# KENNY C. GUINN GOVERNOR

# STATE OF NEVADA DROUGHT PLAN

Revised July 2003



Department of Conservation and Natural Resources Director: R. Michael Turnipseed, P.E.

> Division of Water Resources State Engineer: Hugh Ricci, P.E.

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# **Executive Summary**

#### Purpose:

This State Drought Plan establishes an administrative coordinating and reporting system between agencies that should be involved in providing assistance to help mitigate drought impacts. The intent of this document is to establish a system for determining drought severity, for establishing a framework within which agencies would function, and to establish a process for obtaining federal assistance if required. This plan does not establish specific conservation measures for local entities nor does it affect existing water rights. This plan answers the question, "What is the state's response during a drought?"

#### Plan Organization:

The plan is centered around 3 stages of drought response: The Drought Warning Stage, Drought Alert Stage, and Drought Emergency Stage.

During the Drought Warning Stage the Drought Review and Reporting Committee (DRRC) begins meeting in January. The DRRC, utilizing the various information sources of its members, will assess the hydrologic and climatic parameters and project future conditions. The DRRC will be comprised of the following membership (the chair will be the State Climatologist and other members will be appointed by the Governor as appropriate for the drought effected area):

- State Climatologist (Chair)
- Division of Emergency Management (Vice-Chair)
- Clark County Representative
- Representative, Division of Water Resources
- Washoe County Representative
- Carson City Representative
- Manager of the Truckee Carson Irrigation District
- Upper Carson River Representative
- Manager Walker River Irrigation District
- Representative of the Pyramid Lake Indian Tribe
- Truckee Meadows Water Authority Representative
- Humboldt River Representative
- Central Nevada Representative
- Southern Nevada Water Authority Representative

It is appropriate and strongly encouraged for the committee to call on representatives of various local, state and federal agencies for information or data as may be deemed necessary in correlating preliminary recommendations. The following agencies are recommended:

Bureau of Land Management

- National Weather Service
- Natural Resources Conservation Service
- Colorado River Commission
- Federal Water Master
- Water Districts/Water Utilities
- United States Geological Survey
- Bureau of Reclamation
- U. S. Army Corps of Engineers

During the Drought Alert Stage the DRRC continues to meet, but is assisted by 3 Drought Impact Task Forces. The basic purpose of the Drought Impact Task Forces is to report on drought impacts and to recommend mitigating measures to the DRRC. In response to the impacts, the DRRC will make recommendations to the Governor for action. The 3 task forces are the Agricultural Task Force, the Fish and Wildlife Task Force, and the Municipal and Industrial Task Force. The lead state agencies for these task forces are the State Department of Agriculture, Department of Wildlife, and Department of Administration, respectively. The directors/administrators of these lead state agencies act as the chair for their respective task force. The individual state agencies and advisory groups, which make up each Drought Impact Task Force, should name an agency drought coordinator and, by their own initiative, take appropriate measures in response to drought-related problems. In this regard, task force representatives must be able to speak for their agencies and have authority to make reasonable commitments toward effective cooperation and coordination. The task forces are outlined below:

#### Agricultural Task Force

- Department of Agriculture
- University of Nevada Cooperative Extension
- Division of Water Resources and/or State Engineer
- USDA State and County Emergency Boards
- Bureau of Land Management
- Bureau of Reclamation
- Bureau of Indian Affairs (if drought affects Indian Tribe(s))
- U.S. Forest Service
- Farm Bureau
- Farm Service Agency
- Natural Resources Conservation Service
- Livestock, Feeds and Growers Associations
- Division of Emergency Management
- Member(s) From Affected Area(s), including Indian Tribes

#### Fish and Wildlife Task Force

- Department of Wildlife
- Division of Forestry

- Division of State Lands
- Division of Water Resources
- Division of Emergency Management
- National Weather Service (Fire Weather Forecaster)
- U. S. Fish and Wildlife Service
- Bureau of Land Management
- National Park Service
- Bureau of Indian Affairs (if drought affects Indian Tribe(s))
- Member(s) From Affected Area(s), including Indian Tribes

#### Municipal and Industrial Task Force

- Department of Administration
- Bureau of Health Protection Services
- Commission on Economic Development
- Division of State Parks
- Division of Water Resources
- Division of Emergency Management
- Department of Human Resources
- Division of Environmental Protection
- Public Utilities Commission of Nevada
- Commission on Tourism
- Banking Industry
- UNR/UNLV Economics Specialists
- Member(s) From Affected Area(s), including Indian Tribes

During the Drought Emergency Stage the Drought Response Center (DRC) is formed. The purpose of the DRC is to reduce the number of decision makers and increase the level of governmental response during and an emergency situation. The Drought Response Center is made up of the chairs of the Drought Impact Task Forces and is chaired by the Division of Emergency Management. The Drought Response Center receives input from the Drought Impact Task Forces and the DRCC. The DRC reviews the drought impacts and recommended mitigating measures. The DRC makes interagency policy and financial resource allocation recommendations to the Governor. The Governor provides the DRC with policy and resource allocation direction, and the DRC in turn directs the Drought Impact Task Forces and lead state agencies. The Governor deals with the State Legislature when new authority and funding is necessary. Further, if needs exceed the resources of the state, the Governor may request Federal Disaster Assistance. The DRC will coordinate Federal Disaster Assistance (federal assistance which doesn't need state action should be implemented when necessary without going through the DRC).

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#### 1. Overview

It should be stressed that primary responsibility for drought response must remain with the individual, followed by local cooperative actions, and then state and federal assistance. Hopefully this plan will help provide and orderly system for activating the state response, when necessary and appropriate, as well as coordinating regional and federal efforts.

To preview the more detailed discussion which follows, a comprehensive state drought management plan includes certain key provisions. As drought is a gradually developing phenomenon, a phased approach is perhaps most useful and appropriate. Drought is defined and measures are identified which trigger specific state action. The drought determining measures include the Palmer Drought Severity Index, precipitation data, reservoir storage, surface water availability and ground water levels. The drought monitoring system is discussed, as well as a means of identifying and assessing potential drought impacts. Included is a formal process to gather and disseminate information and educate the public. State policies and procedures and intergovernmental assessment and response responsibilities are defined. During extreme situations, the Drought Response Center is organized (key state agency officials) to coordinate intergovernmental and private efforts. Other important activities under this plan include identifying areas most vulnerable to drought impacts, and developing potential alternative actions in advance of an emergency.

#### 2. What is a Drought?

Drought is a complex physical and social phenomenon of widespread significance. Drought is not usually a statewide phenomena, differing situations in the state make drought more regional in focus. Despite all the problems droughts have caused, drought has proven difficult to define. There is no universally accepted definition because: 1) drought, unlike flood, is not a distinct event, and 2) drought is often the result of many complex factors acting on and interacting within the environment. Complicating the problem of a drought definition is the fact that drought often has neither a distinct beginning nor end. It is recognizable only after a period of time and, because a drought may be interrupted by short spells of one or more wet months, its termination is difficult to recognize.

The most commonly used drought definitions are based on: 1) meteorological and/or climatological conditions, 2) agricultural problems, 3) hydrological conditions, 4) economic considerations, and 5) induced drought problems. Each type of drought will vary in severity, but all are closely related and caused by lack of precipitation.

#### 2.1 Meteorological Drought

Meteorological drought is often defined by a period of well-below-normal precipitation. The commonly used definition of meteorological drought is an interval of time, generally of the order of months or years, during which the actual moisture supply at a given place rather consistently falls short of climatically appropriate moisture supply.

#### 2.2 Agricultural Drought

Agricultural Drought is typically defined as a period when soil moisture is inadequate to meet evapotranspirative demands so as to initiate and sustain crop growth. Another facet of agricultural drought is deficiency of water for livestock or other farming activities.

#### 2.3 Hydrologic Drought

Hydrologic Drought refers to periods of below-normal streamflow and/or depleted reservoir storage.

#### 2.4 Economic Drought

Economic Drought is a result of physical processes but concerns the areas of human activity affected by drought (e.g., municipal water supply shortages). The human effects, including the losses and benefits in the local and regional economy, are often a part of this definition.

# 2.5 Induced Drought

Induced Drought is a condition of shortage which results from over-drafting of the normal water supply. The condition is aggravated by negative precipitation experience and below normal streamflow or re-charge. An "induced" drought is brought about by introducing agricultural, recreational, industrial or residential consumptions into an area which cannot naturally support them.

#### 3. Drought Monitoring System

#### 3.1 Drought Measures

Any statement and description of drought-related problems is dependent on a definition of drought. Drought is largely perceived in terms of its impacts or problems and is usually not a statewide problem. Drought should be defined on a region by region basis. Consequently, the condition referred to is not simply a lack of rainfall or snow accumulation, although lower than normal precipitation is usually the cause of specific problems creating a drought situation. In addition to lower than normal precipitation, drought problems are compounded by related soil moisture and ground-water deficiencies as well as lack of surface water in streams and rivers or storage in lakes and reservoirs.

The most well-known indicator or index of drought severity is the Palmer Drought Severity Index (Palmer, 1965). This index is essentially a soil-moisture accounting or water-balance method. It uses precipitation as input and evapotranspiration and ground-water recharge or deep percolation as outputs to compute an accumulated value of moisture deficiency or excess. The index values center around zero (average conditions) and range from roughly –4 (extreme drought) to +4 (extreme wetness). The following table provides the Palmer Drought Classification for various ranges in PDSI values.

PDSI Value	Palmer Classification
≥ 4.0	Extremely Wet
3.00 to 3.99	Very Wet
2.00 to 2.99	Moderately Wet
1.00 to 1.99	Slightly Wet
0.50 to 0.99	Incipient Wet Spell
-0.49 to 0.49	Near Normal
-0.99 to -0.50	Incipient Dry Spell
-1.99 to -1.00	Mild Drought
-2.99 to -2.00	Moderate Drought
-3.99 to -3.00	Severe Drought
≤-4.00	Extreme Drought

The State of Nevada will use precipitation with respect to normal, surface water and ground water availability, reservoir storage, and the Palmer Drought Severity Index to determine the severity of a drought for a particular area.

#### 3.2 Water Availability Information

The Drought Review and Reporting Committee (DRRC), described in Section 6.1, will review data provided by committee members and various federal agencies. The data to be utilized are at the discretion of the committee. The DRRC should initially select a set of data,

based on currently available sources, for drought tracking and analysis, and the data should be supplemented as necessary. Candidate agency capabilities and reports include, but are not limited to, the following:

# Division of Water Resources and/or State Engineer

- Data on current water uses including diversions, decreed rights, and reservoir storage levels.
- Streamflow field observations and reservoir capacity projections.
- Ground water use data and projections.
- Humboldt River Conditions

#### State Climatologist

- Monthly and water year to date climate reports covering precipitation and temperature, evaporation compared to historic norms, and previous drought periods.
- Capacity to develop probability projections based on historical records.
- The following weekly reports:
  - a. Crop Moisture Index.
  - b. Drought severity chart.

# Division of Emergency Management

- Emergency water response reports.
- Requests for emergency water.

#### Other DRRC Members

- Report on local conditions, forecast probable events, information committee of any special needs.

# Bureau of Land Management

- Historic climate data for planning districts within the state.
- Site-specific data maintained at the district level.

## U.S. Bureau of Reclamation

Reservoir storage and release information and projections.

#### National Weather Service

- Daily 3-5 day forecasts.
- Extended 6-10 day temperature/precipitation forecasts.
- Summary of daily temperature (heating degree day summary).
- Semi-monthly reports on the average monthly precipitation and temperature outlook for the next 30 and 90 day periods.
- Monthly water supply outlooks.

#### U.S. Geological Survey (USGS)

- Statewide well measurements made on an annual basis and on a monthly basis for some areas.
- Stream gauge data, based on reporting stations, with some telemetering.
- Streamflow, reservoir and ground water use modeling for some river basins.
- Joint federal/state programs and special projects.

#### Natural Resources Conservation Service

Snowpack conditions.

#### Federal Water Master/Commissioners

- Truckee River Water Conditions.
- Carson River Water Conditions.
- Walker River Water Conditions.

#### 4. Measures Initiating Action

#### 4.1 Drought Warning Stage

The Drought Warning Stage begins when a determination has been made by the State Climatologist that, based on reservoir storage, precipitation, snowpack data and weather predictions, there is a possibility that river and stream flow will be below normal for a particular area (Palmer Index between -1.0 to -2.0). When the State Climatologist has determined we are in the Drought Warning Stage, the State Climatologist recommends to the Governor to have the Drought Review and Reporting Committee begin meeting on a monthly basis beginning in January (see Appendix C.1 for DRRC membership).

The DRRC will monitor trends, and serve as a reservoir of technical information for state and local decision makers, as well as an initial source of information for the public and media. The following actions would be appropriate:

- Increase monitoring of water supplies
- Begin creating public awareness of the water supply situation and the need to conserve.

#### 4.2 Drought Declaration

The State of Nevada will approach formal declaration with caution. Formal designation may not bring additional federal support or minimize economic impacts and can cause serious economic impacts on tourism, agricultural financing, and other industries. Unless a water shortage situation is expected to be of extreme magnitude, the safest approach is to aid county and local governments in determining their own situations (see Appendix B for local emergency and disaster declaration). There is an existing and effective network of public agencies, water system managers and experts that can assess their particular needs.

#### 4.3 Drought Alert Stage

The Drought Alert Stage begins when the Drought Review and Reporting Committee (DRRC) determines, based on reservoir storage, precipitation, snowpack data and weather predictions, there is a strong possibility that river and stream flow will be well below normal (Palmer Index -2.0 to -3.0). At this stage the Drought Impact Task Forces (see Appendix A), chaired by the directors of the lead state agencies, form to assess the actual and potential impacts on the state's economy, agriculture, and fish and wildlife resources. The chair of each task force will provide a written report on drought impacts and possible mitigating solutions to the DRRC. As a reminder, local governments and other public and private interest groups should be involved, in an advisory role, in the activities of each task force.

The DRRC will monitor the progress of the Drought Impact Task Forces, and evaluate the adequacy of task force reports and procedures. Further, DRRC will aggregate information from the individual task forces in order to develop its own assessments, projections and trends. DRRC will monitor task force and intergovernmental coordination, including federal agency actions, and make timely reports on the status of the drought and response activities to the Governor, other state leaders, the media, and the public.

At this stage the following actions may be appropriate:

- Eliminate unauthorized water use.
- Committees (e. g., town boards, city councils, etc.) and counties initiate penalties for water waste.
- Eliminate the operation of non-recycling fountains or ponds.
- Require use of effluent for construction and dust control purposes.
- Call for wide-based community support to achieve conservation.
- Eliminate use of fire hydrants for other than fire protection.

#### 4.4 Drought Emergency Stage

The Drought Emergency Stage begins when the DRRC determines, based on reservoir storage, precipitation, snowpack data, and weather predictions, there is a strong possibility that river and stream flow will be well below normal (Palmer Index below -3.0), and that there are significant unmet needs which cannot be met within existing state resources. The DRRC prepares a press release for the Governor and notifies the Division Chief of Emergency Management. The Governor activates the Drought Response Center (DRC). The DRC is chaired by the Division of Emergency Management and consists of the directors of the lead state agencies who chair the Drought Impact Task Forces. Other representatives may be designated by the Governor as required. The DRC assumes the "response" responsibilities of the DRRC. including interagency and intergovernmental coordination and media relations. The same lead state agencies and other interests will generally be represented, so continuity of response efforts are maintained. Decision making will be at a higher level, with the DRRC continuing assessment activities and providing advice and support. The Drought Response Center will utilize the Division of Emergency Management and/or Water Resource as staff to help with the administrative, clerical and public relations duties. Drought Response Center duties take priority over the "normal" duties assigned to the Division of Water Resources.

The Drought Response Center reviews statements of unmet needs by the Drought Impact Task Forces, addresses potential solutions which may involve interdepartmental actions requiring the reallocation of state financial resources and coordinates private support. The DRC provides general policy direction, and as appropriate makes policy recommendations to the Governor for his disposition, such as emergency funding requests and suggested legislative action. The DRC may advise the Governor on the use of his emergency powers. The DRC also

assembles the necessary data to support the Governor's request, if necessary, for a Federal Presidential Disaster Declaration. For purposes of federal assistance, the Division of Emergency management would serve as the required contact with the Federal Emergency Management Agency and generally other federal agencies.

In summary, at this point the DRRC is providing information on drought conditions to the various state Drought Impact Task Forces. Each task force, in turn, provides impact assessment reports to the Drought Response Center, and also shares information with the other individual Drought Impact Task Forces. The DRC makes interagency policy and resource allocation recommendations to the Governor. The Governor provides the DRC with policy and resource allocation direction, and the DRC in turn directs the Drought Impact Task Forces and lead state agencies. The Governor deals with the state legislature when new authority and funding are necessary. Further, if needs exceed the resources of the state, the Governor may request Federal Disaster Assistance. Federal assistance which doesn't need state action should be implemented when necessary without going through the DRC.

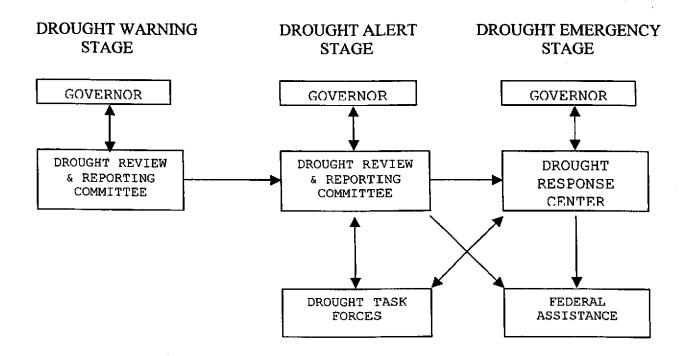
Should the extent of the drought require a regional effort, the Western States Water Council would provide a forum for the exchange of information on drought conditions and mitigation strategies in western states and serve to coordinate regional efforts to secure federal assistance, including support for legislation to create new programs and/or expand funding.

#### 4.5 End of Drought

As the drought subsides and the emergency passes, if continuing assistance requirements can be met within normal state administrative channels, the Drought Response Center prepares, for the Governor, a press release to end the "Drought Emergency". Prior to disbanding, the DRC will prepare and issue a final report on its activities to the Governor. The Drought Review and Reporting Committee again assumes primary responsibility for "response" activities and for interagency and intergovernmental coordination. The Drought Review and Reporting Committee will continue to function until the state plan returns to its monitoring status.

## 5.0 Organizational Flow Chart

The following flow chart graphically represents the interactions, during different stages of the state drought response, of the various groups previously described. Appendix C provides a breakout of the membership of each organization depicted on the flow chart. Section 6 outlines suggested operating procedures for each group within the plan.



#### 6. Operating Procedures

The procedures outlined in this plan are designed to overcome, to the extent possible, potential obstacles to an effective state response by providing: 1) a timely assessment of information upon which to base decisions, 2) defined state policies and procedures for addressing drought situations, 3) specific mechanisms to coordinate intergovernmental and private response efforts, and 4) a specific means to trigger state actions to supplement private and local resources. The plan represents a process for addressing drought-related needs and facilitating mitigation, relief and recovery efforts. It is designed to effectively apply limited state resources as a drought develops. Given its duration and intensity, the drought may exceed the limitations on state resources, funding and emergency response capabilities. Therefore, the plan also addresses coordination of any necessary and appropriate federal response.

Once activated, each committee or task force and the Drought Response Center, as previously described, will meet at the call of the designated chairperson. The initial step will be to review the plan and suggested operating procedures and make any necessary revisions such as the frequency of meetings, and/or reports, the format of reports, appropriate group membership and advisory support, etc. Each appropriate state agency will name a drought coordinator. Further, special working teams may be formed to undertake specific tasks in a timely manner. Records will be kept of drought-related activities, and prior to deactivation, a final report will be written by each group and provided to the Governor. It will include an analysis of any obstacles to an effective state response which were encountered and suggested solutions to these problems.

No special compensation will be provided members of any team, committee, task force or the Drought Response Center. General administrative support, including personnel and materials, will be provided and the cost borne by the member agencies as appropriate. In the case of the DRRC, which meets monthly through all stages of the drought, if affected members cannot bear the burden of travel costs, requests for support will be sent to the Governor's office. (Funds will be made available through the state emergency drought funds.)

The Drought Response Center will utilize the Division of Emergency Management and/or Water Resources as staff, as previously discussed. Requests for special funding outside of existing state and federal programs will be reported to the Drought Response Center. The Drought Response Center reviews statements of unmet needs by the Drought Impact Task Forces, addresses potential solutions which may involve interdepartmental actions requiring the reallocation of state financial resources and coordinates private support. The DRC provides general policy direction, and as appropriate, makes policy recommendations to the Governor for his disposition, such as emergency funding requests and suggested legislative action.

# 6.1 Drought Warning Stage

#### Trigger:

State Climatologist determines a Drought Warning Stage exists.

#### Objective:

The Drought Review and Reporting Committee is a state organization that will assess water availability and make recommendations to the Governor and others for necessary action to address possible water shortages.

#### Organization:

The DRRC may be comprised of the following membership and can be adjusted for "regional" droughts within the State (the chair will be the State Climatologist and other members will be appointed by the Governor as appropriate for the drought effected area):

- State Climatologist (Chair)
- Division of Emergency Management (Vice-Chair)
- Clark County Representative
- Representative, Division of Water Resources
- Washoe County Representative
- Carson City Representative
- Manager of the Truckee Carson Irrigation District
- Upper Carson River Representative
- Manager Walker River Irrigation District
- Representative of the Pyramid Lake Indian Tribe
- Truckee Meadows Water Authority Representative
- Humboldt River Representative
- Central Nevada Representative
- Southern Nevada Water Authority Representative

It is appropriate and strongly encouraged for the committee to call on representatives of various local, state and federal agencies for information or data as may be deemed necessary in correlating preliminary recommendations. The following agencies are recommended:

- Bureau of Land Management
- National Weather Service
- Natural Resources Conservation Service
- Colorado River Commission
- Federal Water Master
- Water Districts/Water Utilities
- United States Geological Survey
- Bureau of Reclamation
- U. S. Army Corps of Engineers

The DRRC will meet at the call of the chair and first address necessary changes in these operating procedures or the following action plan. (All changes are to be forwarded to the State Engineer, Division of Water Resources for incorporation into a revision of the State Drought Plan).

#### Action Plan:

- Utilizing the various information sources of its members and others, the committee will assess the following hydrologic and climatic parameters and project future conditions on a drainage basin and/or geographical/political subdivision basis:
  - Ground water levels
  - Precipitation
  - Reservoir levels
  - Snowpack
  - Soil moisture
  - Streamflow
  - Temperatures
- Provide projections and assessments in a uniform format selected or developed by the DRRC. These routine reports will be issued to the Governor and the public at least monthly, while the DRRC is in session.
- Provide supplemental and special reports as required in response to significant weather events.
- Coordinate data requirements of the DRRC and Drought Impact Task Forces.
- Identify and seek to resolve information gaps and impediments to accurate and timely reports.

# 6.2 Drought Alert Stage

#### **Trigger:**

The DRRC determines that a Drought Alert Stage exists.

#### Objective:

DRRC will review projections of overall water supply conditions and aggregate and evaluate assessments of water demands and other needs prepared by the Drought Impact Task Forces. DRRC will coordinate state drought response activities which can be undertaken within existing state program authority and funding. DRRC will make timely reports to the Governor, and recommend activation of the Drought Response Center.

# Organization:

The Drought Impact Task Forces (see Appendix A), chaired by the directors/administrators of the lead state agencies, form to assess the actual and potential impacts on the state's economy, agriculture, and fish and wildlife resources. The chair of each task force will provide a written report on drought impacts and possible mitigating solutions to the DRRC.

As a reminder, local governments and other public and private interest groups should be involved, in an advisory role, in each task force's activities.

#### Action Plan:

- Review written assessments and projections of need prepared by the various Drought Impact Task Forces.
- Aggregate these assessments and provide situation reports for the Governor, on a monthly basis, or as needed.
- Provide information to the public and media.
- Coordinate initial interagency, local and private response within existing programs and resources.
- Prepare and recommend a press release for the Governor once the DRRC determines that a "drought emergency" situation exists and growing needs require a state response beyond existing programs and funding.
- Prepare a final report to the Governor and appropriate agencies on activities conducted before turning over decision making to the DRC (see Section 6.3 below), and before disbanding.

#### 6.3 Drought Emergency Stage

#### **Trigger:**

The DRRC recommends to the Governor to declare a "Drought Emergency". The Drought Response Center (DRC) is activated by the Governor when the DRRC determines a critical situation exists or it becomes obvious existing state resources, programs, funding and organizations are insufficient to deal with growing problems and needs.

#### Objective:

The Drought Response Center reviews statements of unmet needs by the Drought Impact Task Forces, addresses potential solutions which may involve interdepartmental actions requiring the reallocation of state financial resources and coordinates private support. DRC provides general policy direction, and as appropriate makes policy recommendations to the Governor for his disposition, such as emergency funding requests and suggested legislative action.

#### Organization:

The Drought Response Center will be chaired by the Division of Emergency Management, representing the Governor, and will be composed of the directors of the lead state agencies representing the Drought Impact Task Forces. Other participants may be designated by the chair, as required, in an advisory capacity, including such federal agencies as the U.S. Department of Agriculture, Bureau of Reclamation, and Federal Emergency Management Agency. Other appropriate advisors may include local and private groups or other associations affected by the drought. Participation by such interests will be at the invitation of the chair, and

may necessarily be limited so as to not overly inhibit decisive action by the Drought Response Center.

#### Action Plan:

- Review periodic statements of unmet needs from the DRRC and Drought Impact Task Forces, to be submitted in a uniform format.
- Request special reports from Drought Impact Task Forces, as well as other sources.
- Identify alternative response actions, within the authority of the DRC membership, with respect to executive branch actions.
- Provide a monthly report, or as needed, to the Governor on unmet needs, reviewing DRC activities and recommending further executive action.
- Recommend to the Governor use of state drought emergency funds and/or legislative action for new programs.
- Provide general state policy direction.
- Coordinate outside support, public and private.
- Coordinate federal assistance, and prepare data to support, if necessary, the Governor's request for a Presidential Disaster Declaration.
- Coordinate public/press/media releases.
- Prepare a press release for the Governor to end the "Drought Emergency" as the drought subsides and continuing needs can be met within normal state administrative channels.
- Prepare a final report to the Governor and appropriate agencies on activities conducted prior to disbanding.

#### 7.0 References

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- California Department of Water Resources. Water Conservation Guidebook No. 7. <u>Urban Drought Guidebook</u>. March 1988.
- Nevada Revised Statutes, Chapter 414.

# APPENDIX A DROUGHT IMPACT TASK FORCES

#### A.1 Drought Impact Task Force Duties & Activities

With respect to the Drought Impact Task Forces, minimum duties and activities are to include:

- Revise and update as necessary task force guidelines and procedures.
- Establish procedures for coordination with other task forces, federal agencies, local government, and/or other public and private groups
- Identify key contacts in state, federal and private support groups.
- Develop a method and procedures for periodic contact with critical areas and/or groups.
- Create and utilize special working teams, as appropriate.
- Review existing reporting and analyzing capabilities.
- Identify information gaps.
- Assess the current and potential severity of impacts.
- Identify and inventory existing sources of assistance and available resources for response.
- Using this information, project impacts given various scenarios.
- Recommend response levels and activities.
- Estimate related costs.
- Analyze any barriers to response or special needs.
- Establish the format and process for making timely reports.
- Report to the DRRC and DRC on a monthly basis.
- Issue special reports as conditions warrant or upon request.
- Maintain supporting data and records of activities.
- Prepare a final report on activities.

Individual state agencies and advisory groups which make up each Drought Impact Task Force should name an agency drought coordinator and by their own initiative take appropriate measures in response to drought-related problems. The timely implementation of effective measures by individual agencies should not be hindered by a strict review and approval process. In this regard, task force representatives must be able to speak for their agency and have authority to make reasonable commitments toward effective cooperation and coordination. During a Drought Alert Stage, the chair of each task force will provide a written assessment to the State Climatologist, the task force statements will be reviewed by the DRRC. During a Drought Emergency Stage, the chairs of each task force will form the Drought Response Center.

#### A.2 Agriculture Task Force

#### **Trigger:**

The DRRC determines that a Drought Alert Stage exists. The Agriculture Task Force is activated by the Governor.

#### Purpose:

To promptly notify farmers and ranchers of potential drought conditions, assess and project likely impacts, identify alternative responses and sources of assistance and report data and recommendations to the Drought Review and Reporting Committee or Drought Response Center.

#### **Lead State Agency:**

Department of Agriculture

#### Organization:

The Agriculture Task Force is chaired by the Director of the Department of Agriculture and should include the following state, federal and advisory groups:

- Department of Agriculture
- University of Nevada Cooperative Extension
- Division of Water Resources
- USDA State and County Emergency Boards
- Bureau of Land Management
- Bureau of Reclamation
- Bureau of Indian Affairs (if drought effects Indian Tribe(s))
- U.S. Forest Service
- Farm Bureau
- Farm Service Agency
- Soil Conservation District Association
- Natural Resources Conservation Service
- Livestock, Feeders and Growers Associations
- Division of Emergency Management
- Member(s) From Affected Area(s), including Indian Tribes

The chair will appoint the member(s) from the drought affected area(s) as appropriate. The task force will meet at the call of the chair, or at least monthly. The task force will coordinate individual agency or industry programs, augmenting such programs as necessary and appropriate; however, such programs do not require formal task force review and approval prior to implementation.

#### **Action Plan:**

- Review available data sources.
- Review existing drought reports and analyze potential threats.
- Provide timely data to ranchers, farmers, state agencies and industry.
- Inventory available resources.

- Describe potential response activities and take appropriate actions.
- Assist in emergency livestock feeding and water hauling operations.
- Survey and monitor animal health and care.
- Operate and maintain hay-locator service.
- Coordinate economic outlook reporting.
- Survey, evaluate and coordinate response to insect and pest problems.
- Oversee and coordinate intergovernmental and industry activities.
- Identify any gaps in these various programs and recommend mitigating action on unmet needs.
- Makes requests and recommendations with respect to emergency funding.
- Prepare a final task force report for the Governor upon termination of activities.

#### A.3 Fish and Wildlife Task Force

#### **Trigger:**

The DRRC determines that a Drought Alert Stage exists. The task force is activated by the Governor.

#### Purpose:

To assess and address drought-related impacts due to the threat of water reduction and wildfire.

#### **Lead State Agency:**

Department of Wildlife

#### Organization:

The task force will be chaired by the Administrator of the Department of Wildlife and shall include representatives of the following agencies:

- Department of Wildlife
- Division of Forestry
- Division of State Lands
- Division of Emergency Management
- National Weather Service (Fire Weather Forecaster)
- U. S. Fish and Wildlife Service
- Bureau of Land Management
- National Parks Service
- Bureau of Indian Affairs (if drought effects Indian Tribe(s))
- Member(s) From Affected Area(s), including Indian Tribes

The chair will appoint the member(s) from the drought affected area(s) as appropriate. The Fish and Wildlife Task Force will meet at the call of the chair, or at least monthly. The task force will coordinate actions for the state's fish and wildlife resources and augment existing wildfire protection activities; however, the task force will not require approval of corroborating agency actions, nor actually undertake fire suppression operations, with the exception of public information and education activities.

#### **Action Plan:**

- Identify key personnel and contacts, as well as various agency policies, priorities and authority.
- Outline formal and/or informal information exchange systems.
- Collect and exchange data among agency representatives.
- Assess and project impacts on the state's fish and wildlife resources, including game and non-game species, as well as endangered species.
- Estimate potential short-term wildlife losses and make long-term projections, particularly with respect to state controlled land and waters.
- Recommend mitigation measures such as reservoir conservation pools, instream flows, construction of water ponds, etc.
- Estimate funding and manpower requirements by project and species.
- Coordinate state and federal agency assistance as well as individual reservoir and ditch company cooperation.
- Review state held water rights for fish and wildlife, and the potential impact of reservoir releases on domestic and other needs.
- Coordinate public information releases.
- Assess and project the extent and potential impact of wildfire threats.
- Review existing wildfire protection capabilities.
- Identify potential priorities for the allocation of scarce resources.
- Project the need for additional resources.
- Evaluate barriers to effective cooperation in wildfire protection.
- Provide technical planning and preparedness assistance.
- Devise a wildfire danger warning system for coordinated public education/information.
- Coordinate federal, state and local fire restrictions.
- Make requests and recommendations with respect to emergency funding.
- Prepare a final task force report for the Governor upon termination of activities.

# A.4 Municipal and Industrial Task Force

#### Trigger:

The DRRC determines that a Drought Alert Stage exists. The Municipal and Industrial Task Force is activated by the Governor.

#### Purpose:

To establish procedures and an organization to assess drought related economic impacts and recommend and undertake specific responses.

# **Lead State Agency:**

Department of Administration

#### Organization:

The task force will be chaired by the Director of the Department of Administration and shall include representatives of the following agencies:

- Department of Administration
- Bureau of Health Protection Services
- Commission on Economic Development
- Division of Emergency Management
- Division of Water Resources
- Division of State Parks
- Department of Human Resources
- Division of Environmental Protection
- Public Utilities Commission of Nevada
- Commission on Tourism
- Banking Industry
- UNR/UNLV Economics Specialists
- Member(s) From Affected Area(s), including Indian Tribes

The chair will appoint the member(s) from the drought affected area(s) as appropriate. The task force will meet at the call of the chair, or at least monthly.

#### **Action Plan:**

- Compile data and prepare assessment reports using resources of the member agencies.
- Evaluate and synthesize this data.
- Identify actual and potential economic impacts of drought by area of the state.
- Identify information gaps.
- Develop and employ an economic simulation model to project drought impacts.
- Identify specific counties or areas which have or will experience significant additional resource requirements, such as social services expenses.
- Identify actual or potential revenue losses by state and local governments.
- Recommend mitigation measures.
- Identify state and federal sources of financial assistance.
- Identify priority areas for additional state funding, and possible sources of funding.
- Monitor the costs incurred by state agencies responding to the drought.
- Coordinate public information releases concerning economic impacts.
- Make requests and recommendations with respect to emergency funding.
- Prepare a final task force report for the Governor upon termination of activities.

# APPENDIX B

LOCAL EMERGENCY & DISASTER DECLARATION

## B.1 Local Emergency & Disaster Declaration Process<sup>1</sup>

When an emergency or disaster is so severe that effective response is beyond the capability of the city/county alone, and state or federal assistance is needed to supplement city/county response and recovery efforts, the city council/county commissioners may, upon declaring a state of emergency in the city/county, request a State of Emergency Declaration from the Governor of Nevada for the purpose of supporting city/county efforts.

If the disaster is so severe that local and state resources are inadequate to effectively handle it, the Governor may request a presidential emergency declaration or disaster declaration. The procedures are described in the State of Nevada Comprehensive Emergency Management Plan.

The following are standard procedures for declaring a state of emergency. In cases of obviously severe situations which require immediate support, the Governor has the option of making a State Disaster Declaration immediately and dispatching damage assessment teams as soon as possible.

- 1. In accordance with NRS 241.020 (2) and NRS 241.020 (6), the mayor/county commissioner may call an emergency meeting. If it is determined that a state of emergency exists, the city council/county commissioner shall declare in writing that an emergency exists and shall publicize, by a method deemed appropriate, the existence of the emergency. (A sample resolution declaring a disaster and requesting a State Disaster Declaration follows this list of procedures.)
- 2. After declaring a state of emergency for the city/county, the city council/county commissioners may request a State Emergency Declaration to support response and recovery efforts. This request must be made by notifying the Governor and the Nevada Division of Emergency Management. The Governor shall be notified by the Mayor or County Commissioners. The Nevada Division of Emergency Management shall be notified by the local director of emergency management.
- 3. Immediately upon notification of the declared state of emergency, the Division of the Nevada Division of Emergency Management will coordinate with the local emergency management director to arrange for a joint damage assessment of the impacted area.
- 4. The joint damage assessment will be presented to the Governor with appropriate recommendations for the nature of state support that is needed.

<sup>&</sup>lt;sup>1</sup> In the case of an Indian Tribe substitute <u>Reservation</u> for <u>City</u> and <u>Tribal Council</u> for <u>City</u> <u>Council</u>.

- 5. If the Governor finds that the emergency situation is severe enough to exceed the effective response and recover capabilities of local resources, a state of emergency will be declared and the State of Nevada Comprehensive Emergency Management Plan will be activated in support of local efforts.
- 6. The Nevada Division of Emergency Management, acting on the Governor's behalf, will coordinate state support efforts with the local emergency management director who will be acting on behalf of the city council and/or county commissioners.
- 7. If the emergency is severe enough to exceed the effective response and recovery capabilities of both local and state resources, the Governor may request a presidential disaster declaration to gain additional federal support. Procedures for requesting a presidential declaration are listed in the State of Nevada Comprehensive Emergency Management Plan.
- 8. The city council or county commissioners shall terminate the state of emergency when the emergency no longer exists, or the threat of an emergency has passed. They will also notify the local emergency management coordinator and the Nevada Division of Emergency Management in this instance.

#### **B.2** Sample Solution for Declaration of an Emergency

The following sample emergency resolution is presented as a suggested guide to the content and format for a resolution by the city council/county commissioners declaring a local state of emergency and requesting the Governor declare a state of emergency. The content should include a description of the emergency conditions and known damage, a description of actions already taken, and a statement of the extent to which local resources are depleted. In the case of an Indian Tribe substitute <u>reservation</u> for <u>city</u> and <u>tribal council</u> for <u>city council</u>.

#### RESOLUTION NO.\_\_

SUMMARY: Resolution of the city council/county commissioners declaring a disaster area and a state of emergency in the City/County of (City/County) due to (name emergency).

#### A RESOLUTION:

WHEREAS, the (City/County) is a political subdivision of the State of Nevada; and

WHEREAS, (State of condition of emergency); and

WHEREAS, (State a condition of emergency); and

WHEREAS, (State a condition of emergency); and

WHEREAS, (State an action taken); and

WHEREAS, (State an action taken); and

WHEREAS, (State an action taken); and

WHEREAS, (Identify a resource limitation); and

WHEREAS, (Identify a resource limitation); and

WHEREAS, (Identify a resource limitation); and WHEREAS, the health, safety, and welfare of persons and property in City/County of (City/County) are currently and prospectively endangered due to (state emergency conditions); and WHEREAS, the State of Nevada and the United States Government have manpower and resources which may be available to the City/County of (City/County) and its residents; now therefore,

THE CITY COUNCIL/COUNTY COMMISSIONERS OF (City/County) DOES RESOLVE AS FOLLOW, TO-WIT:

- 1. That the (City/County) City Council/County Commissioners under any by virtue of the authority vested in them by Chapters 244<sup>2</sup> and 414 of the Nevada Revised Statutes, does hereby declare that a disaster area and state of emergency exists within the City/County of (City/County) and that all local resources have been and will be used to respond to, recover from, and mitigate the effects of the emergency caused by (state the cause).
- 2. That the (City/County) City Council/County Commissioners does hereby request that the Governor of the State of Nevada investigate the emergency existing in (City/County) and declare that a disaster area and state of emergency exists in (City/County).
- 3. That the (City/County) City Council/County Commissioners does hereby request that the Governor of the State of Nevada provide assistance, equipment and manpower from the appropriate state agencies, including (specify particular agencies know to be needed).
- 4. That the (City/County) City Council/County Commissioners does hereby request that the Governor of the State of Nevada contact the Nevada Congressional Delegation in Washington, D.C. to solicit their assistance in gaining federal aid for (City/County).

PASSED AND ADOPTED this	day of	
	(Name & Title of Person Executing)	<del></del>
Attest		

<sup>&</sup>lt;sup>2</sup> Chapter 244 pertains to county; revise if issued by city.

# APPENDIX C

**BREAKDOWN OF ORGANIZATIONAL FLOW CHART** 

The following appendix describes organizations called out by the Organizational Flow Chart presented in Section 5.

# C.1 Drought Review and Reporting Committee

The DRRC may be comprised of the following membership and can be adjusted for "regional" droughts within the state (the chair will be the State Climatologist and other members will be appointed by the Governor as appropriate for the drought effected area):

- State Climatologist (Chair)
- Division of Emergency Management (Vice-Chair)
- Clark County Representative
- Representative, Division of Water Resources
- Washoe County Representative
- Carson City Representative
- Manager of the Truckee-Carson Irrigation District
- Upper Carson River Representative
- Manager Walker River Irrigation District
- Representative of the Pyramid Lake Indian Tribe
- Truckee Meadow Water Authority (TMWA) Representative
- Humboldt River Representative
- Central Nevada Representative
- Southern Nevada Water Authority Representative

It is appropriate and strongly encouraged for the committee to call on representatives of various local, state and federal agencies for information or data as may be deemed necessary in correlating preliminary recommendations. The following agencies are recommended:

- Bureau of Land Management
- National Weather Service
- Natural Resources Conservation Service
- Colorado River Commission
- Federal Water Master
- Water Districts/Water Utilities
- United States Geological Survey
- Bureau of Reclamation
- U.S. Army Corps of Engineer

# C.2 Drought Task Forces

# **Agriculture Task Force**

The Agriculture Task Force is chaired by the Department of Agriculture and should include the following state, federal and advisory groups:

- Department of Agriculture
- University of Nevada Cooperative Extension
- Division of Water Resources and/or State Engineer
- USDA State and County Emergency Boards
- Bureau of Land Management
- Bureau of Reclamation
- Bureau of Indian Affairs (if drought effects Indian Tribe(s))
- U.S. Forest Service
- Farm Bureau
- Farm Service Agency
- Natural Resources Conservation Service
- Livestock, Feeders and Growers Associations
- Division of Emergency Management
- Member(s) From Affected Area(s), including Indian Tribes

#### Fish and Wildlife Task Force

The Fish and Wildlife Task Force will be chaired by the Administrator of the Department of Wildlife and should include representatives of the following agencies:

- Department of Wildlife
- Division of Forestry
- Division of State Lands
- Division of Water Resources
- Division of Emergency Management
- National Weather Service (Fire Weather Forecaster)
- U.S. Fish and Wildlife Service
- Bureau of Land Management
- National Park Service
- Bureau of Indian Affairs (if drought effects Indian Tribe(s))
- Member(s) From Affected Area(s), including Indian Tribes

#### Municipal and Industrial Task Force

The Municipal and Industrial Task Force will be chaired by the Department of Administration and should include representatives of the following agencies:

- Department of Administration
- Bureau of Health Protection Services
- Commission on Economic Development
- Division of Water Resources
- Division of State Parks
- Division of Emergency Management
- Department of Human Resources
- Division of Environmental Protection

- Public Utilities Commission of Nevada
- Commission on Tourism
- Banking Industry
- UNR/UNLV Economics Specialists
- Member(s) From Affected Area(s), including Indian Tribes

#### C.3 Drought Response Center

The Drought Response Center will be chaired by the Division of Emergency Management, representing the Governor, and will be composed of the directors of the lead state agencies representing the state Drought Impact Task Forces.

Lead State Agencies: - Department of Agriculture

Department of Wildlife

Department of Administration

Other participants may be designated by the chair, as required, in an advisory capacity, including such federal agencies as the U.S. Department of Agriculture, Bureau of Reclamation, and Federal Emergency Management Agency. Other appropriate advisors may include local and private groups or individuals with specific expertise or interests, such as major water utilities, academicians, environmentalists, and water user groups or other associations affected by the drought. Participation by such interests will be at the invitation of the chair, and may necessarily be limited so as to not overly inhibit decisive action by the Drought Response Center. The DRC is to be located in the State Emergency Operations Center (SEOC) in Carson City. Support staff will be provided by the Division of Emergency Management and/or the Division of Water Resources.

# APPENDIX D

ADDRESSES & PHONE NUMBERS

#### **Addresses and Phone Numbers**

Carson-Truckee Water Conservancy District P.O. Box 2047 Reno, Nevada 89505 (775) 322-8041

Colorado River Commission 555 E. Washington Ave., Suite 3100 Las Vegas, Nevada 89101 (702) 486-2670

Federal Water Master 290 S. Arlington Reno, Nevada 89501 (775) 784-5241

Natural Resources Conservation Service Reno Field Office 5301 Longley Lane, Bldg. F., Suite 220 Reno, Nevada 89511-1805 (775) 784-5863

Nevada Commission on Economic Development 108 E. Proctor Carson City, Nevada 89701 (775) 687-4325

Nevada Commission on Tourism 401 N. Carson Street Carson City, Nevada 89701 (775) 687-4322

Nevada Department of Administration Blasdel Building, Room 200 209 E. Musser Street Carson City, Nevada 89701 (775) 687-0222

Nevada Department of Agriculture 350 Capitol Hill Avenue Reno, NV 89502 (775) 688-1180 Nevada Department of Human Resources 505 E. King Street, Room 600 Carson City, Nevada 89701-3708 (775) 684-4000

Nevada Division of Emergency Management 2525 S. Carson Street Carson City, Nevada 89701 (775) 687-4900

Nevada Division of Environmental Protection 333 W. Nye Lane, Room 138 Carson City, Nevada 89706-0851 (775)687-4670

Nevada Division of Forestry 2525 S. Carson Street Carson City, Nevada 89701 (775) 684-2500

Nevada Division of State Lands 333 West Nye Lane, Room 118 Carson City, NV 89706 (775) 687-4363

Nevada Division of State Parks 1300 S. Curry Street Carson City, Nevada 89703-5202 (775) 687-4384

Nevada Division of Water Resources 123 W. Nye Lane, Suite 246 Carson City, Nevada 89706-0818 (775) 687-4380

Nevada Department of Wildlife 1100 Valley Road Reno, NV 89512 (775) 688-1500

Nevada Farm Bureau 2165 Green Vista Drive Sparks, Nevada 89431 (775) 674-4000 Nevada State Health Division Bureau of Health Protection Services 1179 Fairview Drive, Suite 204 Carson City, Nevada 89701-5405 (775) 687-4750

Office of State Climatologist University of Nevada Reno Mackay Science Building Reno, Nevada 89557 (775) 784-6995

Public Utilities Commission of Nevada 1150 E. William Street Carson City, Nevada 89701-3109 (775) 687-6001

Pyramid Lake Paiute Tribe P.O. Box 256 Nixon, Nevada 89424

U.S. Army Corps of Engineers 300 Booth Street, Room 2103 Reno, Nevada 89509 (775) 784-5304

U.S. Bureau of Reclamation 705 N. Plaza Street, Suite 320 Carson City, Nevada 89701-4066 (775) 882-3436

U.S. Department of Agriculture Farm Service Agency 1755 E. Plumb Lane, Suite 202 Reno, Nevada 89502 (775) 784-5411

U.S. Department of Agriculture Forest Service Federal Office Building 324 25<sup>th</sup> Street Ogden, Utah 84401 (801) 625-5605 U.S. Department of Agriculture Forest Service 1200 Franklin Way Sparks, Nevada 89431 (775) 331-6444

U.S. Department of Agriculture Forest Service Humboldt National Forest Headquarters 2035 Last Chance Road Elko, Nevada 89801 (775) 738-5171

U.S. Department of Agriculture Natural Resources Conservation Service 1201 Terminal Way Reno, Nevada 89502 (775) 784-5408

U.S. Department of Commerce National Weather Service 2350 Raggio Parkway Reno, Nevada 89512 (775) 673-8100

U.S. Department of Interior Bureau of Indian Affairs Western Nevada Agency 1677 Hot Springs Road Carson City, Nevada 89706 (775) 887-3500

U.S. Department of Interior Bureau of Land Management 1340 Financial Blvd. Reno, Nevada 89502-7147 (775) 861-6400

U.S. Department of Interior Fish and Wildlife Service 4600 Kietzke Lane, Bldg. C., Suite 125 Reno, Nevada 89502 (775) 784-5227 U.S. Department of Interior U.S. Geological Survey Water Resources Division 333 W. Nye Lane Carson City, Nevada 89706 (775) 887-7600

U.S. Department of Interior National Park Service 1201 Oakridge Drive, Suite 250 Fort Collins, Colorado 80525 (970) 225-3501

University of Nevada Cooperative Extension Mail Stop 404 Reno, Nevada 89557 (775) 784-7070

Walker River Irrigation District P.O. Box 820 Yerington, Nevada 89447 (775) 463-3523