



CHAPTER 3

NOAA Procurement, Acquisition, & Construction

The latest NOAA Geostationary Operational Environmental Satellite (GOES-0) rotating on a stand for blanket inspection



PROCUREMENT, ACQUISITION & CONSTRUCTION (PAC)

NOAA's Procurement, Acquisition, and Construction (PAC) account captures the cost of acquiring and improving capital assets, which are mission-critical to all agency programs and contribute significantly to achieving each of NOAA's Strategic Goals. This account is grouped by line office into three common activities: (1) "Systems Acquisition," which includes projects that will have a major impact on NOAA's ability to monitor and to forecast weather and climate change on a global basis; (2) "Construction," which includes projects involving new construction or major modification of existing facilities; and (3) "Fleet and Aircraft Replacement," which includes funding to support modernization of NOAA's fleet of ships and aircraft either through new construction, major modification to existing assets, or long-term acquisition of capacity from third parties.



Rendering of NOAA's new Gulf of Mexico Disaster Response Center expected to open Spring 2011

ADJUSTMENTS TO BASE:

The NOAA Procurement, Acquisition, and Construction (PAC) requests no adjustments to FY 2011 Base.

PAC PROGRAM CHANGE HIGHLIGHTS FOR FY 2011:

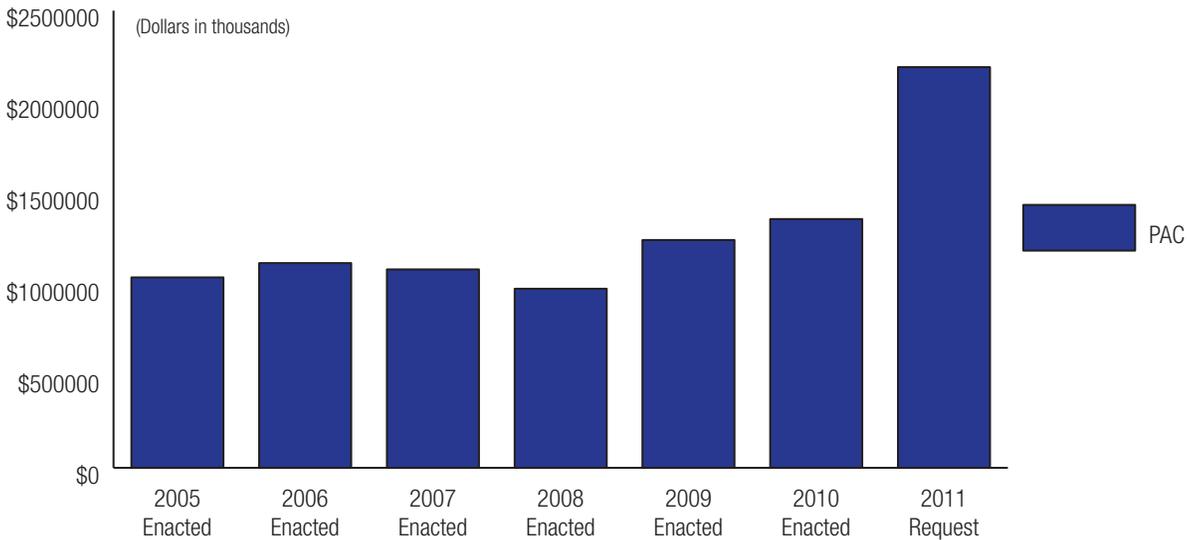
NOAA requests a net increase of \$876,747,000 and 0 FTEs over the FY 2011 Base for a total of \$2,191,091,000 and 190 FTEs for the PAC programs. Detailed numeric breakouts are located in Chapter 7, *Special Exhibits*. Descriptions of each request by line item are located in the NOAA FY 2011 Technical Budget.



PROCUREMENT, ACQUISITION, AND CONSTRUCTION (PAC)

(DOLLARS IN THOUSANDS)	FY 2009 ENACTED	FY 2010 ENACTED	FY 2011 REQUEST	INCREASE (DECREASE)
National Ocean Service	46,188	40,890	34,385	(6,505)
National Marine Fisheries Service	4,600	0	0	0
Ocean and Atmospheric Research	11,579	10,379	10,379	0
National Weather Service	110,951	102,727	100,731	(1,996)
National Environmental Satellite, Data and Information Service	990,579	1,199,357	2,018,796	819,439
Program Support	81,750	2,000	26,800	24,800
GRAND TOTAL PAC	1,245,647	1,360,353	2,191,091	830,738
Total FTE	190	190	190	0
Systems Acquisition	1,098,727	1,317,731	2,149,528	831,797
Construction	135,420	40,622	28,763	(11,859)
Fleet Replacement	11,500	2,000	12,800	10,800
TOTAL	1,245,647	1,360,353	2,191,091	830,738

Budget Trends FY 2005-2011



PAC: Procurement, Acquisition, & Construction



NATIONAL OCEAN SERVICE

\$34,385,000

Construction: NOAA requests an increase of \$10,000,000 and 0 FTEs. This increase is comprised of one initiative:

(BA IN THOUSANDS)	FY 2011 REQUEST	FY 2012	FY 2013	FY 2014	FY 2015
CELCP	25,000	25,000	25,000	25,000	25,000

Coastal and Estuarine Land Conservation Program: NOAA requests an increase of \$10,000,000 and 0 FTE for the Coastal and Estuarine Land Conservation Program (CELCP). Coastal counties are home to almost 153 million people, about 53 percent of the total U.S. population, and by 2015 the coastal population is estimated to reach 165 million. As the coastal population continues to increase, there are many competing demands for limited coastal areas and growing pressure to develop the remaining lands. Coastal lands and estuaries are ecologically productive and economically important. Through the competitive CELCP program, NOAA provides grants to state and local governments to protect important coastal and estuarine areas that have significant conservation, recreational, ecological, historic or aesthetic value that are threatened by development, such as tidal or freshwater wetlands, stream buffers, and floodplains. This increase of \$10,000,000 will support land conservation grants, approximately 2-3 conservation projects per year. This funding will also enable NOAA to ensure that conservation projects satisfy the requirements of NEPA and meet federal appraisal standards. The federal grants require matching funds, which leverage additional state, local or private contributions. The program gives priority to lands that can be effectively managed and protected and have significant ecological value.

NATIONAL WEATHER SERVICE

\$100,731,000

Systems Acquisition: NOAA requests an increase of \$7,358,000 and 0 FTEs. This increase is composed of four new initiatives:

(BA IN THOUSANDS)	FY 2011 REQUEST	FY 2012	FY 2013	FY 2014	FY 2015
NEXRAD	11,126	5,819	0	0	0

Next Generation Weather Radar (NEXRAD) Product Improvement (PI): NOAA requests an increase of \$3,150,000 and 0 FTEs to fund projected costs for the acquisition and deployment of Dual Polarization technology to NWS operational and support site NEXRAD locations. Doppler weather radar is the primary tool for issuing local storm warnings for flash floods, tornados, and severe thunderstorms. Currently, NEXRAD only transmits and receives a horizontal signal. Dual Polarization will add a vertical component. The addition of a vertical component greatly improves accuracy in estimation (quantity) and differentiation (rain, hail, snow, freezing rain, etc.) of precipitation. The outcome will be improved flash flood warnings; improved identification of and warnings for tornados, severe hail, dangerous freezing rain, snow; and enhanced water management capability.



NEXRAD Radar located at the WSR-88D Radar Operations Center in Norman, Oklahoma



(BA IN THOUSANDS)	FY 2011 REQUEST	FY 2012	FY 2013	FY 2014	FY 2015
Complete & Sustain NWR	12,614	5,594	5,594	5,590	5,590

Complete and Sustain NOAA Weather Radio (NWR): NOAA requests an increase of \$1,614,000 and 0 FTEs to continue the modernization of the NOAA Weather Radio system via the Weather Radio Improvement Project (WRIP).

The NWS is required to provide weather watches and warnings and other non-weather emergency messages to the public and emergency managers through the NOAA Weather Radio and the NWS. The most critical component of WRIP is the replacement of the obsolete and unsupported broadcast recoding equipment, the Console Replacement System (CRS), at each of the Weather Forecast Offices (WFOs). NWS will deploy the NWR Broadcast Management System (BMS) as a replacement for the CRS. The CRS is a main component of NOAA Weather Radio that converts text warning messages into digital voice, which gives the NWS the ability to quickly disseminate Severe and High Impact Weather Warnings, Watches and forecasts and Non-Weather Emergency Messages to the public. This increase is required to keep the project on schedule for completion of the CRS replacement in FY 2012. Funding for FY 2013-2015 is required to sustain a steady state operation of the NWR.



NOAA Weather Radios

(BA IN THOUSANDS)	FY 2011 REQUEST	FY 2012	FY2013	FY 2014	FY 2015
NOAA Profiler Network	9,730	9,730	11,960	0	0

NOAA Profiler Conversion: NOAA requests a restoration of \$2,230,000 and 0 FTEs to increase the base level funding for the NOAA Profiler Network (NPN) to continue the planned technology refresh and operating frequency conversion of the 20-year old NPN to that recommended in the President’s FY 2010 Budget but not provided for in the Consolidated Appropriations Act, 2010.

The Wind Profilers, vertical looking radars installed in 1988, are used as input for numerical (computer) weather models that predict clouds, precipitation, and temperature. The data also provides important indicators of where severe weather such as tornadoes and winter storms will form and is used for issuing aviation advisories, volcanic ash plumes and wildfire predictions. NPN winds improve probability of detection (+27%), decrease false alarm rate (-20%), and improve lead time (+14%) for tornado warnings, as well as severe thunderstorms, flash floods, and winter storms. They also improve warnings related to aviation and fire weather. The NPN has been installed for over 20 years without any technology refresh during its life cycle. The proposed increase will (1) convert thirty-two of the profilers currently operating at 404MHz to 449MHz and to provide technology refresh to each (20-year old system) and (2) provide technology refresh to the five profilers which are currently operating at the 449 Mhz frequency. Without this funding, all radars operating on the old frequency will be shut down due to interference with the European Galileo satellites.



NOAA Profiler in McCook, NE



(BA IN THOUSANDS)	FY 2011 REQUEST	FY 2012	FY 2013	FY 2014	FY 2015
AWIPS Tech Infusion	24,364	24,364	24,364	24,364	24,364

AWIPS Technology Infusion: NOAA requests an increase of \$364,000 and 0 FTEs to increase the base level of funding to that recommended in the FY 2010 President’s Budget, but not provided for in the Consolidated Appropriations Act, 2010.



AWIPS Workstations in Tallahassee, FL

AWIPS is the cornerstone of the modernized NWS. This system integrates and displays all hydrometeorological data at NWS field offices. This system integrates satellite, NEXRAD Doppler weather radar data, and Numerical Weather Prediction (NWP) data, enabling field forecasters to visualize environmental processes to create timely and accurate forecasts and warnings. An upgrade from AWIPS I to AWIPS II will provide improved hardware and software for this system. AWIPS II will optimize data access and use by allowing regional queries, enabling forecasters to create timely and accurate forecasts and warnings. AWIPS II Extended is a multi-phase program to add significant improvements to AWIPS II to provide improved functionalities and capabilities to the NWS field forecasters, NOAA partners and the public.

Construction: NOAA requests an increase of \$3,150,000 and 0 FTEs for NWS Construction. This increase is composed of one new initiative:

(BA IN THOUSANDS)	FY 2011 REQUEST	FY 2012	FY 2013	FY 2014	FY 2015
WFO Construction	3,150	3,150	3,150	3,150	3,150

Weather Forecast Office (WFO) Construction: NOAA requests an increase of \$3,150,000 and 0 FTEs for modernization projects in the Alaska and Pacific Regions as well as the replacement of end of life heating, ventilating, and air conditioning (HVAC) systems at six (6) WFOs with modern, high efficiency (green) units.



Construction of the Weather Service Office in Annette, Alaska

Specifically, increased funding completes Barrow, Alaska employee housing and the upper air inflatable shelter, Weather Service Office Koror renovations, and six HVAC replacements at WFOs with newer energy efficient models.



NATIONAL ENVIRONMENTAL SATELLITE, DATA, & INFORMATION SERVICE \$2,018,796,000

Systems Acquisition: NOAA requests a net increase of \$831,439,000 and 0 FTEs. This increase is comprised of six new initiatives and one planned decrease:

(BA IN THOUSANDS)	FY 2011 REQUEST	FY 2012	FY 2013	FY 2014	FY 2015
GOES-R	730,000	773,700	777,800	779,500	780,300

Geostationary Operational Environmental Satellites (GOES): NOAA requests a planned increase of \$62,500,000 and 0 FTEs for the GOES-R Series to provide continued satellite engineering development and production activities. GOES-R is a cooperative venture between NOAA and the National Aeronautics and Space Administration (NASA). NOAA defines requirements, implements system integration, procures ground segments, manages, funds, and operates the satellites. NASA serves as the agency with multi-disciplinary engineering expertise, develops detailed system specifications, procures and launches the spacecraft, and assists NOAA in system integration.



Artist's rendering of GOES-R

The GOES system provides an uninterrupted, continuous flow of environmental and weather data and information that meets customers' spatial, temporal and accuracy requirements, providing significant customer benefit within an established Life Cycle Cost (LCC). The GOES-R series provides for two satellites with a LCC of \$7.67 billion through 2028. The series includes the following instruments that are under development: the Advanced Baseline Imager (ABI), Space Environment In-Situ Suite (SEISS), Extreme Ultraviolet Sensor/X-Ray Sensor Irradiance Sensors (EXIS), Solar Ultraviolet Imager (SUVI), Geostationary Lightning Mapper (GLM), and Magnetometer. The GOES-R series satellites will not only provide critical weather observations for severe weather events such as hurricanes, but will also provide key enhancements in observational capabilities for climate, oceans and coasts, and the space environment. In FY 2011, the program will continue development of the instruments, spacecraft, and ground system. Funds will also be used to conduct Critical Design Reviews (CDR) for the spacecraft and ground system for a planned launch in 2015, as well as the continuation of the ground system antenna contract.

(BA IN THOUSANDS)	FY 2011 REQUEST	FY2012	FY2013	FY2014	FY2015
POES	40,874	40,874	40,874	40,874	40,874

Polar-orbiting Operational Environmental Satellite (POES): NOAA requests a planned decrease of \$2,261,000 and 0 FTEs for the continuation of the POES program and continued support for the MetOp (European Weather Satellite) program. POES launched the last satellite in the POES Series (N-Prime) in February 2009. Funds will be used to provide satellite and instrument anomaly support to the on-orbit POES satellites, maintain the ground system for their operation, and support the maintenance and testing of U.S. instruments on the MetOp satellites.



(BA IN THOUSANDS)	FY 2011 REQUEST	FY 2012	FY 2013	FY 2014	FY 2015
Jason-3	50,000	53,000	29,000	2,000	2,000

Jason-3: NOAA requests an increase of \$30,000,000 and 0 FTEs to continue the development of the Jason-3 satellite altimetry mission in partnership with the European Organization for the Exploitation of Meteorological Satellites (EUMETSAT), which started in FY 2010. Jason-3 will provide continuity of precise measurement of sea surface height, which is an important measurement to assess climate change, for applications in ocean climatology (global sea-level rise, decadal variability in the ocean, seasonal/inter-annual variability, and coastal variability and its impact on ecosystems); and ocean weather (operational oceanography, surface wave forecasting, and hurricane intensity forecasting). Jason-3 will continue the nearly 20-year climate data record created by the altimetry missions of TOPEX/POSEIDON and Jasons-1 and -2. NOAA will provide the launch vehicle and services and the microwave radiometer. EUMETSAT will provide the spacecraft and the altimeter. Both agencies will provide precision orbit and ground system components as required for respective operations of the satellite. The satellite will be commanded from either of the two NOAA Command and Data Acquisitions (CDA) stations or the third EUMETSAT station in Europe depending on which ground station is visible to the satellite. The data collected from each ground station is shared between the partners so that each will have a complete data set. This request allows NOAA and EUMETSAT to launch Jason-3 in 2013, providing an overlap with the Jason-2 mission of six months. This overlap period is necessary to conduct calibration and validation with Jason-2, complete on-orbit check-out operations, and maintain consistent observations of sea surface height between successive altimeter missions. In FY 2011, funds will continue to be used to procure the microwave radiometer and precision orbit determination components, and start launch vehicle building and testing.

(BA IN THOUSANDS)	FY 2011 REQUEST	FY 2012	FY 2013	FY 2014	FY 2015
Joint Polar Satellite System	1,060,800	1,160,000	960,000	740,000	610,000

Joint Polar Satellite System (formerly-National Polar-orbiting Operational Environmental Satellite System (NPOESS)): NOAA requests an increase of \$678,600,000 and 0 FTEs to continue development of the instruments and spacecraft under the restructured next generation polar orbiting satellite program. The program will continue to address NOAA's requirements to provide global environmental data used in numerical weather prediction models for near-term (1-3 day) and mid-term (3-5 day) forecasts, as well as provide space weather observation, search and rescue detection capabilities, and direct read-out and data collection products and services to customers. The new Joint Polar Satellite System continues a number of management and acquisition reforms that will be initiated in FY 2010 to deliver polar observations necessary to meet both the civil and military needs for weather and climate information. NASA, on behalf of NOAA, will provide the acquisition management for those segments that support the afternoon mission requirement, as well as those segments common to both the civil and military mission (e.g., ground systems). The Department of Defense will continue the acquisition of its early morning orbit assets. FY 2011 funds will continue to transition afternoon orbit instrument



asset acquisitions from DoD to NASA and will continue the procurement of an NPP-like spacecraft for the afternoon orbit. In addition, funds will support the launch readiness of NPP. A successful system will improve the nation’s ability to collect and distribute higher resolution data and products. This is achieved through the modernization of sensors and systems to ensure improved performance, compatibility, supportability, and maintainability. It will improve forecasts, climate monitoring, and warning lead times for severe storms. Data and imagery obtained from the Joint Polar Satellite System will help increase timeliness, accuracy, and cost effectiveness of public warnings and forecasts of climate and weather events, thus reducing the potential loss of human life and property.

(BA IN THOUSANDS)	FY 2011 REQUEST	FY 2012	FY 2013	FY 2014	FY 2015
Climate Sensors	49,400	55,400	51,100	50,600	35,500

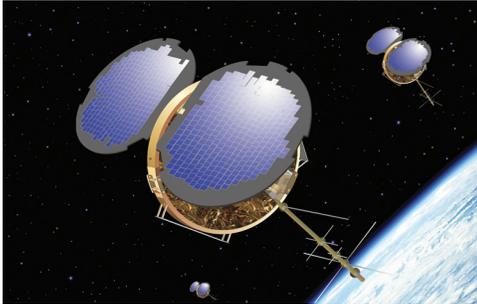
Restoration of Climate Sensors: NOAA requests an increase of \$49,400,000 and 0 FTEs to continue with the re-manifest of NPOESS climate sensors that were demanifested from the NPOESS program as a result of the Nunn-McCurdy Certification Process in FY 2006. The re-manifestation plan that is being implemented is based on a prioritized list of measurements that was developed by NOAA, NASA, and the Office of Science and Technology Policy in consultation with the National Academy of Sciences. The continuation of the data sets from these instruments is critical to climate change research and understanding the impacts of climate change. The prospect of climate change has profound implications for global society and the environment, underscoring the need for information derived from these instruments to aid decision makers in developing and evaluating options for mitigating the impacts of climate change as well as alternatives for adapting to a changing climate. These climate sensors will improve the nation’s ability to collect and distribute higher resolution data and products. This is achieved through the modernization of sensors and systems to ensure improved performance, compatibility, supportability, and maintainability. The modernization of sensors will improve forecasts and climate monitoring which will benefit agriculture, transportation, and energy production. Funding provided in FY 2011 will continue to build the Cloud and Earth Radiant System (CERES) Flight Model 6 (FM-6) and Total Solar Irradiance Sensor (TSIS) #1 for the first satellite of the Joint Polar Satellite System, as well as begin instrument development work for CERES FM-7 (for Earth Radiation Budget) and the Ozone Mapping and Profiler Suite (OMPS) (for ozone).

(BA IN THOUSANDS)	FY 2011 REQUEST	FY 2012	FY 2013	FY 2014	FY 2015
COSMIC-2	3,700	8,300	10,300	9,500	16,500

Constellation Observing System for Meteorology, Ionosphere, and Climate (COSMIC-2): NOAA requests an increase of \$3,700,000 and 0 FTEs to collaborate with the Taiwan National Space Organization (NSPO) for the launch of 12 satellites to provide replenishment and operational upgrade for the current COSMIC constellation. COSMIC is a 6 satellite constellation that was launched in 2006 in collaboration between Taiwan, National Science Foundation, NASA, U.S. Air Force and the University Corporation for Atmospheric Research (UCAR). This constellation was a proof-of-concept effort for a new and inexpensive atmospheric sounding technique using the U.S. Air Force GPS system as a sounding source, called GPS Radio Occultation (GPSRO). The new tech-



nique proved so accurate and beneficial that NOAA began using the data operationally for weather forecasting within a year of the COSMIC launch. COSMIC provides extremely accurate, bias free, daily worldwide measurements of atmospheric temperature and moisture profiles over the oceans and land that greatly improve NOAA's operational weather forecasting accuracy. COSMIC also helps to eliminate bias for artificial offsets in other observing systems, which advances the overall impact on operational model systems and makes it a backbone for the total observing system. COSMIC provides over 2500 atmospheric soundings every 24 hours around the globe, an improvement of about twice the number of daily weather balloon observations which are concentrated mostly over land. The success of the mission has inaugurated an age of operational GPS sounding for weather forecasting, climate analysis and research, ionospheric monitoring, and a suite of related Earth science pursuits. In this partnership, NOAA will procure radio occultation (RO) sensors, launch services, ground station support and sensor processing support. Taiwan will provide the spacecraft and integrate the sensors onto them. The funding in FY 2011 will start the development efforts for the sensors for COSMIC 2, as well as systems engineering, which is necessary to meet the FY 2014 launch date.



Six microsatellites are entering low-Earth orbit to form COSMIC, the Constellation Observing System for Meteorology, Ionosphere, and Climate
Illustration courtesy Orbital Sciences Corporation

(BA IN THOUSANDS)	FY 2011 REQUEST	FY 2012	FY 2013	FY 2014	FY 2015
DSCOVR	9,500	38,300	25,400	3,800	2,400

Deep Space Climate Observatory (DSCOVR): NOAA requests an increase of \$9,500,000 and 0 FTEs to acquire solar wind and Coronal Mass Ejection (CME) data. This acquisition will fund the refurbishment of an existing NASA satellite DSCOVR, as well as purchase and add a CME imager to the mission to provide solar wind data for geomagnetic storm forecasting. Under a reimbursable agreement between NESDIS and NASA, NASA/Goddard Space Flight Center (GSFC) will perform the refurbishment of the DSCOVR satellite currently housed at GSFC. It is anticipated that NOAA will lose two of its most critical observational data sources for geomagnetic storm warnings when the NASA ACE and the NASA/ESA SOHO satellites (which have already exceeded their operational life) fail. Low reliability of the satellites and sensors and the high risk of unavailability of the data pose one of the most serious gaps for NOAA's space weather services. This comes at a time when a large increase in geomagnetic storm frequency and severity is expected during the next solar maximum beginning in 2013 lasting for several years. According to a recent report by the National Academies, geomagnetic storm-disabled electric power grids and collateral impacts could result in projected economic and societal costs of ~\$1-\$2 trillion, and full recovery could take 4 –10 years. Space weather has demonstrated the potential to disrupt virtually every major public infrastructure system, including commercial airlines and other transportation systems, telecommunications, electric power grids, and global positioning systems (GPS). With this increase, NOAA will continue to provide timely and accurate alerts and warnings of geomagnetic storms to support these key industries and minimize disruptions to service.

PROGRAM SUPPORT

\$26,800,000

Construction: NOAA requests an increase of \$14,000,000 and 0 FTEs in the Program Support Construction sub-activity. This increase is comprised of one new initiative:



(BA IN THOUSANDS)	FY 2011 REQUEST	FY 2012	FY 2013	FY 2014	FY 2015
Pacific Regional Center	14,000	1,000	1,000	0	0

Pacific Regional Center: NOAA requests an increase of \$14,000,000 and 0 FTEs to support acquisition and installation of the IT infrastructure for the main facility at the new Pacific Regional Center (PRC) on Ford Island, in Honolulu, HI. NOAA received funding in the American Recovery and Reinvestment Act of 2009 (P.L. 111-5) and the Omnibus Budget Act of 2009 (P.L. 111-8) to complete the building construction phase of the PRC project and achieve full consolidation of its operations on the island of Oahu, Hawaii, with construction of the Main Facility. The FY2011 request will enable NOAA to complete acquisition and installation of the information technology infrastructure for the Main Facility and NOAA project management costs associated with the project. The Pacific Regional Center is a multi-phase, multi-year construction project to consolidate NOAA programs and operations on the island of Oahu into a single facility on federally-owned property at Ford Island. By bringing the programs together into one facility, NOAA expects to realize benefits in improved operations and mission performance, longer-term operational savings, and opportunities for greater program collaboration and synergy-both within NOAA and with external partners.

OMAO Fleet Replacement: NOAA requests an increase of \$10,800,000 and 0 FTEs in the Program Support OMAO Fleet Replacement sub-activity. This increase is comprised of four new initiatives:

(BA IN THOUSANDS)	FY 2011 REQUEST	FY 2012	FY 2013	FY 2014	FY 2015
Fleet Capital Improvements & Technology Refresh	8,400	1,000	1,000	1,000	1,000

Fleet Capital Improvements and Technology Infusion: NOAA requests an increase of \$7,400,000 and 0 FTE to accelerate a planned FY 2013 Major Repair Period (MRP) for *Miller Freeman*. *Miller Freeman* was delivered to NOAA in 1967 and is one of the oldest ships in the fleet. Recent dry dock work and associated material assessments in FY 2009 confirm the ship's continuing and rapidly deteriorating condition from its advanced age. In FY 2009 NOAA Fisheries experienced higher loss of *Miller Freeman* operating times due to mechanical breakdown and shipyard delays, negatively affecting their ability to conduct critical science and stock assessments. To extend ship service life and ensure safe operations, this increase will address the most critical structural, mechanical, and electrical maintenance and repair needs in order to safely operate *Miller Freeman* through 2017. If the MRP is not completed, OMAO risks continued unplanned mechanical or infrastructure failures due to poor structural integrity resulting from hull and structural metal loss that will result in lost days at sea. Also, the ship's condition may jeopardize compliance with the ship certification requirements of the American Bureau of Shipping (ABS) and result in increased lost days at sea.



Miller Freeman underway



(BA IN THOUSANDS)	FY 2011 REQUEST	FY 2012	FY 2013	FY 2014	FY 2015
New Vessel Construction (FSV5)	3,000	0	0	0	0

New Vessel Construction FSV5: NOAA requests an increase of \$3,000,000 and 0 FTEs to design a new shallow-draft Fisheries Survey Vessel (FSV 5). NOAA plans to modernize its fleet, consistent with NOAA's Ship Recapitalization Plan (SRP), and addresses the oldest vessels and those at-sea requirements most at risk first. A shallow-draft FSV will be needed to replace *Oregon II* which is among the oldest ships in the NOAA Fleet at 44 years of service life by FY 2011. *Oregon II* is an *Oscar Dyson* class vessel (FSV1-FSV4) which has a draft of 19 feet and 29 feet with the scientific center-board extended. The draft limits the ability to conduct living-resource and coral-habitat surveys in waters shallower than 42 feet, making it unsuitable to operate in the Gulf of Mexico. The shallow-draft FSV will operate in near-shore coastal waters as shallow as 30 feet and is intended to be the primary ship supporting Gulf of Mexico living-marine resource, habitat, and integrated-ecosystem surveys. The funding for additional design work would leverage existing designs while developing a shallow draft vessel to meet these requirements. Data from these cruises are critical to assessments of the snapper-grouper complex, billfish, tunas, swordfish and sharks, and status of protected species, habitat, and ecosystem health. From FY 2000 to FY 2006, *Oregon II* lost an average of 19 days of operation each year due to engineering related problems. If a suitable replacement ship is not acquired, *Oregon II* will reach the end of its useful service life and will be removed from service in FY 2016.

(BA IN THOUSANDS)	FY 2011 REQUEST	FY 2012	FY 2013	FY 2014	FY 2015
Fisheries Survey Vessel (FSV 6)	1,400	1,400	2,900	0	0

New Vessel Construction FSV6: NOAA requests an increase of \$1,400,000 and 0 FTE to provide project management and change margin funds for Fisheries Survey Vessel (FSV6). FSV6 will replace *David Starr Jordan* and perform acoustic surveys for fish and zooplankton and launch and recover a work boat in open seas. NOAA requires data collected at sea to achieve outcomes mandated by Congress and the economic impact is significant. The Magnuson-Stevens Fisheries Conservation and Management Reauthorization Act require sufficient data to establish annual catch limits for fisheries. If sufficient data is not available, catch limits must be reduced from current levels with an estimated negative impact on the commercial fishing industry of up to \$7 billion annually. With this increase OMAO will procure continuity in the civilian expertise required to monitor and evaluate the contractor's progress during construction. The requested funding is necessary to complete construction and bring FSV6 into operations.



(BA IN THOUSANDS)	FY 2011 REQUEST	FY 2012	FY 2013	FY 2014	FY 2015
Temporary Berthing	0	0	0	0	0

Temporary Berthing: NOAA requests a decrease of \$1,000,000 and 0 FTE for **temporary berthing**. Actual costs to berth Bigelow are substantially lower and will be accommodated within the Marine Operations and Maintenance-Marine Services activity in the ORF account.