



Conservation and Drought Planning for Community Water Systems

How do they work together?



The system water plan required from community water systems consists of three components:

- Water supply plan
- Water conservation plan
- Drought preparedness plan

This fact sheet is intended to assist community water systems in developing the **drought preparedness plan** and **conservation plan**.

Conservation Planning

A water conservation plan is a long-term plan designed to increase water use efficiency, reduce water waste, and help prevent water shortages. A conservation plan recognizes that we live in an arid environment where water supplies are limited, and promotes a low water use lifestyle. It can result in significant cost savings to the water system by extending the life of existing infrastructure and delaying costs associated with building new facilities or retrofitting old facilities to handle larger capacities.

You can think of your conservation plan as “Drought Stage Zero.” It is your standard operating procedure under normal conditions. If you manage your demand through conservation, you will be banking water for future use in times of drought.

The beginning of a conservation plan can be quite simple. *Some basic measures are listed on the back of this page under “Drought Stage 0.”* Consider a balance of both demand- and supply-side measures. Supply-side programs, such as leak detection and repair, increase the water supply, while demand-side programs, such as higher seasonal rates, reduce the demand for water.

Larger systems with more resources can implement more advanced programs:

- Market surveys to identify conservation needs
- Use of reclaimed water (to replace potable use, e.g. turf irrigation)
- Rebate and retrofit programs for water efficient devices
- Landscape and irrigation workshops
- Water waste ordinances, ordinances requiring low water use plants

Drought Planning

As drought conditions worsen, more water use reductions may be needed beyond your normal conservation programs. Drought stages and associated actions should be designed to incrementally scale back water use. The purpose of multiple drought stages is to prevent the final

“emergency” stage from occurring. Drought response actions requested from users can be voluntary or mandatory, depending on the severity of the situation, the amount of reduction needed, and the legal authority of the water provider.

The need to declare drought stages will depend on your system’s vulnerability to drought. Less vulnerable systems may never need to go beyond the “normal” or “precautionary” stage. More vulnerable providers may have to progress to intermediate or advanced stages to achieve necessary water use reductions.

In addition to determining your drought stages, you will also need to consider how to decide when a stage is “triggered,” and conversely, how it will be “removed.” Criteria can include things like well levels, climate conditions, water supply availability, amount of supply in relationship to demand, and the infrastructure of the system.

The ultimate goal should be to plan for future water needs so that there is never a need to declare an advanced stage of drought. Conservation, as well as augmenting supplies, are both important in achieving this goal.

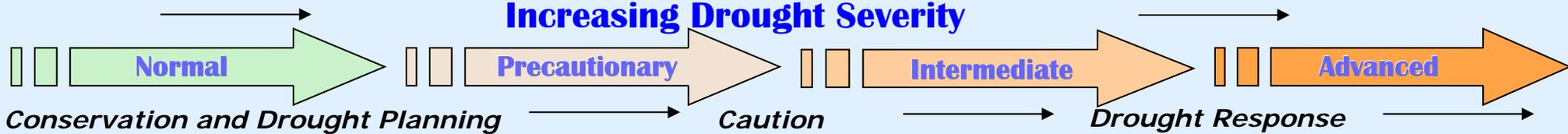
For examples of drought stages and management measures, **see reverse side**. Remember that the example measures are provided as guidance only. Each system is different, and some may require stricter measures in earlier drought stages. For example, a community may decide they want to prohibit turf requirements at all times, and not just during times of drought. This program then becomes a part of the community’s normal conservation measures.



For assistance, please contact the Statewide Drought Program at (602) 771-8442 or (602) 771-8533.

Example Conservation and Drought Management Measures

Increasing Drought Severity



Drought Stage 0

Normal management measures

Conservation measures and programs to be implemented on a continual basis

Examples -

- Provide conservation education and outreach (pamphlets, workshops, etc.)
- Meter water use at the source and all connections, ensure meters are working properly, perform water use audits
- Limit lost and unaccounted for water (e.g. implement leak detection and repair programs, control evaporation from storage tanks, eliminate illegal connections)
- Encourage low water use landscaping (e.g. create a low water use/drought tolerant plant list for your area, encourage installation of efficient irrigation systems)
- Evaluate population trends and projected growth to determine future water needs
- Develop water rate structures that encourage efficient water use
- Develop arrangements for alternative/back-up water supplies should they become necessary

The above programs are basic measures that should be considered by all providers. Systems with sufficient resources should develop more advanced programs.

Drought Stage 1

Precautionary management measures

Recommended when caution is needed to avoid stressing supplies

Examples -

- Communicate conditions, increase outreach
- Encourage further reductions or changes related to landscaping (e.g. turf removal, discourage winter overseeding)
- Promote use of commercial car washing facilities where water is recycled
- Increase system-wide leak detection efforts and expedite repairs
- Monitor water levels of wells, reservoirs more frequently
- Promote rainwater harvesting
- Discourage subdivisions from requiring turf
- Encourage restaurants to provide water only upon request
- Encourage hotel/motels to implement linen & towel replacement programs
- Update arrangements for alternative/back-up water supplies should they become necessary
- Continue actions from previous stage, if applicable

Drought Stage 2

Intermediate management measures

Recommended when there is a possibility that supplies may not meet demand

Examples -

- Implement time of day/day of week schedules
- Request a voluntary percent reduction from water users and offer tips on how to achieve it
- Prohibit subdivisions from requiring turf
- Implement increased conservation rate changes or surcharges
- Require restaurants to provide water only upon request
- Require hotel/motels to implement linen & towel replacement programs
- Require public facilities to reduce water use by community-determined percentage
- Impose restrictions on fire and fireworks
- Prohibit or reduce winter overseeding
- Confirm arrangements for alternative/back-up water supplies should they become necessary
- Continue actions from previous stages, if applicable

Drought Stage 3

Advanced management measures

Recommended when there is a good probability that supplies will not meet demands

Examples -

- Implement alternative/back-up water supply strategies (temporary pumping, water hauling, emergency interconnects, and water rights transfers)
- Institute water use reductions for large turf facilities
- Eliminate outdoor watering: no misters in commercial or public facilities, residential car washing, water used in fountains, or residential pool refills - consider watering trees but allowing shrubs/grass to die off
- Prohibit all public water uses not required for health or safety
- Suspend water use of interruptible customers (such as construction water) during peak periods
- Implement turf removal program
- Consider a moratorium on building permits if current demand cannot be met
- Continue actions from previous stages, if applicable