



**NOAA**

National Oceanic and Atmospheric Administration | NOAA Satellite and Information Service



A view of one of the Fairbanks Station's satellite antennas

## Fairbanks Command and Data Acquisition Station

The images of swirling white clouds and storms moving across your TV screen during the local news weather forecast come from data received at the National Oceanic and Atmospheric Administration (NOAA) Fairbanks Command and Data Acquisition Station (Fairbanks Station) in Fairbanks, Alaska, or the NOAA Wallops Command and Data Acquisition Station (Wallops Station) located on Wallops Island, Virginia. From these stations, data are distributed to users worldwide within minutes.

Environmental satellites, operated by NOAA's Satellite and Information Service (NESDIS), collect data from Earth's atmosphere, land, oceans, poles, and even the Sun. This important information is used by weather forecasters, climate scientists, and others to better understand our planet, protect lives and property, and safeguard critical infrastructure. The Fairbanks and Wallops stations are also part of a global ground system in the Search and Rescue Satellite-Aided Tracking System (SARSAT) program, which detects signals from persons in distress who have activated their emergency beacons. These signals are transmitted to the U.S. Coast Guard, the U.S. Air Force, and local units to support rescue operations.

Nestled in Alaska's Gilmore Valley, the Fairbanks Station is farther north than any other satellite communications facility in North America. As a result, the Fairbanks Station receives more environmental satellite data than any other station, and is a vital link to satellites operated by NOAA and other agencies.

The Fairbanks Station acquires satellite data from:

- **Geostationary Operational Environmental Satellite (GOES)**, a NOAA operational system
- **Polar-orbiting Operational Environmental Satellite (POES)**, a NOAA operational system
- **Defense Meteorological Satellite Program (DMSP)**, a Department of Defense (DoD) operational system
- **Meteorological Operational satellite programme (MetOp)**, an European Organisation for the Exploitation of Meteorological Satellites (EUMETSAT) operational system
- **Earth Observing System (EOS) satellites — Aqua and Aura**, National Aeronautics and Space Administration (NASA) research missions
- **Constellation Observing System for Meteorology, Ionosphere, and Climate (COSMIC)**, a joint project among NOAA, Taiwan's National Space Organization, and the University Corporation for Atmospheric Research
- **Coriolis/Windsat**, a joint U.S. Navy, DoD, Integrated Program Office mission
- **Ocean Surface Topography Mission/Jason-2**, a joint NOAA, NASA, EUMETSAT, French Centre National D'Etudes Spatiales (CNES) operational system
- **Landsat-5**, a U.S. Geological Survey (USGS) land remote sensing satellite



The Fairbanks Station workforce consists of employees currently under contract with an Alaska Native corporation, Aleut Global Solutions (AGS), that ensure that NOAA captures no less than 99.5 percent of the data from the satellites it tracks. NOAA owns the Fairbanks Station and is responsible for general management, total funding, and administering the services contracts.

The Fairbanks Station consists of:

- An operations building, which is the main control center containing administrative support activities and the computer support equipment for telecommunications;
- A 26-meter antenna that was constructed at the opening of the satellite tracking station in 1961, which was upgraded in 2003–2004, and generally used for receiving data transmitted from polar-orbiting satellites;
- Three 13-meter parabolic dish antennas that were installed in 1998 to track, command, and receive data from POES and DMSP satellites, which are also used to support EOS and Landsat-5 missions;
- A 21-meter antenna that was installed in 2003 to support GOES-9 operations for the Japan Meteorological Agency, which today provides GOES-West back-up for NOAA;
- Two 5-meter antennas that were transferred from NASA and installed to provide primary commanding and downlink operations of the six-satellite COSMIC constellation.

The Fairbanks Station also operates two antennas remotely in Barrow, Alaska for commanding NOAA's polar-orbiting spacecraft and receiving weather imagery over the pole and in high-Arctic regions for the National Weather Service.

In collaboration with the U.S. Army Corps of Engineers, Alaska Division, an \$11.7 million construction project is underway to build a new Fairbanks Station Operations Building using NOAA funds from the American Recovery and Reinvestment Act (ARRA) of 2009 and the Omnibus Appropriations Act, 2009. The 20,000-square foot facility is being built to meet U.S. Green Building Council Leadership in Energy and Environmental Design (LEED) Silver Certification and is scheduled for completion in September 2010. The new operations building will replace the existing 1961-era building.

With this new operations building, the Fairbanks Station will:

- Improve the quality of employee worklife by providing a safe and pleasant workplace.
- Increase operational and functional efficiencies.
- Enhance the long-term operational viability of the facility.
- Promote its attractiveness as a place for new missions.
- Protect more than \$1 billion of sensitive electronics equipment.
- Enhance a critical national security infrastructure.

## Fairbanks Station FAQs

**Owner:** NOAA's Satellite and Information Service (NESDIS)

**Location:** Gilmore Valley, Fairbanks, Alaska

**Size:** 8,500 acre Federal reservation

**Personnel:** Five full-time government; 42 Aleut Global Solutions (AGS) workforce

**Annual Operating Budget:** \$9 million

**Construction Project Cost:** \$11.7 million, of which \$9 million was provided from NOAA ARRA funds

**Satellite Contacts (2009):** 54,000 lasting between 5 to 15 minutes at each contact

**Users:** Worldwide

## Links

**More about satellites and products:** [www.nesdis.noaa.gov](http://www.nesdis.noaa.gov)

**Fairbanks Station:** [www.fcdas.noaa.gov/index.html](http://www.fcdas.noaa.gov/index.html)

**Satellite data and products:** [www.nesdis.noaa.gov/sat-products.html](http://www.nesdis.noaa.gov/sat-products.html)

**NOAA satellite programs:** [www.nesdis.noaa.gov/satellites.html](http://www.nesdis.noaa.gov/satellites.html)

**Archived data and products:** [www.nesdis.noaa.gov/datainfo.html](http://www.nesdis.noaa.gov/datainfo.html)

**Geostationary satellite images:** [www.goes.noaa.gov](http://www.goes.noaa.gov)

**Polar-orbiting satellite images:** [www.oso.noaa.gov/poes](http://www.oso.noaa.gov/poes)

**Visualizations of significant weather events:** [www.nvnl.noaa.gov](http://www.nvnl.noaa.gov)

**Education and Outreach:** [www.nesdis.noaa.gov/outreach\\_edu.html](http://www.nesdis.noaa.gov/outreach_edu.html)

**Hurricane Imagery:** [www.nhc.noaa.gov/satellite.shtml](http://www.nhc.noaa.gov/satellite.shtml)

**Search and Rescue/Beacon Registration:** [www.sarsat.noaa.gov](http://www.sarsat.noaa.gov)

