

# NOAA's Climate Prediction Center

## *Understanding the Present... Predicting the Future*

### OUR MISSION

We deliver climate prediction, monitoring and diagnostic products for time scales from weeks to years to the Nation and the global community for the protection of life and property and the enhancement of the economy.

**Location:** Camp Springs, Maryland

**Staff:** 50 federal employees; 25 on-site contracted employees; and 2 staff of the Cooperative Institute for Climate and Satellites

**Background:** In response to anomalous climate events in the 1960s and 1970s, NOAA organized the Climate Analysis Center (later the Climate Prediction Center or CPC) in 1979, to undertake and coordinate climate diagnostics and prediction. From these humble beginnings the CPC expanded its focus from gathering, analyzing, monitoring, and diagnosing climate data and information to providing climate predictions on time scales out to a year. Prediction of climate variability requires high quality data and models that are scientifically state-of-the-art. CPC has continually expanded its capabilities and expertise to provide users of climate information with effective climate forecast products and tools to make informed decisions.

### What We Do

- Deliver official climate forecasts for the Nation – from precipitation and temperature to hurricanes and drought - on weekly, monthly and seasonal time scales.
- Monitor atmospheric, oceanic, and land-surface climate variability, including phenomena such as El Niño/Southern Oscillation, monsoons, droughts and ocean heat content.
- Provide diagnoses of the state of the climate system, including the monthly Climate Diagnostics Bulletin and ENSO Diagnostics Discussion, weekly hazards outlooks for the U.S. and global tropics, and seasonal attribution of climate anomalies.
- Lead ground-breaking research focused on improving climate models, understanding atmospheric and oceanic variability and predictability, attribution of climate anomalies, weather-climate linkages and forecast tool development.
- Manage the Climate Test Bed to accelerate the transition of research advances into operations, especially to support development of climate models, multi-model ensemble prediction systems, and climate products that meet user needs.
- Develop collaborative products and services both within and outside NOAA, for applications tied to drought, agriculture, hydrology and other applications aimed at improving regional predictions to minimize risks.
- Build partnerships with national and international partners, including the US Department of Agriculture via the “Joint Agriculture Weather Facility”, and support humanitarian activities around the globe.
- Provide climate training through the CPC International Desks, educate users of climate information, and ensure consistency with NOAA and NWS training plans.



The CPC staff, pictured above, ready to support NOAA's mission and vision.

# More About CPC

## Recent Accomplishments:

- Delivered the CPC official climate forecasts to the Nation for 2010-2011 in support of organizational goals related to the protection of life and property and the enhancement of the economy.
- Issued El Niña Advisories under the NOAA El Niño/Southern Oscillation (ENSO) Alert System, resulting in enhanced preparedness around the globe for the 2010-11 La Niña.
- Coordinated with the Environmental Modeling Center to complete the Climate Forecast System (CFS) Reanalysis and Reforecast Project (1979-2010) and incorporated the CFSv2 into CPC forecast operations.
- Updated climatology for real-time monitoring to 1981-2010.
- Developed a collaborative effort to improve understanding and prediction of Indian monsoon.
- Reported research results in more than 40 peer reviewed journal articles.
- Provided support for Deep Water Horizon and the Japan Nuclear Crisis from high resolution climate model predictions.
- Developed and implemented an interactive website to allow user-friendly access to forecast accuracy assessments.
- Provided support and leadership in expanding NOAA climate services, including a Needs Assessment on Changes in Extremes of Weather and Climate, the NOAA Climate Portal, and a “NOAA Climate Monitoring Summit”.
- Implemented recommendations from the 2009 external review of CPC, resulting in improved operational climate outlooks, enhancements to the collaborative forecast process across NCEP and with the NWS regions and field.
- With support from the NOAA Climate Program Office and the Climate Test Bed, delivered a suite of drought forecast products for the National Integrated Drought Information System, and provided the foundation for an operational multi-model ensemble prediction system with European partners.
- Led climate workshops and panels, including the 35th annual Climate Diagnostics and Prediction Workshop, to improve collaboration and partnerships with the climate research and modeling community.
- Provided the NWS Regions and Field with briefings, tools and climate information on impacts and conditions related to recent La Niña and other climate extreme events such as the winter 2010-11 East Coast snowstorms, resulting in improved coordination of climate information across the NWS.
- Expanded the NCEP Residency Training Program to include an “International Monsoon Forecaster Training Desk”.
- Provided global leadership in the exchange of climate products, and training opportunities by partnering with other meteorological services through bi-laterals with China, Taiwan, India, Korea and Mexico.

