

“America’s Weather Enterprise: Protecting Lives, Livelihoods, and Your Way of Life”



Weather.gov

NOAA’s National Weather Service

Our Mission

NOAA's National Weather Service provides broad environmental services including weather, water, climate, air, and space weather forecasts and warnings for the United States, its territories, adjacent waters and ocean areas, for the protection of life and property and the enhancement of the national economy. NWS data and products form a national information database and infrastructure which is used by other governmental agencies, academia, the private sector, the public, and the global community.

Who We Are and What We Do

The NWS has about 4,700 employees in 122 weather forecast offices, 13 river forecast centers, nine national centers and other support offices around the country. The NWS’ annual budget supports a national infrastructure to gather and process data worldwide from the land, sea and air. This infrastructure includes collecting data from technology such as Doppler weather radars, satellites, data buoys for marine observations, surface observing systems, and instruments for monitoring space weather and air quality. These data feed sophisticated computer models running on high-speed supercomputers. NWS’ highly trained and skilled workforce uses powerful workstations to analyze all of these data and issue forecasts and warnings.

High-speed communications tie NOAA observation data and forecasts together and provide rapid dissemination of critical forecasts and warnings to the public, the media, the research community, and the private sector. The NOAA Weather Radio All Hazards network provides warnings and alerts through nearly 1,000 stations broadcasting information around the clock and available to anyone equipped with a special radio receiver. NOAA’s broad range of data, forecasts, information and services is available through a robust web presence accessible at www.noaa.gov. NWS staff also use trained community volunteers to enhance weather service operations. Cooperative observers collect weather data that become part of the Nation’s climate records, and citizen storm spotters provide NWS with visual confirmation of severe weather events. As environmental information becomes more sophisticated, complete and available to all, the environmental literacy of the public becomes more important. Outreach and education activities are aimed at making sure the public understands the information NWS provides and can use it effectively in the decisions they make.

America’s Weather Enterprise

The Nation’s weather, water, and climate enterprise provide unparalleled services to the Nation. The enterprise consists of three sectors—government, private-sector entities, and the academic and research community—and include nongovernmental organizations and private citizens. This system has led to an extensive and flourishing set of services of great benefit to the public and the economy. NWS works closely with its partners in all aspects of the forecast process—from research, to observation collection, to forecast dissemination, to warning the public when hazards threaten. We rely on these effective partnerships to better understand and apply technology and science, continue our record of forecast improvements, and meet expanding needs for dependable, high-quality weather, water, and climate

services. We are committed to foster the growth of this complex and diverse enterprise to serve the public interest.

What Are the Benefits?

All the environmental services provided by NWS cost each American about \$5 a year—roughly the cost of a fast-food meal. This investment allows NWS to issue climate, public, aviation, marine, fire weather, air quality, space weather, air, river and flood forecasts and warnings every day.

Millions of weather-based economic decisions are made in agriculture, transportation, power, construction, and other sectors of the economy. Weather and flood conditions affect the entire economy in many direct and indirect ways. Better weather, hydrologic and climate forecasts and information bring new opportunities to almost every sector of the economy. The labor-intensive construction industry contributes more than \$200 billion annually to the U.S. economy, and is directly dependent on accurate short- and long-range weather forecasts. NWS forecasts are also critical to the commercial and private transportation sector, including airline shipping and trucking industries, nationally and internationally. Airlines, for example, rely on short-term forecasts to best position their aircraft and adjust flight routes. Long-term climate forecasts help city managers better manage the purchase of resources such as salt and sand for roads and sidewalks. Hydrologic forecasts help communities protect property by preparing for floods.

The NWS is making great strides to improve weather forecasts and warnings. For example, warning lead-times for tornadoes have doubled to an average of 13 minutes, up from six minutes in 1993, and some warnings have been issued for as much as an hour in advance. This extra time saves lives. Today's three-to-four day forecast is as accurate as the two-day forecast was 15 years ago. The National Weather Service is working to make the 6-10 day forecast as accurate as the forecast for tomorrow.