

BUDGET ACTIVITY: NATIONAL OCEAN SERVICE

For FY 2013, NOAA requests a net decrease of \$7,697,000 and 14 FTE below the FY 2013 base level for a total of \$478,066,000 and 1,224 FTE for the National Ocean Service after a technical transfer of \$5,116,000 and 4 FTE to the National Marine Fisheries Service. This includes \$3,907,000 and 0 FTE in inflationary adjustments.

BASE JUSTIFICATION FOR FY 2013:

The National Ocean Service (NOS) has three subactivities under the Operations, Research and Facilities (ORF) account (\$458,163,000 and 1,221 FTE):

- Navigation Services (\$149,719,000 and 550 FTE) includes the Office of Coast Survey (OCS), the National Geodetic Survey (NGS), and the Center for Operational Oceanographic Products and Services (CO-OPS). The activities of these offices are conducted under the authority of the Coast and Geodetic Survey Act of 1947, the Hydrographic Services Improvement Act (as amended in 2008), and the Ocean and Coastal Mapping Integration Act of 2009.
- Ocean Resources Conservation and Assessment (\$159,534,000 and 422 FTE) includes programs managed by the National Centers for Coastal Ocean Science (NCCOS), the Office of Response and Restoration (ORR), the Coastal Services Center (CSC), the Office of Ocean and Coastal Resource Management (OCRM), and the NOAA Integrated Ocean Observing System (IOOS) Program. These activities are implemented primarily under the authorities established in the Harmful Algal Bloom and Hypoxia Research and Control Act; National Coastal Monitoring Act; Oceans and Human Health Act; Oil Pollution Act; Coastal Zone Management Act; Coral Reef Conservation Act; and the Integrated Coastal and Ocean Observation Systems Act.
- Ocean and Coastal Management (\$148,910,000 and 249 FTE) includes programs managed by the Office of Ocean and Coastal Resource Management (OCRM) and the Office of National Marine Sanctuaries (ONMS). These activities are conducted under the authority of the Coastal Zone Management Act and the National Marine Sanctuaries Act.

Procurement, Acquisition, and Construction (PAC) activities (\$8,000,000 and 1 FTE) include: the Coastal Estuarine Land Conservation Program (CELCP), the National Estuarine Research Reserve System (NERRS) Construction and Land Acquisition Program and the National Marine Sanctuaries Construction Program. These activities are implemented by OCRM and ONMS.

NOS manages two mandatory accounts, the NOAA Damage Assessment and Restoration Revolving Fund (\$18,600,000 and 16 FTE) and the Sanctuaries Enforcement Asset Forfeiture Fund (\$1,000,000 and 0 FTE).

- The NOAA Damage Assessment and Restoration Revolving Fund facilitates and sustains: (1) natural resource damage assessment while the Departments of Commerce and Justice seek full reimbursement from potentially responsible parties; and (2) restoration, replacement or acquisition of the equivalent of injured or lost natural resources, including resources of National Marine Sanctuaries and National Estuarine Research Reserves, tidal wetlands and other habitats, for which NOAA is trustee. These program functions are conducted jointly within NOAA by the Office of General Counsel, the National Ocean Service, and the National Marine Fisheries Service.
- The Sanctuaries Enforcement Asset Forfeiture Fund receives proceeds from civil

penalties and forfeiture claims against responsible parties, as determined through court settlements or agreements, for violations of NOAA sanctuary regulations. Penalties received are held in sanctuary site-specific accounts from year to year (technically reimbursable), as the funds are spent on resource protection within the sanctuary site where the penalty or forfeiture occurred. Funds are expended for resource protection purposes which may include all aspects of law enforcement (from equipment to labor), community oriented policing programs, and other resource protection and management measures such as the installation of mooring buoys or restoration of injured resources.

To implement these efforts, NOS staff and facilities are located around the country with concentrations in Silver Spring, MD; Charleston, SC; Seattle, WA; Norfolk, VA; Beaufort, NC; and Honolulu, HI.

The National Ocean Service is the primary Federal agency that observes, measures, assesses, and manages the Nation's coastal, ocean and Great Lakes areas, provides critical navigation products and services, and conducts response and restoration activities to protect vital coastal resources. These activities support sound decision-making for human, ecological, and economic health. An estimated 165 million people (over 50 percent of the United States population) lived in coastal counties in 2011. These coastal counties make up only 17 percent of the Nation's land area (excluding Alaska). Although coastal population growth reflects the same rate of growth as that of the entire Nation, the limited land area of coastal counties is increasingly strained by the density of population growth. This increasing density, coupled with the important economies of coastal areas, makes the task of managing coastal resources increasingly difficult, especially with the Nation's coastal population expected to increase by more than 13.6 million by 2020 (*NOAA's State of the Coast*, <http://stateofthecoast.noaa.gov>). In addition, over half of the U.S. Gross Domestic Product (GDP) is generated in coastal counties (*State of the U.S. Ocean and Coastal Economies*, NOEP 2009), highlighting the importance of coastal resources to the Nation's economy and emphasizing the need for access to data and sound science to inform decision making.

As a national leader for coastal and ocean stewardship and a trustee of coastal natural resources, NOS promotes a wide range of research and operational activities to better understand and manage ocean, coastal, and Great Lakes ecosystems. NOS research provides a strong science foundation to advance the sustainable use of our coastal and ocean systems, improve ecosystem and human health, and support economic vitality. NOS is improving the quality and quantity of ocean and coastal observations through innovative research and technology development. Observations by NOS assets and partners are critical components of the Nation's Integrated Ocean Observing System (IOOS[®]) and the Global Earth Observation System of Systems (GEOSS). NOS mapping, charting, geodetic, and oceanographic activities build on marine and coastal observations to increase the efficiency and safety of maritime commerce, support coastal resource management, implement integrated planning for multiple uses of coastal areas, and address coastal flooding and water quality concerns.

NOS leverages its scientific expertise into actionable knowledge, tools, and technical services needed to address issues such as climate change, coastal hazards, population growth, ecosystem management, port congestion, and contaminants in the environment. NOS is the Nation's leading expert on restoring coastal resources damaged by releases of oil and other hazardous materials. In collaboration with international, Federal, state, and local managers, NOS also serves as the steward of marine protected areas, the National Marine Sanctuaries system, the Papahānaumokuākea Marine National Monument, and nationally significant estuarine reserves. NOS helps its Federal and non-Federal partners build capacity to protect and sustainably use coastal ecosystems through financial and technical assistance, applied research, and other capacity-building resources.

In working towards vibrant, healthy coasts and coastal economies, NOS's organizational strength lies in its ethos of collaboration, which facilitates synergies between National and regional interests. These synergies result both from vertically integrating actions—NOS brings together applied research, observations, mapping, assessment, planning, management, restoration, and conservation—and from horizontally coordinating activities of Federal, State, local, and non-governmental stakeholders in any given coastal zone. NOS work on responding to sea level rise is a prominent demonstration of the benefits of integrated and coordinated action; as natural and human-induced hazards threaten our Nation's coasts, NOS products and services are directly improving resiliency and addressing emerging threats to the health and well-being of coastal communities.

Research and Development Investments:

The NOAA FY 2013 Budget request for research and development programs is the result of an organization-wide strategic planning process. This process provides the structure to link NOAA's strategic vision with programmatic detail and budget development, with the goal of maximizing benefits of finite investments in science. NOS requests \$80,033,000 for investments in R&D and infrastructure to support R&D in the FY 2013 budget.

NOAA's R&D planning is tied to the goals, enterprises, and associated objectives outlined in NOAA's Next Generation Strategic Plan. Specifically, NOAA's Science and Technology Enterprise and underlying objectives of holistic understanding of the Earth system through research; accurate and reliable data from observing systems; and an integrated environmental modeling system, provide the basis for a set of internal implementation plans covering a 7-year period which guide NOAA's research and development activities. The NOAA Research Council - an internal body composed of senior scientific personnel from every line office in the agency - informs the annual updates to these implementation plans, and is developing the next 5-Year Research and Development Plan for NOAA (FY 2013-2018), which will be publicly available when completed. This new plan will reflect NOAA's strategic objectives, provide a single guiding document for our scientists, the public, and our partners, and inform future internal planning efforts.

Significant Adjustments-to-Base (ATBs):

NOAA requests an increase \$3,907,000 and 0 FTE to fund adjustments to current programs for NOS activities. This increase will fund the estimated 2013 Federal pay raise of 0.5 percent. The increase will also provide inflationary increases for non-labor activities, including service contracts, utilities, field office lease payments, and rent charges from the General Service Administration (GSA).

NOAA also requests the following transfers for a net change of \$0 and 0 FTE to the agency:

From Office	PPA	To Office	PPA	Amount/FTE
NOS	Estuary Restoration Program	NMFS	Habitat Management & Restoration	\$498,000/1 FTE
NOS	Marine Debris	NMFS	Habitat Management & Restoration	\$4,618,000/3 FTE
NOS	Marine Protected Areas	NOS	Marine Sanctuary Program Base	\$1,982,000/9 FTE

NOAA requests a technical adjustment to move \$498,000 and 1 FTE from NOS Estuary Restoration Program to NMFS Habitat Management & Restoration. This transfer will consolidate NOAA's Estuary Restoration Program within the Office of Habitat Conservation.

NOAA requests a technical adjustment to move \$4,618,000 and 3 FTE from NOS Marine Debris to NMFS Habitat Management & Restoration. This transfer will consolidate NOAA's Marine Debris Program within the Office of Habitat Conservation.

NOAA requests a technical adjustment to move \$1,982,000 and 9 FTE from NOS Marine Protected Areas to NOS Marine Sanctuary Program Base to consolidate the Marine Protected Areas Program with the Office of National Marine Sanctuaries.

Administrative Cost Savings:

The Administration is continuing its pursuit of an aggressive government-wide effort to curb non-essential administrative spending. As a result, the Department of Commerce continues to seek ways to improve the efficiency of programs without reducing their effectiveness. The Department's total savings target for FY 2013 is \$176 million, which includes \$142.8 million in savings initiated in FY 2012 and an additional \$33.2 million planned for FY 2013. Building on NOS's administrative savings planned for FY 2012 (\$9.3 million), an additional \$0.4 million in savings is targeted for FY 2013 for a total savings in FY 2013 of \$9.7 million.

Headquarters Administrative Costs:

In FY 2013, NOS headquarters will use \$25,017,100 in funds to support general management activities, financial and budgeting, and IT related expenses, as well as supporting facilities and other general operating costs. These funds also include support for service contracts, utilities, and rent charges from the General Services Administration. Specifically, NOS will use headquarters administrative funds to support the following:

Headquarters Program Support Type	Description	FY 2013 Amount	FY 2013 FTE associated with NOS HQ
General Management & Direction/Executive Management	Includes Assistant Administrator's office, public affairs, information services	\$13,338,200	51.7
Budget & Finance	Includes Budget, Finance and Accounting	\$3,184,900	15.3
Facilities/Other Administrative Functions (CAO Functions)	Includes Facilities and Security costs, as well as other CAO related activities	\$429,200	2.8
Human Resources	All HR services, including EEO	\$994,100	6.8
Acquisitions and Grants		\$219,300	1.3
Information Technology	Includes IT-related expenses and other CIO related activities	6,851,400	12.0
Total		\$25,017,100	89.9

Narrative Information:

Following this section are base justification materials and program change narratives by subactivity for this line office. Please note that no program change narrative is provided for program changes of less than \$100,000, however, a summary exhibit is provided at the end of each subactivity showing the object class detail for the small program changes. Please contact the NOAA budget office if details for any of these changes are required.

APPROPRIATION ACCOUNT: OPERATIONS, RESEARCH AND FACILITIES
SUBACTIVITY: NAVIGATION SERVICES

The objectives of the Navigation Services subactivity are to:

- Survey and chart the Nation's oceans and coasts
- Define the national shoreline
- Define, develop and maintain the National Spatial Reference System
- Provide real-time observations and forecasts of water levels, tides, and currents

To achieve these objectives, NOAA conducts activities in several program areas within the Office of Coast Survey (OCS), the National Geodetic Survey (NGS), and the Center for Operational Oceanographic Products and Services (CO-OPS). These activities are conducted under the authority of the Coast and Geodetic Survey Act of 1947, the Hydrographic Services Improvement Act (as amended in 2008), and the Ocean and Coastal Mapping Integration Act of 2009. NOAA also represents these programs for the Department of Commerce on the interagency Committee for the Marine Transportation System.

The Navigation Services subactivity contains three line items: Mapping and Charting, Geodesy, and Tides and Currents.

MAPPING AND CHARTING (<http://nauticalcharts.noaa.gov/>)

NOAA's Mapping and Charting Program is carried out by the Office of Coast Survey (with support from the National Geodetic Survey and the Center for Operational Oceanographic Products and Services). Established by President Thomas Jefferson in 1807, the Coast Survey is the oldest scientific organization in the U.S., with a long history of supporting maritime commerce and the Nation's economic growth. Authorized to survey and chart the 3.4 million square nautical miles of U.S. Exclusive Economic Zone (EEZ) waters by the Coast and Geodetic Survey Act of 1947 and the Hydrographic Services Improvement Act of 1998 (as amended), the program today continues to support safe, efficient, environmentally sound transportation in U.S. waters by delivering nautical charts and navigation products to meet the needs of increasingly larger ships carrying people, cargo and hazardous materials. Through this program, NOAA supports commercial shipping, the fishing industry, U.S. Navy and U.S. Coast Guard Homeland Security operations, state and local governments, and recreational boaters throughout U.S. waters. Coast Survey serves as the Nation's Hydrographer in international fora such as the International Hydrographic Organization to set standards for surveying and charting, and to build hydrographic capacity in other nations for safe navigation globally. The Mapping and Charting Program also conducts modeling and research and development activities to improve the tools, accuracy, and productivity of its data collection and chart compilation efforts.

In addition to navigation, the hydrographic and shoreline data that this program collects are essential for coastal zone and emergency management, climate assessments, coastal research, and many other uses. The work of the Mapping and Charting Program provides a foundation for the nine priorities identified in the National Ocean Policy, adopted on July 19, 2010 by Executive Order 13547. This program is also the primary focus for Integrated Ocean and Coastal Mapping (IOCM) activities which, as mandated by the Ocean and Coastal Mapping Integration Act, aim to realize maximum benefit from multi-purpose mapping data. NOAA's Hydrographic Services Review Panel (HSRP), a Federal Advisory Committee, plays an oversight role. Mapping and Charting services fall under four of the HSRP's top priority recommendations for action in surveying and mapping U.S. waters, integrating those mapping efforts across Federal agencies charged with maintaining the U.S. Marine

Transportation System, strengthening capacity for emergency response, and improving dissemination of information to users of all kinds.

The Mapping and Charting Program consists of five primary elements:

- **Marine Charts** – Cartographers compile data from many sources to analyze and produce over 1,000 nautical charts and products for safe maritime commerce in the Exclusive Economic Zone (EEZ). Nautical charts and updates are generated in both vector and raster formats to produce Electronic Navigational Charts, traditional paper charts and Raster Nautical Charts.
- **Hydrographic Surveys** – This unit acquires hydrographic data through the NOAA hydrographic fleet and contract surveyors, primarily in the 500,000 square nautical miles of navigationally significant U.S. waters. These hydrographic surveys provide the most basic depth and hazardous obstruction data for the production of nautical charts and for other applications such as storm surge, circulation/forecast and tsunami modeling, fisheries management, coastal zone land use, and spatial planning. Concurrent with data collection, the program ensures that physical scientists maintain the hydrographic expertise necessary to oversee contracts, conduct quality control over data, develop more efficient survey technologies, interact with the International Hydrographic Organization and other nations, and conduct all hydrographic survey work mandated by Congress.
- **Research and Development** – Coast Survey continually tests and evaluates new cartographic, hydrographic, and oceanographic systems in order to advance the science and processes used by NOAA for safe, efficient navigation and the utilization and protection of the coast. The program develops techniques and methods for the modeling, analysis, simulation and accurate real-time prediction of oceanographic, atmospheric and water quality parameters. Specific projects include the National Vertical Datum Transformation tool, or VDatum; Autonomous Underwater Vehicle survey technology; and coastal/ocean forecast models. NOAA's Joint Hydrographic Center (JHC) evaluates sonar technologies and processes to improve efficiencies in hydrographic data acquisition. JHC is also supporting the data collection and analysis necessary to support delimitation of the U.S. Extended Continental Shelf for a claim under the United Nations Convention on the Law of the Sea (UNCLOS).
- **Navigation Services** - The program has built in an outreach mechanism to interact directly with customers and stakeholders via Regional Navigation Managers on charting issues and Marine Transportation System infrastructure improvements. This feedback loop improves NOAA's response to charting and navigation questions and serves as a means to educate constituents on emerging charting technologies and their uses.
- **Coastal Mapping** – The Mapping and Charting program defines the official 95,000 miles of U.S. shoreline that serve as the critical baseline for defining America's marine territorial limits, including its EEZ. The national shoreline is an essential data layer for nautical charts, and for the geographic reference needed to manage coastal resources, conduct marine spatial planning, mitigate and adapt to climate change, support Homeland Security, and many other uses. Shoreline is delineated by processing stereo aerial photographs and high resolution satellite imagery. In addition, the program conducts research into new technologies including Light Detection and Ranging (LiDAR) and Hyperspectral imaging. The program uses both contractors and in-house resources to collect and process shoreline data.

Schedule and Milestones:

Performance Schedule	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
Build and maintain VDatum for contiguous United States	X	X	X	X	X	X
Nautical Charting System II operational – one central station available for all formats of charts (paper, raster, ENCs)	X	X	X	X	X	X
Build and maintain Electronic Navigational Charts (ENCs) for a total of 1,025 available to public	850	875	900	1,000	1,025	1,025
Schedule, prepare and maintain 150 new editions of Raster Navigational Charts each year (RNCs)	X	X	X	X	X	X
New Editions of Coast Pilot published (eight per year)	X	X	X	X	X	X
Evaluate and approve 175 hydrographic surveys conducted by NOAA survey units, contractors, and other sources for nautical charting	X	X	X	X	X	X
Reduce the survey backlog within navigationally significant areas (SNM)	2,200	3,400	2,500	2,500	2,500	2,500
Enhance the nowCOAST model	X	X	X	X	X	X
Survey on the Ellipsoid	X	X	X	X	X	X
Develop and maintain IOCM standards/specs/metadata for mapping data	X	X	X	X	X	X
Accept/process data, deliver products to OCM programs, archive data at NGDC	X	X	X	X	X	X
Provide custom and standard products that would otherwise be unavailable (gridded multibeam data in Bathymetry Attributed Grid (BAG) format and side-scan sonar mosaics)	X	X	X	X	X	X
Implement data archive capability for NOAA charter mapping data from University-National Oceanographic Laboratory System (UNOLS) projects	N/A	X	X	X	X	X

Deliverables:

- VDatum models implemented along the entire contiguous U.S. coastline, enabling seamless integration of land and water information
- Complete suite of Electronic Navigational Charts (ENCs) available to the public along with paper/raster chart options made possible by the programs single chart production system

- Production and maintenance of a wide variety of products and services such as nautical chart updates and nowcast/forecast models
- Hydrographic survey backlog reduced by 13,400 snm FY 2013 to FY 2017 within navigationally significant areas
- 750 (150/year) new editions of Raster Navigational Charts
- New editions of Coast Pilot published at a rate of eight per year
- nowCOAST GIS web mapping portal enhanced to meet requirements of partners in several collaborative projects and other nowCOAST users, and data dissemination improved to address regional needs for data access
- Improved efficiency and accuracy of hydrographic surveys by surveying on the ellipsoid, eliminating the need for time-consuming activities such as tide gauge installations, vessel settlement and squat corrections, and inefficient post-survey-processing
- Data standards, tools and expertise for Integrated Ocean and Coastal Mapping and guidance on acquisition, processing and archives in support of the OCM community and ocean.data.gov
- Acoustic backscatter collection protocols that will facilitate the acquisition of these valuable data while maintaining the quality of bathymetric data

Performance Goals and Measurement Data:

Performance Measure:	FY						
Percentage of top US Seaports with access to suite of NOAA Navigation Products and Services (ENCs, access to VDatum across Nation excl AK/HI)	2011	2012	2013	2014	2015	2016	2017
	Actual	Target	Target	Target	Target	Target	Target
	77%	74%	74%	74%	74%	75%	75%
Description: The U.S. Army Corps of Engineers tracks the number of vessel transits and cargo tonnage that pass through the approximately 300 ports in the U.S. on an annual basis. Over 95 percent of the annual tonnage passes through the top 175 seaports. By tracking how many seaports to which NOAA is providing a full suite of its products and services, one can determine what percentage of cargo is benefitting from NOAA navigational products and services. The percentage of seaports can then be correlated with these statistics.							

Performance Measure:	FY						
Reduce the hydrographic survey backlog within navigationally significant areas (Measure 18f)	2011	2012	2013	2014	2015	2016	2017
	Actual	Target	Target	Target	Target	Target	Target
	2,278	2,200	3,400	2,500	2,500	2,500	2,500
Description: NOAA conducts hydrographic surveys to determine the bathymetry of primarily in U.S. waters significant for navigation. This activity includes the detection, location, and identification of wrecks and obstructions with side scan and multi-beam sonar technology. NOAA uses the data to produce nautical charts in a variety of formats for safe and efficient navigation, in addition to the commercial shipping industry; other user communities that benefit include recreational boaters, the commercial fishing industry, port authorities, coastal zone managers, and marine spatial and emergency planners.							

*Reduced targets in FY 2014 – FY 2017 reflect the *Thomas Jefferson* coming offline.

Performance Measure:	FY						
Update National Shoreline and Priority Ports (Percentage of total per year)	2011	2012	2013	2014	2015	2016	2017
	Actual	Target	Target	Target	Target	Target	Target
	4.6% / 17%*	3.2% / 12%	3.2% / 12%	3.2% / 12%	3.2% / 12%	3.2% / 12%	3.2% / 12%
Description: Updating the National Shoreline and Priority Ports is a measure NOAA typically uses to capture annual performance of NOAA in-house and contract assets for acquiring shoreline data for navigation safety and other programs.							
*Please note increased outputs for FY 2011 were due to ARRA funded projects in FY 2009.							

Performance Measure:	FY						
Multibeam sonar data reprocessed for use in fisheries management (SNM)	2011	2012	2013	2014	2015	2016	2017
	Actual	Target	Target	Target	Target	Target	Target
	0	0	500	750	750	750	750
Description: This measure tracks the re-processing of data collected by NOS for nautical charting for use in NMFS ecosystem assessments and habitat characterizations. The IOCM Center reprocesses multi-beam data, data that will contribute geospatial information on the physical and geological structures of the ocean environment, and is, therefore, a necessary component of habitat characterization and assessment.							

Performance Measure:	FY						
Initial datasets processed for IOCM seafloor/water column mapping data products (annual snm)	2011	2012	2013	2014	2015	2016	2017
	Actual	Target	Target	Target	Target	Target	Target
	226	6,190	17,100	22,800	37,000	47,950	47,950
Description: This measure highlights existing datasets that the IOCM center will focus on re-processing. The metric illustrates the large quantities of data available but not accessible for multiple uses. These datasets were collected for a single purpose, but can be rendered more useful to other applications such as Marine Geospatial Products, habitat mapping, tsunami and storm surge models, and nautical chart updates in areas less critical for navigation than above.							

GEODESY (<http://geodesy.noaa.gov/>)

NOAA's Geodesy Program has developed from a 200-year old requirement to provide the Nation with geodetic and geographic positioning services. Implemented by NOAA's National Geodetic Survey (NGS) program office, the program provides a common reference framework, the National Spatial Reference System (NSRS), for establishing the coordinate positions of all geographic and geospatial data. The NSRS is the national coordinate system that specifies latitude, longitude, height, scale, gravity, and orientation throughout the Nation. NSRS provides the underlying positioning framework for transportation, mapping and charting, and a multitude of scientific and engineering applications. It is also an essential component of all national observing systems. The NSRS must continually evolve to meet the growing demand for more accurate, timely, and consistent positioning services. To meet this demand, the Geodesy program is continually improving the quality and accessibility of the NSRS to meet our Nation's economic, social, and environmental needs. NGS conducts geodesy activities in all 50 states and many U.S. territories.

The Geodesy Program can be grouped into five major overlapping elements:

- **Passive Network Infrastructure Support** - A major component of NSRS is a network of over one million permanently marked passive reference points. These monuments form a crucial foundation for all geographically referenced activities conducted in the United States.
- **Continuously Operating Reference Stations (CORS) support** - NGS manages a National CORS Network of permanent GPS receivers that includes a highly accurate receiver that continuously collects radio signals broadcast by Global Navigation Satellite System (GNSS) satellites. NGS provides access to GPS data from this network free of charge via the Internet. The CORS system enables positioning accuracies that approach a few centimeters relative to the NSRS.
- **Modernization of the Vertical Datum** – NGS leads the Nation’s efforts to enhance the vertical aspect of the NSRS through the establishment of accurate and consistent height measurements. To meet this goal, NGS is conducting a long term multi-year effort to collect airborne gravity data and build the Nation’s gravity-based geoid model through its Gravity for the Re-Definition of the American Vertical Datum (GRAV-D) initiative. This initiative will ultimately lead to new, highly accurate national vertical datum allowing GPS to efficiently establish accurate elevations for all types of positioning and navigational needs. Because GRAV-D will take a number of years to complete, ongoing height modernization efforts are also focusing on integrating GPS technology with existing survey techniques in areas of the country that have critical need for updated height data in response to changing land elevations.
- **Data Access and Capacity Building** - NGS archives and provides access to geodetic control, shoreline, and aeronautical survey data from its own surveys and from cooperating organizations. These data are made available via the Internet. As part of its technology transfer efforts, NGS conducts a series of workshops and constituent forums around the country. NGS also manages the State Geodetic Advisor Program, a cost-shared program that provides a liaison to states to assist the state’s geodetic and surveying programs. Thirty-one states, the District of Columbia, and Puerto Rico are currently covered under the advisor program.
- **Research, Tool and Model Development** - NGS develops standards, specifications, guidelines, and best practices for the surveying and positioning industry, as well as a variety of models and programs describing geophysical and atmospheric phenomena that affect spatial measurements. These tools and models are crucial to scientific and commercial positioning activities. To improve the collection, distribution, and use of spatial data, NGS also conducts cutting-edge research and development in geophysics, including geodynamics and geodesy. Current research interests include improving accuracies and precision of geodetic positions/velocities, automated processing of GPS data for static and/or kinematic positioning, orbital dynamics, sea level rise, crustal motion, GPS antenna characteristics, meteorological effects, and tidal effects.

A 2009 study estimated that the NSRS provides more than \$2.4 billion in potential annual benefits to the U.S. economy. The study found that the NOAA CORS network alone provides an estimated \$758 million per year in benefits. The study estimated that an additional \$522 million in annual economic benefits could be generated by the implementation of a new vertical reference system through GRAV-D, with approximately \$240 million saved from improved floodplain management alone (*Socio-Economic Benefits Study: Scoping the Value of CORS and GRAV-D*, Levenson 2009).

Schedule and Milestones:

- Establish and publish the geoid theory necessary to achieve < 1 cm absolute accuracy, for all non-mountainous regions of the United States, allowing for rock density unknowns in the mountains, and with unknowns not exceeding 1cm at the coast (FY 2012)
- Install foundation CORS sites for the improvement of the International Terrestrial Reference Frame (ITRF) (FY 2013)
- Compute North American Gravimetric Geoid (FY 2013)
- Develop and test standards, specifications, and workflows for new coastal geospatial products, including orthomosaics and lidar data (FY 2013)
- Achieve target of ninety percent of U.S. counties rated as fully enabled or substantially enabled with accurate positioning capacity (FY 2014)
- Complete term as International GNSS Service (IGS) Analysis Center Coordinator (FY 2016)
- Complete two-thirds of all GRAV-D (Gravity for the Redefinition of the American Vertical Datum) areas (FY 2017)

Deliverables:

- Management, maintenance, interpretation, certification, and dissemination of geodetic information
- Federal geodetic control theme lead
- Access to the National Spatial Reference System as the fundamental geodetic control for the United States
- Federal geodetic standards, specifications, and guidelines
- Participation in the development of international geodetic policy, standards, and guidelines and in the development of GPS and other global navigation satellite system policy to the extent it relates to the NSRS
- Positioning instrument testing and calibration services to ensure accurate implementation of NSRS
- Publicly accessible models and tools relating spatial datums and describing geophysical, atmospheric, equipment, and GPS orbit phenomena impacting accurate spatial measurement
- Enhanced GPS augmentation by managing, monitoring, and providing access to the CORS Networks, in support of civil positioning and the U.S. transportation infrastructure
- Geodetic control surveys
- GPS satellite orbit analysis and act as the International GNSS Service (IGS) Analysis Center Coordinator to pinpoint the locations of more than 40 GPS and GNSS satellites to ensure the accuracy of satellite-delivered positioning information
- “Foundation” CORS sites tied to the International Terrestrial Reference Frame (ITRF) in order to improve forecasting absolute global sea level rise on the order of millimeters per year and necessary to inform coastal management and construction project planning

Performance Goals and Measurement Data:

Performance Measure:	FY						
Percent Progress toward a New National Vertical Datum (Measure 18g)	2011	2012	2013	2014	2015	2016	2017
	Actual	Target	Target	Target	Target	Target	Target
	14.7%	20%	28%	36%	44%	52%	60%

Description: This measure tracks progress of NOAA's National Geodetic Survey toward completing the Gravity for the Redefinition of the American Vertical Datum (GRAV-D) initiative and implementation of a new National Vertical Datum for a wide variety of applications including improved inundation management. This improved vertical reference system is critical for all observing systems and activities requiring accurate heights and is a key component of the enhanced geospatial framework required for success in achieving NOAA's strategic priorities. It is of particular importance for community resilience by determining where water flows in order to make accurate inundation models and assessments as well as better management and planning decisions with improved water level predictions based on accurate elevations. "Enabled" is technically defined as having GRAV-D data necessary to support a 1 cm geoid supporting 2 cm orthometric heights (heights relative to sea-level) necessary to define a new national vertical datum. NGS will calculate the percentage of area enabled with regards to a pre-defined total area that includes U.S. territorial land and adjacent land and water areas necessary for final determination of a national vertical reference system. As progress is made, each survey area will be represented by a polygon that will define the completed areas. The performance measure will be tracked as a percent of the total area that is identified as complete.

TIDE AND CURRENTS (<http://tidesandcurrents.noaa.gov/>)

The Tide and Current Data Program (TCDP) is an essential component of the integrated, comprehensive suite of NOAA information products required by the maritime community for safe and efficient navigation. The TCDP provides the foundational reference framework for water coastal (tidal datums) and Great Lakes (International Great Lakes Datum) water levels as well as tide and tidal current predictions. This reference framework enables the production of nautical charts and delineation of shoreline, the demarcation of marine boundaries ranging from international to private property, the monitoring of local sea level trends for long term climate records, and effective coastal and marine spatial planning. The Coast and Geodetic Survey Act of 1947 authorizes collection and dissemination of water level data, analysis, and predictions. The Hydrographic Services Improvement Act provided updated authorities for the collection of real time information and the use of information for coastal resource management. Other relevant legislation includes the Tsunami Warning and Education Act, which directs the use of real time tide data for tsunami warnings.

The TCDP is managed end-to-end by the NOS Center for Operational Oceanographic Products and Services (CO-OPS). CO-OPS adheres to international standards used by other countries and entities seeking to provide similar geospatial reference systems and data. Observations, forecasts and other water level and current products and services are generated and distributed to the marine transportation community and other users. The TCDP managers interact regularly with stakeholders and partners to identify new requirements, product improvements, and training needs. The TCDP further extends the reach of its interactions by leveraging regional networks such as the Office of Coast Survey Navigation Managers, the National Geodetic Survey State Advisors, the Coastal Services Center Regional Representatives, the NOAA Regional Coordination Teams, and others. In a customer satisfaction survey performed in 2009, CO-OPS scored significantly higher on the American Customer Satisfaction Index (ACSI) metric (score of 82) than other Federal government agencies.

The Tide and Current Data Program is composed of four primary program elements:

National Water Level Program – CO-OPS operates and maintains the National Water Level Observation Network (NWLON), a system of over 200 observation stations located in U.S. coastal areas, the Great Lakes, and U.S. Territories and possessions. Information from the NWLON ranges from the high frequency (real time) content in the record (e.g., tsunamis and storm surge) to long-

term content (e.g., sea level and lake level trends). NWLON provides vertical reference datums for all marine boundary applications; national shoreline and nautical chart products; coastal project planning and construction; dredging; habitat restoration projects; and hurricane evacuation route planning. The program also defines and provides local mean sea level trends essential to coastal community and project planning that must incorporate sea level rise guidance. The multi-mission NWLON also provides real time data for safe and efficient navigation, improved hazmat and emergency response, storm surge and tsunami warnings, and other applications. CO-OPS conducts a collaborative program across several NOS offices known as Coastal Oceanographic Applications and Services of Tides And Lakes (COASTAL) that focuses on non-navigation applications of CO-OPS, NGS and OCS data for applications such as beneficial uses of dredged material, coastal planning projects, marsh restoration projects, long-term sea-level assessments, storm-surge monitoring, emergency preparedness, and HAZMAT response. In 2011, CO-OPS completed the hardening of nine NWLON stations against extreme events and the upgrades of 28 additional stations with meteorological sensors. The new suite of meteorological sensors allows NOS to better serve navigation customers as well as local National Weather Service Forecast Offices. CO-OPS enhanced its Sea Levels Online website by updating linear sea level trends for 128 NOAA/CO-OPS long-term water level stations along with 95 percent confidence intervals. Sea level trends were also calculated for 194 global stations.

National Current Program – CO-OPS conducts tidal current surveys primarily to update NOAA’s annual tidal current prediction tables. NOAA’s tidal current prediction tables are used by the largest ship operators, as well as the fishing industry and recreational users. U.S. Coast Guard carriage regulations require large commercial vessels to carry NOAA’s annual Tide and Tidal Current Prediction tables along with Nautical Charts for safety. Updated, accurate predictions are essential for these users to support safe and efficient navigation and for fishers to determine best catch times. Accurate measurements of the currents are essential to test oil spill response strategies and provide onsite response to an emergency spill. The data are used to fine tune strategies and verify current trajectories for models. Tidal currents are also used to assess and help site alternative renewable energy projects tapping into hydrokinetic energy sources such as currents, tides and waves. In FY 2011, CO-OPS conducted tidal current surveys in Hawaii, Boston Harbor, and Mobile Bay, AL.

Physical Oceanographic Real Time Systems (PORTS®) - PORTS® is a decision support tool that integrates and disseminates real-time environmental observations, forecasts and other geospatial information. In partnership with local port authorities, pilot associations, shippers, the U.S. Coast Guard, the U.S. Army Corps of Engineers, the U.S. Navy, academia, and others, PORTS® has been implemented in various bays and harbors in the U.S. to measure and disseminate water levels, currents, salinity, winds, and atmospheric pressure to various users. PORTS® is a cost-shared program requiring local partners to provide funding for the cost of installation, operation and maintenance of the sensor systems. NOAA’s responsibility is to provide the technical expertise required for systems design, 24 x 7 quality control of the data, data collection and dissemination infrastructure and ongoing management of the data. PORTS® builds on CO-OPS water levels and currents program expertise as well as the NWLON observing system infrastructure. PORTS® observations support many mission requirements within NOAA and other Federal agencies. An economic study published in June 2010 for the Columbia River PORTS® showed a \$7.4 million benefit (annually) from reduced groundings and more efficient operations. In FY 2011, work began on the 21st PORTS® installation in New London, Connecticut (expected to be completed in early 2012). A new PORTS® is scheduled for installation in FY 2012 in Humboldt Bay, CA and there is an agreement underway for a new PORTS installation in Jacksonville, FL.

Operational Forecast Models Program - CO-OPS operates nowcast and forecast models that provide short term water level and other environmental forecasts accurate out to 48 hours that enable

better planning and decision making, particularly for vessel transits. These are typically operated in conjunction with PORTS® to address needs for real time data. CO-OPS presently operates eleven nowcast/forecast models; eight are currently running on the high performance computers at the National Centers for Environmental Prediction (NCEP) and the remaining three will be transitioned to NCEP when they are upgraded or replaced over the next several years. The change will improve performance by coupling the models with other models and taking advantage of more capable infrastructure. In FY 2011, CO-OPS released a new operational forecast model for Tampa Bay.

Schedule and Milestones:

Performance Schedule	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
Publish Annual NOAA Tide and Tidal Current Predictions	X	X	X	X	X	X
Maintain NWLON stations	150	150	150	150	150	150
Deliver > 95% water level data availability	X	X	X	X	X	X
Maintain PORTS (# of PORTS)	21	21	21	21	21	21
Conduct tidal current surveys (# of observations)	40	40	40	40	40	40
Support hydrographic survey projects	X	X	X	X	X	X
Support shoreline survey projects	X	X	X	X	X	X
Produce Operational Forecast Models	13	15	18	20	20	20

Deliverables:

- National reference framework (tidal and International Great Lake datums) necessary for nautical charting and shoreline surveying, marine boundaries, habitat restoration, dredging and coastal construction projects
- Tidal zoning, tidal correctors, smooth tides and other tidal information required for reduction of hydrographic soundings to nautical chart datum and for tidal control of shoreline surveys
- Legal authority for definition of local mean sea level, long term sea level trends, guidance for consistent incorporation of sea level trends into interagency planning guidance
- Continuous accurate, reliable, and timely quality controlled real time data from over 2,000 oceanographic and meteorological sensors to support safe and efficient navigation, hazmat response, emergency response planning and execution, NWS tsunami and storm surge warnings, and dredging
- Tide and tidal current predictions and nowcast/forecast oceanographic and meteorological parameters for safe and efficient navigation, coastal resource management, and dredging

Performance Goals and Measurement Data:

Performance Measure:	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
Percentage of top 175 US Seaports with access to suite of NOAA Navigation Products and Services (CO-OPS contribution by tonnage)	Actual	Target	Target	Target	Target	Target	Target
	55%	55%	55%	55%	55%	55%	55%
Description: The U.S. Army Corps of Engineers tracks the number of vessel transits and cargo tonnage that pass through the 300 or so ports in the U.S. on an annual basis. Over 95 percent of the annual tonnage passes through the top 175 seaports. By tracking how many seaports to whom							

NOAA is providing a full suite of its products and services, one can determine what percentage of cargo is transiting more safely and efficiently. The percentage of seaports can then be correlated with these statistics.

Performance Measure:	FY						
Percentage of U.S. coastline with accurate vertical control (tidal and geodetic)	2011	2012	2013	2014	2015	2016	2017
	Actual	Target	Target	Target	Target	Target	Target
	8%	8%	8%	8%	8%	8%	8%

Description: The Coast and Geodetic Survey Act of 1947 authorizes NOAA to conduct tide and current observations and geodetic control surveys. NOAA is the authority for providing vertical reference datums for all marine boundary applications, national shoreline, and nautical chart products. This measure tracks NOAA's ability to provide these datums by measuring the percentage of the U.S. coastline that has accurate vertical control.

Performance Measure:	FY						
Update accuracy of NOAA tidal current predictions (number of locations)	2011	2012	2013	2014	2015	2016	2017
	Actual	Target	Target	Target	Target	Target	Target
	70	40	40	40	40	40	40

Description: The Coast and Geodetic Survey Act of 1947 authorizes NOAA to conduct tide and current observations and to analyze and predict tide and current data and publish data, information, compilations, and reports, including short term tidal current surveys that are used to update the NOAA annual tidal current prediction tables. This measure tracks NOAA's progress in updating the accuracy of these predictions by tracking the number of locations that have been updated.

THIS PAGE LEFT INTENTIONALLY BLANK

PROGRAM CHANGES FOR FY 2013:

Mapping and Charting Base: Navigation Response Teams (Base Funding: \$2,300,000 and 17 FTE; Program Change: -\$2,300,000 and -17 FTE): NOAA is requesting a decrease of \$2,300,000 and 17 FTE for a total of \$0 and 0 FTE to terminate the Navigation Response Teams program in FY 2013.

Proposed Actions:

This reduction will terminate the NOAA Office of Coast Survey's Navigation Response Teams (NRT) program. There are alternative, more cost-effective funding sources for emergency hydrographic surveys in the absence of the NRTs, and NOAA will pursue an agreement with FEMA to ensure that technical assistance to assess navigational hazards is available during Presidentially-declared disasters.

Base Resource Assessment:

NRTs were authorized to provide 24/7 emergency hydrographic survey support to the U.S. Coast Guard, port officials, and other first responders in the wake of accidents and natural events that create navigation hazards which impede safe and efficient marine transportation and commerce. These events may range from Presidentially-declared disasters such as major hurricanes to smaller disruptions such as ship groundings. In their routine non-emergency role, the NRTs work with sister maritime agencies and maritime stakeholders to identify local survey requirements and to validate NOAA's nautical charting products.

The U.S. Army Corps of Engineers (USACE) has primary responsibility for the removal of debris from federally maintained navigable channels and waterways. Section 202 of the Water Resources Development Act of 1976 (PL 94-587) authorizes USACE to remove debris from federally maintained commercial harbors, and water areas immediately adjacent thereto. Furthermore, in Presidentially declared disasters when Public Assistance is authorized pursuant to 44 CFR § 206.208, FEMA may provide direct Federal assistance through a mission assignment to another Federal agency to remove eligible debris when the State and local government certifies that they lack the capability to perform or contract for the requested work.

In 2011, the six NRTs spent a total of 25 days responding to emergencies, and the remainder of their time working with maritime agencies and stakeholders to identify local survey requirements and to validate NOAA's nautical charting products. NOAA will pursue an agreement with FEMA to provide needed technical assistance for emergency response.

Schedule and Milestones:

N/A

Deliverables:

N/A

PROGRAM CHANGE PERSONNEL DETAIL

Activity: National Ocean Service
 Subactivity: Navigation Services

Title:	Location	Grade	Number of Positions	Annual Salary	Total Salaries
Physical Science Technician	Silver Spring, MD	ZT-II	-1	34,075	(34,075)
Physical Science Technician	Silver Spring, MD	ZT-III	-11	51,630	(567,930)
Lead Physical Science Technician	Silver Spring, MD	ZT-IV	-3	62,467	(187,401)
Physical Scientist	Silver Spring, MD	ZP-III	-1	51,630	(51,630)
Physical Scientist	Silver Spring, MD	ZP-IV	-1	62,467	(62,467)
Total			<u>-17</u>		<u>(903,503)</u>
less Lapse		0%	<u>0</u>		<u>0</u>
Total full-time permanent (FTE)			-17		(903,503)
2013 Pay Adjustment (0.5%)					0
TOTAL					(903,503)

Personnel Data

	<u>Number</u>
Full-Time Equivalent Employment	
Full-time permanent	-17
Other than full-time permanent	0
Total	<u>-17</u>
Authorized Positions:	
Full-time permanent	-17
Other than full-time permanent	0
Total	<u>-17</u>

PROGRAM CHANGE DETAIL BY OBJECT CLASS
(Dollar amounts in thousands)

Activity: National Ocean Service

Subactivity: Navigation Services

Object Class	2013 Decrease
11 Personnel compensation	
11.1 Full-time permanent	(\$904)
11.3 Other than full-time permanent	0
11.5 Other personnel compensation	0
11.8 Special personnel services payments	0
11.9 Total personnel compensation	<u>(904)</u>
12 Civilian personnel benefits	(257)
13 Benefits for former personnel	0
21 Travel and transportation of persons	(102)
22 Transportation of things	0
23.1 Rental payments to GSA	0
23.2 Rental Payments to others	0
23.3 Communications, utilities and miscellaneous charges	0
24 Printing and reproduction	0
25.1 Advisory and assistance services	0
25.2 Other services	(1,015)
25.3 Purchases of goods & services from Gov't accounts	(22)
25.4 Operation and maintenance of facilities	0
25.5 Research and development contracts	0
25.6 Medical care	0
25.7 Operation and maintenance of equipment	0
25.8 Subsistence and support of persons	0
26 Supplies and materials	0
31 Equipment	0
32 Lands and structures	0
33 Investments and loans	0
41 Grants, subsidies and contributions	0
42 Insurance claims and indemnities	0
43 Interest and dividends	0
44 Refunds	0
99 Total obligations	<u>(2,300)</u>

Mapping and Charting Base: Support Mapping and Charting Activities (Base Funding: \$50,584,000 and 262 FTE; Program Change: +\$1,060,000 and 0 FTE): NOAA is requesting an increase of \$1,060,000 and 0 FTE for a total of \$51,644,000 to the Mapping and Charting line item to support the accuracy of nautical charts for safe navigation.

Proposed Actions:

With this increase, NOAA will acquire expertise needed for the verification and validation of in-house, contract and 3rd-party survey data for nautical charts. Hydrographic survey data requires verification and validation before it can be applied to nautical charts. This additional capacity will enable NOAA to increase the number of surveys evaluated and validated by 20 percent in a given year.

Statement of Need and Economic Benefits:

NOAA's performance of its charting mandate enables safe navigation of in U.S. territorial waters and the U.S. Exclusive Economic Zone, a combined area of 3.4 million square nautical miles extending 200 nautical miles offshore from the nation's coastline. As cargo ship drafts approach 60 feet below the waterline and import-export container traffic is forecast to double by 2019¹, reliable navigational charts and related products and services are essential to maritime commerce and, by extension, Nation's economic health and welfare. Maritime commerce—including foreign trade and the shipping of goods, commercial and sport fishing, the cruise industry, recreational boating, and the ferry industry—has a combined effect of \$3 trillion on the U.S economy or nearly 21% of GDP (2008 values).

Additionally, many other users also rely on Coast Survey's coastal and ocean data for diverse purposes, including emergency planning, oil spill response, tsunami inundation mapping/modeling, coastal and marine spatial planning, offshore and renewable energy siting, coastal zone management, and ocean science. This work mainly contributes to the *Resilient Coastal Communities and Economies Goal* explained in NOAA's Next Generation Strategic Plan.

Base Resource Assessment:

The base resources for this activity are found in the Mapping and Charting Program base narrative.

Schedule and Milestones:

- Evaluate and approve hydrographic surveys conducted by NOAA survey units, contractors, and other sources for nautical charting (FY 2013-2017)

Deliverables:

- Hydrographic survey data forwarded for application to nautical charts and made accessible for non-navigation uses

¹ Socio-economic Study on Value added to Gross Domestic Product from surface transportation of Import and export bulk traffic (1993-2007) – K.Eric Wolfe, Chief Economist, National Ocean Service

Performance Goals and Measurement Data:

Performance Measure:	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
Evaluate and approve hydrographic surveys conducted by NOAA survey units, contractors, and other sources for nautical charting	Actual	Target	Target	Target	Target	Target	Target
With Increase	N/A	N/A	120	120	120	120	120
Without Increase	202	100	100	100	100	100	100

Description: This measure tracks the number of hydrographic surveys acquired by NOAA in-house vessels, hydrographic service contractors and other sources to be evaluated and approved for application to NOAA Nautical Charts. In FY 2011, NOAA evaluated and approved a backlog of survey data sitting at the processing branches, in addition to the survey data from the NOAA in-house vessels and contractors coming in (hence the larger number compared to FY 2012). In FY 2013, we expect to still have a small backlog to process with this increase.

PROGRAM CHANGE DETAIL BY OBJECT CLASS
(Dollar amounts in thousands)

Activity: National Ocean Service
Subactivity: Navigation Services

Object Class	2013 Increase
11 Personnel compensation	
11.1 Full-time permanent	\$0
11.3 Other than full-time permanent	0
11.5 Other personnel compensation	0
11.8 Special personnel services payments	0
11.9 Total personnel compensation	<u>0</u>
12 Civilian personnel benefits	0
13 Benefits for former personnel	0
21 Travel and transportation of persons	0
22 Transportation of things	0
23.1 Rental payments to GSA	0
23.2 Rental Payments to others	0
23.3 Communications, utilities and miscellaneous charges	0
24 Printing and reproduction	0
25.1 Advisory and assistance services	0
25.2 Other services	1,060
25.3 Purchases of goods & services from Gov't accounts	0
25.4 Operation and maintenance of facilities	0
25.5 Research and development contracts	0
25.6 Medical care	0
25.7 Operation and maintenance of equipment	0
25.8 Subsistence and support of persons	0
26 Supplies and materials	0
31 Equipment	0
32 Lands and structures	0
33 Investments and loans	0
41 Grants, subsidies and contributions	0
42 Insurance claims and indemnities	0
43 Interest and dividends	0
44 Refunds	0
99 Total obligations	<u>1,060</u>

Hydrographic Research & Technology Development: Hydrographic Research & Technology Development (Base Funding: \$7,282,000 and 0 FTE; Program Change: -\$318,000 and 0 FTE):

NOAA requests a decrease of \$318,000 and 0 FTE for a total of \$6,964,000 and 0 FTE to reduce grant funding at the Joint Hydrographic Center.

Proposed Actions:

At this funding level, NOAA will reduce the amount of grant funding provided to NOAA's Joint Hydrographic Center that supports research personnel, with the anticipation that one fewer position will be funded. NOAA's Joint Hydrographic Center (JHC) evaluates sonar technologies and processes to improve efficiencies in hydrographic data acquisition. The program will continue to develop improved standards and methods for collecting data and creating Integrated Ocean and Coastal Mapping (IOCM) products such as habitat maps from nautical charting data, or nautical charting data from fish survey assessments on an adjusted timetable. NOAA will procure new technologies for hydrographic testing and development as resources allow.

Base Resource Assessment:

The base resources for this activity are found in the Mapping and Charting base narrative.

Schedule and Milestones:

- Continue to develop technology for IOCM mapping and data processing on an adjusted schedule
- Test and develop new technologies as resources allow
- Provide custom and standard products that would otherwise be unavailable (gridded multibeam data in Bathymetry Attributed Grid (BAG) format and side-scan sonar mosaics)

Deliverables:

- Data standards, tools and expertise for Integrated Ocean and Coastal Mapping and guidance on acquisition and processing in support of the OCM community
- Acoustic backscatter collection protocols that will facilitate the acquisition of these valuable data while maintaining the quality of bathymetric data

PROGRAM CHANGE DETAIL BY OBJECT CLASS
(Dollar amounts in thousands)

Activity: National Ocean Service
Subactivity: Navigation Services

Object Class	2013 Decrease
11 Personnel compensation	
11.1 Full-time permanent	\$0
11.3 Other than full-time permanent	0
11.5 Other personnel compensation	0
11.8 Special personnel services payments	0
11.9 Total personnel compensation	<u>0</u>
12 Civilian personnel benefits	0
13 Benefits for former personnel	0
21 Travel and transportation of persons	0
22 Transportation of things	0
23.1 Rental payments to GSA	0
23.2 Rental Payments to others	0
23.3 Communications, utilities and miscellaneous charges	0
24 Printing and reproduction	0
25.1 Advisory and assistance services	0
25.2 Other services	0
25.3 Purchases of goods & services from Gov't accounts	0
25.4 Operation and maintenance of facilities	0
25.5 Research and development contracts	0
25.6 Medical care	0
25.7 Operation and maintenance of equipment	0
25.8 Subsistence and support of persons	0
26 Supplies and materials	0
31 Equipment	0
32 Lands and structures	0
33 Investments and loans	0
41 Grants, subsidies and contributions	(318)
42 Insurance claims and indemnities	0
43 Interest and dividends	0
44 Refunds	0
99 Total obligations	<u>(318)</u>

Tide & Current Data Base: Tide and Current Data Program (TCDP) (Base Funding: \$27,829,000 and 124 FTE; Program Change: +\$1,226,000 and 0 FTE): NOAA requests an increase of \$1,226,000 and 0 FTE for a total of \$29,055,000 and 124 FTE to ensure that timely, accurate and reliable oceanographic data and products are available when most needed for navigation safety, maritime commerce, oil spill emergency response, NWS storm surge and tsunami warnings, long term sea level change planning, and other Federal safety of life and property missions.

Proposed Actions:

With this increase, NOAA will inspect an additional 60 NWLON stations per year to adequately maintain and operate the full multi-mission National Water Level Observation Network (NWLON) of 210 long term stations to ensure real time oceanographic and meteorological data is available when most needed to support multiple safety of life and property Federal missions. NOAA will also collect current meter level data at an additional 30 locations per year for a total of 70. The NWLON is NOAA's primary coastal observing system for meeting physical oceanographic and meteorological observation requirements across all NOAA line offices. The increase will support both internal and contracted annual and emergency maintenance of NWLON stations distributed along all U.S. coasts, including remote Pacific Island, Arctic Alaskan, and Caribbean locations. Operating automated NWLON stations to provide continuous real time data from often remote locations constantly subjected to harsh, dynamic environmental ocean conditions is extremely challenging.

Statement of Need and Economic Benefits:

Safe and efficient movement of manufacturing goods, energy supplies, and other commodities through our Nation's seaports is especially critical to supporting the Nation's ongoing economic recovery and job creation as promoted by the Administration's National Export Initiative. The TCDP is expressly mandated by public law and has several direct, specific statutory mandates. These mandates require CO-OPS to provide the physical oceanographic geospatial foundation to support safe and efficient maritime navigation and authorize CO-OPS to leverage that information for other NOAA mission areas such as hazards (storm surge and tsunami warnings), climate (long-term local sea level trends), ecosystems (habitat restoration and coastal resource management), and others. The Coast and Geodetic Survey Act of 1947 (61 STAT 787, 33 U.S.C. §§ 883 a-f) authorizes collection and dissemination of water level data; Section 883a authorizes NOAA to conduct "Hydrographic ... tide and current observations"; Section 883b authorizes NOAA "to analyze and predict tide and current data, and process and publish data, information, compilations, and reports." The Hydrographic Services Improvement Act (112 STAT 3454, 33 U.S.C. §§ 892 et seq) provides updated authorities for the provision of real time information and the use of information for coastal resource management. Other acts, such as the Tsunami Warning and Education Act (120 STAT 2902, 33U.S.C. Ch. 45) authorize the use of real-time tide data for tsunami warnings. Closing physical oceanographic geospatial gaps supports and provides benefits to multiple NOAA and broader Federal Government mission requirements.

The 1999 Assessment of the Marine Transportation System noted that accurate, reliable and timely marine information was a high priority for safe and efficient maritime commerce and that priority holds true today. In addition to providing real time data directly to maritime users, the NWLON also underpins and is an essential component of NOAA's contribution to the cost shared Physical Oceanographic Real Time Systems (PORTS[®]) program. Real time data from these systems help prevent maritime accidents, increase transit efficiencies, and improve oil spill/hazmat response when accidents do occur. The NWLON provides real time data directly to the National Weather Service for hurricane storm surge forecasts and tsunami warnings, as well as directly informing emergency responders of current conditions to support best decisions. The NWLON has been identified as a high priority observing system within NOAA by a rigorous multiyear process. Data from both the

NWLON and tidal current surveys also help inform and improve the accuracy of NOAA hydrodynamic models that provide accurate nowcasts and forecasts of oceanographic conditions 36-48 hours into the future. The NWLON defines the tidal datum reference framework for the Nation and is also the authoritative source for local sea level change rates along the U.S. coast.

A number of studies have documented the economic benefits provided by the broad suite of products and services supplied by the TCDP. A 2009 benefit cost analysis study conducted by the Department of Transportation Volpe National Transportation Systems Center (www.volpe.dot.gov/library/pp09.html) estimated that the net benefit provided by nautical charts, tide and current information is \$1.2 billion based on gross baseline 2006 data. The ratio of the net benefits from the use of the products to the government costs of producing them is 24-to-1; that is, for each dollar of government outlays, \$24 in user benefits are generated. In addition, a series of more targeted economic benefits studies (<http://tidesandcurrents.noaa.gov/pub.html>) have been conducted for various Physical Oceanographic Real Time Systems (PORTS[®]). The studies all show significant reductions in groundings following the establishment of a PORTS[®] as well as annual economic benefits far exceeding the annual recurring costs. For example, the economic benefits documented for the Port of Houston-Galveston is \$16-\$18 million annually, as opposed to the annual maintenance cost of under \$300K. The critical nature of real-time data for safe navigation as well as improved hazmat response, storm surge and tsunami warnings, and other safety of life and property missions have resulted in this capability being classified as a Mission Essential Function in NOAA's Continuity of Operations Plan.

Base Resource Assessment:

The base resources for this activity are described in the Tides and Currents base narrative.

Schedule and Milestones:

- Collect current meter data at 70 locations (FY 2013-2017)
- Annually inspect 210 NWLON stations (FY 2013-2017)

Deliverables:

- Annual Tidal Current Tables
- Accurate and reliable (>95% reliability) real-time oceanographic and meteorological data

Performance Goals and Measurement Data:

Performance Measure:	FY	FY	FY	FY	FY	FY	FY
Conduct Annual Inspections at National Water Level Observation Network Stations	2011	2012	2013	2014	2015	2016	2017
	Actuals	Target	Target	Target	Target	Target	Target
With Increase	N/A	N/A	210	210	210	210	210
Without Increase	210	150	150	150	150	150	150

Description: This measure tracks the number of Annual Inspections conducted each year at the NWLON locations. Annual Inspections are critical to ensuring the NWLON continues to exceed 95% reliability in delivering real time data when most needed to support safe navigation, oil spill response, and NWS issued storm surge and tsunami warnings.

Performance Measure:	FY	FY	FY	FY	FY	FY	FY
Update accuracy of NOAA tidal current predictions	2011	2012	2013	2014	2015	2016	2017
	Actuals	Target	Target	Target	Target	Target	Target
With Increase	N/A	N/A	70	70	70	70	70
Without Increase	70	40	40	40	40	40	40
Description: This measure tracks the number of short term current meter deployments in major U.S. ports and harbors. Data from the current meters is used to update tidal current predictions published on the web and in the U.S. Tidal Current Tables.							

PROGRAM CHANGE DETAIL BY OBJECT CLASS
(Dollar amounts in thousands)

Activity: National Ocean Service

Subactivity: Navigation Services

Object Class	2013 Increase
11 Personnel compensation	
11.1 Full-time permanent	\$0
11.3 Other than full-time permanent	0
11.5 Other personnel compensation	0
11.8 Special personnel services payments	0
11.9 Total personnel compensation	<u>0</u>
12 Civilian personnel benefits	0
13 Benefits for former personnel	0
21 Travel and transportation of persons	0
22 Transportation of things	0
23.1 Rental payments to GSA	0
23.2 Rental Payments to others	0
23.3 Communications, utilities and miscellaneous charges	0
24 Printing and reproduction	0
25.1 Advisory and assistance services	0
25.2 Other services	1,087
25.3 Purchases of goods & services from Gov't accounts	0
25.4 Operation and maintenance of facilities	0
25.5 Research and development contracts	0
25.6 Medical care	0
25.7 Operation and maintenance of equipment	0
25.8 Subsistence and support of persons	0
26 Supplies and materials	0
31 Equipment	139
32 Lands and structures	0
33 Investments and loans	0
41 Grants, subsidies and contributions	0
42 Insurance claims and indemnities	0
43 Interest and dividends	0
44 Refunds	0
99 Total obligations	<u>1,226</u>

The following exhibit shows the summary object class detail for Navigation Services program changes less than \$100,000. Please contact the NOAA budget office if details for any of these changes are required.

PROGRAM CHANGE DETAIL BY OBJECT CLASS
(Dollar amounts in thousands)

Activity: National Ocean Service
Subactivity: Navigation Services

Object Class	2013 Increase
11 Personnel compensation	
11.1 Full-time permanent	\$0
11.3 Other than full-time permanent	0
11.5 Other personnel compensation	0
11.8 Special personnel services payments	0
11.9 Total personnel compensation	0
12 Civilian personnel benefits	0
13 Benefits for former personnel	0
21 Travel and transportation of persons	0
22 Transportation of things	0
23.1 Rental payments to GSA	0
23.2 Rental Payments to others	0
23.3 Communications, utilities and miscellaneous charges	0
24 Printing and reproduction	0
25.1 Advisory and assistance services	0
25.2 Other services	194
25.3 Purchases of goods & services from Gov't accounts	0
25.4 Operation and maintenance of facilities	0
25.5 Research and development contracts	0
25.6 Medical care	0
25.7 Operation and maintenance of equipment	0
25.8 Subsistence and support of persons	0
26 Supplies and materials	0
31 Equipment	0
32 Lands and structures	0
33 Investments and loans	0
41 Grants, subsidies and contributions	8
42 Insurance claims and indemnities	0
43 Interest and dividends	0
44 Refunds	0
99 Total obligations	202

THIS PAGE LEFT INTENTIONALLY BLANK

APPROPRIATION ACCOUNT: OPERATIONS, RESEARCH AND FACILITIES
SUBACTIVITY: OCEAN RESOURCES CONSERVATION AND ASSESSMENT

The objectives of the Ocean Resources Conservation and Assessment subactivity are to:

- Provide a framework for informing and coordinating actions by Federal and state agencies to protect and restore coastal resources.
- Promote management actions to minimize the cumulative effects of coastal development on natural resources, especially NOAA's public trust resources.
- Define the nature and extent of human activities and conditions that threaten the health and productivity of the Nation's coastal resources.
- Conduct damage assessments to support negotiated settlements and litigation that provide funds for restoration of injuries to public trust resources.
- Apply scientific expertise to mitigate the effects of human activities and facilitate environmental recovery, and undertake actions to restore ecosystem functions and resource values.
- Facilitate and support resource conservation through sound science and management activities.
- Develop a capability to research, monitor, assess, and predict coastal ecosystem structure and function to detect changes, evaluate management strategies, and identify actions to effectively manage threats to ecosystem health.
- Provide continuous, integrated data on our open oceans, coastal waters, and Great Lakes in the formats and at the rates and scales required to support the information needs of government, environmental managers, scientists, business, and the public.
- Develop valuation methods for non-market ecological resources and quantify costs of ecosystem changes.
- Facilitate the development and transfer of tools and technology that provide more effective mechanisms to conserve, protect, restore, and utilize coastal ecosystems.
- Build the capacity of coastal decision makers to minimize environmental, social, and economic impacts from coastal and climate hazards to their communities.
- Improve public understanding of functions and values of coastal ecosystems and enhance public access to information on coastal environmental quality and health risks from pollutants.
- Support NOAA's and the Nation's obligations under international treaties and conventions, and increase effectiveness of international programs for coastal environmental science and technology, integrated coastal zone management, and sustainability of coastal resources.

This subactivity contains programs managed by the National Centers for Coastal Ocean Science (NCCOS), the Office of Response and Restoration (ORR), the Coastal Services Center (CSC), the Office of Ocean and Coastal Resource Management (OCRM), and the NOAA Integrated Ocean Observing System (IOOS) Program. The objectives of this subactivity are implemented under the authorities established in the Integrated Coastal and Ocean Observation Systems Act; Clean Water Act; Coastal Zone Management Act (CZMA); Oil Pollution Act (OPA); Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA/Superfund); National Coastal Monitoring Act (NCMA); Harmful Algal Bloom and Hypoxia Research and Control Act (HABHRCA); Estuaries Restoration Act (ERA); Coral Reef Conservation Act (CRCA); Oceans and Human Health Act (OHHA); and other legislation to protect, conserve, and restore natural resources and the environmental quality of the Nation's coastal ecosystems.

The Ocean Resources Conservation and Assessment subactivity contains three items: Ocean Assessment Program, Response and Restoration, and National Centers for Coastal Ocean Science.

OCEAN ASSESSMENT PROGRAM

NOAA's National Ocean Service (NOS) promotes healthy coastal ecosystems by ensuring that economic development in United States coastal areas is managed in ways that maintain biodiversity and long-term productivity necessary for sustained use. Working in partnerships with Federal and state agencies, NOAA provides the coastal resource management community with the scientific understanding, information, products and services needed to balance the environmental, social, and economic goals of coastal communities and NOAA. The Ocean Assessment Program includes six sub-programs that contribute to NOAA's Healthy Oceans, Resilient Coastal Communities and Economies, Climate Adaptation and Mitigation and Weather-Ready Nation Goals.

INTEGRATED OCEAN OBSERVING SYSTEM (<http://ioos.gov>) - The goal of U.S. IOOS is to provide continuous data on open oceans, coastal waters, and Great Lakes to inform decision-making. The Integrated Coastal and Ocean Observation System Act of 2009 (ICOOS Act) charges NOAA with leading oversight and administration of the IOOS regional component and coordinating across Federal agencies to maximize the nation's return on investment in IOOS. The IOOS Regional component complements Federal ocean observing assets by providing coastal, Great Lakes, and ocean data to the National Weather Service for use in operational models and forecasts, and by providing data, models, and information tailored to the economic and environmental requirements of local communities. IOOS implementation relies on the contributions of many programs across NOAA, the Federal government and the regions. Increased compatibility of Federal and regional observing system assets will improve our understanding, forecasting, stewardship, and use of coastal and Great Lakes waters. Base resources are allocated between two program components, NOAA IOOS and Regional IOOS. Users of ocean data, including modelers, researchers, and meteorologists, spend an average of 25–50 percent of their time searching for, accessing, formatting, and ingesting data into their products. Significant resources are expended on data management activities that might otherwise be used to forecast and research. By improving the accessibility and interoperability of ocean data, IOOS delivers time and cost savings that can be redirected to improving existing and developing new products.

COASTAL SERVICES CENTER (<http://csc.noaa.gov>) - The mission of the Coastal Services Center (CSC) is to build regional, state, and local capacity for informed decision making that increases the resiliency of our coasts and coastal communities and economies. Eighty percent of decisions that affect our coasts are made at the local level, and CSC's primary customers are the Nation's coastal managers, including natural resource managers, planners, and emergency officials. Working with other NOAA programs, states, and across Federal agencies, CSC provides geospatial data and tools, training, social science information, and partnership-building at the national, regional and state levels that would otherwise be unavailable. CSC is effectively "buying down" the cost of improving state and local coastal management programs and enabling a more effective and targeted implementation of the Coastal Zone Management Act (CZMA), and other relevant coastal legislation, such as the Ocean and Coastal Mapping Integration Act. Partnerships between CSC, state and local coastal management organizations give rise to numerous projects each year. CSC transfers successful tools and approaches to the coastal management community to ensure that national issues are effectively addressed at regional, state and local levels. CSC's collaborative strategy builds effective working relationships across NOAA and with other Federal agencies.

COASTAL STORMS (<http://csc.noaa.gov/csp/>) - The Coastal Storms Program harnesses and leverages NOAA and community resources to reduce the adverse impacts of coastal storms by developing improved and integrated products and services that address specific state/local decision-maker needs. The Coastal Storms Program brings NOAA-wide expertise, products, and services to address the challenges unique to each region and targets tools and outreach to the needs of local stakeholders. The Coastal Storms Program also seeks to integrate existing products and services to

add value and meet unique needs within a target region. The Program is currently working in the Pacific Islands (Hawaii and the U.S. territories) and Great Lakes.

CORAL REEF PROGRAM (<http://coralreef.noaa.gov>) - Coral reefs are some of the most biologically diverse ecosystems in the world. They provide a range of benefits, including food, recreation, marine habitat, coastal protection, and medicines and sustain American livelihoods and economic development. Coral reefs provide vital ecosystem services, including food, raw materials, climate regulation, moderation of extreme events, waste treatment / water purification, biological control, and maintenance of genetic diversity. A study in 2009 estimated the average annual value of these ecosystem services at \$130,000 per hectare of reef, reaching \$1,200,000 in some cases. Furthermore, coral reefs are harbingers of change – a modern day “canary in the coal mine.” The health of these productive and valuable coral reef ecosystems in the U.S. and around the world is at serious risk due to a variety of human impacts – including global climate change, unsustainable fishing practices, and pollution. Nineteen percent of the world’s reefs are effectively lost (“Status of Coral Reefs of the World,” Wilkinson 2008). A striking new analysis of threats to the world’s coral reefs shows that 60 percent of reefs are threatened by local activities – fishing, coastal development, watershed-based pollution or marine-based pollution – and when global threats such as thermal stress related to climate change are factored in 75 percent of all coral reefs are currently considered threatened (Reefs at Risk Revisited, 2011). Additionally, the emerging issue of ocean acidification represents another chronic and incompletely understood threat to coral reefs on a global scale.

To address the complex nature of the threats that face coral reef ecosystems, the Coral Reef Conservation Program (CRCP) brings together expertise from across NOAA for a multidisciplinary approach to understanding and managing coral reef ecosystems. This matrix program includes more than 30 offices within NOAA from NOS, NMFS, OAR and NESDIS (funds are requested in NOS and then distributed among the participating offices) to meet its mission to protect, conserve and restore valuable coral reef ecosystems. NOAA has found this approach to be an efficient and effective way to mobilize and focus the specific capabilities of each office on these priorities. Examples of CRCP activities and tools include: climate forecasts developed by Coral Reef Watch (NESDIS), benthic habitat mapping (NOS and NMFS), baseline assessment and monitoring programs (NOS and NMFS), management capacity-building of our jurisdictional partners through training and technical assistance (NOS, NMFS, NESDIS), coral reef ecosystem research (OAR), and socioeconomic studies (NOS), among others.

The CRCP addresses NOAA’s legislative mandates to protect and conserve coral reefs (Coral Reef Conservation Act of 2000 and the Presidential Executive Order 13089 on Coral Reef Protection, which established the NOAA-co-chaired U.S. Coral Reef Task Force), recover threatened corals and other protected species (ESA), manage reef-dependent federal fisheries and protect Essential Fish Habitat including deep coral and sponge communities (Magnuson-Stevens Fishery Conservation and Management Act (MSA)), promote sustainable use of the coastal zone under the Coastal Zone Management Act (CZMA), and improve management capabilities of the National Marine Sanctuaries (NMSA).

Schedule and Milestones:

- Develop operational version of IOOS Data Catalog and web-based Viewer to allow users to find and access observational data (FY 2012)
- Support regional IOOS data standardization using DMAC standards. Make regional IOOS data holdings discoverable through IOOS Data Catalog (FY 2012)
- Develop operational version of IOOS System Status Dashboard (FY 2013)
- Develop operational versions of Data Visualization and Format Conversion Services (FY 2013-2014)

- Develop initial versions of Data Integration Services (FY 2013-2014)
- Develop initial versions of IOOS Product Generation (FY 2016-2017)
- Sustain observing and modeling capability throughout regional entities (FY 2012-2017)
- Meet ICOOS Act requirements: promulgate guidelines to certify non-Federal assets; identify observing gaps and or needs for capital improvements, for Federal and non-Federal assets; submit annual report to interagency ocean observing committee; prepare annual budget summary; and deliver biennial report to Congress (FY 2012-2017)
- Sustain Regional IOOS operations and maintenance of existing HF Radar network to support U.S. Coast Guard operational search and rescue, oil spill response, water quality and pollutant tracking, harmful algal bloom (HAB) monitoring, and offshore wind energy siting (FY 2012-2017)
- Maintain national HF Radar network servers with quality assurance, control procedures and fail-over redundancy (FY 2012-2017)
- Monitor performance and “up time” of the HF Radar network (FY 2012-2017)
- Develop visualization and decision support tools for regional planning efforts (FY 2012)
- Execute NOAA Internal Data Integration Plan and O&M of ocean.data.gov (FY 2013-2017)
- Develop and deliver state coastal resource and emergency manager decision support tools, such as hazard assessment tools, sea level rise visualizations, and coastal county snapshots (FY 2012-2017)
- Provide regional technical assistance, tools and coordination on priority issues to support managers in state led regional partnerships including the Gulf of Mexico Alliance, the West Coast Governors’ Alliance on Ocean Health, the Northeast Regional Ocean Council, the Hawaii Ocean Partnership, and others (FY 2012-2017)
- Develop, distribute, update, and apply moderate resolution coastal land cover change analysis data (refreshed on five-year basis) for coastal regions (FY 2012-2017)
- Develop integrated models to provide information about storm vulnerability and ecological impacts (FY 2012-2017)
- Complete 19 watershed management plans for watersheds near priority coral reef areas by FY 2017
- Complete coral reef jurisdictional Capacity Assessments (FY 2013)
- Develop a CRCP National Monitoring Plan (FY 2012)
- Conduct reef assessment and monitoring cruises in Pacific and Atlantic/Caribbean (FY 2012-2017)
- Continue to improve coral bleaching forecasts and ocean acidification models (FY 2012-2017)
- Complete the State of Coral Reef Ecosystems Report every four years and distribute to policy makers, resource managers and others who make decisions about coral reef conservation issues (FY 2016)
- Conduct three social marketing campaigns to raise awareness of coral reef conservation and change behavior (FY 2013-2017)
- Conduct surveys in the U.S jurisdictions to monitor social change regarding reef resources (FY 2013-2017)

Deliverables:

- Fully functional IOOS Data Catalog with contributions from all participating coastal, Great Lakes and open ocean data providers
- Utility services for visualizing, transforming and integrating oceanographic data
- Formal documentation for implementation and training of IOOS data providers and partners

- Standardized data access services and data formats at key NOAA and regional data providers, thereby simplifying access to new and archived oceanographic data
- Established processes for Regional IOOS partners to engage with stakeholders in their respective regions and provide updated stakeholder input to ensure that IOOS is responsive to local and regional priority needs
- Refined IOOS enterprise metrics for assessing performance and maturity of the system
- Expanded capability of U.S. IOOS, improving mission readiness of Federal agencies and ability of U.S. IOOS regions to meet local and regional stakeholder needs for ecosystems data including new data from marine sensor development
- High Frequency Radar trend analysis of system performance and “up time”
- A coordinated NOAA structure that supports targeted regional capacity building for Regional Planning Bodies and geospatial data and decision support tools needed for regional planning efforts
- A NOAA-wide plan for integrating key spatial data for decision-making and making them available through ocean.data.gov
- Data, mapping, tools, and information resources through Digital Coast to address competing using of coastal resources and adaptation to coastal hazards and climate change
- Training and workshops on data, tools, and techniques that address competing using of coastal resources and adaptation to coastal hazards/climate change
- Effective regional ocean partnerships by building capacity through facilitation, training, and workshops addressing completing uses of coastal resources and adaptation to coastal hazards and climate change
- Outreach publications to increase capacities among coastal resource managers, land use planners, emergency managers, floodplain managers, and others
- Development of environmental forecasting and risk and vulnerability decision-support tools to assist with decision making regarding the impacts of storms on natural resources and communities
- Seven reports – one per jurisdiction – on the status of jurisdictional management capacity (organizational, human resources, legal and technical) to determine the capacity gaps that need to be addressed in order for local resource management efforts to be effective
- Increased management capacity and effectiveness in existing MPAs increases the condition of fish assemblages within coral reef MPAs, restores essential ecosystem functions crucial to coral health in priority coral reef areas and increases resilience of these areas to climate change impacts
- Development and implementation of watershed management plans reducing pollutant loading in target watersheds adjacent to coral reefs, thereby decreasing local stressors (sediments, nutrients, etc) that negatively affect coral reefs
- New management strategies to better protect coral reef areas implemented through targeted research to better understand the impacts of stressors to coral reefs
- An engaged public who understands the need for and importance of coral reef ecosystems and who supports action to conserve important coral reef resources

Performance Goals and Measurement Data:

Performance Measure:	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
Number of Regional IOOS supported coastal, ocean, and Great Lakes observations delivered to the GTS for use by NOAA operationally in daily forecasts (in millions)	Actual 2.1	Target 2.1	Target 2.1	Target 2.1	Target 2.1	Target 2.1	Target 2.1

Description: Regional IOOS partners contribute a significant proportion of observations available for use by forecasters via the Global Telecommunications System. IOOS observation platforms are typically located in near shore areas where National Data Buoy Center and National Ocean Service platforms are not present, thereby filling a data gap of critical observations for NOAA.

Performance Measure:	FY						
Percentage of U.S. coastal waters with 2/3 reduced search and rescue area (96 hour period)	2011	2012	2013	2014	2015	2016	2017
	Actual	Target	Target	Target	Target	Target	Target
	N/A	19%	19%	19%	19%	19%	19%

Description: Percentage of U.S. coastal waters with 2/3 reduced search and rescue area (96 hour period) resulting from USCG SAROPS integrating IOOS surface currents at 80 percent data availability. USCG estimates the search area is reduced by 2/3 in a 96 hour period when the SAROPS system is linked to the IOOS HFR data, thereby leading to greater numbers of lives saved and reduced search costs annually. As a baseline, U.S. coastal waters are defined as the area from the contiguous U.S. shoreline out to 150km, for a total area of 1.5 million km².

Performance Measure:	FY						
Percentage of tools, technologies, and information services that are used by NOAA partners/ customers to improve ecosystem-based management (Measure 18c)	2011	2012	2013	2014	2015	2016	2017
	Actual	Target	Target	Target	Target	Target	Target
	88%	88%	89%	90%	91%	91%	91%

Description: This measure tracks NOAA's success in providing tools, technologies, and information services such as those for coastal and marine resource managers that enable progress toward the principles of ecosystem-based management (considering ecological, economic, social, and security concerns) for coastal, marine, and Great Lakes ecosystems. By cataloging and tracking each fiscal year the existing and new tools, technologies, and information services authorized and developed to meet stakeholders' needs (50 to 100), NOAA encourages their completion and use to advance ecosystem-based management. NOAA can also then ensure investments in the most effective programs and products for the Nation. NOAA partners and customers include Federal, state, local and tribal authorities who make decisions affecting resources in the U.S. coastal zone, and other users impacting the condition of coastal ecosystems (e.g., private industry). Actuals are derived by dividing the number of tools/services developed by the end of the year by the number proposed at the beginning of the year. Targets are established based on historical patterns and the amount of funds being requested. Services can include on-line courses for managers, enhanced websites, broadcasts of live events, and workshops and other training techniques. New tools are developed with partners and customers that improve our products and services for ecosystem managers. Benefits of better management of the Nation's coastal, marine, and Great Lakes resources accrue to all citizen's through sustainable ecosystems that provide jobs, products and services that are unique to coastal and ocean areas.

Performance Measure:	FY						
Percentage of U.S. coastal states and territories demonstrating 20% or more annual improvement in resilience capacity to weather and climate hazards (Measure 18e)	2011	2012	2013	2014	2015	2016	2017
	Actual	Target	Target	Target	Target	Target	Target
	43%	34%	43%	49%	54%	60%	66%
<p>Description: This measure tracks a range of contributions to address coastal community risk, vulnerability, and resilience to coastal hazards. It quantifies NOAA's contributions to this important goal across NOAA's coastal programs, measuring how NOAA is improving the nation's capacity for resilience to hazards and is contributing significantly to NOAA's efforts to improve integration of its coastal programs, and expanding beyond the three coastal integration programs providing inputs to the measure (CSC, OCRM, and Sea Grant).</p>							

RESPONSE AND RESTORATION (<http://response.restoration.noaa.gov>)

NOAA's Office of Response and Restoration (OR&R) protects coastal and marine resources, mitigates threats, reduces harm, and restores ecological function. OR&R provides comprehensive solutions to environmental hazards caused by oil, chemicals, and marine debris. NOAA responds to approximately 180 significant oil or chemical spills each year as scientific advisors to the U.S. Coast Guard and provides solutions to cleanup agencies and organizations that protect and restore coastal resources at more than 200 hazardous waste sites each year along the Nation's ocean and Great Lakes coasts. When oil or hazardous substances threaten or injure coastal and marine resources, NOAA, along with state and other Federal natural resource trustees, is responsible for ensuring that cleanup actions protect those resources from further injury; assessing and recovering natural resource damages to restore the injured resources; and seeking compensation on behalf of the public for the loss of services that the natural resources provided. OR&R delivers scientific expertise on releases of oil, chemicals, and marine debris; protecting and restoring NOAA trust resources; and extending core scientific expertise to promote sound, science-based decision making to address critical local and regional coastal challenges.

EMERGENCY RESPONSE DIVISION - The Emergency Response Division (ERD) supports Federal, state, and local agencies across the country that depend on NOAA's science-based guidance during oil and chemical spills, vessel groundings, search and rescue efforts, national security events, and other emergencies. ERD provides scientific expertise, including oil spill trajectory modeling, shoreline cleanup assessment, identification of sensitive resources, information management, and development of cleanup strategies. ERD has extensive experience in the Incident Command System and has developed numerous spill response tools such as: the Environmental Sensitivity Index (ESI) maps used by first responders to depict resources at risk, the Environmental Management Response Application (ERMA), and the CAMEO suite used by fire services across the country to respond to hazardous releases. These tools enable Federal on-scene coordinators to make the best cleanup decisions to minimize the environmental and economic impacts of oil spills. ERD represents NOAA on the National and Regional Response Teams that provide technical assistance, resources and coordination of preparedness, response and recovery activities for emergencies involving oil, hazardous substances, pollutants, and weapons of mass destruction in disasters and other incidents of national significance. ERD enhances national knowledge and readiness by providing training to hundreds of Federal, state and local partners each year. ERD is currently providing critical scientific support to the Coast Guard for the Deepwater Horizon oil spill in the Gulf of Mexico.

ASSESSMENT AND RESTORATION DIVISION - The Assessment and Restoration Division (ARD) works closely with other Federal and state trustees and the responsible party to assess and restore

resources injured by oil spills, releases from hazardous waste sites, and vessel groundings on corals and sea grass beds. ARD ensures the public's natural resources are restored. ARD also influences remediation at hazardous waste sites to be protective of NOAA trust resources. ARD is mandated to perform these natural resource trustee roles by the Oil Pollution Act, the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), and the Clean Water Act. ARD is a leader among the state and Federal damage assessment community and supports the protection and restoration of natural resources vital to coastal ecosystems and local economies. ARD and its partners have generated over \$500 million of restoration over the life of its program, all of which has been paid for by the responsible party. ARD is now leading the damage assessment activities for the Deepwater Horizon oil spill in the Gulf of Mexico. In this arena, ARD works with NOAA's Restoration Center to provide assistance for estuary habitat restoration projects and to develop and enhance restoration monitoring and research capabilities. NOAA's efforts contribute to restoring estuaries that support local economies and understanding the efficacy of our restoration efforts.

In FY 2012, NOAA received funding to develop an oil spill research and development program. The goal of this program is to conduct research to provide useful information, methods and tools for planners, oil spill responders, and assessment practitioners. Funds will support external grants that will be coordinated with the Interagency Coordinating Committee for Oil Pollution Research (ICCOPR) as well as the National Oceanographic Partnership Program (NOPP).

ESTUARY RESTORATION PROGRAM – In FY 2013, NOAA proposes to consolidate the functions and resources of the Estuary Restoration Program into the Office of Habitat Conservation within the National Marine Fisheries Service.

MARINE DEBRIS PROGRAM - In FY 2013, NOAA proposes to consolidate the functions and resources of the Marine Debris Program in the Office of Habitat Conservation within the National Marine Fisheries Service.

Schedule and Milestones:

- Respond to approximately 180 oil spills and other pollution events to influence sound, science-based cleanup decisions
- Influence remedial decisions at more than 200 hazardous waste sites to protect NOAA trust resources
- Conduct natural resource damage assessments at priority spill and hazardous waste sites
- Conduct oil spill drills and implement response and damage assessment training for preparedness and capacity building in partners
- Achieve significant progress on regional ecosystem restoration planning, implementation, and monitoring
- Fund 16 multi-year grants per year focused on high priority oil spill research and development

Deliverables:

- Technical support to CERCLA lead agencies, investigate potential injury to NOAA trust resources, develop protective remedial strategies, and address contaminated sediments
- Significant progress toward completing natural resource damage assessments or cases settled to recover funds for restoration of coastal resources
- Regional response exercises and drills with NOAA presence (Federal, state, local, private)
- Develop Environmental Response Management Application (ERMA) for the State of Alaska
- Socioeconomic monitoring of Deepwater Horizon restoration projects to estimate restoration project benefits to Gulf Coast economies

Performance Goals and Measurement Data:

Performance Measure:	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
Number of hazardous waste sites where assessments or cleanup plans address risks to NOAA trust resources	Actual	Target	Target	Target	Target	Target	Target
	15	15	15	15	15	15	15
Description: This measure tracks the number of hazardous waste sites (e.g., Superfund sites) for which NOAA provides scientific expertise to assess and develop cleanup plans, thereby reducing the risk to NOAA's trust resources.							

Performance Measure:	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
Number of enhancements to scientific support tools that support US government response to hazardous material releases	Actual	Target	Target	Target	Target	Target	Target
	61	59	75	75	75	75	75
Description: This measure tracks the number of improvements to scientific support tools, e.g., fate and trajectory models, ERMA, environmental sensitivity maps, that will help decision makers make the best cleanup decisions to minimize the environmental and economic impacts of oil and chemical spills and marine debris releases.							

Performance Measure:	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
Number of Natural Resource Damage Assessment cases where liability is resolved	Actual	Target	Target	Target	Target	Target	Target
	6	4	4	4	4	4	4
Description: This measure tracks the annual number of natural resource damage cases that are resolved and supply restoration funds. Successful cases reflect NOAA's ability to conduct assessments, provide assistance and work cooperatively with industry and other trustees on natural resource damage cases.							

NATIONAL CENTERS FOR COASTAL OCEAN SCIENCE (<http://coastalscience.noaa.gov>)

NOS' National Centers for Coastal Ocean Science (NCCOS) conduct research, monitoring, and assessments to build the scientific foundation essential for sustainable use of coastal resources. NCCOS integrates its expertise and efforts across all levels of government through a variety of interagency task forces and has established partnerships with NIST, EPA, USGS, NPS, and CDC, academic institutions and coastal community resource managers and public health officials. Coordinating activities with partner organizations, NCCOS ensures research activities meet the highest priority science needs, provide a balanced response to local, regional and national issues and are utilized by decision makers to sustain the viability of coastal ecosystems and communities.

Three of NCCOS' centers have on-site research facilities, and two centers conduct research through analyses of field data. Although each center has unique expertise, NCCOS' research, monitoring and assessment capabilities are leveraged and enhanced by partnerships to manage threats of harmful algal blooms (HABs), support coastal and marine spatial planning, advance research on climate change impacts to coastal ecosystems and address impacts of coastal contamination, with a focus on pharmaceuticals, endocrine disrupting compounds, flame retardants and other contaminants of emerging concern (CECs). NCCOS also performs NOAA's activities under the

Oceans and Human Health Act. Brief descriptions of activities conducted at NCCOS centers are provided below.

Center for Coastal Environmental Health and Biomolecular Research (CCEHBR) – Located in Charleston, SC, CCEHBR conducts applied research programs to: develop methods to characterize, detect and measure marine biotoxins, HABs and CECs; and understand the factors linking land use in the coastal zones with the distribution and effects of environmental contaminants on living marine resources and associated habitats. In FY 2012, NOAA will transition away from the activities conducted in the Marine Forensics Program by CCEHBR which no longer align to the priorities in NCCOS' intramural research portfolio.

Center for Coastal Fisheries and Habitat Research (CCFHR) – Located in Beaufort, NC, CCFHR's science and research efforts evaluate the anthropogenic effects on resource productivity and improve delineation, recovery and restoration of injured habitat. It also develops tools for detecting HABs and improving forecasts of bloom conditions and examines shoreline and habitat response to climate change.

Center for Coastal Monitoring and Assessment (CCMA) – Located in Silver Spring, MD, CCMA conducts programs in applied research, monitoring, biogeography and assessment to evaluate the environmental quality and consequences of anthropogenic stresses to U.S. coastal, estuarine, and Great Lakes areas and to monitor toxic contaminants, nutrients, and related properties in biota, water, and sediments at over 300 sites through the National Status and Trends program. It also determines the distribution of anoxia/hypoxia, the occurrences of HABs, and the biodiversity and habitat characteristics of U.S. coastal, estuarine, and Great Lakes areas.

Center for Human Health Risk (CHHR) - Located in Charleston, SC at the Hollings Marine Lab (HML), a NOAA Center of Excellence in Oceans and Human Health, CHHR research is focused on genomics, environmental chemistry and toxicology, and pathogen source tracking, monitoring, and assessment to examine the interrelationships between human health and marine environmental health; and to develop and integrate medical and marine technologies to understand, assess, sustain and protect marine and coastal ecosystems.

Center for Sponsored Coastal Ocean Research (CSCOR) – Located in Silver Spring, MD, CSCOR addresses emerging coastal ocean issues across NOAA's mission responsibilities. CSCOR supports competitive, peer-reviewed, interdisciplinary research investigations with finite life cycles conducted on a regional scale over a 3-5 year period. The program relies upon established processes that reflect the requirements and advice of both the management and science communities in setting its priorities to ensure the utility and credibility of research designed to investigate ecological stressors including HABs, hypoxia and climate change; and to forecast the ecological effects of ecosystem stressors in a regional context for coastal ecosystems of concern to NOAA.

In response to established legislation and NOAA priorities and in concert with scientific expertise and capabilities, NCCOS' internal research efforts deliver quality, timely and relevant science and services to the Agency and partners to respond to harmful algal blooms (30 percent), support coastal and marine spatial planning (25 percent), and assess the impacts of climate change (10 percent) and coastal contamination (35 percent).

Schedule and Milestones:

- Identify and analyze biological, benthic and oceanographic datasets at appropriate spatial and temporal scales to support New York and North Carolina offshore energy plans

- Research to support National Marine Sanctuary (NMS) rezoning and boundary delineation
- Characterize environmental conditions for HAB species to produce toxins and estimate toxin flux into food chains
- Collect and analyze data to support national baseline assessments of coastal resource health
- Investigate land use and weather modifications on runoff, eutrophication, HABs and pathogens for coastal Southeast, Gulf of Mexico and Chesapeake Bay
- Assess impacts of bulkheads on wave attenuation and marsh vegetation

Deliverables:

- Data integration visualization tools
- Baseline ecological assessments in Gulf of Mexico, Chesapeake Bay and selected NMS and NERRs
- Reports on national ecological conditions and stressor impacts in coastal-ocean waters
- Models on marsh response to sea level rise and assessments of impacts of shoreline modification on ecosystem services in Mid-Atlantic region

Performance Goals and Measurement Data:

Performance Measure:	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
Number of coastal, marine and Great Lakes ecosystem sites adequately characterized for management (Measure 18a: NCCOS contribution only)	Actual	Target	Target	Target	Target	Target	Target
	7	15	16	16	12	12	10
<p>Description: Ecological characterizations provide the scientific basis for coastal and ocean assessments and forecasts, and the development of plans to manage resources and assess the effectiveness of measures implemented to effectively manage natural resources. Characterizations are conducted on NOAA trust resources, essential fish habitats, Great Lakes habitats and living resources and throughout the Nation’s coastal zone. A subset of these metrics contributes to NOAA’s measure 18a.</p>							

Performance Measure:	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
Cumulative number of coastal, marine and Great Lakes forecast capabilities developed and used for management (Measure 18b: NCCOS contribution only)	Actual	Target	Target	Target	Target	Target	Target
	1	3	4	5	4	4	3
<p>Description: This measure is a subset of measure 18b. NOAA’s discrete forecast models allow resource managers to: 1) make decisions based on predicted environmental and socioeconomic impacts related to a particular issue; 2) use issue-based forecasts to predict the impacts of a single ecosystem stressor (e.g., climate change, extreme natural events, pollution, invasive species, and land and resource use) and 3) evaluate the potential options to manage those stressors to fulfill the ultimate goal for resource managers to use NOAA’s forecasts to better manage ecosystem use, condition, and productivity. These forecasts will be based on field and laboratory studies, existing data, and models predicting environmental conditions under different scenarios and will have capabilities specific to a geographic area and be counted for each ecosystem as they become operational. For example, harmful algal bloom forecasts in the Gulf of Mexico and Gulf of Maine are two separate forecast capabilities and similarly, multiple, distinct forecast capabilities could be counted within a single ecosystem (i.e., harmful algal blooms, pink shrimp harvest, and hypoxia – all in the Gulf of Mexico).</p>							

Performance Measure:	FY 2011 Actual	FY 2012 Target	FY 2013 Target	FY 2014 Target	FY 2015 Target	FY 2016 Target	FY 2017 Target
Percent of all coastal communities susceptible to harmful algal blooms verifying use of accurate HAB forecasts (Measure 18h)	N/A	N/A	11	11	11	11	11
Description: This is a pilot measure in FY 2013 which was developed to track the forecast communities (currently using operational forecasts) within a coastal region vulnerable to harmful algal blooms (HAB) and the utility and accuracy of HAB forecasts as verified through customer feedback responses before and after a forecast HAB event.							

PROPOSED LEGISLATION:

The Administration will work with Congress to reauthorize the Coral Reef Conservation Act, the Oceans and Human Health Act, and the Harmful Algal Bloom and Hypoxia Research and Control Act.

PROGRAM CHANGES FOR FY 2013:

Regional IOOS Observations: Regional IOOS Observations (Base Funding: \$22,956,000 and 5 FTE; Program Change: \$6,564,000 and 0 FTE): NOAA requests an increase of \$6,564,000 and 0 FTE for a total of \$29,520,000 and 5 FTE for Regional IOOS Observations to develop and improve marine sensors that will monitor changing conditions in the oceans, coasts and Great Lakes.

Proposed Actions:

With this increase NOAA, will establish a \$10,000,000 marine sensor program by reallocating \$3,436,000 within funds currently available to regional associations and other grant recipients to participate in this effort. Through this effort, NOAA will focus on the “Sensors for Marine Ecosystems” near-term priority and the “Opportunities for Progress” for observing systems and models as specified in the Ocean Research Priorities Plan and Implementation Strategy titled, “Charting the Course for Ocean Science in the United States for the Next Decade” U.S. IOOS® will develop and apply a variety of biological, chemical, and physical marine sensing technologies to allow rapid, accurate, and cost effective detection, identification, characterization, and quantification of environmental conditions. The goal will be to incorporate the successful marine sensor technologies into Regional IOOS operations and other monitoring and prediction programs to meet region-specific stakeholder needs as mandated by the Integrated Coastal and Ocean Observation System (ICOOS) Act (2009) and directed by the National Ocean Policy.

NOAA will make competitive, extramural awards to teams of U.S. IOOS Regions, industry, academia, and Federal partners for the development, demonstration, testing, and evaluation of a variety of biological, chemical, and physical marine sensor technologies. Demonstrations will focus on topics with potential to result in significant improvements to meet National Ocean Policy priorities related to informing decisions and improving understanding, water quality, and observations, mapping, and infrastructure. The competitions will be coordinated with the National Oceanographic Partnership Program to leverage other agency investments intended to address the Nation’s needs for ocean information and will focus on transitioning technologies into operations. Partnering will be encouraged between IOOS Regions, academic partners, and Federal operational programs to ensure new technologies and resulting data sources integrate with existing regional and national operational models and forecasts as appropriate. The demonstrations will be staggered and phased to allow new topics to be competed every two years and will include cross-agency prioritization of topics. The goal will be to incorporate the successful marine sensor technologies into Regional IOOS operations and other monitoring and prediction programs to meet region-specific stakeholder needs as mandated by the Integrated Coastal and Ocean Observation System (ICOOS) Act (2009) and directed by the National Ocean Policy. See the Performance Schedule below in the Schedule and Milestones section for specific activities that will be funded with this request.

After a reallocation of \$2,436,000, \$19,520,000 will be provided to Regional IOOS partners in FY 2013. This funding will allow them to continue to provide 80 percent of the level of meteorological and oceanographic data that they delivered in 2011 to the IOOS data assembly center at the National Weather Service’s National Data Buoy Center (NDBC) and will continue to build upon the increase provided in FY 2012 for HF Radar. In addition, \$1,000,000 provided in FY 2012 for the verification and validation of sensors will be reallocated to be a part of the larger more focused marine sensors program requested here.

Base Resource Assessment:

The base resources for U.S. IOOS are described in the Ocean Resources Conservation and Assessment base narrative.

Statement of Need and Economic Benefits:

Through recreation, residential and commercial development, and employment, human populations are coming into increasing contact with our oceans and coastal waters. Continued coastal development, changes in land use, a varying climate, and altered ecosystem diversity add a complexity of environmental and human stresses, the consequences of which we do not yet fully understand and are ill prepared to manage. Approximately 100 million Americans use coastal and Great Lakes waters for recreation each year, many of them multiple times, and they are exposed to an increasingly dangerous array of ocean health threats from industrial, urban, and agricultural sources. In 2004, there were nearly 20,000 days of closings and advisories at ocean, bay and Great Lakes beaches, of which 73 percent were attributed to unknown sources and cost millions to local economies. During 2006-2007, beach advisory days due to sewage contamination more than tripled to 4,000 and 35 percent of tested estuaries and 12 percent of ocean shoreline waters were considered unfit for designated uses (*Testing the Waters 2009*, NRDC 2009).

Our ability to rapidly and accurately monitor and assess ocean conditions, biodiversity and other indicators of marine ecosystem health, and biological responses to changes in environmental conditions have lagged far behind our capacity to detect physical changes in the oceans and atmosphere. This capability gap is a target of the Marine Sensor Innovation program described here. This work will enable better development of new marine sensing technologies designed to deliver rapid and cost-effective data to inform our understanding of coastal, ocean, and Great Lakes ecosystems, and to support better decision making to improve public, animal, and ecosystem health.

U.S. IOOS provides continuous data on open oceans, coastal waters, and Great Lakes to inform decision-making. Two studies, *The Business Case for Improving NOAA's Management and Integration of Ocean and Coastal Data* (2009) and *Estimating the Economic Benefits of Regional Ocean Observing Systems* (Kite-Powell et al. 2004), confirmed that investments in ocean observation will generate significant economic benefits to both NOAA and the Nation. Users of ocean data, including modelers and meteorologists, spend an average of 25–50 percent of their time searching for, accessing, formatting, and ingesting data into their products. The Kite-Powell study summarized the magnitude of potential economic benefits of deploying a network of ocean observing systems. Conservative estimates of benefits demonstrate that between \$100 million and \$1 billion in economic growth would be created by an investment in regional ocean observing systems (Kite-Powell et al. 2004). This sustained investment in technology innovation will propel marine sector businesses, job growth, and scientific discovery while supporting science, technology, engineering, and mathematics (STEM) education.

Schedule and Milestones:

Performance Schedule	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
Prioritize topics with federal agencies and the National Oceanographic Partnership Program (NOPP) for marine sensor innovative technology demonstrations to advance three-dimensional monitoring of coastal, Great Lakes, and ocean conditions		X		X	
Publish proposal solicitation for 3-year marine sensor technology demonstrations for transition to operations within IOOS Regions.		X		X	
Initiate competitively selected demonstration projects	X		X		X

Make awards and conduct technology demonstrations and evaluations in IOOS Regions	X	X	X	X	X
Evaluate and test new data sources for transitioning into operational coastal models				X	X
Transition demonstrated tools or technologies into operations			X	X	X

Deliverables:

- Expanded capability of U.S. IOOS, improving mission readiness of Federal agencies and ability of U.S. IOOS regions to meet local and regional stakeholder needs for ecosystems data including new data from marine sensor development (FY 2013-2017)
- Expansion of scientific and technical jobs as well as training and education among industry and U.S. IOOS regional partners involved in demonstrations (FY 2013-2017)
- Incorporation of two or more emerging tools or technologies into operations of two or more U.S. IOOS regions every three years (FY 2015-2017)
- Expanded capability of U.S. IOOS, improving mission readiness of Federal agencies and ability of U.S. IOOS regions to meet local and regional stakeholder needs for ecosystems data including new data from marine sensor development (FY 2013-2017)
- Marine Sensor Innovation topic demonstrations for sensor development, platform integration, tool development, and technology transition into operations (FY 2015-2017)
- Expansion of scientific and technical jobs as well as training and education among industry and U.S. IOOS regional partners involved in demonstrations (FY 2013-2017)
- Marine Sensor Innovation topic demonstrations for sensor development, platform integration, tool development, and technology transition into operations (FY 2015-2017)
- Expansion of scientific and technical jobs as well as training and education among industry and U.S. IOOS regional partners involved in demonstrations (FY 2013-2017)
- In 2013, Regional IOOS partners will continue to deliver 80 percent of the 2011 volume of 75 percent of the current volume of Regional IOOS meteorological and oceanographic data to the IOOS data assembly center at the National Weather Service’s National Data Buoy Center.

Performance Goals and Measurement Data:

Performance Measure:	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
Cumulative number of new marine sensors or ecosystem tools developed to enhance ecosystem based management for fisheries, protected species, public health, and additional topics as defined by the National Oceanographic Partnership Program process	Actual	Target	Target	Target	Target	Target	Target
With Increase	N/A	N/A	0	0	4	4	8
Without Increase	0	0	0	0	0	0	0
Description: This measure is focused on the development of new sensors or tools resulting from 3-year NOPP marine sensor technology demonstrations. Staggered starts for projects will lead to four new sensors or tools every two years starting in FY 2015. This assumes at least one sensor or tool per topic demonstration.							

Performance Measure: Annual number of tools, technologies, or products developed from tested and validated sensors or related research used to improve ecosystem-based management and additional issue areas as defined by the National Oceanographic Partnership Program process	FY 2011 Actual	FY 2012 Target	FY 2013 Target	FY 2014 Target	FY 2015 Target	FY 2016 Target	FY 2017 Target
With Increase	N/A	N/A	0	0	8	8	8
Without Increase	0	0	0	0	0	0	0
Description: This measure is focused on the application of marine sensor technologies and tools. Specifically, this measure tracks success in translating tested and validated sensor technologies and related findings into information products, tools, or technology that improve ecosystem-based management of ocean, coastal and Great Lakes resources, protection of trust resources, and the prediction and reduction of ocean and coastal related human and marine organism health risks. This measure assumes three-year technology demonstrations with resulting tools becoming available in year three and becoming available to operations in year four.							

Performance Measure: Number of Regional IOOS supported coastal, ocean, and Great Lakes observations delivered to the GTS for use by NOAA operationally in daily forecasts (in millions)	FY 2011 Actuals	FY 2012 Target	FY 2013 Target	FY 2014 Target	FY 2015 Target	FY 2016 Target	FY 2017 Target
With Decrease	N/A	N/A	1.7	1.7	1.7	1.7	1.7
Without Decrease	2.1	2.1	2.1	2.1	2.1	2.1	2.1
Description: Regional IOOS partners contribute a significant proportion of observations available for use by forecasters via the Global Telecommunications System. IOOS observation platforms are typically located in near shore areas where National Data Buoy Center and National Ocean Service platforms are not present, thereby filling a data gap of critical observations for NOAA. Performance targets will lag relative to resource levels because number of observations will decline gradually over multiple years as maintenance is deferred and spare parts inventories are depleted. Regional observations that will be unavailable through the GTS include: data from CariCOOS, which provides 100 percent of the coastal buoys for Puerto Rico and the U.S. Virgin Islands; data from PacIOOS, which operates 100 percent of the wave buoys in the region which NWS uses for marine forecasts, including two buoys (Guam and CNMI) deployed in direct response to a NWS request; data from NERACOOS, whose buoys provide the only wave observations in Long Island Sound and the only ocean visibility observations in the Gulf of Maine for local WFOs. These losses will decrease the accuracy of forecasts.							

PROGRAM CHANGE DETAIL BY OBJECT CLASS
(Dollar amounts in thousands)

Activity: National Ocean Service
Subactivity: Ocean Resources Conservation and Assessment

Object Class	2013 Increase
11 Personnel compensation	
11.1 Full-time permanent	\$0
11.3 Other than full-time permanent	0
11.5 Other personnel compensation	0
11.8 Special personnel services payments	0
11.9 Total personnel compensation	<u>0</u>
12 Civilian personnel benefits	0
13 Benefits for former personnel	0
21 Travel and transportation of persons	0
22 Transportation of things	0
23.1 Rental payments to GSA	0
23.2 Rental Payments to others	0
23.3 Communications, utilities and miscellaneous charges	0
24 Printing and reproduction	0
25.1 Advisory and assistance services	0
25.2 Other services	0
25.3 Purchases of goods & services from Gov't accounts	0
25.4 Operation and maintenance of facilities	0
25.5 Research and development contracts	2,500
25.6 Medical care	0
25.7 Operation and maintenance of equipment	0
25.8 Subsistence and support of persons	0
26 Supplies and materials	0
31 Equipment	0
32 Lands and structures	0
33 Investments and loans	0
41 Grants, subsidies and contributions	4,064
42 Insurance claims and indemnities	0
43 Interest and dividends	0
44 Refunds	0
99 Total obligations	<u>6,564</u>

Coastal Services Center: Coastal Services Center (Base Funding: \$33,446,000 and 84 FTE; Program Change: -\$1,433,000 and 0 FTE): NOAA requests a decrease of \$1,433,000 and 0 FTE for a total of \$32,013,000 and 84 FTE for a reduction in the number of new or enhanced climate products.

Proposed Actions:

NOAA requests a decrease in the Coastal Services Center base of \$1,433,000 which will result in the development of fewer new or enhanced climate products. NOAA will offset the reduction in product development capacity by leveraging external resources and capabilities associated with ongoing partnerships with states and other Federal agencies, ensuring coastal communities are aware of and able to access the broader range of Federal and non-Federal services.

CSC transfers successful tools and approaches to the coastal management community to ensure that national issues are effectively addressed at regional, state and local levels. This requires a sustained regional approach that includes direct interaction with state and local partners to understand and address their highest priority needs. Therefore, the Budget request continues support for all regionally-dedicated Coastal Service Centers (i.e., Pacific, Gulf, and West), as well as the NOAA Coastal Storms Program (CSP). CSP brings NOAA-wide expertise, products, and services to address the challenges unique to each region, developing integrated products and services that can reduce the adverse impacts of coastal storms in as efficient and cost-effective manner as possible. CSC will also continue to support established and emerging Regional Ocean Partnerships.

Base Resource Assessment:

The base resources for this activity are described in the Ocean Resources Conservation and Assessment base narrative.

Schedule and Milestones:

- Develop and deliver state coastal resource and emergency manager decision support tools, such as hazard assessment tools, sea level rise visualizations, and coastal county snapshots (FY 2013-2017)
- Provide regional technical assistance, tools, and coordination on priority issues to support managers in coastal regions associated with established Regional Ocean Partnerships, such as the Gulf of Mexico Alliance, West Coast Governor's Agreement, Northeast Regional Ocean Council, and others (FY 2013-2017)
- Develop, distribute, update, and apply moderate resolution coastal land cover change analysis data (refreshed on five-year basis) for coastal regions (FY 2013-2017)
- Develop integrated models to provide information about storm vulnerability and ecological impacts (FY 2013-2017)

Deliverables:

- Data, mapping, tools, and information resources through Digital Coast to address competing uses of coastal resources and adaptation to coastal hazards and climate change
- Training and workshops on data, tools, and techniques that address competing uses of coastal resources and adaptation to coastal hazards/climate change
- Effective regional ocean partnerships by building capacity through facilitation, training, and workshops addressing competing uses of coastal resources and adaptation to coastal hazards and climate change

- Outreach publications to increase capacities among coastal zone managers, land use planners, emergency management, floodplain managers, and others
- Development of environmental forecasting and risk and vulnerability decision-support tools to assist with decision making regarding the impacts of storms on natural resources and communities

Performance Goals and Measurement Data:

Performance Measure:	FY						
Percentage of U.S. coastal states and territories demonstrating 20% or more annual improvement in resilience capacity to weather and climate hazards (Measure 18e)	2011	2012	2013	2014	2015	2016	2017
	Actual	Target	Target	Target	Target	Target	Target
With Decrease	N/A	N/A	40%	46%	51%	57%	63%
Without Decrease	43%	34%	43%	49%	54%	60%	66%
Description: This measure tracks a range of contributions to address coastal community risk, vulnerability, and resilience to coastal hazards. It quantifies NOAA's contributions to this important goal across NOAA's coastal programs, measuring how NOAA is improving the nation's capacity for resilience to hazards and is contributing significantly to NOAA's efforts to improve integration of its coastal programs, and expanding beyond the three coastal integration programs providing inputs to the measure (CSC, OCRM, and Sea Grant).							

PROGRAM CHANGE DETAIL BY OBJECT CLASS
(Dollar amounts in thousands)

Activity: National Ocean Service
Subactivity: Ocean Resources Conservation and Assessment

Object Class	2013 Decrease
11 Personnel compensation	
11.1 Full-time permanent	\$0
11.3 Other than full-time permanent	0
11.5 Other personnel compensation	0
11.8 Special personnel services payments	0
11.9 Total personnel compensation	<u>0</u>
12 Civilian personnel benefits	0
13 Benefits for former personnel	0
21 Travel and transportation of persons	0
22 Transportation of things	0
23.1 Rental payments to GSA	0
23.2 Rental Payments to others	0
23.3 Communications, utilities and miscellaneous charges	0
24 Printing and reproduction	0
25.1 Advisory and assistance services	0
25.2 Other services	(1,433)
25.3 Purchases of goods & services from Gov't accounts	0
25.4 Operation and maintenance of facilities	0
25.5 Research and development contracts	0
25.6 Medical care	0
25.7 Operation and maintenance of equipment	0
25.8 Subsistence and support of persons	0
26 Supplies and materials	0
31 Equipment	0
32 Lands and structures	0
33 Investments and loans	0
41 Grants, subsidies and contributions	0
42 Insurance claims and indemnities	0
43 Interest and dividends	0
44 Refunds	0
99 Total obligations	<u>(1,433)</u>

Coastal Services Center: Regional Geospatial Modeling Grants (Base Funding: \$2,861,000 and 0 FTE; Program Change: -\$2,861,000 and 0 FTE): NOAA requests a decrease of \$2,861,000 and 0 FTE for a total of \$0 and 0 FTE for the Regional Geospatial Modeling grant program, funded in the Coastal Services Center PPA in FY 2012, which provides a competitive source of funding for the development of models and geographic information systems by researchers and regional resource managers. In the Consolidated and Further Continuing Appropriations Act, 2012, Congress provided funds to support Regional Geospatial Modeling Grants administered by the NOAA Coastal Services Center. Grants will be awarded and tracked to completion in FY 2012; however, no additional funding is needed for these projects. Base funding from the Coastal Services Center and Geodesy Program supports a range of regional geospatial requirements, including Continuously Operating Reference Stations (CORS) support, Height Modernization, data access, capacity building, and development of tools and models. NOAA will also continue to work with states and across Federal agencies to provide geospatial data and tools, training, social science information, and partnership-building services to address a range of high priority coastal issues.

PROGRAM CHANGE DETAIL BY OBJECT CLASS
(Dollar amounts in thousands)

Activity: National Ocean Service
Subactivity: Ocean Resources Conservation and Assessment

Object Class	2013 Decrease
11 Personnel compensation	
11.1 Full-time permanent	\$0
11.3 Other than full-time permanent	0
11.5 Other personnel compensation	0
11.8 Special personnel services payments	0
11.9 Total personnel compensation	<u>0</u>
12 Civilian personnel benefits	0
13 Benefits for former personnel	0
21 Travel and transportation of persons	0
22 Transportation of things	0
23.1 Rental payments to GSA	0
23.2 Rental Payments to others	0
23.3 Communications, utilities and miscellaneous charges	0
24 Printing and reproduction	0
25.1 Advisory and assistance services	0
25.2 Other services	0
25.3 Purchases of goods & services from Gov't accounts	0
25.4 Operation and maintenance of facilities	0
25.5 Research and development contracts	0
25.6 Medical care	0
25.7 Operation and maintenance of equipment	0
25.8 Subsistence and support of persons	0
26 Supplies and materials	0
31 Equipment	0
32 Lands and structures	0
33 Investments and loans	0
41 Grants, subsidies and contributions	(2,861)
42 Insurance claims and indemnities	0
43 Interest and dividends	0
44 Refunds	<u>0</u>
99 Total obligations	<u>(2,861)</u>

Response and Restoration: Natural Resource Damage Assessment: (Base Funding: \$21,752,000 and 110 FTE; Program Change: +\$2,000,000 and 4 FTE): NOAA requests an increase of \$2,000,000 and 4 FTE for a total of \$23,752,000 and 114 FTE to improve NOAA's capacity to conduct natural resource damage assessment (NRDA) and to expedite the restoration process.

Proposed Actions:

NOAA has identified active NRDA cases in which it believes that the immediate availability of additional resources would allow the program to expedite settlement and restoration implementation. The requested increase to the Response and Restoration base would provide the necessary support for additional attorneys, injury assessment scientists, and restoration specialists that could, in turn, yield accelerated settlements totaling tens of millions of dollars. NOAA currently uses base appropriations to conduct damage assessments following oil and chemical spills, perform legal work toward settlements, and to carry out restoration planning.

Statement of Need and Economic Benefits:

As a trustee NOAA is charged, along with co-trustees, with conducting a NRDA to assess and restore natural resources injured by oil spills or releases of hazardous chemicals (as well as ship groundings). There are over 200 Natural Resource Damage Assessment (NRDA) cases for which NOAA is currently engaged as a trustee. These cases represent a substantial amount of habitat restoration where responsible parties are liable for funding. On an annual basis, NOAA reviews its case load and prioritizes damage assessment resources based on the potential of settlement (and subsequent restoration). The process determines the type and amount of restoration needed to compensate the public for harm or injury to our collective natural resources that occur as a result of a pollution event. To help expedite cases, NOAA leads its co-trustees on most of the NRDA cases in which it is involved by providing technical, strategic, and process guidance and support. With much of NOAA's current NRDA capacity focused on the DWH case, there remain numerous NRDA cases around the country that will benefit from the resources provided in this increase.

The value of reducing, mitigating, and remediating injury to natural resources is easily quantifiable. Over the past 15 years, NOAA's Office of Response and Restoration has recovered more than \$437 million for the protection and restoration of coastal resources after spills and waste site releases. Federal and state trustees for the Deepwater Horizon oil spill reached a \$1 billion early restoration settlement with BP on April 21, 2011.

In conjunction with this initiative, NOAA will be coordinating with the Department of the Interior to prioritize NRDA activities that hold the greatest potential for accelerating habitat restoration.

Base Resource Assessment:

The base resources for this activity are described in the Ocean Resources Conservation and Assessment base narrative.

Schedule and Milestones:

N/A*

**Note: NOAA can only estimate the number of cases that it can expedite as a result of this proposed increase at this time. While NOAA would direct the increased funding toward cases in which additional NOAA resources are most likely to speed recoveries, settlements are often dependent on the actions of numerous co-trustees and other external stakeholders. As such, NOAA cannot assure accelerated timelines for particular cases.*

Deliverables:

- Six Damage Assessment and Restoration Plans completed annually

Performance Goals and Measurement Data:

Performance Measure:	FY						
Number of Natural Resource	2011	2012	2013	2014	2015	2016	2017
Damage Assessment cases in	Actual	Target	Target	Target	Target	Target	Target
which liability is resolved							
With Increase	N/A	N/A	5	6	6	6	6
Without Increase	6	4	4	4	4	4	4

Description: This measure tracks the number of natural resource damage cases that are resolved, and for which restoration funds are secured. Individual cases can represent as much as \$40 million in potential funding for habitat restoration. Successful cases reflect NOAA's ability to provide assistance and work cooperatively with industry and co-trustees on natural resource damage cases. NOAA can only estimate the number of settlements in any given year as settlements are often dependent on the actions of numerous co-trustees and other external stakeholders. Targets reflect average past performance.

PROGRAM CHANGE PERSONNEL DETAIL

Activity: National Ocean Service
 Subactivity: Ocean Resources Conservation and Assessment

Title:	Location	Grade	Number of Positions	Annual Salary	Total Salaries
Physical Scientist	Anchorage, AK	ZP-IV	1	89,370	89,370
Physical Scientist	St. Petersburg, FL	ZP-IV	1	86,575	86,575
Economist	Silver Spring, MD	ZP-IV	1	89,033	89,033
Restoration Specialist	Gloucester, MA	ZP-IV	1	81,823	81,823
Attorney	Silver Spring, MD	ZP-V	1	123,758	123,758
Attorney	Seattle, WA	ZP-V	1	121,357	121,357
					0
					0
Total			<u>6</u>		<u>591,916</u>
less Lapse		25%	<u>2</u>		<u>147,979</u>
Total full-time permanent (FTE)			4		443,937
2013 Pay Adjustment (0.5%)					2,220
TOTAL					446,157
Personnel Data			<u>Number</u>		
Full-Time Equivalent Employment					
Full-time permanent			4		
Other than full-time permanent			0		
Total			<u>4</u>		
Authorized Positions:					
Full-time permanent			6		
Other than full-time permanent			0		
Total			<u>6</u>		

PROGRAM CHANGE DETAIL BY OBJECT CLASS
(Dollar amounts in thousands)

Activity: National Ocean Service
Subactivity: Ocean Resources Conservation and Assessment

Object Class	2013 Increase
11 Personnel compensation	
11.1 Full-time permanent	\$446
11.3 Other than full-time permanent	0
11.5 Other personnel compensation	0
11.8 Special personnel services payments	0
11.9 Total personnel compensation	446
12 Civilian personnel benefits	169
13 Benefits for former personnel	0
21 Travel and transportation of persons	10
22 Transportation of things	0
23.1 Rental payments to GSA	0
23.2 Rental Payments to others	0
23.3 Communications, utilities and miscellaneous charges	0
24 Printing and reproduction	0
25.1 Advisory and assistance services	1,365
25.2 Other services	0
25.3 Purchases of goods & services from Gov't accounts	10
25.4 Operation and maintenance of facilities	0
25.5 Research and development contracts	0
25.6 Medical care	0
25.7 Operation and maintenance of equipment	0
25.8 Subsistence and support of persons	0
26 Supplies and materials	0
31 Equipment	0
32 Lands and structures	0
33 Investments and loans	0
41 Grants, subsidies and contributions	0
42 Insurance claims and indemnities	0
43 Interest and dividends	0
44 Refunds	0
99 Total obligations	2,000

Response and Restoration: Response and Restoration (Base Funding: \$21,752,000 and 110 FTE; Program Change: +\$536,000 and 0 FTE): NOAA requests an increase of \$536,000 and 0 FTE for a total of \$22,288,000 and 110 FTE to improve NOAA's capacity to prepare for and respond to coastal environmental hazards, including an oil spill of national significance or simultaneous, large environmental hazard events in different regions.

Proposed Actions:

This funding will increase NOAA's engagement in the interagency review of Arctic Exploration Plans and proposals; allow NOAA to ensure that Environmental Response Management Application (ERMA) modules are accessible and secured in a cloud server environment for use by coastal managers and emergency responders; and enable NOAA to develop a response toolkit essential for Federal, state and local coastal decision makers in the Gulf of Mexico and Southeast regions.

Base Resource Assessment:

The base resources for this activity are described in the Ocean Resources Conservation and Assessment base narrative.

Schedule and Milestones:

- Increase NOAA engagement in and support to interagency review of Arctic Exploration and Production Plans, as well as Arctic drills and exercises by Q2 FY 2013
- Active ERMA modules accessible in Cloud server environment by Q4 FY 2013
- Develop comprehensive toolkit of response tools and training programs focused on NOAA products and services for critical Federal, state, and local decision makers by Q2 FY 2013

Deliverables:

- Leadership on two workshops in the North Slope specific to oil spill response environmental decision making
- Develop a standard emergency decision support tool kit for all NOAA facilities in the Gulf of Mexico and the Southeast and revise annually
- Convert active ERMA modules to cloud infrastructure

Performance Goals and Measurement Data:

Performance Measure:	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
	Actual	Target	Target	Target	Target	Target	Target
Number of enhancements to scientific support tools that support US government response to hazardous material releases	59	59	77	80	80	80	80

Description: This measure tracks the number of improvements to scientific support tools, e.g., fate and trajectory models, ERMA, environmental sensitivity maps, that will help decision makers make the best cleanup decisions to minimize the environmental and economic impacts of oil and chemical spills and marine debris releases.

PROGRAM CHANGE DETAIL BY OBJECT CLASS
(Dollar amounts in thousands)

Activity: National Ocean Service
Subactivity: Ocean Resources Conservation and Assessment

Object Class	2013 Increase
11 Personnel compensation	
11.1 Full-time permanent	\$0
11.3 Other than full-time permanent	0
11.5 Other personnel compensation	0
11.8 Special personnel services payments	0
11.9 Total personnel compensation	<u>0</u>
12 Civilian personnel benefits	0
13 Benefits for former personnel	0
21 Travel and transportation of persons	0
22 Transportation of things	0
23.1 Rental payments to GSA	0
23.2 Rental Payments to others	0
23.3 Communications, utilities and miscellaneous charges	0
24 Printing and reproduction	0
25.1 Advisory and assistance services	0
25.2 Other services	536
25.3 Purchases of goods & services from Gov't accounts	0
25.4 Operation and maintenance of facilities	0
25.5 Research and development contracts	0
25.6 Medical care	0
25.7 Operation and maintenance of equipment	0
25.8 Subsistence and support of persons	0
26 Supplies and materials	0
31 Equipment	0
32 Lands and structures	0
33 Investments and loans	0
41 Grants, subsidies and contributions	0
42 Insurance claims and indemnities	0
43 Interest and dividends	0
44 Refunds	<u>0</u>
99 Total obligations	<u>536</u>

National Centers for Coastal Ocean Science: National Centers for Coastal Ocean Science (Base Funding: \$36,379,000 and 199 FTE; Program Change: -\$344,000 and 0 FTE): NOAA requests a decrease of \$344,000 and 0 FTE for a total of \$36,035,000 and 199 FTE to reflect savings from a realignment of NCCOS intramural research activities.

Proposed Actions:

In FY 2010 and 2011, NCCOS engaged in the evaluation and transformation of its intramural research portfolio. This has resulted in consolidating scientific priorities into four thematic areas consistent with Congressional direction, Administration and Agency priorities, and in line with NCCOS capabilities. Additionally, administrative functions have been streamlined and consolidated at the NCCOS Center in Charleston SC and NCCOS headquarters in Silver Spring, MD, and the number of contract positions at the Center for Coastal Ecosystem Health and Biomolecular Research in Charleston and in NCCOS Headquarters in Silver Spring have been reduced.

NCCOS is also evaluating the appropriate size and configuration of its labs in order to optimize the value of NOAA's investment in NCCOS science and plans to transition out its laboratories in Oxford, MD and Kasitsna Bay, AK in FY 2013. The mission of the Oxford Lab is largely localized unlike other NCCOS labs that have a more national focus. The work currently performed at Oxford by NCCOS will be terminated and resources will be reinvested in other NCCOS labs that better align with the core mission. NOAA plans to repurpose the NCCOS Cooperative Oxford Lab as a NMFS facility. The Kasitsna Bay lab remains underutilized and has not been able to reach its full potential. NOAA is currently exploring options to excess the facility and will focus resources on other NCCOS labs. NOAA will reassign staff currently at these labs to other programs.

Base Resource Assessment:

The base resources for this activity are described in the Ocean Resources Conservation and Assessment base narrative.

Schedule and Milestones:

- Begin closure of Kasitsna Bay laboratory (2013)
- Transition Oxford Laboratory to the National Marine Fisheries Service (2013)
- Identify and analyze biological, benthic and oceanographic datasets at appropriate spatial and temporal scales to support New York and North Carolina offshore energy plans
- Research to support National Marine Sanctuary (NMS) rezoning and boundary delineation
- Characterize environmental conditions for HAB species to produce toxins and estimate toxin flux into food chains
- Collect and analyze data to support national baseline assessments of coastal resource health
- Investigate land use and weather modifications on runoff, eutrophication, HABs and pathogens for coastal Southeast, Gulf of Mexico and Chesapeake Bay
- Assess impacts of bulkheads on wave attenuation and marsh vegetation

Deliverables:

- Data integration visualization tools
- Baseline ecological assessments in Gulf of Mexico, Chesapeake Bay and selected NMS and NERRs
- Reports on national ecological conditions and stressor impacts in coastal-ocean waters
- Models on marsh response to sea level rise and assessments of impacts of shoreline modification on ecosystem services in Mid-Atlantic region

PROGRAM CHANGE DETAIL BY OBJECT CLASS
(Dollar amounts in thousands)

Activity: National Ocean Service
Subactivity: Ocean Resources Conservation and Assessment

Object Class	2013 Decrease
11 Personnel compensation	
11.1 Full-time permanent	\$0
11.3 Other than full-time permanent	0
11.5 Other personnel compensation	0
11.8 Special personnel services payments	0
11.9 Total personnel compensation	<u>0</u>
12 Civilian personnel benefits	0
13 Benefits for former personnel	0
21 Travel and transportation of persons	0
22 Transportation of things	0
23.1 Rental payments to GSA	0
23.2 Rental Payments to others	0
23.3 Communications, utilities and miscellaneous charges	0
24 Printing and reproduction	0
25.1 Advisory and assistance services	0
25.2 Other services	(344)
25.3 Purchases of goods & services from Gov't accounts	0
25.4 Operation and maintenance of facilities	0
25.5 Research and development contracts	0
25.6 Medical care	0
25.7 Operation and maintenance of equipment	0
25.8 Subsistence and support of persons	0
26 Supplies and materials	0
31 Equipment	0
32 Lands and structures	0
33 Investments and loans	0
41 Grants, subsidies and contributions	0
42 Insurance claims and indemnities	0
43 Interest and dividends	0
44 Refunds	0
99 Total obligations	<u>(344)</u>

National Centers for Coastal and Ocean Science Competitive Research: Competitive Research (Base Funding: \$9,032,000 and 0 FTE; Program Change: +\$1,968,000 and 0 FTE): NOAA requests an increase \$1,968,000 and 0 FTE for a total of \$11,000,000 and 0 FTE for National Centers for Coastal Ocean Science Competitive Research.

Proposed Actions:

With this increase, NOAA will increase its engagement with the extramural science community through additional grants for Harmful Algal Blooms (HABs), Hypoxia and Regional Ecosystem Research.

Statement of Need and Economic Benefits:

Coastal communities contain over half of the U.S. population and generate nearly 60 percent of the U.S. economy via tourism, recreation, commercial fisheries and commerce (Crossett et al., 2004). However, land-based discharges of trace metals, pesticides, pharmaceutical agents and pathogens from industrial, urban and agricultural sources negatively impact human health, impair coastal ecosystems, close beaches, and devastate coastal communities that rely on tourism and recreation as sources of income to achieve economic and environmental sustainability. Over 50 percent of the Nation's estuaries experience hypoxia (CENR 2003). Time-critical investments in research and applied science will fill gaps in NOAA's capacity to protect lives, promote healthy economies and improve human health, reduce the high costs associated with contamination clean-up and potential human health impacts, and respond to Administration priorities, the National Ocean Policy and NOAA's legal mandates.

NCCOS's contamination research and assessment programs provide leadership at the national level to assess the long-term patterns and extent of contamination of coastal resources that threaten ecosystem and human health. NCCOS partners with state, local and tribal agencies along the U.S. West Coast; Federal agencies such as the USGS, EPA, and FDA; the Canadian Government (to document highly contaminated areas in the Great Lakes); and the Gulf Watch Contaminants Monitoring Program (administered by the Gulf of Maine Council on the Marine Environment).

Base Resource Assessment:

The base resources for this activity are described in the Ocean Resources Conservation and Assessment base narrative.

Schedule and Milestones:

The NCCOS competitive research portfolio at this funding level will include approximately 2 to 5 additional projects per year, each with required milestones and schedules over a 3 to 5 year period depending upon the award terms. Each project has interim milestones to ensure that deliverables will be met at their conclusion.

Deliverables:

- Development of operational Harmful Algal Bloom forecasting capabilities in at least one coastal region of the United States
- Development and implementation at the state level of two new technologies for detecting HABs
- Development of one ecological forecast to support a management decision to address a major regional hypoxic, or "dead" zone

Performance Goals and Measurement Data:

Performance Measure:	FY 2011 Actual	FY 2012 Target	FY 2013 Target	FY 2014 Target	FY 2015 Target	FY 2016 Target	FY 2017 Target
Cumulative number of coastal, marine and Great Lakes forecast capabilities developed and used for management (Measure 18b: NCCOS contribution only)							
With Increase	N/A	N/A	5	5	5	5	5
Without Increase	1	3	4	5	4	4	3
<p>Description: This measure is a subset of measure 18b. NOAA's discrete forecast models allow resource managers to: 1) make decisions based on predicted environmental and socioeconomic impacts related to a particular issue; 2) use issue-based forecasts to predict the impacts of a single ecosystem stressor (e.g., climate change, extreme natural events, pollution, invasive species, and land and resource use) and 3) evaluate the potential options to manage those stressors to fulfill the ultimate goal for resource managers to use NOAA's forecasts to better manage ecosystem use, condition, and productivity. These forecasts will be based on field and laboratory studies, existing data, and models predicting environmental conditions under different scenarios and will have capabilities specific to a geographic area and be counted for each ecosystem as they become operational. For example, harmful algal bloom forecasts in the Gulf of Mexico and Gulf of Maine are two separate forecast capabilities and similarly, multiple, distinct forecast capabilities could be counted within a single ecosystem (i.e., harmful algal blooms, pink shrimp harvest, and hypoxia –all in the Gulf of Mexico).</p>							

PROGRAM CHANGE DETAIL BY OBJECT CLASS
(Dollar amounts in thousands)

Activity: National Ocean Service
Subactivity: Ocean Resources Conservation and Assessment

Object Class	2013 Increase
11 Personnel compensation	
11.1 Full-time permanent	\$0
11.3 Other than full-time permanent	0
11.5 Other personnel compensation	0
11.8 Special personnel services payments	0
11.9 Total personnel compensation	<u>0</u>
12 Civilian personnel benefits	0
13 Benefits for former personnel	0
21 Travel and transportation of persons	0
22 Transportation of things	0
23.1 Rental payments to GSA	0
23.2 Rental Payments to others	0
23.3 Communications, utilities and miscellaneous charges	0
24 Printing and reproduction	0
25.1 Advisory and assistance services	0
25.2 Other services	0
25.3 Purchases of goods & services from Gov't accounts	0
25.4 Operation and maintenance of facilities	0
25.5 Research and development contracts	0
25.6 Medical care	0
25.7 Operation and maintenance of equipment	0
25.8 Subsistence and support of persons	0
26 Supplies and materials	0
31 Equipment	0
32 Lands and structures	0
33 Investments and loans	0
41 Grants, subsidies and contributions	1,968
42 Insurance claims and indemnities	0
43 Interest and dividends	0
44 Refunds	0
99 Total obligations	<u>1,968</u>

The following exhibit shows the summary object class detail for Navigation Services program changes less than \$100,000. Please contact the NOAA budget office if details for any of these changes are required.

PROGRAM CHANGE DETAIL BY OBJECT CLASS
(Dollar amounts in thousands)

Activity: National Ocean Service
 Subactivity: Ocean Resources Conservation and Assessment

Object Class	2013 Increase
11 Personnel compensation	
11.1 Full-time permanent	\$0
11.3 Other than full-time permanent	0
11.5 Other personnel compensation	0
11.8 Special personnel services payments	0
11.9 Total personnel compensation	<u>0</u>
12 Civilian personnel benefits	0
13 Benefits for former personnel	0
21 Travel and transportation of persons	0
22 Transportation of things	0
23.1 Rental payments to GSA	0
23.2 Rental Payments to others	0
23.3 Communications, utilities and miscellaneous charges	0
24 Printing and reproduction	0
25.1 Advisory and assistance services	0
25.2 Other services	29
25.3 Purchases of goods & services from Gov't accounts	0
25.4 Operation and maintenance of facilities	0
25.5 Research and development contracts	0
25.6 Medical care	0
25.7 Operation and maintenance of equipment	0
25.8 Subsistence and support of persons	0
26 Supplies and materials	0
31 Equipment	0
32 Lands and structures	0
33 Investments and loans	0
41 Grants, subsidies and contributions	84
42 Insurance claims and indemnities	0
43 Interest and dividends	0
44 Refunds	<u>0</u>
99 Total obligations	<u>113</u>

APPROPRIATION ACCOUNT: OPERATIONS, RESEARCH AND FACILITIES
SUBACTIVITY: OCEAN AND COASTAL MANAGEMENT

The objectives of the Ocean and Coastal Management subactivity are to:

- Maintain and improve the quality of the Nation's coastal lands and waters through a national network of federally approved, coordinated, and supported state management programs.
- Maintain the balance between resource protection and coastal-dependent economic activity, including coastal energy development.
- Provide technical assistance to states in the development, implementation, and improvement of state Coastal Zone Management programs and estuarine research reserves.
- Identify areas of the marine environment of special national significance due to their resource or human-use values.
- Implement the framework for a national network of Federal, state, tribal, and local marine protected areas.
- Support and coordinate scientific research on, and monitoring of, resources in protected areas.
- Coordinate the development of information, tools, strategies, and guidance to enhance and expand the protection of marine and estuarine protected areas.
- Protect and manage a system of nationally significant special marine areas through the National Marine Sanctuary System, a comprehensive conservation program.
- Enhance public education, awareness, and understanding of the marine and estuarine environment.
- Facilitate public/private uses of the resources of special marine areas compatible with resource protection.

To achieve these objectives, NOAA conducts activities in several program areas within the Office of Ocean and Coastal Resource Management (OCRM) and the Office of National Marine Sanctuaries (ONMS). These activities are conducted under the authority of the Coastal Zone Management Act (CZMA), the National Marine Sanctuaries Act (NMSA), Executive Order 13158 on Marine Protected Areas, and Presidential Proclamations 8031 and 8337.

The Ocean and Coastal Management subactivity contains two items: Coastal Management and Ocean Management.

COASTAL MANAGEMENT (<http://coastalmanagement.noaa.gov>)

The Nation's coastal and ocean areas represent some of its most ecologically and economically important regions. Coastal counties are also the most densely populated part of the U.S., an area that is on average two to three times more densely populated than the Nation as a whole. Congress recognized this fact in 1972 when it passed the Coastal Zone Management Act (CZMA). The CZMA declares that it is the national policy "to encourage and assist the states to exercise effectively their responsibilities in the coastal zone through development and implementation of management programs...giving full consideration to ecological, cultural, historic and esthetic values as well as the need for compatible economic development." The importance of these areas and the need for this program has been recognized not only by the CZMA, but more recently by the U.S. Commission on Ocean Policy and the National Ocean Policy.

Responding to this challenge, the CZMA created a national framework for coastal protection through the Coastal Zone Management program and National Estuarine Research Reserve System.

The Coastal Management program also carries out responsibilities mandated under the Coastal Zone Act Reauthorization Amendments of 1990 (the Coastal Nonpoint Pollution Control Program); the Department of Commerce, Justice, and State Appropriations Act of 2002 and Omnibus Public Land Management Act of 2009 (the Coastal and Estuarine Land Conservation Program), the Ocean Thermal Energy Conversion Act (provides licensing of proposed ocean thermal energy projects); and the Deep Seabed Hard Mineral Resources Act. In addition, this program supports implementation of several Administration policy directives, including: the National Ocean Policy and regionally-based initiatives (Chesapeake Bay and Louisiana/Mississippi Gulf Restoration Working Group). It also supports mandates under the Coral Reef Conservation Act that are implemented through CZMA partnerships (e.g. local coral reef action strategies implemented through state coastal management programs).

Through this program, NOAA has provided financial assistance, national policy guidance, technical assistance, and other support to: implement 34 coastal management programs in partnership with coastal and Great Lakes states and territories; research, education, training and stewardship at 28 National Estuarine Research Reserves; and through FY 2012, manage a competitive grant program to protect ecologically significant coastal lands, such as wetlands, natural shorelines and other important habitats that benefit coral reefs, migratory fish, and protected species (the Coastal and Estuarine Land Conservation Program); and a national system of marine protected areas to enhance marine resource protection, which is being transferred to the Ocean Management program in FY 2013). The CZMA also requires periodic reviews of approved state coastal and estuarine programs and oversight of Coastal Energy Impact Program loan repayments to the U.S. Treasury, establishes an awards program to recognize achievement in the field, and requires coordination with other agencies on proposed actions affecting the coastal zone.

This program operates through formal partnerships with states and territories, agreements with other Federal agencies, tribes, and also through a broad range of informal partnerships with non-governmental organizations. It has formal partnerships with 34 states and territories to carry out the CZMP, NERRS, CELCP and Coral Reef local action strategies, as well as interagency agreements and other partnerships with other Federal agencies, including EPA, FEMA, DOI (FWS, NPS, USGS, and BOEMRE), USDA, DOD, and the State Department. Representatives of the program participate actively on a number of regional ocean governance initiatives, including the Council of Great Lakes Governors, the Northeast Regional Ocean Council, Gulf of Maine Council, Mid-Atlantic Regional Collaborative (MARCO), West Coast Governors Initiative, and the Gulf of Mexico Alliance. Within the Department of Commerce, this program has: developed a partnership with the Economic Development Administration (EDA) to increase collaborative efforts within states and regions to support development and resilience of coastal economies; collaborated with the Census Bureau to determine status and trends in coastal population and the coastal economy; and developed environmental technologies, 13 of which have been awarded patents. The program also has extensive partnerships with non-governmental organizations, such as those representing state governors, state natural resource managers, city and county administrators, land use planners, floodplain managers, the fishing industry, ocean energy industry, and conservation organizations, among others.

The Coastal Zone Management Act specifies how the CZMP and National Estuarine Research Reserve System (NERRS) funds are to be allocated and the cost-share requirements for these programs. Funding is awarded through cooperative agreements with a lead state agency responsible for managing each approved state coastal program and designated Reserve. The lead state agency is responsible for coordinating with other state or local agencies that are part of the state coastal program or Reserve. Within these amounts, NOAA negotiates the tasks and funding to target efforts at the state or local level that meet national priorities while also achieving the state

program's priorities. Federal funding leverages state and local funding provided in addition to cooperative awards. NOAA has also strengthened the way it allocates funds for system-wide improvements on the basis of merit, and has better aligned programmatic activities to address priority coastal management issues.

COASTAL ZONE MANAGEMENT GRANTS - The purpose of the national Coastal Zone Management (CZM) Program is to maintain and improve the Nation's coastal lands and waters through a national network of federally approved, coordinated, and supported state management programs. This program seeks to balance resource protection and coastal-dependent economic activity from a national and regional perspective that individual states cannot accomplish on their own. This program recognizes the significance of coastal resources to our Nation's population and economy and promotes improved management of these important assets, while also supporting development that is sustainable and resilient. Federal funds are provided through cooperative agreements to support core state CZM functions and community projects that address the broad spectrum of coastal management issues ranging from habitat conservation and protection of life and property from coastal hazards, to urban waterfront and port revitalization (Section 306/306A CZMA). One of the core functions is the application of Federal Consistency to help ensure that Federal agency activities do not harm state coastal resources. There are currently 34 (out of 35 eligible) coastal and Great Lakes states, territories and commonwealths with federally approved coastal management programs, protecting more than 99 percent of the Nation's 61,427 miles of ocean and Great Lakes coastline (excluding Alaska). Illinois received final Federal approval of its Coastal Zone Program on January 31, 2012; while Alaska withdrew from the voluntary national CZM Program in July 2011.

The majority of CZM funding is allocated using a formula based on shoreline mileage (60 percent) and coastal population (40 percent) of each state, and adjusted according to requirements for minimum and maximum amounts for each state or territory. Some CZM funding, such as a portion of the Coastal Zone Enhancement grants (Section 309 CZMA), for projects of special merit, are now being competed. Most of the CZM Grant funding is matched on a 1:1 basis (only CZMP enhancement funds do not require match).

In FY 2013, the Coastal Zone Management Program plans to increase effectiveness by better targeting grant funding to address significant national issues. Building on NOAA's Next Generation Strategic Plan and its Coastal Goal, NOAA has worked with the state partners to identify target areas for both Section 309 5-year strategies and for projects of special merit. These include wetlands, hazards (including adaptation to the potential effects of climate change), cumulative and secondary impacts of development, and ocean and Great Lakes resources (including planning for offshore energy uses).

NATIONAL ESTUARINE RESEARCH RESERVE SYSTEM (NERRS)

(<http://www.nerrs.noaa.gov>) - NERRS (Section 315 CZMA) is a national network of estuarine protected areas representing the diverse biological and physical characteristics of estuarine systems of the United States. Reserves are owned and operated by state agencies or universities. Reserves serve as living laboratories and local, regional, and national sources of scientific and technical information, training, and education on estuaries. The reserve system serves as a testing ground for the improvement of coastal resource management through direct resource management and restoration, science, and the translation and dissemination of information to coastal decision makers, teachers, students, and the public. There are currently 28 designated reserves in 22 states and territories covering over 1.3 million acres of estuarine lands and waters. NOAA added a 28th reserve in early FY 2011 with the designation of the Lake Superior Reserve in Wisconsin. In addition, the Governor of Connecticut has also submitted a request for the designation of a new reserve.

The NERRS allocates funding for site-specific programs as well as system-wide programs that achieve the program's objectives to protect estuarine areas, provide educational opportunities, promote and conduct estuarine research and monitoring, and transfer relevant information to coastal managers. The NERRS Strategic Plan (2011-2016) focuses on three priority topics: impacts of climate change; habitat loss and alteration; and water quality degradation.

Federal NERRS funding (70 percent) is matched by the states (30 percent) for reserve operations, research, monitoring, training, education and facilities construction. Federal NERRS funding (50 percent) for land acquisition is also matched by the states (50 percent). Base funds for NERRS support site-based science, education and stewardship programs, reserves operations, as well as system-wide programs including a System-wide Monitoring Program, Coastal Training Program, and K-12 Estuarine Education Program. In FY 2013, NOAA will provide \$4,732,000 for the NERRS Science Collaborative (a competitive collaborative research program involving intended users throughout each research project). In FY 2011, NERRS educated more than 83,275 students about estuaries; trained more than 11,519 coastal decision makers; approved updated management plans for four Reserves, as required by the CZMA; and completed site profiles (a complete characterization) for one Reserve.

CZM AND STEWARDSHIP/CZMA NATIONAL PROGRAM - The programs described above are implemented with the resources provided in the budget for the CZMA National Program by the Office of Coastal Resource Management (OCRM). OCRM staff perform numerous critical functions necessary to execute these programs, in addition to negotiating, processing, and providing oversight for more than 100 grants and cooperative funding agreements each year. These functions include:

- Providing management assistance to states in the development, implementation, and improvement of state CZM programs and estuarine research reserve management plans, which are assessed or updated every five years to reflect changing circumstances;
- Analyzing national issues and trends in coastal resource management and measuring the results of the CZMA programs;
- Conducting periodic programmatic evaluations of each state CZM program and NERR;
- Reviewing Federal agency actions for compliance with the Federal consistency provisions of Section 307 of the CZMA and providing mediation services when necessary;
- Conducting training, outreach, and education activities concerning coastal issues;
- Providing technical leadership, coordination, and management of NERRS system-wide education, training, research, monitoring, and technology development programs;
- Providing policy guidance and assistance to states on interpretation of CZMA requirements, as well as those of other Federal statutes and programs, and
- Administering outstanding loans and repayments to U.S. Treasury from the Coastal Energy Impact Program.

REGIONAL OCEAN PARTNERSHIP GRANTS – In FY 2011, NOAA established competitively allocated regional ocean partnership grants to advance regional ocean management through support for regional ocean partnerships. The program was developed to help support priority actions identified in the plans of existing regional ocean partnerships (e.g., Gulf of Mexico Alliance, Northeast Regional Ocean Council, Great Lakes Regional Collaboration, and the West Coast Governors' Agreement on Ocean Health), as well as development and implementation of ocean management plans in other regions (e.g. the Mid-Atlantic Regional Council on the Ocean, the South Atlantic Alliance, Hawaii, and other regions) and addressing regional activities in other parts of the country (e.g. the Pacific and Caribbean territories, and Alaska).

Schedule and Milestones:

- Complete revision of 18 NERR management plans by FY 2016
- Complete 89 percent of National Estuarine Research Reserve site profiles by FY 2016
- Pilot sentinel site monitoring of sea level change and habitat response at four reserves (FY 2013-2017)
- Work with states/territories toward approval of non-point pollution control programs (FY 2012-2017)
- Conduct national competition annually for Regional Ocean Partnership projects for funding and report on how they support regional priorities (FY 2013-2017)

Deliverables:

- Average of 250 sites that provide public access to the coast, added or improved per year through the CZM program
- More than 400 training activities conducted annually for coastal decision makers through the NERRS Coastal Training Program
- Four Federal Consistency trainings and regional workshops held for states, Federal agencies and interest groups to improve understanding and reduce the likelihood of consistency appeals to the Secretary of Commerce

Performance Goals and Measurement Data:

Performance Measure:	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
Annual number of new or improved public access sites through CZMP	Actual	Target	Target	Target	Target	Target	Target
	262	250	250	250	250	250	250
Description: This measure tracks the number of new or improved sites for public access to coastal areas that have resulted from the Coastal Zone Management Program							

Performance Measure:	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
Percentage of NERR System adequately characterized for management	Actual	Target	Target	Target	Target	Target	Target
	82%	86%	89%	93%	96%	100%	100%
Description: This tracks NOAA's progress in characterizing each National Estuarine Research Reserve's resources and condition to guide effective long-term management. Reserves are characterized through site profiles, which summarize the existing state of knowledge about reserve research and monitoring activities and identify research needs that should be addressed in the future. It is measured as the percent of designated Reserves that have							

Performance Measure:	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
Implementation of priority action activities identified in regional action plans (cumulative)	Actual	Target	Target	Target	Target	Target	Target
	12	19	23	27	31	35	39

Description: Regional ocean partnerships will make progress in achieving the actions within integrated plans that have clearly identified goals and objectives for long term ocean health and sustainability and engage academic, non-governmental organizations and private interests. These efforts will build upon the existing accomplishments of the regional ocean partnerships including the Gulf of Mexico Alliance.

OCEAN MANAGEMENT

The National Marine Sanctuaries Act (NMSA) authorizes the Secretary of Commerce to designate areas of the marine environment of special conservation, recreational, ecological, historical, research, educational, or aesthetic value as national marine sanctuaries and to provide comprehensive management of these areas with the primary objective of resource protection. The NMSA provides NOAA with direct Federal management authority in designated ocean and coastal areas. The Act requires an extensive public process to identify and develop solutions regarding planning, implementation, and evaluation of marine areas, uses, and protections. With the increasing environmental pressures on our Nation's coastal areas, the importance of maintaining a system of marine protected areas is evident. Sanctuaries contain natural resource assets of extraordinary social and economic value. Investments that contribute to the long term health of these natural resources ensure that they can continue to be sustainably and responsibly utilized. In addition, Executive Order 13158 recognized the importance of coastal and marine protection by directing the Federal government to establish, significantly strengthen and expand the national system of marine protected areas (MPAs), working closely with state, territorial, local and tribal trustees, and other stakeholders.

In FY 2013, NOAA proposes to consolidate the Marine Protected Areas Program (MPA) and the National Marine Sanctuary System (NMSS) into one integrated program... In the Ocean Management Line Item, NOAA will administer the National Marine Sanctuary System and the Marine Protected Areas Program through the Office of National Marine Sanctuaries (ONMS).

NATIONAL MARINE SANCTUARY SYSTEM & MARINE PROTECTED AREAS PROGRAM

The ONMS manages and operates the Nation's system of marine sanctuaries and the Papahānaumokuākea Marine National Monument. The system includes 13 designated national marine sanctuaries, as well as the Papahānaumokuākea Marine National Monument (established by President Bush on June 15, 2006 as the NWHI Marine National Monument and recently designated as a world heritage site), which is one of the largest marine protected areas in the world (stretching 1,200 miles, about the distance from Chicago to Miami). In addition, in 2009 NOAA was directed to consider incorporating the Rose Atoll Marine National Monument into the Fagatele Bay NMS. The 13 designated sanctuaries include: Monitor (NC), Channel Islands (CA), Gray's Reef (GA), Gulf of the Farallones (CA), Fagatele Bay (AS), Cordell Bank (CA), Florida Keys (FL), Flower Garden Banks (TX/LA), Gerry Studds Stellwagen Bank (MA), Monterey Bay (CA), Olympic Coast (WA), Thunder Bay Underwater Preserve (MI) and Hawaiian Islands Humpback Whale (HI). The sanctuaries range in size from one-quarter square mile in Fagatele Bay to over 5,300 square miles in Monterey Bay. Together, these sanctuaries encompass over 18,000 square miles of waters and marine habitats. The monuments and sanctuaries protect special habitats, including deep ocean and near-shore coral reefs, live bottom, whale migration corridors, deep sea canyons, areas of deep water upwelling, submerged banks that rise close to the ocean surface, kelp forests, sea grass beds, and special maritime heritage assets. With the increasing environmental pressures on our Nation's coastal areas, the importance of maintaining a system of marine protected areas is evident. The NMSS is increasing our knowledge and understanding of complex marine ecosystems. By monitoring human

and natural changes in these sentinel sites, NOAA's marine sanctuaries and marine monuments help preserve the Nation's marine environments.

Individual sanctuary and monument offices are responsible for the daily operation of a wide variety of education, research, monitoring and management programs. Through extensive public engagement processes, each site undertakes activities including: development, implementation, and systematic review of comprehensive management plans to protect these unique areas; development and implementation of local research and monitoring programs to better understand the resources and potential impacts on those resources; development and implementation of cultural resource programs to survey and inventory resources to ensure their long-term protection; development and implementation of education and outreach activities to inform the public about the value of marine resources and how human activities impact the marine environment; coordinating through partnerships to ensure enforcement of sanctuary regulations; permitting of otherwise prohibited activities to allow valuable research and education activities; management of volunteer programs that monitor and educate on marine resources; and management of citizen advisory councils to ensure that each sanctuary is responsive to community needs. In addition, each site is engaged in a number of partnership relationships with other Federal agencies, state agencies, local universities, and other local institutions.

ONMS Regional offices work to capitalize on potential opportunities and partnerships and coordinate with other Federal agencies, many of which operate at a regional level. The regions help to more efficiently coordinate various programs and assets among the sites, regions, and headquarters. The regions also provide an improved basis for program integration with NOAA's evolving ecosystem approach to management and NOAA regional teams for national priorities pertaining to climate change, coastal and marine spatial planning, and regional collaboration.

Programmatic oversight, guidance, and support from the headquarters office ensure that the sites function as a coordinated system. Headquarters functions include the development of programmatic initiatives, such as system-wide research, monitoring, cultural resource, education, and outreach programs; policy development; budget development and tracking; legislative and regulatory initiatives; review and revisions of management plans; development and designation of new sites; and overall guidance and program direction. These functions ensure that the NMSS is an integrated system that has greater national impact than the sum of the individual site actions.

In addition, the ONMS will manage the activities of NOAA's MPA Program which, in coordination with the Department of the Interior, fills a long-standing need for objective science, policy, and management tools to advance the effective use of MPAs in meeting diverse conservation and management objectives. The MPA Program is guided by the Framework for the National System of MPAs. Funding for the program supports core staff to provide MPA science, analysis, outreach, training, technical assistance and coordination. The MPA Center's primary goal is to work with MPA programs, managers and stakeholders to develop a comprehensive and integrated national system of MPAs that more effectively conserves and protects significant areas of our natural and cultural marine heritage. Moreover, the Center facilitates coordination among the various Federal, state and tribal MPA programs to improve the effectiveness of existing MPAs and accomplish conservation goals that could not otherwise be achieved. The MPA Center is headquartered in Silver Spring, Maryland, with scientific support in Monterey, California. A diverse MPA Federal Advisory Committee—including representatives of industry, user groups, scientists, and others—provides advice on the establishment and management of the national system.

For more information related to both of these functions, please see the following websites: (<http://sanctuaries.noaa.gov/>) and (<http://mpa.gov/>)

Schedule and Milestones:

- Complete development and implementation of revised management plans for five sanctuaries through community-based processes – Olympic Coast (FY 2012), Fagatele Bay (FY 2012), Flower Garden Banks(FY 2012) and HI/Humpback Whale (FY 2013)
- Implement additional sentinel monitoring activities where necessary to assess impacts of threats (e.g. climate change, biodiversity loss, invasive species) to ONMS resources and detect early warnings of change at national, regional, and local scales (FY 2012-2017)
- Conduct baseline assessments for priority coral marine protected areas (MPA) using the MPA Assessment Checklist (FY 2012-2013) then reevaluate these MPAs to determine improvements in management (FY 2014-2016)
- Update the Framework for the National System of Marine Protected Areas of the United States of America
- Implement data management (including access and distribution) protocols, infrastructure, and partnerships for ONMS Sentinel Monitoring Program (FY 2012- 2017)

Deliverables:

- Development and/or expansion of partnerships with local communities and businesses to implement sustainable practices for fishing, tourism, recreation, ecosystem protection and alternative energy technologies
- Development and/or expansion of education and public outreach, including those with multi-cultural communities, related to ecosystems, climate change and human use impacts
- Habitat restoration and marine debris removal at all sanctuaries
- Monitoring programs, scientific assessments, technology application, public awareness and mitigation strategies associated with ecosystem changes at all sanctuaries
- Marine acoustics programs to determine the distribution of marine mammals and vessel traffic patterns at Stellwagen Bank and Channel Islands sanctuaries. Develop education initiatives at all sites that protect marine mammals from vessel strikes and conduct disentanglement and rescue operations
- Design and implantation of MPA networks, to enable effective conservation of more acres of coral reefs within U.S. boundaries
- New education, survey and eradication programs to avoid and mitigate introduction of invasive species in multiple sanctuaries
- Community-based management plan for HI/Humpback Whale NMS

Performance Goals and Measurement Data:

Performance Measure:	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
Number of NMS Sites that maintain or improve water quality, habitat and living marine resources	Actual 9	Target 10	Target 10	Target 10	Target 10	Target 12	Target 12

Description: This measure assesses the status of water quality, habitat, and/or living marine resources based on indicators of biodiversity, key species, extracted species, invasive species, health and human impacts. The NMSP and independent evaluators (universities, research institutions SAC research subcommittees, and environmental consultants) evaluate data to determine whether the condition is improving, remaining stable (maintaining), or deteriorating. These outcome-based measures are derived from the National Marine Sanctuaries Act and provide direct and quantifiable evidence to demonstrate Program effectiveness. For each sanctuary, a "condition report" integrates the best available science and scientific interpretation to quantify the status and trends of WQ, habitat and living resource conditions. During the past five years, ONMS has undergone two additional formal

external reviews (NAPA and DOC OIG) that have documented successful application and progress toward these performance measures.

Performance Measure:	FY						
Number of MPA stewardship projects and technical assistance projects funded	2011	2012	2013	2014	2015	2016	2017
	Actual	Target	Target	Target	Target	Target	Target
	4	4	4	4	4	4	4

Description: A primary goal of the National Marine Protected Areas Center is to provide technical assistance to federal, state and territorial MPA programs. This measure tracks the number of MPA Partnership Grants (provided through a partnership with the National Fish and Wildlife Foundation) and technical assistance projects directly supported by the MPA Center that enhance the management of coastal and marine resources.

THIS PAGE INTENTIONALLY LEFT BLANK

PROGRAM CHANGES FOR FY 2013:

Coastal Zone Management Grants: Coastal Zone Management Grants (Base Funding: \$65,936,000 and 0 FTE; Program Change: +\$210,000 and 0 FTE): NOAA requests a increase of \$210,000 and 0 FTE for a total of \$66,146,000 and 0 FTE to support coastal zone management cooperative agreements with coastal states and territories. With this increase, NOAA will enhance the ability of state and territorial coastal zone management (CZM) programs to balance coastal economic growth with conservation of the Nation's coastal resources. Specifically, this request, in combination with base funds, will further support state efforts to protect key coastal habitats, provide greater public access to the coast for recreation, protect coastal life and property, and revitalize waterfront areas through core state CZM functions, such as planning, permitting, enforcement, and the application of Federal Consistency, in accordance with the Coastal Zone Management Act.

PROGRAM CHANGE DETAIL BY OBJECT CLASS
(Dollar amounts in thousands)

Activity: National Ocean Service
Subactivity: Ocean and Coastal Management

Object Class	2013 Increase
11 Personnel compensation	
11.1 Full-time permanent	\$0
11.3 Other than full-time permanent	0
11.5 Other personnel compensation	0
11.8 Special personnel services payments	0
11.9 Total personnel compensation	0
12 Civilian personnel benefits	0
13 Benefits for former personnel	0
21 Travel and transportation of persons	0
22 Transportation of things	0
23.1 Rental payments to GSA	0
23.2 Rental Payments to others	0
23.3 Communications, utilities and miscellaneous charges	0
24 Printing and reproduction	0
25.1 Advisory and assistance services	0
25.2 Other services	0
25.3 Purchases of goods & services from Gov't accounts	0
25.4 Operation and maintenance of facilities	0
25.5 Research and development contracts	0
25.6 Medical care	0
25.7 Operation and maintenance of equipment	0
25.8 Subsistence and support of persons	0
26 Supplies and materials	0
31 Equipment	0
32 Lands and structures	0
33 Investments and loans	0
41 Grants, subsidies and contributions	210
42 Insurance claims and indemnities	0
43 Interest and dividends	0
44 Refunds	0
99 Total obligations	210

Coastal Zone Management and Stewardship: Coastal Zone Management and Stewardship (Base Funding: \$8,139,000 and 57 FTE; Program Change: -\$1,055,000 and 0 FTE): NOAA requests a decrease of \$1,055,000 and 0 FTE for a total of \$7,084,000 and 57 FTE for Coastal Zone Management and Stewardship. This reduction is the result of a joint consolidation review of NOAA's coastal activities, and will result in the development of a more streamlined and focused coastal program, that will integrate data to inform management and decision-making, and leverage activities and resources from outside partners, especially at the regional and state level. As additional efficiencies and reductions are identified, they will be redirected to the highest priority activities in the new program.

Proposed Actions:

NOAA will propose a consolidation of certain coastal activities. NOAA is reviewing the organization of its coastal programs in order to better coordinate ongoing efforts, to improve focus on current and emerging coastal issues, and to maximize efficiencies. As part of this effort, NOAA is evaluating (and will reallocate where appropriate) Coastal Zone Management (CZM) staff in some or all of the following areas, and others, as appropriate:

- Energy Licensing and Appeals
- Coastal Energy Impact Program
- 6217 - Non point Pollution Control program
- Non-statutory performance management
- National Ocean and Coastal Policy

Statement of Need and Economic Benefits:

In conducting this consolidation review, NOAA is assessing coastal programs, with a goal of enhanced program integration, improved collaboration, and value-added to coastal constituents. This will be achieved by better alignment of requirements, partnerships, tools, data, and resources focused on coastal issues and constituencies. Through this improved collaboration across coastal programs, NOAA will increase the effectiveness of its strong array of capabilities and requirements to make coastal communities and habitats more resilient.

Base Resource Assessment:

The base resources for this activity are described in Ocean and Coastal Management base narrative.

Schedule and Milestones:

N/A

Deliverables:

- Coastal Program Consolidation Proposal

PROGRAM CHANGE DETAIL BY OBJECT CLASS
(Dollar amounts in thousands)

Activity: National Ocean Service
Subactivity: Ocean and Coastal Management

Object Class	2013 Decrease
11 Personnel compensation	
11.1 Full-time permanent	\$0
11.3 Other than full-time permanent	0
11.5 Other personnel compensation	0
11.8 Special personnel services payments	0
11.9 Total personnel compensation	<u>0</u>
12 Civilian personnel benefits	0
13 Benefits for former personnel	0
21 Travel and transportation of persons	(25)
22 Transportation of things	0
23.1 Rental payments to GSA	0
23.2 Rental Payments to others	0
23.3 Communications, utilities and miscellaneous charges	0
24 Printing and reproduction	(5)
25.1 Advisory and assistance services	(875)
25.2 Other services	(55)
25.3 Purchases of goods & services from Gov't accounts	0
25.4 Operation and maintenance of facilities	0
25.5 Research and development contracts	0
25.6 Medical care	0
25.7 Operation and maintenance of equipment	0
25.8 Subsistence and support of persons	0
26 Supplies and materials	(50)
31 Equipment	(45)
32 Lands and structures	0
33 Investments and loans	0
41 Grants, subsidies and contributions	0
42 Insurance claims and indemnities	0
43 Interest and dividends	0
44 Refunds	0
99 Total obligations	<u>(1,055)</u>

Regional Ocean Partnership Grants: Regional Ocean Partnership Grants (Base Funding: \$3,489,000 and 1 FTE; Program Change: +\$511,000 and 0 FTE): NOAA requests an increase of \$511,000 and 0 FTE for a total of \$4,000,000 and 1 FTE to expand a targeted competitive grant program to advance regional ocean management through support for regional ocean partnerships.

Proposed Actions:

NOAA proposes to expand its competitive grants program aimed at advancing effective ocean management through regional ocean governance. Through public processes, regional ocean partnerships have identified critical management issues such as: coastal water quality, nutrient loading and clean beaches; wetland and habitat restoration, protection and characterization; environmental education and literacy; coastal community resilience and sustainability (including working waterfronts); sustainable offshore renewable energy; ecosystem based management; coastal scientific information, research, and monitoring; addressing impacts from climate change; and aquatic invasive species.

This program continues to support priority actions identified in the plans of existing regional ocean partnerships (e.g., Gulf of Mexico Alliance, Northeast Regional Ocean Council, Mid-Atlantic Regional Council on the Ocean, the South Atlantic Alliance, and the West Coast Governors' Agreement on Ocean Health), as well as the development and implementation of place-based ocean management plans in other regions (e.g. the Pacific and Caribbean territories, and Alaska). Eligible grant recipients include state, local and tribal governments, institutions of higher learning, and non-profit organizations working with these regional ocean partnerships or member states.

Statement of Need and Economic Benefits:

Regional ocean partnerships support the effective management of ocean and coastal resources that contribute about \$230 billion each year to the national economy in market-based outputs, in addition to ecological systems that increase property values and the quality of life in coastal areas (NOEP, 2004. *Ocean-Related GDP with Multipliers, All Ocean Sectors*). A comprehensive regional approach to science-based, place-based planning for multiple uses of ocean and coastal resources yields many tangible benefits. Among them are reduced user conflicts, streamlined permitting, synergies among compatible uses, incentives for developing coastal infrastructure and business relevant to planned offshore uses, and more increased sustainability.

Increasing coastal populations, offshore energy development, aquaculture, and marine transportation add to the need to manage expanding and often competing uses of finite coastal and ocean areas. Climate change is expected to amplify these challenges. Effective management of ocean and coastal resources across jurisdictional boundaries requires improving communications, aligning priorities, and enhancing resource sharing between local, state, and Federal agencies. Such Federal-state partnerships are central to overcoming the fragmented management regimes that currently exist in many areas, and allow managers on all levels to leverage substantial Federal expertise for long term planning and day to day activities.

Base Resource Assessment:

The base resources for this activity are described in the Ocean and Coastal Management base narrative.

Schedule and Milestones:

- Assist ROPs with improving data management and decision support tools to support Regional Ocean Partnership priorities
- Develop performance measurement system to support National Ocean Policy and ROP implementation

Deliverables:

- Enter into up to eight cooperative agreement awards to support Regional Ocean Partnership coordination and development
- Enter into up to four cooperative agreement awards to implement Regional Ocean Partnership priorities supportive of the National Ocean Policy

Performance Goals and Measurement Data:

Performance Measure:	FY						
Implementation of priority actions identified in regional action plans (cumulative)	2011	2012	2013	2014	2015	2016	2017
	Actual	Target	Target	Target	Target	Target	Target
With Increase	N/A	N/A	24	28	32	36	40
Without Increase	12	19	23	27	31	35	39
Description: Regional ocean partnerships will make progress in achieving the actions within integrated plans for long term ocean health and sustainability and engage academic, nongovernmental organizations and private interests. The program will achieve the dual benefits of addressing regional priority actions while also advancing goals of the National Ocean Policy.							

PROGRAM CHANGE DETAIL BY OBJECT CLASS
(Dollar amounts in thousands)

Activity: National Ocean Service
Subactivity: Ocean and Coastal Management

Object Class	2013 Increase
11 Personnel compensation	
11.1 Full-time permanent	\$0
11.3 Other than full-time permanent	0
11.5 Other personnel compensation	0
11.8 Special personnel services payments	0
11.9 Total personnel compensation	0
12 Civilian personnel benefits	0
13 Benefits for former personnel	0
21 Travel and transportation of persons	0
22 Transportation of things	0
23.1 Rental payments to GSA	0
23.2 Rental Payments to others	0
23.3 Communications, utilities and miscellaneous charges	0
24 Printing and reproduction	0
25.1 Advisory and assistance services	0
25.2 Other services	0
25.3 Purchases of goods & services from Gov't accounts	0
25.4 Operation and maintenance of facilities	0
25.5 Research and development contracts	0
25.6 Medical care	0
25.7 Operation and maintenance of equipment	0
25.8 Subsistence and support of persons	0
26 Supplies and materials	0
31 Equipment	0
32 Lands and structures	0
33 Investments and loans	0
41 Grants, subsidies and contributions	511
42 Insurance claims and indemnities	0
43 Interest and dividends	0
44 Refunds	0
99 Total obligations	511

National Estuarine Research Reserve System: National Estuarine Research Reserve System (NERRS) (Base Funding: \$21,712,000 and 0 FTE; Program Change: -\$2,733,000 and 0 FTE):

NOAA requests a decrease of \$2,733,000 and 0 FTE for a total of \$18,979,000 and 0 FTE to reduce funding for the National Estuarine Research Reserve (NERRS) program.

Proposed Actions:

NOAA proposes to eliminate funding in FY 2013 for the NERRS Graduate Research Fellowship Program and reduce funding for other Reserve specific programs. NOAA will continue to provide funds to support the staff, maintenance operations and programs to implement reserve management plans at each of the 28 reserves across the country. However, as a result of this reduction, Reserves may reduce or eliminate projects, activities, and /or staff positions. State matching funds (30 percent of the total) may also be reduced commensurately. Reserves will continue high priority activities with available funding. Each reserve has a management plan (updated every five years) that guides site-based research, monitoring, education, training and resource stewardship, and the schedule for review of these plans will be extended. Within the total for NERRS, the FY 2013 President's Request funds the NERRS Science Collaborative at \$4,732,000.

Base Resource Assessment:

The base resources for this activity are described in Ocean and Coastal Management base narrative.

Schedule and Milestones:

- Complete revision of 18 NERR management plans by FY 2016
- Complete 89 percent of National Estuarine Research Reserve site profiles by FY 2016
- Pilot sentinel site monitoring of sea level change and habitat response at four reserves (FY 2013-2017)

Deliverables:

N/A

Performance Goals and Measurement Data:

Performance Measure:	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
Percentage of NERR System adequately characterized for	Actual	Target	Target	Target	Target	Target	Target
With Decrease	N/A	N/A	89%	93%	96%	96%	96%
Without Decrease	82%	89%	89%	93%	96%	100%	100%

Description: This tracks NOAA's progress in characterizing each National Estuarine Research Reserve's resources and condition to guide effective long-term management. Reserves are characterized through site profiles, which summarize the existing state of knowledge about reserve research and monitoring activities and identify research needs that should be addressed in the future. It is measured as the percent of designated Reserves that have completed a site profile.

Performance Measure:	FY						
Number of graduate research fellows funded by NERRS	2011	2012	2013	2014	2015	2016	2017
	Actual	Target	Target	Target	Target	Target	Target
With Decrease	N/A	N/A	0	0	0	0	0
Without Decrease	47	32	28	28	28	28	28
Description: The National Estuarine Research Reserve System funds applied research at reserves by providing graduate research fellowships to master's and Ph.D. students.							

PROGRAM CHANGE DETAIL BY OBJECT CLASS
(Dollar amounts in thousands)

Activity: National Ocean Service
Subactivity: Ocean and Coastal Management

Object Class	2013 Decrease
11 Personnel compensation	
11.1 Full-time permanent	\$0
11.3 Other than full-time permanent	0
11.5 Other personnel compensation	0
11.8 Special personnel services payments	0
11.9 Total personnel compensation	<u>0</u>
12 Civilian personnel benefits	0
13 Benefits for former personnel	0
21 Travel and transportation of persons	0
22 Transportation of things	0
23.1 Rental payments to GSA	0
23.2 Rental Payments to others	0
23.3 Communications, utilities and miscellaneous charges	0
24 Printing and reproduction	0
25.1 Advisory and assistance services	0
25.2 Other services	0
25.3 Purchases of goods & services from Gov't accounts	0
25.4 Operation and maintenance of facilities	0
25.5 Research and development contracts	0
25.6 Medical care	0
25.7 Operation and maintenance of equipment	0
25.8 Subsistence and support of persons	0
26 Supplies and materials	0
31 Equipment	0
32 Lands and structures	0
33 Investments and loans	0
41 Grants, subsidies and contributions	(2,733)
42 Insurance claims and indemnities	0
43 Interest and dividends	0
44 Refunds	0
99 Total obligations	<u>(2,733)</u>

Marine Sanctuary Program Base: Marine Sanctuary System and Marine Protected Areas (Base Funding: \$49,634,000 and 191 FTE; Program Change: -\$3,043,000 and 0 FTE):

NOAA requests a decrease of \$3,043,000 and 0 FTE for a total of \$46,591,000 and 191 FTE for the Marine Sanctuaries Program. The FY 2013 President's Budget proposes to consolidate the National Marine Protected Areas Center with the Office of National Marine Sanctuaries to create a single more efficient and effective program. At this level, NOAA will fund the highest priorities of the Marine Protected Areas (MPA) Program within the Office of National Marine Sanctuaries.

Proposed Actions:

The FY 2013 President's Budget request for the consolidated Office of National Marine Sanctuaries (ONMS) will continue support for the 13 Sanctuaries in the National Marine Sanctuary System, the Papahānaumokuākea Marine National Monument, and National Marine Protected Areas Center as required by Executive Order 13158. The proposed consolidation will allow NOAA to fully leverage ONMS capacities and regional networks for management MPAs and foster more effective information sharing among national and regional ocean management interests. At the requested funding level NOAA will support the highest priorities of all its mandates, maintain its unique capabilities, and continue engaging coastal communities and stakeholders to promote science-based stewardship of designated areas.

Base Resource Assessment:

The base resources for this activity are described in the Ocean and Coastal Management base narrative.

Schedule and Milestones:

- Complete development and implementation of revised management plan for HI/Humpback Whale (FY 2013)
- Implement additional sentinel monitoring activities where necessary to assess impacts of threats (e.g. climate change, biodiversity loss, invasive species) to ONMS resources and detect early warnings of change at national, regional, and local scales (FY 2013-2017)
- Conduct baseline assessments for priority coral marine protected areas (MPA) using the MPA Assessment Checklist (2013) then reevaluate these MPAs to determine improvements in management (FY 2014-2016)
- Implement data management (including access and distribution) protocols, infrastructure, and partnerships for ONMS Sentinel Monitoring Program (FY 2013- 2017)
- Update the Framework for a national system of Federal, state, tribal, and local marine protected areas
- Complete additions to the MPA Inventory on the natural and cultural resources protected by U.S. MPAs to support improved MPA management
- Expand the coverage of the U.S. EEZ for which the full range of current and emerging ocean uses are mapped and understood
- Continue to build and strengthen the National System of MPAs by providing technical assistance and tools to member programs (FY 2013-2017)

Deliverables:

- Development and/or expansion of partnerships with local communities and businesses to implement sustainable practices for fishing, tourism, recreation, ecosystem protection and alternative energy technologies
- Development and/or expansion of education and public outreach, including those with multi-cultural communities, related to ecosystems, climate change and human use impacts
- Habitat restoration and marine debris removal at all sanctuaries

- Monitoring programs, scientific assessments, technology application, public awareness and mitigation strategies associated with ecosystem changes at all sanctuaries
- Marine acoustics programs to determine the distribution of marine mammals and vessel traffic patterns at Stellwagen Bank and Channel Islands sanctuaries. Develop education initiatives at all sites that protect marine mammals from vessel strikes and conduct disentanglement and rescue operations
- Design and implementation of MPA networks, to enable effective conservation of more acres of coral reefs within U.S. boundaries
- New education, survey and eradication programs to avoid and mitigate introduction of invasive species in multiple sanctuaries
- Community-based management plan for HI/Humpback Whale NMS

PROGRAM CHANGE DETAIL BY OBJECT CLASS
(Dollar amounts in thousands)

Activity: National Ocean Service
Subactivity: Ocean and Coastal Management

Object Class	2013 Decrease
11 Personnel compensation	
11.1 Full-time permanent	\$0
11.3 Other than full-time permanent	0
11.5 Other personnel compensation	0
11.8 Special personnel services payments	0
11.9 Total personnel compensation	<u>0</u>
12 Civilian personnel benefits	0
13 Benefits for former personnel	0
21 Travel and transportation of persons	0
22 Transportation of things	0
23.1 Rental payments to GSA	0
23.2 Rental Payments to others	0
23.3 Communications, utilities and miscellaneous charges	0
24 Printing and reproduction	0
25.1 Advisory and assistance services	0
25.2 Other services	(3,043)
25.3 Purchases of goods & services from Gov't accounts	0
25.4 Operation and maintenance of facilities	0
25.5 Research and development contracts	0
25.6 Medical care	0
25.7 Operation and maintenance of equipment	0
25.8 Subsistence and support of persons	0
26 Supplies and materials	0
31 Equipment	0
32 Lands and structures	0
33 Investments and loans	0
41 Grants, subsidies and contributions	0
42 Insurance claims and indemnities	0
43 Interest and dividends	0
44 Refunds	<u>0</u>
99 Total obligations	<u>(3,043)</u>

THIS PAGE INTENTIONALLY LEFT BLANK

APPROPRIATION ACCOUNT: PROCUREMENT, ACQUISITION AND CONSTRUCTION
SUBACTIVITY: PROCUREMENT, ACQUISITION AND CONSTRUCTION

The NOS Procurement, Acquisition, & Construction account includes three line items.

Coastal and Estuarine Land Conservation Program

(<http://coastalmanagement.noaa.gov/land/welcome.html>)

The Coastal and Estuarine Land Conservation Program (CELCP) provided grants to state and local governments to protect important coastal and estuarine areas that have significant conservation, recreation, ecological, historical or aesthetic values, or are threatened by conversion from their natural or recreational state. The Federal grants required matching funds, which leverage additional state, local or private contributions. NOAA developed and issued guidelines delineating criteria for grant awards and a process for conducting a national competitive grants program under the CELCP. Through this program, NOAA supported efforts to protect important stream corridors and habitats, reduce the flow of polluted runoff into coastal waters, lessen the impacts of coastal flooding from severe storm events, and provide opportunities for coastal recreation and nature-based tourism. This program is authorized by the Coastal and Estuarine Land Conservation Act of 2009, which requires that 15 percent of any appropriation be allocated to projects that benefit a National Estuarine Research Reserve (NERR). These funds supplemented those in the NERRS construction/acquisition line by supporting land acquisition in the watershed of the reserve. As of the end of FY 2011, the program had protected almost 100,000 acres of coastal land.

The Outyear Funding Estimates are provided with the program change requested for this activity.

National Estuarine Research Reserve System Construction/Acquisition

(<http://www.nerrs.noaa.gov/>)

The National Estuarine Research Reserve System (NERRS) is a Federal-state partnership established under the CZMA designed to protect and understand valuable estuarine resources through research and education. For PAC, NERRS funding has been matched 70:30 (Federal: State) for facilities construction and 1:1 for land acquisition. Reserves are publicly owned lands and onsite facilities that provide opportunities for researchers as well as the public to better understand these estuarine areas. Supplementing or updating facilities at the 28 reserves has been carried on in conjunction with the development of system-wide construction plans. All construction activities have been carried out based on current needs for implementing core NERRS programs and external opportunities for partnerships. When funding and land buying opportunities were available, reserves acquired additional nearby critical habitat within, or adjacent to, a reserve boundary as identified in reserve management plans to increase protection and provide places for conducting long-term science, education, and demonstration programs. The facilities and land of the reserves are owned and managed by the states in this Federal-state partnership. NERRS construction and land acquisition projects have been selected on a competitive basis.

The Outyear Funding Estimates are provided with the program change requested for this activity.

National Marine Sanctuary Program Construction/Acquisition (<http://sanctuaries.noaa.gov/>)

NOAA administers the National Marine Sanctuary System under authority of the National Marine Sanctuaries Act. The Office of National Marine Sanctuaries manages and operates the Nation's system of 13 Marine Sanctuaries and the Papahānaumokuākea Marine National Monument. In FY 2012, the program is implementing a comprehensive facilities plan that prioritizes needs and opportunities at individual sites for constructing exhibits, collaborative education and visibility projects, and operational needs. In order to establish better understanding and appreciation for sanctuary and other ocean and coastal resources by the public, the program is constructing a network of exhibits, signage, and kiosks. Whenever possible, sanctuaries utilize existing aquaria, museums and other appropriate facilities to develop cooperative centers where the public and environmental decision makers can gain direct, objective and focused information on conservation issues. These facilities serve as important windows into the resources of the Sanctuaries and act as a storefront for public interaction with NOAA programs. The goal of these exhibits is to share with the public these ocean treasures. In addition to these efforts, currently available appropriations of PAC funding support operational facility requirements for NOAA-owned facilities, including safety improvements, ADA (Americans with Disabilities Act) upgrades, and replacement and repair.

The Outyear Funding Estimates are provided with the program change requested for this activity.

Schedule and Milestones:

N/A

Deliverables:

N/A

Performance Goals and Measurement Data:

Performance Measure:	FY						
Annual number acres acquired or designated for long-term conservation (CELCP)	2011	2012	2013	2014	2015	2016	2017
	Actual	Target	Target	Target	Target	Target	Target
	1,350	600	0	0	0	0	0

Description: Measure 18d tracks NOAA's success through the National Estuarine Research Reserve System (NERRS), Coastal Zone Management (CZM) Program and Coastal and Estuarine Land Conservation Program (CELCP) programs in protecting habitats identified in the Coastal Zone Management Act as priorities. The measure tracks the number of acres acquired with NOAA funds by state or local government agencies from willing sellers for long-term protection of important coastal habitats and opportunities for recreational access to the coast through the CZM Program and, CELCP, or the number of acres designated for long-term protection by NOAA and state partners through the NERRS. The Annual Performance Plan targets for this measure represent the number of acres acquired or designated for long-term conservation in a given year for each of these programs. In the President's Budget, however, the targets represent the number of acres that are estimated to be acquired or designated with the expected funding appropriated for that year, although the actual acquisition or designation may occur in a later year. Values above are a subset of measure 18d corresponding to funds provided for the CELP program. FY 2013-2017 Targets reflect proposed termination in FY 2013.

PROGRAM CHANGES FOR FY 2013:

Coastal and Estuarine Land Conservation Program: CELCP (Base Funding: \$3,000,000 and 1 FTE; Program Change: -\$3,000,000 and -1 FTE): NOAA requests a decrease of \$3,000,000 and 1 FTE for a total of \$0 and 0 FTE to terminate funding for the Coastal and Estuarine Land Conservation Program (CELCP).

Proposed Actions:

NOAA proposes to terminate funding for the Coastal and Estuarine Land Conservation Program (CELCP) as the base level of funding severely limits the size and number of conservation projects that could be approved and there are other, much larger Federal programs that foster land protection through acquisition and conservation easements.

Base Resource Assessment:

The base resources for this activity are described in the Procurement, Acquisition, and Construction base narrative.

Schedule and Milestones:

N/A

Deliverables:

N/A

Performance Goals and Measurement Data:

Performance Measure:	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
Annual number acres acquired or designated for long-term conservation (measure 18d-CELCP contribution only)	Actuals	Target	Target	Target	Target	Target	Target
With Decrease	N/A	N/A	0	0	0	0	0
Without Decrease	1,350	600	600	600	600	600	600

Description: This measure tracks the number of acres acquired with NOAA funds by state or local government agencies from willing sellers for long-term protection of important coastal habitats and opportunities for recreational access to the coast through the Coastal and Estuarine Land Conservation Program (CELCP). CELCP is one contributor to the NOAA "acres acquired or designated" GRPA Measure 18d. The targets in the budget submission reflect the estimated number of acres that could be acquired with the level of investment available each year. The actual number can vary depending on cost and acreage for each project selected for funding through the competitive process.

Outyear Funding Estimates (\$ in thousands):

Coastal and Estuarine Land Conservation Program	FY 2012 & Prior	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	CTC	Total
Change from FY 2013 Base		(3,000)	(3,000)	(3,000)	(3,000)	(3,000)		
Total Request	264,424	0	0	0	0	0	N/A	N/A

PROGRAM CHANGE PERSONNEL DETAIL

Activity: National Ocean Service
 Subactivity: NOS Acquisition

Title:	Location	Grade	Number of Positions	Annual Salary	Total Salaries
Coastal Management Specialist	Silver Spring, MD	ZP-IV	-1	89,033	(89,033)
					0
					0
Total			<u>-1</u>		<u>(89,033)</u>
less Lapse		0%	<u>0</u>		<u>0</u>
Total full-time permanent (FTE)			-1		(89,033)
2013 Pay Adjustment (0.5%)					0
TOTAL					(89,033)
Personnel Data			<u>Number</u>		
Full-Time Equivalent Employment					
Full-time permanent			-1		
Other than full-time permanent			0		
Total			<u>-1</u>		
Authorized Positions:					
Full-time permanent			-1		
Other than full-time permanent			0		
Total			<u>-1</u>		

PROGRAM CHANGE DETAIL BY OBJECT CLASS
(Dollar amounts in thousands)

Activity: National Ocean Service

Subactivity: NOS Acquisition

Object Class	2013 Decrease
11 Personnel compensation	
11.1 Full-time permanent	(\$89)
11.3 Other than full-time permanent	0
11.5 Other personnel compensation	0
11.8 Special personnel services payments	0
11.9 Total personnel compensation	(89)
12 Civilian personnel benefits	(26)
13 Benefits for former personnel	0
21 Travel and transportation of persons	0
22 Transportation of things	0
23.1 Rental payments to GSA	0
23.2 Rental Payments to others	0
23.3 Communications, utilities and miscellaneous charges	0
24 Printing and reproduction	0
25.1 Advisory and assistance services	0
25.2 Other services	0
25.3 Purchases of goods & services from Gov't accounts	0
25.4 Operation and maintenance of facilities	0
25.5 Research and development contracts	0
25.6 Medical care	0
25.7 Operation and maintenance of equipment	0
25.8 Subsistence and support of persons	0
26 Supplies and materials	0
31 Equipment	0
32 Lands and structures	0
33 Investments and loans	0
41 Grants, subsidies and contributions	(2,885)
42 Insurance claims and indemnities	0
43 Interest and dividends	0
44 Refunds	0
99 Total obligations	(3,000)

National Estuarine Research Reserve System Construction: National Estuarine Research Reserve System Construction (Base Funding: \$1, 000,000 and 0 FTE; Program Change: -\$1, 000,000 and 0 FTE): NOAA requests a decrease of \$1,000,000 and 0 FTE for a total of \$0 and 0 FTE to terminate funding for National Estuarine Research Reserve (NERRS) construction activities.

Proposed Actions:

NOAA proposes to terminate grant funding for National Estuarine Research Reserve System construction activities. Current projects will be completed with grant funding already awarded. Maintenance of existing infrastructure and development of new public exhibits may be funded through the program’s operational budget.

Base Resource Assessment:

The base resources for this activity are described in the Procurement, Acquisition, and Construction base narrative.

Schedule and Milestones:

N/A

Deliverables:

N/A

Outyear Funding Estimates (\$ in thousands):

National Estuarine Research Reserve System – Land Acquisition and Construction	FY 2012 & Prior	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	CTC	Total
Change from FY 2013 Base		(1,000)	(1,000)	(1,000)	(1,000)	(1,000)		
Total Request	96,418	0	0	0	0	0	N/A	N/A

PROGRAM CHANGE DETAIL BY OBJECT CLASS
(Dollar amounts in thousands)

Activity: National Ocean Service
Subactivity: NOS Construction

Object Class	2013 Decrease
11 Personnel compensation	
11.1 Full-time permanent	\$0
11.3 Other than full-time permanent	0
11.5 Other personnel compensation	0
11.8 Special personnel services payments	0
11.9 Total personnel compensation	<u>0</u>
12 Civilian personnel benefits	0
13 Benefits for former personnel	0
21 Travel and transportation of persons	0
22 Transportation of things	0
23.1 Rental payments to GSA	0
23.2 Rental Payments to others	0
23.3 Communications, utilities and miscellaneous charges	0
24 Printing and reproduction	0
25.1 Advisory and assistance services	0
25.2 Other services	0
25.3 Purchases of goods & services from Gov't accounts	0
25.4 Operation and maintenance of facilities	0
25.5 Research and development contracts	0
25.6 Medical care	0
25.7 Operation and maintenance of equipment	0
25.8 Subsistence and support of persons	0
26 Supplies and materials	0
31 Equipment	0
32 Lands and structures	0
33 Investments and loans	0
41 Grants, subsidies and contributions	(1,000)
42 Insurance claims and indemnities	0
43 Interest and dividends	0
44 Refunds	<u>0</u>
99 Total obligations	<u>(1,000)</u>

Marine Sanctuaries Construction: Marine Sanctuaries Construction (Base Funding: \$4,000,000 and 0 FTE; Program Change: -\$4,000,000 and 0 FTE): NOAA requests a decrease of \$4,000,000 and 0 FTE for a total of \$0 and 0 FTE to terminate funding for National Marine Sanctuary System construction activities.

Proposed Actions:

NOAA proposes to terminate base funding for Marine Sanctuaries Construction activities. Funding for emerging critical construction activities will be included as specific project requests in future budget submissions. Marine Sanctuaries Construction funding was used to construct and renovate facilities including visitor centers and to design and install exhibits. In FY 2012, NOAA will finalize work on projects currently in progress. Maintenance of existing infrastructure and development of new public exhibits may be funded through the program's operational budget.

Base Resource Assessment:

The base resources for this activity are described in the Procurement, Acquisition and Construction base narrative.

Schedule and Milestones:

N/A

Deliverables:

N/A

Outyear Funding Estimates (\$ in thousands):

National Marine Sanctuary's Construction and Acquisition	FY 2012 & Prior	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	CTC	Total
Change from FY 2013 Base		(4,000)	(4,000)	(4,000)	(4,000)	(4,000)		
Total Request	106,340	0	0	0	0	0	N/A	N/A

PROGRAM CHANGE DETAIL BY OBJECT CLASS
(Dollar amounts in thousands)

Activity: National Ocean Service

Subactivity: NOS Construction

Object Class	2013 Decrease
11 Personnel compensation	
11.1 Full-time permanent	\$0
11.3 Other than full-time permanent	0
11.5 Other personnel compensation	0
11.8 Special personnel services payments	0
11.9 Total personnel compensation	<u>0</u>
12 Civilian personnel benefits	0
13 Benefits for former personnel	0
21 Travel and transportation of persons	0
22 Transportation of things	0
23.1 Rental payments to GSA	0
23.2 Rental Payments to others	0
23.3 Communications, utilities and miscellaneous charges	0
24 Printing and reproduction	0
25.1 Advisory and assistance services	0
25.2 Other services	(4,000)
25.3 Purchases of goods & services from Gov't accounts	0
25.4 Operation and maintenance of facilities	0
25.5 Research and development contracts	0
25.6 Medical care	0
25.7 Operation and maintenance of equipment	0
25.8 Subsistence and support of persons	0
26 Supplies and materials	0
31 Equipment	0
32 Lands and structures	0
33 Investments and loans	0
41 Grants, subsidies and contributions	0
42 Insurance claims and indemnities	0
43 Interest and dividends	0
44 Refunds	<u>0</u>
99 Total obligations	<u>(4,000)</u>

THIS PAGE INTENTIONALLY LEFT BLANK

APPROPRIATION ACCOUNT: DAMAGE ASSESSMENT AND RESTORATION REVOLVING FUND

A National Oceanic and Atmospheric Administration (NOAA) Damage Assessment and Restoration Revolving Fund was established, under Section 1012(a) of the Oil Pollution Act of 1990, for deposit of sums provided by any party or governmental entity for response to discharges of oil or releases of hazardous substances, for assessment of damages to NOAA trust resources resulting from those discharges and releases, and for the restoration of the injured natural resources. Through the Revolving Fund, NOAA:

- Retains funds that are recovered through settlement or awarded by a court for restoration of injured natural resources, and retains reasonable costs of conducting spill response and damage assessments that are recovered by NOAA through negotiated settlement, court award, or other reimbursement.
- Ensures funds deposited shall remain available to the trustee, without further appropriation, until expended to pay costs associated with response, damage assessment, and restoration of natural resources.

The NOAA Damage Assessment and Restoration Revolving Fund facilitates and sustains: (1) natural resource damage assessment while the Departments of Commerce and Justice seek full reimbursement from potentially responsible parties; and (2) restoration, replacement, or acquisition of the equivalent of injured or lost natural resources, including resources of National Marine Sanctuaries and National Estuarine Research Reserves, tidal wetlands and other habitats, for which NOAA is trustee. These program functions are conducted jointly within NOAA by the Office of General Counsel, the National Ocean Service, and the National Marine Fisheries Service.

THIS PAGE LEFT INTENTIONALLY BLANK

Department of Commerce
 National Oceanic and Atmospheric Administration
 Damage Assessment and Restoration Revolving Fund
SUMMARY OF RESOURCE REQUIREMENTS
 (Dollar amounts in thousands)

	Positions	FTE	Budget Authority	Direct Obligations
FY 2012 Currently Available	16	16	6,000	72,899
less: Obligations from prior year balances	0	0	0	(51,299)
less: Unobligated balance transferred, DOI	0	0	0	(3,000)
plus: 2013 Adjustments to Base	0	0	0	0
FY 2013 Base	16	16	6,000	18,600
plus: 2013 Program Changes	0	0	0	0
FY 2013 Estimate	16	16	6,000	18,600

Comparison by activity/subactivity		FY 2011 Actuals		FY 2012 Currently Available		FY 2013 Base Program		FY 2013 Estimate		Increase/Decrease	
		Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount
Damage Assessment and Restoration Revolving	Pos/BA	28	7,071	16	6,000	16	6,000	16	6,000	0	0
	FTE/OBL	28	78,358	16	72,899	16	18,600	16	18,600	0	0
Total: Damage Assessment and Restoration Revolving Fund	Pos/BA	28	7,071	16	6,000	16	6,000	16	6,000	0	0
	FTE/OBL	28	78,358	16	72,899	16	18,600	16	18,600	0	0

Department of Commerce
National Oceanic and Atmospheric Administration
Damage Assessment and Restoration Revolving Fund
SUMMARY OF RESOURCE REQUIREMENTS
(Dollar amounts in thousands)

	FY 2011		FY 2012		FY 2013		FY 2013		Increase/ Decrease	
	FTE	Amount	FTE	Amount	FTE	Amount	FTE	Amount	FTE	Amount
Direct Mandatory Obligation	28	78,358	16	72,899	16	18,600	16	18,600	0	0
Total Obligations	28	78,358	16	72,899	16	18,600	16	18,600	0	0
Adjustments to Obligations:										
Federal funds	0	102	0	0	0	0	0	0	0	0
New offsetting collections	0	(73,885)	0	(7,600)	0	(7,600)	0	(7,600)	0	0
Recoveries	0	(1,433)	0	0	0	0	0	0	0	0
Unobligated balance, adj. SOY	0	(30,426)	0	(51,299)	0	0	0	0	0	0
Unobligated balance, transferred (From DOI)	0	(16,944)	0	(8,000)	0	(5,000)	0	(5,000)	0	0
Unobligated balance, EOY	0	51,299	0	0	0	0	0	0	0	0
Total Budget Authority	28	7,071	16	6,000	16	6,000	16	6,000	0	0
Financing from Transfers and Other:										
Transfer from Other Accounts	0	0	0	0	0	0	0	0	0	0
Transfer to/from Dept of Interior	0	(7,071)	0	(6,000)	0	(6,000)	0	(6,000)	0	0
Net Appropriation	28	0	16	0	16	0	16	0	0	0

Department of Commerce
 National Oceanic and Atmospheric Administration
 Damage Assessment and Restoration Revolving Fund
SUMMARY OF REQUIREMENTS BY OBJECT CLASS
 (Dollar amounts in thousands)

Object Class	FY 2011 Actuals	FY 2012 Currently Available	FY 2013 Base Program	FY 2013 Estimate	Increase/ (Decrease)
11 Personnel compensation					
11.1 Full-time permanent	2,978	1,373	1,373	1,373	0
11.3 Other than full-time permanent	0	8	8	8	0
11.5 Other personnel compensation	0	29	29	29	0
11.8 Special personnel services payments	0	0	0	0	0
11.9 Total personnel compensation	2,978	1,410	1,410	1,410	0
12.1 Civilian personnel benefits	484	552	552	552	0
13 Benefits for former personnel	0	0	0	0	0
21 Travel and transportation of persons	131	210	210	210	0
22 Transportation of things	(3)	4	4	4	0
23.1 Rental payments to GSA	9	130	130	130	0
23.2 Rental payments to others	10	6	6	6	0
24 Printing and reproduction	62	4	4	4	0
25.1 Advisory and assistance services	71,488	844	844	844	0
25.2 Other services	208	67,602	13,303	13,303	0
25.3 Other purchases of goods and services from Govt accounts	731	182	182	182	0
26 Supplies and materials	542	146	146	146	0
31 Equipment	60	144	144	144	0
41 Grants, subsidies and contributions	1,658	1,652	1,652	1,652	0
42 Insurance claims and indemnities	0	1	1	1	0
43 Interest and dividends	0	12	12	12	0
99 Total Obligations	78,358	72,899	18,600	18,600	0

Department of Commerce
 National Oceanic and Atmospheric Administration
 Damage Assessment and Restoration Revolving Fund
SUMMARY OF REQUIREMENTS BY OBJECT CLASS
 (Dollar amounts in thousands)

	FY 2011 Actuals	FY 2012 Currently Available	FY 2013 Base Program	FY 2013 Estimate	Increase/ (Decrease)
Less collections	(73,783)	(7,600)	(7,600)	(7,600)	0
Less recoveries	(1,433)	0	0	0	0
Less unobligated balance, SOY	(30,426)	(51,299)	0	0	0
Plus unobligated balance, EOY	51,299	0	0	0	0
Plus unobligated balance transferred	(16,944)	(8,000)	(5,000)	(5,000)	0
Total Budget Authority	7,071	6,000	6,000	6,000	0
Transfers:					
Transfer from Other Accounts	0	0	0	0	
Transfer from DOI	(7,071)	(6,000)	(6,000)	(6,000)	0
Discretionary Budget Authority	0	0	0	0	0
Personnel Data					
Full-Time equivalent Employment:					
Full-time permanent	28	16	16	16	0
Other than full-time permanent	0	0	0	0	0
Total	28	16	16	16	0
Authorized Positions:					
Full-time permanent	28	16	16	16	0
Other than full-time permanent	0	0	0	0	0
Total	28	16	16	16	0

APPROPRIATION ACCOUNT: SANCTUARIES ENFORCEMENT ASSET FORFEITURE FUND

The Sanctuaries Enforcement Asset Forfeiture Fund receives proceeds from civil penalties and forfeiture claims against responsible parties, as determined through court settlements or agreements, for violations of NOAA sanctuary regulations. Penalties received are held in sanctuary site-specific accounts from year to year (technically reimbursables), as the funds are spent on resource protection within the sanctuary site where the penalty or forfeiture occurred. Funds are expended for resource protection purposes which may include all aspects of law enforcement (from equipment to labor), community oriented policing programs, and other resource protection and management measures such as the installation of mooring buoys or restoration of injured resources.

THIS PAGE LEFT INTENTIONALLY BLANK

Department of Commerce
 National Oceanic and Atmospheric Administration
 Sanctuaries Enforcement Asset Forfeiture Fund
SUMMARY OF RESOURCE REQUIREMENTS
 (Dollar amounts in thousands)

	Positions	FTE	Budget Authority	Direct Obligations
FY 2012 Currently Available	0	0	1,000	1,000
less: Obligations from prior year balances	0	0	0	0
plus: 2013 Adjustments to Base	0	0	0	0
FY 2013 Base	0	0	1,000	1,000
plus: 2013 Program Changes	0	0	0	0
FY 2013 Estimate	0	0	1,000	1,000

Comparison by activity/subactivity	FY 2011 Actuals		FY 2012 Currently Available		FY 2013 Base Program		FY 2013 Estimate		Increase/Decrease		
	Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount	
Sanctuaries Asset Forfeiture Fund											
	Pos/BA	0	0	0	1,000	0	1,000	0	1,000	0	0
	FTE/OBL	0	0	0	1,000	0	1,000	0	1,000	0	0
	Pos/BA	0	0	0	1,000	0	1,000	0	1,000	0	0
Total: Sanctuaries Asset Forfeiture Fund	FTE/OBL	0	0	0	1,000	0	1,000	0	1,000	0	0

Department of Commerce
 National Oceanic and Atmospheric Administration
 Sanctuaries Enforcement Asset Forfeiture Fund
SUMMARY OF RESOURCE REQUIREMENTS
 (Dollar amounts in thousands)

	FY 2011		FY 2012		FY 2013		FY 2013		Increase/ Decrease	
	FTE	Amount	FTE	Amount	FTE	Amount	FTE	Amount	FTE	Amount
Direct Mandatory Obligation	0	0	0	1,000	0	1,000	0	1,000	0	0
Total Obligations	0	0	0	1,000	0	1,000	0	1,000	0	0
Adjustments to Obligations:										
New offsetting collections	0	0	0	0	0	0	0	0	0	0
Recoveries	0	0	0	0	0	0	0	0	0	0
Unobligated balance, adj. SOY	0	0	0	0	0	0	0	0	0	0
Unobligated balance, EOY	0	0	0	0	0	0	0	0	0	0
Total Budget Authority	0	0	0	1,000	0	1,000	0	1,000	0	0
Financing from Transfers and Other:										
Transfer from Other Accounts	0	0	0	0	0	0	0	0	0	0
Net Appropriation	0	0	0	1,000	0	1,000	0	1,000	0	0

Department of Commerce
 National Oceanic and Atmospheric Administration
 Sanctuaries Enforcement Asset Forfeiture Fund
SUMMARY OF REQUIREMENTS BY OBJECT CLASS
 (Dollar amounts in thousands)

Object Class	FY 2011 Actuals	FY 2012 Currently Available	FY 2013 Base Program	FY 2013 Estimate	Increase/ (Decrease)
11 Personnel compensation					
11.1 Full-time permanent	0	0	0	0	0
11.3 Other than full-time permanent	0	0	0	0	0
11.5 Other personnel compensation	0	0	0	0	0
11.8 Special personnel services payments	0	0	0	0	0
11.9 Total personnel compensation	0	0	0	0	0
12.1 Civilian personnel benefits	0	0	0	0	0
13 Benefits for former personnel	0	0	0	0	0
21 Travel and transportation of persons	0	0	0	0	0
22 Transportation of things	0	0	0	0	0
23.1 Rental payments to GSA	0	0	0	0	0
23.2 Rental payments to others	0	0	0	0	0
24 Printing and reproduction	0	0	0	0	0
25.1 Advisory and assistance services	0	0	0	0	0
25.2 Other services	0	1,000	1,000	1,000	0
25.3 Other purchases of goods and services from Govt accounts	0	0	0	0	0
26 Supplies and materials	0	0	0	0	0
31 Equipment	0	0	0	0	0
41 Grants, subsidies and contributions	0	0	0	0	0
42 Insurance claims and indemnities	0	0	0	0	0
43 Interest and dividends	0	0	0	0	0
99 Total Obligations	0	1,000	1,000	1,000	0

Department of Commerce
 National Oceanic and Atmospheric Administration
 Sanctuaries Enforcement Asset Forfeiture Fund
SUMMARY OF REQUIREMENTS BY OBJECT CLAS
 (Dollar amounts in thousands)

	FY 2011 Actuals	FY 2012 Currently Available	FY 2013 Base Program	FY 2013 Estimate	Increase/ (Decrease)
Less collections	0	0	0	0	0
Less recoveries	0	0	0	0	0
Less unobligated balance, SOY	0	0	0	0	0
Plus unobligated balance, EOY	0	0	0	0	0
Plus unobligated balance transferred	0	0	0	0	0
Total Budget Authority	0	1,000	1,000	1,000	0