

River Protection & Restoration

Background

The Delaware River in the Urban Waters Federal Partnership (UWFP) project area is a tidal freshwater river that provides habitat for many species including resident and migratory fish, birds, reptiles, amphibians, and mammals. A goal of the UWFP is to protect and restore ecological habitats and species that provide economic and recreational benefits to urban river communities. These habitats include riparian areas, wetlands, mudflats, and sub-tidal habitats. Examples of species of concern using these habitats include Atlantic and short-nose sturgeon, striped bass, shad, herring, eagles, ospreys, herons, river otters, and many others. The concept of “river protection” generally includes trying to avoid or minimize impacts from various actions such as dredging and/or filling, dams, dikes/levees, development, and use of water for industrial cooling. River protection can also include habitat conservation and regulatory protection and/or management of natural resources and ecological functions of a healthy river. There are significant historic and ongoing losses of habitat and associated impacts to species of concern throughout the Delaware River Watershed and nationwide. “River restoration” refers to enhancing and/or re-creating habitats supporting these species that have been lost or injured by historic and/or ongoing actions. Examples include reestablishment of riparian areas, wetland and/or mudflat restoration, living shoreline projects, and sub-tidal habitat restoration. Mitigation for this purpose refers to restoration actions that must be taken to offset unavoidable impacts from permitted projects.

Regulatory Authorities/Funding/Programs

➤ National Oceanic & Atmospheric Administration (NOAA)

- NOAA has authority to protect and restore habitats and species under various authorities including the Clean Water Act (CWA), the Magnuson-Stevens Act, CERCLA/Superfund, the Oil Spill Act (OPA), the Coastal Zone Management Act, and other authorities. Under the Clean Water Act NOAA works with the U.S. Army Corps of Engineers (USACE) and other entities to avoid, minimize, and mitigate for impacts from projects that could have negative impacts to NOAA trust resources. This can result in protection measures and restoration projects in urban rivers. There are numerous projects each year in the Delaware River that require review and permitting, including mitigation. (www.habitat.noaa.gov/index.html)
- Under CERCLA, OPA, and CWA, NOAA acts as a natural resource trustee working with federal partners to clean up and restore impacts from contaminated sites and spills. Through this process NOAA conducts **Natural Resource Damage Assessments**, which can lead to additional restoration projects. There are several ongoing clean-up and restoration sites and NRDA actions in the Delaware River. NOAA is currently conducting an assessment of natural resource injury at the Metal Bank Superfund site in Philadelphia. NOAA is also a trustee under the Oil Pollution Act and, in the past, has conducted an NRDA, including a restoration plan, for the Athos Oil Spill, which contributed to habitat restoration at the newly created Lardners Point Park in Philadelphia along the Delaware River. Additional restoration is planned for the John Heinz Wildlife Refuge. Information on NOAA Damage Assessment Projects by state can be found at the DARRP Northeast website. (www.darrp.noaa.gov/northeast/index.html)
- Under the Coastal Zone Management Act, NOAA oversees and provides funding for a number of programs that assist states in managing, preserving, and developing their marine and coastal resources. Pennsylvania, New Jersey, and Delaware all have coastal programs. (<https://coast.noaa.gov/>)

- The NOAA Restoration Center is devoted to restoring the nation’s coastal, marine, and migratory fish habitat. Examples of projects that could be implemented in the Delaware River are tidal wetland and shoreline restoration projects, dam removals, and fish habitat projects. (www.habitat.noaa.gov/restoration/aboutrc/index.html)

The Urban Delaware River was also recently nominated as a potential Habitat Blueprint Site. Although not ultimately selected, the application was reviewed, ranked relatively highly, and will be resubmitted at the next opportunity.

(<http://www.habitat.noaa.gov/habitatblueprint/index.html>)

➤ **U.S. Army Corps of Engineers (USACE)**

- The U.S. Army Corps of Engineers manages one of the largest federal environmental missions: restoring degraded ecosystems, constructing sustainable facilities, regulating waterways, managing natural resources, and cleaning up contaminated sites from past military activities. The organization’s regulatory authority is a result of Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act. USACE works in partnership with other federal and state agencies and non-governmental organizations to carry out ecosystem restoration within the UWFP project area using several different authorities, noted below.
- **General Investigations** – Large General Investigation studies require specific congressional authorization and a non-federal cost-sharing sponsor, such as a state, county, or local government, or a qualified non-profit organization. The Philadelphia Waterfront Study is a potential Feasibility Study on the Pennsylvania side of the Delaware River from the Ben Franklin Bridge north to the Poquessing Creek and the contributing watersheds of the Tookany/Tacony-Frankford Creek, Pennypack Creek, and Poquessing Creek, in Montgomery, Bucks, and Philadelphia Counties. USACE completed the Reconnaissance Study in 2011, which is an initial assessment to determine whether there is federal interest in pursuing a study. A cost-sharing non-federal sponsor is needed to begin the Feasibility Study, a comprehensive analysis which would identify and analyze opportunities for wetland creation or enhancement, riparian buffer creation or enhancement, streambank restoration and stabilization, dam removal, and construction of fish passage within the watershed. (www.nap.usace.army.mil/Missions/Factsheets/FactSheetArticleView/tabid/4694/Article/7383/delaware-river-waterfront-philadelphia-pa.aspx)
- **Section 566** – Section 566 of the Water Resources Development Act (WRDA) of 1996, as amended, allows USACE to provide design and construction assistance to non-federal interests for carrying out water-related environmental infrastructure, and resource protection and development projects in southeastern Pennsylvania, including projects for wastewater treatment and related facilities, water supply and related facilities, surface water resource protection and development, and environmental restoration. Several stream restoration projects have been completed under this authority with the Philadelphia Water Department serving as the cost-sharing non-federal sponsor, including the Cobbs Creek Watershed Habitat Restoration Project, which was recently constructed and the Cobbs Creek Fish Passage Restoration Project, which is in the design phase. (www.nap.usace.army.mil/Missions/Factsheets/FactSheetArticleView/tabid/4694/Article/7628/southeastern-pennsylvania-environmental-improvement-program.aspx) (www.nap.usace.army.mil/Missions/CivilWorks/SoutheasternPAEnvironmentalImprovement.aspx)

- **Continuing Authorities Program (CAP)** – Smaller studies that fit within an existing congressional authorization require a cost-sharing non-federal sponsor, such as a state, county, or local government, or a qualified non-profit organization to implement projects under the Continuing Authorities Program (CAP). There are two authorities that allow for ecosystem restoration, Section 1135 and Section 206. In addition, Section 14 and Section 204 are related to river restoration, but not limited to ecosystem restoration.

A cost-sharing non-federal sponsor is needed for all CAP projects. The non-federal sponsor can be a state/local/regional agency or government, or, in the case of Sections 206 and 1135, a non-profit organization. A prospective non-federal sponsor should submit a written request for a study/project. The Army Corps will initiate a preliminary investigation when federal funds become available. During the preliminary investigation, federal interest and the scope of effort for the proposed project will be determined.

Although there are not any ongoing Section 1135 or Section 206 projects strictly within the Delaware River Urban Waters Federal Partnership study area, there is an active Section 1135 project just north of the study area in Trenton, NJ. The Lower Assunpink Creek Ecosystem Restoration is a daylighting project in the design phase.

<http://www.nap.usace.army.mil/Missions/CivilWorks/LowerAssunpinkCreekEcosystemRestoration.aspx>

The Section 206 authority was used to build the Cooper River Fish Ladder in Haddonfield (Camden County, NJ) in 2000. The project opened 4 miles of stream to migratory fish, specifically targeting blueback herring and alewife. The Camden County Parks Department served as the non-federal cost-sharing sponsor.

The Section 1135 authority was used to build the Fairmount Dam Fishladder along the Schuylkill River in Philadelphia in 2009. Along with four similar projects upstream, this restoration project opened up 100 miles of migratory fish passage for shad. The Philadelphia Water Department served as the non-federal cost-sharing sponsor.

Specific CAP authorities are listed and explained below:

- **Section 1135** of the Water Resources Development Act of 1986, as amended, provides authority for the U.S. Army Corps of Engineers to investigate and construct project modifications for improvement of the environment. This authority is applicable where degradation is attributable to water resource projects previously constructed, funded, or operated by the Corps. Project modifications are limited to a federal cost of \$5-million per project. The sponsor is required to contribute 25% of the total project cost. In-kind services are limited to 80% of the sponsor's share of project costs for design and implementation.
- **Section 206** of the Water Resources Development Act of 1996, as amended, provides authority for the Corps to investigate and construct projects for aquatic ecosystem restoration. There is no connection to a previous USACE project under this authority. These projects are limited to a federal cost of \$5-million per project. The sponsor is required to contribute 35% of the total project cost. In-kind services can be 100% of the sponsor's share of project costs for design and implementation.
- **Section 14** of the Flood Control Act of 1946 (PL 79-526), as amended, allows emergency streambank and shoreline protection for public facilities (such as roads, bridges, hospitals, schools, and water/sewage treatment plants) that are in imminent danger of

failing. The non-federal sponsor is responsible for a minimum of 35% to a maximum of 50% of total project costs and the federal government is responsible for the remainder of total project costs. These projects are limited to a federal cost of \$1.5-million per project.

- **Section 204** of the WRDA 1992, as amended, Regional Sediment Management & Beneficial Uses of Dredged Material, provides for the use of dredged material from new or existing federal projects to protect, restore, or create aquatic and ecologically related habitats, including wetlands. The cost share is 65% federal and 35% non-federal of the incremental cost above the least cost method of dredged material disposal consistent with engineering and environmental criteria. Cooperation in the preparation of comprehensive statewide or regional sediment management plans may be carried out at federal expense. Projects for the purposes of protection, restoration, or creation of aquatic and ecologically related habitat, the costs of which do not exceed \$750,000 and which are located in a disadvantaged community, may be carried out at federal expense.
- **Section 22 of the Water Resources Development Act (WRDA) of 1974**, as amended, provides authority for the U.S. Army Corps of Engineers to assist the states, local governments, and other non-federal entities, in the preparation of comprehensive plans for the development and conservation of water and related land resources. The program can encompass many types of studies, dealing with water resources issues. Studies are cost-shared with 50 percent of the costs (including in-kind services) furnished by a local sponsor and 50 percent funded by the Army Corps. Total study costs typically range from \$25,000 to \$750,000. Implementation of any recommendations is the responsibility of the local sponsor. State and local government officials who are interested in obtaining planning assistance under this program can contact the U.S. Army Corps of Engineers Philadelphia District office at 215-656-6585 for further details.

An ongoing Section 22 study within the UWFP area is the “Effects of Flow Dynamics, Salinity and Water Quality on Key Biological Populations in the Delaware Estuary.” This study is being cost-shared by the South Jersey Port Corporation and consists of updating a hydrodynamic model to examine flow dynamics, salinity, and water quality as related to Eastern oyster, Atlantic sturgeon, and shortnose sturgeon in the Delaware Estuary. The model will be used to assess the impacts of salinity variance to estuarine water users and the information gathered would be useful in assessing low-flow augmentation for the Delaware River and Bay, for natural resource managers, and shipping and port users.

<http://www.nap.usace.army.mil/Missions/Factsheets/FactSheetArticleView/tabid/4694/Article/6554/section-22-planning-assistance-to-states-de-nj-effects-of-flow-dynamics-salinit.aspx>

- **Estuary Habitat Restoration Program** – Another authority that could facilitate ecosystem restoration in the Delaware River Urban Waters Federal Partnership study area is the Estuary Habitat Restoration Program, authorized by the Estuary Restoration Act of 2000 (PL 106-457, Title I), as amended. This program is similar to a grant and projects are administered by USACE. Non-federal cost-sharing sponsors must submit a proposal to the program that will be reviewed by the Estuary Habitat Restoration Council. Interested applicants should check the website and Federal Register for the announcement for applications.
<http://www.usace.army.mil/Missions/Environmental/EstuaryRestoration.aspx>
- **Floodplain Management Services (FPMS)** – Authorized by the Flood Control Act of 1960, this program provides technical services and planning guidance needed to support effective

floodplain management. The purpose of the program is to provide knowledge to the public and state and local officials about flood hazards and actions that can be taken to reduce flood risk. This program develops or interprets site-specific data on obstructions to flood flows; flood formation and timing; flood depths or stages; floodwater velocities; and the extent, duration, and frequency of flooding. On a larger scale, the FPMS program provides assistance and guidance on all aspects of floodplain management planning. Technical scopes range from helping a community identify present or future floodplain areas and related problems to a broad assessment of the various remedial measures that can be effectively used. Types of technical services may include, but are not limited to:

- Floodplain delineation
- Hydrologic and hydraulic modeling and analysis
- Flood hazard evaluation
- Flood warning and preparedness
- Flood proofing analysis
- Stormwater analysis
- Flood-related outreach materials

The FPMS program is a national program funded annually by Congress. Funding is proportioned to USACE districts nationwide. For more information, please contact the U.S. Army Corps of Engineers Philadelphia District office at 215-656-6586.

➤ **U.S. Fish and Wildlife Service (FWS)**

- The Fish and Wildlife Service has primary trust responsibility for the nation’s fish and wildlife resources – specifically, threatened and endangered species, migratory birds, inter-jurisdictional fish, some marine mammals, and their supporting habitats (including Service lands). The Service’s natural resource protection responsibilities are conducted under the authority of numerous federal laws. Among the enabling laws are:
 - Clean Water Act (33 U.S.C. 1251 et seq.)
 - Coastal Zone Management Act (16 U.S.C. 1451-1464)
 - Coastal Wetlands Planning and Protection Act (16 U.S.C. 3951-3956)
 - Comprehensive Environmental Response Compensation and Liability Act (CERCLA/Superfund) (42 U.S.C. 9601-9675)
 - Emergency Wetlands Resources Act (16 U.S.C. 3901)
 - Endangered Species Act (16 U.S.C. 1531)
 - Estuary Protection Act (16 U.S.C.)
 - Fish and Wildlife Coordination Act of 1934 (16 U.S.C. 661-667e)
 - Migratory Bird Treaty Act (MBTA) (16 U.S.C. 703-712)
 - North American Wetlands Conservation Act (16 U.S.C. 4401-4413)

Under the authority of these federal laws the Service consults with other federal agencies with similar responsibilities to develop protection strategies for public resources.

- **The Fish and Wildlife Service’s Coastal Program** works in these urban areas providing technical and financial assistance to watershed-scale, long-term, collaborative natural resource conservation and protection planning efforts and to on-the-ground projects. Funding and technical assistance are also available for habitat restoration on private lands through the Partners for Fish and Wildlife Program. In addition, the Service’s Division of Fisheries’ Delaware River Coordinator works with the four Delaware River Watershed states (Pennsylvania,

Delaware, New Jersey, and New York), providing assistance in all interstate activities related to anadromous fish management and restoration as well as activities related to management and restoration of other inter-jurisdictional species of significance which occur in the Delaware River and its tributaries. The activities of the Delaware River Coordinator are determined by the Delaware River Basin Fish and Wildlife Management Cooperative (Co-op) which was established by Charter in 1972. The Co-op is responsible for developing unified approaches to manage aquatic resources of interstate significance in the Delaware River.

The Co-op members include the U.S. Fish and Wildlife Service, the NOAA National Marine Fisheries Service, the Delaware Division of Fish and Wildlife, the Pennsylvania Boat Commission, the New Jersey Division of Fish and Wildlife, and the New York Division of Fish, Wildlife and Marine Resources. The Coordinator serves as the Secretary to the Co-op and acts as a liaison and technical specialist primarily on aquatic issues to the National Park Service, the Delaware River Basin Commission, the Delaware Estuary Program, and the U.S. Fish and Wildlife Service's Delaware Bay Estuary Project. Examples of issues of concern related to the aquatic resources of the Delaware Basin include habitat restoration, water quality, dredging impacts, impacts of water intakes (impingement and entrainment of fishes), flow requirements, fish passage, and control and management of invasive species.