

## Chapter 5

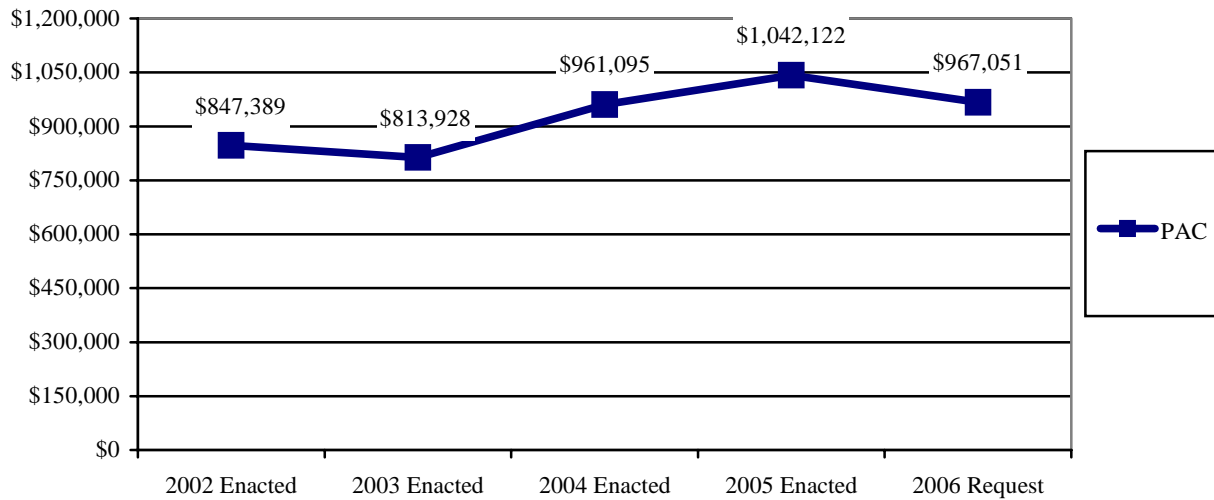
# NOAA Procurement, Acquisition and Construction



## Procurement, Acquisition and Construction

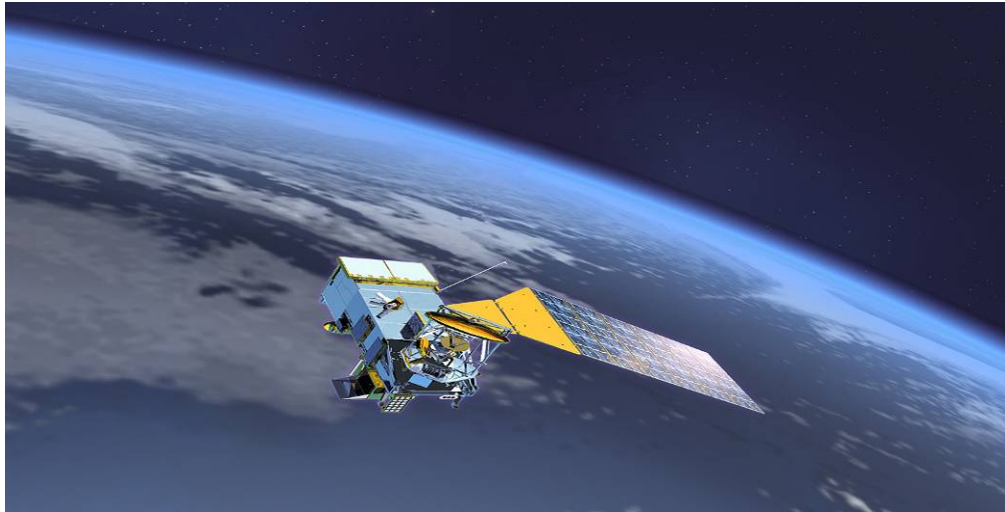
(Dollars in Thousands)	FY 2005 Enacted	FY 2006 Base	Program Changes	Total Request
Procurement, Acquisition and Construction (PAC)				
Systems Acquisition				
Ocean and Atmospheric Research	\$9,663	\$9,500	\$984	\$10,484
National Weather Service	63,973	64,587	7,716	72,303
National Environmental Satellite, Data and Information Service	718,077	728,525	79,129	807,654
Program Support	986	0	0	0
<b>Total Systems Acquisition</b>	<b>792,699</b>	<b>802,612</b>	<b>87,829</b>	<b>890,441</b>
Construction				
Fleet	186,491	42,805	(1,925)	40,880
Aircraft	57,957	35,313	417	35,730
	4,975	1,420	(1,420)	0
<b>GRAND TOTAL PAC</b>	<b>\$1,042,122</b>	<b>\$882,150</b>	<b>\$84,901</b>	<b>\$967,051</b>
Total FTE	174	174	0	174

**Budget Trends, FY 2002 - 2006 (dollars in thousands)**





## Procurement, Acquisition and Construction



NOAA's Procurement, Acquisition and Construction (PAC) account is mission critical to all agency programs and contributes significantly to achieving all NOAA Strategic Goals. The system acquisition projects included in this request will have a major impact on our ability to monitor and to forecast weather and climate change on a global basis. The construction projects will aid environmental recovery efforts and address NOAA infrastructure needs in housing the NOAA Center for Weather and Climate Prediction and restoring various buildings at the Galveston Laboratory. Our fleet replacement project adjustments will redistribute funding to maximize the return on investment while sustaining NOAA fisheries research programs. Eliminating PAC funding for the aircraft replacement project for safety and regulatory upgrades to various aircraft will not affect mission readiness.

### **ADJUSTMENTS TO BASE:**

The NOAA Procurement, Acquisition and Construction (PAC) requests adjustments to FY 2006 Base of \$12,158,000.

**PAC PROGRAM CHANGE HIGHLIGHTS FOR FY 2006:**

For FY 2006, NOAA requests an increase of \$84,901,000 with a total of \$967,051,000 for current programs. These changes include 20 major system programs, seven construction projects, three fleet projects, and withdrawal of funding for one aircraft project. Detailed numeric breakouts are located in Chapter 3, *Special Exhibits*. Descriptions of each request by line item are located in the NOAA FY 2006 Technical Budget. Note that outyear figures are estimates, and future requests will be determined through the annual budget process.

**SYSTEMS ACQUISITION \$890,441,000**

**Office of Oceanic and Atmospheric Research \$10,484,000**

**Research Supercomputing**

Annual Funding Requirements  
(BA in Thousands)

	<u>FY2006</u>	<u>FY 2007</u> <u>Estimate</u>	<u>FY2008</u> <u>Estimate</u>	<u>FY2009</u> <u>Estimate</u>	<u>FY2010</u> <u>Estimate</u>
Research					
Supercomputing/CCRI	10,484	10,484	10,484	10,484	10,484

**NOAA requests an increase of \$984,000 and 0 FTE for a total of \$10,484,000 for Research Supercomputing (CCRI).** This program supports a very large, scalable computer system that provides critical computing, storage, and analysis capabilities, as well as model development and infrastructure support, to NOAA’s Geophysical Fluid Dynamics Laboratory (GFDL) to advance the Nation’s climate research. This computing program allows NOAA to leverage the world-class research staff and modeling capabilities now in place at GFDL to address important research problems in climate and weather research. The laboratory’s on-going model development effort is positioning GFDL to take full advantage of the scalable architectures and to advance the Nation’s climate research program through NOAA computational research and collaboration with the inter-agency and academic climate research community.

**National Weather Service**

**\$72,303,000**

**Tsunami Warning Program**

Annual Funding Requirements  
(BA in Thousands)

	<u>FY2006</u>	<u>FY 2007</u> <u>Estimate</u>	<u>FY2008</u> <u>Estimate</u>	<u>FY2009</u> <u>Estimate</u>	<u>FY2010</u> <u>Estimate</u>
Tsunami Warning Program	3,530	1,850	350	350	350

**NOAA requests an increase of \$3,530,000 and 0 FTE for a total of \$3,530,000 to strengthen the U.S. Tsunami Warning Program.** This budget request completes the Administration’s 2-year plan to strengthen the U.S. tsunami warning program in light of the December 26, 2004 Indian Ocean Tsunami. Funds will be used to complete the planned acquisition of deep ocean assessment and reporting of tsunamis (DART) buoys for the Pacific Ocean Basin and the Caribbean/Atlantic Ocean region. Expanded monitoring capabilities throughout the entire Pacific and Caribbean basins and significant portions of the mid Atlantic will provide tsunami warning capability for regions bordering half of the world’s oceans.

**COOP Modernization**

Annual Funding Requirements  
(BA in Thousands)

	<u>FY2006</u>	<u>FY 2007</u> <u>Estimate</u>	<u>FY2008</u> <u>Estimate</u>	<u>FY2009</u> <u>Estimate</u>	<u>FY2010</u> <u>Estimate</u>
COOP Modernization	4,277	4,277	4,277	4,277	4,277

**NOAA is requesting an increase of \$3,400,000 and 0 FTE with a total FY 2006 funding of \$4,277,000 for the Cooperative Observer Network Modernization (COOP), to continue deployment of modernized COOP sites nationwide as NWS implements the “National Cooperative Mesonet”.** This includes completing the full modernization of 289 stations in the Northeast, including completion of the 220 modernized sites in New England. The proposed COOP modernization will provide the United States with a network of accurate, near real-time surface weather data (temperature and precipitation) obtained with state-of-the-art measurement, monitoring, and communication equipment. Quality controlled, higher density, real-time surface data will improve temperature-forecasting skill, river height forecast error, drought monitoring resolution, hydrology planning, and energy optimization for NWS customers. Improved sensors, including wind data, can provide timely data in response to homeland security events or disasters. A Tennessee Valley Authority study found that a one-degree improvement in temperature forecasting could save \$1 billion annually in energy costs. This initiative supports the Western Governor’s recommendation to utilize the

modernized National Cooperative Mesonet as the core infrastructure for the National Integrated Drought Information System.

**NOAA Weather Radio**

Annual Funding Requirements  
(BA in Thousands)

	<u>FY2006</u>	<u>FY 2007</u> <u>Estimate</u>	<u>FY2008</u> <u>Estimate</u>	<u>FY2009</u> <u>Estimate</u>	<u>FY2010</u> <u>Estimate</u>
Complete & Sustain NOAA Weather Radio	5,650	5,650	5,650	5,650	5,650

**NOAA requests an increase of \$5,650,000 and 0 FTE to complete and to sustain NOAA Weather Radio (NWR).** Funds will be used to complete NWR broadcast coverage of all areas in the United States identified as at high risk of severe weather events, by establishing 17 new broadcasting stations. Additionally, funds will be used to improve network reliability by refurbishing 400 stations established in the 1970s. NOAA is working with the Department of Homeland Security, to make NWR a national all hazards warning network of 900 broadcasting stations and reaching 97% of the nation’s population.

**Coastal-Global Ocean Observing System**

Annual Funding Requirements  
(BA in Thousands)

	<u>FY2006</u>	<u>FY 2007</u> <u>Estimate</u>	<u>FY2008</u> <u>Estimate</u>	<u>FY2009</u> <u>Estimate</u>	<u>FY2010</u> <u>Estimate</u>
C-GOOS	1,497	1,497	1,497	1,497	1,497

**NOAA requests an increase of \$1,497,000 and 0 FTE to establish a Coastal-Global Ocean Observing System (C-GOOS) in the NWS.** The C-GOOS Program fulfills the U.S. coastal component of the international GOOS effort and addresses the mandate of the President’s Commission on Ocean Policy and the National Oceanographic Partnership Program to bring together government, industry and academia. In FY 2005 Congress provided NOS \$8,000,000 to add oceanographic sensors to the existing NWS marine observational backbone. In FY 2006, NOAA’s C-GOOS will deploy new buoys, add the capability to enhance future buoys with biological and chemical oceanographic sensors to allow biological and chemical water sampling; provide information on locations of marine endangered or protected species; and monitor coral reef health.

### **Weather and Climate Supercomputing**

Annual Funding Requirements  
(BA in Thousands)

	<u>FY2006</u>	<u>FY 2007</u> <u>Estimate</u>	<u>FY2008</u> <u>Estimate</u>	<u>FY2009</u> <u>Estimate</u>	<u>FY2010</u> <u>Estimate</u>
Weather & Climate Supercomputing	19,285	19,285	19,285	19,285	19,285

**NOAA requests no change to the \$19,285,000 base for Weather and Climate Supercomputing.** The cyclical upgrade of the NWS weather and climate supercomputing capability is intended to procure the computing and communications equipment needed to receive and to process the increasing wealth of environmental data acquired by modernized observing systems, and to support more sophisticated numerical weather prediction models, and stay current with the available supercomputing technology. Execution of this program promotes public safety and the protection of property by providing the NCEP with the computer systems that are capable of producing more accurate, NWS climate and numerical weather prediction (NWP) guidance products for hurricanes, severe thunderstorms, floods, and winter storms. Additionally, the supercomputing system more accurately forecasts large-scale weather patterns in the medium (3 to 10 days) and extended range (30 days), plus forecasts of major climate events such as El Niño and La Niña. In addition, the computer upgrades will improve the delivery of products to the field and provide system users with enhanced productivity. These products and services will lead to significant economic benefits for users, like the agriculture, construction, and transportation industries.

### **Weather and Climate Supercomputing Backup**

Annual Funding Requirements  
(BA in Thousands)

	<u>FY2006</u>	<u>FY 2007</u> <u>Estimate</u>	<u>FY2008</u> <u>Estimate</u>	<u>FY2009</u> <u>Estimate</u>	<u>FY2010</u> <u>Estimate</u>
Weather & Climate Supercomputing Backup	7,148	7,148	7,148	7,148	7,148

**NOAA requests no change to the \$7,148,000 base for the Weather and Climate Supercomputing Backup.** Because of the critical need of the weather and climate output, it is essential that a backup capability be operational, as part of contingency planning.

**Automated Surface Observing System**

Annual Funding Requirements  
(BA in Thousands)

	<u>FY2006</u>	<u>FY 2007</u> <u>Estimate</u>	<u>FY2008</u> <u>Estimate</u>	<u>FY2009</u> <u>Estimate</u>	<u>FY2010</u> <u>Estimate</u>
ASOS	4,675	4,675	4,675	0	0

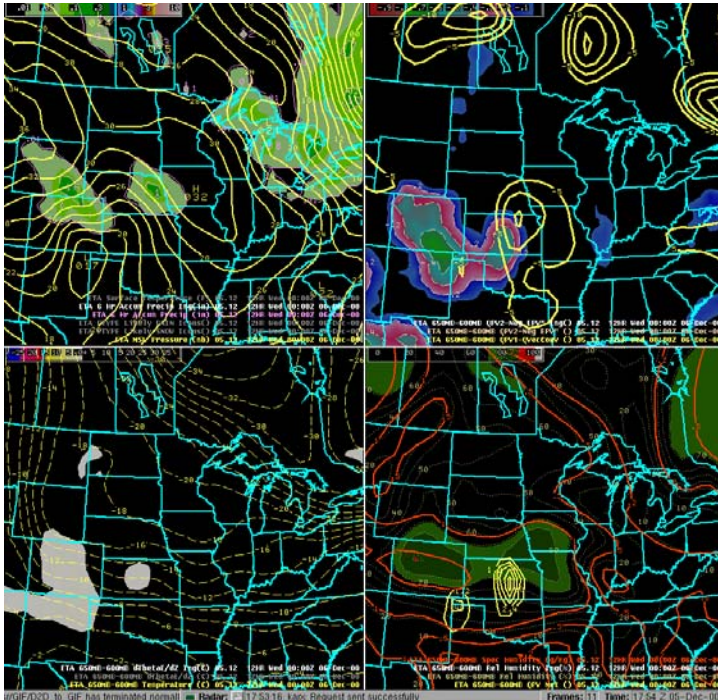
**NOAA request no change to the \$4,675,000 base for the Automated Surface Observing System (ASOS).** This acquisition is a tri-agency program involving NOAA, DoD, and FAA. ASOS provides reliable, 24-hour, continuous surface weather observations. Under the product improvement portion of this acquisition program, NOAA is developing new ASOS sensor capabilities in order to meet changing user requirements and decrease maintenance demands. FY 2006 funding will complete enhanced precipitation identifier sensor deployment of 282 units and acquire and deploy 68-25,000 feet ceilometers.

**Advanced Weather Interactive Processing System**

Annual Funding Requirements  
(BA in Thousands)

	<u>FY2006</u>	<u>FY 2007</u> <u>Estimate</u>	<u>FY2008</u> <u>Estimate</u>	<u>FY2009</u> <u>Estimate</u>	<u>FY2010</u> <u>Estimate</u>
AWIPS	12,894	12,984	12,984	12,984	12,984

**NOAA request no change to the \$12,894,000 base for the Advanced Weather Interactive Processing System (AWIPS)/NOAAPort.** AWIPS is the cornerstone of the modernized NWS. This system integrates and displays all hydrometeorological data at NWS field offices. AWIPS acquires and processes data from modernized sensors and local sources, provides computational and display functions at operational sites, provides an interactive communications system to interconnect NWS operational sites, and disseminates warnings and forecasts in a rapid, highly reliable manner. This system integrates satellite and radar data more fully and provides to the local field forecaster a capability



AWIPS map



that significantly improves forecasts and warnings. NOAAPort offers the communications capability to provide internal and external users with open access to much of NOAA's real-time environmental data.

Current AWIPS processing, communications, and storage capacity is inadequate to support current and future system processing demands from the three sources listed above. These pre-planned and ongoing NOAA investments in modeling, satellite instruments, and radar improvements (NEXRAD Product Improvement) represent NOAA's commitment to bring forecasters the data and information required to improve forecast accuracy and warning lead times.

System-wide information technology investments are necessary to equip NWS forecast offices with the necessary computer performance and capacity to achieve planned and evolving operational and strategic requirements. Planned improvements in the NWS Tornado Warning Lead Time, Flash Flood Warning Lead Time and Winter Storm Warning Lead Time goals can only be realized through the following actions: improve AWIPS system throughput; add new and improved science; and exploit more accurate and higher resolution data and weather forecast model information. To accomplish this, we must improve AWIPS system's performance and capacity. Current choke points in system performance and capacity have been identified in the following areas: workstation and server performance, network throughput, and software architecture.

Improvements in system throughput can be realized by increasing processing and network capacity. Exploitation of new science requires radar, satellite and model data in addition to processing capacity and the ability to quickly and cost-effectively integrate improved decision assistance tools into the AWIPS software. High-resolution data and model information requires additional communications bandwidth, processing and mass storage capacity. For example, the satellite broadcast network (SBN) does not have the capacity to distribute the entire suite of current Eta-12 data, let alone the higher resolution models and products anticipated in FY 2006 such as WRF-8. Insufficient resolution is a serious limitation in providing timely, accurate forecasts and warnings to the public.



**A NOAA Next Generation Radar**

**Next Generation Weather Radar**

Annual Funding Requirements  
(BA in Thousands)

	<u>FY2006</u>	<u>FY 2007 Estimate</u>	<u>FY2008 Estimate</u>	<u>FY2009 Estimate</u>	<u>FY2010 Estimate</u>
NEXRAD	8,460	8,460	8,460	8,460	0

**NOAA requests a decrease \$2,360,000 and 0 FTE for a FY 2006 total of \$8,460,000 for Next Generation Weather Radar (NEXRAD).** The total decrease reflects the completion of contract obligations for open systems radar detection (ORDA) and a ramp-up in dual-polarization development efforts. FY 2006 plan provides for the deployment of 101 ORDA units and award of the dual polarization development and production contract.

### **NWS Telecommunication Gateway**

Annual Funding Requirements  
(BA in Thousands)

	<u>FY2006</u>	<u>FY 2007 Estimate</u>	<u>FY2008 Estimate</u>	<u>FY2009 Estimate</u>	<u>FY2010 Estimate</u>
NWSTG	500	500	500	500	0

**NOAA requests a decrease of \$2,012,000 and 0 FTE for the NWS Telecommunications Gateway (NWSTG) Legacy Replacement with the completion of one-time costs planned for the deployment of the NWSTG Legacy Replacement.**

The remaining \$0.5M is needed to provide a cyclical information technology refresh capability and to avoid future costly NWSTG system upgrades. NWSTG is the communications hub for collecting and distributing weather information to NWS field units and external users. Replacing the NWSTG system with up-to-date technology will reduce current delays in collecting and disseminating data. In FY 2006, NWS will conclude the three-year NWSTG replacement effort at NWS facilities.

### **Radiosonde Network Replacement**

Annual Funding Requirements  
(BA in Thousands)

	<u>FY2006</u>	<u>FY 2007 Estimate</u>	<u>FY2008 Estimate</u>	<u>FY2009 Estimate</u>	<u>FY2010 Estimate</u>
Radiosonde Replacement	4,387	4,387	4,387	4,387	0

**NOAA requests a decrease of \$1,989,000 and 0 FTE for a FY 2006 total of \$4,387,000 for Radiosonde Replacement Program to reflect the reduced scope of total radiosonde acquisition.** The FY 2006 Budget will modernize 84 out of 102 sites, and will allow a second GPS balloon-borne instrument (radiosonde supplier contract to be awarded). The NWS radiosonde network provides upper-air-weather observations; the primary source of data required by NWS numerical weather prediction models, which form the basis of all NWS forecasts for day 2 and beyond. Observations of temperature, pressure, humidity, and wind speed/direction are taken twice a day at 102 locations nationwide and in the Caribbean using a radiosonde which transmits the data via radio signal to a ground receiving station usually located at a Weather Forecast Office (WFO), where it is processed.

**National Environmental Satellite, Data  
and Information Service**

**\$807,654,000**

**Geostationary Operational Environmental Satellites**

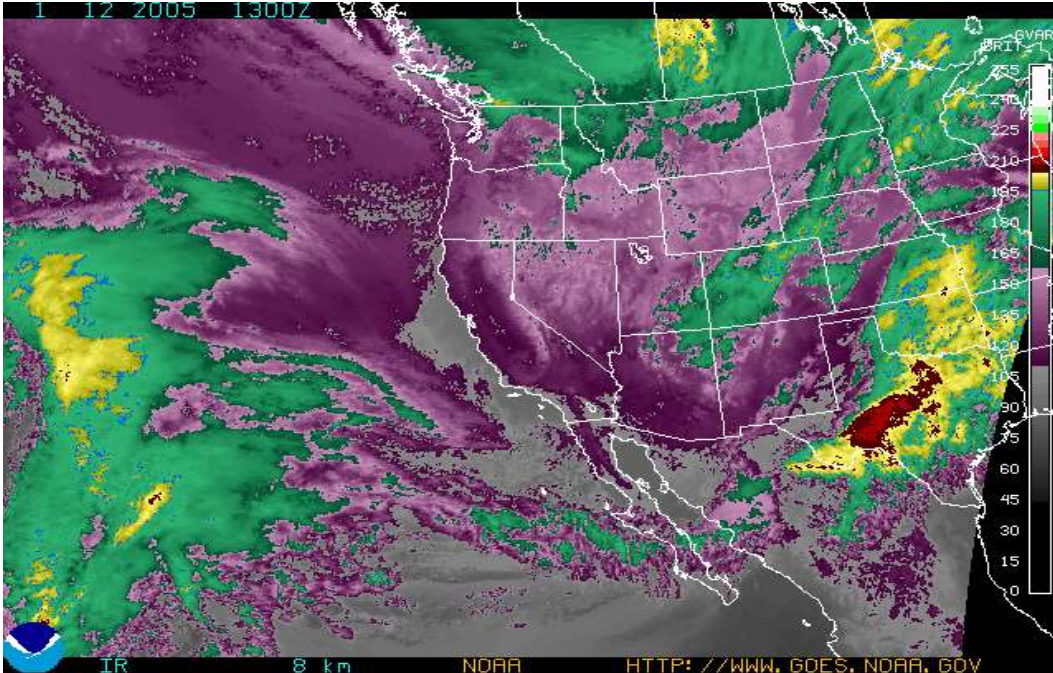
Annual Funding Requirements  
(BA in Thousand)

	<u>FY2006</u>	<u>FY 2007 Estimate</u>	<u>FY2008 Estimate</u>	<u>FY2009 Estimate</u>	<u>FY2010 Estimate</u>
GOES	358,142	454,039	532,079	539,563	570,501

**NOAA is requesting a net increase of \$52,605,000 and 0 FTE for the Geostationary Operational Environmental Satellites (GOES), a total request of \$358,142,000, to continue the procurement of spacecraft, instruments, launch services, and ground systems equipment necessary to maintain an uninterrupted flow of environmental data to the users.**

**NOAA is requesting a decrease in GOES-N series funds of \$30,373,000 and 0 FTE in FY 2006 for a total of \$117,042,000.** GOES-N replaces the GOES-I series, which is funded through FY 2006. The spacecraft contract for the GOES-N series is a firm fixed price contract. The GOES-N program also includes separate contracts for the instruments, one for the imager and sounder and one for the Solar X-ray Imager.

**NOAA is requestings an increase in the GOES-R Series funds of \$82,978,000 in FY 2006 for a total request of \$240,500,000.** FY 2006 funding will begin engineering and activities for several key instruments and continue the imager production begun in FY 2005, all in support of a initial GOES-R launch date of October 2012. End-to-end system integration refers to the acquisition of an on-orbit satellite including the spacecraft, instruments, GOES unique communications services, and launch services; the command, control, and communications and product generation and distribution functions currently performed by Satellite Services; the archive and access of all data and products; and the user interface function providing data to critical users and forecasters. A single prime contract will be used to acquire the GOES-R end-to-end system. This end-to-end integration requires the acquisition, deployment, maintenance, and operations of the space and launch segments from FY 2012 through FY 2029.



GOES Infrared image of the western U.S., showing a storm over Texas

GOES provides an uninterrupted, continuous flow of data and information that meets customers' spatial, temporal and accuracy requirements, providing significant customer benefit within an established life-cycle cost target. NOAA defines requirements, manages, funds, implements system integration, procures ground segments and operates the GOES satellites. The National Aeronautics and Space Administration (NASA), as the agency with multi-disciplinary engineering expertise, works with NOAA to develop detailed system specifications, procure and launch the spacecraft, and manage system integration.

### Polar-Operational Environmental Satellite Systems

Annual Funding Requirements  
(BA in Thousands)

	<u>FY2006</u>	<u>FY 2007</u> <u>Estimate</u>	<u>FY2008</u> <u>Estimate</u>	<u>FY2009</u> <u>Estimate</u>	<u>FY2010</u> <u>Estimate</u>
POES	102,673	90,812	62,308	41,919	41,706

**NOAA requests a decrease of \$3,073,000 and 0 FTE for the Polar-Operational Environmental Satellite Systems (POES) with a total request of \$102,673,000 for the continuation of the POES program.** POES is nearing the end of its production with two remaining satellites to be launched. In September 2003, the second of the two remaining POES satellites, NOAA-N Prime, was involved in a serious accident at the contractor's facility. The damage has been assessed and estimated costs developed. Based upon the negotiated contract modification, NOAA-N Prime will be rebuilt to meet

a December 2007 launch date. POES provides daily global observations of weather patterns and environmental measurements of the Earth's atmosphere, its surface and cloud cover, and the proton and electron flux at satellite altitude. POES provides invaluable long-term data sets for climate monitoring and assessment.

**National Polar-orbiting Operational Environmental Satellite Systems**

Annual Funding Requirements  
(BA in Thousands)

	<u>FY2006</u>	<u>FY 2007</u> <u>Estimate</u>	<u>FY2008</u> <u>Estimate</u>	<u>FY2009</u> <u>Estimate</u>	<u>FY2010</u> <u>Estimate</u>
NPOESS	320,998	341,275	343,862	297,224	373,871

**NOAA is requesting an increase of \$16,097,000 and 0 FTE for a total request of \$320,998,000 for the National Polar-orbiting Operational Environmental Satellite Systems (NPOESS) continuation of the tri-agency NPOESS program that will replace POES.** This request represents NOAA's share of the converged NOAA/DoD/NASA program. This request provides funding necessary to have the instruments and ground system in place to support a November 2006 launch of NPP and to have the first NPOESS satellite available for launch in FY 2010. FY 2006 funding will be used to complete the instruments planned to be flown on NPP and to complete the ground systems and algorithm necessary to acquire, process and distribute NPP data. These data are necessary for continuity of NASA's long-term climate data records and for early risk reduction and calibration and validation essential to the first NPOES satellite.

**LANDSAT**

Annual Funding Requirements  
(BA in Thousands)

	<u>FY2006</u>	<u>FY 2007</u> <u>Estimate</u>	<u>FY2008</u> <u>Estimate</u>	<u>FY2009</u> <u>Estimate</u>	<u>FY2010</u> <u>Estimate</u>
LANDSAT	11,000	13,000	15,500	18,000	11,000

**NOAA requests an increase of \$11,000,000 and 0 FTE to integrate LANDSAT sensors for incorporation on NPOESS satellites C1 and C4.** NOAA, NASA, USGS will implement a continuity plan for LANDSAT. NOAA will be responsible for funding sensor integration, as well as future continuity of the data sets. USGS will develop the ground system necessary to process, archive, and distribute LANDSAT data.



NOAA Satellite being launched into space

**NPOESS Data Exploitation**

Annual Funding Requirements  
(BA in Thousands)

	<u>FY2006</u>	<u>FY 2007</u> <u>Estimate</u>	<u>FY2008</u> <u>Estimate</u>	<u>FY2009</u> <u>Estimate</u>	<u>FY2010</u> <u>Estimate</u>
NDE	4,500	4,500	4,500	4,500	4,500

**NOAA requests an increase of \$4,500,000 for the NPOESS Data Exploitation (NDE) project. NESDIS has the mandate to operate the Nation’s environmental satellites, collect environmental observations, process, distribute and archive data, and make available key data sets for both operations and research.** The NDE component of the NPOESS Preparatory Project (NPP) consists of processing and distribution of NPOESS products and services once the data have been delivered to NOAA. NPOESS and NPP are part of a new environmental satellite program that promises to improve our observations of the earth, atmosphere, oceans and space environment. While the

NPOESS contract awarded by the Integrated Program Office in August of 2002 covers the delivery of two satellites and the option to purchase four more satellites, it does not include product processing and distribution to NOAA's users and customers. In order to realize the benefits of NPOESS data, NOAA must implement capabilities to process NPOESS data records into useful products that meet the requirements of NWS and other civilian users. For example, NDE will be able to derive carbon-based products such as Methane, Carbon Dioxide and Carbon Monoxide from NPOESS observations. These gases tend to mask the atmospheric temperature and humidity observations sensed by NPOESS. By producing a better estimate of these gases, NDE will help the NWS to remove biases and improve weather forecasts. NDE will also assist the NOAA Climate Office by providing global estimates of these greenhouse gases. The funding will start the development of the product generation and dissemination (PG&D) system in Suitland, Maryland. The PG&D system will include new hardware and software to process the NPOESS products. The first phase of hardware procurement will be two IBM scalable processors, or equivalent computers. The software component includes the creation and testing of code required to improve various product sets, and the design of software to facilitate the assimilation of NPOESS atmospheric sounding products into the NWS Numerical Prediction Models. The requested funding will also allow NOAA to study the communications links necessary to disseminate products and services to the user community.

**Comprehensive Large Array Data Stewardship System (CLASS)**

Annual Funding Requirements  
(BA in Thousands)

	<u>FY2006</u>	<u>FY 2007</u> <u>Estimate</u>	<u>FY2008</u> <u>Estimate</u>	<u>FY2009</u> <u>Estimate</u>	<u>FY2010</u> <u>Estimate</u>
CLASS	6,541	6,541	6,541	6,541	6,541

**NOAA requests no change to \$6,541,000 for the Comprehensive Large Array Data Stewardship System.** CLASS will allow efficient management of high volumes of data that is critical to the climate, environmental and the scientific communities. NOAA's Researching Supercomputing goal is to provide a state-of-the-art scalable supercomputer and supporting infrastructure to advance modeling programs that are critical to NOAA's and the Nation's climate research.

**Earth Observing System Data Archive and Access System Enhancement**

Annual Funding Requirements  
(BA in Thousands)

	<u>FY2006</u>	<u>FY 2007</u> <u>Estimate</u>	<u>FY2008</u> <u>Estimate</u>	<u>FY2009</u> <u>Estimate</u>	<u>FY2010</u> <u>Estimate</u>
EOS	1,000	1,000	1,000	1,000	1,000



**NOAA is requesting a decrease of \$2,000,000 and 0 FTE for the Earth Observing System (EOS) Data Archive and Access System Enhancement.** This decrease leaves a balance of \$1,000,000, sufficient to preserve the most critical NASA EOS data, which will be integrated into CLASS for archive and for access. NOAA is responsible for the stewardship of almost two petabytes of environmental data, which is expected to exceed 44 petabytes by 2011.

**CONSTRUCTION**

**\$40,880,000**

**NOAA Center for Weather and Climate Prediction**

Annual Funding Requirements

(BA in Thousands)

	<u>FY2006</u>	<u>FY 2007</u> <u>Estimate</u>	<u>FY2008</u> <u>Estimate</u>	<u>FY2009</u> <u>Estimate</u>	<u>FY2010</u> <u>Estimate</u>
NCWCP	8,500	22,900	10,700	0	0

**NOAA requests an increase of \$6,200,000 and 0 FTE for a total of \$8,500,000 to finalize the design and implementation of the construction of the NOAA Center for Weather and Climate Prediction (NCWCP).** The FY 2006 funding covers the critical long lead procurements for data and communications infrastructure that will be installed in the building during construction and for furnishings, fixtures and equipment that must be procured prior to the completion of construction. Lastly, the funding will be used for project management tasks supporting technical oversight of the design and construction process and the detailed planning necessary to execute the relocation of critical 24x7 operational systems without service interruption. The funding is critical to ensure project continuity for work initiated in FY 2004. Final occupancy of the NCWCP is scheduled for February 2008.

The NWS has had positive results from co-locating its facilities with academic institutions or laboratories in accelerating research into operations and in improving performance. This includes accelerated use of global satellite data through state-of-the-art data assimilation systems; improved model forecasts; decreased time to infuse new science into operations from 7-10 years to 1-3 years

NCWCP is a new facility to replace the current World Weather Building with a new state-of-the-art facility to meet the operational requirements of the National Centers for Environmental Prediction (NCEP), the National Environmental Satellite, Data, and Information Service (NESDIS) Office of Research and Applications and Satellite Services Division, and the Office of Oceanic and Atmospheric Research (OAR) Air Resources Laboratory. FY 2004 funding for the NCWCP enabled NOAA to support the General Services Administration to award a build-to-suit lease for the NOAA NCWCP during FY 2004 and includes necessary "above standard" construction costs. The FY 2005 lease award for NCWCP will ensure occupancy of the new facility by 2008 when the current World Weather Building lease expires.

**Weather Forecast Offices**  
Annual Funding Requirements  
(BA in Thousands)

	<u>FY2006</u>	<u>FY 2007</u> <u>Estimate</u>	<u>FY2008</u> <u>Estimate</u>	<u>FY2009</u> <u>Estimate</u>	<u>FY2010</u> <u>Estimate</u>
WFO	13,630	13,630	13,630	13,630	13,630

**NOAA requests an increase of \$630,000 for a total of \$13,630,000 and 0 FTE for the Weather Forecast Office (WFO) Construction,** to meet NWS WFO facility requirements. WFO construction, part of the NWS modernization and associated restructuring, was started in the 1980s. Required construction elements currently ongoing include the upgrade and modernization of Alaska and Pacific Region Weather Service Offices, Tsunami Warning Centers, and associated employee housing units, upgrades of Heating, Ventilation, and Air Conditioning (HVAC) systems, uninterruptible power supply replacements, and mitigation of all building and fire code violations. This construction effort is essential to bring the NWS into full compliance with federal law and municipal codes. In FY 2006 WFO Construction will focus on continuing to modernize the Alaska and Pacific Region facilities, as well as HVAC upgrades and correcting safety code violations at facilities.

**National Estuarine Research Reserve System**  
Annual Funding Requirements  
(BA in Thousands)

	<u>FY2006</u>	<u>FY 2007</u> <u>Estimate</u>	<u>FY2008</u> <u>Estimate</u>	<u>FY2009</u> <u>Estimate</u>	<u>FY2010</u> <u>Estimate</u>
NERRS	7,250	7,250	7,250	7,250	7,250

**NOAA requests an increase of \$250,000, for a total of \$7,250,000, for discretionary National Estuarine Research Reserve System (NERRS) construction and land acquisition projects.** This increase will maintain the level of funding needed to support this Federal-state partnership designed to protect and understand valuable estuarine resources through research and education. The facilities and land of the reserves are owned and managed by the states in this Federal-state partnership. Federal funds are matched 50:50 for land acquisition and 70:30 for construction projects (Federal/state funds). The land acquisition projects will provide greater protection to reserve resources. The construction projects include interpretive centers, reserve research facilities, educational exhibits, and boardwalks or trails. Having adequate facilities makes a considerable difference in the quality of research, education, outreach and resource protection programs that can be conducted at the reserves.

The NERRS is a Federal-state partnership designed to protect and understand valuable estuarine resources through research and education. 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 26 reserves will be carried on in conjunction with the development of system-wide construction plans. All construction activities are carried out based on the current needs for implementing core NERRS program and external opportunities for partnerships. When it is available, reserves will acquire additional, previously identified near-by critical habitat 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.

**National Marine Sanctuaries**

Annual Funding Requirements

(BA in Thousands)

	<u>FY2006</u>	<u>FY 2007 Estimate</u>	<u>FY2008 Estimate</u>	<u>FY2009 Estimate</u>	<u>FY2010 Estimate</u>
NMS	7,250	7,250	7,250	7,250	7,250

**NOAA requests an increase of \$2,250,000, for a total of \$7,250,000, for discretionary National Marine Sanctuary (NMS) construction projects in FY 2006.** The FY 2006 Sanctuary program will continue efforts on many of the projects begun in prior years, and address operational facility requirements and small outreach efforts, i.e., exhibits. The NMS program will continue to implement a comprehensive facilities plan that prioritizes needs and opportunities at individual sites for constructing sanctuary visitor centers, collaborative education projects and operational needs. These facilities serve as important windows into the resources of the sanctuaries, since most of these special marine environments are offshore and not easily accessible by many visitors. 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 major conservation issues.

**Galveston Laboratory Renovation**

Annual Funding Requirements

(BA in Thousands)

	<u>FY2006</u>	<u>FY 2007 Estimate</u>	<u>FY2008 Estimate</u>	<u>FY2009 Estimate</u>	<u>FY2010 Estimate</u>
Galveston Laboratory Renovation	2,000	0	0	0	0

**NOAA requests no change to \$2,000,000 for the National Marine Fisheries Service construction activities at the Galveston Laboratory.** This represents the last funding increment needed to rehabilitate the Galveston Laboratory buildings 301, 303, 305, 306 and 307.

**Satellite CDA Facilities**

Annual Funding Requirements  
(BA in Thousands)

	<u>FY2006</u>	<u>FY 2007 Estimate</u>	<u>FY2008 Estimate</u>	<u>FY2009 Estimate</u>	<u>FY2010 Estimate</u>
Satellite CDA Facilities	2,250	2,250	2,250	2,250	2,250

**NOAA requests no change to the \$2,250,000 and 0 FTE for the Satellite Command and Data Acquisition (CDA) Facilities.** NOAA’s CDA Infrastructure program at the Wallops and Fairbanks facilities is to ensure continuation of the current 99.9 percent data availability for NOAA environmental satellite systems. The Wallops and Fairbanks facilities and infrastructure are over 40 years old. Major systems at both facilities are operating well past their design lives and require maintenance, repair, and in many cases, replacement. The Fairbanks facility is located in a seismic zone and operates in severe Sub-Arctic conditions, with temperatures routinely reaching minus 60 degrees Fahrenheit during the winter months. The Wallops facility, on the Atlantic coast, is subject to a corrosive salt air environment and lies in the path of hurricanes that hit the US East Coast. Both stations have been determined to be critical national infrastructure elements by Presidential Decision Directive.

NOAA has partnered with the U.S. Army Corps of Engineers and developed facilities master plans for Wallops and Fairbanks facilities. NOAA will incrementally implement the facilities master plans to support a phased, multi-year program to comprehensively renovate and modernize the facilities, infrastructure, and equipment to minimize or eliminate safety, hazardous materials, waste water treatment, and other deficiencies at the facilities that could lead to outages and service disruptions caused by failure of supporting infrastructure at the stations.

**NOAA requests a decrease of \$11,255,000 and 0 FTE for the Suitland Facility, leaving no funding in FY 2006.**

**FLEET**

**\$35,730,000**

**Fleet Upgrades**

Annual Funding Requirements  
(BA in Thousands)

	<u>FY2006</u>	<u>FY 2007</u> <u>Estimate</u>	<u>FY2008</u> <u>Estimate</u>	<u>FY2009</u> <u>Estimate</u>	<u>FY2010</u> <u>Estimate</u>
Fleet Upgrades	3,230	0	0	0	0

**NOAA requests an increase of \$1,430,000 and 0 FTE with total funding of \$3,230,000 for the McARTHUR II, NANCY FOSTER, and OSCAR ELTON SETTE Upgrades, which began in FY 2005.** FY 2006 funding will complete the mission space upgrades initiated in FY 2005. McARTHUR II is home ported in Seattle, Washington, and supports NOS and NMFS missions along the West Coast. Upgrades to McARTHUR II's laboratory spaces will better support the needs of embarked scientists by providing the work areas with appropriate laboratory design and facilities to conduct their research efficiently and to store and assemble mission related equipment.

The NANCY FOSTER upgrades for FY 2006 will include a winch and wire, an additional small boat, and the second phase of outfitting the labs. NANCY FOSTER is home ported in Charleston, South Carolina, and supports NOS, OAR and NMFS missions along the Atlantic coast and Gulf of Mexico.

The OSCAR ELTON SETTE upgrades include modifications to laboratory spaces and the ventilation system, a Miranda davit, and a small boat. The upgrades will enable NMFS, NOS, and OAR to collect data for fisheries management and marine mammal protection and data on coral reefs, marine sanctuaries, National Estuarine Research Reserves (NERRS), ocean exploration, and oceanography. OSCAR ELTON SETTE is home ported in Honolulu, Hawaii, and operates throughout the central and western Pacific.



**OSCAR ELTON SETTE backed by a volcano in the Hawaiian archipelago**

**Fisheries Survey Vessel #4**

Outyear Funding Requirements  
(BA in Thousands)

	<u>FY2006</u>	<u>FY 2007</u> <u>Estimate</u>	<u>FY2008</u> <u>Estimate</u>	<u>FY2009</u> <u>Estimate</u>	<u>FY2010</u> <u>Estimate</u>
FSV-4	32,500	12,800	0	1,000	0

**NOAA requests an increase of \$32,500,000 and 5 FTE with a total of \$32,500,000 for Fisheries Survey Vessel Replacement #4 (FSV-4).** This vessel is required to collect fish stocks data and data necessary to protect marine mammals. The requested funding will enable NOAA to exercise an option for the fourth ship on the existing four-ship contract, thereby retaining current pricing. FSV-4 will deploy state-of-the-art acoustic technologies, combined with very quiet radiated-noise signature, to enhance the effectiveness and efficiency of at-sea resource surveys. There are no charter vessels that can provide this acoustically quiet capability. These capabilities would enable FSV-4 to monitor up to nine times more volume of water for the same time and distance traveled by NOAA's current ships. FSV-4 would fully support NMFS' new FETCH Autonomous Underwater Vehicle to extend survey sampling beyond the trackline of the ship. FSV-4 is scheduled to support both the Northwest and Southwest Fisheries Science Centers (NWFSC and SWFSC). The NWFSC is responsible for managing Pacific whiting, which is the largest West Coast fishery and generates nearly \$30M annually. FSV-4 is also

needed for ocean habitat investigations on ESA-listed Pacific salmon, southern resident killer whales, and highly migratory species (sharks, tunas, and billfish). A GAO review of NMFS' West Coast Groundfish Program (June 2004) validated the highest priority for FSV4 to expand data collection for more comprehensive assessments of over 82 groundfish species.

**Fisheries Survey Vessel #3**

**\$0**

**NOAA is requesting decreases of \$33,513,000 and 5 FTE for Fisheries Survey Vessel Replacement #3 (FSV-3), leaving no funding, as sufficient funds have been appropriated to complete this vessel.**

**AIRCRAFT**

**\$0**

**NOAA is requesting a decrease of \$1,420,000 and 0 FTE for Required Safety and Regulatory Upgrades to Various Aircraft. This project has been completed, and no funds are required in FY 2006.**



**One of NOAA's two WP-3D "Hurricane Hunter" aircraft**