

Drought – National Drought Mitigation Center

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Western Drought Coordination Council:
Frequently Asked Questions

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Dr. Donald A. Wilhite, director of the National Drought Mitigation Center, was a member of the Western Governors' Association Drought Task Force. This task force has been working on the development of the Annual Work Plan of the Western Drought Coordination Council. The Council approved the work plan at its first meeting on June 12, 1997, in Albuquerque, New Mexico. The first meeting of the Council's working groups was held July 30–31, 1997, in Albuquerque. The National Drought Mitigation Center provides administrative leadership for the WDCC.

Q What is the Western Drought Coordination Council (WDCC)?

A Formed under the auspices of the Western Governors' Association, the Council is a group of representatives of federal, state, local, regional, and tribal governments working together to coordinate drought mitigation, preparedness, and response in the western United States. The Council co-chairs are Gary E. Johnson, Governor of New Mexico; and Daniel Glickman, Secretary of the U.S. Department of Agriculture. The Council was officially created in February 1997 with a memorandum of understanding (MOU) signed in February 1997 by representatives of key government agencies. The MOU provides the framework for the creation of the Council. A regional council was recommended as a way to achieve that goal.

Q What prompted the formation of the Council?

A Severe drought gripped the southwestern United States in 1996. Both the Western Governors' Association (WGA) and the Federal Emergency Management Agency (FEMA) convened task forces to study how society can be better prepared for

future droughts. Each recommended better coordination between government agencies and levels of government. Among those who kept the momentum going were elected officials from New Mexico—Governor Gary E. Johnson and Senator Pete Domenici—and the Western Governors' Association.

Q What does the WDCC hope to accomplish?

A Its general objectives, as stated in the 1997–98 Work Plan, are as follows:

- Encourage and help western states, local governments, and tribes to develop and implement drought preparedness and mitigation programs and plans by establishing and maintaining a clearinghouse of information on techniques and procedures for drought monitoring and prediction, response, planning, and mitigation.
- Identify and make recommendations on drought policy issues, legislation, and program implementation at the state, regional, and national levels.
- Improve information exchange and coordination at all levels of government by facilitating the development and implementation of an efficient drought monitoring and information delivery system.
- Heighten awareness and understanding of regional drought management and policy issues and promote the efficient use of water in the West.

Through a steering group, the Council will oversee and coordinate the work of several working groups. At their first meeting, working groups will establish priority for action items identified in the Council's Work Plan. So far, the Work Plan has established the following working groups and their goals and objectives:

Preparedness and Mitigation

This working group will concentrate on short- and long-term management and policy issues that are intended to reduce the economic, social, and environmental impacts (i.e., vulnerability) of drought in the West. The working group will identify preparedness actions, policies, and mitigation options that will facilitate this process and will work cooperatively with localities, states, Indian tribes, and federal agencies. The working group will build on the drought assessment, response, and planning experiences in western states, localities, and federal agencies, and will seek to identify new and innovative solutions to drought and water management issues. The working group will promote drought contingency planning, emphasizing a more proactive, anticipatory approach to drought management in the region.

For the purposes of the Work Plan, the term *mitigation* is defined as those specific measures, projects, and actions taken with the intent to save lives and reduce risk of future damage, hardship, or suffering from a drought.

Some general, ongoing goals of the Preparedness and Mitigation Working Group include:

- Developing recommendations to the Council for drought planning and management alternatives to mitigate short- and long-term impacts before, during, and after drought emergencies.
- Developing and maintaining an information clearinghouse on drought monitoring and prediction, response, mitigation, and preparedness for users throughout the region.
- Developing educational resources (e.g., booklets, reports, videos, drought simulations) that promote the concepts of drought planning and mitigation to a diverse audience.
- Interacting with local, state, tribal, and federal officials in the West and other regions to share experiences on drought planning and mitigation.

Action Items:

- *Review and analyze existing drought plans.* Analyze existing drought response plans adopted by

localities, states, tribes, federal agencies, and other entities and identify the similarities and differences between plans, including characteristics such as organizational structures, monitoring systems, and response programs. This analysis will be shared with all interested parties.

- *Inventory and assess mitigation options.* Inventory all relevant mitigation options implemented in response to recent drought events, and assess their relative effectiveness in both the short and long term, noting any opportunities for improvement.
- *Identify a model to conduct vulnerability assessments.* Promote the development and use of vulnerability assessments to determine the potential economic, environmental, and social impacts of drought on specific geographic regions and economic sectors in the West. For example, vulnerability assessments could be conducted for local water supplies and forests to determine the probable impacts associated with droughts of various intensity and duration.
- *Develop an information clearinghouse.* An information clearinghouse on drought monitoring and prediction, response, mitigation, and preparedness will be developed for users throughout the region in association with the ongoing programs of the National Drought Mitigation Center (NDMC).
- *Conduct drought planning workshops.* Drought workshops will be organized and conducted to help local, state, tribal, and federal governments and others learn how to prepare drought contingency plans and evaluate mitigation options. The working group may work with the NDMC in the organization of these workshops in the western region.

Monitoring, Assessment, and Prediction

Despite advances made over the past decade in understanding the climate system, meteorologists and climatologists cannot predict the onset and end of a drought. Research will continue to improve our knowledge about climate systems and our capability to understand and predict climate anomalies such as drought, but there are no simple solutions in sight. Therefore, it is imperative to develop a drought

monitoring system that provides timely recognition of the occurrence of drought to local, state, tribal, and federal officials responsible for implementing drought response measures. The goal of this working group will be to develop such a monitoring system.

Action Items—Monitoring:

- *Conduct a census of data networks.* The working group will conduct a census of federal, regional, state, local, and private remote and in situ hydrometeorological networks. The census will identify station or site location, environmental variables measured, instrumentation characteristics, and a comprehensive site history and other parameters of each network. Variables may include temperature, dew point, wind, snow, snow depth, snow water equivalent, streamflow, precipitation, reservoir storage, ground water, river stage, soil temperature, solar radiation, soil moisture, and evaporation. Initially, the working group will access data and products from the National Weather Service, Coop Network, USDA SNOTEL, and RAWS networks. The working group will access other networks later.
- *Develop a historical climate data base.* The working group will accumulate a historical data base for comparative analysis by initiating and maintaining a working relationship with current environmental archives including the National Climate Data Center (NCDC), the Regional Climate Centers, the Natural Resources Conservation Service's (NRCS) National Water and Climate Center, and the NRCS Soil Survey Center.
- *Link networks.* The working group will transform data from fragmented single-purpose networks into a multipurpose asset for management of renewable natural resources at a regional level by developing linkages of inventories and information from data networks and environmental archives.
- *Distribute climate-related information.* Once information from data networks are linked, the working group will make use of the Unified Climate Access Network (UCAN) to distribute climate-related products. UCAN is a national distribution network for climate-related products in an online climate data base format.

Action Items—Assessment:

- *Evaluate observed data.* The working group will conduct local, regional, and national evaluation of data, including mean, median, and variance, to highlight daily, weekly, monthly, seasonal, yearly, and historic anomalies.
- *Evaluate derived data.* The working group will monitor derived variables and indices for drought assessment, including the Palmer Drought Severity Index, Crop Moisture Index, Standardized Precipitation Index, Surface Water Supply Index, Crop Specific Indices, and Leaf Area Indices developed from the National Oceanic and Atmospheric Administration's (NOAA) Advanced Very High Resolution Radiometer (AVHRR) for the Normalized Difference Vegetation Index (NDVI).
- *Identify triggers for drought types.* The working group will make a determination of operational definitions and associated "triggers" and descriptive terms for meteorological, agricultural, and hydrological drought consistent with needs and activities of the Council. The working group will also determine appropriate indicators for assessing drought impact.
- *Regional drought assessment reports.* The Council believes a quarterly regional drought assessment report depicting current drought status in the region would be a useful tool for mitigating the impacts of drought. By identifying areas of future concern, a product of this type would enable the Council to be more proactive in its activities. The working group will develop content and format for such a report in the first year, possibly issuing several prototype releases in preparation for formal, scheduled releases in year two.

Action Items—Prediction:

- *Weather and climate predictions.* Monthly, seasonal, annual, and interannual forecasts will be monitored by the working group and interpreted for decision makers.
- *Forecast verification.* The working group will monitor the verification efforts for long-range forecasts to evaluate their suitability for use by decision makers involved in drought-related activities.

- *Drought prediction techniques.* The working group will monitor drought prediction techniques and technologies, including the application of soil moisture, evaporation, and atmospheric and global ocean circulation to support improved forecasting.

Response

This working group will concentrate on enhancing the drought response capability of states, promoting regional drought response mutual aid, strengthening intergovernmental response partnerships, and improving overall drought response management and customer service for future droughts by (1) identifying and cataloging drought assistance programs, resources, and points of contact; (2) aggregating western states' unmet needs in times of drought; (3) identifying drought response programmatic and policy issues; (4) developing action recommendations for issue resolution; (5) identifying potential drought response mitigation strategies, in cooperation with the Preparedness and Mitigation Working Group; and (6) publicizing drought response lessons learned, in cooperation with the Communications Working Group.

Action Items:

- *Review of drought reports.* Review WGA and FEMA drought reports on the recent southwestern drought; consolidate/receive action reports, including lessons learned; and recommend actions to resolve residual issues. Track and report status of issue resolution.
- *Assistance program catalog development.* In conjunction with the Communications Working Group, develop and disseminate a catalog of federal assistance programs, general eligibility criteria, funding availability, and points of contact for each program.
- *Historical responses and strategies.* Develop a list of historical state responses to typical short-term drought impacts and potential strategies for addressing these impacts.
- *Drought occurrence actions.* When a drought occurs, the working group will aggregate reports for

the western states to identify unmet needs. In coordination with state drought response organizations, the working group will make action recommendations and facilitate response actions, mutual aid, and partnerships. Additionally, the working group will ensure that a regional post-drought report is completed for each drought.

Communications

The Communications Working Group's initial audience is identified as all parties interested in the objectives of the Council. The initial focus of this working group is to network with all parties interested in the mission of the Council and ensure that the proper means of communication are known, current, and widely distributed. The objectives of the working group are to (1) identify and use existing drought-related information networks and suggest complementary means of communication, where appropriate; (2) facilitate the exchange and dissemination of drought-related information, and act as a clearinghouse for those documents (where appropriate); (3) provide a forum for feedback and evaluation of information, programs, and services; and (4) provide an active communication outreach service for the Council through press releases and the preparation of articles for publication.

Action Items:

- *Prepare communication strategy.* Prepare, in cooperation with the co-chairs of the working groups and the steering group, a communication plan to implement the strategy for the Council and working groups. The plan will address communication and education products and their contents, as well as the dissemination of the information produced by working groups.
- *Prepare drought-related program directory.* Prepare and distribute a directory of federal drought-related programs and points of contact for each of these programs in conjunction with the Response Working Group.

- *Prepare organizational directory.* Prepare and distribute a directory, with the approval of the steering group, of state, local, and other organizations who are involved or interested in drought-related issues. This directory would also include contact points that could be used in the coordination of drought response activities.
- *Develop drought media briefing package.* Develop a generic western states drought media briefing package that can be modified and supplemented with geographic-specific materials.

Administrative leadership of the Council is through the National Drought Mitigation Center at University of Nebraska–Lincoln. The U.S. Bureau of Reclamation is loaning an employee to the Council for two years.

Q To whom does the WDCC report?

A The WDCC will prepare an annual statement of accomplishments for the WGA.

Q How do I get in touch with the Council?

A Call (402) 472–2731, or send e-mail to wdcc@enso.unl.edu. For more information, such as a copy of the Work Plan, please visit the WDCC web site: <http://enso.unl.edu/wdcc/>.