

A Framework to Enhance Drought Monitoring and Prediction
Executive Summary - June 22, 2001
by Phil Pasteris, Mark Brusberg and Mark Svoboda

Background

Drought monitoring, mitigation, and prediction remain a strategic and critical activity for this nation. At the present time, severe drought affects major portions of the Pacific Northwest and Southeastern United States. The current drought's effects have permeated the country's economy in the form of water and energy shortages, agricultural restrictions and increased wildfire danger. Local, state, Tribal, and Federal officials are on the front line to implement drought response and mitigation measures.

The May 2000 Report of the National Drought Policy Commission (NDPC) made a number of recommendations to address the country's need to prepare for drought. Five separate, but interrelated, goals were established by the Commission to guide Congress in creating and maintaining a mechanism for assessing and mitigating the effects of drought in the United States. To that end, the climate community has been specifically tasked to create a framework to meet the second goal of the NDPC Report:

Goal 2: Improve collaboration among scientists and managers to enhance the effectiveness of observation networks, monitoring, prediction, information delivery, and applied research and to foster public understanding of and preparedness for drought.

Recommendations for meeting the above goal identify a framework of activities to improve early drought detection, improved response to the event in a proactive way, and help to trigger actions within drought plans at various levels of government.

Findings of the Monitoring and Prediction (MAP) Task Force

Drought monitoring requires quality, real-time climatic and hydrologic data to create reliable, easily accessible products for the end user. To support the goals of the NDPC in the area of data collection and information dissemination, new investments are needed in the following areas:

Activity	1 Year	5-Year
Drought Monitoring and Prediction	\$0.3 mil	\$1.5 mil
Information Delivery	\$1.7 mil	\$8.5 mil
Technology Transfer and New Research	\$3.5 mil	\$17.5 mil
Total	\$5.5 mil	\$27.5 mil

These activities would be supported by the upgrade of existing programs and infrastructure. Foremost among these are:

- o The National Drought Mitigation Center (NDMC) – The NDMC figures prominently in the Goal 2 recommendations. A stable avenue for funding the NDMC through the USDA would ensure continuation of its operation and enable the creation of a “One-Stop” information

A Framework to Enhance Drought Monitoring and Prediction
Executive Summary - June 22, 2001
by Phil Pasteris, Mark Brusberg and Mark Svoboda

delivery information system, supplying the public with data and allowing access to its existing substantial information library;

- o The Unified Climate Access Network (UCAN) – This product, which allows a user to obtain observations and Metadata throughout the country is currently in its Beta-test phase;
- o The Regional Climate Centers – These centers, which have a history of collecting and disseminating weather and climate data from various sources (Federal and non-Federal), are the source of data for the UCAN data acquisition process;
- o The National Climate Data Center (NCDC) – The official archival of the National Weather Service, NCDC is able to archive data from other sources in the interest of supporting a UCAN-based system.

In addition, members of the MAP Task Group identified the following current Federal programs that, if sufficiently funded, are vital in meeting the NDPC Goals and should be fully supported by its members:

Activity	Multi-Year
Network Modernization and Expansion	
NOAA	\$212.0 mil
USDA	\$105.9 mil
USGS	\$ 69.0 mil
USDA Soil Survey	\$145.0 mil

The MAP Task Group also recognizes that non-Federal networks are a vital element of state, local, and municipal-level monitoring efforts, which may contribute a great deal to a national-level monitoring system. The non-Federal climate networks, which are operated independently from the aforementioned Federal networks, spend approximately \$5,000 to \$10,000 per site with an annual maintenance cost of approximately \$1,000 per site.

Additional funding to Tribal Nations or individual states, through the Regional Climate Centers, would ensure adequate coverage when combined with information collected at the Federal sites and disseminated through a coordinated information delivery system.

Summary

Members of the MAP Task Group have identified pre-existing components of a drought information delivery system. In some cases, these programs or centers require additional funding to target drought-related activities. Other programs that already directly provide solutions to the problem of drought mitigation require annual funding support for their continuation and would benefit from the backing of the Interim National Drought Council.