



longislandsoundstudy

# **NATIONAL ESTUARY PROGRAM SUMMARY WORK PLAN**

FOR

**FEDERAL FISCAL YEAR 2016 FUNDING**

FOR

**COMPREHENSIVE CONSERVATION AND MANAGEMENT PLAN**

**IMPLEMENTATION ACTIVITIES**

**DURING THE PERIOD**

October 1, 2016-September 30, 2017 or beyond  
[FY2017]

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

October 1, 2014- September 30, 2015  
[FY2015]

**June 2016**

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 2016 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 identifies four primary themes:

2015 “New” CCMP

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

1994 “Old” CCMP

- 1) hypoxia, lack of dissolved oxygen;
- 2) toxic substances pollution;
- 3) pathogen contamination;
- 4) floatable debris pollution;
- 5) management & conservation of living resources and habitats;
- 6) land use & development; and
- 7) public involvement & education.

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 FY2013 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 1985, Long Island Sound is an inherent part of EPA’s NEP program and is a National Geographic Program (GEOs) along with Chesapeake Bay, Puget Sound, the Great Lakes, and the Gulf of Mexico and Mexico Border.

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 GEO 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 LISS underwent its CCMP Implementation Review in FY2015 during June 22-25, to focus on primary CCMP implementation areas and determine that sufficient progress was being made and funding was being directed to highest priority areas. A final findings letter was provided to the LISS by EPA NEP HQ 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. FY2016 LISS BUDGET BREAKDOWN

This work plan summarizes tasks and deliverables contained in EPA FY2016 assistance awards to Management Conference partners that account for the FY2016-17 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 in the annual President’s Budget Request. These funds include \$600,000 in NEP allocations under Clean Water Act (CWA) §320, and \$3,940,000 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 \$3,368,099 as shown in **Attachment 3**. The program received funding for a project under the Climate Ready Estuaries program amounting to \$88,120, which required additional match (Attachment 3, line 10a). The overmatch of at least \$846,166 is being provided by the Connecticut Department of Energy and Environmental Protection (CTDEEP).

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, April 21, 2016 meeting. The record of the Management Committee meeting is documented in Mark Tedesco’s April 25, 2016 memorandum entitled, *FY2016 LISS Grant and Work Plan Technical Guidance*.

The LISS budget is organized into the four Program Elements outlined below; the FY2016 LISS budget breakdown by Program Element is:

Program Element	Amount
<i>Coordination and Reporting of Environmental Actions/Results</i> .....	\$447,245 (9.6%)
<i>Public Outreach, Information and Education</i> .....	\$600,129 (13.0%)
<i>Monitoring, Modeling and Research</i> .....	\$2,078,444 (45%)
<i>CCMP Implementation, Technical Assistance/Regulatory Support</i> .....	\$1,502,302 (32.4%)

To implement this summary Work Plan, as of this writing, EPA will issue one new assistance awards and amend seven current assistance awards to include the FY2016 funding. LISS grantees receiving FY2016 funds have been directed to submit their formal Federal assistance award applications (SF424s) to the grants.gov website on or before June 1, 2016. **Attachment 1** is a detailed breakdown of the FY2016 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 FY2016 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 senior program analyst who 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. 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 FY2016 LISS budget by recipient organization; as the total funding for each recipient may consist of one or more EPA grant awards or amendments to existing grants, **Attachment 4** lists the FY2016 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 due by June 1, 2016 and the grant award process does not complete until September 30, 2016. 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 FY2016.

For FY2016 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 sewage treatment plant upgrade projects in Connecticut that were enabled through the nitrogen TMDL. This also allows other recipients and sub-awardees that are not in a position 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 FY2016 funding for work that will take place in FY2017, the EPA is providing funding to eight LISS partners through eight new or amended awards: NFWF [1], CTDEEP [1]; the New England Interstate Water Pollution Control Commission (NEIWPCC) [1]; the Connecticut Sea Grant College Program (CTSEA) [2]; the Research Foundation of the State University of New York at Stony Brook [1]; the New York Sea Grant College Program [1]; the University of Connecticut Marine Sciences Department [1].

These partners assist in implementing the CCMP and conduct activities to support the LISS base program, which includes the LIS Futures Fund program (NFWF), the CCMP Implementation program (NEIWPCC), the LIS Research Grant program (CTSEA and SUNY RF), the LIS public outreach and education program (NEIWPCC, CTSEA, NYSEA), and the habitat restoration program (CTDEEP, NYSDEC). As indicated above, each of these partners is funded through one or more annual or multi-year EPA assistance awards or IAs as appropriate. 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 (FY2016) PROJECTS**

In FY2008, the LISS adopted the following NEP work plan reporting format in Section B, *Proposed New and Ongoing Projects*. This Section B format utilizes 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 the LISS Program Elements:

<b>Logic Model Element</b>	<b>LISS Program Element</b>
<i>CCMP/Work Plan Goal</i>	[LISS CCMP Area]
<i>Project/Activity Name:</i>	[Program Element/Sub-category description]
<i>Project/Activity Purpose and Description</i> (indicate as Proposed, OnGoing, 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>	[FY2016 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 on a monthly basis 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 in EPA Region 2. 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.

**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.

CCMP implementation actions are tracked by the responsible organizations themselves and through EPA’s eSound annual *CCMP Implementation Tracking Report*. The CCMP Implementation Tracking Reports provide detailed tracking by CCMP problem area and 37 sub-areas. This data is collected under the authority of the grant T&Cs as specified in grantees assistance award documents. The EPA eSound system is publicly accessible at [www.esound.epa.gov](http://www.esound.epa.gov). In 2016 the eSound system will be adjusted to correspond to the new CCMP format or as otherwise determined by EPA.

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/>)

**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:

<b>CCMP/Work Plan Goal:</b>	<b>Continuing the Management Conference</b>
<b>Project/Activity Name:</b>	EPA LISNPO Support to the Management Conference
<b>ONGOING Project/Activity Purpose &amp; Description:</b>	Provides support to the Management Conference in implementing the CCMP; overall program coordination, management and direction.
<b>Responsible Partner(s) Role(s):</b>	EPA Long Island Sound Office
<b>Outputs/Products:</b>	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 GPRA-required reports; tracking and reporting of implementation of CCMP actions; technical assistance to partners in program operations.

<b>CCMP/Work Plan Goal:</b>	<b>Continuing the Management Conference</b>	
<b>Milestones</b> ( <i>project start/end dates</i> )	10/1/16-9/30/17 and continuing.	
<b>2016 Budget:</b>	\$59,500 (administrative support) and \$8,150 (office overhead and travel expenses), EPA staff N/A [See Attachment 1, lines 1 & 2.]	
<b>Outcomes:</b> ( <i>anticipated and/or completed accomplishments</i> ) <b>-Short, Intermediate &amp; Long Term</b>	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.	
<b>Δ (+/-) in Pressure Targets</b>	N/A	
<b>CWA Core Program Project Support</b> 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>CCMP/Work Plan Goal:</b>	<b>Continuing the Management Conference</b>	
<b>Project/Activity Name:</b>	State Coordination and Technical Assistance	
<b>ONGOING Project/Activity Purpose &amp; Description:</b>	Assist in all aspects of LISS Management Conference program development and support for CCMP implementation in the State of Connecticut.	
<b>Responsible Partner(s)/Role(s):</b>	Connecticut Department of Energy and Environmental Protection	
<b>Outputs/Products:</b>	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	

<b>CCMP/Work Plan Goal:</b>	<b>Continuing the Management Conference</b>	
	goals and objectives and productive in restoring and managing Long Island Sound.	
<b>Milestones</b> ( <i>project start/end dates</i> )	10/1/16-9/30/17	
<b>2016 Budget:</b>	\$273,029 [See Attachment 1, line 4a]	
<b>Outcomes:</b> ( <i>anticipated and/or completed accomplishments</i> ) <b>-Short , Intermediate &amp; Long Term</b>	Improved management and implementation of CCMP goals and objectives; improved environmental data quality and reporting of environmental results.	
<b>-Changes (+/-) in Pressure Targets</b>	N/A	
<b>CWA Core Program Project Support</b> 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

<b>CCMP/Work Plan Goal:</b>	<b>Continuing the Management Conference</b>	
<b>Project/Activity Name:</b>	State Program Coordination and Management	
<b>ONGOING Project/Activity Purpose &amp; Description:</b>	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.	
<b>Responsible Partner(s) Role(s):</b>	New York State Department of Environmental Conservation	
<b>Outputs/Products:</b>	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.	

<b>CCMP/Work Plan Goal:</b>	<b>Continuing the Management Conference</b>	
<b>Milestones</b> ( <i>project start/end dates</i> )	10/1/15-9/30/16	
<b>2016 Budget:</b>	\$99,662 Coordinator salary as in-kind state match [See Attachment 1, line 4b]	
<b>Outcomes:</b> ( <i>anticipated and/or completed accomplishments</i> ) <b>-Short , Intermediate &amp; Long Term</b>	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.	
<b>-Changes (+/-) in Pressure Targets</b>	N/A	
<b>CWA Core Program Project Support</b> 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

<b>CCMP/Work Plan Goal:</b>	<b>Continuing the Management Conference</b>	
<b>Project/Activity Name:</b>	Management Conference Administrative Support	
<b>ONGOING Project/Activity Purpose &amp; Description:</b>	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	
<b>Responsible Partner(s) Role(s):</b>	New England Interstate Water Pollution Control Commission	
<b>Outputs/Products:</b>	Citizen involvement and participation; state and local meeting support; national conference and travel support.	
<b>Milestones</b> ( <i>project start/end dates</i> )	10/1/15-9/30/16	
<b>2016 Budget:</b>	\$71,566 [See Attachment 1, line 5]	
<b>Outcomes:</b> ( <i>anticipated and/or completed accomplishments</i> ) <b>-Short , Intermediate &amp; Long Term</b>	Attendance at national conference and meetings; travel to CAC and other LISS meetings and events support.	
<b>-Changes (+/-) in Pressure Targets</b>	N/A	
<b>CWA Core Program Project Support</b> Core programs are:	1) Strengthening WQ Standards,	
	2) Improving WQ Monitoring,	
	3) Developing TMDLs,	
	4) Controlling NPS Pollution on a Watershed Basis,	

<b>CCMP/Work Plan Goal:</b>	<b>Continuing the Management Conference</b>	
	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. NEIWPC, NYSEA and CTSEA are primarily responsible under their LISS grant awards for public outreach assistance. The LISS communications team, consisting of staff of these partners and other interested parties, including members of the LISS Citizens Advisory Committee (CAC) 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 NEIWPC'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. The CAC's operating subcommittees work with LISS work groups and teams in developing program priorities, projects, and in accomplishing implementation actions. These subcommittees are *Policy, Legislative & Advocacy, Accountability & Reporting, and Local Government*. 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:

<b>CCMP/Work Plan Goal:</b>	<b>Public Outreach, Information and Education</b>
<b>Project/Activity Name:</b>	PI&E, Small Grants and PI&E Project Support

<b>CCMP/Work Plan Goal:</b>	<b>Public Outreach, Information and Education</b>	
<b>ONGOING Project/Activity Purpose &amp; Description:</b>	Supports the Management Conference in conducting the LISS public outreach, information and education program through staff resources and products, services and supplies.	
<b>Responsible Partner(s) Role(s):</b>	NEIWPCC, NYSEA, CTSEA; NFWF, direct implementation of PI&E activities.	
<b>Outputs/Products:</b>	Production of three issues of <i>Update</i> for distribution throughout the LIS region. Production of six 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. Fact sheets that summarize timely topics on LIS issues that can be widely distributed in paper or web site formats. 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.	
<b>Milestones (project start/end dates)</b>	October 1, 2016-September 30, 2017 (or as specified in individual assistance awards)	
<b>2016 Budget:</b>	NEIWPCC: \$228,830; NYSEA: \$198,396 ; CTSEA: \$89,272 [see Attachment 1, lines 6-8]	
<b>Outcomes: (anticipated and/or completed accomplishments)</b> <b>-Short, Intermediate &amp; Long Term</b>	Informing public and increasing citizen activism to improve stewardship and individual actions 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 activism Improved habitat and water quality and increased public awareness and participation in LIS affairs Fulfill public request for knowledge about LIS and educational needs; promote better stewardship of the Sound Increased awareness for the protection and restoration of LIS to the general public and improved 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.	
<b>Δ (+/-) in Pressure Targets</b>	N/A	
<b>CWA Core Program Project Support</b> 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 80+ environmental indicators. These indicators are posted on the LISS website, <http://longislandsoundstudy.net/category/status-and-trends/> and a subset of selected indicators of interest to the public is produced biennially in the LISS publication, *Sound Health* last published in 2012. 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. Updating these indicators on a periodic basis is a complex process. The LISS does not directly pay for or support the data collection efforts for the vast majority of the diverse suite of environmental indicators; 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.

**a. Research.** The LISS Research Grant 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. In FY2015 the Management Committee approved a scientific research budget of \$445,000. These Year 1 funds will be awarded to the CT Sea Grant program and SUNY RF for an RFP to be issued in Spring 2016. During the FY2016 budget cycle, an additional year of LISS funding is combined with FY2015 funds for the biennial RFP, depending on availability of funds.

<b>CCMP/Work Plan Goal:</b>	<b>Monitoring, Modeling and Research</b>
<b>Project/Activity Name:</b>	Long Island Sound Research Grant Program
<b>ONGOING Project/Activity Purpose &amp; Description:</b>	To administer the LISS Research Grant program by identifying scientific research needs and priorities for LIS, solicit and review project proposals and ensure the selection and management of the highest priority projects with available funds.
<b>Responsible Partner(s) Role(s):</b>	SUNY RF/CTSEA, jointly administer and manage the LIS research program.
<b>Outputs/Products:</b>	Develop Request for Preliminary and Final Proposals; List of research selected for funding; manage research projects; request, review and process progress reports and final report per research project.
<b>Milestones (project start/end dates)</b>	October 1, 2015-September 30, 2020
<b>2016 Budget:</b>	\$425,000 [\$212,500 SUNY RF, \$212,500 CTSEA] See Attachment 1, line 17. These amounts include \$3,000 each for STAC meeting support.
<b>Outcomes: (anticipated and/or completed accomplishments) -Short, Intermediate, Long Term</b>	Identify, fund and conduct highest priority research relevant to the Long Island Sound Agreement or its successors as established by the STAC; research topics are defined, openly solicited, and selected for funding using a well-developed, respected process that is fair and technically-based; new science-based information will be provided to inform decision-making and actions towards reaching the vision and goals for Long Island Sound. Plan, organize and conduct biennial LIS research conference in 2016.
<b>Δ (+/-) in Pressure Targets</b>	N/A

<b>CCMP/Work Plan Goal:</b>	<b>Monitoring, Modeling and Research</b>	
<b>CWA Core Program Project Support</b> 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

**b. Assessment and Monitoring.** In FY2016 the Management Committee once again approved funding for the LIS ambient water quality (WQ) monitoring program conducted by CTDEEP. 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. The following charts describe the WQ monitoring program conducted by CTDEEP and other partners’ monitoring and assessment projects approved in the FY2016 budget.

<b>CCMP/Work Plan Goal:</b>	<b>Monitoring, Modeling and Research</b>
<b>Project/Activity Name:</b>	LIS Water Quality Field Surveys
<b>ONGOING Project/Activity Purpose &amp; Description:</b>	To monitor and assess the ambient conditions of water quality in LIS and provide management with information for decision-making.
<b>Responsible Partner(s) Role(s):</b>	CTDEEP, conduct of WQ monitoring and analysis of LIS open waters.
<b>Outputs/Products:</b>	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.
<b>Milestones (project start/end dates)</b>	October 1, 2016-September 30, 2017
<b>2016 Budget:</b>	\$1,075,521 [see Attachment 1, line 11] \$40,000 USGS monitoring support [see Attachment 1, line 13]
<b>Outcomes: (anticipated and/or completed accomplishments) -Short, Intermediate, Long Term</b>	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 2015 the maximum area of hypoxia in the Sound was 38 square miles lasting for 56 days. The

<b>CCMP/Work Plan Goal:</b>	<b>Monitoring, Modeling and Research</b>	
	pre-TMDL averages of 208 square miles and 56 days are compared with the post-TMDL averages of 162 square miles and 56 days.	
<b>Δ (+/-) in Pressure Targets</b>	N/A	
<b>CWA Core Program Project Support</b> 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

<b>CCMP/Work Plan Goal:</b>	<b>Monitoring, Modeling and Research</b>	
<b>Project/Activity Name:</b>	EPA Nitrogen Control Strategy Implementation	
<b>NEW Project/Activity Purpose &amp; Description:</b>	Nitrogen control strategies implementation support.	
<b>Responsible Partner(s) Role(s):</b>	EPA	
<b>Outputs/Products:</b>	Select contractor to assist in overall development and implementation of detailed technical approach for establishing thresholds and targets for three LIS watershed groupings (Embayments, Large Riverine, and Western LIS)	
<b>Milestones (project start/end dates)</b>	October 1, 2016-September 30, 2017	
<b>2016 Budget:</b>	\$340,272 [see Attachment 1, line 16]	
<b>Outcomes: (anticipated and/or completed accomplishments)</b> <b>-Short, Intermediate, Long Term</b>	Improved monitoring of nitrogen in embayments; improved understanding of controls necessary to reduce nitrogen inputs in the watershed;	
<b>Δ (+/-) in Pressure Targets</b>	N/A	
<b>CWA Core Program Project Support</b> 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	

<b>CCMP/Work Plan Goal:</b>	<b>Monitoring, Modeling and Research</b>	
<b>Project/Activity Name:</b>	LIS Water Quality Monitoring	
<b>CONTINUING Project/Activity Purpose &amp; Description:</b>	To monitor and assess the ambient conditions of water quality in LIS and provide management with information for decision-making.	
<b>Responsible Partner(s) Role(s):</b>	University of Connecticut Department of Marine Sciences EPA Assistance Award Number: LI96161101	
<b>Outputs/Products:</b>	Project will support the LIS water quality monitoring program through a network of fixed stations (buoys) and tele-metered data.	
<b>Milestones (project start/end dates)</b>	October 1, 2016-September 30, 2017	
<b>2016 Budget:</b>	\$90,460 [see Attachment 1, line 12]; \$88,120 NEP CRE funding; and \$9,571 in LISS supplemental funding	
<b>Outcomes: (anticipated and/or completed accomplishments) -Short, Intermediate, Long Term</b>	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; improved remote sensing data for Chl a and water temperature..	
<b>Δ (+/-) in Pressure Targets</b>	N/A	
<b>CWA Core Program Project Support</b> 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

<b>CCMP/Work Plan Goal:</b>	<b>Monitoring, Modeling and Research</b>	
<b>Project/Activity Name:</b>	Western LIS Water Quality Monitoring	
<b>CONTINUING Project/Activity Purpose &amp; Description:</b>	To monitor and assess the ambient conditions of water quality in western LIS and provide management with information for decision-making.	
<b>Responsible Partner(s) Role(s):</b>	NEIWPC/IEC	
<b>Outputs/Products:</b>	Project supports the LIS water quality monitoring program in western Long Island Sound.	
<b>Milestones (project start/end dates)</b>	October 1, 2016-September 30, 2017	
<b>2016 Budget:</b>	\$9,500 [see Attachment 1, line 15];	
<b>Outcomes: (anticipated and/or completed accomplishments) -Short, Intermediate, Long Term</b>	Improved resolution of water quality data; increase in number of stations covered; additional data points obtained; consistency of data collected and reported.	

<b>CCMP/Work Plan Goal:</b>	<b>Monitoring, Modeling and Research</b>	
<b>Δ (+/-) in Pressure Targets</b>	N/A	
<b>CWA Core Program Project Support</b> 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

<b>CCMP/Work Plan Goal:</b>	<b>Monitoring, Modeling and Research</b>	
<b>Project/Activity Name:</b>	Long Island Sound Senior Scientist/Coordinator Position	
<b>NEW Project/Activity Purpose &amp; Description:</b>	Support to coordinate the science and research programs in the LISS.	
<b>Responsible Partner(s) Role(s):</b>	NEIWPC	
<b>Outputs/Products:</b>	Coordinate with LISS partners to ensure an effective and efficient scientific research program for LIS;	
<b>Milestones (project start/end dates)</b>	October 1, 2015-September 30, 2018	
<b>2016 Budget:</b>	[\$394,980 continuing from FY2015] [see Attachment 1, line 19]	
<b>Outcomes: (anticipated and/or completed accomplishments) -Short; Intermediate;&amp; Long Term</b>	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.	
<b>Δ (+/-) in Pressure Targets</b>	N/A	
<b>CWA Core Program Project Support</b> 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	
	5) Strengthening NPDES Permits	x
	6) Supporting Sustainable Wastewater Infrastructure	
	7) Wetlands Program Support/Implementation	x

**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 area of maximum 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.

**eSound Report.** EPA funds and maintains a web-based program in Research Triangle Park to track annual progress by its funded grantees in implementing the CCMP. <http://epa.gov.esound> has both a public and access-limited site, the latter used by the funded partners for data entry. A final annual report is produced and posted on the LISS website.

<b>CCMP/Work Plan Goal:</b>	<b>Continuing the Management Conference</b>
<b>Project/Activity Name:</b>	eSound, the LISS CCMP Implementation Tracking System
<b>Continuing Project/Activity Purpose &amp; Description:</b>	Review, assess and establish a data reporting system for tracking CCMP implementation activities
<b>Responsible Partner(s) Role(s):</b>	EPA Long Island Sound Office
<b>Outputs/Products:</b>	Annual server O&M costs
<b>Milestones (project start/end dates)</b>	10/1/16-9/30/17 and continuing.
<b>2016 Budget:</b>	\$35,000 [See Attachment 1, line 3]
<b>Outcomes: (anticipated and/or completed accomplishments) -Short, Intermediate &amp; Long Term</b>	Coordinated reporting of federal, state, and local government actions to implement the CCMP; accounting for clear annual goals and objectives framed within available funding; access to public, environmental, and financial data for restoration and protection of Long Island Sound.
<b>Δ (+/-) in Pressure Targets</b>	N/A

<b>CCMP/Work Plan Goal:</b>	<b>Continuing the Management Conference</b>	
<b>CWA Core Program Project Support</b> 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	

**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-\$150,000); Clean Water and Habitat Restoration Planning and Water Quality Monitoring Grants (\$20,000-\$60,000); Education Grants (\$20,000-\$60,000); and Long Island Sound Study Public Participation, Information and Education Grants Program Small Grants (\$3,000-\$10,000) projects. The LISFF is administered by NFWF. In FY2016, the LIS Futures Fund is funded at \$1,204,245 and the Small Grants component is funded at \$65,450, level-funded from FY2015. 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 22.

As noted, the below Logic Model subcategories are eligible funding categories under the LISFF. FY2016 LISFF-funded projects cannot be characterized under this Logic Model format as 2016 projects have not yet been selected.

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

<b>CCMP/Work Plan Goal:</b>	<b>CCMP Implementation Support and Technical Assistance</b>
<b>Project/Activity Name:</b>	LISS Futures Fund
<b>ONGOING Project/Activity Purpose &amp; Description:</b>	To provide resources for priority CCMP implementation projects at the state and local level to qualified applicants.
<b>Responsible Partner(s) Role(s):</b>	NFWF, plans, coordinates, conducts and administers the LISS Futures Fund Grant Program
<b>Outputs/Products:</b>	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.

<b>CCMP/Work Plan Goal:</b>	<b>CCMP Implementation Support and Technical Assistance</b>	
	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.	
<b>Milestones</b> ( <i>project start/end dates</i> )	October 1, 2016-September 30, 2020* Actual dates under negotiation with EPA.	
<b>2016 Budget:</b>	\$1,204,245 [See Attachment 1, line 22]	
<b>Outcomes:</b> ( <i>anticipated and/or completed accomplishments</i> ) <b>-Short, Intermediate, Long Term</b>	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. Increase public understanding of accomplishments and challenges faced in LIS and addressed by various LISS initiatives.	
<b>Δ (+/-) in Pressure Targets</b>	N/A	
<b>CWA Core Program Project Support</b> 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

**4. Technical Assistance/Capacity Building.** The LISS provides technical assistance and capacity building through a variety of means. The LIS Futures Fund can provide support 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 carryover funding, NEIWPC developed and released an RFP requesting proposals to develop a nonpoint source tracking tool for use by regulated entities in establishing measurable effects of nonpoint source controls and BMPs put in place to address water quality in Long Island Sound through the nitrogen TMDL. Phase I of that project is in completion stages and this work plan funds Phase II elements also from prior year carryover funding. The project established tracking system baselines, setting a base year and various nitrogen removal efficiency calculation metrics. Phase II will review and select a pilot sub-basin and obtain data for that sub-basin; then it will customize the tracking system to account for specific attributes in the sub-basin. The tool will be of great use to entities that need to establish reduction scenarios to account for TMDL progress in reducing nitrogen from nonpoint sources.

**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.

<b>CCMP/Work Plan Goal:</b>	<b>CCMP Implementation Support and Technical Assistance</b>	
<b>Project/Activity Name:</b>	LISS Mentor Teacher Training Program	
<b>ONGOING Project/Activity Purpose &amp; Description:</b>	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.	
<b>Responsible Partner(s) Role(s):</b>	CT Sea Grant/NY Sea Grant; direct implementation	
<b>Outputs/Products:</b>	Recruit six (6) mentor teachers and facilitate planning sessions for workshop development (grade level cohorts K-2, 3-5, 6-8); conduct three (3) LIS Mentor Teacher workshops for K-12 formal and informal educators; support LIS Educators Conference; conduct 3 NY mentor teacher workshops.	
<b>Milestones (project start/end dates)</b>	October 1, 2016-September 30, 2017	
<b>2016 Budget:</b>	\$17,830 CT and \$6,940 NY [See Attachment 1, line 9]	
<b>Outcomes: (anticipated and/or completed accomplishments)</b> <b>Short, Intermediate &amp; Long Term</b>	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.	
<b>Δ (+/-) in Pressure Targets</b>	N/A	
<b>CWA Core Program Project Support</b> 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

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.

<b>CCMP/Work Plan Goal:</b>	<b>CCMP Implementation Support &amp; Technical Assistance</b>	
<b>Project/Activity Name:</b>	LISS Habitat Restoration/Coordination	
<b>ONGOING Project/Activity Purpose &amp; Description:</b>	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.	
<b>Responsible Partner(s) Role(s):</b>	NYSDEC (via NEIWPCC); CTDEEP; direct implementation	
<b>Outputs/Products:</b>	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.	
<b>Milestones (project start/end dates)</b>	10/1/16-9/30/17	
<b>2016 Budget:</b>	\$137,769 CTDEEP; \$138,773 NYSDEC via NEIWPCC; [See Attachment 1, line 20]	
<b>Outcomes: (anticipated and/or completed accomplishments) -Short, Intermediate, Long Term</b>	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 (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.	
<b>Δ (+/-) in Pressure Targets</b>	N/A	
<b>CWA Core Program Project Support</b> 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

<b>CCMP/Work Plan Goal:</b>	<b>CCMP Implementation Support &amp; Technical Assistance</b>	
<b>Project/Activity Name:</b>	TMDL Support	

<b>CCMP/Work Plan Goal:</b>	<b>CCMP Implementation Support &amp; Technical Assistance</b>	
<b>Continuing Project/Activity Purpose &amp; Description:</b>	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.	
<b>Responsible Partner(s) Role(s):</b>	NEIWPCC	
<b>Outputs/Products:</b>	Plan, organize, and conduct public meetings in upland states; record public comments and report on results.	
<b>Milestones (project start/end dates)</b>	October 1, 2015-September 30, 2017	
<b>2016 Budget:</b>	\$21,515 [see Attachment 1, line 23]	
<b>Outcomes: (anticipated and/or completed accomplishments) -Short, Intermediate &amp; Long Term</b>	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.	
<b>Δ (+/-) in Pressure Targets</b>	N/A	
<b>CWA Core Program Project Support</b> 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	
	8) Other: Public Involvement and Education	

**C. PREVIOUS YEAR’S (FY2015) 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: HYPOXIA/NUTRIENT MANAGEMENT.**

**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 2015, the latest report available. The total Trade-Equalized (TE) point source nitrogen load for 2015 was 22,815 TE lbs/day. The EPA Strategic Plan target in 2015 was 91.5 percent towards the goal; the 2015 result exceeded that

target, achieving 99.8 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 2016.

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 2000-2015.

Significant EPA LISNPO and Region 1 staff time is spent following up on TMDL implementation and LISS funding has been used to conduct various studies and projects to ensure that the upland states of Massachusetts, New Hampshire and Vermont’s contributions to the total nitrogen load to the Sound are included in a scheduled revision to the TMDL. The LISS funded 50 percent of a CTDEEP technical position to support TMDL revision work in 2011 and as discussed above, an upper basin public outreach and education program conducted by NEIWPC that began in 2010. Due to staff changes, this latter responsibility has been incorporated into a full time FTE’s job description in NEIWPC.

**2. Area/Duration of Hypoxia.** As reported under EPA’s Strategic Plan (LI-SP42) the area (square miles =  $mi^2$ ) of the maximum hypoxic event in Summer 2015 with less than 3 milliliters (ml) of dissolved oxygen (DO) per liter of bottom ( $\sim <1m$ ) water ( $<3ml/DO$ ) was estimated to be 38 square miles, which lasted for a period of 56 days [error margins  $+/-85 mi^2$ ,  $+/- 15$  days]. This compares with the 13-year pre-TMDL averages of 208 square miles and 56.2 days. The 16-year post-TMDL averages are 162.1 square miles and 56 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 [ $176.8 mi^2$ ], as measured by a 5 year annual rolling average. For 2015, the rolling 5-year average reduction is 124.6 square miles or 29.5 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. In 2014 EPA and the five watershed states completed Enhanced Implementation Plans (EIPs) to

current stormwater and nonpoint source control efforts with a goal of qualitatively assessing whether they are adequate for meeting the 2000 TMDL. A TMDL work group has reviewed these evaluations, including an assessment of on-site wastewater treatment systems.

## **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 1,678 acres of habitat in 2015. 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 did not reopen any river miles in 2015. 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 448 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 should be made by Winter 2016.

The LISS STAC met in April, June and November 2015; its June meeting was a joint meeting with the CAC and both citizens and scientists as well as managers came together to discuss issues of mutual concern. CAC and 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/>. Six key sentinels were selected for more detailed monitoring and the UConn Department of Marine Sciences is monitoring them. The bi-state work plan ([http://longislandsoundstudy.net/wp-content/uploads/2011/04/2011\\_2013-SM-Work-Plan.pdf](http://longislandsoundstudy.net/wp-content/uploads/2011/04/2011_2013-SM-Work-Plan.pdf)) includes evaluation of the pilot monitoring program as well as synthesis and dissemination of data from the pilot monitoring and historical data found in the data clearing house. This project is ongoing in 2016 with prior year funding.

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

**1. Long Island Sound Futures Fund (LISFF) Projects, FY2015.** LISFF grants totaling \$1,295,972 to state and local government and community groups, with leveraged matching resources of \$1,249,692, supported on-the-ground conservation projects in Connecticut and New York. The grant program pools funds from the EPA, NFWF, and USFWS for projects to restore the health and living resources of LIS. The 2015 program funded subgrants in Connecticut and in New York and for projects that benefit both states. Two small grants were awarded for educational activities to increase understanding and appreciation of Long Island Sound through community events and activities. The projects in both states will open up 12.2 river miles for fish passage, and restore more than 50 acres of critical fish and wildlife habitat and open space. This habitat includes lakes, underwater grasses, woodlands, meadows, wetlands, beaches, dunes and river and park frontage. Nearly 600,000 gallons of stormwater runoff will be treated through the development of water pollution control projects funded by the LISFF.

**2. LIS Stewardship Initiative.** New York completed its stewardship acquisitions with FY2008 and FY2010 LISS funding in FY2015. On April 22, 2015 DEC took title to 1.1 acres on Conscience Bay for addition to Conscience Bay State Tidal Wetlands. The acquisition gave the State its first upland frontage on the Bay. Following the acquisition, which was 100% funded by EPA LISS funds, a total of \$922,653, a home on the site in very deteriorated condition was abated for large amounts of asbestos and demolished, a leaking underground oil tank and contaminated soil was removed, and an on-site septic system drained and closed. The area was graded and seeded with native grasses and will be allowed to return to its natural condition. This site restoration was also funded entirely with LISS funds. The acquisition, due to title problems, was only possible through the intervention of the Peconic Land Trust, which acquired the property at DEC's behest and subsequently re-conveyed the property to DEC.

On September 11, 2015 DEC acquired 1.2 acres on Stony Brook Harbor for addition Stony Brook Harbor State Tidal Wetland for a total price of \$476,227 in EPA funding. It is a hopeful location for plover habitat and has room for public access to the Harbor should it be deemed appropriate at this location. Complicated real estate required the sellers to incorporate a Limited

Liability Corporation prior to conveyance and an encroachment matter required a time consuming boundary survey. The acquisition was funded 100% with EPA LISS funds.

**3. CCMP Enhancements Program.** In FY2015 no funds were provided for projects to enhance CCMP implementation. Prior year projects are in various stages of implementation depending on the nature of the project and the individual grantee. Some may be out for RFPs while others are being developed or directly implemented.

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

**1. Sound Health Report.** Due to the workload in revising and producing the new CCMP, work and budget were deferred from the Sound Health report. The last version of the report was issued in 2012 and is available on the LISS website.

**2. Long Island Sound Citizens Summit.** The 25th annual Long Island Sound Citizens Summit entitled, *Coming Back from the Brink: Nitrogen and the Sound's Health and Economy*, was held on April 10, 2015 at The Harbor Club, Arena at Harbor Yard, Bridgeport, Connecticut. More than 150 citizens attended the Summit. Connecticut State Representative Ted Kennedy, Jr. was the keynote speaker. EPA, through NEIWPC, provided support to *Save the Sound*, a program of *Connecticut Fund for the Environment*, to plan, organize, and conduct the event. Planning is underway for the next annual Citizens Summit on June 3, 2016 in New York at Stony Brook University, topic: *Citizen Science, Translating Science into Action for Long Island Sound*.

**3. Other LISS Communications.** The LISS partners produce their own materials and press releases to communicate their accomplishments and plans to their public or special audiences. In addition to *Sound Health* and *Protection and Progress*, 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 Outlook* is 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 FY2015, several partners' assistance awards funded in prior fiscal years have been completed and their EPA awards closed out:

- LI-97206812, \$1,585,000 to NFWF for the 2011 Long Island Sound Futures Fund program.
- LI-97213810, \$842,785 to NYSDEC for implementation activities and stewardship acquisitions from 2010-2015.
- LI-97241508, \$1,777,132 to NYSDEC for CCMP implementation activities and stewardship acquisitions from 2008-2015.
- LI-96144301, \$466,325 to CT Sea Grant for scientific research projects 2011-2014.
- DW-13923994, \$162,803 to NOAA for fisheries and technical support and liaison actions, 2013-2015.

**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 2016 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 in their own right. For example, the Long Island Sound Futures Fund (LISFF) in FY2015 supported 22 grants totaling more than \$1.3 million to local government and community groups in Connecticut and New York to improve the health of LIS. See: <http://www.nfwf.org/lisff/Documents/2015-LISFF%20Project%20Descriptions.pdf>. The projects will open up 12.4 miles of river for passage of native fish and restore 80 acres of coastal habitat, including intertidal marsh, coastal forest, grasslands and freshwater wetlands. More than 70,000 citizens will be reached by environmental and conservation programs supported by the grants. Nearly 2.9 million gallons of water pollution will be treated through the delivery of water quality improvement projects. The grants will be leveraged by \$1.4 million from the grantees themselves, resulting in \$2.7 million in funding for on-the-ground, hands-on conservation projects in both states.

The FY2015 Futures Fund RFP listed Urban Waters as a qualifying project category. As a result, 31 percent of the projects selected for funding were classified as having an urban waters component. The LISFF FY2015 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 FY2016, funding available to the LISS was level from FY2015 Enacted level. The states of New York and Connecticut have felt the impact of state budget constraints with 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.

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**LONG ISLAND SOUND STUDY  
SUMMARY OF FY2016 LISS FUNDING UNDER CWA \$119 AND \$320  
BY PROGRAM ELEMENT**

**ATTACHMENT 1**

LISS PROGRAM ELEMENT	ACTIVITY/TASK	2016 OUTPUTS/PRODUCTS/SERVICES/TASKS [PRIOR YEAR REFERENCES]	LISS GRANTEE OR FEDERAL IA	2016 BUDGET AMOUNT	ENVIRONMENTAL OUTCOMES
<b>Coordination and Reporting of Environmental Actions and Results</b>	<b>EPA Long Island Sound Program Office Support</b>	1) Telecommunications; internet; copier; postage; supplies, materials; EPA travel account.	EPA LISO	\$8,150	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) Office Administrative Support, 1FTE	EPA/NCOA	\$59,500	
		3) eSound System Support	EPA/OW	\$35,000	
	<b>State Coordination &amp; Technical Assistance</b>	4a) Assist in all aspects of LISS program development, reporting and support, 1.5FTE.	CTDEEP	\$273,029	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. TMDL technical support in CTDEEP for 0.05FTE.
		4b) Assist in all aspects of LISS program development, reporting and coordination support, [1FTE as state match.]	NYSDEC	[\$99,662]	
	<b>Management Conference Administrative Support</b>	5) 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	\$71,566	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.
	<b>COORDINATION SUBTOTAL:</b>				<b>\$447,245</b>
<b>Public Outreach, Information, Participation and Education</b>	<b>Public Information &amp; Education Program</b>	6) LISS communications coordination, 1FTE; project management & support.	NEIWPC	\$228,830	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.
		7) LISS NY communications coordination, 1FTE, UPDATE, presentations, press releases.	NY Sea Grant	\$191,807	
		8) LISS CT communications coordination (0.80FTE), presentations, press releases.	CT Sea Grant	\$89,272	
		9) K-12 Mentor Teacher Program in New York and Connecticut; LIS Marine Educators Conference Support	CT Sea Grant	\$17,830	
	NY Sea Grant		\$6,940		
	<b>Small Grants Program</b>	10) LISS Futures Fund Small Grants Program for public information, education, outreach, <\$10K projects.	NFWF	\$65,450	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.
<b>PI&amp;E SUBTOTAL:</b>				<b>\$600,129</b>	<b>= 13%</b>

<b>Water Quality Monitoring, Modeling and Scientific Research</b>	<b>Water Quality Monitoring &amp; Modeling</b>	11) 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	\$1,075,521	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.	
		12) LIS Water Quality Monitoring fixed station support; FY16 task to support remote sensing of spatial/temporal analysis of temperature/Chl a [+88,120 NEP HQ FY16]	UConn Marine Sciences	\$90,460 \$88,120 \$9,571	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) CT River WQ Monitoring	USGS-CTDEEP	\$40,000	Improved continuous water quality data for simulations or analyses in support of nitrogen management conditions.	
		14) LIS CT embayment benthic analysis pilot [Years 1 & 2, Phases I & II = \$79,000, FY16-17]	CTDEEP	[\$79,000]	Improved analyses of benthic pollution and sources contributing to water quality impairments in selected CT embayments; increased effective management actions to address identified impairments.	
		15) IEC LIS WQ monitoring, Year 3 [FY13, \$47,860; FY14 carryover; FY15 \$0]	NEIWPPC-IEC	\$9,500	Improved resolution of water quality data; increase in number of stations covered; additional data points obtained.	
		16) Nutrient management support	EPA	\$340,272	Support activities to better model, monitor, manage, assess and address nutrient deposition to the Sound.	
	<b>Scientific Research</b>	17) LIS Research Grant Program, FY16 RFP for scientific topic areas; STAC meeting support; [LIS Research Conference support FY15 CTSEA \$20k]	SUNY Research Foundation	\$212,500	Conduct of highest priority research relevant to the Long Island Sound Agreement or its successor and the LISS CCMP is defined, openly solicited, and selected for funding using a well-developed, respected process that is fair and technically-based; new science-based information is provided to inform decision-making and actions towards reaching the vision and goals for Long Island Sound.	
			CT Sea Grant	\$212,500		
		18) Support for harmful algal bloom research in LI embayments [reprogrammed FY13 NYSDEC base program funds]	NYSDEC – Stony Brook University	[\$234,000]	Improved knowledge of the environmental triggers and causes of toxic algal blooms in Long Island Sound. Better linkages to climate conditions in a changing ecosystem that promote or exacerbate conditions for red tide/toxic blooms; better predictive methodologies and mitigation options developed.	
		19) LIS Science Coordination [FY15 funds, 2+ years, FY16 & 17+]	NEIWPPC	[\$394,980]	Coordinated science and research projects consistent with scientific synthesis, <i>Prospects for the Urban Sea</i> ; improved management direction based on sound science.	
	<b>MONITORING, MODELING &amp; RESEARCH SUBTOTAL:</b>				<b>\$ 2,078,444</b>	<b>= 45%</b>
	<b>CCMP Implementation Support, and Technical Assistance</b>	<b>Habitat Restoration &amp; Protection</b>	20) 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. 1FTE CTDEEP; 1 FTE NYSDEC via NEIWPPC.	CTDEEP	\$137,769	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
				NYSDEC/NEIWPPC	\$138,733	

				of habitat restoration projects and effective communication to the public.
	21) USFWS eelgrass identification support, overflights/ground-truthing [FY15 carryover]	USFWS	[~\$152,000]	Restoration of the Sound's eelgrass habitat; implementation of the LISS CCMP to protect and restore LIS eelgrass resources; prevention and control of aquatic invasive species in LIS; protection and enhancement of the Sound's ecological and recreational resources.
<b>LIS Futures Fund Large Grant Program</b>	22) LIS Futures Fund Large Grants FY15 program element breakout, \$1,295,972 Water Quality, 21.2%; Habitat/Species, 29.4%; Planning, 32.7%; Green Infrastructure, 9.2% Education, 11.6% Urban, 17.7%* *included in habitat & education	NFWF	\$1,204,245	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.
<b>Regulatory and Compliance Assistance</b>	23) LIS TMDL Support; 0.5FTE.	NEIWPC	\$21,515	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.
<b>CCMP IMPLEMENTATION SUPPORT SUBTOTAL:</b>			<b>\$ 1,502,302</b>	<b>= 32.4 %</b>
			<b>Subtotal, all Elements =</b>	<b>\$4,628,120</b>
			<b>TOTAL FUNDING REQUEST =</b>	<b>\$4,628,120</b>

**LONG ISLAND SOUND STUDY  
NATIONAL ESTUARY PROGRAM WORK PLAN  
LIST OF FY2016 LISS-FUNDED STAFF**

<b>ORGANIZATION/NAME</b>	<b><u>LISS TITLE</u></b>	<b><u>DESCRIPTION OF RESPONSIBILITIES/ACTIVITIES</u></b>
<b><u>EPA LISO</u></b>		
Edna Nolfi	Administrative Assistant	Provides overall office administrative support.
<b><u>CTDEEP</u></b>		
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.
Rodney Randall	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.
<b><u>NYSDEC</u></b>		
Cassandra Bauer*	LIS Coordinator	Coordinates overall LIS program in New York
<b><u>NY Sea Grant</u></b>		
Amy Mandelbaum	NY Outreach Coordinator	Develops and implements communications plans and public information/education program in NY.
Karen Palmeri	Administrative Support	Supports Extension Specialist. (33%)
<b><u>NEIWPC</u></b>		
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.
<b><u>CTSEA</u></b>		
Judy Preston	CT Outreach Coordinator	Provides PI&E support and coordination in CT. (70%)

\* funded from state match funds

**Long Island Sound Study  
2016 Budget Summary by Organization  
April 21, 2016**

Organization & Base Program Activity	2016	2016	2016
	Final	Required Match	Actual Match
<b>1. EPA Long Island Sound Office</b>	<b>\$102,650</b>	<b>\$0</b>	<b>\$0</b>
a. Office administration and operating expenses	\$8,150	\$0	\$0
b. eSound Support	\$35,000	\$0	\$0
c. LISO Administrative Support (NCOA)	\$59,500	\$0	\$0
<b>2. CT Dept. of Energy &amp; Environmental Protection</b>	<b>\$1,526,319</b>	<b>\$1,526,319</b>	<b>\$1,526,319</b>
a. CT State Coordination	\$273,029	\$273,029	\$273,029
b. CT Habitat Coordination	\$137,769	\$137,769	\$137,769
c. LIS Water Quality Monitoring Program	\$1,075,521	\$1,075,521	\$1,075,521
d. CT River Monitoring, USGS	\$40,000	\$40,000	\$40,000
e. CTDEEP Overmatch	n/a	n/a	\$846,166
<b>3. NYS Dept. of Environmental Conservation</b>	<b>\$0</b>	<b>\$138,773</b>	<b>\$0</b>
a. NY State Coordination [FY2016]	\$0	\$0	\$0
b. NY Habitat Coordination [via NEIWPCCC]	\$0	\$138,773	\$0
<b>4. CT Sea Grant</b>	<b>\$107,102</b>	<b>\$5,637</b>	<b>\$5,637</b>
a. CT PI&E Coordination	\$89,272	\$4,699	\$4,699
b. K-12 Mentor Teacher Program	\$17,830	\$938	\$938
<b>5. NY Sea Grant Cornell U.</b>	<b>\$198,747</b>	<b>\$10,460</b>	<b>\$10,460</b>
a. NY PI&E Coordination [forward funded 2013]	\$191,807	\$10,095	\$10,095
b. K-12 Mentor Teacher Program [forward funded]	\$6,940	\$365	\$365
<b>6. NEIWPCCC</b>	<b>\$470,184</b>	<b>\$94,242</b>	<b>\$0</b>
a. Task 1 Outreach/Education Support/SH-PP	\$228,830	\$12,044	\$0
b. Task 2 Meeting/Travel Coordination Support	\$71,566	\$71,566	\$0
c. Task 3 NYSDEC Habitat Coordination	\$138,773	-\$138,773	\$0
d. Task 4 LIS TMDL/Upper Basin Outreach Support	\$21,515	\$1,132	\$0
e. Task 5 IEC Monitoring	\$9,500	\$9,500	\$0
<b>7. CT Sea Grant College Program</b>	<b>\$212,500</b>	<b>\$212,500</b>	<b>\$0</b>
a. Connecticut Sea Grant Research Support	\$209,500	\$209,500	\$0
b. STAC Support (1 year)	\$3,000	\$3,000	\$0
<b>8. SUNY Research Foundation</b>	<b>\$212,500</b>	<b>\$212,500</b>	<b>\$0</b>
a. New York Sea Grant Research Support	\$209,500	\$209,500	\$0
b. STAC Support (1 year)	\$3,000	\$3,000	\$0
<b>9. National Fish &amp; Wildlife Foundation</b>	<b>\$1,269,695</b>	<b>\$979,517</b>	<b>\$979,517</b>
a. LIS Futures Fund Large Grants	\$1,204,245	\$976,072	\$976,072
b. LIS Futures Fund Small Grants	\$65,450	\$3,445	\$3,445
<b>10. UCONN Dept. of Marine Sciences</b>	<b>\$188,151</b>	<b>\$188,151</b>	<b>\$0</b>
a. WQ Monitoring Support	\$90,460	\$90,460	\$0
b. Remote Sensing Analytics Support [CRE \$88,120]	\$97,691	\$97,691	\$0
<b>11. Nitrogen Strategy Support (EPA)</b>	<b>\$340,272</b>	<b>\$0</b>	<b>\$0</b>
a. EPA mission contract to support nitrogen work	\$340,272	\$0	\$0
<b>Totals:</b>	<b>\$4,628,120</b>	<b>\$3,368,099</b>	<b>\$2,521,933</b>
<b>Funds Available:</b>	<b>\$4,628,120</b>	<b>Overmatch Need:</b>	<b>\$846,166</b>



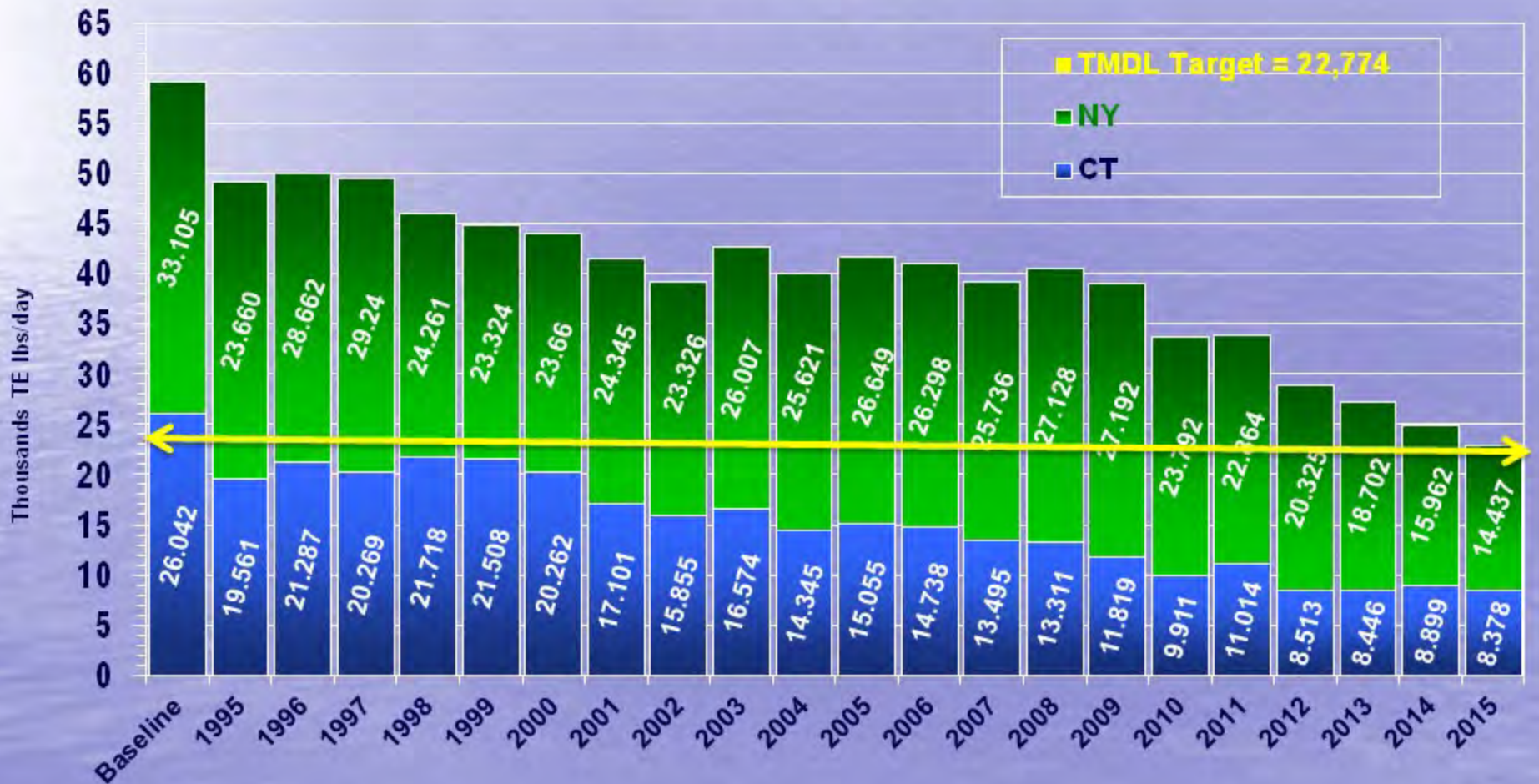
**Long Island Sound Study**  
**Travel Documentation for FY2015 NEP Work Plan**  
 April 2015-March 2016

Meeting Date	Meeting Title	Meeting Location	Person or Committee	Cost	Total Cost Per Meeting
6/11/2015	CAC	Bridgeport, CT	CAC	98.9	<b>\$419.60</b>
6/11/2015	CAC	Bridgeport, CT	CAC	76.8	
6/11/2015	CAC	Bridgeport, CT	CAC	61.75	
6/11/2015	CAC	Bridgeport, CT	CAC	166.05	
6/11/2015	CAC	Bridgeport, CT	CAC	16.1	
9/17/2015	CAC	Stony Brook, NY	CAC/STAC	56.35	<b>\$1,460.39</b>
9/17/2015	CAC	Stony Brook, NY	CAC/STAC	46.57	
9/17/2015	CAC	Stony Brook, NY	CAC/STAC	88.75	
9/17/2015	CAC	Stony Brook, NY	CAC/STAC	472.01	
9/17/2015	CAC	Stony Brook, NY	CAC/STAC	47.37	
9/17/2015	CAC	Stony Brook, NY	CAC/STAC	35.65	
9/17/2015	CAC	Stony Brook, NY	CAC/STAC	529.52	
9/17/2015	CAC	Stony Brook, NY	CAC/STAC	184.17	
9/17/2015	CAC	Stony Brook, NY	CAC/STAC	170.31	
12/10/2015	CAC	Bridgeport, CT	CAC	188.82	
12/10/2015	CAC	Bridgeport, CT	CAC	20.00	
12/10/2015	CAC	Bridgeport, CT	CAC	56.46	
12/10/2016	CAC	Bridgeport, CT	CAC	61.75	
3/10/2016	CAC	NYC	CAC	26.25	<b>\$490.85</b>
3/10/2016	CAC	NYC	CAC	138.80	
3/10/2016	CAC	NYC	CAC	35.47	
3/10/2016	CAC	NYC	CAC	45.78	
3/10/2016	CAC	NYC	CAC	38.30	
3/10/2016	CAC	NYC	CAC	26.00	
3/10/2016	CAC	NYC	CAC	57.50	
3/10/2016	CAC	NYC	CAC	62.00	
3/10/2016	CAC	NYC	CAC	22.75	
3/10/2016	CAC	NYC	CAC	38.00	

Total            \$2,697.87



## Point Source Nitrogen Trade-Equalized Loads 1995-2015 106 NY/CT STPs





# Maximum Area/Duration of Hypoxia

## 1987-2015 (June-September)

29 Year Averages: 56.1 days/182.6 mi<sup>2</sup>

