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TECHNICAL MEMORANDUM

DATE: August 27, 2024

Project No.: 941-80-24-32
SENT VIA: EMAIL

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FROM: Garrett Rapp, PE, RCE #86007

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SUBJECT: Design of Projection Scenarios to Support the 2025 Safe Yield Reevaluation (#3)

This technical memorandum (TM) is the third of three TMs that document the development of an ensemble of projection scenarios (Projection Ensemble) for the 2025 Safe Yield Reevaluation (2025 SYR).

The objective of the Projection Ensemble is to characterize the range in future uncertainties in climate and the water demands and supply plans (Water Plans) of the water purveyors in the Chino Basin, pursuant to Steps 3 through 5 of the 2022 Safe Yield Reset Methodology:[1]

3. *Describe current and projected future cultural conditions, including but not limited to land use and water-management practices, such as: pumping, managed recharge, managed groundwater storage, impervious land cover, water recycling, and water conservation practices. Identify a possible range of projected future cultural conditions.*
4. *Using the most current research on future climate and hydrology, identify a possible range of projected future climatic conditions in the Santa Ana River watershed.*
5. *Using the results of [3.] and [4.] above, prepare an ensemble of multiple projection scenarios of combinations of future climate/hydrology and cultural conditions (herein called the "Projection Ensemble"). Assign likelihoods to each scenario in the Projection Ensemble.*

The Projection Ensemble will be simulated with the Chino Valley Model (CVM) to characterize the future uncertainties of the hydrology, net recharge, and Safe Yield of the Chino Basin.

[1] See Attachment C of the 2022 Update of the Chino Basin Safe Yield Reset Methodology

The objectives of this TM are to (i) document the feedback received from prior TMs and workshops, including Scenario Design TM #2 (Scenario TM #2),[2] the first draft of Scenario TM #3,[3] the March 7, 2024 stakeholder workshop (Workshop #2),[4] and the June 25, 2024 stakeholder workshop (Workshop #3),[5] (ii) quantitatively describe various proposed projections of Water Plans that will be included in the Projection Ensemble, and (iii) describe the proposed approach to developing climate projections. The Watermaster parties and other stakeholders will be presented with the information documented in this TM at a workshop on August 27, 2024 and asked to provide feedback.

FEEDBACK FROM PRIOR TECHNICAL MEMORANDA AND WORKSHOPS

This TM documents feedback from Workshops #2 and #3, Scenario TM #2, and the first draft of Scenario TM #3. Written stakeholder feedback and responses are included in Attachment A. The main themes of the verbal stakeholder feedback are discussed below.

Feedback from Workshop #2 and Scenario TM #2

Scenario TM #2 and Workshop #2 qualitatively described the proposed projections of the Water Plans to include in the Projection Ensemble, described the available and recommended climate datasets that may be included in the Projection Ensemble, and outlined the proposed Projection Ensemble to use in the 2025 SYR. Stakeholders were asked to provide written feedback on Scenario TM #2 and Workshop #2 to further refine the Projection Ensemble.

Characterization of Groundwater and Imported Water Conditions

Scenario TM #2 defined water demands, groundwater availability, and imported water availability as the three primary elements of Water Plans that will characterize the range in future uncertainties in Water Plans in the Projection Ensemble. Groundwater and imported water availability were defined as the ability of the parties to access, purchase, convey, and use these waters to meet their demands. During Workshop #2, several parties recommended that the definitions be expanded to include the "use" of groundwater or imported water more explicitly, because "availability" does not necessarily lead to the use of a supply. One party suggested characterizing these elements as groundwater/imported water utilization rather than availability. This suggestion will be reflected in discussions of these elements of the Projection Ensemble going forward. The definitions of expected high, and low conditions for groundwater and imported water utilization remain unchanged from those described in TM #2.

Feedback from Workshop #3 and First Draft of Scenario TM #3

Workshop #3 and the June 25, 2024 draft of this TM introduced the first draft of the quantitative projection scenarios characterizing the nine scenarios of the Projection Ensemble, including defining the final Projection Ensemble; describing the proposed method to quantify the parties' responses to the Conservation Regulations, precipitation changes, and temperature fluctuations; and describing the then-proposed method to quantify the climate scenarios. Written feedback from Workshop #3 and the June 25, 2024 draft Scenario TM #3 is included in Attachment B along with responses. The main themes of the verbal feedback at Workshop #3 and subsequent related discussions at Watermaster stakeholder meetings are described below.

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[2] Scenario Design TM #2

[3] June 25, 2024 draft Scenario Design TM #3

[4] Slides from Workshop #2

[5] Slides from Workshop #3

Consideration of Conservation Regulations in Projection Ensemble

Two parties suggested that the 2018 Urban Water Use Objectives legislation (Assembly Bill 1668 and Senate Bill 606) and the related "Making Conservation a California Way of Life" (Conservation Regulation)[6] should not be considered in the Water Plan Scenarios that are developed for the 2025 SYR due to the uncertainty of the projected responses and impacts. While we acknowledge the uncertainty in the parties' and their retail customers' responses to the Conservation Regulations are uncertain, we will quantify the impact of the Conservation Regulation in the Water Plan Scenarios for the following reasons:

1. The July 2020 Court Order[7] adopting the Safe Yield of 131,000 acre-feet per year (afy) for the period of 2021 through 2030 also required that the Safe Yield be reevaluated "[i]f the California State Water Resources Control Board develops water conservation measures prior to June 30, 2030, that result in a reduction in urban irrigation […] that is reasonably likely to materially reduce recharge to the Basin…" Based on the current understanding of the adopted Conservation Regulation and the supporting evidence outlined in the *FY 2022/23 Data Collection and Evaluation Report*, we believe that the Conservation Regulation is reasonably likely to materially reduce recharge to the Basin.
2. The Conservation Regulation is a foreseeable future cultural condition and is therefore required to be considered pursuant to the 2022 Safe Yield Reset Methodology.
3. The Water Plans provided by the parties, many of which were derived from the 2020 Urban Water Management Plans, appear to be consistent with the historical trends of overestimating future demands.[8] Therefore, the Water Plan Scenarios should reflect demands that are less than the party-provided Water Plans.
4. Applying the Conservation Regulation's water budget method to adjust each party's Water Plan (see sections on the Conservation Regulation below) is a defensible method to develop Water Plan Scenarios that adjust the party-provided Water Plans. By engaging with parties to gauge their anticipated responses to the Conservation Regulation, we have developed alternative Water Plans that reflect plausible future scenarios, regardless of their direct alignment with the Conservation Regulation.

For these reasons, the Conservation Regulation should be considered in the Water Plan Scenarios. However, we acknowledge the uncertainty in the parties' and their retail customers' responses to the Conservation Regulations. To account for this uncertainty, we consider a range of possible impacts from the Conservation Regulation in the Water Plan Scenarios. We engaged with the parties to understand the range of possible responses to the Conservation Regulation. Based on that information, we applied the Conservation Regulation's water budget method to adjust each party's Water Plan to reflect a range of plausible future scenarios that consider different degrees of response to the Conservation Regulation. We continue to invite your input on the specific Water Plan Scenarios described in this TM.

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[6] Making Conservation a California Way of Life Fact Sheet

[7] 20200716 Notice of Lodging of [Proposed] Order re CBWM Motion re 2020 Safe Yield Reset

[8] See Figure 1 in Scenario TM #1

FINAL PROJECTION ENSEMBLE

This section describes the final Projection Ensemble and the proposed quantification of each of its scenarios. Based on the feedback from Scenario TMs #1 and #2 and Workshops #1 and #2, we propose the final Projection Ensemble shown in Table 1. These nine Projection Scenarios, comprising a combination of three Water Plan Scenarios and three Climate Scenarios, synthesize the "possible range of projected future cultural conditions" and "possible range of projected future climatic conditions" required in the 2022 Safe Yield Reset Methodology.[9]

Table 1. Projection Ensemble

Projection Scenario	Rationale	Water Plan Scenario			Climate Scenario
		Demand	Groundwater Utilization	Imported Water Utilization	
1	Expected/baseline	Expected	Expected	Expected	Average
2	Hot/dry climate	Expected	Expected	Expected	Hot/dry
3	Cool/wet climate	Expected	Expected	Expected	Cool/wet
4	Impact of high demands	High	High	Low	Average
5	Low groundwater levels	High	High	Low	Hot/dry
6	High net recharge	High	High	Low	Cool/wet
7	Impact of low demands	Low	Low	High	Average
8	Low net recharge	Low	Low	High	Hot/dry
9	High groundwater levels	Low	Low	High	Cool/wet

Scenario 1 is the "baseline" scenario that will simulate expected conditions for all Water Plans and average future climate/hydrology.

Scenarios 2 and 3 are modifications to Scenario 1 that will simulate the effects of a hotter/drier climate (2) and cooler/wetter climate (3). Together, these scenarios will characterize the effects of future climatic uncertainty on net recharge and groundwater levels.

Scenarios 4 and 7 are designed to characterize the effects of future uncertainty in Water Plans on net recharge and groundwater levels—particularly the effects of pumping on the Basin. Both scenarios include the average Climate Scenario. Scenario 4 assumes high demands and high groundwater utilization (and low imported water utilization). Scenario 7 assumes low demands and low groundwater utilization (and high imported water utilization).

Scenarios 5 and 9 are designed to simulate the plausible range in groundwater levels. Scenario 5 assumes high demands, high groundwater utilization, low imported water utilization, and a hot/dry climate, which will likely result in the lowest groundwater levels of any combination. Conversely, Scenario 9 assumes low demands, low groundwater utilization, high imported water utilization, and a cool/wet climate, which will likely result in the highest groundwater levels of any combination.

Scenarios 6 and 8 are designed to simulate the plausible range in net recharge. Scenario 6 assumes high demands, high groundwater utilization, low imported water utilization, and a cool/wet climate, which will likely result in the highest net recharge of any combination. Conversely, Scenario 8 assumes low demands,

[9] See Attachment C of the 2022 Update of the Chino Basin Safe Yield Reset Methodology

low groundwater utilization, high imported water utilization, and a hot/dry climate, which will likely result in the lowest net recharge of any combination.

Other possible combinations of Water Plan Scenarios and Climate Scenarios are unlikely to result in conditions (e.g., net recharge, groundwater levels) that are outside of the range of the scenarios described in Table 1.

PROCESS TO TRANSLATE THE WATER PLAN SCENARIOS INTO 2025 CVM INPUTS

The process to translate the Water Plan Scenarios into inputs for the 2025 Chino Valley Model (CVM) involves first developing the Water Plan Scenarios for average hydrologic conditions and then adjusting the annual Water Plans based on interannual variability in climate (precipitation and temperature). This process will be guided by the following questions:

1. Which model inputs will vary for each Water Plan Scenario?
2. What are the current plans, projections, and assumptions for future cultural conditions in the Chino Basin?
3. How should the current plans and projections be modified to develop Water Plan Scenarios that will represent the uncertainty in future cultural conditions?
4. How should the Water Plan Scenarios be adjusted to account for climatic variability?

Each of these questions is addressed in the following sections.

CVM Inputs that Will Vary in Each Water Plan Scenario

This section answers question 1 above: *Which model inputs will vary for each Water Plan Scenario?*

Understanding how the cultural conditions translate into model inputs is important to guide the level of detail required for the development of each projection scenario. The scenarios in the Projection Ensemble will be translated to CVM inputs as demonstrated in the flowchart in Figure 1. The Water Plan Scenarios influence three CVM inputs:

- **Deep infiltration of precipitation and applied water (DIPAW).** DIPAW is calculated by the R4 model, which is part of the CVM, and is translated into groundwater recharge via the recharge (RCH) package of MODFLOW, the groundwater-flow model of the CVM. Changes in land use, population, water demands, and climate drive changes in DIPAW.
- **Groundwater pumping.** Groundwater pumping is based on the Water Plan Scenarios and fluctuate from year to year based on demands. Groundwater pumping is implemented in the well (WEL) and multi-node well (MNW2) packages of MODFLOW.
- **Managed aquifer recharge.** Managed aquifer recharge includes the recharge of stormwater, recycled water, and imported water. Stormwater recharge varies based on precipitation conditions and the extent and operation of facilities to capture and recharge stormwater. Recycled water recharge varies based on water supply conditions, indoor water use patterns, and the operations, economics, and other constraints governing the ability to recharge recycled water. Imported water recharge is based on the assumed use of managed storage in the Chino Basin, which responds to groundwater pumping, net recharge, and the parties' choices of how to meet replenishment obligations. In addition, imported water can be recharged via Storage and Recovery Programs. Imported water recharge is implemented in the flow and head boundary (FHB) package of MODFLOW.

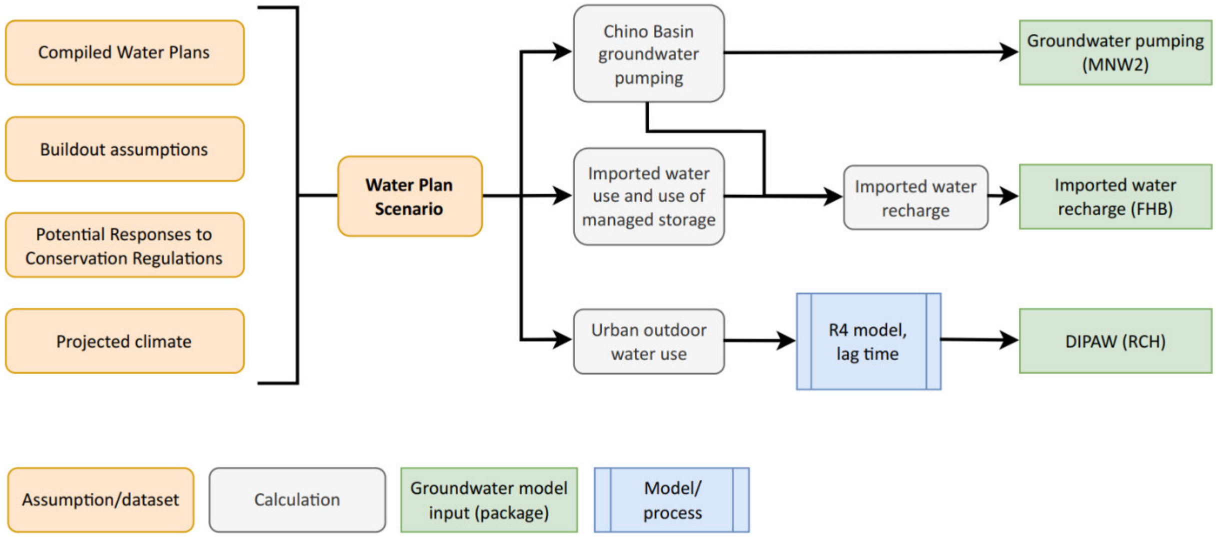

Figure 1. Process to translate Water Plan Scenarios into groundwater model inputs for the 2025 SYR.

Current Plans, Projections, and Assumptions for Future Cultural Conditions

This section answers question 2 above: *What are the current plans, projections, and assumptions for future cultural conditions in the Chino Basin?*

The current plans, projections, and assumptions for future cultural conditions will form the basis for the Water Plan Scenarios. Most of the data and information described in this section were collected from the Chino Basin parties. The following subsections discuss the datasets and assumptions that inform the Water Plan Scenarios, including historical water uses, Water Plans, buildout timeline, timeline for implementing water conservation regulations, and the use of managed storage and supplemental water recharge.

Historical Water Uses

Figure 2 depicts the historical water-supply data compiled from Water Year (WY) 2015 through 2023 for the Chino Basin parties. Over this period, total water demand ranged from 272,000 af (in WY 2023) to 307,000 af (in WY 2020) and averaged about 292,000 afy.

Historical water supplies vary depending on hydrologic conditions. The nine-year period experienced three years that were wetter than average (wet years; WYs 2017, 2019, and 2023), with the other six years experiencing below-average precipitation (dry years). Chino Basin groundwater comprises about 47 percent of supplies in wet years, and about 51 percent of supplies in dry years, averaging 49 percent. Imported water comprises about 22 percent of supplies in wet years, and about 20 percent of supplies in dry years, averaging 21 percent.

Compiled Water Plans

As part of the annual data collection and evaluation process, Watermaster requests updated Water Plans from the major Appropriative Pool retailers (AP retailers) and the larger Overlying Non-Agricultural Pool parties. For many of the Appropriative Pool retailers, the Water Plans are based on their respective 2020 Urban Water Management Plans (UWMPs). Watermaster worked with the AP retailers to develop monthly Water Plans and determine the priority of supplies that will be used to meet demands when projected water supplies exceed demands. The AP retailers included:

- City of Chino (Chino)
- City of Chino Hills (Chino Hills)
- City of Norco (Norco)
- City of Ontario (Ontario)
- City of Pomona (Pomona)
- City of Upland (Upland)
- Cucamonga Valley Water District (CVWD)
- Fontana Water Company (FWC)
- Golden State Water Company (GSWC)
- Jurupa Community Services District (JCSD)
- Marygold Mutual Water Company (MMWC)
- Monte Vista Water District (MVWD)
- Santa Ana River Water Company (SARWC)
- San Antonio Water Company (SAWCo)
- West Valley Water District (WVWD)

The projected pumping for the Overlying Non-Ag Pool parties (excluding those also in the Appropriative Pool, such as Ontario and MVWD) was developed based on historical trends or the party's response to the annual data request. Excluding pumping from General Electric Company, which injects approximately the same volume of water that it pumps, the total projected pumping by the Overlying Non-Agricultural Pool is about 1,430 afy. For simplicity and due to the generally stable nature of the demands of the Overlying Non-Agricultural Pool, we do not assume any variation in these projections.

Agricultural Pool demands are expected to reflect the trend of buildout across the Basin, declining as the Appropriative Pool agencies' service areas build out aligning with the potential buildout timelines discussed below. Watermaster has estimated the production of the Agricultural Pool at buildout based on historical data and projection of wells that are expected to pump in the future. In addition to the wells that are expected to pump at buildout, there are several agricultural areas that are irrigated by recycled water. Several of these areas are expected to remain in the future. Figure 3 shows the Agricultural Pool wells that are expected to produce in the future beyond buildout of the Basin and the projected pumping at these wells. The Agricultural Pool's total water use at buildout is expected to be about 4,070 afy. Uncertainty of the timing of decline in Agricultural Pool pumping is reflected in the timing of buildout discussed below.

Table 2 shows the aggregate Water Plan for the Watermaster parties and the Chino Desalter Authority for 2020[10] (actual data in year with highest historical demands) and projected Water Plans for planning years 2025 through 2045. The projected demands increase from 307,000 af in 2020 to 374,000 af in 2045. The projected utilization of Chino Basin groundwater (44 to 48 percent of total supply) is less than the historical utilization over the past nine years (49 percent). Conversely, the projected utilization of imported water (25 to 27 percent of total supply) is greater than the historical utilization over the past nine years (21 percent of total supply).

[10] Compiled for Water Year 2020 for the Water Year 2020 Annual Report that Watermaster submitted to the State pursuant to the Sustainable Groundwater Management Act.

Table 2. Compiled Water Plans for the Watermaster Parties

Water Supply	2020[a]	2025	2030	2035	2040	2045
Volume (afy)						
Chino Basin Groundwater	151,365	143,179	155,712	163,446	175,211	179,016
Non-Chino Basin Groundwater	48,308	54,682	55,077	55,371	55,762	55,954
Local Surface Water	26,620	13,205	13,205	13,205	13,205	13,205
Imported Water	59,637	87,113	88,368	91,624	94,310	94,808
Recycled Water for Direct Use	20,857	25,891	27,888	29,185	30,782	31,282
Total	**306,787**	**324,070**	**340,250**	**352,831**	**369,270**	**374,265**
Percent of Total Supply						
Chino Basin Groundwater	49%	44%	46%	46%	47%	48%
Non-Chino Basin Groundwater	16%	17%	16%	16%	15%	15%
Local Surface Water	9%	4%	4%	4%	4%	4%
Imported Water	19%	27%	26%	26%	26%	25%
Recycled Water for Direct Use	7%	8%	8%	8%	8%	8%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Historical data compiled for Water Year 2020 for the Chino Basin SGMA Annual Report.						

Buildout Timeline

Future population growth and land use are typically defined by buildout conditions, where a region approaches stable population and land uses. Most of the 2020 UWMPs for the Appropriative Pool parties indicate that respective service areas will be built out by 2040 or 2045. The parties incorporate these assumptions in their Water Plans, projecting increasing demands through at least 2040. Parties have also indicated that demands and land use conditions could change in the future in response to legislation incentivizing urban densification (i.e., changing land uses to increase population density). Future population growth rates, economic conditions, and other factors can also drive the buildout timeline. The best available data for buildout land use conditions are the cities' General Plans, which were used to develop projected future land use.

Conservation Regulation

Since 2018, the State Water Resources Control Board (State Board) and the Department of Water Resources (DWR) have been developing new water use efficiency standards for urban retail water suppliers to implement the 2018 Urban Water Use Objectives legislation (Assembly Bill 1668 and Senate Bill 606) and the related "Making Conservation a California Way of Life" (Conservation Regulation)[11]. In October 2023, the State Board released the first draft of the proposed Conservation Regulation. Following comments from the public, the State Board released multiple revised drafts in early 2024 before adopting the Conservation Regulation on July 3, 2024.[12] The Conservation Regulation will take effect in January 2025, with compliance expected to be assessed beginning in 2027.

[11] Making Conservation a California Way of Life Fact Sheet

[12] Proposed text of Conservation Regulation that was adopted on July 3, 2024. As of this report, the Conservation Regulation text is being circulated for a sixth review period ending on August 12, 2024. The review period is expected to result in minor corrections and will not require the State Board to re-approve the Conservation Regulation.

The proposed Conservation Regulation requires the calculation of a budget for residential outdoor water use, incorporating a landscape efficiency factor linked to irrigable area, with future reductions slated for 2035 and 2040 to promote water-efficient landscaping practices. The State Board has compiled available data into a statewide database to estimate water use objectives for each water agency subject to the Conservation Regulation. The Chino Basin parties that would be subject to the Conservation Regulation have indicated significant uncertainty in their customers' responses to the Conservation Regulation and have voiced concerns with the State Board database. The State Board database calculates total water use objectives for each agency based on four components: (1) residential water use, including indoor, outdoor, and residential agriculture, (2) water losses, (3) outdoor irrigation for commercial, industrial, and institutional uses with dedicated irrigation meters (CII w/ DIMs), and (4) bonus incentives for recycled water use.[13] Changes in outdoor irrigation for (1) and (3) have the greatest impact on the groundwater basin and are therefore the focus for this study.

Following Watermaster's March 7, 2024 workshop, Watermaster solicited feedback from the parties regarding how to quantify the proposed projection scenarios, including projecting responses to the Conservation Regulation. No Appropriative Pool parties provided specific input on how to quantify responses to the Conservation Regulation. Our approach to quantify projected responses to the Conservation Regulation began with using the State Board database to develop initial estimates of the water use objectives for the parties that are subject to the Conservation Regulation. We met with four Appropriative Pool parties that are subject to the Conservation Regulation: Ontario, Upland, CVWD, and JCSD. The parties indicated that:

- The data upon which the water use objectives are based are generally accurate.
- The State Board database did not calculate a water use objective for CII w/ DIMs because the landscape area used in the calculation has not been generated yet; instead, the water use objective for CII w/ DIMs in the database reflects historical use. Parties indicated that once the water use objectives for CII w/ DIMs is calculated, it will likely be less than their current use, necessitating future reductions in water use from CII w/ DIMs. This would increase the total targeted reductions needed to meet the Conservation Regulation compared to the State Board database. CII water use is a small portion of most parties' water demands.
- The water use objectives for CII w/ DIMs will be easier to meet than residential water use objectives due to the higher proportion of non-functional turf in these areas.
- Many agencies hired an outside consultant to develop refined water use objectives compared to what the State has calculated, including calculating the budget for CII w/ DIMs. These data are unpublished, provisional, and will be updated as the Conservation Regulation continues to be refined.
- Areas that have been recently developed (e.g., Eastvale) or are in development (e.g., Ontario Ranch) are likely to have lower residential water use compared to existing areas.
- Agencies that will be required to reduce water use by greater than about 10-15 percent from current water uses will have trouble meeting these targets without external funding or assistance. However, if such funding or assistance were available, some agencies indicated that such reductions in water use could be possible.

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[13] Indoor water use standards, codified at Water Code section 10609.4(a), were originally set by the State Legislature as a part of the Conservation Legislation and amended in 2022 following joint input from the State Board and DWR. The State Board initiated a separate rulemaking process for water loss performance standards, adopting the final regulation on August 19, 2022. Water Loss Performance Standards Regulatory Text

- The compiled Water Plans generally do not reflect the projected impact of the Conservation Regulation. Agencies with access to imported water generally expect to reduce their usage of imported water to meet the Conservation Regulation. Upland indicated that they would reduce pumping from the Chino Basin rather than reduce use of imported water.

Estimated Implementation of Conservation Regulation for AP Retailers

Based on the current understanding of the Conservation Regulation, input from the parties suggests that the State Board database is appropriate for determining the future water use objectives for residential outdoor use, but its use for determining the future water use objectives for CII w/ DIMs is limited. For each of the nine major AP retailers,[14] we calculated the nominal water use objectives for residential water use based on either the State Board database or the data that the party provided, prioritizing the latter. The parties and the State Board database calculate water use objectives relative to historical uses, not accounting for population growth. These objectives can be converted to gallons per capita per day (gpcd) and multiplied by the projected service area population to calculate the total changes in water demands. All projections shown in this TM have been adjusted for projected population growth based on the population projections in the parties' 2020 UWMPs.

We also calculated the nominal objectives for CII w/ DIMs based on assuming a reduction of 20 percent in 2030, 35 percent in 2035, and 45 percent in 2040 and 2045 compared to historical uses. This timeline is based on the provisional data provided by several parties for their respective CII w/DIMs, which is consistent with the reduced landscape efficiency factors (LEFs) for CII w/DIMs.[15]

Use of Managed Storage and Supplemental Water Recharge

Pursuant to the Judgment, Watermaster levies and collects assessments each year in amounts sufficient to purchase replenishment water to replace pumping by a Pool during the preceding year in excess of that Pool's allocated share of Safe Yield (Overlying Agricultural and Overlying Non-Agricultural Pools) or Operating Safe Yield (Appropriative Pool). Each party's obligation is determined after accounting for any transfers or recovery of stored water. Parties within the Overlying Non-Agricultural Pool can transfer stored water and/or unused Safe Yield rights among themselves with Watermaster approval to minimize their replenishment obligations. Appropriative Pool Parties can do the same within their Pool. After the completion of a fiscal year, Watermaster collects pumping and transfer records from all parties to determine replenishment obligations created in the prior year.

Projected future replenishment obligations are based on current and projected Safe Yield, groundwater augmentation as described above, and the transfer activity among the parties. Prior projections (e.g., the 2020 SYR) have estimated replenishment obligations by comparing aggregate groundwater pumping to aggregate production rights. Aggregate production rights are based on the Safe Yield, Reoperation credits used to offset the Desalter Replenishment Obligation, and projected recycled water recharge credits allocated to the parties. The 2020 SYR used the following assumptions:

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[14] These include Chino, Chino Hills, Ontario, Pomona, Upland, CVWD, FWC, JCSD, and MVWD.

[15] The LEF is "a factor used to calculate the aggregate amount of water a supplier may need to deliver to customers so that they can maintain healthy and efficient landscapes across the supplier's service area." (See footnote 6). The Conservation Regulation sets this factor for CII w/ DIMs at 0.80 from adoption to 2035; 0.63 from 2035 to 2040; and 0.45 from 2040 onward, implying reductions of 20 percent, 37 percent, and 55 percent from historical uses, respectively. Suppliers can obtain credits for irrigation with recycled water that reduce these apparent reductions. Therefore, reductions of 20 percent in 2030, 35 percent in 2040, and 45 percent in 2045 are realistic.

- If aggregate pumping rights are greater than the projected aggregate pumping, then the difference is credited to storage accounts and there is no wet-water recharge for replenishment.
- If the aggregate pumping rights are less than the projected aggregate pumping, then 80 percent of the replenishment obligation is debited to storage accounts with the remainder being satisfied through wet-water recharge. This assumption was based on historical assessment packages.

During Watermaster's annual data collection and evaluation process, Watermaster collects updated information regarding the parties' anticipated use of storage. The current information suggests that 90 percent of replenishment obligations are expected to be met through stored water in the future.

In 2024, Watermaster began developing a tool to project managed storage account balances for individual parties based on pumping projections, transfers, and other assumptions. As of this writing, the assumptions for transfers are not refined to a degree necessary to use the tool. Therefore, we will calculate managed storage and replenishment obligations on an aggregate basis for the 2025 SYR.

Water Plan Scenarios that Represent Uncertainty in Future Cultural Conditions

This section answers question 3 above: *How should the current plans and projections be modified to develop Water Plan Scenarios that will represent the uncertainty in future cultural conditions?*

The following subsections describe the assumptions for each of Water Plan Scenario considering the future uncertainties in: land use buildout, Conservation Regulation, groundwater utilization, and imported water utilization. The three Water Plan Scenarios are shown in Table 1 and include:

- Expected Demands, Expected Groundwater Utilization, Expected Imported Water Utilization (Scenarios 1, 2, and 3)
- High Demands, High Groundwater Utilization, Low Imported Water Utilization (Scenarios 4, 5, and 6)
- Low Demands, Low Groundwater Utilization, High Imported Water Utilization (Scenarios 7, 8, and 9)

Buildout

Buildout assumptions impact future land use conditions and Water Plans. An accelerated buildout would mean that demands increase at a faster rate in the near-term, and vice versa for a slower-than-expected buildout. Based on the information described above, the **expected demand** condition assumes land use buildout as reflected in the compiled Water Plans (around 2040). The **high demand** condition assumes that buildout will occur three years earlier than reflected in the compiled Water Plans (around 2037). The **low demand** condition assumes that buildout will occur five years later than what is reflected in the compiled Water Plans (around 2045). The Water Plans for the high demand and low demand scenarios will be adjusted relative to the expected buildout.

Conservation Regulation

Based on the input from the parties, we have developed three plausible demand scenarios to simulate the degree that the parties' demands will decline due to the Conservation Regulation. In some cases, parties' water use in their Water Plans is less than the water use objective. In these instances, the demands shown in the compiled Water Plans were not adjusted. The three demand conditions assume the following regarding the Conservation Regulation:

- The **expected demand** condition assumes that major AP retailers will meet a minimum of 60 percent of the reductions required to meet nominal objectives in residential water uses and 80 percent of the reductions required to meet nominal objectives in CII w/DIMs.
- The **high demand** condition assumes that major AP retailers will meet a minimum of 35 percent of the reductions required to meet nominal objectives in residential water uses and 50 percent of the reductions required to meet nominal objectives in CII w/DIMs.
- The **low demand** condition assumes that major AP retailers will meet a minimum of 80 percent of the reductions required to meet nominal objectives in residential water uses and 90 percent of the reductions required to meet nominal objectives in CII w/DIMs.

The range in percentages are based on the assumptions that (1) parties will not be able to fully meet the nominal water use objectives and (2) proportional reductions in CII w/ DIMs will exceed that of residential uses.

Groundwater and Imported Water Utilization

The groundwater and imported water utilization conditions are as follows:

- The **expected groundwater and imported water utilization** condition reflects the compiled Water Plans adjusted for the assumed implementation of the Conservation Regulation. Parties are assumed to meet 90 percent of any replenishment obligations through debits from Managed Storage, with the remaining replenishment obligations being met via wet-water recharge.
- The **high groundwater utilization/low imported water utilization** condition assumes that the proportion of total demands met by Chino Basin groundwater increase by eight percent relative to the expected condition, and the proportion of total demands met by imported water declines by an equivalent volume. Parties are assumed to meet 100 percent of any replenishment obligations through debits from Managed Storage.
- The **low groundwater utilization/high imported water utilization** condition assumes that the proportion of total demands met by Chino Basin groundwater decline by eight percent relative to the expected condition, and the proportion of total demands met by imported water increases by an equivalent volume. Parties are assumed to meet 70 percent of any replenishment obligations through debits from Managed Storage, with the remaining replenishment obligations being met via wet-water recharge.

In all scenarios, we assume that water supplies other than Chino Basin groundwater and imported water remain unchanged from the expected condition. Chino Basin groundwater and imported water comprise about 77 to 79 percent of total potable supplies in the Chino Basin. This assumption leads to a more conservative estimate, resulting in larger variations in the potential range of Chino Basin groundwater pumping. Other water sources are not included in the groundwater-flow model, except for groundwater pumping in adjacent basins such as Spadra Basin, Six Basins, Cucamonga Basin, and Temescal Basin, which have a minor impact on the Chino Basin.

Water Plans

Tables 3a, 3b, and 3c show the aggregate Water Plans for the three Water Plan Scenarios for an average hydrologic year. The notable differences between the scenarios include:

- By 2045, total demands range from 330,000 af (low demand) to 364,000 af (high demand), with expected demands at 346,000 af. Figure 4 shows the projected total demand for the three Water Plan Scenarios for an average hydrologic year.
- The percentage of Chino Basin groundwater utilization ranges from 42 percent (low groundwater utilization – 2025) to 51 percent (high groundwater utilization – 2045) of total demands, with expected groundwater utilization between 44 and 49 percent. Figure 5 shows the projected Chino Basin groundwater pumping for the three Water Plan Scenarios for an average hydrologic year.
- The percentage of imported water utilization ranges from 21 percent (low imported water utilization – 2045) to 28 percent (high imported water utilization – 2025) of total demands, with expected imported utilization between 23 and 27 percent. Figure 6 shows the projected Chino Basin imported water demands for the three Water Plan Scenarios for an average hydrologic year.

Historical and projected future pumping for each party and scenario for an average hydrologic year is shown in Table 4. Individual Water Plans for each of the nine major AP retailers (not adjusted for proposed buildout years) are included in Attachment B. For parties other than the nine major AP retailers, groundwater pumping was projected to increase and decrease by five percent from expected for the high and low demand conditions, respectively.

Variability due to Climate Scenarios

This section answers question 4 above: *How should the Water Plan Scenarios be adjusted to account for climatic variability?*

We define climatic variability for the modeling as interannual or multi-year variability in precipitation and temperature. Demands respond to changes in precipitation and temperature (as reflected in changes in evapotranspiration). We consider the impacts of precipitation and temperature on demands to be independent. Demands for individual supplies (e.g., Chino Basin groundwater) are expected to increase or decrease proportionally to the other supplies.

Variability of Demands due to Precipitation

Demands typically decrease during wet years and increase during dry years, mainly because of the influence of precipitation on outdoor irrigation demands. These patterns are reflected in the historical data (Figure 2), where total demands in wet years are up to seven percent less than average, and the total demands in dry years are up to five percent greater than average.

During dry years/periods, increased demands for outdoor irrigation are expected to outweigh any reductions in demands due to water conservation measures. IEUA has estimated in its 2020 UWMP that longer dry periods (three or more years) could result in an increased demand by about nine percent by 2040.[16] These projections are consistent with other regional studies[17] and 2020 UWMPs.

The following methodology adjusts demand based on interannual variations in precipitation, with particular attention to the duration of dry or wet periods. This approach ensures that demand projections account for the impacts of prolonged wet or dry conditions. A dry year is characterized by annual precipitation below the 33rd percentile of historical annual precipitation while a wet year is defined by annual precipitation above the 66th percentile of historical annual precipitation. Using these thresholds, dry and wet periods are identified within the projected precipitation time series, and corresponding demand multipliers are applied according to the length of these periods.

The demand multipliers for a single dry or wet year are 1.03 and 0.97, respectively, representing a 3 percent change in demand. The demand multipliers for a second consecutive dry or wet year are 1.06 and 0.94, respectively, representing a 6 percent change in demand. The demand multipliers for a third consecutive dry or wet year are 1.09 and 0.91, respectively, representing a ±9 percent change in demand.

Figure 7 illustrates the application of the methodology to the projected demands under the Average Climate Scenario described in the section below. The greatest demand multiplier occurs in 2033, where demands are projected to be about 30,000 af (9 percent) greater than the projected demand in an average hydrologic year. The lowest demand multiplier occurs in 2039 and 2050, where demands are projected to be about 21,000 af (9 percent) less than the projected demand in an average hydrologic year.

Variability of Demands due to Temperature

Changes in temperature and evapotranspiration drive changes in demands, primarily outdoor irrigation. IEUA has estimated that a 3.6-degree Fahrenheit (°F) increase in temperature may result in a 4.3 percent increase in demand (about 1.2 percent per °F).[18] The parties that have developed 2020 UWMPs incorporate assumptions for impacts of future climate change in demands pursuant to the California Water Code.[19] Therefore, we assume that the compiled Water Plans, most of which are based on the 2020 UWMPs, reflect the anticipated impacts of temperature on demands for the **average Climate Scenario**. In the **hot/dry** and **cool/wet Climate Scenarios**, it is assumed that demands will increase and decrease, respectively, by 1.2 percent per °F of difference from the average Climate Scenario, calculated on an average annual basis. As discussed below, reference evapotranspiration (ET_0) is the only temperature-related climate variable that will be used to develop the Climate Scenarios. A regression between temperature and ET_0 will be used to derive the temperature change factors. Based on the climate datasets described below, demands will be adjusted by about ±1.5 percent by 2050, and up to ±2.8 percent by 2080.

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[16] Section 2.6 of IEUA's 2020 UWMP

[17] Miro, Michelle E., David G. Groves, David Catt, and Benjamin M. Miller, Estimating Future Water Demand for San Bernardino Valley Municipal Water District. Santa Monica, CA: RAND Corporation, 2018. https://www.rand.org/pubs/working_papers/WR1288.html.

[18] Table 2-3 of IEUA's 2015 IRP

[19] Appendix I. Considering Climate Change Impacts (ca.gov)

CLIMATE DATASETS AND SCENARIOS

The 2025 SYR is reevaluating the Safe Yield for the period from FY 2021 through 2030. Historical climate and cultural conditions will be simulated through FY 2023, with projected cultural conditions and climate beginning in FY 2024 through the model simulation period (FY 2080). This section provides an update on the processing of the climate projection datasets and describes the proposed Climate Scenarios.

Datasets for Projected Climate Conditions

Scenario TM #2 documented the proposed downscaled Global Climate Model (GCM) datasets from Phase 6 of the Coupled Model Intercomparison Project (CMIP6) that we proposed to use for the projection scenarios. Since Scenario TM #2, we have processed the precipitation and temperature datasets for the three climate models identified in TM #2 for all scenarios (i.e., historical, SSP2-4.5, SSP3-7.0, and SSP5-8.5) in the Chino Basin. Our data processing identified systematic discrepancies between the GCM and PRISM datasets for the historical period that Cal-Adapt is working to address as of this writing; however, their effort is not expected to be complete in time to use the GCM datasets in this effort. Therefore, we have revised our approach to defining Climate Scenarios to represent the full range in potential climate futures.

Our proposed method for developing climate projections uses approaches that DWR recommended for incorporating climate change into groundwater sustainability planning (e.g., DWR, 2018).[20] The DWR-recommended approach employs change factors (CFs) derived from spatially downscaled climate data from CMIP Phase 5 (CMIP5). The DWR-recommended approach and CMIP5 change factors were used for the 2020 Safe Yield Recalculation.[21] While it has been demonstrated that many of the CMIP6 models outperform the CMIP5 models in simulating California's climate,[22] our assessment is that CMIP5 remains the best-available climate data that is appropriate for use in the Chino Basin.

Proposed Climate Scenarios

This section describes the proposed method for generating projected precipitation and reference evapotranspiration (ET_0) time series for the proposed Climate Scenarios used in the 2025 SYR.

[20] California Department of Water Resources. 2018. Guidance for Climate Change Data Use During Groundwater Sustainability Plan Development. Accessed on 15 Aug 2024 at https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Groundwater-Management/Sustainable-Groundwater-Management/Best-Management-Practices-and-Guidance-Documents/Files/Climate-Change-Guidance_Final_ay_19.pdf.

[21] See Section 7.2 of the 2020 SYR Report.

[22] Memo on Evaluating Global Climate Models for Studying Regional Climate Change in California

Generating Projected Climate Time Series

Our proposed approach to generate time series data for climate projections is as follows:

1. Collect PRISM[23] precipitation data and historical ET_0 data[24] for the historical period (FY 1951 through 2023).
2. Acquire precipitation and ET change factors (CFs) from DWR for the Chino Basin for the four available climatic conditions:
   - 2030 Central Tendency (2030CT)
   - 2070 Central Tendency (2070CT)
   - 2070 Wet with Moderate Warming (2070WMW)
   - 2070 Dry with Extreme Warming (2070DEW)
3. Select relatively wet, average, and dry 7-year periods from the historical period to repeat during the period from FY 2024 to 2030.
4. Select a continuous 50-year period from the historical record that is representative of the historical average.
5. Multiply the selected 50-year period to generate climate inputs for the period from FY 2031 to 2080.

Choosing Precipitation for FY 2024 through 2030

Annually, net recharge is more sensitive to year-to-year precipitation variability than to longer-term trends in average precipitation. Further, differences in climatic conditions resulting from different emission pathways can be expected to result in only a minor amount of uncertainty over the very near-term compared to natural interannual variation; the Safe Yield that is calculated over FY 2021 through 2030 will be sensitive to the simulated precipitation over the projection period of FY 2024 through 2030.

The projected precipitation datasets generated using DWR CFs reflect future climate trends, but interannual variability over the period of FY 2024 through 2030 may not adequately capture the possible range of precipitation over this period. Therefore, we propose a hybrid approach to projecting precipitation and ET, where the precipitation for FY 2024 through 2030 uses a continuous seven-year period taken from historical data with the 2030 CFs applied, and the precipitation for FY 2031 and beyond uses precipitation modified by DWR CFs. Precipitation data for FY 2024 through 2030 will be derived from the historical (PRISM) record of FY 1950 through 2011, which covers the range of historical data that was used in the 2020 SYR and for which CFs are available. Applying the 2030 CFs to the historical seven-year periods will ensure that the variability and trends comport with the expected trends occurring by the end of the decade. The exception to applying the 2030CT CFs is the seven-year period selected for the hot/dry scenario, which is chosen from FY 2012-2018. This is the driest period in the historical record, and 2030CT CFs are not available for this period.

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[23] Parameter-elevation Relationships on Independent Slopes Model (PRISM) data are developed by the Northwest Alliance for Computational Science and Engineering at Oregon State University (PRISM Climate Group at Oregon State University).

[24] Historical ET_0 data are collected from the nearby California Irrigation Management Information System (CIMIS) stations located in Pomona and Riverside (https://cimis.water.ca.gov/). For the period prior to these CIMIS stations becoming active, ET_0 was estimated by regression relationships developed at these stations with evaporation at Puddingstone reservoir.

Applying CFs to Precipitation and ET Time Series

Although they are provided as time series, DWR CFs are designed to represent a snapshot of climate conditions. For example, the 2030 CFs can be multiplied by historical data to develop a time series of climate data representative of 2030 climatic conditions. To develop dynamic precipitation and ET_0 time series covering the period from 2031 to 2080, we will interpolate linearly between the 2030 and 2070 CFs. Monthly precipitation will be calculated as follows:

$$\text{From 2031 to 2069: } CF_t = \frac{t-2030}{40} CF_{2070} + \frac{2070-t}{40} CF_{2030}$$

$$\text{From 2070 to 2080: } CF_t = CF_{2070}$$

$$P_t = CF_t P_{h,t}$$

where:

- CF_t is the change factor applied for time t
- CF_{2070} is the 2070 CF (CT, DEW, or WMW)
- CF_{2030} is the 2030 CF (CT)
- P_t is monthly precipitation for time t
- $P_{h,t}$ is monthly precipitation from the historical time series for time equivalent to t

Figure 8 shows the precipitation time series for each Climate Scenario built with this method for FY 2024 through 2080. From FY 2024 through 2030, the three Climate Scenarios use different portions of the historical record with the 2030CT CFs applied. From FY 2031 through 2080, the three Climate Scenarios use projected data modified (using CFs) from the historical record. During the early part of the 2031-2080 period, there is little difference between scenarios because each is most strongly influenced by the value of CF_{2030}, which is identical for each scenario. Figure 9 shows the ET_0 time series for each Climate Scenario, including the historical data through FY 2023.

Climate Scenarios

Table 5 summarizes the proposed Climate Scenarios and datasets to be used for portions of the projection period.

Table 5. Datasets used for Climate Scenarios

Climate Scenario	Precipitation and ET	
	FY 2024 through 2030	FY 2031 through 2080
Average	Historical period with average precipitation(a) (FY 1968-1974) modified with 2030CT CFs	Historical period (FY 1959-2008) modified using CFs 2030CT and 2070CT
Hot/Dry	Historical period with lowest precipitation (FY 2012-2018)	Historical period (FY 1959-2008) modified using CFs 2030CT and 2070DEW
Cool/Wet	Historical period with highest precipitation (FY 1977-1983) modified with 2030CT CFs	Historical period (FY 1959-2008) modified using CFs 2030CT and 2070WMW

(a) Calculated based on continuous seven-year periods taken from the historical (PRISM) data for FY 1950 through 2022

ASSIGNING LIKELIHOODS TO THE PROJECTION ENSEMBLE SCENARIOS

Step 5 of the 2022 Safe Yield Reset Methodology directs Watermaster to "[a]ssign likelihoods to each scenario in the Projection Ensemble." This element of the Methodology stems from the acknowledgement that all projection scenarios may not have the same probability of occurrence, and the simulated basin responses to these projection scenarios should be evaluated in this context. For example, if a single projection scenario with a low likelihood of occurrence is projected to cause Material Physical Injury (MPI), those results would be less of a concern than a scenario with a higher likelihood of occurrence that is projected to cause MPI. We use scalar weighting factors to weight each scenario. If each projection scenario is assumed to be equally likely, then the implicit weight of each scenario is 1. If a scenario is expected to be twice as likely to occur than another scenario with a weight of 1, then the weight of that scenario would be 2.

Given that the expected condition suggests a higher likelihood, we propose assigning a likelihood weight of 2 to the expected demand and groundwater/imported water utilization scenarios (Scenarios 1, 2, and 3), while assigning a weight of 1 to the remaining projection scenarios (Scenarios 4 through 9). This means that the probability of one of the expected scenarios occurring (50 percent) is equal to the likelihood of either of the other two Water Plan Scenarios occurring (50 percent). We propose to assign a likelihood weight of the Average Climate Scenario of 2, while assigning a weight of 1 to the Hot/Dry and Cool/Wet Climate Scenarios. The total weight of each scenario will be the product of the weight of the Water Plan Scenario and the Climate Scenario. For example, the total weight of Scenario 1 (Expected demand, expected groundwater/imported water utilization, and Expected Climate Scenario) would be 4. Table 6 below shows the Projection Ensemble with the proposed likelihood weights. Following the publication of the August 2024 draft Scenario TM #3, we are requesting input from the parties to guide the assignment of likelihoods to the scenarios in the Projection Ensemble.

Table 6. Projection Ensemble with Proposed Likelihood Weights

Projection Scenario	Water Plan Scenario			Climate Scenario	Proposed Likelihood Weights		
	Demand	Groundwater Utilization	Imported Water Utilization		Water Plan Scenario	Climate Scenario	Total
1	Expected	Expected	Expected	Average	2	2	4
2	Expected	Expected	Expected	Hot/dry	2	1	2
3	Expected	Expected	Expected	Cool/wet	2	1	2
4	High	High	Low	Average	1	2	2
5	High	High	Low	Hot/dry	1	1	1
6	High	High	Low	Cool/wet	1	1	1
7	Low	Low	High	Average	1	2	2
8	Low	Low	High	Hot/dry	1	1	1
9	Low	Low	High	Cool/wet	1	1	1

SCHEDULE AND NEXT STEPS

The August 27, 2024 workshop is the fourth stakeholder workshop that will aid the development of the scenarios that will be simulated during the 2025 SYR. The remaining schedule to complete the 2025 SYR scenario development is described below.

- **August 27, 2024 through September 27, 2024:**
  - Parties and stakeholders provide written comments on draft Scenario TM #3 and the Projection Ensemble, including recommendations of likelihoods for each of the projection scenarios.
  - West Yost begins preparing projection realizations (Projection Ensemble and calibrated model realizations) for simulation with the 2025 CVM.
- **September/October 2024:**
  - West Yost and Watermaster respond to written feedback on Projection Ensemble and Scenario TM #3. West Yost and Watermaster finalize Scenario TM #3 and distribute the TM to the parties.
  - West Yost continues preparing projection realizations (Projection Ensemble and calibrated model realizations) for simulation with the 2025 CVM.

Next Steps

Following the August 27, 2024 workshop, Watermaster invites additional written input from the parties or other stakeholders that may assist the development of the Projection Ensemble. Please submit written input to Garrett Rapp at grapp@westyost.com by September 27, 2024.

Table 3a. Aggregate Water Plans for Scenarios 1-3 (Expected Demands, Expected Groundwater Utilization, Expected Imported Water Utilization)					
Category	2025	2030	2035	2040	2045
Volume (afy)					
Chino Basin Groundwater	141,504	152,237	156,190	165,634	168,753
Non-Chino Basin Groundwater	54,253	54,162	54,232	54,524	54,716
Local Surface Water	13,205	13,205	13,205	13,205	13,205
Imported Water	84,905	82,187	78,603	77,331	78,088
Recycled Water for Direct Use	25,891	27,888	29,185	30,782	31,282
Total	319,758	329,679	331,415	341,477	346,044
Percentage					
Chino Basin Groundwater	44%	46%	47%	49%	49%
Non-Chino Basin Groundwater	17%	16%	16%	16%	16%
Local Surface Water	4%	4%	4%	4%	4%
Imported Water	27%	25%	24%	23%	23%
Recycled Water for Direct Use	8%	8%	9%	9%	9%
Total	100%	100%	100%	100%	100%

Table 3b. Aggregate Water Plans for Scenarios 4-6 (High Demands, High Groundwater Utilization, Low Imported Water Utilization)					
Category	2025	2030	2035	2040	2045
Volume (afy)					
Chino Basin Groundwater	149,955	164,196	175,360	184,166	185,150
Non-Chino Basin Groundwater	54,645	54,720	54,845	55,139	55,187
Local Surface Water	13,205	13,205	13,205	13,205	13,205
Imported Water	80,412	77,624	76,100	76,045	76,139
Recycled Water for Direct Use	25,891	28,212	29,984	31,157	31,282
Total	324,108	337,958	349,493	359,712	360,964
Percentage					
Chino Basin Groundwater	46%	49%	50%	51%	51%
Non-Chino Basin Groundwater	17%	16%	16%	15%	15%
Local Surface Water	4%	4%	4%	4%	4%
Imported Water	25%	23%	22%	21%	21%
Recycled Water for Direct Use	8%	8%	9%	9%	9%
Total	100%	100%	100%	100%	100%

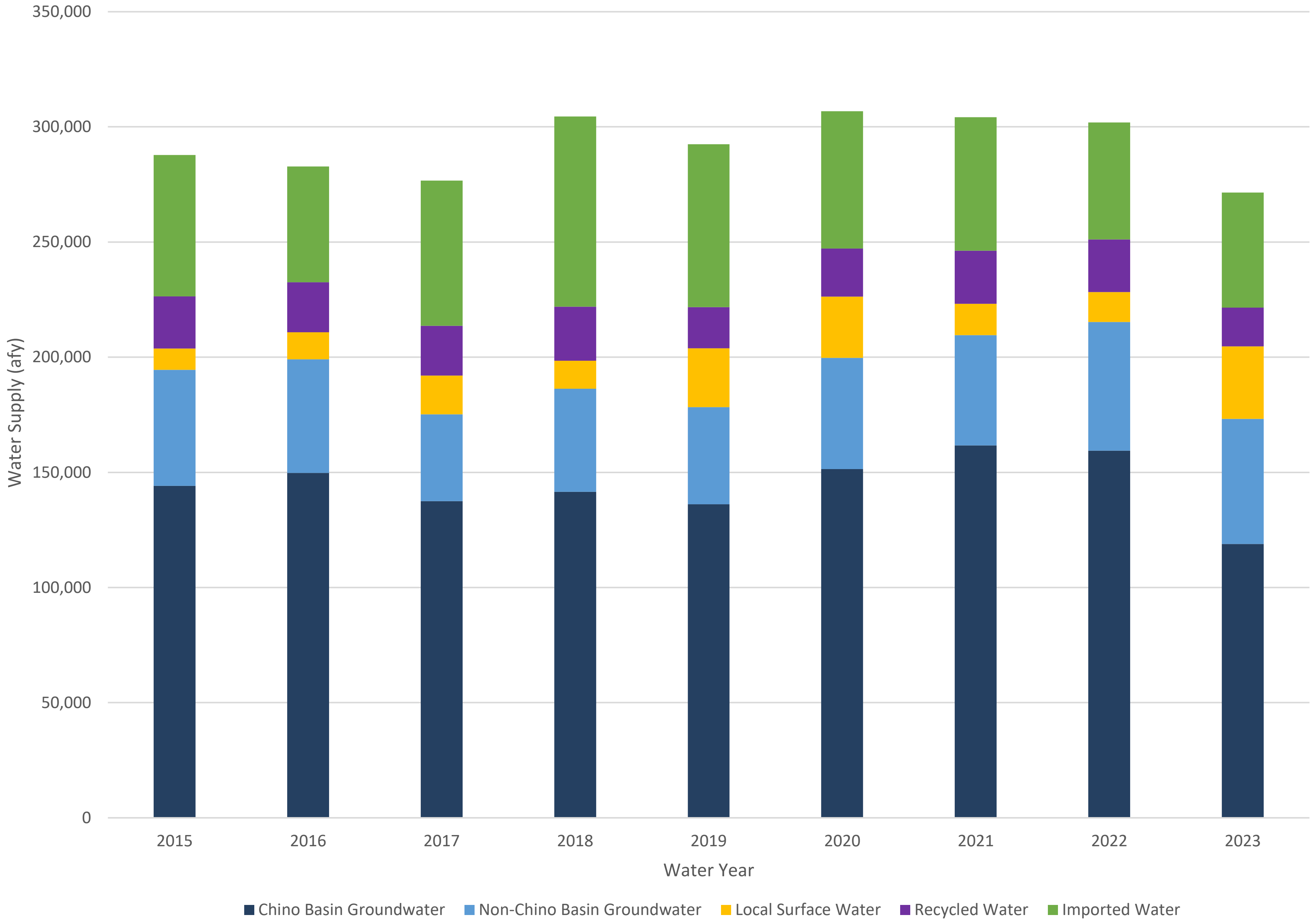
Table 3c. Aggregate Water Plans for Scenarios 7-9 (Low Demands, Low Groundwater Utilization, High Imported Water Utilization)					
Category	2025	2030	2035	2040	2045
Volume (afy)					
Chino Basin Groundwater	132,966	139,895	142,258	145,071	150,273
Non-Chino Basin Groundwater	53,897	53,812	53,802	53,889	54,096
Local Surface Water	13,205	13,205	13,205	13,205	13,205
Imported Water	89,948	87,523	84,092	81,418	80,259
Recycled Water for Direct Use	25,891	27,555	28,629	29,641	30,782
Total	315,906	321,990	321,985	323,225	328,616
Percentage					
Chino Basin Groundwater	42%	43%	44%	45%	46%
Non-Chino Basin Groundwater	17%	17%	17%	17%	16%
Local Surface Water	4%	4%	4%	4%	4%
Imported Water	28%	27%	26%	25%	24%
Recycled Water for Direct Use	8%	9%	9%	9%	9%
Total	100%	100%	100%	100%	100%

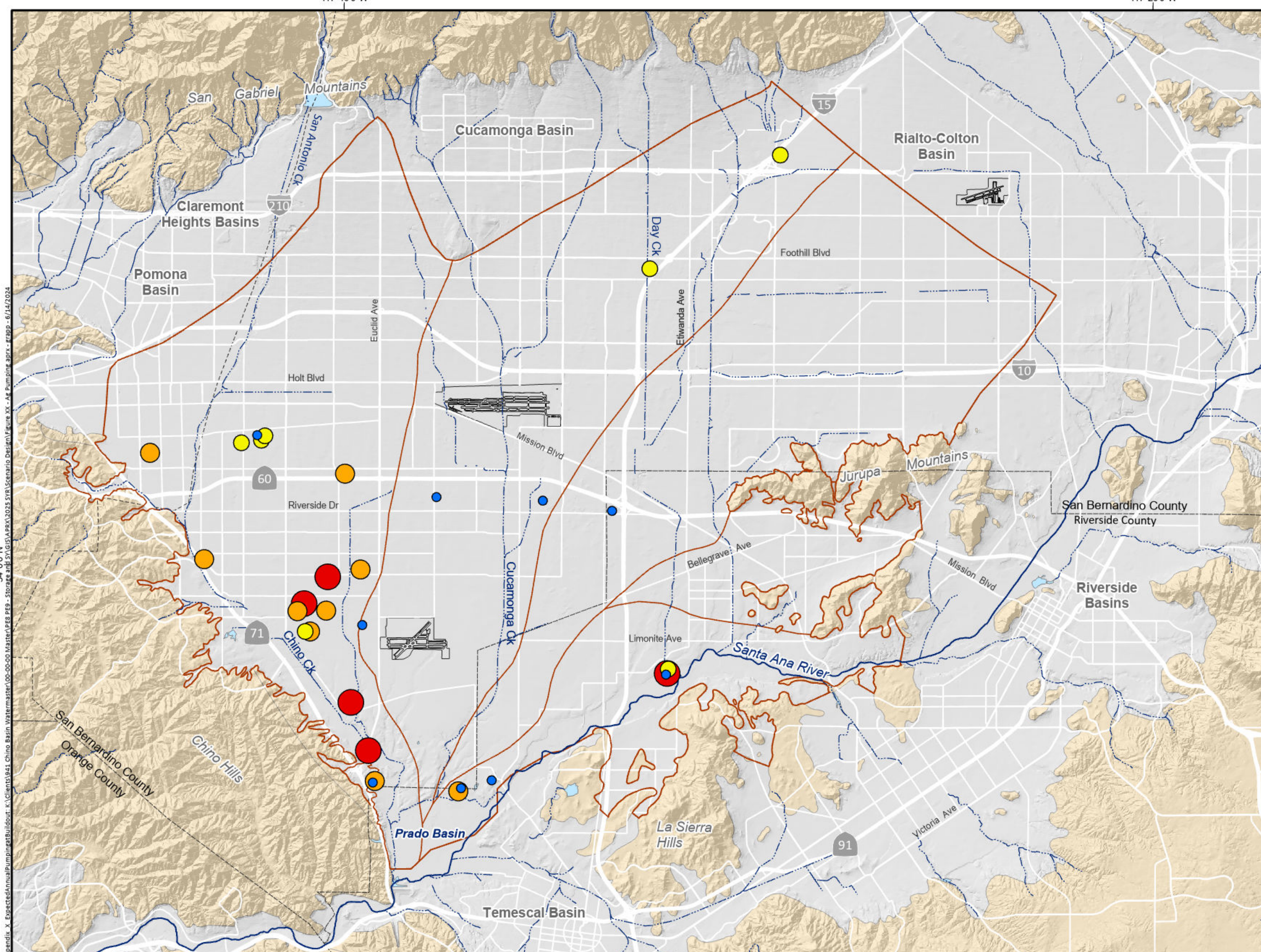
Table 4. Historical and Projected Pumping for the Chino Basin Parties
(afy)

Party	Historical Pumping													Projected Pumping - Expected Demand, Expected GWU, Expected IWU[a]					Projected Pumping - Low Demand, Low GWU, High IWU					Projected Pumping - High Demand, High GWU, Low IWU				
											Statistics (2019-2023)																	
Party	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Min	Max	Mean	2025	2030	2035	2040	2045	2025	2030	2035	2040	2045	2025	2030	2035	2040	2045
Agricultural Pool																												
Aggregate Agricultural Pool Pumping	22,063	17,361	16,904	17,786	18,827	15,652	15,793	15,022	14,159	11,343	11,343	22,063	16,491	11,081	8,607	6,744	5,249	4,000	10,527	8,568	7,165	6,001	4,987	11,635	8,548	6,296	4,528	4,200
Overlying Non-Agricultural Pool																												
9W Halo Western OpCo L.P.	37	26	28	20	21	23	26	29	27	26	23	29	26	26	26	26	26	26	25	25	25	25	25	27	27	27	27	27
California Speedway Corporation	436	454	300	410	438	389	427	388	403	274	274	427	376	274	274	274	274	274	260	260	260	260	260	288	288	288	288	288
California Steel Industries, Inc.	1,417	1,279	1,187	1,298	1,266	1,419	1,065	1,302	671	1,058	671	1,419	1,103	1,103	1,103	1,103	1,103	1,103	1,048	1,048	1,048	1,048	1,048	1,158	1,158	1,158	1,158	1,158
General Electric Company	1,626	1,355	917	1,667	957	1,320	784	1,018	647	809	647	1,320	916	916	916	916	916	916	870	870	870	870	870	961	961	961	961	961
GenOn California South, LP	290	221	204	211	212	18	2	0	0	0	0	18	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Riboli Family and San Antonio Winery, Inc.	10	7	4	5	6	26	26	43	16	2	2	43	22	22	22	22	22	22	21	21	21	21	21	24	24	24	24	24
TAMCO	18	29	30	25	18	10	20	15	2	0	0	20	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Subtotal Overlying Non-Agricultural Pool Pumping	*3,834*	*3,371*	*2,670*	*3,636*	*2,919*	*3,204*	*2,350*	*2,795*	*1,767*	*2,168*	*1,618*	*3,277*	*2,457*	*2,341*	*2,341*	*2,341*	*2,341*	*2,341*	*2,224*	*2,224*	*2,224*	*2,224*	*2,224*	*2,458*	*2,458*	*2,458*	*2,458*	*2,458*
Appropriative Pool																												
BlueTriton Brands, Inc.	379	426	356	367	308	285	279	271	252	277	252	285	273	273	273	273	273	273	259	259	259	259	259	286	286	286	286	286
Chino, City Of	6,725	6,546	5,010	4,972	5,162	4,315	5,173	6,133	6,193	5,569	4,315	6,193	5,477	7,348	10,008	10,381	10,946	12,935	6,760	8,605	8,966	9,048	9,268	7,642	10,834	11,811	14,035	14,641
Chino Hills, City Of	7,522	3,745	1,633	2,246	2,839	1,608	1,472	2,529	2,694	2,218	1,472	2,694	2,104	2,093	2,132	2,196	2,204	2,213	2,011	2,043	2,084	2,113	2,119	2,174	2,232	2,286	2,297	2,299
Norco, City Of	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ontario, City Of	21,980	17,676	22,849	24,840	26,280	20,722	18,395	21,751	19,670	16,933	16,933	21,751	19,494	20,249	22,915	24,943	31,476	31,476	18,629	20,673	22,148	24,665	28,958	21,869	25,296	30,466	33,994	33,994
Pomona, City Of	12,909	12,520	9,964	8,067	9,286	10,840	10,551	9,192	10,184	10,197	9,192	10,840	10,193	10,858	11,685	12,543	13,376	14,238	9,989	10,623	11,201	11,759	12,306	11,793	12,851	13,996	15,093	15,308
Upland, City Of	2,822	3,416	2,601	1,260	1,764	2,381	2,449	2,177	1,473	808	808	2,449	1,858	4,350	3,642	2,362	1,818	1,913	3,426	2,654	1,533	602	90	5,390	4,732	3,974	3,844	3,858
Cucamonga Valley Water District	16,122	14,640	20,537	16,562	6,838	9,624	23,318	26,226	27,281	13,515	9,624	27,281	19,993	9,969	14,150	15,288	16,319	16,319	9,456	12,610	13,758	14,389	14,999	10,504	15,444	17,102	17,714	17,714
Fontana Water Company	15,378	13,344	15,317	13,250	11,392	9,961	10,427	13,565	16,387	8,721	8,721	16,387	11,812	9,278	9,983	11,128	12,293	13,183	7,575	7,938	8,392	8,856	9,303	10,981	12,361	14,431	16,287	16,622
Jurupa Community Services District	18,407	12,805	9,284	11,498	15,286	13,894	12,760	11,161	12,094	7,522	7,522	13,894	11,486	9,432	11,793	12,390	13,381	13,381	8,677	9,894	10,177	10,354	10,723	10,187	13,373	15,565	16,332	16,332
Marygold Mutual Water Company	1,315	1,250	753	619	944	950	860	841	944	560	560	950	831	1,322	1,403	1,484	1,565	1,727	1,256	1,320	1,377	1,432	1,487	1,388	1,494	1,601	1,771	1,813
Monte Vista Irrigation Company	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Monte Vista Water District[b]	7,163	7,402	8,371	7,086	6,483	6,631	6,710	7,674	7,185	5,293	5,293	7,674	6,699	10,764	11,158	11,870	12,145	12,427	10,167	10,474	10,913	11,270	11,452	11,361	11,972	12,690	13,066	13,142
Niagara Bottling, LLC	1,343	1,860	1,775	1,532	1,571	1,683	1,760	1,752	1,684	1,401	1,401	1,760	1,656	1,656	1,656	1,656	1,656	1,656	1,573	1,573	1,573	1,573	1,573	1,739	1,739	1,739	1,739	1,739
San Antonio Water Company	1,159	1,479	1,031	538	428	376	614	677	402	459	376	677	506	592	592	592	592	592	562	562	562	562	562	622	622	622	622	622
San Bernardino, County of (Shooting Park)	16	11	9	13	11	11	8	17	20	18	8	20	15	15	15	15	15	15	14	14	14	14	14	16	16	16	16	16
Santa Ana River Water Company	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Golden State Water Company	736	720	807	850	148	0	640	1,074	1,066	922	0	1,074	740	800	800	900	900	980	728	728	780	819	819	872	899	981	1,046	1,068
West End Consolidated Water Company	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
West Valley Water District	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Subtotal Appropriative Pool Pumping	*113,976*	*97,842*	*100,297*	*93,699*	*88,740*	*83,280*	*95,418*	*105,040*	*107,529*	*74,412*	*74,412*	*107,529*	*93,136*	*88,998*	*102,205*	*108,020*	*118,959*	*123,328*	*81,085*	*89,972*	*93,738*	*97,716*	*103,932*	*96,823*	*114,151*	*127,566*	*138,141*	*139,453*
Chino Desalter Authority																												
Total Desalter Pumping	29,282	30,022	28,191	28,284	30,088	31,233	35,630	40,156	40,566	39,815	31,233	40,566	37,480	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000
Total Pumping	169,155	148,596	148,061	143,405	140,574	133,368	149,190	163,013	164,021	127,737	118,605	173,435	149,563	142,420	153,153	157,105	166,550	169,669	133,836	140,765	143,128	145,941	151,143	150,916	165,158	176,321	185,127	186,112
Less GE Injection	-1,626	-1,355	-917	-1,667	-957	-1,320	-784	-1,018	-647	-809	-1,320	-647	-916	-916	-916	-916	-916	-916	-870	-870	-870	-870	-870	-961	-961	-961	-961	-961
Projected Net Total Basin Pumping														141,504	152,237	156,190	165,634	168,753	132,966	139,895	142,258	145,071	150,273	149,955	164,196	175,360	184,166	185,150
2020 SYR Projected Net Total Basin Pumping														144,596	151,808	164,600	173,805	173,805	144,596	151,808	164,600	173,805	173,805	144,596	151,808	164,600	173,805	173,805
Change in Projected Net Total Basin Pumping from the 2020 SYR														-3,092	429	-8,410	-8,171	-5,052	-11,630	-11,913	-22,342	-28,734	-23,532	5,359	12,388	10,760	10,361	11,345

[a] GWU = Groundwater utilization; IWU = Imported water utilization
[b] Projected pumping includes projected retail deliveries to Chino Hills originating from MVWD wells.

Figure 2. Historical Water Supplies of the Chino Basin Parties, Water Year 2015 through 2023





Projected Active Agricultural Wells at Buildout

Projected Annual Pumping (afy)

- 0 - 5
- 6 - 10
- 11 - 50
- 51 - 250
- > 250

Geology

Water-Bearing Sediments

- Quaternary Alluvium

Consolidated Bedrock

- Undifferentiated Pre-Tertiary to Early Pleistocene Igneous, Metamorphic, and Sedimentary Rocks

Hydrology

- Streams & Flood Control Channels
- Flood Control & Conservation Basins
- OBMP Management Zones

Prepared by:

WEST YOST
Water. Engineered.

Author: AK

Date: 6/26/2024

0 3 6 Miles

0 4 8 Km

Prepared for:

Chino Basin Watermaster
2025 Safe Yield Reevaluation

Projected Active Agricultural Wells at Buildout

Figure 3

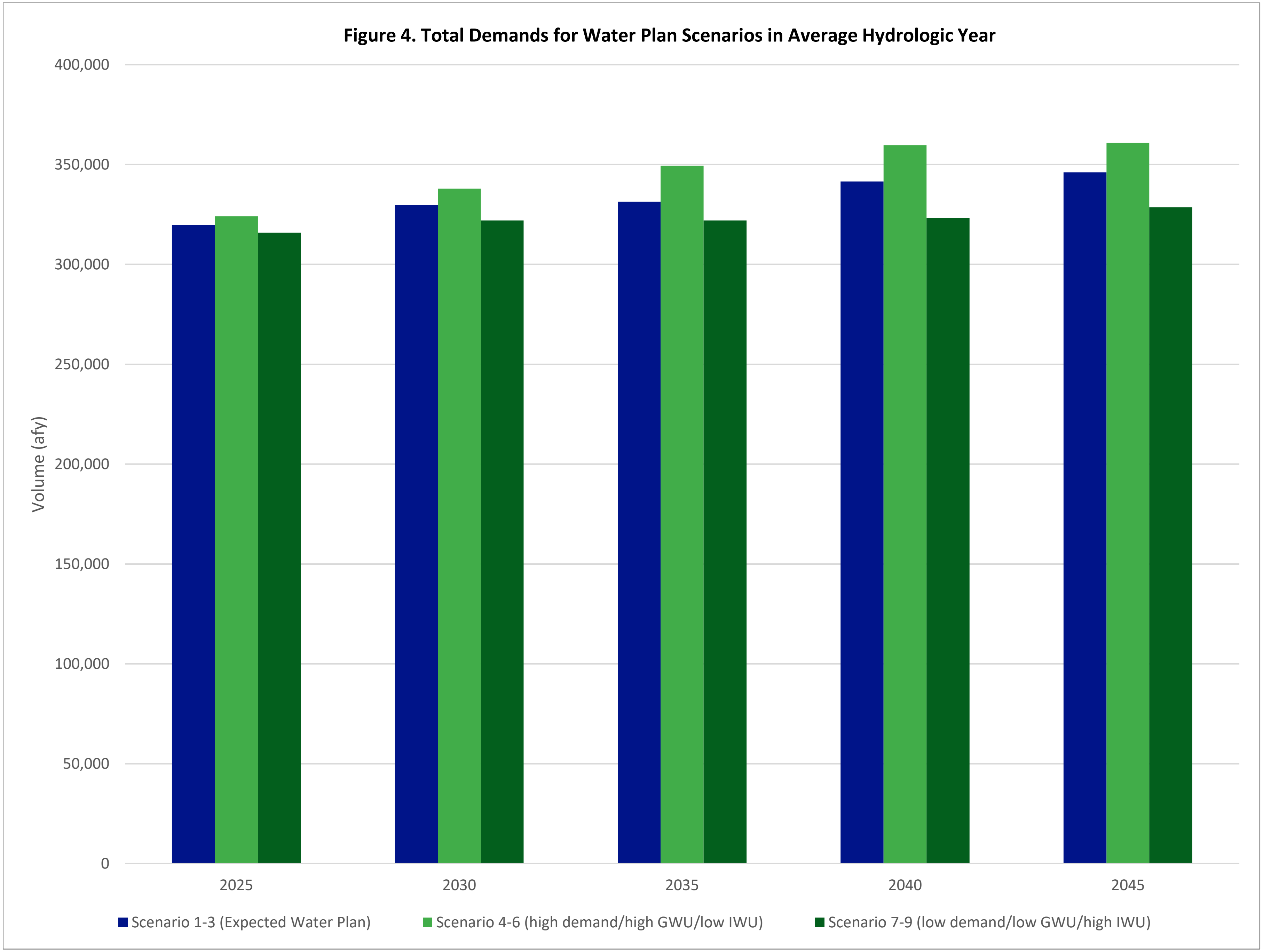


Figure 4. Total Demands for Water Plan Scenarios in Average Hydrologic Year
Volume (afy)
400,000
350,000
300,000
250,000
200,000
150,000
100,000
50,000
0
2025
2030
2035
2040
2045
Scenario 1-3 (Expected Water Plan)
Scenario 4-6 (high demand/high GWU/low IWU)
Scenario 7-9 (low demand/low GWU/high IWU)

Figure 5. Total Chino Basin Groundwater Pumping Demands for Water Plan Scenarios in Average Hydrologic Year

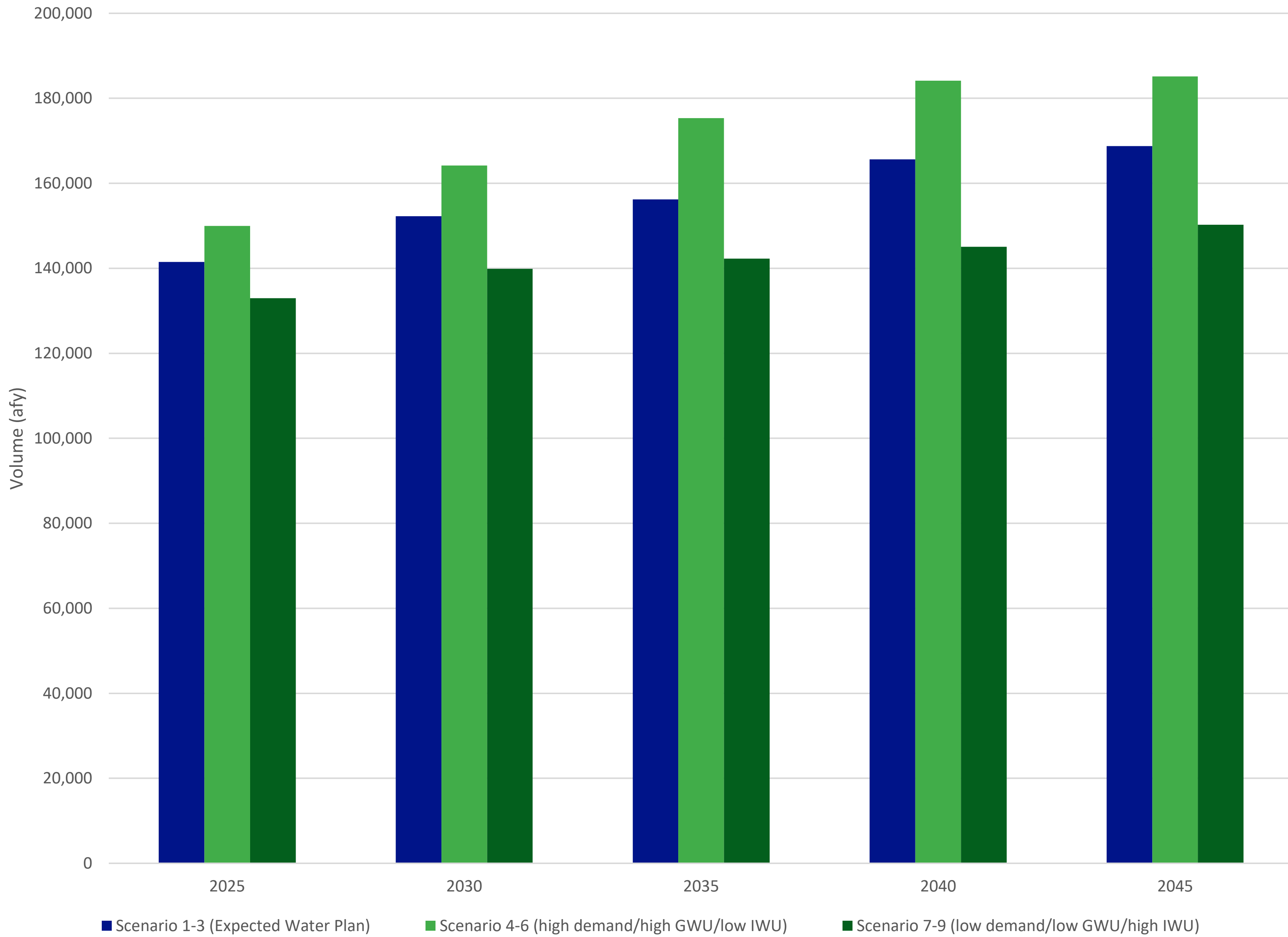
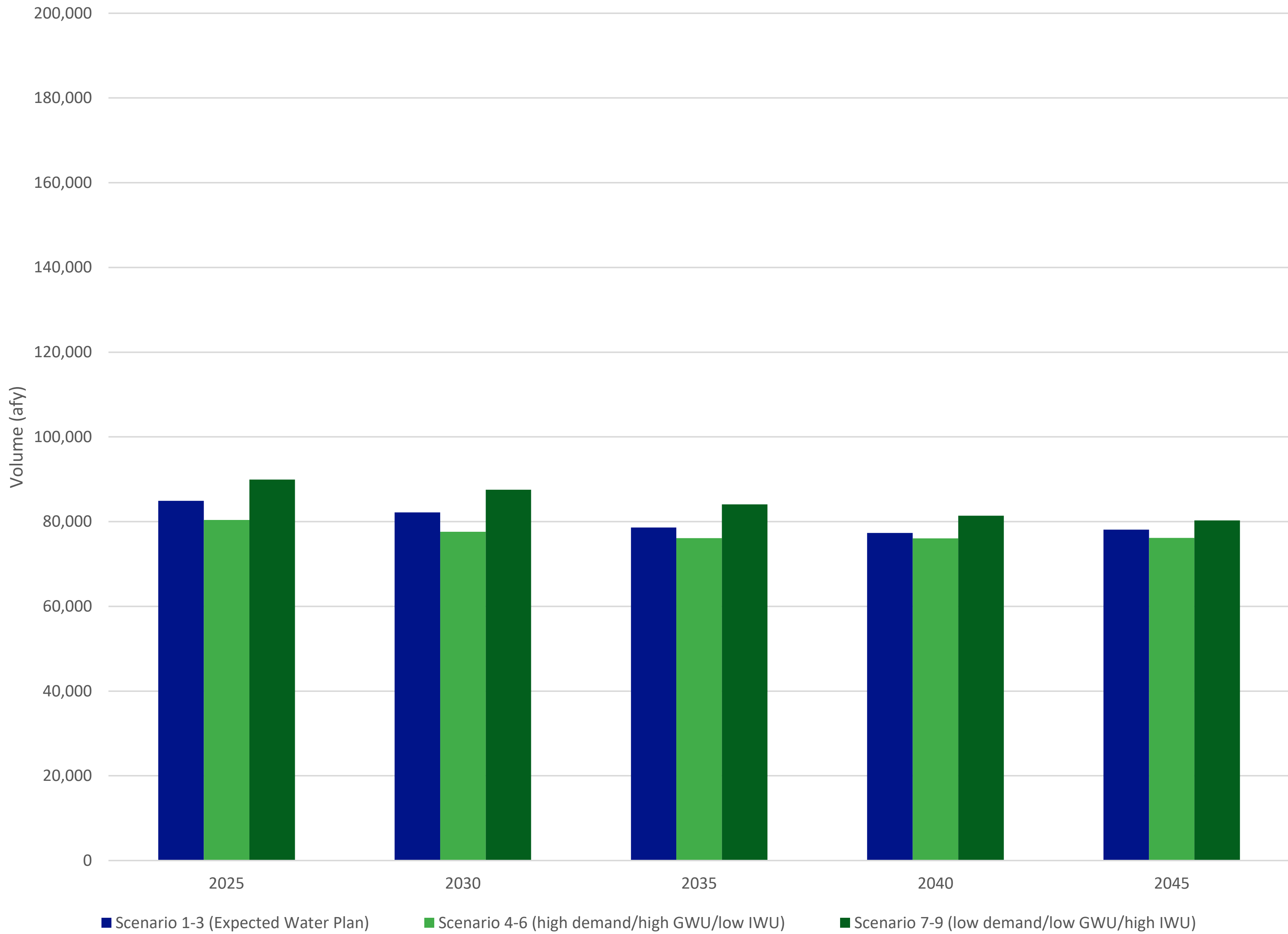


Figure 6. Total Chino Basin Imported Water Demands for Water Plan Scenarios in Average Hydrologic Year



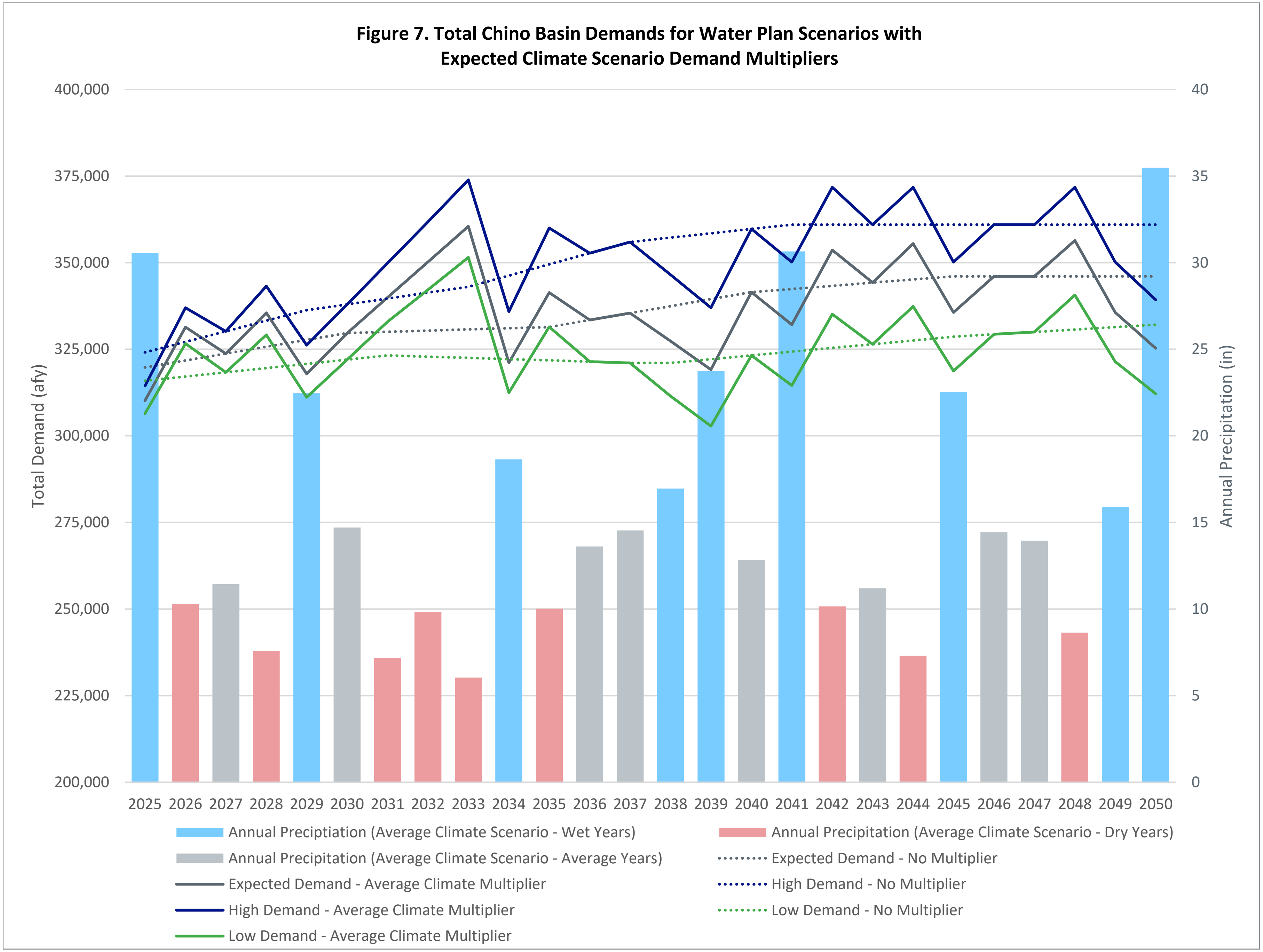
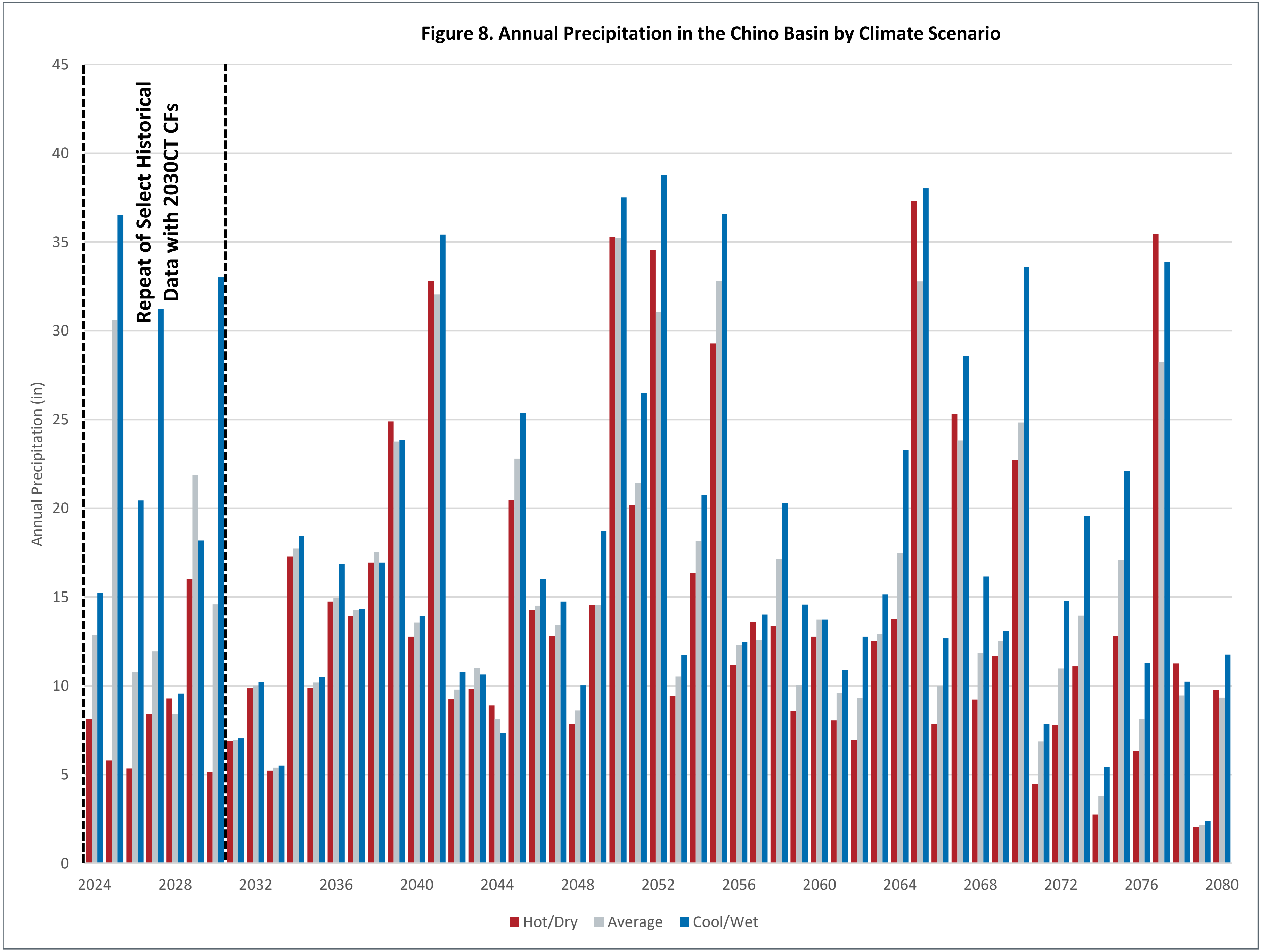


Figure 7. Total Chino Basin Demands for Water Plan Scenarios with
Expected Climate Scenario Demand Multipliers
Total Demand (afy)
Annual Precipitation (in)
400,000
375,000
350,000
325,000
300,000
275,000
250,000
225,000
200,000
40
35
30
25
20
15
10
5
0
2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050
Annual Precipitation (Average Climate Scenario - Wet Years)
Annual Precipitation (Average Climate Scenario - Dry Years)
Annual Precipitation (Average Climate Scenario - Average Years)
Expected Demand - No Multiplier
Expected Demand - Average Climate Multiplier
High Demand - No Multiplier
High Demand - Average Climate Multiplier
Low Demand - No Multiplier
Low Demand - Average Climate Multiplier



WEST YOST

941-80-24-32

Chino Basin Watermaster
2025 Safe Yield Reevaluation
Last Revised: 8/28/2024

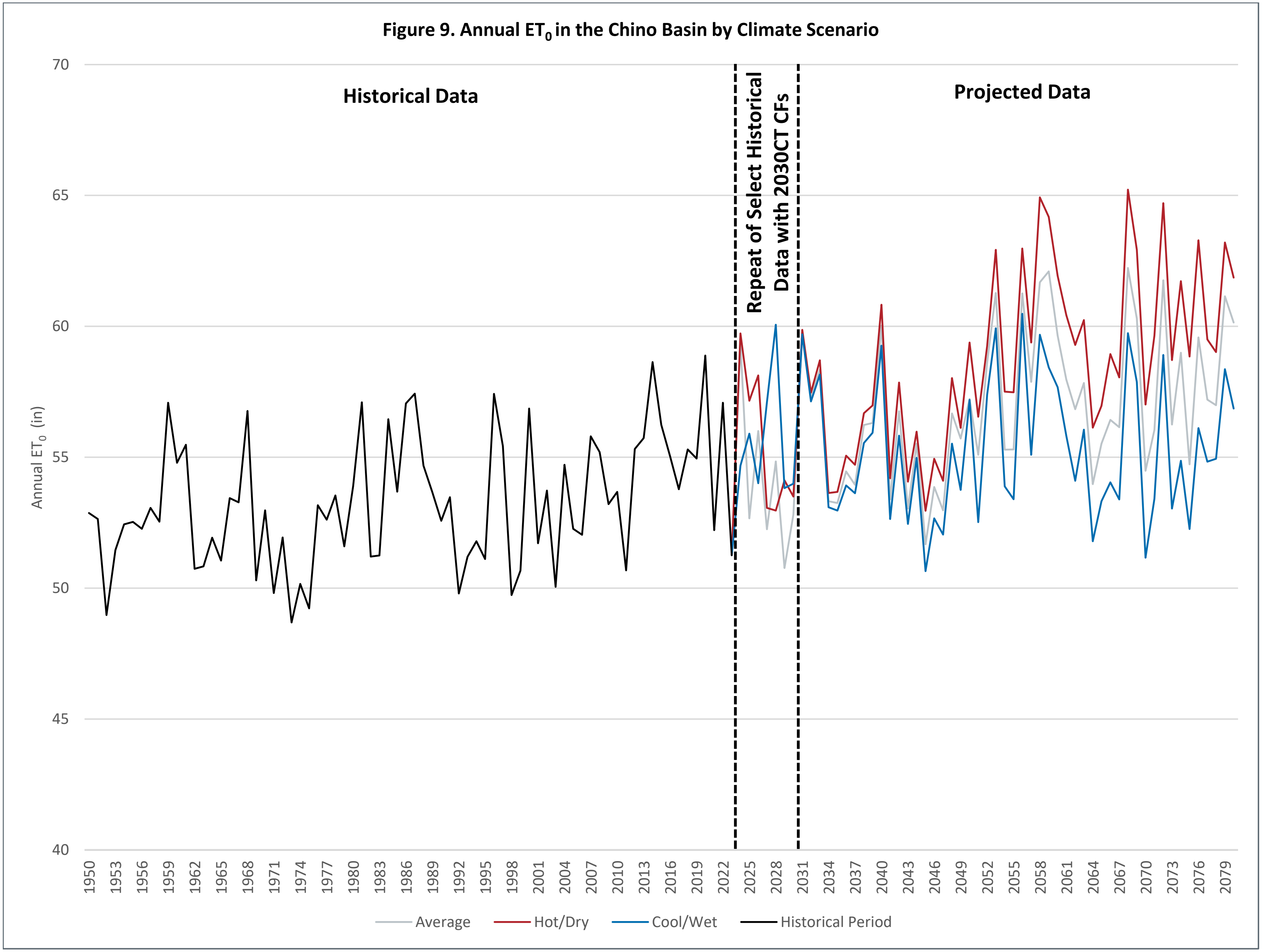


Figure 9. Annual ET_0 in the Chino Basin by Climate Scenario
Historical Data
Repeat of Select Historical Data with 2030CT CFs
Projected Data
Annual ET_0 (in)
70
65
60
55
50
45
40
1950
1953
1956
1959
1962
1965
1968
1971
1974
1977
1980
1983
1986
1989
1992
1995
1998
2001
2004
2007
2010
2013
2016
2019
2022
2025
2028
2031
2034
2037
2040
2043
2046
2049
2052
2055
2058
2061
2064
2067
2070
2073
2076
2079
Average
Hot/Dry
Cool/Wet
Historical Period

Attachment A

Responses to Party Comments on Scenario TM #2 and Draft Scenario TM #3

COMMENTS AND RESPONSES FROM SCENARIO TM #2

State of California (Richard Rees, PG, CHG)

Comment 1 – General Comment

The TM#2 describes the scenario designs in general and we have no comments on the elements of the water plan scenarios. The proposed projection scenarios are limited and appear to be balanced around the expected condition. We agree with that approach. We look forward to seeing the analysis and recommendations for the climate data sets in Scenario TM #3.

Response:
Thank you for your input. We look forward to your future comments on the detailed projection scenarios.

Comment 2 – Specific Comment

Page 7, first paragraph, "Scripps Institute of Oceanography" should be "Scripps Institution of Oceanography."

Response:
This will be corrected if referenced in future documents.

COMMENTS AND RESPONSES FROM JUNE 25, 2024 DRAFT SCENARIO TM #3

Thomas Harder and Company (Jim Van de Water, PG, CHG; Thomas Harder, PG, CHG)

Comment 1 – Introduction

This letter summarizes Thomas Harder & Company's (TH&Co's) understanding of how West-Yost (WY) plans to conduct the Chino Basin safe yield uncertainty analysis using PEST++-IES (IES). Based on this understanding, we have provided an alternative recommended approach that we believe is more streamlined, places less burden on the stakeholders, and remains adherent to the Court Order.

Response:
Thank you for your input and for providing an alternative recommended approach. We appreciate your efforts to ensure efficiency and reduce stakeholder burden. For reasons described in detail below, we demonstrate that our current scope, which was developed with your valuable input, is already streamlined and optimally structured to meet the requirements of the 2022 Safe Yield Reset

Methodology. We strive to balance efficiency with compliance and stakeholder needs, and we remain open to adjustments if necessary.

Comment 2 – Our Understanding of the WY Approach

During an April 15th teleconference between TH&Co and WY and subsequent workshops, we gained a better understanding of how WY plans to conduct the uncertainty analysis. Our understanding is as follows:

1. WY will generate 100 calibrated realizations for the historical ("calibration") period.
2. From these 100 realizations, WY will select five or so calibrated realizations spanning the range of safe yield values (e.g., the 10th, 30th, 50th, 70th, and 90th percentile safe yield values.
3. WY will then append as many as 9 alternative futures (the forecasts) to these five realizations.

Response:
The understanding of this approach is generally accurate. The approach, as clarified in the August 6th, 2024 Calibration workshop[1] is as follows:

1. We have generated 316 calibrated realizations for the historical period (FY 1992 through 2022)

2. From these realizations, we have selected five calibrated realizations: One with the mean historical net recharge closest to the ensemble mean net recharge, and four realizations that are closest to the ensemble mean net recharge plus or minus one and two standard deviations from the mean, respectively.

3. We will simulate nine projection scenarios using all five of the chosen realizations, for a total of 45 projection realizations.

Comment 3 – Overview of Our Recommended Approach

We are of the opinion there is no guarantee the WY approach will result in a reasonable spread of safe yield values. For example, the 10th percentile safe yield value based on the calibration period may not necessarily result in the 10th percentile safe yield for the forecast and so on for the other percentile realizations. As such, we believe one runs the risk that the forecast safe yield values using the 10th, 30th, 50th, 70th, and 90th percentile realizations may be lumped within an unreasonably narrow range. To avoid this possibility, our recommended approach involves running all realizations retained from the calibration process in the ensemble for the uncertainty analysis. Doing so requires that: 1) more temporal parameters be added to the IES setup and 2) the forecast period be appended to the calibration period of the model. Our approach relies on proxy years based on precipitation; however, the proxy years can be based on metrics other than, or in addition to precipitation. The point is that proxy years must be developed to implement our approach.

[1] Slides from the August 6, 2024 workshop

Response:
We acknowledge the possibility that our approach may not capture the entire range of net recharge. However, this approach simplifies the analysis and ensures that the results are easier to interpret and understand.
During the development of the initial scope to implement the 2022 Safe Yield Reset methodology in the 2025 SYR, all peer reviewers who commented suggested using a small (i.e., fewer than 40) number of realizations to append projection scenarios for the analysis of Safe Yield.[2] If, after a review of the results, we determine that the range of results does not capture sufficient uncertainty (including the predictive uncertainty introduced by the projection scenarios), then we will consider simulating additional realizations. We are building workflows that automate the development of projection realizations (i.e., calibrated realizations and projection scenarios), so this will be straightforward to implement.

Comment 4 – Detailed Recommended Approach (Part 1)

Our recommended approach below assumes that the calibration period runs from October 1990 through September 2022 and the model is based on monthly stress periods. That is, the calibration period consists of 384 monthly stress periods (SP1 through SP384). It is further assumed the forecast period runs from October 2022 through September 2032 (SP385 through SP504).

The stepwise procedure that follows is our recommended approach. Steps 1 through 6 involve classifying water years in the calibration and forecast periods. As will be apparent, there's quite a bit of flexibility here so the percentages and ratios should only be used as guidelines to demonstrate our recommended approach. Step 7 and onward speak directly to the IES setup.

1. Select a relatively recent historical time-period as a "representative hydrology" with respect to precipitation. For this example, it is assumed here that the time-period spanning water years 1998-2022 is representative. Some may find this time-period to be a bit on the dry side but it will be assumed for this example.
2. Using the average precipitation, classify the historical water years as "very wet", "wet", "average", "dry", and "very dry" by calculating the ratio of measured precipitation for each water year to the average precipitation over 1998-2022. For example, if the precipitation for a given water is twice the average (i.e., has a ratio > 2.0), it may be classified as "very wet" whereas if it is half the average (i.e., has a ratio < 0.5), it may be classified as "very dry". An average year may be classified as those years with a ratio between 0.8 and 1.2. Adjust as necessary so that there is a reasonable distribution across these five categories. For example, adjust the "ratio cutoff limits" for each category until, roughly:
   a. 8% of the water years are classified as "very wet",
   b. 12% of the water years are classified as "wet",
   c. 60% of the water years are classified as "average",
   d. 12% of the water years are classified as "dry", and

[2] See Attachment B of the 2022 SYRMU TM. Relevant comments include Richard Rees' Comment No. 7 (B-3); Thomas Harder's Comment No. 5 (B-13); Dave Crosley/Eric Fordham's Comment in Paragraph 4 (B-16 and B-17).

e. 8% of the years are classified as “very dry”.

3. Using the 1999-2022 representative time-period, develop a future monthly precipitation forecast using DWR (or court-approved) climate change methodology and group them into their corresponding water years.
4. Using the ratios from Step 2, classify the forecast water years as “very wet”, “wet”, “average”, “dry”, and “very dry”.
5. Select five historical water years as proxy “very wet”, “wet”, “average”, “dry”, and “very dry” water years. Assume that the selection process results in the following proxies:
   a. Water Year 1998 (SP85 through SP96) is “very wet”,
   b. Water Year 2019 (SP337 through SP348) is “wet”,
   c. Water Year 2015 (SP289 through SP300) is “average”,
   d. Water Year 2018 (SP325 through SP336) is “dry”, and
   e. Water Year 2002 (SP133 through SP144) is “very dry”.
6. Calculate the ratio of forecast precipitation to measured precipitation. Using the calculated ratios, assign proxy years to the forecast water years. Assume this comparison results in the following:
   a. Water Year 2023 (SP385 through SP396) is “very wet”,
   b. Water Year 2024 (SP397 through SP408) is “wet”,
   c. Water Year 2025 (SP409 through SP420) is “average”,
   d. Water Year 2026 (SP421 through SP432) is “very dry”,
   e. Water Year 2027 (SP433 through SP444) is “average”,
   f. Water Year 2028 (SP445 through SP456) is “average”,
   g. Water Year 2029 (SP457 through SP468) is “average”,
   h. Water Year 2030 (SP469 through SP480) is “dry”,
   i. Water Year 2031 (SP481 through SP492) is “average”, and
   j. Water Year 2032 (SP493 through SP504) is “average”.
7. Include as many temporal parameters in the IES setup as possible. Temporal parameters are harbored in boundary condition packages. Common ones include recharge rates in the Recharge (RCH) package, flows and/or heads in the Flow and Head Boundary (FHB) package, roughness coefficients and up- and down-stream widths in the Streamflow Routing (SFR) Package, and unmetered pumping in the multi-node well (MNW2) package. For the sake of example, we will limit the discussion to RCH parameters.
8. Recharge rates can be zoned or assigned via pilot points in an IES setup but, for the sake of simplicity, this example only considers stress period-specific model-wide recharge array multipliers.
9. Include recharge array multipliers as parameters in the IES control file and RCH package template file. For this example, they are named “R_1” through “R_384”. R_1 will be featured in the template file as the array multiplier for SP 1 whereas the subsequent parameters (i.e., R_2, R_3, …, R_384) will be featured in the template file as the array multipliers for the remaining SPs in the calibration period.
10. For the forecast period (i.e., SP_385 onward), construct the IES template files such that the recharge parameters are assigned to their associated forecast stress periods. For example, given that Water Year 2023 (SPs 385 through 396) in this example is “very wet” and the “very wet” proxy year (1998) consists of SP 85 through SP 96, R_85 will appear in the RCH template file in SP85 and again further down in SP385 for this “very wet” water year.

11. Repeat the previous step until all forecast SPs are accounted for in the template files with their associated water year type (i.e., "very wet", "wet", "average", "dry", and "very dry").
12. This approach can be repeated for the other stress packages (i.e., FHB, SFR, EVT, etc.) to fully map the calibration period into the forecast period although pumping (assigned via the MNW2 package) would be handled differently because none of the wells in the forecast period have an associated calibrated counterpart from the calibration period. In short, all pumping in the forecast period is assumed to be assigned to wells that have been and will continue to be metered.
13. Assuming a template file is developed for the MNW2 package to calibrate historical unmetered wells (e.g., historical agricultural wells), the template file would be modified to include appropriate pumping rates (e.g., those provided by the stakeholders) for the forecast period.
14. Expand the DIS package to accommodate the forecast SPs.
15. Rerun IES to generate at least 100 calibrated realizations. These realizations will be "complete" in that they include both the historical and forecast periods.
16. Assuming the initial ensemble is set to 100 and no realizations are eliminated (e.g., due to time-outs or unstable parameter fields), you will have 100 realizations with which to conduct the uncertainty analysis.
17. The parameters for each of these 100 realizations can then be extracted into 100 unique 'PAR' files that can be used to generate 100 IES control files. These control files can then be used to conduct 100 individual model runs to generate the files needed to calculate 100 unique water budgets and therefore, 100 unique estimates of the safe yield. It is important to note that these runs are not run in parallel; therefore, they can be run on as many separate computers as you can muster. The more computers, the shorter the runtime. If the runs are to be conducted on a single multicore computer that can process 20 runs at time, each processor will have to conduct 5 runs to complete the uncertainty analysis. If the runtime is, say, 3 hours, the 100 uncertainty runs will be finished in 15 hours.

Response:
Thank you for the detailed suggestion. We will consider using the proposed process to choose proxy years for generating multipliers for boundary inflows, the EVT package, and other applicable inputs for the projection scenarios.

Comment 5 – Detailed Recommended Approach (Part 2)

Given the increased number of parameters that would be part of this approach, we believe consideration of multiple futures may not be necessary. That said - and by way of example - if a drier future must be considered, one could:

- downgrade some or all forecast stress periods from, say, "very wet" to "wet", "wet" to "average", and so on by re-assigning the appropriate associated proxy stress periods in the forecast; or
- adjust the ratio cutoff limits in Step 2 such that a greater percentage of "very dry" and "dry" years are assigned to the forecast SPs; or

- create tied forecast parameters that are identical to selected calibration parameters and set the scaling parameters for the former to values less than 1.0.[3]

Admittedly, we have not used any of these bulleted approaches to create alternative futures but, "on paper", we see no reason why they would not work. That said, if either of the first two bulleted approaches are taken, the template files must be modified from the "base case" template files developed using the numbered approach outlined above for each alterative future. This means IES would need to be run again to generate the appropriate files to conduct the safe yield uncertainty analysis.

The third option may prove to be logistically simpler because the template file would function for all alternative futures. That is, the alternative futures would be controlled entirely via the control file. As an example using pumping, rather than specific future pumping rates, the stakeholders would only have to provide a percentage change in pumping for the various proxy years. For example, using Items 5 and 6 above in the detailed approach, rather than having to tell the modelers "We'll pump 10,000 acre-ft in 2030", the stakeholder will have to tell the modelers for this forecast dry year "We'll pump 7% more than we did in 2018 (the proxy dry year)". The scaling factor assigned in the control file for the stakeholder's wells would therefore be 1.07. That said, for the third option, we strongly recommend that a short test run be conducted to ensure the parameters are being scaled properly by close inspection of the input files written by IES before launching into a full IES run.

Response:
The 2022 Safe Yield Reset Methodology requires the development and simulation of scenarios that span the possible range of future cultural conditions and future climate conditions, and that these conditions be identified and described. Therefore, implementing the proposed approach for developing projection scenarios would not be compliant with the 2022 Safe Yield Reset Methodology.

Comment 6 – Closing

As always, we appreciate the opportunity to provide our services to you and the Chino Basin Appropriative Pool. As the information presented herein is rather detailed, we would be willing to meet with WY remotely or in-person to discuss further at Watermaster's request. If you have any questions, please contact me or Tom.

Response:
No response required.

[3] For example, for the array multipliers in the RCH package and/or flows in the FHB package.

City of Chino (Dave Crosley, PE)

Comment 1

Review of calibration results of the updated CVM using PESTPP-IES compared to the 2020 CVM reveals a similar trend in declining net recharge over the calibration period from 1992 to 2022, though the 2020 CVM results are mostly outside of the min-max range identified for the 4 iterations. As the 2020 CVM was "well calibrated," how have model parameters changed or what has changed structurally in the updated model that resulted in observed differences in net recharge between the two models? Can the difference in net recharge be quantified and equated to specific change(s) in model structure or parameters? Are the differences directly related to recharge factors that would contribute to DIPAW and, if so, how do these factors that have changed relate to those considered for the projection scenarios? Are the factors observable and measurable in nature?

Response:
The primary updates to the groundwater-flow model during the development of the 2025 Chino Valley Model (2025 CVM) were summarized in the August 30, 2023 workshop.[4] In addition to the primary updates, we made several minor updates to refine the characterization of wells, recharge, and other inputs. The cumulative adjustments in the model structure, parameterization, calibration period, and the employment of the PESTPP-IES tool collectively influence the range in model outcomes. The differences in net recharge are not attributable to any single factor but are instead the result of refined processes that more accurately capture the range of possible outcomes in the updated model.

Comment 2

Review of groundwater levels in MZ1 through MZ5 reveal that over the calibration period of 1992 to 2022, changes in groundwater levels can be attributed to variation in rainfall recharge, managed recharge, changes in pumping patterns and volumes, desalter pumping, and changes in land use along with other contributing factors, though overall, there does not appear to be a substantial decline in groundwater level over this period and particularly from 2010 to 2022 that would indicate a decline in the basin's safe yield due to depletion of groundwater in storage. Safe yield however, has been equated with net recharge such that the court order instructs that groundwater production at the net recharge rate should not cause or threaten to cause undesirable results or material physical injury. There appears to be a disconnect between groundwater levels and net recharge, considering the updated CVM net recharge ranges from a high of about 165,000 AF to a low of about 110,000 AF with an overall decline for the calibration period, and reported groundwater levels have not changed in a similar manner. As measured groundwater levels are the dominant target used for CVM calibration, what other factors are changing that would result in

[4] Slides from August 30, 2023 workshop

the decline in net recharge calculated by the CVM? Would a declining net recharge really result in a lower safe yield where MPI may occur?

Response:
Net recharge is estimated as the average net inflow to the basin, excluding the direct recharge of supplemental water. Net recharge, together with artificial recharge and groundwater pumping, causes changes in groundwater levels but is not dependent on groundwater levels. Decline in net recharge may be attributed to the decline in the inflows and/or an increase in the outflows. MPI may occur locally or basin-wide when groundwater level declines impair pumping sustainability or cause increased risk of land subsidence. A declining net recharge would result in a lower Safe Yield, but groundwater production at the Safe Yield should not result in MPI that cannot be mitigated.

Comment 3

While climate change, change in cultural conditions, and regulatory requirements will influence DIPAW and should be considered in predictive scenarios, we also suggest the predictive scenarios utilize the relationship between groundwater in storage in the basin as indicated by groundwater levels and the factors that influence net recharge, to plan and optimize groundwater pumping. The intent would be to meet planned pumping demands, enhance net recharge and reduce potential for MPI.

Response:
Your comment suggests the design of projection scenarios that go beyond the requirements of the 2022 Safe Yield Reset methodology, which only requires that the projection scenarios cover the range in possible future climate and cultural conditions. The range of simulated basin behaviors that will result from the 2025 SYR will provide the information to improve the collective understanding of the Chino Basin response to pumping and other stressors and will yield valuable information that can frame future work to explore optimizing pumping operations in the Chino Basin to enhance Safe Yield and mitigate MPI.

State of California (Richard Rees, PG, CHG)

Comment 1

Page 2, first full paragraph under the header Feedback from Scenario Design TM #2 and March 7, 2024 Workshop, last sentence, “The written stakeholder feedback and responses are included in Attachment A.” Attachment A does not include a response.

Response:
Attachment A has been updated to incorporate all comments and responses.

Comment 2

Page 13, last full paragraph under the header Data Sets for Projected Climate Conditions, last sentence, “Based on our analysis of the datasets for projected climate conditions to date, we may consider revising the definition of the climate scenarios to align with the precipitation and temperature patterns of the projected conditions while ensuring that the full range in potential climate futures are simulated." This sentence appears to indicate that all of the information that follows regarding the proposed climate scenarios may be modified. Alternatively, this sentence could be interpreted as an introduction to the hybrid approach described under the header Proposed Climate Scenarios and that these could be refined later. We suggest adding additional information to clarify the meaning of the sentence.

Response:
This section has been clarified as we have refined the definitions of the proposed climate scenarios that will be used in the 2025 SYR.

Comment 3

We understand the approach to using historical data for the expected, dry, and wet conditions for the near-term future (seven-year period from 2024 to 2030). The period selected for the average (1968 through 1974) may not reflect the current impacts of climate change. We request that you share the two other seven-year periods of the historic record that represent the dry and wet scenarios.

Response:
The revised draft Scenario TM #3 describes the three proposed seven-year periods in more detail. These periods have also been adjusted with the DWR-developed change factors for 2030 to reflect the expected future precipitation patterns more accurately.

Comment 4

During the Workshop, Mr. Rapp mentioned that historically, the Appropriative Pool agencies have overestimated future water use. Please clarify how the expected demand scenarios will attempt to avoid similar overestimates.

Response:
The revised draft Scenario TM #3 includes more detail about how this is addressed. For each of the nine major Appropriative Pool retailers, we calculated the potential impact of the Conservation Regulation on each retailer's Water Plan based on per capita residential use and commercial, industrial, and institutional uses, incorporating each retailer's population projections. The resulting demands that are reflected in the expected, high, and low demand conditions are all less than the total demands outlined in the compiled Water Plans. The compiled Water Plans summarized in Table 2 indicate demands totaling 374,000 afy (179,000 afy of Chino Basin groundwater) by 2045; the high demand condition reflects a demand of 361,000 afy (185,000 afy of Chino Basin groundwater). The low demand condition reflects a demand of 329,000 afy in 2045 (150,000 afy of Chino Basin groundwater). The range in projected Water Plans incorporates the assumption that the compiled Water Plans indicate demands that are greater than what would reasonably occur.

Attachment B

Major Retailer Water Plans for Water Plan Scenarios

Table B-1a. City of Chino Projected Water Plan - Low Demand, Low Groundwater Utilization, High Imported Water Utilization
Monthly Distribution of Supplies (af) 2025 through 2045

Fiscal Year	Water Supply	Demand Met with Supply	Source of Supply	Source of Imported Water	January	February	March	April	May	June	July	August	September	October	November	December	Total Annual Supply	Grand Total Annual Supply
2025	Groundwater	Potable	Chino Basin		389	389	389	525	655	708	646	646	646	646	603	518	**6,760**	**20,848**
	Groundwater (Imported)	Potable	Chino Basin	CDA	417	417	417	417	417	417	418	417	417	417	417	417	**5,000**	
	Surface Water (Imported)	Potable	SWP	WFA	262	262	262	265	279	430	596	723	723	262	262	262	**4,588**	
	Recycled	Non-Potable	IEUA		119	163	151	272	375	450	547	780	694	487	280	180	**4,500**	
2030	Groundwater	Potable	Chino Basin		358	358	358	502	702	983	1,260	1,264	1,135	885	660	509	**8,974**	**21,522**
	Groundwater (Imported)	Potable	Chino Basin	CDA	417	417	417	417	417	417	418	417	417	417	417	417	**5,000**	
	Surface Water (Imported)	Potable	SWP	WFA	139	159	169	263	317	317	346	341	317	317	212	152	**3,049**	
	Recycled	Non-Potable	IEUA		119	163	151	272	375	450	547	780	694	487	280	180	**4,500**	
2035	Groundwater	Potable	Chino Basin		561	561	574	832	946	1,010	1,053	1,045	814	645	481	440	**8,960**	**21,109**
	Groundwater (Imported)	Potable	Chino Basin	CDA	417	417	417	417	417	417	418	417	417	417	417	417	**5,000**	
	Surface Water (Imported)	Potable	SWP	WFA	143	165	175	272	327	327	358	352	327	327	219	157	**3,150**	
	Recycled	Non-Potable	IEUA		106	145	135	242	334	400	486	694	617	433	249	160	**4,000**	
2040	Groundwater	Potable	Chino Basin		635	618	650	740	849	926	972	988	844	798	643	604	**9,268**	**21,305**
	Groundwater (Imported)	Potable	Chino Basin	CDA	417	417	417	417	417	417	418	417	417	417	417	417	**5,000**	
	Surface Water (Imported)	Potable	SWP	WFA	147	169	180	280	336	336	368	362	336	336	225	162	**3,237**	
	Recycled	Non-Potable	IEUA		101	137	128	230	317	380	462	659	586	411	237	152	**3,800**	
2045	Groundwater	Potable	Chino Basin		434	434	434	726	798	1,530	1,565	1,662	944	944	726	580	**10,775**	**23,034**
	Groundwater (Imported)	Potable	Chino Basin	CDA	417	417	417	417	417	417	418	417	417	417	417	417	**5,000**	
	Surface Water (Imported)	Potable	SWP	WFA	157	181	192	299	359	359	393	387	359	359	241	173	**3,459**	
	Recycled	Non-Potable	IEUA		101	137	128	230	317	380	462	659	586	411	237	152	**3,800**	

Table B-1b. City of Chino Projected Water Plan - Expected Demand, Expected Groundwater Utilization, Expected Imported Water Utilization
Monthly Distribution of Supplies (af) 2025 through 2045

Fiscal Year	Water Supply	Demand Met with Supply	Source of Supply	Source of Imported Water	January	February	March	April	May	June	July	August	September	October	November	December	Total Annual Supply	Grand Total Annual Supply
2025	Groundwater	Potable	Chino Basin		423	423	423	571	712	770	702	702	702	702	655	563	**7,348**	**20,848**
	Groundwater (Imported)	Potable	Chino Basin	CDA	417	417	417	417	417	417	418	417	417	417	417	417	**5,000**	
	Surface Water (Imported)	Potable	SWP	WFA	229	229	229	231	243	375	520	630	630	229	229	229	**4,000**	
	Recycled	Non-Potable	IEUA		119	163	151	272	375	450	547	780	694	487	280	180	**4,500**	
2030	Groundwater	Potable	Chino Basin		400	400	400	559	783	1,096	1,406	1,409	1,266	987	736	568	**10,008**	**21,708**
	Groundwater (Imported)	Potable	Chino Basin	CDA	417	417	417	417	417	417	418	417	417	417	417	417	**5,000**	
	Surface Water (Imported)	Potable	SWP	WFA	100	115	122	190	229	229	250	246	229	229	153	110	**2,200**	
	Recycled	Non-Potable	IEUA		119	163	151	272	375	450	547	780	694	487	280	180	**4,500**	
2035	Groundwater	Potable	Chino Basin		650	650	665	965	1,096	1,170	1,220	1,210	943	747	557	510	**10,381**	**21,581**
	Groundwater (Imported)	Potable	Chino Basin	CDA	417	417	417	417	417	417	418	417	417	417	417	417	**5,000**	
	Surface Water (Imported)	Potable	SWP	WFA	100	115	122	190	229	229	250	246	229	229	153	110	**2,200**	
	Recycled	Non-Potable	IEUA		106	145	135	242	334	400	486	694	617	433	249	160	**4,000**	
2040	Groundwater	Potable	Chino Basin		750	730	767	874	1,003	1,094	1,148	1,167	997	943	760	713	**10,946**	**21,945**
	Groundwater (Imported)	Potable	Chino Basin	CDA	417	417	417	417	417	417	418	417	417	417	417	417	**5,000**	
	Surface Water (Imported)	Potable	SWP	WFA	100	115	122	190	229	229	250	246	229	229	153	110	**2,200**	
	Recycled	Non-Potable	IEUA		101	137	128	230	317	380	462	659	586	411	237	152	**3,800**	
2045	Groundwater	Potable	Chino Basin		521	521	521	871	958	1,837	1,878	1,996	1,133	1,133	871	696	**12,935**	**23,934**
	Groundwater (Imported)	Potable	Chino Basin	CDA	417	417	417	417	417	417	418	417	417	417	417	417	**5,000**	
	Surface Water (Imported)	Potable	SWP	WFA	100	115	122	190	229	229	250	246	229	229	153	110	**2,200**	
	Recycled	Non-Potable	IEUA		101	137	128	230	317	380	462	659	586	411	237	152	**3,800**	

Table B-1c. City of Chino Projected Water Plan - High Demand, High Groundwater Utilization, Low Imported Water Utilization
Monthly Distribution of Supplies (af) 2025 through 2045

Fiscal Year	Water Supply	Demand Met with Supply	Source of Supply	Source of Imported Water	January	February	March	April	May	June	July	August	September	October	November	December	Total Annual Supply	Grand Total Annual Supply
2025	Groundwater	Potable	Chino Basin		440	440	440	594	740	801	730	730	730	730	681	586	**7,642**	**20,848**
	Groundwater (Imported)	Potable	Chino Basin	CDA	417	417	417	417	417	417	418	417	417	417	417	417	**5,000**	
	Surface Water (Imported)	Potable	SWP	WFA	212	212	212	214	225	347	482	584	584	212	212	212	**3,706**	
	Recycled	Non-Potable	IEUA		119	163	151	272	375	450	547	780	694	487	280	180	**4,500**	
2030	Groundwater	Potable	Chino Basin		425	425	425	595	833	1,166	1,495	1,499	1,346	1,049	782	604	**10,643**	**21,918**
	Groundwater (Imported)	Potable	Chino Basin	CDA	417	417	417	417	417	417	418	417	417	417	417	417	**5,000**	
	Surface Water (Imported)	Potable	SWP	WFA	81	93	98	153	184	184	202	199	184	184	123	89	**1,776**	
	Recycled	Non-Potable	IEUA		119	163	151	272	375	450	547	780	694	487	280	180	**4,500**	
2035	Groundwater	Potable	Chino Basin		714	714	731	1,060	1,204	1,286	1,340	1,330	1,036	821	612	560	**11,407**	**22,132**
	Groundwater (Imported)	Potable	Chino Basin	CDA	417	417	417	417	417	417	418	417	417	417	417	417	**5,000**	
	Surface Water (Imported)	Potable	SWP	WFA	78	90	96	149	179	179	196	193	179	179	120	86	**1,725**	
	Recycled	Non-Potable	IEUA		106	145	135	242	334	400	486	694	617	433	249	160	**4,000**	
2040	Groundwater	Potable	Chino Basin		837	815	856	975	1,119	1,221	1,281	1,302	1,113	1,052	848	796	**12,216**	**22,697**
	Groundwater (Imported)	Potable	Chino Basin	CDA	417	417	417	417	417	417	418	417	417	417	417	417	**5,000**	
	Surface Water (Imported)	Potable	SWP	WFA	76	88	93	145	175	175	191	188	175	175	117	84	**1,681**	
	Recycled	Non-Potable	IEUA		101	137	128	230	317	380	462	659	586	411	237	152	**3,800**	
2045	Groundwater	Potable	Chino Basin		589	589	589	986	1,084	2,079	2,126	2,259	1,282	1,282	986	788	**14,641**	**25,011**
	Groundwater (Imported)	Potable	Chino Basin	CDA	417	417	417	417	417	417	418	417	417	417	417	417	**5,000**	
	Surface Water (Imported)	Potable	SWP	WFA	71	82	87	136	163	163	178	176	163	163	109	79	**1,571**	
	Recycled	Non-Potable	IEUA		101	137	128	230	317	380	462	659	586	411	237	152	**3,800**	

Table B-2a. City of Chino Hills Projected Water Plan - Low Demand, Low Groundwater Utilization, High Imported Water Utilization
Monthly Distribution of Supplies (af) 2025 through 2045

Fiscal Year	Water Supply	Demand Met with Supply	Source of Supply	Source of Imported Water	January	February	March	April	May	June	July	August	September	October	November	December	Total Annual Supply	Grand Total Annual Supply
2025	Groundwater	Potable	Chino Basin		53	79	83	194	215	205	239	246	213	207	167	110	**2,011**	**17,120**
	Groundwater (Imported)	Potable	Chino Basin	CDA	326	302	345	342	355	374	385	361	354	372	348	337	**4,200**	
	Groundwater (Imported)	Potable	Chino Basin	MVWD	253	207	231	238	337	307	326	273	194	248	307	256	**3,175**	
	Surface Water (Imported)	Potable	Other	MVWD	157	150	157	211	275	348	415	460	457	372	260	157	**3,420**	
	Surface Water (Imported)	Potable	SWP	WFA	168	180	261	215	213	284	307	307	214	214	176	167	**2,705**	
	Recycled	Non-Potable	IEUA		49	38	53	101	143	182	227	234	229	178	114	59	**1,609**	
2030	Groundwater	Potable	Chino Basin		54	80	84	198	219	209	243	251	217	211	170	113	**2,049**	**16,936**
	Groundwater (Imported)	Potable	Chino Basin	CDA	326	302	345	342	355	374	385	361	354	372	348	337	**4,200**	
	Groundwater (Imported)	Potable	Chino Basin	MVWD	257	211	235	243	343	313	332	278	198	253	313	261	**3,235**	
	Surface Water (Imported)	Potable	Other	MVWD	150	143	150	201	262	332	396	439	436	354	248	149	**3,261**	
	Surface Water (Imported)	Potable	SWP	WFA	160	171	249	205	203	271	293	293	204	204	168	159	**2,581**	
	Recycled	Non-Potable	IEUA		49	38	53	101	143	182	227	234	229	178	114	59	**1,609**	
2035	Groundwater	Potable	Chino Basin		55	83	87	204	226	216	251	258	223	218	175	116	**2,110**	**16,480**
	Groundwater (Imported)	Potable	Chino Basin	CDA	326	302	345	342	355	374	385	361	354	372	348	337	**4,200**	
	Groundwater (Imported)	Potable	Chino Basin	MVWD	265	217	242	250	353	322	342	286	203	260	322	268	**3,332**	
	Surface Water (Imported)	Potable	Other	MVWD	134	128	134	180	235	297	354	393	390	317	222	134	**2,918**	
	Surface Water (Imported)	Potable	SWP	WFA	144	154	223	183	182	242	262	262	183	183	150	143	**2,311**	
	Recycled	Non-Potable	IEUA		49	38	53	101	143	182	227	234	229	178	114	59	**1,609**	
2040	Groundwater	Potable	Chino Basin		55	83	87	204	227	216	252	259	224	218	176	116	**2,119**	**16,217**
	Groundwater (Imported)	Potable	Chino Basin	CDA	326	302	345	342	355	374	385	361	354	372	348	337	**4,200**	
	Groundwater (Imported)	Potable	Chino Basin	MVWD	266	218	243	251	355	324	343	287	204	261	323	269	**3,345**	
	Surface Water (Imported)	Potable	Other	MVWD	127	121	127	170	222	281	335	371	369	300	210	126	**2,758**	
	Surface Water (Imported)	Potable	SWP	WFA	136	145	211	174	172	229	248	248	173	173	142	135	**2,186**	
	Recycled	Non-Potable	IEUA		49	38	53	101	143	182	227	234	229	178	114	59	**1,609**	
2045	Groundwater	Potable	Chino Basin		56	83	88	205	228	217	253	260	225	219	176	117	**2,126**	**16,649**
	Groundwater (Imported)	Potable	Chino Basin	CDA	326	302	345	342	355	374	385	361	354	372	348	337	**4,200**	
	Groundwater (Imported)	Potable	Chino Basin	MVWD	267	219	244	252	356	325	344	289	205	262	324	270	**3,357**	
	Surface Water (Imported)	Potable	Other	MVWD	137	131	138	184	240	305	363	402	400	325	228	137	**2,989**	
	Surface Water (Imported)	Potable	SWP	WFA	147	157	228	188	186	248	269	268	188	188	154	146	**2,367**	
	Recycled	Non-Potable	IEUA		49	38	53	101	143	182	227	234	229	178	114	59	**1,609**	

Table B-2b. City of Chino Hills Projected Water Plan - Expected Demand, Expected Groundwater Utilization, Expected Imported Water Utilization
Monthly Distribution of Supplies (af) 2025 through 2045

Fiscal Year	Water Supply	Demand Met with Supply	Source of Supply	Source of Imported Water	January	February	March	April	May	June	July	August	September	October	November	December	Total Annual Supply	Grand Total Annual Supply
2025	Groundwater	Potable	Chino Basin		55	82	86	202	224	214	249	256	222	216	173	115	**2,093**	**17,120**
	Groundwater (Imported)	Potable	Chino Basin	CDA	326	302	345	342	355	374	385	361	354	372	348	337	**4,200**	
	Groundwater (Imported)	Potable	Chino Basin	MVWD	263	215	240	248	350	319	339	284	202	258	319	266	**3,303**	
	Surface Water (Imported)	Potable	Other	MVWD	152	144	152	204	266	337	401	444	442	359	252	151	**3,303**	
	Surface Water (Imported)	Potable	SWP	WFA	162	174	252	207	206	274	296	296	207	207	170	161	**2,613**	
	Recycled	Non-Potable	IEUA		49	38	53	101	143	182	227	234	229	178	114	59	**1,609**	
2030	Groundwater	Potable	Chino Basin		56	83	88	206	228	218	253	261	226	220	177	117	**2,132**	**17,024**
	Groundwater (Imported)	Potable	Chino Basin	CDA	326	302	345	342	355	374	385	361	354	372	348	337	**4,200**	
	Groundwater (Imported)	Potable	Chino Basin	MVWD	268	219	245	253	357	326	345	289	205	263	325	271	**3,365**	
	Surface Water (Imported)	Potable	Other	MVWD	146	140	147	197	257	325	387	430	427	347	243	146	**3,192**	
	Surface Water (Imported)	Potable	SWP	WFA	157	168	244	201	199	265	287	286	200	200	164	156	**2,526**	
	Recycled	Non-Potable	IEUA		49	38	53	101	143	182	227	234	229	178	114	59	**1,609**	
2035	Groundwater	Potable	Chino Basin		57	86	91	212	235	224	261	269	232	226	182	121	**2,196**	**16,760**
	Groundwater (Imported)	Potable	Chino Basin	CDA	326	302	345	342	355	374	385	361	354	372	348	337	**4,200**	
	Groundwater (Imported)	Potable	Chino Basin	MVWD	276	226	252	260	367	335	355	298	212	271	335	279	**3,466**	
	Surface Water (Imported)	Potable	Other	MVWD	135	129	136	182	237	301	358	397	395	321	225	135	**2,952**	
	Surface Water (Imported)	Potable	SWP	WFA	145	155	225	186	184	245	265	265	185	185	152	144	**2,338**	
	Recycled	Non-Potable	IEUA		49	38	53	101	143	182	227	234	229	178	114	59	**1,609**	
2040	Groundwater	Potable	Chino Basin		58	86	91	213	236	225	262	270	233	227	183	121	**2,204**	**16,569**
	Groundwater (Imported)	Potable	Chino Basin	CDA	326	302	345	342	355	374	385	361	354	372	348	337	**4,200**	
	Groundwater (Imported)	Potable	Chino Basin	MVWD	277	227	253	261	369	337	357	299	212	272	336	280	**3,479**	
	Surface Water (Imported)	Potable	Other	MVWD	130	124	130	175	228	289	344	381	379	308	216	130	**2,832**	
	Surface Water (Imported)	Potable	SWP	WFA	139	149	216	178	177	235	255	254	178	178	146	138	**2,244**	
	Recycled	Non-Potable	IEUA		49	38	53	101	143	182	227	234	229	178	114	59	**1,609**	
2045	Groundwater	Potable	Chino Basin		58	87	91	213	237	226	263	271	234	228	183	122	**2,213**	**16,904**
	Groundwater (Imported)	Potable	Chino Basin	CDA	326	302	345	342	355	374	385	361	354	372	348	337	**4,200**	
	Groundwater (Imported)	Potable	Chino Basin	MVWD	278	228	254	262	370	338	358	300	213	273	337	281	**3,492**	
	Surface Water (Imported)	Potable	Other	MVWD	138	132	138	186	242	306	365	405	402	327	229	138	**3,008**	
	Surface Water (Imported)	Potable	SWP	WFA	148	158	230	189	188	250	270	270	189	189	155	147	**2,382**	
	Recycled	Non-Potable	IEUA		49	38	53	101	143	182	227	234	229	178	114	59	**1,609**	

Table B-2c. City of Chino Hills Projected Water Plan - High Demand, High Groundwater Utilization, Low Imported Water Utilization
Monthly Distribution of Supplies (af) 2025 through 2045

Fiscal Year	Water Supply	Demand Met with Supply	Source of Supply	Source of Imported Water	January	February	March	April	May	June	July	August	September	October	November	December	Total Annual Supply	Grand Total Annual Supply
2025	Groundwater	Potable	Chino Basin		57	85	90	210	233	222	258	266	230	224	180	119	**2,174**	**17,120**
	Groundwater (Imported)	Potable	Chino Basin	CDA	326	302	345	342	355	374	385	361	354	372	348	337	**4,200**	
	Groundwater (Imported)	Potable	Chino Basin	MVWD	273	224	249	257	364	332	352	295	209	268	331	276	**3,430**	
	Surface Water (Imported)	Potable	Other	MVWD	146	139	147	197	256	325	387	429	426	346	243	146	**3,186**	
	Surface Water (Imported)	Potable	SWP	WFA	157	167	243	200	199	264	286	286	200	200	164	156	**2,521**	
	Recycled	Non-Potable	IEUA		49	38	53	101	143	182	227	234	229	178	114	59	**1,609**	
2030	Groundwater	Potable	Chino Basin		58	87	91	214	237	226	263	271	235	228	184	122	**2,215**	**17,113**
	Groundwater (Imported)	Potable	Chino Basin	CDA	326	302	345	342	355	374	385	361	354	372	348	337	**4,200**	
	Groundwater (Imported)	Potable	Chino Basin	MVWD	278	228	254	262	371	338	358	300	213	273	338	281	**3,495**	
	Surface Water (Imported)	Potable	Other	MVWD	143	137	144	193	251	318	379	420	417	339	238	143	**3,122**	
	Surface Water (Imported)	Potable	SWP	WFA	154	164	238	196	195	259	280	280	196	196	161	153	**2,471**	
	Recycled	Non-Potable	IEUA		49	38	53	101	143	182	227	234	229	178	114	59	**1,609**	
2035	Groundwater	Potable	Chino Basin		60	89	94	220	244	233	271	279	242	235	189	125	**2,281**	**17,072**
	Groundwater (Imported)	Potable	Chino Basin	CDA	326	302	345	342	355	374	385	361	354	372	348	337	**4,200**	
	Groundwater (Imported)	Potable	Chino Basin	MVWD	286	235	262	270	382	348	369	309	220	281	348	290	**3,600**	
	Surface Water (Imported)	Potable	Other	MVWD	138	131	138	185	242	306	365	404	402	326	229	138	**3,003**	
	Surface Water (Imported)	Potable	SWP	WFA	148	158	229	189	187	249	270	270	188	188	155	147	**2,378**	
	Recycled	Non-Potable	IEUA		49	38	53	101	143	182	227	234	229	178	114	59	**1,609**	
2040	Groundwater	Potable	Chino Basin		60	90	94	221	245	234	272	280	242	236	190	126	**2,290**	**16,960**
	Groundwater (Imported)	Potable	Chino Basin	CDA	326	302	345	342	355	374	385	361	354	372	348	337	**4,200**	
	Groundwater (Imported)	Potable	Chino Basin	MVWD	287	235	263	271	383	350	370	311	221	282	349	291	**3,614**	
	Surface Water (Imported)	Potable	Other	MVWD	134	128	135	181	235	298	355	394	391	318	223	134	**2,927**	
	Surface Water (Imported)	Potable	SWP	WFA	144	154	224	184	183	243	263	263	184	184	151	143	**2,319**	
	Recycled	Non-Potable	IEUA		49	38	53	101	143	182	227	234	229	178	114	59	**1,609**	
2045	Groundwater	Potable	Chino Basin		60	90	95	222	246	235	273	281	243	237	191	126	**2,299**	**17,173**
	Groundwater (Imported)	Potable	Chino Basin	CDA	326	302	345	342	355	374	385	361	354	372	348	337	**4,200**	
	Groundwater (Imported)	Potable	Chino Basin	MVWD	288	236	264	272	385	351	372	312	221	283	350	292	**3,627**	
	Surface Water (Imported)	Potable	Other	MVWD	139	133	140	187	244	309	368	408	406	330	231	139	**3,035**	
	Surface Water (Imported)	Potable	SWP	WFA	149	160	232	191	189	252	273	272	190	190	156	148	**2,403**	
	Recycled	Non-Potable	IEUA		49	38	53	101	143	182	227	234	229	178	114	59	**1,609**	

Table B-3a. Cucamonga Valley Water District Projected Water Plan - Low Demand, Low Groundwater Utilization, High Imported Water Utilization
Monthly Distribution of Supplies (af) 2025 through 2045

Fiscal Year	Water Supply	Demand Met with Supply	Source of Supply	Source of Imported Water	January	February	March	April	May	June	July	August	September	October	November	December	Total Annual Supply	Grand Total Annual Supply
2025	Groundwater	Transfer	Chino Basin		0	0	0	0	0	0	0	0	0	0	0	0	**0**	**49,687**
	Groundwater	Potable	Chino Basin		536	502	529	736	840	955	1,082	1,082	972	884	746	591	**9,456**	
	Groundwater	Potable	Cucamonga Basin		524	491	516	720	821	933	1,057	1,057	950	864	729	577	**9,238**	
	Surface Water	Potable	Deer Canyon		3	3	3	4	4	5	6	6	5	5	4	3	**51**	
	Surface Water	Potable	Cucamonga Canyon		45	42	45	62	71	81	92	92	82	75	63	50	**800**	
	Surface Water (Imported)	Potable	SWP	IEUA/MWD	1,487	1,393	1,466	2,044	2,333	2,650	3,003	3,003	2,699	2,453	2,071	1,641	**26,243**	
	Recycled	Non-Potable	IEUA		102	96	101	140	160	182	206	206	185	168	142	113	**1,801**	
	Surface Water	Potable	Day/East Canyon		119	111	117	163	187	212	240	240	216	196	166	131	**2,098**	
2030	Groundwater	Transfer	Chino Basin		0	0	0	0	0	0	0	0	0	0	0	0	**0**	**51,242**
	Groundwater	Potable	Chino Basin		750	703	740	1,031	1,177	1,337	1,515	1,516	1,362	1,238	1,045	828	**13,241**	
	Groundwater	Potable	Cucamonga Basin		509	477	502	700	798	907	1,027	1,027	923	840	708	561	**8,980**	
	Surface Water	Potable	Deer Canyon		3	3	3	4	4	5	6	6	5	5	4	3	**51**	
	Surface Water	Potable	Cucamonga Canyon		45	42	45	62	71	81	92	92	82	75	63	50	**800**	
	Surface Water (Imported)	Potable	SWP	IEUA/MWD	1,364	1,278	1,345	1,874	2,140	2,430	2,754	2,754	2,475	2,250	1,900	1,505	**24,071**	
	Recycled	Non-Potable	IEUA		113	106	112	156	178	202	229	229	206	187	158	125	**2,001**	
	Surface Water	Potable	Day/East Canyon		119	111	117	163	187	212	240	240	216	196	166	131	**2,098**	
2035	Groundwater	Transfer	Chino Basin		0	0	0	0	0	0	0	0	0	0	0	0	**0**	**48,557**
	Groundwater	Potable	Chino Basin		801	751	790	1,101	1,258	1,428	1,619	1,619	1,454	1,323	1,117	884	**14,145**	
	Groundwater	Potable	Cucamonga Basin		491	460	484	675	770	875	991	991	890	810	683	541	**8,661**	
	Surface Water	Potable	Deer Canyon		3	3	3	4	4	5	6	6	5	5	4	3	**51**	
	Surface Water	Potable	Cucamonga Canyon		45	42	45	62	71	81	92	92	82	75	63	50	**800**	
	Surface Water (Imported)	Potable	SWP	IEUA/MWD	1,178	1,104	1,162	1,620	1,849	2,100	2,380	2,380	2,139	1,945	1,642	1,301	**20,802**	
	Recycled	Non-Potable	IEUA		113	106	112	156	178	202	229	229	206	187	158	125	**2,001**	
	Surface Water	Potable	Day/East Canyon		119	111	117	163	187	212	240	240	216	196	166	131	**2,098**	
2040	Groundwater	Transfer	Chino Basin		0	0	0	0	0	0	0	0	0	0	0	0	**0**	**47,443**
	Groundwater	Potable	Chino Basin		850	796	838	1,168	1,333	1,514	1,716	1,717	1,542	1,402	1,183	938	**14,999**	
	Groundwater	Potable	Cucamonga Basin		483	452	476	664	757	861	975	975	876	797	672	532	**8,520**	
	Surface Water	Potable	Deer Canyon		3	3	3	4	4	5	6	6	5	5	4	3	**51**	
	Surface Water	Potable	Cucamonga Canyon		45	42	45	62	71	81	92	92	82	75	63	50	**800**	
	Surface Water (Imported)	Potable	SWP	IEUA/MWD	1,075	1,007	1,060	1,478	1,687	1,916	2,171	2,171	1,951	1,774	1,498	1,187	**18,974**	
	Recycled	Non-Potable	IEUA		113	106	112	156	178	202	229	229	206	187	158	125	**2,001**	
	Surface Water	Potable	Day/East Canyon		119	111	117	163	187	212	240	240	216	196	166	131	**2,098**	
2045	Groundwater	Transfer	Chino Basin		0	0	0	0	0	0	0	0	0	0	0	0	**0**	**47,443**
	Groundwater	Potable	Chino Basin		850	796	838	1,168	1,333	1,514	1,716	1,717	1,542	1,402	1,183	938	**14,999**	
	Groundwater	Potable	Cucamonga Basin		483	452	476	664	757	861	975	975	876	797	672	532	**8,520**	
	Surface Water	Potable	Deer Canyon		3	3	3	4	4	5	6	6	5	5	4	3	**51**	
	Surface Water	Potable	Cucamonga Canyon		45	42	45	62	71	81	92	92	82	75	63	50	**800**	
	Surface Water (Imported)	Potable	SWP	IEUA/MWD	1,075	1,007	1,060	1,478	1,687	1,916	2,171	2,171	1,951	1,774	1,498	1,187	**18,974**	
	Recycled	Non-Potable	IEUA		113	106	112	156	178	202	229	229	206	187	158	125	**2,001**	
	Surface Water	Potable	Day/East Canyon		119	111	117	163	187	212	240	240	216	196	166	131	**2,098**	

Table B-3b. Cucamonga Valley Water District Projected Water Plan - Expected Demand, Expected Groundwater Utilization, Expected Imported Water Utilization
Monthly Distribution of Supplies (af) 2025 through 2045

Fiscal Year	Water Supply	Demand Met with Supply	Source of Supply	Source of Imported Water	January	February	March	April	May	June	July	August	September	October	November	December	Total Annual Supply	Grand Total Annual Supply
2025	Groundwater	Transfer	Chino Basin		0	0	0	0	0	0	0	0	0	0	0	0	**0**	**50,607**
	Groundwater	Potable	Chino Basin		565	529	557	776	886	1,007	1,141	1,141	1,025	932	787	623	**9,969**	
	Groundwater	Potable	Cucamonga Basin		552	517	544	758	865	983	1,113	1,113	1,000	910	768	608	**9,730**	
	Surface Water	Potable	Deer Canyon		3	3	3	4	4	5	6	6	5	5	4	3	**51**	
	Surface Water	Potable	Cucamonga Canyon		45	42	45	62	71	81	92	92	82	75	63	50	**800**	
	Surface Water (Imported)	Potable	SWP	IEUA/MWD	1,482	1,389	1,462	2,037	2,326	2,641	2,993	2,993	2,690	2,446	2,065	1,636	**26,159**	
	Recycled	Non-Potable	IEUA		102	96	101	140	160	182	206	206	185	168	142	113	**1,801**	
	Surface Water	Potable	Day/East Canyon		119	111	117	163	187	212	240	240	216	196	166	131	**2,098**	
2030	Groundwater	Transfer	Chino Basin		0	0	0	0	0	0	0	0	0	0	0	0	**0**	**52,902**
	Groundwater	Potable	Chino Basin		802	751	790	1,102	1,258	1,429	1,619	1,620	1,455	1,323	1,117	885	**14,150**	
	Groundwater	Potable	Cucamonga Basin		543	509	536	747	852	968	1,097	1,097	985	896	756	599	**9,585**	
	Surface Water	Potable	Deer Canyon		3	3	3	4	4	5	6	6	5	5	4	3	**51**	
	Surface Water	Potable	Cucamonga Canyon		45	42	45	62	71	81	92	92	82	75	63	50	**800**	
	Surface Water (Imported)	Potable	SWP	IEUA/MWD	1,372	1,286	1,353	1,886	2,153	2,445	2,771	2,771	2,490	2,264	1,911	1,515	**24,218**	
	Recycled	Non-Potable	IEUA		113	106	112	156	178	202	229	229	206	187	158	125	**2,001**	
	Surface Water	Potable	Day/East Canyon		119	111	117	163	187	212	240	240	216	196	166	131	**2,098**	
2035	Groundwater	Transfer	Chino Basin		0	0	0	0	0	0	0	0	0	0	0	0	**0**	**51,240**
	Groundwater	Potable	Chino Basin		866	812	854	1,190	1,359	1,544	1,750	1,750	1,572	1,430	1,207	956	**15,288**	
	Groundwater	Potable	Cucamonga Basin		531	497	523	729	832	945	1,071	1,071	962	875	739	585	**9,361**	
	Surface Water	Potable	Deer Canyon		3	3	3	4	4	5	6	6	5	5	4	3	**51**	
	Surface Water	Potable	Cucamonga Canyon		45	42	45	62	71	81	92	92	82	75	63	50	**800**	
	Surface Water (Imported)	Potable	SWP	IEUA/MWD	1,226	1,149	1,209	1,685	1,924	2,185	2,476	2,476	2,225	2,023	1,708	1,353	**21,641**	
	Recycled	Non-Potable	IEUA		113	106	112	156	178	202	229	229	206	187	158	125	**2,001**	
	Surface Water	Potable	Day/East Canyon		119	111	117	163	187	212	240	240	216	196	166	131	**2,098**	
2040	Groundwater	Transfer	Chino Basin		0	0	0	0	0	0	0	0	0	0	0	0	**0**	**50,703**
	Groundwater	Potable	Chino Basin		925	866	912	1,271	1,450	1,648	1,867	1,868	1,678	1,525	1,288	1,021	**16,319**	
	Groundwater	Potable	Cucamonga Basin		525	492	518	722	823	936	1,060	1,060	952	866	731	579	**9,262**	
	Surface Water	Potable	Deer Canyon		3	3	3	4	4	5	6	6	5	5	4	3	**51**	
	Surface Water	Potable	Cucamonga Canyon		45	42	45	62	71	81	92	92	82	75	63	50	**800**	
	Surface Water (Imported)	Potable	SWP	IEUA/MWD	1,143	1,071	1,127	1,571	1,793	2,037	2,308	2,308	2,074	1,886	1,592	1,262	**20,172**	
	Recycled	Non-Potable	IEUA		113	106	112	156	178	202	229	229	206	187	158	125	**2,001**	
	Surface Water	Potable	Day/East Canyon		119	111	117	163	187	212	240	240	216	196	166	131	**2,098**	
2045	Groundwater	Transfer	Chino Basin		0	0	0	0	0	0	0	0	0	0	0	0	**0**	**50,703**
	Groundwater	Potable	Chino Basin		925	866	912	1,271	1,450	1,648	1,867	1,868	1,678	1,525	1,288	1,021	**16,319**	
	Groundwater	Potable	Cucamonga Basin		525	492	518	722	823	936	1,060	1,060	952	866	731	579	**9,262**	
	Surface Water	Potable	Deer Canyon		3	3	3	4	4	5	6	6	5	5	4	3	**51**	
	Surface Water	Potable	Cucamonga Canyon		45	42	45	62	71	81	92	92	82	75	63	50	**800**	
	Surface Water (Imported)	Potable	SWP	IEUA/MWD	1,143	1,071	1,127	1,571	1,793	2,037	2,308	2,308	2,074	1,886	1,592	1,262	**20,172**	
	Recycled	Non-Potable	IEUA		113	106	112	156	178	202	229	229	206	187	158	125	**2,001**	
	Surface Water	Potable	Day/East Canyon		119	111	117	163	187	212	240	240	216	196	166	131	**2,098**	

Table B-3c. Cucamonga Valley Water District Projected Water Plan - High Demand, High Groundwater Utilization, Low Imported Water Utilization
Monthly Distribution of Supplies (af) 2025 through 2045

Fiscal Year	Water Supply	Demand Met with Supply	Source of Supply	Source of Imported Water	January	February	March	April	May	June	July	August	September	October	November	December	Total Annual Supply	Grand Total Annual Supply
2025	Groundwater	Transfer	Chino Basin		0	0	0	0	0	0	0	0	0	0	0	0	**0**	**51,757**
	Groundwater	Potable	Chino Basin		595	557	587	818	934	1,061	1,202	1,202	1,080	982	829	657	**10,504**	
	Groundwater	Potable	Cucamonga Basin		581	544	573	798	911	1,035	1,172	1,172	1,053	958	808	640	**10,244**	
	Surface Water	Potable	Deer Canyon		3	3	3	4	4	5	6	6	5	5	4	3	**51**	
	Surface Water	Potable	Cucamonga Canyon		45	42	45	62	71	81	92	92	82	75	63	50	**800**	
	Surface Water (Imported)	Potable	SWP	IEUA/MWD	1,488	1,394	1,467	2,045	2,335	2,651	3,005	3,005	2,700	2,455	2,073	1,642	**26,259**	
	Recycled	Non-Potable	IEUA		102	96	101	140	160	182	206	206	185	168	142	113	**1,801**	
	Surface Water	Potable	Day/East Canyon		119	111	117	163	187	212	240	240	216	196	166	131	**2,098**	
2030	Groundwater	Transfer	Chino Basin		0	0	0	0	0	0	0	0	0	0	0	0	**0**	**54,875**
	Groundwater	Potable	Chino Basin		855	801	843	1,175	1,342	1,525	1,727	1,728	1,552	1,411	1,192	944	**15,095**	
	Groundwater	Potable	Cucamonga Basin		579	542	571	796	908	1,032	1,169	1,169	1,050	955	806	638	**10,216**	
	Surface Water	Potable	Deer Canyon		3	3	3	4	4	5	6	6	5	5	4	3	**51**	
	Surface Water	Potable	Cucamonga Canyon		45	42	45	62	71	81	92	92	82	75	63	50	**800**	
	Surface Water (Imported)	Potable	SWP	IEUA/MWD	1,394	1,307	1,375	1,917	2,188	2,485	2,817	2,817	2,531	2,301	1,943	1,539	**24,614**	
	Recycled	Non-Potable	IEUA		113	106	112	156	178	202	229	229	206	187	158	125	**2,001**	
	Surface Water	Potable	Day/East Canyon		119	111	117	163	187	212	240	240	216	196	166	131	**2,098**	
2035	Groundwater	Transfer	Chino Basin		0	0	0	0	0	0	0	0	0	0	0	0	**0**	**54,414**
	Groundwater	Potable	Chino Basin		934	876	921	1,284	1,466	1,665	1,887	1,887	1,696	1,542	1,302	1,031	**16,491**	
	Groundwater	Potable	Cucamonga Basin		573	536	565	787	898	1,020	1,155	1,155	1,038	944	797	631	**10,099**	
	Surface Water	Potable	Deer Canyon		3	3	3	4	4	5	6	6	5	5	4	3	**51**	
	Surface Water	Potable	Cucamonga Canyon		45	42	45	62	71	81	92	92	82	75	63	50	**800**	
	Surface Water (Imported)	Potable	SWP	IEUA/MWD	1,296	1,214	1,278	1,781	2,034	2,309	2,617	2,617	2,352	2,138	1,805	1,430	**22,874**	
	Recycled	Non-Potable	IEUA		113	106	112	156	178	202	229	229	206	187	158	125	**2,001**	
	Surface Water	Potable	Day/East Canyon		119	111	117	163	187	212	240	240	216	196	166	131	**2,098**	
2040	Groundwater	Transfer	Chino Basin		0	0	0	0	0	0	0	0	0	0	0	0	**0**	**54,548**
	Groundwater	Potable	Chino Basin		1,004	940	990	1,380	1,574	1,788	2,027	2,028	1,822	1,656	1,398	1,108	**17,714**	
	Groundwater	Potable	Cucamonga Basin		570	533	562	783	893	1,015	1,149	1,149	1,033	939	793	628	**10,047**	
	Surface Water	Potable	Deer Canyon		3	3	3	4	4	5	6	6	5	5	4	3	**51**	
	Surface Water	Potable	Cucamonga Canyon		45	42	45	62	71	81	92	92	82	75	63	50	**800**	
	Surface Water (Imported)	Potable	SWP	IEUA/MWD	1,237	1,159	1,220	1,701	1,941	2,205	2,499	2,499	2,246	2,042	1,724	1,366	**21,838**	
	Recycled	Non-Potable	IEUA		113	106	112	156	178	202	229	229	206	187	158	125	**2,001**	
	Surface Water	Potable	Day/East Canyon		119	111	117	163	187	212	240	240	216	196	166	131	**2,098**	
2045	Groundwater	Transfer	Chino Basin		0	0	0	0	0	0	0	0	0	0	0	0	**0**	**54,548**
	Groundwater	Potable	Chino Basin		1,004	940	990	1,380	1,574	1,788	2,027	2,028	1,822	1,656	1,398	1,108	**17,714**	
	Groundwater	Potable	Cucamonga Basin		570	533	562	783	893	1,015	1,149	1,149	1,033	939	793	628	**10,047**	
	Surface Water	Potable	Deer Canyon		3	3	3	4	4	5	6	6	5	5	4	3	**51**	
	Surface Water	Potable	Cucamonga Canyon		45	42	45	62	71	81	92	92	82	75	63	50	**800**	
	Surface Water (Imported)	Potable	SWP	IEUA/MWD	1,237	1,159	1,220	1,701	1,941	2,205	2,499	2,499	2,246	2,042	1,724	1,366	**21,838**	
	Recycled	Non-Potable	IEUA		113	106	112	156	178	202	229	229	206	187	158	125	**2,001**	
	Surface Water	Potable	Day/East Canyon		119	111	117	163	187	212	240	240	216	196	166	131	**2,098**	

Table B-4a. Fontana Water Company Projected Water Plan - Low Demand, Low Groundwater Utilization, High Imported Water Utilization
Monthly Distribution of Supplies (af) 2025 through 2045

Fiscal Year	Water Supply	Demand Met with Supply	Source of Supply	Source of Imported Water	January	February	March	April	May	June	July	August	September	October	November	December	Total Annual Supply	Grand Total Annual Supply
2025	Groundwater	Potable	No-Man's Land		160	139	139	127	143	141	162	160	154	168	168	161	**1,822**	**44,632**
	Groundwater	Potable	Chino Basin		258	279	317	619	648	926	1,006	1,003	833	827	536	322	**7,575**	
	Groundwater	Potable	Rialto-Colton Basin		355	308	309	282	317	314	359	355	342	372	373	356	**4,043**	
	Groundwater	Potable	Lytle Basin		562	487	488	446	500	496	568	561	541	589	589	563	**6,390**	
	Surface Water	Potable	Lytle Creek		454	488	492	556	517	397	357	337	337	240	293	390	**4,860**	
	Surface Water (Imported)	Potable	SWP	IEUA	997	942	1,207	1,224	1,472	1,412	1,543	1,577	1,466	1,689	1,093	986	**15,609**	
	Surface Water (Imported)	Potable	Sandhill	SBVMWD	213	201	258	261	314	302	330	337	313	361	233	211	**3,334**	
	Recycled	Non-Potable	IEUA		35	39	34	81	110	146	130	114	114	69	80	48	**1,000**	
2030	Groundwater	Potable	No-Man's Land		163	142	142	130	145	144	165	163	157	171	171	164	**1,856**	**45,678**
	Groundwater	Potable	Chino Basin		273	295	335	655	685	979	1,064	1,061	881	875	567	341	**8,011**	
	Groundwater	Potable	Rialto-Colton Basin		362	314	315	288	323	320	366	362	349	380	380	363	**4,120**	
	Groundwater	Potable	Lytle Basin		562	487	488	446	500	496	568	561	541	589	589	563	**6,390**	
	Surface Water	Potable	Lytle Creek		454	488	492	556	517	397	357	337	337	240	293	390	**4,860**	
	Surface Water (Imported)	Potable	SWP	IEUA	996	942	1,207	1,224	1,472	1,412	1,543	1,577	1,466	1,689	1,093	986	**15,607**	
	Surface Water (Imported)	Potable	Sandhill	SBVMWD	213	201	258	261	314	302	330	337	313	361	233	211	**3,333**	
	Recycled	Non-Potable	IEUA		53	58	51	121	165	219	195	171	172	104	121	72	**1,500**	
2035	Groundwater	Potable	No-Man's Land		166	144	145	132	148	147	168	166	160	174	174	167	**1,891**	**45,479**
	Groundwater	Potable	Chino Basin		295	319	363	710	743	1,060	1,153	1,149	954	948	614	369	**8,678**	
	Groundwater	Potable	Rialto-Colton Basin		369	320	321	293	329	326	373	368	355	387	387	370	**4,196**	
	Groundwater	Potable	Lytle Basin		562	487	488	446	500	496	568	561	541	589	589	563	**6,390**	
	Surface Water	Potable	Lytle Creek		454	488	492	556	517	397	357	337	337	240	293	390	**4,860**	
	Surface Water (Imported)	Potable	SWP	IEUA	919	869	1,113	1,129	1,357	1,302	1,424	1,455	1,353	1,558	1,008	910	**14,396**	
	Surface Water (Imported)	Potable	Sandhill	SBVMWD	196	185	237	241	289	278	303	310	288	332	215	194	**3,068**	
	Recycled	Non-Potable	IEUA		71	78	67	161	219	292	260	228	229	138	161	95	**2,000**	
2040	Groundwater	Potable	No-Man's Land		169	147	147	135	151	149	171	169	163	177	177	170	**1,925**	**45,858**
	Groundwater	Potable	Chino Basin		317	342	389	761	796	1,137	1,236	1,232	1,023	1,016	659	396	**9,303**	
	Groundwater	Potable	Rialto-Colton Basin		376	326	327	299	335	332	380	375	362	394	394	377	**4,274**	
	Groundwater	Potable	Lytle Basin		562	487	488	446	500	496	568	561	541	589	589	563	**6,390**	
	Surface Water	Potable	Lytle Creek		454	488	492	556	517	397	357	337	337	240	293	390	**4,860**	
	Surface Water (Imported)	Potable	SWP	IEUA	874	827	1,059	1,074	1,291	1,239	1,354	1,384	1,287	1,482	959	865	**13,693**	
	Surface Water (Imported)	Potable	Sandhill	SBVMWD	186	176	225	228	275	264	288	294	274	315	204	184	**2,913**	
	Recycled	Non-Potable	IEUA		89	97	84	202	274	366	324	285	286	173	201	119	**2,500**	
2045	Groundwater	Potable	No-Man's Land		172	149	150	137	153	152	174	172	166	181	181	173	**1,960**	**47,211**
	Groundwater	Potable	Chino Basin		332	359	408	797	834	1,191	1,294	1,291	1,072	1,064	690	415	**9,744**	
	Groundwater	Potable	Rialto-Colton Basin		382	332	333	304	341	338	386	382	368	401	401	383	**4,350**	
	Groundwater	Potable	Lytle Basin		562	487	488	446	500	496	568	561	541	589	589	563	**6,390**	
	Surface Water	Potable	Lytle Creek		454	488	492	556	517	397	357	337	337	240	293	390	**4,860**	
	Surface Water (Imported)	Potable	SWP	IEUA	890	841	1,078	1,093	1,314	1,261	1,378	1,409	1,310	1,508	976	881	**13,939**	
	Surface Water (Imported)	Potable	Sandhill	SBVMWD	189	179	229	233	280	268	293	300	279	321	208	187	**2,967**	
	Recycled	Non-Potable	IEUA		106	117	101	242	329	439	389	342	343	207	241	143	**3,000**	

Table B-4b. Fontana Water Company Projected Water Plan - Expected Demand, Expected Groundwater Utilization, Expected Imported Water Utilization
Monthly Distribution of Supplies (af) 2025 through 2045

Fiscal Year	Water Supply	Demand Met with Supply	Source of Supply	Source of Imported Water	January	February	March	April	May	June	July	August	September	October	November	December	Total Annual Supply	Grand Total Annual Supply
	Groundwater	Potable	No-Man's Land		160	139	139	127	143	141	162	160	154	168	168	161	**1,822**	
	Groundwater	Potable	Chino Basin		316	341	388	759	794	1,134	1,232	1,229	1,020	1,013	657	395	**9,278**	
	Groundwater	Potable	Rialto-Colton Basin		355	308	309	282	317	314	359	355	342	372	373	356	**4,043**	
2025	Groundwater	Potable	Lytle Basin		562	487	488	446	500	496	568	561	541	589	589	563	**6,390**	**45,593**
	Surface Water	Potable	Lytle Creek		454	488	492	556	517	397	357	337	337	240	293	390	**4,860**	
	Surface Water (Imported)	Potable	SWP	IEUA	958	905	1,160	1,176	1,414	1,357	1,483	1,516	1,409	1,623	1,050	948	**15,000**	
	Surface Water (Imported)	Potable	Sandhill	SBVMWD	204	193	247	251	302	289	316	323	301	346	224	202	**3,200**	
	Recycled	Non-Potable	IEUA		35	39	34	81	110	146	130	114	114	69	80	48	**1,000**	
	Groundwater	Potable	No-Man's Land		163	142	142	130	145	144	165	163	157	171	171	164	**1,856**	
	Groundwater	Potable	Chino Basin		340	367	417	816	854	1,220	1,326	1,322	1,098	1,090	707	425	**9,983**	
	Groundwater	Potable	Rialto-Colton Basin		362	314	315	288	323	320	366	362	349	380	380	363	**4,120**	
2030	Groundwater	Potable	Lytle Basin		562	487	488	446	500	496	568	561	541	589	589	563	**6,390**	**46,855**
	Surface Water	Potable	Lytle Creek		454	488	492	556	517	397	357	337	337	240	293	390	**4,860**	
	Surface Water (Imported)	Potable	SWP	IEUA	955	903	1,157	1,173	1,410	1,353	1,479	1,511	1,405	1,618	1,047	945	**14,956**	
	Surface Water (Imported)	Potable	Sandhill	SBVMWD	204	193	247	250	301	289	315	322	300	345	223	202	**3,190**	
	Recycled	Non-Potable	IEUA		53	58	51	121	165	219	195	171	172	104	121	72	**1,500**	
	Groundwater	Potable	No-Man's Land		166	144	145	132	148	147	168	166	160	174	174	167	**1,891**	
	Groundwater	Potable	Chino Basin		379	409	465	910	952	1,360	1,478	1,474	1,224	1,215	788	473	**11,128**	
	Groundwater	Potable	Rialto-Colton Basin		369	320	321	293	329	326	373	368	355	387	387	370	**4,196**	
2035	Groundwater	Potable	Lytle Basin		562	487	488	446	500	496	568	561	541	589	589	563	**6,390**	**47,427**
	Surface Water	Potable	Lytle Creek		454	488	492	556	517	397	357	337	337	240	293	390	**4,860**	
	Surface Water (Imported)	Potable	SWP	IEUA	893	844	1,082	1,097	1,319	1,265	1,383	1,413	1,314	1,513	979	884	**13,985**	
	Surface Water (Imported)	Potable	Sandhill	SBVMWD	190	180	230	233	281	269	294	301	280	322	208	188	**2,977**	
	Recycled	Non-Potable	IEUA		71	78	67	161	219	292	260	228	229	138	161	95	**2,000**	
	Groundwater	Potable	No-Man's Land		169	147	147	135	151	149	171	169	163	177	177	170	**1,925**	
	Groundwater	Potable	Chino Basin		418	452	514	1,005	1,052	1,502	1,633	1,628	1,352	1,342	870	523	**12,293**	
	Groundwater	Potable	Rialto-Colton Basin		376	326	327	299	335	332	380	375	362	394	394	377	**4,274**	
2040	Groundwater	Potable	Lytle Basin		562	487	488	446	500	496	568	561	541	589	589	563	**6,390**	**48,486**
	Surface Water	Potable	Lytle Creek		454	488	492	556	517	397	357	337	337	240	293	390	**4,860**	
	Surface Water (Imported)	Potable	SWP	IEUA	855	809	1,036	1,050	1,263	1,212	1,325	1,354	1,259	1,449	938	846	**13,396**	
	Surface Water (Imported)	Potable	Sandhill	SBVMWD	182	172	220	223	269	258	282	288	268	308	199	180	**2,848**	
	Recycled	Non-Potable	IEUA		89	97	84	202	274	366	324	285	286	173	201	119	**2,500**	
	Groundwater	Potable	No-Man's Land		172	149	150	137	153	152	174	172	166	181	181	173	**1,960**	
	Groundwater	Potable	Chino Basin		449	485	551	1,078	1,128	1,611	1,751	1,746	1,450	1,440	933	561	**13,183**	
	Groundwater	Potable	Rialto-Colton Basin		382	332	333	304	341	338	386	382	368	401	401	383	**4,350**	
2045	Groundwater	Potable	Lytle Basin		562	487	488	446	500	496	568	561	541	589	589	563	**6,390**	**50,159**
	Surface Water	Potable	Lytle Creek		454	488	492	556	517	397	357	337	337	240	293	390	**4,860**	
	Surface Water (Imported)	Potable	SWP	IEUA	864	817	1,047	1,061	1,276	1,225	1,339	1,368	1,272	1,465	948	855	**13,537**	
	Surface Water (Imported)	Potable	Sandhill	SBVMWD	184	174	223	226	271	260	285	291	270	311	202	182	**2,879**	
	Recycled	Non-Potable	IEUA		106	117	101	242	329	439	389	342	343	207	241	143	**3,000**	

Table B-4c. Fontana Water Company Projected Water Plan - High Demand, High Groundwater Utilization, Low Imported Water Utilization
Monthly Distribution of Supplies (af) 2025 through 2045

Fiscal Year	Water Supply	Demand Met with Supply	Source of Supply	Source of Imported Water	January	February	March	April	May	June	July	August	September	October	November	December	Total Annual Supply	Grand Total Annual Supply
2025	Groundwater	Potable	No-Man's Land		160	139	139	127	143	141	162	160	154	168	168	161	**1,822**	**46,554**
	Groundwater	Potable	Chino Basin		374	404	459	898	940	1,342	1,459	1,455	1,208	1,199	777	467	**10,981**	
	Groundwater	Potable	Rialto-Colton Basin		355	308	309	282	317	314	359	355	342	372	373	356	**4,043**	
	Groundwater	Potable	Lytle Basin		562	487	488	446	500	496	568	561	541	589	589	563	**6,390**	
	Surface Water	Potable	Lytle Creek		454	488	492	556	517	397	357	337	337	240	293	390	**4,860**	
	Surface Water (Imported)	Potable	SWP	IEUA	919	869	1,113	1,128	1,357	1,302	1,423	1,454	1,352	1,557	1,008	909	**14,391**	
	Surface Water (Imported)	Potable	Sandhill	SBVMWD	196	185	237	240	289	277	303	310	288	332	215	194	**3,066**	
	Recycled	Non-Potable	IEUA		35	39	34	81	110	146	130	114	114	69	80	48	**1,000**	
2030	Groundwater	Potable	No-Man's Land		163	142	142	130	145	144	165	163	157	171	171	164	**1,856**	**48,013**
	Groundwater	Potable	Chino Basin		407	440	500	978	1,023	1,461	1,588	1,584	1,315	1,305	846	509	**11,955**	
	Groundwater	Potable	Rialto-Colton Basin		362	314	315	288	323	320	366	362	349	380	380	363	**4,120**	
	Groundwater	Potable	Lytle Basin		562	487	488	446	500	496	568	561	541	589	589	563	**6,390**	
	Surface Water	Potable	Lytle Creek		454	488	492	556	517	397	357	337	337	240	293	390	**4,860**	
	Surface Water (Imported)	Potable	SWP	IEUA	912	863	1,105	1,120	1,347	1,293	1,413	1,444	1,342	1,546	1,000	903	**14,288**	
	Surface Water (Imported)	Potable	Sandhill	SBVMWD	194	184	235	239	287	275	301	308	286	329	213	192	**3,044**	
	Recycled	Non-Potable	IEUA		53	58	51	121	165	219	195	171	172	104	121	72	**1,500**	
2035	Groundwater	Potable	No-Man's Land		166	144	145	132	148	147	168	166	160	174	174	167	**1,891**	**49,437**
	Groundwater	Potable	Chino Basin		462	500	568	1,110	1,162	1,659	1,804	1,799	1,493	1,483	961	578	**13,578**	
	Groundwater	Potable	Rialto-Colton Basin		369	320	321	293	329	326	373	368	355	387	387	370	**4,196**	
	Groundwater	Potable	Lytle Basin		562	487	488	446	500	496	568	561	541	589	589	563	**6,390**	
	Surface Water	Potable	Lytle Creek		454	488	492	556	517	397	357	337	337	240	293	390	**4,860**	
	Surface Water (Imported)	Potable	SWP	IEUA	870	822	1,054	1,068	1,285	1,233	1,347	1,377	1,280	1,474	954	861	**13,624**	
	Surface Water (Imported)	Potable	Sandhill	SBVMWD	185	175	224	227	273	262	287	293	272	314	203	183	**2,898**	
	Recycled	Non-Potable	IEUA		71	78	67	161	219	292	260	228	229	138	161	95	**2,000**	
2040	Groundwater	Potable	No-Man's Land		169	147	147	135	151	149	171	169	163	177	177	170	**1,925**	**51,223**
	Groundwater	Potable	Chino Basin		520	562	639	1,250	1,308	1,868	2,030	2,024	1,681	1,669	1,082	650	**15,283**	
	Groundwater	Potable	Rialto-Colton Basin		376	326	327	299	335	332	380	375	362	394	394	377	**4,274**	
	Groundwater	Potable	Lytle Basin		562	487	488	446	500	496	568	561	541	589	589	563	**6,390**	
	Surface Water	Potable	Lytle Creek		454	488	492	556	517	397	357	337	337	240	293	390	**4,860**	
	Surface Water (Imported)	Potable	SWP	IEUA	842	796	1,020	1,034	1,244	1,193	1,304	1,333	1,239	1,427	923	833	**13,189**	
	Surface Water (Imported)	Potable	Sandhill	SBVMWD	179	169	217	220	264	254	277	283	263	303	196	177	**2,802**	
	Recycled	Non-Potable	IEUA		89	97	84	202	274	366	324	285	286	173	201	119	**2,500**	
2045	Groundwater	Potable	No-Man's Land		172	149	150	137	153	152	174	172	166	181	181	173	**1,960**	**53,202**
	Groundwater	Potable	Chino Basin		566	612	695	1,359	1,422	2,031	2,208	2,202	1,828	1,815	1,177	707	**16,622**	
	Groundwater	Potable	Rialto-Colton Basin		382	332	333	304	341	338	386	382	368	401	401	383	**4,350**	
	Groundwater	Potable	Lytle Basin		562	487	488	446	500	496	568	561	541	589	589	563	**6,390**	
	Surface Water	Potable	Lytle Creek		454	488	492	556	517	397	357	337	337	240	293	390	**4,860**	
	Surface Water (Imported)	Potable	SWP	IEUA	844	798	1,022	1,036	1,246	1,195	1,306	1,335	1,241	1,430	925	835	**13,212**	
	Surface Water (Imported)	Potable	Sandhill	SBVMWD	179	169	217	220	265	254	278	284	264	304	197	177	**2,808**	
	Recycled	Non-Potable	IEUA		106	117	101	242	329	439	389	342	343	207	241	143	**3,000**	

Table B-5a. Jurupa Community Services District Projected Water Plan - Low Demand, Low Groundwater Utilization, High Imported Water Utilization
Monthly Distribution of Supplies (af) 2025 through 2045

Fiscal Year	Water Supply	Demand Met with Supply	Source of Supply	Source of Imported Water	January	February	March	April	May	June	July	August	September	October	November	December	Total Annual Supply	Grand Total Annual Supply
2025	Groundwater	Potable	Chino Basin		434	434	521	694	781	868	955	955	868	868	694	607	**8,677**	**30,678**
	Groundwater (Imported)	Potable	Riverside South Basin	Rubidoux Community Services District	99	99	119	158	178	198	217	217	198	198	158	138	**1,977**	
	Groundwater (Imported)	Potable	Chino Basin	CDA	587	587	704	939	1,056	1,173	1,291	1,291	1,173	1,173	939	821	**11,733**	
	Groundwater (Imported)	Potable	Chino Basin	CVWD	297	297	356	474	534	593	652	652	593	593	474	415	**5,931**	
	Groundwater (Imported)	Potable	Chino Basin	City of Ontario	0	0	0	0	0	0	0	0	0	0	0	0	**0**	
	Groundwater (Imported)	Potable	Chino Basin	WMWD	0	0	0	0	0	0	0	0	0	0	0	0	**0**	
	Groundwater (Imported)	Transfer	Chino Basin	CDA	60	60	72	96	108	120	132	132	120	120	96	84	**1,200**	
	Groundwater	Non-Potable	Riverside South Basin		25	25	30	40	45	50	55	55	50	50	40	35	**500**	
	Groundwater	Non-Potable	Chino Basin		0	0	0	0	0	0	0	0	0	0	0	0	**0**	
	Recycled	Non-Potable	JCSD Rec. Water Project		33	33	40	53	59	66	73	73	66	66	53	46	**660**	
2030	Groundwater	Potable	Chino Basin		507	507	608	811	912	1,014	1,115	1,115	1,014	1,014	811	710	**10,138**	**31,186**
	Groundwater (Imported)	Potable	Riverside South Basin	Rubidoux Community Services District	87	87	104	139	156	174	191	191	174	174	139	122	**1,739**	
	Groundwater (Imported)	Potable	Chino Basin	CDA	587	587	704	939	1,056	1,173	1,291	1,291	1,173	1,173	939	821	**11,733**	
	Groundwater (Imported)	Potable	Chino Basin	CVWD	261	261	313	417	469	522	574	574	522	522	417	365	**5,217**	
	Groundwater (Imported)	Potable	Chino Basin	City of Ontario	0	0	0	0	0	0	0	0	0	0	0	0	**0**	
	Groundwater (Imported)	Potable	Chino Basin	WMWD	0	0	0	0	0	0	0	0	0	0	0	0	**0**	
	Groundwater (Imported)	Transfer	Chino Basin	CDA	60	60	72	96	108	120	132	132	120	120	96	84	**1,200**	
	Groundwater	Non-Potable	Riverside South Basin		25	25	30	40	45	50	55	55	50	50	40	35	**500**	
	Groundwater	Non-Potable	Chino Basin		0	0	0	0	0	0	0	0	0	0	0	0	**0**	
	Recycled	Non-Potable	JCSD Rec. Water Project		33	33	40	53	59	66	73	73	66	66	53	46	**660**	
2035	Groundwater	Potable	Chino Basin		510	510	612	817	919	1,021	1,123	1,123	1,021	1,021	817	714	**10,207**	**31,291**
	Groundwater (Imported)	Potable	Riverside South Basin	Rubidoux Community Services District	89	89	106	142	160	177	195	195	177	177	142	124	**1,775**	
	Groundwater (Imported)	Potable	Chino Basin	CDA	587	587	704	939	1,056	1,173	1,291	1,291	1,173	1,173	939	821	**11,733**	
	Groundwater (Imported)	Potable	Chino Basin	CVWD	261	261	313	417	469	522	574	574	522	522	417	365	**5,217**	
	Groundwater (Imported)	Potable	Chino Basin	City of Ontario	0	0	0	0	0	0	0	0	0	0	0	0	**0**	
	Groundwater (Imported)	Potable	Chino Basin	WMWD	0	0	0	0	0	0	0	0	0	0	0	0	**0**	
	Groundwater (Imported)	Transfer	Chino Basin	CDA	60	60	72	96	108	120	132	132	120	120	96	84	**1,200**	
	Groundwater	Non-Potable	Riverside South Basin		25	25	30	40	45	50	55	55	50	50	40	35	**500**	
	Groundwater	Non-Potable	Chino Basin		0	0	0	0	0	0	0	0	0	0	0	0	**0**	
	Recycled	Non-Potable	JCSD Rec. Water Project		33	33	40	53	59	66	73	73	66	66	53	46	**660**	
2040	Groundwater	Potable	Chino Basin		536	536	643	858	965	1,072	1,180	1,180	1,072	1,072	858	751	**10,723**	**32,072**
	Groundwater (Imported)	Potable	Riverside South Basin	Rubidoux Community Services District	91	91	109	145	163	181	200	200	181	181	145	127	**1,814**	
	Groundwater (Imported)	Potable	Chino Basin	CDA	587	587	704	939	1,056	1,173	1,291	1,291	1,173	1,173	939	821	**11,733**	
	Groundwater (Imported)	Potable	Chino Basin	CVWD	272	272	327	435	490	544	599	599	544	544	435	381	**5,442**	
	Groundwater (Imported)	Potable	Chino Basin	City of Ontario	0	0	0	0	0	0	0	0	0	0	0	0	**0**	
	Groundwater (Imported)	Potable	Chino Basin	WMWD	0	0	0	0	0	0	0	0	0	0	0	0	**0**	
	Groundwater (Imported)	Transfer	Chino Basin	CDA	60	60	72	96	108	120	132	132	120	120	96	84	**1,200**	
	Groundwater	Non-Potable	Riverside South Basin		25	25	30	40	45	50	55	55	50	50	40	35	**500**	
	Groundwater	Non-Potable	Chino Basin		0	0	0	0	0	0	0	0	0	0	0	0	**0**	
	Recycled	Non-Potable	JCSD Rec. Water Project		33	33	40	53	59	66	73	73	66	66	53	46	**660**	
2045	Groundwater	Potable	Chino Basin		536	536	643	858	965	1,072	1,180	1,180	1,072	1,072	858	751	**10,723**	**32,072**
	Groundwater (Imported)	Potable	Riverside South Basin	Rubidoux Community Services District	91	91	109	145	163	181	200	200	181	181	145	127	**1,814**	
	Groundwater (Imported)	Potable	Chino Basin	CDA	587	587	704	939	1,056	1,173	1,291	1,291	1,173	1,173	939	821	**11,733**	
	Groundwater (Imported)	Potable	Chino Basin	CVWD	272	272	327	435	490	544	599	599	544	544	435	381	**5,442**	
	Groundwater (Imported)	Potable	Chino Basin	City of Ontario	0	0	0	0	0	0	0	0	0	0	0	0	**0**	
	Groundwater (Imported)	Potable	Chino Basin	WMWD	0	0	0	0	0	0	0	0	0	0	0	0	**0**	
	Groundwater (Imported)	Transfer	Chino Basin	CDA	60	60	72	96	108	120	132	132	120	120	96	84	**1,200**	
	Groundwater	Non-Potable	Riverside South Basin		25	25	30	40	45	50	55	55	50	50	40	35	**500**	
	Groundwater	Non-Potable	Chino Basin		0	0	0	0	0	0	0	0	0	0	0	0	**0**	
	Recycled	Non-Potable	JCSD Rec. Water Project		33	33	40	53	59	66	73	73	66	66	53	46	**660**	

Table B-5b. Jurupa Community Services District Projected Water Plan - Expected Demand, Expected Groundwater Utilization, Expected Imported Water Utilization
Monthly Distribution of Supplies (af) 2025 through 2045

Fiscal Year	Water Supply	Demand Met with Supply	Source of Supply	Source of Imported Water	January	February	March	April	May	June	July	August	September	October	November	December	Total Annual Supply	Grand Total Annual Supply
2025	Groundwater	Potable	Chino Basin		472	472	566	755	849	943	1,038	1,038	943	943	755	660	**9,432**	**30,890**
	Groundwater (Imported)	Potable	Riverside South Basin	Rubidoux Community Services District	92	92	110	147	166	184	203	203	184	184	147	129	**1,841**	
	Groundwater (Imported)	Potable	Chino Basin	CDA	587	587	704	939	1,056	1,173	1,291	1,291	1,173	1,173	939	821	**11,733**	
	Groundwater (Imported)	Potable	Chino Basin	CVWD	276	276	331	442	497	552	608	608	552	552	442	387	**5,524**	
	Groundwater (Imported)	Potable	Chino Basin	City of Ontario	0	0	0	0	0	0	0	0	0	0	0	0	**0**	
	Groundwater (Imported)	Potable	Chino Basin	WMWD	0	0	0	0	0	0	0	0	0	0	0	0	**0**	
	Groundwater (Imported)	Transfer	Chino Basin	CDA	60	60	72	96	108	120	132	132	120	120	96	84	**1,200**	
	Groundwater	Non-Potable	Riverside South Basin		25	25	30	40	45	50	55	55	50	50	40	35	**500**	
	Groundwater	Non-Potable	Chino Basin		0	0	0	0	0	0	0	0	0	0	0	0	**0**	
	Recycled	Non-Potable	JCSD Rec. Water Project		33	33	40	53	59	66	73	73	66	66	53	46	**660**	
2030	Groundwater	Potable	Chino Basin		590	590	708	943	1,061	1,179	1,297	1,297	1,179	1,179	943	825	**11,793**	**31,886**
	Groundwater (Imported)	Potable	Riverside South Basin	Rubidoux Community Services District	75	75	90	120	135	150	165	165	150	150	120	105	**1,500**	
	Groundwater (Imported)	Potable	Chino Basin	CDA	587	587	704	939	1,056	1,173	1,291	1,291	1,173	1,173	939	821	**11,733**	
	Groundwater (Imported)	Potable	Chino Basin	CVWD	225	225	270	360	405	450	495	495	450	450	360	315	**4,500**	
	Groundwater (Imported)	Potable	Chino Basin	City of Ontario	0	0	0	0	0	0	0	0	0	0	0	0	**0**	
	Groundwater (Imported)	Potable	Chino Basin	WMWD	0	0	0	0	0	0	0	0	0	0	0	0	**0**	
	Groundwater (Imported)	Transfer	Chino Basin	CDA	60	60	72	96	108	120	132	132	120	120	96	84	**1,200**	
	Groundwater	Non-Potable	Riverside South Basin		25	25	30	40	45	50	55	55	50	50	40	35	**500**	
	Groundwater	Non-Potable	Chino Basin		0	0	0	0	0	0	0	0	0	0	0	0	**0**	
	Recycled	Non-Potable	JCSD Rec. Water Project		33	33	40	53	59	66	73	73	66	66	53	46	**660**	
2035	Groundwater	Potable	Chino Basin		619	619	743	991	1,115	1,239	1,363	1,363	1,239	1,239	991	867	**12,390**	**32,483**
	Groundwater (Imported)	Potable	Riverside South Basin	Rubidoux Community Services District	75	75	90	120	135	150	165	165	150	150	120	105	**1,500**	
	Groundwater (Imported)	Potable	Chino Basin	CDA	587	587	704	939	1,056	1,173	1,291	1,291	1,173	1,173	939	821	**11,733**	
	Groundwater (Imported)	Potable	Chino Basin	CVWD	225	225	270	360	405	450	495	495	450	450	360	315	**4,500**	
	Groundwater (Imported)	Potable	Chino Basin	City of Ontario	0	0	0	0	0	0	0	0	0	0	0	0	**0**	
	Groundwater (Imported)	Potable	Chino Basin	WMWD	0	0	0	0	0	0	0	0	0	0	0	0	**0**	
	Groundwater (Imported)	Transfer	Chino Basin	CDA	60	60	72	96	108	120	132	132	120	120	96	84	**1,200**	
	Groundwater	Non-Potable	Riverside South Basin		25	25	30	40	45	50	55	55	50	50	40	35	**500**	
	Groundwater	Non-Potable	Chino Basin		0	0	0	0	0	0	0	0	0	0	0	0	**0**	
	Recycled	Non-Potable	JCSD Rec. Water Project		33	33	40	53	59	66	73	73	66	66	53	46	**660**	
2040	Groundwater	Potable	Chino Basin		669	669	803	1,070	1,204	1,338	1,472	1,472	1,338	1,338	1,070	937	**13,381**	**33,474**
	Groundwater (Imported)	Potable	Riverside South Basin	Rubidoux Community Services District	75	75	90	120	135	150	165	165	150	150	120	105	**1,500**	
	Groundwater (Imported)	Potable	Chino Basin	CDA	587	587	704	939	1,056	1,173	1,291	1,291	1,173	1,173	939	821	**11,733**	
	Groundwater (Imported)	Potable	Chino Basin	CVWD	225	225	270	360	405	450	495	495	450	450	360	315	**4,500**	
	Groundwater (Imported)	Potable	Chino Basin	City of Ontario	0	0	0	0	0	0	0	0	0	0	0	0	**0**	
	Groundwater (Imported)	Potable	Chino Basin	WMWD	0	0	0	0	0	0	0	0	0	0	0	0	**0**	
	Groundwater (Imported)	Transfer	Chino Basin	CDA	60	60	72	96	108	120	132	132	120	120	96	84	**1,200**	
	Groundwater	Non-Potable	Riverside South Basin		25	25	30	40	45	50	55	55	50	50	40	35	**500**	
	Groundwater	Non-Potable	Chino Basin		0	0	0	0	0	0	0	0	0	0	0	0	**0**	
	Recycled	Non-Potable	JCSD Rec. Water Project		33	33	40	53	59	66	73	73	66	66	53	46	**660**	
2045	Groundwater	Potable	Chino Basin		669	669	803	1,070	1,204	1,338	1,472	1,472	1,338	1,338	1,070	937	**13,381**	**33,474**
	Groundwater (Imported)	Potable	Riverside South Basin	Rubidoux Community Services District	75	75	90	120	135	150	165	165	150	150	120	105	**1,500**	
	Groundwater (Imported)	Potable	Chino Basin	CDA	587	587	704	939	1,056	1,173	1,291	1,291	1,173	1,173	939	821	**11,733**	
	Groundwater (Imported)	Potable	Chino Basin	CVWD	225	225	270	360	405	450	495	495	450	450	360	315	**4,500**	
	Groundwater (Imported)	Potable	Chino Basin	City of Ontario	0	0	0	0	0	0	0	0	0	0	0	0	**0**	
	Groundwater (Imported)	Potable	Chino Basin	WMWD	0	0	0	0	0	0	0	0	0	0	0	0	**0**	
	Groundwater (Imported)	Transfer	Chino Basin	CDA	60	60	72	96	108	120	132	132	120	120	96	84	**1,200**	
	Groundwater	Non-Potable	Riverside South Basin		25	25	30	40	45	50	55	55	50	50	40	35	**500**	
	Groundwater	Non-Potable	Chino Basin		0	0	0	0	0	0	0	0	0	0	0	0	**0**	
	Recycled	Non-Potable	JCSD Rec. Water Project		33	33	40	53	59	66	73	73	66	66	53	46	**660**	

Table B-5c. Jurupa Community Services District Projected Water Plan - High Demand, High Groundwater Utilization, Low Imported Water Utilization
Monthly Distribution of Supplies (af) 2025 through 2045

Fiscal Year	Water Supply	Demand Met with Supply	Source of Supply	Source of Imported Water	January	February	March	April	May	June	July	August	September	October	November	December	Total Annual Supply	Grand Total Annual Supply
2025	Groundwater	Potable	Chino Basin		509	509	611	815	917	1,019	1,121	1,121	1,019	1,019	815	713	**10,187**	**31,154**
	Groundwater (Imported)	Potable	Riverside South Basin	Rubidoux Community Services District	86	86	103	137	155	172	189	189	172	172	137	120	**1,719**	
	Groundwater (Imported)	Potable	Chino Basin	CDA	587	587	704	939	1,056	1,173	1,291	1,291	1,173	1,173	939	821	**11,733**	
	Groundwater (Imported)	Potable	Chino Basin	CVWD	258	258	309	412	464	516	567	567	516	516	412	361	**5,156**	
	Groundwater (Imported)	Potable	Chino Basin	City of Ontario	0	0	0	0	0	0	0	0	0	0	0	0	**0**	
	Groundwater (Imported)	Potable	Chino Basin	WMWD	0	0	0	0	0	0	0	0	0	0	0	0	**0**	
	Groundwater (Imported)	Transfer	Chino Basin	CDA	60	60	72	96	108	120	132	132	120	120	96	84	**1,200**	
	Groundwater	Non-Potable	Riverside South Basin		25	25	30	40	45	50	55	55	50	50	40	35	**500**	
	Groundwater	Non-Potable	Chino Basin		0	0	0	0	0	0	0	0	0	0	0	0	**0**	
	Recycled	Non-Potable	JCSD Rec. Water Project		33	33	40	53	59	66	73	73	66	66	53	46	**660**	
2030	Groundwater	Potable	Chino Basin		645	645	774	1,032	1,161	1,290	1,419	1,419	1,290	1,290	1,032	903	**12,897**	**32,734**
	Groundwater (Imported)	Potable	Riverside South Basin	Rubidoux Community Services District	72	72	86	115	129	144	158	158	144	144	115	101	**1,436**	
	Groundwater (Imported)	Potable	Chino Basin	CDA	587	587	704	939	1,056	1,173	1,291	1,291	1,173	1,173	939	821	**11,733**	
	Groundwater (Imported)	Potable	Chino Basin	CVWD	215	215	258	345	388	431	474	474	431	431	345	302	**4,308**	
	Groundwater (Imported)	Potable	Chino Basin	City of Ontario	0	0	0	0	0	0	0	0	0	0	0	0	**0**	
	Groundwater (Imported)	Potable	Chino Basin	WMWD	0	0	0	0	0	0	0	0	0	0	0	0	**0**	
	Groundwater (Imported)	Transfer	Chino Basin	CDA	60	60	72	96	108	120	132	132	120	120	96	84	**1,200**	
	Groundwater	Non-Potable	Riverside South Basin		25	25	30	40	45	50	55	55	50	50	40	35	**500**	
	Groundwater	Non-Potable	Chino Basin		0	0	0	0	0	0	0	0	0	0	0	0	**0**	
	Recycled	Non-Potable	JCSD Rec. Water Project		33	33	40	53	59	66	73	73	66	66	53	46	**660**	
2035	Groundwater	Potable	Chino Basin		740	740	888	1,184	1,332	1,480	1,628	1,628	1,480	1,480	1,184	1,036	**14,799**	**34,425**
	Groundwater (Imported)	Potable	Riverside South Basin	Rubidoux Community Services District	61	61	74	98	110	123	135	135	123	123	98	86	**1,225**	
	Groundwater (Imported)	Potable	Chino Basin	CDA	587	587	704	939	1,056	1,173	1,291	1,291	1,173	1,173	939	821	**11,733**	
	Groundwater (Imported)	Potable	Chino Basin	CVWD	215	215	258	345	388	431	474	474	431	431	345	302	**4,308**	
	Groundwater (Imported)	Potable	Chino Basin	City of Ontario	0	0	0	0	0	0	0	0	0	0	0	0	**0**	
	Groundwater (Imported)	Potable	Chino Basin	WMWD	0	0	0	0	0	0	0	0	0	0	0	0	**0**	
	Groundwater (Imported)	Transfer	Chino Basin	CDA	60	60	72	96	108	120	132	132	120	120	96	84	**1,200**	
	Groundwater	Non-Potable	Riverside South Basin		25	25	30	40	45	50	55	55	50	50	40	35	**500**	
	Groundwater	Non-Potable	Chino Basin		0	0	0	0	0	0	0	0	0	0	0	0	**0**	
	Recycled	Non-Potable	JCSD Rec. Water Project		33	33	40	53	59	66	73	73	66	66	53	46	**660**	
2040	Groundwater	Potable	Chino Basin		817	817	980	1,307	1,470	1,633	1,797	1,797	1,633	1,633	1,307	1,143	**16,332**	**35,169**
	Groundwater (Imported)	Potable	Riverside South Basin	Rubidoux Community Services District	59	59	71	95	107	130	130	130	119	119	95	83	**1,186**	
	Groundwater (Imported)	Potable	Chino Basin	CDA	587	587	704	939	1,056	1,173	1,291	1,291	1,173	1,173	939	821	**11,733**	
	Groundwater (Imported)	Potable	Chino Basin	CVWD	178	178	213	285	320	356	391	391	356	356	285	249	**3,558**	
	Groundwater (Imported)	Potable	Chino Basin	City of Ontario	0	0	0	0	0	0	0	0	0	0	0	0	**0**	
	Groundwater (Imported)	Potable	Chino Basin	WMWD	0	0	0	0	0	0	0	0	0	0	0	0	**0**	
	Groundwater (Imported)	Transfer	Chino Basin	CDA	60	60	72	96	108	120	132	132	120	120	96	84	**1,200**	
	Groundwater	Non-Potable	Riverside South Basin		25	25	30	40	45	50	55	55	50	50	40	35	**500**	
	Groundwater	Non-Potable	Chino Basin		0	0	0	0	0	0	0	0	0	0	0	0	**0**	
	Recycled	Non-Potable	JCSD Rec. Water Project		33	33	40	53	59	66	73	73	66	66	53	46	**660**	
2045	Groundwater	Potable	Chino Basin		817	817	980	1,307	1,470	1,633	1,797	1,797	1,633	1,633	1,307	1,143	**16,332**	**35,169**
	Groundwater (Imported)	Potable	Riverside South Basin	Rubidoux Community Services District	59	59	71	95	107	119	130	130	119	119	95	83	**1,186**	
	Groundwater (Imported)	Potable	Chino Basin	CDA	587	587	704	939	1,056	1,173	1,291	1,291	1,173	1,173	939	821	**11,733**	
	Groundwater (Imported)	Potable	Chino Basin	CVWD	178	178	213	285	320	356	391	391	356	356	285	249	**3,558**	
	Groundwater (Imported)	Potable	Chino Basin	City of Ontario	0	0	0	0	0	0	0	0	0	0	0	0	**0**	
	Groundwater (Imported)	Potable	Chino Basin	WMWD	0	0	0	0	0	0	0	0	0	0	0	0	**0**	
	Groundwater (Imported)	Transfer	Chino Basin	CDA	60	60	72	96	108	120	132	132	120	120	96	84	**1,200**	
	Groundwater	Non-Potable	Riverside South Basin		25	25	30	40	45	50	55	55	50	50	40	35	**500**	
	Groundwater	Non-Potable	Chino Basin		0	0	0	0	0	0	0	0	0	0	0	0	**0**	
	Recycled	Non-Potable	JCSD Rec. Water Project		33	33	40	53	59	66	73	73	66	66	53	46	**660**	

Table B-6a. MVWD Projected Water Plan - Low Demand, Low Groundwater Utilization, High Imported Water Utilization
Monthly Distribution of Supplies (af) 2025 through 2045

Fiscal Year	Water Supply	Demand Met with Supply	Source of Supply	Source of Imported Water	January	February	March	April	May	June	July	August	September	October	November	December	Total Annual Supply	Grand Total Annual Supply
2025	Groundwater	Transfer	Chino Basin		263	215	240	248	350	319	339	284	202	258	319	266	**3,303**	**20,838**
	Surface Water (Imported)	Transfer	SWP	WFA	152	144	152	204	266	337	401	444	442	359	252	151	**3,303**	
	Groundwater	Potable	Chino Basin		546	447	499	515	728	664	704	590	419	536	663	553	**6,864**	
	Groundwater (Imported)	Potable	Other	SAWCo	68	63	10	0	0	0	0	0	0	34	131	171	**477**	
	Surface Water (Imported)	Potable	SWP	WFA	165	157	165	222	289	366	437	484	481	391	274	165	**3,597**	
	Surface Water (Imported)	Potable	San Antonio Creek	SAWCo	28	26	4	0	0	0	0	0	0	14	53	70	**194**	
	Recycled	Non-Potable	IEUA		35	41	38	73	112	133	149	147	137	115	86	36	**1,100**	
	Surface Water (Imported)	Non-Potable	SWP	WFA	92	87	92	123	161	204	243	269	267	217	152	92	**2,000**	
2030	Groundwater	Transfer	Chino Basin		268	219	245	253	357	326	345	289	205	263	325	271	**3,365**	**21,186**
	Surface Water (Imported)	Transfer	SWP	WFA	154	147	155	208	271	343	409	453	450	366	256	154	**3,365**	
	Groundwater	Potable	Chino Basin		570	467	521	538	760	694	735	616	438	560	693	577	**7,170**	
	Groundwater (Imported)	Potable	Other	SAWCo	68	63	10	0	0	0	0	0	0	34	131	171	**477**	
	Surface Water (Imported)	Potable	SWP	WFA	161	154	162	217	283	358	427	473	470	382	268	161	**3,515**	
	Surface Water (Imported)	Potable	San Antonio Creek	SAWCo	28	26	4	0	0	0	0	0	0	14	53	70	**194**	
	Recycled	Non-Potable	IEUA		35	41	38	73	112	133	149	147	137	115	86	36	**1,100**	
	Surface Water (Imported)	Non-Potable	SWP	WFA	92	87	92	123	161	204	243	269	267	217	152	92	**2,000**	
2035	Groundwater	Transfer	Chino Basin		276	226	252	260	367	335	355	298	212	271	335	279	**3,466**	**21,919**
	Surface Water (Imported)	Transfer	SWP	WFA	159	152	159	214	279	353	421	466	463	377	264	159	**3,466**	
	Groundwater	Potable	Chino Basin		615	504	562	580	820	748	793	664	472	604	747	623	**7,732**	
	Groundwater (Imported)	Potable	Other	SAWCo	68	63	10	0	0	0	0	0	0	34	131	171	**477**	
	Surface Water (Imported)	Potable	SWP	WFA	160	152	160	215	280	355	423	469	466	379	265	160	**3,485**	
	Surface Water (Imported)	Potable	San Antonio Creek	SAWCo	28	26	4	0	0	0	0	0	0	14	53	70	**194**	
	Recycled	Non-Potable	IEUA		35	41	38	73	112	133	149	147	137	115	86	36	**1,100**	
	Surface Water (Imported)	Non-Potable	SWP	WFA	92	87	92	123	161	204	243	269	267	217	152	92	**2,000**	
2040	Groundwater	Transfer	Chino Basin		277	227	253	261	369	337	357	299	212	272	336	280	**3,479**	**22,100**
	Surface Water (Imported)	Transfer	SWP	WFA	160	152	160	215	280	355	422	468	465	378	265	159	**3,479**	
	Groundwater	Potable	Chino Basin		634	520	580	598	845	771	817	685	487	623	770	642	**7,973**	
	Groundwater (Imported)	Potable	Other	SAWCo	68	63	10	0	0	0	0	0	0	34	131	171	**477**	
	Surface Water (Imported)	Potable	SWP	WFA	156	149	156	210	273	346	412	457	454	369	259	156	**3,397**	
	Surface Water (Imported)	Potable	San Antonio Creek	SAWCo	28	26	4	0	0	0	0	0	0	14	53	70	**194**	
	Recycled	Non-Potable	IEUA		35	41	38	73	112	133	149	147	137	115	86	36	**1,100**	
	Surface Water (Imported)	Non-Potable	SWP	WFA	92	87	92	123	161	204	243	269	267	217	152	92	**2,000**	
2045	Groundwater	Transfer	Chino Basin		278	228	254	262	370	338	358	300	213	273	337	281	**3,492**	**22,392**
	Surface Water (Imported)	Transfer	SWP	WFA	160	153	161	216	281	356	424	470	467	380	266	160	**3,492**	
	Groundwater	Potable	Chino Basin		654	536	598	617	872	795	843	706	502	642	794	662	**8,220**	
	Groundwater (Imported)	Potable	Other	SAWCo	68	63	10	0	0	0	0	0	0	34	131	171	**477**	
	Surface Water (Imported)	Potable	SWP	WFA	157	149	157	211	275	348	415	460	457	371	260	156	**3,417**	
	Surface Water (Imported)	Potable	San Antonio Creek	SAWCo	28	26	4	0	0	0	0	0	0	14	53	70	**194**	
	Recycled	Non-Potable	IEUA		35	41	38	73	112	133	149	147	137	115	86	36	**1,100**	
	Surface Water (Imported)	Non-Potable	SWP	WFA	92	87	92	123	161	204	243	269	267	217	152	92	**2,000**	

Table B-6b. MVWD Projected Water Plan - Expected Demand, Expected Groundwater Utilization, Expected Imported Water Utilization
Monthly Distribution of Supplies (af) 2025 through 2045

Fiscal Year	Water Supply	Demand Met with Supply	Source of Supply	Source of Imported Water	January	February	March	April	May	June	July	August	September	October	November	December	Total Annual Supply	Grand Total Annual Supply
2025	Groundwater	Transfer	Chino Basin		263	215	240	248	350	319	339	284	202	258	319	266	**3,303**	**20,838**
	Surface Water (Imported)	Transfer	SWP	WFA	152	144	152	204	266	337	401	444	442	359	252	151	**3,303**	
	Groundwater	Potable	Chino Basin		593	486	542	560	791	722	765	641	456	583	721	601	**7,461**	
	Groundwater (Imported)	Potable	Other	SAWCo	68	63	10	0	0	0	0	0	0	34	131	171	**477**	
	Surface Water (Imported)	Potable	SWP	WFA	138	131	138	185	241	306	364	404	401	326	228	137	**3,000**	
	Surface Water (Imported)	Potable	San Antonio Creek	SAWCo	28	26	4	0	0	0	0	0	0	14	53	70	**194**	
	Recycled	Non-Potable	IEUA		35	41	38	73	112	133	149	147	137	115	86	36	**1,100**	
	Surface Water (Imported)	Non-Potable	SWP	WFA	92	87	92	123	161	204	243	269	267	217	152	92	**2,000**	
2030	Groundwater	Transfer	Chino Basin		268	219	245	253	357	326	345	289	205	263	325	271	**3,365**	**21,210**
	Surface Water (Imported)	Transfer	SWP	WFA	154	147	155	208	271	343	409	453	450	366	256	154	**3,365**	
	Groundwater	Potable	Chino Basin		620	508	566	585	826	754	799	670	476	609	753	627	**7,793**	
	Groundwater (Imported)	Potable	Other	SAWCo	68	63	10	0	0	0	0	0	0	34	131	171	**477**	
	Surface Water (Imported)	Potable	SWP	WFA	134	128	134	180	235	297	354	392	390	317	222	134	**2,916**	
	Surface Water (Imported)	Potable	San Antonio Creek	SAWCo	28	26	4	0	0	0	0	0	0	14	53	70	**194**	
	Recycled	Non-Potable	IEUA		35	41	38	73	112	133	149	147	137	115	86	36	**1,100**	
	Surface Water (Imported)	Non-Potable	SWP	WFA	92	87	92	123	161	204	243	269	267	217	152	92	**2,000**	
2035	Groundwater	Transfer	Chino Basin		276	226	252	260	367	335	355	298	212	271	335	279	**3,466**	**21,961**
	Surface Water (Imported)	Transfer	SWP	WFA	159	152	159	214	279	353	421	466	463	377	264	159	**3,466**	
	Groundwater	Potable	Chino Basin		668	548	611	631	891	813	862	722	513	657	812	677	**8,404**	
	Groundwater (Imported)	Potable	Other	SAWCo	68	63	10	0	0	0	0	0	0	34	131	171	**477**	
	Surface Water (Imported)	Potable	SWP	WFA	131	125	131	176	230	291	346	384	382	310	217	131	**2,854**	
	Surface Water (Imported)	Potable	San Antonio Creek	SAWCo	28	26	4	0	0	0	0	0	0	14	53	70	**194**	
	Recycled	Non-Potable	IEUA		35	41	38	73	112	133	149	147	137	115	86	36	**1,100**	
	Surface Water (Imported)	Non-Potable	SWP	WFA	92	87	92	123	161	204	243	269	267	217	152	92	**2,000**	
2040	Groundwater	Transfer	Chino Basin		277	227	253	261	369	337	357	299	212	272	336	280	**3,479**	**22,167**
	Surface Water (Imported)	Transfer	SWP	WFA	160	152	160	215	280	355	422	468	465	378	265	159	**3,479**	
	Groundwater	Potable	Chino Basin		689	565	630	650	919	838	888	745	529	677	837	698	**8,666**	
	Groundwater (Imported)	Potable	Other	SAWCo	68	63	10	0	0	0	0	0	0	34	131	171	**477**	
	Surface Water (Imported)	Potable	SWP	WFA	127	121	127	171	223	282	336	373	371	301	211	127	**2,771**	
	Surface Water (Imported)	Potable	San Antonio Creek	SAWCo	28	26	4	0	0	0	0	0	0	14	53	70	**194**	
	Recycled	Non-Potable	IEUA		35	41	38	73	112	133	149	147	137	115	86	36	**1,100**	
	Surface Water (Imported)	Non-Potable	SWP	WFA	92	87	92	123	161	204	243	269	267	217	152	92	**2,000**	
2045	Groundwater	Transfer	Chino Basin		278	228	254	262	370	338	358	300	213	273	337	281	**3,492**	**22,460**
	Surface Water (Imported)	Transfer	SWP	WFA	160	153	161	216	281	356	424	470	467	380	266	160	**3,492**	
	Groundwater	Potable	Chino Basin		711	582	649	670	947	864	916	768	546	698	863	719	**8,935**	
	Groundwater (Imported)	Potable	Other	SAWCo	68	63	10	0	0	0	0	0	0	34	131	171	**477**	
	Surface Water (Imported)	Potable	SWP	WFA	127	121	127	171	223	282	336	373	370	301	211	127	**2,770**	
	Surface Water (Imported)	Potable	San Antonio Creek	SAWCo	28	26	4	0	0	0	0	0	0	14	53	70	**194**	
	Recycled	Non-Potable	IEUA		35	41	38	73	112	133	149	147	137	115	86	36	**1,100**	
	Surface Water (Imported)	Non-Potable	SWP	WFA	92	87	92	123	161	204	243	269	267	217	152	92	**2,000**	

Table B-6c. MVWD Projected Water Plan - High Demand, High Groundwater Utilization, Low Imported Water Utilization
Monthly Distribution of Supplies (af) 2025 through 2045

Fiscal Year	Water Supply	Demand Met with Supply	Source of Supply	Source of Imported Water	January	February	March	April	May	June	July	August	September	October	November	December	Total Annual Supply	Grand Total Annual Supply
2025	Groundwater	Transfer	Chino Basin		263	215	240	248	350	319	339	284	202	258	319	266	**3,303**	**20,838**
	Surface Water (Imported)	Transfer	SWP	WFA	152	144	152	204	266	337	401	444	442	359	252	151	**3,303**	
	Groundwater	Potable	Chino Basin		641	525	586	605	854	779	826	693	492	630	779	649	**8,058**	
	Groundwater (Imported)	Potable	Other	SAWCo	68	63	10	0	0	0	0	0	0	34	131	171	**477**	
	Surface Water (Imported)	Potable	SWP	WFA	110	105	111	148	193	245	292	323	321	261	183	110	**2,403**	
	Surface Water (Imported)	Potable	San Antonio Creek	SAWCo	28	26	4	0	0	0	0	0	0	14	53	70	**194**	
	Recycled	Non-Potable	IEUA		35	41	38	73	112	133	149	147	137	115	86	36	**1,100**	
	Surface Water (Imported)	Non-Potable	SWP	WFA	92	87	92	123	161	204	243	269	267	217	152	92	**2,000**	
2030	Groundwater	Transfer	Chino Basin		268	219	245	253	357	326	345	289	205	263	325	271	**3,365**	**21,234**
	Surface Water (Imported)	Transfer	SWP	WFA	154	147	155	208	271	343	409	453	450	366	256	154	**3,365**	
	Groundwater	Potable	Chino Basin		669	548	612	632	892	814	863	723	514	658	813	678	**8,416**	
	Groundwater (Imported)	Potable	Other	SAWCo	68	63	10	0	0	0	0	0	0	34	131	171	**477**	
	Surface Water (Imported)	Potable	SWP	WFA	106	101	107	143	186	236	281	312	310	252	176	106	**2,316**	
	Surface Water (Imported)	Potable	San Antonio Creek	SAWCo	28	26	4	0	0	0	0	0	0	14	53	70	**194**	
	Recycled	Non-Potable	IEUA		35	41	38	73	112	133	149	147	137	115	86	36	**1,100**	
	Surface Water (Imported)	Non-Potable	SWP	WFA	92	87	92	123	161	204	243	269	267	217	152	92	**2,000**	
2035	Groundwater	Transfer	Chino Basin		276	226	252	260	367	335	355	298	212	271	335	279	**3,466**	**22,002**
	Surface Water (Imported)	Transfer	SWP	WFA	159	152	159	214	279	353	421	466	463	377	264	159	**3,466**	
	Groundwater	Potable	Chino Basin		722	591	660	681	962	878	930	780	554	709	877	731	**9,076**	
	Groundwater (Imported)	Potable	Other	SAWCo	68	63	10	0	0	0	0	0	0	34	131	171	**477**	
	Surface Water (Imported)	Potable	SWP	WFA	102	97	102	137	179	227	270	299	297	242	169	102	**2,223**	
	Surface Water (Imported)	Potable	San Antonio Creek	SAWCo	28	26	4	0	0	0	0	0	0	14	53	70	**194**	
	Recycled	Non-Potable	IEUA		35	41	38	73	112	133	149	147	137	115	86	36	**1,100**	
	Surface Water (Imported)	Non-Potable	SWP	WFA	92	87	92	123	161	204	243	269	267	217	152	92	**2,000**	
2040	Groundwater	Transfer	Chino Basin		277	227	253	261	369	337	357	299	212	272	336	280	**3,479**	**22,238**
	Surface Water (Imported)	Transfer	SWP	WFA	160	152	160	215	280	355	422	468	465	378	265	159	**3,479**	
	Groundwater	Potable	Chino Basin		744	610	680	702	992	905	959	804	571	731	904	754	**9,359**	
	Groundwater (Imported)	Potable	Other	SAWCo	68	63	10	0	0	0	0	0	0	34	131	171	**477**	
	Surface Water (Imported)	Potable	SWP	WFA	99	94	99	133	173	219	261	289	287	233	164	98	**2,149**	
	Surface Water (Imported)	Potable	San Antonio Creek	SAWCo	28	26	4	0	0	0	0	0	0	14	53	70	**194**	
	Recycled	Non-Potable	IEUA		35	41	38	73	112	133	149	147	137	115	86	36	**1,100**	
	Surface Water (Imported)	Non-Potable	SWP	WFA	92	87	92	123	161	204	243	269	267	217	152	92	**2,000**	
2045	Groundwater	Transfer	Chino Basin		278	228	254	262	370	338	358	300	213	273	337	281	**3,492**	**22,532**
	Surface Water (Imported)	Transfer	SWP	WFA	160	153	161	216	281	356	424	470	467	380	266	160	**3,492**	
	Groundwater	Potable	Chino Basin		767	629	701	724	1,023	933	989	829	589	754	932	777	**9,650**	
	Groundwater (Imported)	Potable	Other	SAWCo	68	63	10	0	0	0	0	0	0	34	131	171	**477**	
	Surface Water (Imported)	Potable	SWP	WFA	98	93	98	131	171	217	258	286	284	231	162	97	**2,126**	
	Surface Water (Imported)	Potable	San Antonio Creek	SAWCo	28	26	4	0	0	0	0	0	0	14	53	70	**194**	
	Recycled	Non-Potable	IEUA		35	41	38	73	112	133	149	147	137	115	86	36	**1,100**	
	Surface Water (Imported)	Non-Potable	SWP	WFA	92	87	92	123	161	204	243	269	267	217	152	92	**2,000**	

Table B-7a. City of Ontario Projected Water Plan - Low Demand, Low Groundwater Utilization, High Imported Water Utilization
Monthly Distribution of Supplies (af) 2025 through 2045

Fiscal Year	Water Supply	Demand Met with Supply	Source of Supply	Source of Imported Water	January	February	March	April	May	June	July	August	September	October	November	December	Total Annual Supply	Grand Total Annual Supply
2025	Groundwater	Potable	Chino Basin		1,070	1,247	1,196	1,681	1,870	2,124	2,102	1,993	1,578	1,327	1,265	1,176	**18,629**	**52,550**
	Groundwater (Imported)	Potable	Chino Basin	CDA	788	628	728	656	627	588	644	637	720	843	822	852	**8,533**	
	Groundwater (Imported)	Potable	Other	SAWCo	27	34	38	34	35	39	39	39	36	38	36	31	**426**	
	Surface Water (Imported)	Potable	San Antonio Creek	SAWCo	11	14	16	14	14	16	16	16	15	15	15	13	**174**	
	Surface Water (Imported)	Potable	SWP	WFA	566	561	624	671	1,042	1,017	1,235	1,658	1,913	1,747	1,077	508	**12,620**	
	Recycled Water	Non-Potable	IEUA		526	480	519	752	1,007	1,200	1,520	1,702	1,565	1,150	1,068	680	**12,168**	
2030	Groundwater	Potable	Chino Basin		1,211	1,411	1,353	1,902	2,116	2,404	2,379	2,255	1,786	1,502	1,431	1,331	**21,082**	**56,558**
	Groundwater (Imported)	Potable	Chino Basin	CDA	788	628	728	656	627	588	644	637	720	843	822	852	**8,533**	
	Groundwater (Imported)	Potable	Other	SAWCo	27	34	38	34	35	39	39	39	36	38	36	31	**426**	
	Surface Water (Imported)	Potable	San Antonio Creek	SAWCo	11	14	16	14	14	16	16	16	15	15	15	13	**174**	
	Surface Water (Imported)	Potable	SWP	WFA	577	573	637	685	1,064	1,038	1,260	1,692	1,953	1,782	1,099	518	**12,878**	
	Recycled Water	Non-Potable	IEUA		582	531	574	832	1,115	1,328	1,682	1,884	1,732	1,272	1,182	752	**13,465**	
2035	Groundwater	Potable	Chino Basin		1,318	1,536	1,473	2,071	2,303	2,616	2,589	2,455	1,944	1,635	1,558	1,449	**22,948**	**59,353**
	Groundwater (Imported)	Potable	Chino Basin	CDA	788	628	728	656	627	588	644	637	720	843	822	852	**8,533**	
	Groundwater (Imported)	Potable	Other	SAWCo	27	34	38	34	35	39	39	39	36	38	36	31	**426**	
	Surface Water (Imported)	Potable	San Antonio Creek	SAWCo	11	14	16	14	14	16	16	16	15	15	15	13	**174**	
	Surface Water (Imported)	Potable	SWP	WFA	561	557	619	665	1,033	1,008	1,224	1,644	1,897	1,731	1,068	503	**12,510**	
	Recycled Water	Non-Potable	IEUA		638	582	629	912	1,222	1,456	1,844	2,065	1,898	1,395	1,296	824	**14,762**	
2040	Groundwater	Potable	Chino Basin		1,663	1,939	1,859	2,613	2,907	3,302	3,268	3,098	2,454	2,063	1,966	1,828	**28,958**	**67,697**
	Groundwater (Imported)	Potable	Chino Basin	CDA	788	628	728	656	627	588	644	637	720	843	822	852	**8,533**	
	Groundwater (Imported)	Potable	Other	SAWCo	27	34	38	34	35	39	39	39	36	38	36	31	**426**	
	Surface Water (Imported)	Potable	San Antonio Creek	SAWCo	11	14	16	14	14	16	16	16	15	15	15	13	**174**	
	Surface Water (Imported)	Potable	SWP	WFA	607	603	670	720	1,119	1,092	1,326	1,780	2,054	1,875	1,156	545	**13,548**	
	Recycled Water	Non-Potable	IEUA		694	633	685	993	1,329	1,584	2,006	2,247	2,065	1,517	1,410	897	**16,059**	
2045	Groundwater	Potable	Chino Basin		1,663	1,939	1,859	2,613	2,907	3,302	3,268	3,098	2,454	2,063	1,966	1,828	**28,958**	**67,697**
	Groundwater (Imported)	Potable	Chino Basin	CDA	788	628	728	656	627	588	644	637	720	843	822	852	**8,533**	
	Groundwater (Imported)	Potable	Other	SAWCo	27	34	38	34	35	39	39	39	36	38	36	31	**426**	
	Surface Water (Imported)	Potable	San Antonio Creek	SAWCo	11	14	16	14	14	16	16	16	15	15	15	13	**174**	
	Surface Water (Imported)	Potable	SWP	WFA	607	603	670	720	1,119	1,092	1,326	1,780	2,054	1,875	1,156	545	**13,548**	
	Recycled Water	Non-Potable	IEUA		694	633	685	993	1,329	1,584	2,006	2,247	2,065	1,517	1,410	897	**16,059**	

Table B-7b. City of Ontario Projected Water Plan - Expected Demand, Expected Groundwater Utilization, Expected Imported Water Utilization
Monthly Distribution of Supplies (af) 2025 through 2045

Fiscal Year	Water Supply	Demand Met with Supply	Source of Supply	Source of Imported Water	January	February	March	April	May	June	July	August	September	October	November	December	Total Annual Supply	Grand Total Annual Supply
2025	Groundwater	Potable	Chino Basin		1,163	1,356	1,300	1,827	2,033	2,309	2,285	2,166	1,716	1,442	1,375	1,278	**20,249**	**52,550**
	Groundwater (Imported)	Potable	Chino Basin	CDA	788	628	728	656	627	588	644	637	720	843	822	852	**8,533**	
	Groundwater (Imported)	Potable	Other	SAWCo	27	34	38	34	35	39	39	39	36	38	36	31	**426**	
	Surface Water (Imported)	Potable	San Antonio Creek	SAWCo	11	14	16	14	14	16	16	16	15	15	15	13	**174**	
	Surface Water (Imported)	Potable	SWP	WFA	493	489	544	585	908	887	1,076	1,445	1,668	1,522	939	443	**11,000**	
	Recycled Water	Non-Potable	IEUA		526	480	519	752	1,007	1,200	1,520	1,702	1,565	1,150	1,068	680	**12,168**	
2030	Groundwater	Potable	Chino Basin		1,316	1,534	1,471	2,068	2,300	2,613	2,586	2,451	1,942	1,632	1,556	1,447	**22,915**	**57,002**
	Groundwater (Imported)	Potable	Chino Basin	CDA	788	628	728	656	627	588	644	637	720	843	822	852	**8,533**	
	Groundwater (Imported)	Potable	Other	SAWCo	27	34	38	34	35	39	39	39	36	38	36	31	**426**	
	Surface Water (Imported)	Potable	San Antonio Creek	SAWCo	11	14	16	14	14	16	16	16	15	15	15	13	**174**	
	Surface Water (Imported)	Potable	SWP	WFA	515	511	568	611	949	926	1,124	1,510	1,742	1,590	980	462	**11,489**	
	Recycled Water	Non-Potable	IEUA		582	531	574	832	1,115	1,328	1,682	1,884	1,732	1,272	1,182	752	**13,465**	
2035	Groundwater	Potable	Chino Basin		1,432	1,670	1,601	2,251	2,504	2,844	2,815	2,668	2,113	1,777	1,693	1,575	**24,943**	**60,396**
	Groundwater (Imported)	Potable	Chino Basin	CDA	788	628	728	656	627	588	644	637	720	843	822	852	**8,533**	
	Groundwater (Imported)	Potable	Other	SAWCo	27	34	38	34	35	39	39	39	36	38	36	31	**426**	
	Surface Water (Imported)	Potable	San Antonio Creek	SAWCo	11	14	16	14	14	16	16	16	15	15	15	13	**174**	
	Surface Water (Imported)	Potable	SWP	WFA	518	514	572	615	955	932	1,131	1,519	1,752	1,600	986	465	**11,558**	
	Recycled Water	Non-Potable	IEUA		638	582	629	912	1,222	1,456	1,844	2,065	1,898	1,395	1,296	824	**14,762**	
2040	Groundwater	Potable	Chino Basin		1,808	2,107	2,020	2,841	3,160	3,589	3,552	3,367	2,667	2,242	2,137	1,987	**31,476**	**69,090**
	Groundwater (Imported)	Potable	Chino Basin	CDA	788	628	728	656	627	588	644	637	720	843	822	852	**8,533**	
	Groundwater (Imported)	Potable	Other	SAWCo	27	34	38	34	35	39	39	39	36	38	36	31	**426**	
	Surface Water (Imported)	Potable	San Antonio Creek	SAWCo	11	14	16	14	14	16	16	16	15	15	15	13	**174**	
	Surface Water (Imported)	Potable	SWP	WFA	557	553	615	661	1,026	1,001	1,216	1,632	1,883	1,719	1,060	500	**12,422**	
	Recycled Water	Non-Potable	IEUA		694	633	685	993	1,329	1,584	2,006	2,247	2,065	1,517	1,410	897	**16,059**	
2045	Groundwater	Potable	Chino Basin		1,808	2,107	2,020	2,841	3,160	3,589	3,552	3,367	2,667	2,242	2,137	1,987	**31,476**	**69,090**
	Groundwater (Imported)	Potable	Chino Basin	CDA	788	628	728	656	627	588	644	637	720	843	822	852	**8,533**	
	Groundwater (Imported)	Potable	Other	SAWCo	27	34	38	34	35	39	39	39	36	38	36	31	**426**	
	Surface Water (Imported)	Potable	San Antonio Creek	SAWCo	11	14	16	14	14	16	16	16	15	15	15	13	**174**	
	Surface Water (Imported)	Potable	SWP	WFA	557	553	615	661	1,026	1,001	1,216	1,632	1,883	1,719	1,060	500	**12,422**	
	Recycled Water	Non-Potable	IEUA		694	633	685	993	1,329	1,584	2,006	2,247	2,065	1,517	1,410	897	**16,059**	

Table B-7c. City of Ontario Projected Water Plan - High Demand, High Groundwater Utilization, Low Imported Water Utilization
Monthly Distribution of Supplies (af) 2025 through 2045

Fiscal Year	Water Supply	Demand Met with Supply	Source of Supply	Source of Imported Water	January	February	March	April	May	June	July	August	September	October	November	December	Total Annual Supply	Grand Total Annual Supply
2025	Groundwater	Potable	Chino Basin		1,256	1,464	1,404	1,974	2,195	2,493	2,468	2,339	1,853	1,558	1,485	1,380	**21,869**	**52,623**
	Groundwater (Imported)	Potable	Chino Basin	CDA	788	628	728	656	627	588	644	637	720	843	822	852	**8,533**	
	Groundwater (Imported)	Potable	Other	SAWCo	27	34	38	34	35	39	39	39	36	38	36	31	**426**	
	Surface Water (Imported)	Potable	San Antonio Creek	SAWCo	11	14	16	14	14	16	16	16	15	15	15	13	**174**	
	Surface Water (Imported)	Potable	SWP	WFA	493	417	464	499	775	756	918	1,233	1,422	1,298	800	377	**9,453**	
	Recycled Water	Non-Potable	IEUA		526	480	519	752	1,007	1,200	1,520	1,702	1,565	1,150	1,068	680	**12,168**	
2030	Groundwater	Potable	Chino Basin		1,421	1,657	1,589	2,233	2,484	2,822	2,793	2,647	2,097	1,763	1,680	1,562	**24,748**	**57,469**
	Groundwater (Imported)	Potable	Chino Basin	CDA	788	628	728	656	627	588	644	637	720	843	822	852	**8,533**	
	Groundwater (Imported)	Potable	Other	SAWCo	27	34	38	34	35	39	39	39	36	38	36	31	**426**	
	Surface Water (Imported)	Potable	San Antonio Creek	SAWCo	11	14	16	14	14	16	16	16	15	15	15	13	**174**	
	Surface Water (Imported)	Potable	SWP	WFA	454	450	501	538	836	816	991	1,330	1,535	1,401	864	407	**10,123**	
	Recycled Water	Non-Potable	IEUA		582	531	574	832	1,115	1,328	1,682	1,884	1,732	1,272	1,182	752	**13,465**	
2035	Groundwater	Potable	Chino Basin		1,547	1,804	1,729	2,431	2,704	3,071	3,040	2,882	2,283	1,919	1,829	1,701	**26,938**	**61,546**
	Groundwater (Imported)	Potable	Chino Basin	CDA	788	628	728	656	627	588	644	637	720	843	822	852	**8,533**	
	Groundwater (Imported)	Potable	Other	SAWCo	27	34	38	34	35	39	39	39	36	38	36	31	**426**	
	Surface Water (Imported)	Potable	San Antonio Creek	SAWCo	11	14	16	14	14	16	16	16	15	15	15	13	**174**	
	Surface Water (Imported)	Potable	SWP	WFA	480	477	530	570	885	864	1,048	1,408	1,624	1,483	914	431	**10,713**	
	Recycled Water	Non-Potable	IEUA		638	582	629	912	1,222	1,456	1,844	2,065	1,898	1,395	1,296	824	**14,762**	
2040	Groundwater	Potable	Chino Basin		1,952	2,276	2,182	3,068	3,412	3,876	3,836	3,637	2,880	2,422	2,308	2,146	**33,994**	**70,632**
	Groundwater (Imported)	Potable	Chino Basin	CDA	788	628	728	656	627	588	644	637	720	843	822	852	**8,533**	
	Groundwater (Imported)	Potable	Other	SAWCo	27	34	38	34	35	39	39	39	36	38	36	31	**426**	
	Surface Water (Imported)	Potable	San Antonio Creek	SAWCo	11	14	16	14	14	16	16	16	15	15	15	13	**174**	
	Surface Water (Imported)	Potable	SWP	WFA	513	509	566	609	945	923	1,120	1,504	1,735	1,584	977	461	**11,446**	
	Recycled Water	Non-Potable	IEUA		694	633	685	993	1,329	1,584	2,006	2,247	2,065	1,517	1,410	897	**16,059**	
2045	Groundwater	Potable	Chino Basin		1,952	2,276	2,182	3,068	3,412	3,876	3,836	3,637	2,880	2,422	2,308	2,146	**33,994**	**70,632**
	Groundwater (Imported)	Potable	Chino Basin	CDA	788	628	728	656	627	588	644	637	720	843	822	852	**8,533**	
	Groundwater (Imported)	Potable	Other	SAWCo	27	34	38	34	35	39	39	39	36	38	36	31	**426**	
	Surface Water (Imported)	Potable	San Antonio Creek	SAWCo	11	14	16	14	14	16	16	16	15	15	15	13	**174**	
	Surface Water (Imported)	Potable	SWP	WFA	513	509	566	609	945	923	1,120	1,504	1,735	1,584	977	461	**11,446**	
	Recycled Water	Non-Potable	IEUA		694	633	685	993	1,329	1,584	2,006	2,247	2,065	1,517	1,410	897	**16,059**	

Table B-8a. City of Pomona Projected Water Plan - Low Demand, Low Groundwater Utilization, High Imported Water Utilization
Monthly Distribution of Supplies (af) 2025 through 2045

Fiscal Year	Water Supply	Demand Met with Supply	Source of Supply	Source of Imported Water	January	February	March	April	May	June	July	August	September	October	November	December	Total Annual Supply	Grand Total Annual Supply
2025	Groundwater	Potable	Chino Basin		809	772	797	796	845	818	877	890	875	876	834	798	**9,989**	**24,708**
	Groundwater	Potable	Six Basins		203	194	218	246	294	329	370	374	352	308	258	204	**3,350**	
	Groundwater	Potable	Spadra Basin		2	4	5	5	7	25	31	26	24	18	3	0	**150**	
	Surface Water	Potable	San Antonio Creek		159	127	187	218	213	190	182	161	143	144	134	143	**2,000**	
	Surface Water (Imported)	Potable	Weymouth	TVMWD	197	156	185	440	593	806	1,023	1,083	973	731	450	232	**6,869**	
	Recycled	Non-Potable	PWRP		31	89	118	204	236	321	341	345	271	195	134	63	**2,350**	
2030	Groundwater	Potable	Chino Basin		871	831	858	857	910	881	944	958	942	943	898	859	**10,750**	**25,214**
	Groundwater	Potable	Six Basins		203	194	218	246	294	329	370	374	352	308	258	204	**3,350**	
	Groundwater	Potable	Spadra Basin		2	4	5	5	7	25	31	26	24	18	3	0	**150**	
	Surface Water	Potable	San Antonio Creek		159	127	187	218	213	190	182	161	143	144	134	143	**2,000**	
	Surface Water (Imported)	Potable	Weymouth	TVMWD	190	150	178	424	571	776	985	1,043	937	704	433	224	**6,614**	
	Recycled	Non-Potable	PWRP		31	89	118	204	236	321	341	345	271	195	134	63	**2,350**	
2035	Groundwater	Potable	Chino Basin		935	892	921	920	976	945	1,013	1,028	1,011	1,012	964	922	**11,540**	**24,984**
	Groundwater	Potable	Six Basins		203	194	218	246	294	329	370	374	352	308	258	204	**3,350**	
	Groundwater	Potable	Spadra Basin		2	4	5	5	7	25	31	26	24	18	3	0	**150**	
	Surface Water	Potable	San Antonio Creek		159	127	187	218	213	190	182	161	143	144	134	143	**2,000**	
	Surface Water (Imported)	Potable	Weymouth	TVMWD	161	127	150	359	483	657	833	882	792	595	366	189	**5,595**	
	Recycled	Non-Potable	PWRP		31	89	118	204	236	321	341	345	271	195	134	63	**2,350**	
2040	Groundwater	Potable	Chino Basin		997	951	982	981	1,041	1,008	1,081	1,097	1,078	1,079	1,028	983	**12,306**	**25,226**
	Groundwater	Potable	Six Basins		203	194	218	246	294	329	370	374	352	308	258	204	**3,350**	
	Groundwater	Potable	Spadra Basin		2	4	5	5	7	25	31	26	24	18	3	0	**150**	
	Surface Water	Potable	San Antonio Creek		159	127	187	218	213	190	182	161	143	144	134	143	**2,000**	
	Surface Water (Imported)	Potable	Weymouth	TVMWD	146	115	136	325	438	595	755	800	718	539	332	171	**5,070**	
	Recycled	Non-Potable	PWRP		31	89	118	204	236	321	341	345	271	195	134	63	**2,350**	
2045	Groundwater	Potable	Chino Basin		1,067	1,018	1,051	1,050	1,114	1,079	1,156	1,173	1,154	1,155	1,100	1,052	**13,168**	**26,104**
	Groundwater	Potable	Six Basins		203	194	218	246	294	329	370	374	352	308	258	204	**3,350**	
	Groundwater	Potable	Spadra Basin		2	4	5	5	7	25	31	26	24	18	3	0	**150**	
	Surface Water	Potable	San Antonio Creek		159	127	187	218	213	190	182	161	143	144	134	143	**2,000**	
	Surface Water (Imported)	Potable	Weymouth	TVMWD	146	115	137	326	439	597	757	802	720	541	333	172	**5,086**	
	Recycled	Non-Potable	PWRP		31	89	118	204	236	321	341	345	271	195	134	63	**2,350**	

Table B-8b. City of Pomona Projected Water Plan - Expected Demand, Expected Groundwater Utilization, Expected Imported Water Utilization
Monthly Distribution of Supplies (af) 2025 through 2045

Fiscal Year	Water Supply	Demand Met with Supply	Source of Supply	Source of Imported Water	January	February	March	April	May	June	July	August	September	October	November	December	Total Annual Supply	Grand Total Annual Supply
2025	Groundwater	Potable	Chino Basin		880	839	867	865	919	889	953	967	951	952	907	868	**10,858**	**24,708**
	Groundwater	Potable	Six Basins		203	194	218	246	294	329	370	374	352	308	258	204	**3,350**	
	Groundwater	Potable	Spadra Basin		2	4	5	5	7	25	31	26	24	18	3	0	**150**	
	Surface Water	Potable	San Antonio Creek		159	127	187	218	213	190	182	161	143	144	134	143	**2,000**	
	Surface Water (Imported)	Potable	Weymouth	TVMWD	172	136	161	385	518	704	893	946	850	638	393	203	**6,000**	
	Recycled	Non-Potable	PWRP		31	89	118	204	236	321	341	345	271	195	134	63	**2,350**	
2030	Groundwater	Potable	Chino Basin		947	903	933	931	989	957	1,026	1,041	1,024	1,025	976	934	**11,685**	**25,289**
	Groundwater	Potable	Six Basins		203	194	218	246	294	329	370	374	352	308	258	204	**3,350**	
	Groundwater	Potable	Spadra Basin		2	4	5	5	7	25	31	26	24	18	3	0	**150**	
	Surface Water	Potable	San Antonio Creek		159	127	187	218	213	190	182	161	143	144	134	143	**2,000**	
	Surface Water (Imported)	Potable	Weymouth	TVMWD	165	131	155	369	497	675	857	907	815	612	377	194	**5,754**	
	Recycled	Non-Potable	PWRP		31	89	118	204	236	321	341	345	271	195	134	63	**2,350**	
2035	Groundwater	Potable	Chino Basin		1,016	970	1,001	1,000	1,061	1,027	1,101	1,118	1,099	1,100	1,047	1,002	**12,543**	**25,326**
	Groundwater	Potable	Six Basins		203	194	218	246	294	329	370	374	352	308	258	204	**3,350**	
	Groundwater	Potable	Spadra Basin		2	4	5	5	7	25	31	26	24	18	3	0	**150**	
	Surface Water	Potable	San Antonio Creek		159	127	187	218	213	190	182	161	143	144	134	143	**2,000**	
	Surface Water (Imported)	Potable	Weymouth	TVMWD	142	112	133	316	426	579	735	778	699	525	323	167	**4,933**	
	Recycled	Non-Potable	PWRP		31	89	118	204	236	321	341	345	271	195	134	63	**2,350**	
2040	Groundwater	Potable	Chino Basin		1,084	1,034	1,068	1,066	1,132	1,096	1,174	1,192	1,172	1,173	1,117	1,069	**13,376**	**25,713**
	Groundwater	Potable	Six Basins		203	194	218	246	294	329	370	374	352	308	258	204	**3,350**	
	Groundwater	Potable	Spadra Basin		2	4	5	5	7	25	31	26	24	18	3	0	**150**	
	Surface Water	Potable	San Antonio Creek		159	127	187	218	213	190	182	161	143	144	134	143	**2,000**	
	Surface Water (Imported)	Potable	Weymouth	TVMWD	129	102	121	288	387	527	668	708	635	477	294	152	**4,487**	
	Recycled	Non-Potable	PWRP		31	89	118	204	236	321	341	345	271	195	134	63	**2,350**	
2045	Groundwater	Potable	Chino Basin		1,153	1,101	1,136	1,135	1,205	1,166	1,250	1,269	1,247	1,249	1,189	1,138	**14,238**	**26,535**
	Groundwater	Potable	Six Basins		203	194	218	246	294	329	370	374	352	308	258	204	**3,350**	
	Groundwater	Potable	Spadra Basin		2	4	5	5	7	25	31	26	24	18	3	0	**150**	
	Surface Water	Potable	San Antonio Creek		159	127	187	218	213	190	182	161	143	144	134	143	**2,000**	
	Surface Water (Imported)	Potable	Weymouth	TVMWD	128	101	120	285	384	522	662	701	630	473	291	150	**4,447**	
	Recycled	Non-Potable	PWRP		31	89	118	204	236	321	341	345	271	195	134	63	**2,350**	

Table B-8c. City of Pomona Projected Water Plan - High Demand, High Groundwater Utilization, Low Imported Water Utilization
Monthly Distribution of Supplies (af) 2025 through 2045

Fiscal Year	Water Supply	Demand Met with Supply	Source of Supply	Source of Imported Water	January	February	March	April	May	June	July	August	September	October	November	December	Total Annual Supply	Grand Total Annual Supply
2025	Groundwater	Potable	Chino Basin		955	912	941	940	998	966	1,035	1,051	1,033	1,034	985	942	**11,793**	**24,774**
	Groundwater	Potable	Six Basins		203	194	218	246	294	329	370	374	352	308	258	204	**3,350**	
	Groundwater	Potable	Spadra Basin		2	4	5	5	7	25	31	26	24	18	3	0	**150**	
	Surface Water	Potable	San Antonio Creek		159	127	187	218	213	190	182	161	143	144	134	143	**2,000**	
	Surface Water (Imported)	Potable	Weymouth	TVMWD	147	116	138	329	443	602	764	809	727	546	336	173	**5,131**	
	Recycled	Non-Potable	PWRP		31	89	118	204	236	321	341	345	271	195	134	63	**2,350**	
2030	Groundwater	Potable	Chino Basin		1,022	976	1,007	1,006	1,068	1,034	1,108	1,124	1,106	1,107	1,054	1,008	**12,620**	**25,370**
	Groundwater	Potable	Six Basins		203	194	218	246	294	329	370	374	352	308	258	204	**3,350**	
	Groundwater	Potable	Spadra Basin		2	4	5	5	7	25	31	26	24	18	3	0	**150**	
	Surface Water	Potable	San Antonio Creek		159	127	187	218	213	190	182	161	143	144	134	143	**2,000**	
	Surface Water (Imported)	Potable	Weymouth	TVMWD	141	111	132	314	423	575	730	773	694	521	321	166	**4,900**	
	Recycled	Non-Potable	PWRP		31	89	118	204	236	321	341	345	271	195	134	63	**2,350**	
2035	Groundwater	Potable	Chino Basin		1,097	1,047	1,081	1,080	1,146	1,110	1,189	1,207	1,187	1,188	1,131	1,083	**13,546**	**25,733**
	Groundwater	Potable	Six Basins		203	194	218	246	294	329	370	374	352	308	258	204	**3,350**	
	Groundwater	Potable	Spadra Basin		2	4	5	5	7	25	31	26	24	18	3	0	**150**	
	Surface Water	Potable	San Antonio Creek		159	127	187	218	213	190	182	161	143	144	134	143	**2,000**	
	Surface Water (Imported)	Potable	Weymouth	TVMWD	124	98	117	278	374	509	646	684	614	461	284	147	**4,337**	
	Recycled	Non-Potable	PWRP		31	89	118	204	236	321	341	345	271	195	134	63	**2,350**	
2040	Groundwater	Potable	Chino Basin		1,170	1,117	1,153	1,151	1,222	1,183	1,268	1,287	1,266	1,267	1,206	1,154	**14,446**	**26,295**
	Groundwater	Potable	Six Basins		203	194	218	246	294	329	370	374	352	308	258	204	**3,350**	
	Groundwater	Potable	Spadra Basin		2	4	5	5	7	25	31	26	24	18	3	0	**150**	
	Surface Water	Potable	San Antonio Creek		159	127	187	218	213	190	182	161	143	144	134	143	**2,000**	
	Surface Water (Imported)	Potable	Weymouth	TVMWD	115	91	108	256	345	470	595	631	566	426	262	135	**3,999**	
	Recycled	Non-Potable	PWRP		31	89	118	204	236	321	341	345	271	195	134	63	**2,350**	
2045	Groundwater	Potable	Chino Basin		1,240	1,183	1,222	1,220	1,295	1,254	1,344	1,364	1,341	1,343	1,278	1,223	**15,308**	**27,065**
	Groundwater	Potable	Six Basins		203	194	218	246	294	329	370	374	352	308	258	204	**3,350**	
	Groundwater	Potable	Spadra Basin		2	4	5	5	7	25	31	26	24	18	3	0	**150**	
	Surface Water	Potable	San Antonio Creek		159	127	187	218	213	190	182	161	143	144	134	143	**2,000**	
	Surface Water (Imported)	Potable	Weymouth	TVMWD	112	89	105	250	337	459	582	616	553	416	256	132	**3,907**	
	Recycled	Non-Potable	PWRP		31	89	118	204	236	321	341	345	271	195	134	63	**2,350**	

Table B-9a. City of Upland Projected Water Plan - Low Demand, Low Groundwater Utilization, High Imported Water Utilization
Monthly Distribution of Supplies (af) 2025 through 2045

Fiscal Year	Water Supply	Demand Met with Supply	Source of Supply	Source of Imported Water	January	February	March	April	May	June	July	August	September	October	November	December	Total Annual Supply	Grand Total Annual Supply
2025	Groundwater	Transfer	Six Basins		0	0	0	0	0	0	0	0	0	241	3	0	**244**	**20,511**
	Groundwater	Potable	Chino Basin		291	230	252	309	386	319	310	333	287	265	170	274	**3,426**	
	Groundwater	Potable	Cucamonga Basin		0	0	0	0	0	0	0	0	181	169	164	169	**683**	
	Groundwater	Potable	Six Basins		222	284	284	345	350	398	440	465	397	329	295	311	**4,122**	
	Groundwater (Imported)	Potable	Other	SAWCo	247	237	247	436	558	686	695	673	524	459	437	187	**5,386**	
	Recycled	Non-Potable	IEUA		21	23	21	49	66	92	111	87	94	79	41	20	**703**	
	Surface Water (Imported)	Potable	San Antonio Creek	SAWCo	149	163	189	187	200	190	194	134	106	55	58	55	**1,679**	
	Surface Water (Imported)	Potable	SWP	WFA	287	221	217	225	248	305	506	578	547	534	327	272	**4,267**	
2030	Groundwater	Transfer	Six Basins		0	0	0	0	0	0	0	0	0	243	3	0	**246**	**20,357**
	Groundwater	Potable	Chino Basin		212	167	184	226	282	233	226	243	209	193	124	200	**2,500**	
	Groundwater	Potable	Cucamonga Basin		0	0	0	0	0	0	0	0	181	169	164	169	**683**	
	Groundwater	Potable	Six Basins		222	284	284	345	350	398	440	465	397	329	295	311	**4,122**	
	Groundwater (Imported)	Potable	Other	SAWCo	247	237	247	436	558	686	695	673	524	459	437	187	**5,386**	
	Recycled	Non-Potable	IEUA		21	23	21	49	66	92	111	87	94	79	41	20	**703**	
	Surface Water (Imported)	Potable	San Antonio Creek	SAWCo	149	163	189	187	200	190	194	134	106	55	58	55	**1,679**	
	Surface Water (Imported)	Potable	SWP	WFA	339	261	256	266	292	360	598	682	646	630	386	321	**5,038**	
2035	Groundwater	Transfer	Six Basins		0	0	0	0	0	0	0	0	0	244	3	0	**247**	**19,668**
	Groundwater	Potable	Chino Basin		69	54	59	73	91	75	73	79	68	62	40	65	**807**	
	Groundwater	Potable	Cucamonga Basin		0	0	0	0	0	0	0	0	181	169	164	169	**683**	
	Groundwater	Potable	Six Basins		222	284	284	345	350	398	440	465	397	329	295	311	**4,122**	
	Groundwater (Imported)	Potable	Other	SAWCo	247	237	247	436	558	686	695	673	524	459	437	187	**5,386**	
	Recycled	Non-Potable	IEUA		21	23	21	49	66	92	111	87	94	79	41	20	**703**	
	Surface Water (Imported)	Potable	San Antonio Creek	SAWCo	149	163	189	187	200	190	194	134	106	55	58	55	**1,679**	
	Surface Water (Imported)	Potable	SWP	WFA	406	313	307	319	351	431	716	818	775	755	463	385	**6,040**	
2040	Groundwater	Transfer	Six Basins		0	0	0	0	0	0	0	0	0	245	4	0	**249**	**19,435**
	Groundwater	Potable	Chino Basin		8	6	7	8	10	8	8	9	8	7	4	7	**90**	
	Groundwater	Potable	Cucamonga Basin		0	0	0	0	0	0	0	0	181	169	164	169	**683**	
	Groundwater	Potable	Six Basins		222	284	284	345	350	398	440	465	397	329	295	311	**4,122**	
	Groundwater (Imported)	Potable	Other	SAWCo	247	237	247	436	558	686	695	673	524	459	437	187	**5,386**	
	Recycled	Non-Potable	IEUA		21	23	21	49	66	92	111	87	94	79	41	20	**703**	
	Surface Water (Imported)	Potable	San Antonio Creek	SAWCo	149	163	189	187	200	190	194	134	106	55	58	55	**1,679**	
	Surface Water (Imported)	Potable	SWP	WFA	438	338	332	344	379	466	774	883	837	816	500	416	**6,522**	
2045	Groundwater	Transfer	Six Basins		0	0	0	0	0	0	0	0	0	246	4	0	**250**	**19,937**
	Groundwater	Potable	Chino Basin		18	15	16	20	24	20	20	21	18	17	11	17	**217**	
	Groundwater	Potable	Cucamonga Basin		0	0	0	0	0	0	0	0	181	169	164	169	**683**	
	Groundwater	Potable	Six Basins		222	284	284	345	350	398	440	465	397	329	295	311	**4,122**	
	Groundwater (Imported)	Potable	Other	SAWCo	247	237	247	436	558	686	695	673	524	459	437	187	**5,386**	
	Recycled	Non-Potable	IEUA		21	23	21	49	66	92	111	87	94	79	41	20	**703**	
	Surface Water (Imported)	Potable	San Antonio Creek	SAWCo	149	163	189	187	200	190	194	134	106	55	58	55	**1,679**	
	Surface Water (Imported)	Potable	SWP	WFA	463	358	351	364	400	493	818	934	885	863	529	440	**6,896**	

Table B-9b. City of Upland Projected Water Plan - Expected Demand, Expected Groundwater Utilization, Expected Imported Water Utilization
Monthly Distribution of Supplies (af) 2025 through 2045

Fiscal Year	Water Supply	Demand Met with Supply	Source of Supply	Source of Imported Water	January	February	March	April	May	June	July	August	September	October	November	December	Total Annual Supply	Grand Total Annual Supply
2025	Groundwater	Transfer	Six Basins		0	0	0	0	0	0	0	0	0	241	3	0	**244**	**20,975**
	Groundwater	Potable	Chino Basin		370	291	320	393	490	405	394	423	364	336	216	348	**4,350**	
	Groundwater	Potable	Cucamonga Basin		0	0	0	0	0	0	0	0	181	169	164	169	**683**	
	Groundwater	Potable	Six Basins		222	284	284	345	350	398	440	465	397	329	295	311	**4,122**	
	Groundwater (Imported)	Potable	Other	SAWCo	247	237	247	436	558	686	695	673	524	459	437	187	**5,386**	
	Recycled	Non-Potable	IEUA		21	23	21	49	66	92	111	87	94	79	41	20	**703**	
	Surface Water (Imported)	Potable	San Antonio Creek	SAWCo	149	163	189	187	200	190	194	134	106	55	58	55	**1,679**	
	Surface Water (Imported)	Potable	SWP	WFA	256	197	194	201	221	272	452	516	489	476	292	243	**3,808**	
2030	Groundwater	Transfer	Six Basins		0	0	0	0	0	0	0	0	0	243	3	0	**246**	**21,040**
	Groundwater	Potable	Chino Basin		309	244	268	329	411	339	330	354	305	282	181	292	**3,642**	
	Groundwater	Potable	Cucamonga Basin		0	0	0	0	0	0	0	0	181	169	164	169	**683**	
	Groundwater	Potable	Six Basins		222	284	284	345	350	398	440	465	397	329	295	311	**4,122**	
	Groundwater (Imported)	Potable	Other	SAWCo	247	237	247	436	558	686	695	673	524	459	437	187	**5,386**	
	Recycled	Non-Potable	IEUA		21	23	21	49	66	92	111	87	94	79	41	20	**703**	
	Surface Water (Imported)	Potable	San Antonio Creek	SAWCo	149	163	189	187	200	190	194	134	106	55	58	55	**1,679**	
	Surface Water (Imported)	Potable	SWP	WFA	308	237	233	242	266	327	543	620	587	573	351	292	**4,579**	
2035	Groundwater	Transfer	Six Basins		0	0	0	0	0	0	0	0	0	244	3	0	**247**	**20,763**
	Groundwater	Potable	Chino Basin		201	158	174	213	266	220	214	230	198	183	117	189	**2,362**	
	Groundwater	Potable	Cucamonga Basin		0	0	0	0	0	0	0	0	181	169	164	169	**683**	
	Groundwater	Potable	Six Basins		222	284	284	345	350	398	440	465	397	329	295	311	**4,122**	
	Groundwater (Imported)	Potable	Other	SAWCo	247	237	247	436	558	686	695	673	524	459	437	187	**5,386**	
	Recycled	Non-Potable	IEUA		21	23	21	49	66	92	111	87	94	79	41	20	**703**	
	Surface Water (Imported)	Potable	San Antonio Creek	SAWCo	149	163	189	187	200	190	194	134	106	55	58	55	**1,679**	
	Surface Water (Imported)	Potable	SWP	WFA	375	289	284	295	324	399	662	756	716	698	428	356	**5,581**	
2040	Groundwater	Transfer	Six Basins		0	0	0	0	0	0	0	0	0	245	4	0	**249**	**20,703**
	Groundwater	Potable	Chino Basin		154	122	134	164	205	169	165	177	152	141	90	146	**1,818**	
	Groundwater	Potable	Cucamonga Basin		0	0	0	0	0	0	0	0	181	169	164	169	**683**	
	Groundwater	Potable	Six Basins		222	284	284	345	350	398	440	465	397	329	295	311	**4,122**	
	Groundwater (Imported)	Potable	Other	SAWCo	247	237	247	436	558	686	695	673	524	459	437	187	**5,386**	
	Recycled	Non-Potable	IEUA		21	23	21	49	66	92	111	87	94	79	41	20	**703**	
	Surface Water (Imported)	Potable	San Antonio Creek	SAWCo	149	163	189	187	200	190	194	134	106	55	58	55	**1,679**	
	Surface Water (Imported)	Potable	SWP	WFA	407	314	308	320	352	433	719	821	778	758	465	387	**6,063**	
2045	Groundwater	Transfer	Six Basins		0	0	0	0	0	0	0	0	0	246	4	0	**250**	**21,173**
	Groundwater	Potable	Chino Basin		163	128	141	173	216	178	173	186	160	148	95	153	**1,913**	
	Groundwater	Potable	Cucamonga Basin		0	0	0	0	0	0	0	0	181	169	164	169	**683**	
	Groundwater	Potable	Six Basins		222	284	284	345	350	398	440	465	397	329	295	311	**4,122**	
	Groundwater (Imported)	Potable	Other	SAWCo	247	237	247	436	558	686	695	673	524	459	437	187	**5,386**	
	Recycled	Non-Potable	IEUA		21	23	21	49	66	92	111	87	94	79	41	20	**703**	
	Surface Water (Imported)	Potable	San Antonio Creek	SAWCo	149	163	189	187	200	190	194	134	106	55	58	55	**1,679**	
	Surface Water (Imported)	Potable	SWP	WFA	433	334	327	340	374	460	764	872	826	805	494	411	**6,437**	

Table B-9c. City of Upland Projected Water Plan - High Demand, High Groundwater Utilization, Low Imported Water Utilization
Monthly Distribution of Supplies (af) 2025 through 2045

Fiscal Year	Water Supply	Demand Met with Supply	Source of Supply	Source of Imported Water	January	February	March	April	May	June	July	August	September	October	November	December	Total Annual Supply	Grand Total Annual Supply
2025	Groundwater	Transfer	Six Basins		0	0	0	0	0	0	0	0	0	241	3	0	**244**	**21,555**
	Groundwater	Potable	Chino Basin		458	361	396	487	608	502	488	524	451	417	267	431	**5,390**	
	Groundwater	Potable	Cucamonga Basin		0	0	0	0	0	0	0	0	181	169	164	169	**683**	
	Groundwater	Potable	Six Basins		222	284	284	345	350	398	440	465	397	329	295	311	**4,122**	
	Groundwater (Imported)	Potable	Other	SAWCo	247	237	247	436	558	686	695	673	524	459	437	187	**5,386**	
	Recycled	Non-Potable	IEUA		21	23	21	49	66	92	111	87	94	79	41	20	**703**	
	Surface Water (Imported)	Potable	San Antonio Creek	SAWCo	149	163	189	187	200	190	194	134	106	55	58	55	**1,679**	
	Surface Water (Imported)	Potable	SWP	WFA	225	174	170	177	194	239	397	453	430	419	257	214	**3,349**	
2030	Groundwater	Transfer	Six Basins		0	0	0	0	0	0	0	0	0	243	3	0	**246**	**21,866**
	Groundwater	Potable	Chino Basin		419	330	362	445	556	459	446	479	412	381	244	394	**4,928**	
	Groundwater	Potable	Cucamonga Basin		0	0	0	0	0	0	0	0	181	169	164	169	**683**	
	Groundwater	Potable	Six Basins		222	284	284	345	350	398	440	465	397	329	295	311	**4,122**	
	Groundwater (Imported)	Potable	Other	SAWCo	247	237	247	436	558	686	695	673	524	459	437	187	**5,386**	
	Recycled	Non-Potable	IEUA		21	23	21	49	66	92	111	87	94	79	41	20	**703**	
	Surface Water (Imported)	Potable	San Antonio Creek	SAWCo	149	163	189	187	200	190	194	134	106	55	58	55	**1,679**	
	Surface Water (Imported)	Potable	SWP	WFA	277	214	210	217	239	294	489	558	528	515	316	263	**4,120**	
2035	Groundwater	Transfer	Six Basins		0	0	0	0	0	0	0	0	0	244	3	0	**247**	**22,086**
	Groundwater	Potable	Chino Basin		352	278	305	374	467	386	375	403	347	321	206	332	**4,145**	
	Groundwater	Potable	Cucamonga Basin		0	0	0	0	0	0	0	0	181	169	164	169	**683**	
	Groundwater	Potable	Six Basins		222	284	284	345	350	398	440	465	397	329	295	311	**4,122**	
	Groundwater (Imported)	Potable	Other	SAWCo	247	237	247	436	558	686	695	673	524	459	437	187	**5,386**	
	Recycled	Non-Potable	IEUA		21	23	21	49	66	92	111	87	94	79	41	20	**703**	
	Surface Water (Imported)	Potable	San Antonio Creek	SAWCo	149	163	189	187	200	190	194	134	106	55	58	55	**1,679**	
	Surface Water (Imported)	Potable	SWP	WFA	344	266	261	270	297	366	607	693	657	641	393	327	**5,122**	
2040	Groundwater	Transfer	Six Basins		0	0	0	0	0	0	0	0	0	245	4	0	**249**	**22,228**
	Groundwater	Potable	Chino Basin		323	255	280	343	429	354	344	370	318	294	189	304	**3,803**	
	Groundwater	Potable	Cucamonga Basin		0	0	0	0	0	0	0	0	181	169	164	169	**683**	
	Groundwater	Potable	Six Basins		222	284	284	345	350	398	440	465	397	329	295	311	**4,122**	
	Groundwater (Imported)	Potable	Other	SAWCo	247	237	247	436	558	686	695	673	524	459	437	187	**5,386**	
	Recycled	Non-Potable	IEUA		21	23	21	49	66	92	111	87	94	79	41	20	**703**	
	Surface Water (Imported)	Potable	San Antonio Creek	SAWCo	149	163	189	187	200	190	194	134	106	55	58	55	**1,679**	
	Surface Water (Imported)	Potable	SWP	WFA	377	291	285	296	325	400	665	759	719	701	430	357	**5,604**	
2045	Groundwater	Transfer	Six Basins		0	0	0	0	0	0	0	0	0	246	4	0	**250**	**22,659**
	Groundwater	Potable	Chino Basin		328	258	284	348	435	359	349	375	323	298	191	309	**3,858**	
	Groundwater	Potable	Cucamonga Basin		0	0	0	0	0	0	0	0	181	169	164	169	**683**	
	Groundwater	Potable	Six Basins		222	284	284	345	350	398	440	465	397	329	295	311	**4,122**	
	Groundwater (Imported)	Potable	Other	SAWCo	247	237	247	436	558	686	695	673	524	459	437	187	**5,386**	
	Recycled	Non-Potable	IEUA		21	23	21	49	66	92	111	87	94	79	41	20	**703**	
	Surface Water (Imported)	Potable	San Antonio Creek	SAWCo	149	163	189	187	200	190	194	134	106	55	58	55	**1,679**	
	Surface Water (Imported)	Potable	SWP	WFA	402	310	304	315	347	427	709	809	767	748	458	381	**5,978**	