Drought Response Program

Webinar for the Institute for Tribal Environmental Professionals (ITEP)

February 19, 2019
Reclamation’s Mission

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.
Reformulation of Drought Program

- Historically, most funding used for emergency response actions

- Program reformulated in 2015 to support a proactive approach for non-Federal partners to prepare for and respond to drought

- Planning ahead is more efficient and effective than taking measures in a crisis
Reformulation of Drought Program

• Drought preparedness to:
  • Identify vulnerabilities and mitigation actions to reduce risks
  • Improve coordination and cooperation among key entities, and development of procedures for monitoring, assessing, and responding to drought
  • Reduce impacts of drought, and conflicts between water users

• Included under Department of the Interior’s WaterSMART Program
WaterSMART Program

Supports Reclamation’s mission through collaboration with stakeholders to improve water management, increase conservation, and stretch scarce water resources.
Drought Response Program

- Drought Contingency Planning
- Drought Resiliency Projects
- Emergency Response Actions

Map showing locations of drought resiliency projects and contingency plans.
Drought Response Program

Program Requirements

**Eligible Applicants**
- States, Indian Tribes, Irrigation Districts, Water Districts, and other organizations with water or power delivery authority

**Cost Share**
- 50% non-Federal cost-share required

**Drought Plans**
- Up to $200,000 per plan, completed within 2 years

**Drought Projects**
- Funding Group I: Up to $300k and completed within 2 years
- Funding Group II: Up to $750k and completed within 3 years
The **East Bay Municipal Utility District** and other regional water management agencies within the Bay Area in California will develop a drought contingency plan.


The **Dolores Water Conservancy District in Colorado** will develop a drought contingency plan with the Ute Mountain Ute Tribe Farm and Ranch Enterprise, and the Montezuma Valley Irrigation Company.
Drought Response Program
Drought Resiliency Projects

Eligible Projects Include:

- Infrastructure Improvements
  - Modifying surface water intakes
  - New conveyance system components
  - Additional water storage
  - Aquifer Storage and Recovery
  - Capture and treat alternative supplies

- Decision Support Tools & Modeling
  - Tools to support water marketing
  - Tools to convey water supply information
  - Measurement

- Environmental Protection
  - Improve habitat
  - Install fish screens and ladders

Projects build resilience to drought
Projects supported by a drought plan are more competitive
Funding Level I: $300k 2 years
Funding Level II: $750k 3 years
Drought Response Program
Drought Resiliency Projects

Evaluation Criteria

Project Benefits – 40 points
  • How does your project build long-term resilience to drought?
  • Quantitative and Qualitative description

Drought Planning and Preparedness – 15 points
  • Projects specifically identified in a drought plan* with a high importance/priority are prioritized

Severity of Actual or Potential Drought Impacts to be addressed by the Project – 15 points
  • Severity of Impacts
  • Existing or Potential Drought Conditions

Project Implementation – 10 points
  • Well-supported budget – table and narrative
  • Identification of necessary permits and regulatory compliance
  • Detailed, thorough schedule

Nexus to Reclamation – 10 points
  • Consider support of Reclamation activities such as a Basin Study if there is no direct nexus to a water delivery project.

Department of the Interior Priorities – 10 points

*Drought plan is not an eligibility requirement.
## WaterSMART Schedule

<table>
<thead>
<tr>
<th>Program</th>
<th>Opportunity</th>
<th>Post Date</th>
<th>Close Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Small-Scale Water Efficiency</td>
<td>January 24, 2019</td>
<td>April 24, 2019</td>
</tr>
<tr>
<td></td>
<td>Projects</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drought Response Program</td>
<td>Drought Resiliency Projects</td>
<td>January 24, 2019</td>
<td>March 27, 2019</td>
</tr>
</tbody>
</table>
Arbuckle-Simpson Aquifer DCP

Arbuckle-Simpson Aquifer DCP
Drought Trigger Thresholds

- Antelope Springs Flow < 0.5 cfs
- Palmer Drought Severity Index (Climate Division 19) < 4.0
- Arbuckle Lake Water Level < 867 feet
- Blue River Streamflow (USGS Connerville Gage) < 33 cfs
- Pittsburg Monitoring Well Depth to Water (USGS) > 120 feet


November 2017
current climate conditions and emerging drought stages. To accomplish this task, on behalf of the Task Force, the Okla Institute and Chickasaw Nation have agreed to host and support an appropriate regional drought monitoring website, including relevant data and updated information pertaining to the current drought stage.

Table 1: ASA DCP Recommended Drought Stages & Response Actions for Water Use Sectors

<table>
<thead>
<tr>
<th>Sector</th>
<th>Municipal/Industrial</th>
<th>Agriculture</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - ALERT</td>
<td>Continue with conservation programs and mitigation strategies with the goal of achieving a voluntary reduction in potable water use of at least 25%.</td>
<td>Continue with mitigation strategies and consider implementation of the following primary voluntary conservation measures toward a goal of achieving a minimum 25 percent reduction in potable water use:</td>
</tr>
<tr>
<td></td>
<td>Restrictions on watering of non-food crops, including minimum watering in certain crop years; implement alternative drought-resistant crops;</td>
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<tr>
<td></td>
<td>Increase level of health monitoring;</td>
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</tr>
<tr>
<td></td>
<td>Increase predator control;</td>
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</tr>
<tr>
<td></td>
<td>Closely monitor and report range conditions;</td>
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<tr>
<td></td>
<td>Promote news media outreach and education programs; and</td>
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</tr>
<tr>
<td></td>
<td>Promote the reuse of wastewater and reclaimed water.</td>
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</tr>
<tr>
<td>2 - WARNING</td>
<td>Reduce non-essential potable water use by 40 percent.</td>
<td>Reduce non-essential potable water use by 40 percent.</td>
</tr>
<tr>
<td>3 - EMERGENCY</td>
<td>Implement site-specific measures to utilize alternative water supplies to the maximum extent available to eliminate non-essential potable water use.</td>
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</tr>
<tr>
<td></td>
<td>Eliminate irrigation of outside vegetation.</td>
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<td>Eliminate water supply to amenity ponds.</td>
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Table 1 (continued): ASA DCP Recommended Drought Stages & Response Actions for Water Use Sectors

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<td>Continue with conservation programs and recycling on-site water use. Achieve minimum 25 percent voluntary reduction in water use.</td>
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<td>Minimize water use for dust suppression.</td>
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<td>Voluntary goal to reduce potable water consumption by 20 percent.</td>
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<td>2 - WARNING</td>
<td>Reduce non-essential potable water use by 40 percent.</td>
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<td>Enforce surface water appropriation limits and reduce groundwater pumping by 30 percent.</td>
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<td>3 - EMERGENCY</td>
<td>Implement site-specific measures to utilize alternative water supplies in areas where surface baseflow is heavily reliant on groundwater (e.g., maintain streamflow requirements).</td>
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<td>Delay new hatchery activities that consume water.</td>
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<td>Work directly with regulators and water right holders to maintain instream flows and lake levels.</td>
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<td>Supplement surface water supplies with groundwater, where feasible.</td>
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Arbuckle-Simpson Aquifer Drought Contingency Plan, November 2017
Shoshone-Bannock Tribes

Computational Modeling to Enhance the Drought Resiliency of Water Resources

Riverware Model
- Identified Normal and Drought Condition Scenarios
- Modeled Operational and Infrastructure Improvements
- Considered Capital and Operational Costs
Coyote Valley Band of Pomo Indians

SITE PLAN
SCALE: 1"=100'

AREA TO RECEIVE BANK STABILIZATION INCLUDES: RIP-RAP, LARGE WOODY DEBRIS, AND RE-VEGETATION

WEAK SOILS DEPOSITS TO BE REMOVED

START SOIL NAIL SHOTCRETE WALL

REPAIR AREA 1 (PROPOSED TOPO)

STRONG SOIL

REPAIR AREA 2 (PROPOSED TOPO)

END SOIL NAIL SHOTCRETE WALL

SALT HOLLOW CREEK

RUSSIAN RIVER
Round Valley Indian Tribes

Mill Creek Streamflow & Riparian Restoration
Round Valley Indian Tribes

Mill Creek
Streamflow &
Riparian Restoration
Alameda County Water District

Rubber Dam No. 3 Fishway Construction and Fabric Replacement Project
WaterSMART Data Visualization Tool

Data visualization site is an interactive companion to this report:

- Interactive maps
- Featured project tours
- Program growth over time

https://www.usbr.gov/watersmart/

Data Visualization Tool: arcg.is/1TcT68S