2023 Annual Water Supply and Demand Assessment Summary Report

A Report to the State Water Resources Control Board pursuant to California Water Code Section 10644(c)(1)(B)

September 2023

California Department of Water Resources
Water Use Efficiency Branch

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Note: This report is developed by the California Department of Water Resources to meet the requirements of California Water Code Section 10644(c)(1)(B).

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Definitions and Acronyms

Annual Assessment – Annual Water Supply and Demand Assessment to be conducted by urban water suppliers every year as required by California Water Code Section 10632(a)

Annual Shortage Report – Annual Water Shortage Assessment Report to be submitted annually by urban water suppliers on or before July 1 as required by California Water Code Section 10632.1. The Annual Shortage Report consists of information including anticipated shortages and triggered water shortage response actions determined by the Annual Assessment.

CVP – Central Valley Project

CWC – California Water Code

Dry Year – Characteristic of a dry year is at the discretion of the Supplier, but it should be adequately defined and ideally align with one of the WSCP water shortage levels. The assumed Dry Year conditions are often based on a previous historic dry year, such as the driest year on record. Suppliers presented their defined historic Dry Year in their UWMP Table 7-1.

DWR – California Department of Water Resources

Guidance – Annual Water Supply and Demand Assessment Guidance

State Water Board – State Water Resources Control Board

Summary Report – Annual Water Supply and Demand Assessment Summary Report, this report

SWP – State Water Project

USBR – United States Bureau of Reclamation

UWMP – Urban Water Management Plan

Unconstrained Demand – The water demand absent any water supply and demand restrictions (see Chapter 8, UWMP Guidebook 2020)

Urban Retail Water Supplier – A water supplier, either publicly or privately owned, that directly provides potable municipal water to more than 3,000 customers or that supplies more than 3,000 acre-feet of potable water annually at retail for municipal purposes

Urban Water Supplier – An Urban Retail Water Supplier or an Urban Wholesale Water Supplier

Urban Wholesale Water Supplier – A water supplier, either publicly or privately owned, that provides more than 3,000 acre-feet of water annually at wholesale for potable municipal purposes

Water Shortage Response Actions – A measure taken to reduce the gap between available water supplies and unconstrained demand and includes demand reduction actions, supply augmentation actions, operational changes, mandatory prohibitions, and other actions

WSCP – Water Shortage Contingency Plan

WUEdata Portal – DWR's online submittal tool allows urban water suppliers or local land use agencies to submit electronic data and reports: wuedata.water.ca.gov

Executive Summary

This annual report summarizes the Department of Water Resources' (DWR's) review of Urban Water Suppliers' Annual Water Shortage Assessment Reports (Annual Shortage Reports) for the State Water Resources Control Board (State Water Board). As directed by the California Water Code (CWC) §10644(c)(1)(B), this summary report includes water shortage information at the supplier level, as well as regional and statewide analyses of water supply conditions.

The Annual Shortage Reports are the result of suppliers' Annual Water Supply and Demand Assessments (Annual Assessments) and are due to DWR every year on or before July 1st (see Figure ES-1 for timeline) and provide a mechanism for suppliers to demonstrate to the State that they have adequately developed and are following their locally adopted Water Shortage Contingency Plans (WSCP). As required by CWC §10632(a)(4) and to address potential near-term shortage, urban water suppliers are required to develop and implement, as part of their WSCP, appropriate shortage response actions that align with various shortage levels. When implemented correctly, this plan provides the supplier with the know-how to respond to varying degrees of anticipated shortage and to rebalance supply and demand to prevent the anticipated shortage from becoming a reality. During a state of drought emergency, CWC §10632.3 directs the State Water Board to defer to the implementation of the locally adopted WSCPs, to the extent practicable. Urban water suppliers who did not submit Annual Shortage Reports to demonstrate that they are taking appropriate local actions to prevent actual shortage, by following their WSCP, may require State Water Board intervention.

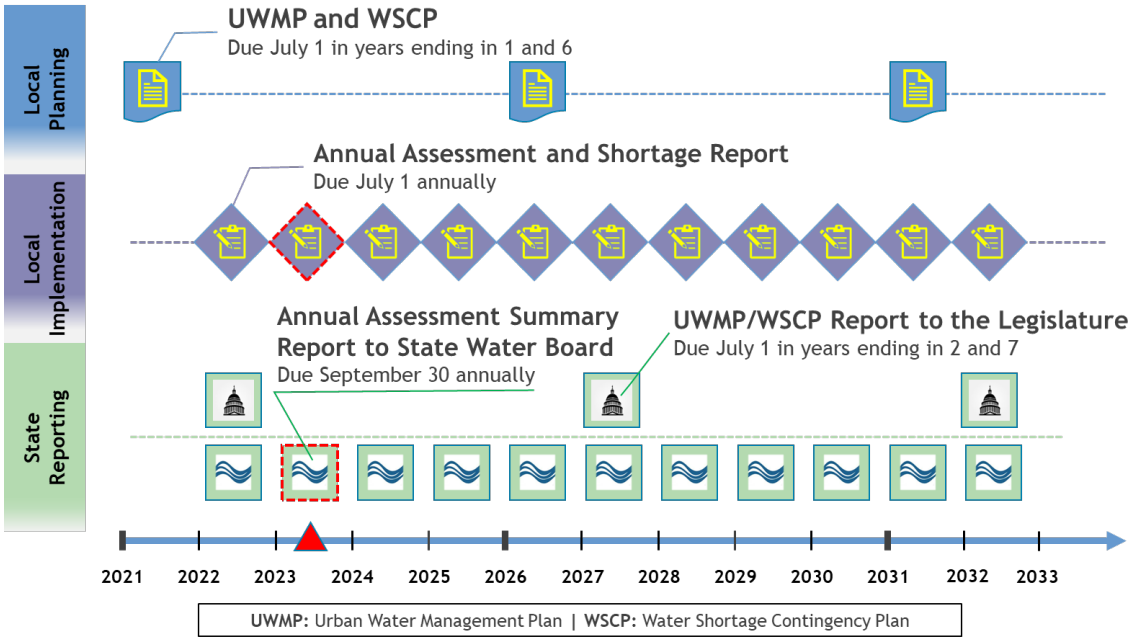

Figure ES-1. Water Shortage Contingency Planning and Implementation Timeline

Each urban water supplier conducts an Annual Assessment for the purpose of (i) evaluating its water supply reliability for the current year and one dry year and (ii) generating and submitting an Annual Shortage Report. To support suppliers' Annual Assessments, DWR has provided resources and technical assistance including: a guidance document, calculation worksheets and reporting tables, an online submittal portal, and a dedicated email address for technical assistance. In May 2023, DWR conducted an online informational meeting to assist urban water suppliers with conducting their 2023-2024 Annual Assessments. Based on lessons learned from the 2022 reports, DWR developed an addendum to the guidance with additional information on updates to the submittal portal in support of suppliers' compliance. Updates to the submittal portal included data validation checks to improve accuracy and completeness of submitted Annual Shortage Reports. For those suppliers who have submitted reports, DWR has provided technical feedback and suggested improvements to reports that were noted to have data or process errors or that did not use the appropriate level of response action. DWR has sent email reminders and made phone calls to suppliers that were late with submitting their required Annual Shortage Reports.

Reporting Compliance

There are 438 urban water suppliers (wholesale and retail) that are required to conduct Annual Assessments and submit Annual Shortage Reports. An urban water supplier is defined as a supplier providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre-feet annually. As of September 24, 2023, DWR received a total of 449 Annual Shortage Reports from 446 suppliers. The submitted Annual Shortage Reports included 436 individual urban supplier reports, 3 separate urban wholesale reports in addition to their retail reports, and 10 voluntary reports submitted by small water suppliers (suppliers serving less than 3,000 customers and supplying less than 3,000 acre-feet annually). The remaining 2 urban water suppliers that are required to submit a report have not yet done so. The compliance rate of the 436 out of 438 urban water suppliers required to submit Annual Shortage Reports is 99.5% (Table ES-1). This year, an additional 22 urban water suppliers participated and submitted their reports. This increase in compliance has been achieved as a result of continuous technical assistance and outreach provided by DWR.

Table ES-1. Water Shortage Assessment Report Submittals

Total Number of Urban Water Suppliers:	438
- Suppliers that Submitted Reports	436
- Suppliers that Did Not Submit Reports	2
Compliance Rate	99.5%
Voluntary Submittals by Small Water Suppliers	10
Total Number of Suppliers that Submitted Reports (Required + Voluntary)	446

Urban Water Suppliers' Projected Shortages and Planned Actions

DWR's review of the submitted Annual Shortage Reports found (summary in Table ES-2):

- All urban water suppliers who reported, including the voluntary submittals, either did not anticipate any shortage in the upcoming year (assumed to be dry) or they found that any anticipated shortage could be handled by implementing locally adopted water shortage response actions.
- Over 95% of urban water suppliers who submitted reports (415 out of 436 suppliers) reported no anticipated shortage and estimated that projected supplies in the coming year would meet or exceed the projected demand.
- Less than 5% of urban suppliers (21) projected an anticipated level of shortage that can be fully addressed by implementing appropriate response actions from their WSCPs, even if the next 12 months are dry.
- No suppliers project shortages that cannot be addressed by Water Shortage Contingency Plan actions.
- Several issues were identified related to some suppliers' assessment methodologies, which DWR helped them to correct, where possible.

Table ES-2. Urban Water Suppliers' Anticipated Shortage Based on Annual Aggregate Projections

Reported Projected Shortage Status	# of Suppliers	%
No shortage[1]	415	95%
Shortage can be fully addressed by suppliers' actions	21	5%
Shortage is not fully addressed by suppliers' reports; additional actions or report corrections are needed	0	0%
Total number of submitted, required shortage assessment reports	436	

[1] Although projecting an annual aggregate surplus, some suppliers may still have shortages when assessed on a monthly timescale. If so, they may be taking some actions during certain periods of the year to balance their supplies and demands.

All the 10 small water suppliers who voluntarily submitted reports anticipated no shortage in the coming year.

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1.0 Introduction

This Annual Water Supply and Demand Assessment Summary Report (Summary Report) contains projected water shortage information at the urban water supplier level as well as regional and statewide analyses of water supply conditions and is intended to inform the State Water Resources Control Board (State Water Board). Additionally, the report includes information on water shortage response actions taken by urban water suppliers as a result of their Annual Water Supply and Demand Assessments (Annual Assessments), and urban water suppliers' compliance statistics with respect to their Annual Water Shortage Assessment Report (Annual Shortage Report) submittals.

1.1 Purpose of the Report

The purpose of the Summary Report is to fulfill the California Water Code (CWC) §10644(c)(1)(B) requirements and it is due on or before September 30th of every year. The full text of the CWC section regarding the Department of Water Resources' (DWR) Summary Report to the State Water Board is presented below for reference.

> ***CWC §10644(c)(1)(B)***
> *The department shall prepare and submit to the board, on or before September 30 of each year, a report summarizing the submitted water supply and demand assessment results along with appropriate reported water shortage conditions and the regional and statewide analysis of water supply conditions developed by the department. As part of the report, the department shall provide a summary and, as appropriate, urban water supplier specific information regarding various shortage response actions implemented as a result of annual supplier-specific water supply and demand assessments performed pursuant to Section 10632.1.*

1.2 Report Organization

This Summary Report is organized into five sections:

Section 1 – **Introduction:** presents a high-level description of the report contents and purpose.

Section 2 – Background: (1) presents information on conducting and preparing Annual Assessments and Annual Shortage Reports and (2) describes how these items relate to

urban water suppliers' Water Shortage Contingency Plans within the overarching urban water management planning.

Section 3 – Summary of Submitted Annual Water Shortage Assessment Reports: presents the compliance statistics, anticipated shortage statistics, and implemented and planned water shortage response actions.

Section 4 – Regional and Statewide Water Supply Conditions: presents an overview of hydrological water supply conditions and information on State Water Project (SWP) and United States Bureau of Reclamation (USBR) allocations.

Section 5 – Findings Summary: identifies issues and potential improvements to the process and highlights the benefits of the Annual Assessment process for improving drought preparedness.

This report includes two appendices:

Appendix A – Summary of Urban Water Suppliers' Reported Shortage Assessments: lists the water suppliers, their Annual Shortage Report submittal status, and projected water shortage status.

Appendix B – Annual Water Shortage Assessment Reporting Tables: includes templates for the reporting tables.

2.0 Background

2.1 Annual Water Supply and Demand Assessments

Urban water suppliers develop and adopt two local planning documents: (1) an Urban Water Management Plan (UWMP) for mid- and long-term planning and (2) a Water Shortage Contingency Plan (WSCP) to prepare for drought and water shortage events. The UWMP and WSCP are both submitted on a 5-year cycle in years ending 1 and 6. DWR is then responsible to report to the legislature on the status of submitted UWMPs and WSCPs every 5 years in years ending 2 and 7.

In the WSCP, urban water suppliers provide a description of the procedures they will employ each year to conduct their Annual Assessment. Those procedures include a written decision-making process, as well as the key data inputs and the assessment methodology used to evaluate the near-term water supply reliability (CWC §10632(a)(2)).

Using the WSCP procedures, each urban water supplier conducts an Annual Assessment for the purpose of (1) evaluating its water supply reliability for the current year and one dry year and (2) generating and submitting an Annual Shortage Report by July 1 every year. After performing the Annual Assessment, each urban water supplier submits to DWR its assessment results regarding any anticipated shortages and appropriate water shortage response actions in its Annual Shortage Report.

DWR summarizes the submitted Annual Shortage Reports and submits this Summary Report to the State Water Board. The following Figure 1 presents the timeline showing the respective milestones for the above-mentioned local planning, local implementation, and state reporting.

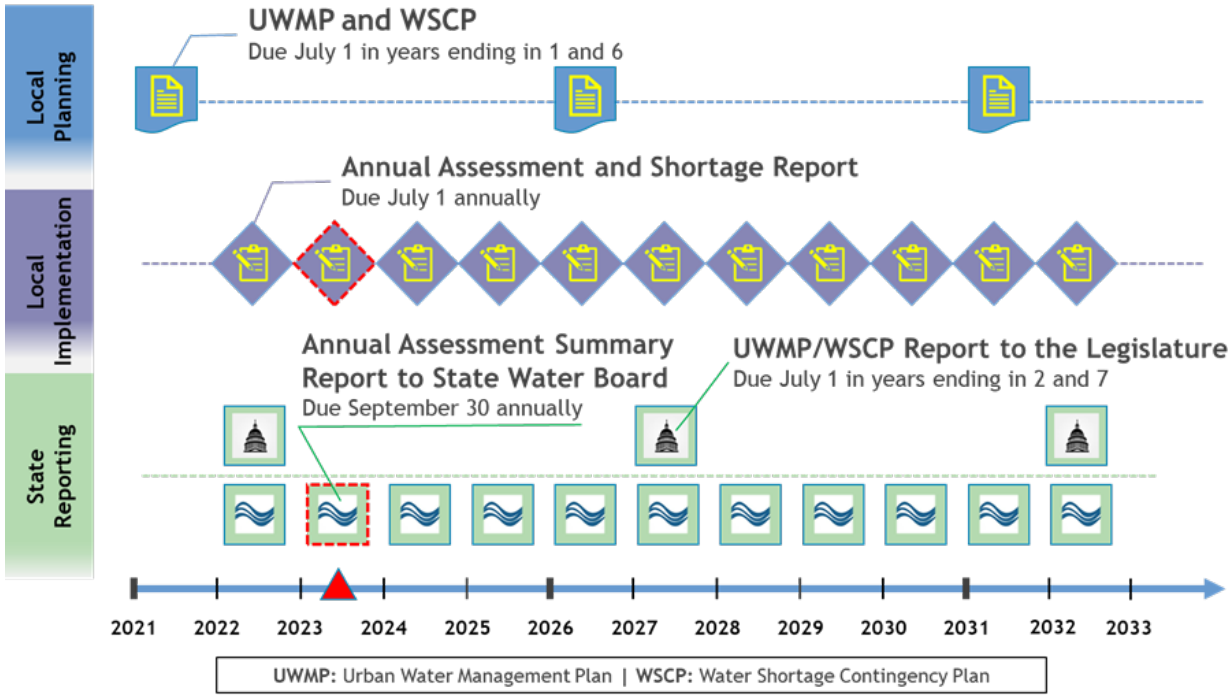

Figure 1. Water Shortage Contingency Planning and Implementation Timeline

2.2 DWR Guidance and Technical Assistance

To support suppliers' Annual Assessments, DWR has provided resources and technical assistance including: a guidance document and addendum, calculation worksheets and reporting tables, an online submittal portal, and a dedicated email address for technical assistance. These resources can be found on DWR's Annual Water Supply and Demand Assessment webpage: https://water.ca.gov/Programs/Water-Use-And-Efficiency/Water-Supply-and-Demand-Assessment.

In April 2022, DWR wrote a document entitled Annual Water Supply and Demand Assessment Guidance (Guidance) to help urban water suppliers prepare their Annual Assessment and submit their Annual Shortage Report to DWR in a way that is consistent with CWC §10632.1 requirements. The Guidance recommends that urban water suppliers use actual current year's conditions, as well as can be known prior to the July 1st due date, and project forward into one year using assumed dry year conditions. By following the Guidance recommendations, the one-year projection would then start on July 1st (which is also the due date of the Annual Shortage Report) and continue through June 30th of the next calendar year.

In March 2023, DWR developed an addendum to provide additional clarifications to the Guidance document in order to alleviate potential confusion and to avoid mistakes discovered in the 2022 submittals.

In spring 2023, DWR updated the WUEdata Portal. Updates to the portal included data validation checks to improve accuracy and completeness of submitted Annual Shortage Reports. Also, the updates added informational notes and instructions to emphasize the updates to WUEdata submittal portal. DWR also updated the calculation worksheets in the Excel Workbook to reflect the portal improvements.

In May 2023, DWR conducted an online public informational meeting to assist urban water suppliers with conducting their 2023-2024 Annual Assessments.

From June 2023 into September 2023, DWR provided technical assistance and outreach to suppliers needing additional support. For those suppliers that were late with submitting their required Annual Shortage Reports, DWR sent email reminders and made phone calls to offer additional notification and assistance. For those suppliers that had submitted reports, DWR provided technical feedback to suppliers and suggested improvements to reports that contained data or process errors or that did not use the appropriate level of response actions.

DWR performed these activities in support of suppliers' compliance with the CWC requirements. The full text of CWC §10632.1 is presented below for reference.

> ***CWC §10632.1***
> *An urban water supplier shall conduct an annual water supply and demand assessment pursuant to subdivision (a) of Section 10632 and, on or before July 1 of each year, submit an annual water shortage assessment report to the department with information for anticipated shortage, triggered shortage response actions, compliance and enforcement actions, and communication actions consistent with the supplier's water shortage contingency plan. An urban water supplier that relies on imported water from the State Water Project or the Bureau of Reclamation shall submit its annual water supply and demand assessment within 14 days of receiving its final allocations, or by July 1 of each year, whichever is later.*

The general procedures to conduct an Annual Assessment are outlined in the CWC §10632(a)(2) and are listed below for reference. The specifics of each urban water supplier's Annual Assessment procedures can be found in the supplier's respective WSCP accessed through the electronic submittal tool (WUEdata Portal at wuedata.water.ca.gov).

> ***CWC §10632(a)(2)***
> *The procedures used in conducting an annual water*

supply and demand assessment that include, at a minimum, both of the following:

(A) The written decision-making process that an urban water supplier will use each year to determine its water supply reliability.

(B) The key data inputs and assessment methodology used to evaluate the urban water supplier's water supply reliability for the current year and one dry year, including all of the following:

(i) Current year unconstrained demand, considering weather, growth, and other influencing factors, such as policies to manage current supplies to meet demand objectives in future years, as applicable.

(ii) Current year available supply, considering hydrological and regulatory conditions in the current year and one dry year. The annual supply and demand assessment may consider more than one dry year solely at the discretion of the urban water supplier.

(iii) Existing infrastructure capabilities and plausible constraints.

(iv) A defined set of locally applicable evaluation criteria that are consistently relied upon for each annual water supply and demand assessment.

(v) A description and quantification of each source of water supply.

2.3 Annual Water Shortage Assessment Reports

This year's Annual Shortage Reports, due July 1, 2023, cover the 12-month period from July 1, 2023 to June 30, 2024. Note that for an urban water supplier relying on imported water allocations from the State Water Project or USBR, its report is due the latter of either July 1st or within 14 days of receiving its final allocations.

The Annual Shortage Report consists of five standard tables. An urban water supplier's reporting requirement is satisfied by submitting a completed set of these tables through the WUEdata Portal. In the tables, urban water suppliers estimate demands and supplies on either an annual (minimum requirement) or monthly (recommended) basis for an assumed dry year, as well as calculate projected shortage levels, and identify potential actions triggered by those shortage levels. The actions are to include water shortage response actions, compliance and enforcement actions, and communication

actions consistent with the urban water supplier's WSCP. Copies of these required tables are displayed in Appendix B, and are described below:

- Table B-1. Annual Water Supply and Demand Assessment Information: the table contains:
    - Annual Assessment Information (Required): required information to include planning cycle, volume unit, reporting interval, as well as urban water supplier's contact information.
    - Other Assessment Related Activities (Optional): optional information and may document the assessment methodology, procedures, decision-making process, key data inputs, etc.
- Table B-2. Water Demands: the table contains estimated unconstrained water demand from July to June of next year.
- Table B-3. Water Supplies: the table contains estimated available water supplies from July to June of next year projecting assumed dry year conditions.
- Table B-4. Water Shortage Assessment: the table shows a summary of supply/demand balances as well as anticipated shortages and results of planned water shortage response actions. Table 4 contains two parts:
    - Table B-4(P) – Potable Water Shortage Assessment
    - Table B-4(NP) – Non-Potable Water Shortage Assessment (Optional)
- Table B-5. Planned Water Shortage Response Actions: the table contains information on current and planned water shortage response actions (if any).

In addition to the above required tables, urban water suppliers may upload additional documentation related to their Annual Shortage Report into the WUEdata Portal.

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3.0 Summary of Submitted Annual Water Shortage Assessment Reports

This section presents summarized information gleaned from urban water suppliers' 2023 Annual Shortage Reports submitted in the WUEdata Portal. For consistency, and because not all suppliers have reported monthly projections, the statistics presented in this Summary Report for all suppliers are based on annual aggregate projections. In addition, for those suppliers which reported monthly data and projected some level of shortage, we also present limited statistics on the level of projected monthly shortages and the time of their occurrence throughout the year. This section also includes some statistics on non-urban water suppliers that voluntarily submitted Annual Shortage Reports. For specific details, the public can access individual reports and data tables through the WUEdata Portal, DWR's electronic submittal tool.

3.1 Reporting Compliance

There are 438 urban water suppliers (wholesale and retail) that are required to conduct water supply and demand assessments and submit Annual Shortage Reports.

An urban water supplier is a supplier providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre-feet annually. As of September 24, 2023, DWR received a total of 449 Annual Shortage Reports from 446 suppliers. The submitted Annual Shortage Reports included 436 individual urban supplier reports, 3 separate urban wholesale reports in addition to their retail reports, and 10 voluntary reports submitted by small water suppliers (suppliers serving less than 3,000 customers and supplying less than 3,000 acre-feet annually) – Table 1. The compliance rate of those required to submit Annual Shortage Reports is 99.5% (436 out of 438). The remaining 2 urban water suppliers that are required to submit a report have not done so.

Table 1. 2023 Annual Shortage Report Submittals as of September 24, 2023

Total Number of Urban Water Suppliers	438
Suppliers that Submitted Reports	436
Suppliers that Did Not Submit Reports	2
Compliance Percentage	99.5%
Voluntary Submittals by Small Water Suppliers	10
Total Number of Suppliers that Submitted Reports (Required + Voluntary)	446

Submitting Annual Shortage Reports is required by the Urban Water Management Planning Act and is a condition for eligibility to receive State grants or loans. The 2 non-compliant urban water suppliers (Table A-4) must come into compliance to be eligible to receive or continue to receive State funding.

3.2 Projected Shortage Status

Table 2 summarizes the number of urban water suppliers' and their projected annual shortage status from the submitted reports. Among the 436 urban water suppliers submitting their Annual Shortage Report, 415 (95%) did not project water supply shortages in the next year (based on annual aggregate supply and demand projections) even assuming dry year conditions. Another 21 (5%) projected that they may have supply shortages prior to implementing response actions, but that they could eliminate the shortages through the implementation of appropriate water shortage response actions. No suppliers project shortages that cannot be addressed by Water Shortage Contingency Plan actions. Figure 2 displays the relative proportions of suppliers in these three shortage categories.

Table 2. Urban Water Suppliers' Projected Shortage Status Based on Annual Aggregate Projections *(as of September 24, 2023)*

Reported Projected Shortage Status	Number of Suppliers	%
No shortage[1]	415	95%
Shortage can be fully addressed by suppliers' actions	21	5%
Shortage is not fully addressed by suppliers' actions; Report corrections or additional actions may be needed	0	0%
Total number of urban suppliers who submitted shortage assessment reports	436	

[1] Although projecting an annual aggregate surplus, some suppliers may still have shortages when assessed on a monthly timescale (see Figure 3 below). If so, they may be taking some actions during certain periods of the year to balance their supplies and demands.

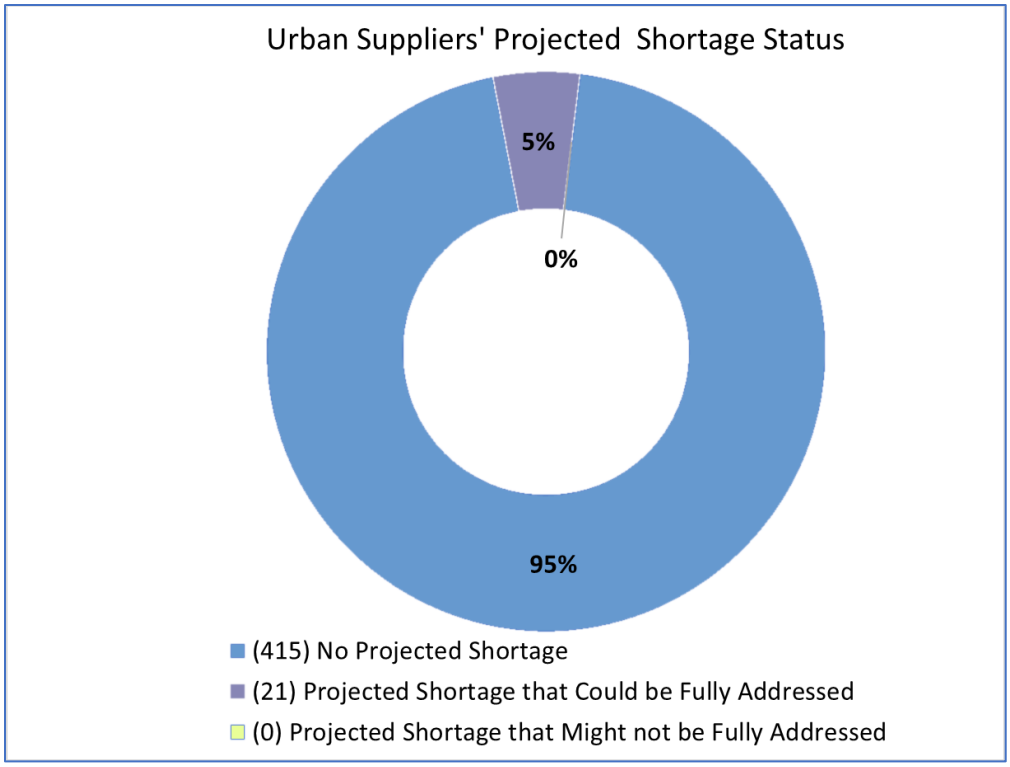

Figure 2. Urban Water Suppliers' Projected Annual Shortage Status

(As of September 24, 2023)

Appendix A includes Tables A-1 through Table A-4 that list the urban water suppliers in the following categories: suppliers anticipating surplus or no shortage, suppliers anticipating shortage that can be fully addressed by implementing water shortage response actions, suppliers anticipating shortage that may not be fully addressed by implementing water shortage response actions, and suppliers that did not submit an Annual Shortage Report.

There were about 340 urban water suppliers that reported monthly data. Among those, there were only 41 suppliers that projected some level of shortage during certain months of the coming year that could be addressed by implementing shortage response actions. Figure 3 displays the distribution of projected monthly shortages in the coming year by these 41 suppliers along with the number of short suppliers and their corresponding projected shortage levels. The figure shows that the shortage occurrences are evenly distributed across all the months. There are relatively few suppliers that project a shortage in any one month. All these suppliers project they will be able to implement actions sufficient to address their projected shortages. Suppliers projecting monthly and seasonal shortages plan to address them by implementing a combination of demand reduction actions and supply augmentation actions including transfers, purchases, and reliance on reserve supplies, mainly local groundwater.

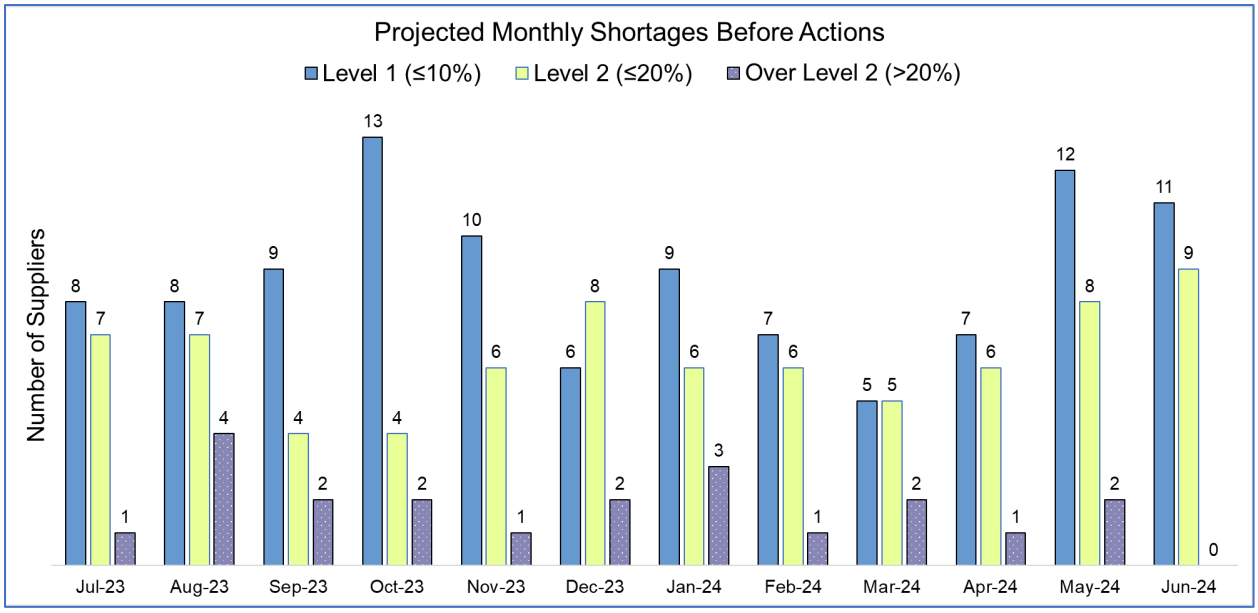

Figure 3. Distribution of Projected Shortages for Suppliers Reporting Monthly

There are an additional 10 non-urban small water suppliers that voluntarily submitted Annual Shortage Reports. All the small water suppliers who voluntarily submitted reports anticipated no shortage in the coming year. Figure 4 displays the relative proportions of the shortage status for the voluntary submitters.

Appendix A Table A-5 lists small water suppliers that voluntarily submitted Annual Shortage Reports in the following categories: suppliers anticipating surplus or no shortage, and suppliers anticipating shortage that can be fully addressed by implementing water shortage response actions.

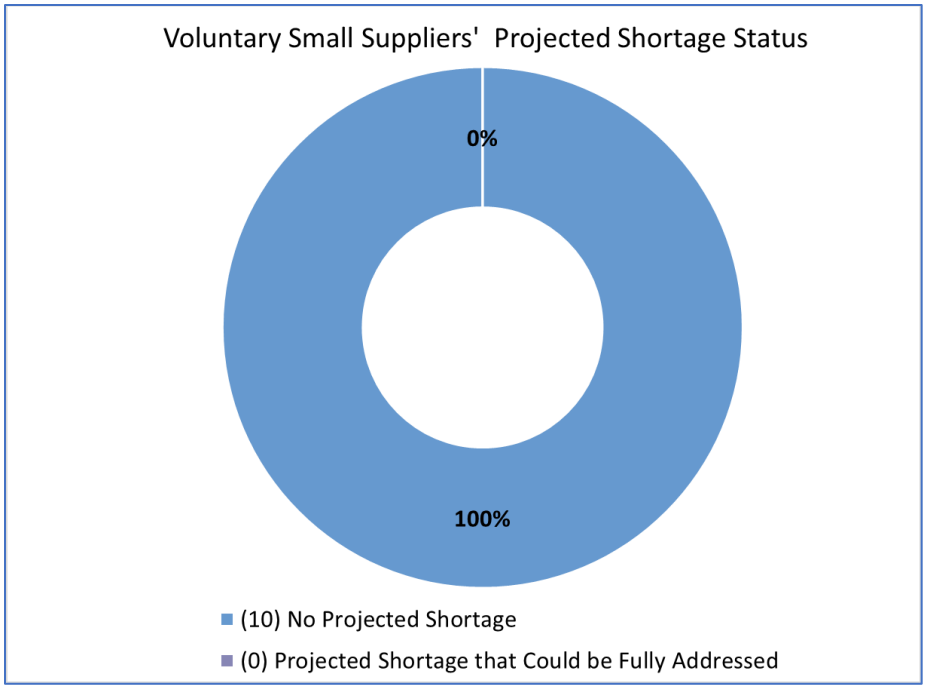

Figure 4. Voluntarily Reporting Small Water Suppliers' Projected Annual Shortage Status *(as of September 24, 2023)*

3.3 Lessons Learned and Process Improvements

In the first year of reporting, several issues were identified. These included:

- Reports submitted with incomplete information.
- Assessments not accounting for the benefits of water shortage response actions planned to be implemented.
- Suppliers not planning to implement appropriate water shortage response actions commensurate with the level of shortage projected.
- Reporting tables showing inconsistencies, such as WSCP benefits entered in Table 4 do not correspond with the level of WSCP actions entered in Table 5.
- Some suppliers that are both wholesale and retail needed to make separate assessments for their retail and wholesale operations.

During the past year, and based on lessons learned from the reports received, DWR made improvements to the process and provided additional guidance and technical assistance (as discussed in Section 2.2). Improvements included: an addendum to the Guidance, updates to the WUEdata Portal, updates to the Excel Workbook and calculation worksheets, and an option to allow dual suppliers to submit separate wholesale and retail reports in WUEdata. Additional outreach efforts included: an online

public informational meeting in May 2023, email reminders and phone calls to suppliers that were late, and targeted technical assistance to suppliers with reports containing identified issues.

It is important to realize that suppliers' assessments are projections that are based on locally defined assumptions. There is an inherent variability in the way suppliers do their assessments because each urban water supplier uses their own discretion on the following topics: determination of unconstrained demand, selection of dry year and calculations of its impact on supplies and demands, selection of water shortage response actions, calculation of benefits from water shortage response actions, and selection of time-step used in the assessment. However, even though these Annual Assessments are based on assumptions, they serve the important purpose of enabling suppliers to be prepared to minimize any potential shortages in the event of dry year or other conditions.

3.4 Water Shortage Response Actions

DWR staff compiled and analyzed the water shortage response actions currently implemented or planned to be implemented, as reported in the received Annual Shortage Reports. The usage frequency of the top 15 water shortage response actions is shown in Figure 5. Currently, the most widely implemented actions by urban water suppliers include:

- Fixing leaks and breaks by customers
- Prohibiting runoff from landscape irrigation
- Prohibiting use of potable water for washing hard surfaces
- Limiting landscape irrigation to specific days and times
- Expanding public outreach campaigns
- Restricting certain CII water uses.

Submitted reports show the most frequently selected water shortage response actions focus predominantly on fixing water leaks, and outdoor and CII water use restrictions.

It is important to highlight that ongoing implementation of some demand reduction actions is becoming the norm for many California urban water suppliers through continuous water conservation efforts. This is clearly demonstrated by the higher number of suppliers implementing or planning to implement demand reduction actions, beyond the small number of suppliers which project shortages, as shown in Figure 5.

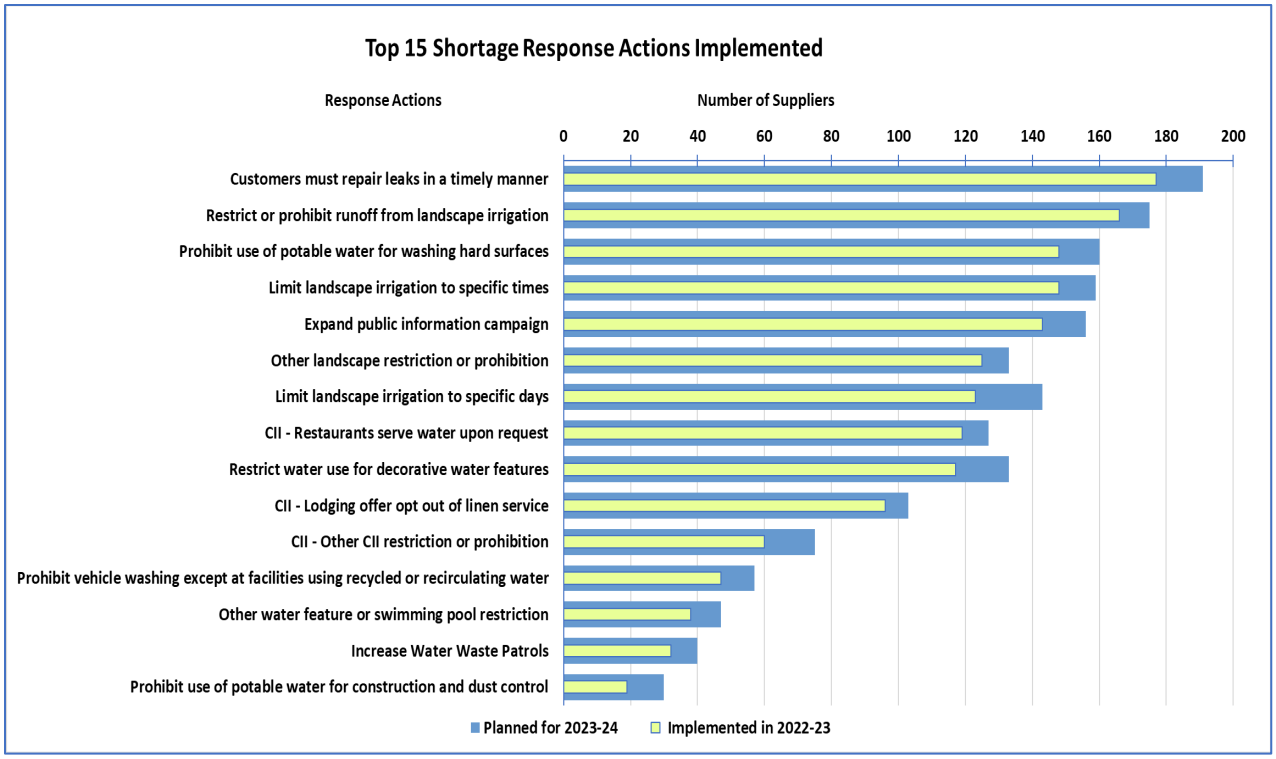

Figure 5. Top 15 Implemented and Planned Water Shortage Response Actions

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4.0 Regional and Statewide Water Supply Conditions

4.1 Hydrologic Water Supply Conditions

California's regional and statewide analyses of water supply conditions is summarized from current hydrological information including precipitation (rain and snow), water storage levels (river, reservoir, and groundwater), and State and Federal water allocations. In early 2023, California experienced a wet winter and spring that provided much needed water to fill severely low reservoirs and ground water basins. Furthermore, the Governor's issued Executive Order N-3-23 laid out instructions to facilitate groundwater recharge projects and to help expand the state's capacity to capture storm runoff in wet years (State of California 2023).

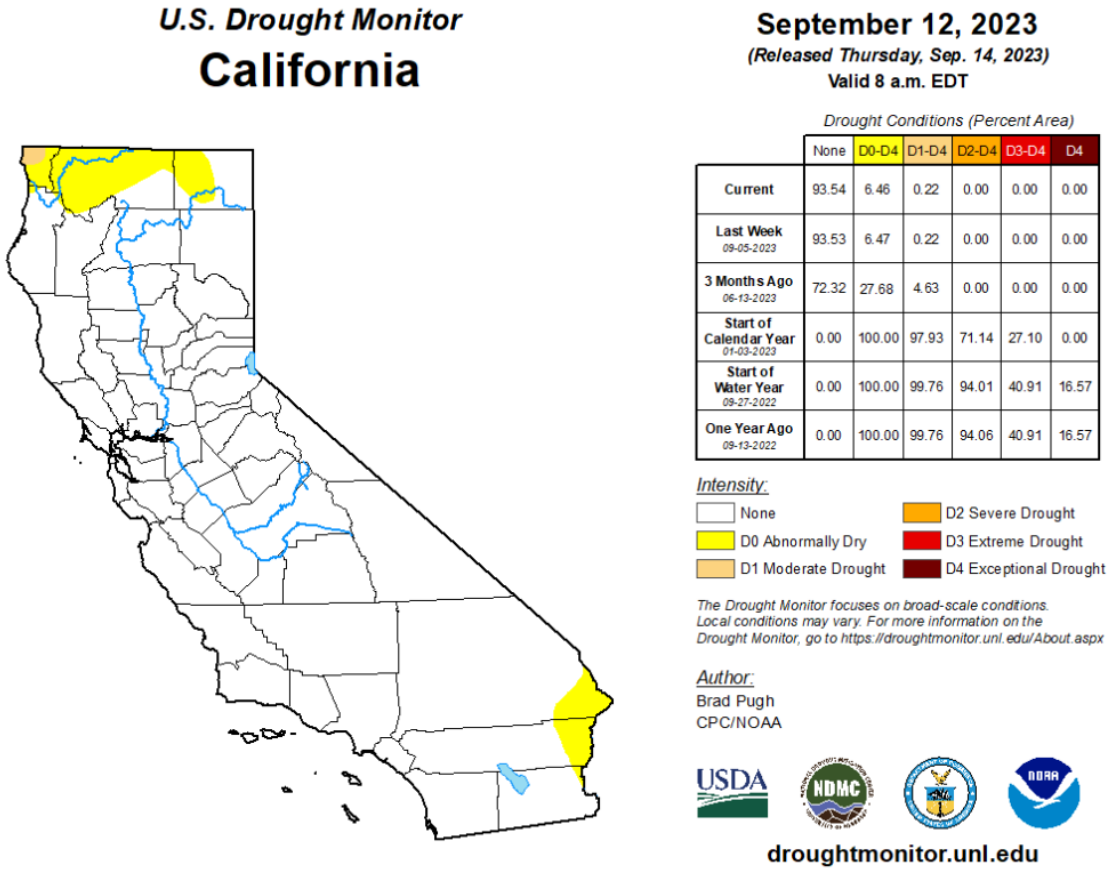


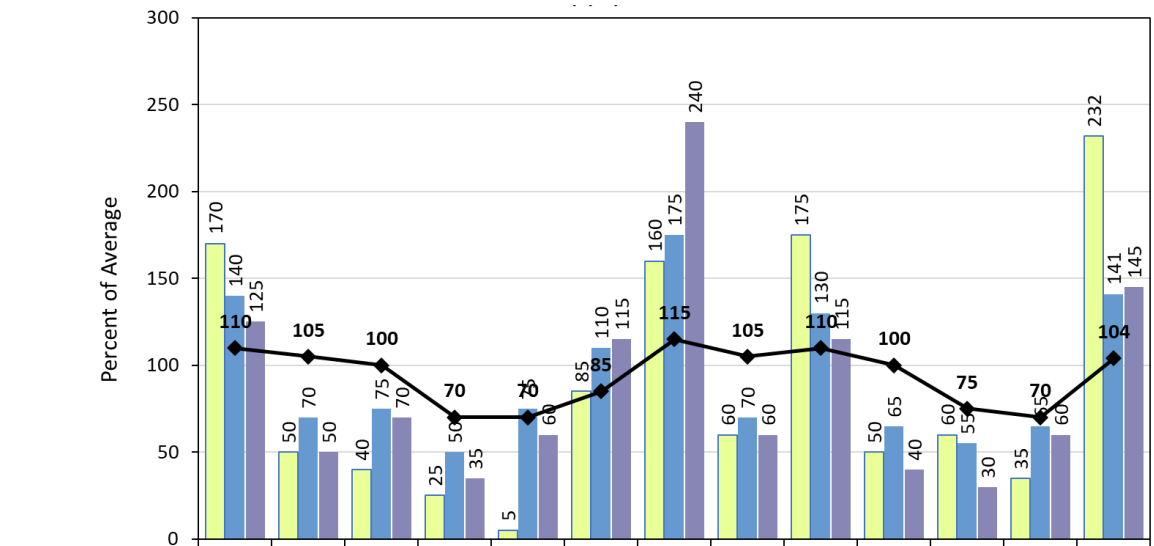
Figure 6. California Drought Conditions on September 12, 2023[1]

[1] The U.S. Drought Monitor is jointly produced by the National Drought Mitigation Center at the University of Nebraska-Lincoln, the United States Department of Agriculture, and the National Oceanic and Atmospheric Administration. Map courtesy of NDMC.

Figure 6 shows that on September 12, 2023, the U.S. Drought Monitor indicated that most of the State is not under drought conditions (NDMC 2023). (It is important to note that the U.S. Drought Monitor focuses on broad-scale conditions, and that local conditions may vary.) As a result of the wet weather conditions, there remains only a small area of the state under abnormally dry (6.24%) or moderate drought (0.22%) conditions. The Abnormally Dry areas exist in a small portion of the Colorado River hydrologic region within the southeastern counties of San Bernardino, Riverside, and Imperial, as well as in the North Coast and Sacramento River hydrologic regions within the northern-most counties of Del Norte, Siskiyou and Modoc. The Moderate Drought area is located in the North Coast hydrologic region within the northern most county of Del Norte. Tropical storm Hilary, which rolled through Southern California in late August, brought widespread rain and flooding to the Mojave Desert, one of the few areas of California that remained in moderate drought till mid-August. As a result, nearly all southeastern counties became drought free.

Figure 7 displays California's 13-year historical record for several hydrological indicators including precipitation, snowpack, runoff, and reservoir storage, as measured on April 1st every year (DWR 2023a). The data is displayed as Percent of Average. Values below 100 are below average and values above 100 are above average.

California has the largest year-to-year variability in hydrologic outcomes of anywhere in the United States, and this year has clearly demonstrated how swings between extreme conditions are becoming more intense, as the driest three-year period on record ended with one of the wettest winters on record. Note that all four hydrological indicators (snowpack, precipitation, stream runoff, and reservoir storage) were above 100% of the historical average on April 1, 2023. This has only happened 4 times in the last 13 years (2023, 2019, 2017, and 2011). Moreover, comparing the data in these 4 years, water year 2023 ranks number 1 in snowpack, and number 2 in both precipitation and stream runoff.



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Snowpack	170	50	40	25	5	85	160	60	175	50	60	35	232
Precipitation	140	70	75	50	75	110	175	70	130	65	55	65	141
Runoff to Date	125	50	70	35	60	115	240	60	115	40	30	60	145
Reservoir Storage	110	105	100	70	70	85	115	105	110	100	75	70	104

Figure 7. Historical Statewide Water Supply Conditions on April 1st

In the 2022-23 water year, the state emerged from three consecutive years of severe drought. Figure 8 shows that, as of September 16, 2023, California has received a statewide average of 33.31 inches of precipitation, which is 142% of average to date (California Water Watch Website, DWR 2023b).

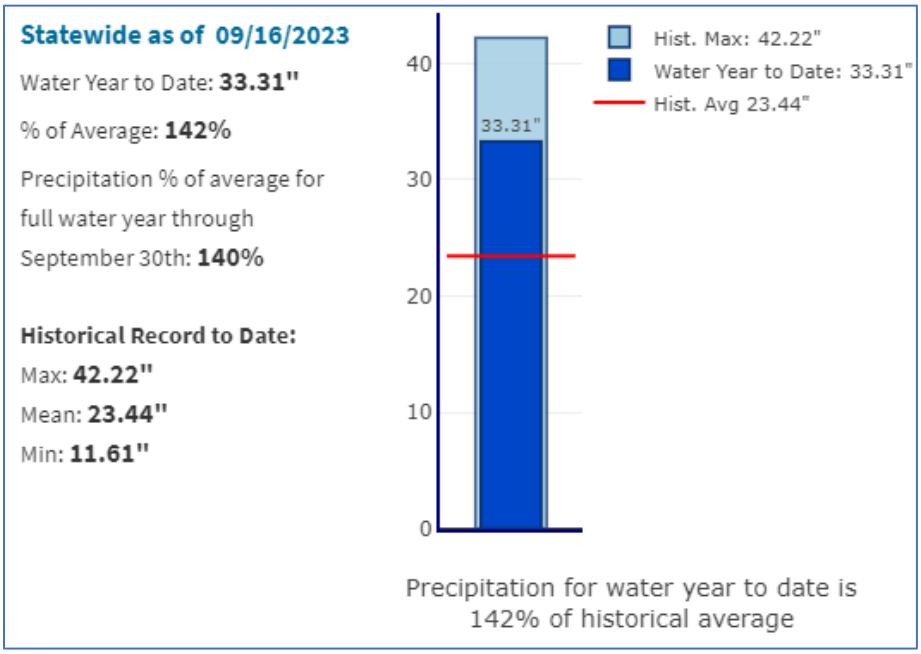


Figure 8. Statewide Precipitation as Percent of Average for the Water Year to Date *(as of September 16, 2023)*

As of September 17, 2023, total precipitation in regions across the state ranged from 107% to 202% of these regions' average precipitation. As shown in Figure 9, the percents of average precipitation by hydrologic region are as follows: North Lahontan-NL (150%), San Francisco-SF (151%), Sacramento-SAC (126%), North Coast-NC (107%), San Joaquin-SJQ (169%), Central Coast-CC (182%), South Coast-SC (193%), South Lahontan-SL (202%), Tulare-TL (185%), and Colorado River-CR (130%) (DWR 2023a).

Precipitation totals dramatically increased in the Colorado River hydrologic region in late August when a rare tropical storm, Hilary, brought heavy rain and winds to southern California. Although the rain totals ranged from 2 to 4 inches in lower elevations and 6 to 12 inches in higher elevations, the rain had little impact on the state's reservoir levels which were mostly full.

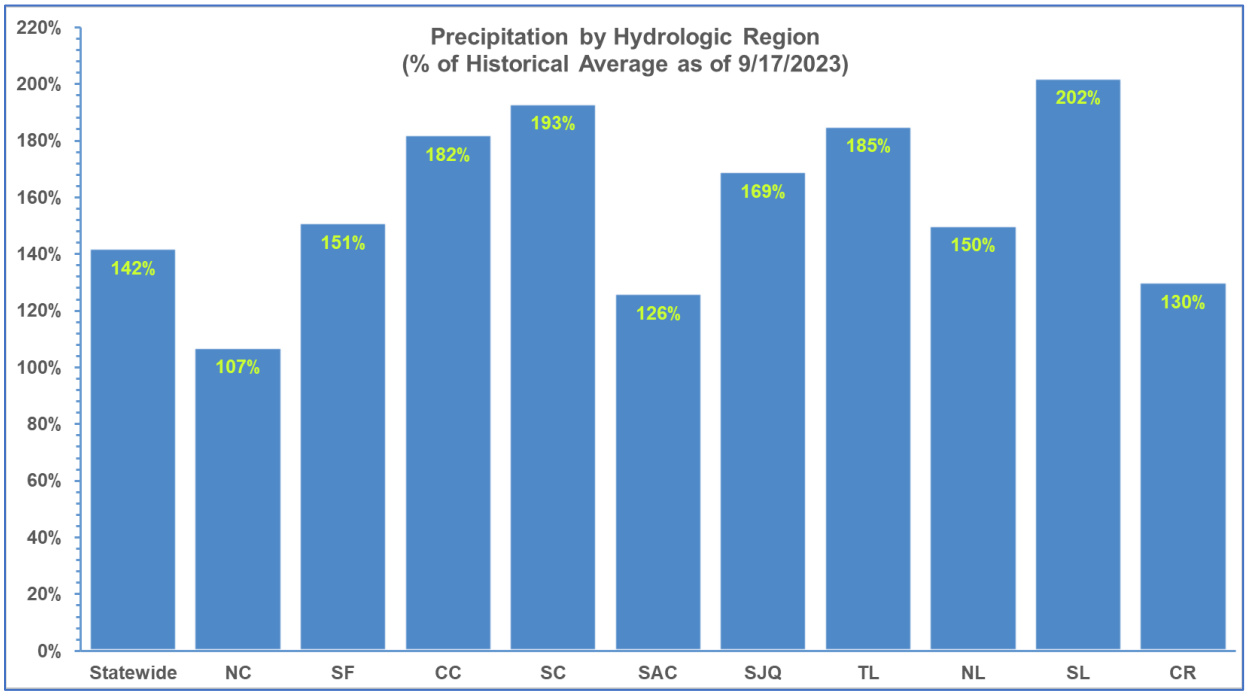


Figure 9. Precipitation by Hydrologic Region as Percent of Historical Average for the Water Year as of September 17, 2023

In addition to rain precipitation, high levels of snow were recorded this year. Figure 10 shows snowpack levels throughout the year (DWR 2023b). The statewide snow sensors showed that April 1, 2023, snow level was the highest since the snow sensor network was established in the mid-1980s. The peak of the statewide snowpack as measured by the automated sensors occurred on April 8 with 61.8 inches of snow water equivalent, which is about 247% of normal to date.

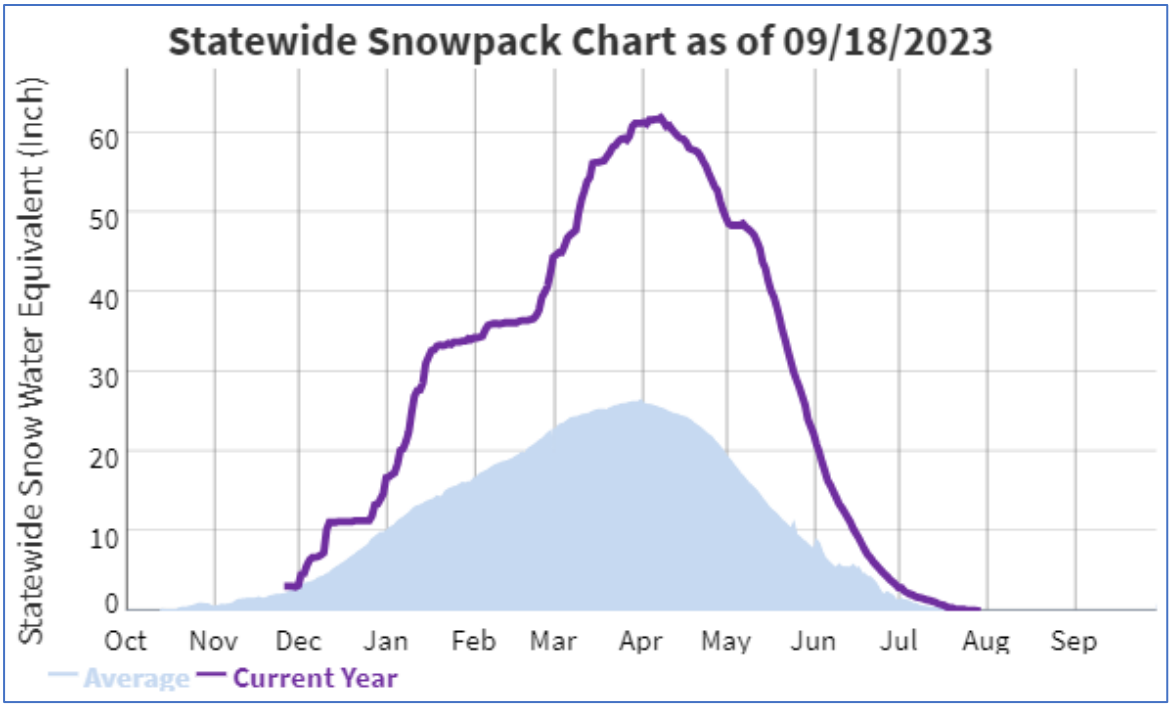


Figure 10. Statewide Snowpack Chart

Water year 2022-23 saw a major increase in Statewide reservoir storage. This increase happened quickly. At the beginning of October 2022, reservoir storage was only 69% of average. However, reservoir conditions improved such that, by September 18, 2023, California's major reservoir conditions reached 129% of the historical average (Figure 11, DWR 2023a).

In spring of 2023, streamflow reached record levels after a series of major storms. However, groundwater is slower to respond to wet extremes on the surface. It will take more than one wet year to replenish groundwater storage severely impacted during the past 3 years of drought. As of August 20, 2023, about 42% of groundwater monitoring wells are still below normal levels. As a result of the Governor's Executive Orders, a total of 92,410 acre-feet of potential flood waters have been diverted for groundwater recharge for future use statewide while also serving to protect communities. While there's limited data available on statewide groundwater recharge right now, DWR has determined an estimated 3.8 million acre-feet of water has been recharged so far this year[2]. DWR will have a full picture of the 2023 water year groundwater conditions after April 1, 2024, when Annual Reports are due from the local groundwater sustainability

[2] https://water.ca.gov/News/Blog/2023/July-23/DWR-Captures-and-Stores-Water-from-Record-Breaking-Snowpack#:~:text=DWR%20worked%20throughout%20the%20winter,storage%20in%20the%20project's%20history.

agencies. These annual reports are publicly available on the Sustainable Groundwater Management Act (SGMA) Portal: https://sgma.water.ca.gov/portal/

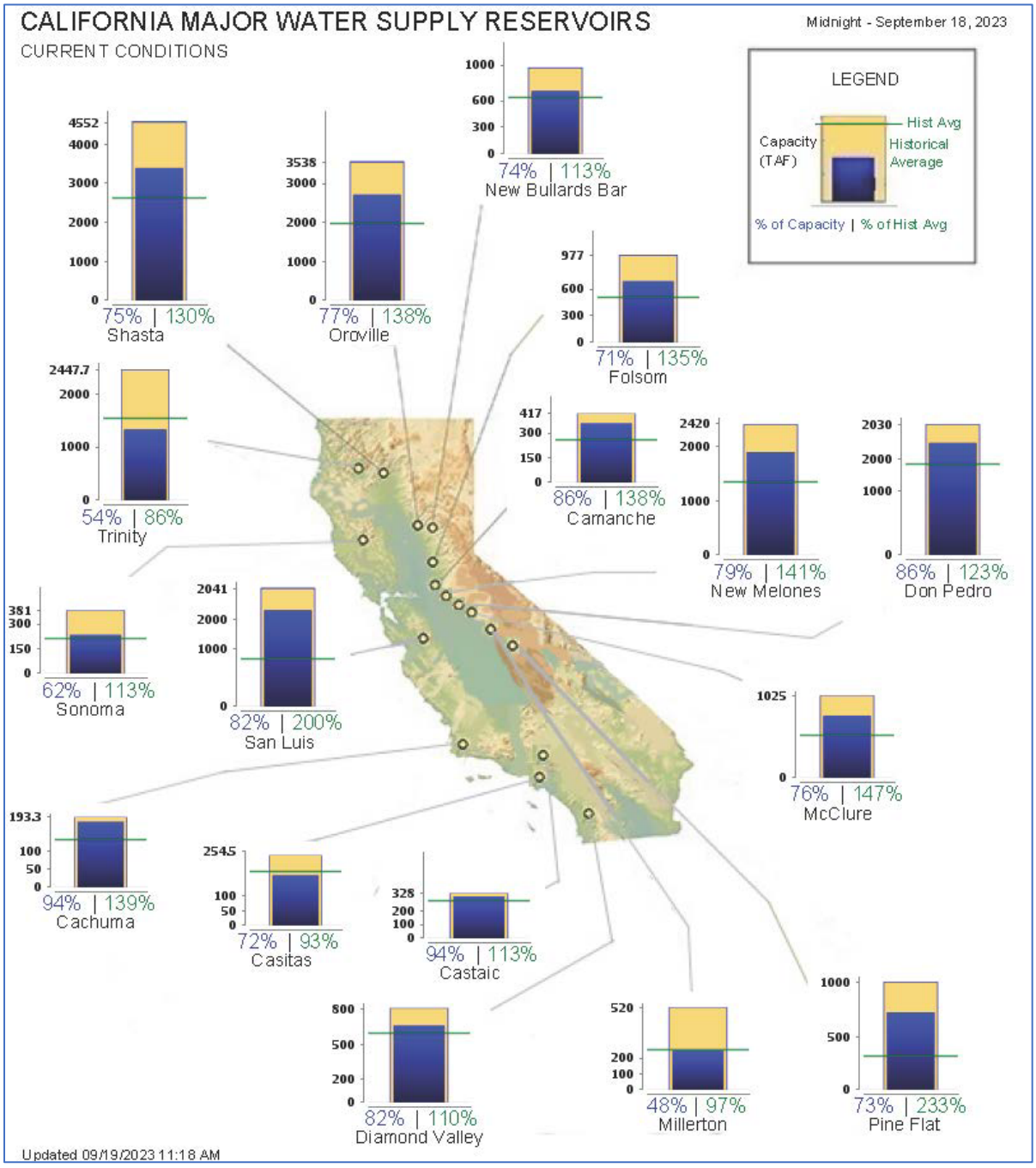


Figure 11. California Major Reservoir Conditions as of September 18, 2023[3]

[3] https://cdec.water.ca.gov/reportapp/javareports?name=rescond.pdf

4.2 State Water Project Allocations

The State Water Project (SWP) is a multi-purpose water storage and delivery system that helps to manage California's water supply and provides hydroelectric power for the State's power grid. While the SWP was being constructed in the 1960s, public agencies and local water districts signed long-term water supply contracts with DWR. Today, the 29 public agencies and local water districts are collectively known as the SWP long-term water contractors or simply, SWP water contractors. The water supply contracts set forth the maximum amount of SWP water a contractor may request annually. DWR makes final SWP allocations that are consistent with long-term water supply contracts, legal requirements, and public policy. Additionally, DWR considers several factors including SWP water contractors' current year demands, existing storage in SWP conservation reservoirs, estimates of future runoff under very dry conditions, water rights obligations under the State Water Board's authority, and SWP operational and regulatory constraints such as those required by the federal Endangered Species Act and California Endangered Species Act.

In April, DWR announced a 100 percent allocation[4] of requested supplies from the SWP, which delivers water to the 29 SWP water contractors that serve 27 million Californians and 750,000 acres of farmland (DWR 2023c). The last time the SWP allocated 100 percent was in 2006. DWR is also maximizing the amount of water that can be diverted towards recharging groundwater basins so more water is stored for future use in underground reservoirs. Full SWP contracted allocations amount to approximately 4.2 million acre-feet (MAF).

4.3 Federal Water Allocations

The Central Valley Project (CVP) is a federal power and water project in California managed by USBR. It provides water for agricultural irrigation and municipal uses to most of California's Central Valley.

On April 20, 2023[5], USBR increased the CVP water supply allocation for irrigation water service and repayment contractors to 100% from the initial 80% March allocation (USBR 2023).

The USBR also manages the Colorado River, which serves seven western U.S. states, two Mexican states, and Native American Tribal nations with water supply, hydropower,

[4] https://water.ca.gov/News/News-Releases/2023/April-23/State-Water-Project-to-Further-Increase-Water-Supply-Allocation

[5] https://www.usbr.gov/newsroom/news-release/4493

recreation, fish and wildlife habitat, and other benefits. The state of California's normal allocation of Colorado River water amounts to 4.4 MAF.

In the summer of 2022, USBR announced allocation reductions to Arizona, Nevada, and Mexico. The allocation for the state of California was not cut due to its more senior water right.

On April 11, 2023, USBR published its Near-Term Colorado River Operations Draft Supplemental Environmental Impact Statement (Draft SEIS). The Draft SEIS proposed alternatives for cutting Colorado River water allocations for Southwest states. One of the proposed alternatives would override the historic senior water rights and split the cuts in water deliveries evenly between California, Nevada and Arizona (Lower Division States). However, on May 22, 2023, the three states reached an agreement[6] to conserve at least an additional 3 MAF of Colorado River water in the Lower Basin by the end of 2026, with at least 1.5 MAF of that total being conserved by the end of 2024 (Lower Basin Plan). The three states also requested the Lower Basin Plan be fully analyzed as an action alternative in USBR's Draft SEIS.

In response, USBR announced that it is temporarily withdrawing the Draft SEIS so that it can fully analyze the effects of the proposal under the National Environmental Policy Act. USBR will then publish an updated draft with the consensus-based proposal presented by the Lower Division States as an action alternative.

4.4 Regional Summary of Urban Water Suppliers' Shortage Projections

Despite the hydrologic information on the regional and statewide water supply conditions (presented above), supply availability to individual water suppliers is more complicated. Many urban water suppliers rely and depend on, in addition to local supplies, purchases, allocations, and transfers of imported supplies from other regions.

Regional summaries of water shortage conditions are presented below. Table 3 and Figure 12 show suppliers' shortage status by hydrologic region based on information from the suppliers' Annual Shortage Reports. Note that "shortage" in this context is based on unconstrained demand as the baseline.

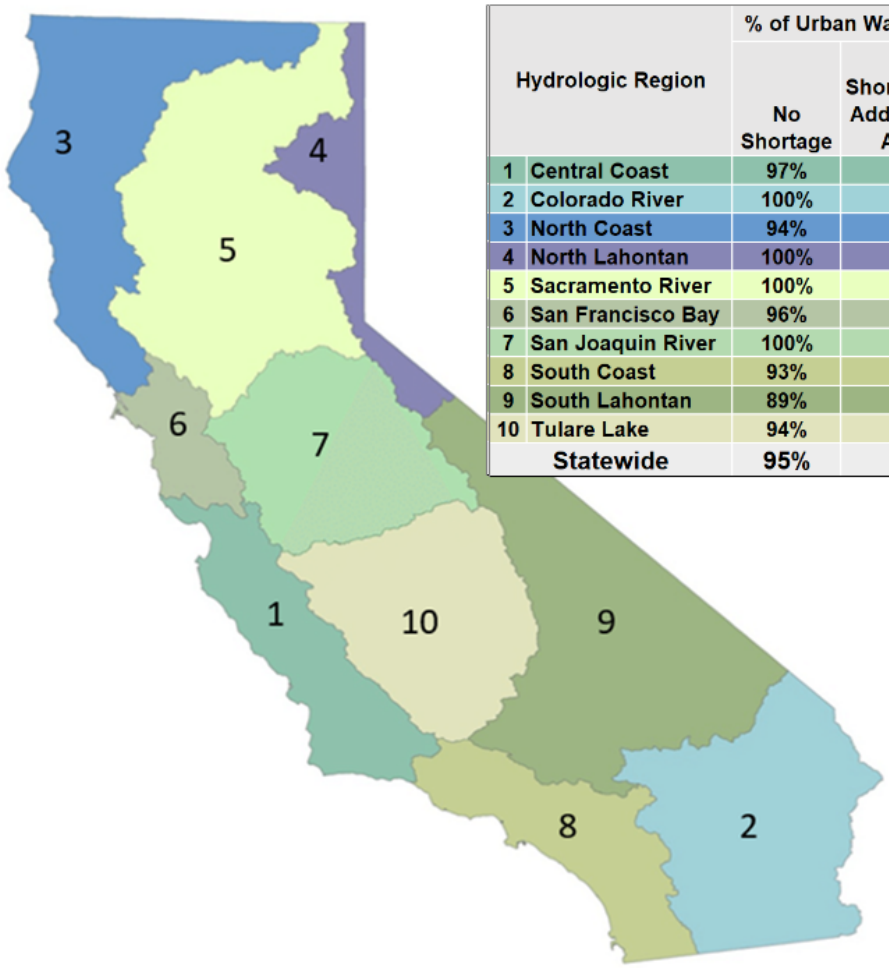
[6] https://doi.gov/sites/doi.gov/files/lower-basin-plan-letter-5-22-2023.pdf

Table 3. Regional Distribution of Urban Water Suppliers by Projected Shortage
(As of September 24, 2023)

Hydrologic Region (Total # of Suppliers)	No Shortage	Shortage Fully Addressed by Actions	Shortage Not Fully Addressed by Actions	Did Not Report
1. Central Coast (35)	33	1	0	1
2. Colorado River (16)	16	0	0	0
3. North Coast (16)	15	1	0	0
4. North Lahontan (5)	5	0	0	0
5. Sacramento River (42)	42	0	0	0
6. San Francisco Bay (50)	48	2	0	0
7. San Joaquin River (32)	32	0	0	0
8. South Coast (189)	176	13	0	0
9. South Lahontan (19)	17	2	0	0
10. Tulare Lake (34)	31	2	0	1
Statewide (438)	**415**	**21**	**0**	**2**

Figure 12 shows the number of urban suppliers by hydrologic region and the percentages of suppliers in each shortage category. No suppliers projected any shortage in the four hydrologic regions of North Lahontan, Sacramento River, San Joaquin River, and Colorado River. Some projected shortages were reported in the remaining six hydrologic regions (12 suppliers project Level 1, or less than 10% shortage, and 9 suppliers project Level 2, or less than 20% shortage). However, those suppliers showed that they could fully address the shortages by implementing water shortage response actions.

This regional summary pertaining to urban water suppliers' projected shortage statistics is based on reported data only. Less than half a percent (2 out of 438) of urban water suppliers in two hydrologic regions have not yet submitted a report.



Hydrologic Region		% of Urban Water Suppliers Reporting			
		No Shortage	Shortage Fully Addressed by Actions	Shortage Not Fully Addressed by Actions	Did Not Report
1	Central Coast	97%	3%	0%	3%
2	Colorado River	100%	0%	0%	0%
3	North Coast	94%	6%	0%	0%
4	North Lahontan	100%	0%	0%	0%
5	Sacramento River	100%	0%	0%	0%
6	San Francisco Bay	96%	4%	0%	0%
7	San Joaquin River	100%	0%	0%	0%
8	South Coast	93%	7%	0%	0%
9	South Lahontan	89%	11%	0%	0%
10	Tulare Lake	94%	6%	0%	3%
	Statewide	**95%**	**5%**	**0%**	**0.5%**

Figure 12. Urban Water Suppliers' Projected Shortage Status by Hydrologic Region *(as of September 24, 2023)*

5.0 Findings Summary

Despite record precipitation, California urban water suppliers continue to maintain preparedness and contingency planning for potential local water shortages. Urban water suppliers have conducted analysis and evaluated whether, or not, they will need to take water shortage response actions in the next 12 months to balance their supplies and demands if the next year is dry.

The Annual Shortage Report is an important tool for a successful and effective local water shortage contingency planning to ensure water supply reliability and drought resiliency.

During this second year of reporting, suppliers have submitted their reports in a timelier fashion. Furthermore, several suppliers who did not submit a report last year did so for the first time this year. Additionally, suppliers' reports reflect the improved water supply conditions statewide, and this is reflected in the higher number of suppliers that have assessed they will have adequate supplies and no potential shortages. The few reports projecting shortages also demonstrated that suppliers would be able to resolve them with planned actions.

For the 2023 reporting, over 99.5% of all urban water suppliers (436 out of 438) have successfully conducted their supply and demand assessments and complied with the requirement.

Based on the completed Annual Shortage Reports, DWR classified the urban water suppliers in the following water shortage status categories:

- No projected shortage: 95% of urban water suppliers (415 out of 436) who submitted reports have assessed that they will have ample supplies to meet projected demand in the coming year, even if it is dry.
- Fully addressed shortage: 5% of urban water suppliers (21 out of 436) who projected some level of shortage identified locally appropriate water shortage response actions to address and mitigate the potential shortage.
- Not fully addressed shortage: 0% of the urban water suppliers (0 out of 436) that submitted reports still show remaining projected shortages.
- Unknown shortage status – unsubmitted reports: less than 0.5% of all urban water suppliers (2 out of 438) still have not submitted their reports.

In addition, urban water suppliers reported on planned actions based on the projected shortage levels as a result of their Annual Assessments. An analysis of the water shortage response actions currently implemented and planned to be implemented

shows that urban water suppliers more frequently selected fixing customer water leaks, outdoor and CII water use restrictions.

After three consecutive years of drought and severe dry conditions that strained water supplies statewide, the state water supply conditions improved dramatically as a result of a wet 2022-23 water year. On April 1, all four hydrological indicators (snowpack, precipitation, stream runoff, and reservoir storage) were above 100% of the historical average. Both state and federal water allocations were increased to full allocations.

As a result of improved statewide water supply conditions, urban water suppliers have predominantly assessed that they will have adequate supplies to meet demand in the coming year. Less than 5% of suppliers projected that they may need to implement some shortage response actions (Level 1 actions corresponding to less than 10% shortage, or Level 2 actions corresponding to less than 20% shortage) in the event of a dry year.

The Annual Shortage Reports inform the State about local water supply conditions. More importantly, the Annual Assessments and the resulting Annual Shortage Reports help urban water suppliers to proactively prepare for potential water shortages in the next year. However, to effectively and efficiently implement appropriate water shortage response actions based on actual conditions, urban water suppliers should perform on-going re-assessments of their water supply and demand conditions throughout the year. To be proactive, water supply and demand assessments may need to be revisited more than once per year. This type of continuous effort will help urban water suppliers to ensure water supply reliability for their customers.

6.0 References and Useful Links

6.1 References

DWR (California Department of Water Resources). 2023a. “California Data Exchange Center.” CDEC. https://cdec.water.ca.gov/.

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State of California. 2023. “Executive Order N-3-23.” Office of the Governor, Executive Department. https://www.gov.ca.gov/wp-content/uploads/2023/02/Feb-13-2023-Executive-Order.pdf?emrc=b12708. February 13.

USBR (United States Bureau of Reclamation). 2023. “Reclamation bolsters Central Valley Project 2023 water supply allocations.” News Release. https://www.usbr.gov/newsroom/news-release/4493. April 20.

6.2 Useful Links

DWR’s Annual Water Supply and Demand Assessment Guidance (Guidance): https://wuedata.water.ca.gov/public/public_resources/3517484366/AWSDA-Final-Guidance-4-2022.pdf.

DWR’s 2022 Annual Water Supply and Demand Assessment Summary Report: https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Water-Use-And-Efficiency/Urban-Water-Use-Efficiency/Annual-Water-Supply-and-Demand-Assessment/FINAL-DWR-2022-AWSDA-Report-to-SWB_11-22-22.pdf.

DWR’s Annual Water Supply and Demand Assessment webpage: https://water.ca.gov/Programs/Water-Use-And-Efficiency/Water-Supply-and-Demand-Assessment.

DWR’s California Data Exchange Center (CDEC) webpage: https://cdec.water.ca.gov/.

DWR’s California Water Watch website: https://cww.water.ca.gov/

DWR’s State Water Project (SWP) webpage: https://water.ca.gov/Programs/State-Water-Project.

DWR's WUEdata Portal: https://wuedata.water.ca.gov.

DWR's Urban Water Management Plan Guidebook 2020: https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Water-Use-And-Efficiency/Urban-Water-Use-Efficiency/Urban-Water-Management-Plans/Final-2020-UWMP-Guidebook/UWMP-Guidebook-2020---Final-032921.pdf

USBR's Central Valley Project (CVP) webpage: https://www.usbr.gov/mp/cvp/about-cvp.html

Appendix A - Summary of Urban Water Suppliers' Reported Shortage Assessments

Table A-1 Urban Water Suppliers Anticipating No Shortage

(Shown is the projected annual % surplus before actions. Although projecting an annual aggregate surplus, some suppliers may still have shortages when assessed on a monthly timescale. If so, they may be taking some actions during certain periods of the year to balance their supplies and demands)

Urban Water Suppliers Projecting Annual Surplus	%
Adelanto City Of	12.6
Alameda County Flood Control District Zone 7	0.0
Alhambra City Of	4.9
Amador Water Agency	194.5
American Canyon City Of	53.3
Anaheim City Of	0.0
Anderson City Of	20.0
Antelope Valley - East Kern Water Agency	1.8
Antioch City Of	221.5
Apple Valley Ranchos Water Company	0.0
Arcadia City Of	10.0
Arcata City Of	90.1
Arroyo Grande City Of	71.5
Arvin Community Service District	60.7
Atascadero Mutual Water Company	56.8
Atwater City Of	0.0
Azusa Light and Water	47.3
Bakersfield City Of (WHOLESALE)	0.0
Bakman Water Company	130.5
Banning City Of	48.5
Beaumont - Cherry Valley Water District	5.2
Bella Vista Water District	0.0
Bellflower - Somerset Mutual Water Company	29.0
Benicia City Of	0.0
Beverly Hills City Of	0.0
Big Bear Community Services District	26.1
Big Bear Lake City Of	53.8
Blythe City Of	147.4
Brawley City Of	130.0
Brea City Of	0.0
Brentwood City Of	52.8
Buena Park City Of	0.0
Burbank City Of	0.0

Urban Water Suppliers Projecting Annual Surplus	%
Burlingame City Of	0.0
Calaveras County Water District	0.0
Calexico City Of	59.0
California American Water Company - Los Angeles Division	0.0
California American Water Company - Monterey District	20.0
California American Water Company - Sacramento District	342.8
California American Water Company - San Diego District	20.0
California American Water Company - Ventura District	49.7
California City Of	14.0
California Domestic Water Company	0.0
California Water Service Company Bakersfield	0.0
California Water Service Company Bear Gulch	0.0
California Water Service Company Chico District	0.0
California Water Service Company Dixon, City of	0.0
California Water Service Company Dominguez	0.0
California Water Service Company East Los Angeles	0.0
California Water Service Company Hermosa/Redondo	0.0
California Water Service Company King City	0.0
California Water Service Company Livermore	0.0
California Water Service Company Los Altos/Suburban	0.0
California Water Service Company Marysville	0.0
California Water Service Company Mid-Peninsula	0.0
California Water Service Company Oroville	0.0
California Water Service Company Palos Verdes	0.0
California Water Service Company Salinas District	0.0
California Water Service Company Selma	0.0
California Water Service Company South San Francisco	0.0
California Water Service Company Stockton	0.0
California Water Service Company Visalia	0.0

Urban Water Suppliers Projecting Annual Surplus	%
California Water Service Company Westlake	0.0
Calleguas Municipal Water District	0.0
Camrosa Water District	6.5
Carlsbad Municipal Water District	0.0
Carmichael Water District	205.0
Carpinteria Valley Water District	56.5
Casitas Municipal Water District	3.3
Central Basin Municipal Water District	21.5
Central Coast Water Authority	0.0
Ceres City Of	0.0
Cerritos City Of	0.0
Chino City Of	0.0
Chino Basin Desalter Authority	0.0
Chino Hills City Of	28.2
Chowchilla, City of Water Department	295.2
Citrus Heights Water District	0.0
Clovis City Of	56.1
Coachella City Of	0.0
Coachella Valley Water District	0.0
Coalinga City Of	142.7
Coastside County Water District	72.4
Colton City Of	42
Compton City Of	0.0
Contra Costa Water District	84.3
Corcoran City Of	6.1
Corona City Of	3.5
Covina City Of	0.0
Covina Irrigating Company	0.0
Crescent City	0.0
Crescenta Valley Community Water District	15.3
Crestline Village Water District	24.7
Cucamonga Valley Water District	2.6
Cupertino City Of (combined report with San Jose Water Company)	0.1
Daly City	0.0
Davis City Of	106.9
Del Oro Water Company	58.5
Delano City Of	0.0
Desert Water Agency	0.0
Diablo Water District	16.5
Dinuba City Of	10.8
Dixon City Of	0.0

Urban Water Suppliers Projecting Annual Surplus	%
Downey City Of	0.0
Dublin San Ramon Services District	0.0
East Bay Municipal Utility District	0.0
East Niles Community Services District	28.1
East Palo Alto City Of	0.0
East Valley Water District	2.1
Eastern Municipal Water District	0.0
El Centro City Of	0.0
El Dorado Irrigation District	75.6
El Monte City Of	1.7
El Segundo City Of	12.0
El Toro Water District	2.8
Elk Grove Water District	96.6
Elsinore Valley Municipal Water District	16.4
Escondido City Of	52.7
Estero Municipal Improvement District	0.0
Eureka City Of	2533.1
Exeter City Of	122.5
Fair Oaks Water District	157.4
Fairfield City Of	2.0
Fallbrook Public Utility District	0.1
Fillmore City Of	0.9
Folsom City Of	80.3
Foothill Municipal Water District	0.0
Fortuna City Of	0.0
Fountain Valley City Of	0.0
Fresno City Of	50.6
Fullerton City Of	0.0
Galt City Of	0.0
Garden Grove City Of	0.0
Georgetown Divide Public Utility District	171.0
Gilroy City Of	0.0
Glendale City Of	0.0
Glendora City Of	0.0
Golden State Water Company - Artesia	0.0
Golden State Water Company - Barstow	0.0
Golden State Water Company - Bay Point	0.0
Golden State Water Company - Bell-Bell Gardens	0.0
Golden State Water Company - Claremont	0.0
Golden State Water Company - Cordova	0.0
Golden State Water Company - Culver City	0.0

Urban Water Suppliers Projecting Annual Surplus	%
Golden State Water Company - Florence Graham	0.0
Golden State Water Company - Norwalk	0.0
Golden State Water Company - Orcutt	0.0
Golden State Water Company - Placentia	0.0
Golden State Water Company - San Dimas	0.0
Golden State Water Company - Simi Valley	0.0
Golden State Water Company - South Arcadia	0.0
Golden State Water Company - South San Gabriel	0.0
Golden State Water Company - Southwest	0.0
Golden State Water Company - West Orange	0.0
Goleta Water District	7.6
Great Oaks Water Company Incorporated	233.8
Greenfield City Of	6.0
Greenfield County Water District	279.2
Groveland Community Services District	20.8
Grover Beach City Of	62.6
Hawthorne City Of	0.0
Hayward City Of	0.0
Healdsburg City Of	172.7
Helix Water District	0.0
Hemet City Of	0.0
Hesperia Water District	0.0
Hi Desert Water District	0.0
Hillsborough Town Of	0.0
Hollister City Of	0.0
Humboldt Bay Municipal Water District	837.0
Humboldt Community Services District	197.5
Huntington Beach City Of	0.0
Huntington Park City Of	7.9
Imperial City Of	55.0
Indian Wells Valley Water District	186.8
Indio City Of	0.0
Inglewood City Of	4.4
Inland Empire Utilities Agency	26.8
Irvine Ranch Water District	40.3
Joshua Basin Water District	7.3
Jurupa Community Service District	8.7
Kerman City Of	9.9
Kern County Water Agency Improvement District No 4	0.0
Kingsburg City Of	15.0

Urban Water Suppliers Projecting Annual Surplus	%
La Habra City Of	0.0
La Palma City Of	0.0
La Verne City Of	42.8
Laguna Beach County Water District	0.0
Lake Hemet Municipal Water District	11.9
Lakeside Water District	0.0
Lakewood City Of	53.6
Lamont Public Utility District	0.0
Las Virgenes Municipal Water District	0.0
Lathrop City Of	0.0
Lemoore City Of	0.0
Liberty Utilities (Park Water) Corp	0.0
Lincoln City Of	0.0
Lincoln Avenue Water Company	12.2
Linda County Water District	662.1
Livermore City Of	0.0
Livingston City Of	2.2
Lodi City Of	351.3
Loma Linda City Of	150.1
Lomita City Of	35.7
Lompoc City Of	8.0
Long Beach City Of	0.0
Los Angeles County Waterworks District 29 - Malibu & Marina Del Rey	0.0
Los Angeles County Waterworks District 40 - Antelope Valley	0.0
Los Banos City Of	18.6
Lynwood City Of	6.4
Madera City Of	9.9
Manhattan Beach City Of	7.8
Manteca City Of	0.0
Marin Municipal Water District	0.0
Marina Coast Water District	179.9
Martinez City Of	0.0
McKinleyville Community Services District	64.3
Menlo Park City Of	0.0
Merced City Of	0.0
Mesa Water District	38.2
Mid-Peninsula Water District	0.0
Millbrae City Of	0.0
Milpitas City Of	0.0
Mission Springs Water District	0.0

Urban Water Suppliers Projecting Annual Surplus	%
Modesto City Of	0.0
Modesto Irrigation District	0.0
Monrovia City Of	0.0
Monte Vista Water District	0.0
Montecito Water District	0.0
Monterey Park City Of	0.0
Morgan Hill City Of	0.0
Morro Bay City Of	34.4
Moulton Niguel Water District	0.0
Mountain House Community Services District	0.0
Mountain View City Of	0.0
Municipal Water District of Orange County (MWDOC)	0.0
Myoma Dunes Mutual Water Company	0.0
Napa City Of	29.0
Nevada Irrigation District	10.0
Newman City of	21.7
Newport Beach City Of	0.0
Nipomo Community Service District	0.0
Norco City Of	113.7
North Coast County Water District	0.0
North Marin Water District	0.0
North Of The River Municipal Water District	53.7
North Tahoe Public Utilities District	83.6
Norwalk City Of	58.9
Oakdale City Of	2.5
Oceanside City Of	0.0
Oildale Mutual Water Company	70.9
Olivehurst Public Utilities District	0.0
Olivenhain Municipal Water District	0.0
Ontario City Of	0.0
Orange City Of	0.0
Orangevale Water Company	109.0
Otay Water District	0.0
Oxnard City Of	0.0
Padre Dam Municipal Water District	0.0
Palmdale Water District	33.0
Palo Alto City Of	0.0
Paradise Irrigation District	93.6
Paramount City Of	1.5
Pasadena City Of	36.2
Paso Robles City Of	115.4

Urban Water Suppliers Projecting Annual Surplus	%
Patterson City Of	3.0
Petaluma City Of	0.0
Phelan Pinon Hills Community Services District	0.5
Pico Rivera City Of	0.0
Pico Water District	0.0
Pismo Beach City Of	0.0
Pittsburg City Of	12.5
Placer County Water Agency	149.5
Pleasanton City Of	0.0
Pomona City Of	0.0
Port Hueneme City Of	121.6
Porterville City Of	2.9
Poway City Of	0.0
Quartz Hill Water District	27.8
Rainbow Municipal Water District	0.0
Ramona Municipal Water District	10.4
Rancho California Water District	0.0
Red Bluff City Of	0.0
Redding City Of	44.0
Redlands City Of	5.2
Redwood City	0.0
Reedley City Of	0.0
Rialto City Of	40.1
Rincon Del Diablo Municipal Water District	0.0
Rio Linda - Elverta Community Water District	290.2
Rio Vista City Of	0.0
Ripon City Of	213.0
Riverbank City Of	0.0
Riverside City Of	42.5
Riverside Highland Water Company	53.0
Rohnert Park City Of	0.0
Rosamond Community Service District	0.0
Roseville City Of	0.0
Rowland Water District	0.0
Rubidoux Community Service District	27.3
Rubio Canyon Land and Water Association	0.0
Running Springs Water District	8.0
Sacramento City Of	160.4
Sacramento County Water Agency	0.0
Sacramento Suburban Water District	8.9
San Antonio Water Company	202.7

Urban Water Suppliers Projecting Annual Surplus	%
San Benito County Water District	0.0
San Bernardino City Of	64.4
San Bernardino County Service Area 64 Spring Valley Lake	0.0
San Bernardino County Service Area 70 J Oak Hills	0.0
San Bernardino Valley Municipal Water District	3.3
San Buenaventura City Of (Ventura)	28.8
San Clemente City Of	0.0
San Diego City Of	0.0
San Diego County Water Authority	0.0
San Dieguito Water District	0.5
San Fernando City Of	61.5
San Francisco Public Utilities Commission	0.0
San Gabriel County Water District	0.0
San Gabriel Valley Municipal Water District	63.7
San Gabriel Valley Water Company	0.0
San Gabriel Valley Water Company Fontana Division	0.0
San Gorgonio Pass Water Agency	0.0
San Jacinto City Of	0.0
San Jose City Of	0.0
San Jose Water Company	0.1
San Juan Water District	101.1
San Lorenzo Valley Water District	0.0
San Luis Obispo City Of	29.4
San Luis Obispo County Flood Control and Water Conservation	49.3
Sanger City Of	4.6
Santa Ana City Of	0.0
Santa Barbara City Of	0.0
Santa Clara City Of	0.0
Santa Clara Valley Water District	0.0
Santa Cruz City Of	0.0
Santa Fe Springs City Of	0.0
Santa Maria City Of	175.9
Santa Paula City Of	0.0
Santa Rosa City Of	0.0
Scotts Valley Water District	24.2
Seal Beach City Of	0.0
Shafter City Of	0.0
Shasta Lake City Of	42.7
Sierra Madre City Of	0.0
Signal Hill City Of	165.0

Urban Water Suppliers Projecting Annual Surplus	%
Soledad City Of	10.6
Sonoma City Of	0.0
Sonoma County Water Agency	0.0
Soquel Creek Water District	0.0
South Coast Water District	0.0
South Feather Water and Power	126.9
South Gate City Of	17.2
South Pasadena City Of	18.6
South San Joaquin Irrigation District	0.0
South Tahoe Public Utility District	430.4
Stockton City Of	114.8
Stockton East Water District	92.8
Suburban Water Systems - San Jose Hills	17.1
Suburban Water Systems - Whittier/La Mirada	23.1
Suisun - Solano Water Authority	0.0
Sunnyslope County Water District	0.0
Sunnyvale City Of	0.0
Susanville City Of	0.0
Sweetwater Authority	0.0
Sweetwater Springs Water District	120.2
Tahoe City Public Utilities District	55.9
Tehachapi City Of	41.3
Thermalito Water and Sewer District	290.3
Thousand Oaks City Of	0.0
Three Valleys Municipal Water District	14.9
Torrance City Of	139.7
Trabuco Canyon Water District	0.0
Tracy City Of	0.0
Triunfo Sanitation District/Oak Park Water Service	0.0
Truckee - Donner Public Utilities District	236.3
Tulare City Of	0.0
Tuolumne Utilities District	121.4
Turlock City Of	0.0
Tustin City Of	0.0
Twentynine Palms Water District	12.8
Ukiah City Of	11.9
United Water Conservation District	0.0
Upland City Of	0.0
Upper San Gabriel Valley Municipal Water	0.0
Vacaville City Of	52.0
Vallecitos Water District	52.4

Urban Water Suppliers Projecting Annual Surplus	%
Vallejo City Of	0.0
Valley County Water District	2.3
Valley Of The Moon Water District	0.0
Valley Water Company	0.0
Vaughn Water Company	176.9
Ventura County Waterworks District No 01 - Moorpark	0.4
Ventura County Waterworks District No 08 - Simi Valley	0.3
Vernon City Of	71.0
Victorville Water District	0.0
Vista Irrigation District	0.0
Walnut Valley Water District	71.1
Wasco City Of	0.0
Water Facilities Authority	0.0
Watsonville City Of	53.9

Urban Water Suppliers Projecting Annual Surplus	%
West Kern Water District	8.9
West Sacramento City Of	0.0
West Valley Water District	151.1
Westborough Water District	0.0
Western Municipal Water District of Riverside	96.6
Westminster City Of	0.0
Whittier City Of	8.5
Windsor Town Of	0.0
Woodland City Of	252.0
Woodland-Davis Clean Water Agency	135.5
Yorba Linda Water District	0.0
Yreka City Of	617.2
Yuba City	0.0
Yucaipa Valley Water District	96.2

Table A-2. Urban Water Suppliers Anticipating Shortage that can be Fully Addressed by Implementing Actions

(% Annual Shortage before actions)

Urban Water Suppliers Fully Addressing Projected Shortage*	% Before
Alameda County Water District	-13
Bakersfield City Of	-11
Camarillo City Of	-5
Cambria Community Service District	-1
Cloverdale City of	-0.3
Hanford City Of	-16
Lake Arrowhead Community Services District	-3
Los Angeles City Department of Water and Power	-18
Mammoth Community Water District	-16
Metropolitan Water District of Southern California	-17

Urban Water Suppliers Fully Addressing Projected Shortage*	% Before
Montebello Land and Water Company	-3
Orchard Dale Water District	-5
San Bruno City Of	-11
San Juan Capistrano City Of	-2
Santa Clarita Valley Water Agency	-13
Santa Fe Irrigation District	-12
Santa Margarita Water District	-4
Santa Monica City Of	-0.4
Sunny Slope Water Company	-4
Valley Center Municipal Water District	-1
West Basin Municipal Water District	-9

(*) Several wholesalers' reports projecting some shortages indicated that those shortages would be addressed in one of the following ways: (1) Their retail member agencies have no projected shortages because they have additional water supply sources; (2) Their retail member agencies have adequate water shortage response actions which address their projected shortages.

Table A-3. Urban Water Suppliers Anticipating Shortage that may not be Fully Addressed by Implementing Actions

Urban Water Suppliers with Some Remaining Shortage	Anticipated Annual Supply Shortage Before Actions (%)	Anticipated Annual Supply Shortage After Actions (%)
— None —		

Table A-4. Urban Water Suppliers that did not Submit Water Shortage Assessment Reports

(As of September 24, 2023)

Urban Water Suppliers that did not Submit Reports
Alco Water Service
Lindsay City Of

Table A-5. Small Water Suppliers that Voluntarily Submitted Water Shortage Assessment Reports

Small Water Suppliers that Voluntarily Submitted Reports	Anticipated Annual Surplus / (Shortage) Before Actions (%)
California Water Service Company Antelope Valley	0.0
California Water Service Company King City	0.0
California Water Service Company Redwood Valley	0.0
California Water Service Company Willows	0.0
Casitas Municipal Water District - Ojai	49.2
Dixon, City Of	0.0
East Orange County Water District	0.0
Mojave Water Agency	0.0
South Mesa Water Company	15.0
Temescal Valley Water District	110.5

Appendix B - Annual Water Shortage Assessment Reporting Tables

Table B-1. Annual Assessment Information

Year Covered By This Shortage Report (REQUIRED)	
Start: July 1,	2023
End: June 30,	2024
Volume Unit for Reported Supply and Demand (must use same unit throughout)	
Supplier's Annual Assessment Planning Cycle (REQUIRED)	
Start Month:	July
End Month:	June
Data Reporting Interval Used:	
Water Supplier's Contact Information (REQUIRED)	
Water Supplier Name:	Test Agency 6
Contact Name:	
Contact Title:	
Street Address:	
Zip Code:	
Phone Number:	
Email Address:	
Report Preparer's Contact Information (If different from above)	
Preparer's Organization Name:	
Preparer's Contact Name:	
Phone Number:	
Email Address:	
Supplier's Water Shortage Contingency Plan	
WSCP Title:	
WSCP Adoption Date:	
Other Annual Assessment Related Activities (optional)	
Activity	Timeline/Outcomes/Links/Notes
Annual Assessment/Shortage Report Title:	
Annual Assessment/Shortage Report Approval Date:	
Other Annual Assessment Related Activities:	

Table B-2. Water Demands

Use Type	Start Year:	2023	Volumetric Unit Used:												
Drop down list May select each use multiple times. These are the only Use Types that will be recognized by the WUEdata online submittal tool. (Add additional rows as needed)	Additional Description (as needed)	Level of Treatmen for Non-Potable Supplies Drop down list	Projected Water Demands - Volume[2]												
			Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun[3]	Total by Water Demand Type
Demands Served by Potable Supplies															
All Demands															0
TOTAL BY MONTH (POTABLE)			0	0	0	0	0	0	0	0	0	0	0	0	0
Demands Served by Non-Potable Supplies															
Groundwater recharge															0
TOTAL BY MONTH (NON-POTABLE)			0	0	0	0	0	0	0	0	0	0	0	0	0
NOTES															

[1]Projections are based on best available data at time of submitting the report and actual demand volumes could be different due to many factors.
[2]Units of measure (AF, CCF, MG) must remain consistent.
[3]When optional monthly volumes aren't provided, please enter yearly volumes in the June column (Jun[3]).

Table B-3. Water Supplies

Water Supply	Start Year:	2023				Volumetric Unit Used:										
Drop down list May select each use multiple times. These are the only Use Types that will be recognized by the WUEdata online submittal tool. (Add additional rows as needed)	Additional Detail on Water Supply	Projected Water Supplies - Volume[2]													Water Quality Drop Down List	Total Right or Safe Yield * (optional)
		Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun[3]	Total by Water Demand Type		
Potable Supplies																
Purchased/Imported Water														0		
TOTAL BY MONTH (POTABLE)		0	0	0	0	0	0	0	0	0	0	0	0	0		0
Non-Potable Supplies																
Recycled Water														0		
TOTAL BY MONTH (NON-POTABLE)		0	0	0	0	0	0	0	0	0	0	0	0	0		0
NOTES																

[1]Projections are based on best available data at time of submitting the report and actual demand volumes could be different due to many factors.

[2]Units of measure (AF, CCF, MG) must remain consistent.

[3]When optional monthly volumes aren't provided, please enter yearly volumes in the June column (Jun[3]).

Table B-4. Water Shortage Assessment

Table 4(P): Potable Water Shortage Assessment[1]	Start Year:	2023				Volumetric Unit Used[2]:							
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun[3]	Total
Potable Supplies													
Anticipated Unconstrained Demand	0	0	0	0	0	0	0	0	0	0	0	0	0
Anticipated Total Water Supply	0	0	0	0	0	0	0	0	0	0	0	0	0
Surplus/Shortage w/o WSCP Action	0	0	0	0	0	0	0	0	0	0	0	0	0
% Surplus/Shortage w/o WSCP Action													0%
State Standard Shortage Level	0	0	0	0	0	0	0	0	0	0	0	0	0
Planned WSCP Actions													
Benefit from WSCP: Supply Augmentation													0
Benefit from WSCP: Demand Reduction													0
Revised Surplus/Shortage with WSCP	0	0	0	0	0	0	0	0	0	0	0	0	0
% Revised Surplus/Shortage with WSCP													

Table 4(NP): Non-Potable Water Shortage Assessment[1]	Start Year:	2023				Volumetric Unit Used[2]:							
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun[3]	Total
Non-Potable Supplies													
Anticipated Unconstrained Demand	0	0	0	0	0	0	0	0	0	0	0	0	0
Anticipated Total Water Supply	0	0	0	0	0	0	0	0	0	0	0	0	0
Surplus/Shortage w/o WSCP Action	0	0	0	0	0	0	0	0	0	0	0	0	0
% Surplus/Shortage w/o WSCP Action													0%
Planned WSCP Actions													
Benefit from WSCP: Supply Augmentation													0
Benefit from WSCP: Demand Reduction													0
Revised Surplus/Shortage with WSCP	0	0	0	0	0	0	0	0	0	0	0	0	0
% Revised Surplus/Shortage with WSCP													
NOTES													

[1]Projections are based on best available data at time of submitting the report and actual demand volumes could be different due to many factors.
[2]Units of measure (AF, CCF, MG) must remain consistent.
[3]When optional monthly volumes aren't provided, please enter yearly volumes in the June column (Jun[3]).

Table B-5. Planned Water Shortage Response Actions

Year Covered By This Shortage Report			July 1,	2023	to June 30,	2024
Anticipated Shortage Level Drop Down List of State Standard Levels (1-6) and Level 0 (No Shortage)	ACTIONS: Demand Reduction, Supply Augmentation, and Other Actions. (Drop Down List) These are the only categories that will be accepted by the WUEdata online submital tool. Select those that apply.	Is Action Already Being Implemented? (Y/N)	How much is action going to reduce the shortage gap?		When is shortage response action anticipated to be implemented?	
			Enter Amount	(Drop Down List) Select % or Volume Unit	Start Month	End Month
Add additional rows as needed						
0 (No Shortage)					January	January
Notes: (NOTES Section to be used only for clarifying details, and not for listing specific actions. Actions need to entered into rows above.)						

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