MAIN SAN GABRIEL BASIN WATERMASTER
REPORT ON
FINAL DETERMINATION OF
OPERATING SAFE YIELD
FOR 2024-25 THROUGH 2028-29

May 1, 2024

STETSON ENGINEERS INC.

861 Village Oaks Drive, Suite 100 • Covina , California 91724
Phone: (626) 967-6202 • Fax: (626) 331-7065 • Website: www.stetsonengineers.com

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF PLATES

LIST OF FIGURES

LIST OF APPENDICIES

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SPECIAL INTRODUCTION

For fiscal year 2023-24, the Basin and the State is currently experiencing a potential second consecutive above-normal snowfall and rainfall event. The State Water Project (SWP) Allocation for 2024 is 40 percent, as of April. In addition, due to an unprecedented long-term drought since 2005, there was strong conservation messaging throughout the Basin to help the Basin water levels from declining further, along with these local wet conditions. The conservation messaging and wet conditions have the Basin experiencing production as low as 168,000 acre-feet in fiscal year 2022-23, which is a historical low since the adjudication. It appears fiscal year 2023-24 production is trending to be around 170,000 acre-feet. The long-term drought (see Appendix A) has significantly impacted the Basin storage and water levels. In addition to conservation messaging, the Watermaster has made significant changes to Basin management (including Water Resources Development Assessment (RDA)) to help supplement the significant reduction in local water supply for Basin replenishment. During this time, the Watermaster reduced and held the Operating Safe Yield (OSY) at 150,000 acre-feet for the last ten (10) consecutive years, which is unprecedented. The Watermaster has used the RDA and OSY as the primary "tools" for Basin water supply management. The unexpected 2-year above-normal hydrologic events are being reviewed very closely to determine if, and when, Basin conditions will allow the Watermaster to, once again, utilize the OSY as the "primary" tool for Basin water supply management.

Is it appropriate time for the Engineer to recommend an "increase" to the OSY? The Engineer has stated, "…the Watermaster should consider maintaining the OSY at no more than 150,000 acre-feet until such times as the operational elevation at the Key Well is significantly above elevation 200 feet…", and hydrologic conditions demonstrate an increasing Key Well elevation, significant storage in canyon reservoirs for replenishment, and adequate imported water supply availability.

INTRODUCTION

Operating Safe Yield is the quantity of water which the Main San Gabriel Basin Watermaster (Watermaster) determines may be pumped from the Main San Gabriel Basin (Basin) in a fiscal year, free of Replacement Water assessments. In accordance with Section 43 of the amended Main San Gabriel Basin Judgment[1], Watermaster at its regular meeting in May of each year determines the Operating Safe Yield applicable to the succeeding fiscal year and estimates the Operating Safe Yield for the next succeeding four fiscal years.

A Report on the "Preliminary Determination of Operating Safe Yield" is submitted by its Engineer to Watermaster at its regular meeting in April each year. On acceptance of that Report by Watermaster, a copy is distributed to each Pumper and Integrated Producer at least 10 days prior to a hearing, which is held at the regular meeting of Watermaster in May each year. Objections, comments or suggested modifications to the preliminary Operating Safe Yield are considered by Watermaster at that hearing and Watermaster, through vote of its Board members, adopts the final Operating Safe Yield.

BASIN OPERATING CRITERIA

Section 42 of the amended Judgment states in part, "... Watermaster shall recharge Replacement Water in accordance with the Watermaster Operating Criteria and, insofar as practicable, to maintain the water level at the Key Well above Elevation two hundred (200)." Replacement Water is defined in Section 10 (cc) of the amended Judgment as "Water purchased by Watermaster to replace: (1) Production in excess of a Pumper's Share of Operating Safe Yield; (2) The consumptive use portion resulting from the exercise of an Overlying Right; and (3) Production in excess of a Diverter's right to Divert for Direct Use". Producers and Responsible Agencies are allowed to deliver Supplemental Water into their respective Cyclic Storage accounts as a pre-delivery of Replacement Water. Furthermore, as a result of recent significant local drought conditions (see Appendix A) the Watermaster took unprecedented actions to supplement local water supplies, and, as part of 2012 Amendments to the Judgment, Watermaster may make deliveries of Supplemental Water to augment the lack of local water replenishment through the Water Resources Development Assessment (RDA) stormwater augmentation program. The Operating Safe Yield, using Replacement Water, and delivery of Supplemental Water, using the RDA, are the tools being used for management of Basin groundwater levels.

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[1] Upper San Gabriel Valley Municipal Water District vs. City of Alhambra, et al, Case No. 924128, Los Angeles County, as amended June 21, 2012.

The Operating Safe Yield, which is established in May of each year, along with the prior year's carryover rights and the Diversion component of Integrated Producers, results in a Replacement Water requirement (net of any withdrawals from Producer Cyclic Storage accounts) that is delivered (at the earliest) in October of the second fiscal year, a span of about 17 months, and possibly not until the following June, a span of 26 months, assuming imported Supplemental Water is available. In the time frame between when the Operating Safe Yield is established and Supplemental Water is actually delivered, the actual hydrologic conditions experienced may have had significant impacts on the Basin groundwater levels. Therefore, it is prudent to conservatively manage the Basin groundwater levels and assure that Replacement Water assessment funds and RDA funds are appropriately collected and available for the purchase of available Supplemental Water to provide for Basin replenishment. The producer's significant purchase of Cyclic Storage water in advance of a Replacement Water obligation has helped to manage the "17-month" time delay for the actual delivery of Replacement water. This Report is for the management of Basin groundwater levels using the Replacement Water management tool.

Watermaster evaluates numerous factors when determining the Operating Safe Yield. The most critical factors are the provisions of the Judgment and the current and projected groundwater elevation at the Baldwin Park Key Well (Key Well), which represents the water stored in the Basin. Importantly, Watermaster focuses on the "operational" groundwater elevation at the Key Well (which excludes the impacts of Supplemental Water held in all Cyclic Storage accounts).

Figures 1A and 1B show the projected Key Well elevation through the end of this fiscal year 2023-24 (June 30, 2024) and next fiscal year 2024-25 (June 30, 2025). Figure 1A assumes MWD imported water deliveries of about 50,000 acre-feet during the 2024 and Figure 1B assumes no imported water deliveries (worst case). Both projections also assume the delivery and replenishment of "only" local water, and the return of normal percolation rates at SFSG's. Both figures show two lines, one is the "measured" Key Well elevation and the second is the "operational" Key Well elevation (only local water and delivered RDA water, and no Cyclic Storage water). The "operational" Key Well elevation is used in determining the OSY.

Figures 1A shows a projection of the Key Well elevation to June 2025, assuming the availability of imported water through calendar year 2024 of about 50,000 acre-feet and (essentially) worst-case conditions for fiscal year 2024-25 (dry year and production of 180,000 acre-feet). Figure 1B shows a projection of the Key Well elevation to June 2025, assuming no imported water and (essentially) worst-case conditions for fiscal year 2024-25 (dry year and production of 180,000 acre-feet). The projected "operational" Key Well elevation (only local water and delivered RDA water, and no Cyclic Storage water) in June 2024 will be about 239 feet. In addition, the projected Key Well elevation "measured" in June 2024 is about 254 feet.

Figure 2 shows the measured groundwater elevation at the Key Well, which includes stored Supplemental Water (Cyclic Storage and the initial Water Resource

Development Assessment deliveries to Cyclic Storage) and the operational groundwater elevation at the Key Well, which is used to characterize "natural" groundwater elevations for the purposes of establishing an Operating Safe Yield. However, for the purpose of this Report, the measured Key Well elevation is referenced throughout.

Figure 3 shows the Key Well elevation and the relationship between the "measured" water level, the natural water level with only RDA water, and the natural water level (excludes RDA water and Cyclic Storage). Watermaster also reviews historical and current hydrologic conditions within the Basin, such as rainfall, storage of local runoff in surface reservoirs and conservation of local runoff; the availability of Supplemental Water; the quantity of water in Cyclic Storage; Carry-over Rights; and other information. Presented in Table 1 is the historical record of the annual Operating Safe Yield, Carry-over Rights, Lost Carry-over Rights, Production Rights, Water Production, and Replacement Water Requirement for each year of Watermaster operations beginning with fiscal year 1973-74.

Stormwater Augmentation – Water Resources Development Assessment

During fiscal year 2015-16, the Watermaster developed a "RDA Stormwater Augmentation Program," whereby Watermaster uses its Water Resource Development Assessment (RDA II) to purchase available untreated imported water to supplement the shortage of local stormwater replenishment (discussed in detail in the following section). Consequently, once the Stormwater Augmentation Program water is delivered to the Basin, and paid for, it is considered to be a supplement to "local water and available to all Basin pumpers," but not Supplemental Water. As a result of just the RDA programs (includes all RDA actual water deliveries, including RDA water not yet paid for), Watermaster and the Producers have added over 195,000 acre-feet of replenishment water and increased the elevation of the Baldwin Park Key Well by about 26 feet, as shown in Figure 3. The RDA is the second "tool" in addition to OSY, the Watermaster has to manage Basin water levels and Basin storage. Other Watermaster and Producer actions have also contributed to maintaining the Basin water supply reliability.

MWD Pre-Delivery Agreement

Under the MWD Pre-Delivery Agreement, MWD, Upper District and Watermaster entered into an Agreement to coordinate large amounts of delivery (up to 200,000 acre-feet) into MWD's Cyclic Storage account. Upper District and Watermaster has up to ten years to purchase that water. At a minimum, MWD requires an annual purchase each year. The purpose of the MWD Pre-Delivery Agreement is when water is available in the SWP Allocation (around 30-35%), MWD would like to deliver as much water as possible in order to prepare for the next 2-3 years of potential drought conditions, when MWD may not deliver Supplemental Water to the Basin. This potential MWD pre-delivery program is predicated on Watermaster managing the Basin so that, when the MWD supply interruption occurs, the pre-

delivered water will be stored in the Basin and available for pumping. Upper District and MWD agreed that the payment schedule for the purchase of water delivered will be purchased over five to ten years. In order to fund these purchases every year, Watermaster uses funds from Replacement Water/Cyclic Storage orders and RDA requirements from Upper District. Currently, there is no water in MWD's Cyclic Storage under the Pre-Delivery Agreement. To ensure funds are available each year, the OSY would need to be set in order to create a Replacement Water/Cyclic Storage requirement (ie, setting a low OSY creates more Replacement Water/Cyclic Storage requirement). If there are not enough funds due to increasing the OSY, more RDA water would need to be purchased to make up the difference. This is accomplished by increasing the RDA assessment. This is how both OSY and RDA are used as a "tool" to manage Basin water levels and Basin storage. There is currently no water stored in the MWD Cyclic Storage account under the Pre-Delivery Agreement.

BASIN CONDITIONS - GROUNDWATER ELEVATIONS

Exhibit H, Section 2 of the amended Judgment states in part "Watermaster in determining Operating Safe Yield and the importation of Replacement Water shall be guided by water level elevations in the Basin." The following describes the groundwater elevation at the Baldwin Park Key Well.

Baldwin Park Key Well

The Key Well is located in the central portion of the Basin, as shown in Plate 1. It has been successfully used to generally represent basin-wide groundwater elevation trends. A one-foot groundwater elevation change at the Key Well is estimated to represent approximately 8,000 acre-feet of water in storage, under normal conditions (Basin operating conditions). Figure 4 is a hydrograph showing the groundwater elevation at the Key Well and annual rainfall at San Gabriel Dam since October 1, 1937. The highest groundwater elevation at the Key Well, since entry of the Judgment, occurred on July 20, 1983 at 295.3 feet at which time 9,900 acre-feet (about one foot) were in Cyclic Storage. The historical low groundwater elevation at the Key Well, since entry of the Judgment, occurred on November 21, 2018 at 169.4 feet at which time 161,000 acre-feet (about 20 feet) were in Cyclic Storage. Without Cyclic Storage, the groundwater elevation at the Key Well would have been about 150 feet on November 21, 2018. Subsequently, the groundwater elevation rose above 210 feet, but again the long-term drought caused the groundwater elevation to decline to nearly 175 feet in 2022. Due to a combination of MWD spreading imported water, recent local storm events and conservation efforts, the Key Well increased by 61 feet since 2022.

Unexpectedly, fiscal year 2023-24 is proving to be a second consecutive above-normal rainfall year. For local rainfall, significant effort is being made to maximize local runoff replenishment. On April 26, 2024, the groundwater elevation at the Key Well was 235.8 feet, at which time about 111,000 acre-feet (about 14 feet)

were in Cyclic Storage. Without Cyclic Storage, the Key Well elevation would have been about 221.9 feet on April 26, 2024, as shown on Figure 2.

Local runoff conserved in the San Gabriel Basin has been significantly below the long-term annual average during the extended drought period (2011-12 through 2021-22), and for the last 15 years. As a result, the measured groundwater elevation at the Key Well decreased from 233.5 feet on June 24, 2011 to a historical low of 169.4 feet on November 21, 2018, a decrease of 64 feet. This is a loss of about 510,000 acre-feet of water from Basin storage. Since the historical low water elevation on November 2018, the Key Well has since increased to a high of 212.5 feet in December 2019, partially due to significant replenishment of imported water, but then declined to nearly 175 feet in 2022. Due to above-average rainfall during fiscal year 2022-23 and 2023-24, the Key Well increased to 235.8 feet on April 26, 2024. As specified in Section 42 of the amended Judgment, the Watermaster, to the extent practical, shall manage the Basin to maintain the groundwater elevation at the Key Well above 200 feet.

Thus far during fiscal year 2023-24 (through April 30, 2024), rainfall at Puddingstone Dam has been about 23.88 inches (the long-term annual average is about 18.5 inches) which is about 135 percent of annual average. The Key Well elevation decreased from 212.5 feet in December 2019 to about 177.2 feet in October 28, 2022. Currently, the Key Well elevation was 235.8 feet on April 26, 2024. Typically, during the Summer and early Fall, the measured groundwater elevation at the Key Well decreases by about 10 feet.

Other "Key Wells"

While the groundwater elevation at the Baldwin Park Key Well has increased by about 8 feet from October 27, 2023 to April 26, 2024, the change in groundwater elevations in other parts of the Basin has been less significant. A well location map showing other "Key Wells" is included as Plate 1 and hydrographs of groundwater elevations at four other wells located throughout the Basin (compared to the measured Baldwin Park Key Well groundwater elevation) are included in Appendix B. San Gabriel County Water District Well 10 is located westerly of the Baldwin Park Key Well, County of Los Angeles Well No. 2947F is located southerly of the Baldwin Park Key Well in the vicinity of Whittier Narrows, Suburban Water Systems Well 155W-2 is located in the vicinity of the Puente Narrows and Valencia Heights Water Company Well No. 5 is located southeasterly of the Baldwin Park Key Well. In general, groundwater elevations at each of the four monitoring wells in the Basin react (both upward and downward) in a comparable but less dramatic manner as the Baldwin Park Key Well. As shown on the hydrographs in Appendix B, the groundwater elevations at these wells generally do not increase as high as the Baldwin Park Key Well during wet periods (with significant groundwater replenishment), but also do not have as significant of a decrease during dry periods with less groundwater replenishment. Significant changes in the water level for the other "Key Wells" are not expected in the near future.

BASIN CONDITIONS - RAINFALL

Rainfall in the San Gabriel River watershed provides direct percolation and typically results in local stormwater runoff which is captured and subsequently percolated in spreading facilities and contributes to Basin replenishment. Precipitation amounts vary throughout the San Gabriel River watershed and typically are highest in the foothills and mountains. Precipitation recorded at San Gabriel Dam, the City of Pasadena and Puddingstone Dam, are described below. The locations of these rainfall stations are shown on Plate 1.

San Gabriel Dam - Station 425B-E

Rainfall at San Gabriel Dam, which is located in the upper watershed and not on the valley floor, is estimated to be about 38.42 inches for the period July 1, 2023 through April 30, 2024, or about 135 percent of average for that period. Assuming average rainfall for the balance of the year, the annual rainfall is projected to be about 134 percent of average. Figure 5 shows the cumulative rainfall for 1) fiscal years , 2016-17, 2017-18, 2018-19, 2019-20, 2020-21, 2021-22, 2022-23; 2) the period July 2023 through April 2024; and 3) the long-term average rainfall at San Gabriel Dam.

Pasadena City Hall - Station 610B

Rainfall at the Pasadena City Hall is estimated to be about 30.02 inches for the period July 1, 2023 through April 30, 2024, or about 154 percent of average for that period. Assuming average rainfall for the balance of the year, the annual rainfall is projected to be about 152 percent of average. Figure 6 shows the cumulative rainfall for 1) fiscal years 2016-17, 2017-18, 2018-19, 2019-20, 2020-21, 2021-22, 2022-23; 2) the period July 2022 through April 2024; and 3) the long-term average rainfall at the Pasadena City Hall.

Puddingstone Dam - Station 96C

Rainfall at Puddingstone Dam is estimated to be about 23.88 inches for the period July 1, 2022 through April 30, 2024, or about 136 percent of average for that period. Assuming average rainfall for the balance of the year, the annual rainfall is projected to be about 135 percent of average. Figure 7 shows the cumulative rainfall for 1) fiscal years , 2016-17, 2017-18, 2018-19, 2019-20, 2020-21, 2021-22, 2022-23; 2) the period July 2022 through April 2024; and 3) the long-term average rainfall at Puddingstone Dam.

Precipitation in the San Gabriel River watershed during fiscal year 2023-24, through the end of April 2024 was about 142 percent of average.

BASIN CONDITIONS - LOCAL WATER IN SURFACE STORAGE RESERVOIRS

Local runoff water in surface reservoirs located on streams tributary to the Basin is stored by the DPW. This local runoff water is later released to the San Gabriel River system either for direct delivery to users or for replenishment of the groundwater Basin.

Table 4 shows the maximum reservoir storage capacity and the quantities of water in storage in surface reservoirs tributary to the San Gabriel Valley on April 25, 2023 and April 30, 2024. Also shown are the current recorded inflow and outflow rates at the reservoirs on April 30, 2024. The total amount of local water stored in surface reservoirs in the San Gabriel Valley as of April 30, 2024, was about 35,900 acre-feet (about 33 percent of capacity), which is a decrease of about 35,100 acre-feet in storage compared to April 25, 2023 (71,000 – 35,900). DPW indicates it maintains a minimum pool in Cogswell, San Gabriel and Morris Reservoirs representing about 10,500 acre-feet. Much of this stored water will be used to replenish groundwater supplies.

BASIN CONDITIONS - LOCAL AND IMPORTED WATER CONSERVED

The amount of local water conserved, which is typically the primary component of Basin replenishment, is dependent upon the amount of precipitation on the tributary watershed, resulting runoff, and the subsequent water replenishment activities of DPW. Historically, when the Basin experiences average to above-average precipitation, it results in a larger amount of local water available to replenish the Basin and the groundwater elevation increases. Examples of this relationship are shown on Figure 4 (see 1977-78, 1982-83, 2004-05, and 2022-23). The occurrence and duration of annual rainfall is also an important factor. For example, a large amount of rainfall over a short period of time may result in limited replenishment to the Basin due to surface flows exceeding water replenishment capabilities and even result in flow of local runoff to the ocean. Also, rainfall that follows severe dry periods will often result in lower runoff amounts due to dry soil absorbing effects in the watershed.

Unexpected above-normal rainfall in the Basin watershed so far during fiscal year 2023-24 has been about 142 percent of average through April 30, 2024. Although DPW replenishment records are incomplete this time of year, preliminary data indicate approximately 70,700 acre-feet (about 64 percent of annual average) of local runoff was replenished in the Basin between October 1, 2023 and March 31, 2024. The average annual local water Basin replenishment has averaged about 110,000 acre-feet prior to the recent drought. Based on historical records when annual rainfall was around 20 inches, annual local runoff replenishment in the last 15 years has been about 100,000 acre-feet. Replenishment of local water is expected to continue into June 2024.

In addition, if the SWP allocation is increased (expected), MWD plans to deliver imported water into the Basin (into MWD's Cyclic Storage account) in the summer. Figure 1A includes a projection of the Key Well elevation assuming MWD delivers and replenishes 50,000 acre-feet in calendar year 2024 and the Basin experiences dry conditions.

Table 2 summarizes the annual rainfall, local water plus RDA II water and imported water replenished for Cyclic Storage and measured and operational groundwater elevations at the Key Well since the inception of Watermaster operations.

BASIN CONDITIONS - SUPPLEMENTAL WATER AVAILABILITY

Section 10 of the amended Judgment defines Supplemental Water as "Nontributary water imported through a Responsible Agency." Upper District, Three Valleys Municipal Water District (Three Valleys District) and San Gabriel Valley Municipal Water District (San Gabriel District) are the Responsible Agencies which deliver Supplemental Water to the Basin. Upper District and Three Valleys District are member agencies of MWD. The San Gabriel District is a SWP contractor. The following describes the availability of Supplemental Water from MWD and San Gabriel District.

Metropolitan Water District of Southern California

MWD primarily receives its water supply from the State Water Project and the Colorado River. Below is a description of the availability of water from MWD.

Availability of Imported Water

An "8-station index" is used by the California Department of Water Resources (DWR) to determine average precipitation in the Sacramento River hydrologic region of northern California, which is the source of much of the imported water supply to the Basin. As of May 1, 2024, the "8-station index" indicated average precipitation of 45.0 inches or about 92 percent of average for that time of year, while rainfall in the San Gabriel Valley is estimated to be about 142 percent of average (through April 30, 2024).

On December 1, 2023, DWR announced the 2024 initial allocation of SWP water was 10 percent of the contractors' Table A Entitlement. On February 21, 2024, DWR announced the 2024 allocation of SWP water has increased to 15 percent of the contractors' Table A entitlement. On April 23, 2024, DWR announced the 2024 allocation of SWP has increased to 40 percent of the contractors' Table A entitlement. As stated in DWR's Notice to State Water Project Contractors, the allocation is based on "projected 2024 demands, existing storage in SWP conservation facilities, estimate of future runoff…" In general, every five percent of SWP allocation equates to about

100,000 acre-feet of supply for MWD. With a 40 percent SWP allocation, MWD would receive about 764,600 acre-feet.

Based on the Colorado River Compact, the seven basin states receive allocations to Colorado River water. Based on California's allocation of Colorado River water, MWD staff has indicated about 984,000 acre-feet of Colorado River water are available to MWD during calendar year 2024. Although Colorado River water may be delivered as Supplemental Water to help replenish the Basin, there are issues which must be addressed prior to delivery. Quagga mussels are in Colorado River water and have the potential to negatively impact the replenishment facilities unless the Colorado River water is isolated and the replenishment facilities are allowed to dry out, which effectively eliminates the Quagga mussels. A second concern is the high Total Dissolved Solids (TDS) concentration in Colorado River water, which would need to be addressed through Watermaster's "Criteria for Delivery of Supplemental Water". There are currently no planned deliveries of Colorado River water for Basin replenishment. However, MWD, Upper District and Watermaster are working cooperatively on preparing a Provisional Quagga Mussel Control Plan to potentially deliver Colorado River water to the Basin as a last resort only if SWP water is not available and the Key Well is projected to reach emergency water levels.

San Gabriel District

San Gabriel District has a contract for State Water Project water (see description of State Water Project availability under MWD). San Gabriel District's current 2024 allocation is 40 percent of its State Water Project Table A entitlement of 28,800 acre-feet. Consequently, it is anticipated San Gabriel District will deliver about 11,520 acre-feet to the Basin during calendar year 2024.

Deliveries of Stormwater Augmentation Program Water (RDA II)

Section 45(b)(7) of the amended Judgment allows Watermaster to "…levy an Assessment on all Pumping, as determined through Rules and Regulations … to support the purchase, financing, and/or development of new or additional Supplemental Water sources, in cooperation with one or more Responsible Agencies as appropriate." Section 45(b)(7) established the RDA for the purchase or development of additional Supplemental Water supplies.

As previously discussed, the "Stormwater Augmentation Program," purchases available untreated imported water to supplement the shortage of local stormwater replenishment. The RDA II assessment is on all production and the purchased water is added to the natural Basin water supply, with no specific rights to recover the water. Production during fiscal year 2016-17 was the first year RDA II assessment was applied at $40/AF. The RDA II assessment increased to $175/AF on fiscal year 2020-21 and remained at $175/AF every year through fiscal year 2023-24. For the seventh year, at $175 on fiscal year 22-23 production of about 168,000 acre-feet, about 51,000 acre-feet was delivered during fiscal year 2023-24, which includes about 20,200 acre-

feet of deferred RDA II requirement from prior years and about 30,800 acre-feet of RDA II requirement. Assuming fiscal year 2023-24 production is about 170,000 acre-feet and at $175/AF, about 30,600 acre-feet could be purchased with RDA II assessment funds and be delivered during fiscal year 2024-25.

Deliveries of Supplemental Water

In addition to Basin replenishment from local water supply, the groundwater elevation at the Key Well is impacted by the amount of Supplemental Water delivered as Replacement Water, RDA Water and for Cyclic Storage accounts. A summary of historical Supplemental Water deliveries is shown on Table 5. The following sections describe Supplemental Water deliveries, as 1) Replacement Water for Upper District, San Gabriel District and Three Valleys District; 2) MWD Agreement water; 3) Producer and other Cyclic Storage accounts and 4) Future Deliveries.

Replacement Water

Section 42 of the amended Judgment states in part, "... Watermaster shall recharge Replacement Water in accordance with the Watermaster Operating Criteria and, insofar as practicable, to maintain the water level at the Key Well above Elevation two hundred (200)." (As of April 26, 2024, the groundwater elevation at the Key Well was 235.8 feet.) Typically, establishing a lower Operating Safe Yield results in reduced water rights, increased Replacement Water obligations and, consequently, increased deliveries and replenishment of imported water as Replacement Water. However, thus far, there is a lot of Cyclic Storage water in accounts, which can be deducted to meet Replacement Water obligations instead of delivering water to the Basin.

Estimated 2024-25 Supplemental Water Delivery Requirements - Replacement Water Plus Stormwater Augmentation Program Water

The estimated fiscal year 2023-24 over-production in the Basin is about 15,000 acre-feet, assuming production of about 170,000 acre-feet. It is assumed much of the over-production will be satisfied by a deduction from water in Producers' Cyclic Storage accounts.

Cyclic Storage Water

Cyclic Storage water is a pre-delivery of Replacement Water. Under the terms of Cyclic Storage agreements, the Individual Producers may make deliveries to Watermaster out of their Cyclic Storage accounts to satisfy Replacement Water requirements which are accounted for following June 30 of each year. The Responsible Agencies may make deliveries to Watermaster out of their Cyclic Storage accounts to satisfy Replacement Water requirements as of June 30 of each year.

There are Cyclic Storage agreements between Watermaster and each of the Responsible Agencies which provide for the total storage of up to 300,000 acre-feet of Supplemental (Replacement) Water in the Basin. This includes up to 50,000 acre-feet for San Gabriel District, up to 200,000 acre-feet for the MWD and Upper District, and up to 50,000 acre-feet for MWD and Three Valleys District. In addition, there are 21 producer Cyclic Storage agreements in which up to 175,525 acre-feet can be stored. The total amount of water that could be stored in existing Cyclic Storage accounts is up to 475,525 acre-feet. As of March 31, 2024, there was a total of about 111,000 acre-feet in Basin cyclic storage (represents about 14 feet at the Key Well).

Water in Cyclic Storage is available to supply Replacement Water by transfer to Watermaster in-lieu of physically delivering Supplemental Water. This is typically done at the discretion of the storing party. Table 3 is a summary of the monthly Cyclic Storage account balances since July 1, 2017. The storage balance in all of the Basin Cyclic Storage accounts on July 1, 2023, the balance as of March 31, 2024 and the estimated balance as of June 30, 2024, is shown below in acre-feet.

	Cyclic Storage as of July 1, 2023	Account Balance as of March 31, 2024	Estimated Balance as of June 30, 2024[1/]
San Gabriel Valley Municipal Water District	6,064	8,481	9,000
Upper San Gabriel Valley Municipal Water District	4,822	8,724	8,000
Three Valleys Municipal Water District	5,349	3,203	3,200
Producers in San Gabriel District	0	0	0
Producers in Upper District	51,715	54,918	50,000
Producers in Three Valleys District	926	926	926
Watermaster Pre-purchases	0	0	0
RDA I	12,756	12,756	13,000
Puente Basin Agency Storage and Export	20,876	20,019	20,000
MWD Cyclic Agreement (intended for RDA II)	24,105	0	0
	126,613	109,027	104,126

1/ It is assumed Replacement Water requirements will be deducted from Cyclic Storage accounts following the end of fiscal year 2023-24. It is assumed 2024 SWP water allocation is 40 percent.

BASIN CONDITIONS - CARRY-OVER RIGHTS

In accordance with the Judgment Section 49, "...Any Pumper's Share of the Operating Safe Yield and the Production Right of any Integrated Producer, which is not produced in a given fiscal year, may be carried over and accumulated for one fiscal year..." Establishing high operating safe yields will normally result in increased

Carry-over Rights. These Carry-over Rights must be used by the Producer in the next year or can be leased to another Producer for use in that year. The first water produced in the succeeding fiscal year is deemed to be the Carry-over water and therefore, unused production right will be carried over the following year, which increases Carry-over Rights every year. Leasing of water rights, including Carry-over Rights, also usually results in a reduction of the amount of water subject to Replacement Water assessments and, thus a decrease in delivery of Replacement Water to the Basin.

The amount of Carry-over Rights is considered when recommending the Operating Safe Yield. The Carry-over Rights at the beginning of fiscal year 2023-24 were approximately 33,000 acre-feet. It is estimated the Carry-over Rights at the beginning of fiscal year 2024-25 will be about 37,500 acre-feet assuming production of about 170,000 acre-feet. If the OSY increases for fiscal year 2024-25 and production remains low where production is less than the set OSY, this will cause a very high Carry-over Rights. Historical Carry-over Rights and lost Carry-over Rights are shown on Table 1.

BASIN CONDITIONS - ESTIMATED WATER PRODUCTION DURING 2023-24

Historical water production under the Judgment since July 1, 1973, has been reported and recorded on a quarterly basis, as shown in Table 6. The preliminary total water production for the first two quarters of fiscal year 2023-24 was about 95,000 acre-feet. Figure 8 shows quarterly production in the Basin for the past 14 years (fiscal years 2009-10 through 2022-23) plus fiscal year 2023-24. Anticipated groundwater production for fiscal year 2023-24 has been estimated below.

The reported production for the first two quarters of fiscal year 2023-24 was about 95,000 acre-feet. This is similar to the first two quarters of fiscal years 2022-23 (97,000 acre-feet). Fiscal year 2022-23 had above average rainfall year and consequently less water use. Fiscal year 2023-24 has had above average rainfall due to the storm events through winter and early spring. Assuming production for the last two quarters of fiscal year 2023-24 is similar to the production for the last two quarters of fiscal years 2022-23 with less water use, which was about 75,000 acre-feet, it is anticipated that the total fiscal year 2023-24 production will be about 170,000 acre-feet (95,000 + 75,000). However, production the first two quarters of fiscal year 2023-24 is trending to be lower than the first two quarters of fiscal year 2022-23 and therefore, fiscal year 2023-24 production could be as low as about 165,000 acre-feet. Direct treated water deliveries have remained about the same, as described below. In addition, drought conservation activities have continued, which also have impacted production. Figure 8 shows production for the past 14 years and the estimated groundwater production for fiscal year 2023-24.

The historical total demand in the Basin is met by local water production and direct treated imported water deliveries. During fiscal year 2022-23, direct treated

imported water sales were about 17,600 acre-feet, as shown in Table 7. Estimated direct treated imported water sales for fiscal year 2023-24 is about 18,000 acre-feet. Total demand during fiscal year 2023-24 is estimated to be about 183,000 acre-feet (165,000 + 18,000) and is about 42,000 acre-feet below the 12-year average total water demand of 225,000 acre-feet, as shown in Table 7.

FISCAL YEAR 2023-24 OPERATING SAFE YIELD DETERMINATION

On May 3, 2023, Watermaster considered the Engineer's recommended Preliminary Operating Safe Yield of 150,000 acre-feet for fiscal year 2023-24. At that time, the total rainfall in the Basin from July 1, 2022 to April 30, 2023, as represented by the Puddingstone Dam station, was 26.50 inches or 151 percent of long-term average for that period. (The total annual rainfall at the Puddingstone Dam station for fiscal year 2022-23 was 28.06 inches, representing about 155 percent of average.) The groundwater elevation at the Key Well at the time of the May 2023 Watermaster meeting was 224.1 feet and increasing at the rate of about 2 feet per week. Total water in local storage reservoirs was 56,000 acre-feet.

At its May 3, 2023 meeting, Watermaster established the Operating Safe Yield at 150,000 acre-feet for fiscal year 2023-24 and an estimated Operating Safe Yield of 130,000 acre-feet for fiscal years 2024-25, 2025-26, 2026-27, and 2027-28.

At its January 17, 2024 Administration/Finance Committee meeting, Watermaster requested the Engineer to present a "review" of OSY criteria and current Basin conditions. No action was taken by the Watermaster.

CONCLUSIONS

It is very important to recognize that "local" water resources and supplies have been seriously impacted by unprecedented drought conditions and Key Wells reached 177 feet in October 2022 and projected to reach the historical low of 169 feet in November 2022. However, the following fiscal year, 2022-23 has been an unexpected above average rainfall year and brought water levels to a peak of 232 feet in June 2023, as shown in Figure 2.

Watermaster uses funds from Replacement Water/Cyclic Storage orders and RDA requirements from Upper District in order to purchase water from MWD's Pre-Delivery Agreement over 5 to 10 years. Currently, there is no water in MWD's Cyclic Storage under the Pre-Delivery Agreement. It is expected the SWP Allocation will increase Table A entitlement and MWD will be able to deliver water under the Pre-Delivery Agreement. To ensure funds are available each year, the OSY would need to be set in order to create a Replacement Water/Cyclic Storage requirement. However, if there is not enough funds from Replacement Water requirement, more RDA water

would need to be purchased to make up the difference. This is accomplished by increasing the RDA assessment. This is a way how both OSY and RDA is used as a "tool" to manage Basin water levels and Basin storage.

Prior to the recent drought, the historical long-term annual average Basin replenishment from "local" water supplies is about 110,000 acre-feet. From fiscal year 2011-12 to fiscal year 21-22, the average annual "local" water Basin replenishment has been reduced to about 56,000 acre-feet per year. This represents a shortage of about 600,000 acre-feet of water supply to the Basin for this recent period. Two consecutive years (fiscal years 2022-23 and 2023-24) of above average rainfall brought about 280,000 acre-feet of local water in 2022-23 and is estimated to bring about 100,000 acre-feet of local water for this fiscal year 2023-24, a total of about 380,000 acre-feet. However, this combined rainfall water supply Basin replenishment is currently not expected to bring the Basin back to normal Basin storage and Basin operations. The Basin would still be in a shortage of about 220,000 acre-feet.

Due to above-average rainfall during fiscal year 2022-23, the Key Well increased to 235.8 feet on April 26, 2024. Without Cyclic Storage, the Key Well elevation would have been about 221.9 feet on April 26, 2024.

During fiscal year 2022-23, production was about 168,000 acre-feet and fiscal year 2023-24 is estimated to be about 165,000 acre-feet to 170,000 acre-feet. Based on production of 168,000 acre-feet and OSY of 150,000 acre-feet, fiscal year 2022-23 had an over production (Replacement Water obligation and includes Cyclic Storage applied towards Replacement Water obligation) of about 14,000 acre-feet. This is lower than normal due to the unexpected historical low production of 168,000 acre-feet. A higher OSY will result in reduced Replacement Water.

Local Water Replenishment	
1973-74 through 2010-11 (before drought)	about 110,000 AFY
2011-12 through 2021-22 (11 yrs)	about 56,000 AFY
Shortage	about 600,000 AF
2022-23 through 2023-24 (two consecutive years of above average rainfall)	about 380,000 AF
Shortage	about 220,000 AF
Local Rainfall	
1973-74 through 2010-11 (before drought)	about 19.23 inches/yr
2011-12 through 2021-22 (11 yrs)	about 11.86 inches/yr
2022-23 through 2023-24	about 26 inches/yr

Baldwin Park Key Well	
Historic Low Elevation (November 21, 2018)	169.4 feet
Most Recent Low Elevation in 2022	177.2 feet
Current Elevation without Cyclic Storage	221.9 feet
Current Elevation – Measured (April 26, 2024)	235.8 feet

As stated earlier in the Report, Section 42 of the amended Judgment states in part, "…Watermaster shall recharge Replacement Water in accordance with the Watermaster Operating Criteria and, in so far as practicable, to maintain the water level at the Key Well above Elevation two-hundred (200)". The Judgment criteria essentially establishes the Operating Safe Yield and delivery of Replacement Water as the primary Watermaster tool to manage groundwater supplies for the Basin. This management goal became not "practicable", as a result unprecedented local drought conditions, and resulted in the RDA II – Stormwater Augmentation Program. The Stormwater Augmentation Program has resulted in the important recovery of Basin water levels and an addition to Watermaster's Basin management approach under Section 42, of the amended Judgment. The RDA II Program will likely continue to be an additional management tool for Watermaster until Basin water levels fully recover and demonstrate sustainability, and annual Replacement Water requirements reduce the large quantity of water held in Cyclic Storage.

Fiscal Year 2022-23 (Full Year) and Fiscal Year 2023-24 Comparison

Last Year's (FY 22-23) Condition	This Year's (as of April 30th) Condition
Key Well June 30th – 232.0 ft	Key Well – 235.8 ft
Rainfall – 28.06 inches	Rainfall – 23.87 inches
Local Runoff – 286,000 AF	Local Runoff – 70,700 AF
SWP Allocation – 100%	SWP Allocation – 40%
Engineer Rec. – 150,000 AF	Engineer Rec. – 160,000 AF
Watermaster Adopted – 150,000 AF	Watermaster Adopted – 160,000 AF

Based on the evaluation presented in this Report, the Engineer's recommended Operating Safe Yield for fiscal year 2024-25 is 160,000 acre-feet and 150,000 acre-feet for the next four years.

ADOPTED OPERATING SAFE YIELD

On May 1, 2024, Watermaster held a hearing on the preliminary determination of Operating Safe Yield, which was submitted to Watermaster on April 3, 2024, in accordance with Section 43(a) of the Judgment. After review by its Engineer and comments received by those at the hearing, Watermaster approved the establishment of the Operating Safe Yield of the Main San Gabriel Basin at 160,000 acre-feet for fiscal year 2024-25, as shown below.

Fiscal Year	Operating Safe Yield (Acre-feet)
2024-25	160,000
2025-26	140,000
2026-27	140,000
2027-28	140,000
2028-29	140,000

Attached, as Appendix C, is a tabulation showing each Pumper's Share in percent and the number of acre-feet each Producer can produce from the Basin free of Replacement Water assessments for quantities of Operating Safe Yield 130,000 acre-feet per year to 160,000 acre-feet per year. Those producers shown to have a share less than five acre-feet prior to June 21, 2012 are Minimal Producers and are allowed to produce up to five acre-feet free of Replacement Water assessments.

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TABLE 1

ANNUAL OPERATING SAFE YIELD, PRODUCTION RIGHTS, WATER PRODUCTION AND REPLACEMENT WATER REQUIREMENTS (ACRE-FEET)

FISCAL YEAR	RAINFALL AT PUDDINGSTONE STA. NO. 96C-E (INCHES) 1/	MEASURED KEY WELL ELEVATION (FEET) 2/	OPERATING SAFE YIELD	CARRY OVER RIGHTS FROM PREVIOUS YEAR	LOST CARRY OVER RIGHTS	PRODUCTION RIGHTS	WATER PRODUCTION	BASIN OVER PRODUCTION		
								REPLACEMENT WATER REQUIREMENT	PRODUCER CYCLIC STORAGE	TOTAL
1973-74	15.05	238.4	226,800	--	--	238,132.94	235,460.40	14,518.98	0.00	14,518.98
1974-75	14.57	234.8	210,000	17,191.52	203.36	237,913.46	225,221.86	8,421.93	0.00	8,421.93
1975-76	7.77	221.1	200,000	20,908.91	131.06	231,391.95	242,246.36	24,744.88	0.00	24,744.88
1976-77	15.72	211.4	150,000	13,759.41	861.12	174,193.45	210,340.40	48,650.71	0.00	48,650.71
1977-78	40.08	270.4	150,000	9,980.67	1,198.54	170,473.30	195,275.53	36,818.25	0.00	36,818.25
1978-79	24.88	266.6	170,000	8,950.43	78.11	189,439.67	214,919.54	34,404.83	0.00	34,404.83
1979-80	33.76	282.4	220,000	6,745.88	81.54	237,226.13	223,088.89	9,896.39	0.00	9,896.39
1980-81	9.74	252.4	230,000	21,960.87	202.89	262,445.19	230,832.31	5,477.08	0.00	5,477.08
1981-82	19.94	245.5	210,000	35,642.01	380.30	255,281.37	220,391.54	10,582.35	0.00	10,582.35
1982-83	37.80	292.7	200,000	43,261.87	304.02	253,049.93	209,949.43	3,293.23	0.00	3,293.23
1983-84	12.09	267.1	230,000	45,378.26	80.10	287,394.98	236,679.19	2,151.85	1,573.60	3,725.45
1984-85	14.42	245.8	210,000	51,594.26	344.48	272,050.11	242,439.63	12,475.69	0.00	12,475.69
1985-86	23.33	250.8	190,000	40,395.40	198.50	240,319.81	246,223.58	33,774.82	0.00	34,774.82
1986-87	9.61	236.5	200,000	25,403.49	106.93	235,923.93	253,633.02	41,828.86	0.00	41,828.86
1987-88	16.79	224.0	190,000	22,457.73	143.63	222,985.31	248,101.54	51,989.89	0.00	51,989.89
1988-89	14.00	219.8	180,000	21,710.19	61.61	214,810.57	253,694.47	59,384.99	0.00	59,384.99
1989-90	12.11	206.5	180,000	19,741.33	282.28	210,268.35	252,135.76	62,582.49	0.00	62,582.49
1990-91	18.29	200.3	170,000	17,837.99	387.33	199,467.55	232,091.44	41,232.39	13,112.70	54,345.09
1991-92	23.93	236.9	140,000	18,796.02	345.83	169,575.74	221,476.83	31,214.19	35,916.90	67,131.09
1992-93	40.44	267.8	180,000	13,478.79	189.05	204,009.40	236,677.04	15,858.66	50,031.39	65,890.05
1993-94	12.44	248.8	220,000	31,718.29	462.81	262,029.85	243,616.55	8,915.59	25,422.42	34,338.01
1994-95	29.38	269.0	200,000	50,290.41	1,065.79	260,802.71	243,479.39	30,194.77	0.00	30,194.77
1995-96	15.92	248.9	220,000	44,262.41	737.28	274,608.47	268,950.50	32,526.05	0.00	32,526.05
1996-97	18.47	241.3	210,000	35,484.68	863.84	256,011.19	279,481.35	55,236.24	0.00	55,236.24
1997-98	35.84	267.8	220,000	28,965.55	704.70	263,725.27	253,921.28	26,362.42	4,331.64	30,694.06
1998-99	7.93	244.8	230,000	34,016.10	124.28	277,282.73	265,151.97	30,499.32	2,859.66	33,358.98
1999-00	14.65	228.5	220,000	40,633.83	592.51	274,824.14	278,687.14	39,749.83	3,663.84	43,625.83
2000-01	17.04	220.1	220,000	33,774.80	570.83	267,126.29	270,919.13	38,317.35	2,825.02	41,142.37
2001-02	6.41	208.7	210,000	32,015.15	532.59	258,992.70	264,328.17	40,773.50	6,450.10	47,223.60
2002-03	19.99	204.1	190,000	32,833.12	159.50	240,450.90	237,490.86	38,519.29	5,948.75	44,468.04
2003-04	12.77	204.2	170,000	38,370.38	79.24	224,691.75	252,811.50	51,416.73	8,870.23	60,286.96
2004-05	44.08	248.4	170,000	24,549.23	53.76	219,049.64	247,187.00	41,043.83	18,736.93	59,780.76
2005-06	16.82	249.7	240,000	17,402.45	156.28	268,418.02	259,807.52	12,065.12	6,908.92	18,974.04
2006-07	4.55	220.5	240,000	27,862.73	90.80	278,386.20	284,328.04	20,048.99	7,309.89	27,356.53
2007-08	16.17	202.7	210,000	29,374.42	182.17	249,433.95	258,167.00	28,777.98	9,157.53	37,935.51
2008-09	14.59	195.6	180,000	33,902.42	778.21	224,028.56	250,102.62	26,473.24	30,239.02	56,712.26
2009-10	20.04	204.2	170,000	28,729.17	236.31	210,117.25	237,846.31	35,129.38	14,929.92	50,059.30
2010-11	19.45	233.5	170,000	20,695.69	167.70	201,220.31	227,657.15	33,084.38	15,382.66	48,467.04
2011-12	12.06	226.4	210,000	21,657.47	166.96	242,181.86	237,028.57	19,685.04	20,704.45	40,389.49
2012-13	7.84	202.8	200,000	44,143.15	268.13	254,314.47	242,913.84	5,972.15	23,673.25	29,645.40
2013-14	4.77	187.8	180,000	42,864.86	377.39	233,389.45	240,552.41	3,779.32	36,325.98	40,105.30
2014-15	10.01	177.5	150,000	36,753.33	419.84	197,280.18	208,339.16	12,319.13	33,508.84	45,827.97
2015-16	10.04	174.0	150,000	35,226.32	284.47	195,752.95	182,826.49	6,909.20	19,510.99	26,420.19
2016-17	20.92	179.4	150,000	39,299.44	285.56	199,994.06	197,243.28	7,526.21	24,009.59	31,535.80
2017-18	6.92	178.5	150,000	34,893.57	144.60	195,420.20	209,499.70	12,520.95	27,409.98	39,930.93
2018-19	23.60	196.9	150,000	28,810.62	298.63	189,434.81	190,156.12	10,747.45	24,101.15	34,848.60
2019-20	16.49	203.1	150,000	34,603.48	640.76	194,608.18	192,583.66	12,911.67	21,913.85	34,825.52
2020-21	6.23	191.3	150,000	36,743.32	176.41	197,339.52	207,821.52	10,776.45	23,887.81	34,664.26
2021-22	11.42	185.2	150,000	25,117.46	147.97	185,717.47	186,148.03	9,177.33	26,324.07	35,501.40
2022-23	28.06	232.0	150,000	26,289.74	144.84	186,826.71	168,360.09	4,373.57	9,975.47	14,349.04
2023-24	23.88 3/	235.8 4/	150,000	32,956.25	--	193,500.00 5/	170,000.00 6/	--	--	--
12-YEAR AVERAGE:	**13.20**	**--**	**161,667**	**--**	**--**	**--**	**205,289**	**--**	**--**	**--**
20-YEAR AVERAGE:	15.34	--	174,500	31,364.46	255.00	217,380.28	224,069.00	18,236.91	20,144.03	38,380.82
50-YEAR AVERAGE:	17.78	--	189,336	29,519.97	336.63	229,796.26	234,365.70	25,102.70	11,100.33	36,227.23

1/ Water Year
2/ End of Fiscal Year, July to June
3/ As of April 30, 2024
4/ As of April 26, 2024
5/ Estimated value including Carry-over Rights and Diversion Rights
6/ Estimated value

TABLE 2

RAINFALL AND WATER REPLENISHMENT OF MAIN SAN GABRIEL BASIN

WATER YEAR 1/	RAINFALL AT PUDDINGSTONE STA. NO. 96C-E (INCHES)	WATER REPLENISHED IN THE MAIN SAN GABRIEL BASIN			MEASURED BALDWIN PARK KEY WELL ELEV. AT END OF WATER YEAR (FT)	OPERATIONAL BALDWIN PARK KEY WELL ELEV. AT END OF WATER YEAR (FT)
		LOCAL RUNOFF (AF)	IMPORTED (AF) 2/	TOTAL (AF)		
1973-74	15.05	92,000	8,835	100,835	234	234
1974-75	14.57	62,000	14,564	76,564	226	226
1975-76	7.77	22,400	28,018	50,418	214	212
1976-77	15.72	21,000	18,335	39,335	206	203
1977-78	40.08	262,400	20,549	282,949	259	258
1978-79	24.88	160,000	30,968	190,968	254	253
1979-80	33.76	227,700	5,805	233,505	269	268
1980-81	9.74	49,100	0	49,100	243	242
1981-82	19.94	92,200	42,623	134,823	240	239
1982-83	37.80	298,800	28,345	327,145	284	283
1983-84	12.09	70,000	3,326	73,326	256	255
1984-85	14.42	32,700	66	32,766	240	239
1985-86	23.33	70,200	55,862	126,062	241	234
1986-87	9.61	26,700	55,943	82,643	238	228
1987-88	16.79	48,500	43,989	92,489	218	208
1988-89	14.00	33,000	45,925	78,925	211	201
1989-90	12.11	37,700	47,504	85,204	201	193
1990-91	18.29	95,500	54,153	149,653	205	199
1991-92	23.93	222,100	68,304	290,404	237	230
1992-93	40.44	220,000	62,632	282,632	268	265
1993-94	12.44	43,000	38,296	81,296	250	247
1994-95	29.38	210,500	22,354	232,854	266	261
1995-96	15.92	105,900	32,480	138,380	248	238
1996-97	18.47	34,700	55,075	89,775	239	228
1997-98	35.84	171,600	62,887	234,487	264	255
1998-99	7.93	48,200	13,346	61,546	239	230
1999-00	14.65	66,500	59,559	126,059	226	214
2000-01	17.04	84,900	34,998	119,898	217	206
2001-02	6.41	55,900	60,543	116,443	205	194
2002-03	19.99	55,200	63,508	118,708	203	189
2003-04	12.77	45,600	67,533	113,133	197	180
2004-05	44.08	398,000	19,921	417,921	248	237
2005-06	16.82	138,600	88,014	226,614	240	225
2006-07	4.50	47,800	24,780	72,580	213	199
2007-08	16.25	85,400	7,727	93,127	203	191
2008-09	14.82	73,800	6,607	80,407	191	185
2009-10	20.02	157,400	32,708	190,108	204	198
2010-11	19.45	241,500	68,424	309,924	234	227
2011-12	12.06	39,100	57,846	96,946	212	203
2012-13	7.84	24,600	44,678	69,278	196	188
2013-14	4.77	21,900	36,717	58,617	182	174
2014-15	10.01	14,500	41,519	56,019	174	165
2015-16	10.04	35,200	60,092 1/	95,292	172	161
2016-17	20.92	92,200	91,316 1/	183,516	182	163
2017-18	6.92	29,400	55,115	84,514	172	152
2018-19	23.60	173,500	99,265 1/	272,765	211	182
2019-20	16.49	79,700	54,736 1/	134,436	201	173
2020-21	6.23	32,700	18,287 1/	50,987	185	163
2021-22	11.42	68,400	10,158 1/	78,558	180	160
2022-23	28.06	286,000	54,527 1/	340,527	227	208
2023-24	23.88 3/	70,700 4/	23,242 5/	93,942 5/	236 6/	222 6/
12-Year Average	**13.20**	**74,767**	**52,021**	**126,788**	--	--
20-Year Average	15.35	104,265	46,998	151,263	--	--
50-Year Average	17.79	102,114	40,375	142,489	--	--

1/ October 1 to September 30
2/ July 1 to June 30
3/ As of April 30, 2024
4/ Preliminary data as of March 31, 2024
5/ October 1, 2023 to March 31,2024
6/ As of April 26, 2024

TABLE 3

MONTHLY STORAGE ACCOUNTS AND EFFECT ON KEY WELL

END OF MONTH	ACCUMULATED CYCLIC STORAGE ACCOUNTS (acre-feet)						ADDITIONAL STORAGE ACCOUNTS			TOTAL	ESTIMATED KEY WELL ELEVATION INCREASE DUE TO STORAGE ACCOUNTS (FT) 1/	OPERATIONAL KEY WELL ELEVATION (WITHOUT STORAGE ACCOUNTS) (FT)	MEASURED KEY WELL ELEVATION (FT)
	MWD/UD	SGVMWD	MWD/TV	MWD AGREEMENT	PRODUCER	TOTAL CYCLIC STORAGE	WATERMASTER PRE-PURCHASES	PUENTE BASIN WATER AGENCY	RESOURCE DEVELOPMENT (RDA I)				
Jul-17	7,225	8,605.83	12,000.00	15,239.40	54,052.49	97,122.9	9,333.84	13,962.31	12,756.00	133,175.01	16.65	160.8	177.4
Aug-17	7,225	10,310.61	12,000.00	31,553.10	56,052.49	117,141.3	7,333.84	13,962.31	12,756.00	151,193.49	18.90	158.5	177.4
Sep-17	7,225	12,451.75	12,000.00	41,020.70	62,122.19	134,819.8	1,264.14	13,654.50	12,756.00	162,494.42	20.31	162.0	182.3
Oct-17	7,225	9,215.56	12,000.00	46,020.70	62,122.19	136,583.6	1,264.14	13,654.50	12,756.00	164,258.23	20.53	162.8	183.3
Nov-17	7,225	11,006.89	12,000.00	46,203.80	62,122.19	138,558.0	1,264.14	13,654.50	12,756.00	166,232.66	20.78	162.5	183.3
Dec-17	7,225	7,391.04	13,329.10	31,547.10	62,716.33	122,208.7	0.00	13,097.88	12,756.00	148,062.59	18.51	162.7	181.2
Jan-18	7,188	9,445.40	13,329.10	42,530.40	62,753.23	135,246.4	6,764.00	13,097.88	12,756.00	167,864.25	20.98	161.3	182.3
Feb-18	7,188	12,467.25	12,978.70	42,530.40	62,753.23	137,917.8	6,764.00	13,097.88	12,756.00	170,535.70	21.32	162.3	183.6
Mar-18	7,188	14,757.10	12,978.70	42,530.40	70,064.73	147,519.2	0.00	12,620.96	12,756.00	172,896.13	21.61	161.2	182.8
Apr-18	7,218	14,017.84	16,074.80	42,517.50	73,423.23	153,251.2	0.00	14,384.31	12,756.00	180,391.52	22.55	159.2	181.7
May-18	7,218	14,763.66	16,074.80	42,517.50	73,423.23	153,997.0	0.00	14,384.31	12,756.00	181,137.34	22.64	158.3	180.9
Jun-18	6,718	16,998.43	16,074.80	42,517.50	73,923.23	156,231.8	0.00	14,384.31	12,756.00	183,372.11	22.92	155.6	178.5
Jul-18	6,718	19,670.74	15,025.80	42,517.50	46,513.25	130,445.1	0.00	12,158.36	12,756.00	155,359.49	19.42	156.6	176.0
Aug-18	6,718	21,125.20	15,025.80	42,517.50	46,513.25	131,899.6	0.00	12,158.36	12,756.00	156,813.95	19.60	153.6	173.2
Sep-18	6,718	23,185.29	15,025.80	42,517.50	46,513.25	133,959.7	0.00	11,964.26	12,756.00	158,679.94	19.83	151.8	171.6
Oct-18	7,397	18,595.85	15,025.80	47,517.50	49,151.65	137,688.0	0.00	11,964.26	12,756.00	162,408.30	20.30	149.9	170.2
Nov-18	7,218	716.46	15,505.30	47,517.50	64,987.25	135,944.4	0.00	11,964.26	12,756.00	160,664.61	20.08	150.1	170.2
Dec-18	11,934	626.51	14,706.60	47,517.50	64,987.25	139,772.3	0.00	11,603.16	12,756.00	164,131.46	20.52	154.9	175.4
Jan-19	11,934	1,146.20	14,706.60	47,517.50	64,987.25	140,292.0	0.00	11,603.16	12,756.00	164,651.15	20.58	158.5	179.1
Feb-19	11,934	1,146.20	14,706.60	47,517.50	64,987.25	140,292.0	0.00	11,603.16	12,756.00	164,651.15	20.58	159.1	179.7
Mar-19	11,934	4,713.71	14,281.90	47,517.50	64,987.25	143,434.8	0.00	11,099.24	12,756.00	167,290.04	20.91	168.3	189.2
Apr-19	11,942	6,686.86	13,992.90	47,517.50	69,987.25	150,127.0	0.00	11,099.24	12,756.00	173,982.19	21.75	174.3	196.0
May-19	11,942	9,134.76	13,659.60	57,517.50	69,987.25	162,241.6	0.00	11,099.24	12,756.00	186,096.79	23.26	172.6	195.9
Jun-19	11,572	12,018.79	13,162.60	57,517.50	70,357.25	164,628.6	0.00	10,677.32	12,756.00	188,061.90	23.51	173.3	196.8
Jul-19	11,572	15,073.15	19,842.60	68,388.00	47,297.80	162,174.0	0.00	10,677.32	12,756.00	185,607.31	23.20	174.3	197.5
Aug-19	11,572	16,861.15	20,300.90	85,906.00	47,297.80	181,938.3	0.00	10,677.32	12,756.00	205,371.61	25.67	181.9	207.6
Sep-19	11,572	18,640.44	20,668.30	102,889.70	47,297.80	201,068.7	0.00	10,677.32	12,756.00	224,502.00	28.06	182.4	210.5
Oct-19	11,572	20,289.00	20,890.00	120,491.30	47,297.80	220,540.5	0.00	10,677.32	12,756.00	243,973.86	30.50	181.3	211.8
Nov-19	11,572	21,897.21	20,923.90	132,031.70	47,297.80	233,723.1	0.00	10,677.32	12,756.00	257,156.37	32.14	179.7	211.8
Dec-19	8,013	22,700.47	32,137.43	107,550.90	55,497.80	225,899.5	0.00	10,211.50	12,756.00	248,867.00	31.11	181.4	212.5
Jan-20	8,013	11,607.01	32,152.03	108,084.00	55,497.80	215,353.7	0.00	10,211.50	12,756.00	238,321.24	29.79	181.9	211.7
Feb-20	8,013	12,513.21	32,152.03	108,084.00	55,497.80	216,259.9	0.00	10,211.50	12,756.00	239,227.44	29.90	179.5	209.4
Mar-20	8,013	12,421.43	32,152.03	108,084.00	55,497.80	216,168.2	0.00	9,694.93	12,756.00	238,619.09	29.83	177.9	207.7
Apr-20	8,013	6,732.68	32,152.03	115,118.20	55,497.80	217,513.6	0.00	9,694.93	12,756.00	239,964.54	30.00	176.5	206.5
May-20	8,013	6,641.27	32,152.03	115,416.60	55,497.80	217,720.6	0.00	9,694.93	12,756.00	240,171.53	30.02	174.2	204.2
Jun-20	8,013	8,892.38	32,152.03	115,416.60	60,643.30	225,117.2	0.00	9,565.68	12,756.00	247,438.89	30.93	172.2	203.1
Jul-20	8,013	10,394.96	31,552.03	115,416.60	38,729.45	204,105.9	0.00	10,165.68	12,756.00	227,027.62	28.38	176.0	204.4
Aug-20	8,013	11,907.09	31,552.03	115,416.60	38,729.45	205,618.1	0.00	10,165.68	12,756.00	228,539.75	28.57	175.1	203.7
Sep-20	8,013	11,803.49	31,552.03	115,416.60	38,729.45	205,514.5	0.00	10,165.68	12,756.00	228,436.15	28.55	172.8	201.4
Oct-20	8,013	11,708.61	31,552.03	115,416.60	38,729.45	205,419.6	0.00	10,165.68	12,756.00	228,341.27	28.54	172.0	200.5
Nov-20	8,013	11,618.81	31,552.03	115,416.60	48,881.15	215,481.5	0.00	10,165.68	12,756.00	238,403.17	29.80	169.5	199.3
Dec-20	8,013	11,522.17	29,005.43	67,859.40	63,014.45	179,414.4	0.00	9,895.93	12,756.00	202,066.28	25.26	174.9	200.2
Jan-21	8,013	11,431.74	29,005.43	67,859.40	63,014.45	179,323.9	0.00	9,895.93	12,756.00	201,975.85	25.25	173.9	199.1
Feb-21	8,013	11,349.98	29,005.43	67,859.40	63,014.45	179,242.2	0.00	9,895.93	12,756.00	201,894.09	25.24	172.6	197.8
Mar-21	8,013	11,260.03	29,005.43	67,859.40	63,014.45	179,152.2	0.00	9,895.93	12,756.00	201,804.14	25.23	171.5	196.7
Apr-21	8,013	3,296.39	29,005.43	67,859.40	60,043.71	168,217.8	0.00	9,390.27	12,756.00	190,364.10	23.80	171.0	194.8
May-21	8,013	3,421.35	29,005.43	67,859.40	60,043.71	168,342.8	0.00	9,390.27	12,756.00	190,489.06	23.81	169.3	193.1
Jun-21	8,013	3,332.34	29,005.43	67,859.40	75,369.71	183,579.8	0.00	9,060.80	12,756.00	205,396.58	25.67	165.6	191.3
Jul-21	8,013	3,229.08	20,264.73	74,859.40	51,481.90	157,848.0	0.00	9,660.80	12,756.00	180,264.81	22.53	166.5	189.0
Aug-21	8,013	3,125.71	8,264.73	74,859.40	51,626.90	145,889.6	0.00	21,660.80	12,756.00	180,306.44	22.54	165.1	187.6
Sep-21	8,013	3,025.63	8,264.73	74,859.40	51,771.90	145,934.6	0.00	21,660.80	12,756.00	180,351.36	22.54	162.8	185.3
Oct-21	8,013	3,016.74	8,264.73	74,859.40	51,784.90	145,938.7	0.00	21,660.80	12,756.00	180,355.47	22.54	161.1	183.6
Nov-21	8,013	2,927.24	8,264.73	74,859.40	51,784.90	145,849.2	0.00	21,660.80	12,756.00	180,265.97	22.53	159.9	182.4
Dec-21	8,013	2,836.73	5,988.43	49,104.73	62,184.90	128,127.7	0.00	21,296.91	12,756.00	162,180.60	20.27	161.7	182.0
Jan-22	8,013	2,746.56	5,988.43	49,104.73	62,184.90	128,037.5	0.00	21,296.91	12,756.00	162,090.43	20.26	161.9	182.2
Feb-22	8,013	2,666.71	5,988.43	49,104.73	62,184.90	127,957.7	0.00	21,296.91	12,756.00	162,010.58	20.25	161.4	181.7
Mar-22	8,013	2,573.14	5,988.43	49,104.73	62,184.90	127,864.1	0.00	21,296.91	12,756.00	161,917.01	20.24	160.7	180.9
Apr-22	7,013	2,485.40	5,988.43	49,104.73	63,183.82	127,775.3	0.00	21,066.32	12,756.00	161,597.60	20.20	164.4	184.6
May-22	7,013	2,395.15	5,988.43	49,104.73	63,183.82	127,685.0	0.00	21,066.32	12,756.00	161,507.35	20.19	166.1	186.3
Jun-22	6,601	2,300.34	5,988.43	49,104.73	64,485.91	128,480.2	0.00	21,066.32	12,756.00	162,302.54	20.29	164.9	185.2
Jul-22	5,711	2,205.06	5,388.43	49,104.73	46,634.59	109,043.6	0.00	21,666.32	12,756.00	143,465.94	17.93	164.1	182.0
Aug-22	5,711	2,115.05	5,388.43	49,104.73	46,634.59	108,953.6	0.00	21,666.32	12,756.00	143,375.93	17.92	161.9	179.8
Sep-22	5,711	2,405.30	5,388.43	49,104.73	52,634.59	115,243.9	0.00	21,666.32	12,756.00	149,666.18	18.71	159.2	177.9
Oct-22	20,419	2,563.75	5,397.93	49,104.73	52,634.59	130,120.3	0.00	21,666.32	12,756.00	164,542.63	20.57	156.6	177.2
Nov-22	20,419	3,066.26	5,599.43	49,104.73	52,634.59	130,824.3	0.00	21,666.32	12,756.00	165,246.64	20.66	159.0	179.7
Dec-22	5,711	3,104.45	5,948.73	24,104.73	63,509.59	102,378.3	0.00	21,284.20	12,756.00	136,418.51	17.05	161.9	179.0
Jan-23	5,711	3,021.35	5,948.73	24,104.73	63,509.59	102,295.2	0.00	21,284.20	12,756.00	136,335.41	17.04	162.4	179.4
Feb-23	5,711	2,944.01	5,948.73	24,104.73	63,509.59	102,217.9	0.00	21,284.20	12,756.00	136,258.07	17.03	170.7	187.7
Mar-23	5,711	2,849.24	5,948.73	24,104.73	63,509.59	102,123.1	0.00	20,796.90	12,756.00	135,676.00	16.96	187.9	204.9
Apr-23	5,711	2,943.38	5,948.73	24,104.73	63,509.59	102,217.2	0.00	20,796.90	12,756.00	135,770.14	16.97	207.1	224.1
May-23	5,711	4,231.92	5,948.73	24,104.73	63,909.59	103,905.8	0.00	20,796.90	12,756.00	137,458.68	17.13	214.8	231.9
Jun-23	4,822	6,064.11	5,348.73	24,104.73	64,398.62	104,737.9	0.00	20,876.43	12,756.00	138,370.36	17.30	214.7	232.0
Jul-23	4,822	7,888.89	5,348.73	25,416.43	54,623.21	98,099.0	0.00	20,876.43	12,756.00	131,731.43	16.47	212.7	229.2
Aug-23	4,822	9,923.20	5,348.73	32,273.73	54,623.21	106,990.6	0.00	20,876.43	12,756.00	140,623.04	17.58	210.1	227.7
Sep-23	4,822	11,693.56	5,348.73	38,430.83	54,623.21	114,918.1	0.00	20,798.37	12,756.00	148,472.44	18.56	208.3	226.9
Oct-23	4,822	3,635.57	5,348.73	50,517.83	54,623.21	118,947.1	0.00	20,798.37	12,756.00	152,501.45	19.06	208.9	228.0
Nov-23	4,822	4,938.30	5,348.73	52,068.83	54,623.21	121,800.8	0.00	20,798.37	12,756.00	155,355.18	19.42	207.4	226.8
Dec-23	8,724	5,492.86	3,202.93	0.00	57,826.21	75,245.9	0.00	20,463.99	12,756.00	108,465.87	13.56	210.5	224.1
Jan-24	8,724	7,345.63	3,202.93	0.00	57,826.21	77,098.7	0.00	20,463.99	12,756.00	110,318.64	13.79	208.6	222.4
Feb-24	8,724	7,299.22	3,202.93	0.00	57,826.21	77,052.2	0.00	20,463.99	12,756.00	110,272.23	13.78	208.6	222.4
Mar-24 2/	8,724	8,480.66	3,202.93	0.00	57,826.21	78,233.7	0.00	20,019.15	12,756.00	111,008.87	13.88	212.2	226.1
Apr-24 3/	8,724	1,729.43	3,202.93	0.00	57,827.21	71,483.5	0.00	20,019.15	12,756.00	104,258.64	13.03	222.8	235.8

1/ ASSUMES 8,000 ACRE-FEET OF CYCLIC STORAGE EQUALS 1 VERTICAL FOOT AT THE BALDWIN PARK KEY WELL.
2/ ESTIMATED CYCLIC STORAGE AS OF MARCH 31, 2024.
3/ ESTIMATED KEY WELL ELEVATION AS OF APRIL 26, 2024

TABLE 4

LOCAL WATER IN STORAGE
IN SURFACE RESERVOIRS

RESERVOIR	April 25, 2023 STORAGE (ACRE-FEET)	April 30, 2024 STORAGE (ACRE-FEET)	INFLOW (CFS)	OUTFLOW (CFS)	RESERVOIR CAPACITY (ACRE-FEET)	RESERVOIR STORAGE IN PERCENT
Cogswell Dam	262	33	40	40	10,475	0%
San Gabriel Dam	38,302	395	452	520	44,044	1%
Morris Dam	24,181	26,792	467	350	28,736	93%
Sub-Total:	**62,745**	**27,220**			**83,255**	**33%**
Santa Fe Dam [1/]	609	488	--	686	--	--
Big Dalton Dam	--	340	2	4	--	--
San Dimas Dam	788	834	29	34	--	--
Puddingstone Dam [2/]	6,879	7,018	0	0	--	--
TOTALS:	**71,021**	**35,900**				

1/ Storage is typically zero. Reservoir used for Flood Control purposes only, not storage for water conservation purposes. As of April 26, 2024
2/ Storage is typically about 6,600 acre-feet. Used for recreational purposes, not water conservation purposes.

TABLE 5

SUPPLEMENTAL WATER DELIVERIES
TO THE MAIN SAN GABRIEL BASIN
FOR GROUNDWATER REPLENISHMENT
(ACRE-FEET)

FISCAL YEAR		UPPER DISTRICT						THREE VALLEYS DISTRICT					SAN GABRIEL DISTRICT						TOTALS
		REPLACEMENT WATER		CYCLIC	WATERMASTER	RESOURCE	PRODUCER CYCLIC	REPLACEMENT	CYCLIC	WATERMASTER	RESOURCE	PRODUCER CYCLIC	REPLACEMENT	USG-5 EXCHANGE	CYCLIC	WATERMASTER	TRANSFERS TO MWD	RESOURCE	
		USG-3	USG-5 2/	STORAGE	PRE-PURCHASES	DEVELOPMENT	STORAGE	WATER	STORAGE	PRE-PURCHASES	DEVELOPMENT	STORAGE	WATER	REPLACEMENT	STORAGE	PRE-PURCHASES	CYCLIC STORAGE	DEVELOPMENT	
1974-75		13,731.90	--	--	--	--	--	--	--	--	--	--	787.10	--	44.90	--		--	**14,563.90**
1975-76		7,121.40	--	12,621.10	--	--	--	--	--	--	--	--	1,302.90	--	6,972.10	--		--	**28,017.50**
1976-77		10,752.60	2,654.90	52.40	--	--	--	--	--	--	--	--	3,814.95	992.93	2,722.12	--		--	**20,989.90**
1977-78		14,962.50	2,981.70	0.00	--	--	--	--	--	--	--	--	4,470.85	1,115.15	0.00	--		--	**23,530.20**
1978-79		24,000.00	3,486.10	0.00	--	--	--	--	--	--	--	--	4,112.25	1,303.79	1,551.96	--		--	**34,454.10**
1979-80		4,740.60	3,191.00	0.00	--	--	--	--	--	--	--	--	0.00	1,064.00	0.00	--		--	**8,995.60**
1980-81		0.00	3,130.70	0.00	--	--	--	--	--	--	--	--	0.00	0.00	0.00	--		--	**3,130.70**
1981-82		40,824.70	2,853.70	0.00	--	--	--	--	--	--	--	--	81.84	1,067.28	648.88	--		--	**45,476.40**
1982-83		22,934.40	2,256.30	3,189.30	--	--	--	--	--	--	--	--	0.00	843.87	1,377.13	--		--	**30,601.00**
1983-84		0.00	1,907.10	3,246.70	--	--	0.00	--	--	--	--	--	0.00	79.00	0.00	--		--	**5,232.80**
1984-85		0.00	2,395.50	0.00	--	--	0.00	--	--	--	--	--	0.00	66.00	0.00	--		--	**2,461.50**
1985-86		3,000.00	2,600.80	47,405.40	--	--	0.00	--	--	--	--	--	4,484.30	972.70	0.00	--		--	**58,463.20**
1986-87		19,354.30	2,484.20	23,991.10	--	--	0.00	--	--	--	--	--	4,368.59	929.09	7,300.32	--		--	**58,427.60**
1987-88		28,187.30	3,751.30	5,975.00	--	--	0.00	--	--	--	--	--	7,763.11	1,402.99	660.90	--		--	**47,740.60**
1988-89		39,100.00	3,726.60	110.70	--	--	0.00	--	--	--	--	--	5,320.25	1,393.75	0.00	--	--	--	**49,651.30**
1989-90		32,740.20	1,716.10	0.00	--	--	0.00	--	--	--	--	--	11,296.63	641.82	2,825.55	--	--	--	**49,220.30**
1990-91		16,078.60	2,734.10	14,453.50	--	--	13,112.70	--	--	--	--	--	9,485.43	1,022.57	0.00	--	--	--	**56,886.90**
1991-92		7,491.90	2,214.00	23,525.90	--	--	3,305.90	0.00	25,077.10	--	--	--	8,074.96	828.04	0.00	--	--	--	**70,517.80**
1992-93		16,077.97	2,478.10	10,214.60	--	--	18,916.73	0.00	3,737.50	--	--	--	11,418.17	1,202.03	1,064.80	--	--	--	**65,109.90**
1993-94		0.00	3,214.00	0.00	--	--	23,050.80	0.00	0.00	--	--	--	8,620.14	1,205.80	5,419.06	--	--	--	**41,509.80**
1994-95		0.00	3,178.10	6,177.10	--	--	0.00	0.00	5,738.60	--	--	--	5,691.49	1,188.61	3,557.90	--	--	--	**25,531.80**
1995-96		15,467.80	3,149.90	85.20	--	--	0.00	0.00	3,832.00	--	--	--	8,484.59	1,178.05	3,432.36	--	--	--	**35,629.90**
1996-97		3,934.10	3,304.50	32,229.90	--	--	0.00	0.00	1,451.10	--	--	--	14,525.94	1,235.89	1,698.17	--	--	--	**58,379.60**
1997-98		21,409.60	3,392.70	24,870.20	--	--	0.00	0.00	953.10	--	--	--	14,061.60	1,268.85	323.55	--	--	--	**66,279.60**
1998-99		0.00	3,353.40	0.00	--	--	0.00	3,311.70	0.00	--	--	--	6,158.61	1,254.19	2,621.20	--	--	--	**16,699.10**
1999-00		13,645.60	3,508.30	24,416.20	--	--	0.00	4,418.60	0.00	--	--	--	9,286.01	1,312.09	8,605.90	--	--	--	**65,192.70**
2000-01		10,412.80	3,285.30	14,624.30	--	--	0.00	5,583.70	675.20	--	--	--	10,464.30	1,228.70	0.00	--	--	--	**46,274.30**
2001-02		25,246.02	3,438.90	1,944.90	--	--	0.00	4,944.10	570.20	--	--	--	10,929.17	1,286.13	1,172.70	--	--	--	**49,532.12**
2002-03		33,551.42	3,018.30	0.00	--	--	0.00	2,791.00	0.00	--	--	--	3,938.39	1,128.84	15,027.77	--	--	--	**59,455.72**
2003-04		14,166.20	3,058.30	23,603.00	--	--	10,000.00	1,920.40	0.00	--	--	--	672.60	1,143.80	16,815.60	--	--	--	**71,379.90**
2004-05		5,744.20	2,998.00	0.00	--	--	0.00	1,714.50	0.00	--	--	1,800.00	500.66	1,121.25	10,840.09	--	--	--	**24,718.70**
2005-06		48,069.20	2,815.50	9,400.80	--	--	7,500.00	357.10	0.00	--	--	0.00	0.00	1,052.99	12,658.01	--	--	--	**81,853.60**
2006-07		0.00	2,963.30	4,159.20	--	--	0.00	166.70	2,978.00	--	--	0.00	573.59	1,108.29	15,794.12	--	--	--	**27,743.20**
2007-08		0.00	3,027.20	5,724.40	--	--	0.00	0.00	0.00	--	--	0.00	91.76	1,132.17	779.07	--	--	--	**10,754.60**
2008-09		0.00	3,064.90	0.00	--	--	0.00	0.00	0.00	--	--	0.00	788.73	1,146.29	4,671.98	--	--	--	**9,671.90**
2009-10		16,076.40	2,611.50	0.00	--	--	0.00	0.00	1,427.80	--	--	0.00	1,886.58	976.70	12,340.72	--	--	--	**35,319.70**
2010-11		23,737.90	2,428.20	0.00	--	--	11,646.50	0.00	12,264.60	--	--	0.00	14,655.86	908.13	5,211.01	--	--	--	**70,852.20**
2011-12		3,257.20	2,999.40	0.00	--	--	18,169.10	0.00	12,871.40	--	--	0.00	22,426.22	1,121.78	0.00	--	--	--	**60,845.10**
2012-13		2,034.70	3,037.40	0.00	--	--	10,000.00	0.00	10,098.80	--	--	0.00	16,269.22	1,135.98	5,138.80	--	--	--	**47,714.90**
2013-14		0.00	2,983.90	0.00	--	--	31,288.90	0.00	3,110.10	--	--	0.00	1,202.03	1,115.97	0.00	--	5,000.00	--	**39,700.90**
2014-15		0.00	2,711.70	4,031.54	5,000.00	--	29,809.36	0.00	471.00	--	--	1,000.00	192.83	1,014.17	0.00	--	0.00	--	**44,230.60**
2015-16		0.00	2,486.50	3,107.00	0.00	5,622.00	10,510.00	0.00	2,507.40	0.00	416.00	500.00	0.00	929.95	7,354.05	--	5,000.00	902.00	**39,334.90**
2016-17		0.00	2,876.90	0.00	0.00	4,713.00	35,786.60	0.00	12,264.60	0.00	118.10	500.00	14,029.70	1,075.95	7,265.75	--	5,000.00	761.00	**84,391.60**
2017-18		0.00	2,987.20	44,310.10	0.00	9,236.00	3,236.00	0.00	5,332.20	0.00	0.00	670.00	4,649.74	1,117.22	12,898.64	--	5,000.00	1,492.00	**90,929.10**
2018-19		0.00	2,943.90	14,854.60	0.00	15,297.00	20,624.00	0.00	2,126.50	0.00	1,110.00	3,220.00	0.00	1,101.03	11,966.97	--	5,000.00	2,471.00	**80,715.00**
2019-20		0.00	2,983.20	57,299.10	0.00	20,056.52	0.00	90.07	17,959.73	0.00	1,455.00	0.00	0.00	1,115.73	14,021.27	--	5,600.00	0.00	**120,580.62**
2020-21		0.00	2,986.40	0.00	179.50	31,270.00	10,000.00	174.60	2,841.60	0.00	2,375.00	353.40	0.00	1,116.92	3,621.08	--	0.00	0.00	**54,918.50**
2021-22		0.00	2,992.00	0.00	0.00	14,719.00	0.00	26.30	600.00	0.00	2,850.00	0.00	0.00	1,119.00	87.00	--	0.00	0.00	**22,393.30**
2022-23		0.00	2,768.00	0.00	0.00	38,139.40	14,708.50	154.70	3,211.00	0.00	2,496.00	0.00	0.00	1,035.23	3,763.77	--	0.00	0.00	**66,276.60**
2023-24	1/	0.00	1,875.90	3,902.14	0.00	48,908.00	3,225.30	21.80	0.00	0.00	2,124.00	0.00	0.00	701.57	12,959.00	--	0.00	0.00	**73,717.71**

1/ Estimated as of April 30, 2024.
2/ In-Lieu replenishment through CWEA.

TABLE 6

HISTORICAL WATER PRODUCTION
(ACRE-FEET)

FISCAL YEAR	FIRST QUARTER	SECOND QUARTER	THIRD QUARTER	FOURTH QUARTER	TOTAL
1973-74	76,455	51,809	40,649	65,397	234,310
1974-75	77,392	48,530	40,887	56,644	223,454
1975-76	77,811	51,274	47,542	63,439	240,066
1976-77	66,731	52,977	41,987	48,645	210,340
1977-78	59,996	47,251	33,189	54,839	195,275
1978-79	69,708	46,610	36,010	62,593	214,920
1979-80	75,291	51,799	37,496	58,522	223,108
1980-81	73,516	54,159	40,262	62,896	230,832
1981-82	77,656	50,996	39,071	51,819	219,541
1982-83	71,346	46,704	37,995	53,904	209,950
1983-84	69,443	44,463	51,157	69,616	234,679
1984-85	77,766	50,832	45,153	68,689	242,440
1985-86	77,193	53,773	46,083	69,175	246,223
1986-87	77,425	55,643	49,330	71,235	253,633
1987-88	76,057	51,642	53,093	67,319	248,111
1988-89	77,997	57,325	49,245	69,127	253,694
1989-90	77,509	60,257	50,941	63,412	252,118
1990-91	73,887	59,330	43,472	55,384	232,073
1991-92	65,688	54,633	40,696	60,461	221,477
1992-93	74,132	54,047	41,534	66,427	236,139
1993-94	76,624	57,381	47,652	61,949	243,606
1994-95	80,506	57,787	43,202	61,984	243,479
1995-96	81,408	63,428	50,931	73,184	268,950
1996-97	84,588	60,760	56,428	77,705	279,481
1997-98	84,624	60,585	46,940	61,890	254,039
1998-99	83,626	62,349	54,000	65,176	265,152
1999-00	82,395	69,076	53,697	73,519	278,687
2000-01	83,293	65,227	51,776	70,623	270,919
2001-02	82,434	61,691	55,724	64,480	264,328
2002-03	69,276	55,906	49,811	57,797	232,791
2003-04	71,337	56,815	54,740	69,957	252,850
2004-05	77,021	55,480	46,456	68,310	247,266
2005-06	79,323	62,977	53,745	63,894	259,940
2006-07	83,160	66,532	61,808	72,828	284,329
2007-08	75,251	57,898	53,327	71,691	258,167
2008-09	76,053	59,007	49,458	66,029	250,547
2009-10	74,867	56,356	43,456	62,445	237,123
2010-11	71,179	50,002	44,881	60,877	226,939
2011-12	74,369	51,922	48,340	61,659	236,290
2012-13	76,217	53,359	46,418	66,550	242,545
2013-14	73,131	54,706	48,357	64,359	240,552
2014-15	66,954	50,046	43,168	48,171	208,339
2015-16	54,430	42,182	37,364	48,850	182,826
2016-17	59,704	46,491	35,748	55,300	197,243
2017-18	63,580	53,479	41,816	50,625	209,500
2018-19	60,022	46,919	34,434	48,780	190,155
2019-20	58,198	44,615	40,766	49,005	192,584
2020-21	60,404	53,345	42,633	51,439	207,822
2021-22	54,603	43,508	39,642	48,395	186,148
2022-23	54,526	42,496	31,019	40,319	168,360
2023-24	52,001	42,922	--	--	170,000 1/
12-Year Average	63,011	48,589	41,699	53,921	205,197
20-Year Average	68,216	52,407	44,879	58,474	223,976
50-Year Average	72,512	53,908	45,471	61,547	232,811

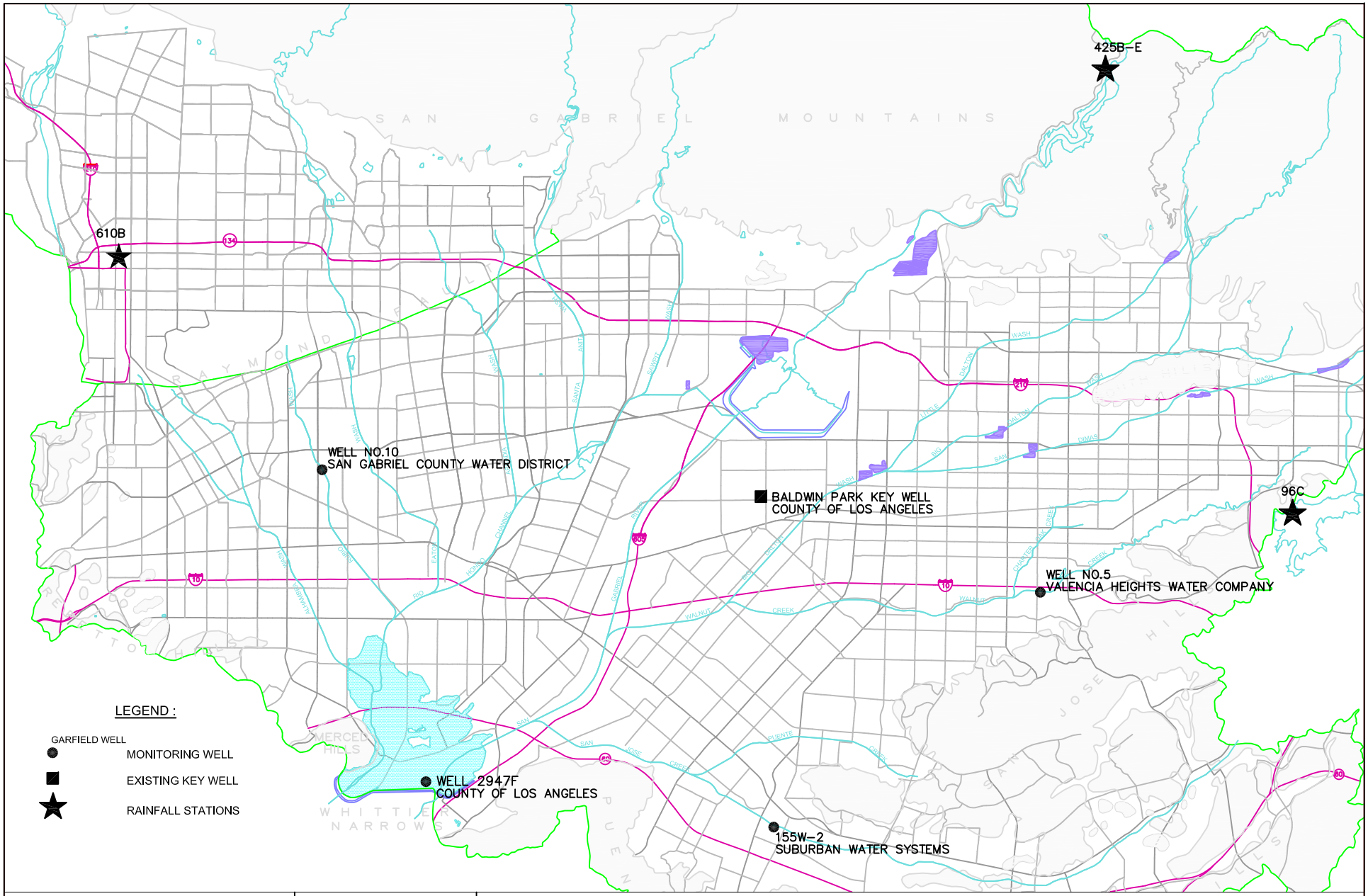
1/ ESTIMATED

TABLE 7

TOTAL HISTORICAL WATER DEMAND IN BASIN
(ACRE-FEET)

FISCAL YEAR	TREATED IMPORTED WATER	TOTAL PRODUCTION	TOTAL DEMAND
1973-74	630	235,460	236,090
1974-75	1,036	225,222	226,258
1975-76	3,539	242,246	245,785
1976-77	9,471	210,340	219,811
1977-78	11,427	195,276	206,702
1978-79	11,724	214,920	226,643
1979-80	13,032	223,089	236,121
1980-81	16,799	230,832	247,631
1981-82	17,402	220,392	237,793
1982-83	14,208	209,949	224,158
1983-84	18,298	236,679	254,977
1984-85	21,676	242,440	264,116
1985-86	20,872	246,224	267,095
1986-87	22,575	253,633	276,208
1987-88	28,537	248,102	276,638
1988-89	25,799	253,694	279,494
1989-90	31,478	252,136	283,614
1990-91	29,922	232,091	262,014
1991-92	18,606	221,477	240,083
1992-93	18,948	236,677	255,625
1993-94	18,412	243,617	262,029
1994-95	19,517	243,479	262,996
1995-96	16,931	268,951	285,881
1996-97	17,205	279,481	296,686
1997-98	14,208	253,921	268,129
1998-99	13,846	265,152	278,998
1999-00	21,062	278,687	299,749
2000-01	19,971	270,919	290,890
2001-02	35,153	264,328	299,481
2002-03	40,982	237,491	278,472
2003-04	50,758	252,812	303,570
2004-05	35,979	247,187	283,166
2005-06	23,125	259,808	282,932
2006-07	25,904	284,328	310,232
2007-08	30,174	258,167	288,341
2008-09	21,683	250,103	271,785
2009-10	16,329	237,846	254,176
2010-11	10,316	227,657	237,973
2011-12	10,561	237,029	247,590
2012-13	14,344	242,914	257,258
2013-14	22,216	240,552	262,768
2014-15	22,517	208,339	230,856
2015-16	12,740	182,826	195,566
2016-17	12,251	197,243	209,495
2017-18	13,576	209,500	223,076
2018-19	24,953	190,156	215,109
2019-20	26,335	192,584	218,919
2020-21	24,413	207,822	232,235
2021-22	34,023	186,148	220,171
2022-23	17,569	168,360	185,929
2023-24	18,000 1/	170,000	188,000
12-Year Average	19,625	205,289	224,914
20-Year Average	22,488	224,069	246,557
50-Year Average	20,061	234,366	254,426

1/ Estimated



STETSON ENGINEERS INC.
861 VILLAGE OAKS DRIVE, SUITE 100
COVINA, CALIFORNIA 91724
TEL: (626) 967-6202
FAX: (626) 331-7065

2171 E Francisco Blvd., Suite K
San Rafael California 94901

2651 W Guadalupe Rd., Suite A209
Mesa Arizona 85202

N

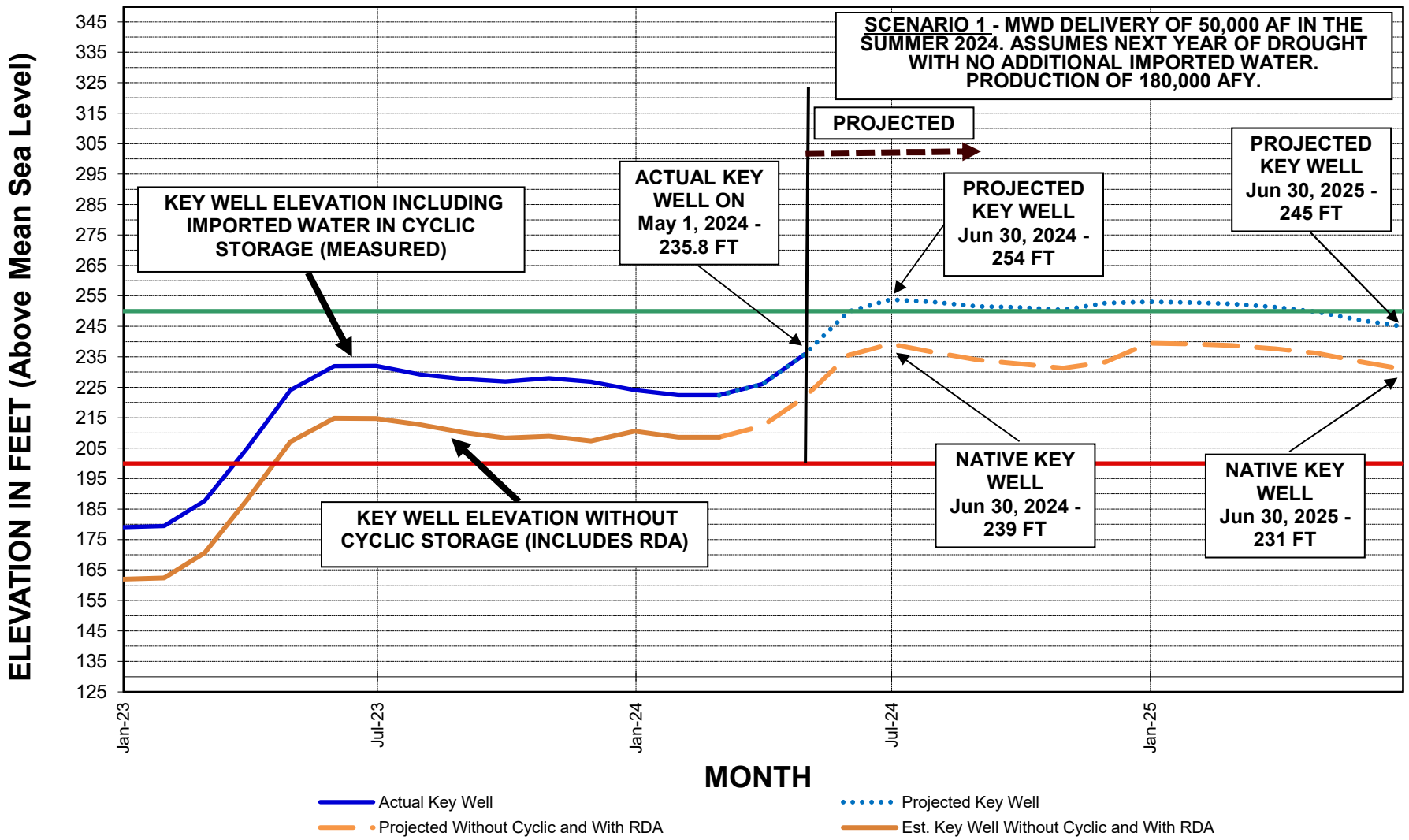
APPROXIMATE SCALE
1" = 12,000'

MAIN SAN GABRIEL BASIN WATERMASTER

WELL LOCATION MAP

PLATE 1

F:\JOBS\1205\1205-04\2019-20\PLATE 1.DWG
F:\JOBS\1205-04.CTB



STETSON ENGINEERS INC.

Covina San Rafael Mesa, Arizona

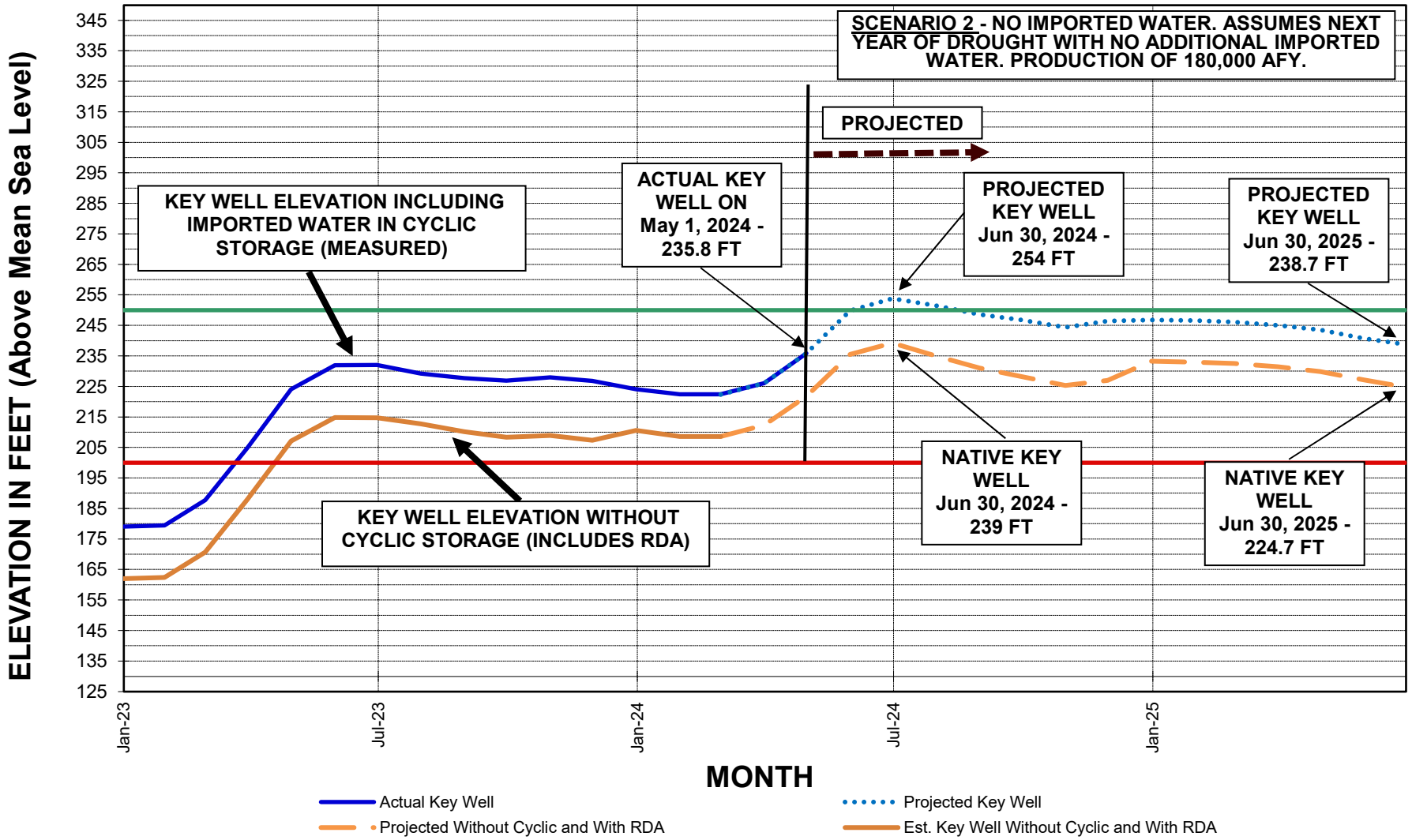
WATER RESOURCE ENGINEERS

MAIN SAN GABRIEL BASIN WATERMASTER

BALDWIN PARK KEY WELL GROUNDWATER ELEVATION PROJECTED THROUGH FY 2024-25 WITH 50,000 AF OF MWD IMPORTED WATER

FIGURE 1A

J:\1205\1205-04\2024-25\Final\Figures 1A - Projected Key Well drought condition w imported Water



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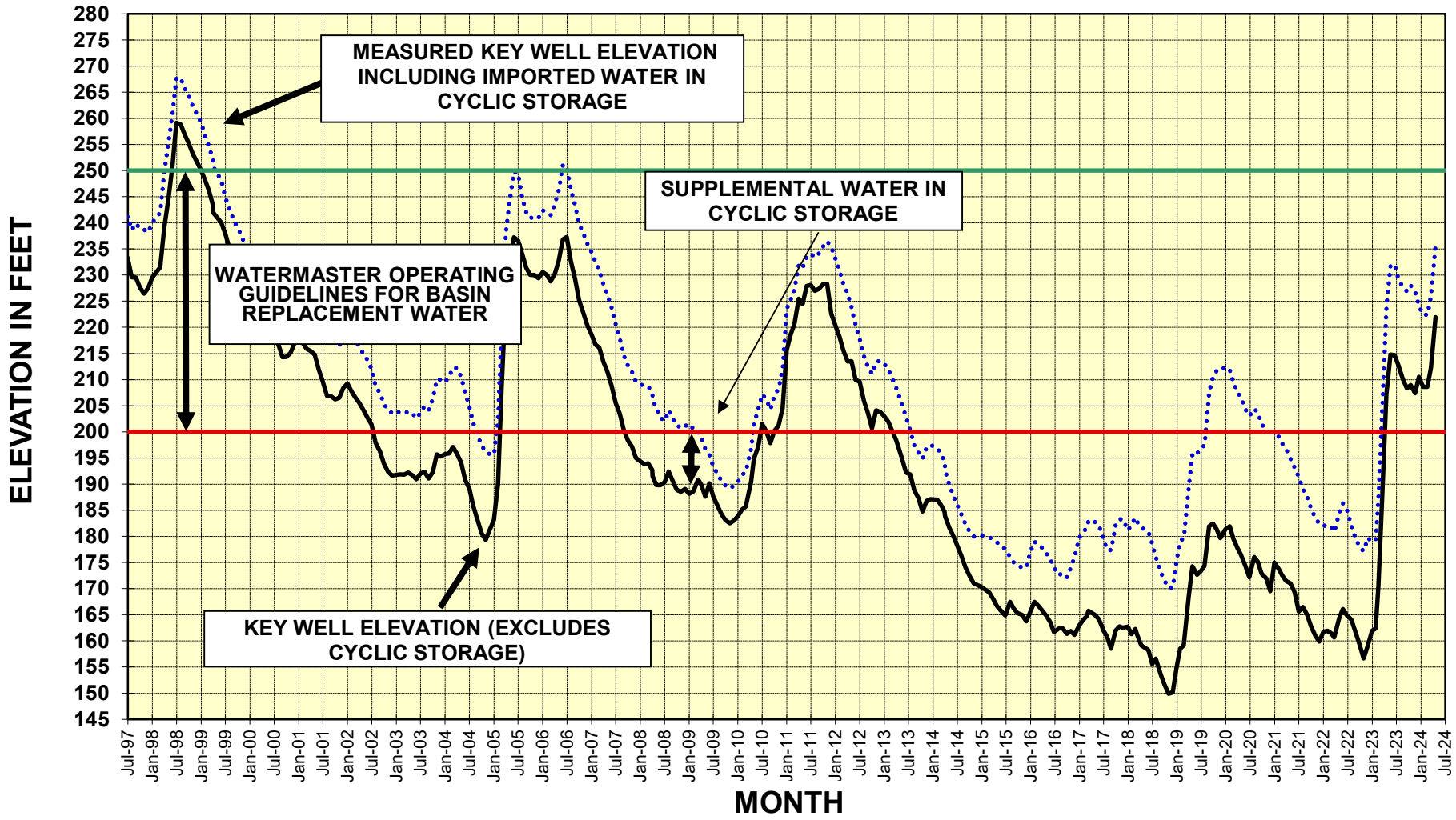
MAIN SAN GABRIEL BASIN WATERMASTER

BALDWIN PARK KEY WELL GROUNDWATER ELEVATION PROJECTED THROUGH FY 2024-25 WITHOUT MWD IMPORTED WATER (WORST CASE)

FIGURE 1B

J:\1205\1205-04\2024-25\Final\Figures 1B - Projected Key Well drought condition



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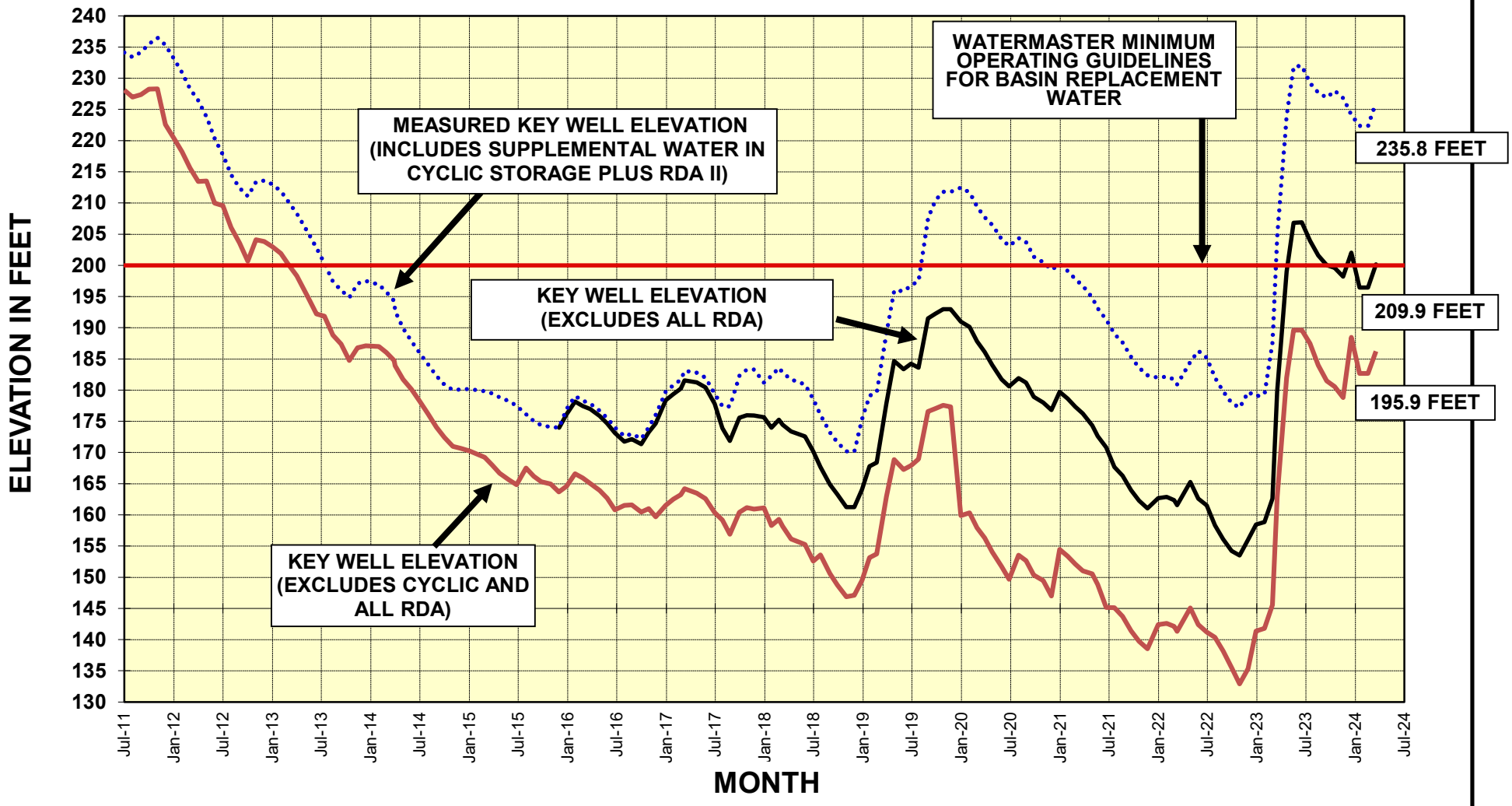
MAIN SAN GABRIEL BASIN WATERMASTER

BALDWIN PARK KEY WELL GROUNDWATER ELEVATION

FIGURE 2

\\server4\data\Jobs\1205\1205-04\2024-25\Final\24-25_TBL_3 and Figure 2



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Covina San Rafael Mesa, Arizona

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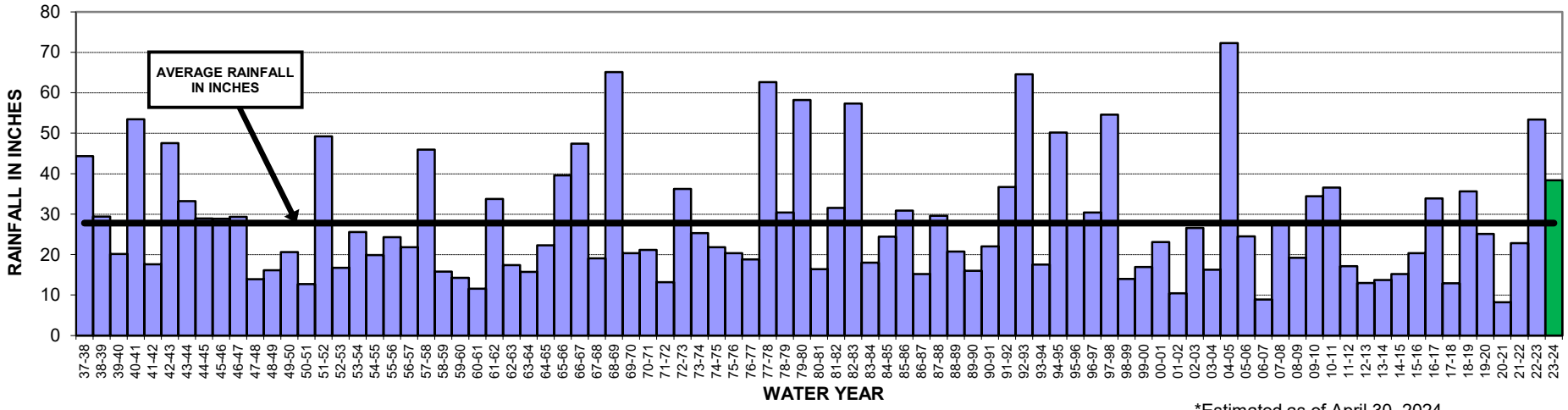
MAIN SAN GABRIEL BASIN WATERMASTER

IMPACTS OF STORED WATER ON BALDWIN PARK KEY WELL GROUNDWATER ELEVATION

FIGURE 3

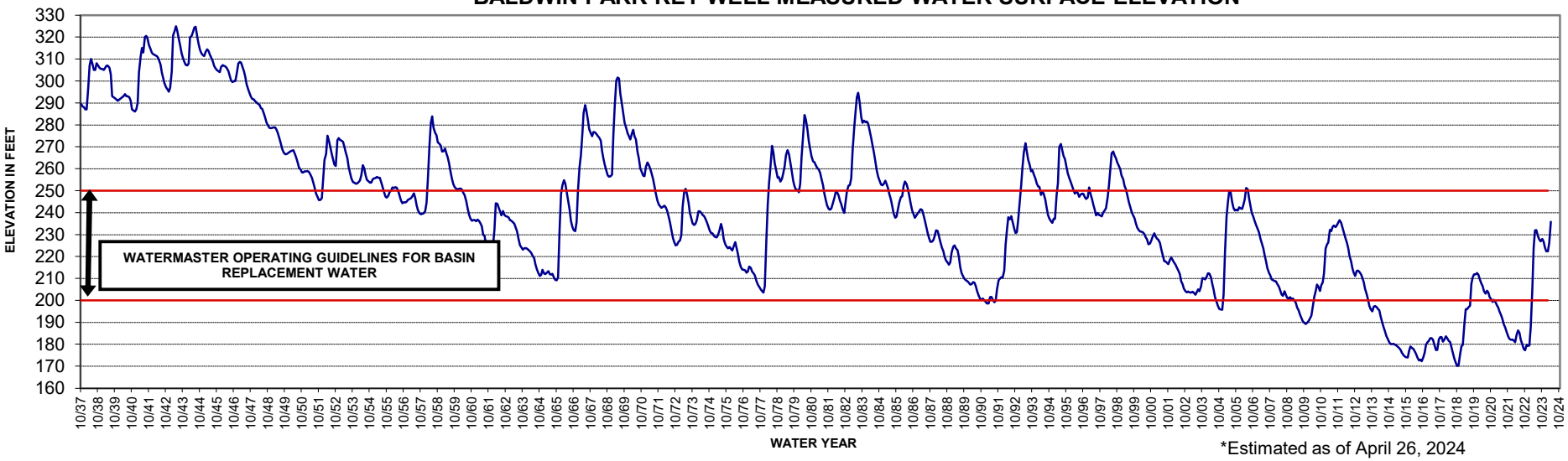
\\server4\data\Jobs\1205\1205-04\2024-25\Final\24-25_Figure 3

RAINFALL AT SAN GABRIEL DAM



*Estimated as of April 30, 2024

BALDWIN PARK KEY WELL MEASURED WATER SURFACE ELEVATION



*Estimated as of April 26, 2024

STETSON ENGINEERS INC.

Covina San Rafael Mesa, Arizona

WATER RESOURCE ENGINEERS

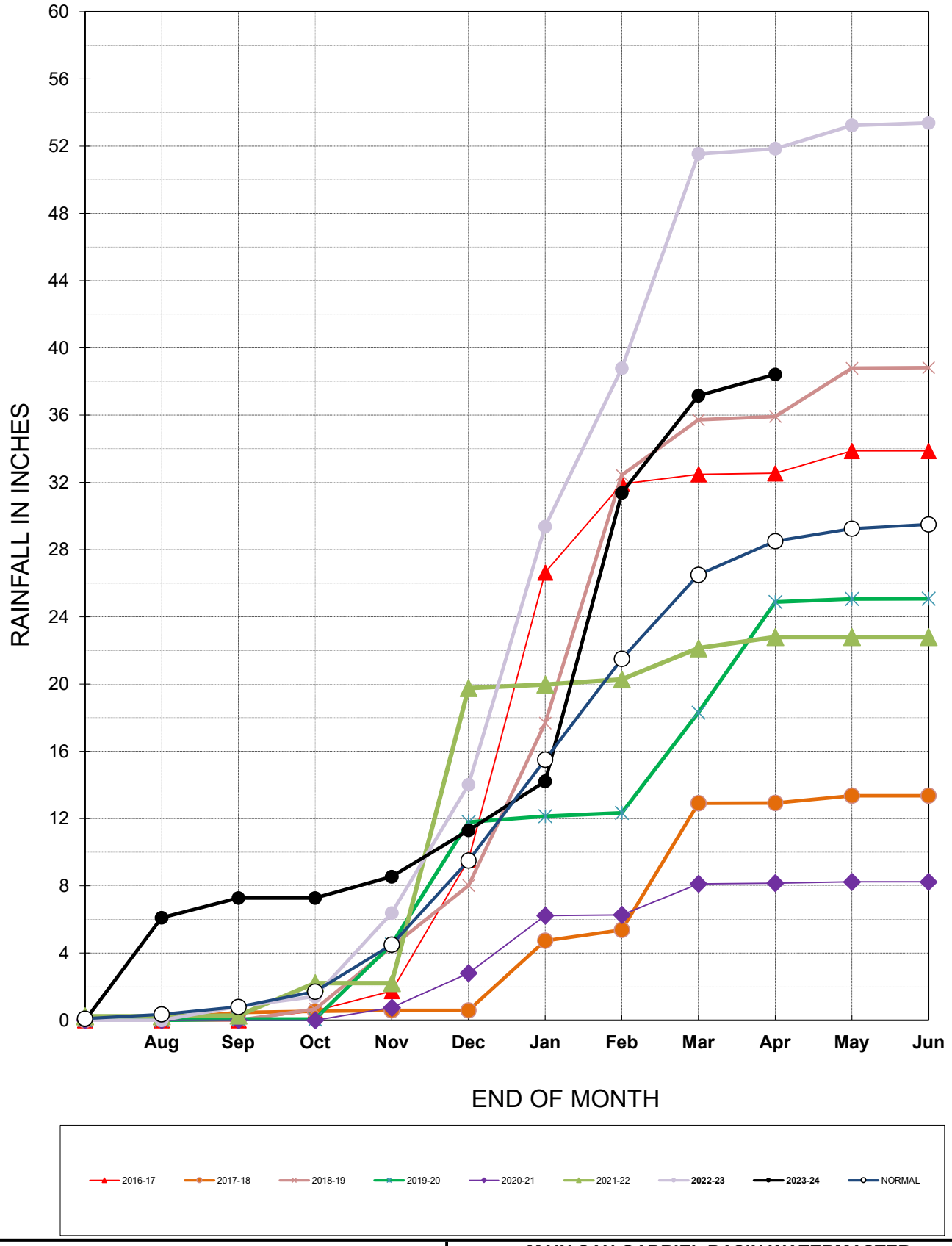
MAIN SAN GABRIEL BASIN WATERMASTER

SAN GABRIEL DAM RAINFALL AND BALDWIN PARK KEY WELL ELEVATION

FIGURE 4

\\server4\data\Jobs\1205\1205-04\2024-25\Final\24-25_Figure 4

FIGURE 5



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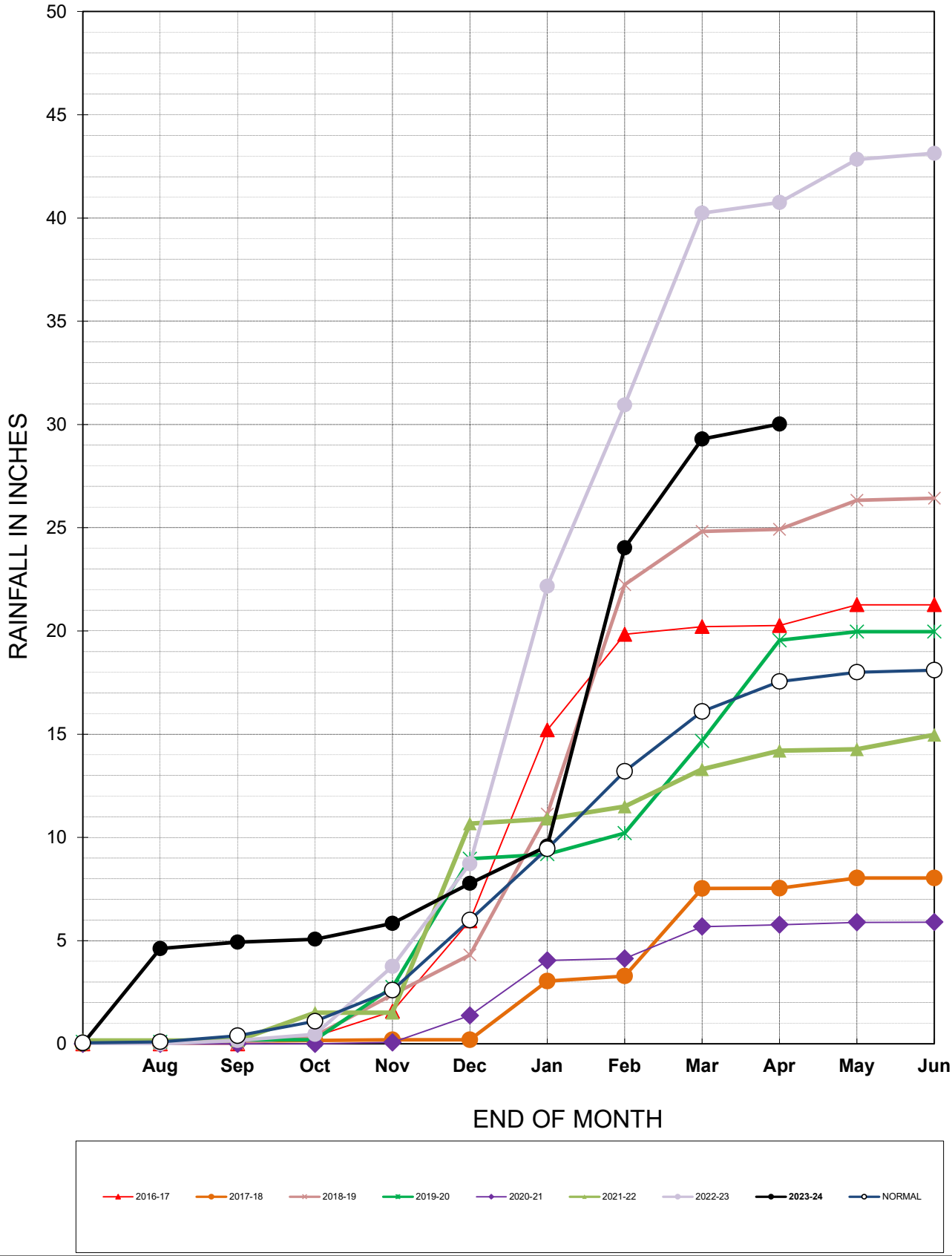
MAIN SAN GABRIEL BASIN WATERMASTER

ACCUMULATED RAINFALL AT SAN GABRIEL DAM
RAINFALL STATION NO. 425B-E

\\server4\data\Jobs\1205\1205-04\2024-25\Final\24-25_Pre_Figures 5-7 - RAINFALL (2)

FIGURE 6



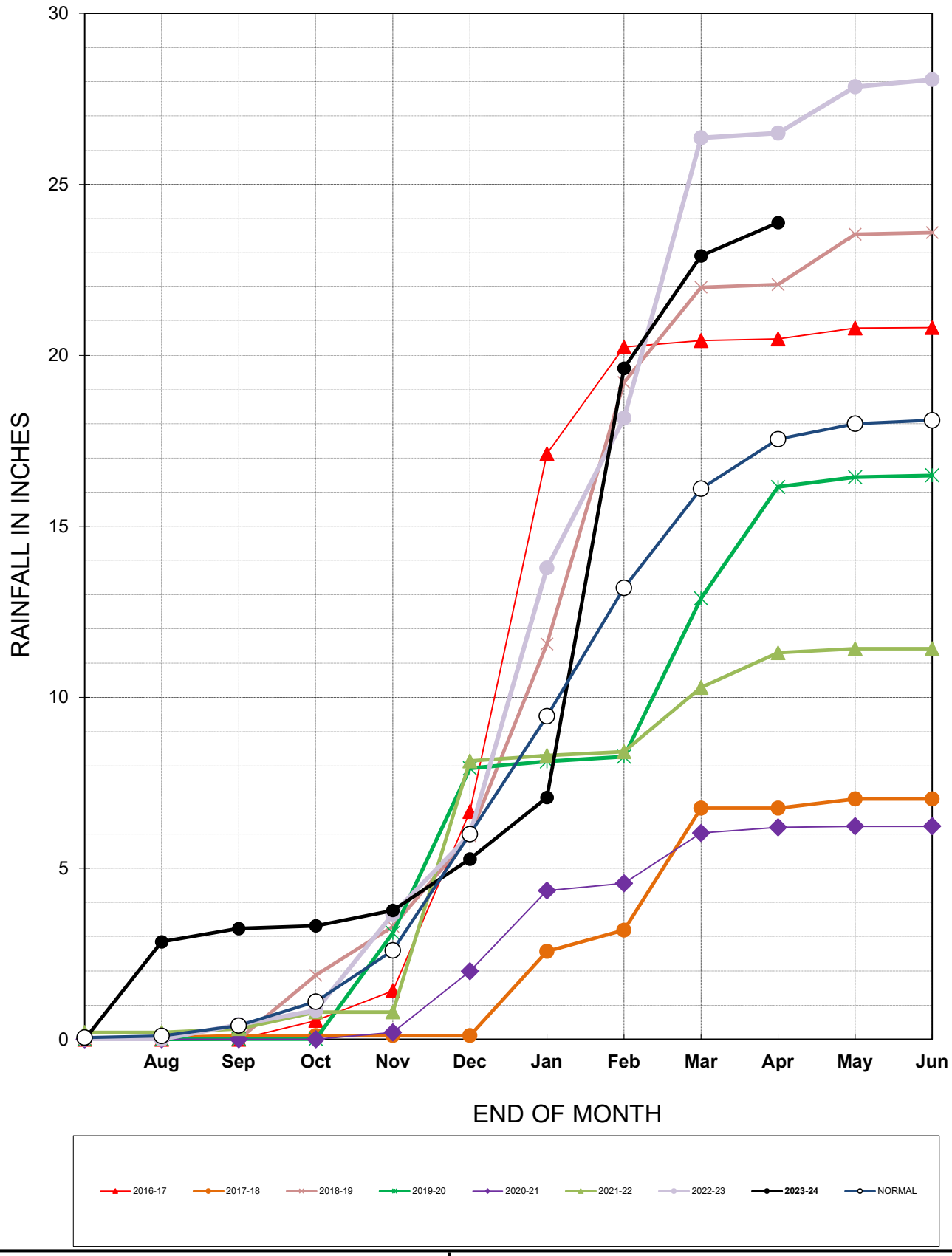
STETSON ENGINEERS INC.
Covina San Rafael Mesa, Arizona
WATER RESOURCE ENGINEERS

MAIN SAN GABRIEL BASIN WATERMASTER

ACCUMULATED RAINFALL AT PASADENA - CITY HALL
RAINFALL STATION NO. 610B

\\server4\data\Jobs\1205\1205-04\2024-25\Final\24-25_Pre_Figures 5-7 - RAINFALL (2)

FIGURE 7

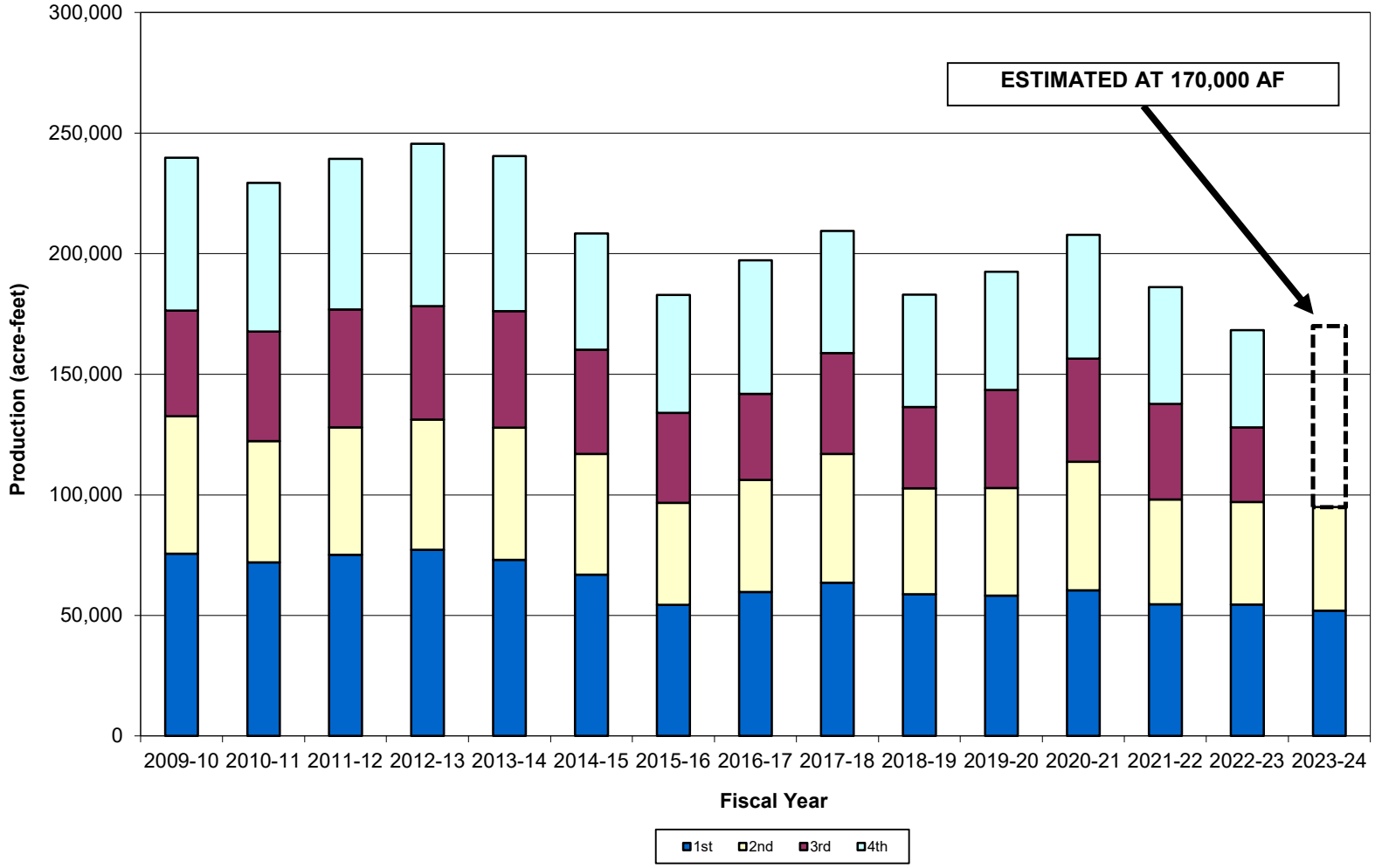


STETSON ENGINEERS INC.
Covina San Rafael Mesa, Arizona
WATER RESOURCE ENGINEERS

MAIN SAN GABRIEL BASIN WATERMASTER

ACCUMULATED RAINFALL AT PUDDINGSTONE DAM
RAINFALL STATION NO. 96-C

\\server4\data\Jobs\1205\1205-04\2024-25\Final\24-25_Pre_Figures 5-7 - RAINFALL (2)



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Covina San Rafael Mesa, Arizona

WATER RESOURCE ENGINEERS

MAIN SAN GABRIEL BASIN WATERMASTER

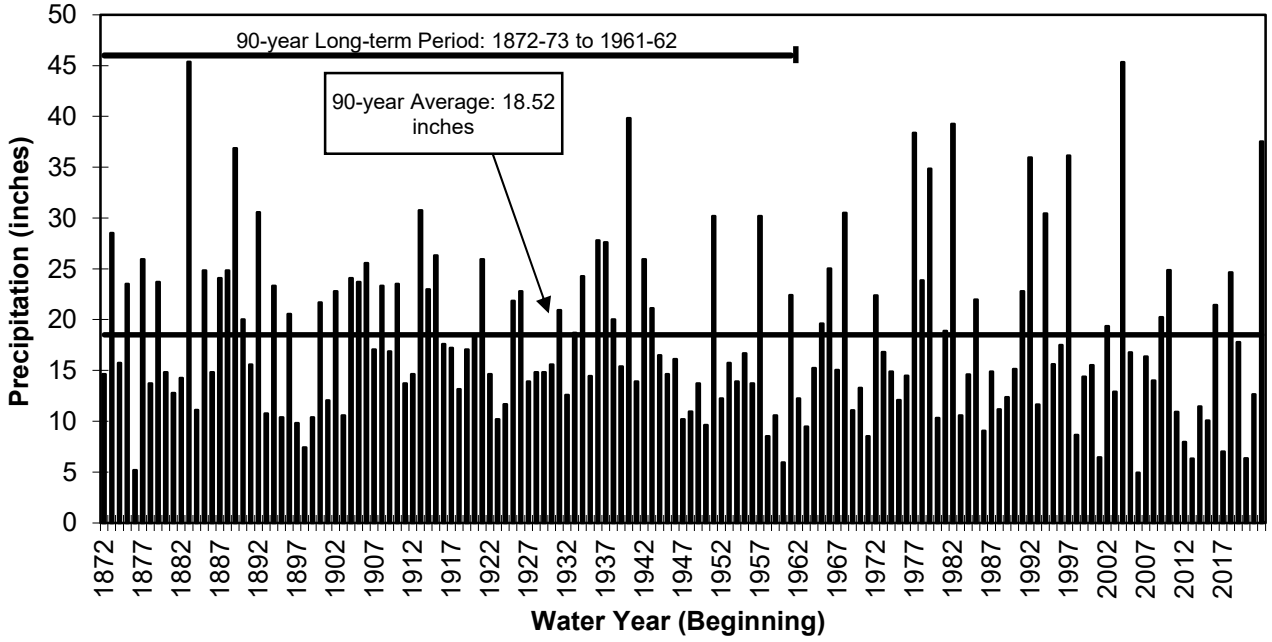
PRODUCTION IN MAIN SAN GABRIEL BASIN

FIGURE 8

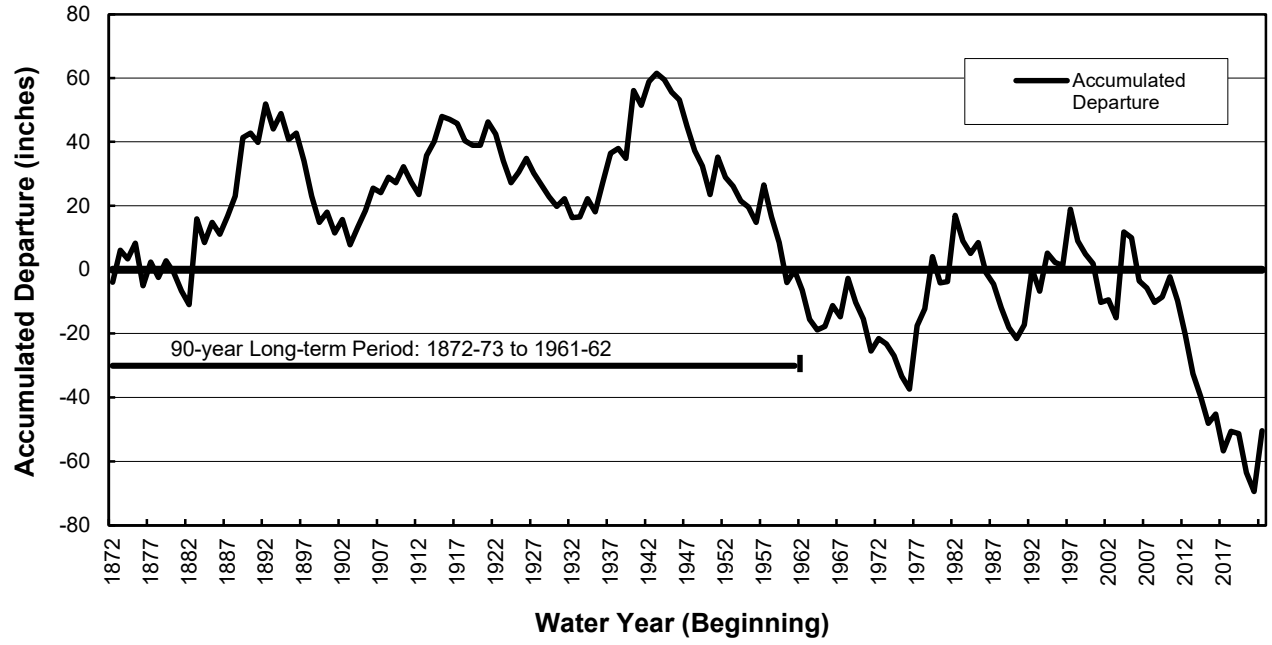
\\server4\data\Jobs\1205\1205-04\2024-25\Preliminary\24-25_Final_Figure 8 - Production graph

APPENDIX A

SAN GABRIEL VALLEY PRECIPITATION
1872-73 THROUGH 2022-23

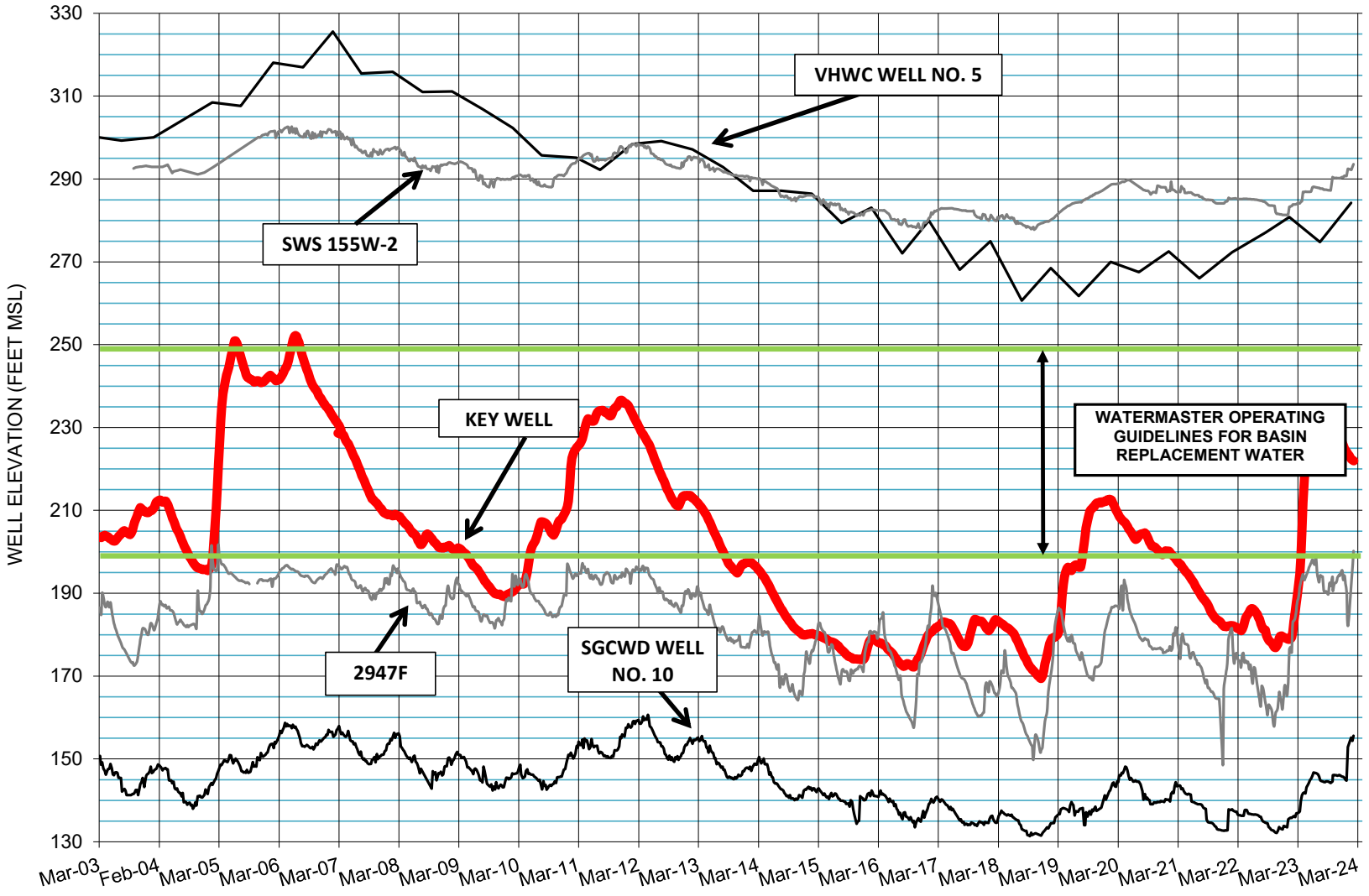


SAN GABRIEL VALLEY ACCUMULATED DEPATURE
1872-73 THROUGH 2022-23



HISTORICAL PRECIPITATION IN THE SAN GABRIEL VALLEY

APPENDIX B



STETSON ENGINEERS INC.
West Covina San Rafael Mesa, Arizona
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MAIN SAN GABRIEL BASIN WATERMASTER

HYDROGRAPHS FOR BALDWIN PARK KEY WELL AND OTHER "KEY WELLS" BETWEEN MARCH 2003 AND MARCH 2024

\\server4\data\Jobs\1205\1205-04\2024-25\Preliminary\Appendix B KeyWell_OtherKeyWells

APPENDIX C

APPENDIX C

RANGE OF OPERATING SAFE YIELDS AND PUMPER'S SHARES THEREOF
(Acre-feet)
Quantities which may be pumped free of Replacement Water Assessment

Pumper	Pumper's Share %	OSY of 130,000	OSY of 140,000	OSY of 150,000	OSY of 160,000
Alhambra, City of	4.45876	5,796.39	6,242.26	6,688.14	7,134.02
Amarillo Mutual	0.35874	466.36	502.24	538.11	573.98
Arcadia, City of	4.23099	5,500.29	5,923.39	6,346.49	6,769.58
Banks, Gale C.	0.02530	32.89	35.42	37.95	40.48
Brea, City of	0.76035	988.46	1,064.49	1,140.53	1,216.56
Cadway, Inc.	0.32545	423.09	455.63	488.18	520.72
Calif. American-San Marino	4.74431	6,167.60	6,642.03	7,116.47	7,590.90
California Domestic	6.26154	8,140.00	8,766.16	9,392.31	10,018.46
Canyon Water Company	0.00051	0.66	0.71	0.77	0.82
Chevron	0.00101	1.31	1.41	1.52	1.62
County Sanitation Dist.18	0.00228	2.96	3.19	3.42	3.65
Covina, City of	0.23979	311.73	335.71	359.69	383.66
Crevolin, A.J.	0.00114	1.48	1.60	1.71	1.82
Dawes, Mary Kay	0.22359	290.67	313.03	335.39	357.74
Del Rio Mutual	0.10069	130.90	140.97	151.04	161.10
El Monte, City of	1.40888	1,831.54	1,972.43	2,113.32	2,254.21
El Monte Cemetery	0.00936	12.17	13.10	14.04	14.98
Fox Family Trust Michael Edward Fox and Crystal Marie Fox, Trustees	0.07378	95.91	103.29	110.67	118.05
Garnier, Anton and Anita	0.10843	140.96	151.80	162.65	173.49
Golden State Water-S.G.V. Dist.	2.92105	3,797.37	4,089.47	4,381.58	4,673.68
Green, Walter	0.02419	31.45	33.87	36.29	38.70
Hansen, Alice	0.00038	0.49	0.53	0.57	0.61
Heinrich, Carolyn	0.01269	16.50	17.77	19.04	20.30
Hemlock Mutual	0.08399	109.19	117.59	125.99	134.38
IBY Property Owner, LLC	1.20047	1,560.61	1,680.66	1,800.71	1,920.75
Industry, City of	0.55810	725.53	781.34	837.15	892.96
Irwindale, City of	0.19025	247.33	266.35	285.38	304.40
Kirklen, Jeffery	0.05665	73.65	79.31	84.98	90.64
Landeros, John	0.00038	0.49	0.53	0.57	0.61
La Puente Valley CWD	0.57197	743.56	800.76	857.96	915.15
Loucks, David	0.00152	1.98	2.13	2.28	2.43

APPENDIX C

RANGE OF OPERATING SAFE YIELDS AND PUMPER'S SHARES THEREOF (Acre-feet) Quantities which may be pumped free of Replacement Water Assessment

Pumper	Pumper's Share %	OSY of 130,000	OSY of 140,000	OSY of 150,000	OSY of 160,000
Lovelady, June G.	0.09386	122.02	131.40	140.79	150.18
The Maggiore Family Trust	0.07379	95.93	103.31	110.69	118.06
Martin Marietta So. Calif. Aggregates,	1.17094	1,522.22	1,639.32	1,756.41	1,873.50
Martinez, Frances	0.00038	0.49	0.53	0.57	0.61
McIntyre, William	0.01467	19.07	20.54	22.01	23.47
Monterey Park, City of	3.39216	4,409.81	4,749.02	5,088.24	5,427.46
NCL Co, LLC	0.00050	0.65	0.70	0.75	0.80
Nick Tomovich	0.00001	0.01	0.01	0.02	0.02
Nicholson Family Trust - Marital Trust	0.01569	20.40	21.97	23.54	25.10
Pellissier Irrevocable QTIP Trust, et a	3.28384	4,268.99	4,597.38	4,925.76	5,254.14
Pico County Water Dist.	0.00038	0.49	0.53	0.57	0.61
Rados, Alexander	0.02176	28.29	30.46	32.64	34.82
Rana Living Trust, Jeanne	0.01269	16.50	17.77	19.04	20.30
Rosemead Development Ltd.	0.00051	0.66	0.71	0.77	0.82
Ruth, Roy	0.00038	0.49	0.53	0.57	0.61
San Gabriel Country Club	0.14476	188.19	202.66	217.14	231.62
San Gabriel County WD	2.73019	3,549.25	3,822.27	4,095.29	4,368.30
San Gabriel Valley WC	10.61200	13,795.60	14,856.80	15,918.00	16,979.20
Sonoco Products	0.15766	204.96	220.72	236.49	252.26
So. Calif. Edison Co.	0.08690	112.97	121.66	130.35	139.04
South Pasadena, City of	1.80520	2,346.76	2,527.28	2,707.80	2,888.32
Sterling Mutual	0.06072	78.94	85.01	91.08	97.15
Suburban Water Systems	12.59998	16,379.97	17,639.97	18,899.97	20,159.97
Sunny Slope Water Co.	1.12770	1,466.01	1,578.78	1,691.55	1,804.32
Tate, Phillip P. & Sieglinde A., et al	0.02926	38.04	40.96	43.89	46.82
Tyler Nursery	0.00162	2.11	2.27	2.43	2.59
United Rock Products	0.23253	302.29	325.54	348.80	372.05
Valencia Heights Water Co.	0.53685	697.91	751.59	805.28	858.96
Valley County Water District	3.01517	3,919.72	4,221.24	4,522.76	4,824.27
Valley View Mutual	0.31169	405.20	436.37	467.54	498.70
Vulcan Materials Company	0.90690	1,178.97	1,269.66	1,360.35	1,451.04
Whittier, City of	4.18519	5,440.75	5,859.27	6,277.79	6,696.30
Wilmott, Erma	0.00038	0.49	0.53	0.57	0.61
Workman Mill Invest. Comp.	0.87839	1,141.91	1,229.75	1,317.59	1,405.42
Total of Pumpers	**76.46119**	**99,399.55**	**107,045.67**	**114,691.79**	**122,337.90**

APPENDIX C

RANGE OF OPERATING SAFE YIELDS AND PUMPER'S SHARES THEREOF (Acre-feet)

Quantities which may be pumped free of Replacement Water Assessment

Pumper	Pumper's Share %	OSY of 130,000	OSY of 140,000	OSY of 150,000	OSY of 160,000
Azusa, City of	1.84988	2,404.84	2,589.83	2,774.82	2,959.81
Azusa Valley Water Co.	5.06299	6,581.89	7,088.19	7,594.49	8,100.78
Calif. American (Duarte)	1.84634	2,400.24	2,584.88	2,769.51	2,954.14
Covina Irrigating Co.	3.22577	4,193.50	4,516.08	4,838.66	5,161.23
Glendora, City of	4.75261	6,178.39	6,653.65	7,128.92	7,604.18
Golden State Water Co. - San Dimas District	1.73984	2,261.79	2,435.78	2,609.76	2,783.74
Los Angeles, County of	1.88292	2,447.80	2,636.09	2,824.38	3,012.67
Metropolitan Water Dist.	0.08349	108.54	116.89	125.24	133.58
Monrovia, City of	3.09472	4,023.14	4,332.61	4,642.08	4,951.55
Phillips, Alice B., et al	0.00025	0.33	0.35	0.37	0.40
Total of Integrated Producers	23.53881	30,600.45	32,954.33	35,308.21	37,662.10
Total of Pumpers	76.46119	99,399.55	107,045.67	114,691.79	122,337.90
TOTAL	**100.00000**	**130,000.00**	**140,000.00**	**150,000.00**	**160,000.00**