



longislandsoundstudy

NATIONAL ESTUARY PROGRAM SUMMARY WORK PLAN

FOR

FEDERAL FISCAL YEAR 2017 FUNDING

FOR

COMPREHENSIVE CONSERVATION AND MANAGEMENT PLAN

IMPLEMENTATION ACTIVITIES

DURING THE PERIOD

October 1, 2017-September 30, 2018 or beyond
[FY2018]

**WITH PRIOR YEAR GOALS/ACCOMPLISHMENTS/HIGHLIGHTS
FOR THE PERIOD**

October 1, 2015- September 30, 2016
[FY2016]

July 2017

Prepared by:
EPA Long Island Sound National Program Office
in consultation with and on behalf of
the Long Island Sound Study Funded Management Conference Partners

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A. GENERAL INFORMATION REPORTING REQUIREMENTS

1. CCMP 2017 GOAL FOCUS

The Long Island Sound Study (LISS) Comprehensive Conservation and Management Plan (CCMP) was first approved in 1994 by the States of New York (NY) and Connecticut (CT) and by the U.S. Environmental Protection Agency (EPA). From 2011 through 2015 the LISS partners and EPA met and revised the CCMP. The new CCMP, approved in 2015, identifies four primary themes:

- 1) Clean Waters & Healthy Watersheds,
- 2) Thriving Habitats & Abundant Wildlife,
- 3) Sustainable & Resilient Communities,
- 4) Sound Science & Inclusive Management.

The need to continue the Management Conference was identified as an important, unifying component to support implementation. With the enactment of the Long Island Sound Improvement Act of 1990 (P.L. 101-596), the LISS Management Conference was made permanent – “The Administrator *shall* continue the Management Conference of the Long Island Sound Study...” This FY2017 Work Plan, prepared under EPA’s draft National Estuary Program (NEP) guidance, directly supports these goal areas with NEP and LISS funding as described herein.

Under the Management Conference structure, the CCMP established a broad-based and integrated approach to addressing the primary environmental and management problem areas identified. This approach required significant and sustained Management Conference coordination, involvement and funding – at all levels. Further, the CCMP identified a number of existing and ongoing environmental management programs of the Management Conference partners that would serve as the foundation for addressing the Sound’s priority problems. New or separate programs or efforts to implement the CCMP were only to be created to fill gaps or better integrate efforts, such as the LIS Futures Fund (LISFF), LIS Research Fund, and CCMP Enhancements program.

Ongoing core environmental programs that contribute to or support CCMP implementation include other Federal programs and funds directed to land use and watershed management, water quality, living resource conservation, management and regulation, as well as state and local programs aimed at regulating human and environmental impacts on the Sound. Many of these programs are delegated to the states, which have the responsibility, authority and accountability for implementing them.

The CCMP anticipates many funding streams and a variety of funding sources for successful implementation of its recommendations -- over time, by the LISS partners. The CCMP also envisions an educated public and informed constituency for the sustained effort to restore, enhance, and preserve the Sound as a national treasure and a ‘green’ engine of economic activity. Designated as an Estuary of National Significance in 1987, Long Island Sound is an inherent part of EPA’s NEP and is a key geographic program of the national water program that includes Chesapeake Bay, Puget Sound, the Great Lakes, and the Gulf of Mexico.

Because of its economic, social and environmental importance to the Northeast region, Long Island Sound is included as a separate line item and has received funding under EPA’s President’s Budget request since FY1999. Long Island Sound is also a goal area in EPA’s Strategic Plan since 2005. The Long Island Sound NEP is included in EPA’s Strategic Plan for FY2014-2018 under Goal 2, *Protecting America’s Waters*, Objective 2.2, *Protect and Restore Watersheds and Aquatic Ecosystems*. One of the LISS’s four major environmental goals has been included with a goal measure in the Strategic Plan:

reducing the area of the maximum hypoxic event occurring in the summer months by 15 percent from baseline. The budget targets measure the reduction in the maximum area of hypoxia in the Sound, and record the acres of critical coastal habitat restored or protected and the miles of rivers and streams reopened to fish passage. These are annual targets negotiated with LISS state partners. The area of hypoxia is an environmental outcome measure and annual targets are not established for outcome measures.

a. NEP Implementation Review. The EPA Office of Water conducted a CCMP Implementation Review during June 22-25, 2015. The review focused on primary CCMP implementation areas and on determining whether sufficient progress was being made and funding was being directed to highest priority areas. The EPA Office of Water provided a final findings letter to the LISS on October 15, 2015. The review found sufficient progress in implementing CCMP goals and targets and recommended Long Island Sound for further funding under the NEP program. The next HQ review is currently scheduled for Summer 2019.

2. FY2017 LISS BUDGET BREAKDOWN

This work plan summarizes tasks and deliverables contained in EPA FY2017 assistance awards to Management Conference partners that account for the FY2017-18 EPA Environmental Programs and Management (EPM) appropriation for the LISS NEP, and for EPM funding provided by EPA for the Long Island Sound Geographic Program. These funds include \$600,000 in NEP allocations under Clean Water Act (CWA) §320, and \$8,000,000 under CWA §119 as enacted. Grants are awarded by EPA Region 1 and 2 as delegated under EPA Delegations of Authority 2-42 and 2-94 under the authority of §119 per NEP funding guidance. The required aggregate match for this funding cycle is \$8,744,511 as shown in Attachment 3. The program received an additional \$30,000 in funding for a *Climate Ready Estuaries* project under the National Estuary Program, which required additional match (Attachment 3, line 24).

The work activities and the budget amounts contained in this NEP Summary Work Plan were approved by EPA and the LISS Management Committee at its Thursday, May 11, 2017 meeting. The record of the Management Committee meeting is documented in Mark Tedesco’s June 9, 2017 memorandum entitled, FY2017 LISS Grant and Work Plan Technical Guidance.

The LISS budget is organized into the four Program Elements outlined below; the FY2017 LISS budget breakdown by Program Element is:

<u>Program Element</u>	<u>Amount</u>
<i>Coordination and Reporting of Environmental Actions/Results</i>	\$513,316
<i>Public Outreach, Information and Education</i>	\$715,112
<i>Monitoring, Modeling and Research</i>	\$3,022,706
<i>CCMP Implementation, Technical Assistance/Regulatory Support</i>	\$4,378,866

To implement this summary Work Plan, as of this writing, EPA will issue seven new assistance award(s) and amend two current assistance awards to include the FY2017 funding. LISS grantees receiving FY2017 funds have been directed to submit their formal Federal assistance award applications (SF424s) to the grants.gov website on or before June 16, 2017. **Attachment 1** is a detailed breakdown of the FY2017 approved budget by LISS Program Element, Products and/or Services, Implementing Agency,

and Environmental Outcome(s). The Environmental Outcomes are derived from the individual partner grant work plans based on EPA Order 5120.

3. LISS STAFF AND THEIR OFFICIAL RESPONSIBILITIES

The LISS provides funding to certain of its partners to support staff resources to carry out key elements of implementing the CCMP. **Attachment 2** lists the FY2017 LISS-funded staff by name, title and description of their major roles and responsibilities. Each LISS partner's federal assistance award work plan provides details on the deliverables, outputs and expected environmental outcomes for LISS-funded staff functions as required by EPA Order 5120. In addition to the staff listed in Attachment 2, the CTDEEP employs seasonal staff to assist with conducting the LIS summer water quality monitoring program as necessary; these, and overtime costs for water quality monitoring staff, are included in that award, but are not shown in Attachment 2 because of the seasonal nature of the positions that may be filled by different incumbents during the period of employment. Each EPA grantee is responsible for managing its personnel under its own organization's human resource management policies and procedures.

The EPA provides two full-time equivalent (FTEs) federal employees that staff the EPA Long Island Sound National Program Office (LISNPO). A director, appointed by the Administrator under §119, and a program coordinator to plan, organize, coordinate and manage program operations in order to assist the Management Conference partners in CCMP implementation. These FTEs are not funded from the LISS, but from other EPA EPM resources. EPA Region 1 provides approximately 75 percent of an FTE to support EPA efforts for Long Island Sound in Region 1. Region 1 also supports a US Government vehicle for LISNPO use via the General Services Administration (GSA). EPA supports, from its Working Capital Fund appropriation, leasing office space for the LISNPO through the GSA. EPA Region 2 provides technical and management support to the program through the Clean Water Division and EPA Region 1 provides staff and technical support through the Office of Ecosystems Protection. By mutual agreement between the Regions, Region 2 provides other administrative support for official business, such as procurements, funds control and management, information technology and telecommunications support, grants management, travel, training and other policy and program management requirements. Region 1 provides grants management, contract oversight and funds control for the awards processed through Region 1. This support is essential to operating and maintaining the EPA LISNPO, the national program office for the Long Island Sound Geographic Program.

4. GRANT AWARDS

Attachment 3 lists the FY2017 LISS budget by recipient organization; the total funding for each recipient may consist of one or more EPA grant awards or amendments to existing grants, **Attachment 4** lists the FY2017 budget by individual EPA assistance award number by grantee where known at this time; the actual EPA assistance award number is provided for reference. However, the award process is dynamic and final grant award numbers and dollar amounts as actually awarded by EPA may differ from Attachment 4 since this NEP summary Work Plan is completed in advance of the grant award process, which must be completed by September 30, 2017. Details of the award purpose, project deliverables, and project completion dates are provided in Section B of this Work Plan below. Attachments 3 and 4 also show the required non-federal matching funds and the overall actual aggregate match requirement for the LISS for FY2017.

For FY2017 Federal assistance awards, the CTDEEP is providing an annual 'overmatch' in its EPA assistance award in order for the LISS to meet the overall aggregate match for the NEP as required under CWA §320 [see Attachment 3, line 2e]. The CTDEEP overmatch is from combined sewage overflow

upgrade projects in Connecticut that were enabled through the nitrogen TMDL. This also allows other recipients and sub-awardees that are not able to meet matching funds requirements to apply for LISS grant programs, ensuring broader participation in the work of the LISS Management Conference from academic researchers and institutions, local environmental organizations, interest groups and associations, as well as other qualified regional or watershed organizations. **[NB: Final assistance award amounts and number designations are issued by EPA pending final EPA action on individual awards, and each award is subject to the special terms and conditions contained therein.]**

Using FY2017 funding for work that will take place in FY2018, the EPA is providing funding to nine LISS partners through nine new or amended awards: NFWF, CTDEEP; the New England Interstate Water Pollution Control Commission (NEIWPCC); the New York State Department of Environmental Conservation (NYSDEC); the New York City Department of Environmental Protection (NYCDEP); the Connecticut Sea Grant College Program (CTSEA); the Interstate Environmental Commission (IEC); the New York Sea Grant College Program (NYSEA); and the University of Connecticut Marine Sciences Department. These partners assist in implementing the CCMP and conduct activities to support the LISS program. These awards are managed by staff of the EPA LISNPO and EPA Region 1, who are trained and assigned as EPA Project Officers. Because of multi-year awards and varying federal appropriation levels, all partners may not receive LISS funding in every annual budget/work plan cycle. The EPA Project Officers work with their grantees to ensure that any unliquidated obligation (ULO) balances are considered in awarding new year funding, and as necessary, award amounts are adjusted to compensate for ULO balances. It should also be noted that these partners also bring their own non-matching resources to restore and protect the Sound, which are not accounted for in this work plan.

B. PROPOSED NEW AND ONGOING (FY2017) PROJECTS

This work plan provides information as required under EPA’s *FY2017-2019 Clean Water Act §320 National Estuary Program Funding Guidance*. The format for Section B is the same as used by the LISS since FY2008, when the LISS adopted a combination of the FY2008 NEP Work Plan Guidance and the September 2008 NEP Program Evaluation Guidance Logic Model format (until updated). To adjust to this reporting format, to the extent feasible, the LISS Program Element activities have been ‘broken up’ under the following logic model Core Elements and Sub-elements contained in the NEP Program Evaluation Guidance:

Logic Model Core Element: 1. Program Implementation & Reporting: a) Financial Management; b) Tracking/Reporting; c) Program Planning & Administration; d) Outreach & Public Involvement;

Logic Model Core Element: 2. Ecosystem Status & Trends: a) Research; b) Assessment & Monitoring; c) Reporting;

Logic Model Core Element: 3. Ecosystem Protection & Restoration Projects: a) Habitat; b) Water Quality; c) Living Resources; d) Healthy Communities; and

Logic Model Core Element: 4. Technical Assistance and Capacity Building: a) Tools; b) Training; c) Direct Assistance.

Following is the crosswalk between the Logic Model elements and the LISS Program Elements:

Logic Model Element	LISS Program Element
<i>CCMP/Work Plan Goal</i>	[LISS CCMP Area]

Logic Model Element	LISS Program Element
<i>Project/Activity Name:</i>	[Program Element/Sub-category description]
<i>Project/Activity Purpose and Description</i> (indicate as Proposed, On-Going, New, Continuing)	New: first year of project for LISS Continuing: prior year funded project On-Going: multi-year or base program project Proposed: first year project proposed for funds
<i>Responsible Partners and Their Role(s)</i>	[LISS Grantee Name]
<i>Outputs/Products:</i>	same
<i>Milestones</i>	(project start and completion dates) [EPA Grant/IAG Date(s)]
<i>Budget:</i>	[FY2017 to the extent separately identifiable]
<i>Outcomes:</i>	(anticipated and/or completed accomplishments) [Environmental Outputs/Outcomes]
<i>-Short term; Intermediate; Long Term</i>	
<i>-Changes (+/-) in Pressure Targets:</i>	[N/A]
<i>Identify the CWA core program the project would support</i>	[Checklist of 7 Core Elements]

1. Program Implementation and Reporting. Under CWA §119 (33 USC 1269), the EPA LISNPO is responsible for the overall coordination of the LISS Management Conference convened under CWA §320 and is to *assist* and *support* implementation of the CCMP developed under that Section, *coordinate* the grant, research and planning programs and *provide administrative* and *technical support* to the Conference.

a. Financial Management. The EPA LISNPO has overall responsibility for managing EPA LISS appropriated funds, ensuring that these funds are awarded and expended in a timely and efficient manner using the methods and management controls established by the Agency. Since the LISS NEP does not utilize the single assistance agreement process for implementation, but rather is a federally-administered program (as specified under CWA §119) that utilizes a number of separate EPA assistance awards to conduct the program, financial management responsibilities are distributed, not centralized. Each EPA grantee is responsible for financial management under EPA assistance regulations, and must comply with those regulations, under the new Part 200 rule as applicable to the organization.

The EPA LISNPO manages the individual EPA assistance awards and IAs for each Federal fiscal year cycle of LISS funding. Each LISS grantee is responsible under EPA regulations for fiscal management and accountability for Federal funds it acquires by advance payment or reimbursement. EPA LISNPO requires semiannual grant progress reports from grantees and periodic Federal Financial Status Reports (SF260s) are to be submitted to EPA’s Las Vegas Financial Center from the grantees’ fiscal offices. EPA LIS grant awards use the identifier prefix, “LI;” NEP awards use the identifier “CE.” Funds accounting by assistance award number is available online at EPA’s Compass Data Warehouse. The LISNPO monitors drawdown of funds regularly and provides each grantee with the data on unliquidated obligation (ULO) status and works with grantees to ensure timely and appropriate liquidation of grant balances or adjustments to work plans and/or grants.

LISS grants are made under the Catalog of Federal Domestic Assistance (CFDA) number 66.437, Long Island Sound Program or CFDA number 66.456, the National Estuary Program. EPA LISNPO semi-annually updates the LIS CFDA description as necessary through EPA’s internal process as required by OMB. Grantees are responsible for tracking and accounting of expenditures according to their approved assistance award budgets and must abide by EPA grant regulations and terms and conditions to modify budgets or change program direction.

CCMP/Work Plan Goal:	Continuing the Management Conference	
Project/Activity Name:	EPA LISNPO Support to the Management Conference	
ONGOING Project/Activity Purpose & Description:	Provides support to the Management Conference in implementing the CCMP; overall program coordination, management and direction.	
Responsible Partner(s) Role(s):	EPA Long Island Sound Office	
Outputs/Products:	Assistance and coordination of the LISS Management Conference. development of annual NEP work plan; development and execution of EPA Strategic Plan elements for LIS; development, execution and management of financial assistance agreements; development and submission of GPRAs-required reports; tracking and reporting of implementation of CCMP actions; technical assistance to partners in program operations.	
Milestones (project start/end dates)	Project period October 1, 2017-September 30, 2018 and continuing.	
2017 Budget:	Total \$14,500. (\$4,000 EPA HQ administrative support) and (\$10,500 communications; postage; supplies), EPA staff N/A [See Attachment 1, lines 1& 2.]	
Outcomes: (anticipated and/or completed accomplishments) -Short, Intermediate & Long Term	Coordinated federal, state, and local government actions to implement the CCMP; clear annual goals and objectives framed within available funding; public, political, and financial support for restoration and protection of Long Island Sound; organized and effective LISS public participation; improved water quality as measured annually by reduced anthropogenic nitrogen deposition and increased dissolved oxygen concentrations; increased habitat restoration and preservation as measured by number of acres of coastal habitat restored/preserved annually; increased species diversity as measured by river miles reopened to diadromous fish passage annually; informed and educated public and citizenry as measured by numbers of publications distributed to target populations and number of website visits; improved management and coordination of implementation actions as measured by reported program indicator outputs and outcomes.	
Δ (+/-) in Pressure Targets	N/A	
CWA Core Program Project Support Core programs are:	1) Strengthening WQ Standards §304(a)	x
	2) Improving WQ Monitoring §303(d) 305(b)	x
	3) Developing TMDLs §304(b)	x
	4) Controlling NPS Pollution on a Watershed Basis §319	x
	5) Strengthening NPDES Permits §402	x
	6) Supporting Sustainable Wastewater Infrastructure	x
	7) Wetlands Program Support/Implementation §404	x

b. Tracking and Reporting. As the only Federally led NEP, EPA’s authority to require and collect information is limited to that contained in enabling statutes and regulations. CWA §320 and §119 indicate specific reporting requirements and EPA regulations under 40 CFR Parts 30 and 31 provide further reporting requirements for grantees. Finally, EPA grant regulations provide several reporting requirements e.g., quarterly or semi-annual reporting on grant progress. EPA LISNPO is responsible for the overall LISS tracking and reporting systems for the NEP.

Each EPA assistance award contains Terms and Conditions (T&Cs) with reporting requirements mandated for the NEP’s Government Performance and Results Act (GPRA) performance measures for: 1) habitat restoration and protection, and 2) leveraged funds.

The LISNPO also tracks and reports the four LIS goal area measures in EPA’s Strategic Plan and budget through the Agency’s Annual Commitment System (ACS) reporting system. This reports state CCMP partners’ progress to EPA in reducing point source nitrogen discharges to the Sound from the 106 NY and CT STPs discharging in the LIS watershed (LI-SP41); the area of the maximum hypoxic event in the Sound (LI-SP42); the acres of coastal habitat restored or protected (LI-SP43); and river miles reopened to diadromous fish passage (LI-SP44). These data are compiled by LISS Management Conference partners through the LIS water quality monitoring program and the habitat restoration program, both of which receive LISS funding in this Work Plan. This data is collected under the authority of the T&Cs in the grant awards issued to the responsible partners.

In 2011 the LISS Management Conference partners agreed to a process to revise and update the 1994 CCMP. CCMP revision was completed in Spring 2015 and a new CCMP issued (see <http://longislandsoundstudy.net/about/the-comprehensive-conservation-and-management-plan/>). The 2015 CCMP also sets 20 ambitious, but achievable, long-term targets for the ecosystem. These ecosystem targets are intended to drive progress toward attaining CCMP goals. Measuring, tracking, and reporting environmental indicators of each ecosystem target will provide information to assess progress and refine and adapt management as needed. The LISS is currently developing a new process to track implementation actions and progress toward ecosystem targets that will rely on a public website. This new system will replace the annual *eSound CCMP Implementation Tracking Report*, which was organized around the 1994 CCMP.

c. Program Planning and Administration. As indicated above, the EPA LISNPO has overall responsibility for coordinating the LISS Management Conference, which is a multi-grantee, multi-state distributed partnership NEP. LISS federal, state, local, and academia partners have inherent responsibilities in these areas, and are provided funding for administrative staff positions to carry out these overarching functions. LISS grantees have a negotiated Indirect Cost Rate with EPA or their federal Cognizant Agency to cover the overall expenses of their institution in managing federal assistance awards under Office of Management and Budget Circulars. The following charts include information in the required NEP Work Plan format relative to this Logic Model category:

CCMP/Work Plan Goal:	Continuing the Management Conference
Project/Activity Name:	State Coordination and Technical Assistance
<u>ONGOING</u> Project/Activity Purpose & Description:	Assist in all aspects of LISS Management Conference program development and support for CCMP implementation in the State of Connecticut.
Responsible Partner(s)/Role(s):	Connecticut Department of Energy and Environmental Protection

CCMP/Work Plan Goal:	Continuing the Management Conference	
Outputs/Products:	Involvement of relevant technical staff and programs in LISS activities to protect and restore Long Island Sound, its resources and its habitats, and to protect public health and meet commitments to the LISS partnership. Development of work group products and activities essential to implementation of the CCMP. Due consideration of nitrogen control in watershed planning and management efforts. Steady progress of point source nitrogen reductions as per the TMDL and nitrogen general permit. Update of progress towards implementing CCMP recommendations in the areas of hypoxia, toxic contamination, pathogens, living marine resources and land use. Reports on progress to ensure commitments to protect and restore LIS, and implementation plans are on track. LIS Research and Implementation grants are consistent with and complementary to LISS goals and objectives and productive in restoring and managing Long Island Sound. Two-year grant period.	
Milestones (<i>project start/end dates</i>)	Project period 10/1/17-9/30/19 and continuing. Grant period 10/1/17-9/30/19 and continuing.	
2017 Budget:	\$414,127 [See Attachment 1, line 3a]	
Outcomes: (<i>anticipated and/or completed accomplishments</i>) -Short, Intermediate & Long Term	Improved management and implementation of CCMP goals and objectives; improved environmental data quality and reporting of environmental results.	
-Changes (+/-) in Pressure Targets	N/A	
CWA Core Program Project Support Core programs are:	<ul style="list-style-type: none"> 1) Strengthening WQ Standards, x 2) Improving WQ Monitoring, x 3) Developing TMDLs, x 4) Controlling NPS Pollution on a Watershed Basis, x 5) Strengthening NPDES Permits, x 6) Supporting Sustainable Wastewater Infrastructure. x 7) Wetlands Program Support/Implementation x 	

CCMP/Work Plan Goal:	Continuing the Management Conference	
Project/Activity Name:	State Program Coordination and Management	
ONGOING Project/Activity Purpose & Description:	Provides support to the Management Conference in implementing the CCMP; overall program planning, coordination, administration, management and direction in the State of New York and coordination with New York State Department of State and other state/local agencies in New York.	

CCMP/Work Plan Goal:	Continuing the Management Conference	
Responsible Partner(s) Role(s):	New York State Department of Environmental Conservation	
Outputs/Products:	Coordination and development of activities and products to implement the CCMP. Track progress of programs and projects designed to protect and restore LIS. Electronic and paper reports of the status of resources, water quality and implementation. Coordinate and implement CCMP actions, protect public health, preserve and protect LIS resources and water quality by soliciting and involving expertise from various state programs. Ensure that projects are consistent with NYS regulations and the CCMP. Grant proposals are reviewed for relevance and benefits to LIS. Information sharing, development of recommendations, strategies and identification of data gaps regarding wetlands loss in LIS. Increased knowledge of existing site conditions (e.g. WQ information at tidally restricted sites); will also be used to collect additional data at the 4 wetland loss research sites. DEC will be able to more effectively partner in restorations, by being able to assist in gathering essential information. Develop and implement CCMP actions as directly related to NPS pollution reduction, protect public health, preserve and protect LIS resources and WQ by soliciting and involving expertise from various state programs.	
Milestones (project start/end dates)	October 1, 2017-September 30, 2018 and continuing	
2017 Budget:	\$118,571 for Coordinator salary as in-kind state match [See Attachment 1, line 3b]	
Outcomes: (anticipated and/or completed accomplishments) -Short , Intermediate & Long Term	Coordinated management and implementation of CCMP goals and objectives. Progress towards implementing the CCMP management actions. Better enables DEC to act as a partner to get restoration projects initiated. Improved public awareness, stewardship, WQ, protection of public health, and implementation of CCMP and LIS Agreement goals and objectives.	
-Changes (+/-) in Pressure Targets	N/A	
CWA Core Program Project Support Core programs are:	<ul style="list-style-type: none"> 1) Strengthening WQ Standards, 2) Improving WQ Monitoring, 3) Developing TMDLs, 4) Controlling NPS Pollution on a Watershed Basis, 5) Strengthening NPDES Permits, 6) Supporting Sustainable Wastewater Infrastructure. 7) Wetlands Program Support/Implementation 	<ul style="list-style-type: none"> x x x x x x x

CCMP/Work Plan Goal:	Continuing the Management Conference
Project/Activity Name:	Management Conference Administrative Support

CCMP/Work Plan Goal:	Continuing the Management Conference	
ONGOING Project/Activity Purpose & Description:	Provides support to the Management Conference in implementing the CCMP through committee meetings support; local and national travel support and other planning and reporting support	
Responsible Partner(s) Role(s):	New England Interstate Water Pollution Control Commission	
Outputs/Products:	Citizen involvement and participation; state and local meeting support; national conference and travel support.	
Milestones (project start/end dates)	October 1, 2015-September 30, 2018	
2017 Budget:	Total: \$84,869 (Task 2 Meeting/travel Coordination \$78,789, and Task 7 Travel Support \$5,900) [See Attachment 1, line 4]	
Outcomes: (anticipated and/or completed accomplishments) -Short, Intermediate & Long Term	Attendance at national conference and meetings; travel to CAC and other LISS meetings and events support.	
-Changes (+/-) in Pressure Targets	N/A	
CWA Core Program Project Support Core programs are:	1) Strengthening WQ Standards,	
	2) Improving WQ Monitoring,	
	3) Developing TMDLs,	
	4) Controlling NPS Pollution on a Watershed Basis,	
	5) Strengthening NPDES Permits,	
	6) Supporting Sustainable Wastewater Infrastructure.	
	7) Wetlands Program Support/Implementation	

d. Outreach and Public Involvement. The LISS provides grants to several of its partners to support their public outreach, information and education (PI&E) program activities, a key Program Element of the LISS. NEIWPCC, NYSEA and CTSEA are primarily responsible under their LISS grant awards for public outreach assistance. The LISS communications team consists of staff of these partners and other interested parties, including members of the LISS Citizens Advisory Committee (CAC). The communications team meets periodically to develop and carry out work as reflected in each grant award. In addition, NFWF conducts the Small Grants program, which is focused on PI&E activities, and may also make awards for approved PI&E projects under the Large Grants program. The prior year LISFF Large and Small Grant projects are posted on the NFWF website, <http://www.nfwf.org/lisff/Pages/lisff-projects.aspx>.

The LISNPO and LISS partners provide significant support to the CAC, which is co-chaired by an elected member each from New York and Connecticut. Coordinated by the NY/CTSEAs, the CAC meets quarterly at alternating locations in Connecticut and New York in the LIS watershed and provides advice to the Management Conference partners in implementation of the CCMP. The CAC operates under its Bylaws and is composed of up to 60 members who represent organizations with a

demonstrated interest in Long Island Sound. Financial support for CAC meetings is provided through NEIWPCCC’s PI&E line item in its LISS assistance award. CAC members are reimbursed for their travel expenses directly related to attending CAC meetings [see Attachment 5].

In addition, the CAC meets as needed with the STAC to jointly review program priorities from a scientific perspective and to update each other on issues of scientific and public concern. The CAC co-chairs are members of the Management Committee, and provide a public perspective at Management Committee meetings. The CAC also appoints two liaisons to the STAC, one each from New York and Connecticut to represent the CAC at STAC meetings. CAC members participate on LISS teams and work groups and attend those meetings as appropriate.

The **Outreach and Public Involvement** program area of the required NEP Work Plan format is summarized below:

CCMP/Work Plan Goal:	Public Outreach, Information and Education
Project/Activity Name:	PI&E, Small Grants and PI&E Project Support
<u>ONGOING</u> Project/Activity Purpose & Description:	Supports the Management Conference in conducting the LISS public outreach, information and education program through staff resources and products, services and supplies.
Responsible Partner(s) Role(s):	NEIWPCCC, NYSG, CTSG; NFWF, CTDEEP, direct implementation of PI&E activities.
Outputs/Products:	Production of three issues of <i>Update</i> for distribution throughout the LIS region. Production of three issues of <i>Sound Outlook</i> for distribution throughout the LIS region. Bi-monthly issuance of <i>Sound Bytes</i> , an electronic mail update of current LIS issues; Update of progress towards implementing CCMP recommendations in the areas of hypoxia, toxic contamination, pathogens, living marine resources and land use. Award small and medium sized grants to public, private and government entities to implement LIS restoration and education projects. Communication of LIS issues and successes to a wide variety of interested citizens, educational entities, and professional societies. Provide LISS and agency information about LIS to the public and assist other agency staff in reporting efforts meeting CCMP goals. Communication of LIS issues and resource value to state citizens and LIS awareness to the general public in the watershed.
Milestones (project start/end dates)	October 1, 2017-September 30, 2018 (or as specified in individual assistance awards)
2017 Budget:	Total: 426,649 (NEIWPCCC: \$229,254; NYSG: \$228,000; CTSG: \$197,395 [see Attachment 1, lines 5-7])
Outcomes: (anticipated and/or completed accomplishments) -Short, Intermediate & Long Term	Informing public and increasing citizen stewardship and action beneficial to a healthy LIS. Informing and increasing public knowledge and citizen activism on LIS issues. Increasing awareness of the state of LIS health and promoting changes in lifestyle that might benefit the Sound. Assessment of progress and key report to citizens involved in the LISS leading to adjustments in management direction. Publicity to support LIS management activity and to inform public about trends in LIS health to create public support. Improved habitat and water quality and increased public awareness and participation in LIS affairs. Fulfill public request for knowledge about LIS and educational

CCMP/Work Plan Goal:	Public Outreach, Information and Education	
	needs; promote better stewardship of the Sound; increase awareness for the protection and restoration of LIS to the general public and improve management decisions for the LISS partner agencies. Increased awareness for the protection and restoration of LIS to the general public and promote better stewardship of the Sound.	
Δ (+/-) in Pressure Targets	N/A	
CWA Core Program Project Support Core programs are:	1) Strengthening WQ Standards,	x
	2) Improving WQ Monitoring,	x
	3) Developing TMDLs,	x
	4) Controlling NPS Pollution on a Watershed Basis,	x
	5) Strengthening NPDES Permits,	x
	6) Supporting Sustainable Wastewater Infrastructure.	x
	7) Wetlands Program Support/Implementation	x

2. Ecosystem Status and Trends. The LISS federal, state, local and academia partners monitor ecosystem status and trends for a suite of environmental indicators. These indicators are posted on the LISS website, <http://longislandsoundstudy.net/category/status-and-trends/>. The indicators are linked back to CCMP problem areas and provide information on the abundance, diversity, distribution, viability, and/or quality and trends of the resource being monitored. As noted previously, the 2015 CCMP sets 20 ecosystem targets. The LISS will be transitioning the website to focus on the 20 ecosystem targets, along with supporting indicators. Measuring, tracking, and reporting the ecosystem targets and indicators will provide information to assess progress and refine and adapt management as needed. Reporting on targets and indicators on a periodic basis is a complex process, because the LISS does not directly pay for or support the data collection efforts for many of them. These are the province of other entities that are either directly responsible for that data collection by law, statute, regulation or by history or organizational preference. Instead, LISS works to use existing data when available, and collect new data as needed.

a. Research. The LISS Research program is a cooperative effort between EPA and the New York Research Foundation of the State University of New York (SUNY RF) and Connecticut Sea Grant College program, to which each have contributed funds and expertise in review of proposals and identification of peer reviewers. The LISS withheld funding for the research program in FY17 to target those funds toward possible data collection related to water quality modeling. Research projects funded from prior cycles of the Research Program are ongoing. This LISS will consider funding for the continuing the research program in 2018.

b. Assessment and Monitoring. In FY2017 the Management Committee once again approved funding for the LIS ambient water quality (WQ) monitoring program conducted by CTDEEP, USGS, IEC, and UCONN. The program provides the basis for the determination of hypoxic, and other ambient conditions in LIS and to determine state compliance with water quality standards for dissolved oxygen (DO). This information is reported by CTDEEP and is used by the LISS to report annual progress in meeting both NEP and EPA Strategic Plan goals and targets for the area and duration of hypoxia. CTDEEP uses some of the funds to supplement CT River nutrient monitoring by the USGS. The Interstate Environmental Commission monitors water quality in the open waters and embayments of the Narrows portion of LIS. The University of Connecticut supports a network of buoys with sensors that monitor water quality every

15 minutes. This effort complements the more spatially dense ship-based sampling by CTDEEP and IEC. The following charts describe the WQ monitoring program conducted by CTDEEP and other partners' monitoring and assessment projects approved in the FY2017 budget.

CCMP/Work Plan Goal:	Monitoring, Modeling and Research	
Project/Activity Name:	LIS Water Quality Monitoring Program	
ONGOING Project/Activity Purpose & Description:	To monitor and assess the ambient conditions of water quality in LIS and provide management with information for decision-making.	
Responsible Partner(s) Role(s):	CTDEEP, conduct WQ monitoring, field sampling, and analysis of LIS open waters.	
Outputs/Products:	Nutrient and ancillary data to evaluate benefits of nutrient management programs and health of LIS. Dissolved oxygen data and maps of areal extent and duration of hypoxia in LIS. Tissue data is required to update the health consumption advisories in CT and NY. Organized and available database (to researchers and the public); interpretive graphics and fact sheets for public consumption on web site. Plankton community data to evaluate biological condition and response to changing water quality.	
Milestones (project start/end dates)	October 1, 2017- April 30, 2019	
2017 Budget:	Total \$1,392,322. (1,352,322 LIS Water Quality Monitoring Program) [see Attachment 1, line 10] (\$40,000 CT River monitoring USGS) [see Attachment 1, line 11]	
Outcomes: (anticipated and/or completed accomplishments) -Short, Intermediate, Long Term	Improved water quality assessment to guide management activities. Improved planktonic community assessment to guide management activities. Improved dissolved oxygen assessment to protect living resources and to determine criteria compliance in CT and NY. Greater safety of CT and NY residents who consume LIS seafood. Better public involvement and management of LIS nutrient and oxygen conditions. Improved stewardship. Data for researchers to complement their projects. Improved water quality assessment to guide management activities. Improved stream and tributary monitoring results. In 2016 the maximum area of hypoxia in the Sound was 198 square miles lasting for 51 days. The pre-TMDL averages of 205 square miles and 56 days are compared with the post-TMDL averages of 164 square miles and 56 days.	
Δ (+/-) in Pressure Targets	N/A	
CWA Core Program Project Support Core programs are:	1) Strengthening WQ Standards,	X
	2) Improving WQ Monitoring,	X
	3) Developing TMDLs,	X
	4) Controlling NPS Pollution on a Watershed Basis,	X
	5) Strengthening NPDES Permits,	X
	6) Supporting Sustainable Wastewater Infrastructure.	X

CCMP/Work Plan Goal:	Monitoring, Modeling and Research	
	7) Wetlands Program Support/Implementation	x

CCMP/Work Plan Goal:	Monitoring, Modeling and Research	
Project/Activity Name:	LIS Real-Time Water Quality Monitoring	
<u>CONTINUING</u> Project/Activity Purpose & Description:	To increase accuracy of data collection of the onset of low dissolved oxygen levels in the Sound to eliminate adverse impacts of hypoxia and provide an early warning mechanism to protect human health and the LIS ecosystem.	
Responsible Partner(s) Role(s):	University of Connecticut	
Outputs/Products:	Project will support the LIS water quality monitoring program through a network of fixed stations (buoys) and telemetered data.	
Milestones (project start/end dates)	October 1, 2017-September 30, 2018	
2017 Budget:	\$122 ,555 [see Attachment 1, line 12]	
Outcomes: (anticipated and/or completed accomplishments) -Short, Intermediate, Long Term	Assessment of water quality management program impact; interpretation of stream flow variability on salinity in critical coastal habitats; better assessment of trends in managed nutrients; improved assessment of water quality models; maintained and working fixed monitoring stations; maintain, evaluate and distribute remote sensing data for PCO2 and PH with instruments purchased last year.	
Δ (+/-) in Pressure Targets	N/A	
CWA Core Program Project Support Core programs are:	1) Strengthening WQ Standards,	x
	2) Improving WQ Monitoring,	x
	3) Developing TMDLs,	x
	4) Controlling NPS Pollution on a Watershed Basis,	x
	5) Strengthening NPDES Permits,	x
	6) Supporting Sustainable Wastewater Infrastructure.	x
	7) Wetlands Program Support/Implementation	x

CCMP/Work Plan Goal:	Monitoring, Modeling and Research	
Project/Activity Name:	IEC LIS Water Quality Monitoring	
<u>CONTINUING</u> Project/Activity Purpose & Description:	To monitor and assess the ambient conditions of water quality in western LIS and provide management with information for decision-making.	
Responsible Partner(s) Role(s):	Interstate Environmental Commission (IEC)	
Outputs/Products:	Project supports the LIS water quality monitoring program in western Long Island Sound.	

CCMP/Work Plan Goal:	Monitoring, Modeling and Research	
Milestones (<i>project start/end dates</i>)	October 1, 2017-September 30, 2018	
2017 Budget:	\$81,245 [see Attachment 1, line 13];	
Outcomes: (<i>anticipated and/or completed accomplishments</i>) -Short, Intermediate, Long Term	Improved resolution of water quality data; increase in number of stations covered; additional data points obtained; consistency of data collected and reported.	
Δ (+/-) in Pressure Targets	N/A	
CWA Core Program Project Support Core programs are:	1) Strengthening WQ Standards,	x
	2) Improving WQ Monitoring,	x
	3) Developing TMDLs,	x
	4) Controlling NPS Pollution on a Watershed Basis,	x
	5) Strengthening NPDES Permits,	x
	6) Supporting Sustainable Wastewater Infrastructure.	x
	7) Wetlands Program Support/Implementation	x

CCMP/Work Plan Goal:	Monitoring, Modeling and Research	
Project/Activity Name:	ESAT (Environmental Services Assistance Team) Connecticut River Monitoring Contract	
Continuing Project/Activity Purpose & Description:	Develop a quantitative and qualitative data set in order to characterize the water quality of the lower reaches of the river and its estuary and to determine whether impairments driven by the input of nutrients exist.	
Responsible Partner(s) Role(s):	EPA	
Outputs/Products:	<p>Sampling will consist of two components (Data Sondes and Water grab samples) at 10 locations along the 8-mile river. Sampling data for component one (data sondes) will collect sample data for chlorophyll, temperature, dissolved oxygen concentration, dissolved oxygen saturation, pH, specific conductance, salinity and photosynthetically-active radiation (PAR). Component two (water grab samples) will be analyzed for total nitrogen, Secondly, water quality grab samples will be collected at each location and analyzed for TN, ammonia, nitrate-nitrite, TSS, total phosphorus, orthophosphate, and chlorophyll a. Surface water clarity will be evaluated with a 20 cm Secchi Disk. A total of 77 samples will be taken during each sampling event (5 samples per station plus 1 set of duplicates). Samples will be analyzed by Region 1. A data sonde will also be used to record chlorophyll, temperature, dissolved oxygen concentration, dissolved oxygen saturation, pH, specific conductance, and salinity at each monitoring location during each sampling event.</p>	

CCMP/Work Plan Goal:	Monitoring, Modeling and Research	
Milestones (<i>project start/end dates</i>)	October 1, 2017-September 30, 2018	
2017 Budget:	\$26,584 [see Attachment 1, line 14]	
Outcomes: (<i>anticipated and/or completed accomplishments</i>) -Short, Intermediate & Long Term	Evaluation of potential for point source nitrogen loadings from POTWs to be causing or contributing to elevated nitrogen levels, dissolved oxygen violations, and loss of eelgrass habitat due to eutrophication in the Connecticut River Estuary.	
Δ (+/-) in Pressure Targets	N/A	
CWA Core Program Project Support Core programs are:	1) Strengthening WQ Standards,	x
	2) Improving WQ Monitoring,	x
	3) Developing TMDLs,	x
	4) Controlling NPS Pollution on a Watershed Basis,	x
	5) Strengthening NPDES Permits,	x
	6) Supporting Sustainable Wastewater Infrastructure.	x
	7) Wetlands Program Support/Implementation	

c. Reporting. Costs for producing Long Island Sound publications are budgeted for in the NEIWPC assistance award as necessary and as approved by the Management Committee for the appropriate budget year. These activities are usually funded in the year preceding the publication of the appropriate report to allow for establishment of financial commitments necessary to produce the documents. Copies of these reports are available upon request or electronic versions are posted on the LISS website.

Grant Reports. Under 40 CFR Parts 30 and 31, semi-annual reporting is required for each EPA grant award according to an established format that follows the LISS work plan form with outputs/outcomes reported. These reports are posted in EPA’s Integrated Grants Management System (IGMS) and final grant progress reports are due within 90 days of the expiration date of an award.

EPA ACS Reports. EPA LISS grantees with responsibilities for monitoring and reporting on hypoxia and nitrogen point source deposition (CTDEEP) and for habitat and river miles (CTDEEP/NYSDEC) report mid-year and end-of-year progress in addressing these four elements contained in EPA’s Strategic Plan and budget – point source nitrogen reduction targets; reduction in the maximum area of hypoxia; acres of habitat restored/protected; and miles of rivers opened to fish passage. In addition, out-year budget targets are requested and estimates of out-year targets are provided by grantees as appropriate during the planning and budgeting cycles. These reporting requirements are included as special Conditions in the appropriate grantees’ award documents.

NEPORT Reports. CTDEEP, NFWF and NYSDEC annually report information into EPA’s NEPORT data system for leveraged funds, and habitat acres restored/protected/enhanced, including river miles reopened to fish passage. These latter data are used to report accomplishments to EPA’s

ACS system for the LIS Strategic Plan and budget measures as appropriate. Grant awards are conditioned to require these reporting elements.

3. Ecosystem Protection and Restoration Projects. The LISS Futures Fund Grant program is the primary LISS vehicle for funding implementation projects to address CCMP and other program priorities. The LISS Futures Fund, consists of Large Implementation Grants (\$20,000-\$250,000); Planning and Water Quality Monitoring Grants (\$20,000-\$100,000); Education and Public Participation Large Grants (\$20,000-\$45,000); and Long Island Sound Study Education and Public Participation Small Grants (\$3,000-\$10,000) projects. The LISFF is administered by NFWF. In FY2017, the LIS Futures Fund is funded at \$2,321,003 and the Small Grants component is funded at \$25,000, approximately a \$1 million increase in funding from FY2016. These projects are responsive to the new *Long Island Sound CCMP* and other LISS priorities and the major outcome metrics are described in brief in Attachment 1, line 16.

As noted, the below Logic Model subcategories are eligible funding categories under the LISFF. FY2017 LISFF-funded projects cannot be characterized under this Logic Model format as projects are not selected until September.

a. Habitat; b. Water Quality; c. Living Resources; d. Healthy Communities.

CCMP/Work Plan Goal:	CCMP Implementation Support and Technical Assistance
Project/Activity Name:	LISS Futures Fund
ONGOING Project/Activity Purpose & Description:	To provide resources for priority CCMP implementation projects at the state and local level to qualified applicants.
Responsible Partner(s) Role(s):	NFWF, plans, coordinates, conducts and administers the LISS Futures Fund Grant Program
Outputs/Products:	Issue RFP to solicit a diverse range of project proposals (45-60 proposals) that address problems identified in the LISS <i>CCMP</i> ; conduct two webcast workshops to encourage applicants to develop a technically sound and diverse range of project proposals (45-60 proposals) that address problems identified in the LISS <i>CCMP</i> . Provide technical assistance to 40-50 potential applicants to help them develop the most useful projects to address the problems identified in the LISS <i>CCMP</i> . Develop and distribute one press release in CT and NY to announce RFP and awards. Develop and implement one grant award event in either NY or CT. Meet with potential public, nonfederal and private funders. Support LISS and EPA/LISNPO to develop accomplishments brochures and other materials. Outreach to three or more Congressional offices to respond to inquiries and raise profile of implementation elements of the LISS Futures Fund in terms of federal investment around the Sound.
Milestones (project start/end dates)	October 1, 2016-September 30, 2020* Actual dates under negotiation with EPA.
2017 Budget:	Total: \$2,321,003 (\$2,296,003 Large Grants, [See Attachment 1, line 16] \$25,000 Small Grants, [See Attachment 1, line 9])
Outcomes: (anticipated and/or completed accomplishments)	Increase in participation of ‘communities of practice,’ including environmental justice, urban waters/distressed communities, youth and young adult and underserved communities. Increase in acres of key coastal habitat restored. Increase in measurable nonpoint source controls addressing water quality

CCMP/Work Plan Goal:	CCMP Implementation Support and Technical Assistance	
-Short, Intermediate, Long Term	problems in LIS and its embayment's. Increase in riparian corridor development and protection. Increase in diadromous fish passage restoration. Increase public understanding of accomplishments and challenges faced in LIS and addressed by various LISS initiatives.	
Δ (+/-) in Pressure Targets	N/A	
CWA Core Program Project Support Core programs are:	1) Strengthening WQ Standards	X
	2) Improving WQ Monitoring	X
	3) Developing TMDLs	X
	4) Controlling NPS Pollution on a Watershed Basis	X
	5) Strengthening NPDES Permits	X
	6) Supporting Sustainable Wastewater Infrastructure	X
	7) Wetlands Program Support/Implementation	X

CCMP/Work Plan Goal:	CCMP Implementation Support and Technical Assistance	
Project/Activity Name:	LISS Stewardship Acquisitions	
Continuing Project/Activity Purpose & Description:	To provide resources for priority CCMP LIS Stewardship Initiative acquisitions at the state and local level.	
Responsible Partner(s) Role(s):	NYSDEC	
Outputs/Products:	Acquisition of properties identified by the LISS Stewardship Initiative workgroup for protection of water quality, habitat and living resources.	
Milestones (project start/end dates)	October 1, 2017-September 30, 2018	
2017 Budget:	\$685,000 [See Attachment 1, line 26]	
Outcomes: (anticipated and/or completed accomplishments) -Short, Intermediate & Long Term	Protection of habitats of ecological, recreational, and public access value; protection of endangered, threatened, and rare species of plant and animal habitats; demonstration of effective public and private partnerships in habitat conservation.	
Δ (+/-) in Pressure Targets	N/A	
CWA Core Program Project Support Core programs are:	1) Strengthening WQ Standards,	
	2) Improving WQ Monitoring,	
	3) Developing TMDLs,	
	4) Controlling NPS Pollution on a Watershed Basis,	X
	5) Strengthening NPDES Permits,	

CCMP/Work Plan Goal:	CCMP Implementation Support and Technical Assistance	
	6) Supporting Sustainable Wastewater Infrastructure.	
	7) Wetlands Program Support/Implementation	X

CCMP/Work Plan Goal:	CCMP Implementation Support and Technical Assistance	
Project/Activity Name:	LIS Impervious Cover Mapping	
Continuing Project/Activity Purpose & Description:	Add to the Lower Long Island Sound watershed area	
Responsible Partner(s) Role(s):	University of Connecticut Center for Land Use Education and Research (CLEAR)	
Outputs/Products:	Update NY portions of the LIS watershed land cover metrics and create seamless region-wide land cover and land cover change dataset 1985 - 2015.	
Milestones (project start/end dates)	October 1, 2017-September 30, 2018	
2017 Budget:	\$58,525 [see Attachment 1, line 19]	
Outcomes: (anticipated and/or completed accomplishments) -Short, Intermediate & Long Term	Classify land cover from the 2015 imagery into data sets for lower LIS; Calibrate and run ISAT impervious cover model by HUC-12 watershed to estimate the impervious cover percentage; Post results on web of the summary of project data with an interactive map; create final report to summarize methods and results of the study.	
Δ (+/-) in Pressure Targets	N/A	
CWA Core Program Project Support Core programs are:	1) Strengthening WQ Standards,	X
	2) Improving WQ Monitoring,	X
	3) Developing TMDLs,	X
	4) Controlling NPS Pollution on a Watershed Basis,	X
	5) Strengthening NPDES Permits,	X
	6) Supporting Sustainable Wastewater Infrastructure.	X
	7) Wetlands Program Support/Implementation	X

CCMP/Work Plan Goal:	CCMP Implementation Support and Technical Assistance	
Project/Activity Name:	EPA Nitrogen Contract	
NEW Project/Activity Purpose & Description:	Nitrogen control strategies implementation support.	
Responsible Partner(s) Role(s):	EPA	

CCMP/Work Plan Goal:	CCMP Implementation Support and Technical Assistance	
Outputs/Products:	Develop technical reports to assist in overall development and implementation of detailed technical approach for establishing thresholds and targets for three LIS watershed groupings (Embayment, Large Riverine, and Western LIS)	
Milestones (<i>project start/end dates</i>)	October 1, 2017-September 30, 2018	
2017 Budget:	Total: \$319,996 (\$29,557 base period in 2017, \$290,439 option period) [see Attachment 1, line 20]	
Outcomes: (<i>anticipated and/or completed accomplishments</i>) -Short, Intermediate, Long Term	Improved understanding of eutrophication conditions and stressor-response relationships; improved understanding of controls necessary to reduce nitrogen inputs in the watershed.	
Δ (+/-) in Pressure Targets	N/A	
CWA Core Program Project Support Core programs are:	1) Strengthening WQ Standards,	x
	2) Improving WQ Monitoring,	x
	3) Developing TMDLs,	x
	4) Controlling NPS Pollution on a Watershed Basis,	x
	5) Strengthening NPDES Permits,	x
	6) Supporting Sustainable Wastewater Infrastructure.	x
	7) Wetlands Program Support/Implementation	

4. Technical Assistance/Capacity Building. The LISS provides technical assistance and capacity building through a variety of means. The LIS Futures Fund can provide direct financial support to partners to in this area. NFWF will provide technical assistance to communities of practice in developing project proposals for their communities, including environmental justice, urban waters, youth and underserved communities and areas designated as distressed communities in Connecticut.

- a. **Tools.** This Work Plan provides funding for development of several programmatic tools. As an example, with prior year LISS funding, NEIWPC developed and released an RFP requesting proposals to evaluate existing nonpoint source tracking tools that could be used by management agencies and regulated entities to estimate the scope of nonpoint source controls and BMPs put in place to address water quality in Long Island Sound through the nitrogen TMDL.

CCMP/Work Plan Goal:	CCMP Implementation Support and Technical Assistance	
Project/Activity Name:	Connecticut Coastal Marsh Land Conservation Planning Project (SLAMM Assessment)	
Continuing Project/Activity Purpose & Description:	Use data available through SLAMM to identify areas most capable of supporting new coastal land conservation acquisitions and marsh management opportunities.	
Responsible Partner(s) Role(s):	CTDEEP	

CCMP/Work Plan Goal:	CCMP Implementation Support and Technical Assistance	
Outputs/Products:	Prepare a report describing expected response of Connecticut’s largest tidal marsh complexes to predicted sea level rise, including a description of the expected change in the wetlands’ existing boundaries.	
Milestones (<i>project start/end dates</i>)	October 1, 2017- September 30, 2019	
2017 Budget:	\$100,000 [See Attachment 1, line 27]	
Outcomes: (<i>anticipated and/or completed accomplishments</i>) -Short, Intermediate & Long Term	Identify the boundaries of the existing large unfragmented coastal wetland complexes greater than 100 acres; Modify the boundaries of the approximately 20 largest existing coastal wetlands complexes to conform to the boundaries of SLAMM initial conditions; identify likelihood of new marsh migration areas; Identify segments most prone to coastal flooding under alternative SLR scenarios that are within or adjacent to coastal wetlands that could require wetland filling or road flood-proofing; Identity opportunities to create new or restore former marsh; prepare a report describing the expected effects of SLR on Connecticut’s largest tidal marsh complex and roads subject to flooding.	
Δ (+/-) in Pressure Targets	N/A	
CWA Core Program Project Support Core programs are:	<ul style="list-style-type: none"> 1) Strengthening WQ Standards, 2) Improving WQ Monitoring, 3) Developing TMDLs, 4) Controlling NPS Pollution on a Watershed Basis, 5) Strengthening NPDES Permits, 6) Supporting Sustainable Wastewater Infrastructure. 7) Wetlands Program Support/Implementation 	 x x

CCMP/Work Plan Goal:	CCMP Implementation Support and Technical Assistance	
Project/Activity Name:	LISS Climate Vulnerability Assessment (NEP HQ)	
Continuing Project/Activity Purpose & Description:	Provide a final LIS Climate Change Vulnerability Assessment	
Responsible Partner(s) Role(s):	CT Sea Grant College Program; University of Connecticut	
Outputs/Products:	Complete the development of a multi-step process (<i>in “Being Prepared for Climate Change, A Workbook for Developing Risk-Based Adaptation Plans”</i>) for the Long Island Sound Climate Change Vulnerability Assessment.	
Milestones (<i>project start/end dates</i>)	October 1, 2017-September 30, 2018	
2017 Budget:	\$30,000 [See Attachment 1, line 17]	

CCMP/Work Plan Goal:	CCMP Implementation Support and Technical Assistance	
Outcomes: <i>(anticipated and/or completed accomplishments)</i> -Short, Intermediate & Long Term	Review the vulnerability matrices for Long Island Sound developed by Battelle for the Northeast Estuary Programs; Draft additions/changes to the matrices for review; Working through the LISS Sentinel Monitoring (SM) workgroup, obtain input on the matrices and confirm or modify them accordingly; Obtain input from other groups as recommended by the LISS SM workshop; Provide a final LIS Climate Change Vulnerability Assessment	
Δ (+/-) in Pressure Targets	N/A	
CWA Core Program Project Support Core programs are:	1) Strengthening WQ Standards,	x
	2) Improving WQ Monitoring,	x
	3) Developing TMDLs,	x
	4) Controlling NPS Pollution on a Watershed Basis,	x
	5) Strengthening NPDES Permits,	x
	6) Supporting Sustainable Wastewater Infrastructure.	x
	7) Wetlands Program Support/Implementation	x

CCMP/Work Plan Goal:	CCMP Implementation Support and Technical Assistance	
Project/Activity Name:	Eutrophication Modeling	
Continuing Project/Activity Purpose & Description:	Develop a model for the accurate water quality predictions and ecological models.	
Responsible Partner(s) Role(s):	NYCDEP	
Outputs/Products:	Develop an integrated model for Long Island Sound (LIS) to assist the DEP in integrated water management planning and assessment activities	
Milestones <i>(project start/end dates)</i>	October 1, 2017-September 30, 2018	
2017 Budget:	\$1,400,000 [see Attachment 1, line 15]	
Outcomes: <i>(anticipated and/or completed accomplishments)</i> -Short, Intermediate & Long Term	Prepare scoping document detailing modeling objectives, goals and requirements for a Technical Advisory Committee (TAC) to review. The Technical Advisory Committee (TAC) will consist of Selected Water Quality modelers and experts; Present the detailed scope of work to the TAC. Convene the TAC, which will provide comments on the initial detailed scope of work and will propose revisions to come up with scopes of work to be reviewed by the Reviewing Committee. The Reviewing Committee will consist of selected stakeholders and regulators in the region; Convene a Reviewing Committee that will evaluate the received scopes of work. They will make a recommendation on a modeling approach based on their review and will come to an agreement on a final scope of work; The consultant, along with the TAC, will finalize the scope of work based on input from the Reviewing Committee, and develop cost estimates and schedules.	

CCMP/Work Plan Goal:	CCMP Implementation Support and Technical Assistance	
Δ (+/-) in Pressure Targets	N/A	
CWA Core Program Project Support Core programs are:	1) Strengthening WQ Standards,	X
	2) Improving WQ Monitoring,	X
	3) Developing TMDLs,	X
	4) Controlling NPS Pollution on a Watershed Basis,	X
	5) Strengthening NPDES Permits,	X
	6) Supporting Sustainable Wastewater Infrastructure.	X
	7) Wetlands Program Support/Implementation	X

CCMP/Work Plan Goal:	CCMP Implementation Support and Technical Assistance	
Project/Activity Name:	ORISE-Technical Support	
NEW Project/Activity Purpose & Description:	Automate the download, analysis, and graphical presentation of water quality-related databases.	
Responsible Partner(s) Role(s):	EPA	
Outputs/Products:	Automate the download, analysis, and graphical presentation of nitrogen loading data from facilities with nutrient limits in the LIS watershed. Gather and assess nutrient loading data from watershed monitoring programs and models to report on trends in watershed loads. Gather and assess data on indicators of watershed nutrient loads used to evaluate progress in implementing the LIS Nitrogen TMDL. Evaluate, refine, and implement additional assessments of storm water building on existing assessments in New York (<i>Determination of Regulated and Non-Regulated Stormwater Loads to LIS From New York State</i> (NYSDEC 2015) and Massachusetts work to apply the Opti-Tool. For Connecticut, compute CT MS4 loads using the Opti-Tool regional nitrogen loading model. Assist the Long Island Nitrogen Reduction Strategy Team in analysis of Tetra Tech outputs on loadings and thresholds to support allocation options.	
Milestones (project start/end dates)	October 1, 2017-September 30, 2018	
2017 Budget:	\$15,000 [see Attachment 1, line 23]	
Outcomes: (anticipated and/or completed accomplishments) -Short; Intermediate;& Long Term	Better accessibility and use of data on pollution loads, compliance conditions, watershed stressors, and water quality responses.	
Δ (+/-) in Pressure Targets	N/A	

CCMP/Work Plan Goal:	CCMP Implementation Support and Technical Assistance	
CWA Core Program Project Support Core programs are:	1) Strengthening WQ Standards	x
	2) Improving WQ Monitoring	
	3) Developing TMDLs	x
	4) Controlling NPS Pollution on a Watershed Basis	
	5) Strengthening NPDES Permits	x
	6) Supporting Sustainable Wastewater Infrastructure	x
	7) Wetlands Program Support/Implementation	

b. **Training.** The LISS will continue to fund the CT and NY Sea Grant LIS Mentor Teacher program, which trains a cadre of K-12 educators to train-the-trainers in the use of LIS as a teaching tool and resource for NY and CT teachers. The Long Island Sound Mentor Teacher (LISMT) program has consistently recruited high quality, creative, and respected teachers to assist their peers in incorporating LIS content into curricula within the scope of the CT Science Frameworks.

CCMP/Work Plan Goal:	CCMP Implementation Support and Technical Assistance	
Project/Activity Name:	LISS Mentor Teacher Training Program	
ONGOING Project/Activity Purpose & Description:	Increase awareness and understanding of the importance of Long Island Sound and its watershed by training a cadre of teachers to mentor the student population.	
Responsible Partner(s) Role(s):	CT Sea Grant/NY Sea Grant; direct implementation	
Outputs/Products:	Recruit six mentor teachers and facilitate planning sessions for workshop development (grade level cohorts K-2, 3-5, 6-8); conduct three LIS Mentor Teacher workshops for K-12 formal and informal educators; support LIS Educators Conference; conduct three NY mentor teacher workshops.	
Milestones (project start/end dates)	October 1, 2017-September 30, 2018	
2017 Budget:	\$35,463 CT and \$7,287 NY (task under the NY SeaGrant \$228,000 grant) [See Attachment 1, line 8]	
Outcomes: (anticipated and/or completed accomplishments) Short, Intermediate & Long Term	Development of grade appropriate, multidisciplinary workshops utilizing LIS curricular resources; provision of LIS resources and appropriate pedagogy to result in increased educator and student understanding of LIS and issues facing LIS; educated teacher ranks in K-12 grades in New York and Connecticut portions of the Long Island Sound watershed.	
Δ (+/-) in Pressure Targets	N/A	
CWA Core Program Project Support Core programs are:	1) Strengthening WQ Standards	
	2) Improving WQ Monitoring	
	3) Developing TMDLs	

CCMP/Work Plan Goal:	CCMP Implementation Support and Technical Assistance	
	4) Controlling NPS Pollution on a Watershed Basis	
	5) Strengthening NPDES Permits	
	6) Supporting Sustainable Wastewater Infrastructure	
	7) Wetlands Program Support/Implementation	x

c. **Direct Assistance.** The LISS is one of the oldest of the NEPs, and it has technically capable support staff in diverse fields of expertise, from scientists to managers to field personnel. The combined resources of the Management Conference, which include the states of New York and Connecticut’s environmental management agencies, New York City, and other Federal and state institutional partners, are sufficient to carry out CCMP implementation, and dwarf the amount of NEP and EPA LIS funding provided for this purpose. The partners provide such technical assistance and build such implementation capacity for local environmental and other groups as may be necessary and appropriate to their ongoing missions. The LISS does fund staff in partner agencies to support direct implementation. Staff include the LISS habitat restoration coordinators in both states.

CCMP/Work Plan Goal:	CCMP Implementation Support & Technical Assistance
Project/Activity Name:	LISS Habitat Restoration/Coordination
ONGOING Project/Activity Purpose & Description:	Preparing, assisting municipalities, and evaluating project applications for habitat restoration, assessment, monitoring and research funding. Develop partnerships to restore LIS habitats. Work with regional staff to help partners prepare project work plans that are compatible with state regulations. Coordinate NYSDEC and CTDEEP activities associated with the LISS Habitat Restoration Initiative.
Responsible Partner(s) Role(s):	NYSDEC (via NEIWPC); CTDEEP; direct Implementation
Outputs/Products:	Engage new and existing LISS partners in LISS habitat restoration activities; increase project proposals for habitat restoration activities in the LIS watershed; plan, coordinate and implement restoration of the twelve priority habitat types as outlined in the LISS Habitat Restoration Strategy adopted by the Policy Committee in 1998; work with LISS communications team to issue press releases, promotional materials, and other communication items addressing habitat restoration in the LIS watershed; report at mid-year and end-of-year on progress is achieving restoration/protection/reopening targets for EPA’s Strategic Plan and budget; develop and publish coastal forest and shellfish chapters of the Habitat Restoration Manual.
Milestones (project start/end dates)	October 1, 2017-September 30, 2018
2017 Budget:	Total: \$351,387 (\$249,966 CTDEEP and \$101,421 NYSDEC Via NEIWPC) [See Attachment 1, line 25]
Outcomes: (anticipated and/or completed accomplishments)	Restored and protected habitat in the LIS watershed; increased public awareness about current or planned habitat restoration and restoration activities in the LIS watershed; progress towards LISS Habitat Restoration Initiative

CCMP/Work Plan Goal:	CCMP Implementation Support & Technical Assistance	
-Short, Intermediate, Long Term	(HRI) goals for restoring habitat and river corridors that improve health of living resources in the LIS environment; additional and leveraged funding brought to restoration activities and increased acreage/miles improved to benefit LIS water quality and biological health; public outreach about HRI and accomplishments; implementation of habitat restoration projects and effective communication to the public; developed and published HRI manual chapters.	
Δ (+/-) in Pressure Targets	N/A	
CWA Core Program Project Support Core programs are:	1) Strengthening WQ Standards,	
	2) Improving WQ Monitoring	
	3) Developing TMDLs	
	4) Controlling NPS Pollution on a Watershed Basis	
	5) Strengthening NPDES Permits	
	6) Supporting Sustainable Wastewater Infrastructure	
	7) Wetlands Program Support/Implementation	x

CCMP/Work Plan Goal:	CCMP Implementation Support & Technical Assistance	
Project/Activity Name:	TMDL Support	
Continuing Project/Activity Purpose & Description:	To work with managers in the upper LIS basin states of New Hampshire, Vermont and Massachusetts on the requirements and impacts of the nitrogen TMDL.	
Responsible Partner(s) Role(s):	NEIWPCC	
Outputs/Products:	Plan, organize, and conduct public meetings in upland states; record public comments and report on results.	
Milestones (project start/end dates)	Project Period 10/1/17 – 9/30/18 Grant Period 10/1/15 – 9/30/19	
2017 Budget:	\$17,270 [see Attachment 1, line 21]	
Outcomes: (anticipated and/or completed accomplishments) -Short, Intermediate & Long Term	A cooperative process in the upland LIS watershed states for achieving reduced nitrogen loads delivered to the Sound, reduced hypoxia, and attainment of state water quality standards; updated technical guidance and data to support management decisions.	
Δ (+/-) in Pressure Targets	N/A	

CCMP/Work Plan Goal:	CCMP Implementation Support & Technical Assistance	
CWA Core Program Project Support Core programs are:	1) Strengthening WQ Standards,	x
	2) Improving WQ Monitoring,	
	3) Developing TMDLs,	x
	4) Controlling NPS Pollution on a Watershed Basis,	x
	5) Strengthening NPDES Permits,	x
	6) Supporting Sustainable Wastewater Infrastructure.	x
	7) Wetlands Program Support/Implementation	

CCMP/Work Plan Goal:	CCMP Implementation Support & Technical Assistance	
Project/Activity Name:	Bioextraction Coordinator [NYSDEC staff]	
Continuing Project/Activity Purpose & Description:	Select a full time full-time Bioextraction Coordinator to achieve the goals and specific outcomes of the CCMP	
Responsible Partner(s) Role(s):	NYSDEC	
Outputs/Products:	Evaluate challenges to implementation of bioextraction in Long Island Sound, including to use conflicts, economic viability, permitting and testing requirements and potential environmental impacts	
Milestones (project start/end dates)	October 1, 2017- September 30, 2019	
2017 Budget:	\$294,362 [see Attachment 1, line 22]	
Outcomes: (anticipated and/or completed accomplishments) -Short, Intermediate & Long Term	Identify solutions to seaweed aquaculture and expanding bivalve aquaculture for nutrient bioextraction in the waters of the LIS; Identify challenges and measures to overcome potential barriers to implementing Bioextraction /aquaculture in the waters of the LIS; Develop criteria and a GIS-based tool that would aid in the site selection process for various types of bioextraction /aquaculture operations; Develop a guidance document based on existing permitting requirements to help new Bioextraction businesses navigate the permitting process. This should be linked to the GIS-based site location tool; Perform a literature review and prepare a report of nutrient removal rates for bioextraction bivalve and seaweed species.	
Δ (+/-) in Pressure Targets	N/A	
CWA Core Program Project Support Core programs are:	1) Strengthening WQ Standards,	x
	2) Improving WQ Monitoring,	x
	3) Developing TMDLs,	

CCMP/Work Plan Goal:	CCMP Implementation Support & Technical Assistance	
	4) Controlling NPS Pollution on a Watershed Basis,	x
	5) Strengthening NPDES Permits,	
	6) Supporting Sustainable Wastewater Infrastructure.	
	7) Wetlands Program Support/Implementation	

CCMP/Work Plan Goal:	CCMP Implementation Support & Technical Assistance	
Project/Activity Name:	Coastal Marine Spatial Planning, Blue Plan	
Continuing Project/Activity Purpose & Description:	Accelerate the rate of progress in identifying relevant datasets, creating map products to engage topical experts and stakeholders.	
Responsible Partner(s) Role(s):	CT Sea Grant (in coordination with the Nature Conservancy)	
Outputs/Products:	Develop a science-based, stakeholder endorsed inventory of natural resources and human uses in Long Island Sound.	
Milestones (project start/end dates)	October 1, 2017 – September 30, 2019	
2017 Budget:	\$200,000 [see Attachment 1, line 24]	
Outcomes: (anticipated and/or completed accomplishments) -Short, Intermediate & Long Term	Map products that summarize science-based datasets on the location of natural resources and human uses in Long Island Sound; Topical expert and stakeholder endorsement, and/or identification of important data gaps in the map products summarizing what we know about the location of natural resources and human uses in Long Island Sound; Refinement of map products based on expert and stakeholder feedback; Create the first draft of the inventory of natural resources and human uses in Long Island Sound.	
Δ (+/-) in Pressure Targets	N/A	
CWA Core Program Project Support Core programs are:	1) Strengthening WQ Standards,	
	2) Improving WQ Monitoring,	
	3) Developing TMDLs,	
	4) Controlling NPS Pollution on a Watershed Basis,	
	5) Strengthening NPDES Permits,	
	6) Supporting Sustainable Wastewater Infrastructure.	
	7) Wetlands Program Support/Implementation	x

CCMP/Work Plan Goal:	CCMP Implementation Support & Technical Assistance	
Project/Activity Name:	Long Island Sound Senior Scientist/Coordinator Position	

CCMP/Work Plan Goal:	CCMP Implementation Support & Technical Assistance	
NEW Project/Activity Purpose & Description:	Support to coordinate the science and research programs in the LISS.	
Responsible Partner(s) Role(s):	NEIWPC	
Outputs/Products:	Coordinate with LISS partners to ensure an effective and efficient scientific research program for LIS.	
Milestones (project start/end dates)	October 1, 2015-September 30, 2018	
2017 Budget:	\$11,323 (see Attachment 1, line 18) additional support comes from FY2016 obligations	
Outcomes: (anticipated and/or completed accomplishments) -Short; Intermediate;& Long Term	Coordinated science and research program; increased understanding of management issues and scientific basis for actions developed in response; increased application of knowledge gained from scientific research project to management actions.	
Δ (+/-) in Pressure Targets	N/A	
CWA Core Program Project Support Core programs are:	1) Strengthening WQ Standards	x
	2) Improving WQ Monitoring	x
	3) Developing TMDLs	x
	4) Controlling NPS Pollution on a Watershed Basis	x
	5) Strengthening NPDES Permits	x
	6) Supporting Sustainable Wastewater Infrastructure	
	7) Wetlands Program Support/Implementation	x

C. PREVIOUS YEAR’S (FY2016) PROJECTS/ACTIVITIES HIGHLIGHTS

1. Goals and Accomplishments. Describe goals that the program met and highlight programmatic accomplishments as well as project/activity short-term and intermediate outcomes. Highlight long-term environmental results achieved wherever possible. Include outcome and/or environmental results information about projects that required substantial NEP staff time but which were sponsored/funded by others, e.g., foundations, Federal or state partners.

A. CCMP GOAL AREA: CLEAN WATERS/HEALTHY WATERSHEDS.

1. Point Source Load Reduction. As reported under EPA’s Strategic Plan (LI-SP41) and EPA’s National Program Guidance reporting system, ACS, the LISS partners continued the point source nitrogen reduction program in Long Island Sound in 2016, the latest report available. The total Trade-Equalized (TE) point source nitrogen load for 2016 was 20,400 TE lbs/day. The EPA Strategic Plan target in 2016 was 95 percent toward the goal; the 2016 result exceeded that target, achieving 111 percent of that goal. It is important to keep in mind that New York City (NYC), as part of a Consent Agreement with the state of New York, had taken significant STP processing capacity off-line during construction upgrades for

biological nitrogen control at affected STPs. For a number of years there was a continuing ‘bulge’ in discharge of nitrogen, which is now being eliminated as construction is completed and NYC treatment plants are back on line. Additionally, Westchester County, New York plants are also undergoing upgrades and are on track to complete their nitrogen reduction targets in 2017.

While the LISS does not directly fund this goal area and important CCMP activity, funds for STP nitrogen upgrades result from a combination of EPA State Revolving Funds, Connecticut’s state Clean Water Fund and Bond Acts, and New York State’s Clean Water/Clean Air Bond Act funds and other sources, including NYC bonds and funding for NYC STP upgrades. **Attachment 6** depicts the reductions in Trade-equalized point source loadings from 2000-2016.

2. Area/Duration of Hypoxia. As reported under EPA’s Strategic Plan (LI-SP42) the area (square miles = mi²) of the maximum hypoxic event in Summer 2016 with less than 3 milliliters (ml) of dissolved oxygen (DO) per liter of bottom (~<1m) water (<3ml/DO) was estimated to be 197 square miles, which lasted for a period of 51 days [error margins +/-85 mi², +/- 15 days]. This compares with the 13-year pre-TMDL averages of 208 square miles and 56.2 days. The 17-year post-TMDL averages are 164 square miles and 55.7 days. The LISS provides funding to CTDEEP to conduct the LIS WQ monitoring program year-round, with additional monitoring runs during the summer months [Attachment 1, line 11]. Other ambient factors affect the formation of the hypoxic zone in the Sound, including water and air temperature, rainfall, solar radiation, wind direction and velocity, currents, storm events and any resulting biological effects such as algae formation.

A strategic measure in EPA’s Strategic Plan, (LI-SP42) is to reduce the area of hypoxia by 15 percent from the pre-TMDL average of 208 square miles [down to 176.8 mi²], as measured by a 5-year annual rolling average. For 2016, the rolling 5-year annual average in the area of hypoxia is 126 square miles. This is a reduction of 82 square miles or 39 percent, exceeding that target. **Attachment 7** depicts the area/duration of the maximum hypoxia event in Long Island Sound since 1987 as measured by CTDEEP.

3. NPS Load Reductions/On-Site Treatment. The CCMP calls for a number of actions to address NPS (NPS) pollution to the Sound, including actions to address on-site waste treatment systems (OWTS), or septic systems. The LIS TMDL addresses NPS pollution, requiring a 10 percent reduction through direct projects or best management practices and other methodologies.

EPA is implementing a strategy to aggressively continue progress on nitrogen reductions, in parallel with the States’ continued implementation of the 2000 Total Maximum Daily Load (TMDL), and achieve water quality standards throughout Long Island Sound and its embayments and near shore coastal waters. The strategy recognizes that more work must be done to reduce nitrogen levels, further improve DO conditions, and address other nutrient-related impacts in Long Island Sound. The nitrogen reduction strategy complements the 2000 TMDL in important ways. Foremost, while the 2000 TMDL is premised on achieving water quality standards for DO in the open waters of LIS, the EPA strategy expands the focus to include other nutrient-related adverse impacts to water quality, such as loss of eelgrass, that affect many of LIS’s embayments and near shore coastal waters. Information on the effort is available at <http://longislandsoundstudy.net/issues-actions/water-quality/nitrogen-strategy/>

B. CCMP GOAL AREA: MANAGEMENT & CONSERVATION OF LIVING MARINE RESOURCES AND THEIR HABITATS.

1. Habitat Restoration. As reported in EPA’s Strategic Plan (LI-SP43) and the NEP’s NEPORT reporting systems, the LISS restored or protected a total of 532 acres of habitat in 2016. The LISS only provides funding for individual habitat restoration projects as they may be eligible for competitive

funding under the LISS Futures Fund Large Grant program, described below in **Section D**. Because of the complexity of planning, organizing and carrying out restoration projects in both states, the LISS funds two habitat coordinators, one each in NYSDEC (via NEIWPCC) and CTDEEP, who develop priority LIS projects, including fish passage projects, in their state. These staff positions are included in the description of LISS-funded staff in this Work Plan in Attachment 2. It should be noted that the acres restored/protected and river miles reopened were not all funded by the LISS; the CCMP called for many and varied funding sources to implement its actions. LISFF projects do help contribute to the total acres restored/protected, to the extent that eligible projects are qualified, apply, and are approved for funding.

2. Fish Passage Restoration. As reported in EPA's Strategic Plan (LI-SP44) and EPA's NEPORT, the LISS reopened 42 river miles in 2016. The LISS-funded CTDEEP and NYSDEC habitat restoration coordinators develop projects to reopen fish passage in each state. Because of Connecticut's river and stream network along the LIS shoreline is much more extensive than New York's, the bulk of the fish passage projects are located in Connecticut rivers and streams. Historically there were approximately 562 miles of river in Connecticut that supported diadromous fish runs; currently there are approximately 490 miles of river reaches open to fish passage. This is not meant as a management target for restoration. It should be noted that the river miles reopened were not all funded by the LISS; the CCMP called for many and varied funding sources to implement its actions.

C. CCMP GOAL AREA: MONITORING, MODELING & RESEARCH.

1. LIS Scientific Research Program. The LISS, through the CT and NY Sea Grant programs, continued to monitor the six scientific research projects that were selected for funding in 2010 and the two projects selected for funding in 2012 for the 2011-2016 project period. The abstracts of these projects may be found on the LISS website at <http://longislandsoundstudy.net/research-monitoring/lis-research-grant-program/>. These projects will continue to be reported on in subsequent NEP work plans as the projects are completed.

The CT and NY Sea Grant College Programs initiated the RFP cycle for FY2016 by releasing the call for pre-proposals in April 2015. Pre-proposals were due by June 2015 and were evaluated by an expert panel. A small subset of proposals were invited to submit full proposals by Fall 2016. Selections under the FY2015-16 two-year funding cycle were made and projects will take place from 2017-2019. More information about the three projects that were selected can be found on the LISS website, <http://longislandsoundstudy.net/research-monitoring/lis-research-grant-program/2017-research-project-descriptions/>.

The LISS STAC met in February and June 2016; STAC meeting minutes are posted on the LISS website, <http://longislandsoundstudy.net>.

2. LIS Sentinel Monitoring Program. The LISS Sentinel Monitoring strategy is posted at <http://longislandsoundstudy.net/research-monitoring/sentinel-monitoring/>. Three pilot projects were funded with prior year funding and have now been completed. For more information on the pilot projects, visit: <http://longislandsoundstudy.net/research-monitoring/sentinel-monitoring/sentinel-monitoring-for-climate-change-research-projects/>. Currently, the Sentinel Monitoring work team is reviewing and updating the Sentinel Monitoring Strategy. A revised Strategy will be posted in 2017.

D. CCMP GOAL AREA: IMPLEMENTATION SUPPORT AND TECHNICAL ASSISTANCE.

1. Long Island Sound Futures Fund (LISFF) Projects, FY2016. LISFF funded 25 projects totaling \$1.3 million to state and local government and community groups to improve the health and ecosystem of

Long Island Sound. The projects leverage \$1.3 million in matching resources. The grant program pools funds from the EPA, NFWF, and USFWS for projects to restore the health and living resources of LIS. The 2016 program funded subgrants in Connecticut and in New York and for projects that benefit both states. The projects in both states will reach more than 395,000 residents through environmental and conservation education programs and treat one million gallons of water pollution with water quality improvement projects, including more than 700 pounds of nitrogen reduced, and 6,000 pounds of floating trash collected.

2. LIS Stewardship Initiative. The LISS website contains an updated online Stewardship Atlas, <http://longislandsoundstudy.net/issues-actions/stewardship/stewardship-areas-atlas/>. The LISFF supported a number of Stewardship Initiative projects and public involvement efforts centered around trails days at stewardship sites.

3. CCMP Non-Base Program Projects. In FY2016 funds were provided for two projects to enhance CCMP implementation: 1) support for the Nitrogen Reduction Strategy and 2) Climate Ready Estuaries supplemental funding to evaluate and refine chlorophyll a estimates from remote sensing imagery. Details on progress and products relating to the first project are available at <http://longislandsoundstudy.net/issues-actions/water-quality/nitrogen-strategy/>. The work is being conducted with the support of an EPA contract with Tetra Tech. Dr. Heidi Dierssen, University of Connecticut, Department of Marine Sciences, is the lead investigator of the second project, which will be completed by September 30, 2017. Prior year projects are in various stages of implementation depending on the nature of the project and the individual grantee.

E. CCMP GOAL AREA: PUBLIC OUTREACH, INFORMATION & EDUCATION.

1. LISS Communications. The LISS partners produce their own materials and press releases to communicate their accomplishments and plans to their public or special audiences. The LISS, via a grant to NEIWPC, maintains its website for public information and access, and produces *SoundBytes*, an electronic email product to keep constituents informed in topical and timely areas. *Sound Update and Outlook* are also produced several times a year, but paper copy distribution has been phased down to conserve resources and be more ‘green.’ LISS-produced materials emphasize the bi-state nature of public information on the Sound, its ecology or status, while individual partners’ public information programs may focus on single state or communities of interests’ priorities or needs. Examples of these publications are on the LISS website.

2. Completed Projects. *For completed projects that were funded by a CWA §320 sub-award, indicate: project purpose; entity that led project implementation; final grant amount – if project came in under budget, describe how remaining funds will be reallocated to ensure expenditure during the project period; project deliverable(s) and project completion date.*

The LISS is an ongoing partnership of Federal, state and local organizations implementing the cleanup and restoration plan for Long Island Sound. The LISS is not organized by ‘project’ and its program functions are distributed across its partners. Therefore, unless there are specific and discrete sub-grant projects that have been completed, this reporting category does not adequately represent the LISS organizational and reporting structure. However, in FY2016, several partners’ assistance awards funded in prior fiscal years have been completed and their EPA awards closed out:

- LI-96792412, \$1,315,450 to NFWF for the 2012 Long Island Sound Futures Fund program;
- LI-97206912, \$465,500 to State University of New York Research Foundation for the 2011 scientific research grant program.

3. Success Stories/Transferable Activities, Tools. The LISS is willing to discuss any of its ongoing programs and activities with NEP staff that were felt to be worthy of technology transfer to other NEPs; this can be done in conjunction with this Work Plan. The LISS website, the nitrogen TMDL, the bioextraction projects funded in prior years, the LISS environmental indicators, *Sound Health and Protection & Progress* are all examples of successful and transferable products and activities from which the other NEPs may benefit.

4. Support of CWA Core Program Implementation. *Information about the anticipated role the NEP will play in the use of CWA tools; use role definitions in the September 28, 2007 Program Evaluation Funding Guidance: Primary; Significant; Support.*

Based in CWA Sections 119 and 320, this FY2016 NEP Summary Work Plan supports, directly or indirectly, many CWA core programs as indicated in the Office of Water's National Program Guidance. In turn, these core EPA regulatory programs support CCMP implementation through permits that establish nutrient levels, or programs that reduce NPS pollution to the Sound. Because of the LISS nitrogen TMDL, over the last several years, both the states of Connecticut and New York revised their ambient water quality standards (CWA §304) for DO pursuant to EPA's 2000 national guidance for DO in marine waters. Connecticut conducts the LISS ambient water quality monitoring (WQM) program under CWA §106. The data compiled by the LISS WQM program is one of the most robust and extensive datasets on ambient conditions available to scientists, researchers and managers. The LISS nitrogen TMDL (CWA §303(d)) set firm reduction targets and encouraged trading at point sources, and NPDES/SPDES permits (CWA §402) have been modified to incorporate TMDL nitrogen limits on a 15-year schedule.

The states of New York and Connecticut recognize the significant investments required to support wastewater infrastructure and have passed state bond act funding to sustain efforts to upgrade facilities to reduce nitrogen loads to the Sound as established in the nitrogen TMDL. The State of Connecticut designated all of its LIS waters in 2007 as a No Discharge Zone under the CWA §312 and the State of New York has accomplished a similar designation in NY LIS waters in 2011. The states use authorities and funding under CWA §319 to address priority problem areas of the Sound that originate in the watershed on land. These actions are primary support of CWA core programs, and are ongoing and integral to LISS CCMP implementation to restore and protect Long Island Sound and its watershed.

5. Support for NEP Regional Priorities. *NEP regional priorities include urban waters, fertilizers/lawn care, nutrients, climate change, NDZs, public access, environmental justice, citizen science and fish advisories.*

The LISS supports many of the NEP regional priorities, either directly through funded projects, or indirectly through previously-funded work or from support to partners who are charged with implementing a priority area. For example, the Long Island Sound Futures Fund (LISFF) in FY2016 supported 25 grants totaling \$1.3 million to local government and community groups in Connecticut and New York to improve the health of LIS. See: <http://longislandsoundstudy.net/about/grants/lis-futures-fund/2016-large-grants/>. The projects will restore 27 acres of coastal habitat, including intertidal marsh, coastal forest, dunes, and grasslands. More than 395,000 citizens will be reached by environmental and conservation programs supported by the grants. Nearly 1 million gallons of water pollution will be treated through the delivery of water quality improvement projects. The grants will be leveraged by \$1.3 million from the grantees themselves, resulting in \$2.6 million in funding for on-the-ground, hands-on conservation projects in both states.

The FY2016 Futures Fund RFP listed Urban Waters as a qualifying project category. As a result, a number of projects target urban waters and include outreach and involvement activities to environmental justice communities. The LISFF FY2016 also supported EPA’s Environmental Justice initiatives by providing funding for projects in communities in which inner-city and disadvantaged youth are given the opportunity to visit and explore Long Island Sound -- some for the first time -- and to accomplish meaningful conservation work on public lands and waters.

6. External Factors. *Description of external factors that had an impact on: overall work plan implementation, attainment of specific goals; achievement of project milestones and/or output completion; and description of adaptive management strategies the program used to deal with those factors.*

In FY2017, funding available to the LISS was almost twice the level from the FY2016 Enacted level. This is a welcome increase as the states of New York and Connecticut have felt the impact of state budget constraints resulting in hiring freezes and staff furloughs; staff have been limited in their travel authorizations for LISS and other national, regional or local conference and meetings regardless of funding source; teleconferencing, webinars and video conferencing have been used for LISS work group and other meetings to compensate for staff travel restrictions. Increasing internal costs for grantees in such areas as indirect rates, fringe benefit rates, salary accretion and other costs have constrained budgets and affected work plan outputs. In addition, tight research and academic budgets have limited the opportunity for partners to provide the required matching funds under §119 and §320. Finally, the statutory funding authorization for CWA §119 and §320 expired in 2010. In 2011 the statutory funding authorization for the Long Island Sound Stewardship Act [P.L. 109-359] expired. The final legislative results of any future reauthorization bills may impact future LISS program implementation and direction.

**LONG ISLAND SOUND STUDY
SUMMARY OF FY2017 LISS FUNDING UNDER CWA §119 AND §320
BY PROGRAM ELEMENT**

ATTACHMENT 1

LISS PROGRAM ELEMENT	ACTIVITY/TASK	2017 OUTPUTS/PRODUCTS/SERVICES/TASKS [PRIOR YEAR REFERENCES]	LISS GRANTEE OR FEDERAL IA	2017 BUDGET AMOUNT	ENVIRONMENTAL OUTCOMES
Coordination and Reporting of Environmental Actions and Results	EPA Long Island Sound Program Office Support	1) Telecommunications; internet; copier; postage; supplies, materials; EPA travel account.	EPA LISO	\$10,500	Coordinated federal, state, and local government actions to implement the CCMP; clear annual goals and objectives framed within available funding; public and financial support for restoration and protection of Long Island Sound
		2) EPA HQ administration	EPA LISO	\$4,000	
	State Coordination & Technical Assistance	3a) Assist in all aspects of LISS program development, reporting and support.	CTDEEP	\$414,127	Involvement of relevant technical staff and programs in LISS activities to protect and restore Long Island Sound, its resources and its habitats, and to protect public health and meet commitments to the LISS partnership.
		3b) Assist in all aspects of LISS program development, reporting and coordination support.	NYSDEC	[\$118,571]	
	Management Conference Administrative Support	4) National NEP travel; Management Conference meetings; CAC meeting support; state travel support for local and national meetings and conferences; other planning and reporting support.	NEIWPC	\$84,689	Increased citizen involvement and participation at local and national meetings; increased understanding of issues and ability to inform and advise management conference partners on program direction and policy.
	COORDINATION SUBTOTAL:				\$513,316
Public Outreach, Information, Participation and Education	Public Information & Education Program	5) LISS communications coordination; project management & support.	NEIWPC	\$229,254	Increased citizen involvement in CCMP implementation and program direction; informed and increasing public knowledge and citizen participation in LIS issues; increasing understanding of the state of LIS health; better public assessment of progress and production of key reports to citizens involved in the LISS leading to changes in management direction or CCMP implementation.
		6) LISS NY communications coordination, UPDATE, presentations, press releases.	NY Sea Grant	\$228,000	
		7) LISS CT communications coordination, presentations, press releases.	CT Sea Grant	\$197,395	
		8) K-12 Mentor Teacher Program in New York and Connecticut; LIS Marine Educators Conference Support	CT Sea Grant	\$35,463	
	NY Sea Grant		[\$7,287]		
	Small Grants Program	9) LISS Futures Fund Small Grants Program for public information, education, outreach, <\$10K projects.	NFWF	\$25,000	Informed public and increased citizen participation to improve stewardship and individuals' actions beneficial to a healthy LIS; increasing awareness of the state of LIS health and promoting changes in lifestyle that might benefit the Sound; improved habitat and water quality and increased public awareness and participation in LIS affairs; fulfilled public expectations for knowledge about LIS and educational needs.
PI&E SUBTOTAL:				\$715,112	= 8.3%

Water Quality Monitoring, Modeling and Scientific Research	Water Quality Monitoring	10) LIS Water Quality Field Surveys conducted year-round by CTDEEP using <i>RV Dempsey</i> ; includes captain, crew, sampling and analyses at 48 stations in NY and CT LIS waters to support water quality standards attainment.	CTDEEP	\$1,352,322	Improved water quality assessment to guide management activities; improved planktonic community assessment to guide management activities; improved dissolved oxygen assessment to protect living resources and to determine criteria compliance in CT/NY; greater safety of CT/NY residents who consume LIS seafood; better public involvement and management of LIS nutrient and dissolved oxygen conditions affecting living marine resources.
		11) CT River WQ Monitoring	USGS-CTDEEP	\$40,000	Improved continuous water quality data for simulations or analyses in support of nitrogen management conditions.
		12) LIS Real-Time Water Quality Monitoring	UConn	\$122,555	Assessment of management program impact; interpretation of stream flow variability on salinity in critical coastal habitats; better assessment of trends in managed nutrients; improved assessment of water quality models.
		13) IEC LIS Water Quality monitoring	IEC	\$81,245	Improved resolution of water quality data; increase in number of stations covered; additional data points obtained.
		14) ESAT Connecticut River Monitoring Contract	EPA	\$26,584	Develop a quantitative and qualitative data set in order to characterize the water quality of the lower reaches of the river and its estuary and to determine whether impairments driven by the input of nutrients exist.
	Modeling	15) Eutrophication Modeling	NYCDEP	\$1,400,000	Prepare scoping document detailing modeling objectives, goals and requirements for a Technical Advisory Committee (TAC) to review.
MONITORING, MODELING & RESEARCH SUBTOTAL:				\$ 3,022,706	= 35.1%

CCMP Implementation Support, and Technical Assistance	LIS Futures Fund Large Grant Program	16) LIS Futures Fund Large Grants	NFWF	\$2,296,003	Increase in participation of ‘communities of practice,’ including environmental justice, urban waters/distressed communities, youth and young adult and underserved communities. Increase in acres of key coastal habitat restored. Increase in measurable nonpoint source controls addressing water quality problems in LIS and its embayments. Increase in riparian corridor development and protection. Increase in diadromous fish passage restoration. Increased public understanding of accomplishments and challenges faced in LIS and addressed by various LISS initiatives.
	Climate Ready Estuaries	17) LISS Climate Vulnerability Assessment (NEP HQ)	CT Sea Grant; UCONN	\$30,000	Complete the development of a multi-step process (<i>in</i> “Being Prepared for Climate Change, A Workbook for Developing Risk-Based Adaptation Plans”) for the Long Island Sound Climate Change Vulnerability Assessment.
	Science Synthesis	18) Long Island Sound Senior Scientist/ Coordinator Positon	NEIWPC	\$11,323	Coordinated science and research program; increased understanding of management issues and scientific basis for actions developed in response; increased application of knowledge gained from scientific research project to management actions.

CCMP Implementation Support, and Technical Assistance	Regulatory and Compliance Assistance	19) LIS Impervious Cover Mapping	UCONN CLEAR	\$58,525	Update NY portions of the LIS watershed land cover metrics and create seamless region-wide land cover and land cover change dataset 1985 - 2015.
		20) EPA Nitrogen Contract	EPA	\$319,996	Develop technical reports to assist in overall development and implementation of detailed technical approach for establishing thresholds and targets for three LIS watershed groupings (Embayment, Large Riverine, and Western LIS)
		21) LIS TMDL Support	NEIWPC	\$17,270	A more cooperative and publicly understood process in the upland LIS watershed states for achieving reduced nitrogen loads delivered to the Sound, reduced hypoxia, and attainment of state water quality standards through TMDL adoption in upland states.
		22) Bioextraction Coordinator	NYSDEC	\$294,362	Evaluate challenges to implementation of bioextraction in Long Island Sound, including to use conflicts, economic viability, permitting and testing requirements and potential environmental impacts
		23) ORISE-Technical Support	EPA	\$15,000	Automate the download, analysis, and graphical presentation of nitrogen loading data from facilities with nutrient limits in the LIS watershed and monitoring programs and models to report on trends in watershed loads.
	Habitat Restoration & Protection	24) Coastal Marine Spatial Planning, Blue Plan	CT Sea Grant	\$200,000	Develop a science-based, stakeholder endorsed inventory of natural resources and human uses in Long Island Sound.
		25) Habitat coordination, develop and implement projects to restore and protect significant habitats in the LIS watershed; maintain priority list of habitat restoration sites; support habitat team for implementation of restoration and protection goals; reporting to EPA systems, NEPORT, HQ ACS/Strategic Plan, mid-year/EOY.	CTDEEP	\$249,966	Restored and protected critical coastal habitat in the LIS watershed; increased public awareness about current or planned habitat restoration and restoration activities in the LIS watershed; progress towards LISS Habitat Restoration Initiative (HRI) goals for restoring habitat and river corridors that improve health of living resources in the LIS environment; additional and leveraged funding brought to restoration activities and increased acreage/miles improved to benefit LIS water quality and biological health; public outreach about HRI and accomplishments; implementation of habitat restoration projects and effective communication to the public.
			NYSDEC/ NEIWPC	\$101,421	
		26) LIS Stewardship Acquisitions	NYSDEC	\$685,000	Acquisition of properties identified by the LISS Stewardship Initiative workgroup for protection of water quality, habitat and living resources.
	27) Connecticut Coastal March Clan Conservation Planning Project (SLAMM Assessment)	CTDEEP	\$100,000	Prepare a report describing expected response of Connecticut's largest tidal marsh complexes to predicted sea level rise, including a description of the expected change in the wetlands' existing boundaries.	
	CCMP IMPLEMENTATION SUPPORT SUBTOTAL:			\$ 4,378,866	= 50.7%
	Subtotal, all Elements =			\$8,630,000	
	TOTAL FUNDING REQUEST =			\$8,630,000	

**LONG ISLAND SOUND STUDY
NATIONAL ESTUARY PROGRAM WORK PLAN
LIST OF FY2017 LISS-FUNDED STAFF**

ORGANIZATION/NAME	LISS TITLE	DESCRIPTION OF RESPONSIBILITIES/ACTIVITIES
<u>CTDEEP</u>		
Mark Parker	Environmental Analyst 3	Coordinates overall LIS program in CT.
Kelly Streich	Environmental Analyst 3	Provides technical support. (50%)
Katie Clayton-O'Brien	Environmental Analyst 2	Water quality sampling/analysis.
Matthew Lyman	Environmental Analyst 2	Water quality sampling/analysis.
TBD	Boat Captain	RV John Dempsey CTDEEP WQ Monitoring.
Christine Olsen	Environmental Analyst 2	Water quality sampling/analysis. (80%)
Harry Yamalis	Environmental Analyst 2	Coordinates habitat restoration plans/projects in CT.
<u>NYSDEC</u>		
Cassandra Bauer*	LIS Coordinator	Coordinates overall LIS program in New York
<u>NY Sea Grant</u>		
Vacant	NY Outreach Coordinator	Develops and implements communications plans and public information/education program in NY.
Karen Palmeri	Administrative Support	Supports Extension Specialist. (33%)
<u>NEIWPC</u>		
Robert Burg	LISS Outreach Coordinator	Coordinates the overall LISS communications program .
James Ammerman	Science Coordinator	Coordinates LISS science and research program.
Kimberly Roth	Environmental Analyst I	Overall LIS coordination within NEIWPC and TMDL support.
Victoria O'Neill	NYSDEC Habitat Restoration Coordinator	Coordinates habitat restoration plans/projects in the New York portions of the LIS watershed.
<u>CTSEA</u>		
Judy Preston	CT Outreach Coordinator	Provides PI&E support and coordination in CT. (70%)

* funded from state match funds

Organization & Base Program Activity	2017	2017	2017
	Request	Match	
		Required	Actual
1. EPA Long Island Sound Office	\$14,500	\$0	\$0
a. Office operating expenses (communications; postage; supplies)	\$10,500	\$0	\$0
b. Administrative support (funded via carryover, FY2016)	\$0	\$0	\$0
c. EPA HQ administration	\$4,000	\$0	\$0
2. CT Dept. of Energy & Environmental Protection	\$2,214,940	\$2,214,940	\$2,564,940
a. CT State Coordination	414,127	414,127	\$414,127
b. CT Habitat Coordination	249,966	249,966	\$249,966
c. LIS Water Quality Monitoring Program	1,352,322	1,352,322	\$1,352,322
d. CT River Monitoring, USGS	\$40,000	\$40,000	\$40,000
f. SLAMM assessment	\$100,000	\$100,000	\$100,000
g. Impervious Cover mapping (Uconn CLEAR)	\$58,525	\$58,525	\$58,525
h. Non-federal overmatch			\$350,000
3. NYS Dept. of Environmental Conservation	\$685,000	\$685,000	\$1,482,453
a. Stewardship acquisition	\$685,000	\$685,000	\$685,000
b. NY Habitat Coordination [via NEIWPCCC]	\$0	\$0	\$101,421
c. Bioextraction Coordinator [via NEIWPCCC]	\$0	\$0	\$294,362
d. Non-federal overmatch			\$401,670
4. CT Sea Grant PI&E (UConn)	\$462,858	\$245,256	\$245,256
a. CT PI&E Coordination (STAC Support)	\$197,395	\$13,389	\$13,389
b. K-12 Mentor Teacher Program	\$35,463	\$1,866	\$1,866
c. NEP HQ funding for Climate Vulnerability Assessment	\$30,000	\$30,000	\$30,000
d. Coastal Marine Spatial Planning, Blue Plan	\$200,000	\$200,000	\$200,000
5. NY Sea Grant Cornell U.	\$228,000	\$12,000	\$12,000
a. NY PI&E Coordination, K-12 Mentor/Teacher & STAC support	\$228,000	\$12,000	\$12,000
6. NEIWPCCC	\$738,319	\$521,131	\$0
a. Task 1 Outreach/Education Support	\$229,254	\$12,066	\$0
b. Task 2 Meeting/Travel Coordination Support	\$78,789	\$78,789	\$0
c. Task 3 NYSDEC Habitat Coordination [NYSDEDC staff]	\$101,421	\$101,421	\$0
d. Task 4 LIS TMDL Support	\$17,270	\$17,270	\$0
e. Task 5 Science Coordinator	\$11,323	\$11,323	\$0
f. Task 7. Travel Support	\$5,900	\$5,900	\$0
g. Task 8 NYSDEC Bioextraction Coordinator [NYSDEC staff]	\$294,362	\$294,362	\$0
7. UConn Real-time Water Quality Monitoring	\$122,555	\$122,555	\$0
a. Maintenance, mapping, equipment & data products	\$122,555	\$122,555	\$0
8. National Fish & Wildlife Foundation	\$2,321,003	\$1,862,287	\$1,862,287
a. LIS Futures Fund Large Grants	\$2,296,003	\$1,860,971	\$1,860,971
b. LIS Futures Fund Small Grants	\$25,000	\$1,316	\$1,316
9. IEC Water Quality Monitoring	\$81,245	\$81,245	\$0
10. EPA Nitrogen Contract	\$319,996	\$0	\$0
a. Base period FY17 forward funded	\$29,557	\$0	\$0
b. Option period	\$290,439	\$0	\$0
11. ORISE - Technical support	\$15,000	\$0	\$0
12. NYCDEP Eutrophication Modeling	\$1,400,000	\$1,400,000	\$1,400,000
13. ESAT monitoring contract	\$26,584	\$0	\$0
Total Request:	\$8,630,000	\$7,144,414	\$7,566,936
Funds Available*:	\$8,630,000		

\$0

*Section 119 funds = \$8,000,000

*Section 320 funds = \$600,000 NEP + \$30,000 CRE

FY2017 Long Island Sound Funding by Grantee

Attachment 4

ORGANIZATION [Project Officer]	Project Period # Months	Expires	EPA Assistance Award #	2017 Funding for FY2018 Tasks
Final LIS Allocation				\$8,600,000
BASE IMPLEMENTATION PROGRAM:		HQ Hold	\$4,000	\$4,000
EPA LISO Office				
a. Operations/Expenses				\$10,501
b. ORISE support				\$15,000
NYSDEC 2017 Stewardship [CM]	36	9/30/20	New	\$685,000
NYSEA PI&E & Mentor Teachers 2013-15 [CM]	48	9/30/18	CE96291113	\$228,000
NYCDEP Modeling 2017-2021 [MT]	48	9/30/21	New	\$1,400,000
NFWF LIS Futures Fund 2017 [ID/LON]	48	9/30/21	LI-New	\$2,321,003
CTSEA CCMP Implementation 2017 [CM]	24	9/30/19	LI00A00156	\$462,857
UCONN DMS WQ Monitoring [ID/LON]	24	9/30/19	LI00A00157	\$122,555
CTDEEP 2017 CCMP Implementation [LON]	24	9/30/19	LI00A00155	\$2,214,940
IEC Water Quality Monitoring [LON]	24	9/30/19	New	\$81,245
NEIWPC 2015 CCMP Implementation [LON]	36	9/30/18	LI96187401	\$738,319
EPA Contract for Nitrogen Strategy [LON]	18	3/27/18	EPC12055/23	\$319,996
ESAT monitoring contract [LON]	24	9/30/19		\$26,584
BALANCE SUBTOTALS:				\$8,630,000
Region 1, Green; Region 2 Blue; Contract Red				\$(8,630,000)
Additional \$30,000 from HQ NEP				\$(30,000)

Long Island Sound Study Travel Documentation for FY2016 NEP Work Plan

Attachment 5

April 2016-March 2017

CAC Travel

Meeting Date	Meeting Title	Meeting Location	Person or Committee	Cost	Total Cost	Grant Number
6/23/2016	CAC	Bridgeport, CT	CAC	74.24	\$672.63	LI96159701
6/23/2016	CAC	Bridgeport, CT	CAC	173.88		LI96159701
6/23/2016	CAC	Bridgeport, CT	CAC	27.00		LI96159701
6/23/2016	CAC	Bridgeport, CT	CAC	20.00		LI96159701
6/23/2016	CAC	Bridgeport, CT	CAC	62.96		LI96159701
6/23/2016	CAC	Bridgeport, CT	CAC	99.90		LI96159701
6/23/2016	CAC	Bridgeport, CT	CAC	214.65		LI96159701
9/8/2016	CAC	Centerport, NY	CAC	222.48	680.84	LI96159701
9/8/2016	CAC	Centerport, NY	CAC	176.8		LI96159701
9/8/2016	CAC	Centerport, NY	CAC	41.04		LI96159701
9/8/2016	CAC	Centerport, NY	CAC	39.96		LI96159701
9/8/2016	CAC	Centerport, NY	CAC	167.08		LI96159701
9/8/2016	CAC	Centerport, NY	CAC	21.6		LI96159701
9/8/2016	CAC	Centerport, NY	CAC	11.88		LI96159701
12/8/2016	CAC	Bridgeport, CT	CAC	34.00	\$540.45	LI96159701
12/8/2016	CAC	Bridgeport, CT	CAC	34.00		LI96159701
12/8/2016	CAC	Bridgeport, CT	CAC	55.08		LI96159701
12/8/2016	CAC	Bridgeport, CT	CAC	42.92		LI96159701
12/8/2016	CAC	Bridgeport, CT	CAC	58.88		LI96159701
12/8/2016	CAC	Bridgeport, CT	CAC	174.62		LI96159701
12/8/2016	CAC	Bridgeport, CT	CAC	43.75		LI96159701
12/8/2016	CAC	Bridgeport, CT	CAC	97.20		LI96159701
3/16/2017	CAC	NYC	CAC	37.00	\$349.81	LI96159701
3/16/2017	CAC	NYC	CAC	26.25		LI96159701
3/16/2017	CAC	NYC	CAC	103.51		LI96159701
3/16/2017	CAC	NYC	CAC	36.00		LI96159701
3/16/2017	CAC	NYC	CAC	19.25		LI96159701
3/16/2017	CAC	NYC	CAC	127.80		LI96159701

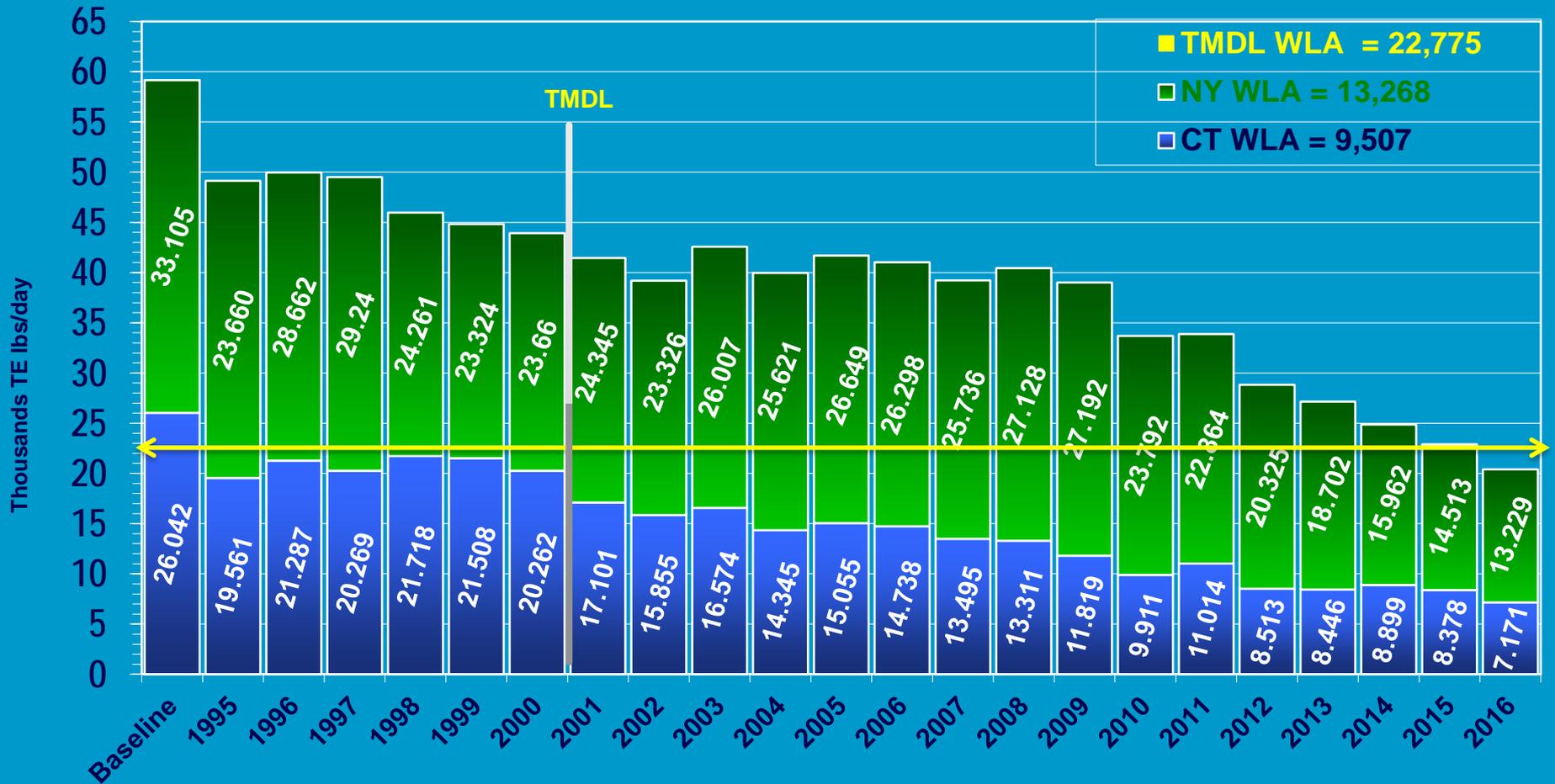
Total \$2,243.73

Non-NEWIWPCC Travel

-	Date	Meeting/Workshop	Amount
Harry Yamalis	4/14-16/2016	NEERS Workshop	\$ 359.45
Kelly Streich	5/3/2016	Hilton -- Stonybrook	\$ 86.40
Harry Yamalis	5/11/2016	LISS Hab/Rest WG	\$ 13.00
Kelly Streich	5/13/2016	LIS Research Conference	\$ 60.00
Corinne Fitting	5/13/2016	LIS Research Conference	\$ 60.00
Harry Yamalis	5/13/2016	LIS Research Conference	\$ 60.00
Mark Parker	6/3/2016	LISS Citizen Summit	\$ 209.50
Cassie Bauer	6/3/2016	LISS CitSci Summit	\$ 30.00
Peter Francis	7/21/2016	LISS MC	\$ 82.08
Harry Yamalis	8/4/2016	LIS FF Review	\$ 43.47
Harry Yamalis	8/16/2016	LISS HRSWG	\$ 20.00
David Kozak	8/16/2016	LISS HRSWG	\$ 27.00
Cassie Bauer	9/12/2016	Trash-Free Waters R2	\$ 31.50
Cassie Bauer	9/27/2016	NEI Estuary Research Workshop	\$ 35.00
Peter Francis	10/20/2016	LISS MC	\$ 82.08
Cassie Bauer	10/20/2016	LISS MC	\$ 27.00
Cassie Bauer	12/7/2016	LISS I-Team	\$ 27.00
Peter Francis	1/19/2017	LISS MC	\$ 76.15
Cassie Bauer	1/19/2017	LISS MC	\$ 112.00
Cassie Bauer	1/27/2017	LISS CAC	\$ 27.00
Harry Yamalis	2/8/2017	LISS HRSWG	\$ 50.29
Harry Yamalis	3/13/2017	CT Natural Resources Conf	\$ 40.13
Cassie Bauer	3/16/2017	LISS CAC	\$ 42.25
Cassie Bauer	3/24/2017	LIS Natural History Conf	\$ 40.00
Harry Yamalis	3/29/2017	EPA R1 Meeting	\$ 176.07
Harry Yamalis	3/16-18/2017	NEERS Meeting	\$ 245.95
Kelly Streich	3/16-18/2017	NEERS Groton, CT	\$ 120.22

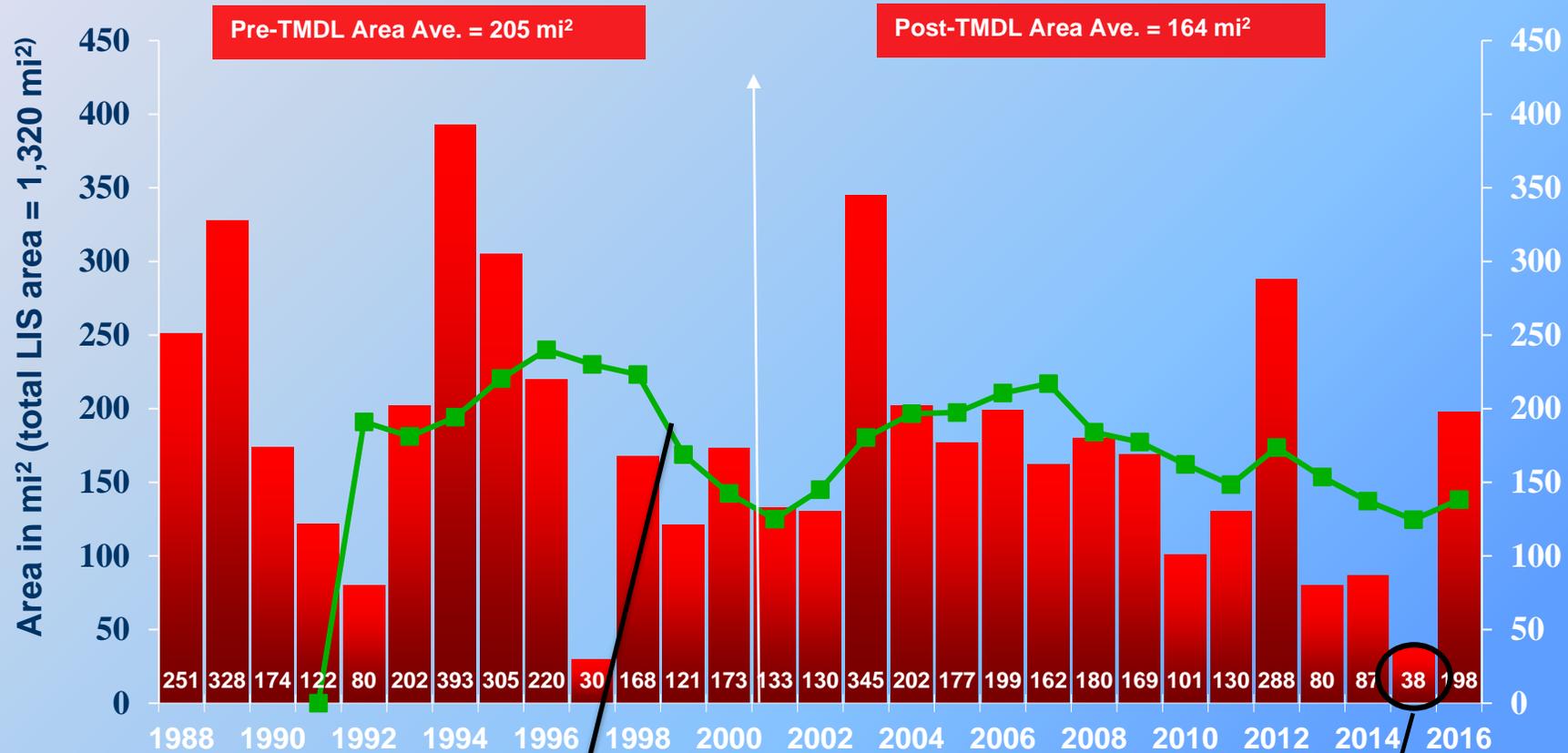
\$ 2,183.54

Point Source Nitrogen Trade-Equalized Loads vs. **Total Maximum Daily Load** Waste Load Allocations 1995-2016 **NY/CT STPs**



Maximum Area of Hypoxia

1987-2016 (June-September)



Five-year rolling average

Second smallest area in 28 years