintenance, trash disposal and dumpster rentals for skimmer boat operations and shoreline cleanups. HEP has supported this effort as part of the actions to address floatables in the Estuary, which is an important CCMP goal.

Project Amount: \$1,746,453

Project Name: PVSC/Rutgers Green Infrastructure Municipal Technical Assistance Program

Project Partner(s): Passaic Valley Sewerage Commission

HEP Role: Support

Goals addressed: Habitat & Ecological Health, Water Quality

Project Description:

The Passaic Valley Sewerage Commission (PVSC) provided funds for Rutgers Cooperative Extension Water Resources Program to develop Green Infrastructure Feasibility Studies for seven PVSC municipalities, to develop an education and outreach program including educational handouts and materials, to hold an informational workshop on Green Infrastructure practices, to develop and maintain a program website, to develop and install 2 Green Infrastructure demonstration projects within the PVSC District, and to design Green Infrastructure elements in the redesign of the PVSC Administration Building entry plaza. PVSC also provided staff to oversee the project and meet with municipal officials to promote the program and the benefits of reducing stormwater runoff with Green Infrastructure practices.

Project Amount: \$186,549

Project Name: US Army Corps of Engineers Drift & Floatables Collection

Project Partner(s): U.S. Army Corps of Engineers

HEP Role: Support

Goals addressed: Water Quality

Project Description:

As part of the region's Floatables Action Plan, the U.S. Army Corps of Engineers has a Drift and Floatables Removal Program for surveillance, detection and collection of floating hazards to navigation. HEP has been supportive of this collective effort, which advances CMMP goals.

Project Amount: \$9,300,000

Project Name: USACE - Coastal Flood Damage Reduction Projects - NJ

Project Partner(s): U.S. Army Corps of Engineers

HEP Role: Support

Goals addressed: Habitat & Ecological Health

Project Description:

The U.S. Army Corps of Engineers carried out three Coastal Flood Damage Reduction Projects in NJ (Sea Bright to Manasquan, Keansburg, and Port Monmouth) in the core area of the HEP, or just outside it. These beaches were restored after being severely eroded by Hurricane Sandy and their functions were severely diminished as both hurricane protection for the communities behind them and for the beachgoing recreational public. These projects will restore these beach and dune systems, greatly enhancing storm damage protection, while also facilitating recreation and habitat usage by a variety of species, some of which are endangered.

Project Amount: \$160,800,000

Project Name: USACE - Coastal Flood Damage Reduction Projects - NY

Project Partner(s): U.S. Army Corps of Engineers

HEP Role: Support

Goals addressed: Habitat & Ecological Health

Project Description:

The U.S. Army Corps of Engineers carried out a Coastal Flood Damage Reduction Projects in NY in the core area of the HEP in Rockaway Beach (East Rockaway Inlet to Rockaway Inlet). This beach was restored after being severely eroded by Hurricane Sandy and its functions were severely diminished as both hurricane protection for the communities behind them as well as for the beachgoing recreational public. This project will restore the beach and dune systems, greatly enhancing storm damage protection, while also facilitating recreation and habitat usage by a variety of species, some of which are endangered.

Project Amount: \$26,500,000

Project Name: USACE - Jamaica Bay Ecosystem Restoration Feasibility Study

Project Partner(s): U.S. Army Corps of Engineers

HEP Role: Support

Goals addressed: Habitat & Ecological Health

Project Description:

The US Army Corps of Engineers (USACE) continued to advance the Feasibility Study for the Jamaica Bay Restoration Plan. The local sponsor for this project is the NY City Dept of Environmental Protection, with a 50/50 cost share. The goal of this Study is to investigate the feasibility of restoring portions of the ecosystem of Jamaica Bay which, over the past century, has been degraded through human encroachment and increased urbanization. Combined Sewer Outfall (CSO) discharges have also exacerbated these effects. Restoration measures may include the need to: regrade shorelines, revegetate grasslands, create and/or restore additional estuarine, wetland and upland habitats, and improve circulation and flushing. The study planned to recommend restoration measures for 8 selected sites. Currently, sites identified within the Feasibility Study are being reevaluated following Hurricane Sandy as part of the East Rockway Inlet to Rockaway Inlet (Rockaway Beach) Reformulation through the Disaster Relief Appropriations Act of 2013 to address coastal resiliency and long-term sustainability in order to provide coastal storm damage reduction benefits. The Sites that do not meet the justification for use of Sandy funding providing adequate Coastal Storm Risk Management benefits will be included and recommended for construction under the Hudson-Raritan Estuary (HRE) Ecosystem Restoration Feasibility Study. The USACE is a long-time HEP partner that has played a critical role creating and implementing the Comprehensive Restoration Plan (CRP) for this region. This and other USACE-led projects are critical to advance the common goals in the CRP.

Project Amount: \$51,000

Project Name: USACE - Small Harbor Restoration Dredging - NJ

Project Partner(s): U.S. Army Corps of Engineers

HEP Role: Support

Goals addressed: Public Access, Economically & Ecologically Viable Estuary and Port

Project Description:

The U.S. Army Corps of Engineers maintenance dredged three small boat harbors within the core area of the HEP: Sandy Hook Bay at Leonardo, Shrewsbury River, and Shoal Harbor & Compton Creek. These harbors are primarily used for recreational boating, ferries or commercial fishing. Hurricane Sandy had caused excessive shoaling in these harbors, severely impacting safe access in and out of the harbor for small boats. This project restored the harbors to their required depth and repaired the damage done by Hurricane Sandy, facilitating safe passage for recreational boaters, passenger ferries and commercial fishing vessels.

Project Amount: \$12,500,000

Project Name: USACE - Small Harbor Restoration Dredging - NY

Project Partner(s): U.S. Army Corps of Engineers

HEP Role: Support

Goals addressed: Public Access, Economically & Ecologically Viable Estuary and Port

Project Description:

The U.S. Army Corps of Engineers maintenance dredged the Great Kills Harbor, a small boat harbor within the core area of the HEP, primarily used for recreational boating, ferries or commercial fishing. Hurricane Sandy had caused excessive shoaling in this harbor, severely impacting safe access in and out of the harbor for small boats. This project restored this harbor to required depth and repaired the damage done by Hurricane Sandy, facilitating safe passage for recreational boaters, passenger ferries and commercial fishing vessels.

Project Amount: \$3,300,000

Project Name: USACE, NYC Parks - Soundview Park Ecosystem Restoration Project

Project Partner(s): U.S. Army Corps of Engineers, NYC Parks Department

HEP Role: Support

Goals addressed: Habitat & Ecological Health

Project Description:

The U.S. Army Corps of Engineers (USACE) and its local sponsor, the NYC Department of Parks and Recreation (cost share: 65/35; total project cost \$7.1 million) have implemented the previously reported Soundview Park Ecosystem Restoration Study with additional funds provided by the NYC Department of Sanitation. The project restored 3.7 acres of tidal marsh habitat and 12 acres of adjacent upland habitat in southern Soundview Park. This Fiscal Year, post-construction monitoring activities were carried out at the site. Funds were used to monitor and adaptively manage the project site. A Final Monitor Report will be prepared. A ribbon-cutting event for the site is scheduled for Fall 2014. The USACE is a long-time HEP partner that has played a critical role creating and implementing the Comprehensive Restoration Plan (CRP) for this region. This and other USACE-led projects are critical to advance the common goals in the CRP.

Project Amount: \$236,500

Project Name: USACE, NYCDEP, NYC Parks - Jamaica Bay Marsh Islands restoration: Yellow Bar Hassock, Black Wall and Rulers

Project Partner(s): U.S. Army Corps of Engineers, NY City Department of Environmental Protection, NYC Parks Department

HEP Role: Support

Goals addressed: Habitat & Ecological Health

Project Description:

Jamaica Bay Marsh Island Restoration construction for Yellow Bar, Black Wall and Rulers Bar was completed in 2012 in coordination with the NY/NJ Harbor Deepening Project using sand from Ambrose Channel. Sand placement (375,000 CYD) and wetland restoration of 47 acres of marsh islands was conducted and cost shared with NYSDEC and NYCDEP 65% federal/35% non-federal cost (total \$19.6 million). Black Wall and Rulers Bar (total project cost \$2.11 million) were placement sites for Ambrose sand that was paid 100% by NYSDEC and NYCDEP; followed by a volunteer planting program (led by Jamaica Bay Guardian, American Litoral Society and NYCDEP). In 2014, the U.S. Army Corps of Engineers conducted post-construction monitoring and other activities at these recently restored marsh islands. Approximately 70,000 plants were replanted at Yellow Bar as part of repairs from Hurricane Sandy. The marsh island restoration efforts are being monitored by the project team and are providing valuable data on the cause of the islands disappearance, helping identify the most effective future restoration options. This program also has significant implications for the future success of restoration activities beneficially using sand from the Operations and Maintenance (O&M) Program. These marsh islands were identified as opportunities in the Region's Comprehensive Restoration Plan (CRP). HEP has actively participated in preparing the CRP, and HEP's Restoration Work Group (RWG) is one of several groups and entities working to implement the CRP, a master plan for habitat restoration in the region. The NYSDEC and NYCDPR (the local sponsors for the project) are members of HEP and the RWG.

Project Amount: \$4,478,000

Project Name: USACE, NYCDEP, Westchester County Dept. of Planning - Bronx River Ecosystem Restoration Feasibility Study

Project Partner(s): U.S. Army Corps of Engineers, NY City Department of Environmental Protection, Westchester County Department of Planning

HEP Role: Support

Goals addressed: Habitat & Ecological Health

Project Description:

As part of the Bronx River Restoration, the U.S. Army Corps of Engineers (USACE) continues to develop a Feasibility Study for an area that occupies approximately 55 square miles in central and lower Westchester County and Bronx County in New York City. An assessment of the entire Bronx River watershed is being conducted to identify restoration opportunities that can be recommended for construction, as well as future feasibility studies. An assessment of the entire Bronx River watershed was conducted to identify restoration opportunities that can be recommended for construction, as well as future feasibility studies. A watershed opportunities/analysis report for the Bronx River watershed completed in 2010 identified a total of 330 restoration sites. Ranking based on habitat and water quality resulted in identification of 18 restoration opportunities for further feasibility level evaluation. Ten sites are being advanced through detailed feasibility level designs to be recommended for authorization, with the remaining recommended for future study. A scope of work was awarded in FY14 to complete all feasibility study tasks. Recommendations will be included in the overall HRE Feasibility Study Draft Report to be released in early 2016. The non-federal sponsors for this project are the NYC Department of Environmental Protection and the Westchester County Department of Planning and they share 50% of the costs (total project cost \$4.49 million). The USACE is a long-time HEP partner that has played a critical role creating and implementing the Comprehensive Restoration Plan (CRP) for this region. This and other USACE-led projects are critical to advance the common goals in the CRP.

Project Amount: \$341,000

Project Name: USACE, PANYNJ - Hudson-Raritan Estuary Ecosystem Restoration Feasibility Study - support

Project Partner(s): U.S. Army Corps of Engineers, The Port Authority of NY & NJ

HEP Role: Support

Goals addressed: Habitat & Ecological Health

Project Description:

The U.S. Army Corps of Engineers (USACE) and other partners have conducted work to advance the Hudson-Raritan Estuary (HRE) Ecosystem Restoration Feasibility Study, which includes the Comprehensive Restoration Plan (CRP). Funding was provided by the USACE and the Port Authority of NY & NJ, the local partner (cost share: 50/50; total project cost \$19 million as indicated above). The USACE is a long-time HEP partner that has played a critical role creating and implementing the CRP for this region. This and other USACE-led projects are critical to advance the common goals in the CRP. Work completed in FY14 included: 1) Advancement of the Feasibility Study including evaluation of restoration opportunities outlined within the CRP including preparation and digitization of conceptual designs/restoration alternatives. This information will update the information currently in the HEP OASIS database and interactive map; 2) Preparation of Feasibility Level Designs of sites potentially recommended for construction; and 3) Revisions to the CRP.

Project Amount: \$580,100

Project Name: USEPA - Phase 1 Passaic River Removal Action activities

Project Partner(s): U.S. Environmental Protection Agency

HEP Role: Support

Goals addressed: Sediment Quality

Project Description:

Cost of the U.S. Environmental Protection Agency's contributions towards the oversight of the Phase I Passaic River Removal Action for the period September 1, 2012-August 31, 2013, which were reimbursed by the Potentially Responsible Parties. The Removal Action involves dredging 40,000 cubic yards of contaminated sediments adjacent to the Diamond Alkali site from within a sheetpile enclosure to be piped to an upland processing facility for dewatering and to be shipped off-site for treatment and disposal.

Project Amount: \$152,609

Grand Total

\$553,509,714