# IMPROVED NWS CLIMATE PRODUCTS AND SERVICES IN RESPONSE TO CUSTOMER FEEDBACK

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#### 1. INTRODUCTION

The National Weather Service's Climate Services Division (CSD), under the Office of Climate, Water, and Weather Services, hosted two workshops in 2002 to gather feedback from customers of climate products. The Drought Outlook Workshop was held in April 2002 to gather customer input on that particular forecast product. The COOP Modernization Partners' Forum, held in September 2002, provided a means for Cooperative Observers Program (COOP) partners to discuss plans for COOP network modernization directly with high-level NOAA management.

## 2. DROUGHT OUTLOOK WORKSHOP

The Drought Outlook, issued by the Climate Prediction Center (CPC) in the middle of each month, is a threeand-a-half month forecast of the progression of drought conditions across the U.S. The product forecasts drought onset and relief, as well as areas of spotty improvement or no change. The outlook is available at: http://www.cpc.ncep.noaa.gov/products/expert\_assess ment/seasonal\_drought.html.

CSD sponsored a Drought Outlook Product Evaluation Workshop on April 3, 2002, in Kansas City, Missouri, to solicit agricultural customer feedback on the product's content, interpretation, and access for consideration in improving the product.

In response to the suggestions made by customers at the workshops, changes to the Drought Outlook either have already been made or are ongoing.

#### 2.1. Meeting purpose

Twenty-seven representatives of agriculturally-oriented interests in the private sector and the government participated in the workshop, including participants from commodities/futures, market advisory services, educators, forecasters, water supply managers, and politicians.

The goal of the workshop was to solicit agricultural customer feedback on the product's content, interpretation, and access for consideration in improving the product.

#### 2.2. Results

Figure 1 is the Drought Outlook for April-May-June 2002 released on March 14, before any changes were made as a result of the Drought Outlook Workshop. Immediately following the workshop, the following changes were made:

- Addition of a color legend.
- Increased consistency with CPC long-lead forecast.

Within the next several months, the following changes were also implemented:

- Mid-month updates when unforeseen weather events (i.e. tropical storm landfall) change drought conditions and forecast significantly (August).
- Addition of more detailed information on the reasoning behind the outlooks, so users could examine the various products used to create the outlook and gain a better understanding of the forecaster's confidence (October).

The format of the Drought Outlook following these initial changes appears as Figure 2. This outlook is a revision (issued on September 25) of the initial September 19 release of the October-November-December 2002 forecast, following a more confident forecast of the landfall of Tropical Storm Isidore (2002).

Several other recommendations from the workshop are also under consideration for implementation, including: • Adding a historical verification database.

- Providing multiple layers (versions) of complexity of
- Providing multiple layers (versions) of complexity of the Drought Outlook to provide guidance for a wider customer base (from layman to professional meteorologists).
- Changing the issuance time from 3:00 p.m. to a morning release so that U.S. markets have the information before overseas markets.
- Consistently increasing the update frequency of the Drought Outlook from the current once-per-month schedule to monthly plus as needed if changing conditions warrant.

A workshop report is also available at:

http://www.nws.noaa.gov/om/csd/workshop/drought200 2 2.shtml.

## 3. COOP MODERNIZATION PARTNERS' FORUM

This forum provided partners with detailed information about NOAA's proposal to modernize the COOP

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network and the benefits that will be realized when the plan is implemented. Currently, COOP data are unavailable for several months after the observations are taken. The network operates in basically the same manner as it did when it was first created over 100 years ago; the system uses pencil and paper to record observations and U.S. mail to communicate data. The network has been successful in fulfilling its original agriculturally-oriented mission of defining the weather and climate of the United States. However, its data are now needed in near real-time by NOAA and its customers for a myriad of applications. Modernization will benefit many sectors of the national economy. The modernization satisfies many of the recommendations by a 1998 National Research Council report.

#### 3.1. Meeting purpose

The goals of the Forum were to provide customers of NOAA COOP data with detailed information on the technical proposal for modernizing the COOP network system architecture and to allow customers direct exchange with NOAA COOP management.

One hundred representatives from the government and private sectors participated in the workshop, including representatives from state and regional climatologist groups, energy, media, weather risk management, private meteorology, and COOP observers. The keynote speaker was Deputy Secretary of Commerce Samuel Bodman.

## 3.2. Results

The forum provided valuable information for partners on the COOP modernization process. Through the forum, partners were informed of the options available to support modernization:

 Option 1 - Equipment on privately owned site can be covered by a written agreement that grants approval



Figure 1. Drought Outlook issued in March 2002 for April-May-June 2002, before changes resulting from the Drought Outlook Workshop. to install the equipment, addresses liability issues and states "who pays for what."

- Option 2 Non-profit entities can jointly fund and operate a site with equitable apportionment of costs.
- Option 3 A gift can be made to NOAA. NOAA can accept gifts of equipment and instruments to do its work, subject to certain conditions.

Partners expressed overwhelming support for the modernization plan. They voiced concerns that included how best to integrate mesonets and how to accelerate the scheduled implementation of modernization from 12 years to 4 years.

The speakers' PowerPoint presentations, as well as a conference report, are available at: http://www.nws.noaa.gov/om/csd/workshop/COOP/\_

## 4. CONCLUSIONS

The Climate Services Division continues to strive to improve customer service by soliciting and validating our partners' needs and recommendations and then incorporating these into climate products and services.

CSD plans to hold workshops in 2003 to gather customer feedback. The specific topics and dates will be announced at the AMS Annual Meeting; details will also be available on the CSD website at: http://www.nws.noaa.gov/om/csd/.

## 5. REFERENCES

NRC, 1998: Future of the National Weather Service Cooperative Observer Network. National Weather Service Modernization Committee, Washington, DC, National Academy Press.



Figure 2. Drought Outlook issued in September 2002 for October-November-December 2002, following the first set of changes resulting from the Drought Outlook Workshop. Note the addition of a legend to the lower left corner of the figure.