

Achieving Environmental Success through Partnerships:

Collaboration between the National Estuary Programs and State and Territory Coastal Zone Management Programs



Piscataqua Region, New Hampshire



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Disclaimer

The findings reported herein are made available for informational purposes only and do not represent the Environmental Protection Agency's position on the topics covered.

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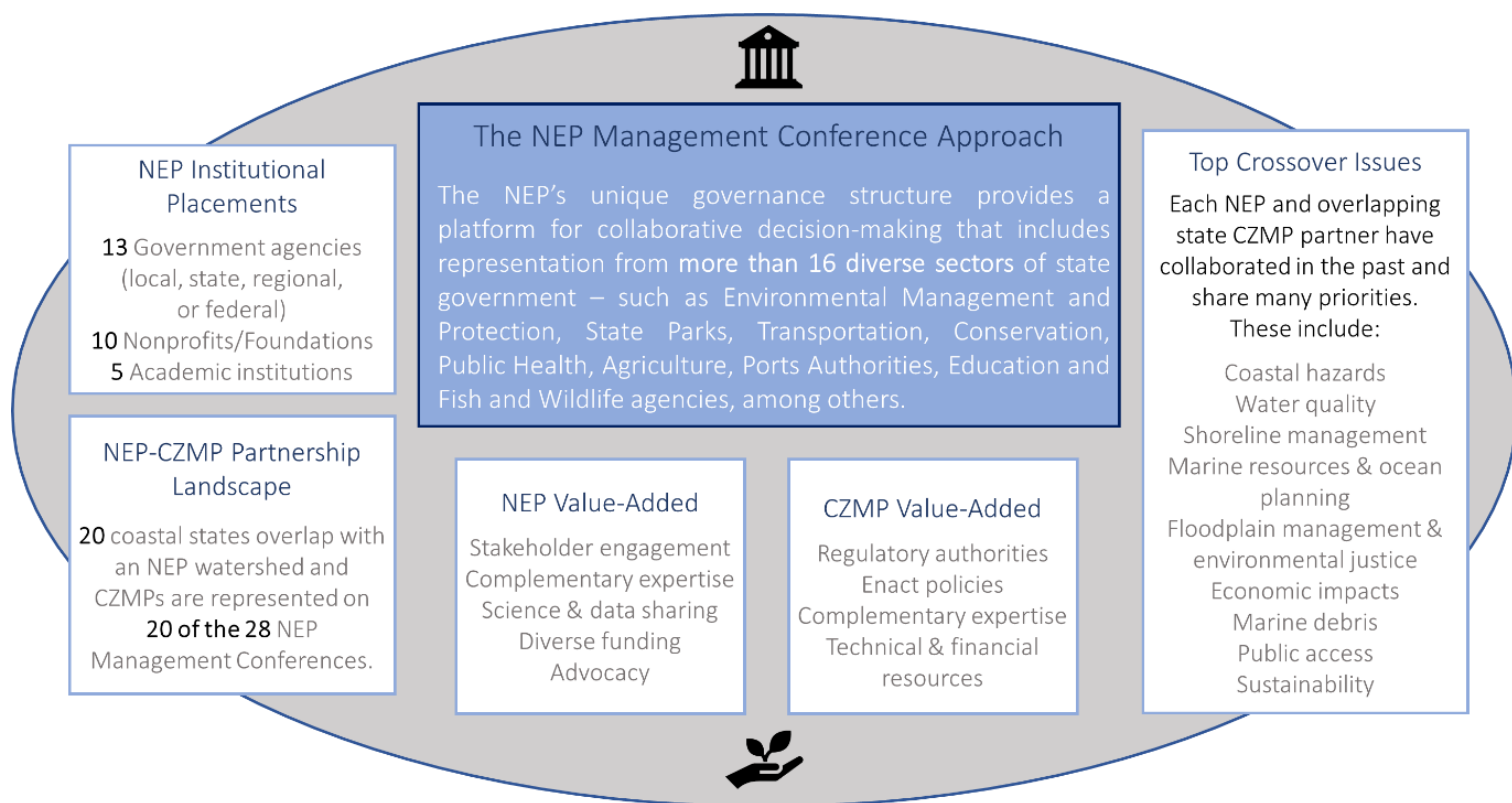
Abbreviations Key

National Estuary Program	NEP Abbreviation	Overlapping State(s)	State Abbreviation
Albemarle-Pamlico National Estuary Partnership	APNEP	North Carolina	NC
		Virginia	VA
Barataria-Terrebonne National Estuary Program	BTNEP	Louisiana	LA
Barnegat Bay Partnership	BBP	New Jersey	NJ
Buzzards Bay National Estuary Program	BBNEP	Massachusetts	MA
		Rhode Island	RI
Casco Bay Estuary Partnership	CBEP	Maine	ME
Coastal Bend Bays & Estuaries Program	CBBEP	Texas	TX
Coastal & Heartland National Estuary Partnership	CHNEP	Florida	FL
Delaware Center for the Inland Bays National Estuary Program	CIB	Delaware	DE
Galveston Bay Estuary Program	GBEP	Texas	TX
Indian River Lagoon National Estuary Program	IRL	Florida	FL
Long Island Sound Study	LISS	Connecticut	CT
		New York	NY
Lower Columbia Estuary Partnership	LCEP	Oregon	OR
		Washington	WA
Massachusetts Bays National Estuary Program	MassBays NEP	Massachusetts	MA
Maryland Coastal Bays Program	MCB	Maryland	MD
Mobile Bay National Estuary Program	MobileBay NEP	Alabama	AL
Morro Bay National Estuary Program	MBNEP	California	CA
Narragansett Bay Estuary Program	NBEP	Massachusetts	MA
		Rhode Island	RI
New York-New Jersey Harbor & Estuary Program	HEP	New Jersey	NJ
		New York	NY
Partnership for the Delaware Estuary Program	PDE	Delaware	DE
		New Jersey	NJ
		Pennsylvania	PA
Peconic Estuary Partnership	PEP	New York	NY
Piscataqua Region Estuaries Partnership	PREP	Maine	ME
		New Hampshire	NH
Puget Sound Partnership	PSP	Washington	WA
San Francisco Estuary Partnership	SFEP	California	CA
San Juan Bay Estuary Program	SJBEP	Puerto Rico	PR
Santa Monica Bay National Estuary Program	SMBNEP	California	CA
Sarasota Bay Estuary Program	SBEP	Florida	FL
Tampa Bay Estuary Program	TBEP	Florida	FL
Tillamook Estuaries Partnership	TEP	Oregon	OR

Executive Summary

This report demonstrates the importance and effectiveness of partnerships – including the National Estuary Programs (NEPs), Urban Waters and Trash Free Waters – in helping EPA’s state partners deliver solutions to the urgent and challenging issues threatening the ecological and economic well-being of coastal and estuarine areas. This report lays out the case for strengthening relationships between EPA’s partnership programs and state or territory agencies, through the lens of the 28 NEPs and the 20 overlapping state Coastal Zone Management Programs (CZMPs). Through conversations with NEP and CZMP staff and extensive research, this report explores the scope of these two programs to identify areas of common focus that can serve as a basis for further collaboration. It also considers the institutional structures of the NEPs and CZMPs and how these can shape opportunities for different types of collaboration. These findings, illustrated in Exhibit ES-1 below, are meant to contribute to the ongoing dialogue occurring between the two national programs.

Exhibit ES-1. Key Findings





Keys Elements of Successful NEP-CZMP Partnerships

- The Management Conference for individual NEPs include all relevant state-level partners to help achieve consensus-based decision-making.
- Monitoring data and research products are readily shared between programs to help inform conservation and management actions.
- Consistent two-way communication of needs and priorities occurs to maximize efficiencies and avoid duplicative actions.
- Creativity is employed to leverage diverse resources and increase the capacity of both programs.

Success Stories

Through conversations and research, this report identifies numerous examples of successful collaboration between NEPs and CZMPs. Exhibit ES-2 highlights three of these examples related to different priorities.

Exhibit ES-2. Examples of Successful NEP-CZMP Collaboration

 <p>Puget Sound</p> <p>The NEP and CZMP worked with partners to establish and maintain a public-private partnership dedicated to providing tailored solutions for improving floodplain health in the region.</p>	 <p>Mass Bays and Buzzards Bay</p> <p>To help protect the Bays' natural and cultural resources from pollutants in boat sewage, the NEPs and CZMP coordinated to establish a No Discharge Zone for all state coastal waters.</p>	 <p>San Juan Bay</p> <p>In the wake of Hurricane Maria, the NEP and CZMP are developing a watershed-based mitigation plan for eight municipalities in coordination with FEMA to ensure funding eligibility.</p>
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Opportunities to Promote Coordination at the Individual NEP-CZMP Level

1. Counterparts jointly participate in formal processes or serve on committees to institutionalize working relationships and create efficiencies between programs.
2. NEPs and CZMPs coordinate monitoring activities and data sharing to promote data-driven decision-making.
3. Local or regional science and management knowledge-exchange workshops and summits highlight priority coastal and estuarine management issues and solutions.
4. The multiple benefits approach to decision-making facilitates strategic investments in restoration and protection efforts for shared resources.
5. Upstream management activities are protective of downstream and coastal resources and leverage the full extent of the NEP watershed study area.
6. NEP and CZMP plans align with programs and elements in State Hazard Mitigation Plans.
7. NEPs and CZMPs can leverage their mutual resources to meet goals of the National Flood Insurance Program through a comprehensive approach to floodplain management.
8. NEPs provide scientific and technical reviews for regular state planning or grants processes.

Summary of Opportunities to Promote Coordination at the National level

The two nonprofit organizations – the Association of National Estuary Programs and Coastal States Organization – can further coordinate on national priorities and use their national platforms to enhance peer-to-peer knowledge exchange. Opportunities also exist for EPA to facilitate enhanced collaboration by working with federal, state and nonprofit partners to coordinate on shared priorities and to communicate environmental successes achieved through NEP-CZMP collaboration.

1. Introduction

1A. Overview

This report lays out the case for strengthening relationships between EPA’s partnership programs and state or territory agencies, through the lens of the National Estuary Programs (NEPs) and state Coastal Zone Management Programs (CZMPs). It explores the scopes and priorities of the programs, looking for areas of overlapping focus that can serve as a basis for partnering to achieve mutual objectives. This paper also considers the institutional structures of the NEPs and CZMPs and how these structures shape opportunities for different types of collaboration. The intention of this report is to show the unique value that NEPs bring to the table for addressing water quality and habitat needs within the context of coastal zone management challenges and opportunities for NEPs and state partners to fully leverage each other’s strengths to achieve mutual priorities.

This report represents one piece of a larger ongoing dialogue between EPA and their state partners. For this project, partnerships were discussed with NEP and CZMP managers in a subset of coastal states that have NEPs. There are NEPs and states that were not interviewed, although there are likely important activities happening in those locations. The authors also acknowledge there are likely other activities happening in the states they did communicate with, which may not have come up during the discussions. This conversation existed before this report and will continue – looking at the map in the next section, it is evident that this is just a small slice of what locations are doing. One goal for this report is to continue and expand the conversation going forward.

1B. Motivation

The Clean Water Act (CWA) and Coastal Zone Management Act (CZMA), enacted in 1972, remain the two most significant pieces of legislation for protecting and restoring the nation’s coastal places. CWA §320 established the NEP as a non-regulatory program that employs a unique management approach to improve the waters and habitats of 28 estuaries of national significance. The CZMA provided coastal state and territory governments the authority – including through regulatory means – to balance the often competing and potentially conflicting demands of coastal resource use, development and conservation. Section 6217 of the Coastal Zone Act Reauthorization Amendments (CZARA) of 1990 established the Coastal Nonpoint Pollution Control Program, addressing nonpoint source pollution problems in coastal waters (1). Section 6217 requires states and territories with approved Coastal Zone Management Programs to develop Coastal Nonpoint Pollution Control Programs. This program is administered jointly with the National Oceanic and Atmospheric Administration (NOAA).

Based on the unique and complementary way that the NEP and CZMP were established under their respective legislation, this report explores how collaboration can yield multiple benefits. In water resource management, the terms “multiple benefits” or “multi-benefit” represent the deep connection between water and other environmental, economic and community systems so that the strategies to address water challenges provide other benefits including building community resilience, providing improved habitat and supporting local economies. Today the importance of achieving multiple benefits through collaboration is vital, given the breadth and scope of the challenges threatening the ecological and economic well-being of coastal and estuarine areas.

Recognizing these urgent and complex issues, the EPA Office of Wetlands, Oceans and Watersheds (OWOW) seeks to demonstrate the effectiveness and positive impacts of their national programs, which

include NEPs, Urban Waters and Trash Free Waters, to help state partners deliver solutions that address mutual priorities. The Agency's commitment to partners is reflected in the EPA Strategic Plan Goal 2: More Effective Partnerships (2), which addresses the shared responsibility between states, tribes and the federal government.

1C. Approach

In order to perform an analysis of state agency priorities, the state and territory CZMPs were used as an entry point to explore the network of state agencies. CZMPs are cross-cutting programs that take the lead in managing coastal resources and are therefore an appropriate entry into state agency activities around coastal and estuary issues. This study was facilitated by EPA's relationship with the non-profit Coastal States Organization (CSO), whose membership is composed of governor-appointed representatives from the 34 CZMPs. NEPs and CZMPs work in partially overlapping geographic areas and address shared threats including hurricanes and the impacts of climate change. These programs also face similar programmatic challenges such as budgetary and staff constraints and often-shifting political priorities. This report uses EPA's and CSO's national viewpoints to explore the distinct but complementary nature of NEPs and CZMPs. The intention of this report is for NEPs and state partners to use the study findings to strengthen partnerships and promote further on-the-ground results.

Document Review

To understand the national landscape and programmatic priorities of the 28 NEPs whose study areas fall within 20 coastal states, the authors reviewed various materials. The document review covered all 20 states with an NEP and reflects priorities developed through multi-stakeholder, consensus-based processes. This process was used to identify complementary priorities, management structures, and topical overlaps and included reviews of:

- NEP Comprehensive Conservation and Management Plans (the most recent available)
- CZMP Section 309 Enhancement Program reports (for 2015 – 2020)
- NEP and CZMP website materials (e.g., programmatic focus areas, organizational placements, meeting information, project descriptions)

Discussions

To gain additional insights into the nature of these relationships, discussions were held with NEP Directors and CZMP Managers. Specific NEPs and CZMPs were chosen based on EPA staff and CSO recommendations identifying Directors and Managers as able to provide good examples of collaboration and/or insights for future collaboration. Conversations were also held with individuals holding leadership roles in the Association of National Estuary Programs (ANEP) and CSO – to add a national perspective. Given this targeted approach, the information gleaned from discussions is not fully generalizable but provides illustrative information regarding NEP-CZMP relationships.

- **Locations:** NEPs and CZMPs from eight states (AL, DE, FL, MA, MD, NH, NJ, WA) and the territory of Puerto Rico.
- **Timing:** Calls were conducted in February and March 2019.
- **Focus:** Discussions focused on examples of current collaboration, how the collaborations originated, the value-added, and opportunities for future work. See Appendix B for a general guide to topics covered in conversations with NEP Directors and CZMP Managers.

Visual Tool

To help frame the conversation, a map was created depicting the NEP and CZMP programs, Urban Waters and Trash Free Waters, and National Estuarine Research Reserves (NERRs) across the country using geospatial data. In addition to describing overlapping priorities in the report, the map demonstrates the physical overlap of these programs. This report combines findings from various research methods to present the results and notes where the findings come from.

1D. Roadmap

This section lays out the basic structure and approach to this project and provides some background on the programs included in the study. Section 2 constructs an inventory of state programs and the NEPs by addressing the management structure of the NEPs and major overlapping priorities as identified through the background research. Section 3 dives into specific examples of successful collaborations and lessons learned that were discovered through conversations with representatives of a number of NEPs and CZMPs. Section 4 explores the opportunities for enhanced collaboration as shown through a combination of background research and further explored through the conversations with NEP and CZMP staff and discuss how institutional factors can shape opportunities for collaboration. The main body of the report concludes with Section 5 – that summarizes major findings from the analysis. Important references are numbered in superscript throughout and the reference list, including links to helpful resources, is available at the end of the report.

To complement this report, several appendices are also included. Appendix A provides table summaries of past NEP and CZMP success stories as identified through research and calls. Appendix B provides an overview of the main discussion topics from conversations with NEP and CZMP managers and staff. Appendix C, presented in a separate document, provides a set of 28 individual NEP fact sheets that demonstrate how each NEP is helping address specific state coastal and water quality priorities and identifies some specific opportunities for future collaborative efforts.

2. Inventory of State Programs and EPA Partnership Programs

To a large extent, the NEPs and CZMPs work in the same geographic areas and manage shared resources. Therefore, these distinct but complementary programs have overlapping focus areas, priorities, and community stakeholders. They also face similar challenges including natural threats, such as hurricanes, and programmatic restrictions, such as budgetary and staff constraints. As discussed in Section 1, an overarching goal of this report is to help programs build stronger partnerships by leveraging each other's strengths to achieve mutual objectives that benefit coastal resources and communities. A first step in developing this report was to characterize NEP and CZMP overlaps (geographic, institutional, and priority areas) based on extant information. This section of the report provides an overview of the NEP and CZMP landscape and touches on overlaps with related and complementary EPA and NOAA programs.

2A. Geographic Overlaps

Exhibits 2-1, 2-2 and 2-3 show the locations of the NEPs and CZMPs, as well as the Urban Waters Federal Partnership (UWFP), Trash Free Waters (TFW) projects, and NOAA's National Estuarine Research Reserves (NERRs). The UWFP reconnects urban communities, particularly those that are overburdened or economically distressed, with their waterways by improving coordination among federal agencies. The UWFP also collaborates with community-led revitalization efforts to improve the nation's water systems and promote their economic, environmental, and social benefits (1). The maps show the 12 UW locations that are in coastal states and Puerto Rico (out of 20 designated UW locations nationwide).

TFW works to reduce and prevent trash from entering U.S. waters and the ocean. The TFW program assists states, communities, businesses, non-governmental organizations, and other stakeholders to work together to find and implement effective strategies to reduce the amount of litter and packaging waste that enters the water. The program integrates trash prevention policies and programs into larger sustainability agendas for water quality, habitat protection, materials management, and community health and well-being (2). The maps show the locations of 73 TFW projects in coastal states and Puerto Rico (out of 82 TFW project locations for the whole country) for 2017-2019.

The maps show significant geographic overlaps across OWOW's partnership programs (NEP, TFW, and UWFP), and between these programs and the CZMPs. Notably, there are 15 states in which 20 NEPs extend further inland than the CZMPs (AL, CA, CT, LA, MA, ME, NC, NH, NJ, NY, OR, PA, PR, TX, VA); this may provide opportunities for extending coordination to upstream areas that affect the coasts and extending coordination of NEPs' activities with state agencies other than CZMPs that have jurisdictions that reach further inland and also have overlapping priorities, such as water quality or resilience. There were several examples of NEPs leveraging their full watershed to help protect coastal waters, which are discussed in subsequent sections. Similarly, TFW projects address sources of trash upstream that end up in coastal waters. The maps show TFW projects along 17 coastal states plus Puerto Rico. Similar to NEPs, TFW projects frequently extend inland beyond the jurisdiction of CZMPs. In terms of the UWFP locations, six partially overlap the CZMA boundaries, three are entirely within the CZMA boundaries, and the rest are completely outside the CZMA boundaries.

Though not part of the original scope for this report, NOAA's NERRs were added to the maps, as they were mentioned multiple times during the conversations with staff. NOAA's NERRs are a network of 29 coastal sites designated to protect and study estuarine systems. Established through the Coastal Zone

Management Act, the Reserves represent a partnership program between NOAA and the coastal states. NOAA provides funding and national guidance, and each site is managed by a lead state agency or university with input from local partners (3). During calls, the CZMP and NEP managers mentioned the NERRs in the context of estuarine monitoring and other forms of collaboration. For example, the Great Bay NERR has water quality monitoring stations within the area covered by the Piscataqua Region Estuaries Partnership (PREP) and also collaborates with the CZMP on water quality monitoring activities. In addition, PREP, CZMP, and NERR participate together on the Coastal Roundtable of Action Planning and on philanthropic initiatives with the New Hampshire Charitable Foundation. In Puerto Rico, the San Juan Bay Estuary Program manager highlighted the value of exchanging research and scientific data with the Jobos Bay NERR (and mentioned there used to be an annual summit where these exchanges occurred). The New Jersey Coastal Program regularly works with the Jacques Cousteau NERR, and recently the Barnegat Bay Partnership worked with the State Coastal Management Program and the Jacques Cousteau NERR to develop a Getting to Resilience website.

The state agencies/divisions that host the CZMP sometimes host the NERRs as well. For example, Florida's Office of Resilience and Coastal Protection houses the Florida Coastal Management Program and the three NERRs in Florida (as well as other programs). Similarly, Delaware's Coastal Section includes the state's Coastal Management Program as well as the Delaware NERR (and other programs). These organizational arrangements may provide a point of entry for certain NEPs to engage with their corresponding NERRs via the CZMP.

Exhibit 2-1. Geographic Overlaps of OWOW's Partnership Program Locations, CZMPs and NERRs in Coastal States – East Coast

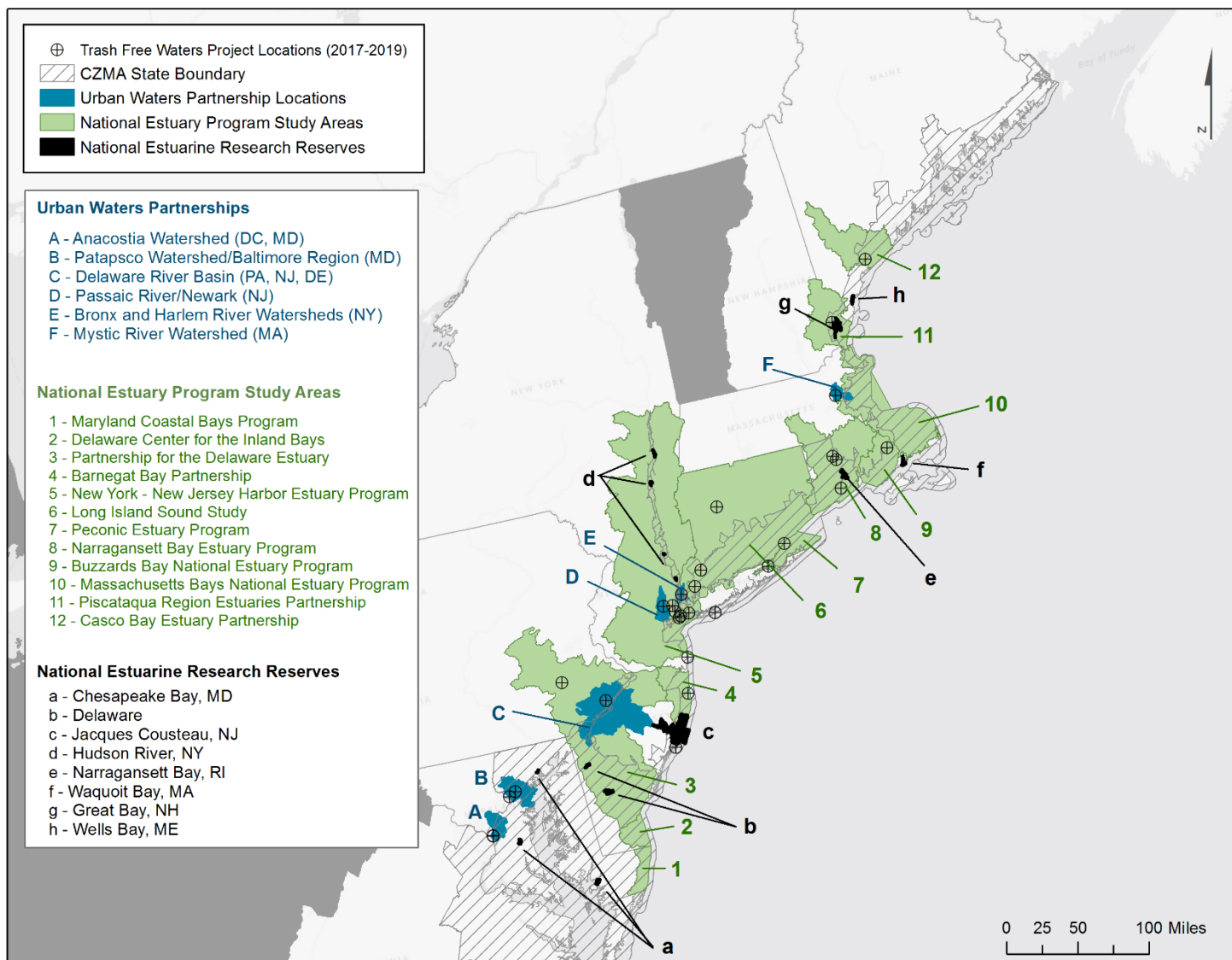


Exhibit 2-2. Geographic Overlaps of OWOW’s Partnership Program Locations, CZMPs and NERRs in Coastal States – Gulf of Mexico and Puerto Rico

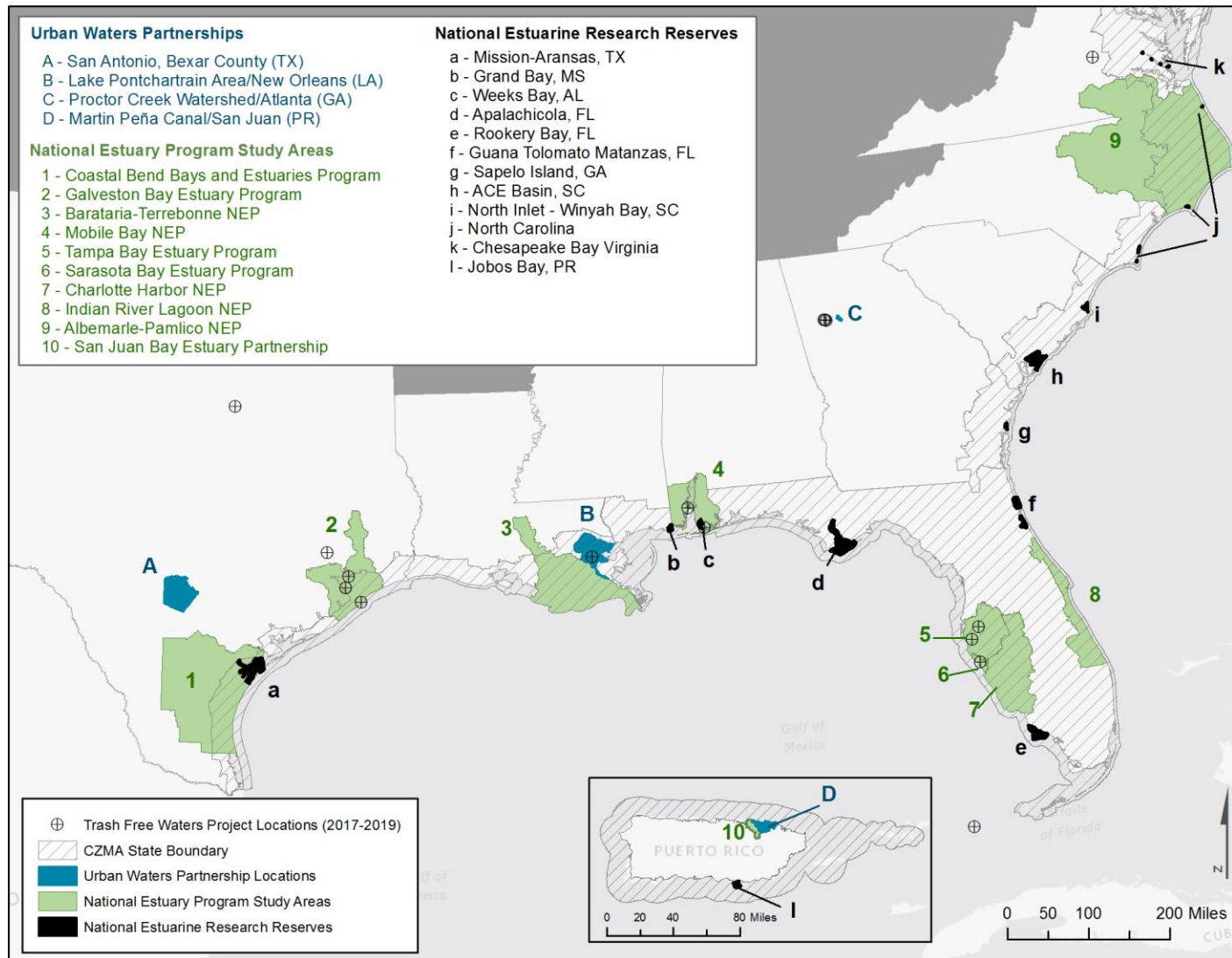
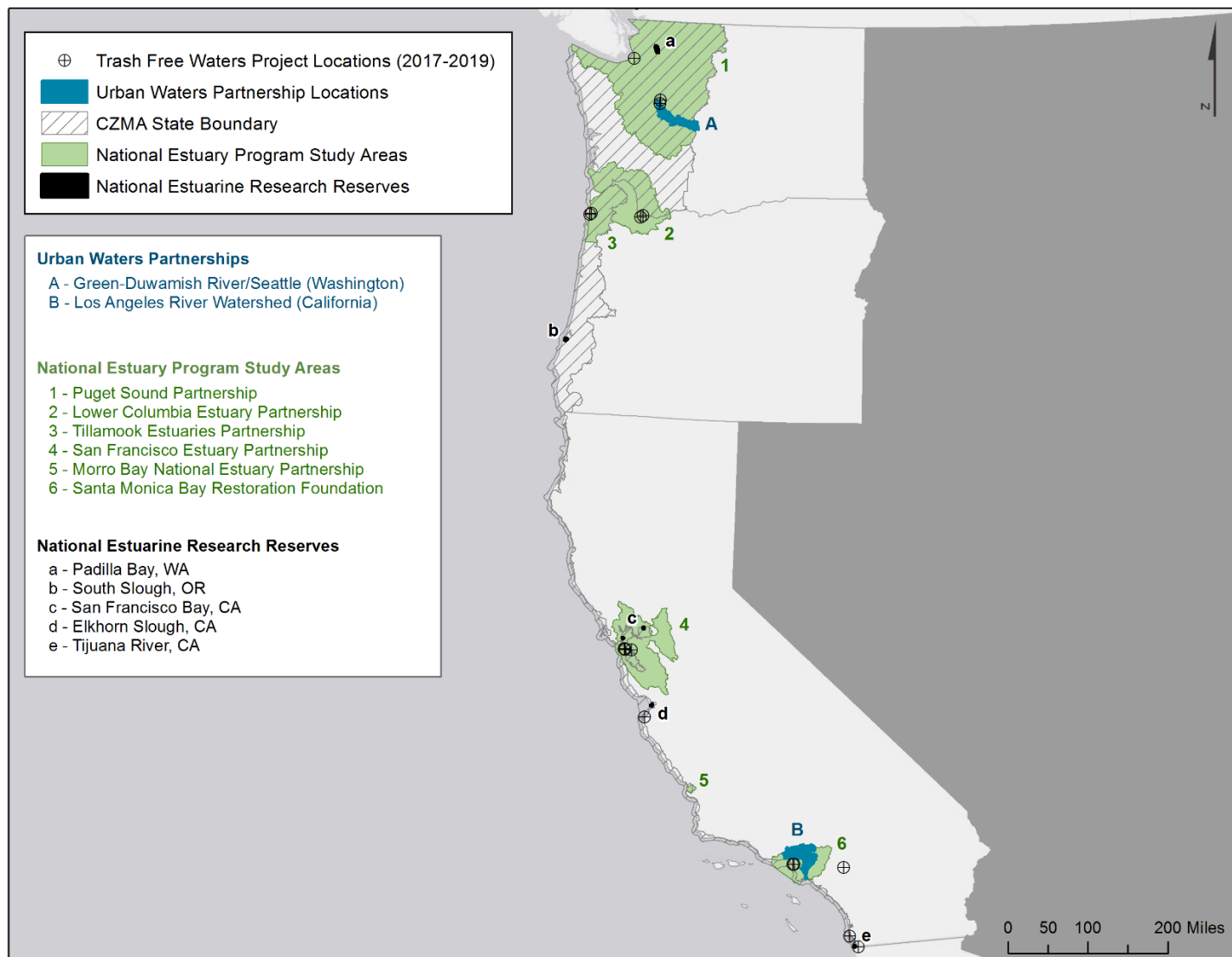


Exhibit 2-3. Geographic Overlaps of OWOW’s Partnership Program Locations, CZMPs and NERRs in Coastal States – West Coast



2B. Overview of the NEP-CZMP Landscape

As an early step in developing this report, EPA and CSO reviewed the NEP-CZMP landscape to gather basic information about the institutional structures of the 28 NEPs and the 20 overlapping CZMPs that contain part or all of the NEP watershed. Priority issues were also crosswalked across both programs, based on a review of the Comprehensive Conservation and Management Plans (CCMPs), CZMA §309 Assessments and Enhancement Plans, and other publicly available information. Exhibit 2-4 provides a summary of “quick facts” about the NEP-CZMP landscape.

Exhibit 2-4. Quick Facts about the NEP-CZMP Landscape

CCMP/NEP Review		Number
1	Number of NEPs	28
2	Number of states that contain any part of the NEP watershed	20
3	Number of NEPs that extend upstream of the CZMP jurisdiction	20
4	Number of NEPs with a CZMP representative on their Management Conference (MC)	20
5	Number of NEPs with the CZMP director on their MC	9
CZMA 309 Review		
6	Number of states that cite any NEP initiatives in their 309 Enhancement plans	13
7	Number of states that cite NEPs as a direct partner on a proposed Strategy in their 309 Enhancement plans	7
8	Number of states that list NEPs as stakeholders involved in 309 Assessment	9
Organizational Structure		
9	Number of NEPs hosted by a state agency	6
10	Number of NEPs hosted by regional, local/city, or independent special district of the state	7
11	Number of NEPs hosted by a non-profit or foundation	10
12	Number of NEPs hosted by an academic institution	5
13	Number of overlapping CZMPs whose lead state agency includes crossover with CWA programs	10
14	Number of overlapping CZMPs whose authorities are networked across multiple state agencies	13

The membership of the MCs was used as a first-order indicator of the level of communication and coordination that occurs between NEPs and CZMPs. A total of 20 NEPs in 14 states identified a CZMP staff member on at least one of their MC committees. Additionally, nine NEPs have the state CZMP director on their MC.* Due to the organizational structure of NEPs, participation by CZMP staff on the MC suggests that CZMP priorities directly inform NEP planning and implementation.

The review of CZMP documents provides a supportive view from the state perspective. Of the nine states that cite NEPs as stakeholders on their self-assessment, the 13 states that cite NEP initiatives in their CZMA §309 Assessments, and the seven states that list the NEP partner on a CZMA §309 strategy – only NJ and PA do not have CZMP staff representation on a MC committee. This suggests that close institutional ties help to ensure that CZMPs leverage NEP resources to achieve mutual goals.

* This number is based on information accessed from NEP websites. The actual number may differ, depending on how frequently NEPs update their websites.

The institutional structure/hosting arrangements of the NEPs varies. Thirteen NEPs are hosted by a government agency (including six hosted by a state agency, two hosted by an independent special district of the state, three by a regional organization, and two by local/city organizations). Ten are hosted by a non-profit or foundation. The remaining five NEPs are hosted by an academic institution. The state CZMP institutional structure was also investigated and it was found that 13 CZMPs have authorities networked across multiple state agencies and 10 lead CZMP agencies include a crossover with Clean Water Act programs. Section 3 discusses the institutional structure of the programs in more detail.

2C. Priority Area Overlaps Identified in the Document Review

The preliminary NEP-CZMP priority matching exercise began with a review of CZMA §309 and CCMP documentation to identify priority area overlaps, which were subsequently explored further in discussions with a select number of NEP and CZMP staff. Exhibit 2-5 summarizes the nine priority areas for CZMA §309 review, the priority level assigned by a state (high, medium, or low), and the number of states that have developed a strategy eligible for funding through the CZMA §309 Enhancement Grant Program.

About half of the state CZMPs ranked Cumulative and Secondary Impacts as a “high” management priority and the other half ranked it as “medium.” This category encapsulates planning activities and projects that address the impacts of coastal growth and development. Twelve states developed a strategy to support this priority area, three of which cite NEPs as partners. A review of the CCMP Action Plans showed that the majority align well with the CZMP priority area of Cumulative and Secondary Impacts because of the NEPs’ statutory authority under the CWA to address the complex factors that contribute to degradation of estuaries. This indicates there are likely many ways to partner on activities related to the impacts of coastal development and provide opportunities for CZMPs to aid in the implementation of CCMPs.

The analysis also highlighted the strong focus of all CZMPs on “Coastal Hazards” – which includes natural disasters and the impacts of climate change. In the preliminary review of CCMP Action Plans, relatively few fell under the umbrella of “Coastal Hazards.” However, many NEPs are in the process of updating or revising their CCMPs, and the newer plans have many activities related to addressing both chronic coastal hazards and catastrophic events. This focus was also reflected in NEP Work Plans and information found on NEP websites. Coastal hazards is an area where NEP resources would be highly valued by CZM programs. From the NEP perspective, this is also a bell-weather of where CZMPs are targeting their financial resources. This also signals NOAA’s focus on the issue as they work closely with CZMPs to develop their CZMA §309 Enhancement plans. Finally, NOAA designates the priority area(s) that will be eligible for additional assistance under the annual CZMA §309 grants program – termed the CZM Projects of Special Merit Competition (4).

Exhibits 2-6 and 2-7 provide further information to identify how CZMPs leverage NEP resources. Exhibit 2-6 summarizes the 13 states that cite any NEP initiatives in their CZMA §309 Enhancement plans. NEPs were cited with respect to a variety of issues, including aquaculture, wetlands, coastal hazards, cumulative and secondary impacts, and ocean resources, among others. The type of NEP resource that was cited took many forms, including research/reports, plans, policies, studies, mapping, working groups, partnerships, projects, and advisory roles, among others. For example, Connecticut’s CZMP indicated that it used beach cleanup data in a Long Island Sound Study report to describe significant

changes to marine debris since the previous CZMA §309 assessment. As another example, Maine's CZMP used the Casco Bay Estuary Program's 2010 State of the Bay Report to assess significant stressors or threats from growth and development in the context of Cumulative and Secondary Impacts priority area.

Exhibit 2-7 shows the seven states citing NEPs as a partner on a proposed CZMA §309 strategy. The strategies relate to coastal hazards, wetlands, ocean resources, cumulative and secondary impacts, aquaculture, and public access. As shown in the table, the NEPs were expected to play a variety of roles in support of these strategies, including providing guidance, training and capacity building, data, outreach materials, implementation assistance, and other types of support.

The conversations with staff provided an opportunity to explore the priority issues raised in the CCMPs and CZMA §309s for select states. Based on the responses and an additional review of documents, this report identifies a number of additional issues where collaboration has occurred and/or where there appear to be opportunities for future collaboration between the NEPs and CZMPs. Section 3 provides examples of current collaborations and Section 4 discusses opportunities to collaborate in these areas in the future.

Exhibit 2-5. Nine Priority Areas for CZMA Section 309 Review

	Aquaculture	Coastal Hazards	Cumulative & Secondary Impacts	Energy & Government Facility Siting	Marine Debris	Ocean & Great Lakes Resources	Public Access	Special Area Management Planning	Wetlands
Alabama	Medium	High*	Medium	Low	Medium	Low	Low	Low	Medium
California [†]	Medium	High*	High*	Medium	Medium	Medium	High*	High*	High*
Connecticut	Medium	High*	Medium	Medium	Low	High*	Medium	Low	Medium
Delaware	Low	High*	Medium	Medium	Medium	Medium	Low	Medium	High*
Florida	Medium	High*	High*	Medium	High*	High*	High*	High*	Medium
Louisiana	Low	High*	High*	Medium*	Medium	Low	Low	Low	High*
Maine	Low*	High*	High*	Medium*	Low	High*	Medium*	High	High*
Maryland	Medium	High*	Medium*	Medium*	Medium	High*	Medium*	Low	Medium*
Massachusetts	Low	High*	Medium	Medium*	Low	High*	Low	High*	High*
New Hampshire	Medium	High*	Medium*	Medium	Medium	Medium	Medium	Medium	High*
New Jersey	High*	High*	High*	Medium	Low	High*	Medium	Low	High*
New York	Medium	High*	High*	High	Medium	High*	Medium	High*	Medium
North Carolina	Low	High*	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Oregon	Low	High*	Medium	Medium	Low	Medium	Low	High*	High*
Pennsylvania	Low	High*	High*	Medium	Medium	Low-Medium	High*	Low	Medium
Puerto Rico	Low	High*	Medium	Medium	Medium	Medium	Medium	Medium	High*
Rhode Island	Low	High*	Medium	Low	Low	Medium	Medium	Low	High*
Texas	Low	High*	High*	Medium	Medium*	Medium	High*	n/a	High*
Virginia	Medium	High*	High*	Medium	High	Medium	Medium	Medium	Medium*
Washington	High*	High*	High*	Medium	Low	High	Medium*	Medium	Medium*
High priority	2/20	20/20	10/20	1/20	2/20	8/20	4/20	6/20	12/20
Strategy Developed*	3/20	20/20	12/20	4/20	2/20	7/20	7/20	6/20	15/20

* An asterisk (*) in the exhibit means that the CZMP has developed a Strategy for this area.

[†] The California Coastal Commission manages development along the California coast except for San Francisco Bay, where the San Francisco Bay Conservation and Development Commission oversees development and is the designated coastal management agency.

Exhibit 2-6. States Citing NEPs in CZMA Section 309 Reviews

State	NEP	Where in the §309 Assessment the NEP is cited*	Resource Type
Alabama ^t	MobileBay NEP	Phase I – Wetlands	Research/Report
		Phase I - Coastal Hazards	Plan
		Phase I - Cumulative §Secondary Impacts	Mapping/Report
		Summary of recent §309 Achievements	Policy
California	SFEP	Summary of recent §309 Achievements - Cumulative & Secondary Impacts	Research/Policy
		Summary of recent §309 Achievements - Wetlands	CZM study
Connecticut	LISS	Phase I - Marine Debris	Report
		Phase I - Ocean Resources	Reports
		Phase II - Ocean Resources	Mapping Program
Delaware ^t	CIB	Phase I – Aquaculture	Analysis
	PDE	Phase I – Wetlands	Report
Florida	TBEP	Phase I - Coastal Hazards	Working Group
		Strategy	
	CHNEP/SBEP/TBEP	Phase I – SAMP	Plan
	CHNEP/SBEP/TBEP/IRL	Phase I - Ocean Resources	Grants
Massachusetts	BBNEP	Phase I - Coastal Hazards	Data analysis Vulnerability analysis
	MassBays NEP	Summary of Completed §309 Efforts	Inventory
Maryland ^t	MCB	Introduction	n/a
		Phase I - Public Access	n/a
		Phase I - Special Area Management Planning	Plan
Maine ^t	CBEP	Phase II - Cumulative & Secondary Impacts	Report
			Guide
New Hampshire ^t	PREP	Introduction	Advisory role
		Summary of recent 309 Achievements - Ocean Resources	Funding
		Phase I – Wetlands	Report
			Report
			Advisory role
		Phase I - Coastal Hazards	Report
			Report
Advisory role			
Phase I - Public Access	Advisory role		

State	NEP	Where in the §309 Assessment the NEP is cited*	Resource Type
		Phase I - Marine Debris	Advisory role
		Phase I - Cumulative & Secondary Impacts	Report
			Advisory role
		Phase I - Special Area Management Planning	Report
			Report
			Advisory role
		Phase I - Ocean Resources	Advisory role
		Phase I - Energy & Gov't Facility Siting	Advisory role
		Phase I - Aquaculture	Advisory role
		Phase II - Wetlands	Report
			Report
			Plan
		Phase II - Coastal Hazards	Advisory role
Phase II - Cumulative & Secondary Impacts	Plan		
	Report		
	Research		
	Advisory role		
New Jersey [†]	BBP, PDE and HEP	Introduction	Plans
	BBP and PDE	Phase I - Wetlands	Partnership
	PDE	Phase I - Special Area Management Planning	Plan
Pennsylvania [†]	PDE	Phase I - Wetlands	Report
		Phase I - Coastal Hazards	Report
		Phase II - Cumulative & Secondary Impacts	Report
		Phase I - Ocean Resources	Plan
		Phase I - Aquaculture	Project
Puerto Rico	SJBEP	Phase II - Wetlands	Monitoring program
Washington [†]	PSP	Phase I - Cumulative & Secondary Impacts	Plan

*Phase I = High level assessment; Phase II = In depth assessment of high priority area(s); Strategy = a program the CZMP plans to pursue during the 5-year strategy period based on the management needs identified through the assessment of the high priority enhancement area.

[†] = states that list NEPs as stakeholders involved in the 309 Assessment and public comment process for the 2016-2020 CZMP's Section 309 Enhancement Grant Program Assessment & Strategy review. This also applies to Texas (not shown in the exhibit).

Exhibit 2-7. States Citing NEPs as a Partner on a Proposed CZMA Section 309 Strategy

State	NEP	309 Category**	Strategy Title	NEP Role
Alabama	Mobile Bay National Estuary Program	Coastal Hazards	Community Resiliency Initiative: Planning for Resilient Communities	Providing guidance through an advisory committee role; assisting in a needs assessment; providing technical expertise
Delaware	CIB	Coastal Hazards & Wetlands	Determining the Economic Impacts of Coastal Resilience Actions to Support Policy Change	Training & capacity building
	PDE			
Florida	All four NEPs	Ocean Resources/SAMPs/Cumulative & Secondary Impacts	Statewide Ecosystem Assessment Program of Florida's Coastal Aquatic Managed Areas	Data from the program will be used to support implementation of the CCMPs
New Hampshire	PREP	Coastal Hazards, Wetlands & Cumulative & Secondary Impacts	Coastal Resilience Technical Assistance Program	Develop & disseminate outreach materials/help provide fiscal needs/advisory partner
New Jersey	BBP & PDE	Aquaculture	Supporting growth of the aquaculture industry while protecting coastal resources	Supporting partner helping with regulatory amendments & updating guidance
Pennsylvania	PDE	Coastal Hazards/Cumulative & Secondary Impacts/Public Access	Building Capacity to Facilitate Climate Adaptation Planning and Community Resiliency	Partner to help implement proposed strategy
Puerto Rico	SJBEP	Coastal Hazards	Coastal Hazards Strategy	SJBEP Technical Advisory Committee - supports management need for data & information management/decision-support

2D. Other State Agencies and their Focus Areas

As discussed in Section 1, the CZMPs provide a good point of entry for NEPs (and potentially Urban Waters and Trash Free Waters) to access other state programs. This report looked at the priorities of other state environmental agencies and the organizational connections between the state agency that houses the CZMP and other state environmental agencies. The boxes below summarize information for the states that the authors had conversations with. The findings show that there are multiple state agencies addressing water quality and other priorities that overlap with NEPs and these present opportunities for more coordination with the states. The findings also show the breadth of institutional structures and overlapping priorities, suggesting there are multiple ways to coordinate and collaborate

ALABAMA The Coastal Program is administered by two separate agencies: Alabama's Department of Environmental Management (ADEM) is the regulatory side, and the Alabama Department of Conservation and Natural Resources (DCNR) houses the majority of the coastal program activities. DCNR is recognized by NOAA as the lead agency. The DCNR and ADEM overlap in certain areas, including the Coastal Nonpoint Source Pollution Program. ADEM also works closely with the NERRs, the NEP, the Corp of Engineers, and the Geological Society of Alabama. Among other management measures, major priorities for ADEM include getting full approval of the Coastal Nonpoint Source Program, dealing with septic tanks in urban areas, watershed protection, and stream restoration. It appears that some if not all these areas overlap with NEP priorities and provide opportunities for coordination.

DELAWARE Located within Delaware's Department of Natural Resources and Environmental Control (DNREC), the CZMP is housed within the Coastal Section of the Division of Climate, Coastal, and Energy. The Coastal Section includes the Coastal Management Program, the NERRs, and represents the state on the Regional Ocean Partnership (ROP). In the Mid-Atlantic, the ROP is the Mid-Atlantic Regional Council on the Ocean (MARCO). The Coastal Section coordinates with one of the two NEPs: Partnership for the Delaware Estuary (PDE). Their Department Secretary serves on the MC steering committee for the PDE, and the Environmental Program Administrator serves on the MC's Estuary Implementation Committee. For the Center for Inland Bays (CIB), the other NEP in Delaware, the Division of Watershed Stewardship is the primary contact and plays a similar role that the Coastal Section plays for the PDE. The Coastal Section's Senior Scientist serves on the MCs for both NEPs. Coastal staff participate in various workgroups including the Resilient and Sustainable Communities workgroup, which was created within DNREC and has steering committees with leadership from multiple agencies, including PDE, Delaware Sea Grant, Delaware Department of Transportation, and the Coastal Section. There is also a Living Shoreline committee that was created by DNREC and is co-chaired by DNREC and the PDE. Priorities of the Coastal Section include healthy coastal ecosystems and economy, resilient and sustainable communities (this includes working with local governments), climate change research and adaptation (this includes working with the National Climate Alliance Group), and sea level rise and coastal habitats. Over the next year, they will be working to update their policies for Federal Consistency.

on shared priorities. The fact sheets in Appendix C provide detailed information about the overlaps across state agencies.

FLORIDA Located within the Florida Department of Environmental Protection, the Office of Resilience and Coastal Protection (ORCP) houses the CZMP, the state’s three NERRs, the Aquatic Preserve Program, the Coral Reef Conservation Program, the National Marine Sanctuary, the Clean Boating Program, and various other programs. According to ORCP staff that were interviewed, the CZMP is a “glue” program that brings many of the other programs together cohesively and coordinates their various activities. Current priorities include submerged habitats, cumulative and secondary impacts, water quality, harmful algal blooms, living shorelines, ocean reefs, and resiliency. The ORCP works with multiple partners including the Florida Fish and Wildlife Conservation Commission, district offices (on regulatory permitting), the water management district, and the Indian River Lagoon (IRL) Council, among others. As the “glue” program, the CZMP helps to connect Florida’s NEPs to other state agencies and programs including but not limited to the Northeast Estuarine Restoration Team (NERT) and the Aquatic Preserve Program (see Section 3 for details).

MASSACHUSETTS The CZMP is housed within the Executive Office of Energy and Environmental Affairs, a secretariat within the Governor’s office. The MA CZMP hosts two NEPs – MassBays and Buzzards Bay – which are housed within the same institutional structure. The CZMP also hosts the Massachusetts Board of Underwater Archaeological Resources. The CZMP is the lead policy and planning agency for coastal initiatives in Massachusetts. The CZMP manages the Coastal Resilience Grant Program and the Coastal Pollutant Remediation Grant Program. Within the context of resilience, the MA CZMP partners with the USGS, UMass, and others to develop science to inform policy and management related to climate change mitigation and adaptation. Another important initiative that the MA CZMP supports is the Ocean Management Plan, which has informed the basis for much of the work on the proposed offshore wind project. Other priorities include species management, water quality, and municipal harbor planning. All coastal state programs conduct Federal Consistency Review, and the CZMP interacts with the MA Department of Environmental Protection (DEP) on state-level permits. As part of the Federal Consistency Review process, the CZMP requires state DEP permits be issued prior to the CZMP issuing a Federal Consistency concurrence. The CZMP divides the coast into five regions, each of which has a Regional Coordinator (RC). MassBays has a similar regional structure, and the CZMP’s RCs collaborate with the MassBays RCs on projects. The Buzzards Bay NEP and CZM RC also share an office.

NEW HAMPSHIRE The CZMP resides in the Department of Environmental Services (DES), which is the state’s Clean Water Act agency. The NEP serves as a monitoring arm for the state’s Clean Water Act responsibilities. They used to have a shared position, where the NEP paid for half-time of a Coastal Scientist. Although that shared position no longer exists, the CZMP and NEP continue to coordinate closely on water quality monitoring among many other efforts.

NEW JERSEY The NJ CZMP is located within the Department of Environmental Protection (NJDEP) but they are a “networked” program and there are multiple other programs within the department that are funded to participate with the CZMP. They also work with many other external partners including Sea Grant, nonprofits, academic institutions, the NEPs, the Jacques Cousteau NERR, Rutgers, Sustainable Jersey, Jersey Future, TNC, and the Urban Coast Institute, among others. A key state priority is planning, preparing for, and mitigating the impacts of coastal hazards. Other CZMP priorities include aquaculture, oyster and hard clams, ocean resources, coastal wetlands, and living shorelines. The CZMP director serves as chair of the Mid-Atlantic Regional Council on the Ocean (MARCO), which will soon be having an ocean planning conference to set up a new coordinating entity with the federal agencies involved in ocean planning. It appears that NJ CZMP’s networked program provides or could provide opportunities for the NEP to coordinate with a wide range of networked stakeholders on shared priorities.

PUERTO RICO The CZMP is hosted in the Department of Natural Resources; and the chair of the CZMP is also the chair of the Scientific and Technical Advisory Council for the San Juan Bay Estuary Conference. The NEP works closely with the CZMP, which provides access to other parts of the island as well as other government agencies. The NEP also works closely with the NERRs, described by the NEP manager as the Island’s “estuary program” in the southern coast. The NEP also works with the US Forest Service, through the stewardship authority they were granted over all states and territories, to work to fund watershed restoration and management in Puerto Rico. Currently, the NEP and Forest Service are jointly managing an action plan to address illicit discharges. The NEP also works with the municipalities of San Juan, and is currently engaging with the Planning Board, which oversees development and planning across the Island.

WASHINGTON The State’s CZMP is a networked program whose authorities largely reside within the state’s Department of Ecology. The networked structure of Washington State’s CZMP results in various state agencies being involved in implementing different coastal priorities. Major state partners include the Department of Natural Resources (DNR) Aquatic Division, the state’s Fish and Wildlife agency, and the Department of Commerce. Strategic priorities that the state agencies are responsible for carrying out include habitat, shellfish, and stormwater. The Department of Ecology primarily intersects with the habitat initiative, which is being coordinated by DNR and the state’s Fish and Wildlife agency. The Puget Sound Partnership works in all three of these priority areas including developing the overall strategic action agenda.

In addition to the state agency summaries provided through discussions with staff, the document review was also used to examine the state agency representation on all 28 NEP Management Conferences (MCs). EPA and CSO developed a crosswalk of NEP Action Plans and state agency priorities to help visualize the range of overlapping priority issues. Exhibit 2-8 summarizes these findings and details for each NEP are found in Appendix C. This report found that every NEP has representation from state environmental management or the natural resource sector – and 10 NEPs have representation by both

agencies. The majority of NEPs also include representation from the state fish and wildlife agency (16 NEPs). Other common agency sectors that were represented on the MC included agriculture (9 NEPs); state parks (5 NEPs); human health (5 NEPs); water and soil resources (5 NEPs); forestry (4 NEPs) and transportation (4 NEPs). Additional sectors that were represented on three or fewer MC's include: state lands (3 NEPs), economic (3 NEPs), planning (2 NEPs), recreation/tourism (2 NEPs), education (1 NEP), marine resources (1 NEP) and the port authority (1 NEP).

Exhibit 2-8. State agency sectors on NEP Management Conference (MC) summary table.

State Agency Sector	Represented on MC	Total	Overlapping Issues
Environmental Management, Protection, Quality or Ecology	AL: MobileBay NEP CA: SMBNEP CA: MBNEP CT/NY: LISS RI/MA: NBEP DE/NJ/PA: PDE FL: CHNEP FL: IRL FL: SBEP FL: TBEP LA: BTNEP MA: MassBays NEP MA: BBNEP MD: MCB NC/VA: APNEP ME: CBEP ME/NH: PREP NJ: BBP NJ/NY: HEP OR/WA: LCEP OR: TEP PR: SJBEP TX: CBBEP TX: GBEP WA: PSP	25	<ul style="list-style-type: none"> • BMPs • Clean marinas • Dredging • Environmental justice • Erosion control • Estuary management • Fish passage • Groundwater • Harbor management • Harmful algal blooms • Permitting • Pesticides & toxics • Population growth • Public health • Mitigation • Monitoring • Native plants • Standards • Sediment pollution • Shellfish monitoring • Shipping • Shoreline management • Spill response • Status & trends • Stormwater • TMDLs • Wastewater • Wetlands
Fish and Wildlife	CA: SMBNEP CA: SFEP CA: MBNEP RI/MA: NBEP FL: CHNEP FL: IRL FL: SBEP FL: TBEP	16	<ul style="list-style-type: none"> • Climate change • Conservation • Estuarine health • GIS and mapping • Habitat • Harmful algal blooms • Invasive species • Living shorelines

State Agency Sector	Represented on MC	Total	Overlapping Issues
	LA: BTNEP NC/VA: APNEP MA: MassBays ME: CBEP ME/NH: PREP OR: TEP TX: CBBEP TX: GBEP WA: PSP		<ul style="list-style-type: none"> • Marine Protected Areas • Restoration • Species management • Spill response • Urban river revitalization • Water quality • Water rights and use
Conservation and Natural Resources	AL: MobileBay NEP CA: SMBNEP CA: SFEP CA: MBNEP CT/NY: LISS DE: CIB DE/NJ/PA: PDE LA: BTNEP MA: MassBays MD: MCB NC/VA: APNEP NJ/NY: HEP NY: PEP PR: SJBEP WA: PSP	14	<ul style="list-style-type: none"> • Beaches • Carbon sequestration • Climate adaptation • Derelict vessels • Ecosystem services • Fisheries • Habitat • Land Management • Marine debris • Monitoring • Natural infrastructure • Pollution discharges • Resiliency • Sea level rise • Stewardship • Stream improvements • Voluntary watershed agreements • Working waterfronts
Agriculture	DE: CIB FL: CHNEP FL: IRL FL: TBEP LA: BTNEP MD: MCB NC/VA: APNEP OR: TEP TX: GBEP	9	<ul style="list-style-type: none"> • Aquaculture • BMPs • Conservation • Forestry • Green spaces and urban communities • Harmful algal blooms • Land and water use • Nutrient management • Pesticides • Protection • Watershed planning
State Parks	CA: SMBNEP CA: MBNEP CT/NY: LISS TX: CBBEP TX: GBEP	5	<ul style="list-style-type: none"> • Public access • Open space • Restoration • Stream improvements

State Agency Sector	Represented on MC	Total	Overlapping Issues
Health and Human Services	AL: MobileBay NEP CA: MBNEP FL: IRL LA: BTNEP TX: GBEP	5	<ul style="list-style-type: none"> • Disaster response • Infrastructure • Monitoring • Nonpoint source pollution • Preparedness planning • Shellfish farming • Toxic substances • Water quality
Water and Soil Resources	CA: SFEP MA: MassBays OR/WA: LCEP OR: TEP PR: SJBEP TX: GBEP	5	<ul style="list-style-type: none"> • Conservation • Flood management • Restoration • Storm sewer management • Streams • Water infrastructure • Water rights • Wetlands
Forestry	AL: MobileBay NEP LA: BTNEP NJ: BBP OR: TEP	4	<ul style="list-style-type: none"> • Species management • Watershed surveys and monitoring • Emerging concerns • Restoration • Sustainability • Floodplain protection • Riparian areas • Risk reduction • Sediment management
Transportation	AL: MobileBay NEP MA: MassBays ME: CBEP NJ: BBP NY: PEP	4	<ul style="list-style-type: none"> • Fish passage • Hydrologic alterations • Land acquisition • Nonpoint source pollution • Regulations • Road pollutants • Soil restoration • Stormwater • Water dependent uses • Water quality • Watershed management
State Lands	CA: SMBNEP TX: CBBEP TX: GBEP	3	<ul style="list-style-type: none"> • Fisheries • Landscape planning • Sea level rise • Species management • Climate adaptation • Sediment quality and quantity

State Agency Sector	Represented on MC	Total	Overlapping Issues
			<ul style="list-style-type: none"> • Beaches • Erosion • Wetlands • Ecotourism • Waterfront revitalization • Public access
Economic	FL: IRL LA: BTNEP OR: TEP	3	<ul style="list-style-type: none"> • Climate change • Fisheries • Preparedness planning • Resiliency • Wastewater
Planning	DE: CIB MA: MassBays MD: MCB	2	<ul style="list-style-type: none"> • Healthy communities • Land use change • Land use planning • Septic permitting • Shoreline management
Recreation, Culture and/or Tourism	LA: BTNEP NC/VA: APNEP	2	<ul style="list-style-type: none"> • Beneficial Use of Dredge Materials • Sediment management • Species protection
Education	LA: BTNEP	1	<ul style="list-style-type: none"> • Harmful algal blooms
Marine Resources	MA: MassBays ME: CBEP	1	<ul style="list-style-type: none"> • Coastal science • Community planning • Marine debris • Monitoring • Permitting • Restoration • Scientific literacy • Water quality
Ports Authority	AL: MobileBay NEP	1	<ul style="list-style-type: none"> • Clean vessels • Hydrologic alterations

3. What Can Be Learned from Past Examples of Successful Collaboration

During calls with staff, the authors talked to NEP managers and state CZMP managers about examples of successful collaboration in their locations. These examples illustrate some of the ways in which NEPs and CZMPs have collaborated effectively and provide ideas that other NEPs/CZMPs may be able to adopt in their own states. The examples also provide a framework for assessing the factors that facilitate or hinder collaboration and the perceived added value of collaboration. Throughout this section, NEP abbreviations are used to streamline the text and enhance readability. Please refer to the Abbreviations Key for a list of NEP abbreviations.

3A. Examples of Successful Collaboration

Respondents in all eight states in which calls were conducted were able to provide examples of successful collaboration. As discussed below, the most commonly mentioned types of collaboration involve: stakeholder engagement; participation in working groups/meetings; joint coastal water monitoring; collaboration on a specific project or project proposal; and issue identification and work planning. The examples below provide a partial view of the types of collaboration that are occurring in these states. It should be noted that the authors did not have conversations with NEP and CZMP managers in every state, and staff may not have provided a comprehensive list of all collaborations.

- **Stakeholder engagement:** One of the most frequently mentioned forms of collaboration involves the NEPs convening and engaging local stakeholders. CZMP and NEP managers in several states commented on the NEPs' role in convening stakeholders and obtaining input at the grassroots level for efforts that are aligned with the coastal program's goals. For example, in Alabama the MobileBay NEP has been conducting public meetings to solicit ideas for restoration planning with Deepwater Horizon RESTORE funds. In New Hampshire, PREP conducts an annual survey of policy and management actions in 52 communities across the region, which is paid for in part by the CZMP's annual grant to the Regional Planning Commissions. In Delaware, the CZMP and PDE work collaboratively on a community of practice that holds an annual summit as well as other, more regular events throughout the state. In Florida, CHNEP, TBEP, and SBEP convened meetings and brought stakeholders together to develop an oyster restoration plan led by the CZMP and The Nature Conservancy (1).[†]
- **Issue identification/work planning:** The CZMP managers and NEP directors that were called identified examples of coordinating to identify issues, set priorities, and develop plans. In Puerto Rico, the SJBEP and CZMP are working together to develop a watershed management plan, which they intend to use as a model for other watersheds (outside the NEP's jurisdiction) on the island. Their plan is for the CZMP, which is housed in the Department of Natural Resources, to share the template that the NEP/CZMP develop together with other watershed groups so they can apply a standard model that is proven to work in order to leverage additional FEMA funding

[†]"Construct multiple oyster restoration projects in Charlotte Harbor. A pilot project to test different oyster restoration methods has been deployed and is being monitored. The best method(s) will be used to construct a multi-site, large-scale reef restoration project (20+ acres) proposed for RESTORE funding and identified in the Southwest Florida Regional Ecosystem Restoration Plan that was adopted by the Tampa, Sarasota and Charlotte Harbor National Estuary Programs." (page 22)

for restoration efforts. In Alabama, the MobileBay NEP and CZMP have collaborated on watershed protection in urban areas. The NEP conducts long-term planning to identify which streams need to be restored and the CZMP utilizes the NEP's project implementation committee to develop priorities and work with environmental resource managers to make science-based decisions about watershed protection (e.g., planning about which streams need to be restored). In Florida, several NEPs and the CZMP have partnered to identify restoration priorities following the Deepwater Horizon oil spill. In New Hampshire, PREP and the CZMP coordinate on annual workplans for joint water monitoring activities (see below).

- **Workgroup participation:** Another commonly mentioned form of collaboration was joint participation by NEPs and CZMPs in working groups that address shared goals. This supports programmatic coordination and can also create efficiencies. For example, New Hampshire's Department of Environmental Services (which houses the state's CZMP program) and PREP both participate in a Coastal Adaptation Workgroup (CAW). The Department of Environmental Services takes a leading role on climate vulnerability and readiness through the working group and NEP staff complement State actions by supporting the working group's communications activities (e.g., the "King Tide Photo Contest"). Balancing roles allows each entity to create efficiencies by focusing their attention on core priority issues. In Massachusetts, the MassBays NEP and the CZMP each have Regional Coordinators (RCs) who coordinate with one another, including who will attend which meetings and provide input at different points in time. In Washington, the CZMP has been participating in LCEP meetings over time to address sand management issues on the coast. In other states, the NEP and CZMP lead together. The PDE and Delaware's CZMP both serve in leadership roles on the Resilient and Sustainable Communities workgroup and the Living Shoreline committee. In Florida, IRL participates in the Northeast Estuarine Restoration Team (NERT) (2)[‡] meetings and has been working with the Aquatic Preserve Program[§] to implement key actions in the Indian River Lagoon.
- **Water quality monitoring, assessment, and data sharing.** During discussions, the NEP and CZMP managers provided several examples of joint monitoring and data sharing activities. In New Hampshire, the NEP serves as the "monitoring arm" for the state's Clean Water Act responsibilities. The NEP and CZMP coordinate on developing annual workplans, including determining what to monitor; the University of New Hampshire (the NEP's host organization) conducts monitoring; and the CZMP provides technical support, GIS expertise, and analysis of water quality data. There are also synergies between the data collection efforts for the NEP's State of the Estuary Report (conducted every five years) and the CZMP's bi-annual Water Quality Assessments. In Massachusetts, MassBays and the CZMP collaborate on the Marine Invasive

[‡] NERT was created in 2010 to bring partners together to develop regional landscape-level habitat initiatives. It is focused on the restoration and enhancement of estuarine habitats including coastal marsh, mangroves, oyster reefs, and seagrass. The NERT is led by representatives from state and federal agencies and non-profits. The Florida Department of Environmental Protection (which houses the Office of Resilience and Coastal Protection, which in turn houses the Florida Coastal Management Program) is a Steering Committee member.

[§] The Aquatic Preserve Program is housed in the Office of Resilience and Coastal Protection. Florida has 41 aquatic preserves – about 2.5 million acres. The aquatic preserves are outside of the NERRs and are mostly submerged habitat. A portion of funding that comes through the Coastal Management Program supports the state's Aquatic Preserve Program. The Office of Resilience and Coastal Protection manages the development of a management plan for the aquatic preserves.

Species Monitoring Program.** Washington's CZMP has been conducting watershed characterization, mapping and analysis work with PSP funding or in collaboration with the NEP.

- **Collaboration on special projects:** Several NEP and CZMP managers mentioned special projects on which they successfully collaborated with each other. For example, MassBays NEP and the Massachusetts CZMP jointly applied for and were awarded funding for a “project of special merit” to conduct an inventory of tide gates. They drew on their respective networks and resources to implement an extensive inventory in communities across the state. In New Jersey, the BBP and PDE, the CZMP, and a multitude of other stakeholders worked together to successfully implement a NFWF grant that they received after Hurricane Sandy (3). The project included approximately 50 communities and resulted in guidance for how to assess green areas, marsh, and shoreline environments as a resource for resilience and ecological resources. The NEPs are leading the science portion for a decision support tool that will be hosted on the NEPs and NJDEP's websites. In Alabama, the MobileBay NEP and CZMP worked together to address sediment erosion in Joe's Branch (a portion of the northeastern part of Mobile Bay). The NEP brought the issue to the CZMP's attention, the CZMP conducted sampling in the watershed, and the NEP launched the process of developing a watershed management program. When Deepwater Horizon funding came through, the NEP applied it to these projects.**
- **Funding coordination:** Conversations with NEP directors and CZMP managers raised numerous examples of coordinating funds to accomplish shared goals. They shared examples of financial resources flowing from CZMPs to NEPs, and from NEPs to CZMPs. In Delaware, the Coastal Management Program is providing funding to PDE to manage the Resilient and Sustainable Communities website. In New Hampshire, as noted above, the CZMP provides an annual grant to the Regional Planning Commissions which helps to support PREP's data collection activities for the Piscataqua Estuary Assessment. Examples of NEP funding going to support CZMP activities include Florida, where CHNEP purchased monitoring equipment for the Aquatic Preserve Program's voluntary monitoring network in Southwest Florida(4); and New Hampshire, where the NEP provided funding for cleanups in Great Bay and Hampton-Seabrook, following involvement from the Trash Free Waters program. In addition, NEPs and CZMPs have coordinated on funding initiatives with other organizations. For example, New Hampshire's NEP, CZMP, NERRs, and other organizations participate on a steering committee that works with the New Hampshire Charitable Foundation. The Washington State Department of Ecology (which hosts the CZMP) partners with other agencies on projects funded by the PSP.
- **Staffing coordination:** NEPs and CZMPs have also coordinated on staffing positions. In New Hampshire, PREP and the CZMP are teaming up to address non-point sources through the Coastal Fellowship Program. PREP and the CZMP have applied for a NOAA Coastal Management Fellow for 2019-2021 to work on stormwater and flood management. The NEP is a partner on this project and will be involved in mentoring the fellow. PREP will be contributing financially as a non-federal cash match for the first year of the fellowship. Previously, the NEP and CZMP partnered on a Coastal Fellowship for a social indicators project. In Puerto Rico, the SJBEP

** The Casco Bay Estuary Partnership also provides funding for this initiative.

** In Puerto Rico, the San Juan Bay NEP manager noted that EPA's Trash Free Waters program has been a key partner in addressing aquatic debris through projects conducted in the estuary. The San Juan Bay NEP manager did not mention a link between Trash Free Waters activities and the CZMP.

partnered with the Urban Waters program to hire two resilience coordinators. In Florida, IRL has partnered with the Northeast Aquatic Preserve office, a component of the CZMP, to fund shared staff positions. In a minimally staffed office, this is seen by the state as a major benefit to partnering with the NEP.

- **Joint outreach and communication:** NEPs and CZMPs have conducted coordinated outreach and communications. As discussed above, in New Hampshire the NEP provides communications expertise for the Coastal Adaptation Workgroup; NEP staff have offered to formulate and staff the workgroup’s King Tide Photo Contest. In Massachusetts, MassBays NEP and the CZMP conducted joint outreach and communications around water quality and pollutant discharge.

In addition to the types of collaboration that were mentioned in multiple states, some conversations included discussions of unique examples of collaboration. Although each of the following themes came up only once during the call, these examples were still notable.

- **Policy development:** MassBays NEP and the Massachusetts CZMP teamed up with towns and marinas on water quality and pollutant discharges, as noted above, and MassBays NEP played an important role in getting the No-Discharge Zone policy in place. No-Discharge Zones are EPA and state-designated waterbodies where the discharge of all boat sewage, whether treated or untreated, is prohibited. As of 2014, all of Massachusetts coastal waters are designated as “no discharge” for vessel sewage (5).
- **Federal Consistency Review.** Section 307 of the Coastal Zone Management Act is commonly known as the “federal consistency” provision. In general, federal consistency requires that federal actions that have reasonably foreseeable effects on any coastal use or natural resource of the coastal zone be consistent with the enforceable policies of a state’s federally approved coastal management program (6). These determinations are made through the federal consistency review process. In Massachusetts, Regional Coordinators (RCs) from the CZMP coordinate with RCs from the NEPs to provide input for consistency reviews. While this does not happen in every project, the pathways for communication exist. For example, the CZMP engages with Massachusetts Bays and Buzzards Bay NEPs when the CZMP knows that NEP staff are knowledgeable about a particular topic.
- **NEP referenced in lieu of a SAMP.** The Coastal Zone Management Act encourages states to develop Special Area Management Plans (SAMPs), which are resource management plans and implementation programs developed to better manage specific geographic areas, such as urban waterfronts (7). The development of a SAMP requires involvement from all responsible federal and state agencies and also has public participation requirements to obtain stakeholder input. According to Florida’s Section 309 plan, the three Gulf Coast NEPs developed a regional management plan that was referenced in lieu of a SAMP.

3B. Perceived Added Value of Collaboration – What Each Party Brings to the Table

The examples above show that the NEPs and CZMPs bring complementary and/or reinforcing knowledge, skills, and resources to their collaborations. During the discussions, NEP directors and CZMP managers were asked what they view as the value added by each party. Their responses are summarized below. For the most part, respondents spoke more about what the other party brings to the table – i.e., CZMP managers tended to comment on the added value of the NEPs, and vice versa. Because more

CZMP managers were called than NEP directors, opinions about the added value of the NEPs are reflected more heavily in the summary below.

Commonly mentioned ways in which NEPs add value to CZMPs' work include the following:

- **Convening and stakeholder engagement:** This was one of the most commonly mentioned ways that NEPs add value. Stakeholder engagement and consensus building are fundamental to the NEP model. When this process addresses issues of interest to the CZMPs, it can add value to the work of both parties by engaging a diversity of local stakeholders and opinions. As one CZMP manager stated, "Having NEPs (and other partners) involved in the process helps to make management a more holistic approach, and by leveraging the multiple and diverse spheres of influence we can work together to maximize the power and benefits of each program." A CZMP manager in another state noted the NEP, as a non-regulatory program, was adept at engaging stakeholders and facilitating discussions around topics "that might not be as easy for the CZMP to do as a state regulatory agency."
- **Complementary knowledge and expertise:** Another common observation that arose during the conversations was that NEPs bring complementary knowledge and expertise to the CZMPs' work. For example, in Massachusetts, the NEPs' Regional Coordinators include research scientists who specialize in habitat restoration and spawning analysis, which complements the CZMP's GIS specialists, coastal engineers, and geomorphologists. The NEPs also bring local input and expertise from advocacy groups and local volunteer networks. In New Jersey, the BBP's locally based staff scientists bring "on the ground" knowledge that complements the work of the state CZMP, which is hosted at NJDEP. Since it is hosted by Ocean County College, the BBP also draws on academics and external experts to play a review role and can serve as an information clearinghouse.
- **Science and data sharing:** The NEPs provide science and data to support the CZMPs' efforts in some states, as illustrated in the examples in the previous section, such as monitoring water quality in New Hampshire. A CZMP manager in New Hampshire also noted that the NEP is well-respected for facilitating discussion among various stakeholders and bringing the best available science to bear.
- **Flexibility to pursue diverse funding opportunities.** NEPs can apply for funding opportunities that the CZMP cannot apply for as a state agency, particularly if the NEP is hosted in a non-profit or academic institution. NEPs can also provide matching funds for grants. For example, as previously mentioned PREP will be contributing financially as a non-federal cash match for the first year of a Coastal Fellow that is being shared by PREP and the New Hampshire CZMP.
- **Ability to play an advocacy role.** As non-regulatory entities, NEPs can sometimes play more of an advocacy role than CZMPs. For example, PDE has an advocacy group and interfaces with Delaware's Clean Water Coalition, which pushes for legislation for clean water projects in Delaware. The NEPs also can advocate for specific issues or focus more narrowly on special topics connected to Section 320 of the Clean Water Act, whereas CZMPs may need to be more careful in balancing a broader array of competing coastal priorities.

Ways in which the CZMPs add value to the NEPs' work include the following:

- **Regulatory authority:** CZMPs have regulatory authority, including the Federal Consistency provision, which ensures that federal actions with reasonably foreseeable effects on coastal uses and resources are consistent with the enforceable policies of a state's coastal management program.
- **Working with the state agency to enact policies:** Housed within state government agencies, the CZMPs work with the state agency and the state legislature to enact policies.
- **Complementary expertise and knowledge:** The examples of complementary expertise listed above were often reciprocal: The CZMPs bring complementary expertise, knowledge, and connections that are beneficial to the NEPs' work. For example, the Massachusetts CZMP brought mapping, science, and modeling expertise for the tide gate inventory project.
- **Technical and financial resources:** The CZMPs provide technical tools, guidance, and assistance, as well as financial resources for NEP projects and related activities.

Even though only a subset of NEPs/CZMPs was called, the responses are illustrative of the big picture, as evidenced in Exhibit 3-1 below (8, 9).

Exhibit 3-1. Hallmarks of the NEP approach and summary of CZMP roles and responsibilities.

How NEPs Work	How CZMPs Work
<ol style="list-style-type: none">1. Led by inclusive governance structure2. Involve stakeholders3. Engage the public through decision-making process4. Collaborate to identify problems and solutions5. Implement Clean Water Act core programs6. Set measurable goals and objectives and monitor effectiveness7. Develop and implement a CCMP	<ol style="list-style-type: none">1. Provide planning, financial, and technical assistance2. Protect natural resources3. Manage development in high hazard areas4. Ensure coastal-dependent uses receive development priority5. Coordinate state and federal actions to create permit and regulatory efficiencies

3C. Advantages of Greater Collaboration Between NEPs and States

All of the managers expressed interest in continuing and enhancing collaboration between the NEPs and CZMPs. The managers were asked what they perceive as the advantages of increased collaboration and any potential challenges.

Advantages of collaboration can be seen in many of the examples of successful collaboration and the value that each party brings to the collaboration, as discussed earlier in this chapter. In addition, the following additional benefits of collaboration were identified through the discussions:

- **Providing additional capacity for projects:** NEP and CZMP managers in several states commented on the benefits of combining their knowledge, expertise, and/or financial resources. As managers in one state put it, they are being asked to “do more with less” funding and staff, which makes it critical to collaborate and to leverage partners’ resources. NEP and CZMP managers in other states stated that collaboration expands each program’s “bandwidth” to carry out projects by providing additional staff capacity and complementary technical expertise. CZMP managers also mentioned (as noted above) that the NEPs can pursue additional funding sources and provide matching funds, which further supports the CZMPs’ initiatives.
- **Maximizing efficiencies:** A smaller number of managers talked about maximizing efficiencies by coordinating on proposals, projects, and workgroups. Through collaboration, responsibilities can be shared, and management efficiencies gained (e.g., non-duplicative management and reporting structures). Key to maximizing efficiencies is clearly defining the operational niche of each entity and communicating often to ensure effective collaboration.
- **Fostering dialogue:** As noted above, CZMP managers highlighted that the NEPs’ role as trusted advisors lends them the ability to convene diverse groups of stakeholders and foster constructive discussions, including around topics that would be more difficult for the CZMP to lead as a regulatory agency.
- **Extending geographic reach:** Two managers commented that collaboration extends their geographic reach in the watershed. MassBays NEP’s jurisdiction extends farther upstream than the MA CZMP, allowing this NEP to work with volunteers monitoring the spring herring runs and participate in dam removal projects and fish passageway projects. In Puerto Rico, the CZMP and NERRs have a wider geographical reach than the NEP. By partnering with the NERRs and CZMP, the NEP can extend its reach beyond its own watershed area to other parts of the island.
- **Connecting with other parts of EPA and NOAA.** One CZMP manager commented that the NEP can provide a point of entry to working with other parts of EPA. The authors note that the CZMP can also provide points of entry for working with other NOAA programs and other parts of state environmental agencies (e.g., those focusing on water quality, which is a top priority for NEPs).

3D. Potential Challenges to Greater Collaboration Between NEPs and States

All of the managers that were called expressed interest in continuing and enhancing collaboration between the NEPs and CZMPs. The managers were asked what they perceive as any potential challenges of increased collaboration.

Challenges to collaboration identified during the conversations include the following:

- **Changes in NEP structure/processes:** Changes in an NEP’s host organization can change the types of projects that the NEP funds, which can be challenging for partners to adapt to (however, based on the discussions held, this does not seem to occur frequently). Similarly, changes in an NEP’s committee structure and member representation can be difficult for the CZMP to navigate in terms of bringing issues to the forefront.
- **Changes in government administrations:** Similarly, changes in government administrations can bring about a shift in priorities that can impact a CZMP’s activities (both federal and state

administration changes) and an NEP's activities (federal, state and local administration changes). Also, the level of support for activities undertaken by the CZMP and NEP can fluctuate across administrations.

- **Bureaucracy:** One NEP manager observed that the government agency housing the state's CZMP is bureaucratic and can be difficult to navigate. A CZMP manager in a different state noted the challenge of translating NEP actions that occur through a bureaucratic but academic-focused pathway into CZMP actions that happen through regulatory changes and legislation. A CZMP manager in another state, when asked about any barriers/challenges to working more with the NEPs, noted they would not want to add "layers of bureaucracy" to partnership efforts.
- **NEP processes:** While NEPs were generally characterized as flexible and nimble, it was noted that some NEPs are perceived as being process-oriented and/or having committee processes that can be difficult for CZMPs to navigate when attempting to collaborate with them.
- **Funding and staff capacity challenges:** NEPs and CZMPs described challenges related to limited funding and reductions in staff. Several managers observed that funding for the NEPs has stayed relatively constant over time, and that the NEPs are mostly "staff-based organizations" that frequently need to seek project funding from other sources. One manager noted that NEPs lack staff time to conduct strategic planning and communication work beyond their day-to-day activities (although this manager sees significant value in doing this type of work). Resource constraints were also identified as a challenge for some CZMPs.

Other challenges that were mentioned occasionally include interpersonal challenges, such as personality clashes, and in one instance a perception that one party was more interested in furthering its own work agenda rather than working together to advance shared goals.

4. Forward-Looking Opportunities for Enhanced Collaboration

This section identifies and describes opportunities for enhanced collaboration. First, building on the examples of successful collaboration in Section 3, this section identifies how institutional factors – the NEP structure/host arrangement, and the organizational placement of CZMPs within state agencies – can shape opportunities for collaboration. Next, it provides an overview of collaboration opportunities for the 28 NEPs and the coastal states that host all or part of an NEP. Then, this section considers several specific opportunities for NEPs to partner more closely with states on their top shared issues. Finally, insights are shared from ANEP and CSO leadership on collaboration opportunities at the national level.

The information in Section 4 is based on a review of written information (including CCMPs, Section 309 Assessments and Strategies, and other publicly available information including the websites of each NEP and CZMP), interviews with a subset of NEP and CZMP program managers, and interviews with the current leadership of ANEP and CSO. The priority issues discussed here are distilled from these sources and represent what specific states and interviewees reported they want to pursue, as well as where the authors found natural alignment between programs based on the document review. This report recognizes that priority areas can and will differ across states.

4A. How the NEP Host Arrangement Can Shape Opportunities for Collaboration

The 28 NEPs have a variety of institutional arrangements and host structures. The program structure is specific to individual NEPs and is driven by various factors including the availability of different partnership opportunities. The most common host structures are government agencies, non-profit organizations, and academic institutions. Other hosts include regional organizations, local/city government agencies, and, in Florida, independent special districts of the state (e.g., Indian River Lagoon).

Every NEP hosting arrangement has shown positive examples of collaboration. The examples of successful collaboration discussed in Section 3 cover the full range of NEP institutional structures. The interviews and other research underlying this report demonstrate that while opportunities for collaboration might differ depending on the institutional structure of the NEP, these opportunities between an NEP and a CZMP exist under each of the NEP hosting arrangements. This section shows the types of collaboration opportunities that appear most promising for the different types of hosting arrangements.

The text below and Exhibit 4-1 summarize the different types of NEP hosting arrangements, the number of NEPs with each type of hosting arrangement, opportunities for collaboration with CZMPs, and examples from the interviews.

Government host agency: Thirteen NEPs have a government host agency, including six state agencies, three regional organizations, two local/city organizations, and two independent special districts of the state. Opportunities for collaboration revolve around the integration that occurs when the CZMP and NEPs are both housed within state government.

- **Institutionalized integration between the NEP and CZMP:** The Massachusetts CZMP and both NEPs are housed in the same state agency. MassBays has a network of Regional Coordinators who collaborate on projects; this structure is institutionalized and lends itself to collaboration, coordination, and efficiencies.

- **Management and administrative efficiencies:** Being housed in the same agency provides financial and administrative efficiencies, including shared office space, equipment, administrative support, and some shared staff time.
- **Access to policymakers:** The Massachusetts CZMP and NEPs are both housed in the Executive Office of Energy and Environmental Affairs, a state Cabinet-level office. This structure allows closer integration between the NEPs, CZMP, and policymakers/the policy process.
- **Access to other parts of state government:** The networked structure of Washington State's CZMP results in various state agencies being involved in implementing different coastal priorities. The Puget Sound Partnership – a state agency – selects (through a competitive process) organizations to lead different initiatives within their watershed and the CZMP partners with some of these agencies to carry out projects.

Non-profit/foundation: Ten NEPs are hosted in non-profits/foundations. Opportunities for collaboration center on a non-profit's flexibility in being able to champion issues, fundraise, and advocate for legislation and policies.

- **Greater flexibility, including flexibility to address EJ issues:** NEPs that are hosted by non-profit organizations have flexibilities that the CZMPs may not. One area of flexibility is being able to address environmental justice (EJ) issues by engaging local communities and providing a venue for diverse stakeholders to make their voices heard about a variety of issues. For example, the non-profit status of the SJBEP in Puerto Rico helps insulate the NEP from politics and lets them play a unifying role in developing collaborative plans to improve the watersheds and reconstruct the island after Hurricane Maria.
- **Ability to fundraise and apply for different types of funding:** Another area of flexibility for NEPs hosted in non-profit organizations is the ability to fundraise and apply for different types of funding. For example, the SJBEP's 501c(3) status helps the NEP to leverage funding and support from government agencies and other parties, including industry.
- **Ability to advocate/lobby:** Non-profit status also enables NEPs to engage in advocacy and lobbying activities that are not allowed for government agencies. For example, PDE has an advocacy group that interfaces with Delaware's Clean Water Coalition, which advocates for legislation for clean water projects in the state. Also, Delaware's NEPs serve in an advisory capacity on regulatory issues and advocate for certain issues through a committee that advises on CZMP regulations.

Academia: Five NEPs are hosted in academic institutions. There is some overlap between opportunities for collaboration with the previous category (non-profit/foundations) with respect to fundraising, as well as opportunities associated with proximity to academic researchers and labs.

- **Access to research facilities/labs/academic experts:** The MobileBay NEP is housed in the Dauphin Island Sea Lab, which gives them strong academic credentials, and helps enhance some of the NEP's research capacity because it has access to the lab. Similarly, the BBP engages academics and external reviewers and provides a clearinghouse of science-based information.
- **Ability to fundraise and apply for different types of funding:** As discussed above, New Hampshire's NEP can access non-federal funds and provide non-federal match for grants, e.g., for NOAA's Coastal Management Fellowship Program.

Exhibit 4-1. NEP Hosting Arrangements and Opportunities for Collaboration

Type of hosting arrangement	No. of NEPs	Opportunities for Collaboration	Examples from the Interviews
Government agency <ul style="list-style-type: none"> • State • Regional • Local/city • Independent special district of the state 	13	Institutionalized integration between NEP and CZMP	MA: NEP Regional Coordinators (RCs) and CZMP RCs work together on projects. The RC structure is institutionalized and lends itself to collaboration, coordination, and efficiency (not duplicating each other’s efforts).
		Management/admin. Efficiency	MA: Financial and administrative benefits include shared space, equipment, administrative support, and staff time.
		Access to policymakers	MA: CZMP and NEPs are housed in the Executive Office of Energy and Environmental Affairs (state Cabinet-level office)
		Access to other parts of state government	WA (Puget Sound): Various agencies are involved in carrying out different priorities, and the NEP works with all of those agencies. NEP selects (through a competitive process) organizations to lead different initiatives in their watershed; the CZMP partners with some of these agencies to carry out projects.
Non-profit/foundation <ul style="list-style-type: none"> • Non-profit • Foundation 	10	Greater flexibility, incl. to address EJ issues	PR: Non-profit status helps insulate the NEP from politics and lets them play a unifying role in developing collaborative plans to improve the watersheds and reconstruct the area
		Able to fundraise and apply for different types of funding	PR: 501c(3) structure helps the NEP to leverage funding and support from government agencies and other parties
		Able to advocate/lobby	DE: PDE’s board has an advocacy group that interfaces with Delaware’s Clean Water Coalition, which advocates for legislation for clean water projects in the state DE: NEPs serve in an advisory capacity on regulatory issues and advocate for certain issues through the committee that advises on CZMP regulations
Academic institution	5	Access to research facilities/labs/academic credentials	AL: NEP is housed in the Dauphin Island Sea Lab, which gives them strong academic credentials, and helps enhance some of the NEP’s research because they have access to the lab. NJ: NEP brings academics and outsiders in as expert reviewers and provides a clearinghouse of science-based information.
		Ability to fundraise and apply for different types of funding	NH: NEP can access non-federal funds and provide non-federal match for grants, e.g. for NOAA’s Coastal Management Fellowship Program.

4B. How the Organizational Placement of CZMPs within State Agencies Can Shape Opportunities for Collaboration

In addition to the organizational structure of the NEPs, this report also considers the organizational placement of the CZMPs within state agencies and how this can shape opportunities for collaboration. Exhibit 4-2 summarizes the organizational placement of the CZMPs for the 20 states that overlap with an NEP watershed. For each state, the exhibit lists the CZM Program Office and the host agency(ies). It also shows that CZMPs in 10 of the 20 states are housed within the same state agency that is responsible for administering Clean Water Act programs (“CWA Crossover”). This overlap is significant because the National Estuary Program is authorized under the Clean Water Act. The CZMP has a broader purview, but when a CZMP is housed within a CWA agency it may facilitate more direct engagement between the NEP and CZMP on water quality issues. This crossover can be advantageous for both the NEP and the CZMP. These findings echo an earlier EPA report that discussed the benefits of institutional locations in the context of NEPs investigating which alternative best suits the specific needs (1).

Exhibit 4-2 also shows that 13 states have a “networked” CZM Program, indicating that the functions and authorities of the CZMP are networked across multiple offices (within a single agency) or across various state agencies. Networked CZMPs may be able to provide resources and expertise in additional areas beyond those typically addressed by the NEP, providing opportunities for NEP-CZMP collaboration across state offices and/or agencies.

Exhibit 4-2. Coastal State CZMP Offices and Host Agencies in States Overlapping NEP Watersheds

State	CZMP Office	Lead State Agency(ies)*	CWA Crossover**	Networked Program***
Alabama	Coastal Area Management Program	Dept. of Conservation & Natural Resources [CSO]		X
		Dept. of Environmental Management	X	
California	Coastal Management Program	CA Coastal Commission [CSO]		X
		CA Coastal Conservancy		
		San Francisco Bay Conservation & Development Commission [CSO]		
Connecticut	Coastal Management Program w/in Office of Long Island Sound Programs	Dept. of Energy & Environmental Protection	X	
Delaware	Coastal Management Program w/in Division of Soil & Water Conservation	Dept. of Natural Resources & Environmental Control	X	X
Florida	Office of Resilience & Coastal Protection	Dept. of Environmental Protection	X	X
Louisiana	Interagency Affairs & Field Services Division [CSO] and Permits & Mitigation Division w/in Office of Coastal Management	Dept. of Natural Resources		X
Maine	Maine Coastal Program	Dept. of Marine Resources		X

State	CZMP Office	Lead State Agency(ies) *	CWA Crossover **	Networked Program ***
Maryland	Chesapeake & Coastal Service	Dept. of Natural Resources		X
Massachusetts	Office of Coastal Zone Management	Executive Office of Environmental Affairs		X
New Hampshire	Coastal Program w/in Watershed Management Bureau of Water Division	Dept. of Environmental Services	X	
New Jersey	Division of Coastal & Land Use Planning	Dept. of Environmental Protection	X	X
New York	State Coastal Management Program w/in Office of Planning & Development	Dept. of State		
North Carolina	Division of Costal Management	Dept. of Environmental Quality	X	
Oregon	Coastal Management Program w/in Ocean & Coastal Services Division	Dept. of Land Conservation & Development		X
Pennsylvania	Coastal Resources Management Program w/in Compacts & Commissions Office in Office of Water	Dept. of Environmental Protection	X	X
Puerto Rico	Coastal Zone Division	Dept. of Natural & Environmental Resources		
Rhode Island		Coastal Resources Management Council		
Texas	Coastal Management Program	General Land Office		
Virginia	Coastal Zone Management Program	Dept. of Environmental Quality	X	X
Washington	Shoreline & Coastal Management	Dept. of Ecology	X	X
<p>Notes:</p> <p>* For networked CZMPs that have more than a single office or agency listed, we designate with a [CSO] which represents a CSO-delegate office.</p> <p>** An "X" in this column denotes that the lead CZMPs State agency is also responsible for administering Clean Water Act programs.</p> <p>***An "X" in this column denotes a networked CZMPs, indicating that the functions and authorities of the CZMPs are networked across multiple offices (within a single agency) or across various state agencies.</p>				

Our conversations with NEP and CZMP managers provide some examples of collaboration for the organizational structures shown in Exhibit 4-2. For example, New Hampshire’s CZMP is located within the state’s Department of Environmental Services, which is also responsible for administering New Hampshire’s Clean Water Act programs. The CZMP manager in New Hampshire noted that while the CZMP and NEP would still collaborate even if the CZMP was not located in the CWA agency, the CWA crossover strengthens and shapes their collaboration. For example, the Watershed Management Bureau (where the CZMP is located) is responsible for all water quality monitoring in the state of New

Hampshire; as noted above, the CZMP and NEP collaborate extensively on water quality monitoring. This is a natural way for the NEP and CZMP in New Hampshire to collaborate and is reinforced by the organizational placement of the CZMP.

Similarly, Florida provides examples of collaboration for a “networked” CZMP. The Office of Resilience and Coastal Protection houses the CZMP, the state’s three NERRs, the Aquatic Preserve Program, the Coral Reef Conservation Program, National Marine Sanctuary, the Clean Boating Program, and various other programs. A staff member described the CZMP as a “glue program” that coordinates all these activities in a cohesive way. By engaging with the CZMP, Florida’s NEPs can engage with other programs in the Office of Resilience and Coastal Protection. For example, as mentioned above, the Indian River Lagoon NEP attends NERT meetings and has been working with the Aquatic Preserve Program to implement key actions in the Indian River Lagoon.

4C. Future Opportunities for Coordination across the 28 NEPs and Overlapping States

Next, the focus will be on forward-looking opportunities for enhanced collaboration across the NEPs and states, beginning with a summary of the priority issues identified through documents and interviews.

Coastal hazards were by far the most frequent issue mentioned (19 NEPs), followed by water quality (10 NEPs), shoreline management (3 NEPs), marine resource and ocean planning (3 NEPs) and floodplain management and environmental justice (3 NEPs). The rest of the issues were mentioned one time each: economic impacts, marine debris, public access and sustainability. Note that these issues are inextricably linked, and some categories overlap (Exhibit 4-3). Below summarizes the scope of the issues identified through research and interviews and includes potential approaches NEPs could take to add value, based on the authors’ knowledge of NEP strengths. More detailed descriptions of the opportunities in the NEP fact sheets can be found in Appendix C.

Exhibit 4-3. Summary of Overlapping Priority Issues across NEPs and States

The Issues	# of NEPs	List of States and NEPs
Coastal Hazards Sub-categories: - Sea level rise - Flooding - Erosion - Coastal acidification - Hurricanes	19	CA: Santa Monica NEP CA: San Francisco Bay DE: Center for Inland Bays [†] DE/NJ/PA: Partnership for the DE Estuary [†] FL: Coastal Heartlands [†] FL: Indian River Lagoon [†] FL: Sarasota Bay [†] FL: Tampa Bay [†] MA: Massachusetts Bays NEP* [†] MD: Coastal Bays ME: Casco Bay NC/VA: Albemarle-Pamlico Sound NJ: Barnegat Bay Partnership* [†] OR: Tillamook Estuaries Partnership OR/WA: Lower Columbia PR: San Juan Bay*

The Issues	# of NEPs	List of States and NEPs
		RI/MA: Narragansett Bay TX: Coastal Bend Bays TX: Galveston Bay
Water quality Sub-categories: - Coastal Nonpoint Pollution Control program - Nutrients management - Wastewater	10	AL: Mobile Bay [†] DE: Center for Inland Bays [†] DE/NJ/PA: Partnership for DE Estuary [†] FL: Coastal and Heartlands [†] FL: Indian River Lagoon [†] FL: Sarasota Bay [†] FL: Tampa Bay [†] MA: Buzzards Bay [†] ME: Casco Bay NH/ME: Piscataqua Region ^{* †}
Shoreline management	3	WA: Puget Sound [†] CA: San Francisco CA: Santa Monica Bay
Marine resources and ocean planning – including aquaculture siting	3	CT/NY: Long Island Sound Study MA/RI: Massachusetts Bays ^{* †} NY: Peconic Estuary
Floodplain management & Environmental Justice	3	NJ: Barnegat Bay Partnership ^{* †} NY/NJ: NY-NJ Harbor [†] CA: San Francisco
Economic impacts	1	DE: Center for Inland Bays [*]
Marine debris	1	NH/ME: Piscataqua Region ^{* †}
Public access	1	NY/NJ: NY-NJ Harbor [†]
Sustainability	1	DE/NJ/PA: Partnership for the DE Estuary [†]

*Indicates that the NEP managers were interviewed

† Indicates that state CZMP staff were interviewed

Coastal Hazards

The term coastal hazard is used to capture both chronic issues such as flooding, erosion and the long-term impacts of climate change as well as catastrophic events such as hurricanes or tsunamis. This report found that most opportunities to address coastal hazards centered around building resilience to chronic issues including the effects of climate change, such as sea level rise (CHNEP, CIB, IRL, LCEP, MassBays NEP, MCB, NBEP, PDE, SBEP, SFEP, SMBNEP, TBEP), the impacts of chronic flooding (BBP, TEP), erosion (BTNEP, CBB, GBEP) and coastal acidification (CBEP). For two locations that have been recently impacted by hurricanes (APNEP, SJBEP), there was a focus on building resilience to these potentially catastrophic events. There were opportunities for NEPs to help build their partners' capacity by providing access to data and scientific reports (CIB, CBEP, NBEP), developing adaptation plans and vulnerability assessments (LCEP, TEP), developing tools and trainings to assist in decision-making (BBP, SFEP, SMBNEP), and leading community outreach efforts (HEP, PDE, SBEP). also found opportunities for NEPs to develop or enhance on-the-ground projects through promotion of natural and nature-based infrastructure, including living shorelines (APNEP, BBP, CHNEP, IRL, LCEP, MassBays NEP, TBEP), habitat

protection and restoration efforts (CBB, CIB, GBEP), and facilitating the preservation of open space through conservation efforts (BTNEP, MBNEP).

Water Quality

To address water quality, opportunities were identified for NEPs to add value to water quality improvement efforts across a number of states. NEPs to be involved in the development and implementation of the CZMA-led Coastal Nonpoint Pollution Control programs (MobileBay NEP, PREP), managing nutrient pollution and effects of harmful algal blooms (CHNEP, CBEP, IRL, SBEP, TBEP), building monitoring programs (CIB, PDE) and assisting in wastewater management efforts (BBNEP, MassBays NEP, PREP). States revise their Nonpoint Source Management Plan every 5 years, so that is a recurring opportunity to leverage common objectives. NEP approaches that could add value to the state include facilitating long-term planning and project prioritization initiatives through stakeholder engagements (CBEP, MassBays NEP, MobileBay NEP), data sharing and research (CIB, PDE), promotion and implementation of natural infrastructure projects (CHNEP, MassBays NEP, SBEP, TBEP) and through the development of financing options for septic upgrades (BBNEP, MassBays NEP, PREP). As shown in Section 2, many of these opportunities could be categorized under §309 priority area Cumulative and Secondary Impacts that 10 overlapping CZMPs cite as a high priority and 10 as a medium priority area.

Shoreline Management

This research found examples of opportunities for NEPs to work more closely with states on shoreline management including reducing shoreline armoring (PSP, SMBNEP) and evaluating changes in shoreline and associated uplands (SFEP). These issues could be addressed through NEP coordination on permitting and regulatory processes (PSP), involvement in shoreline mapping efforts (SFEP) and through communication of guidance and training to local stakeholders (SMBNEP).

Marine Resource and Ocean Planning

Several NEPs showed overlapping interests with states with respect to long-term planning efforts especially marine spatial planning that balances the differing uses of shared coastal and ocean resources (LISS, MassBays NEP, PEP). NEP opportunities to contribute to this work includes aligning CCMP actions with state-led marine spatial plan implementation (LISS) and using technical expertise and consensus-based decision-making to assist in the siting of aquaculture in estuarine waters (MassBays NEP, PEP).

Floodplain Management and Environmental Justice

This research also found shared interests with respect to the consideration of environmental justice communities in floodplain management activities that includes the need to improve the consideration of vulnerable populations and promoting equity in the decision-making process (BBP, SFEP) and reducing risks from flooding in urban communities (HEP). NEPs could enhance state efforts through developing and funding support tools (BBP) and leveraging relationships with citizen networks (BBP, HEP) and using mapping exercises to identify opportunities for urban greening that can lead to policy development (SFEP).

Other

This research also found examples of additional, unique opportunities for states and NEPs to coordinate further that included leveraging datasets to determine the economic impacts of coastal resilience actions (CIB), addressing marine debris and aquatic trash by leading estuary cleanups (PREP), work to provide additional public access opportunities for urban communities (HEP) and promote sustainability by helping to incorporate science into decision-making (PDE).

4D. Opportunities for Coordination at the National Level

The authors had conversations with individuals who hold leadership roles in ANEP and CSO. The ANEP and CSO Chairs are both open and eager to collaborate. A major takeaway from these conversations included the need to clearly define each partner's priorities and roles as a first step toward building synergies across the organizations. Opportunities for collaboration include coordinating at national conferences, working on shared priorities, and co-branded messaging (the latter came up at the March 2019 ANEP and CSO meetings). The conversations focused on what work NEPs and CZMPs (and other partners, such as the NERRs) are and can be doing together and showing the complementary role the programs play in achieving a common purpose. ANEP and CSO leadership focused on their visions for collaboration and thoughts on specific areas to collaborate. The actions listed below arose from these conversations and again, are part of a broader, ongoing conversation.

The ANEP Chair highlighted living shorelines/natural infrastructure and coastal resiliency as areas of overlap with the CZMPs, noting that the CZMPs need to balance multiple coastal uses whereas the NEPs can focus on bringing habitat considerations to coastal resiliency projects. Water quality was another overlapping area that the ANEP Chair highlighted, citing the No-Discharge Zone policy in her state of Massachusetts as an example of where an NEP collaborated successfully with a CZMP (see Section 3). These observations were strongly supported by subsequent conversations and research - demonstrated in the preceding section. The ANEP Chair observed that while the 28 NEPs are all implementing Section 320 of the Clean Water Act, they have disparate priorities and goals, and ANEP does not currently have top-level goals or an overarching strategy that applies across all NEPs. She noted that ANEP does not have staff to coordinate strategic planning; similarly, individual NEPs are understaffed and do not necessarily have opportunities to conduct joint planning with CZMP counterparts.

Similarly, the CSO Chair expressed openness to ideas on what collaboration between CSO and ANEP might look like moving forward. Although he did not identify specific areas where CSO and ANEP might engage with each other, he observed that partnerships have been a hallmark of CSO's work in previous years, and that expanding these relationships is a "great and logical next step." The CSO Chair further stated that he sees considerable value in thinking about ways to coordinate with ANEP on strategy and messaging and is interested in continuing these conversations.

Section 5 describes opportunities for these NGOs to further promote coordination on national issues.

5. Synthesis and Opportunities

This section synthesizes the key information described in the four preceding sections, distills this research into several big-picture takeaways, and describes opportunities for NEPs, CZMPs, and key partners to further promote collaboration among NEPs and their state partners.

5A. Synthesis

This report found that NEP-CZMP relationships exist along a spectrum – some already work very closely together while others are seeking opportunities to partner more meaningfully in the future. This report considered examples of past collaboration between the two programs and identified the common ingredients found in close NEP-CZMP partnerships. It also extracted the NEP value-added from these examples to further illustrate the wide range of services the NEP approach delivers (summarized in Appendix A). Four key messages distilled from the national NEP-CZMP landscape are highlighted below.

Keys Elements of NEP-CZMP Partnerships

- The NEP Management Conference for individual NEPs includes all relevant state-level partners to help achieve consensus-based decision-making.
- Monitoring data and research products are readily shared between programs to help inform conservation and management actions.
- Consistent two-way communication of needs and priorities occurs to maximize efficiencies and avoid duplicative actions.
- Creativity is employed to leverage diverse resources and increase the capacity of both programs.

Institutional Considerations

As discussed in Section 3, the 28 NEPs have a variety of institutional structures and hosting arrangements, and each has shown positive examples of collaboration. While opportunities for collaboration exist in all types of NEP hosting arrangements, the form that the collaboration takes may be shaped or guided by the host arrangement. For example, government hosts may provide opportunities for more extensive integration of the NEP and CZMP, resulting in management and administrative efficiencies, access to policymakers, and access to other parts of state government. Non-profit hosts may provide greater operational flexibility for the NEP, the ability to fundraise and apply for more types of funding than a state agency, and the ability to advocate. NEPs hosted by academic institutions have access to research facilities, labs and academic experts, and, similar to those hosted by non-profits, may also be able to fundraise and apply for more types of funding than a state agency.

Identifying the ways in which different institutional structures present unique pathways or opportunities for collaboration can help NEPs and CZMPs consider areas where they can work together. This may be helpful for programs that are not currently working closely or are seeking additional ways to partner. This report does not suggest that all NEPs with the same hosting arrangement should collaborate in the same way, or that NEPs with a different hosting arrangement would be prevented from collaborating in

a particular way. When NEPs and CZMPs coordinate closely with each other, they can readily identify and take advantage of a wide range of options for collaboration.

5B. Multiple Benefits

Partnerships are vital; successfully managing the challenges posed by the increasing pressures of climate change and population growth on the coastal environment with the constraint of finite resources takes everyone. Preceding sections of this document demonstrate the value that NEPs bring to the table for addressing water quality and habitat needs within the context of coastal zone management challenges and the wide range of specific topics that NEPs and CZMPs work on together – including tackling coastal acidification, promoting community resilience and improving water quality. This report also found that the ways programs partner can be equally diverse – including through data integration, coordination on trainings, seeking joint grant applications and sharing staff, among others. These findings describe what NEP-CZMP partnerships address and how collaboration succeeds.

Looking across this complex and nuanced partnership landscape, this report also demonstrated why these programs could benefit from partnering more closely in the future. This research showed, through real-world examples, the benefits of aligning the differing but complementary approaches of NEPs and CZMPs. These examples illustrate a principal value of the NEP-CZMP partnership - **to advance management and conservation strategies that achieve multiple benefits for natural resources and coastal communities**. The multiple benefits approach (1) helps partners understand the costs and benefits of a project or program in order to identify opportunities for cost sharing and optimization of time, money and other resources. By advancing multiple benefits, NEPs and CZMPs leverage complementary expertise and maximize investments by integrating management of shared resources.

The following subsections describe opportunities for the programs to further maximize their ability to leverage each other's strengths in pursuit of a shared vision for the nation's coast.

5C. Opportunities to Promote Coordination at the Individual NEP-CZMP Level

For NEPs and CZMPs looking to build or strengthen partnerships to advance a multiple benefits approach to water quality and coastal resource management, this report offers several opportunities to promote greater coordination at the individual NEP-CZMP level. The opportunities (in bold) are intended to help the programs achieve the four key elements to successful partnerships noted above. Below each item in the call-out boxes is specific findings and examples of where this collaboration could occur.

1. Counterparts participate in formal processes or serve on committees to institutionalize working relationships and create efficiencies between programs.

Findings:

- 14 CZMPs are represented on the Management Conferences of 20 NEPs.
- Nine NEPs participated directly in the most recent CZMA §309 self-assessment in their states and 13 CZMPs cited NEP data and reports in their assessment. And 11 of these states have CZMP staff represented on at least one MC – demonstrating that formalized relationships can help lead to further synergies between the programs.
- An opportunity exists to invite representatives from state emergency management agencies onto the Management Conference, as no NEP currently lists this sector on its Management Conference. Additionally, only five NEPs include representatives from public health services on their Management Conference.
- One NEP involved the state emergency management agency in the review of its current CCMP and seven included the public health sector in this process.

Highlights:

- Maryland CZMP has realized efficiencies through the consideration of Maryland Coastal Bays NEP as an analog to a CZMA-designated Special Area Management Plan (SAMP). Rather than go through the extensive process to develop a SAMP for the region, the CZMP leverages the NEP to protect shared natural resources.
- In Florida, the CZMP invited the three NEPs on the Gulf Coast to develop a plan to advise the Gulf Coast Ecosystem Restoration Council on restoration needs. The NEPs leveraged their technical and science advisors in reviewing, vetting, and ranking 280 restoration project proposals from cities, counties, nonprofits, universities and others to inform the use of the RESTORE Act funds (2).

2. NEPs and CZMPs coordinate monitoring activities and data sharing to promote data-driven decision-making.

Finding:

- 11 CZMPs cited NEP reports, data analyses, monitoring results or other NEP research products in the most recent CZMA §309 self-assessments.

Highlights:

- In New Hampshire, PREP serves as a “monitoring arm” for the state and creates efficiencies by coordinating with the state on all water quality monitoring programs.
- In Washington, the CZMP and Puget Sound Partnership NEP leverage their respective resources by creating synergies between data collection efforts for the NEP State of the Estuary Report and the CZMP bi-annual water quality monitoring assessments.
- In New Jersey, the NEPs helped lead the science portion of a Hurricane Sandy recovery project that included developing an online decision support tool jointly hosted by the CZMP.
- In Delaware, the CZMP helps fund the Partnership for Delaware Estuary-managed Resilient and Sustainable Communities website that provides science-based information to advance the resilience and sustainability goals of the state.

3. Local or regional science and management knowledge-exchange workshops and summits highlight priority coastal and estuarine management issues and solutions.

Findings:

- Five NEPs are hosted by academic institutions, lending them strong academic and scientific credentials.

Highlights:

- In Florida, the CZMP invites the four NEPs to participate in its annual meetings.
- In Puerto Rico, San Juan Bay NEP previously worked with the CZMP and NERR to host a well-attended research summit to showcase research and data trends and currently there is interest in finding ways to reinvest in these events.

4. The multiple benefits approach to decision-making facilitates strategic investments in restoration and protection efforts for shared resources.

Finding:

- Seven CZMPs cite NEPs as a direct partner on a CZMA §309 Strategy. The NEPs were identified as partners because they provide complementary skillsets – including scientific expertise, facilitation skills and stakeholder education (Section 2).

Highlights:

- In New Hampshire, the Piscataqua Region NEP provided matching funds to support a shared NOAA Coastal Management Fellow with the state CZMP.
- In Florida, Indian River Lagoon NEP partners with one of the CZMP Aquatic Preserves to support shared science staff working together to improve water quality and address the negative impacts of harmful algal blooms on ecosystems and economies.
- The New Hampshire CZMP and the Piscataqua NEP have also partnered to work with a charitable foundation. By working together to develop a strategic plan, the NH CZMP and PREP prioritize projects that address the highest priority watershed-specific needs in their coastal communities and estuaries in order to efficiently allocate limited funds.

5. Upstream management activities are protective of downstream resources and leverage the full extent of the NEP watershed study area.

Findings:

- The CZMP jurisdiction varies by state, and in many cases comprises just the coastal counties or tidal extent of the coastal watershed; there are 20 NEPs that extend further inland than the CZMA boundary in 15 states (maps found in Section 2). Actions within the CCMP are eligible for Clean Water State Revolving Fund (3) and §319 Nonpoint Source Grant programs (4) and can be applied in the active NEP study area and the broader watershed.
- Additional EPA partnership programs are present in coastal states where there are NEP watersheds. Notably, 12 of the 19 Urban Waters locations and 73 of the 82 Trash Free Waters projects are located in coastal states and Puerto Rico (see Section 2. Figures 2-1, 2-2 and 2-3). These programs, which focus on upstream pollution management, can be further leveraged to provide water quality benefits to coastal areas.
- EPA resources that consider watershed-scale processes could be applied in NEP study areas to facilitate decision-making – such as the Recovery Potential Screening Tool (5) and Healthy Watersheds Assessments (6).

Highlights:

- In Louisiana, Barataria-Terrebonne NEP and the state of Louisiana partnered with the Minnesota Department of Agriculture to support pollution prevention practices and expand the eligibility of low-interest loans for farmers in Minnesota (7) in an effort to curb pollution impacting the estuary and Gulf of Mexico.
- Albemarle-Pamlico Sound NEP fostered bi-state coordination throughout the region, through the creation of a Memorandum of Understanding between North Carolina and Virginia (8).
- The Long Island Sound Study supports grants through the NFWF-administered LIS Futures Fund (9) that can be used to support water quality projects in the upper portion of the watershed – including Massachusetts, Vermont and New Hampshire.

Integration of Coastal Hazards and Water Quality Issues

As demonstrated in Exhibit 2-5, addressing coastal hazards is identified by state CZMPs as the top priority area to strengthen and improve the program, nationally. Therefore, this issue presents a significant opportunity for CZMPs and NEPs to enhance the extent of their collaboration and achieve multiple benefits on projects in the future. Outline below are several opportunities for NEPs and CZMPs to address the overlapping priorities of coastal hazards and improving water quality.

6. NEP and CZMP plans align with programs and elements in State Hazard Mitigation Plans.

Finding:

- Every coastal state is working to address the long-term impacts of climate change and all coastal state HMPs explicitly consider the risks associated with sea level rise. Sea level rise is a shared priority for many NEPs and CZMPs and this alignment with the HMP provides an opportunity to address this chronic issue.

Highlights:

- Funded by EPA Climate Ready Estuaries (10) program, nearly all NEPs have performed risk-based vulnerability assessments for their study areas and applied the results to their CCMP action plans to ensure the long-term viability of projects. This approach can be tailored to other watersheds and used to inform HMP updates for broader application of results.
- Puerto Rico serves as an example of how NEPs can be leaders in resiliency by partnering with the CZMP to incorporate local plans into state-level processes. San Juan Bay NEP is working with the Puerto Rico CZMP and other partners to use the CCMP as a model to develop watershed-based mitigation plans for the eight municipalities within the NEP's study area. These plans will conform with the territory's HMP and will enable municipalities to work with FEMA to ensure projects are eligible for FEMA funding. San Juan Bay NEP is also exploring opportunities to leverage Clean Water State Revolving Funds to serve as cost share for the mitigation projects.

7. NEPs and CZMPs can leverage their mutual resources to meet goals of the National Flood Insurance Program through a comprehensive approach to floodplain management.

Findings:

- The NFIP serves as a tool in state HMPs to mitigate the impacts of flooding in vulnerable areas. The Community Rating System (CRS) is a voluntary incentive program for communities participating in the NFIP that rewards local floodplain management actions including through the preservation of open space where no significant development encroaches on flood flows.
- In 2019 alone, the NEPs and their partners preserved and protected nearly 41,000 acres of coastal and estuarine habitat through land conservation actions including through easements and land acquisition activities.

Highlight:

- In Louisiana, the Barataria-Terrebonne NEP is cited in Louisiana's HMP as an entity responsible for coordinating preservation activities under the CRS program.

8. NEPs provide scientific and technical reviews for regular state planning or grants processes.

Findings:

- The five-year update cycle for state HMPs necessitates coordination among agencies and interested groups. In addition to FEMA resources, many coastal states also provide direct funding for resiliency projects. NEPs are seen by their partners as subject matter experts and trusted information brokers able to build consensus on difficult issues and are well-suited to play a role in these processes.
- State emergency management agencies partner with academic institutions and local or regional entities to facilitate the updates to the HMP and creates an opportunity for NEPs with similar hosting arrangements to be involved in the process.

In addition to these findings, this report encourages NEPs and CZMPs to consider the 2018 report: *Preparing for Disaster: The National Estuary Program's Role in Pre-Disaster Planning, Post-Disaster Recovery, and Hazard Mitigation* (11) that outlines four NEP case studies around disasters and derives helpful options to increase the NEPs' capacity to contribute to a range of disaster management activities.

5D. Opportunities to Promote Coordination at the National level

ANEP and CSO Coordination

As previously discussed in Section 4, conversations with ANEP and CSO leadership revealed that there is ample opportunity for these nonprofit organizations to coordinate on national strategies.

1. Connecting directly with leadership of NGO counterparts can facilitate collective action on resiliency and water quality needs in coastal and estuarine areas.

Highlights:

- In spring 2019, members of ANEP and CSO joined their counterpart from the National Estuarine Research Reserve Association on a joint briefing to Senate staff on the value of partnering in New Hampshire to deliver multiple benefits for coastal resources and communities.
- The organizations also met in spring 2019 with five other NGO partners on an Estuary Leadership panel to explore challenges and opportunities to strengthen organizational partnerships.

2. Communication platforms that share successes and lessons learned from local efforts help generate ideas for addressing shared priorities across the combined national network.

Finding:

- Case studies, like those identified in this report, that demonstrate how NEPs and CZMPs work together to address risks from coastal hazards and improve and protect water quality can be shared via CSO Work Groups and other communication platforms.

3. ANEP and CSO leadership and program staff can coordinate interactions during the annual winter meetings of both organizations held in Washington, DC.

Finding:

- Interest expressed by ANEP and CSO leaders to better understand the relationship between these programs and to facilitate greater dialogue resulted in the development of this research and report. These findings are intended to help focus future dialogue.

Highlights:

- In 2018, the CSO Executive Director was invited to speak at the EPA-ANEP winter meeting to speak to the partnerships happening between NEPs and the states.
- In winter 2019, the NEPs were invited to the Coastal Celebration on Capitol Hill co-hosted by CSO and the EPA branch chief for partnership programs was invited to address the CSO membership at the annual meeting.

4. Co-branded communications materials can be used by both ANEP and CSO, as well as individual NEPs and CZMPs, when messaging the value of their work to decision-makers at the state and national level.

Highlight:

- To help initiate this effort, EPA and CSO developed individual NEP fact sheets, found in Appendix C, that show overlapping priorities with CZMPs and other state agencies and can serve as a template to begin building co-branded materials.

Opportunities for EPA

Through this research and ongoing conversations with ANEP and CSO, this report found that EPA can help further increase the visibility of NEPs, both internally and in coordination with partners to facilitate enhanced collaboration at the federal, state and local levels. Conversations with CZMP managers and staff showed that CZMPs see the NEPs as an important gateway to other EPA programs. For example, the Lower Columbia NEP participated in a bi-state effort to resolve sediment management issues, which ultimately involved the EPA regional office in implementing a Regional Sediment Management Plan. In Massachusetts, the NEPs were instrumental in establishing a No-Discharge Zone (NDZ) policy for state waters, a joint effort with the CZMP. Because the NDZ is an EPA-led program that requires coordination

between regional and headquarters staff, the NEP's relationship with these offices and knowledge of EPA programs helped to facilitate this effort. EPA can leverage these and other examples to increase the visibility of NEPs as delivery mechanisms for core CWA programs.

1. A “menu” of ideas and case studies for the overlapping priorities of coastal resiliency, water quality and habitat restoration, provides useful direction to NEPs and states and can help the two programs generate project ideas and proposals to further achieve joint goals.

Highlights:

- EPA creates a federal partnership to build nationwide resilience to natural disasters (12) - and provides informational resources and case studies (13) that demonstrate how to align program goals and activities to create a cooperative, coordinated water protection and hazard mitigation approach.
- EPA signs an MOU with FEMA to streamline coordination between FEMA and SRF programs to help restore vital infrastructure more quickly in times of disaster.

2. Focused workgroups can tackle issues that are national in scope and develop policy recommendations for EPA leadership.

Highlight:

- As nutrient pollution is developing into a national crisis, interest was expressed at the 2018 ANEP Tech Transfer meeting to think collectively about actions NEPs could take to address the problem. EPA leadership was then invited to attend the 2019 winter EPA-ANEP meeting and expressed their interest in learning more about NEP non-regulatory, partnership-based approaches to dealing with nutrient pollution. In response to this interest, ANEP has established a Nutrient Management Workgroup in partnership with EPA. The mission of the group is to empower collective action to address the nutrient problem. This group can serve as a model for how to work with partners to drive collective action that encourages individual NEPs to also think nationally.

3. Representatives from the state CZMP network and/or CSO can serve as expert reviewers on project proposals that constitute federal investments in the coastal zone.

4. The NEPs can more fully integrate and leverage the work of the TFW program and the UWFP in collaborative efforts to protect coastal resources.

Highlight:

- EPA is exploring a partnership with the River Network to help coordinate between NEPs and the other partnership programs through an integrated water resource management approach for geographic systems.

5E. Conclusion

The findings of this report can help the 28 NEPs and 20 overlapping state CZMPs address the current and emerging challenges facing the nation's coastal places. The insights gained through this research can be applied to building stronger partnerships with states and the Urban Waters and Trash Free Waters programs.

Highlight:

- The NEP website and NEP Story Map (14) hosted by EPA currently displays Success Stories achieved through the NEP Approach to address common environmental challenges. This website is a potential platform to communicate the successes in this report that demonstrate how NEPs achieve environmental outcomes by building strong partnerships with states.
- EPA is preparing to launch the newest version of the How's My Waterway application that provides information about the conditions of local streams, lakes and other waters anywhere in the US and intended for broad usership. EPA staff is coordinating to include NEP restoration projects on this robust and nationally significant data portal.

In summary, leveraging the strengths of the two unique and complementary programs helps NEPs and CZMPs advance projects and programs that achieve multiple benefits – such as improving water quality and habitat, while also building more resilient communities. By working together with NEPs, CZMPs gain insights into EPA programs and better access to the full suite of EPA resources. Strong and sustained communication between NEPs and CZMPs helps to ensure that CCMP implementation is coordinated with state plans to create efficiencies and avoid duplication of efforts. Importantly, collaboration helps the two programs find opportunities to align funds in innovative ways and promote strategic investments in coastal watersheds to address mutual objectives. Overall, this report found that collaboration helps the two national programs realize on-the-ground successes they could not necessarily achieve alone. Through the development of this report, the EPA demonstrates its continued support for building and maintaining effective partnerships that empower states to share in the protection of vital environmental resources.

6. References and Resources

Section 1.

(1) Coastal Zone Act Reauthorization Amendments (CZARA) Section 6217

<https://www.epa.gov/nps/coastal-zone-act-reauthorization-amendments-czara-section-6217>

(2) Working Together FY2018 – 2022 US EPA Strategic Plan, Created Feb 2018 and Updated Sep 2019

<https://www.epa.gov/sites/production/files/2019-09/documents/fy-2018-2022-epa-strategic-plan.pdf>

Section 2.

(1) Urban Waters Federal Partnership <https://www.epa.gov/urbanwaterspartners>

(2) Trash Free Waters program <https://www.epa.gov/trash-free-waters>

(3) National Estuarine Research Reserve System <https://coast.noaa.gov/nerrs/>

(4) CZM Projects of Special Merit Competition - FY2019 <https://coast.noaa.gov/data/docs/funding/NOAA-NOS-OCM-2019-2005819-posted-10.19.2018.pdf>

Section. 3

(1) TNC Gulf Oyster Restoration

<https://www.nature.org/content/dam/tnc/nature/en/documents/OysterRestorationintheGulf.pdf>

(2) NERT <https://floridadep.gov/sites/default/files/NoelA-NERT.pdf>

(3) Hurricane Sandy project <https://www.nj.gov/dep/oclup/case-studies-projects/nj-ecol-solution-projects.html>

(4) CHNEP Volunteer Monitoring <https://floridadep.gov/rcp/aquatic-preserve/content/charlotte-harbor-estuaries-volunteer-water-quality-monitoring-network>

(5) MA No Discharge Zone <https://www.mass.gov/service-details/requirements-for-boaters-in-no-discharge-zones-ndzs>;
<https://www.mass.gov/service-details/designating-a-no-discharge-zone-ndz>

(6) Federal Consistency <https://coast.noaa.gov/czm/consistency/media/federal-consistency-overview.pdf>

(7) Special Area Management Plan <https://coastalsmartgrowth.noaa.gov/gettingstarted/samps.html>,
<https://coastalresilience.tamu.edu/home/wetland-protection/policy-framework/federal-framework/special-area-management-plans/>

(8) The NEP Approach https://www.epa.gov/sites/production/files/2015-09/documents/2009_12_23_estuaries_pdf_nep_brochure_timeless_new.pdf

(9) National CZMP Fact Sheet <http://www.coastalstates.org/csopublications/2018-czm-fact-sheet/>

Section 4.

(1) Community-Based Watershed Management https://www.epa.gov/sites/production/files/2015-10/documents/2007_04_09_estuaries_neprimeruments_chapter5.pdf

Section 5.

- (1) Moving Toward a Multi-Benefit Approach for Water Management <https://pacinst.org/wp-content/uploads/2019/04/moving-toward-multi-benefit-approach.pdf> -
- (2) 2013 Southwest Florida Regional Ecosystem Restoration Plan https://www.tbep.tech.org/38olf/9us0v_ivgd/dgev7863.dol
- (3) Clean Water SRF Funding Clean Water State Revolving Fund Projects Under Clean Water Act Section 320 Authority (National Estuary Program) https://www.epa.gov/sites/production/files/2019-04/documents/cwsrf_section_320_estuaries.pdf
- (4) Nonpoint Source Program and Grants Guidelines for States and Territories <https://www.epa.gov/sites/production/files/2015-09/documents/319-guidelines-fy14.pdf>
- (5) Recovery Potential Screening Tool <https://www.epa.gov/rps>
- (6) Healthy Watersheds Assessments <https://www.epa.gov/hwp/download-2017-preliminary-healthy-watersheds-assessments>
- (7) BTNEP and the Minnesota Department of Agriculture Under Agreement <https://btnep.org/wp-content/uploads/2017/12/December-2017-Newsletter.pdf>
- (8) NC – VA Memorandum of Understanding <https://apnep.nc.gov/our-work/outreach-and-engagement/interstate-collaboration-shared-waterways>
- (9) LIS Futures Funds <http://longislandsoundstudy.net/about/grants/lis-futures-fund/>
- (10) Climate Ready Estuaries Project summary table <https://www.epa.gov/cre/climate-ready-estuaries-partner-projects>
- (11) Preparing for Disaster: The National Estuary Program’s Role in Pre-Disaster Planning, Post-Disaster Recovery, and Hazard Mitigation https://www.epa.gov/sites/production/files/2018-11/documents/final_preparing_for_disaster_the_national_estuary_programs_role_in_pre-disast_.pdf
- (12) News Release from EPA regarding Federal Partnership for Nationwide Resilience - <https://www.epa.gov/newsreleases/epa-announces-federal-partnership-build-nationwide-resilience-natural-disasters>
- (13) Case studies on community approach to investments in mitigation and water resource management <https://www.epa.gov/green-infrastructure/integrating-water-quality-and-natural-hazard-mitigation-planning>
<https://www.epa.gov/green-infrastructure/building-resilient-communities-green-infrastructure-and-hazard-mitigation>
https://www.epa.gov/sites/production/files/2019-03/documents/combined_slide_deck_hazard_mitigation_508.pdf
- (14) NEP Map <https://www.epa.gov/nep/nepmap-user-guide>

Appendix A. Past Successes Summary Table

Exhibit A-1. Examples of past collaborations between individual NEPs and CZMPs as identified through conversations with managers and staff and through this research. The NEP host designation is shown, and the primary issue addressed through the collaboration is identified. NEP activities are grouped into the general action categories that demonstrate the NEP approach to watershed management.^{##}

NEP	State(s)	Host Type	Issues	NEP Action Categories	Success Stories
Mobile Bay*	Alabama	Nonprofit & Academic	Natural Infrastructure	Leverage Resources	MBNEP has contributed to many Alabama CZMP needs including conducting and publishing aquatic habitat studies and developing Living Shorelines permitting procedures. MBNEP also participates on the Coastal Management Program's 5-year self-evaluation as part of their Enhancement review. ADCNR also partners with MBNEP to publish Alabama Current Connection, a joint newsletter that highlights projects, Management Conference activities, and other issues of interest. MBNEP's Watershed Management Plans (Plans) inform coastal management decisions. A demonstration of the benefits of coordinating multiple programs under these Plans includes the achievement of National Flood Insurance Program discounts through the Community Rating System for local communities. MBNEP has also been instrumental in coordinating Deepwater Horizon RESTORE funds to ensure that these resources are aligned with the existing Plans – a model Alabama plans to use in other watersheds throughout the state
			Watershed Management Plans	Involve Stakeholders	
				Set Goals & Measure Progress	
				Implement CWA Programs	
Santa Monica	California	Nonprofit	Resiliency	Collaborate on Solutions	Local Coastal Programs (LCPs) are planning tools used by local governments to guide coastal development and are created and implemented in partnership with the Coastal Commission. Through this Action the SMBNEP is seeking to integrate adaptation strategies and natural infrastructure into LCP Land Use Plans and Implementation Plans. These Plans are evaluated by the Commission for consistency with the Coastal Act, the State's authorizing legislation for the CZMP.
			Natural infrastructure		
San Francisco	California	Local Government	Flood protection	Collaborate on Solutions	SFEP partnered with BCDC and other regional entities to examine ways to improve flood protection channels to better transport sediment. The goal of this effort was to improve sediment transport to wetlands and other shoreline habitats. The legacy of this project included efficient navigation of regulatory hurdles and improved pathways for innovative projects in the future. The innovative Flood Control 2.0 program resulted from this close collaboration – including creation of SediMatch, a match-up web tool that consists of a database and web interface to match available sediment with opportunities for beneficial reuse.
			Sediment Transport	Involve Stakeholders	

^{##} National Estuary Program Booklet <https://www.epa.gov/nep/national-estuary-program-booklet>

NEP	State(s)	Host Type	Issues	NEP Action Categories	Success Stories
Morro Bay	California	Nonprofit	Resiliency - sea level rise	Protect & Restore Habitat	MBNEP participates with public and non-profit partners in the purchase of land or easements in strategic locations to help guide development toward existing and strategically planned communities. MBNEP develops “greenbelts” around existing developed areas to help control encroachment of the watershed. This effort supports the California CZMP’s work in developing a framework for the protection of public trust lands for the future – by assessing impacts of sea level rise and hazard mitigation responses while ensuring public access continues. The State is concerned that as sea levels rise, access to public lands will be lost due to submergence. The goal of the project is to develop new information for protecting public access to public trust lands and resources, even as the climate changes.
			Land management		
Long Island Sound Study	Connecticut	Federal Government	Spatial planning	Set Goals & Measure Progress	The LISS CCMP outlines the need to manage LIS using sound science and cross-jurisdictional governance that is inclusive, adaptive, innovative, and accountable. To support this priority area, LISS develops and provides a compendium of environmental indicators available online – including water quality, wildlife, climate change, land use, and habitat. LISS also conducted a Benthic Mapping Program that provided a variety of geologic, ecologic and physical data used by the state for spatial planning efforts. CTDEEP used the results from the LISS compendium to address their assessment of the ocean resources found in LIS. Connecticut plans for future investments to leverage the historic data, provided in part by LISS, to address changes and threats.
	New York		Ocean resources	Collaborate on Solutions	
Narragansett Bay	Rhode Island	Nonprofit Interstate Commission	Resiliency – climate change	Set Goals & Measure Progress	NBEP serves as an important forum in the region – working with partners to foster the synthesis, communication, and cooperation on environmental issues in the Bay. In 2017, NBEP developed a report entitled State of Narragansett Bay and Its Watershed and NBEP is actively working to build on the progress made in developing the report to continue enhancing their role in watershed science. This report included a focus on providing climate change information specific to the Bay for local and bi-state decision-makers.
	Massachusetts			Collaborate on Solutions	
Center for Inland Bays*	Delaware	Nonprofit	Wetlands	Protect & Restore Habitat	CIB outlines 13 new or revised goals and objectives that will help CIB protect, restore, and enhance living resources by improving water quality, controlling land use, and reducing habitat. These include developing no net loss wetlands policies, attaining maximum wetlands preservation, developing regulations to protect wetlands, and strengthening enforcement of existing wetland protection regulations. CIB maintains data regarding sediment elevations in wetlands and these contribute to a consolidated dataset and network of resources that can be leveraged by all users. The Delaware CZMP is implementing a complementary strategy to determine the economic impacts of coastal resilience actions that will provide communities with information regarding a cost-benefit analysis of wetlands and infrastructure improvements. The goal is to improve community resilience to the impacts of storms and flooding by providing data to inform local planning and ordinances.
			Resiliency	Set Goals & Measure Progress	

NEP	State(s)	Host Type	Issues	NEP Action Categories	Success Stories
Partnership DE Estuary*	Delaware	Nonprofit	Resiliency	Involve Stakeholders	Delaware's CZMP has formed several workgroups in partnership with PDE that focus on topic areas of mutual interest - including the Resilient and Sustainable Communities League (RASCL) and the DE Living Shoreline Committee. PDE maintains the RASCL website for the collaborative network of 14 entities, including PDE, DNREC, and the Center for the Inland Bays NEP. RASCL serves as a forum that brings communities to the table to build capacity and facilitate decision-making about land use, emergency plans, and allocation of resources.
	New Jersey		Natural infrastructure	Collaborate on Solutions	
	Pennsylvania				
Coastal and Heartlands*	Florida	Local Government	Restoration	Leverage Resources	Habitat restoration of coastal and estuarine areas is a priority for CHNEP and the state, and the NEP has worked with local, state and nonprofit partners like The Nature Conservancy to develop and coordinate restoration efforts in Southwest Florida. An example of this effort is the Oyster Habitat Restoration Program – created by the Southwest Florida Oyster Working Group in 2012 to address the nearly total loss of historic oyster habitat in the region. Monitoring of several restoration projects is ongoing, and a comprehensive oyster habitat mapping initiative will be completed by 2020. This partnership coupled state resources with the NEP strengths of leading strong partnership-driven meetings that bring all necessary stakeholders to the table for a consensus-based approach to the issue. CHNEP joined the other southwest Florida NEPs in developing a plan to advise the Gulf Coast Ecosystem Restoration Council and the state on restoration needs following the Deepwater Horizon oil spill.
			Monitoring	Set Goals & Measure Progress Protect & Restore Habitat	
Indian River Lagoon*	Florida	Regional-State-Local Partnership	Natural Infrastructure	Involve Stakeholders	IRL partners with state agencies to implement much of their CCMP. The Aquatic Preserve of Northeast Florida, an extension of the CZMP, currently has staff funded through IRL. This added staff capacity is seen as a major benefit to working with the NEP but additionally they work together to pursue grant opportunities that meet both state goals and implement the IRL CCMP. Successful examples of FLDEP and IRL working together in the past are plentiful and include the installation of living shorelines projects, collaborating on education and outreach efforts and providing public access to beaches for people with limited mobility.
			Public Access	Leverage Resources	
Sarasota Bay*	Florida	Regional-State-Local Partnership	Restoration	Leverage Resources	Florida and the other Gulf States were presented a unique challenge and opportunity following the Deepwater Horizon Oil Spill to administer funds from the Resources and Ecosystems Sustainability, Tourist Opportunities, and Revived Economies Act (or RESTORE Act) in an impactful and strategic way. In Southwest Florida, SBEP joined the other NEPs in developing a plan to advise the Gulf Coast Ecosystem Restoration Council and the state on restoration needs. The three NEPs leveraged their technical and science advisors in reviewing, vetting, and ranking 280 proposals from cities, counties, nonprofits, universities and others. The 2013 Southwest Florida Regional Ecosystem Restoration Plan is the result of this work - the projects proposed expand on work identified in the CCMPs and meet state restoration priorities.

NEP	State(s)	Host Type	Issues	NEP Action Categories	Success Stories
Tampa Bay*	Florida	Regional-State-Local Partnership	Nitrogen management	Collaborate on Solutions	TBEP has worked closely with the Florida CZMP on a variety of issues since their creation in 1991. Notably, TBEP developed the Nitrogen Management Consortium that has contributed significantly to addressing long-term nitrogen management in the Bay – seen as a success story by CZMP. TBEP also convened with six other regional, state and local entities to develop the ONE BAY Resilient Communities Working Group that meets several times a year to sustain a dialogue about regional resiliency. This collaboration works to help communities adapt to and prepare for the impacts of sea level rise. To facilitate community decision-making, TBEP developed the Sea Level Rise Visualization Tool that provides data and maps that illustrate the effects of sea level rise on Bay habitats. TBEP also joined the other two southwest Florida NEPs in developing a plan to advise the Gulf Coast Ecosystem Restoration Council and the state on restoration needs following the Deepwater Horizon oil spill.
			Resiliency – sea level rise	Involve Stakeholders	
				Leverage Resources	
Barataria-Terrebonne	Louisiana	Academic	Beneficial use of dredged material	Collaborate on Solutions	Hydrologic modification is described as the “linchpin” problem for BTNEP, and subsequent losses of habitat and changes in living resources through sediment reductions and eutrophication are consequences of the altered water flows. The BTNEP system has lost a total of 866 square miles since 1935 – and no other place on earth is losing land more rapidly. This issue is widespread across coastal LA, and statewide policies are working to address this challenge. BTNEP’s habitat restoration projects influenced the development of the Louisiana Comprehensive Master Plan – a protection and restoration strategy for the Louisiana coastline. The CZMP also works to implement the objectives of the Master Plan – such as through a beneficial use policy that requires private applicants dredging more than 25,000 cubic yards of sediment place the material in coastal restoration projects or pay to support restoration. Since this rule was instated in 2009 the CZMP has enforced the policy, resulting in greater than 7 million cubic yards of material being placed and nearly 2,000 acres of coastline created.
			Resiliency	Protect & Restore Habitat	
			Restoration		
Buzzards Bay*	Massachusetts	State Government	Floodplain management	Leverage Resources	The state benefits from hosting BBNEP within the Massachusetts CZMP, as NEP staff is able to provide scientific information for management decisions and, because they are non-regulatory, they can be somewhat more nimble in becoming involved in high profile projects. BBNEP benefits from the state’s financial and administrative support. This arrangement ensures that the lines of communication among BBNEP and the state are strong. BBNEP and MassCZMP collaborated on a project to evaluate the potential expansion of the existing FEMA 100-year floodplain based on increases in sea level. This effort identified vulnerable infrastructure which subsequently led to local action and state vulnerability grant funding to municipalities to protect investments in coastal infrastructure. This is part of a larger effort by BBNEP to evaluate impacts of sea level rise on coastal habitats and localities. Addressing the impacts from coastal hazards is a high priority for MassCZMP
			Sea level rise	Collaborate on Solutions	
			Coastal hazards		

NEP	State(s)	Host Type	Issues	NEP Action Categories	Success Stories
Massachusetts Bays*	Massachusetts	State government	Regional coordination	Collaborate on Solutions	In the case of both MassBays and Massachusetts CZMP, their geographic areas are broken into multiple regions and the regional staff have local knowledge of the municipalities and resources within their jurisdiction. This arrangement ensures that the lines of communication between MassBays and the state are strong both at the state and regional level. By being housed within a state agency, MassBays benefits from the state's financial and administrative support. The state benefits from hosting MassBays because as a non-regulatory entity the NEP staff are able focus on science and be more involved with local advocacy and nonprofit groups. Working closely and coordinating often have allowed MassBays and the MassCZMP to carve out individual niches that play to their expertise and find opportunities to leverage each other's strengths through collaboration. These collaborations included a tide gate inventory for a wetland's restoration project, a herring monitoring network, and a coordinated approach to addressing water quality issues in Cape Cod. The tide gate inventory was funded by a NOAA Project of Special Merit that resulted from the teamwork between the programs.
			Restoration	Leverage Resources	
			Inventory Resources	Set Goals & Measure Progress	
Maryland Coastal Bays	Maryland	Nonprofit	Beneficial use of dredged material	Set Goals and Measure Progress	The Maryland CZMP is networked across several agencies and departments encompassing coverage of the entire coast of MD. This decentralized approach has led to the formation of many partnerships, including between the state and MCB. Since MCB's formation and the passing of the first CCMP in 1999, MCB has operated much like a Special Area Management Plan (SAMP), a component of CZMA, and serves in lieu of a SAMP for the state. Maryland has found that while a SAMP can be an effective management tool, MCB accomplishes many of the same goals within a focused geographic area, thus creating efficiencies between the two programs. CCS tracks progress towards implementation of the MCB CCMP and works to support actions that further the goals of the CCMP. Under the authority of the Clean Water Act, MCB brings a habitat focus to projects they conduct with the state. This was an important component of a beneficial use project for Skimmer Island that MCB coordinated with MDNR. In this effort, MCB was responsible for monitoring and managing the return of nesting birds to spoil islands created from the resources generated by a dredge project conducted by the state and the Corps of Engineers.
			Special Area Management Plan	Collaborate on Solutions	
			Monitoring Restoration Projects		
Albemarle-Pamlico Sound	North Carolina	State Government	Regional coordination	Involve stakeholders	Just as water flow does not follow political boundaries, APNEP serves as an important linkage between NC and VA as the Albemarle Sound lies in NC but the APNEP watershed extends into VA. In 2017, APNEP facilitated a Memorandum of Understanding (MOU) between NCDEQ, NCDNCR, and Virginia's Secretary of Natural Resources. This was a renewal of a shared commitment to work together to address shared environmental issues in the river basins that flow into the Albemarle Sound. Expanding on an earlier MOU this renewal included new priorities including climate change and sea level rise, nonpoint source pollution, and watershed protection and stewardship.
	Virginia				

NEP	State(s)	Host Type	Issues	NEP Action Categories	Success Stories
Casco Bay	Maine	Academic	Water quality	Set Goals & Measure Progress	CBEP has been working to address water quality in the Bay – especially the impacts of nutrient pollution on dissolved oxygen and links to coastal acidification. Past State of the Bay reports that characterize the conditions in the estuary have been used by the state to inform management decisions regarding how to prioritize and address coastal stressors. CBEP has also produced a stream barrier assessment entitled Casco Bay Watershed Fish Barrier Priorities Atlas that helped guide and prioritize stream restoration at the local level, in support of Maine CZMP priorities.
			Habitat restoration	Collaborate on Solutions	
Piscataqua Region*	New Hampshire	Academic	Water quality monitoring	Implement CWA Programs	Given the focused nature of the NH coastline, PREP and the New Hampshire CZMP are close partners on a wide range of projects and programs. These include coordinating to host a shared NOAA Coastal Management Fellow, flood forecasting in Hampton-Seabrook estuary, King Tide Photo Contests, and estuarine water quality monitoring. PREP provides feedback on the 5-year CZM Program Enhancement stakeholder evaluation process and NHDES contributes to the development and implementation of the PREP CCMP. Therefore, these programs are routinely working to align priorities and finding opportunities to complement each other’s strengths.
	Maine		Photo contests	Involve Stakeholders	
			Floodplain management	Collaborate on Solutions Leverage Resources	
Barnegat Bay*	New Jersey	Academic	Water quality	Implement CWA Programs	BBP has partnered with the state on a variety of projects and planning efforts in the past. These include inclusion in the state’s Water Quality Data Exchange System, aquaculture initiatives, and tidal marsh restoration efforts. Most notably, following Hurricane Sandy the state received a NFWF grant entitled “Building Ecological Solutions to Coastal Community Hazards.” BBP and 17 federal, state, and local partners worked in roughly 50 communities and developed guidance how to look at green areas as multi-benefits resource for resilience and ecological value. This team also implemented projects on the ground with trainings and ongoing monitoring to collaborate at the state level to set baseline for marsh monitoring and coordination. The project was awarded the “Outstanding Community Engagement or Education Award” from the American Planning Association.
			Natural Infrastructure	Involve Stakeholders	
			Habitat restoration	Protect & Restore Habitat	
			Coastal Hazards - recovery		
NY-NJ Harbor	New York	Nonprofit	Public access	Collaborate on Solutions	HEP’s watershed is located within the most densely developed metropolitan region of the country. This means that many of HEP’s communities are highly urbanized and represent environmental justice communities with significant barriers to public participation and access to coastal and estuarine resources. HEP has worked with the states to create public access opportunities by working directly with municipalities to developed locally-relevant public access plans, especially for tidal areas. Providing public access for recreation is a key element of the CZMP.
	New Jersey				

NEP	State(s)	Host Type	Issues	NEP Action Categories	Success Stories
Peconic Estuary	New York	Nonprofit	Nutrient management	Implement CWA Programs	Nitrogen pollution is a major issue impacting the water quality of the Peconic Estuary – with pollution originating from both point and nonpoint sources. Since 2017, the state has funded a Septic Improvement Program in partnership with Suffolk County, within the PEP watershed. PEP has worked with local groups to promote septic system best management practices to help reduce nitrogen pollution within the estuary and beyond. Improving water quality through these and other practices is a top priority in the development of the new PEP CCMP that representatives from the CZMP are participating on through their role in the PEP Management Conference.
				Involve Stakeholders	
Lower Columbia Estuary*	Oregon	Nonprofit	Sediment management	Collaborate on Solutions	In the early 2000’s a bi-state effort was initiated to resolve challenges related to sand management and dredging at the mouth of the Columbia River. Environmental agencies from both states worked together to develop a Regional Sediment Management Plan, an adaptive management approach to dredging and beneficial use practices. This effort has involved EPA’s Regional office and the LCEP in ongoing implementation of the Plan. Notably, LCEP funded a feasibility study of proposed upland disposal sites for dredge materials. Continuing to utilize dredge material as a resource for habitat enhancement and restoration is an ongoing priority for LCEP.
	Washington		Beneficial use of dredged material	Set Goals & Measure Progress	
Tillamook	Oregon	Nonprofit	Estuary management	Collaborate on Solutions	Oregon’s CZMP works to protect the long-term values, diversity and benefits of estuaries and associated wetlands through the development of Estuary Plans for the 22 major estuaries in the state. Each estuary is broken into management units that is defined by the characteristics and uses to ensure the appropriate protections are instituted. In 2014, DLCD conducted an evaluation of their regulatory framework for managing estuaries. TEP participated in an advisory reviewer role - evaluating the policies and actions of the Oregon CZMP as they relate to estuary management. The results will be used to begin modernization of the local plans that are driven by local needs and priorities.
San Juan Bay*	Puerto Rico	Nonprofit	Water quality monitoring	Implement CWA Programs	The NEP partners closely with the Coastal Zone Division (CZMP) whose Director serves as a Chairman on the SJBEP Management Conference. This close working relationship helps to ensure that coastwide priority issues are incorporated into the SJBEP workplan and CCMP. Additionally, this provides an opportunity for the protocols developed by SJBEP to be transferred to other estuaries throughout the island. Following Hurricane Maria, SJBEP worked to evaluate water quality throughout the watershed to identify bacterial contamination – a major concern for local communities. SJBEP was able to act rapidly following the storm because they had previously developed a robust monitoring protocol.
			Coastal Hazards - response	Collaborate on Solutions	
Coastal Bend Bays	Texas	Nonprofit	Erosion	Protect & Restore Habitat	Many of CCBEP’s ongoing programs focus on conservation, stewardship, and habitat protections. In 2016, CBBEP launched a project in partnership with Texas CZMP to address habitat loss in Nueces Bay. This project built on earlier work by CBBEP to

NEP	State(s)	Host Type	Issues	NEP Action Categories	Success Stories
			Habitat restoration		protect Causeway Island from erosion by designing and engineering a more long-term solution to wind and wave erosion and secure sediment. The island serves as important nesting and roosting habitat for shorebirds. Texas CZMP funded 75% of the project to enhance critical areas of the coastline.
Galveston Bay	Texas	State government	Conservation	Protect & Restore Habitat	GBEP has been a recipient of funds from GLO's Coastal Impact and Assistance Program that funds the conservation of coastal land. These funds are also used to implement projects with multi-level benefits, including mitigating against coastal hazards – a top priority for the Texas CZMP. GBEP is also an important stakeholder providing feedback for the CZMP's 5-year Program Enhancement review process.
			Coastal hazards	Collaborate on Solutions	
Puget Sound*	Washington	State government	Floodplain management	Involve Stakeholders	Floodplain management and restoration is a priority for PSP, and their environmental indicators shows progress on improving floodplain health in the region. This progress can be credited in part to the Floodplains by Design initiative - a public-private partnership led by PSP, the CZMP, and The Nature Conservancy. Floodplains by Design is working to enable communities to consider the environment and develop tailored solutions for floodplain management for different watersheds. Collaboration is the hallmark of this program with each of the entities contributing financial and personnel resources to promote healthy floodplains in the Puget Sound region.
				Leverage Resources	
				Collaborate on Solutions	

Exhibit A-2. Summary of NEP value-added through collaboration with CZMP extracted from the table above.

How the NEP Works – A Collaborative, Effective, Efficient, and Adaptable Coastal Ecosystem-Based Program					
Involve Stakeholders	Implement CWA Programs	Leverage Resources	Protect & Restore Habitat	Set Goals & Measure Progress	Collaborate on Solutions
<ul style="list-style-type: none"> • Publish communications (MobileBay NEP, PREP) • Support multi-stakeholder workgroups (PDE, TBEP) • Facilitate bi-state MOU (APNEP) • Provide training and stakeholder outreach (BBP, PEP) • Coordinate public-private partnership (PSP) 	<ul style="list-style-type: none"> • Develop and implement Watershed Management Plans (Mobile Bay NEP) • Coordinate implementation of CWA 319 projects (Mobile Bay NEP) • Develop and implement nutrient management strategies (TBEP, LISS, PEP) • Support water quality monitoring programs (LISS, SJBEP, PREP, BBP) 	<ul style="list-style-type: none"> • Coordinate use of Deepwater Horizon funds (MobileBay NEP, CHNEP, SBEP, TBEP) • Hire shared staff positions (IRL, LISS, BBNEP, MassBays NEP, PREP) • Seek collaborative grant opportunities (MassBays NEP, BBP) • Contribute financial and personnel resources to a project (PSP) 	<ul style="list-style-type: none"> • Acquire land (MBNEP, GBEP) • Develop habitat protective policies (CIB) • Coordinate restoration programs (BBP, CHNEP) • Design and engineer habitat protection projects (CBBEP, BTNEP) 	<ul style="list-style-type: none"> • Research habitat trends and impacts (MobileBay NEP, LCEP) • Synthesize datasets (LISS) • Monitor restoration projects (CHNEP, MCB) • Inventory and assess resources (MassBays NEP, CBEP) 	<ul style="list-style-type: none"> • Develop decision-making tools (SFEP, TBEP, PSP) • Integrate across state programs (SMB, BTNEP, MCB, SJBEP) • Develop reports for decision-makers (NBEP, CBEP) • Evaluate state or federal programs and produce recommendations (BBNEP, MassBays NEP, CBEP, PREP, GBEP, BTNEP, TEP) • Create and implement local plans or protocols (HEP, LCEP, SJBEP)

Appendix B. Main Discussion Topics from NEP-CZM Conversations

CZM and NEP Priorities and Current Direction

- Considered organizational structure, including placement within a larger state agency and any current governor, commissioner-led, or mayoral directives for the program
- Discussed priorities the organization is currently working on and who major partners on these issues may be (e.g., state and local agencies, non-profits)
- For CZMPs considered whether the organization partners with other EPA programs (e.g., Urban Waters, Trash Free Waters)

Opportunities for Collaboration

- Looked at opportunities for enhanced collaboration between NEPs and CZMs
 - Potential opportunities for increased/enhanced collaboration – top priorities
 - Potential challenges for increased collaboration

Value Added

- Considered main value added by collaboration between NEPs and CZM programs – broadly or in terms of specific projects
- Discussed whether the institutional structure of the NEP (e.g., hosting arrangement) shapes or influences opportunities for collaboration and how
- Awareness of any prior examples of successful NEP-CZM collaboration
- Shared how the collaboration(s) came about and any results

Overlapping Areas of Interest

- The authors identified three topic areas that may have potential for a deeper investigation: resiliency/disaster preparedness/coastal hazards; coastal wetlands-related issues; and environmental justice.
 - Considered opportunities for NEP-CZM collaboration in any or all of these areas
 - Shared awareness of examples of collaboration in these areas
 - Discussed any other opportunities moving forward
- Shared other topics or priority areas not considered above

Follow-up

- Shared other individuals or locations with examples of successful or potential collaborations