Example Curtailment Plans

Large Cities, Water Use Authorities, Water Districts, etc.

- **Example 1:**

Curtailment Stage	Initiating Condition	Curtailment Actions
Stage 1 Water Shortage Alert	Forecasts of below-normal summer stream flows; Mechanical or electrical malfunction causing the loss of pumping capacity at intake facility; or Minor damage to raw or treated water transmission mains (e.g., leaking joint requiring repair.)	• Contact local media outlets to notify public about potential for summer water shortages or temporary interruptions to normal service delivery. • Post public service announcement and link to conservation tips on webpage. • Provide notice on water bills or through utility bill inserts. • Activate water conservation hotline. Include pre-recorded message providing conservation tips. Update recording weekly to maintain current status of event trigger.
Stage 2 Serious Water Shortage	Declaration of drought by Governor pursuant to ORS 536.720; Continuation of hot dry weather predicted; Declining river levels; Mechanical or electrical malfunction causing the loss of the largest pump at the intake; or Extensive repairs needed on raw or treated water transmission mains.	• General Manager will declare a state of emergency. • Provide handouts to field personnel with direction to remind customers of voluntary measures and shortage status. • Encourage, through public service announcements, voluntary restrictions on outdoor irrigation. Customers will be asked to irrigate only between hours of 8 pm and 10 am. • Encourage customers to refrain from washing cars except at commercial establishments that recycle or reuse water in their cleaning process. • Prohibit nonessential uses of water including recreation, remodeling, reconstruction, and cleaning uses, unless necessary for public health or safety.
Stage 3 Severe Water Shortage	Continuation of hot dry weather predicted; Clackamas R. stream flows below 510 cubic feet per second (cfs) between July 1 and Sept. 15 or below 750 cfs between Sept. 16 and June 30; Significant reduction in pump capacity at water treatment plant; Serious mechanical or electrical malfunction within the system; Multiple failures in the joints of the raw or treated water transmission mains.	• Restrict all outdoor irrigation to only 3 days per every 7-day period and only between the hours of 8 pm and 10 am, unless: - Grass, turf or landscaping is less than 1-year old, or; - Grass or turf is part of a commercial sod farm, or; - Grass or turf areas are within a high use athletic field use for organized play, are used for golf tees or greens, or are part of a park or recreation area. • All water waste is prohibited: No unfixed leaks; No hosing of paved surfaces; No fountains except those using re-circulated water; No water running onto streets, sidewalks or into gutters; No washing of vehicles other than in establishments that recycle water; and No washing of roofs, decks or home siding unless solely to abate a potential fire hazard. • Activate intersystem connections with inter-tied communities. (Only undertaken if severe water shortage is not due to event related to shortage in source supply which also serves neighboring communities.) • Work with local industrial and large commercial water users to minimize their water use.
Stage 4 Emergency Water Shortage	Clackamas R. stream flows below 510 cubic feet per second (cfs) between July 1 and Sept. 15 or below 730 cfs between Sept. 16 and June 30 impacting instream water rights; Severe drought conditions; Prolonged loss of utility electrical service at water treatment plant or intake; Major mechanical or electrical malfunction causing the loss of multiple pumps at intake or water treatment plant; Extensive damage to transmission, pumping or treatment processes (e.g., caused by a natural disaster); Contamination of source of supply; Imminent terrorist threat against supply system; or intentional acts of fire, contamination of source or any other event resulting in an immediate, sustained deprivation of water supply.	• It is expressly prohibited to: - Water, sprinkle or irrigate lawns, grass, landscaping or turf. - Wash, met down, or sweep sidewalks, walkways, driveways, parking lots, open ground or other hard-surfaced areas with water. - Wash vehicles, unless the public health, safety or welfare is contingent upon frequent vehicle cleaning, or otherwise required by law. - Flush water mains, except for water quality concerns or emergency purposes.

- **Example 2:**

Curtailment Stages	Curtailment Triggers	Curtailment Actions
Stage 1: Routine Summer Advisory	• PWB issues a "notice of drawdown," announcing the release of stored water in the Bull Run System. • PWB activates groundwater wells as part of its supplies. • The JWC issues a "notice of drawdown," announcing the release of stored water. • Hagg Lake fails to fill 100% by May 1. (Holds 53,000 acre-feet, or 17.3 billion gallons). • Barney Reservoir fails to fill 100% by May 1. (Holds 20,000 acre-feet, or 6.5 billion gallons)	**Public Message: Voluntary Conservation Measures** • Each summer, ask customers to voluntarily limit water application to 1-inch of water per week for turf areas and less for areas with trees and shrubs. • Promote already-existing conservation messages, such as "Use Water Wisely!" Suggested water conservation measures are posted on supplier's website. **Possible District Actions** • Partner with Regional Water Providers Consortium and west side providers to send consistent conservation messages to the media. • Place conservation reminders and tips in Water Words, bill message, and on supplier's website and conservation hotline. Use various venues to distribute information. Set up public information booths where opportunities exist and look for other opportunities for public outreach, such as speaking engagements, etc.
Stage 2: Moderate Water Supply Shortage	• PWB is operating under a warm-dry scenario (updated by PWB officials each year). • Hagg Lake fails to fill 80% before May 1, which equates to 42,400 acre-feet (or 13.8 billion gallons). The JWC will only make the full allotment available to municipal users if the lake fills to at least 80%. • District customer use reaches contractual and/or facility capacity for seven consecutive days.	**Public Message: Voluntary Conservation Measures** • Reduce all water use by 10%. • Limit use of water in commercial businesses (do not serve water to restaurants customers unless specifically requested). • Reduce watering of lawns, plants, trees, gardens, shrubbery, and flora on private or public property to the minimum necessary. Outdoor watering during early morning hours to reduce evaporation. • Eliminate all other kinds of outdoor water use, including: washing down of hard surface areas, decks, buildings, gutters, and vehicles; use of water in fountains, ponds, decorative water bodies, except where necessary to support aquatic life; filling or maintaining private swimming pools (except children's wading pools); and use of fire hydrants for any purpose other than firefighting or flushing essential to maintain water quality. **Possible District Actions** • Issue a notice to local media that District is in a Moderate Water Supply Shortage. • Send postcard notification of Moderate Water Supply Shortage to District customers. • Provide reminders to non-efficient users (including those given 30 days to repair leaks and have failed to do so). • Routinely publish in local newspapers the voluntary conservation measures customers are requested to follow during a Moderate Water Supply Shortage.
Stage 3: Severe Water Supply Shortage	• PWB has only groundwater sources available. • The PWB system cannot meet supply demands of wholesale customers. • JWC reservoirs drop below 40% of "normal conditions" and JWC enacts mandatory curtailment for members. • Water supplies fail to meet EPA Safe Drinking Water Act standards. • The District's distribution system experiences a significant and sustained reduction of water pressure. • District customer use reaches contractual and/or facility capacity for 14 consecutive days.	**Public Message: <u>Mandatory</u> Conservation Measures** The District will provide public messages that include the following: • Water is in short supply; Reduce all water use by 25%; The District will enforce its Water Supply Shortage Plan; and Mandatory curtailment actions are enacted. • Mandatory curtailment actions include: Eliminate all outdoor water use; Prohibit chemical applications to lawns that require subsequent watering; Limit expanding commercial nursery facilities, placing new irrigated agricultural land in production, or planting or landscaping except when required by the permitting jurisdiction; Limit water use in commercial businesses (e.g., do not serve water to restaurant customers unless specifically requested); and Repair leaks in hoses, faucets and couplings. **Possible District Actions** • Issue statement that the District is experiencing a Severe Water Supply Shortage; notify local media and send postcard notification to District customers. • Cease water service to customers given 30-day notice to repair leaks and have failed to do so. • Implement the enforcement provisions of the District's Water Supply Shortage Plan. • Routinely publish in local newspaper the mandatory restrictions placed on the use of water supplied by the District. • Through the media and public outreach efforts, publicize widely the penalties to be imposed for violations of mandatory restrictions and the procedures to be followed if a variance in the restrictions is requested. • Provide and advertise a conservation hotline that provides relevant curtailment information and Update and mail a conservation brochure to customers.
Stage 4: Critical Water Supply Shortage	• PWB ceases serving the District from its system and JWC cannot meet the District's resulting water demands. • JWC ceases serving the District from its system, and the PWB cannot meet the District's additional water demands. • Water supplies from JWC or PWB are either physically cut off or become otherwise unavailable to the District. • District customer use reaches contractual and/or facility capacity for 28 consecutive days.	**Public Message: <u>Mandatory</u> Conservation Measures** The District will provide its customers with public messages about the following mandatory curtailment measures: • Water may be used for drinking, cooking and sanitation purposes only; Reduce all water use by 50%; Eliminate use of water at construction sites; and Enforcement of the District's Water Supply Shortage Plan including issuance of fines. **Possible District Actions** • Issue a statement that the District is experiencing a Critical Water Supply Shortage, and issue media releases. • Continue to enforce Water Supply Shortage Plan with warnings, fines and discontinued service if necessary. • Widely distribute reminder conservation messages, and provide and advertise a conservation hotline. • If necessary, conduct emergency actions: Activate District's Emergency Operations Center; Begin rationing water as needed; Activate any curtailment agreements previously negotiated with B.I.G. customers; open interconnections with neighboring water suppliers; Bring emergency wells on-line; Place moratorium on all new service connections; and Work with partners to distribute bottled water as needed.

Example Curtailment Plans

Small Cities, Rural Communities, HOAs or Developments, etc.

- **Example 1:**

Stage	Trigger	Goal	Implementation measure
Mild	80% of capacity	Public awareness of the issue.	• Advise community through the water bill to conserve water where possible.
Moderate	90% of capacity	10% reduction in consumption	• Advise community that 10% water savings desired. • Water yards every 5th day. • Do not waste water on pavement. • Used recycled water only in fountains.
Critical	95% of capacity	15% reduction in consumption	• Advise community that 15% water savings desired. • Continue Moderate actions. • Do not fill pools with city water. • Do not irrigate yards. • Do not wash cars.

- **Example 2:**

Alert Level	Alert Level Triggers		Notification	Curtailment Action	Enforcement Action
	Supply	Remaining System Capacity			
Normal Operation	Fountain Spring and Oak Springs are fully functional	1,288 gpm	N/A	N/A	N/A
Mild	Temporary loss of interconnection with City of XXXX	1,288 gpm	N/A	N/A	Voluntary
Moderate	Temporary loss of Fountain Spring	1,288 gpm	Distribute instructional flyers. Personal contact with large commercial users.	No unnecessary water use, and reduce commercial use 20%.	Monitor reservoir levels and remind customers of the alert level.
High	Temporary loss of Fountain Spring and interconnection with City of XXXX	188 gpm	Continue notification actions under Moderate Alert, plus publish newspaper notices and submit public notices via local radio stations.	No unnecessary water use, and reduce commercial use 50%.	Monitor reservoir levels and remind customers of the alert level.
Emergency	Complete loss of Fountain Spring, Oak Springs, and City of XXXX interconnection for an extended period; OR The reservoir has reached the half-full level with no practical means of refilling	0 gpm	All notifications above plus door-to-door communication.	Water use limited to health, sanitation, and safety.	District staff, City police/County sheriff will monitor the reservoir levels and will issue fines as approved by the ordinance.

Example Curtailment Plan for Irrigation Districts

Water Allocation/Curtailment Procedure during Water Shortages

Criteria for Implementation of District Water Allocation/Curtailment Plan	
Annually during the month of March:	• Perform careful analysis of snow pack, stream flows, and stored water for the year. • Review long-range weather forecasts to predict the type of summer that might be forthcoming. • In the event that supply deficiencies are anticipated, the District will implement its Water Allocation Procedure to the extent required.
Allocation/Curtailment Actions	
If demand exceeds supply:	1. Notices of lower flow or drought conditions are posted on the District website and submitted to the local radio station and newspaper for public information. 2. Voluntary reductions are requested, including economic incentives for non-use during the drought season. 3. Flow reductions are made from 5.6 gpm /acre down to 4.5 gpm/acre. 4. Supply rotation begins with the ends of branching lines and then expands to include entire main lines as required. 5. The last and worst case calls for shutdown of entire main lines for the balance of the season if flow becomes non-existent.