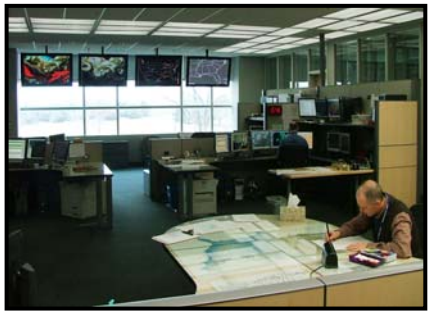
Storm Prediction Center

Storm Prediction Center
Norman, Oklahoma
www.spc.noaa.gov

The Storm Prediction Center provides hazardous weather forecasts, including critical tornado and severe thunderstorm watches. The SPC also provides forecasts for mesoscale hazards such as thunderstorms, winter storms, and wildfires. These forecasts protect life and property and improve economic productivity.

Who We Are

The Storm Prediction Center (SPC) is part of the National Weather Service's (NWS) National Centers for Environmental Prediction (NCEP). The SPC exists to protect life and property of the American people through the issuance of timely, accurate watch and forecast products dealing with tornadoes and other hazardous mesoscale weather phenomena.

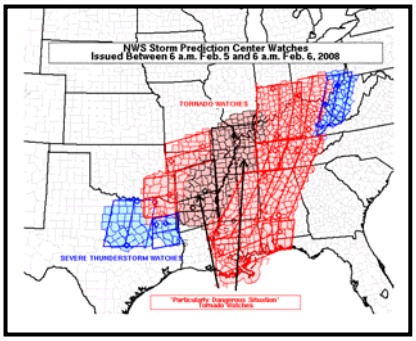


A critical component of the NWS Watch and Warning Program, the SPC focuses on hazardous weather, such as:

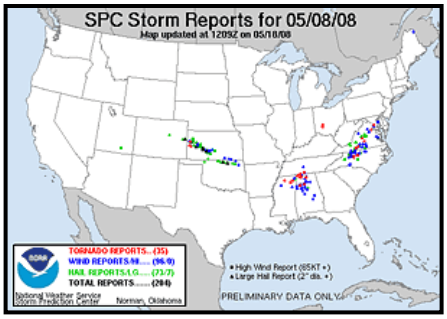
- Tornadoes, large hail, strong wind gusts, and heavy precipitation associated with thunderstorms;
- Freezing rain, rapidly accumulating snow, and blizzard conditions associated with winter storms; and
- Hot, dry, windy conditions, often accompanied by "dry lightning," associated with the development and spread of wildfires.

What We Do

Every Tornado and Severe Thunderstorm Watch issued in the United States originates at the Storm Prediction Center. In addition, SPC forecasters create forecasts of thunderstorms, severe thunderstorms, and areas susceptible to wildfires up to 8 days in advance. Technical discussions and short term guidance forecasts are issued for mesoscale conditions that are expected to produce hazardous weather. Finally, hourly, daily, and climatological lists of severe thunderstorm events are compiled and disseminated by the SPC.



The SPC is the nation's only all-hazards weather forecast center. It deals with hazardous weather 24 hours a day, 365 days a year. The SPC maintains a continuous weather watch over the entire contiguous United States, and issues most of its products on an as-needed, event-driven basis. The SPC provides its partners and customers a one-stop source of mesoscale meteorological information.



All products issued by the SPC are available on the World Wide Web at ***www.spc.noaa.gov***. Our products are commonly used by local National Weather Service offices, emergency managers, TV and radio meteorologists, private weather forecasting companies, the aviation industry, storm spotters, agriculturalists, educational institutions, and many other groups.

NOAA Hazardous Weather Testbed (HWT) Spring Experiment

The **NOAA HWT Spring Experiment** is a yearly experiment that investigates the use of convection-allowing model forecasts as guidance for the prediction of severe convective weather. A variety of model output is examined and evaluated daily during the experiment, and experimental severe weather forecasts are created and verified. The variety of model output allows us to explore different types of guidance, including products derived from both ensemble and deterministic forecasts.

The NOAA HWT in Norman rose from a grassroots level after the Storm Prediction Center (SPC) moved its operations to the National Severe Storms Laboratory (NSSL) facility in 1997. The mutual interests of forecasters from the SPC, researchers from NSSL, and collocated joint research partners from the Cooperative Institute for Mesoscale Meteorological Studies (CIMMS) inspired the formation of the HWT. The testbed's activities have been varied. Projects have included daily map discussions of imminent severe weather, loosely-related research projects involving two to three collaborators, and intensive collaboration periods between groups of researchers and forecasters.

The cornerstone of the testbed is the SPC/NSSL Spring Experiment, a series of annual experiments that attracts 50-60 researchers and forecasters to Norman each year. The premise of each Spring Experiment is to provide forecasters with a first-hand look at the latest research concepts and products, while immersing research scientists in the challenges, needs, and constraints of front-line forecasters. In practice, this program gives forecasters direct access to the latest research developments while imparting scientists with the knowledge to formulate research strategies that will have practical benefits. The end result is not only better severe-weather forecasts, but important contributions to the scientific literature as well. More information on the NOAA Hazardous Weather Testbed may be found at http://www.nssl.noaa.gov/projects/hwt/.

National Severe Weather Workshop

Every March, the Storm Prediction Center conducts the National Severe Weather Workshop (NSWW). The workshop provides a national forum for emergency managers and media to exchange ideas with academia and federal government experts from the National Oceanic and Atmospheric Administration (NOAA). This collaboration is designed to enhance partnerships between severe weather forecasters and researchers, emergency managers, broadcast meteorologists, businesses, storm spotters, and other weather enthusiasts.

For the past 10 years, participants from more than 30 states have gathered in Norman to identify communities at risk, evaluate current and future tools for hazardous weather assessment, and discuss communication technologies and meteorological careers. The event is hosted by NOAA's National Weather Service and Office of Oceanic and Atmospheric Research, the Oklahoma Emergency Management Association (OEMA), and the Central Oklahoma Chapter of the American Meteorological Society/National Weather Association (COCAMS).

A highlight of the National Severe Weather Workshop is the Trade and Technology Expo. Leading and innovative companies in the emergency response and emergency preparedness fields showcase their products and services to the 400 – 500 attendees at the workshop.

More information on the National Severe Weather Workshop may be found at http://www.norman.noaa.gov/nsww/.

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