



## NOAA In Your State

# West Virginia

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**NOAA** is an agency that enriches life through science. Our reach goes from the surface of the sun to the depths of the ocean floor as we work to keep citizens informed of the changing environment around them. From daily weather forecasts, severe storm warnings, and climate monitoring to fisheries management, coastal restoration and supporting marine commerce, NOAA's products and services support economic vitality and affect more than one-third of America's gross domestic product. NOAA's dedicated scientists use cutting-edge research and high-tech instrumentation to provide citizens, planners, emergency managers and other decision makers with reliable information they need when they need it.

The following is a summary of NOAA facilities, staff, programs, or activities based in, or focused on, your state or territory: Starting with highlights, then by [congressional districts and cities or towns](#), and then [statewide programs](#).

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### Highlights of NOAA in West Virginia

<a href="#">NESDIS Consolidated Remote Backup Unit</a>	Fairmont	WV-2
<a href="#">NCEP Weather Supercomputing</a>	Fairmont	WV-2
<a href="#">NOAA Cyber Security Center</a>	Fairmont	WV-2

The state of West Virginia also has a Weather Forecast Office, a Regional Geodetic Adviser, and several observation platforms.

## Weather Forecast Office

Charleston WV-1

**National Weather Service (NWS) Weather Forecast Offices (WFO)** are staffed 24/7/365 and provide weather, water, and climate forecasts and warnings to residents of West Virginia. There are 122 WFOs nationwide of which one is in West Virginia. Highly trained forecasters issue warnings and forecasts for weather events, including severe thunderstorms, tornadoes, hurricanes, winter storms, floods, and heat waves to the general public, media, emergency management and law enforcement officials, the aviation and marine communities, agricultural interests, businesses, and others. Information is disseminated in many ways, including wireless emergency alerts, social media, [weather.gov](http://weather.gov), and NOAA Weather Radio All Hazards. Each WFO has a Warning Coordination Meteorologist who actively conducts outreach and educational programs that strengthen working relationships with local partners in emergency management, government, the media and academic communities. Forecasters provide Impact-based Decision Support Services (IDSS), both remotely and on-site during critical emergencies such as wildfires, floods, chemical spills, and major recovery efforts. To gather data for forecasting and other purposes, NWS WFO staff monitor, maintain and use Automated Surface Observing Stations and Doppler Weather Radar. In addition to the WFOs, NWS operates specialized national prediction centers and regional headquarters throughout the U.S. for a total of 168 operational units. Over 85% of NWS' workforce is in the field. For current West Virginia weather, visit [www.weather.gov](http://www.weather.gov) and, on the national map, click on the relevant county or district.

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### **WV-1**

#### **Charleston**

**National Weather Service (NWS) - Weather Forecast Office (WFO)** - See [Page 2](#) for detail.

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### **Chesapeake Bay Region**

#### **National Marine Fisheries Service (NMFS) - Chesapeake Bay Watershed Education and Training Program**

The NOAA Bay-Watershed Education and Training (B-WET) program is an environmental education program that promotes locally relevant, experiential learning in the K-12 environment. The NOAA Chesapeake Bay Office, a division of NOAA Fisheries' Office of Habitat Conservation, administers B-WET grants for the Chesapeake Bay watershed on behalf of the NOAA Office of Education. The primary delivery of B-WET is through competitive funding that promotes systemic Meaningful Watershed Educational Experiences (MWEEs). The Chesapeake B-WET program recognizes that knowledge and commitment built from firsthand experience, especially in the context of one's community and culture, is essential for achieving environmental stewardship. Chesapeake B-WET responds to regional education and environmental priorities through local implementation of competitive grant funds and is supportive of partnerships between school districts and community organizations and institutions that are run by and/or serve marginalized groups, particularly minority communities. School district implementation grants are available to school districts with 25% or more landmass in the Chesapeake Bay watershed. State-level capacity building grants are typically available on an every-other-year basis.

### **WV-2**

#### **Elkins**

**Office of Oceanic and Atmospheric Research (OAR) - U.S. Climate Reference Network**

The US Climate Reference Network (USCRN) is an operationally viable research network of more than 138 climate stations that are deployed nationwide. Data from the USCRN are used in various climate monitoring activities and for placing current climate anomalies into an historical perspective. The USCRN provides the United States with a reference network that contributes to an International network under the auspices of the Global Climate Observing System (GCOS). ARL/ATDD manage the USCRN in partnership with NOAA's NESDIS/NCEI.

### **Fairmont**

#### **National Environmental Satellite, Data, and Information Service (NESDIS) - [Consolidated Remote Backup Unit](#)**

The Geostationary Operational Environmental Satellite-R (GOES-R) and the Joint Polar Satellite System Programs have established a backup facility, which includes antennas for acquiring data and commanding the GOES-R series and JPSS satellites, first launched in 2016 and 2017. The CBU allows NOAA's Office of Satellite and Production Operations to continue operating the GOES-R and JPSS ground network in the event the primary locations – the NOAA Satellite Operations Facility in Suitland, Md., and the Wallops (Va.) Command and Data Acquisition Station – are disabled. The ground system for GOES-R and JPSS is composed of computer systems, which control the satellites and process the satellite's data into products that scientists and meteorologists will use around the world. The facility is located on leased property in a local high-technology park.

#### **National Environmental Satellite, Data, and Information Service (NESDIS) - [Office of Common Services \(OCS\) - Comprehensive Large Array-data Stewardship System \(CLASS\)](#)**

The Comprehensive Large Array Storage System (CLASS) is NOAA's premiere online facility for the distribution of NOAA and US Department of Defense (DoD) Polar-orbiting Operational Environmental Satellite (POES) data, NOAA's Geostationary Operational Environmental Satellite (GOES) data, and derived data. The CLASS development team is located in Fairmont, WV adjacent to the high-technology park, and NESDIS and NASA facilities.

#### **National Weather Service (NWS) - [NCEP Weather Supercomputing](#)**

The backup of the NWS weather supercomputing capability is intended to provide the computing and communications equipment needed to assume the workload of the primary supercomputer system in case of system or communication outage. The primary system receives and processes the extensive amounts of environmental data acquired by modernized observing systems, and runs highly sophisticated numerical weather prediction models. Execution of this program promotes public safety and the protection of property by providing the NCEP with the computer systems that are capable of producing more accurate numerical weather prediction (NWP) guidance products for hurricanes, severe thunderstorms, floods, and winter storms.

#### **Office of the Chief Information Officer (OCIO) - [N-Wave NOAA Science Network](#)**

N-Wave is NOAA's science network connecting NOAA, academic, and state research network communities to data and resources needed to advance environmental science.

#### **Office of the Chief Information Officer (OCIO) - [High Performance Computing and Communications](#)**

The Office of the Chief Information Officer manages research and development high performance computing for weather and climate modeling, research, and predictions, supporting improvements in areas such as the prediction of severe weather, seasonal prediction of temperature and precipitation, and forecasting the next Sandy-like storm.

#### **Office of Oceanic and Atmospheric Research (OAR) - [NOAA High-Performance Computing](#)**

A high performance computer, located at the NOAA Environmental Security Computing Center (NESCC) in Fairmont, West Virginia, allows Geophysical Fluid Dynamics Laboratory (GFDL) researchers to develop and refine advanced weather models. Named Hera, this high-performance computer replaced Theia in Summer 2019.

**Office of the Chief Information Officer (OCIO) - [NOAA Cyber Security Center](#)**

The NOAA Cyber Security Center (NCSC) provides 24x7 security operations, incident response, and enterprise security services to the Department of Commerce and NOAA programs and missions across the entire nation as well as internationally. The cutting-edge NCSC provides monitoring, analysis and appropriate escalation of information security events to protect and ensure the confidentiality, integrity, availability and compliance of the information technology enterprise. The NCSC is approximately 50 personnel, both Federal Government and Contract employees. The majority are located in Fairmont, West Virginia at the Robert H. Mollohan Research Center at the West Virginia High-Tech Center (WVHTC).

**Office of the Chief Information Officer (OCIO) - [Service Delivery Division](#)**

The Service Delivery Division provides a suite of IT services to support NOAA's mission. Our work includes IT infrastructure design and maintenance, network and server management and administration, desktop configuration and maintenance, application and system design and implementation, and IT security.

**[Statewide](#)**

**National Marine Fisheries Service (NMFS) - [Restoration Center](#)**

The [NOAA Restoration Center](#), within the [Office of Habitat Conservation](#), works with partners across the nation to restore habitat to sustain fisheries, recover protected species, and maintain resilient coastal ecosystems and communities. We have over 30 years conducting habitat restoration through competitive funding opportunities and technical assistance. We also work to reverse habitat damage from disasters like oil spills, ship groundings, and severe storms. The Restoration Center provides funding and technical guidance to restore coastal habitat in West Virginia and nationwide. In-stream restoration has been completed in West Virginia. See the interactive [Restoration Atlas](#) to find habitat restoration projects near you. Site visits to see habitat projects may be available in West Virginia, please inquire if interested.

**National Ocean Service (NOS) - [Regional Geodetic Advisor](#)**

The Regional Geodetic Advisor is a National Ocean Service (NOS) employee that resides in a region and serves as a liaison between the National Geodetic Survey (NGS) and its public, academic and private sector constituents within their assigned region. NGS has a Regional Geodetic Advisor stationed in Columbus, Ohio serving the Appalachian region including West Virginia. The Geodetic Advisor provides training, guidance and assistance to constituents managing geospatial activities that are tied to the National Spatial Reference System (NSRS), the framework and coordinate system for all positioning activities in the Nation. The Geodetic Advisor serves as a subject matter expert in geodesy and regional geodetic issues, collaborating internally across NOS and NOAA to ensure that all regional geospatial activities are properly referenced to the NSRS.

**National Weather Service - [NEXRAD \(WSR-88D\) Systems](#)**

NEXRAD is used to warn the people of the United States about dangerous weather and its location. This radar technology allows meteorologists to warn the public to take shelter with more notice than ever before. The NEXRAD network provides significant improvements in severe weather and flash flood warnings, air traffic safety, flow control for air traffic, resource protection at military bases, and management of water, agriculture, forest, and snow removal. NEXRAD radar has a range of up to 250 nautical miles, and can provide information about wind speed and direction, as well as the location, size, and

shape of precipitation. There are 159 operational NEXRAD radar systems deployed throughout the United States and overseas, of which one is in West Virginia.

**National Weather Service (NWS) - [Automated Surface Observing Systems Stations](#)**

The Automated Surface Observing Systems (ASOS) program is a joint effort of the National Weather Service (NWS), the Federal Aviation Administration (FAA), and the Department of Defense (DOD). ASOS serves as the Nation's primary surface weather observing network. ASOS is designed to support weather forecast activities and aviation operations and, at the same time, support the needs of the meteorological, hydrological, and climatological research communities. ASOS works non-stop, updating observations every minute, 24 hours a day, every day of the year observing basic weather elements, such as cloud cover, precipitation, wind, sea level pressure, and conditions, such as rain, snow, freezing rain, thunderstorms, and fog. There are ten ASOS stations in West Virginia.

**National Weather Service (NWS) - [Cooperative Observer Program Sites](#)**

The National Weather Service (NWS) Cooperative Observer Program (COOP) is truly the Nation's weather and climate observing network of, by and for the people. More than 10,000 volunteers take observations on farms, in urban and suburban areas, National Parks, seashores, and mountaintops. The data are representative of where people live, work and play. The COOP was formally created in 1890 under the NWS Organic Act to provide observational meteorological data, usually consisting of daily maximum and minimum temperatures, snowfall, and 24-hour precipitation totals, required to define the climate of the United States and to help measure long-term climate changes, and to provide observational meteorological data in near real-time to support forecast, warning and other public service programs of the NWS. The data are also used by other federal (including the Department of Homeland Security), state and local entities, as well as private companies (such as the energy and insurance industries). In some cases, the data are used to make billions of dollars' worth of decisions. For example, the energy sector uses COOP data to calculate the Heating and Cooling Degree Days which are used to determine individuals' energy bills monthly. There are 117 COOP sites in West Virginia.

**National Weather Service (NWS) - [NOAA Weather Radio All Hazards Transmitters](#)**

NOAA Weather Radio All Hazards (NWR) is a nationwide network of radio stations broadcasting continuous weather information directly from the nearest National Weather Service (NWS) forecast office. NWR broadcasts official NWS warnings, watches, forecasts and other hazard information 24 hours a day, 7 days a week. Working with the Federal Communication Commission's (FCC) Emergency Alert System, NWR is an "All Hazards" radio network, making it the single source for comprehensive weather and emergency information. In conjunction with federal, state, and local emergency managers and other public officials, NWR also broadcasts warning and post-event information for all types of hazards – including natural (such as earthquakes or avalanches), environmental (such as chemical releases or oil spills), and public safety (such as AMBER alerts or 911 Telephone outages). Known as the "Voice of NOAA's National Weather Service," NWR is provided as a public service by the NWS. NWR includes 1,100 transmitters covering all 50 states, adjacent coastal waters, Puerto Rico, the U.S. Virgin Islands, and the U.S. Pacific Territories. There are 12 NWR transmitters in West Virginia.

**Office of Oceanic and Atmospheric Research (OAR) - [Sustained Carbonate Chemistry Observation Moorings](#)**

The Carbonate Chemistry Observing Mooring network is a sustained investment in ocean chemistry observing network in U.S. waters and abroad. There are currently 19 buoys in coastal, open-ocean and coral reef waters that contribute to this network. The time series created from these moorings are key to understanding how ocean chemistry is changing over time in these ecosystems by providing continuous and long-term observations of ocean conditions. These buoys are seated in three locations in Alaska (Gulf of Alaska, Papa, Bering Sea), two in California (California Current Ecosystem 1 &

2), one in the Chesapeake Bay (DE, MD, NY, PA, VA, WV), Coastal Mississippi (MS), Florida (Cheeca Rocks), Georgia (Grays Reef), Oregon (Newport Hydrographic Line), Maine (Gulf of Maine), and Washington (Cha'ba in La Push).

**National Ocean Service (NOS) - Students for [Zero Waste Week](#)**

Students are inviting their local communities to "Go Green and Think Blue" by joining them in the annual *Students for Zero Waste Week campaign*. During this campaign led by the Office of National Marine Sanctuaries, students focus on reducing land-based waste in order to protect the health of local marine environments. These young leaders are raising awareness of how single-use plastic and other types of litter affect the health of local watersheds, national marine sanctuaries, and the ocean. In addition, some schools are looking at ways to reduce their energy use on campus with hopes of raising awareness of how the burning of fossil fuels also impacts the health of the ocean.

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**NOAA In Your State is managed by [NOAA's Office of Legislative and Intergovernmental Affairs](#) and maintained with information provided by NOAA's Line and Staff Offices. Questions about specific programs or offices should be directed to the NOAA Line or Staff Office listed.**

**More information for those offices may be found at [NOAA.gov](#).**

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