



NOAA's Weather and Water Goal



What is requested?

- **COOP Modernization:** \$1.4M: O&M for 460 modernized COOP sites in the NE
- **NWS Gateway:** \$0.9M: Complete 2-year acquisition/replacement program
- **Air Quality Forecasts:** \$5.5M: Operational AQ Ozone forecasts for the NE
- **USWRP/THORPEX:** \$1.0M: Accelerate improvements in 7-14 day forecasts
- **C-GOOS:** \$2.0M: Expand Marine Observation Network and add Ocean sensors
- **Space Environment Center (SEC):** \$2.3M: Ensure continuity of SEC services
- **NEXRAD:** \$0.4M: Complete radar signal improvements
- **GOES:** \$25.5M for Geostationary Satellite Development.
- **NPOESS:** \$21.7M for Polar Orbiting Satellite Development.

What are the benefits?

- **COOP Modernization:** Quantitative improvements in 24-hour Temperature Forecasts, Flash Flood Forecasts and Drought Forecasts/Outlooks enhances the Nation's economy. A TVA study found that a one-degree improvement in temperature forecasting could save the energy industry \$1B annually.
- **NWS Gateway:** Improvements to the Gateway will enhance processing speed, providing more timely distribution of key weather observations and model guidance to NWS forecasters, partners, and customers (emergency managers, private industry, media, and the DOD).
- **Air Quality:** The Air Quality Forecasting capability will provide accurate and timely air quality forecasts to alert the public of poor air quality.
- **USWRP/THORPEX:** Accelerate improvement of the Nation's operational 7-14 day high impact weather forecasts. Goal: Provide the Nation with 7-14 day forecasts that are as reliable and useful as 2-3 day weather forecasts through partnered international (WMO) and interagency (NASA, USN and NSF) global weather predictability research.
- **C-GOOS:** Adds coastal U.S. oceanographic sensors to the international Global Ocean Observing System (GOOS) and will provide the NWS with improved marine observations and will improve marine weather forecasts and warnings.
- **SEC:** The SEC provides real-time monitoring, assessment and prediction of the Earth's space environment, largely solar phenomenon that impact the Earth. This increase will allow the NWS to maintain SEC's critical space forecast products and services in support of the Nation's energy and telecommunications industries, NASA and the DOD.
- **GOES/NPOESS:** Satellite data products critical to support NOAA's Weather and Water activities.

Why do we need it?

- **COOP Modernization:** The lack of real-time, high-density surface observations contribute to 24-hour Temperature, Flood and Drought forecast errors. Quantitative improvements in these forecasts will enhance the Nation's economy.
- **NWS Gateway:** Current processing systems are obsolete and over-saturated. New switching systems will speed dissemination of NWS forecasts and warnings; improve infrastructure support for continuity of services.
- **Air Quality:** Poor National air quality leads to health problems (\$147B/year) and significant loss of life (40,000/year). These losses can be mitigated with accurate and timely air quality forecasts.
- **USWRP/THORPEX:** Current extended weather forecast errors are high. Skill improvements to these forecasts requires an increased international understanding of global weather. Improvements to these extended forecasts will enhance the Nation's economy.
- **C-GOOS:** Lack of coastal weather observations degrade the accuracy of marine weather forecasts in support of the Nation's commercial and recreation marine industry.
- **SEC:** NOAA must maintain its solar forecast and warning capabilities in support of sensitive public and private data users (Space, Power, and telecommunications industries).
- **GOES/NPOESS:** Satellite data products critical to support NOAA's Weather and Water activities.

What will we do?

- **COOP Modernization:** Operate and maintain the modernized COOP sites; identify and add non-NOAA mesonets; support central COOP database processing capabilities
- **NWS Gateway:** Replace server and front-end processors; address facility deficiencies (HVAC and UPS); Refresh technology cyclically
- **Air Quality:** Predict for the Northeastern U. S., the onset, duration and severity of poor air quality condition; Achieve 90% forecast accuracy for ozone in the Northeast.
- **USWRP/THORPEX:** Partner with the international community (WMO), NASA, the USN, and the NSF, to conduct extended range global weather predictability research through competitive grants.
- **C-GOOS:** In support of the President's Commission on Ocean Policy, adds ocean sensors to all existing buoys and C-MAN stations; adds 15 C-MAN stations to the existing Marine Observation Network.
- **SEC** increase will allow the NWS to maintain SEC's products and services.
- **GOES/NPOESS:** Support preliminary design, instrument development and continued risk reduction activities.