



Long Island Sound Futures Fund 2016 Grant Awards

Clean Waters and Healthy Watersheds - NY

Green Infrastructure Planning Initiative (NY)

Village of Port Chester

Project Area: Village of Port Chester, New York

LISFF Funds: \$47,000.00

Matching Funds: \$47,000.00

Total Project: \$94,000.00

Village of Port Chester will develop a green infrastructure manual to plan for improved stormwater and flood management with a particular emphasis on its 115 acre riverfront. The Village is home to a highly developed central business district and neighborhoods which lie along the Byram River, a tributary of Long Island Sound. The formerly forested areas of Port Chester have been replaced by buildings and streets reducing the area where infiltration into the ground can take place, and increasing the amount of water being discharged into the river and Sound. During storms the community experiences high levels of polluted runoff into the river and suffers from flooding. The project will: 1) develop a Drainage Manual that will prescribe innovative and effective local policies and regulations specific to the Village, assess the impact of current runoff issues, and identify conservation activities to reduce pollution at its source; 2) Produce conceptual designs and cost estimates for green and gray infrastructure projects; and 3) conduct two public meetings and outreach to obtain and incorporate public opinion in the final report. The Village will use its website, social media, public notices and press releases to communicate project goals, developments and outcomes to 29,522 residents in relation to reducing urban runoff and bolstering the health of the Sound. The project will increase a sense of environmental stewardship throughout the community; and advance activities and projects to reduce urban runoff currently impacting water quality in the Byram River and Long Island Sound.

Green Infrastructure Planning Initiative (NY)

City of New Rochelle

Project Area: City of New Rochelle, New York

LISFF Funds: \$55,000.00

Matching Funds: \$64,232.00

Total Project: \$119,232.00

City of New Rochelle prepare a green infrastructure (GI) program plan for its total area of 13.2 square miles. GI uses a natural or engineered approach to mimic nature to manage stormwater runoff. The runoff is a major cause of water pollution. When rain falls stormwater drains from streets and roofs through gutters and storm sewers into water bodies. The grantee will address this runoff which is putting pressure on aging infrastructure and carrying pollution into local waterways and Long Island Sound. The project has four major parts: 1) Explore creating stormwater districts to incentivize implementation of GI on private property and to encourage GI public/private partnerships; 2) a long term GI implementation plan linked to the City capital improvement plan/budget, and leveraging of City initiatives such as Complete Streets; 3)

Specifications for GI as part of the City's stormwater management to ensure GI design/build/maintain is fully integrated into work programs; and 4) A funding plan identifying opportunities to support implementation and maintenance of GI. The City GI Team will create robust content related to the project goals and use resources such as the Citizen's Guide to Curbing Polluted Runoff and local information for public education about stormwater pollution; and conduct outreach to stakeholders who may benefit from GI. The project will advance activities to reduce urban runoff currently impacting water quality in the Sound.

Water Quality Monitoring Initiative for Long Island Sound Embayments (NY)

Connecticut Fund for the Environment/Save the Sound

Project Area: Mamaroneck Harbor and Manhasset Bay, New York

LISFF Funds: \$58,936.35

Matching Funds: \$44,485.00

Total Project: \$103,421.35

Connecticut Fund for the Environment (Save the Sound) will pilot the Unified Water Study (UWS) designed to develop cost-effective and practical standards that inform citizen-science groups to monitor ecological and eutrophic conditions in a common way in Manhasset Harbor and Mamaroneck Bay, New York. Coordination among citizen-science groups monitoring Long Island Sound embayments is a goal of the 2015 Comprehensive Conservation and Management Plan for Long Island Sound. Collecting water quality data in Sound bays and harbors supports regional action plans including the: US Environmental Protection Agency, Comprehensive Nitrogen Reduction Strategy for Long Island Sound, and the NYS Department of Environmental Conservation's Long Island Nitrogen Action Plan. Both prioritize nitrogen reduction in embayments. The grantee has already commenced development of Tier 1 standards under the UWS. The project will: 1) develop Tier 2 Standard Operating Procedures (SOPs) and a template Quality Assurance Project Plan to be shared with agencies, groups interested in conducting similar monitoring in other embayments, and academics who monitor the Sound; 2) coordinate volunteers to monitor water quality using the SOPs; 3) publish data on the organization website and in any other online repository agreed to by the participants in the pilot; 4) make the data available for use in the Long Island Sound Report Card 2017; and 5) share data with state agencies.

Cultivating Champions for Healthy Soil and Clean Water for Long Island Sound (NY)

American Farmland Trust

Project Area: Town of Southold, Suffolk County, New York

LISFF Funds: \$83,940.96

Matching Funds: \$63,786.00

Total Project: \$147,726.96

American Farmland Trust will demonstrate the use of healthy soil practices on farms to reduce nitrogen entering Long Island Sound from agriculture in Suffolk County, New York. Farms and farmland are an integral part of the identity and economy of Suffolk County. The area is unique because it is also surrounded on three sides by water, including water bodies like the Sound. Because of the intensity of agricultural production, including the use of nitrogen fertilizers, and the sandy soils of the region, agriculture is one of the sources nutrients into the Sound. It is clear that working with farmers is an essential component of any strategy to lower the current nutrient inputs to surrounding waterbodies. The project will: 1) engage five progressive 'soil health champion' farmers as demonstration sites; 2) document the impact of the practices on soil condition, and plant health and evaluate the environmental and economic returns; 3) develop a new template benchmarking tool that documents results from 'champion' farmers and

enables individual growers to assess the impact of practices on their farm and to compare it with peers; 4) share information about implementation of the practices and results to facilitate peer learning in a Soil Health Discussion Group; 5) share information with 30 vegetable farmers about soil health practices through in-person training; and at an on-farm Soil Health field day. Partners: Cornell Cooperative Extension of Suffolk County.

Demonstrating Onsite Wastewater Treatment Systems for Clean Water at Uplands Farm Sanctuary (NY)

The Nature Conservancy, Long Island

Project Area: Suffolk County, New York

LISFF Funds: \$100,074.30

Matching Funds: \$157,630.00

Total Project: \$257,704.30

The Nature Conservancy, Long Island will install a vegetated wastewater treatment system at an office and residential complex in Cold Spring Harbor, and publicize this attractive, plant-based treatment method in Suffolk County, New York. Excess nitrogen is a threat to the health of Long Island Sound. A Nitrogen Loading Model assessment found that nitrogen from septic systems/cesspools is the major land-based source of nitrogen in 12 of 13 Sound watersheds from Little Neck Bay to Northport Bay, including the Cold Spring Harbor watershed where Uplands Farm is located. The project will: 1) sample soil and groundwater pre-construction to assess the quantity of nitrogen leaving the current cesspools and determine baseline levels in the area where the new system will be located; 2) Sample post-construction to determine nitrogen reduction; 3) install a hybrid moving bed bio-reactor and a constructed wetland using native plants to handle flows of 1,000 gallons per day. The system size can be adjusted to adapt to larger-flow homes, clusters of homes, or offices. The plantings provide botanical for nitrification, which will be followed by de-nitrification. A drainfield for effluent will further absorb nitrogen; and 4) publicize through site visits, signage, short videos, social and traditional media, and conference presentations. The project will reduce nitrogen in effluent to nearly zero, and by at least 90% resulting in a reduction of at least 150 pounds of nitrogen annually.

Onsite Wastewater Treatment Systems for Clean Water Robert E. Reid Sr. Recreation Center (NY)

Peconic Green Growth

Project Area: Shoreham, New York

LISFF Funds: \$86,429.64

Matching Funds: \$48,303.00

Total Project: \$137,732.64

Peconic Green Growth will design and install a pilot, soil-based wastewater treatment system in Shoreham, New York. The project will reduce nitrogen by 85-90% as well as treat for other contaminants of emerging concern in Long Island Sound. Reducing excess nitrogen continues to be a major focus of Long Island Sound management. Aging infrastructure (cesspools) discharges nitrogen and pathogens into aquifers and surface waters of the Sound. Contaminants such as pharmaceuticals and personal care products with an outsize impact on environmental resources are also found in Sound waters and are untreated by these aging systems. On Long Island, and particularly in Suffolk County, this will require installation of innovative and alternative sanitary systems suitable for decentralized, single-family homes. The project will evaluate a system for acceptance by the Suffolk County as a viable treatment with wide applicability to reduce nitrogen and other contaminants. Major activities include: 1) upgrades of the onsite system to treat for nitrogen mitigation using a shallow dispersal system

with timed pressure dosing and soil-based treatment including a sand and sawdust/wood chip mixture; 2) upgrade of existing toilet fixtures to lower water consumption and produce a more concentrated effluent and more in line with future installations; 3) conducting a design training seminar to acquaint 30 engineers and architects with the technology; and 4) installing a sign describing the installation to the public. The project will reduce nitrogen by 266 pounds annually. Partners: NYS Center for Clean Water Technology, Town of Brookhaven, and Suffolk County Department of Health Services.

Clean Waters and Healthy Watersheds - CT

Green Infrastructure for Beardsley Zoo (CT)

Connecticut Fund for the Environment/Save the Sound

Project Area: Bridgeport, Connecticut

LISFF Funds: \$149,833.23

Matching Funds: \$75,880.00

Total Project: \$225,713.23

Connecticut Fund for the Environment/Save the Sound will install 6,000 square feet of green infrastructure to reduce 1,000,000 gallons of polluted stormwater runoff annually in Bridgeport, Connecticut. Green infrastructure uses a natural or engineered approach to mimic nature to manage stormwater runoff at the local level. Stormwater runoff is a major cause of water pollution in urban areas like Bridgeport. When rain falls, stormwater drains from streets and roofs through gutters, storm sewers, and into nearby water bodies. The grantee will address water quality problems in Pequonnock River whose waters flow into Long Island Sound. Currently, 80 percent of the river does not meet water quality standards because of pollution from urban runoff and other sources. The project will: 1) install 2,000 square feet of bioretention gardens (a combination of soil and plant material used to capture and treat stormwater) and up to two tree pits (collect rainwater by diverting runoff from the street into cuts in curbs); 2) replace 4,000 square feet of impervious pavement with pervious pavers (made of sustainable materials that trap and filter runoff); 3) install two signs to educate 275,000 annual visitors about the benefits of green infrastructure; and 4) conduct one volunteer planting and two educational workshops about green infrastructure. The project will improve water quality in the river and the Sound. Partners: Beardsley Zoo and Northeast Organic Farmers Association of Connecticut.

Stonington Harbors Water Quality Monitoring and Education Initiative (CT)

Sea Research Foundation

Project Area: Stonington, Connecticut coastline

LISFF Funds: \$24,671.86

Matching Funds: \$24,710.16

Total Project: \$49,382.02

Sea Research Foundation (Mystic Aquarium) will conduct water quality monitoring and a public education to identify pollution problems and engage the public in taking action to improve water quality of the Stonington coastline, Connecticut. Current monitoring shows water quality problems particularly high nitrogen levels in these waters. There is no single reason for the problem but contributors include: local population increases, pesticide and fertilizer runoff, boat waste discharge, plastic trash and more. Yet, according to a 2006 Long Island Sound public perception survey only a quarter of respondents knew phosphorous and nitrogen promoted excess plant and algae growth, and even fewer respondents knew the major source of water pollution in the U.S. is runoff into surface water. The grantee will address these challenges as

follows: 1) Conduct water testing of 13 parameters at 14 sites to identify sources of point and non-point pollution; 2) training and engaging up to 25 volunteers in water quality sampling and analysis; 3) Engaging 100 people in three organic turf, landscaping, and gardening workshops; and 4) Educating 20,125 people about the Sound, pollution issues and providing them with actions they can take to reduce water pollution in local waters and the Sound. The project will provide data to be used to implement solutions to problems of increased pollution loads in the Stonington coastline and the Sound. Partner: Clean Up Sound and Harbors.

Thriving Habitats and Abundant Wildlife - NY

Alley Creek Shoreline and Coastal Forest Restoration (NY)

City of New York, Department of Parks and Recreation

Project Area: Alley Pond Park, Douglaston, New York

LISFF Funds: \$150,000.00

Matching Funds: \$150,000.00

Total Project: \$300,000.00

The City of New York, Department of Parks and Recreation will construct living shoreline to enhance re-establishment of up to one acre of salt marsh, and enhance 13 acres of coastal grassland, forest and upland in at Alley Pond Park in Douglaston, New York. The salt marshes along Alley Creek in Queens are home to a unique native ecosystem in a highly developed watershed. Over 11 acres of shoreline marsh have been lost in this complex since 1974, equivalent to a decrease of more than 22% of the original marsh area. This loss illustrates a trend that is occurring throughout New York City, where over 160 acres of shoreline marsh have disappeared in the last 40 years. The grantee will address these losses by focusing on the drivers of erosion and to mitigate the impacts of sea level rise by constructing a living breakwater shoreline structure. This breakwater will reduce frequent, low-level wave energies and change near-shore hydraulics. This will promote sediment deposition behind the structure while also providing habitat for aquatic life. The project will: 1) implement the first phase of a pilot living shoreline (200 to 400 linear feet) using a combination of oyster castles, rip rap, and shell bags or baskets; 2) enhance 13 acres of coastal grassland, shrubland and forest through invasive vegetation control and planting of native species; and 3) conduct up to three events for living shoreline construction engaging 90 community stewards from local environmental and education focused non-profits. Once installed, the project features will protect the existing salt marsh and promote its reestablishment.

Restoring Coastal Forest at Otter Creek Preserve (NY)

Westchester Land Trust

Project Area: Village of Mamaroneck, New York

LISFF Funds: \$55,392.27

Matching Funds: \$33,347.00

Total Project: \$88,739.27

Westchester Land Trust will restore a 12 acre coastal forest at its Otter Creek Preserve through removal of non-native invasive plants and planting native trees, shrubs and herbs in the Village of Mamaroneck, New York. The 35-acre preserve hosts 21 acres of tidal marsh and the coastal forest along the Long Island Sound shore. The marsh and forest is a magnet for 100 species of birds including warblers, vireos, thrush, flycatchers, and raptors. While some of the preserve forest is in good ecological condition, invasive plants are degrading the ecosystem. At risk is the preserve's ability to support forest dwelling migratory birds. The grantee will focus on six of the coastal forest's 12 acres to reverse forest fragmentation/degradation. The project will: 1) remove

invasive trees Norway maples and tree of heaven, 3 acres of invasive plants and ~1000 invasive vines; and replant ~560 native trees/shrubs/herbaceous plants; 2) provide education on the organization website, social media and in the press and on partner websites to 10,000 households; and 3) work with three partners offering six field trips for 195 students from local and underserved communities to teach about Sound ecology and to engage in the project. The project will result in a forest with increased structural complexity and improved wildlife habitat. Partners: Sheldrake Nature Center, The Nature Conservancy, Atmosphere Academy, Village of Mamaroneck, and Federated Conservationists of Westchester County.

Thriving Habitats and Abundant Wildlife - CT

Coastal Dune Restoration at Stratford Point (CT)

Sacred Heart University

Project Area: Stratford Point, Stratford, Connecticut

LISFF Funds: \$115,198.32

Matching Funds: \$200,000.00

Total Project: \$315,198.32

Sacred Heart University will restore 1.5 acres of dune habitat across 900 linear feet of shoreline for Piping Plovers, and Least and Roseate Terns and American Oystercatcher at Stratford Point, Connecticut. Historically, Stratford Point supported a large tidal marsh and dune, coastal bluff, and coastal grassland habitats; however, over the past century the site has been subject to alteration and habitat loss. The loss of coastal dunes is particularly detrimental. Dunes provide habitat for a variety of species at the interface of upland and intertidal zones and are increasingly valued as a cost-effective places to reduce impacts of severe storms. The grantee will restore dune habitat between those zones and connectivity between two subunits of the Stewart B. McKinney National Wildlife Refuge. The project will: (1) create topographic relief across the shoreline by grading existing soils to produce a mosaic of hummocks and mounds; (2) enhance existing soils with organic material; (3) plant native plant species; (4) conduct site monitoring to assess use by target species among other factors; (5) use the site as a demonstration area to inform coastal communities about how to adapt to storms; and 6) engage 20 student volunteers in projects at the site. The project will add to the understanding about the potential effectiveness of ecosystem restoration as a means to improve the resilience of coastal communities while adding wildlife habitat. Partner: Audubon Connecticut.

Village Creek Salt Marsh Restoration Demonstration (CT)

Norwalk Land Trust

Project Area: Norwalk, CT

LISFF Funds: \$20,000.00

Matching Funds: \$20,000.00

Total Project: \$40,000.00

Norwalk Land Trust will develop the planning and design to support restoration of approximately 8 acres of degraded intertidal salt meadows in Norwalk, Connecticut. The project will produce a plan and small pilot salt marsh restoration to establish a foundation for more restoration of salt marsh in Norwalk, Connecticut. An oil spill and clean-up in the 1960's at the Manresa Power Station west of Norwalk Harbor negatively affected several marsh grass communities in Village Creek and began a process of destabilization and erosion that continues to this day. The industrial area along Meadow Street is adjacent to the upper reaches of Village Creek and in some locations degraded salt marsh is now a mud flat which abuts the industrial areas and parking lots. Surface water run-off from industrial and commercial businesses in the area

contains contaminants which enter Village Creek along with fine particles from roadways and parking areas. The grantee will develop the information necessary to initiate a salt marsh restoration. The project will: 1) prepare a site assessment, a topographic and bathymetric survey, and a determination of the characteristics of the sediment; 2) Restore a small, 0.25 to 0.5 acre salt marsh pilot plot; and 3) conduct a monitoring program to track changes in the affected area, the stability of pilot berms and the developing plant community. The project will design a cost-effective and sustainable program for the restoration of degraded salt marsh at Village Creek a wildlife area near Norwalk Harbor and the Stewart B. McKinney National Wildlife Refuge. Partner: Village Creek Homeowners Association.

Planning for Restoring Fish Passage on the Falls River (CT)

The Nature Conservancy, Connecticut

Project Area: Centerbrook, Connecticut

LISFF Funds: \$59,982.13

Matching Funds: \$40,960.00

Total Project: \$100,942.13

The Nature Conservancy, Connecticut will develop two fully-engineered designs for fish passage at the Dolan Pond dam and Mill Pond dam in Centerbrook, Connecticut. The project will set the stage for access to over 45 acres and a mile and a half of stream habitat for alewife and blueback herring; and raise community awareness of these projects, river health, and the critical connection between freshwater habitats and Long Island Sound. Lack of access to historic spawning habitat impacts the ability of fish such as alewife and blueback herring to rebuild their populations. The fish play a critical role in marine and freshwater food chains of rivers and Long Island Sound. The Falls River watershed is one of the first freshwater stream systems encountered by migratory fish moving in from the Sound. Migratory fish can now reach Dennison Pond where a fishway was added to a dam. The best spawning habitat in the watershed is upstream at Mill Pond with the next barrier to fish passage downstream at Dolan Pond dam. The grantee will plan for fish passage at both dams because fish cannot reach Mill Pond until passage is provided from Dolan Pond dam. The project will: 1) conduct public outreach about the proposed project with presentations, newsletters, social media, and press releases; and 2) develop two engineered plans and permit applications. Both property owners approved the development of plans. The owner of Mill Pond dam will assist with design and fishway operation. Ultimately this fishway will have a viewing window and an adjacent American eel pass. Volunteers engaged in fish passage monitoring and observation of fish runs on Falls River observed a large school 50-200 alewife upstream of the former Falls River dam. Partner: Essex Land Trust.

Educating to Engage Sustainable and Resilient Communities - NY

Reducing Floatable Litter and Debris Pollution in the Bronx River and Long Island Sound (NY)

Bronx River Alliance

Project Area: Bronx River, Bronx, NY

LISFF Funds: \$9,999.80

Matching Funds: \$10,760.00

Total Project: \$20,759.80

Bronx River Alliance will collect floatable debris through ten paddle and pickup canoe trips, one on-shore litter collection at a trash collection boom site, and one on-shore coastal cleanup event in the Bronx, New York. The project will prevent 4,420 pounds of floatables debris and other

trash from entering Long Island Sound waters. The Bronx River annually delivers 16-billion gallons of water—and more than 1,200 cubic yards of floatable debris—into Long Island Sound. Stormwater runoff from streets and roofs washes debris into the river, combined sewer overflows carry even more trash, and passersby throw litter into the river. To stem the flow of floatable litter pollution, the grantee will: 1) conduct ten paddle & pick-up canoe trips; 2) engage a boom cleanup to clean trash from the shore ends of the New York City Department of Environmental Protection (NYC DEP) floatables boom which is inaccessible to the trash skimmer; 3) conduct coastal cleanup to collect trash from the shoreline; and 4) develop flyers, web, and social media communications that highlight the connection between the Bronx River and the Sound, why floatables are a problem, and how this type of trash can be prevented. Ultimately the project will engage 240 volunteers removing 4,420 lbs. of floatable litter and debris to prevent it from entering Sound waters. Project partners include: NYC DEP, and NYC Department of Parks and Recreation.

Student Scientist Monitoring of American Eel and River Herring on the Bronx River (NY)

Rocking the Boat

Project Area: Bronx River, Bronx, NY

LISFF Funds: \$34,999.14

Matching Funds: \$38,242.05

Total Project: \$73,241.19

Rocking the Boat will engage 265 middle and high school students in monitoring river herring and American eel in Bronx, New York. The program will increase local community awareness of the Bronx River as habitat for river herring and American eels and contribute to the development of a management plan for these Long Island Sound species. The grantee will have students monitor below the southernmost dam on the Bronx River (located at E. 182nd Street in River Park) to assess the effectiveness of the River Park Fish Passage which opened in April 2015. The grantee will have student scientists: 1) use wooden rowboats built by their peers to explore the Bronx River as they learn about American eels and river herring in the Sound ecosystem; 2) monitor eels mops in three locations spanning nearly 1.5 miles of the river; 3) maintain the River Park Fish Passage by inspecting the catch basin, counting and identifying the state of any eels observed, and releasing them on the upstream portion of the dam; 4) offer four eel monitoring training workshops and four maintenance and eel ramp monitoring training sessions to the students; and 5) provide an interpretive display, designed by students, about American eel and river herring in the Sound ecosystem to approximately 3,700 people; and 6) provide data to scientific partners. Project partners include the Wildlife Conservation Society's New York Seascapes Program, and the New York City Department of Parks & Recreation's Natural Resources Group.

Share the Shore and Be a Good Egg (NY)

National Audubon Society, Audubon New York

Project Area: Oyster Bay, Centre Island, Stehli Beach, Sands City/Hobart, and Caumsett and Sunken Meadow State Parks, New York

LISFF Funds: \$34,988

Matching Funds: \$35,000.00

Total Project: \$69,987.57

National Audubon Society (Audubon New York) will provide a multifaceted environmental education program which includes public and school programming, direct on-the-beach public outreach, delivering stewardship projects on the coast for birds, and securing pledges from people committing to share the shore with shorebirds on the North Shore of Long Island, New

York . The project will reduce threats to coastal habitats and shorebirds including Piping Plover, Least Tern, Common Tern, American Oystercatcher, and Black Skimmer. Because Long Island Sound beaches are a magnet for birds and people and shorebirds rely on beach habitat, their needs can conflict with human uses. The grantee will connect beachgoers to nature and encourage them to be active players in shorebird protection. The project will: 1) Provide training materials in Spanish and English to allow partners to implement BGE; 2) Conduct eight BGE events at five beaches educating 1,500 beachgoers; 3) Evaluate BGE outreach using an online survey; 4) Train 50 volunteers to help with beach stewardship and BGE public outreach; 5) Deliver two public conservation days to install string fencing around nesting areas and build tern chick shelters; 6) Secure BGE pledges from 1,000 beachgoers committing to share the shore; 7) Engage 200 children in a shorebird lesson and have them create 20 BGE signs for nesting sites; and 8) Conduct outreach to 37,000 people with BGE messages through newsletters and social media. The project will increase support for beach-nesting bird conservation engaging people to act to reduce threats to the birds to increase bird populations and survival. Partners: Audubon Chapters including Huntington Oyster Bay, North Shore, Four Harbors, and North Fork Audubon Societies.

My Yard, Our Sound: Planting for Clean Water and Wildlife (NY)

The Maritime Explorium at Port Jefferson Harbor

Project Area: Port Jefferson, New York

LISFF Funds: \$25,365.39

Matching Funds: \$69,216.00

Total Project: \$94,581.39

The Maritime Explorium at Port Jefferson Harbor will engage 1,600 people in a program that delivers an exhibit, and workshops for families to transform their yards and gardens with native plants in Port Jefferson, New York. The project will provide natural landscaping guidance to homeowners to encourage the use of alternatives to chemical and nutrient-intensive landscaping to benefit water quality and living resources of Long Island Sound. The Long Island Native Plant Initiative (LINPI) reports that lack of knowledge about, availability and cost of native plants are barriers to use of native landscaping. The project will engage 1,600 visitors in a My Yard, Our Sound Exhibit which will teach about how and why native plants contribute to the health and living resources of Long Island Sound. Families will make native plant seed balls, receive a seedling, and be asked to plant two square feet of their home garden with native plants. Native plant landscaping workshops will be offered to 180 families with information about native plant garden design. Participants will pledge to commit 100 square feet of their yards to native plants which will result in approximately 18,000 square feet of new native plant landscape. Surveys will evaluate the program in terms of increased knowledge and whether participants have successfully “gone native.” A website will provide resources about nurseries, landscapers and garden designs. The project will forge a network of citizens engaged in sustainable gardening, and enhance the ecological health of the Sound. Partners: Flax Pond Marine Laboratory, LINPI, and Center for Science Education for New Civic Engagement and Responsibilities.

Long Island Sound Water Education for Elementary School Students (NY)

North Shore Land Alliance

Project Area: Nassau and Suffolk Counties, New York

LISFF Funds (EPA): \$30,500.00

Matching Funds: \$18,000.00

Total Project: \$48,500.00

North Shore Land Alliance will deliver a three-session water quality education program to 1,850 elementary school students in Nassau and Suffolk Counties, New York. The project will educate students about Long Island's ground water quality, the connection to Long Island Sound and how students can protect local water resources. Overabundance of nitrogen is a threat Long Island Sound health. Large contributors to nitrogen pollution are septic systems and cesspools and stormwater runoff from the land. Yet, according to a 2006 Long Island Sound public perception survey, 49% of Long Island residents fertilize their lawns more than once a year, and 53% had not had their septic systems inspected in more than three years. The grantee will address this lack of public knowledge about the problem with classroom and outdoor education about the value of the Sound, threats to it, and ways people can be part of the solution. The project will introduce students to Long Island's sole source aquifer and describe the connection between groundwater, streams and bays, and the Sound. Through a series of two classroom sessions and a field trip to a nature preserve on Cold Spring Harbor, students learn how the watershed functions, where drinking water comes from, and about threats to water resources, while building an understanding of how their actions can affect groundwater quality and the Sound. The project will increase knowledge and appreciation of the Sound and how natural areas and stewardship of them can protect water quality. NSLA will showcase the program and what students are learning about the Sound in two e-newsletters sent to 6,000 people.

Educating to Engage Sustainable and Resilient Communities - CT

Coastal Youth Stewards (CT)

North American Marine Environment Protection Association

Project Area: Bridgeport, Stamford, Ridgefield and Southport/Fairfield, Connecticut

LISFF Funds: \$6,917.30

Matching Funds: \$5,236.68

Total Project: \$12,153.98

North American Marine Environment Protection Association will educate 150 K-12 youth about the marine environment and marine debris; and conduct 10 beach cleanups in Connecticut's Southwest Coast Watershed. The project will prevent over 1,500 pounds of debris from entering Long Island Sound waters and encourage students to become environmental stewards through hands-on education about the impact of marine debris on the Sound as well as other waterways. The grantee will address the conservation challenge of marine debris 80% of which enters the world's oceans and estuaries like Long Island Sound from land-based sources. Project activities include: 1) conducting ten interactive Science, Technology, Engineering and Mathematics- and Next Generation Science Standards-based education workshops to expose students to the marine environment and how the health of the Sound impacts them and their community. They will learn about the types of marine debris and their sources, plastics and its effect on the marine environment, and about the methods they can use to prevent marine debris in their everyday lives; 2) conducting 10 beach cleanups with the students; 3) recording and publicly posting the amounts and types of debris collected during cleanups to track project impact; and 4) testing student knowledge about marine debris and the impact on the Sound during the program. This project will benefit marine life and habitat by preventing 1,500 pounds of marine debris from entering the Sound; and give students the knowledge and tools to become environmental stewards. Project partners include the: Bridgeport Regional Aquaculture School and the Boys & Girls Clubs of Bridgeport, Stamford, Southport/Fairfield, and Ridgefield.

Sound Engagement for Families (CT)

Sea Research Foundation (Mystic Aquarium)

Project Area: Mystic Aquarium, Mystic, Barn Island Wildlife Management Area, Pawcatuck, and Bluff Point State Park, Groton, Connecticut

LISFF Funds: \$9,299.59

Matching Funds: \$11,894.97

Total Project: \$21,194.56

Sea Research Foundation (Mystic Aquarium) will conduct six hands-on Long Island Sound-based conservation field programs, and a Long Island Sound Day celebration for 4,000 community members and 300 families in Mystic, Connecticut. The project will immerse families in hands-on learning and conservation activities that foster appreciation and stewardship of Long Island Sound. With more than 9 million people living in the Sound watershed, there is a need for public education about the importance of environmental stewardship. The grantee will: 1) conduct six conservation-themed programs for 300 families involving 100 volunteers including: Salt Marsh Monitoring exploring the importance of salt marshes in Sound-health; a Beach Cleanup focused on maintaining a debris-free Sound, and collecting 350 pounds of trash along 2.5 miles of coast; Horseshoe Crab Monitoring and Egg Collection with information about the crab, and their role in the environment; and Coastal Exploration Seining and Water Quality where participants will search for and record coastal biodiversity; 2) deliver a Long Island Sound Day with hands-on programs and exhibits about the Sound; and 3) inform over 10,000 people with Sound information through a social media and website campaign. The project will increase public awareness and education about threats facing the Sound to inspire people to become environmentally-responsible citizens who act to protect and restore the Sound watershed; and open doors to children who would otherwise have no access to the Sound. Project partners include: Project Limulus and Charles River Laboratory.

Audubon WildLife Guards – A Coastal Stewardship and Youth Conservation Training Program (CT)

National Audubon Society, Audubon Connecticut

Project Area: Pleasure Beach, Bridgeport, Connecticut

LISFF Funds: \$35,000.00

Matching Funds: \$35,100.00

Total Project: \$70,100.00

National Audubon Society (Audubon Connecticut) will employ 10 students to encourage 3,000 members of the public to share 9.85 acres of coast with beach-nesting coastal waterbirds (such as Least and Common Tern, American Oystercatcher, and Piping Plover); and provide coastal stewardship training to 25 municipal employees to add to student stewardship efforts at Pleasure Beach in Bridgeport, Connecticut. The project will allow residents to enjoy the beach and allow Piping Plover and Least Terns to nest successfully. The grantee will address the need to manage beach and dune habitat for coastal birds while increasing appreciation and understanding of the value of natural resources by the public in a populated area of Long Island Sound. The project will: 1) Employ 10 high school students as summer WildLife Guards to monitor and steward nests and conduct public outreach along 1.25 miles of shoreline; 2) provide a workshop about the natural resources and ecological value of the beach for 25 municipal employees; 3) Engage 150 volunteers in three hands-on events organized by the WildLife Guards. Hands-on activities may include: a beach cleanup, planting native flora, playing Wildlife Jenga, and a craft project using marshmallows to create a Piping Plover; 4) Ask visitors to take the “Be a Good Egg” pledge to give nesting birds space and to keep the beach trash-free; and 5) Produce regular Facebook posts about the WildLife Guards, beach-nesting birds, and the

Sound. The end result is a Pleasure Beach that all of Bridgeport's residents can enjoy and where birds can nest successfully. Project partners: Audubon Connecticut, City of Bridgeport, and the Roger Tory Peterson Institute.

Engaging Student Scientists for Long Island Sound (CT)

Earthplace - The Nature Discovery Center

Project Area: Fairfield County, Connecticut

LISFF Funds: \$32,828.98

Matching Funds: \$34,050.00

Total Project: \$66,878.98

Earthplace- The Nature Discovery Center will engage 46 high school and undergraduate citizen scientists in four experiential learning programs about water quality and Long Island Sound ecology using rivers, harbors, and the Sound as the classroom and make public presentations about their research at public events in Fairfield County, Connecticut. The project will train student participants for careers in conservation science and improve public knowledge and understanding of the Sound. The grantee will operate the program at its laboratory, at 150 water quality monitoring field sites located in rivers, streams and Sound harbors, and aboard a research vessel. The project will engage 27 high school interns in an academic year internship or senior internship, and six summer undergraduates in water quality monitoring. Twelve high school interns will conduct summer fish surveys. All programs incorporate students into research which aims to improve the health of the Sound through identification and remediation of sewage pollution. The project will teach students about biology and conservation science in combination with the hands-on experiences. Skills acquired include water sample collection, meter calibration, membrane filtration, spectrophotometer use, and science communication. The will project will culminate with student presentations about pollution remediation successes and the positive impact of protecting water quality at multiple community-based public events and to state and municipal official and with social media to 700 people; . The project will increase students' scientific literacy and inspire environmental stewardship; and help the public understand and appreciate how their actions impact the environment.

River Smart Community Stormwater Education in the Farmington River Watershed (CT)

Farmington River Watershed Association

Project Area: Towns on the Pequabuck and Still Rivers such as Simsbury, Farmington, Avon, Barkhamsted, Winsted, and Bristol, CT

LISFF Funds: \$31,173.10

Matching Funds: \$32,810.40

Total Project: \$63,983.50

Farmington River Watershed Association will deliver River Smart CT an education and outreach program focused on personal actions to reduce polluted stormwater to 4,000 people in the Farmington Valley, Connecticut. The project will increase the number and variety of citizens who understand the value of Long Island Sound and take a local action to protect its water quality. The health of the Sound, and the rivers and streams that flows into it, are connected to how people live on the land. Yet, many people are unaware of the role they play in determining the quality of waterways. The project will: 1) Enlist 100 volunteers to take a River Smart pledge and act on it individually, and engage 50 volunteers in activities to reduce runoff; 2) Conduct 15 organic lawn care workshops or runoff reduction workdays; 3) Educate 100 students with programming concerning the connection between local storm drains, uplands and land-use on the Sound, and the impact of stormwater pollution on wildlife. Older students will receive hands-on experience with actions to be taken to reduce stormwater pollution or install a stormwater

improvement; 4) Deliver targeted outreach to 200 streamfront property owners about landscaping practices to improve water quality; 6) Produce an exhibit for five events reaching 600 people showing land-uses affecting the Sound; and 7) Conduct field-trips for 100 people to learn about how stormwater reaches the river. The project will give people direct exposure to “their” river connecting runoff prevention benefits they value to encourage personal actions to reduce run off.

SOUNDoff Event! Creating Long Island Sound Stewards (NY)

The Whaling Museum & Education Center of Cold Spring Harbor

Project Area: Cold Spring Harbor, NY

LISFF Funds: \$7,397.19

Matching Funds: \$3,700.00

Total Project: \$11,087.19

The Whaling Museum & Education Center of Cold Spring Harbor will host a one-day event to engage and inform children and adults about how to play an active role in preserving the Long Island Sound through hands-on activities in Cold Spring Harbor, New York. The project will reach 400 visitors who will leave the event with a stronger understanding of their relationship to the Sound and with practical ways to contribute to a cleaner Sound. The grantee will: 1) conduct a local outreach and media campaign to generate interest in the event; and 2) provide multiple hands-on activities including: “Sound Rescue Stations” where visitors can practice “rescuing” the Sound from an array of threats, from oil to pollutants; a water quality monitoring station where visitors may test actual samples, learn how to understand the results and enter those results into an international database; a touch tank of local marine organisms such as oysters and horseshoe crabs combined with presentations about the impact of local marine debris and stormwater pollution on the Sound; a Water Wheel Activity Kit to teach basic ecology of the water cycle to help participants understand why to become stewards of the Sound; and a “Totebag” activity to encourage participants to take the No Plastic Bags Pledge. The event aimed at attracting 400 adults and children will help visitors understand how to protect, and steward the Sound by promoting a greater awareness of human impacts on the health of the estuary, directly or indirectly, and sharing practical, active ways to contribute to a cleaner Sound. Project partners: Seatuck Environmental Association, The Waterfront Center, Cornell Cooperative Extension of Suffolk County, Friends of the Bay, Huntington/Oyster Bay Audubon Society, and the Coastal Research and Education Society of Long Island.

Educating to Engage Sustainable and Resilient Communities – NY/CT

A Blue “Marine” Plan for Long Island Sound (CT,NY)

University of Connecticut

Project Area: Long Island Sound Watershed, Connecticut and New York

LISFF Funds: \$34,996.96

Matching Funds: \$29,996.96

Total Project: \$64,993.92

University of Connecticut will engage scientists, government, industry, and the public in development of maps and natural resource and human use information to become part of an online resource for the Long Island Sound Watershed of Connecticut and New York. The project will support the public process needed for development of a Blue Plan which looks at human activities in the marine environment to achieve ecological, economic, and social objectives with an aim of protecting and restoring the Sound. The Sound hosts diverse uses -

recreation, aquaculture, commercial and recreational fishing, marine trades and transportation, and fish and wildlife habitat. Blue Plans are a new way to manage different uses of oceans. The plans consider all uses of the ocean, and provide decision-makers with information about the geography, environment, and current uses of the ocean. This helps prepare for increased existing and new uses. A key tenet of the plans is robust stakeholder engagement to ensure the openness, transparency, and legitimacy, and to assure local knowledge is part of the process. The grantee will: 1) conduct eight workshops for 50 stakeholders to acquire, review and prepare information; 2) conduct outreach to government entities with responsibilities related to the Sound; 3) Create preliminary maps based on the information collected; 4) draft natural resource and human use narratives based on the information collected; 5) engage the public to further review maps and narratives; and 6) create an online portal of information. The project will foster stronger collaborative relationships; and provide a foundation for management of the Sound's habitats, marine life, and human uses.