



July 21, 2021

TO: Utilities Advisory Committee

FROM: Margaret Falkner, Utility Systems Manager
Ron Munds, General Manager

**SUBJECT: Agenda Item 7 - 07/21/2021 Utilities Advisory Committee
Water Shortage Contingency Plan Review**

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STAFF RECOMMENDATION

Review the information provided in this report and provide ideas, suggestions and direction to staff on to best ways to inform the District water customers of the current drought situation consistent with the District's Water Shortage Contingency Plan.

DISCUSSION

Background

In 2014, the LOCSD established a *Water Shortage Contingency Plan* (Plan) that identified voluntary and mandatory water use restrictions designed to reduce water demand in response to drought or other water quality or supply deficiencies. The plan includes five water use reduction stages with target cutback levels ranging from 5% to 50%. Stages III, IV, or V water shortage emergencies result in mandatory water use restrictions and penalties.

In April 2015, the Board of Directors (Board) declared a Stage III drought emergency. On May 7, 2015 the Board amended the Plan to add the prohibition of issuing will-serve letters during Stages III, IV and V. The plan was again amended in June 2019 to reflect the Board decision to allow for leak adjustments during a Stage III emergency. The District's water service area has remained in Stage III since 2015 based on the climatic triggers in the Plan.

San Luis Obispo County & State Drought Emergency Declarations

On July 8, 2021, Governor Newsom expanded the regional drought state of emergency to include San Luis Obispo County. A Voluntary 15 percent reduction in water use is urged to preserve available supplies and protect water reserves.

On July 13, 2021 the SLO County Drought Task Force recommended to the Board of Supervisors that they adopt a proclamation proclaiming a local emergency due to current drought conditions based on the immediate and long-term impacts of the drought that pose a threat to the health and welfare of our residents and a negative impact on the economy of San Luis Obispo County. The Board of Supervisors adopted the proclamation as recommended by the Drought Task Force.

LOCSD Water Shortage Contingency Plan Review

Staff is requesting that the Utilities Advisory Committee review the District's Plan to consider updates and/or modifications. Keep in mind that the water use patterns in the District's water service area have changed since the development

of the Plan back in 2013-2014 making some of the assumptions and prohibitions outdated. Additionally, from a practical sense, there are prohibitions listed in Stages I, II and III that are beyond the District’s current capabilities to implement, mainly from a resource and personnel standpoint.

Staff suggests that the UAC divide the Plan review effort into two components, short and long term. There are fundamental changes and updates to the Plan that need to be made which will take time to develop, have to be approved by the Board and then implemented. The short-term component would consist at reviewing the list of prohibitions in the Plan and determining which would be functional and address the immediate drought concerns. During this process, new ideas could be introduced for implementation or existing prohibitions could be modified for more effective implementation. The second component would be the longer-term changes that need to be made to reflect current water use conditions, implementation of the Basin Plan and the corresponding data that has been collected, changing expectations of the District’s water customers and revisions to the prohibitions which reflect the District’s resources and capabilities to respond.

Data Analysis

The following section presents various data tables and elements of the Plan for the committee’s review. As previously stated, the first phase of work will focus on prohibition elements of the Plan in order to devise a strategy to move forward quickly to disseminate drought related information.

Water Production & Water Use

In order to better understand the water use patterns which will influence the path moving forward for both the short- and long-term components previously discussed, the following two summary tables provide information that will help make the water use related make decisions.

Water Production

Overall, total water production has declined over the past five years. This can be attributed to the plumbing retrofit effort made during the construction of the wastewater project and the community’s continued response to the drought conditions experienced from 2012 through 2016.

Production in Acre Feet per Year (AFY)					
	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21
AFY	539.67	560.07	510.53	512.06	524.52
Rainfall	26.01"	13.62"	23.09"	13.23"	13.52"

Residential Per Capita Water Use (gallons per capita per day; GPCD)

The following data is calculated using the Department of Water Resources formula for estimating residential water use. The formula does use older census data which will be updated later this year. This means the per capita numbers will probably go down. The estimated indoor GPCD was determined by using the lowest winter GPCD number for each year. It is speculated that the numbers fluctuate based on the weather, meaning, during dry winters, outdoor water use could be reflected in that number.

YEAR	Avg Res-GPCD	Est. Indoor
2021*	60.25	
2020	61.71	59.59
2019	60.35	48.45
2018	62.25	50.84
2017	67.76	64.11
2016	63.44	55.99
2015	60.01	46.86
*January thru June 2021		
Estimate indoort based on winter water use		

Rainfall

As indicated, Los Osos has experienced back-to-back dry years and three out of the last five years have been below the average rainfall of 17 inches. The rainfall data is used in the Water Shortage Contingency Plan to transition between stages in the Plan.

Los Osos Landfill Station #727 (units are in inches)

Water Year	Total
2021-2022	
2020-2021	13.52
2019-2020	13.23
2018-2019	23.09
2017-2018	13.62
2016-2017	26.01

Water Shortage Contingency Plan Stages, Triggers & Prohibitions

The following table shows the five stages of the Plan the climate triggers to enter into a particular stage and the requirements to exit each stage based on the rainfall data and/or water quality triggers. It is important to note that the gpcd residential water use back when the Plan was developed in 2013 was about 65 gpcd. The state and county were in extreme drought conditions at the time which could have influenced water consumption at that time. Any changes in how the water use information is interrupted will be part of the long term look at the Plan.

Take note of the GPCD goals in the first column. Under Stage III, the community should be at 50 gpcd. The residential gpcd for calendar year 2020 was estimated to be 61.71 gpcd.

Stage (Household allocations are based on household of 3)	Reduction Target	Climate Trigger (Median Rainfall 17 Inches)	Chloride Trigger (8th or 10th Street Wells - Zone D)	TDS Trigger (8th or 10th Street Wells - Zone D)	Recommended Climate & Water Quality Requirements To Exit Water Shortage Stages (de-trigger)
STAGE I ALERT					Receive rainfall >= median by March 31
Customers: Residential					
Allocation:	5%	Rainfall total as of March 31:	N/A	N/A	
183 gal/day/household		less than median (17 in) for			
or		current year			
61 gal/day/occupant					
STAGE II WARNING					Receive rainfall >= median by March 31
Customers: Residential		Stage I plus rainfall total as of			
Allocation:	15%	March 31: <= 32 in. for over two	N/A	N/A	
174 gal/day/household		years or <= 48 in. over three yrs.			
or		or 65 in. over four yrs.			
58 gal/day/occupant		or 81 in over five years			
STAGE III EMERGENCY		Stage I plus rainfall total as of			
Customers: Residential		March 31: <= 29 in for over two			Receive rainfall >= median by March 31
Allocation		ys. Or <= 43 in. over three yrs.			
150 gal/day/household	25%	or 58 in. over four yrs. Or 72 in	150 mg/l	700 mg/l	for two consecutive years. If in Stage III
or		over five yrs. Stage III shall be			due to water quality, two consecutive semi-
50 gal/day/occupant		enacted no earlier than April			annual samples must be below
NO TRANSFERS ALLOWED		2015. Declared by BOD 4/2/2015 -			trigger concentrations to exit Stage III.
		Based on Climate Trigger ONLY			Modified on 6/6/19
		Modified on 5/7/2015			
STAGE IV SEVERE					
Customers:		Stage I plus rainfall total as of			Receive rainfall >= median by March 31 for two
Residential, Commercial		March 31 <= 26 in. for over two			consecutive years, transition to Stage II for
		years or <= 38 in over three yrs.			current year.
		or 51 in over four yrs. Or 64 in.			consecutive semi-annual samples must be
		over five years, Stage IV shall be			below trigger concentrations to exit Stage IV
		enacted no earlier than			
Allocation	35%	November 2015	250 mg/l	850 mg/l	
135 gal/day/household					
or					
45 gal/day/occupant					
NO TRANSFERS ALLOWED					
STAGE V CRITICAL					
All Customers					
		Stage I plus rainfall total as of			Receive rainfall >= median by March 31,
		March 31 <= 17 in. for over two			transition to Stage II for current year. If in Stage
		years or <= 26 in over three yrs.			V due to water quality, two consecutive semi-
		Or 34 in. over four yrs. Or 43 in.			annual samples
		over five years.			must be below trigger concentration to exit
Allocation:	50%		500 mg/l	1,000 mg/l	Stage V
126 gal/day/household					
or					
42 gal/day/occupant					
NO TRANSFERS ALLOWED					

Prohibitions

The following table lists the prohibitions on water use and activities during each stage of the plan. Staff requests that the committee review the prohibitions (Stages I through III) since there are specific prohibitions that staff is reluctant to implement because cost and lack of staffing resources. Those prohibitions are highlighted and discussed in the next section of the report.

STAGE – based on household of 3	PROHIBITIONS
STAGE I - ALERT Customers: Residential Allocation: 183 gal/day/household 61 gal/day/occupant	<ul style="list-style-type: none"> • All outdoor irrigation of vegetation shall occur only between dusk and dawn. • The use of potable water to wash sidewalks, walkways, driveways, parking lots, open ground and other hard-surface areas by direct application shall be prohibited. • The use of non-drinking water fountains, except for those using recirculated water, shall be prohibited. • Use of water which results in flooding or run-off in gutters or streets shall be prohibited.
STAGE II - WARNING Customers: Residential Allocation: 174 gal/day/household 58 gal/day/occupant	<p>In addition to Stage I conservation measures:</p> <ul style="list-style-type: none"> • Use of water from fire hydrants shall be limited to fire suppression and/or other activities immediately necessary to maintain health, safety and welfare of residents within the boundaries of the Los Osos Community Services District. • Use of District potable water for construction projects shall be prohibited. • Washing of automobiles, trucks, trailers, boats, and other types of mobile equipment not occurring upon the immediate premises of a commercial car wash and/or commercial service station shall be prohibited unless residents have an automatic shut-off hose nozzle and do not allow water to run off their property. • Use of potable water to irrigate lawns, landscape plantings, groundcovers, and shrubs shall be limited to prescribed days and hours. Irrigation shall only occur between dusk and dawn, and shall only occur on Wednesday and Sunday for <u>even</u> numbered addresses, and Tuesday and Saturday for <u>odd</u> numbered addresses. Community recreational facilities shall be exempt from this prohibition. • Water main flushing shall only occur in emergency situations as declared by the General Manager
STAGE III - EMERGENCY Customers: Residential Allocation: 150 gal/day/household 50 gal/day/occupant	<p>In addition to Stage I & II conservation measures:</p> <ul style="list-style-type: none"> • Irrigation of community recreational facilities shall be exempt from this prohibition. • Penalties up to 2 times the established rate for usage above the allocation, may be applied. District will notify customer of usage above allocation, if the customer fails to modify usage, penalties will be applied. • No new Intent to Serve applications. • No allocations may be transferred to another property.
STAGE IV - SEVERE Customers: Residential, Commercial Allocation: 135 gal/day/household 45 gal/day/occupant	<p>In addition to Stage I, II, & III conservation measures:</p> <ul style="list-style-type: none"> • Irrigation of community recreational facilities and residential edible crops shall be exempt from this prohibition. • New water connections to the District water system shall be prohibited. • Commercial allocation 10% below baseline. • Penalties up to 4 times established rate may be applied. • No allocations may be transferred to another property.
STAGE V CRITICAL All Customers Allocation: 126 gal/day/household 42 gal/day/occupant	<p>In addition to Stage I, II, III, & IV conservation measures:</p> <ul style="list-style-type: none"> • Commercial allocation 15% below baseline. • Penalties up to 4 times established rate may be applied. • No allocations may be transferred to another property.

Prohibition Review

The following prohibitions can easily be implemented (most are in effect now) by District staff:

- Use of water from fire hydrants shall be limited to fire suppression and/or other activities immediately necessary to maintain health, safety and welfare of residents within the boundaries of the Los Osos Community Services District.
- Water main flushing shall only occur in emergency situations as declared by the General Manager

- Use of District potable water for construction projects shall be prohibited.
- No new Intent to Serve applications.
- No allocations may be transferred to another property.
- Irrigation of community recreational facilities shall be exempt from this prohibition.

The following prohibitions can be in place but not easily enforced since it would take a staff person to follow up on complaints for enforcement:

- Washing of automobiles, trucks, trailers, boats, and other types of mobile equipment not occurring upon the immediate premises of a commercial car wash and/or commercial service station shall be prohibited unless residents have an automatic shut-off hose nozzle and do not allow water to run off their property.
- All outdoor irrigation of vegetation shall occur only between dusk and dawn.
- The use of potable water to wash sidewalks, walkways, driveways, parking lots, open ground and other hard-surface areas by direct application shall be prohibited.
- The use of non-drinking water fountains, except for those using recirculated water, shall be prohibited.
- Use of water which results in flooding or run-off in gutters or streets shall be prohibited.

Staff would recommend that the following prohibitions be delayed for implementation or modified. Moving to irrigation restrictions would require additional staff to monitor and enforce. Establishing allocations and accessing penalties will require billing software adjustments, extensive public outreach and additional staff to process the paperwork to effectively implement this measure.

- Use of potable water to irrigate lawns, landscape plantings, groundcovers, and shrubs shall be limited to prescribed days and hours. Irrigation shall only occur between dusk and dawn, and shall only occur on Wednesday and Sunday for even numbered addresses, and Tuesday and Saturday for odd numbered addresses. Community recreational facilities shall be exempt from this prohibition.
- Penalties up to 2 times the established rate for usage above the allocation, may be applied. District will notify customer of usage above allocation, if the customer fails to modify usage, penalties will be applied.

Next Steps

At the July 21st UAC meeting, staff would like to review the information provided in this report but focus on the short-term strategy to provide the District's water customers with clear and effective information to help them understand the implications of the current drought and solutions they can use to help conserve water. We will be looking for ideas and suggestions on how to quickly and effectively reach customers.