NOAA's Silver Spring, Maryland Campus

NOAA Monitors Climate and Environment in Maryland

Each day, the ***National Oceanic Atmospheric Administration*** or NOAA, touches the lives of many people around the world. From environmental monitoring to climate research and ocean exploration, from weather forecasts to fisheries management, from safe navigation to coastal services, NOAA's products, services, and people contribute to the foundation of a healthy economy in Maryland and throughout the United States. Our work affects approximately one-third of the Nation's gross domestic product.

NOAA's Silver Spring, Maryland, Metro Center campus houses the agency's line offices and many program groups, including the National Environmental Satellite, Data, and Information Service, the National Marine Fisheries Service, the National Weather Service, the Office of Oceanic and Atmospheric Research, the National Ocean Service and the Office of Marine and Aviation Operations. Situated in downtown Silver Spring, the four-building complex is home to 80 percent of the agency's Washington-area employees. NOAA also has employees in Greenbelt, Suitland, Rockville, Germantown, and Camp Springs, Maryland. (www.ofa.noaa.gov/~hrmo/PMFaboutss.htm)

NOAA is a leading provider of climate, weather, and water information and services to the Nation and the world. In October 2005, NOAA established its Climate Program Office in Silver Spring, Maryland. This office manages the competitive research program to fund high-priority climate science. This work advances our understanding of atmospheric, oceanic, land-based, and snow and ice processes, as well as how these processes affect climate. It focuses on developing a broader user community for climate products and services, provides NOAA a focal point for climate activities within NOAA, leads NOAA climate education and outreach activities, and

NESDIS outreach to local Girl Scouts

NOAA National Oceanic and Atmospheric Administration | NOAA Satellite and Information Service

Satellite antenna at NSOF

coordinates international climate activities. This office also supports projects conducted by investigators outside the federal government, such as scientists in the academic and private sectors and in NOAA Cooperative Institutes. (www.cpo.noaa.gov)

The ***National Environmental Satellite, Data, and Information Service*** (NESDIS) is the largest civil operational environmental space agency and the most extensive holder of atmospheric and oceanographic data in the world. NESDIS is dedicated to providing timely access to global environmental data from satellites and other sources to promote, protect, and enhance the Nation's economy, security, environment, and quality of life. To fulfill its responsibilities, NESDIS acquires and manages the Nation's operational environmental satellites, provides data and information services, and conducts related research. NESDIS acquires and operates the Geostationary Operational Environmental Satellites (GOES) and the Polar-orbiting Operational Environmental Satellites (POES). (www.nesdis.noaa.gov)

NESDIS Offices and Centers in Maryland

The NESDIS ***Office of Satellite Operations*** (OSO) manages and directs the operation of NOAA GOES, NOAA POES, and, recently, the Jason-2 satellite. These responsibilities include command, control, tracking, and acquisition of data from these spacecraft. OSO has operational responsibility for the Satellite Operations Control Center at Suitland, Maryland and Command and Data Acquisition facilities at Wallops, Virginia, and Fairbanks, Alaska. Under agreement with the Department of Defense, OSO also commands and controls the Defense Meteorological Satellite Program. OSO supports the launch, activation, and evaluation of new satellites and the in-depth assessment of satellite and ground systems anomalies. It prepares plans and procedures for responding to these anomalies, and establishes and coordinates the schedules for satellite operation and data acquisition to meet users' needs. (www.oso.noaa.gov)

The NESDIS ***Office of Satellite Data Processing and Distribution*** (OSDPD) operates 24×7 in Suitland, Maryland, to manage and direct the operation of the central ground facilities that ingest, process, and distribute environmental satellite data and derived products to domestic and foreign users. OSDPD also collaborates with the U.S. Coast Guard and U.S. Navy to operate the National Ice Center. In addition, OSDPD is responsible for operating the U.S. Mission Control Center, which is an integral part of the global satellite-aided search and rescue system. (www.osdpd.noaa.gov/ml/index.html)

Under OSDPD, the ***Satellite-aided Search and Rescue*** (COSPAS-SARSAT) is an international, humanitarian search and rescue system that uses satellites to detect and locate emergency beacons carried by ships, aircraft, or individuals. The COSPAS-SARSAT system consists of a network of satellites, ground stations, mission control centers, and rescue coordination centers. NOAA's polar and geostationary satellites are part of this high-tech system, along with Russian spacecraft. When a NOAA satellite pinpoints a distress location within the United States,

Personal locator beacons

or its surrounding waters, the information is relayed by the SARSAT program to the agency's SARSAT Mission Control Center, both located in Suitland, Maryland. Without delay, the information is sent to a rescue coordination center. (www.sarsat.noaa.gov)

Launch of Jason-2

The NESDIS ***Center for Satellite Applications and Research*** (STAR), in Camp Springs, Maryland, acquires and manages the Nation's operational Earth-observing satellites. STAR's mission is to transfer satellite observations of the land, atmosphere, ocean, and climate from scientific research and development into routine operations and to offer state-of-the-art data, products, and services to decision-makers. (www.star.nesdis.noaa.gov/star/index.php)

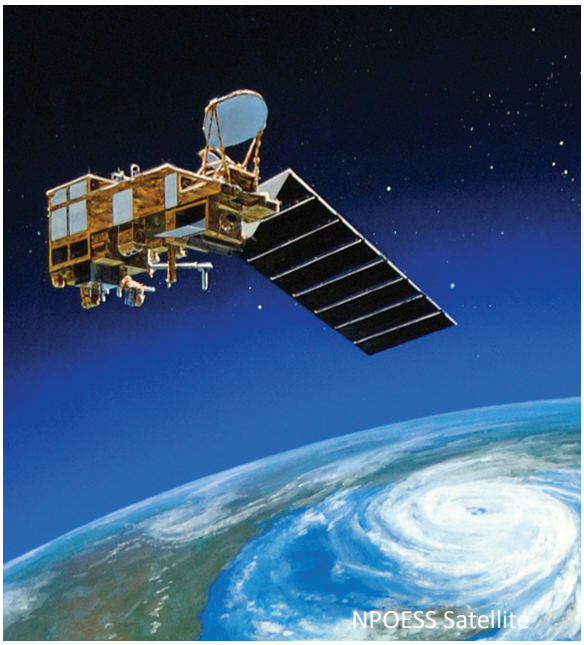
Under STAR, NOAA's ***CoastWatch*** program provides and ensures timely access to near real-time satellite data to protect, restore, and manage U.S. coastal ocean resources and understand climate variability and change to enhance society's quality of life. This program is located in Camp Springs, Maryland, and is a part of STAR. There are two components to CoastWatch: Central Operations and Regional Nodes. Central Operations, managed by NESDIS, coordinates the processing, delivery, quality control and storage of data products. The six regional nodes include other NOAA line offices that participate in the CoastWatch Program. They are located around the country, hosting equipment and personnel to provide near real-time data distribution and regional scientific expertise to the local user community. Together, central operations and the regional nodes provide for the distribution pathway for CoastWatch data products. (coastwatch.noaa.gov/cw_index.html)

The NESDIS ***Office of Systems Development*** (OSD) manages NOAA's operational geostationary and polar-orbiting environmental satellite programs. Headquartered in Silver Spring, Maryland, OSD provides the spacecraft, launch services, and ground systems for NOAA GOES and NOAA POES satellites. OSD's work is necessary to maintain the uninterrupted flow of remotely sensed environmental data required to protect live, property, and the environment and to promote economic well being. This office also defines user requirements and develops engineering designs for future satellite systems. (www.osd.noaa.gov)

NOAA Central Library

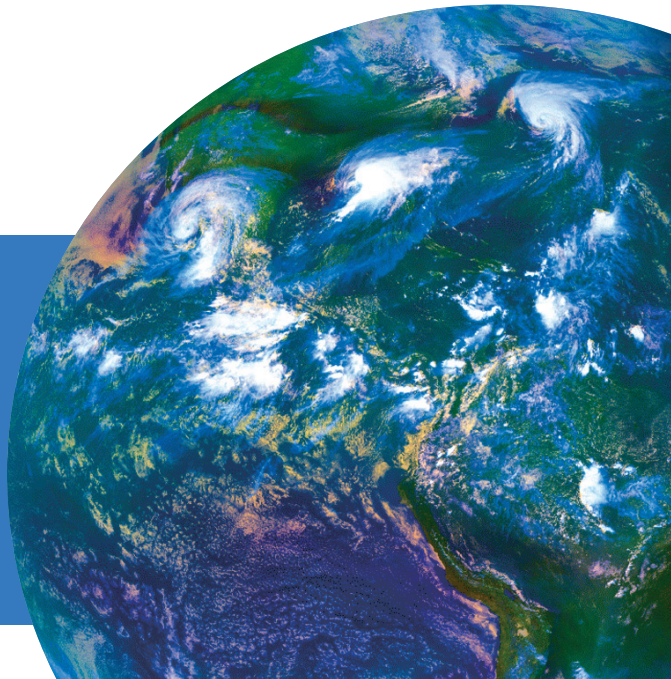
Under OSD, the ***POES Program***, headquartered in Greenbelt, Maryland, procures the spacecraft, instruments, launch services, and ground equipment necessary to maintain an uninterrupted operational polar-orbiting satellite system. The POES spacecraft offer daily global coverage by orbiting near the Earth's poles roughly 14 times daily. Data from the POES satellites support a broad range of environmental monitoring applications, including weather analysis and forecasting, climate research and prediction, atmospheric temperature and humidity measurements, ocean dynamics research, volcanic eruption monitoring, forest fire detection, and many other applications. (www.osd.noaa.gov/POES/index.htm and www.osd.noaa.gov/GOES/index.htm)

The NESDIS ***National Oceanographic Data Center*** (NODC) is a national repository and dissemination facility for global


NPOESS Satellite

oceanographic data. Located in Silver Spring, Maryland, NODC acquires and preserves a historical record of the Earth's changing environment to be used for operational applications and ocean climate research. NODC manages the Oceanographic Data Center, the National Coastal Data Development Center, the World Data Center for Oceanography, and the NOAA Central Library. These centers provide access to the world's most comprehensive sources of marine environmental data and information. The library houses a research collection with a comprehensive coverage of hydrographic surveying (from 1820); oceanography, meteorology, and hydrology (from 1870); living marine resources (from 1970 with selected coverage from 1870), and meteorological satellite applications (from 1960). (www.lib.noaa.gov and www.nodc.noaa.gov)

The ***Integrated Program Office*** in Silver Spring, Maryland, is a tri-agency partnership among the Department of Commerce (DOC), the Department of Defense (DoD), and the National Aeronautics and Space Administration (NASA) to develop NPOESS. NPOESS is the next generation of operational polar-orbiting environmental satellites for DOC and DoD. NPOESS spacecraft will circle the Earth approximately once every 100 minutes. During these revolutions, NPOESS satellites provide global coverage, monitoring environmental conditions and collecting, disseminating, and processing data about the Earth's weather, atmosphere, oceans, land, and near-space environment. (www.ipo.noaa.gov)

The ***GOES-R Program Office***, located in Greenbelt, Maryland, at Goddard Space Flight Center, is responsible for the acquisition of GOES-R, the next generation geostationary satellite series. GOES-R will maintain a continuous stream of geostationary data to support NOAA's mission. While NOAA manages and funds the GOES-R program, its development is a collaboration between NOAA and NASA. GOES-R will be composed of improved spacecraft and instrument technologies, which will result in more timely and accurate weather forecasts and improve the detection and observation of meteorological phenomena that directly affect public safety, protection of property, and, ultimately, economic health and development. The first launch of the GOES-R series satellite is scheduled for FY2015. (www.goes-r.gov)

For more information:
www.noaa.gov
www.nesdis.noaa.gov