
SPECIAL  **DISTRICTS**

Lake County's Water and Wastewater Agency

Drought Management Plan

Update

April 12, 2021

Lake County Special Districts Administration
230 N. Main Street, Lakeport, CA 95453
(707) 263-0119

Drought Management Plan

Introduction

Provided herein is Special Districts update to the Drought Management Plan for the five water systems that we manage. Much has changed in Lake County over the years, and we are all facing increased challenges in our day-to-day lives; water supply and usage being one of those challenges. Water table levels are critically low and weather experts are all predicting low rainfall this year, and a continuation of the drought conditions we have been experiencing periodically over the last two decade. The primary goal of this Drought Management Plan is to act promptly and carefully to better protect the water supply and systems for our customers.

The good news is that there are now a host of opportunities for addressing water management such as better technology and methods to monitor water sources, treatment and distribution. These tools help recognize water issues earlier, allowing a more prepared response. There are also more efficient ways of sharing information on water conservation and technologies for the home to reduce water consumption and water waste.

On average, as a country our residential per capita use has been flat or declining over the past 30 years¹. Some of our water customers are able to use lake water for outdoor gardening and landscaping needs which helps in periodd of drought, however the majority must rely on drinking water for both indoor and outdoor uses.

Lake County Special Districts has developed a Drought Management Plan, drought related ordinances, and other planning tools for the water systems we manage. We are examining each water system, looking at current production capabilities as well as future needs. Factoring in less (aquifer) recharge and increased seasonal demand, all systems may experience increased challenges as we head into another dry season. However, with a formal plan that includes diligent monitoring, community awareness and strict conservation measures and incentives, customer water should remain available throughout the season.

District Working Group

The Lake County Special Districts Administration consists of 47 budgeted staff positions (administration, water and wastewater employees) working to provide continuous water and wastewater services to our customers.

Staff responsible for the implementation of the drought management plan are as follows:

Scott Harter	Steven Phillips	Phillip Spooner
Administrator	US Compliance Coordinator	Utility Area 3 Superintendent
	Lori Baca	John Sparkes
	Customer Service Coordinator	Utility Area 2 Superintendent
	Cassandra Benitez	Lynn Prescott
	Utility Billing Specialist	Utility Area 1 Superintendent

¹ <https://pacinst.org/wp-content/uploads/2015/04/Water-Use-Trends-Report.pdf>

Water Systems

Our agency oversees and manages the operation of five water systems serving between 300 and 3,000 customers in various locations within the County.

CSA #13 – Kono Tayee, serving population of approximately 307

CSA #2 – Spring Valley, serving population of approximately 1,154

CSA #20 – Soda Bay, serving population of approximately 1,446

KCWWD #3 – Kelseyville, Finley and Lands End, serving population of approximately 3,058

CSA #21 – N. Lakeport, serving population of approximately 2,862

Kelseyville and the Kono Tayee water systems are supplied by wells. CSA #20 (Soda Bay), and CSA #21 (N. Lakeport) are supplied by surface water from Clear Lake, and CSA #2 (Spring Valley) is supplied with surface water from the North Fork of Cache Creek.

Tiered rate increases that promote conservation have been implemented in the following County Service Areas:

CSA #2 Spring Valley

CSA #13 Kono Tayee

CSA #20 Soda Bay

CSA #21 N. Lakeport

System Background

Staff monitors information on each of the water systems. The information includes a description of the water sources, seasonal production data, seasonal characteristics (well depth, lake level, etc), and seasonal water quality data. Historical data (from the previous five years) will be examined. These data points will show how much water storage has been historically available over the previous five years and will be used in developing the goals and trigger points for the Drought Management Plan.

Average Water Demand

Water use is examined in each system by looking at the customer type and the average water use. For our small systems, this classification will initially be broken down into just two categories: “residential”; and “commercial”. For each category, the “Basic Use” and “Peak Use” will be determined by averaging the water use for Jan/Feb (basic use) and Aug/Sept (peak use). Historical data from previous years will be examined. The basic use represents the average indoor use, and typically represents the essential water use, and peak use represents the basic use plus all other watering including outdoor. These data points will also be used in developing the goals and trigger points for the Drought Management Plan.

Goals and Triggers

The goals and triggers are the basis for when to implement various stages of the Drought Management Plan. The information obtained from the condition assessments and water use is used to set the conservation goals. This information, combined with the practical experience of the water treatment plant operators, are used to set the triggers (or stages) of the Plan. The

triggers are developed based on use, storage, supply condition (i.e. well level or surface water level, and public safety).

Each water system can have different goals and threshold triggers, since they are based on individual water system performance and needs.

At such time as there is a potential threat to the supply of any system, Special Districts will implement Stage 1 of the Drought Management Plan. This stage is to alert the community to the potential threat and ask all customers to comply with voluntary conservation. **During Stage 1, all customers will be required to comply with any and all State regulations and requirements concerning conservation. This will include prohibited uses, limited landscape watering and mandatory reductions in usage.**

During Stage 1, the system's capacity and consumption will be monitored closely and in the event the potential threat is not alleviated or worsens, Special Districts will request the Board of Supervisors approve a Stage 2 declaration for that particular system. At such a time as Stage 2 is declared, a plan will be provided to monitor and report on the system's characteristics and use data and Special District's staff will be establishing Stage 3 and 4 triggers, representing the levels of action needed to meet worsening conditions. These stages are typically seasonal, however, if Lake County experiences additional dry periods, or a specific district experiences ongoing capacity issues, these stages could remain in effect for a longer period of time.

Stages

Stage 1 – Voluntary Conservation **and compliance with State conservation regulations and requirements.** Emphasis on community awareness and outreach.

Stage 2 – Initiate mandatory conservation measures (implement surcharge for violations through a "Water Waste" Urgency Ordinance)

Stage 3 – Through additional Urgency Ordinances, implement additional mandatory conservation measures and revised water rates (Base, Tier 1, Tier 2 rate structure adjustments) to financially discourage non-essential water use. Include surcharges for usage over the maximum allowed.

Stage 4 – Implement Urgency Ordinance with stringent consumption limits and penalties.

Stage Description

Stage 1 – Implemented when a potential threat to capacity is seen. The District will mail out conservation notices to all customers. Water use will be examined to see how much customer water conservation is taking place. **Targeted voluntary reduction for this effort will be consistent with State guidelines and requirements, historically that has been a 25% reduction from pre-drought consumption levels. All State conservation regulations or requirements in effect must be adhered to during this stage.**

Stage 2 – Implement "phased" mandatory conservation measures to prohibit non-essential water use. At the Stage 2 trigger point, the voluntary water conservation efforts have not provided enough reduction in water use and/or storage and supply have deteriorated to a

point where additional measures are needed to reduce overall water use. Mandatory conservation measures include an Urgency Ordinance prohibiting nonessential water use. Nonessential water use for Stage 2 is defined, as follows:

- a. The use of water through a hand held hose unless it is equipped with a functional positive shut-off nozzle.
- b. Use of water through a hand-held hose for washing buildings, structures, mobile homes, sidewalks, walkways, driveways, patios, parking lots, tennis courts, or other hard-surfaced areas.
- c. Use of water that results in flooding or results in runoff in gutter or streets.
- d. Use of water through any meter where the person billed for the service has been given 10 days written notice to repair broken or defective plumbing, sprinkler, watering, or irrigation systems and failed to affect such repairs.
- e. Use of water for filling or refilling after draining of any existing or new swimming pool, spa, hot tub.
- f. Use of water to clean, fill or maintain levels in decorative fountains.
- g. Use of water for construction purposes (dust control, consolidation of backfill, etc.)
- h. Use of water through a sprinkler system between the hours of 10:00 am and 7:00 PM.

The Urgency Ordinances can include a surcharge of \$350 for each day a violation occurs. The goal of this stage is to achieve a reduction in water use and ensure compliance with all State regulations which was not achieved through Stage 1 voluntary compliance.

Stage 3 - Implement by Urgency Ordinance additional mandatory conservation measures AND revised rate structures, to financially discourage non essential water use. It would include surcharges for consumption above a prescribed base usage. Stage 3 would also allow Special Districts to install flow restrictors on connections that violate the urgency ordinance more than twice.

As noted above, each water system can have different goals and threshold triggers, since they are based on individual water system performance and condition. At the time the Stage 3 trigger has been reached in the affected water system, an Urgency Ordinance is recommended to be enacted resetting the maximum amount of water allowed to protect the system capacity. Rates are established to financially discourage non essential water use. The goal of this stage is to achieve a reduction in overall water use based on the conditions of the system and projections of capacity limitations. Stage 3 conditions will be brought to the Board as an update, when conditions merit.

Stage 4 - Implement minimum usage and a Connection Moratorium

Depending on the condition of the water system and the degree of conservation observed within the water system during Stages 1, 2 and 3, Stage 4 may be necessary. Stage 4 will be implemented when a system is potentially unable to meet the demands of the customers. Stage 4 will set the maximum gallons per day per person as low as needed to ensure essential health and safety can be met and the water system capacity protected. Stage 4 would prohibit new connections. Stage 4 would include a surcharge for water consumption above a prescribed base usage. Stage 4 conditions will be brought to the Board as an update, when conditions merit.

Public Information / Media Program

Getting our customers involved is a key element in a successful program. It is encouraging that many customers are already practicing effective conservation measures and this is greatly appreciated. During any stage of this plan, the District will be utilizing a variety of Public Service Announcements, mail-outs to customers, website and social media updates, and advertisements.

The District will also work to provide conservation and water system information to local decision makers, other County Departments, Fire Districts and other water-dependent agencies to provide technical guidance and educational assistance.

We will provide detailed information to commercial accounts, restaurants, schools, and other groups asked to comply with specific use restrictions. The District will provide local news groups with frequent updates on water and conservation efforts.

If system conditions require Stage 2 (re-structuring of rates or surcharges), information will be available to all customers in advance of their first billing to further educate them on reading their water meter and monitoring use throughout the billing period. Customers will be provided the tools (i.e. post card instructions) to better understand and calculate their ongoing costs and water use during the billing period.

Supply and Demand Balance

For each of the water systems, District staff will examine the current conditions and supply. Along with this information we will use our 12-month Growth Tables showing actual growth (customer accounts) and forecast potential growth for the next five years.

The report will identify previously prepared infrastructure needs (storage, supply, and distribution) to meet those growth projections, and how those growth projections affect the water system in normal rainfall/system recharge year as well in a continued drought condition.

Improvements in Supply

Historically, during drought or other water emergency conditions, system operators were able to supplement their supply with purchased water from another source. Unfortunately, during a prolonged drought, most other sources may not have an excess supply and cannot be relied upon to supply emergency water.

The District will also examine and evaluate existing well sources for rehabilitation or re-working to recover or increase production capabilities.

The District is also working toward increasing the efficiency of water delivery. This will include more staff involvement with inspections and looking for water waste, increasing the frequency of system leak checks and reducing system pressures where possible.

We also investigate the potential for private construction projects to utilize recycled water for a portion of their needs rather than using potable water from the public water systems managed by our agency.