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Committee on Transportation and Infrastructure

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June 26, 2008

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SUMMARY OF SUBJECT MATTER

TO: Members of the Subcommittee on Water Resources and Environment

FROM: Subcommittee on Water Resources and Environment Staff

SUBJECT: Hearing on Protecting and Restoring America's Great Waters, Part I: Coasts and Estuaries

PURPOSE OF HEARING

On Thursday, June 26, 2008, at 2:00 p.m., in Room 2167 Rayburn House Office Building, the Subcommittee on Water Resources and Environment will receive testimony from representatives from the U.S. Environmental Protection Agency, the National Oceanographic and Atmospheric Administration, the Puget Sound Partnership, the San Francisco Public Utility Commission, the Association of National Estuary Programs, and other stakeholder organizations on the protection and restoration of the nation's coasts and estuaries.

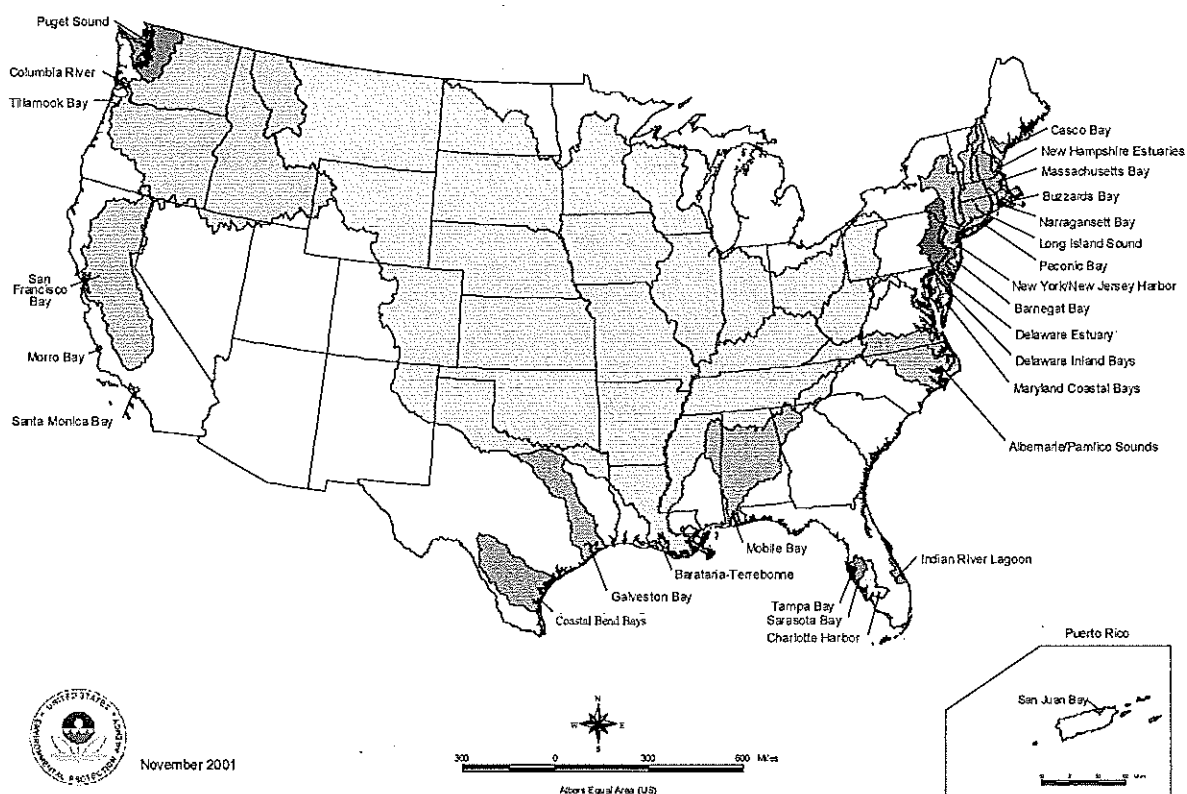
BACKGROUND

This memorandum summarizes the state of the nation's coasts and estuaries, and federal programs to protect and restore them. It then focuses in more detail on efforts to protect the Puget Sound.

Introduction – EPA's NEP Program

In 1987, Congress established the National Estuary Program, as an amendment to the Clean Water Act (section 320), to promote comprehensive planning efforts to help protect nationally significant estuaries in the United States that are deemed to be threatened by pollution, development, or overuse. There are currently 28 National Estuary Program (NEP) estuaries in the program. The United States Environmental Protection Agency (EPA) implements this program, and oversees NEP activities in each of the 28 estuaries.

National Estuary Program Watersheds



Estuaries and Coasts

Estuaries are bodies of water that receive both inflows from rivers and tidal inflows from the ocean. They are, therefore, transition zones between fresh water from rivers and saline water from the ocean.

The mixing of fresh and salt water provides a unique environment that supports diverse habitats for a wide variety of living resources, including plants, fish, and wildlife. Many fish and shellfish species depend on the sheltered habitat provided by estuaries, as well as the mix of saline and fresh water. Estuaries are often used as places for these species to spawn, and for their young to grow and develop. These areas also serve as habitat and breeding areas for hundreds of species of birds and other wildlife, including marine mammals.

The rich array of resources found in estuarine environments provides a foundation for the economy of many coastal areas. Tourism, fisheries, and other coastal commercial activities depend on the resources provided by estuaries. Most commercially and recreationally important fish and shellfish species, such as striped bass, shad, salmon, sturgeon, shrimp, crabs, lobster, clams, oysters, mussels, and bay scallops, depend on estuaries for stages of their life cycles. According to the National Oceanographic and Atmospheric Administration (NOAA) and the National Research Council (NRC), estuaries provide habitat for 75% of the U.S. commercial fish catch and 80-90% of

the recreational fish catch. Estuaries also provide cultural and recreational opportunities that include boating, fishing, swimming, surfing, and bird watching.

The coastal areas surrounding estuaries are amongst the most populated areas in the nation. Collectively, the nation's coastal counties account for only 13% of the total contiguous land area of the United States. However, 43% of the population lives in these coastal areas.¹

Estuaries and coastal areas are central to the nation's economy. According to economic analyses performed by Restore America's Estuaries, coastal counties account for 40% of the employment and 49% of the economic output for the nation. The University of California and the Ocean Foundation have determined that beach-going produces between \$6 and \$30 billion, recreational fishing between \$10 and \$26 billion, and coastal wildlife viewing between \$4.9 and 49 billion per year. Louisiana State University's Center for Energy Studies reports that 30% of U.S. crude oil production, 20% of U.S. natural gas production, and 45% of U.S. petroleum refining capacity lies within a few miles of the Gulf of Mexico coastal zone. The Woods Hole Oceanographic Institute's Marine Policy Center reports that U.S. ports handled over \$800 billion in trade in 2003. The University of Maryland has found that a significant proportion of the ten billion pounds of commercial fish landings in 2004 are dependent on estuaries. This was worth over \$3.8 billion, unprocessed. Finally, a 2004 analysis from Penn State found that beachfront proximity increased the value of a property by 207%, compared to a similar property two blocks away. A bayfront location resulted in a 73% increase in value, compared to a similar property two blocks away.

State of the Nation's Coasts and Estuaries

EPA assesses the state of the nation's coastal resources through its *National Coastal Condition Reports* (NCCR). The NCCRs rely on a series of indicators to measure coastal resource health using National Coastal Assessment (NCA) monitoring data.

Indicators used in each of the NCCRs to determine coastal resource health include indexes for water quality, sediment quality, benthic species, fish tissue contaminants, and coastal habitat. The water quality index is based on five water quality component indicators: dissolved inorganic nitrogen, dissolved inorganic phosphorus, chlorophyll, water clarity, and dissolved oxygen. The sediment quality index is based on three sediment quality component indicators: sediment toxicity, sediment contaminants, and sediment total organic carbon. The benthic index indicates the condition of the benthic community (organisms living in estuarine sediment) and can include measures of benthic community diversity, the presence and abundance of pollution-tolerant species, and the presence and abundance of pollution-sensitive species. The fish tissue contaminants index indicates the level of chemical contamination in target fish and/or shellfish species. The coastal habitat index is based on the average of the mean long-term, decadal wetland loss (1780-1990) and the most recent decadal wetland loss rate (1990-2000). The NCA rating scores are developed for each of these indicator indexes on a 5-point scale.

¹ These figures are based on only marine coastal counties. Counties bordering the Great Lakes were considered non-coastal counties. Including those counties would increase the percentage of coastal counties that make up the total land area of the U.S., but would likely boost the total percentage of the population that lives along coastal areas.

NCCR I, released in 2001, reported that the nation's coastal resources were in poor to fair condition.² NCCR II, released in 2004, showed a slight improvement in the health of national coastal resources and rated them in fair condition.³ EPA's draft NCCR III⁴ reports an overall rating of fair for the nation's coastal resources.

The draft NCCR III also rates the coastal waters of geographic regions. Across all indicators, the Northeast Coast,⁵ the Gulf Coast,⁶ and the Great Lakes⁷ regions are rated fair to poor; the Southeast Coast⁸ and West Coast regions⁹ are rated fair; Hawaii and south-central Alaska are rated good; and Puerto Rico is rated poor.

The draft NCCR III provides regional breakdowns by coastal resource health indicators.

Water Quality Index: Nationally, the water quality index for coastal waters is rated good to fair. The percent of coastal area rated poor for water quality is 0% in south-central Alaska to 14% in the Gulf Coast region. Puerto Rico and the Gulf Coast region are rated poor; south-central Alaska is rated good; Hawaii is rated fair to good; and all other regions are rated fair.

Sediment Quality Index: Nationally, the sediment quality index is rated fair. Regionally, the Gulf Coast, Great Lakes, and Puerto Rico are rated poor; the West and Northeast Coasts are rated fair to poor; the Southeast Coast is rated fair; Hawaii is rated good to fair; and the south-central Alaska coast is rated good.

Benthic Index:¹⁰ Nationally, the benthic index is rated fair to poor. Poor benthic conditions are observed in the Gulf and Northeast Coast, and Puerto Rico regions. The Southeast and West Coast regions are rated good.

Coastal Habitat Index:¹¹ Nationally, the coastal habitat index is rated poor. The Northeast Coast region is rated fair to good; the Southeast Coast region is rated fair; the Great Lakes region is rated poor to fair; and the Gulf and West Coast regions are rated poor.

Fish Tissue Contaminants Index:¹² Nationally, the fish tissue contaminants index for coastal waters is rated fair. Eighteen percent of the stations where fish were caught rated poor for this indicator. Regionally, the Gulf Coast region and south-central Alaska rated good; the Southeast

² Data collected from 1990-1996, and represented 70% of the nation's coterminous coastal waters.

³ Data collected from 1997-2000, and were representative of 100% of the coastal waters of the 48 coterminous states, as well as Puerto Rico.

⁴ Reflects data collected from 2001-2002.

⁵ Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, New Jersey, Delaware, Maryland, Virginia

⁶ Texas, Louisiana, Mississippi, Alabama, Florida (Gulf coast)

⁷ Minnesota, Wisconsin, Illinois, Indiana, Michigan, Ohio, Pennsylvania, New York

⁸ North Carolina, South Carolina, Georgia, Florida (Atlantic coast)

⁹ California, Oregon, Washington

¹⁰ Data unavailable for south-central Alaska or Hawaii.

¹¹ Updated coastal habitat index results were unavailable for the release of the Draft NCCR III. Results used are from the NCCR II. Results and ratings for south-central Alaska, Hawaii, and Puerto Rico were not reported.

¹² Fish tissue contaminants index results were not reported for Puerto Rico or Hawaii (or within the Gulf Coast and Southeast Coast regions, for Florida or Louisiana.)

Coast region rated fair to good; the Great Lakes region rated fair; and the Northeast and West Coast regions rated poor.

State of National Estuary Program Estuaries: EPA’s 2006 National Estuary Program Coastal Condition Report reports on the health of coastal resources of those estuaries in EPA’s NEP. Based on a five-point scale (1 poor, 5 good), EPA reports that the overall condition of the NEP estuaries is fair. The table below provides the numeric ratings of NEPs by region across the coastal resource indicators discussed above.¹³

Regional and National Rating Scores for Indices of Estuarine Conditions and Overall Condition for the Nation’s NEP Estuaries^{14 15}

Index	Northeast Coast	Southeast Coast	Gulf Coast	West Coast	Puerto Rico	United States
Water Quality Index	3	5	3	3	3	3.6
Sediment Quality Index	1	4	2	1	1	2.1
Benthic Index	1	3	2	5	1	2.7
Fish Tissue Contaminant Index	1	4	4	1	1	2.6
OVERALL CONDITION	1.5	4.0	2.75	2.5	1.5	2.7

Impairment Drivers: While each estuary and coastal area is unique, EPA has identified a set of environmental problems and challenges that are common to many estuaries and regions.

- *Nutrient Overloading:* While nutrients such as nitrogen and phosphorus are necessary for the growth of plants and animals, in excess they can contribute to algal blooms, low dissolved oxygen levels, and fish disease. Excess nutrients stimulate the growth of algae. After the algae die, the decomposition process uses the dissolved oxygen found in the water, resulting in low oxygen zones. Excessive algae can also block light from penetrating into the water. Sources of excessive nutrients include point and non-point sources such as sewage treatment plant discharges, stormwater runoff from lawns and agricultural lands, faulty or leaking septic systems, sediment in runoff, animal wastes, atmospheric deposition originating from power plants or vehicles, and groundwater discharges.
- *Pathogens:* Disease carrying pathogens such as viruses, bacteria and parasites can harm fish, shellfish, the consumers of fish and shellfish, and human users of the water such as swimmers, surfers, or waders. Sources of pathogens include urban and agricultural runoff, boat and marina waste, faulty or leaky septic systems, sewage treatment plant discharges,

¹³ The 2006 National Estuary Program Coastal Condition Report does not include a Coastal Habitat Index indicator.
¹⁴ Rating scores are based on a 5-point system, where a score of less than 2.0 is rated poor; 2.0 to less than 2.3 is rated fair to poor; 2.3 to 3.7 is rated fair; greater than 3.7 to 4.0 is rated good to fair; and greater than 4 is rated good.
¹⁵ Source: EPA National Estuary Program Coastal Condition Report (2006), p. ES.7

combined sewer overflows, recreational vehicles or campers, illegal sewer connections, and waste from pets or wildlife.

- *Toxic Chemicals:* Toxic substances such as metals, polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), heavy metals, and pesticides can impact the health of humans, fish, shellfish, and benthic organisms. Consumption advisories and the closure of fisheries and shellfisheries may occur as a result of dangerous levels of toxic substance in estuarine and coastal areas. These substances enter waterways through stormdrains; industrial discharges and runoff from lawns, streets and farmlands; sewage treatment plants; and from atmospheric deposition. Many toxic contaminants are also found in sediments and are resuspended into the environment by dredging and boating activities.
- *Habitat Loss & Degradation:* The health and biodiversity of estuarine areas is largely dependent on the maintenance of high-quality estuarine habitat. Habitat provides essential food, cover, migratory corridors, and breeding and nursery areas for a broad array of coastal and marine organisms. In addition, these habitats also perform other important functions such as water quality and flood protection, and water storage. Threats to habitat include conversion of open land and forest for commercial development and agriculture, forestry, highway construction, marinas, diking, dredging and filling, damming, and bulkheading. Wetland loss and degradation caused by dredging and filling have limited the amount of habitat available to support healthy populations of wildlife and marine organisms. In addition, habitat loss can result in increased loadings of sediment, nutrients, and other stressors into estuaries.
- *Introduced Species:* Non-native species that are introduced into an estuarine environment can alter the estuarine ecosystem balance through over-competition and predation of native species. The overpopulation of some introduced herbivorous species has resulted in overgrazing of wetland vegetation and the resultant degradation and loss of marsh in some estuaries. Sources of non-native species into estuaries include ship ballast discharges, marine aquaculture and the aquarium trade.
- *Alteration of Natural Flow Regimes:* Alteration of the natural flow of fresh water into estuaries as a result of human water resource decisions can adversely impact estuarine water quality and the distribution of living estuarine resources. Too much or too little freshwater can adversely affect fish spawning, shellfish survival, bird nesting, seed propagation, and other seasonal activities of fish and wildlife. In addition to changing salinity levels, inflow provides nutrients and sediments that affect the overall productivity of the estuary.
- *Declines in Living Estuarine Resources:* The decline of living estuarine resources, including sea grasses, fish, shellfish, and benthic organisms, can have ripple effects on those species that depend on those species for food or habitat. For example, some migratory bird species consume the eggs of horseshoe crabs. Declining numbers of horseshoe crabs in the Delaware Bay, however, are adversely affecting the food source for the second largest stop-over population of migratory birds in North America. In other words, estuarine stressors that negatively impact particular keystone species in an estuary can have adverse cascading effects farther up the food chain.

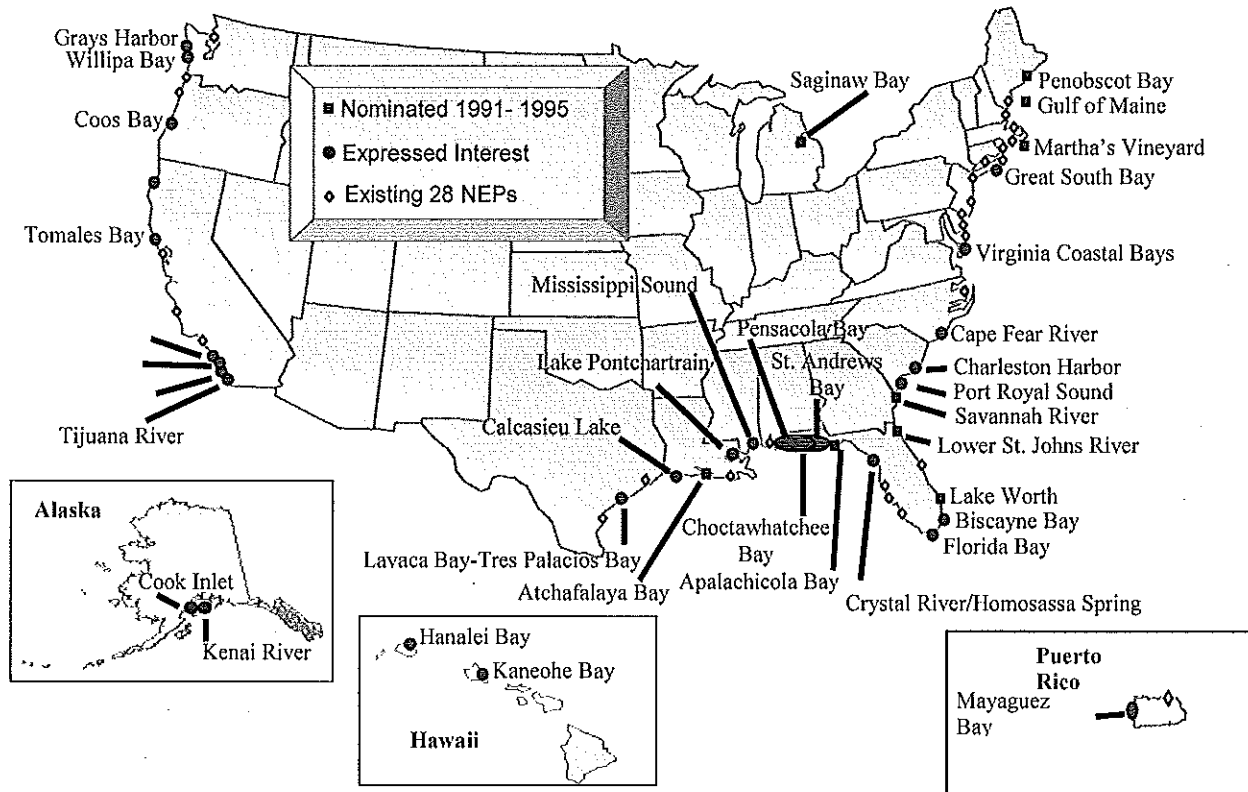
- *Climate Change:* Estuaries are amongst the ecosystem types most likely to be impacted by climate change. Adverse ecosystem impacts could be caused by sea level changes, precipitation increases or decreases (both around the immediate estuary, and on upstream rivers and tributaries), and ocean temperature changes. These changes could exacerbate the effects of other impairment drivers.

Federal Programs to Protect and Restore Coasts and Estuaries

EPA National Estuary Program: EPA's NEP is a stakeholder-driven, collaborative process to address water quality problems, and to target habitat restoration. The NEPs conduct long-term planning and management activities to address the complex factors that contribute to the degradation of estuaries.

Currently, 28 estuaries are included within the program. (See figure on Page 2.) To be included within the program an estuary must be nominated by a state governor in response to an EPA call for nominations. If an estuary faces significant risks to its ecological integrity, contributes substantially to its commercial activities, would benefit greatly from comprehensive planning and management, amongst other criteria, EPA may include it in the program. While no new estuaries have been included in the program since 1995, EPA reports that numerous states, localities, and non-governmental organizations have expressed interest in 38 additional estuaries being included within the NEP.

Estuaries That Have Expressed Interest in Joining the NEP



Since its inception, policy analysts and policy-makers have described the NEP as one of the leading examples of collaborative institutions designed to resolve conflict and build cooperation at the watershed level. Unlike many other EPA programs that use traditional regulatory tools to achieve environmental and policy goals, the NEP uses a framework that relies on stakeholder collaboration to achieve estuarine protection and restoration goals. It is important to understand, however, that the NEP does not replace ongoing EPA and state regulatory activities in the NEP estuaries – but works instead in parallel with them.

The four framework cornerstones of the NEP are to:

- Focus on watersheds;
- Integrate science into the decision-making process;
- Foster collaborative problem-solving; and
- Involve the public.

The NEP fulfills these cornerstone goals through the use of a structure that revolves around stakeholder involvement and interaction. Once an estuary is accepted by EPA into the NEP, a Management Conference is convened. This is traditionally a 3- to 5-year process which typically includes local governments, regulated and/or affected businesses and industries, public and private institutions like universities, nongovernmental organizations, the general public, and representatives from EPA, other federal agencies, state governments, and interstate and regional agencies.

The first stage of the NEP process is the convening of an estuary Management Conference. This Management Conference creates the framework upon which eventual estuary restoration and protection will take place. The Management Conference defines programs goals, identifies the causes of the estuary's environmental problems, and designs actions to protect and restore habitats and living resources. The essence of the Management Conference is that it aims to convene the primary stakeholders involved in the watershed. These groups, organizations, and institutions seek to reach consensus on problem identification and the development of solutions.

The culmination of the Management Conference is the Comprehensive Conservation and Management Plan (CCMP). The CCMP is the implementation 'blueprint' for protecting and restoring the estuary. The CCMP identifies discrete activities that will be engaged in by particular parties to address priority problems. Developed through the Management Conference, the activities prescribed through the CCMP are based in consensus and will often involve coordination and collaboration between different stakeholder entities. EPA must approve the CCMP.

In addition to being a Management Conference participant, EPA provides the Management Conference and the NEP estuary program with financial and technical assistance. Some of this funding goes towards setting up the individual estuary NEP program office. This usually consists of a small staff that is housed in, and is an entity of, a local government agency, university, or nongovernmental organization. Because the local NEP program can be located in a number of different types of organizations, the program structure and character of each of the 28 local NEP programs is unique. For the most part, then, none of the staff in any of the 28 NEP estuaries are EPA employees. They are usually either employed by nongovernmental organizations or state or local government entities (but paid through CWA Section 320 (NEP) funding.)

The NEP budget was \$11,711,000 in FY 2007 and \$16,569,000 in FY 2008. The President has proposed \$7,432,000 for FY 2009. This resulted in \$418,000 per individual NEP in FY 2007 and \$592,000 in FY 2008. The President's proposed budget for FY 2009 would result in \$265,000 for each NEP in FY 2009. The Puget Sound NEP received an additional \$1,000,000 in FY 2007 and \$19,688,000 in FY 2008. The Long Island Sound NEP received an additional \$1,354,000 in FY 2007 and \$4,922,000 in FY 2008. For FY 2009 the President has proposed \$1,000,000 for the Puget Sound NEP and \$467,000 for the Long Island Sound NEP.

NEPs, by design, are intended to access funding from sources other than solely through EPA's direct funding. This aim is, in part, intended to be realized through the ostensible buy-in of non-federal partners (state and local governments, non-governmental organizations) and achieved through the collaborative process. The CCMP should include a finance plan. NEPs have attracted funding from a variety of sources and partnerships including the Clean Water State Revolving Fund program stormwater utility fees, municipal bond funding, fines and settlements, tax abatements and incentives, and sales fees. According to EPA, between 2003 and 2007, NEPs received \$85 million in Clean Water Act Section 320 (NEP) funding and through earmarks. However, these NEPs were able to leverage nearly \$1.3 billion in funding from non-EPA sources. This is a funding ratio non-EPA to EPA funds of 15.5 to 1.

As a funding entity EPA exercises oversight authority over the local NEP programs, as well as providing technical (e.g., finance planning, smart growth, monitoring and assessment) and programmatic assistance (policy development). For example, individual NEPs are required to periodically monitor the effectiveness of their management activities to address estuary-specific priority actions (as established through the Management Conference, and as defined in their respective CCMPs.) EPA is also involved with conducting program evaluations of NEPs, and transferring lessons learned. The EPA NEP office is located within the Office of Wetlands, Oceans, and Watersheds in the Office of Water.

On the whole, the NEP program has resulted in somewhat better estuarine conditions for NEP estuaries than for non-NEP estuaries. On a national scale, collectively the NEP estuaries score slightly higher than non-NEP estuaries for the water quality and benthic indices, are comparable for the fish tissue contamination index, and are slightly lower for the sediment quality index.

National Rating Scores by Index for All U.S. Estuaries (NCCR) and for NEP Estuaries^{16 17}

	Water Quality Index	Sediment Quality Index	Benthic Index	Fish Tissue Contaminant Index	OVERALL
NEP Estuaries	3.6	2.1	2.7	2.6	2.7
All U.S. Estuaries	3.0	2.6	2.2	2.6	2.6

¹⁶ Rating scores are based on a 5-point system, where a score of less than 2.0 is rated poor; 2.0 to less than 2.3 is rated fair to poor; 2.3 to 3.7 is rated fair; greater than 3.7 to 4.0 is rated good to fair; and greater than 4 is rated good

¹⁷ Source: EPA National Estuary Program Coastal Condition Report (2006), p. ES.9

While some data and analysis issues should warrant caution in directly comparing the above results, it provides some information that the collaborative NEP approach can, at a minimum, provide an alternative to a sole reliance on traditional regulatory, or command-control, mechanisms.

In addition to the comparative results, above, EPA reports that the NEPs have protected and restored over 102,000 acres of estuarine habitat¹⁸ since 2007, and one million acres since 2000.

On June 19, 2008 EPA announced a new pilot program for NEP estuaries, entitled 'Climate Ready Estuaries.' According to EPA, each NEP estuary in the program will receive technical assistance to assess and reduce their vulnerability to climate change. The programs will apply analyses and tools to help them make decisions to protect their communities and build knowledge to help other communities adapt to a changing climate. Communities with plans approved by their local stakeholders will be designated as 'Climate Ready Estuaries' by EPA.

The six 'Climate Ready Estuary' pilots include the New Hampshire Estuaries Project, Massachusetts Bays Estuary Program, Partnership for Delaware Bay, Albemarle-Pamlico Sounds National Estuary Program, Charlotte Harbor Estuary Program and San Francisco Estuary Project.

NOAA Community-based Restoration Program: The National Oceanographic and Atmospheric Administration's (NOAA) Community-based Restoration Program (CRP) is located within the NOAA Fisheries Service's Restoration Center. It is a grant program that provides funding to national, regional, and local organizations to restore fish habitat and coastal resources. In addition to providing grant funding, the CRP allows for the provision of NOAA technical advice on restoration techniques, environmental compliance, and scientific monitoring. Similar to EPA's NEP, the CRP is designed to build partnerships to identify local priorities, and to promote community involvement and stewardship of local projects. The CRP began in 1996 and, as of September, 2007, had funded more than 1,200 restoration projects in 26 states, Canada, the Caribbean, and the Pacific Islands.

The CRP received \$13 million in FY 2008. Individual project grants are used by groups to support habitat restoration, marine debris removal, and river restoration projects to remove dams and other barriers. Awards for individual projects range from \$30,000 to \$500,000.

National and regional partnership grants allow groups to establish multi-year cooperative agreements with NOAA. Grants are provided annually to support multiple habitat restoration projects across a geographic area. The partner organization solicits proposals from local groups and selects projects jointly with NOAA. NOAA's funding for partnership grants ranges from \$100,000 to nearly \$2 million.

NOAA National Estuarine Research Reserve System: NOAA's National Estuarine Research Reserve System (NERRS) is a network of protected areas established for research, water quality monitoring, education, and coastal stewardship. NERRS was established by the Coastal Zone Management Act of 1972. It is a partnership program between the NOAA and the coastal states, whereby NOAA provides funding, national guidance and technical assistance, but where the management and implementation is undertaken by a lead state agency or university, with input from

¹⁸ This includes wetlands, mangroves, barrier islands, beaches, dunes, riparian areas, in-stream areas, grasslands and uplands, and ponds.

local partners. Twenty-seven sites exist within NERRS. Some of these sites are co-located with, or nearby NEP estuaries.

The FY 2008 appropriations for NERRS operations was \$16.4 million. NERRS also received an additional \$7 million for the acquisition of land, and the construction of educational facilities and labs. On average, each NERRS site receives around \$500,000.

NOAA Coastal and Estuarine Land Conservation Program: NOAA's Coastal and Estuarine Land Conservation Program (CELCP)¹⁹ was established in 2002 to protect coastal and estuarine lands considered important for their ecological, conservation, recreational, historical or aesthetic values. Through an application review process the program ranks proposed projects and provides state and local governments with matching funds to purchase significant coastal and estuarine lands, or conservation easements on such lands, from willing sellers.

The program received \$8 million in FY 2008. Between 2002 and 2007, CELCP distributed more than \$200 million to protect more than 35,000 acres of land in 26 states.

Puget Sound Water Quality and Estuarine Resource Restoration and Protection

The Puget Sound, located in the state of Washington, is an ecologically complex system that provides habitat for fish and wildlife, including Pacific salmon and orca whales. The Puget Sound is an estuary that covers 2,800 square miles of marine waters, with an average depth of 450 feet, and which encompasses 2,500 miles of shoreline.

Stressors on the Puget Sound include toxic contamination, habitat loss, shoreline hardening (to prevent erosion, and for development activities), and stormwater runoff. By 2020, the population in the Puget Sound basin is expected to be more than 5 million people. This is a 30% increase in population over 2000 levels. Population increases are anticipated to add to exacerbate current stresses on the Puget Sound estuary.

Estuarine impairments have impacted a number of species in the Puget Sound. Amongst the primary concerns are nine Endangered Species Act listings, including salmon species, and shellfish bed closures. Based on NCCR coastal resource health indicators, the Puget Sound rates, on average, in fair condition. In terms of specific indices, the Puget Sound received a rating of 3 (fair) for the water quality index; a rating of 1 (poor) for the sediment quality index; a rating of 5 (good) for the benthic index; and a rating of 3 (fair) for the fish tissue contaminant index.

The Puget Sound NEP program, the Puget Sound Partnership (PSP)²⁰, entered the NEP in 1987. The PSP is a state entity. While the original CCMP was approved in 1991, in 2004 a watershed assessment showed that the estuary was still under considerable stress. That assessment showed an overall downward trend in the estuarine condition. Eight of 15 indicators of condition were rated fair, while four of the 15 were rated poor. Partially in response to these assessment findings, Washington Governor Christine Gregoire named a Blue Ribbon Commission to address Puget Sound impairments in December 2006. Recommendations from this Commission resulted in the creation of a new Management Conference, the establishment of new priorities for the Puget Sound

¹⁹ Pronounced 'kelp.'

²⁰ Until May 2007, the Puget Sound NEP was called the Puget Sound Action Team.

NEP, and the creation of the PSP. The PSP is currently in the process of creating a CCMP (referred to in the PSP as the 'Action Agenda.')

Through the PSP, the state of Washington has eight priorities for the Puget Sound:

- Clean up contaminated sediments;
- Mitigate stormwater runoff impacts;
- Prevent toxic contamination;
- Prevent nutrient and pathogen pollution;
- Protect functioning near shore and freshwater habitats;
- Restore degraded near shore and freshwater habitats;
- Protect species diversity; and
- Adapt the Puget Sound efforts to climate change.

Partners in the PSP include federal agencies (EPA, NOAA, and the U.S. Fish and Wildlife Service), state agencies (Washington Departments of Ecology, Natural Resources, and Fish and Wildlife), counties (San Juan County Council, Clallum County Board of Commissioners, Skagit County Administrator, Kitsap County Board of Commissioners, King County Executive, Pierce County), tribal governments (Nisqually Tribe, Lummi Nation, Skokomish Tribe, Nooksack Indian Tribe), cities (Federal Way City Council), port districts (Port Angeles Port Commission), business interests (Master Builders Association of King and Snohomish Counties, Taylor Shellfish), environmental groups (The Nature Conservancy, People for Puget Sound), legislators and other organizations and institutions.

In addition to being a formal partner with the PSP, EPA through its Region 10 offices is involved in water quality protection activities in the Puget Sound. EPA Region 10 uses a mix of non-regulatory as well as traditional regulatory tools to protect water quality.