Options for Funding Estuary Program Priorities

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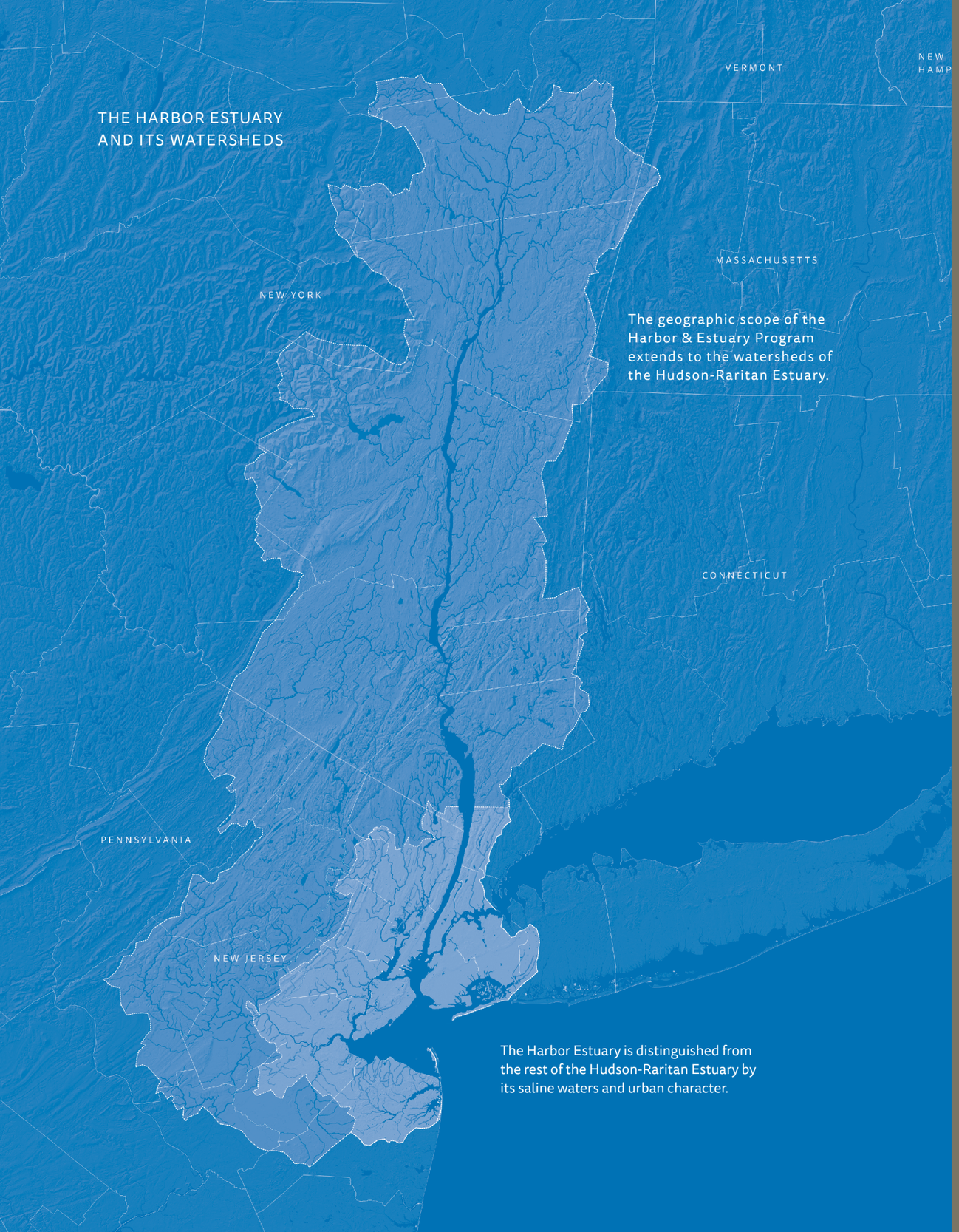
HUDSON RIVER FOUNDATION

NY/NJ HARBOR & ESTUARY PROGRAM

Contents



The geographic scope of the Harbor & Estuary Program extends to the watersheds of the Hudson-Raritan Estuary.

The Harbor Estuary is distinguished from the rest of the Hudson-Raritan Estuary by its saline waters and urban character.

ACKNOWLEDGEMENTS

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Executive Summary

The New York – New Jersey Harbor & Estuary Program (HEP) has developed a draft 2017-2022 Action Agenda (available at www.harborestuary.org/pdf/HRF-ActionAgenda-draft-0517.pdf) which calls for enhanced efforts to protect, conserve and restore the Estuary. This prioritized series of actions to reduce pollution, restore habitat, improve public access, support balanced port development, and engage and educate the public has been created by Program staff in consultation with HEP's partners.

Many of the action items will require significant funding beyond levels that have carried HEP priorities and specific projects in prior years. For example, the estimated cost of meeting HEP's long term objectives for restoring tidal wetlands, just one of 12 target ecological characteristics, is from $1.0 to $3.5 billion.[1] New York City has budgeted $1 billion over the next 10 years to support implementation of green infrastructure opportunities and similar commitments may be forthcoming from New Jersey municipalities and utilities to address combined sewer overflow and stormwater management obligations.[2]

The purpose of this document to explore a wide range of potential funding sources in order to broaden the depth and breadth of funding available for implementing the HEP Action Agenda and realizing the shared goals for the Estuary. It is intended to serve as a basis for discussion among HEP partners to identify and advance the best candidate funding sources upon which to move forward. The emphasis is identifying new sources of funding for HEP's priorities as opposed to documenting existing sources. Given the political challenges and competing needs involved in securing any new sources of funding, broad political consensus will need to be developed to advance consideration by decision makers.

This paper describes **28 funding opportunities in five categories**, each with a clear nexus to the Estuary including: user fees, tax surcharges, voluntary contributions, permit violations and enforcement. Additionally, expansion and/or re-purposing of some existing federal and state programs and the roles of key regional commissions and authorities that touch upon the Estuary are examined as potential sources of additional funding. While HEP and the Hudson River Foundation that manages the program may be the appropriate administrator for project-level priorities, these existing and possibly new federal, state and local government offices are the likely vehicles for capital and operational needs.

Some funding sources may yield relatively small amounts of revenue on an annual basis but may have the potential to do so consistently over a number of years. Other sources may be relatively large but only available on a one-time basis. Some may be implemented by changes in administrative practice while others may require regulatory or statutory changes. Each section also discussed the potential and feasibility of these potential sources of funding.

Based on initial considerations of the funding **potential** and the political and administrative **feasibility** of these opportunities, a short list of potential funding sources that might be advanced has been identified with the help of an ad-hoc committee of the Policy Committee. **These are as follows:**

1 See: "Hudson-Raritan Estuary Comprehensive Restoration Plan Version 1 Volume I"; 2016. USACE & PANYNJ in partnership with HEP available at www.nan.usace.army.mil/Portals/37/docs/harbor/Final%20CRP_2016-06-27_v1.0.pdf?ver=2016-06-29-170128-157

2 See: www.nyc.gov/html/dep/pdf/green_infrastructure/gi_annual_report_2017.pdf.

1.

New or Expanded Public Revenue Sources

Stormwater Fee Based on Impervious Surface Area or Discharge: Regulatory mandates for addressing stormwater through Long Term Control Plans for combined sewer areas and municipal separate stormwater systems provide a clear case for moving forward, including addressing unfairness of current water rate structure. There is broad applicability throughout the Estuary, with the potential for significant improvements to water quality and incentives for private property owners to make improvements directly.

Aviation Impact User Fee: Aviation operational impacts from regional airports are ubiquitous throughout the Estuary, including impacts arising from wildlife management, stormwater discharge, and pollutant emissions from aircraft. While the aviation industry is a linchpin for the regional economy, these environmental costs have been externalized by the industry. While fees may be challenging, a case could be made for voluntary contributions by industry.

Tax Assessment Districts: The San Francisco Bay experience provides a great example of how an effective regional approach can help address resiliency needs and other coastal infrastructure improvements. Expanding the number of smaller special assessment districts that now exist could also be pursued to address unique neighborhood issues including stewardship of waterfront parks and maritime infrastructure.

2.

Voluntary Contributions

Sightseeing Vessels/Ferry Passengers: The numbers of passengers is impressive and growing and they are invested in the aesthetics of the experience. Even small contributions by a fraction of the passengers would yield a consistent revenue stream. Solicitation of contributions for estuary stewardship would have the added benefit of helping engage the public and raise awareness of estuarine issues.

3.

Other Opportunities to Generate Resources

Permit Violations and Enforcement—Environmental Benefit Projects or Supplemental Environmental Projects: The ecology of the Estuary is affected when discharge permits are exceeded, illegal fill is placed, or other federal or state environmental regulations are contravened. Federal and state fines and penalties are often paid into the general fund(s) of federal and state government, and do not address the impacts of these illegal actions. The portfolio of valuable Supplemental or Environmental Benefit Projects that are negotiated in lieu of fines and penalties could be enhanced through better coordination.

Environmental Benefit Agreements for Major Regional Projects: Projects in the public interest often have externalized environmental costs which affect the Estuary. Recent examples are Tappan Zee Bridge Replacement and the Champlain Power Express. Portfolios of environmental projects can be incorporated in project scope by project proponents to help address mitigation requirements in a timely manner. Amtrak's Gateway Program, including the new cross-Hudson Tunnel, will likely give rise to a unique opportunity to address some aspects of the HEP Action Agenda.

Coordinated Private Philanthropy through a Dedicated Harbor Estuary Fund: Creating a repository for funds from individuals and corporations for the specific purpose of advancing HEP and the Action Agenda could help expand the pool of donors and ensure coordination among existing philanthropy. In particular, large corporations may be interested in this as part of their corporate social responsibility efforts. The Long Island Sound Futures Fund provides a good example of how this approach could help.

4.

Expansion/Re-Dedication/ Re-Purposing of Federal, State and Local Programs

Maintenance Dredging: Harbor Maintenance Trust Fund: There is a surplus in this national fund and the Port of New York and New Jersey contributes more to this fund than it receives in benefit. Removal of off-channel contaminated sediments or similar actions could be undertaken under an expanded harbor maintenance program.

The **NYS Environmental Protection Fund** currently allocates specific funding for the Hudson River, Long Island South Shore, and Peconic Estuary Programs as well as other watershed based management efforts in the New York State. The Harbor Estuary and priorities identified by HEP's Action Agenda could be provided a similar consideration. Dedicated funding from the **NJ Green Acres and Blue Acres programs** or other New Jersey sources would be a similarly appropriate and perhaps matching contribution towards stewardship of the Estuary's bi-state resources.

Section 320 of the Clean Water Act was recently reauthorized, and helps direct funding to HEP and other National Estuary Programs including a new competitive grants program. The Great Lakes Restoration Collaboration offers a model for how state and local government and non-profit organizations can work together to secure additional federal resources through new authorizations and on-going appropriations.

Under the Congressionally-authorized **Hudson-Raritan Estuary Ecosystem Restoration Feasibility Study**, the USACE has recommended 33 projects identified within the Hudson-Raritan Estuary Comprehensive Restoration Plan for construction, with a first level total cost of $644 million. Local non-federal partners have committed to support 35% of each project. Engaging the bi-state congressional delegation in support of the overall feasibility study and/or the specific projects proposes offers opportunities for advancing restoration.

5.

Key Regional Commissions/ Authorities/Utilities

The Port Authority of New York and New Jersey: The Port Authority has significant and continuous impacts to the Estuary through the location and operation of its facilities and its on-going capital investments. In the past, the Port Authority has played key leadership roles including co-sponsoring the Army Corps of Engineer's Comprehensive Restoration Plan and making considerable investments in land preservation and public access through its Hudson Raritan Estuary Resources Program (HRERP). Renewed commitments of the Port Authority, through HRERP or otherwise, should be important means to advance the HEP Action Agenda.

Battery Park City Authority: Battery Park City was created at the expense and to the detriment of the Estuary. Ninety-two acres was removed from the Hudson River Estuary without mitigation, despite environmental statutes. Given the financial success of Battery Park City, it is reasonable that some "restitution" be made to the Estuary from the considerable surpluses being generated by the Battery Park City Authority.

Introduction

The New York-New Jersey Harbor & Estuary is a complex ecological system located in one of the nation's most densely populated regions. Its large, bi-state expanse as well as the range of communities and uses found within it, raise significant management and policy challenges in a multi-jurisdictional setting.

With its partners, the New York – New Jersey Harbor & Estuary Program (HEP) has developed a draft 2017-2022 Action Agenda[1] to continue protecting, conserving, and restoring the Estuary. The public agencies and civic stakeholders that make up HEP have prioritized a series of actions that will help address the partnership's long term goals for the region: reducing pollution of its waters, restoring ecological habitat, improving public access, supporting an economically and ecologically viable port, and educating and engaging the public.

Moving forward on these priorities will require new approaches for existing resources and additional revenue streams. The purpose of this white paper is to identify and provide a preliminary assessment of potential funding sources that address these needs. It complements the Hudson-Raritan Estuary Comprehensive Restoration Plan which includes a list of current funding sources for habitat restoration.[2]

The draft Action Agenda identifies the kind and level of funding that will be required for each priority, including grant funding to support larger and smaller research, planning, or demonstration projects; major capital investments; and on-going operating or programming needs. While HEP and the Hudson River Foundation that manages HEP may be the appropriate administrator for project-level priorities, existing and possibly new federal, state and local government offices are the likely vehicles for capital and operational needs.

1 Available at www.harborestuary.org/pdf/HRF-ActionAgenda-draft-0517.pdf
2 See: "Hudson-Raritan Estuary Comprehensive Restoration Plan Version 1 Volume I"; 2016. USACE & PANYNJ in partnership with HEP available at www.nan.usace.army.mil/Portals/37/docs/harbor/Final%20CRP_2016-06-27_v1.0.pdf?ver=2016-06-29-170128-157

GUIDING FRAMEWORK

The following qualities were used to determine if a funding stream was appropriate for investigation:

- **Existing**: the source may be already authorized or appropriated in New York or New Jersey for similar purposes
- **Comparable:** the source is utilized by other National Estuary Programs or comparable conservation and management efforts
- **Appropriate:** the cost could be borne by those entities which benefit from the Estuary, in a manner proportionate to those benefits, or to the entities' impact on the quality and quantity of ecological services and amenities identified as central to HEP goals. The opportunities should promote decisions that are environmentally and economically sustainable and should discourage harmful behavior or actions that will negatively impact the Estuary.

CRITERIA

The research reviews a range of revenue options and gauges their potential based on the following criteria:

1. **Nexus and Basis for Action:** relevance to HEP priorities, and accounts for the benefits derived from the Estuary and/or impact of the activity on the state's resource
2. **Precedent:** this criterion examines deployment and possible past success in other cities, regions, and estuaries in the U.S. and Canada.
3. **Potential:** an initial look at funding significance such as, among other things, whether the source is a one-time grant or a more consistent source of revenue. Where possible, funding estimations are made to illustrate financial potential as it relates to HEP and the Estuary.
4. **Feasibility:** this criterion evaluates whether the proposal involves a short or long-term effort, legal constraints, and possible institutional or political challenges.
5. **Comments:** additional considerations pertinent to the option.

POTENTIAL FUNDING OPPORTUNITIES 1

New or Expanded Public Revenue Sources

User Fee for Industrial, Energy, or other Commercial Surface Water Withdrawal

Nexus and Basis for Action: Surface water withdrawal for use as cooling water in power plants and commercial buildings and other withdrawals such as for recreational use (golf courses), resource extraction (mining companies), and agriculture are direct uses of the natural resources of the Harbor Estuary. Use of this resource diminishes its use and availability for other purposes and has direct impacts on the ecosystem including the entrainment of fish eggs and impingement of fish and larvae at intakes.

A user fee or registration fee for large-scale use of surface water could be implemented in New York State. Currently, the New York State Department of Environmental Conservation (DEC) does not impose any fees or surcharges for surface water withdrawals although permits are required for withdrawers of 100,000 or more gallons per day.[1] New Jersey has an existing fee structure in place for similar large scale water withdrawals of greater than 100,000.[2] These funds are deposited in the state's Environmental Services Fund from which the legislature annually appropriates an amount to support the budgeted cost of the state's water management programs.[3]

Funds collected for withdrawals within the Harbor Estuary and its tributaries could be dedicated to HEP priorities through existing state mechanisms, such as the Environmental Protection Fund.

Precedent: Some other states have a registration fee for water withdrawal permits such as Wisconsin, where proceeds from collected fees are used to improve databases on water resources, conservation research, management, and mapping.[4] Most often, a fee of between one to eight dollars per one million gallons of water consumed a year is imposed on a sliding scale where heavier users are charged more. States generally cap the maximum fee charged. In Wisconsin, the cap is set at $9,500. In Minnesota, it is up to $250,000 for municipalities withdrawing large quantities for drinking water. In most states, agricultural withdrawers are exempt from surcharges for gallons used, but may have to pay a small annual fee. Iowa's withdrawal fee scheme was designed to raise $500,000 per year.[5]

Potential: This proposal could be realized as a user fee on volume surface water withdrawn from the Estuary which is used for industrial, energy or other commercial purpose, or as an application fee when entities are applying for a withdrawal permit from the NYS, as is currently done in NJ. If New York State were to impose a surface withdrawal fee with the highest users capped at $25,000 and all others charged at five dollars per million gallons a year, it is estimated that approximately $600,000 could be raised per year based on the number of surface water withdrawers in counties encompassing the Estuary.

Feasibility: Implementing a user fee on large scale water withdrawers will require legislative action at the state level. It would likely raise concerns in the power industry and with other commercial users. However, such an approach is consistent with recent efforts to price water appropriately. Pursuing the necessary regulatory changes in NY would require a significant effort to engage government officials, industry and the public.

Comments: An additional fee for water withdrawal may make adoption of alternative technologies and water conservation more cost competitive.

1 More information is available at hudsonvalleyregionalcouncil.org/wp-content/uploads/2015/11/Regulating-Water-Withdrawal-in-NY-s.pdf and codes.findlaw.com/ny/environmental-conservation-law/env-sect-15-1503.html
2 For NJ fee structure, see page 37 of 94 at: www.nj.gov/dep/rules/rules/njac7_19.pdf. For Overview of water withdrawals in NJ see: www.state.nj.us/dep/njgs/enviroed/infocirc/withdrawals2009.pdf
3 See: NJSA 58.2-3 found at: www.nj.gov/dep/watersupply/pdf/statut_58.2-1.pdf
4 Section 281.346 (12)(c), created in 2009 Wisconsin Act 28 and Section 281.346 (12). More information is available at dnr.wi.gov/about/nrb/2010/August/08-10-3A2.pdf
5 More information on Great Lakes Basin water withdrawal fees for neighboring states is available at dnr.wi.gov/about/nrb/2010/August/08-10-3A2.pdf

Stormwater Fee Based on Impervious Surface Area or Discharge

Nexus and Basis for Action: Stormwater generated from impermeable surfaces such as roofs, sidewalks, roads and parking lots carry pathogens, nutrients, trash, and other pollutants into local waterbodies. Street runoff can cause erosion, damage habitat, property, and infrastructure. Stormwater that is managed in a combined sewer system is routed to a sewage treatment plant, using the plant's capacity. Importantly, this cost is not accounted for in the billing regime for water and sewerage services, and land owners with large impervious surfaces are not contributing for their costs to the system. Moreover, even modest rain storms can result in overflow events, discharging raw sewage into the Estuary.

Municipalities are required to manage their stormwater through MS4 Permit requirements (for areas with separate stormwater systems) or Long Term Control Plans (for areas with combined sewer systems). EPA and the state regulators encourage the use of green infrastructure, such as green roofs, permeable pavement, rain gardens, and other nature-based features to reduce stormwater and/or retain flow.

A stormwater user fee, imposed by a municipality or through a regional wastewater utility, is paid by landowners based on their lots' impermeable surfaces, such as rooftops, walkways, patios, driveways, parking lots or other surfaces which similarly impede natural infiltration of precipitation. Imposing a fee would serve the dual purposes of generating revenue that could be reinvested in municipal or utility stormwater management projects whiles incentivizing the "greening" of these impervious surfaces. It would provide fairness in utility rate structures by pricing in the runoff from parking lots and other areas that adds to sewage treatment costs but are not charged under water and sewer rates. Such programs can also be a vehicle for encouraging private sector participation in the financing and implementation of stormwater management systems. The fee structure could include a credit program to encourage landowners to increase permeability on their property. An in–lieu fee program can help address the needs of landowners in areas where on site management is difficult.

Precedent: Many cities have introduced user fee mechanisms to address this issue, including Philadelphia and Salt Lake City, where charges are based on parcel size, use, and amount of impervious cover.[1,2] Seattle has also adopted a stormwater management fee that charges property owners based on their estimated impact on the city's drainage system. In 2012, the Maryland State Legislature passed a law mandating the ten largest jurisdictions in the state create a Stormwater Remediation Fee by July 1, 2013.[3]

In 2012, NYC DEP promulgated a stormwater performance standard along with "Guidelines for the Design and Construction of Stormwater Management Systems".[4] While there is no citywide stormwater user fee that has been established, NYC DEP initiated a stormwater parking lot pilot project, under which "stand-alone" parking lots that did not already pay water or sewer fees were required to pay $0.063 per square foot, to offset the cost of transportation and treatment of stormwater from the parking lot site. While the program has generated over $500,000 in fees from 557 parking lots in 2014, none of the participating parking lot owners have installed stormwater capture infrastructure to avoid paying the fee.[5] It is believed that the fee may be too low to induce capital investment in such infrastructure.

The New Jersey legislature passed legislation to authorize municipalities holding a combined sewer system general permit to establish a designated stormwater utility for the purpose of creating a stormwater management system and charge a fee but was not supported by the Governor's office.[6] In 2015, the City Council of Newark adopted an new zoning ordinance, "Newark Zoning and Land Use Regulations" (NZLUR) which, among other things, established stringent design requirements for stormwater management.[7] However, such requirements apply to new development projects and not to existing stormwater management challenges within the City. **Potential:** In Baltimore County, the stormwater fee in fiscal year 2014 raised $24.7 million[8] The highest residential rate in Baltimore County is $26 per year. The individual residential stormwater fee in Philadelphia is approximately $168 per year[9] while non-residential properties are charged based on the gross area of the property (at $.63/500 sf) and the impervious area of the property (at $4.91/500sf).

There are about two million individual water/sewer accounts in the entire HEP region. Applying an average of Baltimore and Philadelphia annual fees would generate about $200 million annually from stormwater user fees to support management of storm and wastewater infrastructure improvements in the region.

Feasibility: As federal and state regulatory agencies impose greater permit requirements on stormwater management and discharge, greater responsibilities and attendant costs will fall upon local municipalities to enhance and maintain stormwater systems and expand the use of green infrastructure. Capacity limits and the need to finance maintenance on existing wastewater treatment system assets will also affect water rates. User fees for stormwater collection and discharge based on appropriate metrics (impervious surface area, flow rate) offer an appropriate and equitable approach to offsetting these costs and encouraging better practices.

Comments: As with any user fee, rate payer confidence will be increased if the funds are kept in separate accounts for the express purpose of storm and/or wastewater management and not co-mingled with other municipal funds or diverted to other purposes.

1 See: www.slcgov.com/utilities/public-utilities-billing
2 See: "User-Fee-Funded Stormwater Programs"; 2013. Water Environment Federation, Alexandria, VA -ISBN 978-1-57278-277-8 (www.wef.org)
3 More information on Maryland's stormwater fees is available at www.abell.org/sites/default/files/publications/env-stormwater614.pdf and an in depth document entitled "Baltimore County, 200 Miles of Waterfront (2014) that has more information on their proposed restoration projects can be downloaded at www.baltimorecountymd.gov/Agencies/budfin/customerservice/taxpayerservices/stormwaterfee.html
4 See: www.nyc.gov/dep/html/stormwater/stormwater_management_construction.shtml
5 NYC DEP, NYC Green Infrastructure 2014 Annual Report at www.nyc.gov/html/dep/pdf/green_infrastructure/gi_annual_report_2015.pdf See also Mandy DeRoche, A Stormwater Fee, With Strong And Equitable Credits For Green Infrastructure, Could Benefit New York City As A Whole And Environmental Justice Communities Such As The South Bronx, Environmental Law In New York, Vol 25, No 1 Jan 2014 at www.prattpspd.org/wp-content/uploads/2014/02/ELNY-jan-2014-2.pdf .
6 Worstell, Carolyn. Green Infrastructure in the State of New Jersey: Statutory and Regulatory Barriers to Green Infrastructure Implementation. Rep. N.p.: New Jersey Future, 2013.
7 See: Chapter 17of NZLUR found at: planning.ci.newark.nj.us/nzlur-contents/
8 See: resources.baltimorecountymd.gov/Documents/Budget/fy14swmreport150116.pdf
9 See: www.phila.gov/water/PDF/RatesCharges_effective_7-1-2016.pdf

Industrial and Other Permitted Wastewater Discharge User Fees

Nexus and Basis for Action: The federal Clean Water Act authorizes the delegation of regulating point source discharges to the states, giving rise to the State Pollutant Discharge Elimination System (SPDES) programs in New York and New Jersey[10] Discharges of pollutants are permitted within certain federally defined limits. These industrial and commercial dischargers are adding pollutants to HEP waters even when discharging within permit limits. This is an externalized environmental cost which should be borne by permit holders. A surcharge based on pollutant load could be implemented to generate revenue for water quality improvements and asset management; encourage water conservation and better treatment prior to discharge; and spur the development of "Water Quality Trading" consistent with EPA Policy.[11]

Precedent: There is no precedent for this approach in the US. In Sweden, this approach has been proposed for reducing discharges of Nitrogen and Phosphorus to the Baltic Sea.[12]

Potential: This approach to raising revenue has great potential given the number of individual industrial permit holders in the HEP region. For illustration, a quick search using EPA's online Permit Compliance System (PCS)/Integrated Compliance Information System (ICIS)[13] yielded 3,194 individual permit holders for the "Hudson Estuary" (both NY and NJ) south of the Tappan Zee Bridge. This approach would require selecting a contaminant/parameter of concern which is commonly monitored and determining an appropriate fee per unit of loading.

Feasibility: This approach would likely encounter significant hurdles in that additional authority to collect this fee by state agencies would require state legislation. An advisory opinion would be needed to determine whether authority exists under the federal CWA to collect such a fee.

Comments: The additional costs to be borne by individual permit holders may provide impetus to reduce pollutant loadings and/or incentivize a "water quality trading system" as described in EPA's policy guidance.

10 See: www3.epa.gov/enviro/index.html
11 In 2003, EPA developed a policy re point and non-point discharges to a facilitate a credit trading system with the goals of reducing pollutant loading to the waters of the United States in a more cost -effective way. See: www.epa.gov/npdes/water-quality-trading
12 "Proposal for a Permit Fee System for Nitrogen and Phosphorus"; 2009: Swedish Environmental Protection Agency Report Number 5968. See: www.naturvardsverket.se/Documents/publikationer/978-91-620-5968-2.pdf
13 See: www3.epa.gov/enviro/index.html

Aviation Impact User Fee

Nexus and Basis for Action: The airports are a major economic engine in our region. In 2013[1] the region's major airports contributed approximately $75 billion in economic activity and directly employed approximately 70,000 people. Aircraft safety is critical to human life and is a paramount consideration in this vital industry. However, the ecological impact of airport operations extends far beyond their physical borders and the costs to the estuarine environment are not being borne by the industry or the airport operators. The airports themselves were constructed primarily on wetlands and shallow waters on the Harbor Estuary. A user fee to capture these ecological costs in the form of a surcharge on the flight fee charged by the local airport operator—the Port Authority of New York & New Jersey—would help to advance HEP goals and restore estuarine ecology in a manner consistent with airport's Wildlife Hazard Management Plans.

The aviation industry is a major source of greenhouse gases throughout the world and is the subject of a recent final determination by the US EPA,[2] in light of the industry's significant role in global warming and climate change. Climate change and sea level rise have direct impacts on the Estuary.

Additionally, air emissions arising from activity at the four major airports in the HEP region (Newark Liberty, John F. Kennedy, LaGuardia and Teterboro) are a significant source of particulates that settle as dust or fall to the earth in rain and snow. Minor (but frequent) ramp spills occur during fueling operations and can be carried to adjacent waterbodies in stormwater runoff. Airport runoff is not treated by POTW's and is discharged to local waters in accordance with individual SPDES permit requirements. These pollutants are deposited directly into HEP waters or are washed into surface waters from land, affecting water quality, flora and fauna.

Wildlife Hazard Management Plans[3] are required by FAA as part of its commercial airport certification process and their requirements discourage certain activities within the "Air Operations Area" (AOA), a five mile radius around each airport which constrains the restoration and use of potential habitat within the Estuary. Taken together, this "ecological footprint" defined by each airport's AOA is approximately 313 sq. miles which, for comparison purposes, exceeds the land mass of the five boroughs comprising New York City (305 sq. miles). Wildlife Hazard Management Plans authorize the removal of birds which pose a hazard to aircraft safety. It is estimated that between 2009 and 2013 approximately 26,000 birds were shot at the area's airports.

Precedent: There is no known precedent for this proposal. However, many other airport operating costs and administrative fees comprise the "flight fee" which is charged to carriers for each aircraft movement. There are some parallels to the Port Authority's Noise-Proofing Program, which tacitly acknowledges aviation impacts beyond the borders of the airports into neighboring communities.[4] However, the noise-proofing program is contingent upon federal funding at the 90% level.

Potential: There are approximately 1.4 million aircraft movements annually at the region's airports. A $1 surcharge would generate approximately $1.4 million annually to advance HEP goals and restore the Estuary.

Feasibility: Such a fee conceivably could be enacted by a vote of the Board of Commissioners of the Port Authority of New York & New Jersey. This action may raise concerns about "mission creep" of the Port Authority. Alternatively, federal and/or state legislation would be required. In either case, enactment of the fee would be challenging given lack of precedent and other demands on Port Authority revenue.

Comments: As an alternative, voluntary contributions by the airlines and/or by individual travelers to offset their historic and ongoing impacts could go into a dedicated fund to offset regional airport impacts by advancing HEP goals and restoring the Estuary consistent with Wildlife Hazard Management Plans.

1 See: www.panynj.gov/airports/pdf-traffic/ATR2013.pdf
2 See: "Finding that Greenhouse Gas Emissions From Aircraft Cause Or Contribute To Air Pollution That May Reasonably Be Anticipated To Endanger Public Health And Welfare" ; Federal Register: August 15, 2016. Vol 81, No.157, pages 54422 to 54475. For an overview, see: www3.epa.gov/otaq/aviation.htm
3 as per FAA AC-150/5200-33B. Details on the FAA advisory on wildlife on or near airports can be downloaded from www.faa.gov/airports/resources/advisory_circulars/index.cfm/go/document.current/documentNumber/150_5200-33
4 See: www.panynj.gov/press-room/press-item.cfm?headLine_id=285

Petroleum Facility Host Estuary User Fee

Nexus and Basis for Action: The Port of NY and NJ is an "energy transfer port" within the meaning of Sec 2106 (a) (2) of the Water Resources Reform and Development Act of 2014, with petroleum transferred by a system of tanks, barges, trucks and pipelines.[5] Since 2011, the permitted volume of crude transport on the Hudson River has grown to as high as 2.8 billion gallons per year.[6] In particular, train transport of crude oil has increased six-fold since 2011.

Shipments are largely regulated under federal statutes. Various federal agencies regulate the movement and storage of petroleum and petroleum derivatives by rail, barge, and pipeline. Additionally, the industry pays a $.08 per-barrel excise tax, collected on petroleum produced in or imported to the United States to fund the Oil Spill Liability Trust Fund[7] (they also pay the Harbor Maintenance Tax imposed on all shipping operations). However, states can also play a role, and in 2014, Governor Andrew Cuomo enacted Executive Order 125 directing various State agencies to provide greater oversight of shipments of petroleum.[8]

Despite the safety requirements and the protocols imposed, accidents can and do occur. The physical presence of large tank farms, refineries, and associated pipelines traversing wetlands and submerged throughout the Estuary detract from its overall quality.[9] Investments in conservation and restoration efforts can be undone by the occurrence of oil spills due to accidents, storms, and terrorist acts at petroleum facilities..[10] Moreover, many petroleum facilities are proximate to HEP waters to facilitate waterborne movement, or to isolate facilities from people and residences. These activities limit access and use of this public resource. The imposition of a "host community fee" to offset the externalized costs of petroleum- related activities to the Estuary and advance access and restoration is appropriate.

Precedent: A bill has been repeatedly introduced in the NJ Assembly to authorize municipalities to impose a host community impact fee on petroleum facilities.[11] Although this bill has not yet passed into law, it provides a recognition of the unique burden of such facilities. Various host community fees have been authorized by statute in assorted jurisdictions covering facilities ranging from solid waste disposal facilities[12] to gambling casinos.[13] However, there is no known precedent for an "estuarine host fee".

Potential: Based on a surcharge of $0.01 per barrel as a "host fee", approximately $3.6 million in each state could be raised for all facilities throughout each state. Assuming that a quarter of the major petroleum facilities in each state are within the HEP geographic area, a reasonable estimate for revenue arising from a host surcharge to support HEP goals would be $1.7 million annually.

Feasibility: It would likely be challenging to pass state legislation seeking to place a user fee on the petroleum industry in NY and NJ. However, both NY and NJ have fees in place on major petroleum facilities (defined as 200,000 gallons in NJ) based on their throughput. In NJ, the fee supports the Spill Compensation and Clean Up Fund authorized by the NJ Spill Compensation and Control Act[14] and is at a rate of $0.023 per barrel of throughput. The estimated annual revenue into the fund from all sources is approximately $8.5 million. In New York, there is a fee charged to "Major Oil Storage Facilities" (exceeding 400,000 gallons) of $0.125 per barrel with annual revenues of approximately $45 million.[15]

Comments: It would be important to assure that any revenue generated would be held separately and not swept into the states' general fund.

5 Defines "energy transfer port" as: a port 1. that is subject to the Harbor Maintenance fee; 2. at which energy commodities comprised 25% of all commercial activity by tonnage in FY 2012; 3. through which 40 million tons of cargo were transported in FY 2012. See: www.gpo.gov/fdsys/pkg/PLAW-113publ121/html/PLAW-113publ121.htm
6 See: www.dailyfreeman.com/general-news/20140405/shipments-of-crude-oil-on-hudson-river-alarm-environmentalists-but-oil-industry-envisions-job-growth
7 See: www.uscg.mil/npfc/About_NPFC/osltf.asp
8 See: www.governor.ny.gov/news/no-125-directing-dec-dot-dhses-doh-and-nyserda-strengthen-states-oversight-shipments-petroleum
9 See: http://codes.lp.findlaw.com/uscode/33/26/lll/1330
10 See: www.nj.gov/dep/enforcement/security/downloads/API%20Security%20Guidance%203rd%20Edition.pdf
11 See: trackbill.com/bill/nj-s619-permits-imposition-of-municipal-host-community-petroleum-bulk-processing-impact-fees-under-certain-circumstances/424406/
12 See: www.epa.ohio.gov/portals/34/document/currentrule/3745-502-04_current.pdf
13 See: www.millbury-ma.org/Public_Documents/MillburyMA_BComm/PB/MGC.pdf
14 See: www.nj.gov/dep/srp/regs/statutes/spill_act.pdf
15 See: osc.state.ny.us/audits/allaudits/093015/14s59.pdf

Boater Registration Fees

Nexus and Basis for Action: Recreational boaters benefit from the ecological amenities afforded by the Estuary. Wake damage to wetlands from power boats, sediment resuspension, and minor fuel spills have cumulative impacts. Recreational boaters' impacts to the Estuary could be offset to some degree by a surcharge on existing boater registration fees. Revenue from a surcharge in the States of New York and New Jersey could result in a dedicated stream of revenue to fund HEP priorities such as investments in wetland management, eelgrass and oyster restoration, and marine pumpout facilities. Recreational boaters, as well as others, would directly benefit from this surcharge.

Precedent: Presently, there is a surcharge on NY boat registrations ranging from $3.75 to 18.75 (depending on vessel size) that supports a Boater Safety Program[1]. In New Jersey, the annual registration fees for recreational boats range from $12 to $250 depending on the length of the craft. A portion of the New Jersey boat registration fee has been allocated to support the "I BOAT NJ"[2] program which was meant to enhance boating amenities in the state. According to published reports, this revenue has been redirected to funding other budgetary items in recent years.[3]

In the state of Oregon, there is a $5.00 surcharge placed on boat registration in support of an invasive species prevention program.[4]

Potential: In 2015, there were 446,582 registered vessels in New York. For the counties along the Hudson in New York State, there were 63,000.[5] In 2015, 151,450 boats[6] were registered throughout the New Jersey. Assuming that the same proportion of boat registrations that fall within HEP in NYS applies to NJ, (approx. 15%), it is anticipated that approximately 23,000 NJ registered boats fall within HEP waters. If a $5.00 annual surcharge were applied to registration fees in HEP waters for both states, approximately $430,000 could be raised annually.

Feasibility: Imposing a mandatory surcharge on boat licenses in New York State and New Jersey would likely require action by the two state legislatures. Any political support by recreational boaters and others may depend on the degree to which revenue was dedicated to initiatives that supported their activities such as water quality improvements, fisheries management, and maintenance of boating access.

Comments: As an alternative, existing programs in NY (boater safety) and NJ (I BOAT NJ) may be able to be more broadly defined and/or dedicated to include the broader environmental purposes embodied in HEP goals.

1 See: dmv.ny.gov/registration/register-boat/
2 See: www.state.nj.us/dep/fgw/pdf/boat_resource_guide.pdf
3 See: nynjbaykeeper.org/pumpout/
4 See: www.dfw.state.or.us/conservationstrategy/invasive_species/quagga_zebra_mussel.asp
5 See: nysparks.com/recreation/boating/documents/RecreationalBoatingReport.pdf
6 See: www.uscgboating.org/library/accident-statistics/Recreational-Boating-Statistics-2015.pdf

Tax Assessment Districts

Nexus and Basis for Action: Private residences and businesses located on estuarine waterfronts benefit from the beauty and the amenities the ecosystem provides, often to the exclusion of others. The value of their property is strongly connected to their location and maintaining the quality of that environmental setting. Homes and other structures can contribute to and/or be affected by poor water quality caused by sewage, floatables and stormwater runoff, noise and air pollution, flooding and sea level rise, and habitat loss and degradation.

Special Assessment Districts (or SADs)[7] provide a mechanism by which local improvements can be funded. These are generally surcharges on property taxes collected by the municipality or special authority. They can be for improvements that property owners vote to fund and support including small capital improvement projects as well as maintenance of common property.

A Business Improvement District (BID) is a public/private partnership in which property and business owners elect to make a collective contribution to the maintenance, development, and promotion of their commercial district. BIDs have greater emphasis on operating programs, such as sanitation, beautification, business promotion, public safety and hospitality but they can also include capital programs.[8] A TIF District is a defined area wherein a project funded through Tax Increment Financing (TIF)[9] by state or local government will provide benefits to the district to such an extent that local real estate values will increase and the future higher real estate taxes to be paid in the district (i.e., the increment) will be used to finance the capital improvement.

Tax Assessment Districts could be created along the waterfront to address estuarine issues of particular significance to the local constituency. Many would likely be congruent with HEP goals such as management of public access, habitat restoration, and resiliency to sea level rise and increased risk of flooding.

Precedent: The creation of SADs and BIDs is fairly defined in law and in practice. In general for special assessments to be defendable, two requirements must be met:

1. The improvement funded by the special assessment must confer a special benefit upon the assessed properties beyond that provided to the community as a whole.
2. The amount of the special assessment must be reasonably proportionate to the benefits derived from the improvement.

The creation of BIDs in New York City is governed by specific procedures administered by the Department of Small Business Services.[10] Currently there are 70 authorized BIDs in New York City focused largely on sanitation and maintenance, marketing, and public safety. The assessment is billed and collected by the City of New York and then disbursed to the District Management Association. Each BID is governed by a Board of Directors that is elected by the members of the district. Revenues vary widely among participating districts. The average budget for BIDs in Manhattan is $3.3 million, while the average in Brooklyn is $439,000.[11] In New Jersey, there have been 90 BIDs formed since enabling legislation was enacted in 1984.[12]

Several waterfront parks, including Battery Park City Parks, Brooklyn Bridge Park, Hudson River Park, Riverside Park South, and privately-owned public spaces such as the Hudson River Waterfront Walkway in New Jersey and esplanades in New York City created under the City's waterfront zoning statute rely on lease payments to finance all or a portion of their maintenance. The costs of these annual lease payments are in turn passed along to condominium associations and/or residential and commercial tenants, in effect, creating special waterfront assessment districts.[13]

Michigan's Lake Board Law[14] has been in effect for over 40 years and offers an interesting precedent in that Special Assessment

7 See: financial-dictionary.thefreedictionary.com/special+assessment+district See, also: en.wikipedia.org/wiki/Special_assessment_tax
8 See: www.nyc.gov/html/sbs/html/neighborhood_development/bids.shtml
9 See: www.ibo.nyc.ny.us/iboreports/TIF-Sept2002.pdf
10 See: www.nyc.gov/html/sbs/html/neighborhood_development/bids.shtml
11 See: citylimits.org/2014/02/18/outer-borough-bids-struggle-with-low-budgets-little-impact
12 See: www.state.nj.us/dca/divisions/dhcr/faq/idp_faq.html#5
13 See "On the Verge: Caring for New York City's Emerging Waterfront Parks and Public Spaces", Regional Plan Association, 2007.
14 See: www.lakeproinc.com/resource-center/tools/lake-boards-sad-special-assessment-districts/
See: legislature.mi.gov/doc.aspx?mcl-451-1994-III-1-INLAND-WATERS-309

Districts have been created around individual lakes to make various improvements that benefit the District's constituents. These include benefits that result from the elimination of pollution, the elimination of flood damage, elimination of water conditions that jeopardize the public health or safety; increase the value or use of lands and property arising from improving a lake for conservation of fish and wildlife, improvement of lake for fishing, wildlife, boating, swimming, or any other recreational, agricultural, or conservation uses.

The San Francisco Bay Restoration Authority recently established a $12 annual parcel tax on all parcels in counties bordering the Bay through a successful public referendum. See page 19 for more details.

Potential: In 2006, the average property in a BID in New York City paid about $6 per $1,000 of assessed value.[15] While property values vary widely across the Estuary, and would have to take into account ability to pay, public property and other exempt areas, an estuary wide assessment would generate tens of millions of dollars.

Feasibility: The concept of new waterfront development paying for the maintenance of adjoining parkland or privately owned public space is well established in the Estuary. These payments are most feasible in neighborhoods with new construction, a high percentage of owner-occupied housing, and a financial ability to pay. The likelihood of creating a SAD benefits from having a local authority able to utilize the funds, and a clear connection between payment and public space maintenance.

Comments: An assessment district to address restoration and/or coastal adaptation, as was done in San Francisco Bay, may also gain currency as the costs of inaction on anticipated sea level rise and increased risk of coastal flooding become more apparent.

15 See: www.ntanet.org/wp-content/uploads/proceedings/2006/054-schwartz-what-do-business-2006-nta-proceedings.pdf

Case Study:

Parcel Tax in the San Francisco Bay Area

In 2008, the California Legislature established the San Francisco Bay Restoration Authority. This new Authority streamlined the shared goals among various agencies, non-profit organizations, and other stakeholders, transcending municipal borders and presenting a unified voice for protecting the Bay as a whole. The Authority was charged with generating funding and overseeing restoration projects in the Bay, with the goal of creating 100,000 acres of tidal wetlands, among other improvements. To finance this ag enda, the Authority proposed a $12 annual parcel tax on all parcels in counties bordering the Bay. The amount of the parcel tax is not directly related to the cost or service that the projects will provide to each parcel. This dedicated fund cannot be allocated for any other purposes other than projects and programs that support the Bay Restoration Plan.[1]

A referendum was placed on the ballot and voted on in June, 2016 by the citizens of the nine counties comprising the San Francisco Bay Area. The measure passed with 69 percent of voter support.[2] The referendum required a two thirds majority of voters for approval.

The nine-county approach assures the Authority with a stable, long-term funding source. Grants from the $25 million raised annually will begin to be distributed in 2018. Supporters hope the large revenue stream will attract additional state and federal matching funds which could potentially triple the available pool of funds for restoration work in the Bay Area. The Authority will "sunset" in 2028, and the parcel tax expires in 2037, but will have generated $500 million in revenue.

The campaign took eight years and cost approximately five million dollars. It brought together a broad coalition of local, state, and federal elected officials, community leaders, NGOs, and business groups. The campaign emphasized climate resilience, citing the $60 billion in homes, businesses, and crucial infrastructure in the region at risk. Interestingly, and despite the climate resilience focus, communities polled in advance of the vote expressed a strong interest in projects related to water quality, fish and wildlife.

1 See: Draft Expenditure Plan at: bayplanningcoalition.org/wp-content/uploads/2014/01/SFBRA-Draft-Expenditure-Plan-11-26-13.pdf
2 See: sfgov.org/elections/sites/default/files/Documents/candidates/SF%20Bay%20Clean%20Water.pdf

Voluntary Contributions

Sightseeing Vessels/Ferry Passengers

Nexus and Basis for Action: Ticket sales for sightseeing vessels and ferries can be affected by the quality of the estuarine environment. Sightseeing vessels and ferries have the potential to directly impact the Estuary by wakes, air pollution, and discharge of petroleum. Points of embarkation/debarkation compete for space with other public uses, impact fish and wildlife, and can be a location for litter which is blown into waterways.

Visitors to the region appreciate their sightseeing experiences and may wish to express their gratitude through small donations to support the health of the Estuary and access to the waters. This may likewise be said of ferry commuters. Even the act of requesting a donation makes visitors and commuters mindful of the continual need to support HEP goals. Working with the industry, ticket sales could provide the opportunity for tourists/ferry users to make a donation in support of the Harbor. Donations could be at point of sale or by kiosks/depositories on board vessels. Donations would be processed by a 501(c)(3) organization dedicated to this purpose to make them tax exempt and tax deductible for the donors.

Precedent: Many park conservancies solicit donations from patrons who often use facilities free of charge. Ticket sales at other public attractions such as botanical gardens, museums, zoos and aquariums often provide information regarding donations to conservancies in support of these public attractions.

Potential: There are a number of sightseeing tour operators and ferry operators[1] within the Harbor. It is estimated that there is approximately 38 million annual ferry trips in the harbor with the Staten Island Ferry,[2] NY Waterway,[3] and the operating Citywide Ferry System[4] accounting for most of these. It is estimated that there is approximately 6 million sightseeing trips annually in the Harbor with the Statue Cruises[5] and Circle Line Cruises[6] accounting for the vast majority of them. If 5% of ferry and sightseeing rides generated a $1.00 donation, approximately $2.2 million could be raised on an annual basis to support HEP goals and initiatives.

Feasibility: The support and cooperation of the ferry and tour boat operators would be critical to the success of this scheme in terms of marketing and the processing of donations at point of sale transactions. These stakeholders share common interests and concerns with regard to the Estuary and its management, including a desire to grow public access to the Estuary and improve its maintenance and management. It is important to note that people traveling to local parks and National Monuments are also solicited for donations for the upkeep of those public spaces.

1 See: www.panynj.gov/commuting-traveling/ferry-transportation.html
2 See: www.nyc.gov/html/dot/html/ferrybus/staten-island-ferry.shtml
3 See: en.wikipedia.org/wiki/NY_Waterway
4 See: www.nytimes.com/2016/06/16/nyregion/new-york-city-ferry-service.html?_r=0
5 See: comptroller.nyc.gov/wp-content/uploads/documents/FM12_122A.pdf
6 See: mashable.com/2015/06/09/circle-line-new-york/#We5zhcvDOkq4

Specialty License Plates

Nexus and Basis for Action: Specialty license plates revenue programs have been used by national estuary programs and other wildlife management programs in New York, New Jersey and elsewhere.

Precedent: In Connecticut, a specialty "Save the Sound" plate has been in existence since 1993 and has generated approximately $8.5 million to date. Of the $50 purchase price, $ 35 goes to a dedicated fund for projects to protect and preserve the Long Island Sound. However, sales have been on the decline since 1998 when 10,494 plates were purchased to 2,469 in 2014.[1] This may be due, in part, to a "sweep" of this fund to the state's general fund[2] that occurred in 2009 due to a budget shortfall, thereby bringing into question its effectiveness regarding preservation of the Sound. In New Jersey, $40 of the "Conserve Wildlife" license plate's $50 fee goes to the State's Endangered and Nongame Species Fund. It competes with 15 other specialty plates, five of which are dedicated to wildlife and environmentally related causes, including the Meadowlands Trust. In New York a number of specialty plates already exist including those for environmental causes such as "Conserve Open Space" and "Marine and Coastal District".[3] An additional annual fee of $25 is charged for the plates with the revenue going to the state's Environmental Protection Fund.[4] Florida created a specialty license plate for the Indian River Lagoon National Estuary Program the dedicated fund for which receives $15 for each specialty plate sold, raising roughly $400,000 a year.[5] Revenue from specialty plate programs is used directly for education and restoration, not for administrative or operational needs.

Potential: A detailed fiscal note of costs and benefits was provided to the NJ State Legislature for a proposed 2005 specialty plate offering and gives some insight into cost and projected revenue.[6] The note provides general guidance that approximately $50,000 in annual net revenue can be anticipated from the issuance of specialty plates for a particular fund with a net loss of approximately $25,000 in the first year due to start-up costs.

While there is no data available for the revenue generated by the sales of specialty plates in support of the Environmental Protection Fund, an audit was conducted by the NYS Comptroller's Office on specialty plates in support of human health causes such as diabetes and autism.[7] Among other things, the audit showed average annual revenue inclusive of all four specialty plates at approximately $110,000 over approximately 12 years.

Feasibility: Since similar programs already exist in New York and New Jersey it seems li kely that additional specialty plates could be initiated for HEP. However, existing specialty plate offerings in both states are already serving environmental purposes which are congruent with HEP goals. Competition with existing programs may not expand total revenue to environmental causes.

Comments: Part of the value of the specialty plate programs is to raise awareness and educate the public on the importance of particular issues. However, rather than initiating a new plate for HEP, it may be more effective to have HEP recognized as a legitimate and worthy recipient of these funds by the state entities which disburse the funds for existing environmental programs. In turn, HEP and its members could advocate for sales of these specialty plates to help boost sales and revenue.

1 See: www.greenwichtime.com/local/article/Save-the-Sound-plates-sales-on-the-wane-9229252.php
2 See: www.ctpost.com/news/article/Sound-plate-program-raided-38579.php
3 See: dmv.ny.gov/custom-plates/bluebird-plate-environmental
4 See Article 14 of NYS Vehicle and Traffic Law; Secs 404-n and 404-t found at: ypdcrime.com/vtl.php
5 See: www.epa.gov/nep/sustainable-financing-examples-national-estuary-program
6 See: www.njleg.state.nj.us/20042005/A0500/244_F1.HTM (Note that this is a "file transfer protocol"(ftp) url and while it is not password protected, manual entry may be required.)
7 See: www.osc.state.ny.us/audits/allaudits/093016/15s72.pdf

State Income Tax Checkoff

Nexus and Basis for Action: State income tax "checkoff" programs have been used in many states, including New York and New Jersey, to garner voluntary contributions for worthy causes. Typically, contributions can be made whether or not a refund is due the taxpayer. When a refund is due, the refund amount is diminished by the contribution. When tax is due the contribution is added to the tax due. The contribution is a tax deductible charitable donation in the subsequent tax year.

Precedent: Both New York and New Jersey have existing tax checkoff programs that benefit state natural resources. In New Jersey, the checkoff[1] is in support of New Jersey's Endangered Wildlife Fund which supports NJ DEP's Endangered and Non-Game Species Program together with the specialty license plates described above. New York has the "Return a Gift to Wildlife" checkoff[2] which supports the "New York Natural Heritage Program" and "Project Wild".

Potential: In 2011, New Jersey's Endangered and Non-Game Species Program received approximately $292,000 from the combined receipts of the specialty license plate offering and the income tax checkoff for New Jersey's Endangered Wildlife Fund.[3] In New York, the "Return a Gift to Wildlife" checkoff generates approximately $450,000 annually. As with specialty license plates there already exists many checkoff categories for worthy causes other than natural resources in addition to the existing checkoffs for wildlife and endangered species. It seems probable that a special check-off for the Harbor Estuary Program could be pursued. However, it seems likely that an additional checkoff may not increase the overall level of funding from this source for natural resource causes on a dollar for dollar basis.

Feasibility: A special checkoff for the Harbor Estuary Program would require state legislation for programs in New York and New Jersey.

Comments: Part of the value of the tax checkoff programs is to raise awareness and educate the public on the importance of particular issues, in this case, HEP goals. However, rather than initiating a new checkoff for HEP, it may be more effective to have HEP recognized as a legitimate and worthy recipient of existing checkoff funds by the state entities which disburse the funds for existing environmental programs. In turn, HEP and its members could advocate for the checkoff programs that exist to help boost taxpayer participation.

1 See: www.njfishandwildlife.com/ensp/checkoff.htm
2 See: www.dec.ny.gov/animals/327.html
3 See: www.nj.gov/dep/newsrel/2011/11_0029.htm

Other Means of Securing Funding

Permit Violations and Enforcement—Environmental Benefit Projects or Supplemental Environmental Projects

Nexus and Basis for Action: The ecology of the Estuary is affected when discharge permits are exceeded, illegal fill is placed, or other federal or state environmental regulations are contravened causing pollutants to enter estuarine waters or otherwise impair habitat or water quality. Federal and state fines and penalties are paid into the general fund(s) of federal and state government.

However, as a matter of policy, EPA,[1] NJ DEP[2] and NYS DEC[3] have allowed respondents to undertake "Supplemental Environmental Projects" (SEPs) or "Environmental Benefit Projects" (EBFs) in lieu of fines and penalties. These SEPs and EBFs often advance the goals of HEP but could be enhanced through better coordination

In particular, payment of smaller fines or penalties results in revenue to the general fund of the federal or state government, not undertaking an EBP/SEP, and is not available to advance HEP goals. In the case of fines or penalties, HEP or some entity acting on behalf of HEP interests could be a recipient of such funds and hold them in trust for the advancement of HEP goals. In this way, fines and penalties could be aggregated to undertake larger projects at a scale that could not otherwise be realized by singular EBP's/SEP's, particularly in the cases of *de minimus* fines and penalties. Damages to the Estuary arising from contraventions of existing law should be ameliorated by projects that benefit the Estuary; the payment of fines and penalties that is treated as general revenue is not benefitting the Estuary.

Precedent: The precedent exists at the federal level and in both NJ and NY for violators to undertake or fund individual SEP's or EBP's or to dedicate the funding from fines to a specific geographic location. For example, the $10 million Lower Passaic River and Tributary Grant program funded by the Passaic River Natural Resource Damage Settlements is providing grant money for construction projects in the Lower Passaic River or tributaries to the Lower Passaic River while the Newark Bay Complex Grant program will fund projects that create or enhance public access and enjoyment to waterfront resources in the Newark Bay Complex.

Potential: It is likely that fines and penalties levied in the HEP region which impact its waters would be on the order of millions of dollars, annually.

Feasibility: It may be that further expansion and re-interpretation of existing administrative policies underpinned by existing statutes could enable this proposal. If enabling legislation were necessary, it is more likely to occur for state fines and penalties rather than federal fines and penalties.

Comments: To advance this concept, HEP and its partners would also need to develop a list of plans/projects/actions by watershed or sub region, to be pre-approved for funding by regulatory agencies. The projects identified by the Hudson Raritan Estuary Comprehensive Restoration Plan and the Restoration Work Group offers an excellent starting point.

1 See: www.epa.gov/sites/production/files/2015-04/documents/sepupdatedpolicy15.pdf
2 See: www.nj.gov/dep/enforcement/seps.html
3 See: www.dec.ny.gov/regulations/64596.html

Wetland Mitigation Banks

Nexus and Basis for Action: Wetlands Mitigation Banks—the conservation of existing wetlands, restoration of degraded wetlands, and/or creation of new wetlands from upland areas to compensate for expected adverse impacts to a similar nearby wetland—hold the potential to advance HEP goals of public access, habitat restoration, and coastal resiliency. While wetland "credits" are used to offset wetlands losses due to development, federal and state permit decisions should be made on a case-by-case basis on the merits of each project and not on the basis of the availability of mitigation credits. Applicants are required to demonstrate that they have avoided and minimized project impacts on wetlands to the maximum extent possible before applications are ripe for consideration. Additionally, regulators have a policy of "no net loss"[1] of wetlands which helps to guide the use of mitigation banks on a case by case basis including the mitigation ratios to be applied. Wetland Mitigation Banks do enable the pooling of small credits for larger more significant sites in a faster and more efficient manner for needed permits.

Precedent: At the federal level, the U.S. Army Corps of Engineers has developed a formal regulatory scheme[2] for wetlands mitigation banks pursuant to its authority under Sec.404 of the CWA.

In New Jersey, approximately 20 mitigation banks are completed or underway.[3] In the Meadowlands area, an interesting example is the Kane Wetland Mitigation Bank,[4] operated by Kane Mitigation LLC. It is located in the Boroughs of Carlstadt and South Hackensack, Bergen County, New Jersey and consists of 237 acres. Private mitigation bank developers have spent approximately $6 million to lease the property from the Meadowlands Conservation Trust and have expended another $25 million in constructing both freshwater and tidal wetlands. The Service Area for the bank includes the Hackensack River and the Lower Passaic River primarily within Bergen and Hudson Counties. These two watersheds surround and encompass the Hackensack Meadowlands District so that projects with a component in the District are included in the Service Area. An important feature is that the bank is set up exclusively for transportation projects of NJ Transit; the Port Authority of New York and New Jersey; the NJ DOT, and NJTA. Projects undertaken by these agencies are typically viewed as "in the public interest" as contrasted with those proposed by private developers.

In New York, mitigation banks for freshwater wetlands have been used in the past[5] but the Saw Mill Creek Wetlands Mitigation Bank[6] on the west shore of Staten Island.[7] is the first instance of a tidal wetlands mitigation bank to be considered in New York.

Saw Mill Creek was subject to deep and severe flooding and inundation during Hurricane Sandy. The need for the proposed project is rooted in three major goals: (1) to provide a targeted investment on behalf of New York City to increase resiliency against storm events, flooding, and the effects of climate change and sea level rise; (2) to restore a significant ecological habitat in the New York Bight watershed; and (3) to streamline the process of mitigating authorized unavoidable impacts to wetlands and aquatic resources within a particular region. The project is 68 acres. It is likely that many City agency projects would benefit from having the certainty of available mitigation credits in the implementation of City projects in the public interest with unavoidable wetlands impacts.

Potential: Wetlands Mitigation Banks that are located and developed in a manner consistent with HEP goals provide an opportunity to offset significant wetland losses that have occurred during industrialization of the region in the 20th Century. The mitigation banks are largely reliant on market forces to make them successful. HEP partners and stakeholders can enhance the effectiveness of mitigation banks in the restoration of the Estuary by advocating for an aggressive threshold mitigation ratio that not only assures "no net loss" of wetlands in the Estuary but a quantifiable net increase.

Feasibility: The financial feasibility of mitigation banks has been established in the HEP region and throughout the U.S. Large tracts of wetlands are viewed as advantageous in terms of functionality, however, siting large tracts in the HEP region may provide unique challenges not found in other parts of the U.S.

1 See: www.epa.gov/cwa-404/compensatory-mitigation
2 See: www.usace.army.mil/Missions/Civil-Works/Regulatory-Program-and-Permits/mitig_info/
3 See: www.nj.gov/dep/landuse/mitigate.html
4 See: meri.njmeadowlands.gov/mesic/sittes/existing-restoration-preservation-mitigation-sites/kane-mitigation-site
5 See: www.eli.org/sites/default/files/docs/core_states/New_York.pd
6 See: www.nan.usace.army.mil/Portals/37/docs/regulatory/publicnotices/2013/Nov%202013/2013-00259%20Public%20Notice%20and%20Prospectus.pdf
7 See: www.nycedc.com/project/marshes-initiative

Environmental Benefit Agreements for Major Regional Projects

Nexus: Major regional projects, such as bridges, tunnels, highways, pipelines and transmission lines will likely have direct impacts on the natural resources of the Estuary. These large scale transportation projects are frequently undertaken by public agencies or authorities; the private sector is dominant with respect to power transmission lines and pipelines.

Given the public and developer interest in efficient project implementation, developers and regulatory agencies will consider a portfolio of environmental benefit projects and initiatives to offset environmental impacts as part of the project scope. HEP goals can be advanced by working with regulatory agencies and public sector project implementers in the development of environmental benefit agreements as part of major regional projects that have the potential to affect HEP waters or limit future opportunities to restore and enhance HEP ecology or inhibit future public uses.

Potential: Given the importance and potential cost savings of expedient implementation of large regional projects, there is a business case to be made to reach early closure on offsetting environmental benefit agreements in order to expedite regulatory review for appropriate projects. Many of these projects are in the multiple billions of dollars. Creating a portfolio of environmental benefit projects in the range of one to three percent of project costs offers a strong value proposition given the real costs attendant to delays in project implementation.

Precedent: A recent example is the reconstruction of the Tappan Zee Bridge and the portfolio of environmental benefit projects that became part of the project scope. The Hudson Riverkeeper,[1] and Scenic Hudson[2] worked in a collaborative fashion with NYS DEC, the Thruway Authority, and others to identify a series of environmental programs to offset the potential impacts of the replacement bridge to the Hudson River in the vicinity of Haverstraw Bay. These include, among other things, bubble curtains to protect aquatic life from harmful effects of construction; a shared use path for pedestrians and bicycles; stormwater treatment at landings; sturgeon monitoring; an oyster relocation program; restoration of Piermont Marsh; and an endangered Peregrine Falcon nest box relocation. The foregoing was memorialized in an MOU[3] in addition to environmental permits issued for the project.

Another noteworthy aspect of this project and is that the estimated total project cost of $5 billion is supported by a $511 million loan (½ of which is interest free) authorized by the NYS Environmental Facilities Corporation from the Clean Water State Revolving Fund (CWSRF) for aspects of the project related to the Hudson River and Estuary.[4] The use of the CWRSF for these estuary related costs is specifically authorized for projects contained in the Harbor & Estuary's Program's CCMP.

Another good example of a major regional project undertaken by private developers is the high energy transmission line that will extend from Lake Champlain down the Hudson River by way of a direct buried cable to interconnect with the downstate grid in Manhattan and Queens.[5] As part of the project, the developers have created the Hudson River and Lake Champlain Habitat Enhancement, Restoration, and Research/Habitat Improvement Project Trust[6] to mitigate any ecological impacts to the Hudson River and various other waterbodies that comprise the route, including Lake Champlain and the Bronx, Harlem, and East Rivers. The Trust will receive $117 million over 35 years and be managed by a governance board comprised of the Project Developers, DPS Staff, NYSDEC, NYSDOS, CNY, APA; the New York State Council of Trout Unlimited, Riverkeeper, and Scenic Hudson. Priority projects for each affected water body have already been agreed upon; the Hudson River Foundation will act as administrator of the Trust.

A recently proposed major regional project now undergoing environmental review is the Hudson Tunnel, a critical component of Amtrak's Gateway Program for the Northeast Corridor. In light of the storm damage to the existing NEC tunnels arising from Superstorm Sandy, there is a compelling need to expedite environmental review and construction inasmuch as if the existing 106 year old tunnels were to fail, rail

1 See: www.riverkeeper.org/news-events/news/preserve-river-ecology/settlement-with-ny-state-on-tappan-zee-bridge/
2 See: www.scenichudson.org/news/article/negotiations-nys-yield-environmental-wins-tappan-zee-bridge-project/2013-04-02
3 See: www.riverkeeper.org/wp-content/uploads/2013/03/TZB-Executed-MOU-3-22-13-R.pdf
4 See: www.newnybridge.com/documents/efc-loan-fact-sheet.pdf
5 See: chpexpress.com
6 See: chpexpress.com/governance-committee.php

capacity along the NEC would be reduced by 75%. The new tunnel would provide new capacity and the ability to rehabilitate the existing tunnels. The new Hudson Tunnel would be much shallower than the ARC Tunnel (discontinued in 2009) because the plan calls for use of the existing interlocking at the Hudson Yards to connect to Penn Station.[7] Therefore it is highly likely that the tunnel will result in both construction impacts and permanent impacts to the Hudson River and the Hudson River Park.

The Hudson Tunnel project presents an opportunity for the advancement of HEP goals by means of a negotiated package of environmental benefit projects to offset project impacts. It has been estimated that an 18 month delay in project permitting could result in $1.8 billion increase in construction costs[8] for the Gateway program.

Feasibility: This approach to large regional projects appears feasible given that a number of regional stakeholders play key roles in such endeavors. A threshold issue may be how HEP and its various committees reach consensus and take action on major regional projects in a timely manner. It seems reasonable and appropriate HEP and its stakeholders would advocate for environmental benefit projects as part of the scoping process in major regional projects, particularly those serving a broader public purpose. It would be important that there be a net benefit to the Estuary and not just an offset to project impacts.

7 See: web.archive.org/web/20130517075834/http://www.lautenberg.senate.gov/assets/Gateway.pdf
8 See: commongood.3cdn.net/e68919da002c4300cd_bzm6bxnb9.pdf

Coordinated Private Philanthropy Through a Dedicated Harbor Estuary Fund

Nexus and Basis for Action: The Estuary greatly benefits from the generosity of charitable foundations, corporations, and individuals. These donors provide resources and their own expertise to the work of the many non-profit organizations actively pursuing water quality, restoration, public access, stewardship and other initiatives.

Other estuaries have benefitted by the establishment of specific coordinating bodies to advance their goals. This can be as simple as providing a forum by which funders can informally learn about opportunities to coordinate their giving but could also include the creation of a mechanism or pathway whereby resources from private philanthropy can be aggregated with other non-governmental and potentially governmental resources.

Precedent: The federally chartered National Fish and Wildlife Foundation[1] has helped create two similar ventures. NFWF plays a pivotal role in the Long Island Sound Futures Fund[2] in partnership with the Long Island Sound Study. Funding for the program is provided by the U.S. Environmental Protection Agency, Long Island Sound Study, and the U.S. Fish and Wildlife Service. NFWF's Long Island Sound Futures Fund supports projects in local communities that aim to protect and restore the Long Island Sound. It unites federal and state agencies, foundations and corporations to achieve high-priority conservation objectives. Since 2005, the Long Island Sound Futures Fund has invested $14.3 million in 324 projects in communities surrounding the Sound. With grantee matches of $28 million, the program has generated $42 million for locally-based conservation. Grants have funded projects such as creating school yard habitat for native birds; reducing floatable debris and litter; providing education on invasive species; and initiating an 8th Grade Environmental Leaders Program.[3] The Future Fund is managed by a partnership of NFWF and the Long Island Sound Study through EPA's Long Island Sound Office. EPA Regions I and II, FWS, Natural Resources Conservation Service, Connecticut Department of Energy and Environmental Protection, New York State Department of Environmental Conservation, New York and Connecticut Sea Grant programs, Interstate Environmental Commission, and the New England Interstate Water Pollution Control Commission review proposals and provide technical assistance to applicants and recipients.

Similarly, NFWF has played a key role in the Chesapeake Bay Stewardship Fund.[4] From 1999 to 2015, the Stewardship Fund awarded over 912 grants totaling roughly $115 million. These investments leveraged more than $221 million in grantee matching funds to support a wide range of conservation projects throughout the Bay Basin. The Chesapeake Bay Stewardship Fund is a partnership with the Federal-State Chesapeake Bay Program. Major funding is provided by the U.S. Environmental Protection Agency, Altria Group, the USDA's Natural Resources Conservation Service and Forest Service, CSX, National Oceanic and Atmospheric Administration, SeaWorld and U.S. Fish and Wildlife Service. The kinds of projects that have been funded through this program include innovative nutrient and sediment reduction; soil amendments and water quality, engaging churches in stormwater management; tributary restoration; and green jobs and youth engagement, to name a few.

Feasibility: One possibility would be to create an informal mechanism for coordination among donors seeking to restore the Estuary. Launching such an effort requires clear articulation of the goals of such an effort and a commitment from several of the major donors to participate. In particular, such an effort could help advance fundraising from large commercial and industrial entities in the region. Large corporations may be interested in this as part of their corporate social responsibility efforts. The Hudson River Foundation manages several environmental benefit funds with the intent of improving scientific understanding, public access, and stewardship of the River and estuary. While the Foundation has never accepted charitable donations, its charter allows it to do so. Developing or creating a new regional entity that can accept and co-mingle congressionally-appropriated funds and private funding could require federal legislation. Alternatively, HEP could formally collaborate with NFWF, which is chartered by Congress.

1 See: www.fws.gov/partnerships/nfwf.html
2 See: www.nfwf.org/LISFF/Pages/home.aspx
3 See: longislandsoundstudy.net/about/grants/lis-futures-fund/
4 See: www.nfwf.org/chesapeake/Pages/home.aspx

POTENTIAL FUNDING OPPORTUNITIES **4**

Expansion/ Re-Dedication/ Re-Purposing of Federal, State and Local Programs

FEDERAL

National Estuary Program and other Clean Water Act Funds

Nexus and Basis for Action: In 1987, the U.S. Congress amended the Clean Water Act (CWA)[1] by adding Section 320, creating the National Estuary Program (NEP) to identify, protect, and restore "estuaries of national significance." The NEP encompasses 28 watersheds nationwide, and is recognized as a model for building partnerships to protect the coastal environment while sustaining coastal economies. These partnerships are guided by citizen and intergovernmental management committees attuned to local needs and priorities. The committees develop Comprehensive Conservation and Management Plans (CCMPs) for protecting their respective estuaries and resources. It is worth noting that both the Chesapeake Bay[2] and Long Island Sound[3] Estuary Programs received special recognition and individual appropriations within the Clean Water Act. On May 20, 2016, NEP was reauthorized[4] with $26,500,000 authorized for each of fiscal years 2017 through 2021. Not less than 80 percent of the amount made available to provide grant assistance to the 28 estuary programs, including HEP for the development, implementation, and monitoring of the CCMPs and not less than 15 percent of the amount made available each fiscal year shall be used for a competitive awards program.

Additional federal funding to address nonpoint source pollution is available to the states pursuant to Section 319 of the CWA. The goals of the Nonpoint Source (NPS) Program[5] are to control pollution from nonpoint sources to the nations waters and to protect, maintain and restore waters that are vulnerable to, or are impaired by nonpoint source pollution. This is accomplished by means of a watershed planning approach. Funding at the national level under this program reached its peak in 2003[6] at $238.5 million and remains a significant source of funding at $163 million in FY 2016. Both New Jersey and New York have EPA-approved NPS Programs. Additional federal funding to address water pollution prevention and control programs is available to the states pursuant to Section 106 of the CWA.[7] These include monitoring, developing water quality standards, enforcement, managing NPDES Programs, and the like. In FY 2014, Section 106 funding made available to New Jersey was $3.716 million while $7.640 million was made available to New York.[8]

Precedent: The CWA and the NEP have been reauthorized and amended several times since inception to re-direct efforts and appropriate additional funds. The Great Lakes Restoration Collaboration offers a model for how state and local government and non-profit organizations can work together to secure additional federal resources through new authorization and on-going appropriations.[9] The Harbor Coalition led by Waterfront Alliance and National Parks and Conservation Association was a similar effort active in New York and New Jersey before Hurricane Sandy and the push for recovery and rebuilding funds took precedent.[10]

Potential: If Congress appropriates its authorized amount, each NEP including HEP will receive approximately $750,000, about 20% more than the $ 600,000 that has been appropriated annually for the past several years. However the President's proposed budgets for FFY 2016-2017 and FFY 2017-2018 dramatically reduces spending by EPA and specifically targets the NEPs for cuts. While Congress restored NEP funding in their FFY 21016 budget it seems likely that holding the line against cuts will continue to require congressional action

With the support of the congressional delegation and the states, additional funding for projects could be realized through coordinated projects using Section 319, 320 and 106 funding. In particular, success in competing for the newly authorized competitive grant program will require broad collaboration.

Feasibility: Holding the line and securing appropriations in line with the amount permitted under the recent reauthorization is the current focus, given the administration's proposed budget cuts. While new authorization for funding similar to that enabled for Long Island Sound is unlikely in the short term, continuing to educate congressional leadership about the Program is important and could set the stage for additional funding in the future. Documenting HEPs priorities and working through civic partners to inform congressional leaders can be an important complement of the work of the Association of National Estuary Programs and Restore America's Estuaries at the national level.

1 See: www.govtrack.us/congress/bills/100/hr1/text
2 See: www.chesapeakebay.net/channel_files/19193/sec_117_cbp_authorization.pdf
3 See: www.law.cornell.edu/uscode/text/33/1269
4 See: www.congress.gov/114/plaws/publ162/PLAW-114publ162.pdf
5 See: www.epa.gov/polluted-runoff-nonpoint-source-pollution
6 See: www.epa.gov/polluted-runoff-nonpoint-source-pollution/319-grant-program-states-and-territories
7 See: www.epa.gov/water-pollution-control-section-106-grants
8 See: www.epa.gov/sites/production/files/2014-04/documents/final_fy_14_allocations_02_27_14.pdf
9 See: glrimap.glc.org/
10 See: www.harborcoalition.org/

Maintenance Dredging: Harbor Maintenance Trust Fund

Nexus and Basis for Action: Maintenance dredging provides the critical maintenance for maritime commerce in the region. However, the system of channels has significantly altered estuarine circulation of the natural harbor, thereby altering its ecology. Dredging re-suspends sediments in the water column, releasing toxic pollutants and reducing light penetration, thereby affecting flora and fauna.

Harbor maintenance activities are overseen by the U.S. Army Corps of Engineers (USACE) and largely funded through the Harbor Maintenance Trust Fund (HMTF) authorized by Congress in 1986. The Fund receives revenue from a harbor maintenance tax which is a 0.125% tax on the value of imported cargo and passenger tickets and is collected by US Customs and Border Protection.[1] Annual revenue is approximately $1.8 billion.

Presently, the Harbor Maintenance Trust Fund (HMTF) has a significant surplus estimated to be about nine billion dollars. The Port Authority of New York and New Jersey pays a disproportionate share of the revenue into the fund relative to the benefits received given the volume of cargo containers that pass through the port and the fact that the tax is based on the value of the cargo rather than the tonnage. For example, in 2011, NY/NJ Harbor revenue paid into the HMTF was $131.73 million while benefits received for maintenance dredging were only $17.15 million,[2] effectively cross-subsidizing maintenance dredging at other US ports. Furthermore, the excess annual revenue that accrues to the HMTF reverts to the general fund, and is used to balance the federal budget.

The "ecological costs" of maintenance dredging—the direct impacts on benthos, pelagic fish, and larvae—are not generally accounted for in the cost of maintenance dredging activities and there are no offsetting projects to restore estuarine ecology. Currently, expenditures from the HMTF are strictly limited to maintenance dredging. Section 312 provides authority for addressing off-channel contamination and could be used to address some HEP restoration priorities. But expanding the kind of work that can be done in the NY-NJ Harbor through the use of the Harbor Trust Fund would enable restoration projects at no additional costs to the region, or maritime industry (although funds available to the federal government to subsidize other ports and balance the federal budget would be diminished). Restoration projects directly linked to the presence or maintenance of specific channels could be identified (for example, addressing wake damage to wetlands or off-channel contaminated sediments that continue to re-contaminate navigation channels).

Precedent: There has been some recent attempts to re-shape how the HMTF will be used in future years. The work of the NY-NJ congressional delegation to assure the harbor deepening to 50 feet may provide guidance as well.

Potential: If funds for restoration were pegged at 50% of the maintenance budget for the NY-NJ Harbor, in excess of $10 million would be annually available for restoration projects and the revenue that the NY-NJ port contributes to the HMTF would still be twice as much as it receives in benefits.

Feasibility: The *ad valorem* tax has been in place for a number of years. There is surplus of funds available. Congressional authorization will likely be required to expand the use of the HMT. Political support for the proposal locally would require a partnership between the environmental community and the maritime industry.

1 See: 19 CFR 2424: gpo.gov/fdsys/pkg/CFR-2011-title19-vol1/pdf/CFR-2011-title19-vol1-sec24-24.pdf
2 *"Harbor Maintenance Funding and Financing"*; 2013. John Frittelli; Congressional Research Service. Can be found at: fas.org/sgp/crs/misc/R43222.pdf

US Army Corps of Engineers Ecosystem Restoration Authorities

Nexus and Basis for Action: The most recent version of the Hudson-Raritan Estuary Comprehensive Restoration Plan (HRE-CRP) provides an overview of specific partnering opportunities related to existing and future authorities for restoration.[1] The authorities through which the Corps can participate in the study, design and implementation of ecosystem restoration projects include:

- Continuing Authorities Program (CAP)
  - Section 206 of WRDA 1996, Aquatic Ecosystem Restoration—this authority is to develop aquatic ecosystem restoration and protection projects that cost effectively improve the quality of the environment, and are in the public interest;
  - Section 1135 of WRDA 1986, Project Modifications for Improvement of the Environment—this authority is to review the modification of structures and operations of water resources projects constructed by the Corps for the purpose of improving the quality of the environment. If a Corps water resources project has contributed to the degradation of the quality of the environment, restoration measures may be implemented at the project site or at other locations that have been affected by the construction or operation of the project, if such measures do not conflict with the authorized project purposes; and
  - Sections 204 of WRDA 1992 and 207 of WRDA 1996, Beneficial Uses of Dredged Material—this authority is to carry out projects for the protection, restoration, and creation of aquatic and ecologically related habitats, including wetlands, in connection with dredging for construction, operation, or maintenance of a Corps of Engineers authorized navigation project.
- Studies specifically authorized by Congress (e.g. HRE Ecosystem Restoration Feasibility Study), pursued under General Investigations (GI)
- Sections 102-110 of the Estuary Restoration Act of 2000 (ERA: Title 1 of Pub. L. 106-457)

These programs require a cost-share agreement between the Corps and the non-Federal sponsor. GI studies, require specific Congressional authorization and appropriation. Recommendations stemming from a feasibility study must then be approved by Congress and funded for construction via CG accounts.

Precedent: For the HRE Ecosystem Restoration Feasibility Study, the USACE has prepared a Draft Integrated Feasibility Report/Environmental Assessment (EA) which recommended a subset of 33 projects identified within the HRE-CRP for construction.[2] For each site, restoration alternatives, concept level design, and costs estimates have been prepared.

Funding for Corps projects are dependent upon annual appropriations and must be shared with non-Federal parties. The Non-Federal interests are responsible for 35 percent (except Section 1135 – 25%) of the total project cost including the costs of monitoring for a five year post-construction period. This may be provided in cash, credit for required real estate interests, services or other appropriate in-kind contributions.

Potential: The 33 projects identified in the Draft Integrated Report/EA Study have a first level total cost of $ 644 million.[3] Local non-federal partners have committed to support 35% of each project. As part of finalizing the Draft Report, the NY District Corps is evaluating comments and undergoing internal review/coordination with Corps HQ, which will be followed by additional feasibility evaluation. Following Corps HQ approval of the Final Integrated Feasibility Report/EA, a Chief's Report would be provided to Congress for authorization and appropriations.

Feasibility: Engaging the bi-state congressional delegation in support of the overall feasibility study and/or selected specific projects offers opportunities for advancing restoration. However, any request will have to compete with other funding requests at the federal level and a backlog of authorized USACE projects.

1 See: "Hudson-Raritan Estuary Comprehensive Restoration Plan Version 1 Volume I"; 2016. USACE & PANYNJ in partnership with HEP available at www.nan.usace.army.mil/Portals/37/docs/harbor/Final%20CRP_2016-06-27_v1.0.pdf?ver=2016-06-29-170128-157
2 See: www.nan.usace.army.mil/Media/Fact-Sheets/Fact-Sheet-Article-View/Article/487595/fact-sheet-hudson-raritan-estuary-new-york-new-jersey/
3 "Hudson-Raritan Estuary Ecosystem Restoration Feasibility Study: Draft Integrated Feasibility Report & Environmental Assessment", February 2017. Prepared by the New York District U.S. Army Corps of Engineers and Partners.

US Army Corps of Engineers Flood Risk Management Authority

Nexus and Basis for Action: The US Army Corps of Engineers' (ACOE) mission statement provides the basis for the development of resiliency strategies which can be used to enhance authorized federal projects. The Corps Civil Works mission statement is to provide "....quality and responsive development and management of the nation's water resources, protection, restoration, and management of the environment, disaster response and recovery, and engineering and technical services in an environmentally sustainable, economic, and technically sound manner through partnerships."

The North Atlantic Coast Comprehensive Study Report[1] (NACCS) authorized after Hurricane Sandy by the Disaster Relief Appropriations Act of 2013[2] gave the Corps the opportunity to fill in data gaps in their knowledge of resiliency with respect to their portfolio of authorized federal projects. In order to pursue an integrated approach to coastal resilience, the NACCS formed a team to develop a framework for identifying and evaluating opportunities for integrating natural and nature-based features (NNBF). These beaches, dunes, coastal wetlands, and living shorelines can be used to enhance the resilience of coastal areas threatened by sea level rise and storms. It can provide a range of ecosystem services and benefits for commercial and recreational fishermen, tourism, provision of clean water, and habitat for threatened and endangered species.

Precedent: The emergency Federal funding provided after Hurricane Sandy projects can and is being used to fund research, design, construction and monitoring of NNBFs. The New York District Corps has already begun this process with the East Rockaway Inlet to Rockaway Inlet and Jamaica Bay Reformulation Study,[3] among others. A detailed list of these efforts that are supporting coastal restoration is in Chapter 2 of the Hudson-Raritan Estuary Comprehensive Restoration Plan.[4]

Potential: There is high potential to advance HEP goals within the context of federally authorized civil works projects as reevaluation studies are undertaken by the Corps on a case-by case basis.

Feasibility: The new emphasis on NNBF to project sustainability and resiliency could advance HEP goals of ecological restoration.

1 See: www.nad.usace.army.mil/Portals/40/docs/NACCS/NACCS_main_report.pdf
2 See: www.govtrack.us/congress/bills/113/hr152/text
3 See: www.nan.usace.army.mil/Media/News-Releases/Article/920084/us-army-corps-of-engineers-announces-availability-of-the-draft-general-reevalua/
4 See: "Hudson-Raritan Estuary Comprehensive Restoration Plan Version 1 Volume I"; 2016. USACE & PANYNJ in partnership with HEP available at www.nan.usace.army.mil/Portals/37/docs/harbor/Final%20CRP_2016-06-27_v1.0.pdf?ver=2016-06-29-170128-157

NEW JERSEY

The State of New Jersey has a number of programs that support conservation in the Estuary and its watershed. These include the Endangered Species—Conserve Wildlife Matching Grant,[1] Clean Vessel Pump Out Facilities;[2] and the Community Stewardship Incentive Grant Program.[3] However, that potential may be constrained due to one or more of the following: limited applicability due to subject matter or geographic scope; limited funds to be disbursed; limiting eligibility requirements; additional qualifications or certifications as a pre-condition to grant eligibility.

Of particular note are the Green Acres / Blue Acres Programs and the New Jersey Environmental Infrastructure Trust.

New Jersey Green Acres and Blue Acres Programs

Nexus and Basis for Action: The Green Acres Program was created in 1961 to meet New Jersey's growing recreation and conservation needs. The mission of the program is to create a system of interconnected open spaces, whose protection will preserve and enhance New Jersey's natural environment and its historic, scenic, and recreational resources for public use and enjoyment. Green Acres has protected over half a million acres of open space and provided hundreds of outdoor recreational facilities in communities around the State. Similarly, the Blue Acres Program was established in 2007 to acquire lands in the floodways of the Delaware, Passaic, and Raritan Rivers and their respective tributaries, for recreation and conservation purposes. Approximately $71 million of corporate business taxes will be set aside annually following a constitutional amendment made law by voters in November, 2015. In 2020, this number will increase dramatically to approximately $121 million. The funds will replace repeated voter-approved bonds in the state and will be allocated as follows: 64 percent to the Green Acres fund for acquisition and protection of open space, 29 percent for farmland preservation, four percent to the Blue Acres fund for acquisition of flood-prone property, and three percent for historic preservation purposes. An additional $300 million of federal Sandy Disaster Recovery money is supporting the Blue Acres Program.

Goals of the Blue Acres and Green Acres Programs are closely aligned with HEP in the areas of habitat and open space preservation, recreation and long term sustainability and resiliency. The Green Acres Program provides an opportunity to advance HEP goals through State Lands Acquisitions, grants to Local Government and not-for-profit organizations for land acquisition.

Precedent: Numerous preservation projects identified by HEP's Restoration Work Group have been successfully advanced by the use of Green Acres funding.

Potential: These funds are a major source of capital funding for conservation efforts in New Jersey with approximately $40 million appropriated annually for Green Acres through 2020 and about $310 million for Blue Acres over the four-year period (including federal Sandy money for buy-outs). Numbers should grow larger for 2020 and beyond.

Feasibility: Continued efforts by the State of New Jersey and civic partners such as the NY/NJ Baykeeper and the Trust for Public Land are essential to ensure successful allocation of these funds for land preservation in the HEP geographic area.

1 See: www.nj.gov/dep/grantandloanprograms/nhr_endanger.html
2 See: www.nj.gov/dep/grantandloanprograms/nhr_pumpout.html
3 See: www.nj.gov/dep/grantandloanprograms/nhr_csip.htm

New Jersey Environmental Infrastructure Trust

Nexus and Basis for Action: The New Jersey Environmental Infrastructure Trust (NJEIT) is an independent State Financing Authority. It receives federal funds from EPA as the State's Clean Water State Revolving Fund (SRF). NJEIT provides and administers low-interest loans to municipalities, counties, regional authorities, and water purveyors to finance water quality infrastructure projects –particularly those that work to enhance ground and surface water resources, protect public health, and make responsible, sustainable economic development choices. Other foci of the Trust include capital improvements of wastewater treatment systems, including controlling overflows from combined sewer systems, stormwater management projects and runoff control, including green infrastructure, and open space acquisition for water supply protection.

Section 320 of the Clean Water Act allows a CWSRF to fund publicly and privately owned projects, as long as the project is part of the state's Comprehensive Conservation Management Plan (CCMP) and is sanctioned in the plan.[1] This includes plantings, environmental clean-up, development and initial delivery of educational programs so long as the projects have a direct benefit to the water quality of an estuary including protection of fish and wildlife and actions that require the control of point and nonpoint sources of pollution.

Precedent: Many wastewater system upgrades and other water quality improvements within the HEP geographic area are financed through the NJEIT.

Potential: The Program has issued more than $6.5 billion in loans since its inception in 1986.[2] More than 1,050 loans have been issued to fund clean water, drinking water, green infrastructure, land acquisitions, remediation and redevelopment projects. A typical loan is for 20 years with a blended interest rate as low as 0.624%. NJEIT is also able to provide a limited amount of funding each year under its Principal Forgiveness program.

Feasibility: The Programs are directly applicable to achieving HEP goals with funds available exclusively to local and county governments and some private water companies. In some instances, NJEIT may be able to fund projects on private property by allocating money to municipalities, entrusting them with responsibility over the funds. This funding may in turn be available to non-profits specializing in pollution abatement or green infrastructure development. While access to the low and no interest loans can greatly reduce the costs of projects, this allocation of funds does require a source of revenue to repay the loan. NJEIT has only limited funding available through its Principal Forgiveness program. Creating a new source of capital funding to complement or extend the capacity of NJEIT to address the State's infrastructure needs has been the subject of recent discussion in Trenton. Jersey Water Works recently published an assessment of options.[3]

1 See: www.epa.gov/sites/production/files/2016 07/documents/overview_of_cwsrf_eligibilities_may_2016.pdf
2 From the NJEIT Infrastructure Financing Program, State Fiscal Year 2017 Priority System and Project Priority List, available at https://d8lomzvei8y8s.cloudfront.net/njeit/publications/sfy2017/SFY2017_Jan_Report.pdf
3 See: Upgrading Our Water Systems; A National Overview of State-level Funding Initiatives for Water Infrastructure, by Vivian Chang at www.jerseywaterworks.org.

NEW YORK

There are a number of dedicated funds within New York State that have been set up for various environmental purposes, many of which are congruent with HEP goals.[1, 2] These funds are administered by and through various state agencies, most notably the New York State Department of Environmental Conservation (DEC) and the New York State Environmental Facilities Corporation (EFC). The list includes the NYS Conservation Fund. One of the State's first dedicated funds, it was created in 1925 to provide a stable, long-term source of revenue to help support activities related to the State's fish, wildlife and marine resources. The Fund receives revenues from various sources, including all revenues from the sale of hunting, trapping and fishing licenses, which represents its largest source of revenue. In addition to programs directly associated with managing fish and wildlife species that are targeted for recreational and commercial harvest, the Conservation Fund supports DEC actions to manage populations of non-game species.

New York State has undertaken several recent efforts to provide funding for clean water infrastructure. The Water Infrastructure Improvement Act of 2015 provided $400 million for a variety of purposes. In 2017, Governor Andrew M. Cuomo proposed the $2 billion Clean Water Infrastructure Act.[3] The proposal would fund drinking water infrastructure, wastewater infrastructure and source water protection actions over a five year period. The $5 billion Clean Water Bond Act proposed by the NYS Legislature would provide funding for similar activities. It would require approval by voters in a referendum in November 2017.[4]

Of particular note for HEP priorities are the Environmental Protection Fund and Environmental Facilities Fund, and these are described in detail below.

1 See: www.osc.state.ny.us/reports/environmental/environmental_funding_nys_2014.pdf
2 See: www.dec.ny.gov/pubs/grants.html
3 See: www.governor.ny.gov/news/governor-cuomo-presents-17th-proposal-2017-state-state-invest-2-billion-clean-water.
4 See: www.nysenate.gov/legislation/bills/2017/s3772/amendment/a

Environmental Protection Fund (EPF)

Nexus and Basis for Action: The Environmental Protection Act established the EPF as a "pay-as-you-go" source of capital funding to support specified environmental programs and purposes by setting aside sources of revenue including: revenues from the Real Estate Transfer Tax; proceeds from the sale, lease or permitting of underwater State lands; a portion of unclaimed bottle deposits; revenues derived from enforcement of the Bottle Bill; and revenues from the issuance of conservation license plates for vehicles. Programs funded by the EPF include: open space conservation; nonhazardous landfill closure projects; municipal waste reduction and recycling projects; park, recreation and historic preservation projects; local waterfront revitalization projects; stormwater, wastewater and aquatic habitat restoration projects; agricultural nonpoint source pollution control; and farmland preservation. Over the life of the EPF, $2.8 billion has been appropriated, $2.1 billion has been disbursed, $254.8 million is encumbered for projects and $412.6 million in appropriation authority is available for future obligations. In 2016, Governor Cuomo proposed and the State Legislature supported an appropriation of $300 million for the EPF, the highest level of funding for the EPF in its 23-year history.[1]

Precedent: Of particular note is that the EPF secures specific funding for the Hudson River, Long Island South Shore, and Peconic Estuary Programs as well as other watershed based management efforts in New York State.

Potential: In 2016-2017, the Hudson River Estuary Program (HREP) received $5 million dollars for program priorities, with $800,000 allocated for the Mohawk River Action Plan. HREP's funding does benefit the Harbor Estuary, given the confluence of geography, interests and priorities addressed by HREP and HEP and the many specific projects the two programs collaborate on. The other estuary programs receive less albeit direct funding for their program priorities: the Long Island South Shore received $900,000 and the Peconic Estuary Program is allocated $200,000 in 2016-2017.[2]

Feasibility: Establishing a dedicated line of funding for HEP within the EPF would have to address concerns about reducing funds to address other environmental needs, in particular the related and overlapping work of the HREP, as well as the need for balancing New York State's contributions with those of New Jersey.

1 See: keepprotectingny.com
2 See: keepprotectingny.com/images/EPF_chart_3-13-2017.pdf

New York State Revolving Funds / Environmental Facilities Corporation

Nexus and Basis for Action: NYS Environmental Facilities Corporation (EFC)[1] is empowered by state law to administer and finance the Clean Water State Revolving Fund (CWSRF) the Drinking Water State Revolving Fund and the Industrial Finance Program.[2] Taken together these provide financing for water management, solid waste disposal, sewage treatment and pollution control projects undertaken by or on behalf of private entities; technical advice and assistance to private entities, state agencies and local government units on sewage treatment and collection, pollution control, recycling, hazardous waste abatement, solid waste disposal, and other related subjects. Of particular note is the EFC's Green Innovation Grant Program.[3]

Section 320 of the Clean Water Act allows a CWSRF to fund publicly and privately owned projects, as long as the project is part of the state's Comprehensive Conservation Management Plan (CCMP) and is sanctioned in the plan.[4] This includes plantings, environmental clean-up, development and initial delivery of educational programs so long as the projects have a direct benefit to the water quality of an estuary including protection of fish and wildlife and actions that require the control of point and nonpoint sources of pollution.

Precedent: New York State relied on the CCMP to enable financing of some environmental benefits projects related to the Tappan Zee Bridge Replacement.

Potential: Utilizing the EFC is a source of financing for environmental benefit projects including those identified by HEP, capital projects could be undertaken on a large scale and repaid over time provided there were one or more consistent revenue streams available to HEP.

Feasibility: The foregoing approach appears feasible provided an entity responsible for collecting and dispersing funds on behalf of HEP can be identified and designated as such.

Conservation Funding at the County and Municipal Levels

County and municipal government referenda on local ballots have led to the adoption of environmental bond acts for projects and initiatives within their geographic limits. For example, the Peconic Bay Region Community Preservation Fund (CPF) was established by voter referendum in 1998, when voters in the five East End Towns in Long Island (East Hampton, Riverhead, Shelter Island, Southampton, and Southold) approved a new real estate transfer tax of 2% on each transaction occurring in these towns. In 2016, voters supported a referendum to extend the CPF through 2050 and to allow up to 20 percent of its future proceeds to be used for water quality initiatives.[5] Eligible projects include wastewater and stormwater treatment, habitat restoration, and the operation of the Peconic Bay National Estuary Program.[6] New Jersey counties are similarly permitted to establish a dedicated trust fund to acquire land for conservation/open space purposes, recreation facilities enhancement, and farmland and historic preservation. For example, Bergen County's Trust Fund is funded through a property tax assessment to be determined annually by the governing body of the County, at a rate not to exceed one cent per $100 of total County equalized real property valuation. In 2015 the County proposed spending two million dollars on a variety of projects, including habitat restoration in Teaneck Creek.[7]

Precedent: There is state authorization and precedent to establish environmental bond funds for a specific purpose in defined geographic location. Many of these funding sources allow for spending of at least a portion of the resources generated on improvement to public spaces and/or their maintenance.

Potential: Large Bond funding on the order of $100 million at the Town or County level is not uncommon.

Feasibility: These existing sources of support for conservation bonds could support various HEP goals. These funds have been used in the past for water quality protection and habitat restoration in addition to land conservation.

1 See: www.efc.ny.gov/Default.aspx?tabid=81
2 See: www.efc.ny.gov/OtherPrograms/IndustrialFinanceProgram.aspx
3 See: www.efc.ny.gov/Default.aspx?tabid=461
4 See: www.epa.gov/sites/production/files/2016-07/documents/overview_of_cwsrf_eligibilities_may_2016.pdf
5 See: www.peconiclandtrust.org/pdf/CPF_Flyer_2017_Feb.pdf and easthamptonstar.com/Lead-article/20161108/East-End-Decisively-Approves-Preservation-Fund-Extension
6 See: patch.com/new-york/easthampton/new-law-extend-cpf-signed-governor-cuomo
7 See: www.co.bergen.nj.us/203/Trust-Fund

Roles of Key Regional Commissions/ Authorities/Entities

The Port Authority of New York and New Jersey

Nexus and Basis for Action: The Port Authority of New York and New Jersey is a bi-state agency responsible for maintaining and enhancing bi-state transportation facilities and facilities of commerce within the "Port District".[1] A bi-state compact approved by the federal Congress created the Port Authority in 1921.[2] Disputes and lawsuits between the states of New York and New Jersey in the early twentieth century over the movement of freight by barge across the Hudson River had led the Interstate Commerce Commission to issue an order that a joint advisory board be set up to address the issue, resulting in the formation of the Harbor Commission in 1917. The Harbor Commission recommended the formation of a bi-state authority to manage movement of people and goods between the states.[3]

The Port Authority owns and /or operates in excess of 30 facilities within the Port District, including the George Washington Bridge, The World Trade Center, the PATH subway system, JFK International, Newark Liberty, LaGuardia, Airports, Port Newark, Elizabeth and Port Jersey Marine Terminals, among others. The Port Authority is financially self-sustaining in that it funds its capital and operating programs through the issuance of bonds which are backed by income from rents, toll revenue, and investments.[4] The 2017 Budget for the Port Authority is $7.4 billion comprised of a $3.1 billion operating budget, a $2.9 billion capital budget, and $1.4 billion in debt service.[5]

Given the history of the Port Authority's formation, it can be said that, but for the existence of the Estuary, there would likely have been no need to create the Port Authority to address the trans-Hudson freight controversy. However, since then, the Port Authority has been closely tied to the Harbor-Estuary with the construction of bridges and tunnels going over and under it, as well as the construction of large facilities of maritime commerce and aviation which account for approximately 10,000 acres of formerly connected tidal wetlands, now permanently lost from the Harbor-Estuary. While the vast amount of wetland filling done to create these facilities pre-dates the CWA, and was, therefore, done in accordance with existing law and regulation, no mitigation was required and this unmitigated loss of wetlands has permanently transformed the Harbor-Estuary.

Operations at Port Authority facilities result in emission of air pollutants, including particulates, at bridge and tunnel toll plazas and from aircraft movements at Port Authority airports. Maintenance dredging of channels and berths and the pursuit of ever deeper navigation channels to accommodate larger ships continues to be a source of impact to the ecology of the Estuary. Stormwater runoff from large paved areas of airports and marine terminals delivers pollutants to the Estuary, even when discharges are within permitted limits. Water from the Hudson River is used to cool World Trade Center facilities resulting in the impingement of adult fish and the entrainment of fish eggs and larvae as well as an increase in river water temperature. The environmental impacts of Port Authority operations to the Harbor-Estuary are largely unmitigated and these "externalized costs" in the form of environmental impacts are borne by all users of the Estuary.

In past years the Port Authority has supported critical aspects of restoration as the local sponsor of the Corps' "Hudson-Raritan Estuary Restoration Feasibility Study" and "Comprehensive Restoration Plan"[6] at a cost of approximately $9.5 million. Additionally, the Port Authority has been the largest sponsor of the "Contaminant Assessment and Reduction Project" (CARP)[7] over its eighteen year history contributing approximately $30 million to this effort from the Port's "Bi-state

1 The "Port District" is best described as the geographic area defined by a 25 mile radius around the Statue of Liberty.
2 See: www.panynj.gov/about/history-port-authority.html
3 See: "New York, New Jersey Port and Harbor Development Commission, Joint Report with Comprehensive Plan and Recommendations" (1920) found at: babel.hathitrust.org/cgi/pt?id=uiug.30112114036129;view=1up;seq=5
4 See: corpinfo.panynj.gov/pages/financial-information/
5 See: corpinfo.panynj.gov/documents/2017-Budget-Book/
6 See: www.nan.usace.army.mil/Media/Fact-Sheets/Fact-Sheet-Article-View/Article/647240/hudson-raritan-estuary-hre-ny-nj-ecosystem-restoration-program/
7 See: www.hudsonriver.org/?x=carp

Dredging Fund".[8] Lastly, Port Authority efforts in the area of natural resource acquisition has preserved approximately 400 acres of land to advance the HEP goal of wetlands restoration and preservation and public access to the waterfront at a cost of approximately $60 million. The Port Authority Board of Commissioners authorized a second phase to the Hudson-Raritan Estuary Resources Program at $60 million at its meeting of April 4, 2014,[9] although no funds have been identified for this purpose in any of its capital program budgeting.

Precedent: In terms of its Capital Program, the Port Authority has undertaken environmental projects to offset impacts. Its natural resource acquisition program (HRERP) is a good example of an effective way to temper the impact of development pressure on wetlands and undeveloped areas in the harbor estuary. The HRERP is unique in that while it is not a direct mitigation for a particular Port Authority Capital Project, it acknowledges that the capital investments of the Port Authority affect the remaining balance of wetland and upland habitat areas by through additional operations in the harbor and by inducing capital investment by others that impact remaining habitat in the harbor estuary. Other projects such as funding of wetlands restoration in Jamaica Bay are directly linked to a Port Authority Capital Projects and are done in direct mitigation thereof.

Potential: The Port Authority's Ten Year Capital Plan provides for investments of $30 billion in infrastructure in the Port District. These investments will undoubtedly result in construction and operational impacts and may also have long term impacts to the Hudson-Raritan Estuary. These may include channel deepening or realignment, land mass creation, additional pollutant loading through air emissions and discharges to surface waters, and alteration of existing habitat.

If only one percent of the Port Authority's Ten Year Capital Plan were dedicated to advancing HEP goals as a way of offsetting these likely impacts, $300 million could be made available. At its Board meeting of December 10, 2015, the Board was considering a proposal to update and restate its environmental sustainability policy but the proposal was tabled for the purpose of soliciting public comments. The solicitation is still forthcoming but offers an opportunity for addressing some of these issues.

Feasibility: Given the strong connection between Port Authority operations and capital program and the Hudson-Raritan Estuary, it is appropriate that the Port Authority assist in advancing HEP goals. The Port Authority provides significant contingency in its capital project estimates and consistently underspends its capital budget on an annual basis. The Port Authority's commitment to funding of HEP goals could be subject to availability of surplus in the capital budget on an annual basis. In this way, there would be *deminimus* impact on advancing the Port Authority's 10 Year Capital Plan. It will be important to work with the Governors of New York and New Jersey to garner support. Port Authority funding could be used as the source of local funding to advance the CRP objectives with federal cost sharing.

8 In 1996, the Port Authority allocated $130 million to fund the Governors' Joint Dredging Plan with $65 million for dredging and harbor-related projects to each of the states, (the Bi-State Dredging Fund). The Fund was created to advance two main goals: increase the certainty and predictability in the dredging project review process and in dredged material management and the facilitation of long term, environmentally sound management strategies for addressing dredging and disposal needs for the region

9 See: Board minutes of 4/23/14 page 58 at: http://corpinfo.panynj.gov/documents/board-minutes-94

The Interstate Environmental Commission

Nexus and Basis for Action: The same Harbor Development Commission Report that led to the formation of the Port Authority also recognized the impact of waste pollution in the Harbor stating in part:

> The harbor waters are badly if not dangerously polluted with sewage, and the degree of polluton is increasing, while no effective steps have been taken to improve conditions. The disposal of garbage and other refuse does not present quite so serious a problem, yet the means employed are far from satisfactory and result in further pollution of the waters. There is no interstate agency for the control of these matters, and the Commission believes there is a vital need for such an agency. Whether or not the agency should be the Port Authority, there are aspects of the problem of which the Commission must take cognizance.[1]

Ultimately, the Port Authority was not given this mandate but another agency, The Interstate Sanitation Commission was created by a tri-state compact of New York, New Jersey and Connecticut, as per the Final Report of the Tri State Treaty Commission in 1932.[2]

In 2000, the name was changed from the Interstate Sanitation Commission to the Interstate Environmental Commission (IEC); "…. to reflect more accurately the nature of the Commission's mandates, mission and responsibilities."[3]

The IEC has interstate as well as intrastate regulatory authority and works with the states' environmental agencies and U.S. EPA to enforce law and regulations with respect to water quality impairments within its District. The District runs west from Port Jefferson, New York, and New Haven, Connecticut, on Long Island Sound; south from Bear Mountain on the Hudson River to Sandy Hook, New Jersey (including Upper and Lower New York Bays, Newark Bay, Arthur Kill and Kill Van Kull); and embraces a portion of the Atlantic Ocean out to Fire Island Inlet on the southern shore of Long Island and the waters abutting all five boroughs of New York City. Since the IEC, predates the CWA by approximately 30 years, it has its own set of water quality standards which it enforces, in addition to those promulgated under the CWA.

Given the congruency of the IEC's mission and geographic jurisdiction with HEP, the IEC has the potential to play an even greater role in achieving HEP goals.

Precedent: The IEC has worked collaboratively with HEP since the inception of HEP and is represented on a number of committees with HEP. The IEC hosts a shared waterways monitoring work group, conducts monitoring for itself and others, and performs research on water quality in HEP waters.

Potential: The IEC is well positioned to facilitate work to achieve HEP goals in that it is a statutorily created, interstate agency formed by compact approved by the federal government with a mission in close alignment with HEP. The IEC is a qualified recipient of federal grant monies under Section 106 of the CWA. The IEC receives annual support from New York, New Jersey and Connecticut as well as Section 106 funds. However, the IEC appears to be underfunded to carry out the basic activities to fulfill its mandate. In 2011, (the last year for which data could be found) total receipts from all sources was approximately $1.25 million. The IEC does not appear to have any mechanisms to raise revenue to carry out its mandate and relies solely on contributions from the member states, Sec 106 funding, and a few miscellaneous grants. The IEC could potentially serve as the repository for revenue derived from surcharges, fines and penalties and other sources as described earlier in this report and could administer the funds to advance both IEC goals and HEP goals. Additionally, member states, as well as the EPA, could increase the annual funding levels of the IEC given the benefits to the HEP region that would accrue as a result thereof.

Feasibility: The IEC provides an appropriate vehicle for advancing HEP goals given its enabling legislation mandate and history. However, legislative changes may be required to mandate increases in annual contributions from member states and to receive other sources of revenue as described earlier in this report. HEP and its members need to bring these views to the states' legislatures and executive branches to garner significant increases in revenue to the IEC in support of HEP goals.

1 New York, New Jersey Port and Harbor Development Commission Report: Chapter 33, page 400
2 See: www.iec-nynjct.org/archive/1932%20Final%20Report%20Joint%20Commission%20opt.pdf
3 See: www.iec-nynjct.org/about.who.htm

The Battery Park City Authority

Nexus and Basis for Action: The Battery Park City Authority was established by the New York State Legislature in 1968 and was given the mandate to develop and maintain a well-balanced community including low and middle income housing on the Lower West Side of Manhattan where deteriorating piers once stood in the Hudson River.[1] Approximately 92 acres of land was created by filling the Hudson River between the pierhead and bulkhead lines from the Battery, north to Reade Street using three million cubic yards of material from excavation of the World Trade Center site, construction of NYC Water Tunnel No. 3, and sand dredged from Ambrose Channel.[2] Creation of Battery Park City was viewed as an urban renewal project—the "blighted community" being the abandoned and deteriorating finger piers that were a source of drift and floating debris in the Hudson River and a visual eyesore. Although the necessary federal and state permits were issued post-CWA and post-NEPA, there was no mitigation required for the significant loss of estuarine habitat that accrued as a result of this action. The Cover Page of the Corps' Draft Environmental Impact Statement states, in part;

"Adverse Environmental Effects: There are no known adverse environmental effects from the proposed bulkheading and filling other than the turbidity of the waters at and adjacent to the project during the period of construction. The principal public argument against the total project is that it will further increase the demand on transportation facilities in lower Manhattan."[3]

The lack of a mitigation requirement for the loss of 92 acres of estuarine habitat was likely overlooked in light of the public interest to be served by eliminating what was perceived to be a blighted area and in the provision of new housing, jobs, and open space. However, in hindsight, and in light of the undeniable financial success of the BPCA, it is appropriate to consider "environmental restitution" in the form of financial support to advance HEP goals.

Precedent: There is no known legal precedent for "restitution" in the context of environmental matters. Restitution has its origins in common law and is generally linked to the concept of "unjust enrichment."[4] However, in advancing this potential source of revenue, rather than initiating legal action, discussions with BPCA, ESDC, NYC Mayor's Office the NYS Governor's Office and others would likely provide a better result. Given the facts and circumstances surrounding the inception of BPC and the BPCA as they relate to unmitigated impacts to estuarine habitat, it would appears equitable that a portion of BPCA's revenue stream be directed to support HEP goals.

Potential: In 2016, BPCA achieved excess revenues in the amount of $177.1 million. Approximately $135.2 million of PILOT-related excess revenues from operations was used to fund the City of New York's General Fund. Approximately $41.9 million went to the NYC Housing Development Corporation's 421-a fund and the pay-as-you-go capital fund.[5] If only 1% of BPCA's excess revenues were used for restitution, the amount would exceed $1 million, annually. As of fiscal year 2016, BPCA has cumulatively produced $3.3 billion in excess revenues for the benefit of the City of New York.

Feasibility: The initial vision of building low and middle income housing at the BPCA site was never realized due to the City's fiscal woes at that time and the need to incorporate private financing to get both residential and commercial real estate projects underway. Rather, it was decided that the excess revenue stream from this public-private endeavor would be used to subsidize the cost of affordable housing throughout the City.[6,7] Ergo, there already is an important public purpose to be met by this funding stream. That said, both the City and State have used this revenue stream for other purposes.[8] As per a 1986 Amendment to the Settlement Agreement which defines the relationship between BPCA and NYC there is a recognition of the potential need to fund other projects by means of "Joint Purpose Funds" and a mechanism for accumulating the same.[9] It will be important to work cooperatively with affordable housing advocates in support of our mutual endeavors.

1 See: bpca.ny.gov/about/who-we-are/
2 See: en.wikipedia.org/wiki/Battery_Park_City
3 See: Corps DEIS Project Description Cover Page: https://babel.hathitrust.org/cgi/pt?id=ien.35556030992176;view=1up;seq=9
4 See: "Restitution and Equity: an Analysis of the Principle of Unjust Enrichment": scholarship.law.cornell.edu/cgi/viewcontent.cgi?article=1949&context=facpub
5 See: bpca.ny.gov/wp-content/uploads/2015/03/BPCA-FY-2016-Annual-Report-NEW.pdf
6 See: "Battery Park City: A Model for Financing Low-Income Housing?" at: digitalcommons.law.yale.edu/cgi/viewcontent.cgi?article=1160&context=ylpr
7 See: thevillager.com/villager_103/thebatterysupfunds.html
8 See: www.nytimes.com/2009/01/30/nyregion/30housing.html
9 See: data.ny.gov/api/assets/F8B228C3-BA26-4879-8538-21C0E86E0C1B?download=true

New Jersey Harbor Dischargers Group

Nexus and Basis for Action: The New Jersey Harbor Dischargers Group (NJHDG) is a consortium of nine sewerage agencies operating eleven treatment plants which discharge approximately 600 mgd to the New Jersey waters of the Estuary. The consortium monitors water quality at 33 locations in New Jersey on a voluntary basis with no outside funding and has been doing so since 2003. The goals of the monitoring program include: provide basic information on ambient water quality of conventional pollutants; validate water quality model results; foster appropriate regulatory decision making; collectively use the resources of members to best meet water quality objectives of the harbor.[1]

Precedent: The NJHDG has worked closely with HEP and is represented on several HEP committees dealing with ambient water quality issues and implementation of long term control plans. The ambient water quality monitoring data that is provided by the NJHDG provides critical information to HEP and compliments water quality data available for the NY side of the Estuary. NJHDG's member agencies have collaborated on regional work for Long Term Control Plan implementation and share information and technological and infrastructure innovation to improve sewage treatment and reduce costs.

Potential: With the support of HEP and its members, NJHDG and its members could be the recipients for federal, state and private grants to implement infrastructure upgrades and develop pilot projects to test new technologies.

Feasibility: Provided the NJHDG is willing to take on this additional role, it may be necessary for them to formalize the consortium into a legal entity capable of receiving grants and outside financing.

1 See: www.state.nj.us/dep/wms/njhdg_%20wq_indicators_012512.pdf

New York City Department of Environmental Protection

Nexus and Basis for Action: New York City Department of Environmental Protection[1] (NYC DEP) has its primary focus on two critical roles: providing approximately 1.3 billion gallons of drinking water from upstate reservoirs to 9 million NYC customers on a daily basis, and treating sewage and stormwater on a daily basis at 14 wastewater treatment plants which discharge to the New York side of the Estuary. Intertwined with the foregoing, the NYC DEP is addressing stormwater issues; reducing nitrogen to receiving waters; monitoring ambient water quality in NYC waters; and directly managing the business interface with NYC customers including billing for water and sewage treatment; as well as permitting and inspection of new connections for potable water and sewage. Additionally, NYC DEP plays an important role in air and noise pollution as well as the safe storage and handling of hazardous materials. NYC DEP has initiated innovative programs such as Staten Island's Blue Belt program as a non-structural approach to stormwater management.[2]

Precedent: The NYC DEP has worked closely with HEP and is represented on several HEP committees dealing with ambient water quality issues. The ambient water quality monitoring data that is provided by the NYC DEP provides critical information to HEP and compliments water quality data available for the New Jersey side of the Estuary. The NYC DEP is advancing the specific goal of oyster restoration in the Estuary with its efforts in Jamaica Bay[3] and other locations.

Potential: In addition to the foregoing, the NYC DEP plays a critical role in promulgating regulations attendant to stormwater management and industrial pretreatment, among other things, and is the recipient of federal and state capital financing and funding. NYC DEP has significant staffing and bandwidth to address issues that have a direct impact on water quality of the Estuary.

In carrying out capital investments on infrastructure that it maintains and operates, NYCDEP has opportunities to undertake environmental benefit projects and community projects to offset the impacts of construction and operation of infrastructure.[4]

Feasibility: NYC DEP already plays a critical role with respect to estuarine water quality and HEP. HEP and its partners may be well served to push for an even greater role for NYCDEP as an innovator, test bed and grant recipient with respect to studies and capital projects to advance HEP goals. NYC DEP already has in place critical institutional mechanisms for data collection and analyses, water infrastructure as potential testbeds for technological innovation and capacity to design, and award contracts for capital projects in pursuit of HEP goals.

1 See: www.nyc.gov/html/dep/html/home/home.shtml
2 See: www.nyc.gov/html/dep/html/dep_projects/bluebelt.shtml
3 See: www.nyc.gov/office-of-the-mayor/news/708-16/50-000-oysters-being-installed-jamaica-bay-help-improve-water-quality-protect-wetlands
4 For Example, Riverbank State Park was constructed atop the North River Sewage Treatment Plant in collaboration with New York State and others. See: osc.state.ny.us/audits/allaudits/093000/99s35.pdf. The construction of the Croton Reservoir Filtration Plant beneath VanCortlandt Park was mitigated by $200 million committment to the "Greening" of Parks in the Bronx. See: citylimits.org/2015/06/17/croton-plant-still-stirs-anger--questions-about-water-projects/