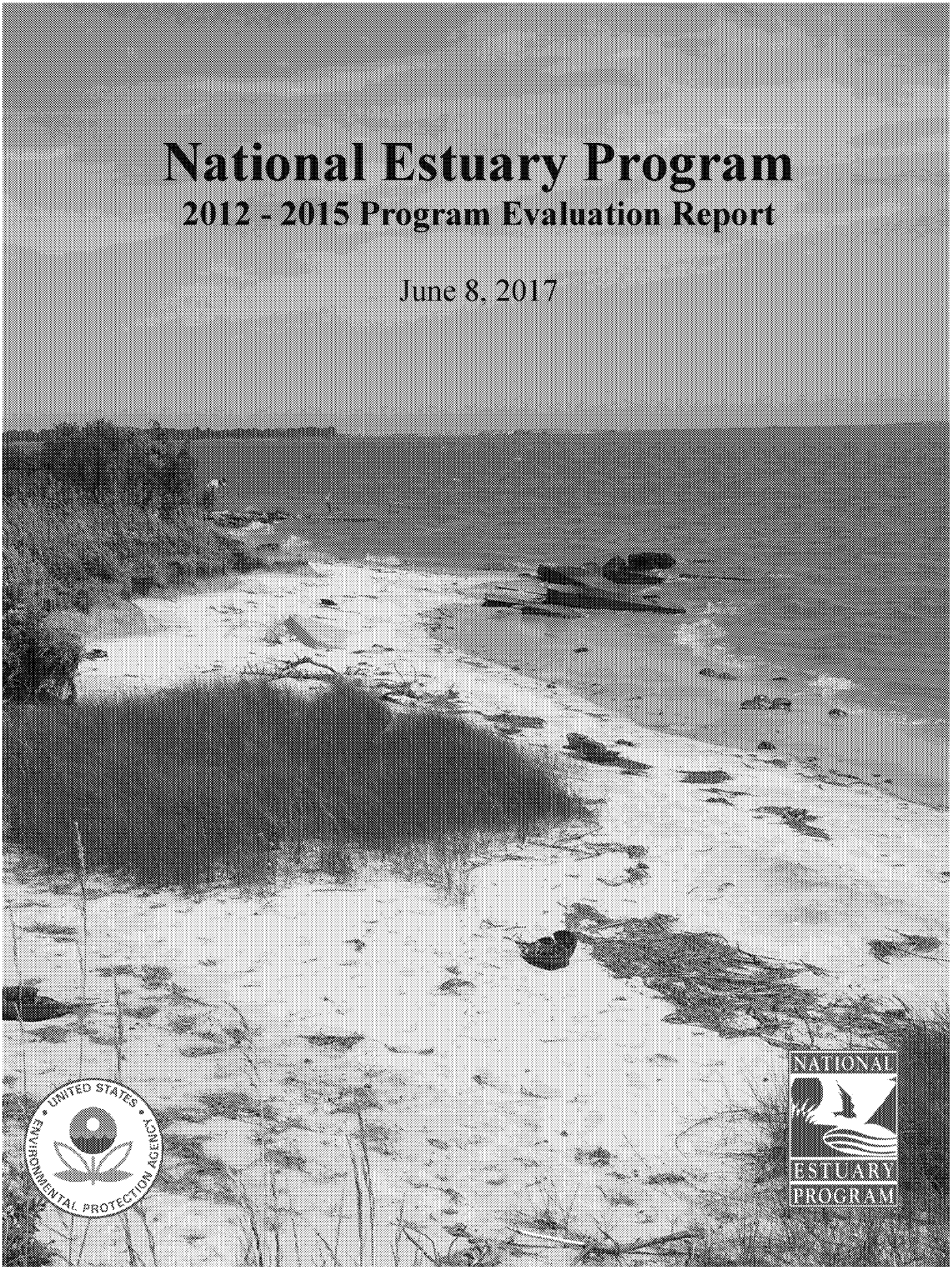
National Estuary Program

2012 - 2015 Program Evaluation Report

June 8, 2017



National Estuary Program
2012 - 2015 Program Evaluation Report

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EXECUTIVE SUMMARY

The National Estuary Programs (NEPs) are place-based watershed management entities that restore and protect 28 estuarine watersheds along the coasts of the continental U.S. and Puerto Rico. This Program Evaluation (PE) Report summarizes the results of the Environmental Protection Agency (EPA) led evaluations of the NEPs, conducted between February 2012 and September 2015. The PE is a systematic, rigorous assessment that enables EPA to tell a national story about NEP accomplishments and challenges while acknowledging differences in management approaches. The 2012 - 2015 PE results reveal the following:

- All 28 programs achieved a *pass* rating and were eligible to receive funding under Clean Water Act (CWA) Section 320.

- Every NEP and its partners supported implementation of CWA core programs.

- Every NEP made progress addressing the challenges that were highlighted during the 2008 - 2010 PE.

- The NEPs' three main strengths as identified in the PE letters were:
    - Outreach and Public Involvement. 75 percent of NEPs conducted activities such as: (1) training teachers and students on estuary issues, (2) utilizing the website, videos, and newsletters to inform the public about NEP's issues, and (3) conducting community awareness campaigns on issues such as *Vessel Waste No Discharge Zones*.
    - Habitat Protection and Restoration. 71 percent of NEPs conducted activities such as: (1) completing a *Habitat Restoration Plan*, (2) creating wetland zones to support salt marshal community, and (3) implementing living shorelines for stabilization.
    - Program Planning and Administration.* 61 percent of NEPs conducted activities such as: (1) facilitating environmental planning and implemented projects, (2) promoting collaborative stewardship between state and federal partners, and (3) developing by-laws to identify the role of Citizen Advisory Committee.

- The NEPs' three main challenges as identified in the PE letters were:
    - Program Planning and Administration.* 89 percent of NEPs need to: (1) revise CCMPs, (2) assess how climate change will affect NEP's CCMP goals, and (3) support employee's professional development to ensure staff's capacity to continue restoration and protection efforts.
    - Financial Management. 39 percent of NEPs need to: (1) diversify sustainable funding sources, (2) update their finance strategy, and (3) ensure that contracting activities are paid in a timely manner.

*Notice that the element Program Planning and Administration is a strength and challenge at the same time because it addresses different components of the same element.

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- Assessment and Monitoring. 36 percent of NEPs need to: (1) update their monitoring plan, (2) promote understanding of the importance of improve monitoring toxics, and (3) identify sources and pathways of nitrogen to understand linkages between nitrogen and macro-algae.

- The NEPs leveraged $4.97 billion during the 2012 - 2015 period, which represented a 142 percent increase over funds leveraged by NEPs reviewed during the 2008 - 2010 review period. Most of the funds raised during the 2012 - 2015 period came from state partnerships support.
- The number of NEP habitat acres protected and restored during the 2012 - 2015 period was 447,314, which represented a 149 percent increase from the number of acres reported by NEPs during the 2008 - 2010 review period.

The PE process has proven to be an effective interactive management process that ensures national program accountability and transparency. It also demonstrates the value of wise federal investment in estuarine and coastal watershed restoration and protection at the local and regional levels.

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I. National Estuary Program Overview

Authorized under Section 320 of the Clean Water Act (CWA §320) of 1987, the National Estuary Program (NEP) comprises 28 estuaries designated as estuaries of national significance. The NEP requires the preparation of comprehensive conservation and management plans (CCMPs) to ensure the long-term ecological integrity of those estuaries. The approach to estuarine protection and management reflected in §320 emphasizes the importance of collaboration among multiple users and stakeholders.

To date, 28 estuaries (see map on page 3) located along the Atlantic, Pacific and Gulf Coasts of the continental U.S. and Puerto Rico comprise the NEP. These estuaries of national significance were designated due to chronic challenges to water quality in these estuaries and the subsequent health and decline of living resources that are economically important to their local, regional, and national economies. Thus, maintaining the integrity of the entire watershed – its chemical, physical, and biological properties, as well as its economic, recreational, and aesthetic values is the focus of the NEP.

Each NEP is governed by a management conference composed of representatives from: state and local government, non-governmental organizations, local for-profit entities, members of the general public, EPA, and other federal agencies. The management conference establishes goals, objectives, priorities and management actions that are reflected in the CCMP, a blueprint for each NEP.

Specifically, each management conference is required to:

- assess water quality, natural resources, and human use trends;
- characterize and identify the causes of environmental problems;
- develop the relationship between in-place loads and point and nonpoint loadings of pollutants to the estuarine zone and between the potential uses of the zone, water quality, and natural resources;
- develop a CCMP that recommends priority corrective actions and compliance schedules;
- develop plans for the coordinated implementation of the CCMP by the states as well as federal and local agencies participating in the conference;
- monitor the effectiveness of actions taken pursuant to the CCMP; and
- review all federal financial assistance programs and federal development projects.

The 28 NEPs range in geographic scope and political jurisdictions within their watersheds. Although each of the estuaries in the NEP is unique, most of them face the following environmental challenges: (1) alteration of natural hydrologic flows, (2) aquatic nuisance species, (3) climate stressors, (4) declines in fish and wildlife populations, (5) habitat loss and degradation, (6) nutrient loads, (7) pathogens, (8) stormwater, and (9) toxics.

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In addition to financial assistance, EPA provides technical assistance, facilitates and promotes tech transfer, establishes policy, reviews and tracks program performance, and assesses NEP progress with CCMP implementation.

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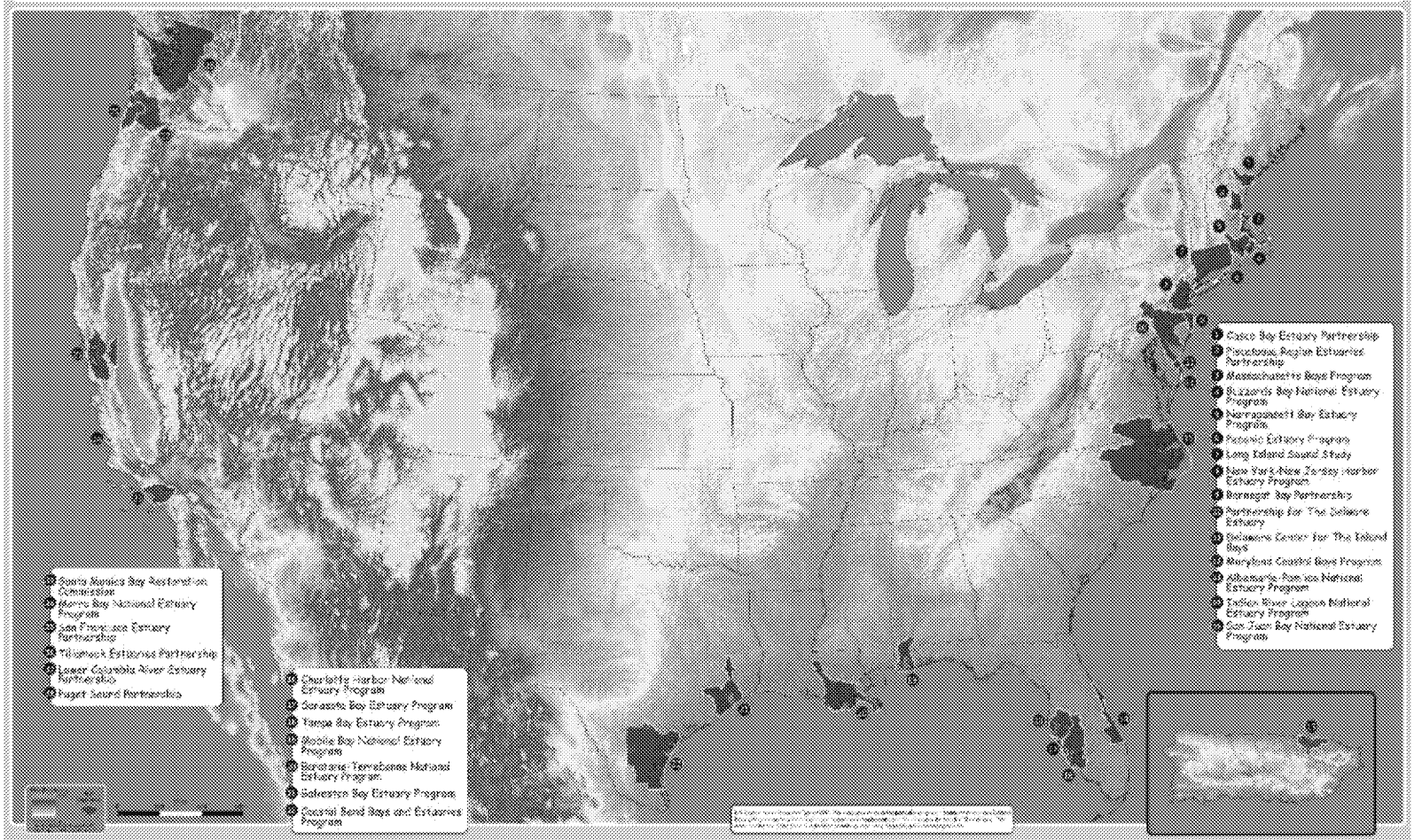
NATIONAL ESTUARY PROGRAM STUDY AREAS



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National Estuary Program
2012 - 2015 Program Evaluation Report

II. Program Evaluation Introduction

This Report explains the PE process and summarizes the results of the 28 evaluations conducted by EPA between February 2012 and September 2015. PE Teams comprised of EPA Headquarters and Regional staff and, in some cases, an NEP Director who served in an *ex-officio* capacity, carefully reviewed documentation provided by the NEPs about their 2012 through 2015 activities and accomplishments. The teams also conducted on-site visits to the NEPs and developed a findings letter highlighting NEP: (1) effectiveness in addressing challenges identified during the previous PE, (2) strengths, (3) challenges, (4) activities supporting CWA core programs, and (5) eligibility for continued funding under §320.

III. Background, Framework, and Process

This section summarizes the purpose, history, and refinement of EPA's PE. It also describes the PE framework, criteria, process, and review schedule for evaluating each NEP.

A. Background

In accordance with CWA §320, each of the 28 NEPs implements a CCMP that identifies priority watershed challenges on estuarine and establishes priority actions that will improve water quality, habitat, and living resources. Each NEP's CCMP is based on a scientific characterization of the estuary that is developed and approved by a broad-based coalition of stakeholders. The original CCMP was approved by the EPA Administrator and delegated to the Regions for daily oversight.

Funding the NEPs is contingent upon Congress annually appropriating funds for the §320 program. EPA uses the PE results to determine the progress an NEP has made toward implementing its CCMP and its continued eligibility for the funding. While the purpose of the PEs is not to rank order or compare the NEPs, the PEs are a valuable tool for:

- Highlighting environmental results.
- Highlighting strengths and challenges in program management.
- Demonstrating continued stakeholder commitment.
- Transferring lessons learned within EPA, among the NEPs, and with other watershed programs.
- Assisting EPA in making resource allocation decisions to strengthen each NEP.

EPA began conducting NEP PEs on a biennial basis in 1997. In the spirit of continual improvement, the PE process has since been regularly assessed and revised over the years to address the dynamic nature of program management and evaluation needs. Specifically, in 2000, the process was streamlined and the review cycle was extended from every two to every three years. In 2006, EPA revised the PE process in response to increased federal requirements for accountability and transparency in reporting results of federal program investments. This culminated into a 2007 NEP PE Guidance that improved EPA's ability to objectively and transparently assess the programmatic and environmental achievements of the 28 NEP estuaries on a triennial basis.

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In 2011, the PE process was reassessed again to identify further streamlining opportunities. The PE framework laid out in the 2007 PE Guidance was maintained, but the Tracking/Reporting sub-element was eliminated with the exception of two of the criteria that were transferred to the Outreach and Public Involvement sub-element. The PE cycle was also expanded from a three-year cycle to a five-year cycle (four consecutive years with a fifth to be spent producing a findings report).

B. Framework

EPA used the NEP evaluation process to collect and assess data about individual NEP accomplishments and environmental outcomes. During the 2012 - 2015 evaluation period, EPA used the following framework described in the 2011 PE Guidance to evaluate the 28 NEPs:

- Standardized and tiered **performance measures** of NEP programmatic activities. The NEPs submitted program information and EPA evaluated their performance regarding the following topics:
  (1) Financial Management
  (2) Program Planning and Administration
  (3) Outreach and Public Involvement
  (4) Research
  (5) Assessment and Monitoring
  (6) Reporting

- A logic model-based **work plan summary**. The NEPs summarized their annual work plan goals and activities, outputs, outcomes, and the linkages of outputs and outcomes (where possible) to reductions of environmental stressors. The NEPs indicated progress in meeting the environmental milestones established for their goals under the following topics:
  (1) Habitat
  (2) Water Quality
  (3) Living Resources
  (4) Healthy Communities
  (5) Tools
  (6) Training
  (7) Direct Assistance[1]

- Annual reports depicting the number of habitat acres protected and restored by habitat type.
- A description of work plan support for CWA core programs.
- A description of external factors affecting each NEP's ability to meet its work plan goals and/or to achieve progress implementing its CCMP and adaptive management strategies to manage CCMP implementation in the face of those constraints. (Providing this description was optional).
- A description of how each challenge identified in the previous PE findings letter was addressed.
- A budget summary with an accompanying brief narrative accounting for CCMP activities.
- In addition, EPA conducted on-site visit to observe and learn first-hand about on-the-ground NEP projects and to meet with key NEP stakeholders and partners.

[1] Assistance provided by NEPs to towns and cities addressing issues related to specific environmental problems (e.g., climate stressors, low impact development).

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C. Process

Each NEP's PE team reviews the NEP's relevant documents, and discusses with the NEP Director the NEP's strengths and challenges, and the agenda for the on-site visit. Once a PE team reviews the NEP's relevant documents and completes its site visit, the PE team develops a findings letter fully describing the NEP's strengths and challenges and indicating a rating of *pass, conditional pass,* or *fail*[2]. The findings letter also includes recommendations for improvement along with proposed timeframes for implementing the recommendations. The progress made by NEPs in addressing these challenges is then evaluated during the next PE cycle. Figure 1 lists each NEP and the year in which a PE team reviewed its program.

Figure 1: Program Evaluation Groups and 2012 - 2015 Review Cycle

Group A 2012 (7 Programs)	Group B 2013 (6 Programs)	Group C 2014 (7 Programs)	Group C 2015 (8 Programs)
Barataria-Terrebonne	Albemarle-Pamlico Sounds	Buzzards Bay	Charlotte Harbor
Casco Bay	Tampa Bay	New York – New Jersey Harbor	Columbia River
Indian River Lagoon	Sarasota Bay	Narragansett Bay	Long Island Sound
Massachusetts Bays	Delaware Inland Bays	Maryland Coastal Bays	Barnegat Bay
Peconic Bay	Galveston Bay	Santa Monica Bay	Mobile Bay
San Juan Bay	Coastal Bend Bays	Partnership for the Delaware Estuary	Morro Bay
Tillamook Bay	--	Puget Sound	Piscataqua Estuaries
--	--	--	San Francisco Estuary

IV. 2012 - 2015 National Estuary Program PE Findings

This section summarizes findings from the 28 PEs conducted from 2012 - 2015, describing the data for two national indicators that EPA requires all NEPs to report on annually: (1) habitat protected and restored, and (2) dollars leveraged by CWA Section 320 funds as well as local indicators of progress each NEP uses to report environmental progress to its local stakeholders, partners, and the general public. These indicators are used in publications, such as NEP *State of the Bay* reports, which are included in each NEP's PE submission. This section also summarizes: (1) NEP support for CWA core programs, (2) progress made on challenges highlighted during the 2008 - 2010 PE, and (3) organizational capacity and program management strengths and challenges across all 28 NEPs.

Summation of the 28 PEs findings letters:

- All 28 programs achieved a *pass* rating and were eligible to receive funding under §320.
- Every NEP and its partners supported implementation of CWA core programs.
- Every NEP made progress in addressing the challenges highlighted during its 2008 - 2010 PE.
- Strengths and challenges were identified in every NEP.

In several instances, the PE team rated NEP's effectiveness addressing one component of a topic as a strength while also finding that the NEP faced challenges addressing another component of that same

[2] Each rating has well described thresholds in the 2011 PE Guidance.

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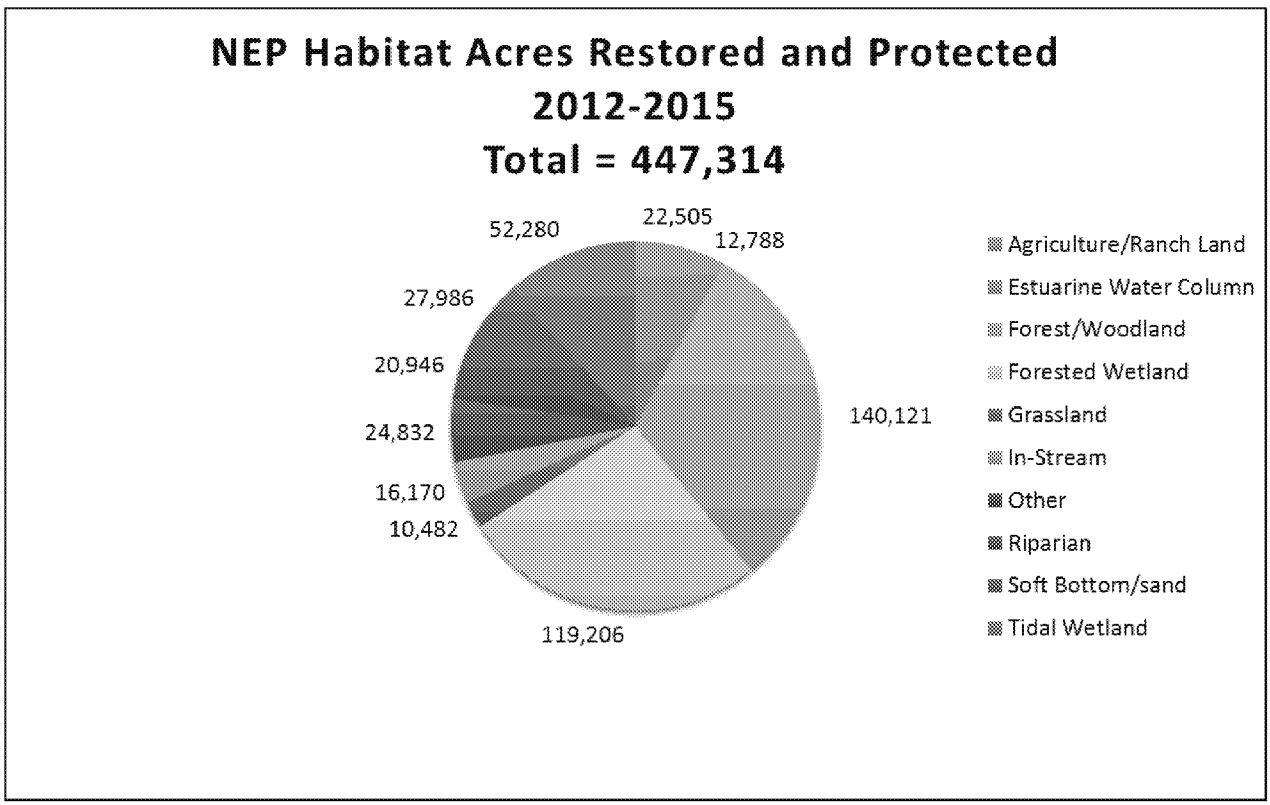
topic. For example, a PE team could have rated as a strength an NEP's ability to obtain funds from local governments while also rating as a challenge that same NEP's lack of a sustainable finance strategy.

A. Environmental Results

The NEPs and their multiple federal, state, and local partners successfully implemented the CCMPs to improve water quality, habitat, and living resources. Their efforts have produced on-the-ground, measurable environmental results leading to improved water quality, increased control and management of erosion and flooding, and increased amounts of native habitat for living resources. Examples of NEP activities yielding environmental results include: creation of artificial reefs; planting riparian buffers; acquiring upland open space for conservation; and re-connecting tidal flow to wetlands. The 2012 - 2015 PEs revealed that the NEPs and their partners restored and protected 447,314 acres of habitat. This result suggests that EPA is on target for meeting EPA's Strategic Plan acreage commitment absent unforeseen circumstances. Figure 2 depicts that acreage by habitat type.

Figure 2: Acres Protected and Restored by Habitat Type



B. Leveraging

The NEPs successfully leverage federal grants to support implementation of their CCMPs. The NEPs obtained these funds by building relationships with Federal, state, local, non-profit, and private-sector partners. In particular, these funds were used to protect and restore hundreds of thousands of acres of habitat and reduced point and nonpoint sources of pollution. The NEPs played primary, significant, or support roles in leveraging these additional resources. Definitions of leveraging roles:

- Primary role: indicates that the NEP played the central role in obtaining leveraged resources.

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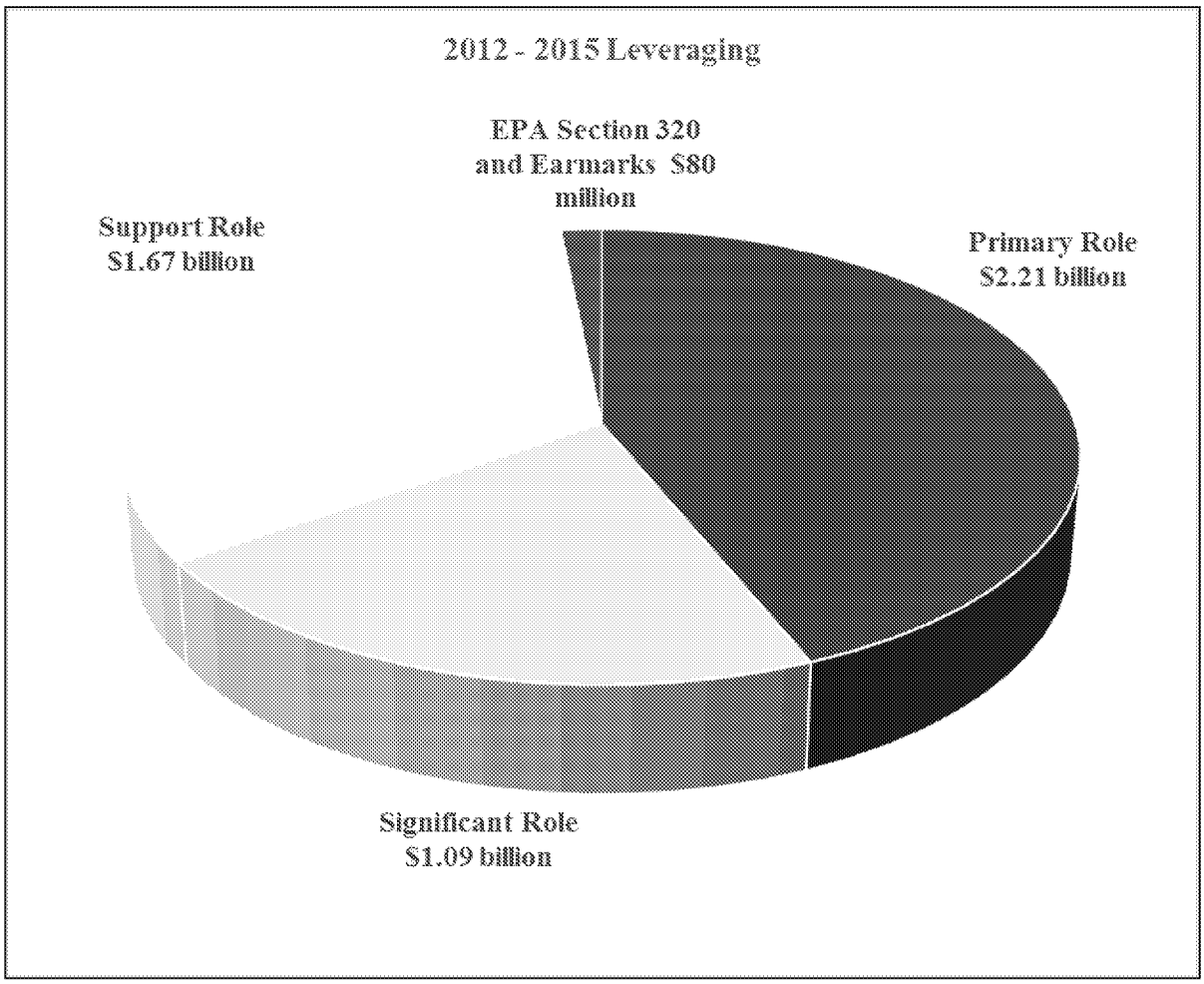
- Significant role: indicates that the NEP actively participated, but did not lead, the effort to obtain additional resources.
- Support role: indicates the NEP played a minor role in channeling resources toward CCMP implementation.

From 2012 - 2015 the NEPs played a primary role in leveraging $2.21 billion, achieving a ratio of $28 for every $1 of EPA grant funds provided. When all roles are combined, the NEPs leveraged $4.97 billion. Figure 3 depicts the funds leveraged by roles as compared with funds appropriated over the three-year period.

Figure 3: Funds Leveraged by NEP Role



Over the four-year period, NEPs received $80 million in EPA funding and generated:

- 4.97 billion (all roles)
- $2.76 billion (significant and supporting role)
- $2.21 billion (primary role)

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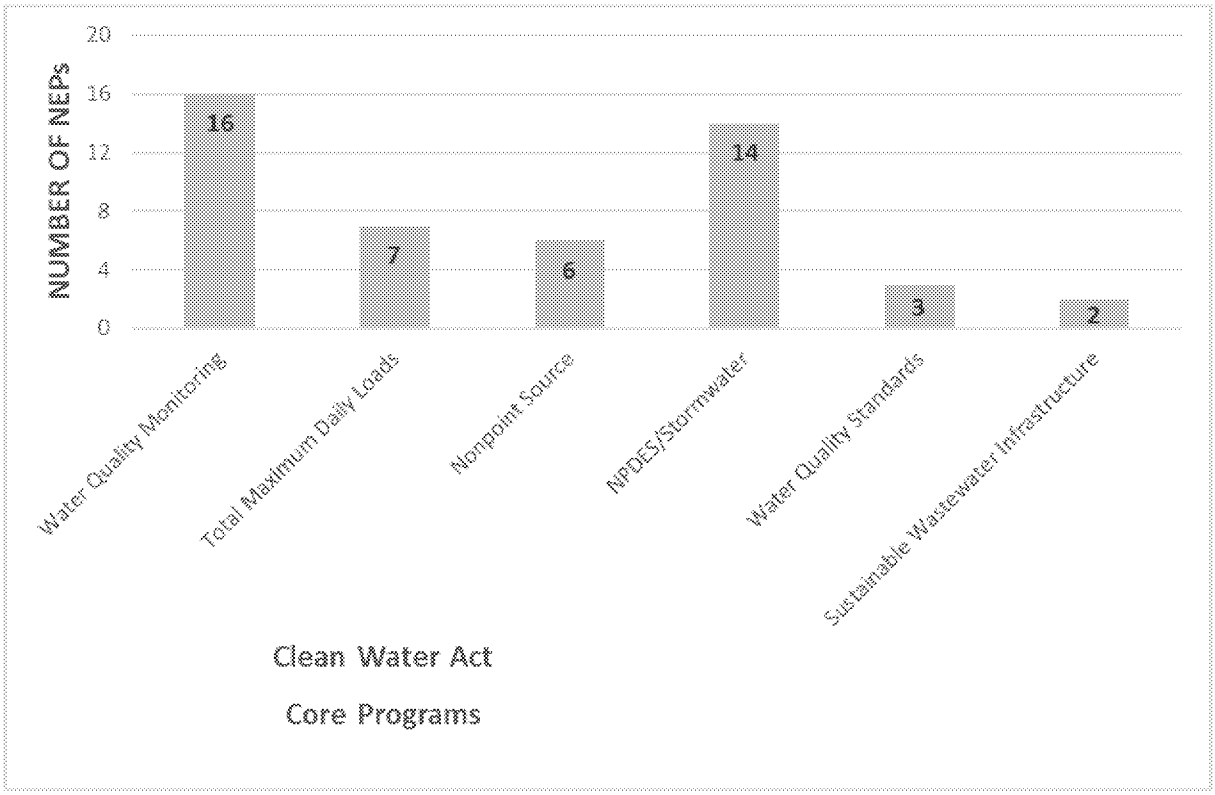
C. Support for Clean Water Act (CWA) Core Programs

The goal of the CWA is to restore and maintain the chemical, physical, and biological integrity of our nation's water. The NEPs and their partners supported implementation of CWA core programs[3] through a wide-range of actions designed to improve water quality and address habitat loss and degradation, including reduction of the pollutants that degrade habitat and adversely impact the living resources that inhabit those areas. Figure 4 depicts the number of NEPs supporting each CWA core program and Appendix 1 describes specific examples of NEP CWA core programs support.

Figure 4: NEP Support for CWA Core Programs Identified in 2012 - 2015 PE Findings Letters



D. Progress Made Addressing Challenges Identified in 2008 - 2010 Program Evaluations

All of the NEPs have made progress addressing the challenges identified during the 2008 - 2010 PEs in areas such as: (1) Financial Management (e.g., established a protocol to ensure that grant-reimbursable travel for the staff is taking place with reasonable timeframes and updated finance plan with case of support, (2) Water Quality (e.g., established water quality targets for seagrass and chlorophyll for each bay segment and using these targets to developed Numeric Nutrient Criteria for all bay segments, (3) Assessment and Monitoring (e.g., began regularly monitoring nine Vital Signs targets and their associated pressures as well as began negotiations with partners about additional efforts that still need to be put in place to monitor all Vital Sign targets, (4) Program Planning and Administration (e.g., re-constituted the

[3] Clean Water Act core programs are: Water Quality Monitoring (WQM), Total Maximum Daily Loads (TMDLs), Nonpoint Source Pollution (NPS), National Pollutant Discharge Elimination System (NPDES)/Stormwater, Water Quality Standards (WQS), and Sustainable Wastewater Infrastructure (SWI).

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Management Committee to significantly enhance representation by the state, non-governmental organizations, and the scientific and regulated communities, and (5) Outreach and Public Involvement (e.g., increased participation in citizen science activities and elevated awareness of estuary resources). See Appendix 2 for more specific examples of how the challenges were addressed.

E. Common Strengths and Challenges

The PE findings document the most common strengths and challenges among the 28 NEPs. The three main strengths for the 28 Programs as identified in the PE letters were:

- Outreach and Public Involvement. 75 percent of NEPs conducted activities such as: (1) training teachers and students on estuary issues, (2) utilizing the website, videos, and newsletters to inform the public about NEP's issues, and (3) conducting community awareness campaigns on issues such as *Vessel Waste No Discharge Zones*.
- Habitat Protection and Restoration. 71 percent of NEPs conducted activities such as: (1) completing a *Habitat Restoration Plan*, (2) creating wetland zones to support salt marshal community, and (3) implementing living shorelines for stabilization.
- Program Planning and Administration.* 61 percent of NEPs conducted activities such as: (1) facilitating environmental planning and implemented projects, (2) promoting collaborative stewardship between state and federal partners, and (3) developing by-laws to identify the role of Citizen Advisory Committee.

The three main challenges for the 28 Programs as identified in the PE letters were:

- Program Planning and Administration.* 89 percent of NEPs need to: (1) revise CCMPs, (2) assess how climate change will affect NEP's CCMP goals, and (3) support employee's professional development to ensure staff's capacity to continue restoration and protection efforts.
- Financial Management. 39 percent of NEPs need to: (1) diversify sustainable funding sources, (2) update finance strategy, and (3) ensure that contracting activities are paid in a timely manner.
- Assessment and Monitoring. 36 percent of NEPs need to: (1) update monitoring plan, (2) promote understanding of the importance of improve understanding of monitoring toxics, and (3) identify sources and pathways of nitrogen to understand linkages between nitrogen and macro-algae.

*Notice that the element Program Planning and Administration is a strength and challenge at the same time because it addresses different components of the same element. For example, a PE team could have rated as a strength an NEP's ability to hire new staff while also rating as a challenge that same NEP's lack of visibility and independence.

Figures 5a and 5b depicts the strengths and challenges most common to the 28 NEPs and Appendix 3 and Appendix 4 describe examples of those strengths and challenges.

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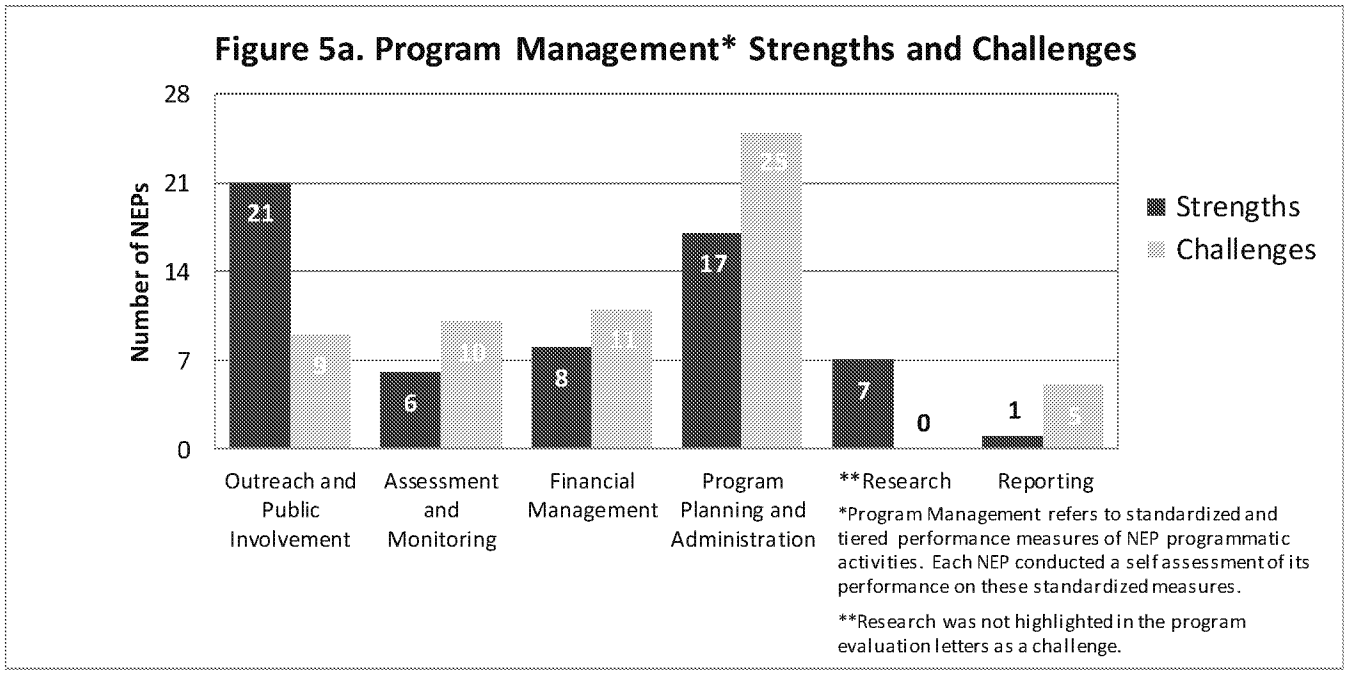
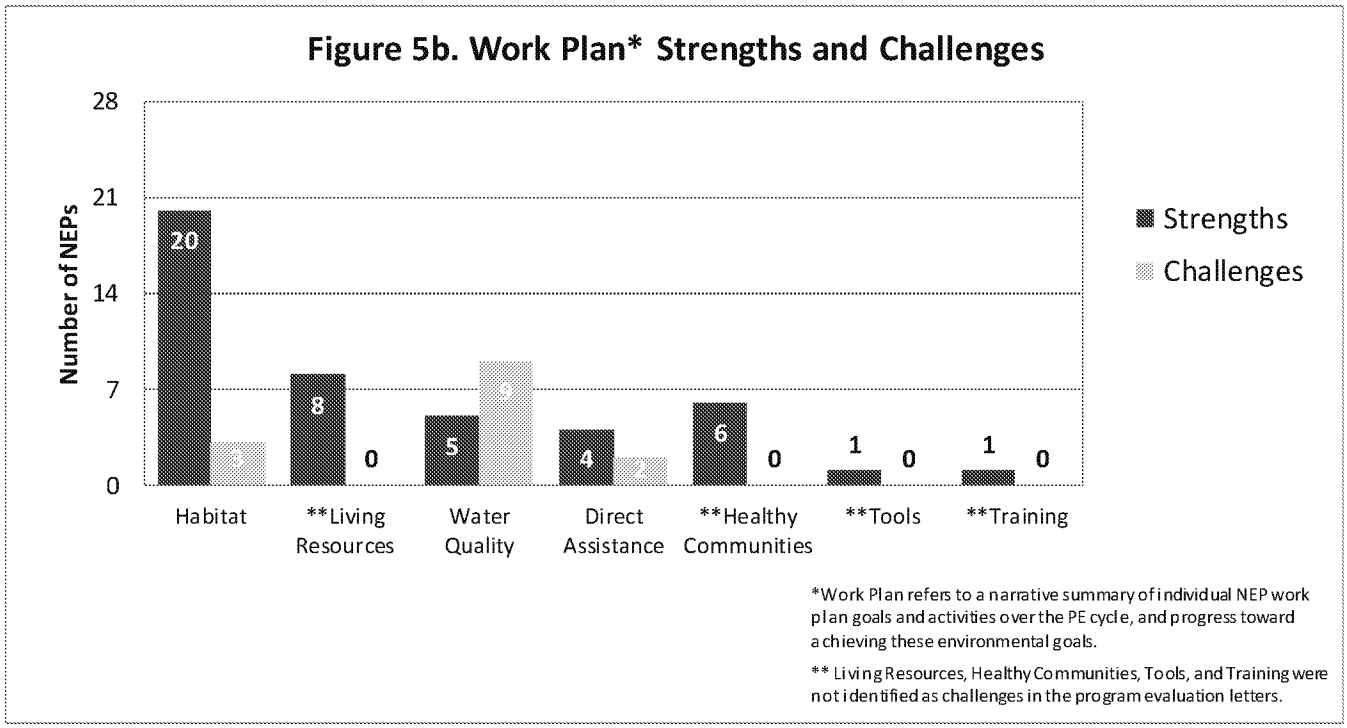
Figures 5a and 5b: Common Program Management and Work Plan Strengths and Challenges Identified in 2012 - 2015 PE Findings Letters





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V. The Program Evaluation Process as a Management Tool

Managing an environmental program like the NEP is challenging, partly because of the many varied and complex factors impacting local environmental conditions and decision making. The PE process yields information that EPA uses to identify where additional assistance is needed and to revise reporting requirements to promote a focus on new and emerging environmental issues that affect NEP study areas and coastal communities. The process also promotes accountability, transparency, adaptive management, and technical transfer among the NEPs. Examples of how EPA uses PE findings as a national program management tool include the following:

- PE data informs EPA about the extent of NEP support for CWA core programs. The data informs EPA about which NEPs are minimally involved in support of those core programs. EPA then collaborates with those NEPs to promote increased support for those core programs.
- Identification of NEP challenges prompts EPA to target its resources toward initiatives enabling the NEPs to better address those challenges. Examples of EPA targeted support include:

    (1) Sponsoring webcasts about wetlands protection and restoration and living shorelines.
    (2) Providing funds to support NEP's monitoring efforts and CCMP revisions/updates.
    (3) Funding NEPs to build a sustained monitoring network to measure trends in local acidification conditions.
    (4) Providing grants for development of NEP climate adaptation strategies and implementation of climate vulnerability assessments (Climate Ready Estuaries Project).
- Utilizing lessons learned from the NEPs to educate EPA program offices and other Federal agencies.

Examples of how individual NEPs use PE findings as a local program management tool include:

- Documenting progress on addressing priority environmental challenges to include: (1) nutrient loads, (2) toxics, (3) stormwater, (4) habitat loss and degradation, (5) pathogens, (6) decline in fish and wildlife populations, (7) alteration of natural hydrologic flows, (8) climate stressors, and (9) aquatic nuisance species.
- Targeting efforts and resources toward challenges that limit the effectiveness of their protection and restoration efforts.
- Communicating about lessons learned from CCMP implementation among NEPs.

VI. Trends

In 2014, EPA released a PE Report that summarized the results from EPA's evaluation of the 28 individual NEPs conducted during 2008 - 2010. A comparison of 2008 - 2010 PE Report results to 2012 - 2015 PE Report results reveals that:

- All 28 NEPs supported CWA core programs during each review period. In both periods, the greatest level of NEP support was for the following CWA programs: (1) Water Quality, (2) TMDLs, and (3) NPDES/Stormwater.
- The NEPs leveraged $4.97 billion during the 2012 - 2015 period, which represented a 142 percent increase over funds leveraged by NEPs reviewed during the 2008 - 2010 review cycle ($3.5

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billion). Most of the funds raised during the 2012 - 2015 period came from state partnerships support.

- The number of NEP habitat acres protected and restored during the 2012 - 2015 period was 447,314, which was a 149 percent increase from the number of acres reported by NEPs during the 2008 - 2010 review cycle (298,799).
- The number one strength in both review periods was Outreach and Education, reaffirming that the NEPs are good creating awareness of the watershed, enhancing support for management actions, and increasing participation of the stakeholders in the CCMP implementation beyond any particular interest.
- The main challenge for the 2008 - 2010 review period was Financial Management and it is going to continue being a challenge for the NEPs because in order to implement the wide range of CCMP actions it requires the NEPs to continually identify funding sources and financing strategies to successfully implement the priority actions. During the 2012 - 2015 review period the most common challenge raised in the PE letters was under the Program Planning and Administration element. Specifically, the need was identified to update and revise CCMPs. In doing so, create a risk--based climate change vulnerability assessment that would enable CCMPs to be implemented in a resilient manner. Both CCMP updates and revisions and climate change vulnerability assessments were recommended in EPA's FY 2015 and FY 2016 CWA Section Funding Guidance.

VII. Conclusion

The 2012 - 2015 PE findings reinforce EPA's view that the NEP is an effective community-based program for watershed protection and restoration of estuaries. Since it was established in 1987, the NEP has successfully adapted to new opportunities, new challenges, and new expectations. The NEP has made significant achievements in implementing effective and innovative management solutions for the benefit and protection of water quality and living resources in some of our Nation's most important estuaries. This success is a result of the strong partnerships formed within each NEP, the collaborative efforts made with local stakeholders, effective management of each NEP's program, and EPA's efforts to continue building capacity within the NEPs.

The data shows that the PE process is an effective evidence-based and transparent approach for ensuring NEPs are utilizing public funds in accordance with the requirements of the law. It also documents that NEPs continue to address challenges and target the increased achievement, measurement, and reporting of environmental outcomes.

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Appendix 1: Examples of NEP Support for CWA Core Programs Identified in 2012 - 2015 PE Findings Letters (ongoing activities)

Clean Water Act		
Core Programs	**#of NEPs**	**Examples**
Water Quality Monitoring (WQM)	16	• Funding monitoring of pollutants for fresh and marine surface water at the Department of Health Services in Suffolk County, New York. • Water sampling at 23 monitoring stations for 12 parameters. Data supports 305(b) / 303(d) reports that the Puerto Rico Environmental Quality Board submits to EPA. • Working with the Cumberland County Soil and Water Conservation District to reduce loadings of phosphorus and sediment in Highland Lake. • Assessing monitoring needs on nutrient issues. • Partnering with the Department of Environmental Quality in Oregon to address major pollutants of concern identified in the CCMP. • Establishing a shore zone fish community monitoring program that collects data on fish species and size from over 12 sites. • Acting as a hub for monitoring activities throughout the Galveston Bay. • Coordinating regional ambient water quality monitoring. Data was used to help developed the Numeric Nutrient Criteria for Southwest Florida. • Establishing an ambient water quality monitoring program on the New Jersey side of the harbor to complement the New York City program. • Collecting data on salinity, oxygen, and temperature through the volunteer monitoring program in Buzzards Bay. • Assisting pathogen source tracking resulting in improved conditions at bathing beaches. • Providing volunteer monitoring program data to the Department of Public Health and the Water Board in California. • Monitoring and evaluating legacy and emerging contaminants in sediment, surface water, and fish tissue. • Facilitating dialogue about measures to address nutrients loadings. • Tracking of declining contribution of point sources of nitrogen and monitoring for climate change. • Participating in the Coastal Charlotte Harbor Monitoring Network, a system of over 100 volunteers sampling estuarine and tidal water within the NEP study area.
National Pollutant Discharge Elimination System (NPDES)/Stormwater	14	• Providing assistance on controlling stormwater and meeting MS4 permit requirements in towns, villages and other permittees. • Educating the public about appropriate use of storm sewage collection systems through the campaign called *Only Rain to the Stormwater*. • Developing stormwater systems such as Sebastian Stormwater Park. • Evaluating and monitoring diversion of stormwater to enhance

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		habitat resulting in an increase in wetlands. • Exploring more effective ways to implement stormwater programs (e.g., retrofitting commercial properties to treat stormwater in Long Creek). • Funding efforts such as Jones River estuary and Kingston Bay Stormwater Assessment Project. • Continuing to demonstrate reasonable assurance progress towards the attainment of nitrogen loads to 189 point and nonpoint sources throughout the watershed. • Completing a *Low Impact Development Manual* that supports the Florida stormwater rule and finalizing stormwater retrofit projects in the Phillippi and Bowlees Creeks. • Publishing the manual *The Green Guide* that identifies approaches for reducing stormwater pollution. • Helping the County of Los Angeles to develop a stormwater fee to finance the development, operation, and maintenance of stormwater projects. • Educating Berlin residents about the importance of setting up a stormwater utility. • Mapping of all stormwater outfalls/outlets along 600 miles of shoreline. • Providing workshops on stormwater best management practices including maintenance of stormwater ponds. • Completing nine culvert replacement in Kitsap County resulting in the conversion of 176 acres of runoff to a higher level of water quality treatment.
Total Maximum Daily Loads (TMDLs)	7	• Supporting development of *TMDL Basin Management Action Plans* for the Indian River Lagoon. • Assessing overall implementation of nitrogen TMDL in Peconic Bay. • Funding nitrogen TMDL implementation and tracking progress of nitrogen load reductions in Long Island Sound. • Supporting development of nutrient TMDL for the Maryland Coastal Bays watershed. • Assisting in the development of bacteria TMDL and achieving reductions in bacteria loadings in Galveston Bay. • Implementing projects that help meet the trash, pathogen and metal TMDLs in Santa Monica Bay. • Helping the Massachusetts Estuaries project refine the results of its watershed-loading models in order to develop TMDL for Buzzards Bay embayment.
Nonpoint Source (NPS)	6	• Working with the City of Philadelphia's Water department to raise awareness about the causes of and ways to prevent nonpoint pollution in the Schuylkill and Delaware rivers like the "Spokedog" contests that encouraged dog owners to "scoop the poop". • Working with the Maryland State Legislature and Worcester County to make sure that the Maryland Coastal Bays were included in the Bay Restoration Fund, which provides funding for septic systems

		upgrades. During the review period removed 334 septic systems. • Providing technical assistance to the state's Healthy Lawns-Healthy Waters Initiative to reduce nutrient inputs from the developed landscape via better management of fertilizer. • Reducing erosion from rural roads in the upper watershed through the Morro Bay Watershed Road Erosion Prevention Project potentially keeping 15,500 cubic yards of sediment from entering Morro Bay. • Implementing the *D'Olive Bay Watershed Plan* that prevents severe erosion from threatening Alabama Department of Transportation's Highway 31. • Promoting green infrastructure and water conservation in San Francisco Bay.
Water Quality Standards (WQS)	3	• Setting water quality targets, including chlorophyll *a* and seagrass for Tampa Bay to demonstrate full aquatic life support and attain the designated use of the water body. • Developing proposals for Numeric Nutrient criteria pertaining to estuarine waters of Southwest Florida. • Providing data to help the Oregon Department of Environmental Quality apply narrative sediment criteria with the goal of establishing quantitative targets.
Sustainable Wastewater Infrastructure (SWI)	2	• Leveraging money in the townships of the Peconic study area from the Community Preservation Fund to secure loan interest loans from the SRF to acquire critical lands for drinking water and surface protection. • Helping prompt state legislation requiring a 50 percent reduction in nitrogen loads from major wastewater treatment plants thanks to Narragansett's NEP role in monitoring water quality.

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Appendix 2: Examples of NEPs' Progress Made in Areas Highlighted in 2008 - 2010 PE Findings Letters[4]

Program Management	
Element	**Examples**
Financial Management	• Developed a Finance Plan seeking commitments from partners towards CCMP implementation. • Improved management of annual 320 funds and its other fiscal resources. • Produced a *Financial Overview Report* summaries for multiple years as good examples of "cases for support". • Began accounting for cash revenue and in-kind match in a systematic way. • Revitalized the Barnegat Bay Foundation, which will raise funds to support the mission for the Barnegat Bay Partnership.
Tracking	• Developed A CCMP Tracking Table documenting action plan, its status, and partners. • Developed a tracking tool—"Puget Sound Vital Signs"—identifying key ecosystem indicators and pressures to determine progress on Puget Sound restoration. • Began use of Partnership of Delaware Estuary-maintained Project Registry tool to collect information about CCMP projects that had been implemented.
Program Planning and Administration	• Re-constituted the Management Committee to significantly enhance representation by the State of Massachusetts, non-governmental organizations, and the scientific and regulated communities. • Revised CCMP reflecting new Program goals, objectives, and recommendations. • Moved Program from a "division" to an "office", which helped to make the Program more visible and influential. • Developed by-laws that clarify Management Conference decision making. • Added sea level rise as an emerging issue to revised CCMP plan.
Outreach and Public Involvement	• Enhanced outreach strategy by describing the target audience for the Strategy and indicating what parties would be responsible for implementing actions in the Strategy. • Developed an outreach strategy that give the Program greater visibility through its *Back the Bay* campaign. • Made the *Estuary Water Atlas* more user-friendly for the general public. • Updated Program's website.
Research	• Supported research that helped identify significant data gaps that warrant additional monitoring and sampling in the study area.
Assessment and Monitoring	• Completed and assessment of contaminants in sediments and fish tissue in Program's study area and added these two indicators to the Program's permanent monitoring framework. • Began setting targets for each environmental indicator that the Program is assessing. • Program reported measurable outcomes reducing pounds of nitrogen and phosphorus.

[4] Based on how NEPs addressed challenges identified in 2008 – 2010 PE cycle

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		• Worked with stakeholders from the scientific and management communities across the study area to develop a set of measurable goals for achieving and tracking improvements for areas related to Healthy Waters, Healthy Communities, and Healthy Habitats. • Continued to ensure adequate data collection and monitoring are in place to assess both programmatic and environmental results long-term.
	Reporting	• Charlotte Harbor published its own *State of the Bay Report* as an update to the report card issued by the Conservancy of Southwest Florida. • Developed a *State of the Estuary Report* assessing status and trends of 33 indicators of estuary health in five categories: water, habitat, wildlife, processes, and people. • Developed a FY 2013 work plan consistent with NEP Funding Guidance requirements. • Produced a very comprehensive and accessible *State of the Inland Bays Report* in 2011. • Coastal Bend Bays produced the *Environmental Indicators Report 2010* depicting status and trends for 19 major water quality, habitat, and living resources indicators.
Work Plan		
	Element	**Examples**
	Habitat	• Ensured that sediment was delivered throughout a pipeline to areas from which coastal wetlands have disappeared. • Completed a geo-hazard analysis of Mustang Island and a LIDAR analysis of the Nueces Delta to serve as a framework for future land acquisition and research. • Monitored the effectiveness of habitat restoration by assessing fish use of sites.
	Water Quality	• Established water quality targets for seagrass for each bay segment within the Sarasota Bay NEP study area. • Correlated implementation of agricultural BMPs with changes in nutrient loadings throughout the Coastal Bays watershed. • Provided technical assistance to communities as they worked to implement state stormwater programs and TMDLs recommendations. • Focused on reduction strategies for nitrogen point sources in Long Island Sound.

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Appendix 3: Examples of NEPs Strengths Identified in 2012 - 2015 PE Findings Letters

Program Management			
	Element	#of NEPs	Examples
	Outreach and Public Involvement	21	• Producing documentary to raise coral reef awareness. • Training teachers and students on estuarine issues. • Creating a *Clean Water Future* campaign to assist groups with the implementation of watershed management plans.
	Program Planning and Administration	17	• Hiring new staff and reaffirming all existing Management Committee members. • Setting priorities among partners and helping to set timetables for implementation of multiple strategies. • Developing and adopting by-laws to identify the role of Citizen Advisory Committee.
	Financial Management	8	• Increasing funding collaboration between state and federal partners. Ratio of over 15 to one in federal NEP funds. • Having a good system for tracking funds that allows quick identification of funding source paid for various aspects of projects. • Updating long-term funding strategy.
	Research	7	• Carrying out restoration research associated with maritime forest and marsh lands to improve wildlife habitat. • Supporting research projects that measure PCBs and Hg concentrations in striped bass and bluefish. • Assessing climate change vulnerability for southwest Florida.
	Assessment and Monitoring	6	• Developing a baseline monitoring and assessment for the Ballona Wetlands Ecological Reserve, which is critical to inform restoration planning of the reserve. • Using volunteers to collect water samples for bacteria analysis at approximately 51 bacteria sampling sites. • Using assessment and research results to inform CCMP projects implementation and promote achievement of measurable environmental outcomes.
	Reporting	1	• Publishing the book, *Long Island Sound: Prospects for the Urban Sea*, a fantastic synthesis of the human and natural forces that shape the Long Island Sound system.

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Work Plan			
	Element	#of NEPs	Examples
	Habitat	20	• Implementing living shoreline stabilization. • Enhancing tidal marshes and recovering sea grass. • Coordinating floodplain and levee management and cataloguing urban shoreline case studies.
	Living Resources	8	• Creating oyster reef sites. • Launching the fresh water mussel recovery program to help improve water quality in freshwater. • Implementing fish passage feasibility and design studies for the Bronx River.
	Healthy Communities	6	• Creating the *Weathering Change* program to help communities identify how they are vulnerable to climate change. • Producing a comprehensive watershed management plan for Three Mile Creek, which could transform a degraded urban stream into an important community amenity. • Assisting community recovery in post hurricane storm Sandy.
	Water Quality	5	• Eradicating sewage discharges in the Condado Lagoon helping the lagoon improved its water quality. • Reducing chlorophyll *a* in Tampa Bay's four major segments below Florida Department of Environmental protection-approved thresholds. • Improving total nitrogen levels in various segments of Maryland Coastal Bays.
	Direct Assistance	4	• Collaborating with local government to map, monitor, and prioritize stormwater discharges remediation. • Helping municipalities to help advance implementation of nitrogen and bacteria TMDL. • Publishing the 2015 *Piscataqua Region Environmental Planning Assessment Report*, which help communities increased buffer setbacks, initiated fertilizer setbacks, and adopted stormwater management regulation.
	Training	1	• Providing training to up-and coming professionals (e.g., Rainwater Catchment Project training at the California Conservation Corps Center).
	Tools	0	

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Appendix 4: Examples of NEPs Challenges Identified in 2012 - 2015 PE Findings Letters

Program Management			
	Element	#of NEPs	Example
	Program Planning and Administration	25	• Update and revise CCMPs. • Assess impact of climate change on NEP's CCMP actions. • Promote green infrastructure in the study area.
	Financial Management	11	• Establish an annual set-aside or line item in the state's Environmental Protection Fund. • Expand funds to maintain the Program's environmental activities. • Update financial strategy.
	Assessment and Monitoring	10	• Establish measurable targets and milestones associated with the environmental indicators. • Increase monitoring efforts to understand the linkages between nitrogen and macro-algae. • Science Advisory Committee to provide input into existing monitoring strategies and review the water quality assessments and list of impaired and threatened waters from Rhode Island and Massachusetts.
	Reporting	5	• Meet EPA's reporting requirements in Program's annual work plans. • Adopt a mechanism to depict net changes that reveal the combined impact of progress on restoration as well as loss of existing resources. • Report on the linkage between specific Program protection and restoration efforts and the status of the study area water quality and ecosystem resources.
	Outreach and Public Involvement	0	
	Research	0	

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Work Plan		
Element	#of NEPs	Example
Water Quality	9	• Complete development for the Oso Creek bacteria TMDL to ensure that human health risks from contaminated waters are reduced. • Reduce nutrient loadings from nonpoint sources particularly from agricultural and non-agricultural fertilizer use. • Identify priority water quality deficiencies on an annual basis and articulate actions needed to address such deficiencies.
Habitat	3	• Articulate Program's protection and restoration goals and lay out a timeline for achieving those goals in a document that focuses on habitat. • Increase efforts to protect riparian areas, prairie, and coastal wetlands to make the area resilient to hurricanes and other disturbances. • Identify a long-term numeric eelgrass acreage goal to provide a roadmap for restoration efforts.
Direct Assistance	2	• Work with the Marine Resource Advisory Council to finalize 18 actions to address ocean acidification. • Encourage communities within study area to use the spatial planning initiative to facilitate the use of GIS-based decision-making regarding coastal resources and hazards by town officials in the watershed.
Healthy Communities	0	
Living Resources	0	
Tools	0	
Training	0	

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Appendix 5: Program Evaluation Report Methodology

This PE Report summarizes the information that was captured in each of 28 PE letters that EPA provided to the NEPs between 2012 and 2015. A PE Team made up of the EPA HQ Team Leader, the EPA Regional NEP Coordinator, and in many cases an ex-officio NEP Director developed a letter. Team members and the NEP Director to whom the letter was addressed reviewed and commented on the final PE findings letter before it was signed by the Director of the Oceans and Coastal Protection Division.

Review teams analyzed each NEP's supporting documentation regarding topics listed in the August 2011 PE Guidance. The teams then identified each NEP's strengths, challenges, support of CWA core programs, and progress made in the areas highlighted in the previous PE cycle identified in the PE letters.

The draft PE Report was reviewed by CMB employees, the Oceans and Coastal Protection Division management, EPA regional coordinators, and NEP directors. The final PE Report was issued after seeking input from the Office of Wetlands, Oceans, & Watersheds senior management.

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