

Western Drought Tribal Public Drinking Water System Preparedness and Response

Short-Term and Long-Term Solutions, Training and Information Resources

U.S. EPA Region IX

1) Water-Efficiency Strategies for Utilities

- a) Get started:
 - i) Designate a water efficiency coordinator
 - ii) Develop a [water efficiency plan](#)
 - iii) Coordinate with neighboring PWS to protect shared resources
 - iv) Educate and involve employees, residents and [school children](#) in water efficiency efforts
 - v) Become a [WaterSense partner](#)

- b) Make system improvements:
 - i) Implement a water-loss management program. Water losses may be real (e.g. from leaks) or apparent (e.g. meter inaccuracy, unauthorized consumption). AWWA has [free audit software](#) to help utilities get a handle on water loss
 - ii) Utilities should strive for universal metering
 - iii) Decrease water system pressure, if plausible
 - iv) Consider a [reclaimed wastewater](#) distribution system for non-potable uses
 - v) Ensure that fire hydrants are tamper-proof
 - vi) Equipment changes: set a good example by using water-efficient fixtures, appliances, and equipment
 - vii) Eliminate "once-through" cooling of equipment with municipal water by recycling water flow to cooling tower or replacing with air-cooled equipment
 - viii) Minimize the water used in space cooling equipment in accordance with manufacturer's recommendations. Shut off cooling units when not needed

- c) Enact policies and programs to encourage efficient water use:
 - i) Ensure the [utility rate structure](#) encourages water efficiency
 - ii) Request voluntary conservation & provide goals (e.g. 30-50 gal/person/day)
 - (1) If ineffective, institute mandatory restrictions with fines
 - iii) Make retrofit kits for residences and businesses available free or at minimal cost
 - iv) Offer incentive programs ([rebates/tax credits](#)) to homeowners and businesses to encourage replacement of plumbing fixtures and appliances with water-efficient models
 - v) Conduct water-use audits of homes, businesses, and industries
 - vi) Promote water-efficient indoor and outdoor water use for [homes](#) and [businesses](#)

2) Water-Efficiency Strategies for Homes

- a) Use water more efficiently indoors by following these [simple steps](#):
 - i) Find and fix leaks
 - ii) Be water wise (take shorter showers, turn off the tap while brushing your teeth, etc.)
 - iii) Replace older, inefficient water-using fixtures (toilets, faucets, etc.) with [WaterSense](#) labeled models, which use at least 20% less water without sacrificing performance.

- iv) Wash only full loads of dishes and clothes or lower the water settings for smaller loads
- v) Replace old washing machines and dishwashers with high efficiency [ENERGYSTAR](#) labeled models, which use up to 50% less water and electricity

b) Use water more efficiently [outside the home](#):

- i) Find and fix leaks in irrigation systems
- ii) Only water when needed
- iii) Don't over-fertilize
- iv) Garden with care (xeriscape, use mulch to reduce evapotranspiration, etc.)
- v) Irrigate gardens with [greywater](#) (water from bathroom sinks, showers, tubs, and washing machines)

3) Emergency Planning

- a) Review and update emergency response plans for drought
- b) Monitor well levels to track drawdown and predict critical levels
- c) Emergency conservation measures
- d) Alternate water sources
- e) Provisions for emergency bottled water, water buffalos, portable tanks, or trucks
- f) Provisions to retain fire-fighting capability
- g) Provisions to keep distribution system pressurized
- h) Identify and notify critical users; quality, quantity or both (e.g. hospitals, schools). Develop a plan to continue to serve critical users, while cutting service to others

4) Accessing FEMA Assistance

- a) Tribal leaders can make an emergency declaration (draft guidance for tribes is out for public comment)
- b) Training schedule and guide for obtaining and administering FEMA assistance:
<http://www.fema.gov/technical-assistance>

5) Short-Term Options to Bring Inactive Sources Online

- a) Contact your EPA tribal project officer to explore whether any of the following may be appropriate:
 - i) Bringing sources online that are below the MCL, though had been previously abandoned
 - ii) Bringing sources online that are at or above the MCL, but could be used short-term with running annual averages (RAA) remaining below the MCL
 - iii) Bringing sources online that do not meet MCLs, but using them for non-potable use

6) Long-Term Solutions

- a) Using backup sources in different watersheds/recharge zones
- b) Reclaim, [recycle and/or reuse](#) rainwater, degraded water, stormwater, and/or wastewater
- c) Reuse residential greywater to irrigate home gardens

7) Funding Sources

- a) See attached table

8) Other Resources

- a) USGS: groundwater studies/measurements
- b) RWA/RCAC: training, tech assistance with leak detection and conservation measures

- c) Join state WARN program: potential for assistance in bad situation
- d) Hold public meetings to promote understanding of the drought situation and cooperation in addressing the situation amongst tribal members. Get input and buy-in from the impacted community.
- e) If there are nearby groundwater dewatering operations such as mines, seek legal assistance for compensation in water service
- f) Alternative technologies that can produce small volumes of water for a family
 - i) Rainwater catchment
 - ii) Greywater

Drinking Water Drought Support for Tribes

EPA	Technical Assistance	General Assistance Program	Drinking Water Tribal Set-Aside
Drought eligible activities	Technical assistance and training for: <ul style="list-style-type: none"> • Development of drought contingency plans • Development of water conservation programs • Leak detection • Water audits • Emergency response for water outages 	Capacity building and training, including: <ul style="list-style-type: none"> • Development of drought contingency plans • Development of water conservation programs • Leak detection • Water audits 	Plan, design and construct high ranking public water system infrastructure projects to: <ul style="list-style-type: none"> • Increase water supply and storage • Provide treatment as needed • Replace waterlines to eliminate leaks • Install water meters to reduce consumption
Purpose	Provide technical assistance and training on public water system operation and maintenance, including asset management and utility governance. Assistance is provided through EPA contractors and IHS.	The goal of the GAP is to assist tribes in developing the capacity to plan and establish environmental protection programs consistent with the federal laws the EPA is charged with implementing and to develop and implement solid and hazardous waste programs in accordance with their individual needs.	Bring tribal public water systems (PWS) into compliance with the Safe Drinking Water Act (SDWA) through infrastructure improvements.
Eligible Applicants	All federally recognized Indian tribes with PWS.	All federally recognized Indian tribes and intertribal consortia.	All federally recognized Indian tribes with PWS.
Pre-Requirements for Funding	n/a	n/a	Compliance with the SDWA; adequate technical, financial and managerial capacity including a certified operator; feasibility studies required to receive construction funding.
Typical Award Amount	n/a	\$75,000 - \$120,000 for entire GAP grant award	Varies
Annual Funding Level	n/a	Approximately \$15 million	Approximately \$6 million
Matching Share Required	n/a	None	None
Solicitation Timeline	n/a	November – Funding announcement January – Proposals due March – EPA Guidance letters issued April – Applications and workplans due September – Grant award	September – Funding announcement November – proposals due April – address EPA comments/ provide capacity information May – final selection June/July – applications due

			September – award
Priorities	Highest health risks	<p>GAP resources should support:</p> <ul style="list-style-type: none"> - Developing and maintaining core environmental program capacities - Engaging with the EPA to negotiate joint EPA-Tribal Environmental Plans (ETEPs) that reflect intermediate and long-term goals for developing, establishing, and implementing environmental protection programs - Linking GAP-funded assistance agreement work plans to the ETEPs - Developing baseline capacities for media-specific environmental protection programs that are related to the needs of the recipient and to EPA statutory programs - Implementing waste management programs 	<p>Highest health risk project in the order of:</p> <ul style="list-style-type: none"> - Microbial contamination - Arsenic, nitrate, and lead contamination - Other SDWA regulated contaminants - Water outages that cannot be fixed with operational improvements, conservation - Other system improvements
More information	EPA Program Manager for each public water system	http://www.epa.gov/region9/funding/tribal-gap.html	http://www.epa.gov/region9/funding/dwtsa.html
Contact	Helen McKinley EPA Drinking Water Office (415) 972-3559 mckinley.helen@epa.gov	EPA GAP Project Officer, or: Veronica Swann at (415) 972-3699 or Swann.Veronica@epa.gov Timothy Wilhite at (530) 841-4577 Wilhite.Timothy@epa.gov	Sara Ziff, P.E. EPA Drinking Water Office (415) 972-3536 ziff.sara@epa.gov

California	California Cleanup and Abatement Account (CAA) Interim Emergency Drinking Water
Drought eligible activities	Interim replacement drinking water, to include: <ul style="list-style-type: none"> • Bottled Water • Vending Machines • Point of Use Devices (for example, Filtration) • Hauled Water • Wellhead Treatment • Planning
Purpose	To provide interim replacement drinking water for economically disadvantaged communities with contaminated water supplies.
Eligible Applicants	<ul style="list-style-type: none"> • Public Agencies • Not-for-Profit Water Districts • Not-for-Profit Organizations • Tribal Governments
Pre-Requirements for Funding	Project must serve economically disadvantaged community based on Median Household Income
Typical Award Amount	Unknown
Funding Level	One time funding of \$4 million
Matching Share Required	n/a
Solicitation Timeline	Ongoing until funds run out
Priorities	Disadvantaged communities that are most at-risk and would benefit from financial assistance
More information	http://www.waterboards.ca.gov/water_issues/programs/grants_loans/caa/dw_droughtfund/
Contact	DFA-CAA-DW-DroughtFund@waterboards.ca.gov

Other Federal Agencies	USDA Emergency Community Water Assistance Grants	HUD Imminent Threat	FEMA, Pre-Disaster Mitigation (PDM) Grant Program
Drought eligible activities	The USDA Emergency Community Water Assistance Grants (ECWAG) program helps eligible rural communities recover from or prepare for emergencies that result in a decline in capacity to provide safe, reliable drinking water for households and businesses.	Eliminate or lessen problems which pose an imminent threat to public health	Assist States and local governments (to include Indian Tribal governments) in implementing hazardous mitigation activities. Permanently installed standby generators for water infrastructure are eligible.
Purpose	Help California rural communities that are experiencing a significant decline in the quality or quantity of drinking water due to the drought obtain or maintain water sources of sufficient quantity and quality	Eliminate or lessen problems which pose an imminent threat to public health or safety.	All federally recognized Indian Tribal government.
Eligible Applicants	California state and local governmental entities, nonprofit organizations and federally recognized Tribes. Colonias are also eligible.	Indian tribe, band, group, or nation, or Alaska Native village which has established a relationship to the Federal government as defined in the program regulations. In certain instances, tribal organizations may be eligible to apply.	Applicants must use electronic grants management system: https://portal.fema.gov
Pre-Requirements for Funding	Projects must be located in rural areas and towns up with 10,000 or fewer people and with a median household income less than \$62,883.		-
Typical Award Amount	<ul style="list-style-type: none"> Grants up to \$150,000 are for repairs to breaks or leaks in existing water distribution lines, and related maintenance. Grants up to \$500,000 are for construction of a new water source, intake and/or treatment facility or waterline extensions. 	Up to \$450,000, or \$900,000 for Presidentially declared disasters	\$250,000
Funding Level	\$3 million	5% of each year's Indian Community Development Block Grant allocation	\$5 million tribal set-aside
Matching Share Required	n/a	n/a	25% non-federal source
Solicitation	Applications are accepted year round	First come, first served	Applications accepted beginning 4/21/14

Timeline			
Priorities		First come, first served	Hazard mitigation planning and implementation.
More information	http://www.rurdev.usda.gov/SupportDocuments/rdECWAG_Feb2014.pdf	http://portal.hud.gov/hudportal/HUD?src=/program_offices/public_indian_housing/ih/grants/icdbg	http://www.fema.gov/pre-disaster-mitigation-grant-program
Contact	Various local CA USDA Rural Development offices	Southwest Office of Native American Programs, (602) 379-7200	Heather Duschell Tribal Liaison (510) 627-7052

Other Resources	Department of Interior WaterSMART Clearinghouse	EPA WaterSense
Drought eligible activities	Clearinghouse of information on web sites, press releases, research, and best practices from a variety of governmental organizations and land grant universities involved with conserving and maintaining water supplies and water use.	Products carrying the WaterSense label perform well, help save money, and encourage innovation in manufacturing.
Purpose	Focuses on improving water conservation and helping water-resource managers make sound decisions about water use. The Program provides leadership by identifying strategies to ensure that this and future generations will have sufficient supplies of clean water for drinking, economic activities, recreation, and ecosystem health. Additionally, the Program identifies adaptive measures to address climate change and its impact on future water demands.	WaterSense helps people save water with a product label and tips for saving water around the house.
Eligible Applicants	n/a	n/a
Pre-Requirements for Funding	n/a	n/a
Typical Award Amount	n/a	n/a
Funding Level	n/a	n/a
Matching Share Required	n/a	n/a
Solicitation Timeline	n/a	n/a
Priorities	n/a	n/a
More information	http://www.doi.gov/watersmart/html/index.php	http://www.epa.gov/watersense/
Contact	watersmartBOR@usbr.gov	(866) WTR-SENS (987-7367)