

State of California
California Natural Resources Agency
CALIFORNIA DEPARTMENT OF WATER RESOURCES
Division of Regional Assistance
Water Use Efficiency Branch

2022 ANNUAL WATER SUPPLY AND DEMAND ASSESSMENT SUMMARY REPORT



**Submitted to the State Water Resources Control Board
Pursuant to California Water Code §10644(c)(1)(B)**

November 2022

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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.

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

UWMP – Urban Water Management Plan

Urban Retail Water Supplier – a water supplier, either publicly or privately owned, that directly provides potable municipal water to more than 3,000 end users 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

2022 ANNUAL WATER SUPPLY AND DEMAND ASSESSMENT SUMMARY REPORT

1. INTRODUCTION

This 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.

The purpose of this Annual Water Supply and Demand Assessment Summary Report (Summary Report) is to fulfill the California Water Code (CWC) §10644(c)(1)(B) requirements and it is due on or before September 30, 2022, and every year thereafter. 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.

This Summary Report is structured as follows.

- 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. This section also briefly covers this year’s special conditions as a result of the Governor’s Executive Order N-7-22.¹
- 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.
- 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. BACKGROUND

2.1. Annual Water Supply and Demand Assessments

Urban water suppliers develop and adopt two local planning documents: an Urban Water Management Plan (UWMP) for mid- and long-term planning, and 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)).

¹ <https://www.gov.ca.gov/wp-content/uploads/2022/03/March-2022-Drought-EO.pdf>

Using the WSCP procedures, 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 by July 1 every year starting in 2022. 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.

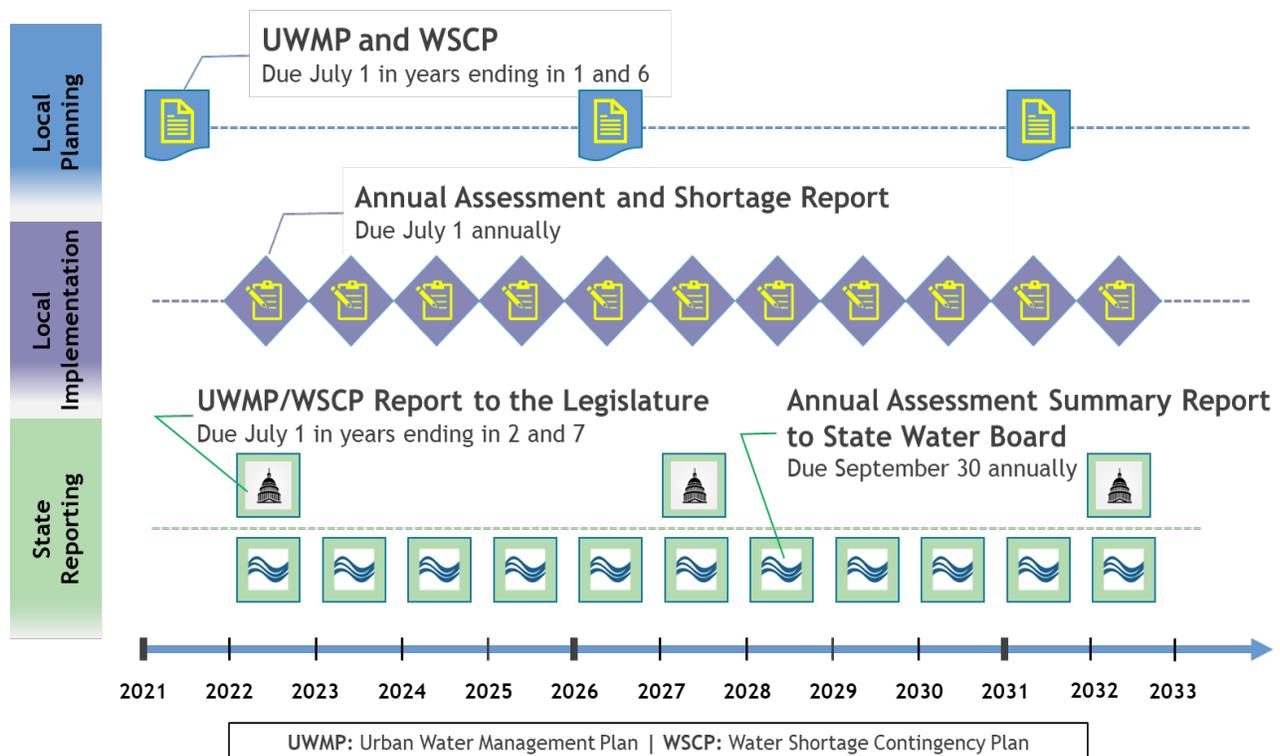


Figure 1. Water Shortage Contingency Planning and Implementation Timeline

DWR wrote a document entitled Annual Water Supply and Demand Assessment Guidance² (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, published in April 2022, recommends that urban water suppliers use actual current year’s conditions, as well as can be known prior to

² https://wuedata.water.ca.gov/public/public_resources/3517484366/AWSDA-Final-Guidance-4-2022.pdf

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. 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.

2.2. Annual Water Shortage Assessment Reports

The first required Annual Shortage Reports, due July 1, 2022, cover the 12-month period from July 1, 2022 to June 30, 2023. 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: two tables showing a summary of supply/demand balances as well as anticipated shortages and results of planned water shortage response actions.

- 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: 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.

3. SUMMARY OF SUBMITTED ANNUAL WATER SHORTAGE ASSESSMENT REPORTS

This section presents summarized information gleaned from urban water suppliers' final 2022 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 are based on annual aggregate projections. For specific details, the public can access individual reports and data tables through the WUEdata Portal, DWR's electronic submittal tool.

This summary briefly addresses special conditions related to the Governor's Executive Order N-7-22 and includes the urban water suppliers' reporting compliance, local water supply conditions including anticipated potential shortages, and water shortage response actions as reported by the suppliers. Statistics on non-urban water suppliers that voluntarily submitted Annual Shortage Reports are also included.

3.1. Special Conditions: Executive Order N-7-22

As a result of continuing drought conditions in the state, on March 28, 2022, Governor Gavin Newsom issued Executive Order (EO) N-7-22 with many drought preparedness directives, including an additional special requirement for urban water suppliers to submit a preliminary water shortage assessment report to DWR by June 1, 2022.

In June, DWR received preliminary water shortage assessment reports, per EO N-7-22, from over 300 urban water suppliers. Submittal of preliminary reports helped motivate urban water suppliers to assess their water supply and demand conditions early and prepare for their final Annual Shortage Reports. Review of the preliminary reports also allowed DWR to provide targeted technical assistance to suppliers needing help with conducting assessments and reporting to meet CWC requirements.

For many of the urban water suppliers, the preliminary reports were based on initial drafts of their annual water supply and demand assessments. Hence, this summary

focuses on the reviews of the final Annual Shortage Reports and does not include any synthesis of the information provided in those initial preliminary reports.

3.2. Reporting Compliance

There are 435 urban water suppliers (wholesale and retail) that are required to conduct water supply and demand assessments and submit Annual Shortage Reports³.

An urban water supplier is a supplier providing water for municipal purposes to more than 3,000 connections or supplying more than 3,000 acre-feet annually. As of November 2, 2022, DWR received a total of 424 Annual Shortage Reports, of which 414 reports were submitted by urban water suppliers and 10 were submitted voluntarily by small water suppliers (suppliers serving less than 3,000 connections and supplying less than 3,000 acre-feet annually) – Table 1. The compliance rate of those required to submit Annual Shortage Reports is 95%. The remaining 21 urban water suppliers that are required to submit a report have not done so.

Table 1. 2022 Annual Shortage Report Submittals
(As of November 2, 2022)

Total Number of Urban Water Suppliers	435
- Submitted Reports	414
- Did not Submit Reports	21
Compliance Percentage	95%
Voluntary Submittals by Small Water Suppliers	10
Total Submittals (Required + Voluntary)	424

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 21 non-compliant urban water suppliers (Table A-4) must come into compliance to be eligible to receive or continue to receive State funding.

³ An additional four agencies that have recently been identified as meeting the threshold were pending confirmation to be considered as urban water suppliers at the time the Annual Shortage Reports were due: California Water Service Company Kern River Valley, City of Lindsay, Sweetwater Springs Water District, and Thermalito Water and Sewer District.

3.3. Projected Shortage Status

Table 2 summarizes the number of urban water suppliers' and their projected shortage status from the submitted reports⁴. Among the 414 urban water suppliers submitting their Annual Shortage Report, 338 (82%) did not project water supply shortages in the next year (based on annual aggregate supply and demand projections) even assuming dry year conditions. Another 73 (18%) projected that they may have supply shortages in the absence of response action, but that they could eliminate the shortages through the implementation of appropriate water shortage response actions. The remaining 3 (0.7%) urban water suppliers projected water shortages in the coming year even after they take into consideration planned water shortage response 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 November 2, 2022)**

Reported Projected Shortage Status	Number of Suppliers	%
No shortage ¹	338	82%
Shortage can be fully addressed by suppliers' actions	73	18%
Shortage is not fully addressed by suppliers' actions; Report corrections or additional actions may be needed	3	0.7%
Total number of submitted shortage assessment reports	414	

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.

⁴ Not all suppliers have reported monthly projections, thus for consistency, the analysis and resulting statistics are based on the suppliers' annual aggregate projections.

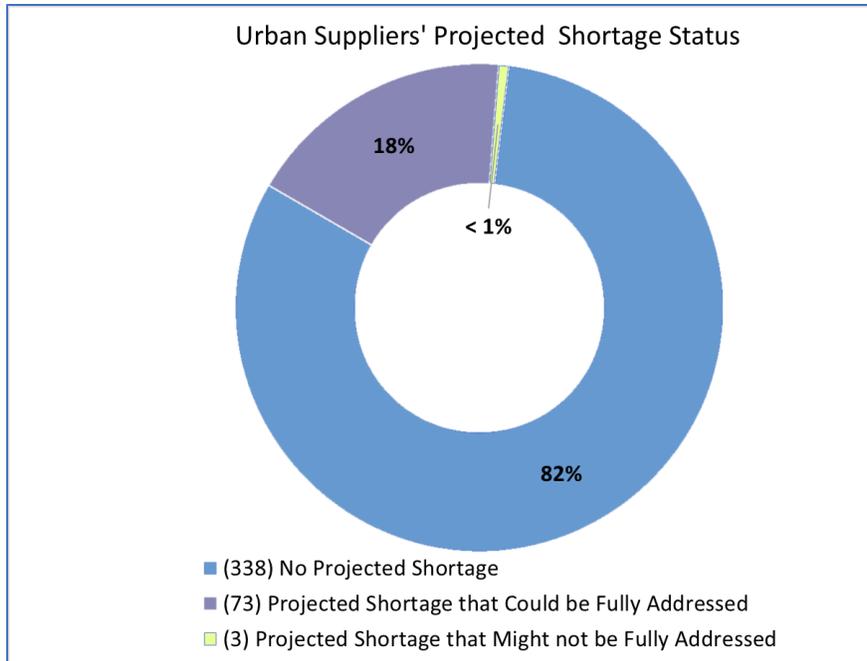


Figure 2. Urban Water Suppliers' Projected Annual Shortage Status
(As of November 2, 2022)

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 are an additional 10 non-urban water suppliers that voluntarily submitted Annual Shortage Reports. Among the voluntary reporters, only one supplier projected that it may have supply shortages and that could be eliminated through the implementation of the water shortage response actions. Figure 3 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.

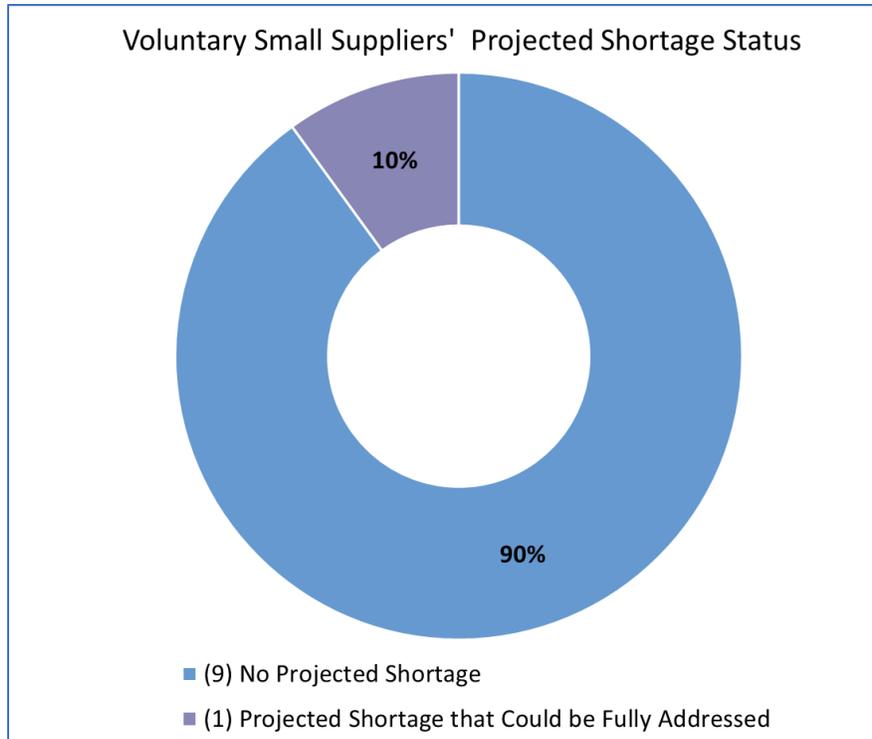


Figure 3. Voluntarily Reporting Small Water Suppliers' Projected Annual Shortage Status
(As of November 2, 2022)

3.4. Identified Issues and Annual Shortage Report Revisions

DWR's review of the Annual Shortage Reports identified several issues with some of the urban water suppliers' assessment methodologies including the following:

- Using historical maximum demand to estimate unconstrained demands instead of more recent water use trends. Recent water use trends may be more appropriate to use instead, since water use has been decreasing in recent years due to implementation of water use efficiency programs.
- Not accounting for the benefits of water shortage water shortage response actions planned to be implemented.
- Not reporting on water shortage response actions already in place.
- Not implementing appropriate water shortage response actions commensurate with the level of shortage projected.
- Not reporting recommended monthly supply and demand data and instead reported yearly aggregated projections. As a result, the analysis and this report

does not provide detailed monthly shortage estimates over the subsequent 12-month period and instead provides yearly aggregated shortage estimates to avoid reporting inconsistencies. With yearly, aggregated reporting, shortages occurring on a shorter time-step within the year may not be revealed.

- Using locally defined shortage levels. This resulted in some reporting inconsistencies, despite cross-reference to the state standard shortage levels provided in WSCP.
- Submitting incomplete reports.

DWR staff provided targeted technical assistance to those urban water suppliers with identified issues and worked with them to revise and resubmit their Annual Shortage Reports. The review of the initially submitted Annual Shortage Reports indicated that 15 urban water suppliers initially projected shortages in the coming 12 months even after implementing water shortage response actions. DWR advised these urban water suppliers to consider actions to address their shortages by performing one or more the following:

- Select, if needed, additional water shortage response actions appropriate to the projected shortage level.
- Account properly for volumetric benefits (e.g., water savings) from the planned water shortage response actions to eliminate the shortage.
- Amend and readopt a more robust local WSCP, if the currently adopted plan is deemed to be inadequate for addressing projected shortages. Agencies are reminded that the CWC allows them, in the meanwhile, to take water shortage response actions that are not specified in their WSCP, if needed, without having to formally amend their WSCP.

Two of 15 suppliers that did not submit revised reports are wholesalers (San Gabriel Valley Municipal Water District, Water Facilities Authority). Even though these two wholesalers have remaining projected shortages, those shortages have been 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.

After following DWR's advice, 13 of the 15 urban water suppliers projecting shortages did revise and resubmit their reports. Of those 13 suppliers, 10 no longer show projected shortages after implementing appropriate water shortage response actions, per their revised reports.

There are still three urban water suppliers projecting shortages even after implementing water shortage response actions. These suppliers collectively serve a total population of approximately 150,000 people (0.4% of the state population). The remaining shortage levels of these three suppliers, are relatively small at 4%, 5%, and 6%. DWR staff believe that these suppliers might be able to address their remaining projected water shortages by more aggressively performing the DWR recommended actions listed above.

One of these suppliers still projecting a small level of shortage is in the San Francisco Bay hydrologic region:

- Menlo Park City of (Menlo Park)

Menlo Park initially projected a 21% shortage before accounting for water shortage response actions. After implementing actions, they estimated they would be able to reduce their shortage to 5%. Furthermore, Menlo Park is a member agency of the San Francisco Public Utilities Commission (SFPUC). Systemwide, SFPUC's member agencies might be able to address shortages by activating water transfers within their regional plan (Water Shortage Allocation Plan (WSAP)). Menlo Park, in its 2020 UWMP, projected shortages under the following scenarios: Single Dry Year, Multiple Dry Years, and Drought Risk Assessment. However, the five-year (2021 through 2025) Drought Risk Assessment table in their UWMP, indicates that the shortages projected can be eliminated by implementing water shortage response actions.

The other two suppliers still projecting a small level of shortage are in the South Coast hydrologic region:

- Ventura County Waterworks District No 01 – Moorpark (Moorpark)
- Ventura County Waterworks District No 08 – Simi Valley (Simi Valley)

Moorpark projected a 54% shortage before accounting for water shortage response actions. After revising their report, Moorpark estimated they would be able to reduce their shortage to 4%.

Simi Valley initially projected a 70% shortage before accounting for water shortage response actions. After revising their report, Simi Valley estimated they would be able to reduce their shortage to 6%.

Looking further into Moorpark’s and Simi Valley’s UWMPs submitted last year, neither of these suppliers project any shortages under all scenarios: Normal Year, Single Dry Year, Multiple Dry Years, and Drought Risk Assessment for the years 2021 through 2025.

Both of these Ventura County urban water suppliers receive water from Metropolitan Water District via their wholesaler: Calleguas Municipal Water District (Calleguas). Calleguas, in their submitted Annual Shortage Report, projected a 40% shortage that they plan to address with aggressive actions to be implemented by their retail member agencies. These retail member agencies will also need to implement actions from Metropolitan Water District’s Emergency Water Conservation Program.

3.5. 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 4. The following types of actions are selected most frequently by urban water suppliers.

- Limiting landscape irrigation to specific days and times
- Fixing leaks, breaks, etc. by customer
- Expanding public outreach campaigns
- Prohibiting water use for decorative water features
- Restricting certain CII water uses.

These most frequently selected water shortage response actions focused predominantly on outdoor water use and expanding public outreach, which agrees with the State Water Board findings from the urban water suppliers’ monthly conservation reports.⁵

⁵ State Water Resources Control Board. Water Conservation Portal. Water Conservation and Production Reports. https://www.waterboards.ca.gov/water_issues/programs/conservation_portal/conservation_reporting.html

Top 15 Shortage Response Actions Implemented

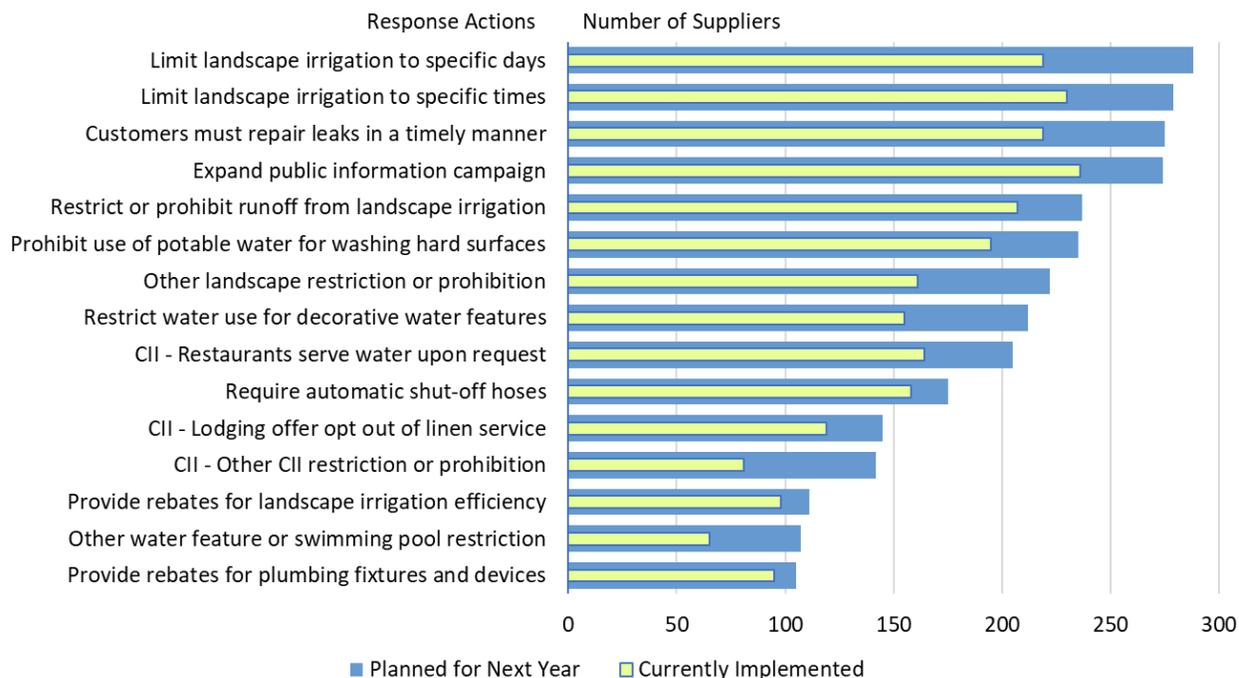


Figure 4. Top 15 Implemented and Planned Water Shortage Response Actions

4. 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. California is in its third year of drought, which started in February 2020. According to the U.S. Drought Monitor, by mid-May of 2021, the entire State was experiencing drought conditions. It is important to note that the U.S. Drought Monitor focuses on broad-scale conditions, and that local conditions may vary.

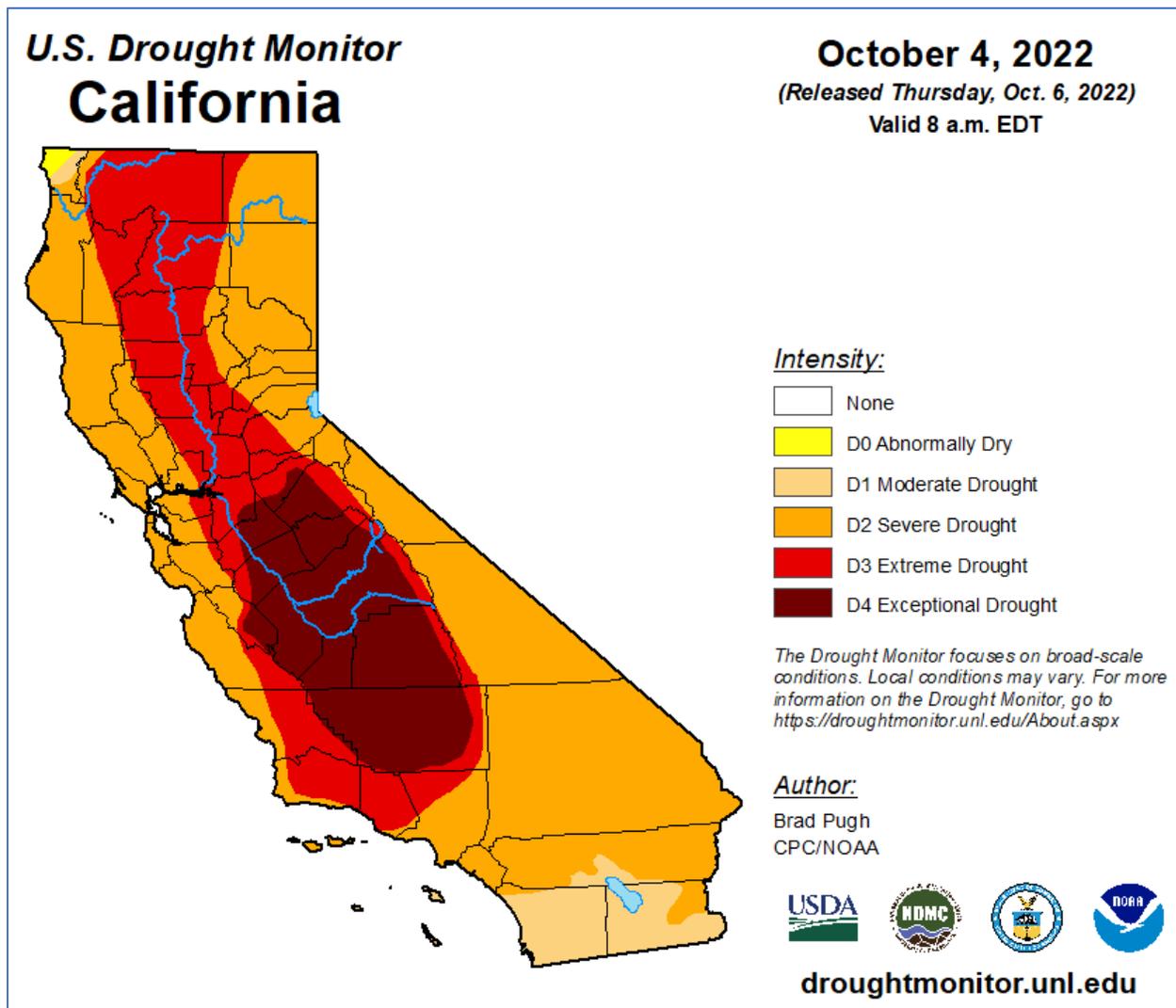


Figure 5. California Drought Conditions on October 4, 2022

As Figure 5 indicates that, as of October 4, 2022, most of the State is under severe drought conditions with approximately one-third of the state under extreme or exceptional drought conditions.⁶ The Exceptional Drought area is mostly located in the San Joaquin River and Tulare Lake hydrologic regions.

Figure 6 displays California’s 12-year historical record for several hydrological indicators including precipitation, snowpack, runoff, and reservoir storage, as measured on April

⁶ Droughtmonitor.unl.edu. 2022. | U.S. Drought Monitor. [online] Available at: <https://droughtmonitor.unl.edu/CurrentMap/StateDroughtMonitor.aspx?CA> [Accessed 6 October 2022].

1st every year.⁷ The data is displayed as Percent of Average. Values below 100 are below average and values above 100 are above average. The hydrological indicators are below average in eight of the twelve years, which include the last three years.

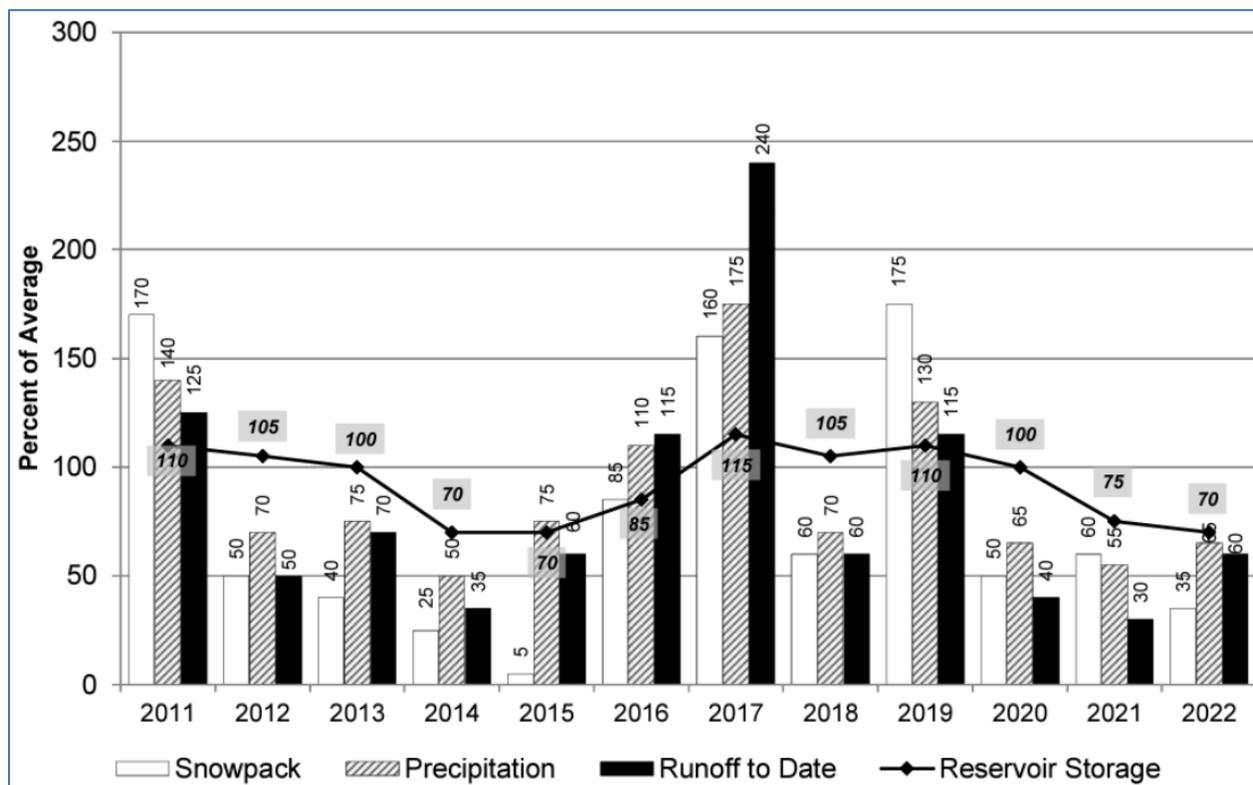


Figure 6. Historical Statewide Water Supply Conditions on April 1st

Water supply conditions across California are strongly affected by low precipitation levels. Last year, in the 2021 water year (October 1, 2020 through September 30, 2021), California received a statewide average of less than 12 inches of precipitation. In the 2022 water year, the state has continued to experience severe drought conditions for the third year in a row. Figure 7 shows that, as of September 30, 2022, California has received a statewide average of 17.9 inches of precipitation in the 2021-2022 water year, which is 76% of average (California Water Watch Website).⁸ It is notable that three percent out of the 76% was received during the late-September storm event.

⁷ California Data Exchange Center, California Department of Water Resources. 2022. |California Statewide Water Conditions. [online] Available at: <https://cdec.water.ca.gov/water_cond.html> [Accessed 30 August 2022].

⁸ California Department of Water Resources. California Water Watch. <https://cww.water.ca.gov/>

Precipitation Statistics (period of record: 1981-current)

Statewide as of 09/30/2022

Water Year to Date: **17.9"**

% of Average: **76%**

Precipitation % of average for full water year through September 30th: **76%**

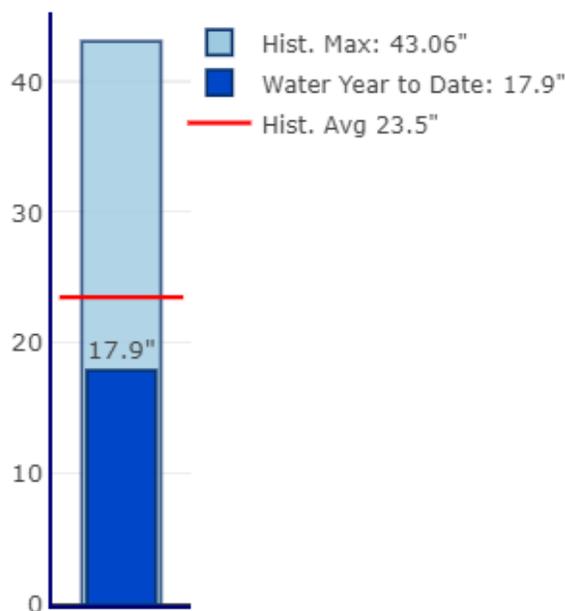
Historical Record to Date:

Max: **43.06"**

Mean: **23.5"**

Min: **11.91"**

[Download Image](#)



Precipitation for water year to date is 76% of historical average

Figure 7. Statewide Precipitation as Percent of Average for the Current Water Year (as of September 30, 2022)

Water year 2021-2022 total precipitation in regions across the state ranged from 61% to 99% of these regions' average precipitation. As shown in Figure 8, the percents of average precipitation by hydrologic region are as follows: North Lahontan (99%), San Francisco (85%), Sacramento (79%), North Coast (75%), San Joaquin (75%), Central Coast (75%), South Coast (73%), South Lahontan (73%), Tulare (66%), and Colorado River (61%).

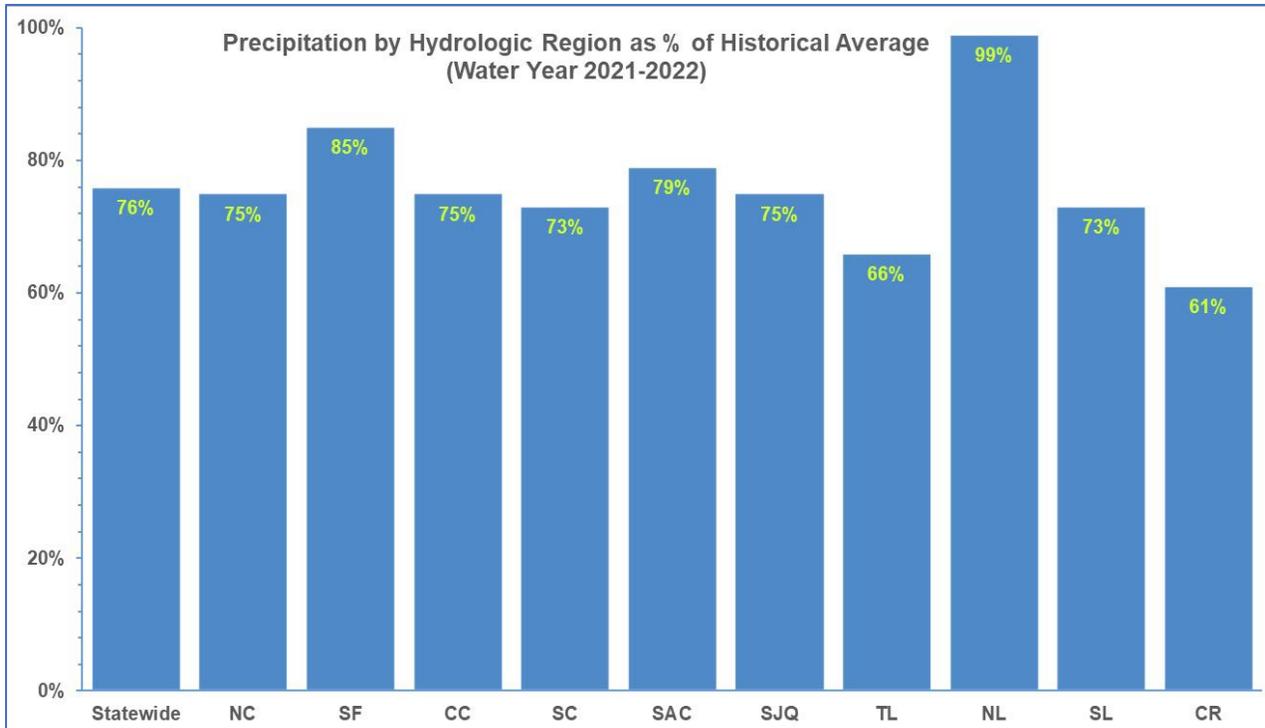


Figure 8. Precipitation by Hydrologic Region as Percent of Historical Average for the Water Year 2021 - 2022

Due to the amount of snow melting in March from a lack of storms, clear skies, and warmer-than-average temperatures, the April 1, 2022 snowpack is one of the 10 lowest years on record. At the end of July 2022, all the automated snow sensors reported no snow (Figure 9). The peak of the statewide snowpack as measured by the automated sensors occurred on March 8 with about 57% of a seasonal snowpack, which equates to 16.1 inches of snow water equivalent.

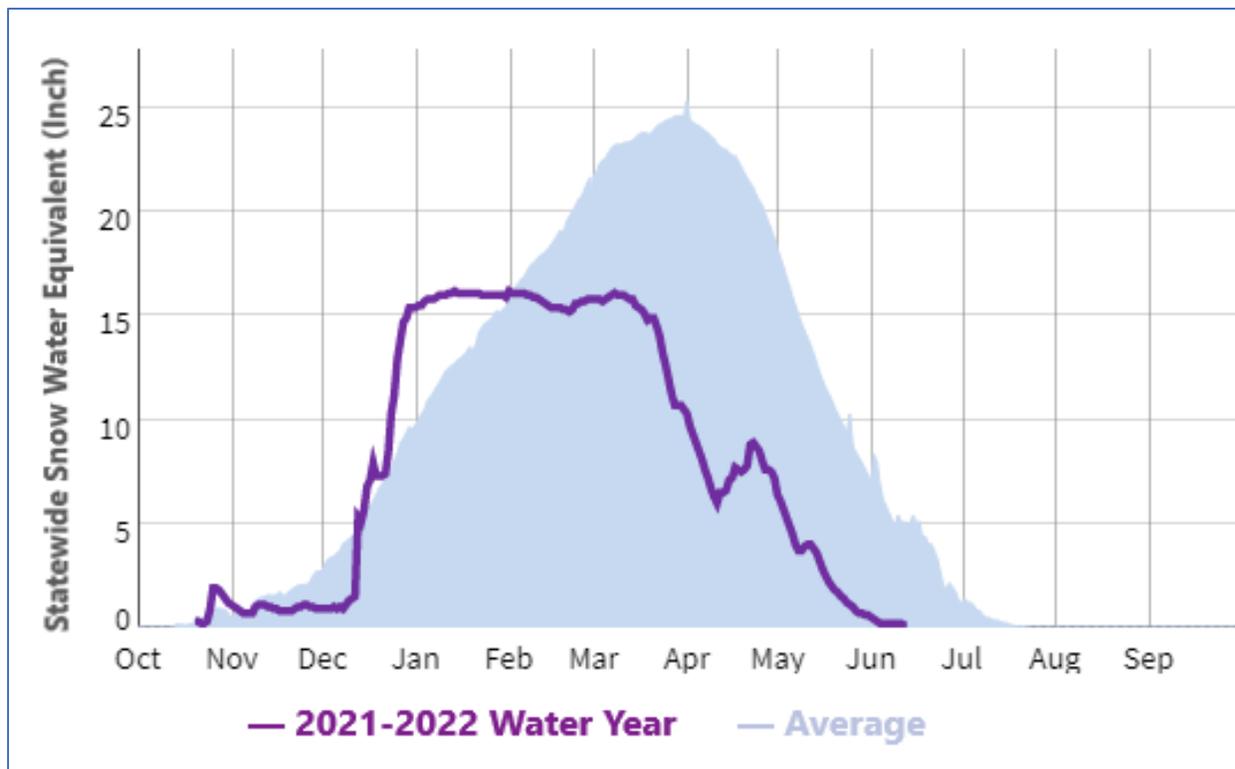


Figure 9. Statewide 2021-2022 Water Year Snowpack Chart

This year saw a decrease in Statewide reservoir storage beginning in the month of June. At the end of September, reservoir storage was 69% of average. Last year's supply was lower, at 60% of average. Figure 10 shows California's major reservoir conditions, as of September 30, 2022.

Streamflow and groundwater levels were also both well below average across much of the state this year. Rainfall along the North Coast and in the southern Sierra from thunderstorms have elevated streamflow in that region. Other areas in California are reporting streamflow and groundwater in the bottom 10% of the historical distribution.

CALIFORNIA MAJOR WATER SUPPLY RESERVOIRS

Midnight - September 30, 2022

CURRENT CONDITIONS

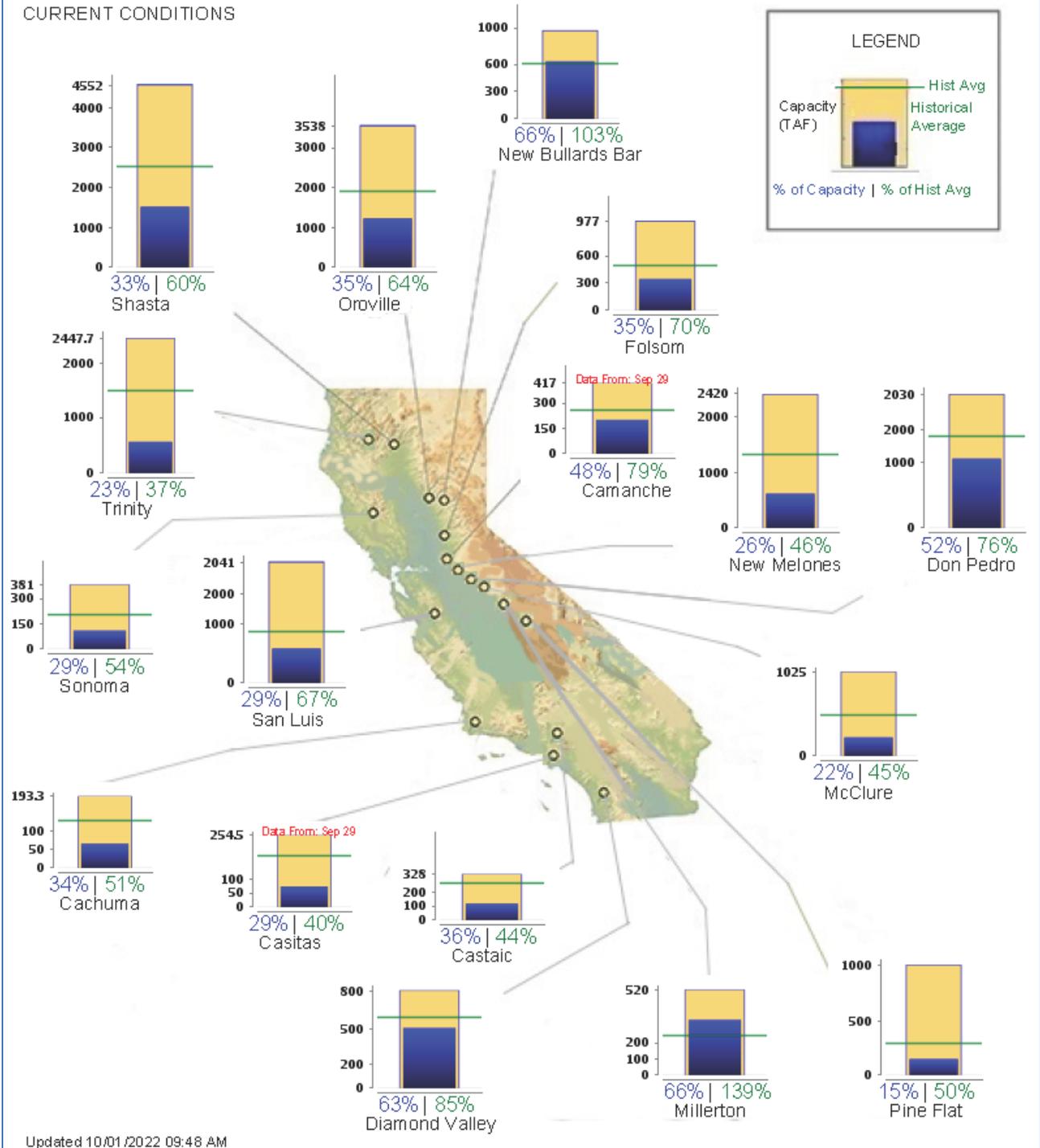


Figure 10. California Major Reservoir Conditions as of September 30, 2022

4.2. State Water Project Allocations

The 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 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 its notice to the SWP Contractors dated March 18, 2022, DWR announced that the 2022 SWP final allocation was set at 5% of the total contracted allocations (Table A water).⁹ Because of critically dry conditions this year, the 5% state allocation was insufficient to meet human health and safety needs of at least one urban water supplier and the amount was increased to meet the minimum required needs. The original 5% SWP allocation was calculated as 219 thousand acre-feet. An additional quantity of 176 thousand acre-feet was added to meet the minimum needs. Therefore, this year's final SWP allocations are estimated to total 395 thousand acre-feet. DWR may revise this and any subsequent allocations, if warranted, based on developing hydrologic conditions and available SWP water supplies.

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 much of California's Central Valley.

In March of 2022, the CVP north-of-Delta municipal and industrial (M&I) water service contractors were already allocated only the minimum water supplies needed to meet their Public Health and Safety needs, due to limited northern California water storage.

⁹ <https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/State-Water-Project/Management/SWP-Water-Contractors/Files/22-03-2022-SWP-Allocation-Decrease-5-Percent-031822.pdf>

The other M&I water service contractors were set to receive a 25% allocation of their contracted CVP water supply.

On April 1, 2022, due to critically dry hydrologic conditions, and after the first three months of 2022 were the driest in California’s recorded history, the USBR drastically reduced its water supply allocations for the remaining CVP M&I water service contractors to only the level needed to meet their minimum Public Health and Safety needs.¹⁰

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, recreation, fish and wildlife habitat, and other benefits. The state of California’s normal allocation of Colorado River water amounts to 4.4 million acre-feet. By declaring, on August 16, 2022,¹¹ that the Lower Colorado River Basin has reached what is called a “Tier 2” shortage, USBR is requiring cuts in water use that will diminish the allocations to Arizona by 21%, Nevada by 8% and the country of Mexico by 7%. USBR requested the lower basin states to reach agreement to reduce their Colorado River water use by two to four million acre-feet.

Even though USBR has announced allocation reductions to Arizona, Nevada, and Mexico, the state of California has a more senior water right and its allocation was not cut this year. Note that California’s allocation is based on Lake Mead levels and may be reduced when the Lake Mead level drops below 1,045 feet above mean sea level. The USBR will make its next allocation determination in January 2023.

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 11 show the shortage status by hydrologic region and is based on information from the suppliers’ Annual Shortage Reports. Note that “shortage” in this context is based on unconstrained demand as the baseline.

¹⁰ <https://www.usbr.gov/newsroom/news-release/4157>

¹¹ <https://www.usbr.gov/newsroom/news-release/4294>

Table 3. Regional Distribution of Urban Water Suppliers by Projected Shortage
(As of November 2, 2022)

Hydrologic Region (Total # of Suppliers)	No Shortage	Shortage Fully Addressed by Actions	Shortage Not Fully Addressed by Actions	Did Not Report
1. Central Coast (33)	25	5	0	3
2. Colorado River (16)	14	1	0	1
3. North Coast (14)	12	1	0	1
4. North Lahontan (4)	3	0	0	1
5. Sacramento River (40)	36	2	0	2
6. San Francisco Bay (50)	20	29	1	0
7. San Joaquin River (33)	28	3	0	2
8. South Coast (194)	166	22	2	4
9. South Lahontan (18)	13	4	0	1
10. Tulare Lake (33)	21	6	0	6
Statewide (435)	338	73	3	21

Figure 11 shows the percentages of suppliers by hydrologic region where urban water suppliers are anticipating shortages. There are two hydrologic regions where some urban water suppliers continue to project shortages after accounting for water shortage response actions: San Francisco Bay (1 supplier) and South Coast (2 suppliers). The figure shows there are seven hydrologic regions where some urban water suppliers reported that they would be able to address projected shortages by implementing water shortage response actions. North Lahontan is the only hydrologic region that did not report any projected shortages. However, Annual Shortage Reports were submitted by only three of the four urban water suppliers in that region. As discussed previously in this report, of those urban water suppliers reporting, a very low percentage projected shortages that would not be fully addressed by their water shortage response actions (only 2% of suppliers in San Francisco Bay and 1% in South Coast). Note that higher percentages of urban water suppliers reported that they are anticipating shortages that can be fully addressed in the following regions: San Francisco Bay (58%), South Lahontan (24%), Tulare Lake (22%), Central Coast (17%), and South Coast (12%).

This regional summary pertaining to urban water suppliers' projected shortage statistics is based on reported data only. There are data gaps due to the fact that most hydrologic regions included some urban water suppliers that did not report.

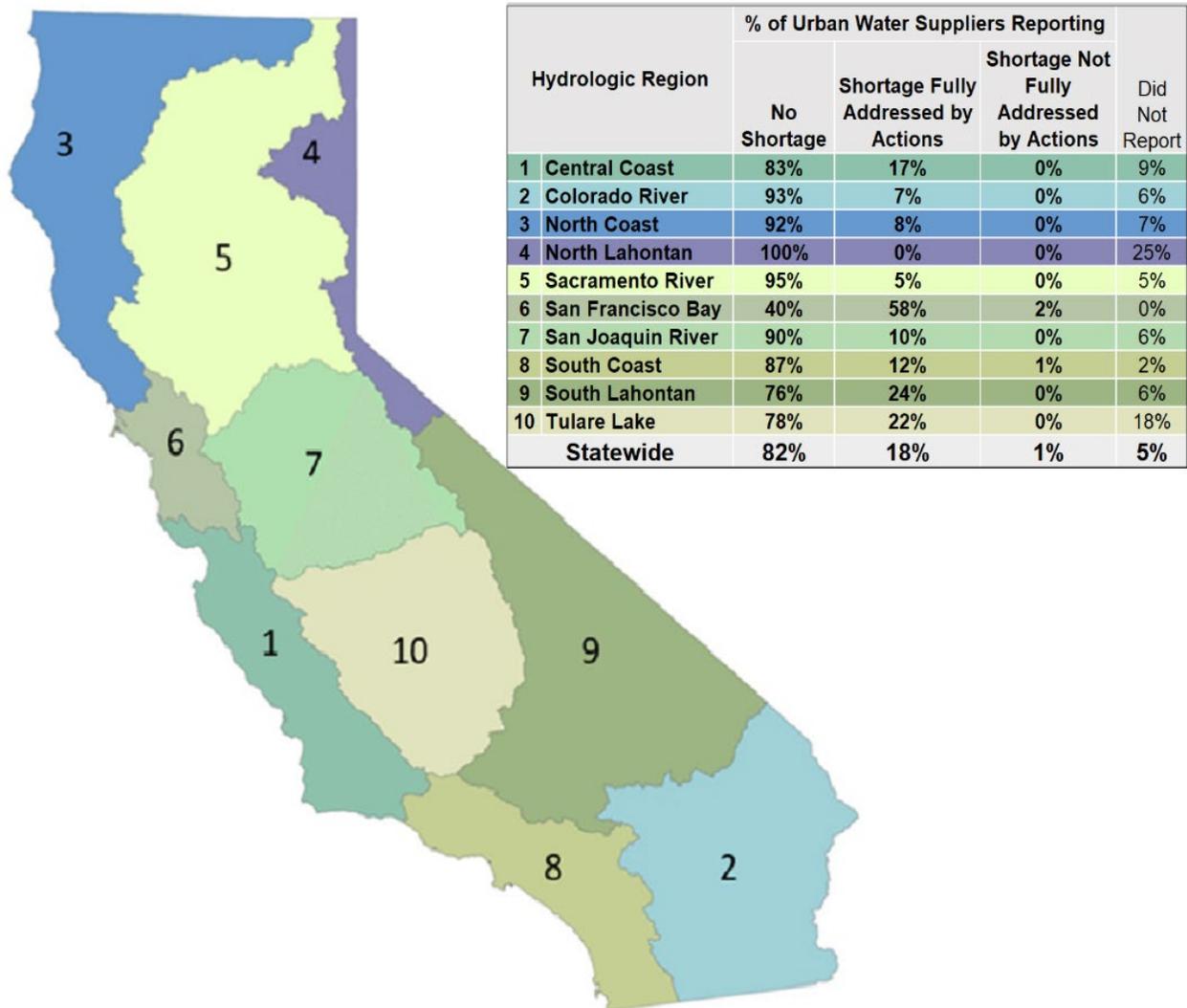


Figure 11. Urban Water Suppliers’ Projected Shortage Status by Hydrologic Region

5. FINDINGS SUMMARY

California is in its third year of drought. Because of the continuing dry conditions this year, it is timely that the urban water suppliers have begun to annually assess their water supplies and demands and prepare planned water shortage response actions to proactively address projected shortages, as required (CWC §10632.1). Through this process, urban water suppliers have looked into the immediate future to evaluate whether, or not, they will need to take water shortage response actions to balance their supplies and demands if the next year is dry.

For this first-year annual water shortage assessment reporting requirement, over 95% of all urban water suppliers have successfully conducted their supply and demand assessments and overwhelmingly complied with this new requirement. This high compliance rate likely has been achieved as a result of the preliminary assessments required by the EO N-7-22, high awareness of worsening drought conditions, and technical assistance and outreach provided by DWR staff. The submitted Annual Shortage Reports demonstrate the importance of successful water management planning and effective water shortage contingency planning in ensuring water supply reliability and drought resiliency.

Each urban water supplier used 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, selection of shortage levels (state or local), matching water shortage response actions with the appropriate standard state shortage levels, and selection of time-step used in the assessment.

The DWR Guidance document provided some clarity on these topics, however, the urban water suppliers still had the flexibility to decide how to proceed. This flexibility caused some variations in the submitted Annual Shortage Reports. Furthermore, the degree or severity of dry year selected affects whether or not the urban water supplier can address the projected shortages and the adequacy of the Annual Assessment in preparing for dry year conditions.

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

- No projected shortage: 82% of urban water suppliers (338 out of 414) 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: 18% of urban water suppliers (73 out of 414) who projected some level of shortage identified locally appropriate water shortage response actions to address and mitigate the potential shortage.
- Not fully addressed shortage: 0.7% of the urban water suppliers (3 out of 414) that submitted reports still show remaining projected shortages.
- Unknown shortage status – unsubmitted reports: 5% of the urban water suppliers (21 out of 435) still have not submitted their reports.

Statewide, California's continuing drought conditions spurred the Governor to require all urban water suppliers to plan for drought and to cut back on water demands using water

shortage response actions in line with, at a minimum, the State standard shortage level 2 (EO N-7-22). The State standard shortage level 2 represents a 10% to 20% shortage gap. Nearly all (96% of urban water suppliers, 398 out of 414) indicated that they are implementing at a minimum level 2 water shortage response actions in compliance with EO N-7-22.

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 outdoor water use restrictions and public outreach actions.

The effects of this third year of drought can be seen in the low precipitation (rain and snow), low water storage levels (river, reservoir, and groundwater), and cuts to both state and federal water allocations. The state is broadly experiencing severe drought conditions and water supplies are strained.

Shortages are projected throughout the state if drought conditions persist. Regionally, we can see that all hydrologic regions, except North Lahontan, have suppliers projecting that they would have some level of shortage without taking appropriate water shortage response actions. Fortunately, most urban water suppliers indicated they would be able to eliminate those projected shortages through appropriate response action. Even the three urban water suppliers with remaining shortages show that they can reduce their shortages to manageable levels not exceeding six percent.

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.

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 a once per year. This type of continuous effort will help urban water suppliers to ensure water supply reliability for their customers.

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	0%
Alhambra City of	5%
Amador Water Agency	177%
American Canyon City of	20%
Anaheim City of	0%
Anderson City of	22%
Apple Valley Ranchos Water Company	0%
Arcadia City of	0%
Arcata City of	97%
Arroyo Grande City of	0%
Atascadero Mutual Water Company	74%
Atwater City of	0%
Azusa Light and Water	54%
Banning City of	27%
Bellflower - Somerset Mutual Water Company	19%
Bakman Water Company	130%
Benicia City of	0%
Beverly Hills City of	0%
Big Bear Community Services District	7%
Big Bear Lake City of	49%
Blythe City of	138%
Brawley City of	113%
Brea City of	0%
Brentwood City of	79%
Buena Park City of	0%
Calaveras County Water District	0%
Calexico City of	61%
California American Water Company - Los Angeles Division	0%
California American Water Company - Monterey District	12%
California American Water Company - Sacramento District	261%
California American Water Company - San Diego District	20%
California Water Service Company Bakersfield	0%
California Water Service Company Chico District	0%
California Water Service Company Dixon, City	0%
California Water Service Company Dominguez	0%

Urban Water Suppliers Projecting Annual Surplus	%
California Water Service Company East Los Angeles	0%
California Water Service Company Hermosa/Redondo	0%
California Water Service Company Livermore	0%
California Water Service Company Los Altos/Suburban	0%
California Water Service Company Marysville	0%
California Water Service Company Oroville	0%
California Water Service Company Palos Verdes	0%
California Water Service Company Salinas District	0%
California Water Service Company Selma	0%
California Water Service Company Stockton	0%
California Water Service Company Visalia	0%
Camarillo City of	2%
Carlsbad Municipal Water District	0%
Carmichael Water District	189%
Central Basin Municipal Water District	13%
Ceres City of	0%
Cerritos City of	0%
Chino City of	0%
Chino Basin Desalination Authority	0%
Chino Hills City of	2%
Chowchilla City of Water Department	271%
Citrus Heights Water District	29%
Clovis City of	42%
Coachella City of	0%
Coachella Valley Water District	0%
Colton City of	42%
Corona City of	3%
Covina City of	0%
Covina Irrigating Company	0%
Crescent City	0%
Crescenta Valley Community Water District	27%
Crestline Village Water District	5%
Davis City of	76%
Delano City of	0%
Del Oro Water Company	56%

Urban Water Suppliers Projecting Annual Surplus	%
Desert Water Agency	0%
Diablo Water District	8%
Discovery Bay Community Services District	73%
Downey City of	0%
East Niles Community Services District	27%
East Orange County Water District	0%
East Valley Water District	2%
Eastern Municipal Water District	0%
El Dorado Irrigation District	46%
El Monte City of	9%
El Toro Water District	0%
Elk Grove Water District	87%
Elsinore Valley Municipal Water District	9%
Escondido City of	0%
Eureka City of	1%
Fair Oaks Water District	154%
Fairfield City of	61%
Fallbrook Public Utility District	0%
Fillmore City of	15%
Folsom City of	46%
Foothill Municipal Water District	0%
Fortuna City of	0%
Fountain Valley City of	0%
Fullerton City of	0%
Galt City of	0%
Garden Grove City of	0%
Georgetown Divide Public Utility District	94%
Glendale City of	0%
Glendora City of	0%
Golden State Water Company - Artesia	0%
Golden State Water Company - Barstow	0%
Golden State Water Company - Bell Gardens	0%
Golden State Water Company - Claremont	0%
Golden State Water Company - Cordova	0%
Golden State Water Company - Culver City	0%
Golden State Water Company - Florence Graham	0%
Golden State Water Company - Norwalk	0%
Golden State Water Company - Orcutt	0%
Golden State Water Company - Placentia	0%
Golden State Water Company - San Dimas	0%
Golden State Water Company - South Arcadia	0%
Golden State Water Company - South San Gabriel	0%
Golden State Water Company - Southwest	0%
Golden State Water Company - West Orange	0%
Goleta Water District	23%

Urban Water Suppliers Projecting Annual Surplus	%
Great Oaks Water Company Incorporated	211%
Greenfield City of	9%
Greenfield County Water District	257%
Groveland Community Services District	24%
Hawthorne City of	0%
Healdsburg City of	129%
Helix Water District	0%
Hemet City of	0%
Hesperia Water District	0%
Hi Desert Water District	0%
Humboldt Bay Municipal Water District	834%
Humboldt Community Services District	187%
Huntington Beach City of	0%
Huntington Park City of	4%
Indian Wells Valley Water District	210%
Indio City of	0%
Inglewood City of	2%
Irvine Ranch Water District	25%
Joshua Basin Water District	10%
Jurupa Community Service District	4%
Kerman City of	16%
Kern County Water Agency Improvement District No 4	0%
La Habra City of	0%
La Verne City of	40%
Laguna Beach County Water District	0%
Lake Hemet Municipal Water District	15%
Lakeside Water District	0%
Lakewood City of	54%
Lamont Public Utility District	0%
Lathrop City of	0%
Liberty Utilities (Park Water) Corp	0%
Lincoln City of	0%
Lincoln Avenue Water Company	2%
Linda County Water District	309%
Lodi City of	51%
Loma Linda City of	220%
Lomita City of	10%
Lompoc City of	22%
Long Beach City of	0%
Los Angeles County Waterworks District 29 - Malibu & Marina Del Rey	0%
Los Angeles County Waterworks District 40 - Antelope Valley	0%
Los Banos City of	23%
Lynwood City of	5%
Madera City of	0%

Urban Water Suppliers Projecting Annual Surplus	%
Manhattan Beach City of	4%
Marin Municipal Water District	0%
Marina Coast Water District	174%
McKinleyville Community Services District	63%
Merced City of	0%
Mesa Water District	31%
Mission Springs Water District	0%
Modesto City of	0%
Monrovia City of	0%
Monte Vista Water District	14%
Montecito Water District	0%
Monterey Park City of	0%
Morro Bay City of	50%
Moulton Niguel Water District	0%
Mountain View City of	0%
Municipal Water District of Orange County (MWDOC)	0%
Myoma Dunes Mutual Water Company	0%
Napa City of	12%
Nevada Irrigation District	6%
Newman City of	20%
Newport Beach City of	0%
Nipomo Community Service District	0%
Norco City of	104%
North Coast County Water District	56%
North Marin Water District	0%
North Tahoe Public Utilities District	84%
North of The River Municipal Water District	40%
Norwalk City of	70%
Oakdale City of	0%
Oildale MWD	62%
Olivehurst Public Utilities District	0%
Olivenhain Municipal Water District	0%
Ontario City of	0%
Orange City of	0%
Orchard Dale Water District	7%
Otay Water District	0%
Oxnard City of	6%
Padre Dam Municipal Water District	0%
Paradise Irrigation District	107%
Paramount City of	2%
Pasadena City of	12%
Paso Robles City of	106%
Patterson City of	42%
Petaluma City of	0%
Phelan Pinon Hills Community Services District	0%

Urban Water Suppliers Projecting Annual Surplus	%
Pico Rivera City of	0%
Pico Water District	0%
Pismo Beach City of	0%
Pittsburg City of	1%
Placer County Water Agency	132%
Pomona City of	0%
Port Hueneme City of	92%
Port Hueneme Water Agency	19%
Porterville City of	7%
Poway City of	0%
Quartz Hill Water District	61%
Rainbow Municipal Water District	0%
Rancho California Water District	0%
Redding City of	27%
Redlands City of	8%
Redley City of	0%
Redwood City of	24%
Rialto City of	36%
Rincon Del Diablo Municipal Water District	0%
Rio Linda - Elverta Community Water District	255%
Rio Vista City of	0%
Ripon City of	145%
Riverbank City of	108%
Riverside City of	40%
Riverside Highland Water Company	38%
Rohnert Park City of	0%
Rosamond Community Service District	0%
Rowland Water District	0%
Rubidoux Community Service District	5%
Rubio Canyon Land and Water Association	0%
Running Springs Water District	8%
Sacramento City of	173%
Sacramento County Water Agency	0%
Sacramento Suburban Water District	25%
San Antonio Water Company	25%
San Benito County Water District	0%
San Bernardino City of	0%
San Bernardino County Service Area 64 Spring Valley Lake	0%
San Bernardino County Service Area 70 J Oak Hills	0%
San Bernardino Valley Municipal Water District	21%
San Buenaventura City of (Ventura)	16%
San Clemente City of	0%
San Diego City of	0%
San Diego County Water Authority	0%
San Dieguito Water District	0%

Urban Water Suppliers Projecting Annual Surplus	%
San Fernando City of	46%
San Gabriel County Water District	0%
San Gabriel Valley Water Company	0%
San Gabriel Valley Water Company Fontana Division	0%
San Geronio Pass Water Agency	0%
San Jacinto City of	0%
San Jose City of	0%
San Juan Capistrano City of	0%
San Juan Water District	97%
San Lorenzo Valley Water District	0%
San Luis Obispo City of	62%
San Luis Obispo County Flood Control and Water Conservation	9%
Sanger City of	3%
Santa Ana City of	0%
Santa Barbara City of	0%
Santa Clara City of	0%
Santa Cruz City of	0%
Santa Fe Springs City of	0%
Santa Margarita Water District	0%
Santa Maria City of	39%
Santa Paula City Of	0%
Santa Rosa City of	0%
Scotts Valley Water District	20%
Seal Beach City of	0%
Shafter City of	0%
Shasta Lake City of	2%
Sierra Madre City of	0%
Signal Hill City of	125%
Soledad City of	9%
Sonoma City of	0%
Sonoma County Water Agency	0%
Soquel Creek Water District	0%
South Coast Water District	0%
South Feather Water and Power	133%
South Gate City of	11%
South Pasadena City of	0%
South San Joaquin Irrigation District	0%
South Tahoe Public Utility District	590%
Stockton City of	107%
Stockton East Water District	65%
Suburban Water Systems - San Jose Hills	8%
Suburban Water Systems - Whittier/La Mirada	38%
Sunny Slope Water Company	11%
Sunnyslope County Water District	7%
Sunnyvale City of	0%

Urban Water Suppliers Projecting Annual Surplus	%
Sweetwater Authority	0%
Tehachapi City of	16%
Temescal Valley Water District	0%
Three Valleys Municipal Water District	3%
Torrance City of	36%
Trabuco Canyon Water District	0%
Tracy City of	0%
Triunfo Sanitation District/Oak Park Water Service	0%
Truckee - Donner Public Utilities District	236%
Tulare City of	0%
Tuolumne Utilities District	122%
Turlock City of	0%
Tustin City of	0%
Twentynine Palms Water District	10%
United Water Conservation District	0%
Upland City of	0%
Upper San Gabriel Valley Municipal Water	0%
Vacaville City of	20%
Vallecitos Water District	47%
Vallejo City of	34%
Valley Center Municipal Water District	0%
Valley County Water District	6%
Valley of the Moon Water District	0%
Valley Water Company	0%
Vernon City of	27%
Victorville Water District	0%
Vista Irrigation District	0%
Walnut Valley Water District	30%
Wasco City of	0%
Watsonville City of	51%
West Basin Municipal Water District	0%
West Kern Water District	0%
West Sacramento City of	0%
West Valley Water District	70%
Western Municipal Water District of Riverside	58%
Westminster City of	0%
Whittier City of	2%
Windsor Town Of	0%
Woodland City of	123%
Woodland-Davis Clean Water Agency	125%
Yorba Linda Water District	0%
Yreka City of	504%
Yuba City	0%
Yucaipa Valley Water District	20%

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	Urban Water Suppliers Fully Addressing Projected Shortage	% Before
Alameda County Flood Control District Zone 7	-15%	Hanford City of	-15%
Alameda County Water District	-14%	Hayward City of	-17%
Antelope Valley - East Kern Water Agency	-17%	Hillsborough Town Of	-20%
Antioch City of	-9%	Hollister City of	-3%
Bakersfield City of	-10%	Inland Empire Utilities Agency	-35%
Beaumont - Cherry Valley Water District	-27%	Lake Arrowhead Community Services District	-8%
Bella Vista Water District	-94%	Las Virgenes Municipal Water District	-63%
Burbank City of	-4%	Livermore City of	-18%
Burlingame City of	-15%	Livingston City of	-5%
California American Water Company - Ventura District	-40%	Los Angeles City Department of Water and Power	-30%
California Water Service Company Bear Gulch	-26%	Mammoth Community Water District	-18%
California Water Service Company Mid Peninsula	-26%	Martinez City of	-15%
California Water Service Company South San Francisco	-28%	Metropolitan Water District of Southern California	-43%
California Water Service Company Westlake	-40%	Mid-Peninsula Water District	-14%
Calleguas Municipal Water District	-40%	Millbrae City of	-12%
Cambria Community Service District	-12%	Milpitas City of	-18%
Camrosa Water District	-19%	Montebello Land and Water Company	-12%
Carpinteria Valley Water District	-2%	Morgan Hill City of	-23%
Casitas Municipal Water District	-14%	Mountain House Community Services District	-20%
Cloverdale City of	-14%	Oceanside City of	-10%
Coalinga City of	-20%	Palmdale Water District	-19%
Coastside County Water District	-8%	Palo Alto City of	-7%
Contra Costa Water District	-11%	Pleasanton City of	-15%
Corcoran City of	-2%	Ramona Municipal Water District	-3%
Cucamonga Valley Water District	-9%	Roseville City of	-14%
Daly City	-18%	San Bruno City of	-11%
Dinuba	-10%	San Francisco Public Utilities Commission	-5%
Dublin San Ramon Services District	-18%	San Gabriel Valley Municipal Water District (*)	-93%
East Bay Municipal Utility District	-9%	San Jose Water Company	-9%
East Palo Alto City of	-11%	Santa Clara Valley Water District	-11%
El Centro City of	-8%	Santa Clarita Valley Water Agency	-30%
Estero Municipal Improvement District	-19%	Santa Fe Irrigation District	-12%
Fresno City of	-20%	Santa Monica City of	-14%
Gilroy City of	-24%	Suisun - Solano Water Authority	-2%
Golden State Water Company - Bay Point	-2%	Thousand Oaks City of	-67%
Golden State Water Company - Simi Valley	-33%	Water Facilities Authority (*)	-42%
		Westborough Water District	-17%

(*) These are wholesalers whose reports show remaining shortages. However, shortages have been 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 (%)
Menlo Park City of	-21%	-5%
Ventura County Waterworks District No 01 - Moorpark	-54%	-4%
Ventura County Waterworks District No 08 - Simi Valley	-68%	-6%

Table A-4. Urban Water Suppliers that did not Submit Water Shortage Assessment Reports
(As of November 2, 2022)

Urban Water Suppliers that did not Submit Reports
Alco Water Service
Arvin Community Service District
California City
California Domestic Water Company
Central Coast Water Authority
Compton City of
El Segundo City of
Exeter City of
Grover Beach City of
Imperial City of
Kingsburg City of

Urban Water Suppliers that did not Submit Reports
La Palma City of
Lemoore City of
Manteca City of
Modesto Irrigation District
Orangevale Water Company
Red Bluff City of
Susanville City of
Tehachapi - Cummings County Water District
Ukiah City of
Vaughn Water Company

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%
California Water Service Company Kern River Valley	0%
California Water Service Company King City	0%
California Water Service Company Redwood Valley	0%
California Water Service Company Willows	0%
Casitas Municipal Water District – Ojai (<i>0% after actions fully addressing shortage</i>)	(-5%) before actions
Dixon City of	0%
Mojave Water Agency	0%
South Mesa Water Company	15%
Tahoe City Public Utilities District	54%

Appendix B Annual Water Shortage Assessment Reporting Tables

Table B-1. Annual Assessment Information

Annual Assessment Information (Required)	
Year Covered By This Shortage Report	
Start: July 1,	2022
End: June 30,	2023
Supplier's Annual Assessment Planning Cycle	
Start Month:	MONTH
End Month:	MONTH
Data Reporting Interval Used: MONTHLY, Bi-MONTHLY, QUARTERLY, or ANNUALLY	
Volume Unit for Reported Supply and Demand: <i>(Must use the same unit throughout)</i>	
AF	
Water Supplier's Contact Information	
Water Supplier's Name:	Water_Supply_Name
Contact Name:	
Contact Title:	
Street Address:	
ZIP Code:	
Phone Number:	
Email Address:	
Report Preparer's Contact Information <i>(if different from above)</i>	
Preparer's Organization Name:	
Preparer's Contact Name:	
Phone Number:	
Email Address:	
Supplier's Water Shortage Contingency Plan	
WSCP Title	
WSCP Adoption Date	MM/DD/YYYY
Other Annual Assessment Related Activities (Optional)	
Activity	Timeline/ Outcomes / Links / Notes
Annual Assessment/ Shortage Report Title:	Optional
Annual Assessment / Shortage Report Approval Date:	MM/DD/YYYY
Other Annual Assessment Related Activities:	Optional
(Add rows as needed)	

Table B-3. Water Supplies

	= From prior tables
	= Auto calculated

Table 3: Water Supplies ¹																		
Water Supply	Start Year: 2022	Volumetric Unit Used ² :																
Drop-down List May use each category multiple times. These are the only water supply categories that will be recognized by the WUEdata online submittal tool (Add additional rows as needed)	Additional Detail on Water Supply	Projected Water Supplies - Volume ³													Water Quality	Total Right or Safe Yield* (optional)		
		Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Water Supply Type	Drop-down List			
Potable Supplies																		
Total by Month (Potable)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0
Non-Potable Supplies																		
Total by Month (Non-Potable)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0

Notes: List hydrological and regulatory conditions, infrastructure capabilities, and plausible constraints which may impact the water supplies

¹Projections are based on best available data at time of submitting the report and actual supply volumes could be different due to many factors.
²Units of measure (AF, CCF, MG) must remain consistent.
³When opting to provide other than monthly volumes (bi-monthly, quarterly, or annual), please see directions on entering data for Projected Water Supplies in the Table Instructions.

Table B-4(P). Potable Water Shortage Assessment

													= Auto calculated	
													= From prior tables	
													= For manual input	
Table 4(P): Potable Water Shortage Assessment¹													Start Year: 2022	Volumetric Unit Used ² :
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun ³	Total	
Anticipated Unconstrained Demand														
Anticipated Total Water Supply														
Surplus/Shortage w/o WSCP Action														
% Surplus/Shortage w/o WSCP Action														
State Standard Shortage Level														
Planned WSCP Actions														
Benefit from WSCP: Supply Augmentation														
Benefit from WSCP: Demand Reduction														
Revised Surplus/Shortage with WSCP														
% Revised Surplus/Shortage with WSCP														

¹Assessments are based on best available data at time of submitting the report and actual volumes could be different due to many factors.
²Units of measure (AF, CCF, MG) must remain consistent.
³When optional monthly volumes aren't provided, verify Tables 2 and 3 use the same columns for data entry and are reflected properly in Table 4 and make sure to use those same columns to enter the benefits from Planned WSCP Actions. Please see directions on the shortage balancing exercise in the Table Instructions. If a shortage is projected, the supplier is highly recommended to perform a monthly analysis to more accurately identify the time of shortage.

Table B-4(NP). Non-Potable Water Shortage Assessment (Optional)

													= Auto calculated	
													= From prior tables	
													= For manual input	
Table 4(NP): Non-Potable Water Shortage Assessment¹													Start Year:	Volumetric Unit Used ² :
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun ³	Total	
Anticipated Unconstrained Demand: Non-Potable														
Anticipated Total Water Supply: Non-Potable														
Surplus/Shortage w/o WSCP Action: Non-Potable														
% Surplus/Shortage w/o WSCP Action: Non-Potable														
Planned WSCP Actions														
Benefit from WSCP: Supply Augmentation														
Benefit from WSCP: Demand Reduction														
Revised Surplus/Shortage with WSCP														
% Revised Surplus/Shortage with WSCP														

¹Assessments are based on best available data at time of submitting the report and actual volumes could be different due to many factors.
²Units of measure (AF, CCF, MG) must remain consistent.
³When optional monthly volumes aren't provided, verify Tables 2 and 3 use the same columns for data entry and are reflected properly in Table 4 and make sure to use those same columns to enter the benefits from Planned WSCP Actions. Please see directions on the shortage balancing exercise in the Table Instructions. If a shortage is projected, the supplier is highly recommended to perform a monthly analysis to more accurately identify the time of shortage.

