

LISFF 2010 Large and Small Grants

PROJECT ABSTRACT

Project Title: Pond Lily Dam Removal Planning and Design Project (CT), #23994

Recipient: Town of Woodbridge

LISFF Award: \$60,000 (EPA and FWS)

Matching Funds: \$76,050

Project Costs: \$136,050

Project Area: West River, New Haven, Connecticut

The Town of Woodbridge will complete the planning and design work needed to remove Pond Lily Dam in the West River, New Haven, CT. Removal of the dam will increase fish passage to 1.7 river miles and to 60 acres of spawning habitat for native fish.

The first phase of the project will involve conducting engineering studies to analyze the impact of removing the dam and to produce designs that aim to provide river habitat for native fish and improve water quality in the pond and downstream. The second phase of the project will be to secure permits and implement preferred designs in consultation with the New Haven Land Trust (owners of the dam and pond) and other entities including the Connecticut Department of Environmental Protection, the City of New Haven and the State of Connecticut Historic Preservation Office. Removing Pond Lily Dam is part of a larger effort to restore the West River including renovation of tide gates near the mouth of the river to restore migratory fish passage in the lower reaches of the river. Together, these two projects will expand the scope of fish habitat for particularly alewife, blueback herring, American eel and sea lamprey native to this river.

PROJECT ABSTRACT

Project Title: Wallace Dam Fishway Project, #23801

Recipient: The Connecticut Fund for the Environment, Inc.

LISFF Award: \$95,699 (EPA/FWS)

Matching Funds: \$213,788

Total Project Costs: \$309,487

Project Area: Quinnipiac River, Wallingford, Connecticut

The Connecticut Fund for the Environment, Inc. will install a Denil fishway across Wallace Dam on the Quinnipiac River in Wallingford.

For the last 100 years the Wallace Dam has blocked migratory fish passage on the Quinnipiac River.

Native fish such as alewife, American and gizzard shad, sea-run brown trout and blueback herring have been observed at the base of the dam but not above it. With the installation of the fishway, the fish will be able to pass over Wallace Dam and access an additional 8 miles of river habitat to the base of the Southington Dam. The Denil fishway constructed around the northwest end of the dam is approximately 120 feet in length by four feet in width and will cut through the embankment associated with Route 150. The entire facility will include a counting house where fish will be monitored on video recordings to be analyzed by local volunteers; public parking; and an Americans with Disabilities accessible public viewing area all providing opportunities for community participation and education.

PROJECT ABSTRACT

Project Title: Pequonnock River Apron Fish Passage Project, #24320

Recipient: City of Bridgeport

LISFF Award: \$32,833.61 (EPA/FWS)

Non-Federal Funds: \$27,411.39

Matching Funds: \$43,643

Total Project Costs: \$103,888

Project Area: Pequonnock River, Bridgeport, Connecticut

The City of Bridgeport will install a step pool fish ladder through an existing concrete erosion apron installed in the Pequonnock River which is impeding upstream fish passage. Installation of the fish ladder will remedy the problem and restore five miles of upstream river passage for migrating and spawning native fish -- alewife and blueback herring.

At the time, Rout 8 and 1 in Bridgeport were realigned a concrete apron was installed across the Pequonnock River to reduce erosion. As a result the natural, deep channel flow of the river was replaced with shallow sheet flow across the apron. At high river flows, fish moving upstream across the apron must swim on their sides causing injury or death. At low river flows, most fish cannot pass at all. Predators, such as Black-Crowned Night Herons, pick off fish as they struggle to get over the apron. The project will install a step pool fish ladder comprised of a series of weirs and concrete pools through the center of the apron. The pools are designed to allow fish to safely navigate the apron at all flow levels while continuing control erosion. Fish will then be able to use the steep-pass fishway about 0.5 miles upstream which allows them to access 33 acres of open water at Bunnell's Pond. Located in a highly urbanized river corridor, the project will also improve natural freshwater river flow into Bridgeport Harbor and Long Island Sound.

PROJECT ABSTRACT

Project Title: Anguilla Brook Fish Passage Restoration Project, #23888

Recipient: Avalonia Land Conservancy, Inc.

LISFF Award: \$75,000 (EPA/FWS)

Non-Federal Funds: \$47,700
Matching Funds: \$40,440.00
Total Project Costs: \$163,140

Project Area: Anguilla Brook, North Stonington, Connecticut

The Avalonia Land Conservancy, Inc. will design a simple pool and weir fishway modifying the Wequetequock boulder dam located at head-of-tide; and completely remove the Rutan dam located a mile upstream to restore access to Anguilla Brook's entire 13-mile historic range of spawning habitat for native alewife, blueback herring, American eel, and trout.

The existing habitat above Rutan Dam is a shallow rocky pond with few plants in-stream or on the stream bank. The project will involve removing the spillway and a portion of the earthen dam. Adjacent banks will be stabilized and planted with native vegetation. With the dam removal, fish and wildlife will be able to access extensive natural, forested wetland found below the dam. The Wequetequock dam is the site of a 1600s gristmill. The dam millrace still exists at the northwestern side. Modifying an existing channel on the southeastern side of the large boulder that is the dam will provide passage for fish. The Connecticut Department of Environmental Protection, The Nature Conservancy and volunteers from Avalonia Land Conservancy will construct the Wequetequock fishway using stone salvaged from the Rutan dam removal.

PROJECT ABSTRACT

Project Title: The NY/CT Long Island Sound Eelgrass Restoration Project, #24369

Recipient: Cornell Cooperative Extension Association of Suffolk County

LISFF Award: \$30,000 (EPA)
Non-Federal Funds: \$109,566.56
Matching Funds: \$23,606
Total Project Costs: \$173,172

Project Area: Clinton Harbor, Griswold/Hatchett Point, Two Tree Island/Bartlett Reef, Avery Point/Pine Island, Noank Harbor/Esker Point, and Mystic Harbor/Lobster Cove, Connecticut; and Old Field Point, Duck Pond Point, Goldsmith's Inlet, and St. Thomas Point, New York

Cornell Cooperative Extension of Suffolk County will restore 1.5 acres of historic eelgrass beds at seven sites in New York and Connecticut with the aim of ensuring survival of this important marine habitat in the face of climate change, sea-level rise and other threats.

With prior funding provided by the Long Island Sound Futures Fund, Cornell Cooperative Extension successfully completed three eelgrass restoration projects at St. Thomas Point and Terry Point in Southold, New York. Cornell will now collaborate with the University of Connecticut to build on this work and expand into Connecticut waters. This innovative project involves gathering by hand healthy eelgrass shoots from existing underwater meadows; and "rock planting" and/or "sand bag" planting adult shoots. Rock planting uses stones to anchor groups of shoots in place allowing them to become

rooted. The sand bag method is identical to the rock method except that it uses small burlap bags filled with local sand to act as anchors. If used properly, the bags last for approximately 12 months ensuring that the eelgrass shoots are protected and well-rooted before the burlap degrades releasing the sand into the surrounding bottom leaving no trace. Planting growth, reproduction and survival will be monitored by underwater drop cameras, snorkeling and SCUBA.

PROJECT ABSTRACT

Project Title: Rodman's Neck Coastal Forest Restoration, #23902

Recipient: City of New York Parks and Recreation Department

LISFF Award:	\$50,000 (EPA/FWS)
Non-Federal Funds:	\$100,000
Matching Funds:	<u>\$150,000</u>
Total Project Costs:	\$300,000

Project Area: Pelham Bay Park, Bronx, New York

The City of New York Parks and Recreation Department will restore approximately 65 acres of parkland in Pelham Bay Park replacing invasive exotic vegetation with native forest.

More than three times the size of Central Park, Pelham Bay Park is New York City's largest park property, including a saltwater shoreline that hugs Long Island Sound. Most of Pelham Bay Park is a Forever Wild Nature Preserve. The Park is comprised of mature oak forest, meadows, salt marsh and rocky shoreline. More than 400 species of wildlife make the Park home and migratory birds use it as an important stopover point along the Atlantic Flyway. Surrounded by some of the city's poorest neighborhoods the Park is a natural oasis for urban residents.

Remnant forests comparable to those to be restored at Pelham Bay Park are often overrun with invasive plants reducing habitat for many species. The project will remove these invasive plants and use park staff and volunteers to plant 10,000 trees such as native oaks, black birch, American sycamore and white pine; and 5,000 native shrubs like elderberry and dogwood.

PROJECT ABSTRACT

Project Title: Lord Cove Coastal Forest and Stream Restoration, #24250

Recipient: The Connecticut Agricultural Experiment Station

LISFF Award:	\$40,091 (EPA)
Non-Federal Funds:	\$20,000
Matching Funds:	<u>\$48,792</u>
Total Project Costs:	\$108,883

Project Area: Lord Cove, Lower Connecticut River, Lyme, Connecticut

The Connecticut Agricultural Experiment Station will restore 32-acres of coastal forest and a 4,000-ft stream corridor adjacent to Lord Cove on the lower Connecticut River to improve wildlife habitat and reduce erosion by eradicating invasive plants.

The Lord Cove watershed on the lower Connecticut River is a recognized Stewardship site in the Long Island Sound Study. A collaborative team from The Connecticut Agricultural Experiment Station, The Nature Conservancy, Audubon Connecticut, and Lord Creek Farm will eradicate a nearly continuous understory of invasive shrubs and vines, especially Japanese barberry at the site. Japanese barberry forms dense thickets which can inhibit native plant populations, increase sediment and nutrient loading into adjacent streams, and is associated with increased risk of Lyme disease. The project will use an innovative two-stage procedure to control Japanese barberry in a single season while minimizing soil disturbance and protecting existing native plants.

PROJECT ABSTRACT

Project Title: Acquisition of Former Griswold Airport in Madison, CT, #23932

Recipient: The Trust for Public Land

LISFF Award:	\$260,000 (EPA)
Non-Federal Funds:	\$0
Matching Funds:	<u>\$1,000,000</u>
Total Project Costs:	\$1,260,000

Project Area: Madison, Connecticut

The Trust for Public Land will purchase and permanently protect 17.4 acres of tidal wetlands, grasslands, and coastal forest at the 42-acre former Griswold Airport.

The protected land is alongside Hammonasset Beach State Park, Connecticut's most popular state park, and adjacent to the Hammonasset/ Hammock River estuary, which is among the most productive in the state. Protecting the significant and unique natural features of Griswold Airport will provide a buffer for the wildlife and plant species that thrive in the estuary, while also ensuring opportunities for the landward migration of marsh habitat in the face of sea level rise. The Griswold property includes prime wetland habitat and coastal forest, more than 400 feet of frontage on the Hammonasset River, and a 2,000-foot salt marsh border with the Hammonasset State Park. As part of the Atlantic Flyway, the Griswold land is an important migration stopover and feeding habitat for birds, recognized by Audubon Connecticut as an "Important Bird Area" of global significance. The land also serves as a key breeding ground for finfish in the Hammonasset River, which leads out to Long Island Sound. Finally, the site will offer recreation opportunities. People will be able to walk trails along the river and view a variety of birds, which will be drawn to restored grasslands.

PROJECT ABSTRACT

Project Title: Conscience Bay Stormwater Control & Buffer Enhancement (NY), #24052

Recipient: Village of Old Field

LISFF Award:	\$60,000 (EPA)
Matching Funds:	<u>\$90,000</u>
Total Project Costs:	\$150,000

Project Area: Conscience Bay, Old Field, New York

The Village of Old Field will design a suite of green infrastructure practices and enhance upland buffer habitat to reduce polluted stormwater runoff from Old Field Road which currently discharges directly into Conscience Bay and the Long Island Sound.

Conscience Bay has one of the most restricted tidal flow exchanges of any of the North Shore's major bays making this project to prevent runoff from roads and related contaminants from entering the estuary of great significance to restoration and protection of the health and living resources of the Long Island Sound.

PROJECT ABSTRACT

Project Title: Goldsmith WATERWASH Stormwater Remediation and Outreach, #24140

Recipient: Group for the East End

LISFF Award:	\$30,000 (EPA/FWS)
Non-Federal Funds:	\$30,000
Matching Funds:	<u>\$207,966.00</u>
Total Project Costs:	\$267,966

Project Area: Goldsmith Inlet, Village of Peconic, Town of Southold, New York

The Group for the East End will design a retention wetland using native plants to reduce nonpoint source stormwater pollution and restore wildlife habitat into Goldsmith Inlet.

Goldsmith Inlet is a unique and important ecosystem on Long Island Sound. Goldsmith Inlet and Pond are made up of tidal wetlands and a mosaic of maritime dunes, maritime freshwater interdunal swales, wetlands, and wooded uplands. The habitat is bordered by residential development as well as undeveloped vegetated dunes. This highly diverse area provides important nesting and feeding habitat for a variety of migratory birds. Public recreation and fish and wildlife continue to be affected by water pollution. This project will improve water quality by integrating green infrastructure tools including design of a bioretention wetland that filters stormwater runoff. The project involves using science and public outreach to improve water quality.

PROJECT ABSTRACT

Project Title: THE POINT's South Bronx Community Green Roof, #24257

Recipient: THE POINT Community Development Corporation

LISFF Award:	\$69,206 (EPA)
Non-Federal Funds:	\$62,044
Matching Funds:	<u>\$199,793</u>
Total Project Costs:	\$331,043

Project Area: Garrison Avenue, Hunt's Point, Bronx, New York

THE POINT Community Development Corporation will convert the main roof of its facility to an extensive green roof and convert a smaller portion of its roof to an intensive green roof to reduce polluted stormwater and function as a demonstration area and outdoor classroom. THE POINT's extensive green roof will reduce runoff by a minimum of 50% (150,475.5 gallons/year in the first year). The roof is projected to reduce polluted roof runoff by 100% (300,951 gallons/year) over the long-term.

The project will have unsurpassed visibility for a green roof project as it will be in full view of thousands of vehicle occupants that transit the adjacent elevated Bruckner Expressway each day. The green roof will function as an easily accessible demonstration area and outdoor classroom. It will help improve and protect the Long Island Sound by reducing the volume of polluted water entering the Bronx River through combined sewer overflows. The project will help generate awareness of low-impact development strategies among local residents and business owners, and serve to educate, involve and strengthen the Hunts Point community through its example of sustainable development.

PROJECT ABSTRACT

Project Title: Town of Mamaroneck Stormwater Quality Control Grant, #24420

Recipient: Town of Mamaroneck

LISFF Award:	\$63,000 (EPA)
Matching Funds:	<u>\$82,803</u>
Total Project Costs:	\$145,803

Project Area: Town of Mamaroneck, New York

The Town of Mamaroneck will retrofit 50 catch basins to remove or reduce large 75% of sediment, suspended solids, oil and grease, trash, hydrocarbons, bacteria, nitrogen and other pollutants from storm drains before pollutants enter the Long Island Sound. As a result of the project 12,773,374.9 gallons of stormwater will be treated annually.

The entire Town of Mamaroneck is in the coastal area of Long Island Sound. Oil, grease, sediment, and litter from streets, parking lots, driveways, and other impermeable surfaces runs down roads into the nearest street catch basin. Pollution then travels, untreated, through storm drains to the closest stream and out to the Long Island Sound. The area where catch basins will be retrofit flow directly into Long Island Sound. Retrofitting these targeted catch basins will reduce and remove a large part of

the problem and result in improved water quality in the Larchmont and Mamaroneck harbors, and at Town of Mamaroneck municipal and private beaches.

PROJECT ABSTRACT

Project Title: Mill River Stormwater Retention & Treatment Infrastructure, #24191

Recipient: City of Stamford, Connecticut

LISFF Award: \$500,000 (EPA)

Matching Funds: \$1,806,230

Total Project Costs: \$2,306,230

Project Area: Mill River, City of Stamford, Connecticut

The City of Stamford will improve water quality and restore and protect degraded riparian areas on the lower Rippowam (Mill) River watershed, which drains 37.5 square miles from the New York border to Long Island Sound.

Water quality is impaired by petrochemical runoff, mainly hydrocarbons, from impervious surfaces. Water quality is also degraded by periodic flooding because of the low level of existing stormwater retention. The project will construct four stormwater swales planted with native vegetation to capture the first flush from rain events over the 11.5 acre site. In addition, an engineered treatment unit will filter out contaminants transported in the first inch of rainfall. Treated stormwater will then be released into the river. Pre- and post monitoring will be conducted to quantify the reduction in contaminants. Important species, including shellfish, river herring, and eels will benefit from the reduction of hydrocarbons and sediment flowing into the Mill River.

PROJECT ABSTRACT

Project Title: Seaweed Aquaculture for Bioextraction of Nutrients from LIS, #24266

Recipient: University of Connecticut, Department of Ecology and Evolution, Biology and Marine Sciences

LISFF Award: \$110,211 (EPA)

Non-Federal Funds: \$13,789

Matching Funds: \$61,748

Total Project Costs: \$185,748

Project Area: Bronx River, Bronx, New York and Fairfield County, Connecticut

The project will pilot the use of seaweed to “bio” extract pollution and then measure reductions in pollution in New York at the mouth of the Bronx River and Connecticut off the coast of Fairfield.

Reducing point and nonpoint sources of pollution from is a challenging problem especially in urban

areas. This project will explore how growing and then harvesting cultured seaweed and naturally occurring seaweed in polluted waterways might reduce nutrients in coastal waters. The project will grow seaweed using traditional commercial aquaculture techniques as well as growing and harvesting naturally growing seaweed from aquaculture structure in the Bronx River. The project will then evaluate the amount of pollutions removed from the seaweed grown and harvested using aquaculture techniques; and then a compare amount of bioextraction resulting from aquacultured seaweed against the amount of bioextraction resulting from naturally occurring seaweed. Students from the Bridgeport Regional Aquaculture Science and Technology Education Center (BRASSTEC) will help grow seaweed for the project using aquaculture techniques. BRASSTEC is a public secondary school with a mission to provide highly rigorous marine science and technology instruction wrapped around “aquaculture.” The school is one of Connecticut’s 19 vocational agriculture centers and provides instruction to students from seven school districts. Rocking the Boat will help monitor the bioextractive potential of naturally occurring seaweed in the Bronx River. Rocking the Boat is a non-profit that provides youth and community members around the Bronx with scientifically robust on-water education programs.

PROJECT ABSTRACT

Project Title: Not a Bridge over Troubled Waters – a Superswale for Derby, #23872

Recipient: Valley Council of Governments

LISFF Award: \$30,073 (EPA)

Matching Funds: \$325,000

Total Project Costs: \$355,073

Project Area: O’Sullivan’s Peninsula, Housatonic River, City of Derby, Connecticut

The Valley Council of Governments will construct a ½ acre rain garden and bioremedial swale to treat highway, bridge, boat ramp and parking lot runoff at O’Sullivan’s Peninsula on the Housatonic River; and will develop educational signs and programs about the water quality problems the project is designed to address.

The project expands an existing simple swale and adds a rain garden at the boat ramp to treat runoff from roads and lots. The design aims to capture suspended solids, oil and grease, trash, hydrocarbons, bacteria, sand, road salt and other pollutants in the swale at the edge of the parking lot, in a series of grates where the swale runs under the walkway as well as within the bioretention rain garden. Contaminants will be further reduced by directing water toward the large swale and by retaining pollutants in soils and through uptake by plants. There are many opportunities to educate the public about the project because the site is an active public recreation area with riverbank fishing, a greenway, and boat ramp. Information about the project will also be offered in local public schools.

PROJECT ABSTRACT

Project Title: Habitat Management Planning for 3 LISS Stewardship Areas (CT), #23603

Recipient: University of Connecticut, Sea Grant

LISFF Award:	\$20,858.65 (EPA)
Non-Federal Funds:	\$12,044
Matching Funds:	<u>\$4,463</u>
Total Project Costs:	\$37,365

Project Area: Goshen Cove, Waterford, Lower Connecticut River, Essex, and Hammonasset Beach, Madison, Connecticut

The University of Connecticut, Connecticut Sea Grant will develop habitat management plans for three Long Island Sound Study Stewardship areas.

Recognizing that continued growth will put further pressure on the Sound's remaining natural areas, the Long Island Sound Study (LISS) established the Long Island Sound Stewardship Initiative to protect the diverse plants and animals that make their home in or near the estuary. The Stewardship Initiative also seeks to ensure that the Sound's citizens will continue to have access to the natural seascapes that make the area an enjoyable place to live. There are 33 Stewardship areas around the Sound with significant recreational and ecological values. The project will prepare plans for three of those Stewardship Areas focused on identifying priority habitats and species, and special management concerns. The planning template will become part of a web-based tool on habitat management planning. The tool will not only contain the plans as examples for other conservation groups, but will also include information on terrestrial coastal habitats, specifically, coastal forests, coastal grasslands, and beach/dune habitat, with management issues common to these habitats. Because management and monitoring go hand in hand, standardized vegetation monitoring procedures for these priority habitat types will be developed as part of this project and be available as part of the on-line tool.

LISFF AWARD: PROJECT ABSTRACT

Project Title: Beach-nesting Bird Stewardship at Long Island Sound Study Sites on Eastern Long Island, #24331

Recipient: National Audubon Society, Inc. (Audubon New York)

LISFF Award:	\$25,833 (FWS)
Matching Funds:	<u>\$11,527</u>
Total Project Costs:	\$37,360

Project Area: Jamesport-Mattituck Creek, Plum Island, Gull Island, and Fishers Island, New York

National Audubon Society, Inc. will address beach-nesting bird monitoring and stewardship needs for remote yet critical breeding sites for the Piping Plover and Least Tern on eastern Long Island.

For over 20 years, conservation organizations and agencies on Long Island have conducted protective stewardship and monitoring of priority beach-nesting birds during the breeding months of April through August. While management activities and stewardship guidelines are in place to address threats to beach-nesting birds at sites across Long Island, some areas do not have consistency in year to year monitoring responsibilities due to their remote locations and/or access issues. This project will

expand active engagement at these sites by working with landowners and stakeholders to increase protection of and reduce threats to beach-nesting birds during the breeding season.

PROJECT ABSTRACT

Project Title: Low Impact Development for Long Island Sound – Lower Housatonic Valley, #24274

Recipient: Housatonic Valley Association

LISFF Award: \$34,863 (EPA)

Matching Funds: \$40,000

Total Project Costs: \$74,863

Project Area: Lower Housatonic and Naugatuck River and Estuary municipalities including: Monroe, Newtown, Southbury, Oxford, Seymour, Ansonia, Derby, Shelton, Stratford, and Brookfield, Connecticut

The Housatonic Valley Association will expand Low Impact Development (LID) “green infrastructure” activities in 10 coastal communities to reduce pollution flowing into the Housatonic River and Long Island Sound.

This project is an education and training initiative proposes to bring green infrastructure experts together with land use leaders and private developers in ten municipalities. Working with partners, HVA will use GIS modeling, organize forums, produce LID Toolkit, and work with boards and commissions to incorporate LID into land use regulations, ordinances and management. The aim is to see improved land use regulations and projects that reduce polluted runoff in five of the ten targeted communities.

PROJECT ABSTRACT

Project Title: Oyster Bay/Cold Spring Harbor Protection Committee Creation, #23747

Recipient: Town of Oyster Bay

LISFF Award: \$60,000 (EPA)

Matching Funds: \$14,000

Total Project Costs: \$74,000

Project Area: Town of Oyster Bay, Town of Huntington, Village of Laurel Hollow Village of Muttontown, Village of Old Brookville, Village of Mill Neck, County of Nassau Village of Cove Neck, County of Suffolk, Village of Brookville, Village of Upper Brookville, Village of Bayville, City of Glen Cove, Village of Lattintown, Village of Oyster Bay Cove Village of Lloyd Harbor, Village of Matinecock, and Village of Centre Island, New York

The Town of Oyster Bay will create an Oyster Bay/Cold Spring Harbor Protection Committee consisting of the 18 municipal entities in this 40 square mile watershed to help protect and enhance the water quality of these harbors.

While the Oyster Bay/Cold Spring Harbor Complex is the cleanest estuary in the western Long Island Sound, the watershed has been subject to increasing environmental threats in recent years. These threats include illegal dumping, polluted stormwater, development pressure and impairments to shell fishing, public bathing, fish consumption, habitat/hydrology, aquatic life and recreation. In order address these threats; the Town will form a watershed-wide collaborative that addresses environmental issues that cross municipal boundaries. With a protection committee composed of these municipalities, multi-jurisdictional issues can be brought to the table for discussion and solutions identified.

PROJECT ABSTRACT

Project Title: Tankerhoosen Watershed III - Land Use Regulatory Control, #24199

Recipient: Friends of the Hockanum River Linear Park of Vernon, Inc.

LISFF Award: \$26,000 (EPA)

Matching Funds: \$29,000

Total Project Costs: \$55,000

Project Area: Tankerhoosen Watershed a subregional basin of the Hockanum River, Vernon, Connecticut

The Friends of the Hockanum River Linear Park of Vernon, Inc. will draft Low Impact Development (LID) green infrastructure regulations and create a stormwater design manual for incorporation into local land use regulations to detain runoff close to its source within the Tankerhoosen Watershed.

The Tankerhoosen Watershed is a small, high quality inland watershed of the Long Island Sound. Development pressure in the upper watershed region is a major threat to the long-term health of the watershed. Water quality in the lower region is declining and cited as impaired by the Connecticut Department of Environmental Protection. The Tankerhoosen Watershed Management Plan was prepared under previous Long Island Sound Futures Fund grant award to address these threats. The project will implement key recommendations of the watershed management plan which are to draft Low Impact Development (LID) regulations and an accompanying stormwater design manual for incorporation into local land use regulations. Implementation of the project will encourage environmentally sensitive land use planning and stormwater runoff design by managing rainfall where it lands. The project partners are the Vernon land use commissions (Conservation, Planning & Zoning, and Inland Wetlands), the Vernon Planning & Engineering Department, and the North Central Conservation District, with support from Belding Wildlife Trust and Rivers Alliance of Connecticut.

PROJECT ABSTRACT

Project Title: Stormwater Management Priorities: Roadmap for Rural Towns, #23816

Recipient: Eastern Connecticut Resource Conservation & Development Area, Inc.

LISFF Award: \$37,926 (EPA)

Matching Funds: \$38,046

Total Project Costs: \$75,972

Project Area: Towns of Salem, Lyme, and East Haddam, Connecticut

The Eastern Connecticut Resource Conservation & Development Area, Inc. will prioritize stormwater management based on infrastructure condition, land-uses and town resources.

The project will conduct a comprehensive review of the stormwater infrastructure and current management practices in the three towns to develop an enhanced stormwater outlet map and a priority retrofit matrix list linking existing land-uses and sensitive natural resources with infrastructure condition and potential for stormwater retrofits. A second result of the project will be a stormwater "audit" of "on the ground" management practices to develop recommendations and training for more environmentally effective and cost effective delivery of stormwater management. A well prepared framework for developing a stormwater retrofit matrix and audit will serve as a template for other municipalities in the Long Island Sound Watershed to develop effective stormwater management implementation priorities for their own communities. Proactive management to eliminate stormwater pollution is an important issue in the Eightmile River Watershed. With over 150 miles of pristine rivers and streams flowing through relatively undeveloped rural land, the Eightmile River Watershed is an exceptional natural and cultural resource. Large areas of unfragmented habitat, an array of rare and diverse wildlife, scenic vistas, high water quality, unimpeded stream flow, and significant cultural features typify the watershed a national federally-designated Wild and Scenic River.

PROJECT ABSTRACT

Project Title: Planning/Design of Storm Water Management Practices at QCC, #24366

Recipient: Research Foundation of the City University of New York

LISFF Award: \$34,150 (EPA)

Matching Funds: \$34,150

Total Project Costs: \$68,300

Project Area: Queensborough Community College, Bayside, New York

The Research Foundation of the City University of New York will assess the feasibility of implementing green infrastructure at parking lots on the campus of Queensborough Community College to improve the quality of Little Neck Bay and the Long Island Sound by reducing storm water flow and improving storm water quality.

The project will assess repaving Parking Fields 4 and 6 with permeable pavement, installing bioretention basins and/or implementing other practical source control technologies to deal with stormwater flowing from the parking fields down an area of steep slopes known as Oakland Ravine. Oakland Ravine is connected to Oakland Lake, which feeds polluted stormwater into Little Neck Bay and eventually into the Long Island Sound. The project will also assess the feasibility of retaining most or all storm water on Parking Field 1 with green infrastructure such as bioretention, rain gardens, or other practical source control technologies. Parking Field 1 is located along the southern edge of the

campus, adjacent to 56th Avenue. Rain water from the lot enters a set of storm sewers separated from the city sanitary sewers. As a result, polluted stormwater exits the system directly into Little Neck Bay without treatment at a sewage treatment plant.

PROJECT ABSTRACT

Project Title: Water Quality Monitoring, #24391

Recipient: Rocking the Boat, Inc.

LISFF Award: \$35,000 (EPA)

Matching Funds: \$35,000

Total Project Costs: \$70,000

Project Area: Hunts Point and Soundview, Bronx River, Bronx, New York

Rocking the Boat, Inc., will engage 32 students in performing weekly water quality tests on the Bronx River. The information is used to educate youth and the community and is given to the Bronx River Alliance for analysis and use within a comprehensive database of water quality.

The Bronx River Estuary, where the river empties into Long Island Sound, is bordered by the neighborhoods of Hunts Point and Soundview. There are two primary sources of the Bronx River's poor water quality: and high concentration of impermeable surfaces: combined Sewer Outfalls (CSOs) dumping waste directly into the River and contaminated rainwater runoff spilling unfiltered into the River. Rocking the Boat will conduct a volunteer monitoring program and contributes data to a comprehensive database of water quality of use to public officials making management decisions that balance environmental quality and economic sustainability.

PROJECT ABSTRACT

Project Title: Solar Youth's Neighborhood Steward Teams Program, #24206

Recipient: Solar Youth, Inc.

LISFF Award: \$35,000 (EPA)

Matching Funds: \$65,000

Total Project Costs: \$100,000

Project Area: New Haven, Connecticut

Solar Youth's Neighborhood Steward Teams will deliver an after-school program engaging 62 youth to investigate the local ecology of their community, identify environmental issues that affect the health of people and the natural environment, and seek solutions through a process of problem-solving and youth led action, then teach what they have learned and accomplished to others through public education project.

This year's program will focus on the Long Island Sound and be co-led by teenagers with Solar Youth staff for New Haven youth ages 9-13. The program will run during two seasons (fall and spring), with six teams in four locations per season involving three New Haven middle schools and a housing development. Students will deliver 40 community service and public education programs focused on environmental quality problems in their neighborhoods. New Haven youth, most whom have had little to no environmental educational experiences in the past, will understand basic ecological concepts related to Long Island Sound, and become committed environmental stewards and the general public will learn about environmental issues associated with Long Island Sound as a result of Public Education Projects performed by Solar Youth participants.

PROJECT ABSTRACT

Project Title: Curbing Invasion Pathways through AIS Awareness, #23961

Recipient: University of Connecticut, Connecticut Sea Grant

LISFF Award: \$33,123 (EPA)

Matching Funds: \$11,974

Total Project Costs: \$65,097

Project Area: Boat access points and marinas primarily in Connecticut and on the North Shore of Long Island, New York

The University of Connecticut, Connecticut Sea Grant will create and implement a social marketing campaign to educate marine boaters and anglers about aquatic invasives and to change behavior to minimize their potential role in causing new introductions.

Many boaters and anglers are unaware of the problems associated with invasive species in Long Island Sound and the pathways for introductions of those species from recreational boating and fishing. The project will apply techniques used by commercial marketers, termed "social marketing." Rather than dictating the way that information is to be conveyed from the top-down, educators listen to the needs and desires of the target audience themselves, and build a program from there. Like commercial marketing, the primary focus is on the consumer--on learning what boaters and anglers want and need rather than trying to persuade them about environmental goals. The project aims to reduce new invasions by engaging these communities to properly dispose of bait and bait packing materials and changing hull maintenance practices to minimize transfer of invasive species. Bait retailers will also be contacted to encourage them to put "Don't Dump Bait" labels on purchases of live bait for marine use at point-of-sale.

PROJECT ABSTRACT

Project Title: Long Island Sound Urban Waterfront Education Program, #23627

Recipient: New York City Parks and Recreation Urban Park Rangers

LISFF Award: \$33,672.50 (EPA)

Matching Funds: \$70,109

Total Project Costs: \$103,781

Project Area: Fort Totten Park, Queens and Pelham Bay Park, Bronx, New York

The New York City Parks and Recreation Urban Park Rangers will provide 120 education and 60 outdoor recreation programs involving 3,000 students and 1,800 adults in four community service days in Fort Totten and Pelham Bay parks to increase public awareness/appreciation of and access to the Long Island Sound.

The Urban Park Rangers will integrate direct experiential, hands-on elements into their The Natural Classroom and Explorer programs to educate students and community members about the ecological services provided by the Long Island Sound, the threats it faces, and the conservation action necessary to restore and protect its health and living resources. Rangers will provide Explorer waterfront programs to introduce local community members to waterfront natural resources and increase public access to the Sound. In partnership with the American Littoral Society and the Million Trees NYC Program, Rangers will offer four Community Service Days as part of Explorer programs, where community members will have an opportunity to participate in an urban waterfront restoration project including a beach clean up or tree plantings, and learn how they can get involved in future Sound conservation efforts. Rangers will address local issues such as pollution, pet waste, and wildlife feeding to educate students and the public about human induced negative impacts on the Sound.

PROJECT ABSTRACT

Project Title: Long Island Sound Curricula Outreach to Connecticut's Inner Cities, #24362

Recipient: Sea Research Foundation, Inc.

LISFF Award: \$28,949.20 (EPA)

Matching Funds: \$22,937

Total Project Costs: \$51,886.20

Project Area: Norwich, New London, and New Haven, Connecticut

The Sea Research Foundation, Inc. will reach 750 elementary and middle school students with an aim of increasing their knowledge of Long Island Sound and interest in protecting it.

The overarching goal of the project is to provide direct, hands-on experiences with the Long Island Sound environment and its inhabitants with the goal of inspiring a cadre of young people to become environmentally responsible citizens who will act to protect and conserve the Sound and its watershed. The project is a year-long conservation science curriculum based on state and national science standards that turns Long Island Sound into a living laboratory for learning.

PROJECT ABSTRACT

Project Title: Manhasset Bay Boater Pollution Prevention, #24302

Recipient: Town of North Hempstead

LISFF Award: \$21,350 (EPA)

Matching Funds: \$5,000

Total Project Costs: \$26,350

Project Area: Manhasset Bay, Town of North Hempstead, New York

The Town of North Hempstead, Manhasset Bay Protection Committee will conduct a comprehensive pollution prevention program targeted towards boaters using educational materials and pollution prevention devices.

Manhasset Bay is one of the most active recreational harbors on the east coast. The Bay has over 1,000 resident boats at slips and on moorings. With its location near New York City and array of services to boaters, thousands of transients both regional and international call in each season. The project will create a comprehensive pollution prevention outreach to boaters. The program will consist of both education and physical pollution prevention devices to be distributed in the Manhasset Bay area. The project has several educational facets, including a waterproof brochure, Clean Boating Pledge, display, and a Clean Boating Event. Physical devices, bilge socks and fuel whistles, would be distributed. A professional spill response kit would be available for emergencies. Partnerships with the commercial marinas, yacht clubs, racing associations, and other groups would allow direct access to the boating community. The goal is to directly reduce boating related pollutants with the devices and lessen future pollution via education on clean boating practices.

PROJECT ABSTRACT

Project Title: Environmental Education and Scientific Internship Program, #24036

Recipient: Earthplace - The Nature Discovery Center, Inc.

LISFF Award: \$34,122.80 (EPA)

Matching Funds: \$48,264

Project Costs: \$82,836.80

Project Area: Westport, New Canaan, Wilton, Ridgefield and the City of Norwalk; Norwalk Harbor, Silvermine, Five Mile, and Saugatuck Rivers, and Sherwood Island Millpond, Connecticut

The Earthplace – The Nature Discovery Center, Inc. will train and engage 50-60 high school students to monitor water quality on local rivers using modern instrumentation and then do analytical work associated with that monitoring in a state certified lab.

Harbor Watch/River Watch is a year round and consists of three segments. The first segment complements school science courses with extensive field and lab work and runs during the school year from September to May. The second segment involves an internship program which allows high-school seniors to explore various “green-collar” careers. The third segment allows students to volunteer during summer months with college interns working on specific environmental quality and

conservation projects and runs for a month during May and June. The overall program aims to allow students to work in supervised settings with real pollution problems, to analyze data, write scientific papers and present work to peers and public officials. The polluted rivers in Fairfield County that drain into the Long Island Sound are used as training grounds for future scientists and serve as outdoor classrooms for high school students. Students enrolled in the program come from the Aqua Culture Center of Bridgeport, and Darien, Staples, Ludlow, Wilton, Weston, Norwalk and Brien McMahon high schools.

PROJECT ABSTRACT

Project Title: Guide to the Phytoplankton of Long Island Sound, #23622

Recipient: The University of Connecticut, Connecticut Sea Grant

LISFF Award: \$6,982.20 (EPA)

Matching Funds: \$947

Total Project Costs: \$7,929.20

Project Area: Long Island Sound

The University of Connecticut, Connecticut Sea Grant will prepare an online guide showing photos and descriptions of common phytoplankton of Long Island Sound. The guide will provide information about harmful algal bloom organisms and descriptions of ecology, importance, and physiology of phytoplankton. The guide is widely used in schools surrounding the Long Island Sound in Connecticut and New York.

PROJECT ABSTRACT

Project Title: Save the Sound Coastal Cleanup Program (CT), #23817

Recipient: The Connecticut Fund for the Environment, Inc.

LISFF Award: \$10,000 (EPA)

Matching Funds: \$10,000

Total Project Costs: \$20,0000

Project Area: Long Island Sound Coastal Boundary in Connecticut

The Connecticut Fund for the Environment, Inc., Save the Sound will recruit a diverse group of volunteers and engages with a variety of partners, including community leaders and residents, organizations and corporate/business groups to clean up Connecticut's inland and coastal shores.

The project will: 1) recruit 70 volunteer Cleanup Captains for cleanups along Connecticut's shoreline; 2) schedule and coordinate 70 cleanup events along the coastal and inland shores of Connecticut; 3) engage 1,750 volunteers; 4) hold 50 events on or around International Coastal Cleanup (September 19, 2009) and National Estuaries Day; and 5) clean 70 miles of Connecticut shoreline, including beaches and riverfronts.

PROJECT ABSTRACT

Project Title: Estuary Celebration Weekends, #23874

Recipient: Sea Research Foundation, Inc.

LISFF Award: \$9,911 (EPA)

Matching Funds: \$8,744

Total Project Costs: \$18,655

Project Area: Mystic, Connecticut

The Sea Research Foundation, Inc. will host National Estuary Day and Long Island Sound Day events over a weekend attracting 2,700 visitors focusing on increasing public awareness about the threats facing Long Island Sound and the abundance of its natural resources with a goal of increasing community connections with the Sound. The project includes a beach clean-up, horseshoe crab watch, Long Island Sound estuary exploration, and activities.

PROJECT ABSTRACT

Project Title: Hutchinson River/Thomas Pell Wildlife Refuge Cleanup, #24024

Recipient: Hutchinson River Restoration Project

LISFF Award: \$2,884 (EPA)

Matching Funds: \$6,000

Total Project Costs: \$8,884

Project Area: Hutchinson River/Thomas Pell Wildlife Refuge, Pelham Bay Park, Bronx, New York

The Hutchinson River Restoration Project will organize, advertise and run a canoe-borne expedition by 40 volunteers to clean up floatable debris from the shore of the Thomas Pell Wildlife Refuge in Pelham Bay Park, New York City.

PROJECT ABSTRACT

Project Title: Long Island Sound Day, #24290

Recipient: National Audubon Society, Inc./Audubon New York

LISFF Award: \$9,995 (EPA)

Matching Funds: \$7,158

Total Project Costs: \$17,153

Project Area: Oyster Bay, New York

The National Audubon Society, Inc./Audubon New York will host "Long Island Sound Day" at the Theodore Roosevelt Audubon Sanctuary and Center attracting 400 participants and focusing on the threats related to the Sound. The project will also engage 100 volunteers in conservation projects around the Sound.

The purpose of Long Island Sound Day will be to raise Oyster Bay community awareness of the habitat, wildlife, and threats to the habitat and wildlife of the Long Island Sound through activities, games, exhibits, and programs. The event will be appropriate for children, adults, and families. Long Island Sound Day will also serve to recruit volunteers for subsequent Audubon New York-lead beach clean ups and string fencing installations for the protection of the area's beach nesting birds. Additionally, this project aims to educate Oyster Bay residents about the threats to these birds and connect them to nature in their own community.

PROJECT ABSTRACT

Project Title: Coastal Classroom, #24291

Recipient: City Parks Foundation

LISFF Award: \$10,000 (EPA)

Matching Funds: \$25,000

Total Project Costs: \$35,000

Project Area: The East River, in Astoria and Long Island City, Queens situated within the Long Island Sound watershed.

The City Parks Foundation will offer hands-on lessons to schools and local residents along the Queens waterfront, introducing concepts of river ecology, water quality, and waterfront restoration and preservation.

Coastal Classroom provides educational experiences on the East River waterfront, in Astoria and Long Island City, Queens, to 1,000 children and community members. It educates residents about river ecology, environmental challenges, and how human actions affect water health. The program offers hands-on lessons to public school classes and community groups, and also holds community events and public workshops. It provides 20 in-classroom lessons and 80 outdoor lessons at waterfront parks in Queens (each class/community group receives a series of four lessons). Participants test water quality variables; enter the water, using waders, to observe wildlife; and collect flora and fauna for biodiversity sampling and identification. Additionally, Coastal Classroom will also hold a National Estuaries Day community-wide event with lessons tailored to focus on the importance of estuaries.

PROJECT ABSTRACT

Project Title: Long Island Sound Component-2010 Beach Cleanup, #24368

Recipient: American Littoral Society

LISFF Award: \$6,000 (EPA)
Matching Funds: \$150,000
Total Project Costs: \$156,000

Project Area: Queens, Bronx, Westchester, Nassau, Suffolk and New York Counties

The American Littoral Society will coordinate the 2010 International Coastal Cleanup at 130 miles of beaches on the Long Island Sound involving 2,570 volunteers with data compiled for 70 sites to develop strategies for combating marine pollution and to educate the public about floatable pollution and prevention.

A site captain is responsible at a cleanup and is usually from a local group, school, or civic association. The beach cleanup gets people to see first-hand what litter is doing to the marine and coastal environment. Participants learn what they can do on a daily basis to solve the problem of floatable debris: recycling, advocating for less packaging, adopting a beach, stenciling messages next to storm drains, etc. The cleanup itself improves the habitat by removing debris and in the case of wetlands, of restoring productivity. Beaches are cleaner, safer, and more aesthetically pleasing to the general public. The annual beach cleanup is not about debris; it is about people: enhancing their knowledge and appreciation of the environment and helping them find ways to protect and improve it. The event puts a face on issues such as “non-point source pollution,” storm drains, sewage, etc. Children learn that cities have an “environment” and “habitat” worth protecting.

PROJECT ABSTRACT

Project Title: Solar Youth's Leaders in Training Program, #24415

Recipient: Solar Youth, Inc.

LISFF Award: \$10,000 (EPA)
Matching Funds: \$10,000
Total Project Costs: \$20,000

Project Area: City of New Haven, Connecticut

Solar Youth, Inc. will create opportunities for 10 urban youth to develop their leadership skills through engagement in environmental exploration and community service.

The purpose of Solar Youth’s Leaders in Training Program is to develop New Haven’s leading environmental stewards of tomorrow. The focus of this program during the spring of 2011 will be “The Long Island Sound.” It will take place for eight weeks, meeting twice a week, including several Saturdays. Between 6 and 10 youth aged 11 to 14 will participate. During the program, participants will learn about the ecology of the Sound through a series of at least six day-long explorations. They will also learn how to plan, implement and evaluate Community Service Action Projects that address environmental issues that relate to the Long Island Sound and its watershed.

PROJECT ABSTRACT

Project Title: Norwich Harbor - Thames River Interpretive Signage Project, #24231

Recipient: City of Norwich Harbor Management Commission

LISFF Award:	\$9,480 (EPA)
Matching Funds:	<u>\$0</u>
Total Project Costs:	\$9,480

Project Area: City of Norwich, Connecticut

The City of Norwich Harbor Management Commission will prepare and install three signs depicting environmental themes concerning the Thames River watershed and Norwich Harbor.

The signs will be placed at three separate locations providing significant public visibility on and near the City's waterfront. The signs will include information about the relationship of the City's waterways and watershed to Long Island Sound. The project will help promote and enhance public enjoyment of the City's harbor and waterways, and provide educational benefits in an urban setting that currently lacks interpretive signage related to the City's harbor and waterways.