

UTAH
DROUGHT RESPONSE PLAN

March 1993

Utah Natural Resources
Water Resources

UTAH DROUGHT RESPONSE PLAN

1. SITUATION

Utah has experienced periods of droughts since the pioneers first settled in the Salt Lake Valley. The lengthy droughts of the 1930s and 1950s caused significant economic problems for the state. While the drought of 1976-77 was not as long, the consequences were still intense and costly. Precipitation fluctuates greatly in Utah's relatively arid climate. As the demand for water continues to increase, even temporary shortages in supply can be disruptive to the normal process in urban and rural environments. Two or more consecutive years of significant reduction in precipitation, particularly snowfall in the mountains, may have serious and far-reaching impacts.

When droughts occur, the state experiences a variety of problems. If identified and evaluated, problems can be dealt with in an organized and cost-efficient manner. The most significant impacts relate to agriculture, municipal water supplies, tourism, and wildlife preservation. Electric power generation and water quality can also be adversely affected.

A timely application of the state's available resources can reduce drought effects. When the impacts of drought exceed the state's response capabilities, an existing state program would facilitate preparation of requests for federal assistance.

2. PURPOSE

The purpose of the Drought Response Plan is to provide an effective and systematic means for the state of Utah to deal with emergency drought problems.

3. DEFINING DROUGHT

There is no universally accepted definition of drought. Further, drought creates unusual management problems due to the uncertainty surrounding its occurrence, duration, magnitude, and severity. The climatological and hydrological parameters normally used in defining drought are precipitation, soil moisture, snowpack, runoff, recharge, evapotranspiration, and temperature. Several indices employ indicators to measure the intensity or severity of drought. For purposes of a state response plan, drought must be objectively quantified to appropriately trigger specific state actions.

3.1 Drought Indices

The Palmer Index is the most widely used measure of quantifying drought. The index is universal in that persistently normal temperature and precipitation produce an index near zero in all seasons and climates. In the plains areas originally studied by Palmer, the index is useful in quantifying

drought periods; when applied in the mountainous regions of the west, it does not adequately reflect water supply conditions. It does not account for snowpack and runoff, which are the state's most significant sources of water. It may, however, still be used as an indicator of a trend, particularly over an extended period.

The Surface Water Supply Index (SWSI) incorporates multiple hydrologic/climatological components into a single, objective derived index value for each major basin in the state. It focuses on surface water supplies derived from melting snow, which account for most of the annual flow of the state's major streams. Reservoir storage and current precipitation amounts are also taken into account in appraising available or forecasted water supplies. When spring arrives, the moisture represented by the melting snowpack is translated into streamflow and is included in the water supply assessment. The SWSI unifies these various components into a single index value useful for management decisions in times of impending or current water shortage. (The Utah Division of Water Resources, in cooperation with the Soil Conservation Service, will be developing SWSIs for the major basins in Utah to be used as an "objective" trigger for drought action)

4. DESCRIPTION

To maximize effectiveness, a state drought response plan must include (1) an **assessment system** which continually monitors water supply so that deteriorating conditions can be identified early enough for appropriate actions to be taken, (2) a **response system** to meet existing or growing needs which are beyond local capabilities, and (3) a **centralized point of coordination and control**. The relationship between these components is depicted in Attachments 1 and 2.

4.1 State Drought Coordinator

Responsibility for preparation and timely implementation of the Utah Drought Response Plan lies with the State Drought Coordinator, who is appointed by the Governor. The State Drought Coordinator (currently, the executive director of the Utah Department of Natural Resources), will chair both the Drought Review and Coordinating Committee and the Drought response Committee, and will act as a duly authorized representative of the Governor in the performance of his duties.

4.2 Assessment System

The assessment system is comprised of the Water Supply Availability Committee, Drought Review and Reporting Committee (DRRC), and the Impact Task Forces. The DRRC and task forces are activated by the State Drought Coordinator's Memorandum of Potential Drought Emergency. (See attachment 3).

4.2.1. Water Supply Availability Committee (WSAC)

- Chaired by Division of Water Resources.
- Makes assessments and projections (in comparison to historical norm) on:
 - Snowpack
 - Soil Moisture
 - Reservoir levels
 - Groundwater levels
 - Precipitation
 - Temperature
 - Streamflow
- Selects and/or develops formats for reporting the above assessment projection information.
- Determines requirements for routine and special reports.
- Provides report on water supply conditions to State Drought Coordinator for action.

4.2.2 Drought Review and Reporting Committee (DRRC)

- Activated by memorandum from the State Drought Coordinator.
- Chaired by State Drought Coordinator (SDC), with membership (as a minimum) to include the chair of each Impact Task Force.
- Monitors activities of the Impact Task Forces to ensure comprehensiveness, timeliness, and adequacy of procedures and reports.
- Aggregates and develops assessments, projections, and trends.
- Makes timely reports to leadership, the news media, and key elements of the response system.

- Ensures inter-task force and inter-government (to include federal agencies) coordination.
- Makes recommendations to activate Drought Response Committee (DRC).

4.3 Impact Task Forces

The task forces gather water availability and drought impact information and disseminate this information (through the Drought Review and Reporting Committee) to leadership and to the response agencies of state government. The task forces delineate problem areas (impacts) which generate needs that cannot be met locally and must therefore be responded to by the state. The task forces will normally be chaired by midlevel managers drawn from state government who can deal with a very broad range of government and private data sources.

Task force leadership provides the news media with impact assessments/information pertinent to task force responsibility. Information releases of a broader scope will be made by the Office of the Governor, Drought Review and Reporting Committee, and the State Drought Coordinator.

- Detailed information on task forces, i.e. composition, duties, operating procedures, etc., is shown in Annex A.

4.3.1 Task Force 1 - Municipal Water and Sewer Systems

- Chaired by Department of Environmental Quality.
- Identifies existing and potential drought related problems.
- Assesses capability of municipal water systems and sewer systems to withstand drought impacts.
- Assesses municipal fire fighting capability related to low system pressures or supplies.
- Reports findings to:
 - Drought Review and Reporting Committee
 - Lead response agencies.
 - Economic Task Force (loss data).

4.3.2. Task Force 2 - Agriculture Industry

- Chaired by Department of Agriculture

- Identifies existing and potential drought problems.
- Emphasizes assessment of impacts on soil erosion, crop and livestock loss, and insect and pest problems.
- Reports findings to:
 - Drought Review and Reporting Committee.
 - Lead response agencies.
 - Economic Task Force (loss data).
 -

4.3.3 Task Force 3 - Commerce and Tourism

- Chaired by Department of Community and Economic Development.
- Identifies existing and potential drought problems, especially in major industrial and commercial sectors.
- Assesses impacts such as loss of sales tax revenues, increases in unemployment, and decreases in tourism visitation levels and lodging receipts.
- Reports findings to:
 - Drought Review and Reporting Committee
 - Lead response agencies.
 - Economic Task Force (loss data).

4.3.4 Task Force 4 - Wildlife Protection

- Chaired by Division of State Lands and Forestry.
- Identifies high priority threats.
- Assesses fire protection capabilities/resources and outside sources of assistance.
- Reports findings to:
 - Drought Review and Reporting Committee.

- Lead response agencies.
- Economic Task Force (loss data).

4.3.5 Task Force 5 - Wildlife

- Chaired by Division of Wildlife Resources.
- Identifies existing and potential drought problems. (Emphasis on assessments should be losses of game, fish, and non-game wildlife.)
- Reports findings to:
 - Drought Review and Reporting Committee.
 - Lead response agencies.
 - Economic Task Force (loss data).

4.3.6 Task Force 6 - Economic Impacts

- Chaired by Office of Planning and Budget.
- Identifies existing and potential drought problems within area of responsibility.
- Aggregates economic loss data from other task forces.
- Reports findings to:
 - Drought Review and Reporting Committee.

Note: Other task forces may be organized/activated as drought intensifies and need arises, e.g., energy and health.

4.4 Response System

When it becomes likely that drought related problems will significantly impact day-to-day operations of state government, the DRRC will recommend activation of the Drought Response Committee (DRC) by gubernatorial proclamation. The DRC is chaired by the State Drought Coordinator, and is comprised of senior level managers of the involved state departments. The DRC will act in concert with or through the lead agencies and will: (1) review unmet needs identified by task forces and lead agencies, (2) identify and recommend means to meet those

needs, (3) ensure inter-agency coordination, and (4) determine when deactivation should occur. (Attachment 2 depicts relationship of the DRC to the DRRC, task forces, and lead agencies.)

The response system is based upon existing statutory authorities. As specific impacts are identified and assessed by the various task forces, these impacts are reported to the concerned lead agency and to the Drought Review and Reporting Committee. When a lead agency receives an impact assessment which requires a response, action is through existing programs according to established department criteria. State action is taken only when local capabilities cannot cope with existing or growing needs. (Lead agencies are responsible for making news releases concerning their programs. Authority for releases covering overall status and direction of drought response is the responsibility of the State Drought Coordinator.)

Drought problems normally will be assigned as follows:

Water shortages	Department of Natural Resources
Wildfire and wildlife	Department of Natural Resources
Agricultural problems	Department of Agriculture
Municipal water, sewer system problems	Department of Environmental Quality
Commerce and tourism	Department of Community and Economic Development
Economic problems	Office of Planning and Budget
Life-Threatening Situations	Department of Public Safety

As other response needs become apparent, additional lead agencies will be established. (See Annex B for details on Lead State Agencies and Drought Response Committee).

5. PLAN ACTIVATION

As indicated in section 3, some type of objective mechanism is needed to trigger certain levels of activity in a State Drought Response Plan. The Surface Water Supply Index (SWSI) has been selected as the most representative index for determining the potential availability of Utah's projected seasonal water supply. Until the SWSI is developed for all basins, the Palmer Drought Severity Index will be used.

5.1 Criteria

The State Drought Response Plan will be activated according to calculated values of the Surface Water Supply Index (SWSI) or the Palmer Drought Severity Index. (SWSI values will be published by SCS on a monthly basis for the major basins in the state.) Important drought plan trigger points related to the Palmer Index or SWSI are shown below.

5.2 Sequence of Actions

Surface Water Supply Index/Palmer Index	Drought Response Phase	Actions Taken
0 to plus indices in all river basins	Normal Conditions	<ol style="list-style-type: none"> 1. Surface Water Supply Index maps are generated each month by SCS and sent to Division of Water Resources (UDWR) and State Drought Coordinator (SDC). 2. UDWR reviews maps, monitors for isolated drought problems.
Drought Emerges 0 to -1.0	Normal Conditions	<ol style="list-style-type: none"> 1. UDWR monitors maps, discusses trend with SDC.
-1.0 to -2.0	Phase 1	<ol style="list-style-type: none"> 1. WSAC activated by SDC. 2. WSAC monitors trends. 3. WSAC provides news media with status information.
At -2.0 in any river basin	Phase 2	<ol style="list-style-type: none"> 1. SDC Memorandum activities Drought Review and Reporting Committee (DRRC) and TFs 1-6. 2. SDC meets with TF chairpersons to outline Phase 2 activity. 3. TFs 1-6 make an initial assessment of impact in the drought basin. 4. The Drought Review and Reporting Committee (DRRC) makes periodic reports to the Governor. 5. TF chairperson interface with news media for their areas of concern.

Surface Water Supply Index/Palmer Index Drought Response Phase

Actions Taken

6. Lead agencies undertake response actions which are within their normal programs and with the resources available.
7. The Drought Review and Reporting Committee delineates any unmet needs which cannot be handled through the normal channels of a lead department.

When declared by Governor on advice of DRRC Phase 3

1. DRRC prepares a Governor’s Proclamation of Drought Emergency.
2. Governor’s Proclamation activates the Drought Response Committee (DRC).
3. TFs 1-6 continue to make assessments and reports.
4. Unmet needs are passed to the DRC.
5. The DRC determines which needs can be met by reallocation of existing resources. Those needs which cannot be met will be listed and are forwarded to the Governor with recommendations.
6. DRC assembles data needed to support a request by the Governor for federal drought assistance.
7. State Drought Coordinator interacts with the Federal Emergency Management Agency (FEMA) Comprehensive Emergency Management to secure needed federal assistance.

Drought recedes Phase 3

1. DRC determines all requirements for assistance are now being met within established channels.
2. DRC prepares a proclamation for Governor’s signature which ends the drought emergency.

Surface Water Supply Index/Palmer Index	Drought Response Phase	Actions Taken
		3. DRC terminates activity, issues final report.
at -2	Return to Phase 2	1. TFs 1-6 continue to make assessments and reports.
at -1.5	Return to Phase 1	1. TFs 1-6 terminate activity, issue final report.
at -0.5	Return to normal conditions	1. WSAC deactivated. 2. SDC continues to monitor the Surface Water Supply Availability Index Maps.

6. Drought Relief Programs

There are state and federal programs that provide relief from drought impacts. State programs for relief are few in number and limited in scope, while federal programs are more numerous and broad. All of these programs are dependent on annual funding appropriations which vary significantly from year to year. Therefore, the usefulness of these programs at a particular point in time may be limited. As drought conditions intensify:

- appropriations may be increased; or
- initiatives may be established for new legislation.

When drought occurs over a multi-state region (as during the 1976--77 drought), the possibilities for new federal legislation are significantly enhanced.

Normally the president does not approve major emergency declarations with follow-on relief programs for drought. On the other hand, when extremely serious events occur which are associated with drought and which clearly over-extend the state's capacity for social relief, then such a declaration may be possible.

(For more detailed information on existing state and federal relief programs see Annexes C & D.)

7. Coordinating Instructions to All Drought Assessment and Response Agencies

- The general sequence of actions will be in accordance with Section 5.2 of this plan.
- Expenses to support activities are subject to normal fiscal constraints of respective agencies. Requests for special funding will be forwarded through the appropriate coordinating agency, DRCC or DRC to the Governor.
- Local governments and public associations assisting state agencies in the identification and assessment of drought impacts, respond within their capabilities and request state assistance when needs cannot be met locally.
- Meeting frequency of task forces and the DRC will be established by the chairpersons.
- Frequency of situation reports, assessments, and reports of inter-agency response actions will be as recommended to the Governor by the State Drought Coordinator.
- Task force chairpersons and lead response agency representatives are authorized to respond to questions from the news media or issue news releases concerning their specific areas of responsibility. Where questions of potential conflict arise, inquiries should be referred to the Drought Review and Reporting Committee Chairperson (State Drought Coordinator). Major policy announcements on overall drought assessment and response program status will be made by the Office of the Governor or the State Drought Coordinator.
- When a drought disaster is federally declared for Utah, the State Drought Coordinator will become the coordinating officer.
- If a drought emergency is declared through the Federal Emergency Management Agency (FEMA), the director of Comprehensive Emergency Management (CEM) will serve as the state liaison officer and Governor's authorized representative, by prior agreement, to access the state's letter of credit and activate the disaster relief provisions of Public Law 93-288.

Attachment 1 goes here

attachment 2 goes here

Attachment 3

Date

To: Commissioner of Agriculture
Executive Director, Department of community and Economic Development
Executive Director, Department of Environmental Quality
Executive Director, Department of Public Safety
Director, Office of Planning and Budget
(Others as required)

From: Executive Director, Department of Natural Resources

Subject: Activation of the Utah Drought Response Plan

Drought conditions have developed along the () and () River Basin(s) to the degree that counties in the () and () are likely to receive severe impacts to various sectors of their economy. If present trends continue, other river basins and sectors of the entire state's economy may soon be affected.

As State Drought Coordinator, I have decided to activate the State's Drought Response Plan so that specific impacts may be identified, and expeditious and effective remedial action may be taken.

As of the date of this memorandum, the Utah Drought Response Plan is in effect; the following actions, as specified in the plan, will be taken.

- (1) The Drought Review and Reporting Committee will be activated under chairmanship of the executive director, Department of Natural Resources.
- (2) All Impact Task Forces (TF): municipal, wildfire, agriculture, commerce and tourism, wildlife, and economic will be activated. The TF chairpersons will call their first meeting as soon as possible after the Drought Review and Reporting Committee is activated.
- (3) All addressees will assign: (1) a senior manager who can commit the resources of the agency as a drought coordinator, and (2) TF chairpersons and participants as indicated in Annex A "Task Force Organization."

(4) Lead agencies for drought response will be prepared to take action as appropriate.

(5) Weekly/Bi-weekly situation reports will be submitted starting the ().

By this memo I am requesting that each of you forward names, titles, and office and home telephone numbers of your drought coordinators and TF chairpersons to the executive director, Department of Natural Resources by (). You may elect to use your present disaster coordinator in the role of drought coordinator.

I recognize this effort imposes a burden beyond the normal work load. However, a potentially serious situation exists. This creates a need for priority attention and I appreciate your full cooperation.

Attachment 4

EXECUTIVE ORDER
PROCLAMATION
DISASTER EMERGENCY

WHEREAS, drought conditions exist in _____ beginning on or about _____, and such conditions present a serious threat to public health, safety and property; and

WHEREAS, economic damages are occurring in _____ because of drought and have the potential to greatly worsen if left unattended; and

WHEREAS, these conditions will worsen as the drought persists; and

WHEREAS, immediate action is required to respond to and alleviate the damage and suffering from drought; and

WHEREAS, these conditions do create a disaster emergency within the intent of the Disaster Response and Recovery Act of 1981;

NOW THEREFORE, I Michael O. Leavitt, Governor of the State of Utah, by virtue of the power vested in me by the constitution and the laws of the state of Utah, do hereby order as follows:

It is found, determined and declared that a “State of Emergency” exists due to the aforesaid drought statewide and that such area is declared to be a disaster area for the remainder of the drought period requiring aid, assistance, and relief available pursuant to the provisions of the state statutes, and the State of Utah Emergency Operations Plan, Volume II, Natural Disaster, which is hereby activated.

IN WITNESS WHEREOF, I have sent my hand and caused to be affixed the Great Seal of the State of Utah. Done at the State Capitol in Salt Lake City, Utah, this day of

_____.

Michael O. Leavitt
Governor

ATTEST:

Olene Walker
Lieutenant Governor

ANNEX A

ASSESSMENT SYSTEM
TASK FORCES/COMMITTEES

PURPOSE/ORGANIZATION/OPERATING PROCEDURES

Drought Review and Reporting Committee

Water Supply Availability Committee

Task Force

- 1- Municipal Water and Sewer Systems
- 2 - Agriculture Industry
- 3 - Commere and Tourism
- 4 - Wildfire Protection
- 5 - Wildlife
- 6 - Economic Impacts
- 7 - Energy (when activated)
- 8 - Health (when activated)

ANNEX A

1. DROUGHT REVIEW AND REPORTING COMMITTEE

1.1 Situation

As drought conditions develop and intensify so that the varied impacts and needs can be identified, assessments of these impacts and needs must be developed so that an effective response can be generated.

1.2 Purpose

The Review and Reporting Committee is the “heart” of the drought assessment system. It will receive reports from the Water Supply Availability Committee and Impact Task Forces; aggregate assessment and projections; evaluate overall conditions; develop recommendations for drought response; and make timely reports to leadership, the news media, and the response system (Lead Response Agencies).

1.3 Organization

The Drought Review and Reporting Committee is composed of the chairpersons of the Water Supply Availability Committee and Impact Task Forces and chaired by the State Drought Coordinator (executive director, Department of Natural Resources). The vice-chairperson will be the director of the Division of Comprehensive Emergency Management. Composition of the committee is as follows:

Chairperson - State Drought Coordinator
Vice-chairperson - director of Division of Comprehensive Emergency Management
Members - Chairperson - Water Supply Availability Committee
 Chairperson - Impact Task Forces:
 Agriculture Industry
 Commerce and Tourism
 Wildfire Protection
 Wildlife
 Economic Impacts
 Energy (when activated)
 Health (when activated)

Other: Departmental drought coordinators for Lead Response Agencies may attend meetings as observers.

1.4 Execution

1.4.1 Concept/Approach

The Drought Review and Reporting Committee is the key to the effectiveness of the assessment system. The committee will review written assessments of the Impact Task Forces and summarize the findings for transmission to the Governor. On a more frequent basis, or as conditions dictate, significant activities/information will be relayed to the Governor in a situation report.

1.4.1 Tasks

- Review Water Supply Availability Committee assessments and projections.
- Review written assessments and projections of need prepared by Impact Task Forces.
- Aggregate task force assessments and provide situation reports to the Governor as needed.
- Provide information to the public and news media.
- Coordinate initial interagency, local, and private response within existing programs and resources.
- When growing needs require a response beyond existing programs and funding, prepare a “Drought Emergency Proclamation” for Governor’s signature to activate the State Drought Response Committee.
- Provide situation reports, advice and other support to the Drought Response Committee, including recommendations for funding response activities.

1.5 Implementation

- After activation, meeting frequency will be determined by the committee chairperson.
- Committee will produce reports necessary to perform tasks.

2. WATER SUPPLY AVAILABILITY COMMITTEE

2.1 Situation

As drought conditions worsen so that trends in water availability in comparison with the historical norm can be identified, there is a need to develop timely supply assessments so an effective response can be generated.

2.2 Purpose

The Water Supply Availability Committee, when activated, will collect water availability data, evaluate this data, make assessments as to changes (based on frequency analysis) in availability and make trend projections, identify key areas of water shortages, and report these activated assessments and projections to the State Drought Coordinator, Impact Task Forces, and Review and Reporting Committee.

2.3 Organization

The Water Supply Availability Committee is composed of representatives of the following agencies, and may be expanded as new resource agencies are identified:

Division of Water Resources (agency providing chairperson)

National Weather Service

Office of State Climatologist

U.S. Bureau of Reclamation

State Engineer

Division of Comprehensive Emergency Management

U.S. Geological Survey

Soil Conservation Service

2.4 Execution

2.4.1 Concept/Approach

Committee members will utilize their various information resources to develop water availability statistical data and trends. Data collection, evaluation, and reporting will be focused on major problem areas across the state (by drainage basin or by geographical/political subdivision).

2.4.2 Tasks

- Review and update this annex upon activation of the committee.
- Make assessments and projections by basin (in comparison to the historical norm) on:
 - Snowpack
 - Soil moisture
 - Reservoir levels
 - Stream flow
 - Precipitation
 - Temperatures
- Obtain site specific data to provide other task forces with water availability/storage estimates by river basins.
- Select or develop specific formats for reporting the above assessment and projection information.
- Determine requirements for routine and special reports.
- Respond to special data requirements of the other assessment task forces.
- Identify resource information gaps and make recommendations to address same.

2.5 Implementation

(Action Plan). Based on the various resource information capabilities and data banks, the Water Supply Availability Committee will take the following actions to carry out its tasks.

- 2.5.1 On a monthly basis, provide a Water Availability Report to the State Drought Coordinator comprised of information on snowpack/precipitation, stream flow, reservoir storage levels,

Surface Water Supply and Palmer indexes, and forecasted weather. The basis of this report will be:

- Snowpack, precipitation, stream flow, and reservoir storage levels:

January 1 through June 1 - Monthly Water Supply Outlook published by SCS, as supplemented.

June 1 to January 1 - Data provided by the National Weather Service, SCS, and Office of the State Climatologist.

- Palmer Index, as provided by the National Weather Service/State Climatologist.
- Surface Water Availability Index, as provided by the Division of Water Resources and SCS.
- Weather forecasts, as provided by the National Weather Service.

2.5.2 Provide supplemental reports whenever a significant weather event occurs or a special report requirement exists.

2.5.3 Coordinate special data requirements of the other Impact Task Forces with resource agencies.

2.5.4 Continuous emphasis will be placed on improvement of the committee's capability to provide accurate and timely assessments of water availability.

2.5.5 The committee will meet at the call of the chairperson.

2.5.6 Adjustments to the action plan will be made as necessary, with the approval of the committee.

2.6 Capabilities

- Reports normally available by agency

2.6.1 Soil Conservation Service (SCS)

- Monthly report titled "Water Supply Outlook", covering snowpack, stream flow, and reservoir storage conditions.
- Weekly snow-precipitation update

- Ability to call up automated SNOTEL sites for current data.
- Soil moisture conditions.

2.6.2 Office of the State Climatologist

- Weekly precipitation/heating degree updates by climatological division. Comparisons to the historical norms.
- Adjust Palmer Drought Indices by climatological division
- Capacity to develop probability projections based on historical records

2.6.3 United States Geological Survey (USGS)

- Measures of well levels throughout the state. Some are measured on a monthly basis.
- Stream sage data, based on reporting stations. Some are telemetered.
- Joint programs with state agencies for special projects under a limited time frame.

2.6.4 National Weather Service - SLC Forecast Center and Colorado River Basin Forecast Center

- Daily - 3-5 day forecast
- Weekly
 - Palmer Drought Index
- Semi-Monthly
 - Average monthly precipitation and temperature outlook for next 30 days - received near 1st and 15th.
- Monthly
 - 90-day precipitation and temperature outlook - received during last week of the month.
 - Water Supply Outlook from River Forecast Center (January 1 to June 1).

2.6.5 State Engineer

- Approximately 40 river commissioners distribute and measure water according to water rights filing and can give a daily status of the situation.
- Data base of all instate reservoirs: river commissioners can provide status on a daily basis.
- Area engineers become directly involved in all questions of distribution within their respective areas during drought conditions.

2.6.6 U.S. Bureau of Reclamation

- Reports on bureau-owned systems to include reservoir levels, forecast inflows, and releases.

3. MUNICIPAL WATER AND SEWER SYSTEMS TASK FORCE

3.1 Situation

As drought conditions worsen for municipal water and sewer systems, there is a need to develop a process for timely assessments, response mechanisms, and follow-up procedures for such an event.

3.2 Purpose

The Municipal Water and Sewer Task Force is established to make assessments on the impact suffered by municipalities during a drought. These assessments will be based upon the most recent data available from each system manager or engineer, both in terms of prevention and resolution. The task force will be responsible for advising the Drought Review and Reporting Committee as to necessary responses which may not be forthcoming from the individual assistance agencies.

3.3 Organization

The Municipal Water and Sewer Task Force is composed of representatives of the following agencies, and may be expanded as needed throughout the season:

Department of Environmental Quality - (agency providing chairperson)
Department of Community and Economic Development
Division of Comprehensive Emergency Management
Utah League of Cities and Towns
USDA - Farmers Home Administration

Division of Water Rights
Division of Water Resources
Other agencies as needed

3.4 Execution

3.4.1 Concept/Approach

Task force members will utilize their various sources of information to develop estimates of impact on municipal systems. Data collection, evaluation, and reporting will be focused on major problem areas likely to occur in municipalities. When potential or actual municipal impacts and local need are identified, they will be reported to the Drought Review and Reporting Committee along with a response recommendation indicating possible sources of assistance. All estimates will consider assessments formulated by the Water Supply Availability Committee. Essential tasks to be performed by this committee are shown below.

3.4.2 Tasks

Identify sources of water supply: Reservoir, stream flow, and wells for both municipal and semi-public water systems. Assess water and sewer system drought susceptibility due to:

- Loss of supply.
- Seniority of water rights.
- Water quality standards.
- Other.
- Make recommendations to address identified impacts.
- Estimate costs associated with the implementation of all recommended programs and actions.

3.5 Implementation

The task force will meet as necessary to review and update procedures and situations throughout the state. Response agencies will take action where indicated and appropriate; all actions will be noted to the task force. All grants, loans or other emergency assistance measures will be reported monthly to the Drought Review and Reporting Committee. These reports may be more frequent depending upon the need.

4. AGRICULTURAL INDUSTRY TASK FORCE

4.1 Situation

The length and degree of intensity of a drought period produces an impact on the state's agricultural industry that can be devastating to many farmers and ranchers. As drought conditions

escalate so that impacts on agriculture can be identified, there is a need to develop timely assessments so that an effective response can be generated.

4.2 Purpose

The purpose of this annex is to describe the system for agricultural drought-damage assessment as part of the overall State Drought Response Plan. This will include defining the procedures and responsibilities of members in collecting and evaluating data, making assessments and projections, identifying sources of assistance, reporting and making recommendations to the Drought Review and Reporting Committee and other concerned elements of government.

4.3 Organization

The Agricultural Industry Task Force is composed of representatives of the following agencies and may be expanded as needed throughout the drought period:

- Department of Agriculture (agency providing chairperson)
- State Food and Agriculture Committee
- Bureau of Land Management
- Forest Service
- Division of Water Resources
- Division of Water Rights
- Other agencies as needed

4.4 Execution

4.4.1 Concept/Approach

The Food and Agriculture Committees (FAC), at county and state levels, are the key to an effective and timely assessment of statewide agricultural drought impacts and local needs. The Federal Emergency Operations Handbook describes the functions at the FAC (See Annex E). Response to natural disasters, including drought, is an important responsibility of the FAC. The committees are usually of members from federal agencies (i.e. ASCS, SCS, FmHA, ES) with representation from county commissions, emergency program directors, and other appropriate officials.

4.4.2 Procedure

- ASCS County Executive Directors request local FAC to gather applicable data assessing impacts of the drought. Regular reports of emergency areas and approved programs will be compiled and issued by ASCS.

- As needed, state agencies will conduct additional investigations and make reports necessary to trigger state drought related programs.
- State FAC will share findings with Utah Department of Agriculture (chairperson, Agricultural Task Force).
- Chairperson, Agricultural Task Force will report impacts/needs/losses to Drought Review and Reporting Committee and to lead response agency.
- The State Drought Coordinator, when appropriate and in cooperation with state FAC, will submit requests for natural disaster designation through Governor's office.

4.5 Implementation

- When activated, the task force will meet at call of the chairperson recognizing that a significant amount of the assessment and reporting will be accomplished through the already functioning county and state FACs.
- Extremely close liaison between the state FAC and the task force chairperson will be needed to keep the State Drought Coordinator (chairperson, Drought Review and Reporting Committee) informed of drought impacts and responses.

5. COMMERCE AND TOURISM TASK FORCE

5.1 Situation

Utah periodically experiences drought of varying degrees with impacts commerce and tourism within the state. One of the first industries impacted is the ski industry which is highly dependent on early and/or a substantial snowpack. As soon as impacts on commerce and tourism can be identified, there is a need to develop assessments so that an effective response can be generated. There are no regularly funded drought response programs, so legislative action would be required to establish and finance mitigation activities.

5.2 Purpose

The Commerce and Tourism Task Force will collect impact data, evaluate this data, and make assessments as to severity of impact. Based on water availability data, the task force will make impact projections, identify possible sources of assistance and report these assessments and projections to the Drought Review and Reporting Committee. Collected data would be used to initiate the legislative process to meet drought needs.

5.3 Organization

The Commerce and Tourism Task Force is composed of representatives of the following agencies and may be expanded at discretion of the task force chairperson:

Department of Community and Economic Development (agency providing chairperson)
Division of Parks and Recreation
Department of Employment Security
Other Agencies as needed:
Utah Ski Association
National Park Service
Bureau of Land Management
U.S. Forest Service
County government

5.4 Execution

5.4.1 Concept/Approach

Task force members will utilize their various sources of information to develop estimates of impact on commerce and tourism. Data collection evaluation and reporting will be focused on major problem areas likely to occur. When potential or actual impacts and local needs are identified, they will be reported to the Drought Review and Reporting Committee along with a response recommendation indicating possible sources of assistance. All estimates will consider assessments formulated by the Water Supply Availability Committee.

5.4.2 Task

- Assess losses in sales and receipts by economic segment/sector.
- Estimate levels of unemployment. Identify major segments impacted by unemployment as well as geographic or political subdivisions of the state most severely impacted.
- Recommended means to resolve identified problems. Consider mitigation activities such as public awareness programs.
- Estimate costs associated with the implementation of all recommended programs and actions.

5.5 Implementation

- Task force will be activated in accordance with the drought severity indicators as shown in the sequence of actions for activation of the State Drought Response Plan.

- Once activated, the task force will meet at the call of the chairperson and provide assessment reports to the Drought Review and Reporting Committee as determined necessary or as scheduled, i.e., weekly, monthly.

6. WILDFIRE PROTECTION TASK FORCE

6.1 Situation

The threat of wildfire in rural and forested areas is a weather- dependent activity that occurs annually. The problem is usually seasonal, but it can and does occur year-round in Utah. Drought conditions, however, increase the severity of wildfire threat and strain normal fire defenses. As drought conditions worsen, there is need to make assessments and identify potential short- and long-range fire protection impacts. Such evaluations are essential so that ongoing protection programs can be effectively strengthened to counter the expected threats.

6.2 Purpose

This task force will make drought assessments, wildfire impact projections, and recommend reinforcements necessary to maintain defense against the threats.

6.3 Organization

The task force will be composed of representatives from the following agencies:

- Division of State Lands and Forestry (Agency providing chairperson)
- State Fire Marshall
- Utah National Guard
- U.S. Forest Service
- Bureau of Land Management
- National Park Service
- Bureau of Indian Affairs
- National Weather Service (Fire Weather Forecaster)
- Other agencies as needed

6.4 Execution

6.4.1 Concept/Approach

Task force members will utilize various sources of information to develop urban and rural fire threat and impact estimates. Data collection, evaluation, and reporting will be focused on major problem areas likely to occur. A significant threat of fire or actual occurrence, along with suppression needs, will be reported to the Drought Review and Reporting Committee, along with a response recommendation indicating possible sources of assistance.

6.4.2 Tasks

- Review present urban and rural fire suppression capabilities in relationship to the fire threat.
- Inventory resource availability and procedures for activation.
- Identify key points of contact within major fire suppression agencies.
- Review adequacy of agency agreements with respect to urban and rural fire prevention and suppression.
- Assess municipal fire fighting impacts (low capacity systems in particular).
- Identify and report key urban and rural fire policy issues.
- Develop high priority impact projections.
- Make recommendations as to means by which major impact problems can be solved.
Consider:
 - Publishing and posting of potential fire hazard areas.
 - Establish a state government restriction policy, along with procedures for implementation.
 - Fire prevention program initiatives (Public service announcements, Smokey Bear, etc.).
- Estimate costs associated with the implementation of all recommended programs and actions.

6.5 Implementation

- After activation, meeting frequency will be determined by the task force chairperson.’
- Using available data sources, the task force will produce reports necessary to perform assigned tasks.

7. Wildlife

7.1 Situation

As drought conditions intensify so that impacts on wildlife can be identified, there is a need to develop timely assessments so that an effective response can be generated.

7.2 Purpose

The Wildlife Task Force will collect related impact data, make assessments as to severity, make impact projections, identify source of assistance, and plan for preventative measures. Assessments and projections will be reported to the Drought Review and Reporting Committee.

7.3 Organization

Membership of the Wildlife Task Force mainly includes individuals from the Division of Wildlife Resources. The division is structured into five regions statewide with a central administrative office in Salt Lake City. Each regional office is responsible for implementation of wildlife programs within established boundaries. The five regional offices are at Ogden, Springville, Vernal, Price, and Cedar City. The task force will be composed of the following members:

- Division of Wildlife Resources (agency providing chairperson)
- Regional Offices, Division of Wildlife Resources
- U.S. Forest Service
- Bureau of Land Management
- U.S. Fish and Wildlife Service
- Other agencies as needed

7.4 Execution

7.4.1 Concept/Approach

Task force members will utilize their various sources of information to develop estimates of impact on wildlife. Data collection, evaluation, and reporting will be focused on major problem areas likely to occur. When potential or actual impacts and local needs are identified, these will be reported to the Drought Review and Reporting Committee along with a response recommendation indicating possible sources of assistance.

7.4.2 Tasks

- Review and update this annex to include task force operating procedures.
- Estimate wildlife losses and make projections for losses over the long-term by major species.

- Advise various measures which can be taken to preserve wildlife.
- Make recommendations to solve wildlife problems. Consider public awareness programming.
- Estimate costs associated with implementing all recommended programs and actions.

7.5 Implementation

- When activated, task force will meet on schedule determined by chairperson.
- Task forces will submit assessment reports to the Drought Review and Reporting Committee as necessary and/or as requested by the committee.

8. ECONOMIC IMPACTS TASK FORCE

8.1 Situation

Utah experiences periodic droughts which result in significant impacts on the state's economy. As drought conditions escalate to a point where impacts can be identified, there is a need to develop assessments and projections so that an effective response can be generated.

8.2 Purpose

The purpose of this annex is to describe the organization and procedures for economic impact assessment as a part of the overall State Drought Response Plan.

8.3 Organization

The task force will include representatives from the following agencies:

- Office of Planning and Budget (agency providing chairperson)
- Department of Social Services
- University of Utah Bureau of Economic & Business Research
- Department of Agriculture
- Department of Commerce
- Department of Insurance
- Financial Institutions
- Department of Employment Security
- Other agencies as needed

8.4 Execution

8.4.1 Concept/Approach

Task force members will utilize their various sources of information as well as data from other task forces to develop estimates and projections of economic impact. Data collection, evaluation, and reporting will be focused on major problem areas likely to occur. When significant economic impacts and local needs are identified, they will be reported to the Drought Review and Reporting Committee indicating recommendations for response.

8.4.2 Tasks

- Upon activation, review and update this annex
- Identify significant revenue losses of local and state governments.
- Identify economic impacts by sector of activity: commerce, tourism, agriculture, and industry.
- Conduct simulation modeling to produce economic impact projections as required.
- Make recommendations to solve problems.
- Estimate costs associated with implementing all recommended programs and actions.

8.5 Implementation

- The task force, when activated, will meet at the call of the chairperson.
- Using information provided by task force member agencies, current conditions will be reviewed and their effects on the economy will be assessed. Reports will then be provided to the Drought Review and Reporting Committee on an “as required” basis. (List of possible reports which could be generated by task force members may be appropriate.)

9. Energy Task Force

(Annex to be published when task force is activated.)

10. Health

(Annex to be published when task force is activated.)

ANNEX B
RESPONSE SYSTEM
LEAD AGENCIES/DROUGHT RESPONSE COMMITTEE
ORGANIZATION/OPERATING PROGRAMS

1. Drought Response Committee
2. Municipal Water/Sewer System
3. Agriculture
4. Commerce and Tourism
5. Wildfire
6. Wildlife
7. Economic Losses
8. Energy
9. Public Health

1. Drought Response Committee (DRC)

1.1 Situation

When lead response agencies become overburdened and find difficulty in coping with growing problems, a need exists for an organization to be formed of senior level management from affected lead agencies to address these issues.

1.2 Purposes

When activated, the Drought Response Committee will review impact task force statements of unmet needs, or make recommendations to the Governor for action.

1.3 Organization

The Drought Response Committee will be composed of senior level representatives of the lead drought response agencies of state government and chaired by the State Drought Coordinator. Membership is as follows:

- State Drought Coordinator - Chairperson
- Representative - Department of Agriculture
- Representative - Department of Environmental Quality
- Representative - Department of Community and Economic Development
- Representative - Division of comprehensive Emergency Management
- Representative - Office of Planning and Budget
- Representative - FEMA Region - (advisory only)
- Other participants as needed/designated by the committee chairperson

1.4 Execution

1.4.1 Concept

The Drought Response Committee, when activated by the Governor upon recommendation of the Drought Review and Reporting Committee, will address those unmet needs and issues identified by the Impact Task Forces and lead response agencies. Actions within the authority of the representatives of this committee will be taken to resolve those matters brought before the committee. Matters not within the authority of this committee to resolve will be forwarded to the Governor with recommendations for action. Policy decisions made by the Governor will be implemented through this committee.

1.4.2 Tasks

- Review task force statements of unmet needs to recognize and identify alternate choices for response.
- Develop, coordinate, and recommend solutions to impact problems involving:
 - Executive branch actions to include inter-departmental or outside support (possible federal declaration). This could also include recommending the appointment of a departmental staff position(s) or field representative(s) or other special drought-related personnel.
 - State legislative actions, include requests for funding.
 - Program implementation, monitoring, and approval.
- Ensure inter-agency coordination (e.g., news media releases)
- Determine when drought intensity has receded to the point that there is no longer a need for the DRC to function.

1.5 Implementation

- The DRC, when activated, will meet on the call of the chairperson.
- A written report will be submitted to the Governor indicating the significant items brought before this committee, any actions taken by the committee, and any matters being recommended for executive action.
- The DRC may request special reports from:
 - Impact Task Forces
 - Response agency program managers
 - Other sources of assessment/response expertise

2. Drought Response - Municipal Water and Sewer Systems

- Lead agency: Department of Environmental Quality
- Other cooperating agencies: Division of Comprehensive Emergency Management, Division of Water Rights, Division of Water Resources, Department of Community

and Economic Development, Utah League of Cities and Towns, Farmers Home Administration.

2.1 Coordinating Procedures:

The goal of the task force is to help alleviate or diminish the effects of drought on public drinking water suppliers or sewer system operations. Part of this effort will involve providing financial assistance. Ordinarily, such assistance is provided by the Board of Water Resources, the Drinking Water Board, Farmers Home Administration, the Water Quality Board, and the Community Impact Board. When severe drought conditions exist, and funds are available, the Water and Sewer Task Force may distribute loan or grant funds to systems having extreme drought problems.

2.2 Response Programs

2.2.1 Department of Environmental Quality

- Maintain and distribute periodic report on drinking water systems experiencing drought-related problems.
- Respond to drinking water shortages to protect public health.
- Expedite review of Drinking Water Board (SDWB) or Water Quality Board (WQB) loan requests for drought-related problems.
- Provide guidance and technical expertise for drinking water systems affected by drought.
- Water quality monitoring programs and water quality criteria to maintain beneficial use of the waters of the state and allow reuse of wastewater.

2.2.2 Department of Community and Economic Development

- Provide loans and grants through the Community Impact Board for drinking water projects. In an emergency situation, applications for such funds could be expedited.
- Provide financial assistance through the Disaster Relief Board to political subdivisions (subject to legislative authorization and appropriation).

2.2.3 Division of Water Rights

- Approval for the emergency construction of new or replacement wells.

- Emergency processing of applications to appropriate new sources of water or change existing approved right to new points of diversion, place of use, or nature of use.

2.2.4 Farmers Home Administration

- Water and sewer financial assistance program.

2.2.5 Division of Comprehensive Emergency Management

- Activation and coordination of state and federal disaster relief resources and programs.
- Emergency fire suppression assistance
- Emergency communications
- Emergency public information

2.2.6 Board/Division of Water Resources

- Loans for water supply and conservation projects
- Technical assistance, including geotechnical for well siting
- Education program for water conservation

2.2.7 Utah League of Cities and Towns

- Provide task force information on drought problems and needs
- Provide cities and towns with information on state resources

2.3 Typical Problems/Obstacles to Response Action

2.3.1 Emergency situations, calling for immediate action, may arise and the normal funding process from various state agencies may take too long.

- No grant funds available for emergency disbursing to needy systems.

3. Drought Response - Agriculture

- Lead Agency: Utah Department of Agriculture

- Other cooperating agencies: State Food and Agricultural Committee (U.S. Department of Agricultural Agencies), Division of Water Resources, Bureau of Land Management, Forest Service, Division of Water Rights, and others as needed.

3.1 Coordinating Procedures

To help alleviate or diminish the effects of drought on the agricultural industry, the Department of Agriculture, as lead agency, shall act as liaison between various state and federal agencies and the State Drought Coordinator.

3.2 Response Programs

The currently available state and federal drought-related response programs are listed in Annexes C & D. Lead agency and cooperating agencies will complete, as needed, all tasks necessary to trigger appropriate assistance programs.

3.3 Typical Problem/Obstacles to Response Action

3.3.1 Emergency situation requires financial assistance beyond capability of state program.

3.3.2 Emergency declarations are made at federal level to permit access to available federal programs.

3.3.3 Federal agencies' often slow response and interpretation of program make them somewhat restrictive.

3.3.4 Coordination of efforts between local, state, and federal programs.

4. Drought Response - Commerce and Tourism

- Lead Agency: Department of Community and Economic Development
- Other cooperating agencies: Utah Division of Parks and Recreation, Department of Employment Security, Utah Ski Association, U.S. Forest Service, Bureau of Land Management, and National Park Service

4.1 Coordinating Procedures

Agencies concerned with commerce and tourism will assemble on call by Department of Community and Economic Development. They will meet as frequently as required to develop responses to an actual or threatened drought. Telephone information may be used in lieu of formal meeting when conditions warrant.

4.2 Response Programs

When receiving notification of significant unmet local needs, the Department of Community and Economic Development will coordinate actions within the capability of the agencies concerned. The department will report the results of such actions to the DRRC and/or DRC, if activated.

Response programs may include:

- When available, expedite federal loan or loan guarantee programs for business.
- Developing and disseminating information for tourists and news media to direct visitors to areas capable of receiving visitation.
- Coordinating information releases dictated by the statutory requirements of the various agencies that could offset tourism loss.

Rendering of direct technical assistance to cities, counties and business association eligible for drought related financial assistance (when assistance is available).

4.3 Typical Problems/Obstacles to Response

Availability of short-term financial assistance to business affected by the drought is extremely limited if not in most instances non-existent. This will dictate greater limitation on the part of the state in determining who will receive such assistance.

Inability to influence state or national news media who will focus on “worst case” without also showing normal or good alternatives available.

Lack of discretionary funds within agencies to counter adverse publicity with a professional campaign.

5. Drought Response - Wildfire Protection

- Lead Agency: Department of Natural Resources, Division of State Lands and Forestry
- Cooperating Agencies: U.S. Forest Service, Bureau of Land Management, National Park Service, Bureau of Indian Affairs, Utah National Guard, Division of Comprehensive Emergency Management, and others as needed/appropriated.

5.1 Coordinating Procedures

Regardless of drought conditions, wildfire emergency procedures are expected to be:

NEED	ACTION
Normal fire events and workload	Utilize existing fire suppression mechanisms of local, state, and federal resources.
Multiple fires which threaten an overload or demand the same limited resources.	Activate multi-agency coordinating system to evaluate needs and set resource priorities.
Local capability overwhelmed; disastrous fires imminent or in progress.	Implement state and/or federal emergency programs where applicable; take other appropriate emergency actions as needed.
<ul style="list-style-type: none"> • Longer-range wildfire problems which may be drought related, such as abnormal number of fire starts, abnormal number of fires still burning, unusual control problem, and lack of funds, will be reported by the lead response agency to the DRRC and/or DRC, if activated. 	

5.2 Significant Timing Problems

Once ignited, fire is of immediate concern. Emergency suppression responses must be quick. The impacts are real and urgent for a very localized area during the emergency. This will lead to several timing problems for the drought-response system:

- New program designs or re-direction will be slow and too late for a specific fire.
- Shortages of trained forces available for any long-term repositioning.
- Many key decisions may have been made during the fire operation; DRC may only be able to support such decisions and seek financial support as required.
- When there are no fires, the needs disappear. The DRC response programs will seem unnecessary during such periods of lull.
- An on-again off-again response to variable fire activities is difficult to retrieve once shelved. Continuous response levels will be costly and wasteful.

5.3 Additional Funding

Some preventative or mitigative measures are possible should additional funding become available. To be effective, the funding needs to be available prior to major wildfire activities and periods of high fire dangers.

5.3.1 Wildfire Prevention

- Special printing of items (leaflets, badges, restaurant cards, bumper stickers, etc.).
- Special news media materials available.
- Highway checkpoints with special warnings/information.
- Closures of areas to visitors, hunters, wood gatherers, etc.
- Road blocks
- Engine spark arrester requirements/inspections.
- Active fire weather stations early/late.
- Mobilize strike teams of fire prevention specialists.

5.3.2 Wildfire Detection

- Increase aerial detection flights.
- Increase manning of Lightning Detection System at Boise.
- Establish statewide 24-hour toll-free reporting number.

5.3.3 Wildfire Readiness

- Increase number of on-call fire crews (recruit, train, equip).
- Hire on-call fire crews full time.
- Preposition paid crews.
- Increase air tanker capability.
- Increase helicopter availability.
- Purchase and stockpile/distribute slip on pumper tanker units.
- Initiate roving initial attack fire patrols.
- Increase equipment stockpiles at fire caches.

- Activate fire weather stations early/late.
- Paid standby of overhead fire teams.

5.3.4 Wildfire Suppression

- Quick recruiting/training of emergency fire mop-up crews.
- Establish additional temporary air tanker bases.
- Reinforce fire aircraft capabilities and back-up A/C.
- Utilize infrared fire detection aircraft for fire mapping.
- Activation of requested National Guard units/facilities.
- Activate/hire video TV teams for intelligence, critiques, reviews.
- Step up prevention, detection, readiness actions.

6. Drought Response - Wildlife

- Lead agency: Department of Natural Resources, Division of Wildlife Resources (DWR)
- Cooperating Agencies: State, federal and private conservation groups that have authority or interest in wildlife and their habitat. Federal agencies of primary interest will include the U.S. Forest Service and Wildlife Service.

6.1 Coordination Procedures

Concerned agencies will meet on call of Division of Wildlife Resources as needed. Because DWR has the major capability to respond to drought impacts, internal directives will generally cover coordination procedures. Situation reports will be made to DRRC and/or DRC, as required.

6.2 Response Program

The division will respond to wildlife problems associated with drought within the limits of its own manpower and funding. If problems exceed the capabilities of the division, requests for supplemental manpower and funding will be made.

6.3 Typical Problems/Obstacles to Response

- Lack of adequate manpower or funding needs.
- Time constraints in responding to problems, especially those resulting in fish losses in streams and reservoirs.

7. Drought Response - Economic Impacts

- Lead agency: Office of Planning and Budget
- Cooperating agencies: All other state departments as well as the local and federal agencies and public and private organizations/individuals concerned with response to impacts of drought.

7.1 Coordinating Procedures

The Office of Planning and Budget is responsible for monitoring the costs incurred by state agencies in responding to a disaster. In cases where these expenses cannot be absorbed within a department's existing appropriation or other outside sources, they will determine the best manner to acquire the necessary funds to reimburse the department for these extraordinary expenses.

7.2 Response Programs

The Office of Planning and Budget will work with the affected departments and the Governor in determining which source of additional funding would be most appropriate. Some of the possible options are:

- Transfer from other programs within the affected department.
- Transfer from other departments.
- Request to the legislature for supplemental funding.
- Recommended for special funding built into following year's appropriation.
- Recommendation that the Governor call a special session of the legislature to obtain the required funding.

The Office of Planning and Budget may also take the lead in other response roles in the event of a severe drought. If state revenues decline drastically from the projections used to establish the state spending limit, an-across-the-board budget cutting exercise may be necessary.

7.3 Typical Problems/Obstacles to Response

A very severe drought requiring an extensive state response could also result in a decline in state revenues, limiting the state's ability to respond.

Reimbursement to state departments for extraordinary expenses incurred in responding to a drought or other disaster are usually made after the fact, and a department has no guarantee that all its expenses will be reimbursed.

8. Drought Response - Energy

- Lead Agency: Energy Office

To be published when energy impacts (shortages, disruptions) are forecast and begin to occur.

9. Drought Response - Public Health

- Lead Agency: Department of Health

To be published when public health problems begin to occur.

ANNEX C

FEDERAL DROUGHT ASSISTANCE PROGRAMS

The following listing of federal programs and authorities that address drought-related needs are for reference purposes. Federal agencies administering the program should be consulted for currency, eligibility, and uses of a particular program.

1. U.S. Department of Agriculture

1.1 Farmers Home Administration

1.1.1 Emergency Loans

The purpose of the program is to assist family farmers, ranchers, and aquaculture operators with loans to cover losses resulting from major natural disasters, including drought. These loans can be used for annual farm operating expenses and for other essential needs necessary to return the disaster victims' farming operations to financially sound bases so that they can return to private sources of credit as soon as possible. Assistance ranges between \$500 and \$500,000. Loan funds may be used to repair, restore, or replace damaged or destroyed farm property (real and chattel) and supplies which were lost or damaged as a direct result of a natural disaster. Under certain conditions, funds may be used to refinance secured and unsecured debts made necessary by the disaster or finance adjustments in farming, ranching, or aquaculture operations in order to restore or maintain the operations on a sound financial basis equivalent to predisaster potential.

1.1.2 Soil and Water Loans - OMB 10.416.

This program is intended to facilitate improvement, protection, and proper use of farmland by providing adequate financing and supervisory assistance for soil conservation; water resource development, conservation, and use; forestation; drainage of farmland; the establishment and improvement of permanent pasture; the development of pollution abatement and control facilities on farms; an development of energy conservation measures and other related conservation measures. Loan funds may be used to: level land; carry out basic land treatment practices, including liming, fertilizing, and seeding; establish permanent pastures and farm forests; establish forestry practices; improve irrigation; develop water supplies for home use and livestock; develop energy conserving measures; purchase pumps, sprinkler irrigation systems and other irrigation equipment; acquire water rights; restore and repair ponds, tanks, ditches, and canals for irrigation; dig ditches and install tile to drain farmland; develop ponds and water control structures for fish production; and carry out pollution control and abatement on farms.

1.1.3 Water and Waste Disposal Systems for Rural Communities - OMB 10.418.

This program provides basic human amenities, alleviates health hazards and promotes the orderly growth of rural areas by meeting the need for new and improved rural water and waste disposal facilities. In 1988, loans ranged between \$4,000 and \$6,818,200, with an average of \$499,063. Grants ranged between \$4,500 and \$2,136,000, with an average of \$363,899.

Funds may be used for installation, repair, improvement, or expansion of a rural water facility including distribution lines, well pumping, facilities and associated costs, and the installation, repair, improvement or expansion of a rural waste disposal facility including the collection and treatment of sanitary, storm, and solid wastes.

Municipalities, counties, and other political subdivisions of a state, such as districts and authorities, associations, cooperatives and not-for-profit corporations, and Indian tribes are eligible. Assistance is limited to communities of 10,000 people or less, with priority given to communities of less than 5,500. Applicants must (1) be unable to finance the proposed project from their own resources or through commercial credit at reasonable rates and terms, and (2) have the legal authority necessary for constructing, operating, and maintaining the proposed facility or service and for obtaining, giving security for, and repaying the proposed loan.

Eligibility was expanded to communities of 15,000 or less for drought relief under the Disaster Assistance Act of 1989.

1.1.4 Watershed Loans - OMB 10.419

These loans are available to local organizations to develop and carry out plans to protect, develop and utilize land and water resources in small watersheds. Assistance ranges between \$19,800 and \$300,000, with an average of \$133,276.

Loan funds may be used to help local sponsors provide the local share of the cost of watershed improvement for flood prevention, irrigation, drainage, water quality management, sedimentation control, fish and wildlife development, public water based recreation, and water storage and related costs. The total amount of WS loans in any one watershed cannot exceed \$10,000,000.

Sponsoring local organizations, such as municipal corporations, soil and water conservation districts, or other not-for-profit organizations in approved watershed areas are eligible for assistance. Applicants must have authority under state law to obtain, give security for, and raise revenues to repay the loan and to operate and maintain facilities financed with the loan.

1.1.5 Resource Conservation and Development Loans - OMB 10.414

This program is designed to provide loan assistance to local sponsoring agencies in authorized areas where acceleration of resource conservation, development, and utilization programs will increase economic opportunities for local people. Assistance ranges between \$12,840 and \$500,000, with an average of \$97,981.

Loan funds may be used for (1) rural community public outdoor-oriented water based recreational facilities; (2) soil and water development, conservation, control and use facilities, (3) shift-in-land use facilities; (4) community water storage facilities; and (5) special purpose equipment to carry out the above activities.

City, county and agencies, and local non-profit corporations in authorized Resource Conservation and Development (RC&D) areas are eligible provided they are (1) financially sound; (2) sponsor the RC&D measure for which the loan is requested and included in the RC&D project plan; and (3) have authority to borrow funds, repay the loan, and pledge security for the loan and to operate the facilities or services provided.

1.1.6 Other FmHA Loan Programs

A variety of other loan programs are available from FmHA which provide loans to groups, including governmental bodies, to develop water systems which could contribute to alleviating water shortages in rural areas. Information on specific requirements are eligibility for each of the following programs is available from county FmHA offices.

- Farm Ownership Loans - Assistance for buying, improving or enlarging farms, including the improvement of on-farm water supplies. As of February 1990, the applicable interest rate was 8.755. Interest rates are subject to periodic revisions.
- Farm Labor Housing Loans and Grants - Assistance for the development of low-rent housing for domestic far laborers including the development of water, sewage disposal, heating, and lighting systems. As of February 1990, the applicable interest ranged between 1% and 10.2%. Interest rates are subject to periodic revision.
- Home Improvement and Repair - Assistance for general home improvement, including the development of sanitary water and waste disposal systems. As of February 1990, the applicable interest rate was 8.75%. Interest rates are subject to periodic revision.
- Rural Rental Housing Loans - Assistance for repair and development of streets and water and waste disposal systems. As of February 1990, the applicable interest rate was 8.75%. Interest rates are subject to periodic revision.

- Non-Farm Enterprise Loans - Assistance for development of water and waste disposal systems essential to the enterprise. As of February 1990, the applicable interest rate was ____%. Interest rates are subject to periodic revision.
- Commercial Facility Loans - Assistance for the development of utilities and other associated costs. For applicants at or below the poverty line, the applicable interest rate is 5%. For intermediate applicants, the interest rate is 6%. For all others, the interest rate is 7%. These are the current rates as of February 1990. Interest rates are subject to periodic revision.

1.2 Agricultural Stabilization and Conservation Service

1.2.1 Emergency Conservation Program - OMB 10.0154

This program enables farmers to perform emergency conservation measures to control wind erosion on farmlands, or to rehabilitate farmlands damaged by wind erosion, floods, hurricanes, or other natural disasters and to carry out emergency water conservation or water enhancing measures during periods of severe drought. Examples of the sorts of activities which can be performed under this program include: renting irrigation pipe, lining conveyance systems, installing tailwater recovery systems, and developing water supplies for grazing livestock. Assistance ranges between \$3 and \$64,000. The average award is \$1,780.

Emergency cost-sharing is limited to new conservation problems created by natural disasters which, if not treated, will impair or endanger the land, materially affect the productive capacity of the land, represent damage that is unusual in character and, except for wind erosion, is not the type of damage that would recur frequently in the same area. In addition, qualifying applications are for circumstances so costly to rehabilitate that federal assistance is necessary if the land is to be returned to agriculture use. Severe drought situations for water enhancing measures are to be determined by the deputy administrator, State and County Operations, ASCS.

Owners, landlords, tenants, or sharecroppers on a farm or ranch, including associated groups, who bear a part of an approved conservation practice in a disaster area are eligible to apply for cost-share conservation activities. Applicants are advised to contact their local county Agricultural Stabilization and Conservation Service office after a natural disaster has occurred to determine eligibility and application deadlines.

1.2.2 Agricultural Conservation Program - OMB 10.063

The purpose of this program is to control erosion and sedimentation, encourage voluntary compliance with federal and state requirements to solve point and non-point source pollution, improve water quality, encourage energy conservation measures, and assure a continued supply of

necessary food and fiber. The program is directed toward the solution of critical soil, water, energy, woodland, and pollution abatement problems on farms and ranches.

Conservation practices are to be used on agricultural land and must be performed in accordance with applicable specifications. Wildlife conservation practices must also conserve soil or water. Program participants are responsible for upkeep and maintenance of practices installed with cost-share assistance. The cost-share assistance does not apply if the primary purpose is to bring new land into production.

Owners, landlords, tenants, or sharecroppers, including associated groups, on a farm or ranch who bear the cost of an approved conservation practice are eligible for cost-share assistance.

1.2.3 Water Bank Program - OMB 10.062

This program is designed to conserve surface waters; preserve and improve the nation's wetlands; increase migratory waterfowl habitat in nesting, breeding, and feeding areas in the United States; and secure national environmental benefits. Assistance ranges between \$8 and \$65 per acre, with an average of \$16.00 per acre.

Ten-year agreements are made with landowners to help preserve important nesting, breeding, and feeding areas of migratory waterfowl. As part of the agreements, participants agree in return for annual payment not to drain, burn, fill, use for agricultural purposes, or otherwise destroy wetlands areas determined by the Secretary of Agriculture. The program is coordinated with the Department of Interior and uses technical and related services of state, federal, and private conservation agencies.

Landowners and operators of specified types of wetlands is designated important migratory waterfowl nesting, breeding, and feeding areas are eligible.

1.2.4 Emergency Feed Assistance Program

This program makes CCC-owned feed grains available for sale at reduced prices to eligible livestock producers in counties designated by the Secretary of Agriculture as disaster areas due to drought. This program is administered under Section 407 of the Agricultural Act of 1940.

1.2.5 Emergency Feed Program

This program provides cost-sharing for livestock producers who must purchase feed in excess of normal purchases due to production losses incurred by natural disasters. Eligible producers may receive assistance for purchasing the type feed, including hay, best suited for the livestock operation, in amounts not to exceed the smaller of feed needs or feed loss. The program can be implemented by the ASCS Deputy Administrator, State and County Operations, upon request by a county committee for ASCS and concurrence of the state committee.

1.2.6 Acreage Conservation Reserve

Cropland acreages are reduced under production adjustment programs and placed in an acreage conservation reserve (ACR) for an entire growing season. Haying and grazing of eligible cover crops is permitted in drought emergencies. Authority to implement haying and grazing of ACR designated under the Agriculture and Food Act of 1981 is vested in the ASCS Deputy Administrator, State and County Operations, but may be delegated to state committees of ASCS.

1.3 Soil Conservation Service

1.3.1 Watershed Protection and Flood Prevention (Small Watershed Program)

The purpose of this program is to provide technical and financial assistance in planning and carrying out works of improvement to protect, develop, and utilize the land and water resources in small watersheds. Project purposes include watershed protection, flood prevention, agricultural water management, recreation, municipal and industrial water supply, and fish and wildlife development. In addition, during times of emergency or drought, emergency authority is granted to haul water for livestock in communities with demonstrated need. Assistance per state ranges from \$20 to \$6,100,000, with an average of \$1,700,000.

Assistance is provided in planning, designing, and installing watershed improvement works. Cost-sharing assistance is also available for watershed protection, flood prevention, irrigation, drainage, sedimentation control, fish and wildlife, and public water-based recreation. Long-term credit is available to help local interests with their share of the costs. Watershed area must not exceed 250,000 acres and the capacity of a single structure is limited to 25,000 acre-feet of total capacity and 12,500 acre-feet of floodwater detention capacity.

Eligible are any state agency, county or group of counties, municipality, town or township, soil and water conservation district, flood prevention or flood control district, Indian tribe or tribal organization, or any other nonprofit agency with authority under state law to implement, maintain, and operate watershed works of improvement.

1.3.2 Soil and Water Conservation - OMB 10.092

This program is designed to plan and implement a national soil and water conservation program, and to provide leadership in conservation, development, and productive use of soil, water, and related resources. An ancillary part of this program, the Soil Survey, provides published soil interpretations for widespread use by agencies, organizations, and individuals.

Technical assistance to the general public in planning and applying soil and water conservation practices and treatment, and furnishing technical soil and water conservation resource information to state and local governments.

General public, state governments, and local governments. Local governments usually informally review needed resource assistance with the conservation district governing body. Individuals and groups usually cooperate with local conservation district.

1.3.3 Resource Conservation and Development - OMB 10.901

This program intended to encourage and improve the capability of state and local units of government and local nonprofit organizations in rural areas to plan, develop, and carry out programs for resource conservation and development. Assistance ranges between \$10,000 and \$500,000, with an average of \$40,000.

Technical and financial assistance is available only for Resource Conservation and Development (RC&D) areas authorized for assistance. Assistance is available for the planning and installation of approved measures specified in RC&D area plans, to conserve and improve the use of land, develop natural resources, and improve and enhance the social, economic, and environmental conditions in rural areas. Grant funds are available only for the federal cost share part of construction contracts.

State and local governments and nonprofit organizations with authority to plan or carry out activities relating to resource use and development in multijurisdictional areas.

1.3.4 Snow Survey and Water Supply Forecasting - OMB 10.907

This program provides information on forthcoming seasonal water supplies from streams that derive most of their runoff from snowmelt. Water supply forecasts are available to farm operators, rural communities and municipalities for water resource management purposes and hydrometeorological data is available for reservoir regulation and streamflow management purposes. The data collected through the snow survey system is shared with the Joint Agriculture Weather Facility of the World Agricultural Outlook Board. During drought, this data is used to advise the Secretary of Agriculture on which counties should be declared disasters.

The information is used by the owners and operators of the 32,000,000 irrigated acres in the mountain states and the far west. The data is also used in the regulation of hundreds of small and large reservoirs for irrigation, flood control, power generation, recreation, industry, and municipal supplies. Cooperators include other federal agencies, state agencies, municipalities, 88 other irrigation districts and water associations, and private utilities.

Information is available to the general public.

2. U.S. Department of Interior

2.1 Bureau of Reclamation

2.1.1 Irrigation Systems Rehabilitation and Betterment (R&B Program) - OMB 15.502

The purpose of this program is to rehabilitate and improve small irrigation facilities on projects governed by reclamation law or constructed under the authority of the Small Reclamation Projects Act of 1956. Assistance ranges from \$9,000 to \$64,833,000, with the average of \$2,279,500.

Funds may be used for rehabilitation of existing irrigation systems, including those constructed under the Distribution System Loans Act of July 4, 1995 (P.L. 840130, 69 Stat. 244) on reclamation projects only in the 17 westernmost contiguous states and on project facilities constructed under the Small Reclamation Projects Act in the 17 western states and Hawaii. Funds cannot be used to initiate new construction. Funds for rehabilitation and betterment work are interest-free, except for certain interest-bearing project functions constructed under the Small Reclamation Projects Act. All funds are repaid by the contracting entity in annual installments pursuant to the water users ability to pay as determined by the Secretary of the Interior, taking into account the outstanding obligations of the organization.

Any water users organization whose facilities were constructed by the BOR or with a Distribution System Loans Act loan, and to which the U.S. holds title, is eligible. In addition, any water users organization on nonfederal projects constructed under the authority of the Small Reclamation Projects act of 1956 is eligible as well.

2.1.2 Small Reclamation Projects (Small Project Loans) - OMB 15.503

This program provides federal loans and some grants to public non-federal organizations for the rehabilitation and improvement or construction or water resource development projects. Assistance ranges between \$1,906,000 and \$26,700,000, with an average of \$13,775,000.

Loans and/or grants for calendar year 1989 were available for up to \$29,600,000 for individual projects whose total cost did not exceed \$44,500,000. Projects can be single-purpose irrigation or drainage, or multipurpose, including municipal and industrial water supplies, flood control, fish and wildlife, recreation development, and hydroelectric power. Construction grants can be made for a portion of the costs allocated to flood control, fish and wildlife enhancement, and recreation development, if such development is of general public benefit. Loan application report, water rights, and rights-of-way costs must be contributed by applicant.

Cities, counties, irrigation or water districts, or other entities organized under state law and eligible to contract with the federal government, and who can demonstrate engineering and financial feasibility, are eligible. Private individuals are not eligible.

2.1.3 Distribution System Loans - OMB 15.501

This program provides reimbursable federal loans to organize irrigation districts with land included within congressionally authorized reclamation projects to plan, design, and construct irrigation and municipal and industrial water distribution or drainage systems in lieu of federal construction.

The program is only for construction of irrigation, drainage, and associated municipal and industrial water supply systems. Projects must have been previously authorized for construction under reclamation law and located in the 17 westernmost contiguous states. Loan amounts are not limited, unless specified in the authorizing act. All project-required rights-of-way and other item costs up to 10 percent must be contributed. Costs allocated to irrigation and irrigation drainage are interest-free. Costs allocated to municipal and industrial water supply are interest-bearing.

Irrigation districts organized under state law, eligible to contract with the United States and possessing a water supply contract with the BOR, are eligible.

2.2 Geological Survey

2.2.1 National Water Research Program - OMB 15.806

The purpose of this program is to support needed research into any aspect of water resource related problems deemed to be in the national interest. At least 50 percent of the research cost must be met by the applicant. Assistance ranges between \$4,000 and \$200,000, with an average of \$50,000.

Applications must be for scientific research projects which are within the USGS area of responsibility. Conferences and symposia will be supported only if it is clear that equivalent results cannot be obtained at regular meetings of professional societies. Cost-sharing is encouraged.

Colleges, universities, profit-making and nonprofit organizations, and state and local governments, having named a principal investigator, are eligible.

3 Department of Defense, Department of Army

3.1 Office of the Chief of Engineers

3.1.1 Planning Assistance to States

This program provides for cooperation with states in the preparation of comprehensive plans for the development, utilization, and conservation of water and related land resources of drainage basins located within the boundaries of that state.

The state must have a planning program for the development, utilization, or conservation of the water and related land resources underway or laid out in sufficient detail. All U.S. Corps of Engineers input must be an integral part of the state program. The input from the Corps is to be on an effort or service sharing basis in lieu of an outright grant basis. The program is limited to \$6,000,000 annually, and not more than \$300,000 shall be expended in any one year in one state.

3.1.2 Emergency Advance Measures for Flood Prevention - OMB 12.111

In addition to allowing the Army Corps of Engineers to perform activities to protect life and property prior to or during flooding, this program allows the Corps to construct wells and transport water to farmers, ranchers, and political subdivisions in drought-distressed areas. The water is provided for human and livestock consumption only. The cost of well drilling under this program is paid by the applicant. Federal drilling equipment must be used. The transportation of water by vehicle, small diameter pipeline, or other means will be at 100% federal costs. The applicant, however, is responsible for the purchase, loading, unloading, and storage costs.

Authorized assistance for mitigating drought conditions includes transporting water and well drilling. This is a program of last resort and all other options must be exhausted before it will be implemented.

COE assistance for emergency water supplies will be provided only when (1) the applicant lives in an area determined to be “drought-stricken” and a request is made by the governor of the state for assistance; (2) a clearly definable need will exist in the foreseeable future despite state and local actions for reasons other than lack of financial resources; (3) drought conditions are causing or are likely to cause a substantial threat to public health and welfare in the area; (4) all other local, state, and federal resources and options for securing necessary water supplies have been exhausted, including assistance and support from federal agencies such as FmHA, SBA, ASCS, and EDA; and (5) a long-term solution to the problem is being put in place so that the problem will not be recurring.

3.1.3 Emergency Water Supplies

The Secretary of the Army, acting through the Chief of Engineers, has the authority to drill wells or transport water for farmers, ranchers, and political subdivisions in an area determined by the Secretary of the Army to be drought-distressed. The water is provided for human or livestock consumption only. Both types of assistance are only provided after it is determined that the applicant cannot obtain the water (for reasons other than lack of financial resources) from the

private sector within a reasonable time. The cost of well drilling will be paid by the applicant. If the applicant cannot obtain financing from commercial or other sources, the applicant may pay the reasonable cost over a number of years, not to exceed 30, and at an interest rate which would apply pursuant to Section 7(b) (2) of the Small Business Act (PL 85-536). Reasonable cost is the lesser of the cost to the Corps of engineers to construct the well or the cost of a private business to construct the well. The transportation of water by vehicle, small-diameter pipeline, or other means will be at 100 percent federal costs. The purchase, loading, unloading, and storage of the water will be at the applicant's expense. The Corps of Engineers has also developed policy and guidance for the preparation of drought contingency plans for an integral part of the overall water-control management system for Corps operated and maintained projects. Technical expertise and guidance on specific water and related land-resource problems may be available from the nearest district engineer.

4. Federal Emergency Management Agency (FEMA)

4.1 State and Local Programs and Support

4.1.1 Disaster Assistance - OMB 83.515

The purpose of this program is to provide supplemental assistance to states, local governments, certain private nonprofit organizations, and individuals in alleviating suffering and hardship resulting from presidentially declared emergencies or disasters, including drought. There has never been a presidential disaster declaration for drought and it is not envisioned that there will ever be one. It is felt that Congress has sufficiently expanded the programs of other federal agencies, primarily those of the USDA. However, should a drought be severe enough to warrant presidential declaration, the following program would apply.

Public assistance in the form of cost-sharing grants is available following a presidential declaration of emergency or disaster. Without a presidential declaration, grant may be made to states for the suppression of forest and grassland fires which threaten to become major disasters. Individual housing, counseling, and legal and financial assistance are also available to families adversely impacted by declared disasters.

State and local governments, federally recognized Indian tribal governments, U.S. territories and possessions, and certain private nonprofit organizations in designated emergency or disaster areas are eligible for public assistance. Only states are eligible for fire suppression grants. Assistance is also available for individuals or families whose needs are not met by other programs.

5. Small Business Administration (SBA)

5.1 Disaster Loan Assistance

Under the authorities of SBA, the administrator may declare an area available for SBA disaster loan assistance. While “drought” is not included in SBA’s definition of a disaster, there are three circumstances in which the agency will provide loan assistance for drought related situations to eligible applicants:

- When the Secretary of Agriculture declares a natural disaster for farms, SBA’s Economic Injury Disaster Loan (EIDL) program is available to eligible applicants. Therefore, SBA will lend to agriculturally dependent businesses, but to farmers. In addition, SBA loans are available to those suffering economic losses as a result of the effect of droughts on farmers and ranchers, i.e., SBA will provide loan assistance to farm equipment dealers that do not have a market because farmers are unable to continue farming. Therefore, for example, the agency would not provide the assistance to hydro-businesses or producers of canoes.
- Nurseries are eligible to apply for EIDL’s due to drought.
- Presidential declarations for individual assistance. The difference between a presidential and Secretary of Agriculture declaration is that in cases where the president has made a declaration, EIDL is available to all applicants. The restriction that the business must be directly affected by the drought on farms and ranchers is removed.

6. American Red Cross (ARC)

6.1 Disaster Services - Water Shortage

The disaster services of the Red Cross during a drought or water shortage will be in support of, and in cooperation with, general community based response efforts initiated to reduce suffering or meet basic human needs. Depending on a community’s need, Red Cross activities may include:

- Providing technical consultation and guidance to local and state government agencies or officials when planning for the distribution of water from central sites to community residents.
- Establishing and staffing first-aid stations at community sites designated for the distribution of water to residents.

- Coordinating voluntary agency activities designed to support local community response efforts.
- Providing voluntary personnel to assist local government response actions.

The Red Cross does not provide assistance to commercial, industrial, or agricultural corporations with drought or water-shortage caused losses.

ANNEX D

STATE DROUGHT RELATED ASSISTANCE PROGRAMS

The Governor has authority to declare an emergency, effective for 30 days. Any extension must be approved by the Legislature. The Governor's emergency powers include the purchase or lease of necessary materials. Food and other items are specifically mentioned, including lands, but not water. However, water rights are similar to the property interest in land, and arguably the Governor could expropriate and reallocate water. Appropriate compensation would be required and determined under domain statutes.

The state now has a revolving "emergency fund" of \$250,000 which can be used to respond to any type of emergency provided the Governor issues a "State of Emergency" proclamation.

1. Department of Public Safety

1.1 Division of Comprehensive Emergency Management (CEM)

1.1.1 Utah Emergency Act of 1981

This act authorized CEM to coordinate disaster mitigation, preparedness, response, and recovery covering "natural phenomenon," which specifically includes drought. Drought response therefore falls under the general State Emergency Response Plan. Within policies established by the Governor and the Legislature, the division is to prepare, implement, and maintain programs and plans for: (1) disaster prevention and mitigation; (2) prompt and effective response and recovery; (3) identification of particularly vulnerable areas; (4) coordinating preventive and preparedness measures; (5) coordinating federal, state, and local emergency activities; and (6) all necessary, incidental, and appropriate measures.

2. Department of Natural Resources

2.1 Division of Water Resources

The state of Utah, through the Board of Water Resources, operates three revolving construction fund programs for the purpose of providing technical and financial assistance in the development of the state's water resources. Over the years these programs have been used not only for water development purposes but to provide assistance during times of drought and flooding. These self-help programs require the sponsor of the project to repay the financial assistance provided by the state at 0% or low interest rates. In addition, the sponsor is usually required to provide 25 percent of the estimated construction costs in cash or in kind service.

2.1.1 Revolving Construction Fund (RCF)

The Revolving Construction Fund was established in 1947 to provide technical and financial assistance to nonprofit irrigation companies and water companies. Board funding is provided at 0% interest, which has been used to construct many small conservation projects. During the 1977 drought, funding was provided through this program to assist irrigation companies and individuals experiencing water shortages. This program provides the best opportunity for the state to provide assistance to irrigation companies experiencing problems during the drought.

2.1.2 Cities Water Loan Fund (CWLF)

The Cities Water Loan Fund is used to provide funding to political subdivisions of the state for upgrading and/or replacing its municipal water systems. Under this program, the board purchases general obligation or water revenue bonds from the municipality as security for the financial assistance being provided. The sponsors of these projects are also expected to repay the financing provided by the state. During the 1977 drought, several communities received funding through this program to help drill wells.

2.1.3 Conservation and Development Fund (C&D)

The Conservation and Development fund was created in 1978 to help finance large water development projects beyond the funding limits of the RCF & CWLF. The Board of Water Resources either purchases a bond or enters into a purchase sales agreement with the sponsoring entity.

2.2 Division of Water Rights

With respect to water rights administration, permanent water rights transfers in Utah involve the usual notice and hearing requirements. After the filing of an application for permanent change in the point of diversion, or place or nature of use, the law requires advertising the change once a week for three consecutive weeks, followed by a 300-day protect period. If there is a protest, a hearing will be held. During the 1977 drought, every effort was made to keep the time required to process change applications as short as possible. Also of note, the State Engineer has authority to permit drilling of a water well after an application has been filed, but before final approval. However, the applicant assumes any risk of the change being disapproved. The State Engineer may also approve temporary transfers or appropriations for a period not to exceed one year. While public notice may be required, the processing time is shorter. These provisions are not restricted to use during drought, and are contingent on the usual findings regarding water availability, non-interference with senior rights, engineering feasibility, financial ability, non-speculation, and the public interest in recreation and the environment.

While Utah law follows the appropriation principal of “first in time, first in right,” it also provides: “In times of scarcity, while priority of appropriation shall give the better right as between those

using water for the same purpose, use for domestic purposes, without unnecessary water, shall have preference over use for all other purposes, and use for agricultural purposes shall have preference over use for any other purpose except domestic use.” Thus, under drought conditions, special attention and consideration would be given community and domestic water systems.

3. Department of Community and Economic Development

3.1 Division of Community Development

3.1.1 Community Impact Fund Board Program

Though this program is not a drought response program, projects can be funded which have the effect of mitigating the impacts of a water shortage or drought. In areas impacted by natural resources development, the Community Impact Board (CIB) makes loans and grants for a wide variety of projects deemed to be in the public interest. Included are drainage projects, drinking water and waste water projects and secondary irrigation systems.

4. Utah Soil Conservation Commission Programs

4.1 Utah Agriculture Resource Development Loan (ARDL) Program

In 1976, the Utah Legislature provided \$250,000 to create the Rangeland Development Fund. Over the next several years, this fund provided low-interest loans to applicants for range improvements.

In 1983, this fund was expanded to include cropland conservation measures. Funding was initialized at \$42.48 million. There is now over \$15 million in the revolving account. This fund is under direction of the SCC, and staff support is provided by the Utah Department of Agriculture. The Soil Conservation Service provides technical assistance for the implementation of conservation measures under direction of the local soil conservation districts (SCDs).

The loans are available to all farmers and ranchers for use on private and state lands. Loans are made at 3% interest and carry a one-time 4% administrative fee. The maximum life of a loan is 12 years. Conservation practices must be maintained.

4.2 Priority Watershed Program

The ARDL Program includes the Watershed Subprogram, established to meet special conservation needs in priority areas. Priority watershed projects are intended to develop a coordinated interagency approach to problem area improvement. Watershed funds set aside by the SCC are used exclusively in designated areas. To meet technical assistance needs, watershed grant funds may be used.

The priority watersheds are identified jointly by the Utah Department of Health, Utah Department of Agriculture, the U.S. Soil Conservation Service, and other interested local, state, and federal agencies. These priority watersheds are ranked by the SCC based on resource problems and local desire to reduce water pollution, soil erosion, and floodwater damage.

5. Department of Environmental Quality

5.1 Divisions of Drinking Water and Water Quality

5.1.1 Drinking Water Board Financial Assistance Program

The Safe Drinking Water Board's financial assistance program was created by the Legislature in 1983 with \$10 million. Another \$2.5 million was appropriated by the Legislature for a security account which could only be used for credit enhancement purposes. Since then, approximately \$9.9 million has been loaned to 18 applicants. The loans were used for drinking water facilities such as water storage tanks, pipelines, and wells. The repayments on these loans, along with interest, were to be deposited into the security account.

Amendments to the act in 1985 let the security account funds be used for direct project loans with variable interest rates, credit enhancement, or interest buy-down. Thus, a revolving loan system was established. Principal and interest repayments from previous loans are revolving into a security account. It is estimated that for each of the next 10 years, approximately \$900,000 will enter the security account from this source.

5.1.2 Water Quality Board Wastewater Treatment Facilities Financial Assistance Program

The Water Quality Board and its staff, the Division of Water Quality, encourages communities to plan and finance all needed wastewater facilities. But for some communities, it may not be possible for residents alone to afford the full cost. For this reason, two assistance programs are administered by the Division of Water Quality.

5.1.2.1 The State Wastewater Project Financial Assistance Program

In 1983, the Utah Legislature created a wastewater loan program and appropriated \$40 million for the Water Quality Board to construct needed wastewater projects. In addition, \$5 million was made available for credit enhancement agreements. Credit enhancement agreements are generally zero-interest loan for the purchase of municipal bond insurance. The insurance improves ratings and financing on locally issued bonds. There is a large need for adequate wastewater systems which will continue into the future due to growing populations and the natural deterioration of existing systems.

5.1.2.2

The present Federal Wastewater Treatment Construction Grants Program has been in existence since 1972 when the Water Pollution Control Act was passed by Congress. The program is currently administered by the Division of Water quality through a program delegation agreement with the U.S. Environmental Protection Agency (EPA).

Since 1972, the Grants program has been used by 23 separate communities with raw sewage discharges or widespread failing individual wastewater disposal systems. During the same period, 76 other communities received grants for various stages of projects, which range from planning and design to major upgrading of existing plants or replacement of inadequate facilities. This successful record has been accomplished with \$186 million in federal funds, which stimulated a total of \$248 million in wastewater facilities construction.

6. Disaster Relief Board

6.1 Utah Disaster Relief Board (DRB)

The Utah Disaster Relief Board (DRB) was created by the Legislature in 1983 to help local governments repair flood damage. DRB funds help applicants repair, restore, reconstruct, or replace public facilities damaged or destroyed by flooding or mudslides. Included may be the following county or municipal facilities: flood control, public power, sewage treatment and collection, waterways, water supply and distribution, and watershed development. Some highway facilities and public buildings are also eligible.

The Permanent Community Impact Board (see Section 8.6) acts as the Disaster Relief Board. Personnel in the Division of Community Development act as staff for the board.

All financial assistance provided by the DRB is in the form of grants. Obviously, this funding is only appropriate for emergency repair situations and is only available when mandated by the Legislature and Governor. Routine water resources development is not eligible.

ANNEX E

Extract From Emergency Operations Handbook

CHAPTER 14 - NATURAL DISASTER RESPONSIBILITIES OF STATE AND LOCAL FOOD AND AGRICULTURAL COUNCILS, EMERGENCY PERSONNEL

SECTION 1 - OPERATING RELATIONSHIPS

14101 OPERATING RELATIONSHIPS

- A. Local FAC Chairpersons, Emergency Programs, and State FAC Vice Chairpersons, Emergency Programs, are responsible for:
1. Reporting:
 - a. Natural disaster information in accordance with Exhibits 24 and 25.
 - b. Conditions such as droughts or unusually heavy rains, which threaten to develop into natural disaster situations.
 2. Coordinating USDA natural disaster activities to assure efficiency and effectiveness, without becoming directly involved in natural disaster assistance operations of individual USDA agencies.
 3. Maintaining liaison with:
 - a. Appropriate representatives of State and local governments.
 - b. Representatives of the Federal Emergency Management Agency (FEMA), when a natural disaster occurs in only one state. If a natural disaster such as a flood or hurricane occurs in two or more states, the USDA Emergency Programs Staff, Departmental Administration, will provide for liaison with FEMA.
- B. Agency representatives serving on the Local FACs and State FACs, Emergency Programs are responsible for informing their Chairpersons of progress made by their respective agencies in providing natural disaster assistance.
- C. USDA agencies are responsible for:

1. Natural disaster assistance programs outlined in the current USDA Program Aid 1328, Natural Disaster Assistance Available from the U.S. Department of Agriculture.
2. Conducting their respective natural disaster assistance programs.

14102 MEETING NATURAL DISASTER SITUATIONS

Both the Local FAC Chairperson, Emergency Programs, and State FAC Vice Chairperson, Emergency Programs, will take the following actions:

- A. Call a meeting of their respective FAC, Emergency Personnel, as soon as practicable, if a natural disaster SIGNIFICANTLY affects rural areas:
 1. The Local FAC Chairperson, Emergency Programs, will invite the local governing body or its appropriate representative, Local Emergency Programs Director, and other appropriate officials. When possible, without endangering lives of FAC Emergency Personnel, a physical on-site inspection should be conducted.
- B. Consult with as many FAC, Emergency personnel, as feasible, either in person or by telephone, when a meeting is impracticable.
- C. In the meeting
 1. Arrange, as necessary, for obtaining damage assessment information for preparation of Exhibit 25, USDA Potential Natural Disaster Damage Assessment Report.
 2. Coordinate FAC Emergency Program activities to:
 - a. Avoid duplication of efforts in obtaining needed information.
 - b. Assure common use of information obtained.
 - c. Avoid providing conflicting information to the public and others.
 3. Request that Local and State FAC, Emergency Personnel, keep their respective Chairpersons informed of progress in carrying out the emergency programs of their respective agencies.
- D. Maintain liaison with appropriate local, State or Federal representatives.

SECTION 2 - REPORTS

14201 REPORTING NATURAL DISASTERS

- A. Local FAC Chairperson, Emergency Programs. Submit the following reports in accordance with exhibit instructions:
1. USDA Flash Situation Report (Exhibit 24). A report will be made as soon as possible, but within 24 hours of the occurrence of a natural disaster.
 2. USDA Potential Natural Disaster Damage Assessment Report (Exhibit 25). When requested by the State FAC Vice Chairperson, Emergency Programs.
 3. Concurrence. Obtain and indicate concurrence of the assessment of damage from Local FAC Emergency Personnel involved in reviewing and editing the report.
 4. Signatures. The Damage Assessment Report must be signed and dated by the Local FAC Chairperson, Emergency Programs.
- B. State FAC Vice Chairperson, Emergency Programs:
1. USDA Flash Situation Report (Exhibit 24). Edit report if required, and make prompt distribution in accordance with exhibit instructions.
 2. USDA Potential Natural Disaster Damage Assessment Report (Exhibit 25). Request Damage Assessment Report from the Local FAC Chairperson, Emergency Programs, if requested by the Governor's office, Indian Tribal Council, the FEMA Regional Director, or the national headquarters.
 - a. In requesting Damage Assessment Report from the Local FAC Chairperson, Emergency Programs, provided:
 - (1) Submission Time. Consult with FmHA, NASS, and other State FAC, Emergency Personnel, as appropriate, in addition to the FEMA representative, in determining when the Local FAC Chairperson, Emergency Programs, should send the Damage Assessment Report to the State FAC Vice Chairperson, Emergency Programs.
 - (2) Price Information on Crops and Livestock. Consult with the NASS member of the State FAC, Emergency Personnel, to determine unit prices on livestock and average yield of crops when required. The

value of farm facilities will be determined locally by the Local FAC, Emergency Personnel, in estimating dollar losses of these items.

(3) Aquaculture Information, consult with:

(a) FmHA representative on the State FAC Emergency Personnel, concerning aquaculture enterprises eligible for emergency loans, and advise Local FAC Chairperson, Emergency Programs, of eligibility.

(b) Appropriate State government specialists and Federal Government specialists to obtain information to assist the local FAC Emergency Personnel, in estimating unit and dollar losses to aquaculture operations.

b Review of Damage Assessment Report from the Local FAC Chairperson, Emergency Programs:

(1) Review and Editing. ASCS, CES, FmHA, NASS a SCS, along with other State FAC, Emergency Personnel, whose agency emergency programs would be impacted as a result of the natural disaster, will review and edit the Damage Assessment report.

(2) Concurrence. Obtain and indicate concurrence of the assessment of damage from State FAC Emergency Personnel involved in reviewing and editing the report.

(3) Signatures. The Damage Assessment Report must be signed and dated by the State FAC Vice Chairperson, Emergency Programs, and the Local FAC Chairperson, Emergency Programs.

(4) Distribution. In accordance with Exhibit 25 instructions.

SECTION 3 - LIAISON

14301 STAFFING FEMA DISASTER ASSISTANCE CENTERS

If FEMA establishes disaster assistance centers in the disaster area, the State FAC Vice Chairperson, Emergency Programs, will confer with other State FAC Emergency Personnel and:

- A Select qualified USDA personnel to represent USDA at each established disaster assistance center.

- B. Orient selected personnel on all current USDA disaster assistance programs.
- C. Inform FEMA representative that a USDA representative is available at each of the disaster assistance centers.

SECTION 4 - SECRETARIAL DETERMINATIONS AND ADMINISTRATOR, FmHA NOTIFICATIONS

14401 CRITERIA

When severe loss and damage has occurred as the result of a natural disaster(s) to the agricultural segment of an area (county), FmHA EM loans may be made available as follows:

- A. By the Secretary of Agriculture - when it is determined that farmers, ranchers, and/or aquaculture operators have suffered severe physical and/or production losses, as a result of the natural disaster.
- B. By the Administrator, FmHA - when it is determined that farmers, ranchers, and/or aquaculture operators have suffered severe physical losses only, as a result of the natural disaster.

14402 REQUESTS

- A. All Secretarial Determinations must be initiated by a written request to the Secretary of Agriculture from a State Governor or Indian Tribal Council within 3 months of the last day of the natural disaster.
- B. All Administrator, FmHA Notifications must be initiated by an FmHA County Supervisor and recommended by the FmHA State Director to the Administrator, FmHA, within 3 months of the last day of the natural disaster. This process is an FmHA in-house procedure and does not involve any action on the part of other government agencies or political subdivision officials. DARs are not to be submitted.

SECTION 5 - PRESIDENTIAL DECLARATIONS

(By Executive Authority)

14501 CRITERIA

A request for a Presidential declaration must be initiated by a State Governor making a written request to the President. FEMA makes a survey of damage and loss, and determines which areas (counties) have been affected, and which Federal programs are to be made available, except that

FmHA emergency (EM) loans will be made available to qualified applicants in areas declared by the President and named by FEMA.

- A. Major disaster. Any disaster in any part of the United States which, in the determination of the President, causes damage of sufficient severity and magnitude to warrant unusual assistance above and beyond normal emergency services available from State and Federal Governments. Major disaster assistance makes several Federal disaster programs available automatically, and is intended to supplement the efforts and available resources to states, Local governments and disaster relief organizations in alleviating the damage, loss, hardship, or suffering caused by disasters.

- B. Presidential emergency. Any disaster in any part of the United States which is of such magnitude that the President makes a declaration requiring certain Federal emergency programs to be implemented as a supplement to State and local efforts as a means of saving lives and protecting property, preserving public health and safety, and/or lessening the threat of a more severe disaster.

EOH
USDA POTENTIAL NATURAL DISASTER DAMAGE ASSESSMENT
REPORT

1. Local FAC Chairperson, Emergency Programs:

- A. When requested by the State FAC Vice Chairperson, Emergency Programs, the Local FAC Chairperson, Emergency Programs, will schedule a meeting of the Local FAC Emergency Personnel, and make arrangements to assess the extent of the damage and submit the report to the state FAC Vice Chairperson, Emergency Programs, on the USDA Potential Natural Disaster Damage Assessment Report (DAR) form.
- B. Reproduce the DAR form locally, as needed.
- C. Use term “farm” or “farmers” to cover farms, ranches, farmers, ranchers, or aquaculture operations.
- D. Report losses to aquaculture operations separately, completing applicable items of the form.
- E. Complete specific items on the DAR as follows:
 - 1. Self-explanatory.
 - 2. Self-explanatory.
 - 3. Number of farmers doing business as an owner-operator or tenant-operator in the disaster year.
 - 4. Actual date (i.e., August 12, 1986), or dates (i.e., June 15 through August 20, 1986), on which natural disaster began and ended. These dates are necessary in establishing the disaster incident period.
 - 5. Type of natural disaster. EXAMPLES:
 - a. Blizzard, drought, excessive rain, excessive snow, flash flooding, flooding, freeze, frost, hail, high winds, hurricane, lightning or tornado.
 - b. If a major ANIMAL or PLANT DISEASE results from a natural disaster, state in an attachment, how abnormal weather contributed to spread of disease to epidemic stages.

- c. If a major INSECT OUTBREAK results from a natural disaster, state in an attachment, how abnormal weather contributed to the spreading and flourishing of the insects.
6. Number of Local FAC Emergency Personnel concurring with the information set forth in the DAR. Number of Local FAC Emergency Personnel not concurring with the information set forth in the DAR.
7. List all crops, including hay and pasture normally planted/growing in the order of their importance to the country's agricultural economy, regardless of whether or not they were damaged by the natural disaster. This information will be provided by the NASS member of the State FAC Emergency Personnel.
8. List acres normally planted/growing for crops shown in item 7. This information will be provided by the NASS member of the State FAC Emergency Personnel, and will be the average of the five years immediately preceding the disaster year.
9. List total acres planted/growing in county in the disaster year for crops shown in item 7.
10. Show disaster year yields per acre, i.e., bushels, pounds, or tons, etc., per acre for the county in the disaster year. These yields will be estimated realistically when DARs are requested prior to the completion of harvest. Take into consideration any probable recovery of the crops. If a reasonable assessment cannot be made, the DAR should reflect such a decision by the Local FAC Emergency Personnel.
11. List acres normally planted that were not planted to any crop during the disaster year. Those acres not planted must be due to the natural disaster.
12. & 13 Self-explanatory.
14. Self-explanatory.
15. Self-explanatory.
16. Use the average monthly market price for each type of livestock for the 36-month period preceding the calendar year in which the natural disaster occurred. This information will be provided by the NASS member of the State FAC Emergency Personnel.
17. Use the value of farm facilities, i.e., farm dwellings, including mobile homes, and service buildings, farm structures, farm machinery and equipment, and land damages, as determined by the Local FAC, Emergency Personnel, in estimating

dollar losses. NOTE: Include damage and losses to fences, timberland, drainage outlets and irrigation systems, etc., under “other” and note in Item 18. “Remarks” to which it applies.

18. Self-explanatory. List alternate crops that, as estimated by the Local FAC Emergency Personnel, may be planted to replace crops destroyed by the natural disaster.
- F. Submit the completed DAR and minutes of the Local FAC, Emergency Personnel meeting to the State FAC Vice Chairperson, Emergency Programs, with copies to:
 1. Appropriate local government representatives.
 2. Local FAC Emergency Personnel.
 3. State FAC Vice Chairperson, Emergency Programs.
 - 4.
 - G. The State FAC Vice Chairperson, Emergency Programs, will upon receiving all of the DARs requested from the Local FAC Chairperson, Emergency Programs, schedule a meeting of the State FAC Emergency Personnel for the purpose of reviewing the DARs.
 - H. Review each DAR in cooperation with other State FAC Emergency Personnel, and in Item 6 indicate number of State FAC Emergency Personnel concurring, and NOT concurring with the information set forth on the DARs. If DARs are not acceptable, return to the Local FAC Chairperson, Emergency Programs, for necessary additions or revisions.
 - I. The State FAC Vice Chairperson, Emergency Programs, must sign and date the DAR in Item 13. The DARs will not be reviewed by the Secretary of Agriculture unless they are properly signed and dated and copies of the respective minutes are attached.
 - J. FAX each DAR and respective minutes from Local FAC Emergency Personnel meetings within two work days after completion of State FAC Emergency Personnel review, unless returned to the Local FAC Emergency Personnel for revision. FAX to the ASCS Area Director, ATTENTION: EOLPD, with copies to:
 1. The governor’s Emergency Coordinator and the Head of the State Department of Agriculture.
 2. All State FAC Emergency Personnel.

3. FEMA Regional Director (upon request).
4. National Weather Service, NOAA State representative.
5. FmHA State Director

The FmHA State Director will send to the Administrator, FmHA, a copy of each DAR and respective minutes of the State and Local FAC Emergency Personnel meeting.

NOTE: The new flash situation and DAR forms will be used for reporting all natural disasters beginning on or after October 1, 1986.