KNOWLEDGE FOR A COMPETITIVE AMERICA

NOAA: NATIONAL ENVIRONMENTAL SATELLITE, DATA, AND INFORMATION SERVICE (NESDIS)

IMPACTS AT A GLANCE

WHAT IS NOAA NESDIS?

The National Environmental Satellite, Data, and Information Service (NESDIS) is a trusted provider of environmental intelligence that supports decision-making across the federal government, the private sector, and local communities. NESDIS maintains end-to-end responsibility for ensuring the quality, continuity, and accessibility of this information—from raw observations collected by the Nation's weather and environmental satellites to operational products used every day across the United States.

NESDIS data underpins the work of the National Weather Service, researchers across NOAA and the broader scientific enterprise, commercial weather and data service providers, and the American public. These data support mission-critical applications that protect lives, safeguard infrastructure, and strengthen economic competitiveness.

WHO USES NESDIS PRODUCTS?

NESDIS data also underpin key sectors of the U.S. economy, including agriculture, manufacturing, transportation, construction, and energy. These sectors rely on NESDIS data to operate efficiently and safely and to improve their bottom line. These data allow:

Farmers to make informed decisions on planting and harvesting

Airlines to resume operations more quickly following weather disruptions

Maritime and Arctic operators to navigate safely around hazardous conditions

THE BACKBONE OF THE WEATHER, WATER, CLIMATE ENTERPRISE

Approximately 95% of the data used in numerical weather prediction models originates from satellites. NESDIS operates the Nation's civil weather satellite fleet around the clock, 365 days a year, ensuring continuous coverage essential to forecast accuracy and lead time.

NOAA operates fifteen satellites, of which they own eight:

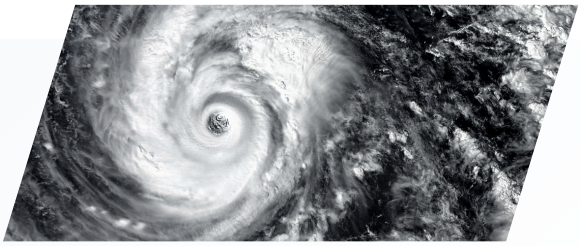
- Five geostationary (GOES-R Series)
- Two polar-orbiting (JPSS)
- One deep space (DSCOVR)

The Geostationary Operational Environmental Satellites (GOES)-R series is the most sophisticated weather-observing and environmental monitoring system in the Western Hemisphere. It provides advanced imagery and atmospheric measurements, real-time mapping of lightning activity, and monitoring of space weather.

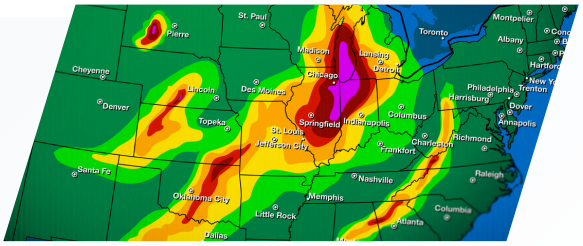
The Joint Polar Satellite System (JPSS) provides global observations and the majority of data that informs numerical weather forecasting in the U.S. and deliver critical observations during severe weather events like hurricanes and blizzards.

AMERICANS ARE MORE SECURE, COMPETITIVE, AND PROSPEROUS, BECAUSE OF REASONABLE AND MEANINGFUL INVESTMENTS IN FEDERAL EARTH SCIENCE AND WEATHER INTELLIGENCE.

NOAA'S ENVIRONMENTAL SATELLITES

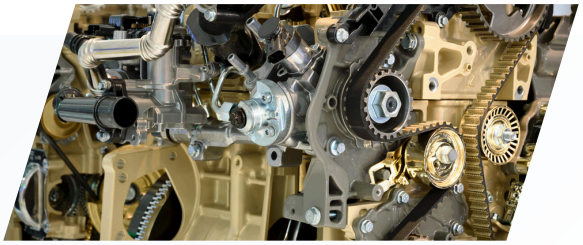


Over the last 50 years, the Geostationary Operational Environmental Satellite (GOES) constellation has watched over the nation for severe weather on Earth, space weather events, and other environmental hazards. GOES provides eyes in the sky watching hurricane development and movement, enabling the refinement of forecasting models and ensuring that millions of people are forewarned every year. In the next decade, NESDIS will transition from the GOES-series to the Geostationary Extended Observations (GeoXO) program. GeoXO will continue these critical observations and promises to improve short-term forecasting and warning of severe weather.



The Joint Polar Satellite System (JPSS) orbits Earth over the poles 14 times a day, collecting data about solar radiation, atmospheric gases, planetary temperature and moisture, and visual data that feed into numerical weather forecasting models, weather intelligence products and services, and helps researchers understand how polar and high-latitude processes affect the country.

THE NATIONAL CENTERS FOR ENVIRONMENTAL INFORMATION (NCEI)



NCEI is a unit within NESDIS which focuses on serving society and industry with data, tools, and products to support decision making and planning that strongly support the architecture/engineering, insurance/reinsurance, and retail sectors. This includes the Industry Proving Grounds (IPG) Task Group, which aims to identify the environmental data needs of these sectors and develop new information products that fill these needs and drive climate change resilience. These products will improve how these industries plan and prepare for extreme weather events and the future of our environment, which will in turn build resilient communities and strengthen the U.S. economy.

CENTER FOR SATTELITE APPLICATIONS AND RESEARCH (STAR)

The Center "transforms satellite observations of the earth into meaningful information essential to society's evolving environmental, security, and economic decision-making." STAR works closely with partners whether at NOAA, academic institutions, or international organizations, to understand how NESDIS satellite data can be used to address societal and user needs. The Center's research activities are integral to understanding and extracting the best and most useful information from our satellites, information that supports the implementation of all of NOAA's mission service areas.

WANT TO GET INVOLVED?

Reach out to
info@usacompetes.org

Learn more on our website:
usacompetes.org

KNOWLEDGE FOR A COMPETITIVE AMERICA