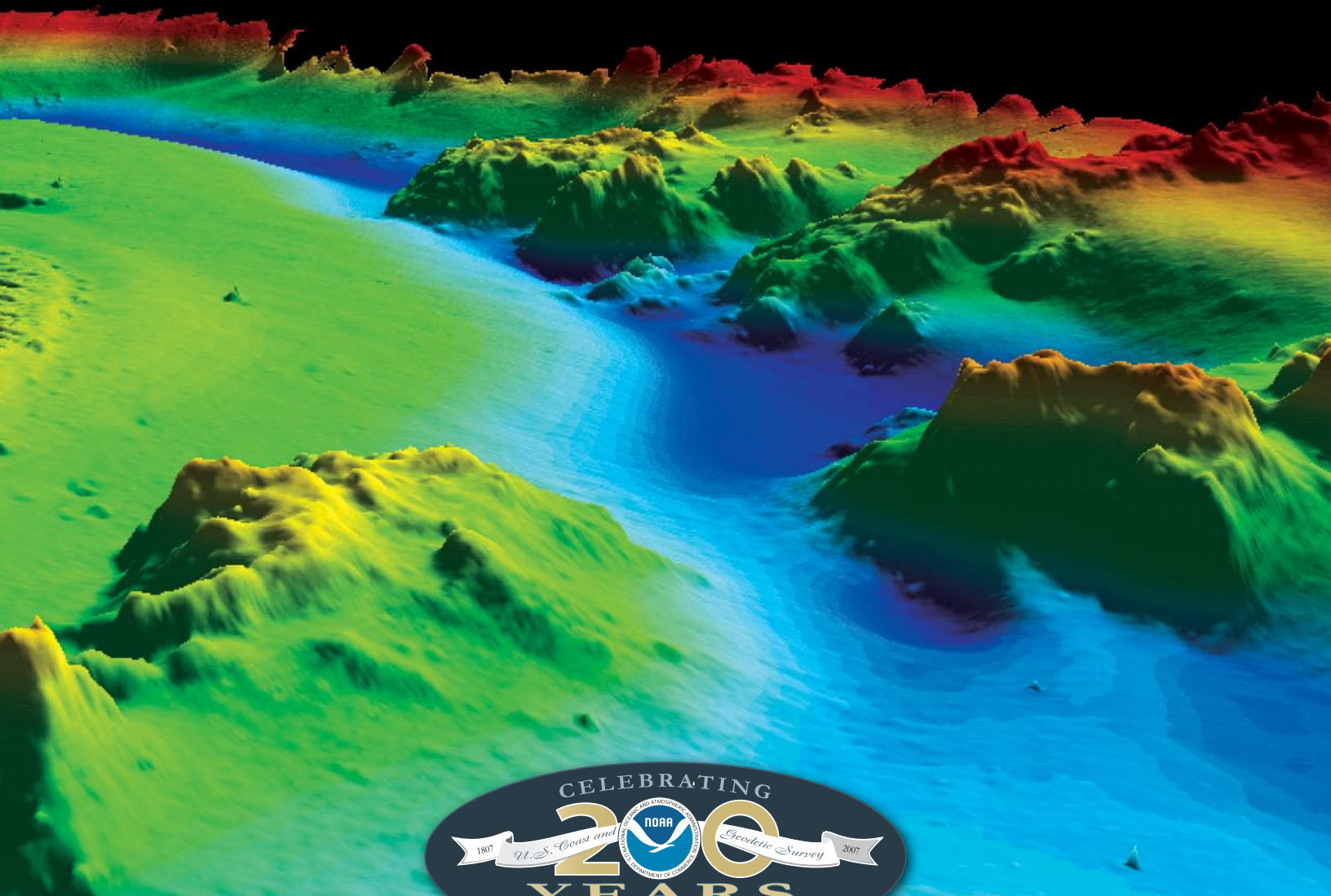
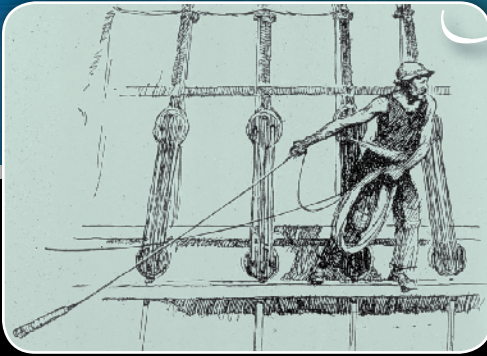


NOAA

Celebrating 200 Years of Science, Service, and Stewardship



For centuries, weighted lines were lowered by hand to measure ocean depth. Today, NOAA ships and underwater robots measure depth with hi-tech sonar. NOAA scientists turn the data into maps of the sea bed, like this image of the underwater world at the entrance to Portsmouth Harbor, New Hampshire. The data can be used for many purposes, including safe navigation, fisheries research, and flood evacuation planning. This image may be downloaded for free as a screen saver at: www.celebrating200years.noaa.gov

TOP LEFT: Sailor sounding from merchantman—19th century, sketch by Gordon Grant from Herbert Warden's "In Praise of Sailors."

Weather and Climate

At the time of the first federal coastal surveys in 1807, Americans were already careful observers of country's climate and weather patterns. For example, George Washington and Thomas Jefferson recorded the daily weather. Telegraph operations in 1845 made it possible to transmit weather data, leading to President Grant's authorization of a national weather agency under the Army Signal Service. Today's National Weather Service is the largest single component of NOAA, providing weather, hydrologic, and climate forecasts and warnings for the United States, its territories, and adjacent ocean waters that protect life, property, and the nation's economy.



At a cooperative weather station in Granger, Utah, a volunteer observes temperature, precipitation, sky conditions, etc. Circa 1930. Credit: NOAA.

and air quality. Complex models and high-speed communications systems compile this data for timely dissemination to the public.

NOAA Research in technologies such as phased array radar, dual polar radar, and unmanned aircraft systems will provide forecasters with better views of existing conditions, while further development of numerical prediction models will increase accuracy of weather and air quality forecasts.

NOAA also studies and predicts changes from climate patterns. Weather changes can occur quickly, but climate varies from year to year, decade to decade, and even across centuries. Changes in the atmosphere, oceans, ice sheets, land, and life forms are studied. The Climate Program Office coordinates climate research across NOAA and its partner organizations providing reliable and accurate information on the Earth's changing climate.



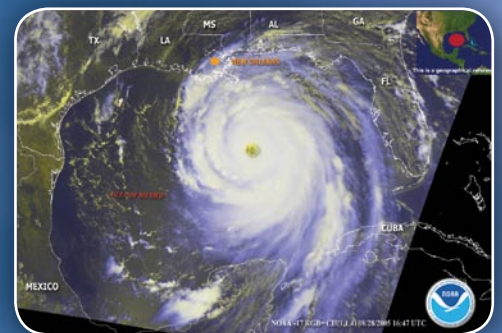
Operations area, National Weather Service Forecast Office in Key West, Florida as spiral bands from Hurricane Charley spread over the Florida Keys. August 13, 2004. Credit: Jim W. Lee.

The Weather Service is the official U.S. voice for watches and warnings during life-threatening weather conditions. From 122 weather forecast offices, 13 river forecast centers, nine national centers, and other support offices, 4,700 employees gather and analyze global data from land, sea,

and atmospheric sources. The Service uses an array of satellites operated by NOAA's National Environmental Satellite, Data, and Information Service, including the powerful Geostationary Operational Environmental Satellites that orbit 22,300 miles above the Earth. NOAA's network of 140 high-powered Doppler radars blanket America and its territories, providing meteorologists with the lead time for warnings to save lives and minimize property loss. Information is also gathered from marine data buoys, surface observing systems, and instruments that monitor space weather

The National Weather Service is achieving its vision of providing the world's best weather and climate information by delivering consistently reliable and accurate forecasts that greatly reduce weather and water-related injuries and fatalities. NOAA Weather Radio All Hazards is a nationwide network of more than 950 radio stations broadcasting continuous weather information directly from local NWS offices. NOAA Weather Radio also broadcasts warning and post-event information for other hazards, including earthquakes, avalanches, environmental accidents, AMBER alerts and 911 telephone outages.

Information from the National Weather Service touches our lives every day. ■



GOES-12 satellite imagery of Hurricane Katrina over the Gulf of Mexico at peak intensity of 175 mph. August 28, 2005. Credit: NOAA.