

Observation Services

Vision

To set policy, develop procedures, and articulate requirements for the maintenance and enhancement of in-situ and remote environmental monitoring.

Concept of Operations

The Cooperative Observer Network (COOP) and the radiosonde network are being modernized. Modernization activities include replacement of the current 91 station upper air network and enhancement of 8,000 cooperative observing stations over the remainder of the decade.

As part of a demonstration pilot in New England, about 400 stations are scheduled to be modernized. The modernization of NWS-sponsored observing programs involves integrating new technologies and science, while building stronger relationships with NOAA's public and private sector partners.

Customer and Partner Requirements

- ✓ Real-time access to Automated Surface Observing System (ASOS) data and COOP data.
- ✓ Access to mesonet data.
- ✓ Access to high-resolution data.

Link to Science and Technology Infusion Plan

The future for Observing Services includes:

- ✓ Air quality sensors.
- ✓ Boundary layer profilers.
- ✓ Advancements in communications.
- ✓ More detailed aircraft meteorological reports.
- ✓ Increased capacity of satellite reports.
- ✓ Global Positioning System (GPS).
- ✓ Improved GPS radiosonde measurements.
- ✓ Improved use of surface transportation sensors.



Science and Technology Requirements

- ✓ Continue data assimilation.
- ✓ Generate ocean atmosphere model resolution and mesoscale physics.
- ✓ Couple mesoscale ocean and atmospheric Numerical Weather Prediction (NWP) models.
- ✓ Expand targeted observations.
- ✓ Produce high-resolution modeling at the land surface.



Modernized COOP site in New England sensor configuration, demonstrates the partnership between NWS and the USDA.

Milestones by Quarter

1st Quarter

- Deploy 20 radiosonde replacement systems.
- Begin planning for the next phase of COOP deployments.
- Prepare a white paper defining training needs for the legacy and modernized COOP networks.
- Implement the new COOP Length of Service award process.
- Implement new snow-paid program.

2nd Quarter

- Finalize Global Climate Observing System (GCOS) metadata for NWS upper air network stations.
- Revise GCOS Global Upper Air Network (GUAN) sites and CLIMAT data implementation.
- Reestablish National COOP newsletter.
- Develop training materials for the Fischer & Porter upgrade.

3rd Quarter

- Review the status of on going ASOS sensor continuity evaluations and prepare a report in coordination with the National Climate Data Center.

4th Quarter

- Begin development of a series of training videos for COOP observers.
- Begin the Fischer & Porter continuity evaluation.

Integrated Requirements

- ✓ Graphic user interface in OB2.
- ✓ Local Data Acquisition and Dissemination (LDAD) capability to ingest mesonet data.

Data Assimilation

- ✓ Work with the FSL to provide data collection capabilities.
- ✓ Provide improved interim data assimilation for COOP data.
- ✓ Secure National support for the Central Region Weather Coder II (WxCoder II) and Southern Region Interactive Voice Remote Observation Collection (IV-ROCS) system data assimilation solutions.

Outreach

- ✓ Participate in WMO OPAG for International Organizing Committee on Radiosonde Comparisons.
- ✓ Attend WMO International Radiosonde Comparison in Mauritius.
- ✓ Participate in May 2005 Commission for Instrument and Methods of Observation (CIMO) in Bucharest, Romania.
- ✓ Monitor radiosonde testing on regional and national levels and report to the WMO Technical Conference on Meteorological and Environmental Instruments and Methods of Observation (TECO).

- ✓ Develop procedures for the publication of results of WMO intercomparisons for inclusion in chapter 5 of the CIMO guide.
- ✓ Develop performance measures to demonstrate continuous improvement of data quality of radiosonde observations.

Verification

- ✓ Coordinate the process of using COOP data sites for temperature forecast verification.

Contact Information

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