



GOES (I-M) Spacecraft

GOES-8

National Environmental Satellite, Data, and Information Service

Total Request: \$738,038,000

ORF: \$131,662,000

PAC: \$606,376,000

The following narrative describes the activities of the National Environmental Satellite, Data, and Information Service (NESDIS) and its Operations, Research and Facilities (ORF) and Procurement, Acquisition and Construction (PAC) accounts requests.

NESDIS provides for procurement, launch, operation, data ingesting, and product development and distribution for the polar orbiting and geostationary environmental satellites. NESDIS is also responsible for the management of NOAA's environmental data collections and acquiring operational data from non-NOAA environmental satellites that include Department of Defense (DOD) and foreign satellite missions. The satellites provide meteorological data to the National Weather Service and other environmental data users. Environmental data and information are collected from NOAA and other sources, disseminated in real time, and archived for future use to meet the needs of users in commerce, industry, agriculture, science and engineering, and in Federal, state and local agencies.

NESDIS contributes to the achievement of six of NOAA's Strategic Plan goals: Advance Short-Term Warning and Forecast Services, Implement Seasonal to Interannual Climate Forecasts, Predict and Assess Decadal to Centennial Change, Recover Protected Species, Sustain Healthy Coasts and Build Sustainable Fisheries.

For FY 2002, the National Environmental Satellite, Data, and Information Service requests a total of \$738.0 million, of which \$131.7 million is requested in the ORF account and \$606.3 million is requested in the PAC account.

Significant Adjustments-to-Base

NESDIS requests a decrease of \$0.8 million to maintain current services and abate declining base resources from mandatory pay and inflation. Detailed estimates are as follows:

Mandatory Pay, Inflationary Costs, and Adjustment: \$4.3 million

NOAA requests an increase of \$4.3 million to fund Adjustments-to-Base (ATBs) for NESDIS base operations and system accounts. The increase will fund the FY 2002 federal pay raise of 3.6 percent and annualize the FY 2001 pay raise of 3.8 percent. The increase will also provide mandatory inflationary increases for non-labor activities, including service contracts, field office lease payments, and rent charges from the General Services Administration (GSA).

Restoration of FY 2001 Rescission: \$0.3 million

NOAA requests an increase of \$0.3 million to restore the FY 2001 rescission. Restoration of these funds in FY 2002 is required to sustain NESDIS operations.

Non-Recurring Terminations: -\$5.4 million

The NESDIS requests a decrease of \$5.4 million to reflect the termination or reduction of the following activities or programs: Center for Spatial Data Research and Application at Jackson State (-\$2.5 million); and Regional Climate Centers (-\$2.9 million)

Detailed Program Increase by Sub-Activity Operations, Research and Facilities (ORF)

Satellite Observing Systems \$75.9 million

NOAA requests a total of \$75.9 million in this sub-activity, an increase of \$15.7 million over the FY 2001 Enacted level. This sub-activity provides for the operation of current polar-orbiting and geostationary satellites, and production and distribution of satellite products for a wide range of Federal agencies, State and Local governments, and private users. As part of this sub-activity, funding will be provided for continuation of Ocean Remote Sensing, Global Wind Demonstration, National Hazards Information Strategy, and Environmental Observing Services.

Environmental Observing Services \$68.9 million

NOAA requests \$68.9 million for Environmental Observing Systems an increase of \$15.7 million over the FY 01 Enacted level. This continued investment supports the operations of all of the NESDIS satellite systems, the ingesting and processing of satellite data, and the development of

new product applications required for continuity of operations. NESDIS provides satellite command and control services on a 24 hours per day, 365 days per year schedule. Funding is required to keep up with increases in labor costs, software licensing, communications, and ground system maintenance. Requirements have expanded due to greater demands on operations and control, greater amounts of data requirements for new products, requirements for more advanced software and the development of improved products, and increased demand to support our user's requirements. As part of the total \$68,908,000 below are enhancement areas.

Commercial Remote Sensing License: \$1.2 million

NOAA requests within Environmental Observing Services, \$1.2 million for the Commercial Remote Sensing Licensing Program to ensure the timely review and processing of satellite license applications. This investment will be used to establish a program to provide technical support for such reviews, support of an industry advisory mechanism, and a computer infrastructure. Major Monitoring and Compliance activities will include review of quarterly licensee reports, on-site inspections, audits, license violation enforcement, and implementation of shutter control in national security and foreign policy crisis situations.

Joint Center for Satellite Data Assimilation: \$0.8 million

NOAA requests a total of \$0.8 million to establish a Joint Center for Satellite Data Assimilation with NWS and OAR in order to accelerate the use of satellite data in forecast models. This investment will fund work to accelerate the use of current and scheduled satellite data in NWS weather and climate prediction operations. NASA, with its own funding, will be a partner in a coordinated national effort to realize the full potential of the vast quantities of new satellite data that are becoming available. The core scientific staff and computing facilities of the Center will consist of current NOAA resources.

Coral Reef Monitoring: \$0.8 million

NOAA requests total of \$0.8 million for the development of a Coral Reef Watch Program to transition existing experimental satellite coral reef health monitoring capabilities into a viable operational capability, and to provide for a solid scientific basis for future monitoring and assessment products/capabilities. Coral Reef Watch strengthens NOAA's position as the world leader in operational environmental monitoring and early warnings. This is a joint NOAA effort spearheaded by NESDIS in partnership with OAR and NOS.

Critical Single Point of Failure: \$0.3 million

NOAA requests a total of \$0.3 million to study the requirements for backup capabilities for critical products and services at alternate sites. This investment supports the requirement to have continuity of critical operational satellite products and services in the event of a catastrophic outage. Federal Building 4 in Suitland, MD is potentially a single point of failure for every operational NOAA satellite product and service that the NWS and other users rely on.

Environmental Data Management Systems

\$55.8 million

NOAA requests a total of \$55.8 million in this sub-activity for environmental data and information systems, a decrease of -\$9.0 million from FY 2001 Enacted level. The FY 2002 request continues to provide environmental data and information to commerce, industry, agriculture, science and engineering, the general public, and Federal, State and Local governments. As part of this sub-activity, funding will be provided for continuation of the Climate Reference Network, National Coastal Ocean Data Development Center, and Climate Database Modernization and Utilization.

Data and Information Services: \$43.4 million

NOAA requests \$43.4 million for Data and Information Services. This continued investment, a decrease of \$6.2 million from FY 2001 Enacted level, will increase the Data Centers capacity to ingest, process, and archive data as well as continue the rescue of valuable environmental data. Requirements have expanded due to growing customer demands for data and products, and increased data management as the volume of new data continues to grow. Below are two enhancement areas of the Environmental Data Management Systems line.

- **Fisheries Oceanography: \$0.5 million**

NOAA requests \$0.5 million to explore using the full potential of modern technology in fishery resources monitoring, utilizing Synthetic Aperture Radar data. This investment would build on applications demonstrated in October 1999, for near real-time calculation of coastal ocean surface winds and vessel positions using RADARSAT-1 imagery in Alaska. Imagery would be produced at selected sites and sent in near real-time to the NESDIS Satellite Active Archive for imagery dissemination. NESDIS would also derive products from the SAR data for NOAA and other agencies such as the Coast Guard. The full system would consist of four reception capabilities specific sites, covering the entire U.S. coastal waters, which will host the required X-band antennas for reception of SAR data from the ENVISAT, ADARSAT II, and ALOS satellites.

- **Habitat Characterization: \$0.3 million**

NOAA requests a total of \$0.3 million to develop the ability to map fishery habitat distributions in space and time, and to answer important questions with such maps. A computer mapping capability will be created that will allow spatial/statistical delineations (stratification) of the landscape. Such maps can represent inferred ecosystem “potentials” that are critical in monitoring, assessment, and management. The system will allow rapid iteration of the mapping process, thus affording opportunities to test, modify, and document model criteria, statistical mapping technique, and data selection. In this manner, habitat maps can be adaptively maintained.

Procurement Acquisition and Construction Account (PAC)

Satellite Observing Systems

\$596.1 million

NOAA requests \$596.1 million for Satellite Observing Systems operations, an increase of \$96.1 million over the FY 2001 Enacted level. This sub-activity provides funding for the multi-year procurement of spacecraft, launches and associated ground system changes for the current series NOAA K-N' of polar-orbiting operational satellites, the National Polar Orbiting Operational Environmental Satellite System (NPOESS), and the Geostationary Operational Environmental Satellite (GOES).

NOAA Polar K-N: \$146.3 million

NOAA requests \$146.3 million for the NOAA Polar K-N', an increase of \$9.6 million over the FY 2001 Enacted level to fund the continuation of the production and launch of this series of satellites. This continued investment required to maintain spacecraft production. The request also includes funds necessary to complete the instruments for the European METOP satellites which will replace NOAA's morning polar orbiting satellite no earlier than calendar year 2005. Funding is included for upgrading and replacing aging and deteriorating ground systems to allow for continuation of operations for the remainder of the NOAA Polar K-N' series through the end of its lifetime in about 2012. In addition, funds provide for replacing and upgrading the aging product generation and distribution system.

NPOESS: \$156.6 million

NOAA requests \$156.6 million for the Polar Orbiting Systems, an increase of \$83.4 million over the FY 2001 Enacted level for NOAA's share of the converged NOAA/DOD/NASA polar-orbiting program. This program is to be jointly and equally funded by NOAA and DOD. In FY 2002, funds will be required to continue the post-Preliminary Design Review (PDR) development for the five most technologically challenging NPOESS instruments. Continuation of the instrument development contracts is critical to a successful risk reduction strategy for NPOESS to assure a successful schedule for the availability of the NPOESS satellites to replace both the Defense Meteorological Satellite Program and the NOAA Polar Orbiting Environmental Satellite system when needed. FY 2002 funds are also required to continue critical contracts on NPOESS program definition and risk reduction efforts which include the NPOESS Preparatory Project (NPP). The NPP is a joint NOAA/NASA program that will demonstrate and test new NPOESS instruments and data utilization systems before the launch of the first NPOESS satellite. In FY 2002, a single prime contractor to build and deploy the total NPOESS program will be selected.

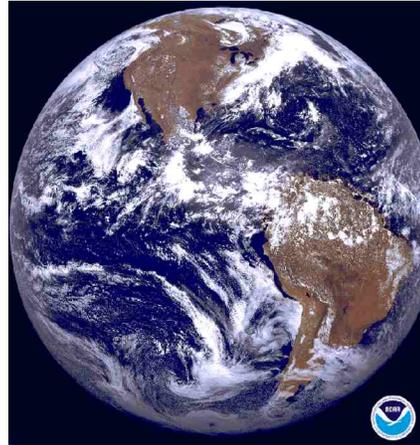
GOES: \$293.3 million

NOAA requests \$293.3 million for the Geostationary Orbiting Environmental Satellite program an increase of \$3.1 million over the FY 2001 Enacted level for the systems spacecraft and launch services program. Funding is necessary to maintain continuity of geostationary satellites. In FY 2002 these funds will be used to continue funding the firm fixed price contract for GOES N-Q spacecraft and launch services which was awarded in January 1998. In addition, under separate contract, production will continue for the Imager and Sounder instruments required for these satellites. The production of the Solar X-ray Imager (SXI) instruments will also continue under a third contract. The first in this series of satellites will be available for launch in fall of 2002.

Construction

Continuity of Critical Facilities for Satellite Operations: \$4.6 million

NOAA requests a total of \$4.6 million to address deficiencies and risks associated with the infrastructure facilities of the NOAA environmental satellite command and control centers at Wallops, VA and Fairbanks, AK. This investment addresses sustaining satellite ground systems/control centers for the Fairbanks Command and Data Acquisition Station (FCDAS) and the acquisition of patent mining claims adjacent to FCDAS. This initiative forms a cohesive approach to resolving known infrastructure problems by reducing facilities' threats and risks, and completing the renovation/repair of the Satellite Operations Control Center. These problems could jeopardize NESDIS' ability to control the nation's environmental satellite systems and potentially lose in-orbit assets.



Program reductions and terminations are shown in Section 4: Supplementary Information.





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