



National Environmental Satellite, Data, and Information Service

The Nation's operational weather satellite and information service.

NOAA's National Environmental Satellite, Data, and Information Service (NESDIS) collects observations of the atmosphere, oceans, and the sun to support NOAA's four mission goals of weather ready nation, climate adaptation, resilient coastal communities, and healthy oceans. NESDIS satellite observations are a key input to NOAA's National Weather Service, enabling timely and accurate weather forecasts, as well as watches and warnings used by Federal, State, and local officials, and the general public, to make decisions to safeguard lives, property and critical infrastructure in advance of severe weather.

NESDIS develops and operates Geostationary Operational Environmental Satellites (GOES) for short-range warning and forecasting, and Polar-orbiting Operational Environmental Satellites (POES) for longer term forecasting. NESDIS also leverages data from satellites flown by the National Aeronautics Space Administration (NASA), Department of Defense (DoD), and international space agencies. NESDIS analyzes the most cost-effective means of obtaining satellite data, including purchasing data from commercial sources. NESDIS acquires its satellites through NASA's Goddard Space Flight Center, a long-standing and successful interagency partnership. NESDIS has managed operational POES satellites since 1966. Additionally, NESDIS has managed operational GOES satellites since 1974. A new generation of satellites is being developed to succeed POES and GOES.

NESDIS operates three environmental data centers that house the world's largest archive of climatic, oceanographic, and geophysical data from both satellite and in-situ sources, ensuring these data remain fully available to Federal, state, and local governments, the private sector, academia, and the public. Data from this archive are used to develop numerous assessments that support NOAA's mission goals.

Foundational Data That Support NOAA's Mission

NESDIS provides foundational data that are used by NOAA's Line offices and its programs. Select examples include:

- **National Ocean Service** utilizes data from satellites and the National Data Centers to monitor ocean and coastal phenomena, such as coral reefs and hazardous algal blooms, that affect commercial and recreational activities in America's ocean and coastal areas.
- **Oceanic and Atmospheric Research** uses data from NESDIS satellites and monitoring stations to conduct research and modeling relating to environmental trends as diverse as drought, stratospheric ozone, air quality from wildland fires, and seasonal climate events.

- **National Weather Service** uses data from NOAA POES in its numerical weather prediction models to develop medium and long term forecasts, 3 days and beyond. In addition, NESDIS obtains data from NASA earth science satellites and European weather satellites for use in NWS models. Data from the recently launched Suomi National Polar-orbiting Partnership (Suomi NPP) satellite are providing significant enhancements to numerical weather prediction models. NESDIS also provides data to support operational space weather warning and forecasts. GOES satellites provide instantaneous images of weather "as it happens" that are routinely used by NWS, commercial weather entities, and the media.
- **National Marine Fisheries Service** uses data from NESDIS satellites and Data Centers to monitor movement of endangered and threatened marine life. Sea surface temperature data from NOAA's satellites are used to monitor the distribution of fishery stocks that are sensitive to water temperature.
- **Office of Marine and Aviation Operations** use data from NOAA satellites to safely operate their ships and aircraft. Data are used by Hurricane Hunter aircraft to determine where specific measurements should be taken in order to provide critical data that the National Hurricane Center needs for its forecast products.

NOAA Satellites Serve the Nation

- NESDIS satellite observations are a key input to NOAA's National Weather Service, enabling timely and accurate weather forecasts, as well as watches and warnings used by Federal, State, and local officials, and the general public, to make decisions to safeguard lives, property and critical infrastructure in advance of severe weather.
- Data from NOAA satellites and National Data Centers are used by all DoD services to support their global mission and operational readiness.
- Telecommunications, public utilities and satellite operators use outlooks and warnings from NOAA's Space Weather Prediction Center, to protect electric grids and communications assets from solar flares and geomagnetic storms. NESDIS satellite instruments are the primary input into these outlooks and warnings.
- Since 1982, over 7,000 boaters and aviators in the US (and over 33,000 persons worldwide) have been rescued with the aid of the satellite-assisted search and rescue (SARSAT) program. The US Coast Guard and local rescue coordinators utilize the location capabilities that SARSAT provides to quickly locate and rescue persons in life threatening situations.
- Commercial air traffic is routed using data from NOAA satellites to avoid airspace that may contain volcanic ash.



For more information, please visit: www.noaa.gov

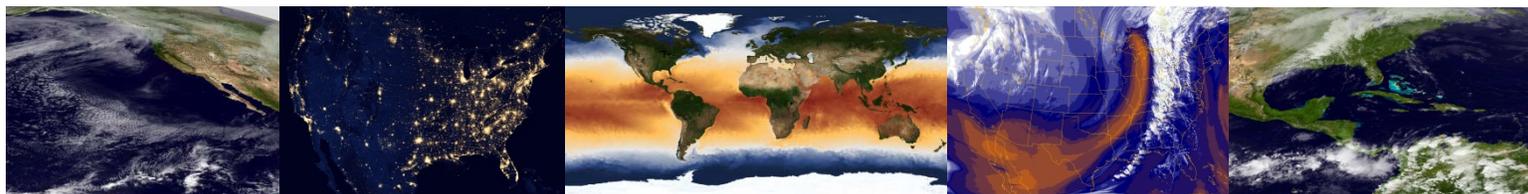




FY 2014 Budget Request Highlights

The FY 2014 President's Budget Request for NESDIS is \$2,186M. Highlights of select activities include:

- **Environmental Satellite Observing Systems (\$121.6M)** This request will support command and control of NOAA's current satellites, NOAA's contribution to interagency National Ice Center, and SARSAT Mission Control Center. Funding will support operations-oriented research that provides constant quality assurance of satellite data and its products. These funds will also support 24x7 data processing and distribution of products that are used by the National Weather Service and its forecast offices nation-wide. Funds also support coordination with commercial aerospace industry and licensing and enforcement of commercial earth observing systems.
- **Data Centers and Information Services (\$86M)** This request will support operations and scientific assessments of climatic, oceanographic, and geophysical data archived in NOAA's National Data Centers. These funds also support activities with Regional Climate Centers and with State and local climatologists. The FY 2014 budget request includes funds for NOAA's contribution to the Administration's Big Earth Data initiative.
- **GOES-N (\$26.3M) and POES (\$28.8M) satellites.** This request will support the current GOES and POES satellites that are providing data for NOAA's Line Office and Programs, especially National Weather Service needs.
- **GOES-R Series Program (\$954.8M)** This request will support continued space and ground development in preparation for launch of the first satellite, GOES-R, in FY 2016 and GOES-S in FY 2017. FY 2014 funds are required to maintain current development schedules.
- **JPSS Program (\$824M)** This request will support continued development of a weather-focused program which will provide continuity after NOAA POES and Suomi NPP satellites. JPSS-1 is scheduled for launch in FY 2017, and JPSS-2 is scheduled for launch in FY 2022. FY 2014 funds are required to maintain current development schedules and minimize a gap in polar-orbiting satellite coverage.
- **Polar Free Flyer Program (\$62M)** This request will support accommodation and launch of sensors such as SARSAT, the Advanced Data Collection System, and to provide continuity of total solar and spectral measurements.
- **Jason-3 (\$37M)** This request is NOAA's contribution to a joint US-European program to continue this important satellite oceanographic mission used for climate measurements and monitoring hurricane intensity. FY 2014 funds are required to maintain current development schedules and minimize a gap in coverage.
- **Refurbishment of DSCOVR satellite as a space weather mission (\$23.7M)** DSCOVR is a joint mission among NOAA, US Air Force, and NASA. NOAA is the program manager with each agency funding its activities for this joint program.
- **Enterprise Ground System (\$6.0M)** This request will lay the groundwork for streamline existing and future ground systems to take advantage of technological solutions to accrue long-term efficiencies.
- **CLASS and Earth Observing System Archive development (\$7.5M)** This request will prepare NOAA's Data Centers for the huge datasets that are already being archived from Suomi NPP, and will be archived once the JPSS and GOES-R Series satellites are launched.
- **Critical Infrastructure Protection (CIP) Single Point of Failure (\$2.8M)** This request will ensure continuity of satellite operations without failure in the event of a catastrophe at the primary operations facility.
- **Satellite Command and Data Acquisition (CDA) Facility (\$2.2M)** This request will maintain integrity of satellite command and data acquisition stations located in seismically-active and Arctic environments in Alaska, and hurricane-prone coastal areas in Virginia .



NATIONAL OCEANIC & ATMOSPHERIC ADMINISTRATION

For more information, please visit: <http://www.noaa.gov/budget>