OREGON DEPARTMENT OF EMERGENCY MANAGEMENT

Local Water Supply Emergency Planning Guidance

Feb. 2, 2023

Contents

Purpose

This guidance identifies potential solutions when anticipating or experiencing sustained drought causing localized or widespread drinking, sanitation and household water supply shortages. When responding to any emergency, the first step is to follow your local emergency operations plan to ensure appropriate entities are engaged.

Planning Assumptions

- Drought is a normal, recurring feature of climate and occurs almost everywhere, although its features vary from region to region and defining it can be difficult.
- Changes in the timing of streamflow related to changing snowmelt have been observed and are likely to continue, reducing the supply of water for many competing demands and causing widespread ecological and socioeconomic consequences.
- Prolonged periods of reduced precipitation contribute to water supply deficits that can increase the time it takes for water supplies to recover.
- Sustained high temperatures increase demand on water supply systems and stress within the natural environment.
- Drought is a slowly developing – and often long-lasting – disaster with cumulative impacts, making consistent early monitoring and detection critical. Drought can have adverse effects on agriculture, community water supplies, industry, fish and wildlife, recreation, and other uses of water to support communities and individuals.
- During a drought, local and tribal jurisdictions will consider all water management tools available and routinely consult with drinking water suppliers within the region.
- Local jurisdictions have initial responsibility for providing emergency drinking water supplies.
- When local resources have been exhausted, assistance may be provided by state agencies.

Understanding ORS 536 and ORS 401 Emergency Declarations

Drought declarations under Oregon Revised Statute (ORS) 536 and emergency declarations under ORS 401 allow for different types of state assistance. Drought declarations provide water rights holders with temporary, short-term methods of accessing water resources or putting water to beneficial use. Emergency declarations enable emergency resource procurement and allocation when the lack of water supply resources threatens health and safety. This section supports local and tribal emergency managers in accessing the most appropriate state assistance associated with drought conditions and water supply emergencies.

In most instances, an ORS 536 drought declaration should occur before an ORS 401 emergency declaration to conserve limited state resources. In some cases, especially when it's anticipated that drought conditions may occur statewide, the governor may issue concurrent drought and emergency declarations. When this occurs, it's to facilitate proactive emergency planning and resource coordination to address anticipated water supply shortages.

ORS 536 Drought Declaration

Counties and tribes can declare a drought emergency and petition the governor to declare a state drought emergency under ORS 536. Oregon Water Resources Department (OWRD) offers water users (e.g., farmers, ranchers, cities, industry) additional water rights tools to address supply shortages. An ORS 536 drought

declaration is not intended to address life safety impacts. An ORS 536 drought declaration makes available the following emergency tools and powers: temporary emergency water use permits, temporary transfers, temporary instream leases, temporary substitutions, special option agreements, human consumption or stock water use preferences, and water conservation or curtailment. Download the OWRD State Drought Declaration Process and Emergency Tools document for more information.

ORS 401 Water Supply Emergency Declaration

When a drought causes water supply shortages that affect life safety within local or tribal jurisdictions, then a state of emergency should be declared under ORS 401. Local, tribal and county emergency declarations allow emergency actions at the local level to meet immediate needs. This often means procurement process requirements may be eased. Local, tribal and county governments should use every means available, including mutual aid, to prevent loss of life and interruption of essential services. When a county or tribe has exhausted local and regional resources, it may request state assistance through the Oregon Department of Emergency Management (OEM).

The state will not provide direct financial support under an ORS 401 declaration. The level of state assistance will be determined by the extent of the threat to life safety, resources available, statewide priority and type of assistance requested. All requests are reviewed by OEM and assigned to one or more state partners for fulfillment. The state will respond within its capabilities and request interstate or federal government support, if necessary. Resources may include technical assistance, equipment, personnel, facilities, communications or coordination.

Planning Checklist

Drought impacts many sectors. The focus of this section is on water supply shortages that pose life safety issues by jeopardizing water for drinking, sanitation and other household purposes.

Preparing for Drought and Water Shortages

1. **Understand and define drought impacts.**
    - Identify affected water sources and assess the severity of the effects.
    - Identify public water systems vulnerable to reductions in supply, see Appendix A: Resources for Community Water System Operators.
    - Engage with vulnerable local water systems to track changes in water supply over time and forecast expected rates of change.
    - Identify other factors contributing to water supply shortages (e.g., damaged or leaking pipes, improperly constructed wells, collapsed well casings, inadequate storage) and determine timelines for resolving issues.
    - Identify the number of households that use domestic wells.
    - Engage with the local watermaster to understand regional water supply impacts.
    - Consider the effects of severe weather. Hot, dry days can cause an increase in plant evapotranspiration and open container evaporation, which may reduce surface water flows as well as soil moisture.
    - Identify the total number of people potentially affected. This information will drive many planning assumptions since an individual needs about 1 gallon of water per day to survive. The average American domestic water user uses about 80-100 gallons per day for normal household indoor activities.

2. **Review existing plans.**
    - Review existing county or tribal emergency operations plans and address potential planning gaps.
    - Identify water providers' existing plans for addressing water shortages:
        - Water management and conservation plan (WMCP).
        - Emergency response plan.
        - Drought contingency plan.
        - Hazard mitigation plan.
        - Water curtailment plan.

3. **Organize a collaborative local response planning team.**
    - Include members who have local knowledge and technical expertise, represent multiple disciplines and are focused on solutions**.**
    - Involve the whole community, including government, community-based organizations, nonprofit organizations, private sector businesses, organizations and agencies from other sectors, people with disabilities, individuals with access and functional needs, infants, children and older adults.
    - Some recommended members include but are not limited to:
        - County commissioners.
        - Water system operators (both drinking water and wastewater facilities).
        - Local drinking water regulators.
        - Local OWRD watermaster.
        - Fire departments.
        - Tribal representatives.

- OEM preparedness and response and mitigation and recovery regional coordinators.
- Oregon Department of Human Services (ODHS) regional coordinators.
- Oregon Water/Wastewater Agency Response Network (ORWARN).
- Local community emergency response organizations (i.e., CERT) and faith-based organizations that can mobilize volunteers.
- Water-related planning groups.
- Local public information officers.

4. **Develop a jurisdictional communication plan for drought and water shortages.**
   - Pre-identify available public information officer resources that may be activated during a response.
   - Develop accessible public education materials (translated and in formats accessible to individuals with access and functional needs).
     - Water shortages impacting community water systems:
       - Strategies for conserving water that system users can take to maximize water.
       - Role of the community when water conservation or curtailment measures are implemented.
       - Ways that community members can get involved with helping.
       - Actions that community members should take when a water shortage occurs.
     - Domestic dry wells:
       - How to maintain your well, indicators a well may be going dry, and when and where to report a dry well.
       - Strategies for conserving water that household residents can take to maximize water (the Oregon State University Well Water Program has educational materials and is willing to be a resource to aid in developing additional resources. Contact the program at well.water@oregonstate.edu).
       - Ways that community members can help (e.g., what to donate and where or how to volunteer).

5. **Prioritize local water needs.**

   Identify critical facility needs.

   - Critical facilities in your community may have significant water needs, such as hospitals, long-term care facilities, food processing plants, public safety facilities, and wastewater treatment and processing facilities.

   Consider water needs for agriculture.

   - Water for agricultural production and processing typically is not prioritized as highly as health and safety considerations during an emergency.
   - Lack of water to support agricultural production and processing poses potential impacts on local economies and supply chain management.
   - Loss of livestock because of extended water shortages can become a secondary public health concern, as higher temperatures will increase decomposition rates and create additional health and safety concerns. As such, carcasses must be disposed of quickly using accepted disposal methods.

   Consider water availability for firefighting.

   - A major fire event concurrent with a significant drought can pose a special risk should water for fire suppression become unavailable due to reduced supply.

- Coordination among emergency managers and local, state and federal firefighting resources is vital for ensuring sufficient water supply to conduct effective fire suppression without causing sudden drinking water supply depletion.

Consider economic impacts.

- Disruption of water availability can result in economic hardships for individuals and businesses.
- Identify businesses at risk of closing if water shortages cannot be remedied.
- Determine if economic impacts will affect the operations of critical facilities, such as hospitals.

6. Identify resources for domestic personal wells.

- Pre-identify the organizations or groups that may test and provide verification a well is dry due to drought vs. non-operational due to mechanical or maintenance issues (e.g., licensed well driller or pump installer, public works officials or volunteers specifically trained in performing verification).
- Evaluate and pre-identify local resources available to assist potential personal well owners with:
    - Deepening or replacing an existing well.
    - Sources for temporary potable water.
    - Testing water levels in wells to verify well is dry vs. non-operational due to mechanical or maintenance issues.
    - Providing temporary potable water storage (e.g., water tanks).
    - Transporting potable water to household water storage tanks.
    - Plumbing temporary water storage tanks into homes.
- Review local or tribal codes and ordinances to determine if there are any waivers or permits required for connecting temporary water storage tanks to preexisting plumbing.
- Specific areas have wells that go dry annually and have adapted to such occurrences. Solutions may be readily available without engaging in an emergency response.
- Consult OWRD's dry well handout to troubleshoot issues with drying water wells.
- Pre-identify strategies to solicit, accept, store and disburse bottled water donations.
- See Appendix B: Dry Domestic Personal Wells for additional information about household responsibilities and resources.

7. Understand state and federal regulations.

- When identifying potential response strategies, engage with state and federal regulators for technical expertise and to ensure compliance with state requirements.
- Oregon Health Authority (OHA) Drinking Water Services regulates the safety of public water supply systems.
- OWRD regulates the use of surface water and groundwater.
- Oregon Department of Environmental Quality (DEQ) regulates wastewater sanitation and management.

8. Identify strategies and document local capabilities to respond to drought.

- Talk to local and regional partners that can deliver mutual aid, such as ORWARN or local fire departments.
- The local OWRD watermaster can assist in identifying alternatives, such as other public water systems or private wells, and should be contacted to ensure emergency supplies are obtained legally.

- Talk to local businesses to identify what resources or capabilities they may be able to provide.
    - Examples of resources include water trucks, commercial water hauling companies, water tanks for short-term storage, water point of distribution equipment (e.g., trailers, manifolds) and bottled water distributors.
- Consider non-traditional solutions and partnerships. Be creative within regulatory guidelines.

Remember the following when identifying potential response strategies:

- What are the costs associated with implementing each identified strategy and who is responsible for these costs?
- How long can the identified strategy be sustained?
- For any strategy that's implemented, what are the thresholds for demobilizing?

9. Identify thresholds for local response.

- Set clear, data-driven thresholds and associated actions (e.g., if stream flow drops below 300 gallons per minute, then implement curtailment measures restricting outdoor water use).

Responding to Drought and Water Shortages

During the preparedness phase, counties should identify thresholds indicating when a drought emergency is imminent, and action is required. When those thresholds are met, counties should implement their plan and include the following actions:

1. Convene the drought response planning team.

2. Declare a local drought emergency.

- The county governing body, through ordinance or resolution, should declare a local drought emergency for its jurisdiction. In its resolution, the governing body should identify local actions that should be taken and indicate if state assistance is needed.
- Under most circumstances, jurisdictions should initially request an ORS 536 drought declaration to receive assistance to address water supply shortages before requesting an ORS 401 emergency declaration to address life safety impacts. The local OEM preparedness and response coordinator is available to provide technical assistance on the appropriate declaration.
- Additional details about state assistance provided under ORS 536 and ORS 401 are available in the Understanding ORS 536 and ORS 401 Emergency Declarations section.
- See Appendix C: Sample County Drought Declaration Resolution for a sample ORS 536 declaration.
- When requesting a drought declaration from the governor, refer to the Guidance Memo and Template document on the OWRD Governor Drought Declaration Process page for a template letter.

3. Communicate with the public.

- Implement a jurisdictional communications plan and consider the following:
    - Be consistent in the type and frequency of information communicated.
    - Clearly communicate the situation and appropriate preparedness actions through media outlets, government websites, social media and other public information distribution methods.
    - Directly and promptly address rumors that can have detrimental effects on public confidence, morale and sense of security.

4. **Reduce Demand.**
    - Encourage water conservation. OWRD maintains water conservation resources.
    - For public water systems, enforce curtailment of non-essential water uses per existing curtailment plans.
    - For private domestic uses, make recommendations about curtailing lawn watering, car washing, and other non-essential activities that require water when surface water or wells are going dry.

5. **Initiate local strategies to provide emergency water.**

6. **If life safety needs for water exceed local capability, request state support.**
    - Emergency managers can request state support for responding to water supply shortages through the Oregon Emergency Operations Portal (i.e., Ops Center).
    - Ensure the request clearly explains the problem to be resolved, the support provided through local resources and how needs exceed the capabilities of the local jurisdictions.

Best Practices for Responding to an Emergency

Communicate early and often.

- Communication with stakeholders, community leaders, organizations and the public will provide the foundation to build partnerships when involvement and support become critical.
- Public trust and confidence in local government will help reinforce difficult water use restrictions that may be required, as well as provide reassurance that issues are being addressed and response efforts are underway.
- Open and honest communication will minimize adverse public opinion, counterproductive interference, panic, rumors and false claims.
- Clearly communicate the impacts of drought.
- Release clear guidance regarding water conservation and curtailment measures for the public.
- Clearly outline how curtailment measures will be enforced and any penalties associated with violations.

Consider immediate and long-range issues.

- Response to the immediate effects of drought and threats to public safety will lead to a review of existing water supply capabilities. A review could include system reliability, storage capacity, pipeline and pumping requirements, requirements for future flow demands, potential intertie considerations, and funding opportunities for expansion and maintenance.
- Recovery from a sustained drought and corresponding water supply emergency will require long-term planning to ensure the continuation of reliable and sustainable drinking water sources and associated treatment and distribution systems to offset future water shortage impacts.

Leverage volunteer services.

- Some aspects of water supply emergencies depend on human resources to be effective. Identify volunteers from established volunteer organizations, local government staff or community solicitations for assistance.
- Volunteers may be able to assist by:
    - Providing or supplementing staffing at water supply community points of distribution (CPODs).
    - Passing out water bottles at CPODS.
    - Transporting drinking water tanks and containers to central locations or individual users.
    - Assisting with conducting safety checks of vulnerable populations.
    - Moving supplies to and from warehouses for further distribution.
    - Passing out official information on water supply resilience.
    - Documenting response activities for emergency efforts.

Identify the impact on vulnerable populations.

- Identifying who may be vulnerable to water supply emergencies within affected areas will require careful consideration of matters of privacy. Examples of vulnerable populations may include people with pre-existing medical or health conditions, very young individuals and senior populations.
- People who already may be faced with water supply limitations are especially at risk during prolonged droughts.
- Vulnerability may be enhanced because of limited mobility, access to transportation, remoteness or financial hardship.

- Local organizations and neighborhood associations may be able to assist in defining populations of vulnerability.
- Identify organizations like the Disability Emergency Management Advisory Committee (DEMAC) to assist vulnerable populations.

Embed diversity and inclusion into planning and decision-making.

- Ensure public messaging and outreach are as inclusive as possible, being mindful that some segments of an affected community traditionally may be underserved during emergencies.
- Remembering that emergencies transcend both physical and human boundaries will ensure diversity and inclusion are elements of the local water supply emergency response.
- Inclusion of community groups, organizations and cultural representations, as well as those with non-English language proficiency, will ensure all population segments are represented.

Special Considerations

Community Points of Distribution (CPODs)

- CPODs are sites where the public can access life-sustaining emergency relief supplies during or after a disaster.
- The logistics associated with the implementation of CPODs for centralized water delivery in affected neighborhoods require planning and preparation to achieve success and maximum coverage.
- Available data about where systems have or are about to fail because of water shortages will help identify the most effective sites for CPODs, including water delivery resources, staff needed and available, hours of operation, security, public outreach, traffic control and other factors.
- Understand sanitation regulations and cleaning processes for ensuring potable water.
- Consider using convenient sanitary containers, such as water bags.
- Set up sanitation stations to clean water containers before they're filled.
- Check with the local OWRD watermaster to ensure the source of water complies with Oregon Water Law.
- Ensure all water intended to be used for drinking is safe for use.

Water Hauling

- Ensure all potable water hauling meets the OHA Drinking Water Services Hauling Guidelines.
- Ensure water tenders are operated by appropriately qualified operators.
- Water tenders should be flushed and sanitized regularly to ensure water potability.
- Check with the local OWRD watermaster to ensure the source of water complies with Oregon Water Law.

Appendix A: Resources for Community Water System Operators

The following are resources that jurisdictions can share with community water system operators.

Organization or Agency	Resource	Details
Oregon Department of Environmental Quality	Clean Water State Revolving Fund	Assists public agencies with low-interest loans for water infrastructure projects.
Oregon Health Authority	Drinking Water State Revolving Fund	Provides low-cost loans to community and nonprofit non-community water systems for planning, design and construction of drinking water infrastructure improvements.
Oregon Health Authority	Drinking Water Services Circuit Rider Program	Circuit Riders provide short-term (typically 10 hours or less) on-site technical and engineering assistance for community water systems serving populations under 10,000, as well as nonprofit transient and non-transient water systems. For these systems, services are free.
USDA Rural Development – Oregon Program	Emergency Community Water Assistance Grants	Helps eligible communities prepare, or recover from, an emergency that threatens the availability of safe, reliable drinking water.
Oregon Association of Water Utilities	Training and on-site assistance for water utilities	Helps provide training, resources and on-site technical assistance for water systems.

Appendix B: Dry Domestic Personal Wells

During drought, increased groundwater pumping coupled with reduced recharge can impact domestic personal wells and result in low water yields. Chronic drought is becoming more common across Oregon lowering available groundwater and causing domestic personal wells to go dry.

Responsibilities of Households

Users of domestic personal wells should be informed about their wells. The following are resources to educate domestic well users about maintaining their domestic wells:

- Oregon State University Well Water Program.
- Oregon Health Authority Domestic Well Safety Program.
- National Environmental Health Association Private Well Class.

When households find that their well output is decreasing, residents should start water conservation efforts and contact a licensed well driller or pump installer to verify the cause. Decreased output of water from a well may be due to drought or a maintenance issue. Households should work with a licensed well driller or pump installer to identify a solution. When water output from a well drops significantly or a well becomes dry, report the dry well to the Oregon Water Resources Department using its Dry Well Reporting form.

The following are resources that jurisdictions can share with households experiencing dry domestic personal wells.

Organization or Agency	Resource	Details
Oregon Water Resources Department	Water Well Abandonment, Repair, and Replacement Fund (WARRF)	WARRF provides financial assistance to individual households or members of a federally recognized tribe in Oregon to permanently abandon, repair or replace a water well used for household purposes.
Rural Community Assistance Corporation	Household Water Well & Septic System Loan/Grant Programs	Provides loans and grants for wells and septic tanks for households in rural communities with income of $31,713 or less.
Rural Community Assistance Corporation	Environmental Infrastructure Loans	Provides early funds small rural communities need to determine project feasibility and pay pre-development costs prior to receiving state and federal funding. Projects must be in rural areas with populations of 50,000 or less in RCAC's service region.
USDA Rural Development – Oregon Program	Rural Decentralized Water Systems Grant in Oregon	Helps qualified nonprofits and tribes create a revolving loan fund to increase access to clean, reliable water and septic systems for households in eligible rural areas.

Appendix C: Sample County Drought Declaration Resolution

ORS 536 Sample Declaration

IN THE MATTER OF DECLARING)
A STATE OF DROUGHT EMERGENCY) RESOLUTION #2022-03
IN HARNEY COUNTY)

THIS BEING the 16th Day of March, 2022 and a day set aside for a regular meeting of the Harney County Court and there being present Pete Runnels, County Judge; Kristen Shelman, County Commissioner and Patty Dorroh, County Commissioner; and

WHEREAS, information has been provided to the Harney County Court that a drought is occurring in Harney County and that protective actions may be or are required to protect the citizens of Harney County;

WHEREAS, the U.S. Secretary of Agriculture has designated Harney County as a contiguous disaster county due to drought, enabling producers in the County eligible for emergency aid, with a moderate drought monitor condition;

WHEREAS, the National Drought Mitigation Center has listed a large portion of Harney County as "Extreme Drought" with smaller portions listed as "Severe Drought" as of February 17, 2022.

WHEREAS, unless weather conditions improve substantially to above normal conditions, water users who rely on stored water will have a shortened water use season, and depending upon the priority date of their water right, water users who rely on stream flows will have substantially less water available and a shortened water use season;

WHEREAS, the above conditions will result in severe economic hardship to Harney County, including shortages of livestock forage, loss of agricultural interests, and increased chance of wildfire;

NOW, THEREFORE, BE IT RESOLVED that:

1. A state of emergency exists in Harney County due to drought conditions.
2. The Harney County Drought Emergency Management Plan has been implemented
3. Due to the state of emergency, the Harney County Court does hereby request and entreat the Honorable Kate Brown, Governor of the State of Oregon, to:

   A. Declare a "State of Emergency," a drought, to exist in all of Harney County, Oregon under ORS 536; due to severe and continuing drought conditions beginning at this time and continuing for an unknown period of time; and Direct the Oregon Water Resources Department to provide all available means of assistance to Harney County agricultural producers: Temporary Transfers of

Water Rights, Emergency Water Use Permits, and Use of Existing Option/Agreement; and other federal and state drought assistance programs as needed.

B. Direct Office of Emergency Management to coordinate and assist as needed, to address current and projected conditions in Harney County.

C. Direct all other state agencies to coordinate with the above agencies and to provide appropriate state resources as determined necessary to assist those affected in Harney County.

DONE AND DATED this 16th day of March 2022.