



ALASKA

REGION



SUPPORTING WEATHER FORECASTING IN YOUR REGION

Storms, blizzards, flooding and wildfires are annual dangerous weather conditions in the Alaska region. Three Weather Forecast Offices receive data from JPSS which provides both real-time environmental monitoring in the Polar region and the three- to seven-day weather forecast. Severe weather conditions impact several industries including:

- AVIATION** 50,000 aircrafts per year traverse the Alaskan region where 32 historically active volcanoes present harmful risks in the form of volcanic ash and SO_2 .
- LOGGING** Wildfires in the summer and fall of 2015 burned 5 million acres of Alaskan forest.
- FISHING** In 2009, the wholesale value of Alaskan harvests was \$3.3 billion. Severe storms can disrupt both the ecosystem and the ability to fish.
- SHIPPING** Commercial shipping in the Northwest Passage is disrupted by shifting sea ice and stormy conditions.

SUPPORTING A “WEATHER-READY NATION”

The Joint Polar Satellite System (JPSS) is the Nation’s advanced series of polar-orbiting environmental satellites. JPSS satellites provide sophisticated meteorological data and observations of atmosphere, ocean and land for short-term, seasonal and long-term monitoring and forecasting.

Specifically, data from the infrared and microwave sounding instruments is assimilated into numerical weather prediction models which forecast the path and intensity of severe weather events such as blizzards and thunderstorms. The visible and infrared imaging capabilities of the satellite provide comprehensive Earth observation for mitigating hazardous events including the wildfires, floods, oil spills and ice break up that threaten the Alaska region. The ozone mapper monitors environmental conditions by measuring and tracking aerosols from volcanoes and fires.

JPSS satellites increase the timeliness and accuracy of forecasts three to seven days in advance of a severe weather event. NOAA’s National Weather Service uses JPSS data as critical input for numerical forecast models, providing the basis for these mid-range forecasts. These forecasts allow for early warnings and enable emergency managers to make timely decisions to protect American lives and property, including ordering effective evacuations.

JPSS satellites circle the Earth from pole-to-pole and cross the equator 14 times daily in the afternoon orbit—providing full global coverage twice a day. Polar satellites are considered the backbone of the global observing system.

Information from JPSS supports NOAA’s mission to ensure a more “Weather-Ready Nation.”

Which industries benefit from JPSS data?

- Emergency management
- Agriculture
- Transportation
- Commercial aviation
- Regional general aviation
- Maritime transportation
- Commercial fishing industry
- Transoceanic container shipping industry
- Recreational boating
- Land transportation
- Defense
- Coastal community preparedness
- Tourism (land and ocean)
- Energy
- Construction
- Insurance
- Conservation
- Oil spill trajectories (ocean)
- Vegetation health



PARTNERS IN YOUR REGION

JPSS commits to continually improving forecasting capabilities by leveraging its relationships with academic institutions, government agencies, ongoing research and development, and working closely with industry contractors.

ACADEMIC AND INDUSTRY PARTNERS

- Fairbanks Command and Data Acquisition Station, AK
- Geographic Information Network of Alaska, Fairbanks, AK
- University of Alaska Fairbanks



To learn more about the science behind JPSS, visit www.jpss.noaa.gov

To view an interactive tool that allows users to explore NOAA data, visit: www.nvli.noaa.gov/view