

A large concrete dam is situated in a deep, narrow canyon with reddish-brown rock walls. Water is flowing through the dam's spillways, creating a white, frothy cascade. The sky is clear and blue. In the background, more of the canyon and some distant structures are visible.

RECLAMATION
Managing Water in the West

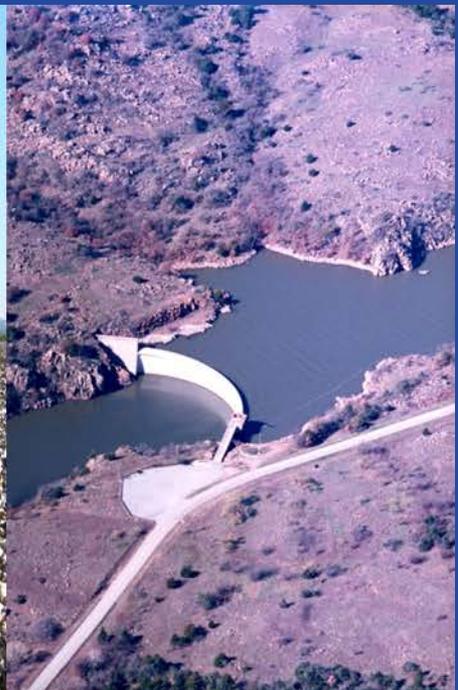
Drought Response Program

**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.





Reclamation Offices



-  Area Offices
-  Commissioner's Office
-  Regional Offices
-  Western Rivers

Reclamation Regional Boundaries

Region

-  Great Plains
-  Lower Colorado
-  Mid-Pacific
-  Pacific North West
-  Upper Colorado
-  States



Map produced by Bureau of Reclamation
Contact: kschultz@usbr.gov

Reformulation of Drought Program

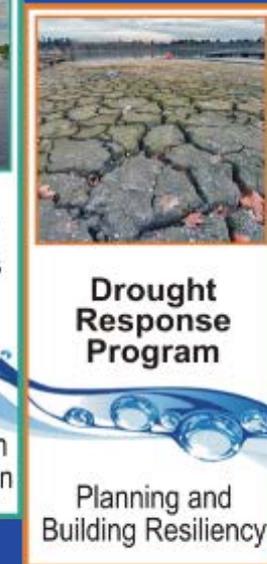
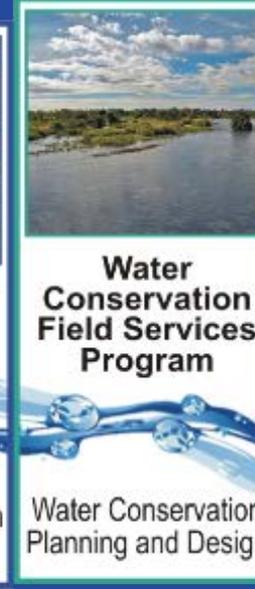
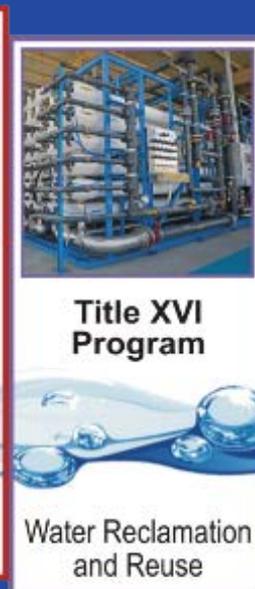
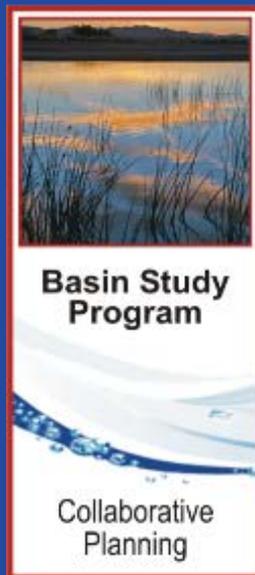
- Historically, most funding used for emergency response actions
- Program reformulated in 2015 to support a proactive approach for non-Federal partners to prepare for and respond to drought
- Planning ahead is more efficient and effective than taking measures in a crisis

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

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**

Drought Response Program Drought Contingency Plans

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 **Washington State Department of Ecology** will update its drought contingency plan, last published in 1992.

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.

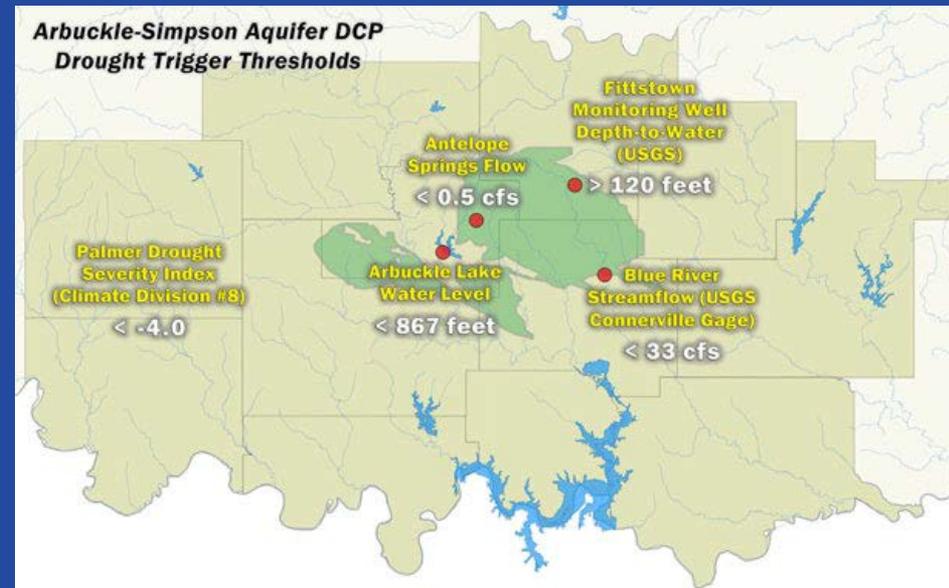
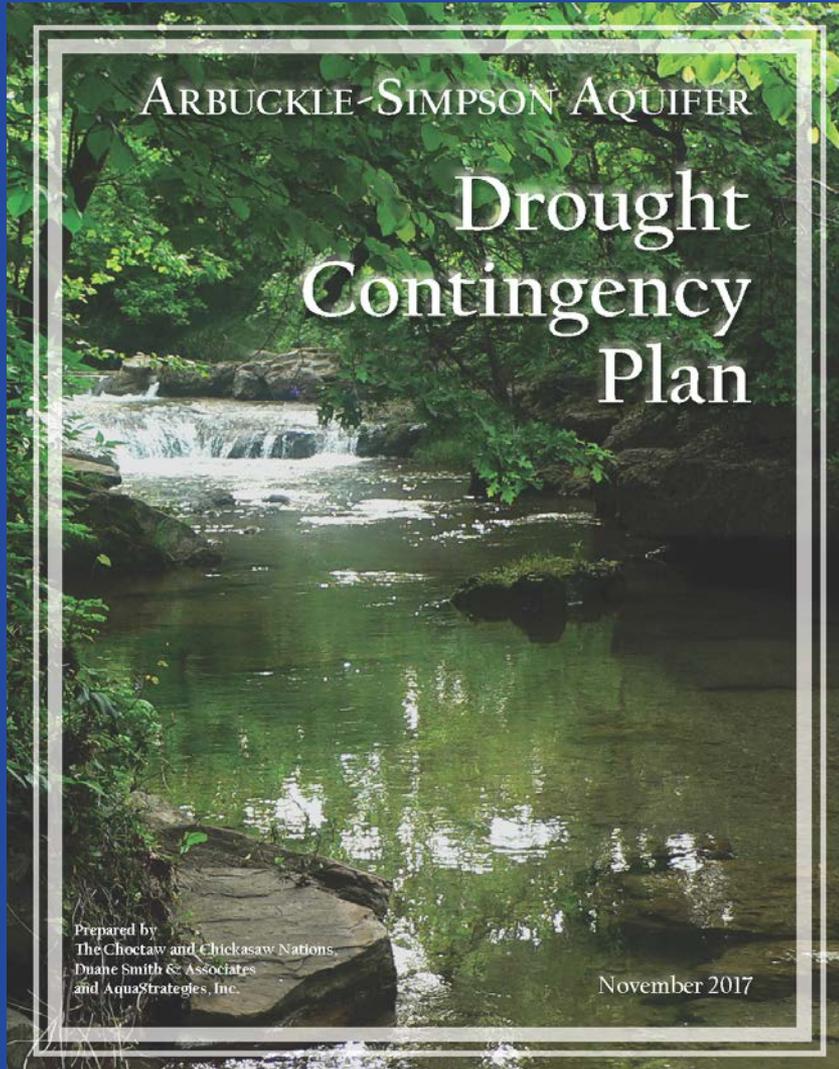
Department of the Interior Priorities – 10 points

*Drought plan is not an eligibility requirement.

WaterSMART Schedule

Program	Opportunity	Post Date	Close Date
<i>WaterSMART Grants</i>	Water and Energy Efficiency Grants	January 31, 2019	March 19, 2019
	Small-Scale Water Efficiency Projects	January 24, 2019	April 24, 2019
<i>Drought Response Program</i>	Drought Resiliency Projects	January 24, 2019	March 27, 2019

Arbuckle-Simpson Aquifer DCP



Arbuckle-Simpson Aquifer DCP

current climate conditions and emerging drought stages. To accomplish this task, on behalf of the Task Force, the Oka' 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

	SECTOR							
	Municipal/Industrial	Agriculture						
1—ALERT	<ul style="list-style-type: none"> Continue with mitigation strategies and consider implementation of the following primarily voluntary conservation measures toward a goal of achieving a minimum 25 percent reduction in potable water use: <ul style="list-style-type: none"> Restrictions on days or time of day for outdoor watering; Restrictions on filling swimming pools; Restrictions on residential or charity car washing; Limit washing of impervious surfaces; Establish water use requirements for local hotels and restaurants; Implement an escalating rate structure to discourage high water usage; Implement public education and outreach programs; and Promote the reuse of wastewater and reclaimed water. 	<ul style="list-style-type: none"> Continue with recommended conservation programs and mitigation strategies with the goal of achieving a voluntary reduction in potable water use of at least 25 percent. 						
2—WARNING	<ul style="list-style-type: none"> Reduce non-essential potable water use by 40 percent by implementing restrictions listed in Stage 1 on a non-voluntary basis. 	<table border="1"> <thead> <tr> <th colspan="2">Agriculture</th> </tr> <tr> <th>Beef Cattle Production</th> <th>Crop Production</th> </tr> </thead> <tbody> <tr> <td> <ul style="list-style-type: none"> Move livestock to available water sources, as needed. Increase level of health monitoring. Increase predator control. Closely monitor and report range conditions. Promptly report damage assessments to local agriculture office. </td> <td> <ul style="list-style-type: none"> Dryland producers report damage assessments and initiate support from farm and crop assistance programs. Irrigated producers pursue alternative diversion point access if diversion points are impacted by drought conditions. Divert available water to highest value crops. </td> </tr> </tbody> </table>	Agriculture		Beef Cattle Production	Crop Production	<ul style="list-style-type: none"> Move livestock to available water sources, as needed. Increase level of health monitoring. Increase predator control. Closely monitor and report range conditions. Promptly report damage assessments to local agriculture office. 	<ul style="list-style-type: none"> Dryland producers report damage assessments and initiate support from farm and crop assistance programs. Irrigated producers pursue alternative diversion point access if diversion points are impacted by drought conditions. Divert available water to highest value crops.
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3—EMERGENCY	<ul style="list-style-type: none"> Implement site-specific measures to utilize alternative supplies—such as rainwater, gray water and reclaimed water—to the maximum extent available to eliminate non-essential potable water use. Eliminate irrigation of outside vegetation. Eliminate water supply to amenity ponds. 	<ul style="list-style-type: none"> Continue Stage 2 response actions. Implement site-specific measures, such as delaying crop planting, switching to alternative crops that require less (or no) irrigation water, and delaying purchase of livestock and/or early sale of existing livestock. 						

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

	SECTOR			
	Energy (Oil & Gas)	Mining	Fish & Wildlife	Recreation & Tourism
1—ALERT	<ul style="list-style-type: none"> Continue with conservation programs and recycling on-site water use. Achieve minimum 25 percent voluntary reduction in water use. 	<ul style="list-style-type: none"> Continue with conservation programs to recycle on-site water and minimize water used for dust suppression. Voluntary goal to reduce potable water consumption by 20 percent. 	<ul style="list-style-type: none"> Continue with conservation and mitigation programs. 	<ul style="list-style-type: none"> Continue and expand conservation programs, especially at hotels and restaurants.
2—WARNING	<ul style="list-style-type: none"> Reduce potable water use by 40 percent. 	<ul style="list-style-type: none"> Reduce non-essential potable water use by 40 percent. 	<ul style="list-style-type: none"> Enforce surface water appropriation limits and reduce groundwater pumping by 30 percent. 	<ul style="list-style-type: none"> Initiate closures only to protect natural resources and public safety while preserving hiking and camping opportunities. Post water shortage emergency restriction notices and provide increased public awareness through park publications and visitor contact at entry stations and visitor centers. Turn off exterior campground spigots. If possible, reduce pumping and flow from Artesian wells that are located near springs and streams. Prepare a water-hauling contingency plan.
				3—EMERGENCY

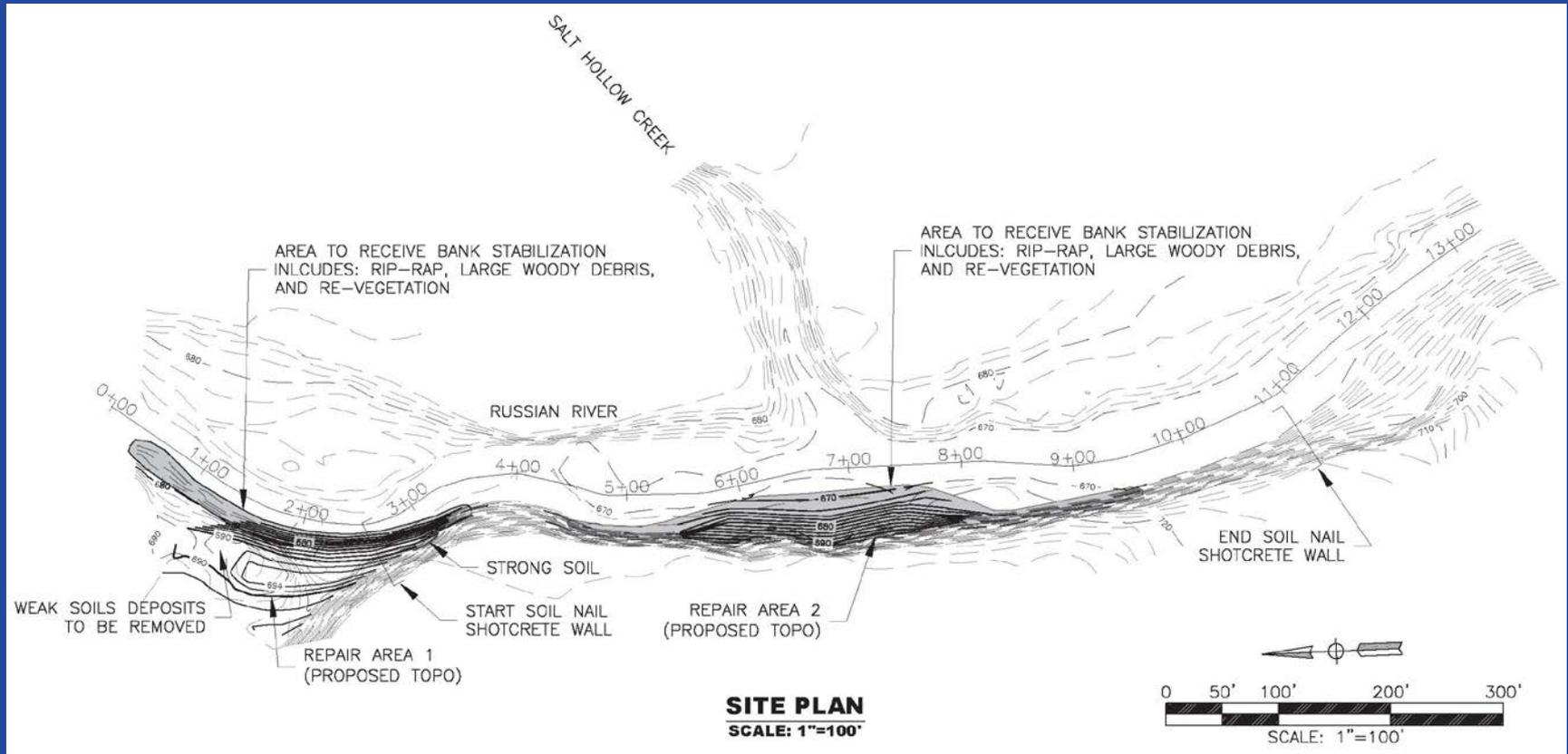
Shoshone-Bannock Tribes

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



COYOTE VALLEY
Band of Pomo Indians

Round Valley Indian Tribes



Mill Creek Streamflow &
Riparian Restoration

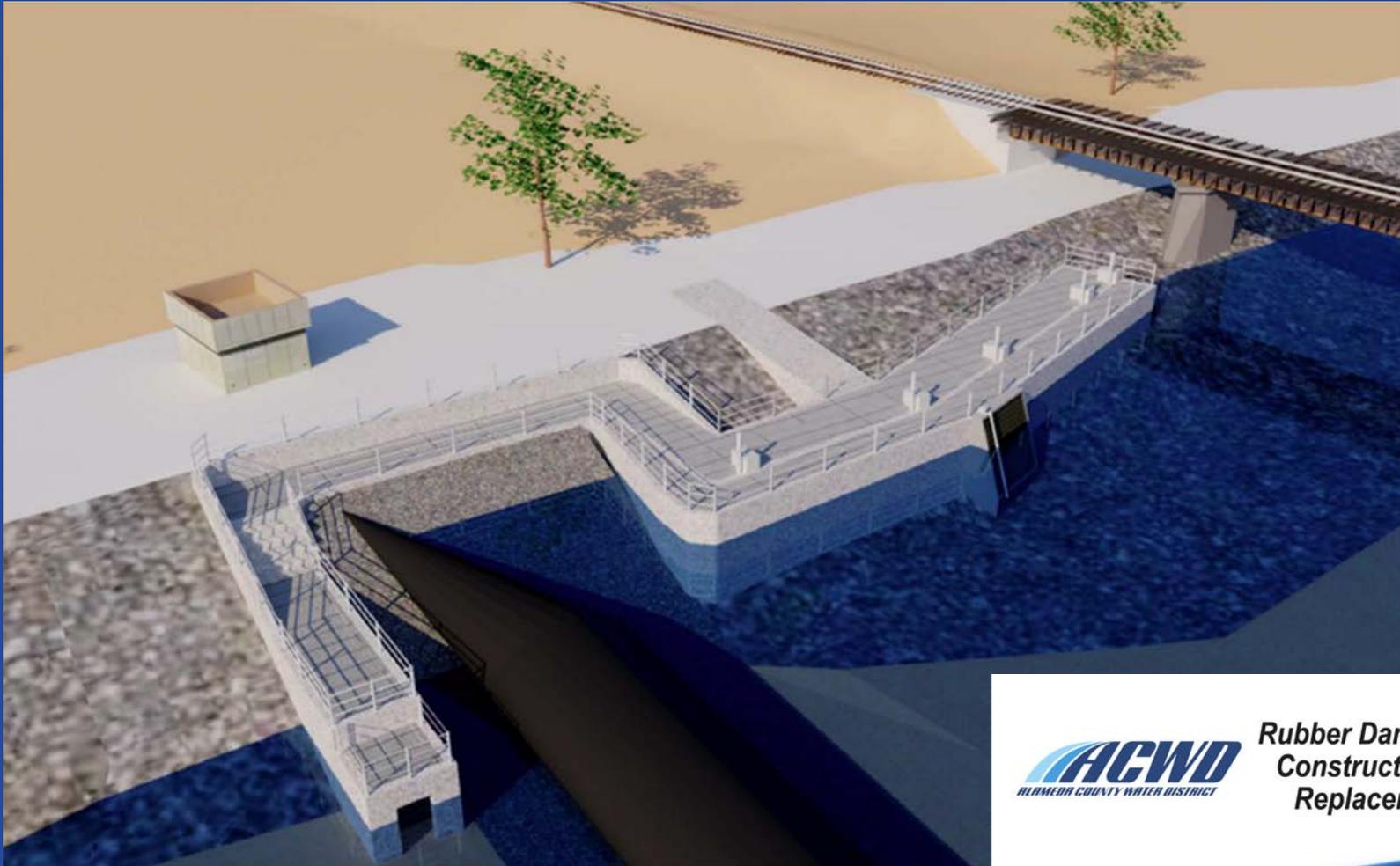
Round Valley Indian Tribes



Mill Creek
Streamflow &
Riparian Restoration



Alameda County Water District



**Rubber Dam No. 3 Fishway
Construction and Fabric
Replacement Project**

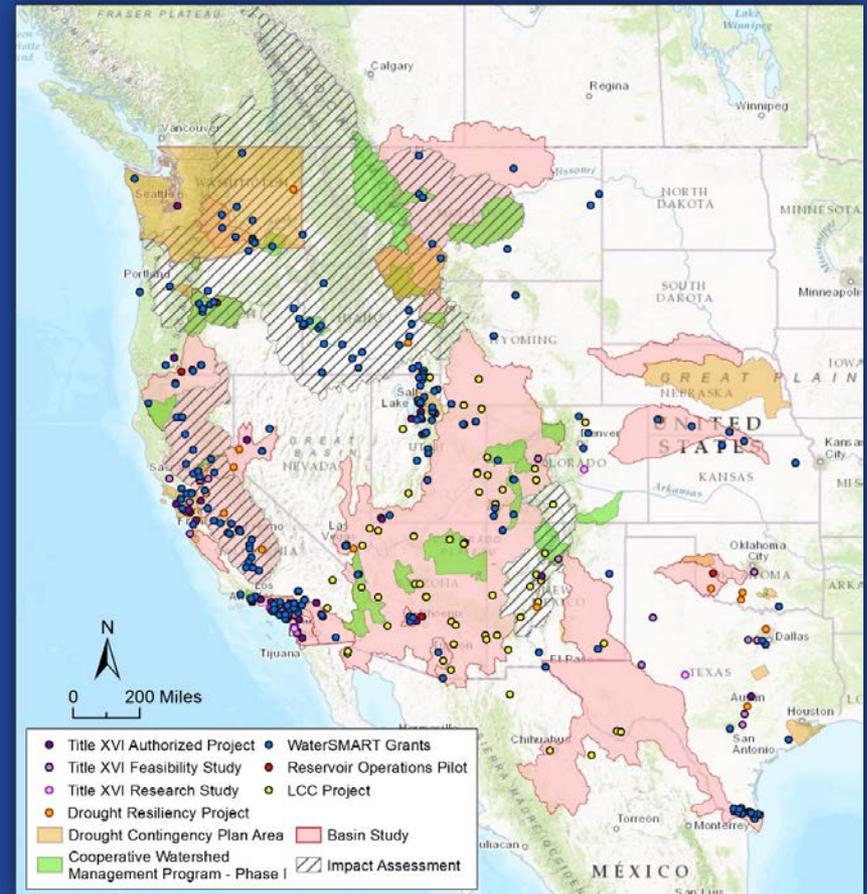
WaterSMART Data Visualization Tool

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



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