



May 15, 2024

TO: Utilities Advisory Committee
FROM: Ron Munds, General Manager
SUBJECT: **Agenda Item 4 – 05/15/2024 UAC Meeting**
Los Osos CSD 2023-2024 Water Report.

STAFF RECOMMENDATION

Receive report, comment and provide staff with input and direction regarding Water Shortage Contingency Plan Stage to recommend to the Board

DISCUSSION

The purpose of this report is to provide the UAC and community with an overview of the District's water supply outlook, water production history, rainfall totals, per capita water use trends, and other pertinent water related information. With the recent changes to the Water Shortage Contingency Plan (WSCP) strategies which updated the triggers to enter or exit the various stages of water conservation, reports, similar to this one, will be provided in May to the UAC on annual basis.

Water Supply

The District's single source of water supply is from the Los Osos Groundwater Basin which is adjudicated and managed by a coordinated effort with the District, Golden State Water Company, S&T Mutual Water Company and the County of San Luis Obispo. These entities make up the Basin Management Committee which oversee the implementation of the groundwater management plan known as the Basin Plan. Implementation of the programs (mainly Programs A & C) in the Basin Plan fall mainly on the water purveyors with BMC assistance and support for data collection and the commissioning of additional studies when needed. Implementation of the Basin Plan, planning for a water resilient water supply future and maintaining existing infrastructure are the key challenges facing the District.

The following are updates on the District's water supply and projects:

Rehabilitation of Existing Wells- Since 2019, the District has had to rehabilitate (rebuild) three of its four existing lower aquifer wells. This is an indication of the age of the well infrastructure and the fragile nature of the water supply system. When a well is out of service, it puts stress on the remaining wells to make up the difference. This is especially problematic when the District is trying to cut production at the Palisades and 8th Street wells to combat seawater intrusion.

Program A- Program A entail shifting and/or adding water production from the upper aquifer (Zone C). To implement this program, the District has an upper aquifer well at the South Bay site which requires nitrate removal equipment. This is a low producing well in terms of gallons per minute that can be pumped and it is expensive to maintain. The District has minimized its use because of the well limitations.

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The District was successful in completing another upper aquifer well at the 8th Street water yard location. This well has added extra capacity to the water system and works well in coordination with the lower aquifer well at the same location.

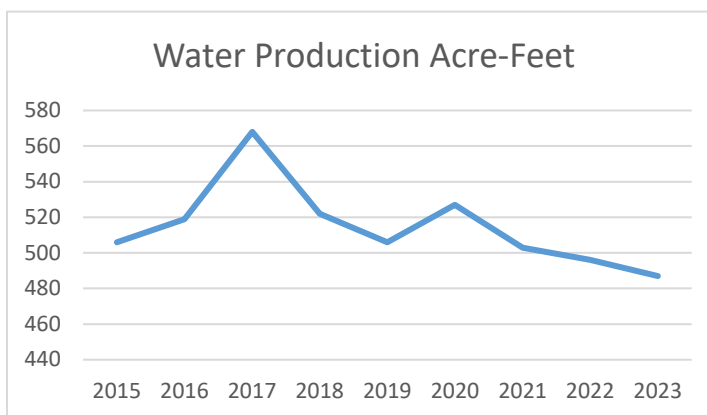
Program C- the strategy outlined in Program C is to shift pumping from the western portion of the basin in Zones D and E to the middle and east portions. The District has been working on the Program C well project for over five years and it is near completion. This will add operational integrity to the District’s well infrastructure and add safe yield to the basin sustainable yield estimates.

Water Supply Resiliency Intertie Project- The District has been working on the Water Supply Resiliency project since October 2022. This project will add a connection to the regional water supply network by connecting to the State Water pipeline in the Chorro Valley. The strategy is to bring imported water during wet years to offset pumping in the groundwater basin. This would allow for better recharge rates during average or above average rainfall years. During periods of drought, the basin will be better equipped to sustain the community’s water needs. Preliminary engineering design and the environmental impact assessment work has been completed. Next steps would be to find project financing to complete the design and initiate construction of the pipeline. The District also needs to negotiate with the County for an allocation from the State Water Project.

Water Production

One of the key goals in the Basin Plan is decrease production not only from wells on the westerly side of the groundwater basin but to also track water use by customers in an effort to lower overall water production. Tracking production provides the District with valuable information on customer water consumption, monitoring the water systems water loss and tracking revenues to support the operations of the water system. The following is the District’s water production numbers since 2015 as reported in the BMC’s annual monitoring report:

Water Production	
Year	Acre-Feet
2015	506
2016	519
2017	568
2018	522
2019	506
2020	527
2021	503
2022	496
2023	487



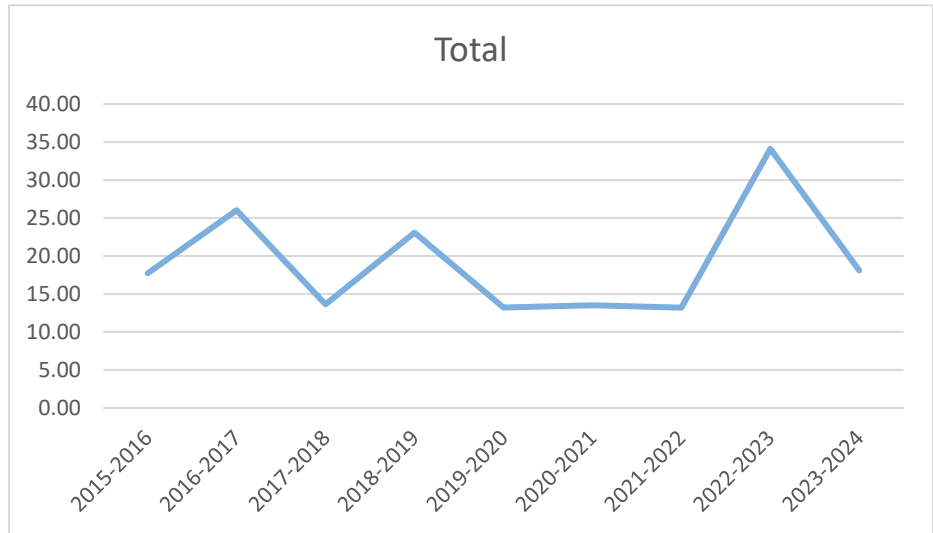
As indicated in the table and chart, overall, water production has steadily decreased over this period of time, even during drought and above rainfall periods. Since around 2019, water production has been relatively stable in the District’s service area.

Rainfall

Since the District’s water supply is dependent on groundwater recharge from rainfall, tracking the cumulative impacts of rainfall amounts on water levels in the aquifer is one of several key factors on determining the sustainability of the basin. Currently, the District’s rainfall year is from April through March. The reason for this time period, as opposed to a calendar or fiscal year, is that the District’s Water Shortage Contingency Plan (WSCP) references the date of March 31st of each year as the point in time when the determination of if the District should increase or decrease the water shortage stage based on

the trigger mechanism defined in the WSCP. The following table and chart provide rainfall total since 2015.

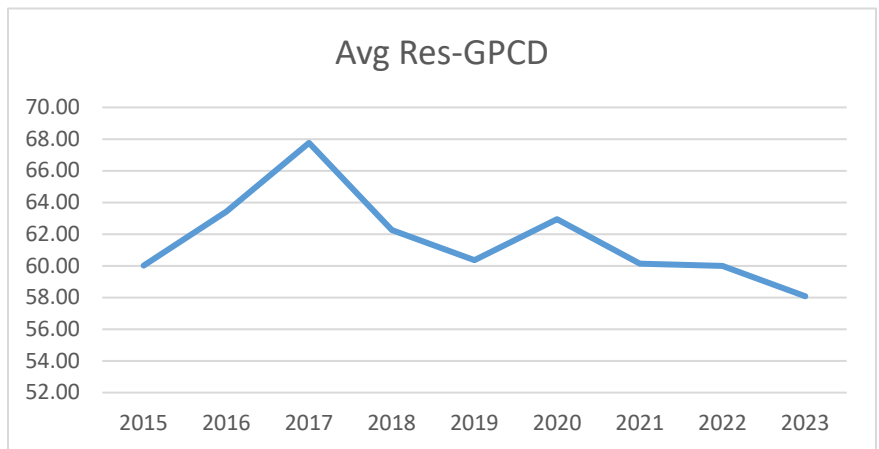
Water Year	Total
2015-2016	17.72
2016-2017	26.01
2017-2018	13.62
2018-2019	23.09
2019-2020	13.23
2020-2021	13.52
2021-2022	13.20
2022-2023	34.11
2023-2024	18.12



Residential Per Capita Water Use

Residential per capita water use is defined as the amount of water used per person per day in a household. This includes both indoor and outdoor water consumption. It is calculated by using a California developed formula that uses total monthly production, the percentage of both single and multi-family residential accounts versus all accounts, population and number of days in the particular month to calculate the per capita number. Per capita water use does fluctuate from month to month and year to year mostly driven by climatic conditions, i.e. rainfall, drought conditions, etc. The following table and chart provide the annual average residential per capita water for each year going back to 2015.

YEAR	Avg Res-GPCD
2015	60.01
2016	63.44
2017	67.76
2018	62.25
2019	60.35
2020	62.94
2021	60.14
2022	60.00
2023	58.08



As indicated, residential per capita water use has remained fairly constant for a number of years.

Water Shortage Contingency Plan – Water Conservation Stage

The WSCP was updated in October 2023. The update included modifications to the climatic triggers to enter and exit the various stages based on current conditions and operational experience. The District has been in Stage III of the WSCP since 2015 due to the old triggers which were based strictly on year-to-year rainfall totals instead of the current triggers based on cumulative totals over multiple years and

the BMC's water level metric which is an indicator for the impacts of drought, average and above average rainfall on the groundwater basin. The following is the criteria for exiting Stage III:

To exit Stage III and upon a determination by the Board of Directors, if the equivalent rainfall \geq average by March 31 for two consecutive years is received or the BMC spring Water Level Metric increases, may allow for the exiting Stage III.

Using the criteria of equivalent rainfall \geq average (17 inches) by March 31 for two consecutive years, the rainfall totals for 2022-23 and 2023-2024 equal 52.31 inches versus the two-year average of 34 inches (17 inches per year time 2), the exiting criteria has been met. Additionally, the BMC spring Water Level Metric for 2023 increased by over two feet, again meeting the exiting criteria.

Given the amount of rainfall received and the rise in the Water Level Metric for the past three years, the Board could determine that moving to Stage II or I is appropriate.

Summary

The information in this report provides a high-level overview of the District's water portfolio, water production, per capita water use, rainfall, and the review of the WSCP which indicates the opportunity to move to a different stage of conservation. In general, the District is incrementally improving its overall water supply conditions because of the investments made to the water system and the future planning efforts underway. Continue efforts in water conservation, water supply resiliency and implementation of the Basin Plan programs are essential to provide water to the community now and in the future.