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September 26, 2023

Project No.: 941-80-22-06
SENT VIA: EMAIL

Mr. Peter Kavounas
Chino Basin Watermaster
9641 San Bernardino Road
Rancho Cucamonga, CA 91730

SUBJECT: Annual Streamflow Monitoring Report for Water Rights Permit 21225, Fiscal Year 2022/23

Dear Mr. Kavounas:

West Yost hereby submits the Annual Streamflow Monitoring Report for Fiscal Year (FY) 2022/23. This is the 15th Annual Report prepared pursuant to Term 20 of the Chino Basin Watermaster's (Watermaster) Water Rights Permit 21225. Per the terms of the March 20, 2007 Stipulation, Watermaster and the California Department of Fish and Wildlife (DFW) agreed that Watermaster would prepare estimates of monthly changes in discharge in each tributary of the Santa Ana River from which stormwater is diverted, prepare annual reports describing the data and methods used to prepare those estimates, and submit the annual reports to the DFW by October 1st of each year.[1] Each annual report covers the 12-month period of July 1st through June 30th.

This letter report describes the data and methodology used to assess stormwater diversion impacts and summarizes the diversion impact analysis for each tributary system for the FY 2022/23 reporting period.

As in past years, the stormwater and dry-weather discharges diverted for recharge within the Chino Basin during the reporting period were small relative to total discharge: about 15 percent of the total estimated discharge was diverted for recharge. About 89 percent of the diversions occurred between November 1st and March 30th, during storm events.

Watermaster's diversions for recharge reduce stormwater and dry-weather discharge, improve water quality in the Santa Ana River and its Chino Basin tributaries, and reduce channel erosion in these drainages, thereby offsetting some of the increase in stormwater and dry-weather discharge resulting from the urbanization of the watershed.

DATA COLLECTION AND METHODOLOGY

There are four main tributary systems to the Santa Ana River from which Watermaster and the Inland Empire Utilities Agency (IEUA)[2] divert stormwater and dry-weather discharges for groundwater recharge:

[1] In September 2010, Watermaster requested and the DFW approved an extension of the report due date from September 1st to October 1st of each year.

[2] The IEUA operates the diversion and recharge facilities on behalf of Watermaster, pursuant to Watermaster's permit.

San Antonio/Chino Creek (hereafter referred to as Chino Creek), Cucamonga Creek, Day Creek, and Etiwanda/San Sevaine Creek (hereafter referred to as San Sevaine Creek). Figure 1 shows these creeks, their drainage areas, and other significant hydrologic features. Chino Creek and Cucamonga Creek discharge directly to the Prado Dam Reservoir, while Day Creek and San Sevaine Creek discharge to the Santa Ana River upstream of the Prado Dam Reservoir. The impact of Watermaster's stormwater and dry-weather diversions is estimated relative to the reduction in discharge on each tributary system and the reduction in discharge from each tributary system to the Prado Dam Reservoir. For Chino Creek and Cucamonga Creek, these are one and the same.

Two of the four tributary systems, Chino and Cucamonga Creeks, are equipped with U.S. Geological Survey (USGS) stream gages, and average daily discharge data are available for these stations. Daily USGS data, daily stormwater and dry-weather discharge diversion data from the IEUA, and daily discharge data collected from other known point discharges (e.g., recycled and imported water discharges) are used to estimate the discharge of Chino and Cucamonga Creeks as they enter the Prado Dam Reservoir. These data are also used to reconstruct hydrographs for the tributaries as they would have been without stormwater and dry-weather discharge diversions.

Day Creek and San Sevaine Creek are not equipped with USGS gaging stations. The hydrographs for these two systems were estimated using West Yost's Waste Load Allocation Model (WLAM). The WLAM uses recharge basin and stream channel characteristics, daily precipitation, boundary inflows, and land use characteristics to estimate stormwater runoff, and subsequently routes stormwater as well as non-tributary inflows through the Santa Ana River Watershed. The WLAM was developed for and has been used by the Santa Ana Regional Water Quality Control Board (Regional Board) to evaluate the discharge and water quality impacts of existing and planned recycled water and stormwater discharges to the surface and groundwater resources of the watershed.[3] Watermaster and the City of Riverside used the WLAM to complete the only watershed-wide (system-wide) review of all appropriative water rights applications on the Santa Ana River in the 2006 State Water Resources Control Board hearing process. Watermaster most recently updated the WLAM in 2020 as part of the *2020 Safe Yield Recalculation.*[4] The updated version of the WLAM was used for this analysis, and the land use reflects 2017 conditions.

Daily discharge tables for key hydrologic components and for the aggregate of all hydrologic components are included in the enclosed appendices.

DIVERSION IMPACT ANALYSIS

During FY 2022/23, Watermaster diverted a total of 20,313 acre-feet (af) of stormwater and dry-weather discharge to recharge basins on the Chino, Cucamonga, Day, and San Sevaine tributary systems. Table 1 summarizes, by tributary, the monthly diversions for recharge at each spreading basin, as provided by the IEUA. Impact analyses of these diversions are provided below.

[3] Wildermuth Environmental, Inc. (2009). *2008 Santa Ana River Wasteload Allocation Model Report.* Prepared for the Basin Monitoring Program Task Force. May 2009.

[4] Wildermuth Environmental, Inc. (2020). *2020 Safe Yield Recalculation*. Prepared for the Chino Basin Watermaster. April 2020.

Chino Creek

The objective of this analysis is to illustrate the impact of Watermaster's diversions on flows in Chino Creek. Figure 1 shows the locations of significant points of activity on the Chino Creek tributary system, including Watermaster's points of diversion to recharge basins, USGS gaging stations, the Orange County Water District's (OCWD) OC-59 imported water turnout,[5] and the IEUA's recycled water discharge points. The impact of Watermaster's diversions of the flow in Chino Creek on discharge to the Prado Dam Reservoir is assessed at the point where recycled water from the IEUA RP-1 (Prado) recycling plant discharges to Chino Creek (see *WLAM-Estimated Points of Discharge* feature in Figure 1).[6] Because discharge to the Chino Creek tributary system from OCWD OC-59 occurs irregularly, it is not considered a part of the natural system and is not included in the reconstructed hydrograph of Chino Creek. This methodology is consistent with the Santa Ana River Watermaster's methodology of computing the annual volume-weighted TDS concentration of the Santa Ana River at the Prado Dam Reservoir.[7] The total discharge of imported water to Chino Creek through OC-59 during FY 2022/23 was about 7,380 af.

The estimated average daily discharge entering the Prado Dam Reservoir from Chino Creek is calculated from the average daily discharge measured at USGS gage 11073360 (Appendix A1) less any imported water discharges from OC-59 that were not diverted into recharge basins (Appendix A2 minus Appendix A3) plus the average daily discharge from each of the IEUA's recycled water discharge points (Carbon Canyon, RP1-Prado, and RP5) (Appendix A4). These discharges are summarized as monthly totals in rows one through four of Table 2a and are shown in detail as daily totals in Appendices A1 through A4. The resulting daily discharge time history, summarized in row five of Table 2a and shown in detail in Appendix A5, approximates actual daily discharge in Chino Creek after Watermaster's diversions and without OC-59 discharges. Note that this estimation does not account for additional stormwater flows generated by the drainage area for the Chino Creek downstream of USGS gage 11073360. The drainage area for these unaccounted-for flows is approximately 24 square miles and represents about 26 percent of the total Chino Creek drainage area. Thus, the relative impact of Watermaster's diversions is overstated.

The time history of stormwater and dry-weather discharge diversions is summarized in row six of Table 2a and shown in detail in Appendix A6. When added together, the daily discharge time histories from Appendices A5 and A6 yield what would have been the approximate daily discharge time history in Chino Creek had Watermaster not diverted stormwater and dry-weather flows for recharge. This reconstructed discharge time history is summarized in row seven of Table 2a and shown in detail in Appendix A7. The percent reduction in discharge entering the Prado Dam Reservoir due to Watermaster diversions relative to the estimated discharge without diversions is summarized in row eight of Table 2a.

The total discharge that entered the Prado Dam Reservoir from Chino Creek during FY 2022/23 was estimated to be about 25,499 af. Monthly discharges ranged from a low of about 134 af (August) to a high of about 6,365 af (March). Total diversions of stormwater and dry-weather flows from Chino Creek were

[5] The Metropolitan Water District of Southern California can supply the OCWD with State Water Project water through the OC-59 connection, which discharges water to San Antonio Creek, and subsequently to Chino Creek, through the Prado Basin, and into Orange County via the Santa Ana River. The IEUA, through an agreement with the OCWD, can divert water discharged at the OC-59 connection to the recharge facilities along the Chino Creek tributary system.

[6] Note that the IEUA RP-1 recycling plant has two discharge locations: one to Chino Creek (RP-1 Prado) and one to Cucamonga Creek (RP-1 Cucamonga).

[7] See for example, FIFTY-FIRST ANNUAL REPORT OF THE SANTA ANA RIVER WATERMASTER FOR WATER YEAR OCTOBER 1, 2020 - SEPTEMBER 30, 2021. Prepared in April 2022 by the Santa Ana River Watermaster for the ORANGE COUNTY WATER DISTRICT v. CITY OF CHINO, et al. CASE NO. 117628 - COUNTY OF ORANGE.

about 4,141 af. The estimated total discharge that would have entered the Prado Dam Reservoir without stormwater and dry-weather diversions is about 30,073 af; thus, about 14 percent of the total estimated discharge in Chino Creek was diverted for recharge in FY 2022/23. About 94 percent of the diversions on Chino Creek occurred between November and March and were coincident with the larger storm events of the year.

Figure 2a shows the estimated monthly discharge to the Prado Dam Reservoir, with and without diversions, as a stacked bar chart (af) and average daily discharge, with and without diversions, as an xy plot (cubic feet per second [cfs]). This figure illustrates that the relative magnitude of the stormwater and dry-weather diversions for recharge, shown as the light blue bar (monthly diversions), is small compared to the total estimated discharge entering the Prado Dam Reservoir. Figure 2a also shows that most recharge results from a few short-duration stormwater events (i.e., when the yellow line [average daily discharge with diversions] is significantly below the red line [average daily discharge without diversions] during the large upward peaks in the graph where stream flow is magnified by stormwater runoff).

Cucamonga Creek

Figure 1 shows the locations of significant points of activity on the Cucamonga Creek tributary system, including Watermaster's points of diversion to recharge basins, USGS gaging stations, and the IEUA's recycled water discharge points. The impact of Watermaster's diversions on discharge to the Santa Ana River at the Prado Dam Reservoir is assessed at the point where the concrete-lined channel of Cucamonga Creek ends (see *WLAM-Estimated Points of Discharge* feature in Figure 1). The estimated average daily discharge entering the Prado Dam Reservoir from Cucamonga Creek is approximated as the average daily discharge measured at USGS gage 11073495. The estimated discharge time history is summarized as a monthly total in row one of Table 2b and is shown in detail as daily values in Appendix B1. Note that this estimation does not account for additional stormwater flows generated by the drainage area for the Cucamonga Creek downstream of USGS gage 11073495. The drainage area for these unaccounted-for flows is approximately 13 square miles and represents about 15 percent of the total Cucamonga Creek drainage area. Thus, the relative impact of Watermaster's diversions is overstated.

The time history of stormwater and dry-weather discharge diversions is summarized in row two of Table 2b and shown in detail in Appendix B2. When added together, the daily discharge time histories from Appendices B1 and B2 yield what would have been the approximate daily discharge time history in Cucamonga Creek had Watermaster not diverted stormwater and dry-weather flows for recharge. This reconstructed discharge time history is summarized in row three of Table 2b and shown in detail in Appendix B3. The percent reduction in discharge entering the Prado Dam Reservoir relative to the estimated discharge without Watermaster diversions is summarized in row four of Table 2b.

The total discharge that entered the Prado Dam Reservoir from Cucamonga Creek during FY 2022/23 was estimated to be about 58,965 af. Monthly discharges ranged from a low of about 295 af (July) to a high of about 18,801 af (March). Total diversions from Cucamonga Creek were about 5,673 af. The estimated total discharge that would have entered Prado Dam Reservoir without stormwater and dry-weather diversions is about 64,637 af; thus, about 9 percent of the total discharge in Cucamonga Creek was diverted for recharge in FY 2022/23. 82 percent of the diversions on Cucamonga Creek occurred between November and March and were coincident with the larger storm events of the year.

Figure 2b shows total monthly discharge to the Prado Dam Reservoir, with and without diversions, as a stacked bar chart (af) and average daily discharge, with and without diversions, as an xy plot (cfs). This figure illustrates that the relative magnitude of the stormwater diversions for recharge is small compared to the total estimated discharge entering the Prado Dam Reservoir. Figure 2b also shows that most recharge results from a few short-duration stormwater events.

Day Creek

Figure 1 shows the locations of significant points of activity on the Day Creek tributary system, including Watermaster's points of diversion to recharge basins and the confluence of Day Creek and the Santa Ana River (see the *WLAM-Estimated Points of Discharge* feature in Figure 1). Day Creek's average daily discharge to the Santa Ana River was estimated using the WLAM. The estimated daily discharge represents discharge to the Santa Ana River without stormwater diversions for recharge. The discharge time history estimated by the WLAM is summarized as monthly totals in row one of Table 2c and is shown in detail as daily values in Appendix C1. Because the WLAM does not simulate dry-weather flows, the estimated daily discharge underestimates actual flows on Day Creek and, thus, overestimates the impact of diversions on discharge to the Santa Ana River. To correct for this underestimation, dry-weather diversions are added together with the WLAM-estimated discharge to create a reconstructed hydrograph of Day Creek.

The time history of stormwater and dry-weather discharge diversions is summarized in row two of Table 2c and shown in detail in Appendix C2. The "diversion" values reported by the IEUA represent the recharge of stormwater and dry weather flow in basins. There are instances when the reported diversions are in excess of total WLAM estimated stormwater flow; in such cases, the excess diversions are assumed to be dry-weather flows. In other instances, when the volume of stormwater diverted for recharge is large, the recharge may continue to occur after storm flows in the creek have stopped (i.e., when the WLAM estimated flow is zero). Periods of recharge that are attributed to stormwater are highlighted grey in Appendices C1, C2, and C3. During storm periods, dry-weather flows are not estimated and are assumed to be zero. All diversions that occur during non-storm periods are considered dry-weather flows. The time history of dry-weather flow diversions is summarized in row three of Table 2c and shown in detail in Appendix C3. None of the diversions that occurred in FY 2022/23 were estimated to be dry-weather flows. Note that dry-weather flows that occur downstream of the recharge basins are not estimated. Thus, the relative impact of Watermaster's diversions is overstated.

When added together, the stormwater discharge estimated by the WLAM (row one of Table 2c), and the estimated dry-weather diversions (row three of Table 2c) yield the total estimated discharge from Day Creek to the Santa Ana River. This total estimated discharge without diversions is summarized in row four of Table 2c. Subtracting the diversions (row two of Table 2c) from the total estimated discharges (row four of Table 2c) yields an estimated monthly discharge from Day Creek to the Santa Ana River after Watermaster diversions. This calculation is done monthly. Within each storm period (highlighted in grey in Appendices C1, C2, and C3), total diversions are subtracted from the total stormwater flows generated during the storm, including diversions that were recharged on dates after the actual stormwater flows were generated. The estimated monthly discharge is summarized in row five of Table 2c.

The percent reduction in discharge entering the Santa Ana River from Day Creek relative to the estimated discharge without Watermaster diversions is summarized in row six of Table 2c. Table 2c also summarizes the discharge measured at USGS gage 11066460 (row seven), the closest gage on the Santa Ana River upstream of its confluence with Day Creek (see Figure 1). The percent reduction in discharge to the Prado Dam Reservoir from Day Creek, relative to discharge in the Santa Ana River at USGS gage 11066460, is summarized in row eight of Table 2c.

Total discharge to the Santa Ana River from Day Creek during FY 2022/23 was estimated to be about 13,475 af. Monthly discharges range from a low of zero af (primarily summer months) to a high of about 4,039 af (March). Total diversions from Day Creek were about 2,227 af, of which none were dry-weather flows. The estimated discharge that would have entered the Santa Ana River without stormwater and dry-weather diversions is 15,702 af; thus, about 14 percent of the total discharge in Day Creek was diverted for recharge in FY 2022/23. The percent reduction in discharge entering the Prado Dam Reservoir was about 2.2 percent. 94 percent of the diversions on Day Creek occurred between November and March and were coincident with the larger storm events of the year.

Figure 2c shows total monthly discharge, with and without diversions, as a stacked bar chart (af) and average daily discharge, with and without diversions, as an xy plot (cfs). Stormwater runoff accounted for 100 percent of Watermaster's diversions, which occurred during short-duration events.

San Sevaine Creek

Figure 1 shows the locations of significant points of activity on the San Sevaine Creek tributary system, including Watermaster's points of diversion to recharge basins and the confluence of San Sevaine Creek and the Santa Ana River (see *WLAM-Estimated Points of Discharge* feature on Figure 1). San Sevaine Creek's average daily discharge to the Santa Ana River was also estimated using the WLAM. The estimated daily discharge represents discharge to the Santa Ana River without stormwater diversions for recharge. The discharge time history estimated by the WLAM is summarized as monthly totals in row 1 of Table 2d and is shown in detail as daily values in Appendix D1. Because the WLAM does not simulate dry-weather flows, the estimated daily discharge underestimates actual flows on San Sevaine Creek and, thus, overestimates the impact of diversions on discharge to the Santa Ana River. To correct for this underestimation, dry-weather diversions are added together with the WLAM estimated discharge to create a reconstructed hydrograph of San Sevaine Creek.

The time history of stormwater and dry-weather discharge diversions is summarized in row two of Table 2d and shown in detail in Appendix D2. The "diversion" values reported by the IEUA represent the recharge of stormwater and dry weather flow in basins. There are instances when the reported diversions are in excess of total WLAM estimated stormwater flow; in such cases, the excess diversions are assumed to be dry-weather flows. In other instances, when the volume of stormwater diverted for recharge is large, the recharge may continue to occur after storm flows in the creek have stopped (i.e., when the WLAM estimated flow is zero). Periods of recharge that are attributed to stormwater are highlighted grey in Appendices D1, D2, and D3. During storm periods, dry-weather flows are not estimated and are assumed to be 0. All diversions that occur during non-storm periods are considered dry-weather flows. The time history of dry-weather flow diversions is summarized in row 3 of Table 2d and shown in detail in Appendix D3. Note that dry-weather flows that occur downstream of the recharge basins are not estimated. Thus, the relative impact of Watermaster's diversions is overstated.

When added together, the stormwater discharge estimated by the WLAM (row one of Table 2d) and the estimated dry-weather diversions (row three of Table 2d) yield the total estimated discharge from San Sevaine Creek to the Santa Ana River. This total discharge is summarized in row four of Table 2d. Subtracting the diversions (row two of Table 2d) from the total estimated discharges (row four of Table 2d) yields an estimated monthly discharge from San Sevaine Creek to the Santa Ana River after Watermaster diversions. This calculation is done monthly. Within each storm period (highlighted in grey in Appendices D1, D2, and D3), total diversions are subtracted from the total stormwater flows generated during the storm, including diversions that were recharged on dates after actual stormwater flows were generated. In some cases, a diversion taken at the beginning of one month was subtracted from stormwater flows generated in a previous month. The estimated monthly discharge is summarized in row five of Table 2d.

The percent reduction in discharge entering the Santa Ana River from San Sevaine Creek relative to the estimated discharge without Watermaster diversions is summarized in row six of Table 2d. Table 2d also summarizes the discharge measured at USGS gage 11066460 (row seven), the closest gage on the Santa Ana River upstream of its confluence with San Sevaine Creek (see Figure 1). The percent reduction in discharge to the Prado Dam Reservoir from San Sevaine Creek, relative to discharge in the Santa Ana River at USGS gage 11066460, is summarized in row eight of Table 2d.

Total discharge to the Santa Ana River from San Sevaine Creek during FY 2022/23 was estimated to be about 26,027 af. Monthly discharges ranged from a low of zero af (primarily summer months) to a high of about 9,450 af (March). Total diversions from San Sevaine Creek were about 8,267 af, of which about 545 af were dry-weather flows. The estimated discharge that would have entered the Santa Ana River without stormwater and dry-weather diversions is 34,294; thus, about 24 percent of the total discharge in San Sevaine Creek was diverted for recharge in FY 2022/23. The percent reduction in discharge entering the Prado Dam Reservoir was about 8 percent. On San Sevaine Creek, 84 percent of the diversions occurred between November and March and were coincident with the larger storm events of the year.

Figure 2d shows total monthly discharge, with and without diversions, as a stacked bar chart (af) and average daily discharge, with and without diversions, as an xy plot (cfs). Stormwater runoff accounted for about 93 percent of Watermaster's diversions, which occurred during short-duration events, while the remainder of the diversions were dry-weather flows.

Should you have any questions regarding the information contained herein, please contact Amanda Gateley (949-461-1138 or agateley@westyost.com) or Carolina Sanchez (949-600-7504 or csanchez@westyost.com).

Sincerely,
WEST YOST

Amanda Gateley
Geologist

Carolina Sanchez
Engineer, PE
RCE #85598

Table 1. Total Monthly Stormwater and Dry-Weather Recharge Fiscal Year 2022/23 (af)													
Tributary System	**Jul-22**	**Aug-22**	**Sep-22**	**Oct-22**	**Nov-22**	**Dec-22**	**Jan-23**	**Feb-23**	**Mar-23**	**Apr-23**	**May-23**	**Jun-23**	**Total**
Chino Creek													
College Heights	0	0	0	0	2	0	0	18	21	1	7	0	50
Upland	0	0	18	7	107	97	168	131	320	0	25	1	872
Montclair	0	0	38	25	314	252	537	431	726	7	49	0	2,378
Brooks Street	0	0	6	21	67	69	311	86	236	4	39	2	841
Tributary Total	**0**	**0**	**62**	**53**	**489**	**418**	**1,016**	**666**	**1,303**	**12**	**120**	**3**	**4,142**
Cucamonga Creek													
7th and 8th Street	9	6	76	50	212	285	174	209	229	10	126	142	1,529
Ely	125	24	34	25	123	286	711	310	483	11	100	2	2,233
Turner 1 and 2	9	11	22	78	130	191	205	106	247	11	16	8	1,035
Turner 3 and 4	16	17	60	6	102	98	155	29	28	0	2	0	513
Grove	1	2	1	5	70	76	54	58	71	0	26	1	365
Tributary Total	**161**	**60**	**192**	**164**	**637**	**936**	**1,299**	**712**	**1,058**	**32**	**271**	**152**	**5,675**
Day Creek													
Lower Day	0	2	32	7	101	73	543	246	1,119	91	12	1	2,226
Tributary Total	**0**	**2**	**32**	**7**	**101**	**73**	**543**	**246**	**1,119**	**91**	**12**	**1**	**2,226**
San Sevaine Creek													
San Sevaine	0	3	43	8	222	272	426	355	628	254	59	0	2,271
Jurupa	0	0	0	9	56	95	65	211	216	44	34	17	748
Hickory	0	0	28	2	65	10	65	41	37	0	0	0	249
Banana	0	0	1	1	64	96	66	74	59	0	23	0	385
RP-3	1	0	2	16	54	99	381	149	378	42	6	3	1,131
Declez	4	5	17	58	128	206	86	194	176	8	78	9	969
Etiwanda Debris Basin	0	0	0	0	37	76	318	76	356	274	82	0	1,219
Victoria	0	2	28	8	88	106	375	120	428	108	34	1	1,298
Tributary Total	**5**	**10**	**119**	**102**	**714**	**961**	**1,781**	**1,221**	**2,279**	**731**	**318**	**29**	**8,270**
Tributary System Total	**166**	**72**	**405**	**325**	**1,942**	**2,388**	**4,639**	**2,845**	**5,759**	**865**	**721**	**185**	**20,313**

Note: Recharge volumes represent diversions of both stormwater and dry-weather discharge; recharge volumes are rounded to the nearest whole number.

Table 2a. Impact of Stormwater Diversions on Total Monthly Discharge Entering the Prado Dam Reservoir from Chino Creek for FY 2022/23, (af)														
Row	**Discharge Components**	**Jul-22**	**Aug-22**	**Sep-22**	**Oct-22**	**Nov-22**	**Dec-22**	**Jan-23**	**Feb-23**	**Mar-23**	**Apr-23**	**May-23**	**Jun-23**	**Total**
(1)	Discharge in Chino Creek at USGS Gage 11073360[(a)]	189	30	142	114	1,899	1,109	4,510	2,064	4,739	65	457	54	**15,372**
(2)	Discharge to San Antonio Creek from OCWD OC-59	0	0	0	0	0	0	0	0	0	0	3,328	4,502	**7,830**
(3)	Diversions of OC-59 Imported Water to Recharge Basins	0	0	0	0	0	0	0	0	0	0	1,677	2,269	**3,946**
(4)	Recycled Water Discharge from IEUA's CCWRF, RP-5, and RP-1 (Prado)	110	104	207	700	1,084	1,293	1,704	1,186	1,626	1,182	903	539	**10,638**
(5) =(1)-[(2)-(3)]+(4)	Estimated Discharge Entering the Prado Dam Reservoir	299	134	349	814	2,983	2,402	6,214	3,250	6,365	1,247	903	539	**25,499**
(6)	Stormwater and Dry-Weather Discharge Diversions	0	0	62	53	489	418	1,015	666	1,303	12	120	3	**4,141**
(7) =(5)+(6)	Estimated Discharge That Would Have Entered the Prado Dam Reservoir *without* Stormwater and Dry-Weather Diversions	299	133	411	867	3,472	2,820	7,230	3,916	7,668	1,259	1,458	541	**30,073**
(8) =(6)/(7)	Percent Reduction in Discharge Entering the Prado Dam Reservoir Relative to the Estimated Discharge *without* Diversions	0%	0%	15%	6%	14%	15%	14%	17%	17%	1%	8%	1%	**14%**

[(a)]For July 1, 2022 to December 2, 2022, data have been approved by the USGS; data after December 2, 2022 are provisional.

Table 2b. Impact of Stormwater Diversions on Total Monthly Discharge Entering the Prado Dam Reservoir from Cucamonga Creek for FY 2022/23, (af)

Row	Discharge Components	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Total
(1)	Discharge Entering the Prado Dam Reservoir after Stormwater and Dry-Weather Diversions (USGS Gage 11073495)[(a)]	295	484	1,096	430	4,219	6,754	13,567	5,845	18,801	4,064	2,741	669	**58,965**
(2)	Stormwater and Dry-Weather Discharge Diversions	161	60	192	164	637	936	1,299	712	1,058	32	270	152	**5,673**
(3) =(1)+(2)	Estimated Discharge That Would Have Entered the Prado Dam Reservoir *without* Stormwater and Dry-Weather Diversions	456	544	1,287	594	4,855	7,689	14,866	6,558	19,859	4,096	3,012	821	**64,637**
(4) =(2)/(3)	Percent Reduction in Discharge Entering the Prado Dam Reservoir Relative to the Estimated Discharge *without* Diversions	35.3%	11.0%	14.9%	27.6%	13.1%	12.2%	8.7%	10.9%	5.3%	0.8%	9.0%	18.5%	**9%**

[(a)]For July 1, 2022 to December 1, 2022, data have been approved by the USGS; data after December 1, 2022 are provisional.

Table 2c. Impact of Stormwater Diversions on Total Monthly Discharge Entering the Santa Ana River from Day Creek for FY 2022/23, (af)

Row	Discharge Components	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Total
(1)	Discharge Entering the Santa Ana River *without* Stormwater and Dry-Weather Diversions *or* Dry-Weather Flows[a]	0	0	36	32	1,212	1,384	4,582	2,312	5,756	94	291	0	**15,699**
(2)	Stormwater and Dry-Weather Discharge Diversions[b]	0	2	32	7	101	73	543	246	1,119	91	12	1	**2,227**
(3)	Diversions Attributable to Dry-Weather Flows[c]	0	2	0	0	0	0	0	0	0	0	0	1	**3**
(4) =(1)+(3)	Total Discharge Entering the Santa Ana River *without* Stormwater and Dry-Weather Diversions[d]	0	2	36	32	1,212	1,384	4,582	2,312	5,756	94	291	1	**15,702**
(5) =(4)-(2)	Estimated Discharge Entering the Santa Ana River after Stormwater and Dry-Weather Diversions	0	0	4	25	1,111	1,311	4,039	2,066	4,637	3	279	0	**13,475**
(6) =(2)/(4)	Percent Reduction in Discharge Entering the Santa Ana River Relative to Discharge *without* Diversions	0%	100%	89%	22%	8%	5%	12%	11%	19%	97%	4%	100%	**14%**
(7)	Discharge in the Santa Ana River at USGS Gage 11066460	1,122	991	1,890	1,908	5,513	3,762	21,392	11,227	33,130	8,241	7,039	2,813	**99,028**
(8) =(2)/(7)	Percent Reduction in Discharge Entering the Santa Ana River Relative to Discharge at 11066460[e]	0.0%	0.2%	1.7%	0.4%	1.8%	1.9%	2.5%	2.2%	3.4%	1.1%	0.2%	0.0%	**2.2%**

[a] Estimated using the WLAM.

[b] Calculated on a monthly basis.

[c] Calculated on a monthly basis. Note that the WLAM does not simulate dry-weather flows on the Day Creek tributary system. Thus, there are dates on which the measured diversions from Day Creek are greater than the WLAM's estimated discharge to the Santa Ana River without diversions. For these dates, the difference between the measured diversions and estimated discharge can be attributed to dry-weather discharge. Dry-weather diversions that occur while stormwater is being recharged (highlighted in grey in Appendices C1-C3) or downstream of the recharge basins are not included in these calculations.

[d] Calculated on a monthly basis.

[e] For July 1, 2022 to June 20, 2023, data have been approved by the USGS; data after June 20, 2023 are provisional.

Table 2d. Impact of Stormwater Diversions on Total Monthly Discharge Entering the Santa Ana River from San Sevaine Creek for FY 2022/23, (af)

Row	Discharge Components	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Total
(1)	Discharge Entering the Santa Ana River *without* Stormwater and Dry-Weather Diversions *or* Dry-Weather Flows[a]	1	0	421	108	2,303	3,412	9,068	5,696	11,728	597	412	3	**33,749**
(2)	Stormwater and Dry-Weather Discharge Diversions[b]	5	10	119	102	714	961	1,780	1,221	2,278	730	318	29	**8,267**
(3)	Diversions Attributable to Dry-Weather Flows[c]	4	10	50	12	8	4	36	136	0	133	124	28	**545**
(4) =(1)+(3)	Total Discharge Entering the Santa Ana River *without* Stormwater and Dry-Weather Diversions[d]	5	10	471	120	2,311	3,416	9,104	5,832	11,728	730	536	31	**34,294**
(5) =(4)-(2)	Estimated Discharge Entering the Santa Ana River after Stormwater and Dry-Weather Diversions	0	0	352	18	1,597	2,455	7,324	4,611	9,450	0	218	2	**26,027**
(6) =(2)/(4)	Percent Reduction in Discharge Entering the Santa Ana River Relative to Discharge *without* Diversions	100%	100%	25%	85%	31%	28%	20%	21%	19%	100%	59%	94%	**24%**
(7)	Discharge in the Santa Ana River at USGS Gage 11066460	1,122	991	1,890	1,908	5,513	3,762	21,392	11,227	33,130	8,241	7,039	2,813	**99,028**
(8) =(2)/(7)	Percent Reduction in Discharge Entering the Santa Ana River Relative to Discharge at 11066460[e]	0.4%	1.0%	6.3%	5.3%	13.0%	25.5%	8.3%	10.9%	6.9%	8.9%	4.5%	1.0%	**8%**

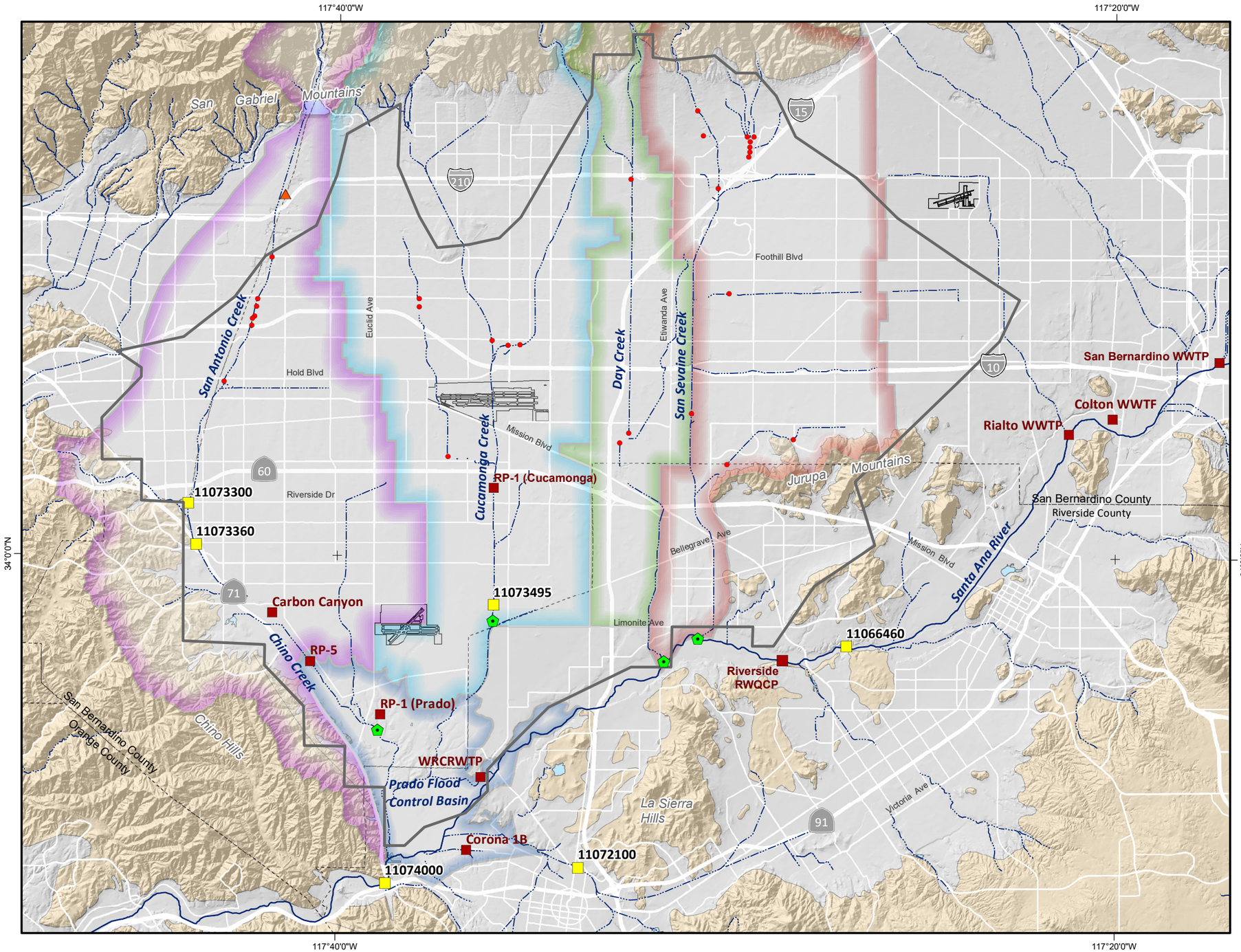
[a] Estimated using the WLAM.

[b] Calculated on a monthly basis.

[c] Calculated on a monthly basis. Note that the WLAM does not simulate dry-weather flows on the San Sevaine Creek tributary system. Thus, there are dates on which the measured diversions from San Sevaine Creek are greater than the WLAM's estimated discharge to the Santa Ana River without diversions. For these dates, the difference between the measured diversions and estimated discharge can be attributed to dry-weather discharge. Dry-weather diversions that occur while stormwater is being recharged (highlighted in grey in Appendices D1-D3) or downstream of the recharge basins are not included in these calculations.

[d] Calculated on a monthly basis.

[e] For July 1, 2022 to June 20, 2023, data have been approved by the USGS; data after June 20, 2023 are provisional.



Streams & Flood Control Channels

Flood Control & Conservation Basins

Permitted Points of Diversion

Active USGS Gaging Stations

Recycled Water Discharge Location

WLAM-Estimated Points of Discharge

OCWD OC-59 State Water Project Turnout

Chino Basin Legal Boundary

Drainage Areas

Chino Creek System

Cucamonga Creek System

Day Creek System

San Sevaine Creek System

Prado Dam Reservoir

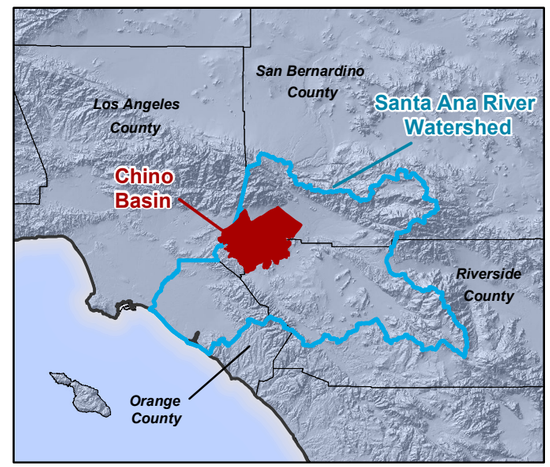
Geology

Water-Bearing Sediments

Quaternary Alluvium

Consolidated Bedrock

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



Prepared by:

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Author: AG

Date: 9/8/2023

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N

0 3 6 Miles

0 4 8 Km

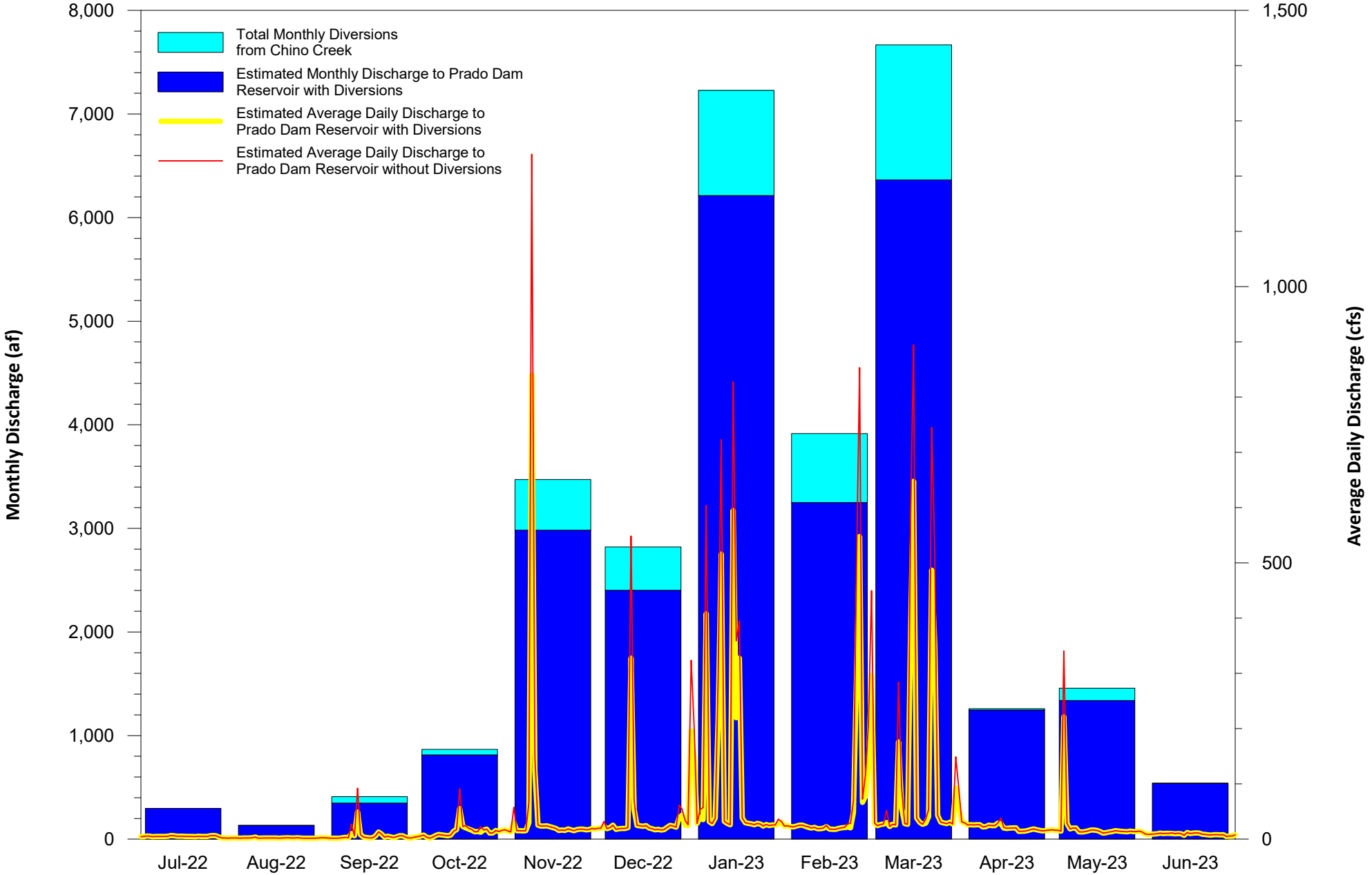
Prepared for:

Chino Basin Watermaster
Water Rights Compliance Reporting
FY 2022/23

Stormwater Recharge Points of Diversion
Water Rights Permit 21225

Figure 1

Figure 2a
Estimated Discharge from Chino Creek to Prado Dam Reservoir
With and without Stormwater and Dry-Weather Discharge Diversions



Author: AG
Date: 9/8/2023

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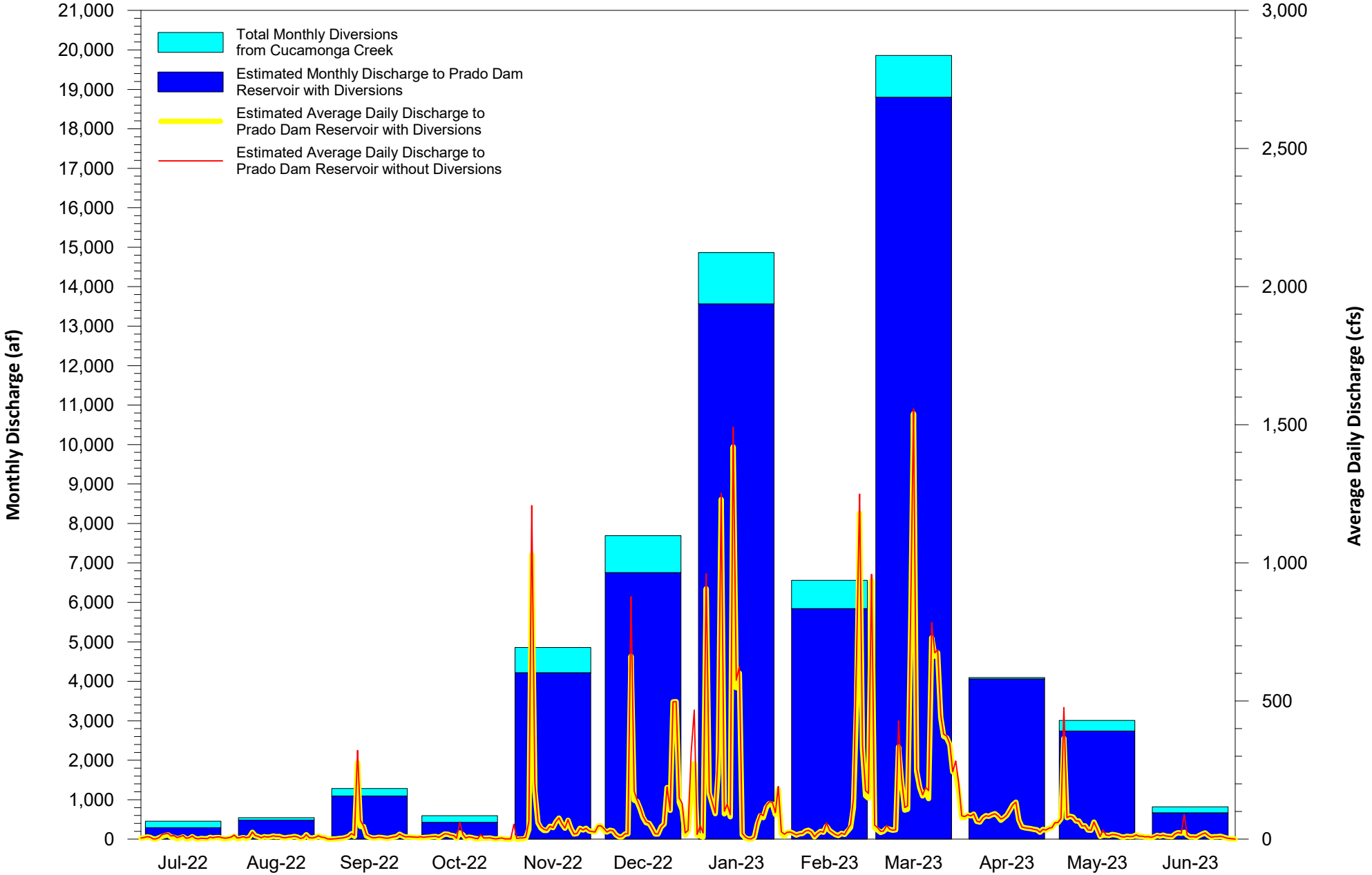
Figure 2b
Estimated Discharge from Cucamonga Creek to Prado Dam Reservoir
With and without Stormwater and Dry-Weather Discharge Diversions



Author: AG
Date: 9/8/2023

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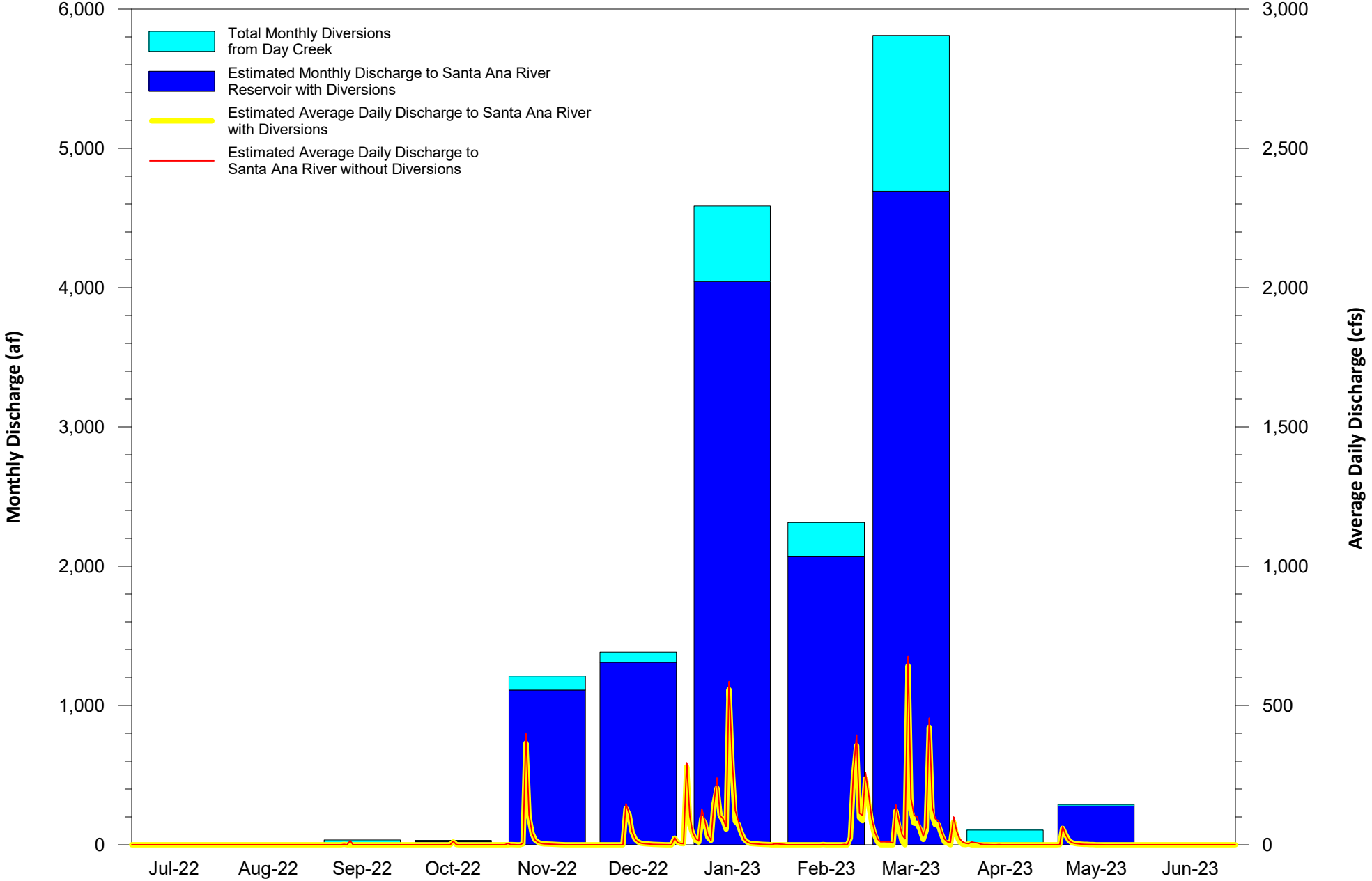
Figure 2c
Estimated Discharge from Day Creek to the Santa Ana River
With and without Stormwater and Dry-Weather Discharge Diversions



Author: AG
Date: 9/8/2023

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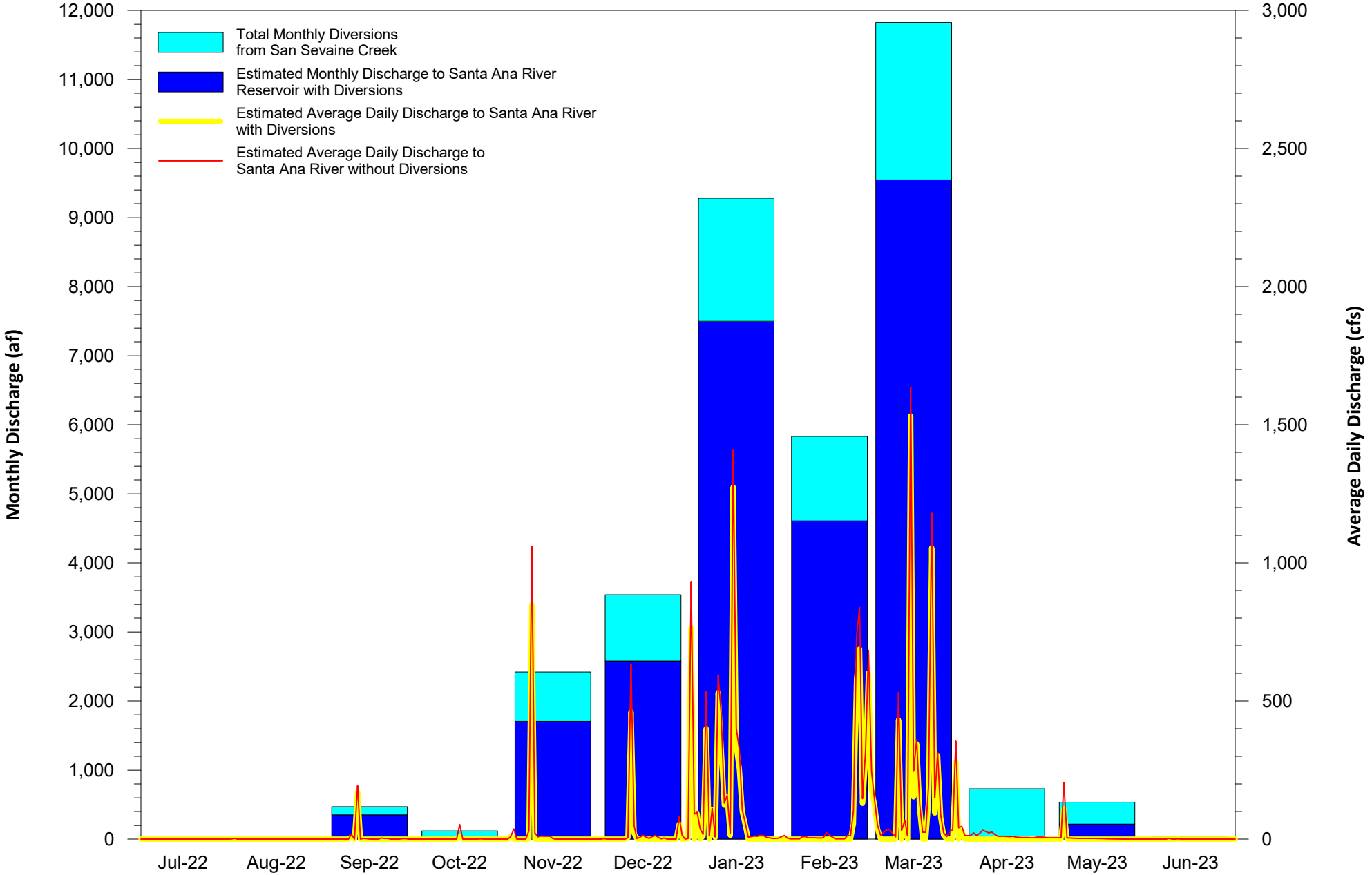
Figure 2d
Estimated Discharge from San Sevaine Creek to the Santa Ana River
With and without Stormwater and Dry-Weather Discharge Diversions



Author: AG
Date: 9/8/2023

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Appendix A1 – A7

Appendix A1

Average Daily Discharge at USGS Gage 11073360 on Chino Creek, (cfs)

Day	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23
1	3.01	0.49	0.71	1.11	0.43	1.33	118.00	0.71	266.00	3.42	0.46	0.43
2	3.10	0.46	0.32	0.29	16.70	3.19	2.19	0.75	2.57	2.13	0.43	0.39
3	3.46	0.47	0.33	0.29	0.68	0.92	14.10	0.80	1.62	2.29	0.44	0.39
4	3.16	0.45	0.34	0.35	0.72	1.72	8.91	0.75	1.49	1.30	205.00	0.39
5	3.04	0.50	0.38	0.42	0.65	3.08	380.00	0.80	1.46	2.36	10.60	0.42
6	3.26	0.45	0.35	0.33	0.59	0.70	2.51	0.73	5.28	2.31	0.80	0.82
7	3.53	0.42	0.46	0.54	10.10	0.85	1.26	0.77	1.28	1.37	0.69	1.05
8	3.28	0.42	0.97	0.41	811.00	0.86	0.94	0.65	1.17	1.43	0.69	1.07
9	3.38	0.42	8.68	0.41	97.00	0.25	186.00	0.71	1.10	1.52	0.60	1.22
10	3.40	0.46	2.17	0.36	3.77	0.26	482.00	1.08	153.00	1.69	0.53	1.02
11	3.54	0.45	41.50	0.40	1.05	302.00	4.02	0.63	30.60	1.85	0.48	1.01
12	3.51	0.50	1.86	0.74	0.67	29.80	1.72	0.55	3.00	1.75	0.51	1.02
13	3.52	0.66	0.68	0.43	0.62	0.97	1.49	1.05	2.19	1.41	0.53	0.99
14	3.67	0.66	0.45	0.50	0.74	0.50	567.00	3.72	363.00	0.63	0.53	1.05
15	3.59	0.47	0.39	38.80	0.84	0.70	187.00	0.60	616.00	0.40	0.52	1.02
16	3.61	0.32	0.62	3.27	0.75	0.66	292.00	0.57	6.74	0.39	0.51	1.02
17	3.38	0.37	0.42	0.99	0.89	0.35	4.61	0.45	2.71	0.44	0.49	1.02
18	3.30	0.78	0.61	0.70	0.76	0.40	2.36	0.50	2.44	0.47	0.48	1.00
19	3.07	1.01	0.54	0.55	0.72	0.42	1.98	0.43	2.73	0.46	0.48	1.39
20	3.98	0.54	1.12	1.12	0.63	0.33	1.68	0.43	14.20	0.51	0.46	0.95
21	3.61	0.30	1.69	0.51	0.67	0.28	1.47	2.41	458.00	0.50	0.46	0.95
22	3.52	0.74	1.70	0.78	0.65	0.33	1.25	1.68	319.00	0.50	0.47	1.02
23	3.60	0.35	0.45	0.73	0.61	0.33	1.06	27.00	13.40	0.51	0.45	1.01
24	4.12	0.36	0.74	0.35	0.73	0.28	1.01	268.00	4.09	0.48	0.47	1.35
25	4.05	0.36	1.94	0.34	0.80	0.27	0.91	521.00	2.99	0.44	0.47	0.99
26	4.46	0.38	0.44	0.39	0.88	0.28	1.06	37.80	2.37	0.41	0.43	0.90
27	2.31	0.44	0.44	0.55	0.82	15.60	1.21	53.80	2.83	0.40	0.42	0.95
28	0.45	0.33	0.52	0.48	1.06	18.50	1.25	112.00	3.73	0.46	0.44	0.87
29	0.46	0.54	0.47	0.44	0.88	0.50	1.61	--	67.30	0.41	0.42	0.81
30	0.40	0.48	0.53	0.41	0.95	0.66	2.52	--	32.10	0.41	0.42	0.78
31	0.51	0.39	--	0.43	--	173.00	0.79	--	4.94	--	0.54	--
Minimum	**0.4**	**0.3**	**0.3**	**0.3**	**0.4**	**0.3**	**0.8**	**0.4**	**1.1**	**0.4**	**0.4**	**0.4**
Maximum	**4.5**	**1.0**	**41.5**	**38.8**	**811.0**	**302.0**	**567.0**	**521.0**	**616.0**	**3.4**	**205.0**	**1.4**
Average	**3.2**	**0.5**	**2.4**	**1.9**	**31.9**	**12.9**	**75.8**	**37.2**	**79.5**	**1.1**	**7.7**	**0.9**
Total Volume (af)	**189.0**	**29.7**	**142.5**	**113.9**	**1,898.9**	**1,109.4**	**4,510.2**	**2,063.5**	**4,739.2**	**64.8**	**456.6**	**54.1**

Note: For July 1, 2022 to December 2, 2022, data have been approved by the USGS; data after December 2, 2022 are provisional.

Appendix A2 Average Daily Discharge at OC-59 on San Antonio Creek, (cfs)												
Day	**Jul-22**	**Aug-22**	**Sep-22**	**Oct-22**	**Nov-22**	**Dec-22**	**Jan-23**	**Feb-23**	**Mar-23**	**Apr-23**	**May-23**	**Jun-23**
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	78.4
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	68.2
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	67.8
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	67.6
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	68.1
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	67.1
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66.7
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66.7
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0	66.2
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	70.0	65.8
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	71.0	65.7
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	71.0	66.3
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	71.0	66.4
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	71.0	65.5
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	71.8	65.5
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	69.1	65.7
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	67.6	65.7
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66.7	65.8
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66.3	65.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66.1	64.7
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	67.4	63.1
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	68.4	68.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66.7	65.6
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	75.6	66.2
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	88.3	67.6
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	87.5	92.5
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	87.9	128.4
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	89.3	128.0
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	89.1	125.3
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	88.7	126.3
31	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	87.5	-
Minimum	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**63.1**
Maximum	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**89.3**	**128.4**
Average	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**54.1**	**75.7**
Total Volume (af)	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**3,328.3**	**4,502.3**

Appendix A3
Daily Diversions of OC-59 Water to Recharge Basins from the Chino Creek Tributary System, (cfs)

Day	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	39.5
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	34.4
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	34.2
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	34.1
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	34.3
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.8
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.6
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.6
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.1	33.4
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35.3	33.2
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35.8	33.1
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35.8	33.4
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35.8	33.5
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35.8	33.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36.2	33.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	34.9	33.1
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	34.1	33.1
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.6	33.2
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.4	32.8
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.3	32.6
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	34.0	31.8
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	34.5	34.3
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.6	33.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	38.1	33.4
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	44.5	34.1
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	44.1	46.6
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	44.3	64.7
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	45.0	64.5
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	44.9	63.1
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	44.7	63.7
31	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	44.1	-
Minimum	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**31.8**
Maximum	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**45.0**	**64.7**
Average	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**27.3**	**38.1**
Total Volume (af)	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**1,677.4**	**2,269.4**

Note: On days when the non-replenishment discharge recorded was greater than the measured recharge, the total diversion volume was manually changed to 0.

Appendix A4
Average Daily Discharge of All IEUA Recycled Water Effluent Discharges to Chino Creek, (cfs)

Day	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23
1	1.5	1.5	1.5	3.4	12.4	18.4	27.7	23.5	30.0	26.0	15.6	8.7
2	1.9	1.5	1.5	5.4	13.3	20.0	26.3	22.3	25.8	23.7	15.6	9.0
3	2.3	1.4	1.5	7.0	14.5	18.3	25.8	21.4	23.1	24.0	14.2	9.3
4	2.3	1.5	1.5	3.2	14.7	19.3	26.6	22.9	24.9	24.6	16.7	9.6
5	1.7	1.5	1.5	1.5	14.4	22.3	28.3	24.4	25.8	23.7	18.1	10.8
6	1.5	1.5	2.2	3.6	14.7	17.0	29.1	24.8	24.9	24.0	17.6	10.1
7	1.5	2.2	2.8	6.2	19.5	18.3	27.1	22.7	21.8	20.9	19.6	10.7
8	1.5	3.2	1.7	8.4	29.2	18.6	37.1	20.9	26.0	21.4	19.3	10.7
9	1.5	1.5	1.5	7.4	27.4	19.0	30.3	19.5	24.6	23.7	13.3	10.4
10	1.9	1.5	3.9	6.7	21.8	20.6	34.0	20.4	23.4	22.9	13.0	9.9
11	3.1	1.5	7.7	5.7	22.9	25.7	28.0	18.4	25.8	22.7	13.9	10.2
12	2.8	1.5	6.3	6.8	23.2	24.1	26.8	18.6	25.4	27.4	15.0	9.6
13	1.9	1.5	3.1	14.2	23.5	24.0	24.8	18.9	24.9	26.6	16.6	7.1
14	1.5	1.5	2.5	16.7	22.0	23.5	27.9	18.9	24.8	19.5	16.4	12.2
15	1.9	1.5	1.7	16.4	20.0	22.7	33.0	17.5	31.9	19.2	15.6	10.2
16	1.5	1.5	1.9	19.8	18.7	24.0	35.9	17.3	31.3	19.8	13.8	11.0
17	1.5	1.7	5.4	19.5	14.7	19.6	33.6	17.3	27.9	19.8	11.1	11.3
18	1.5	1.5	12.5	17.3	15.9	18.7	27.4	18.9	24.4	20.0	11.8	11.1
19	1.5	1.5	9.0	15.5	15.2	16.7	26.6	20.1	26.1	13.6	13.2	9.0
20	1.5	1.5	2.5	12.2	18.1	17.5	26.3	20.7	26.5	13.8	13.9	8.7
21	1.5	1.9	3.7	13.3	16.2	16.2	24.9	19.8	29.1	14.1	15.5	7.7
22	1.5	1.9	2.6	11.9	14.7	16.9	27.2	18.9	33.0	15.3	14.9	7.6
23	1.5	1.7	2.3	15.8	16.9	20.9	26.1	21.4	29.4	17.0	14.2	8.2
24	2.2	1.5	3.6	17.6	17.6	24.8	22.7	25.5	26.8	18.3	13.9	8.2
25	2.5	1.5	4.3	10.8	17.3	23.4	25.7	26.6	26.5	16.4	13.5	7.7
26	1.5	1.5	5.7	11.1	16.1	21.7	23.7	28.8	26.0	15.3	14.7	8.4
27	1.5	1.5	3.4	15.2	16.7	23.5	24.4	24.3	27.9	14.5	13.6	4.8
28	1.5	1.5	1.5	13.3	18.3	24.9	24.4	23.5	23.5	15.3	13.9	5.7
29	1.5	1.7	1.5	15.3	17.6	24.3	26.3	-	25.4	15.9	14.7	5.9
30	1.5	2.2	3.1	16.7	18.9	23.8	27.9	-	26.3	16.7	12.8	7.9
31	1.5	2.0	-	14.7	-	23.4	23.1	-	26.6	-	9.3	-
Minimum	**1.5**	**1.4**	**1.5**	**1.5**	**12.4**	**16.2**	**22.7**	**17.3**	**21.8**	**13.6**	**9.3**	**4.8**
Maximum	**3.1**	**3.2**	**12.5**	**19.8**	**29.2**	**25.7**	**37.1**	**28.8**	**33.0**	**27.4**	**19.6**	**12.2**
Average	**1.8**	**1.7**	**3.5**	**11.4**	**18.2**	**21.0**	**27.7**	**21.4**	**26.4**	**19.9**	**14.7**	**9.1**
Total Volume (af)	**109.6**	**103.7**	**206.8**	**699.7**	**1,083.9**	**1,293.2**	**1,703.8**	**1,186.4**	**1,625.6**	**1,182.1**	**903.5**	**538.6**

Appendix A5
Estimated Average Daily Discharge from Chino Creek to Prado Dam Reservoir
after Watermaster Diversions and Removal of OCWD OC-59 Discharge, (cfs)

Day	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23
1	4.6	2.0	2.3	4.5	12.8	19.7	145.7	24.2	296.0	29.4	16.1	15.3
2	5.0	2.0	1.9	5.7	30.0	23.1	28.5	23.0	28.4	25.8	16.1	10.4
3	5.8	1.9	1.9	7.3	15.2	19.2	39.9	22.2	24.7	26.3	14.7	10.6
4	5.5	2.0	1.9	3.6	15.4	21.1	35.5	23.6	26.4	25.9	221.7	10.7
5	4.7	2.0	1.9	2.0	15.0	25.4	408.3	25.2	27.3	26.0	28.7	12.3
6	4.8	2.0	2.5	3.9	15.3	17.7	31.6	25.5	30.2	26.3	18.4	11.4
7	5.1	2.6	3.2	6.7	29.6	19.1	28.3	23.5	23.1	22.3	20.3	12.1
8	4.8	3.7	2.7	8.8	840.2	19.4	38.1	21.5	27.2	22.8	20.0	12.1
9	4.9	2.0	10.2	7.8	124.4	19.3	216.3	20.2	25.7	25.2	24.0	12.7
10	5.3	2.0	6.0	7.0	25.6	20.8	516.0	21.5	176.4	24.6	14.4	11.9
11	6.6	2.0	49.2	6.1	23.9	327.7	32.0	19.0	56.4	24.6	14.6	12.1
12	6.3	2.0	8.2	7.5	23.9	53.9	28.5	19.1	28.4	29.1	15.7	11.9
13	5.4	2.2	3.8	14.7	24.1	25.0	26.2	19.9	27.1	28.0	17.3	9.4
14	5.2	2.2	2.9	17.2	22.7	24.0	594.9	22.6	387.8	20.1	17.1	14.1
15	5.4	2.0	2.1	55.2	20.8	23.4	220.0	18.1	647.9	19.6	16.7	12.1
16	5.2	1.9	2.5	23.1	19.5	24.6	327.9	17.9	38.0	20.2	15.8	12.9
17	4.9	2.1	5.8	20.5	15.6	20.0	38.2	17.8	30.6	20.2	12.4	13.2
18	4.8	2.3	13.1	18.0	16.7	19.1	29.7	19.4	26.9	20.4	12.5	13.1
19	4.6	2.6	9.5	16.0	15.9	17.1	28.6	20.5	28.9	14.1	14.8	10.9
20	5.5	2.1	3.6	13.3	18.7	17.8	28.0	21.2	40.7	14.3	15.5	10.0
21	5.2	2.2	5.4	13.8	16.9	16.5	26.4	22.2	487.1	14.6	17.7	13.8
22	5.1	2.6	4.3	12.7	15.3	17.2	28.5	20.6	352.0	15.8	16.5	9.6
23	5.1	2.1	2.8	16.5	17.5	21.2	27.2	48.4	42.8	17.5	15.0	11.2
24	6.3	1.9	4.3	18.0	18.4	25.0	23.8	293.5	30.9	18.7	19.2	12.9
25	6.5	1.9	6.3	11.2	18.1	23.6	26.6	547.6	29.4	16.8	15.2	9.5
26	6.0	1.9	6.2	11.5	17.0	21.9	24.7	66.6	28.4	15.7	15.9	25.9
27	3.9	2.0	3.8	15.7	17.5	39.1	25.7	78.1	30.7	14.9	15.0	10.5
28	2.0	1.9	2.1	13.8	19.3	43.4	25.7	135.5	27.2	15.8	15.0	8.9
29	2.0	2.2	2.0	15.8	18.5	24.8	27.9	-	92.7	16.3	15.6	7.6
30	1.9	2.6	3.6	17.1	19.8	24.5	30.4	-	58.4	17.1	14.7	10.1
31	2.1	2.4	-	15.1	-	196.4	23.8	-	31.6	-	10.6	-
Minimum	**1.9**	**1.9**	**1.9**	**2.0**	**12.8**	**16.5**	**23.8**	**17.8**	**23.1**	**14.1**	**10.6**	**7.6**
Maximum	**6.6**	**3.7**	**49.2**	**55.2**	**840.2**	**327.7**	**594.9**	**547.6**	**647.9**	**29.4**	**221.7**	**25.9**
Average	**4.9**	**2.2**	**5.9**	**13.2**	**50.1**	**39.1**	**101.1**	**58.5**	**103.5**	**21.0**	**23.1**	**12.0**
Total Volume (af)	**298.5**	**133.4**	**349.3**	**813.6**	**2,982.8**	**2,402.6**	**6,214.1**	**3,250.0**	**6,364.8**	**1,246.9**	**1,422.7**	**712.4**

Appendix A6
Daily Diversions of Stormwater and Dry-Weather Discharges to Recharge Basins from the Chino Creek Tributary System, (cfs)

Day	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23
1	0.0	0.0	0.1	0.0	0.0	0.0	26.9	0.0	77.4	0.0	0.0	0.0
2	0.0	0.0	0.1	0.0	14.1	4.6	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.1	0.0	0.0	0.0	7.2	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.1	0.0	0.0	0.0	10.8	0.0	0.0	0.0	59.9	0.0
5	0.0	0.0	0.1	0.0	0.0	0.0	98.7	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	11.1	0.0	0.0	0.0
7	0.0	0.0	0.1	0.0	18.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.1	0.0	201.4	0.0	0.0	0.6	0.0	0.0	0.0	0.0
9	0.0	0.0	8.6	0.0	12.6	0.0	37.3	0.0	0.0	0.0	0.0	0.5
10	0.0	0.0	0.1	0.0	0.0	0.0	104.5	0.0	54.3	0.0	0.0	0.0
11	0.0	0.0	21.7	0.0	0.0	111.4	0.0	0.0	18.2	0.0	0.0	0.5
12	0.0	0.0	0.1	0.0	0.0	8.5	0.0	0.1	0.0	0.0	0.0	0.0
13	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	5.1	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	117.3	1.1	100.8	0.7	0.0	0.0
15	0.0	0.0	0.1	18.0	0.0	0.0	70.2	0.1	124.4	0.0	0.0	0.0
16	0.0	0.0	0.1	0.0	0.0	0.0	33.9	0.1	0.0	0.0	0.0	0.0
17	0.0	0.0	0.1	2.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
18	0.0	0.0	0.1	0.8	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.1	3.6	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	6.4	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	130.0	0.0	0.0	0.0
22	0.0	0.0	0.0	5.0	0.0	0.0	0.0	4.2	83.9	0.0	0.0	0.0
23	0.0	0.0	0.1	0.0	0.0	0.0	0.0	10.5	0.0	0.0	0.0	0.0
24	0.0	0.0	0.1	0.0	0.0	0.0	0.0	101.8	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	154.1	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	11.2	0.0	19.8	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	5.4	0.0	37.5	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	0.0	0.0	4.5	4.2	-	28.4	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.8	1.0	-	18.2	0.0	0.0	0.0
31	0.0	0.0	-	0.0	-	64.2	0.0	-	0.0	-	0.0	-
Minimum	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Maximum	**0.0**	**0.0**	**21.7**	**18.0**	**201.4**	**111.4**	**117.3**	**154.1**	**130.0**	**5.1**	**59.9**	**0.5**
Average	**0.0**	**0.0**	**1.0**	**0.9**	**8.2**	**6.8**	**16.5**	**12.0**	**21.2**	**0.2**	**1.9**	**0.0**
Total Volume (af)	**0.0**	**0.0**	**62.1**	**53.2**	**489.0**	**417.8**	**1,015.4**	**665.6**	**1,303.0**	**12.3**	**119.7**	**2.5**

Note: On days when the non-replenishment discharge recorded was greater than the measured recharge, the total diversion volume was manually changed to 0.

Appendix A7
Estimated Average Daily Discharge from Chino Creek to Prado Dam Reservoir without Watermaster Diversion, (cfs)

Day	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23
1	4.6	2.0	2.3	4.6	12.8	19.7	172.6	24.2	373.4	29.4	16.1	15.3
2	5.0	2.0	1.9	5.7	44.1	27.7	28.5	23.0	28.4	25.8	16.1	10.5
3	5.8	1.9	1.9	7.3	15.2	19.2	47.1	22.2	24.7	26.3	14.7	10.6
4	5.5	2.0	1.9	3.6	15.4	21.1	46.3	23.6	26.4	25.9	281.6	10.8
5	4.7	2.0	2.0	2.0	15.0	25.4	507.0	25.2	27.3	26.0	28.7	12.3
6	4.8	2.0	2.6	3.9	15.3	17.7	31.6	25.5	41.3	26.3	18.5	11.4
7	5.1	2.6	3.3	6.7	48.1	19.1	28.3	23.5	23.1	22.3	20.4	12.1
8	4.8	3.7	2.7	8.8	1,041.6	19.4	38.1	22.1	27.2	22.8	20.0	12.1
9	4.9	2.0	18.8	7.8	137.0	19.3	253.7	20.2	25.7	25.2	24.0	13.2
10	5.3	2.0	6.1	7.0	25.6	20.8	620.5	21.5	230.7	24.6	14.4	11.9
11	6.6	2.0	70.9	6.1	23.9	439.1	32.0	19.0	74.6	24.6	14.6	12.6
12	6.3	2.0	8.3	7.5	23.9	62.4	28.5	19.2	28.4	29.2	15.7	11.9
13	5.4	2.2	3.8	14.7	24.1	25.0	26.2	20.0	27.1	33.1	17.3	9.4
14	5.2	2.2	2.9	17.2	22.7	24.0	712.2	23.7	488.6	20.8	17.1	14.1
15	5.4	2.0	2.1	73.2	20.8	23.4	290.1	18.1	772.3	19.6	16.8	12.1
16	5.2	1.9	2.5	23.1	19.5	24.6	361.8	17.9	38.0	20.2	15.8	12.9
17	4.9	2.1	5.9	22.5	15.6	20.0	38.2	17.8	30.6	20.3	12.4	13.3
18	4.8	2.3	13.2	18.8	16.7	19.1	29.7	19.4	26.9	20.4	12.6	13.1
19	4.6	2.6	9.5	16.9	15.9	17.1	28.6	20.6	32.5	14.1	14.8	10.9
20	5.5	2.1	3.6	13.3	18.7	17.8	28.0	21.2	47.1	14.3	15.5	10.0
21	5.2	2.2	5.4	13.8	16.9	16.5	26.4	24.7	617.1	14.6	17.7	13.8
22	5.1	2.6	4.3	17.7	15.3	17.2	28.5	24.7	435.9	15.8	16.5	9.6
23	5.1	2.1	2.8	16.5	17.5	21.2	27.2	58.9	42.8	17.5	15.0	11.2
24	6.3	1.9	4.3	18.0	18.4	25.0	23.8	395.3	30.9	18.8	19.2	12.9
25	6.5	1.9	6.3	11.2	18.1	23.6	26.6	701.7	29.4	16.9	15.2	9.5
26	6.0	1.9	6.2	11.5	17.0	21.9	24.7	69.6	28.4	15.7	16.0	25.9
27	3.9	2.0	3.9	15.7	17.5	50.3	25.7	97.9	30.7	15.0	15.0	10.5
28	2.0	1.9	2.1	13.8	19.3	48.9	25.7	173.0	27.2	15.8	15.0	8.9
29	2.0	2.2	2.1	15.8	18.5	29.3	32.1	-	121.1	16.4	15.6	7.6
30	1.9	2.6	3.7	17.1	19.8	25.3	31.4	-	76.6	17.1	14.7	10.1
31	2.1	2.4	-	15.1	-	260.5	23.8	-	31.6	-	10.7	-
Minimum	**1.9**	**1.9**	**1.9**	**2.0**	**12.8**	**16.5**	**23.8**	**17.8**	**23.1**	**14.1**	**10.7**	**7.6**
Maximum	**6.6**	**3.7**	**70.9**	**73.2**	**1,041.6**	**439.1**	**712.2**	**701.7**	**772.3**	**33.1**	**281.6**	**25.9**
Average	**4.9**	**2.2**	**6.9**	**14.1**	**58.3**	**45.9**	**117.6**	**70.5**	**124.7**	**21.2**	**25.1**	**12.0**
Total Volume (af)	**298.5**	**133.4**	**411.4**	**866.8**	**3,471.8**	**2,820.4**	**7,229.5**	**3,915.6**	**7,667.7**	**1,259.2**	**1,542.5**	**715.0**

Appendix B1 – B3

Appendix B1

Estimated Average Daily Discharge from Cucamonga Creek to Prado Dam Reservoir after Watermaster Diversions, (cfs)

(Average Daily Discharge at USGS Gage 11073495)

Day	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23
1	3.6	10.8	0.5	6.3	0.0	48.3	274.0	24.9	936.0	77.6	59.0	8.8
2	4.9	1.4	0.1	5.1	6.2	30.3	13.6	25.7	40.8	87.8	59.9	5.5
3	8.1	3.4	0.7	6.2	0.0	25.7	11.9	21.3	32.8	84.1	74.3	8.6
4	6.7	5.9	1.2	7.1	0.0	32.1	7.6	15.0	24.1	90.7	365.0	13.8
5	0.8	3.0	2.9	7.9	0.9	30.0	907.0	19.3	28.6	64.3	77.8	10.5
6	0.0	6.6	3.5	9.3	3.3	15.2	165.0	20.5	39.8	61.6	83.0	14.9
7	5.0	24.9	5.9	9.7	35.2	8.2	130.0	29.2	35.9	76.9	80.5	11.1
8	10.3	12.7	9.9	6.1	1,030.0	8.7	92.4	32.3	32.1	85.2	65.9	9.6
9	13.1	9.3	19.2	11.3	174.0	19.0	238.0	25.8	33.6	82.9	66.0	8.9
10	15.4	4.9	9.8	18.9	59.6	19.5	1,230.0	8.7	334.0	88.1	47.4	19.1
11	7.2	9.1	277.0	18.3	40.5	663.0	91.4	19.8	205.0	92.1	48.6	23.6
12	6.5	7.2	46.3	14.0	31.8	141.0	117.0	28.0	105.0	83.8	33.1	21.0
13	0.8	8.7	45.9	12.7	31.8	137.0	81.1	24.9	108.0	68.6	32.4	25.2
14	4.1	11.9	11.6	2.8	46.7	110.0	1,420.0	46.6	759.0	77.3	62.0	14.2
15	8.3	9.1	7.9	22.6	41.9	79.0	548.0	31.5	1,540.0	87.1	38.0	8.0
16	1.1	9.7	4.4	16.0	63.1	59.6	601.0	23.7	246.0	106.0	10.0	8.7
17	1.4	5.7	4.0	3.3	76.6	57.5	16.1	16.3	186.0	124.0	14.7	7.1
18	9.4	4.6	6.8	7.4	55.7	40.5	4.5	12.9	156.0	134.0	14.3	13.2
19	2.9	6.8	6.2	5.7	39.8	19.0	0.0	21.4	172.0	69.8	12.8	18.8
20	0.7	8.0	4.1	2.4	68.4	18.4	0.1	17.0	147.0	44.2	17.3	22.6
21	2.5	10.1	2.7	1.1	39.0	44.0	7.3	29.4	729.0	41.1	15.8	13.1
22	2.1	7.8	5.5	2.9	18.8	55.1	53.6	41.8	663.0	39.2	13.5	6.6
23	1.6	2.5	7.3	3.4	20.3	187.0	85.3	114.0	675.0	38.2	8.6	9.2
24	6.9	4.6	9.3	3.6	39.4	104.0	78.2	484.0	440.0	35.6	7.7	9.0
25	4.2	16.1	18.1	4.3	33.2	497.0	115.0	1,180.0	372.0	33.8	10.7	10.4
26	5.7	4.3	11.6	1.7	39.4	498.0	129.0	328.0	367.0	25.1	9.0	7.9
27	5.6	4.1	7.9	0.3	29.6	133.0	127.0	157.0	342.0	35.3	10.1	4.2
28	2.2	6.5	8.4	2.1	27.4	107.0	89.2	148.0	244.0	32.7	15.7	2.1
29	0.9	11.8	7.3	3.8	25.9	15.1	178.0	--	235.0	39.6	10.7	1.2
30	2.4	6.9	6.4	0.6	48.4	29.7	17.6	--	172.0	42.0	10.6	0.4
31	4.3	5.6	--	0.1	--	173.0	10.8	--	78.2	--	7.8	--
Minimum	**0.0**	**1.4**	**0.1**	**0.1**	**0.0**	**8.2**	**0.0**	**8.7**	**24.1**	**25.1**	**7.7**	**0.4**
Maximum	**15.4**	**24.9**	**277.0**	**22.6**	**1,030.0**	**663.0**	**1,420.0**	**1,180.0**	**1,540.0**	**134.0**	**365.0**	**25.2**
Average	**4.8**	**7.9**	**18.4**	**7.0**	**70.9**	**109.8**	**220.6**	**105.3**	**305.8**	**68.3**	**44.6**	**11.2**
Total Volume (af)	**294.9**	**484.1**	**1,095.6**	**430.1**	**4,218.6**	**6,753.6**	**13,566.6**	**5,845.4**	**18,801.1**	**4,063.5**	**2,741.3**	**668.8**

Note: For July 1, 2022 to December 1, 2022, data have been approved by the USGS; data after December 1, 2022 are provisional.

Appendix B2
Daily Diversions to Recharge Basins on the Cucamonga Creek Tributary System, (cfs)

Day	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23
1	0.8	4.0	0.6	0.9	0.9	0.2	193.7	0.2	22.4	4.0	0.2	0.2
2	0.8	2.9	0.6	4.4	48.2	7.4	3.5	0.2	10.1	0.5	0.2	1.7
3	0.8	2.9	0.6	0.9	3.0	0.2	36.7	0.2	9.5	0.4	0.2	1.7
4	0.8	2.9	0.6	0.9	4.0	0.2	15.2	0.2	4.4	0.5	111.3	1.7
5	0.8	1.9	0.6	0.9	3.7	0.5	54.2	0.2	0.3	0.5	0.3	1.7
6	0.8	0.7	0.6	0.9	3.8	0.2	6.5	0.2	10.6	0.3	0.2	0.2
7	0.6	0.7	0.6	0.9	29.7	0.2	4.1	0.2	0.3	0.3	0.2	0.2
8	6.9	0.6	0.6	0.9	177.2	0.2	2.4	0.2	0.3	0.3	0.2	0.2
9	6.5	0.6	1.4	0.9	29.8	0.2	78.8	0.2	0.3	0.3	0.2	0.2
10	5.8	0.6	4.1	0.9	4.3	0.2	22.3	0.2	94.6	0.3	0.2	0.2
11	4.7	0.6	44.5	0.9	4.0	214.8	9.5	0.2	14.5	0.2	0.2	0.6
12	6.8	0.6	20.9	0.9	3.7	34.0	8.8	0.2	9.9	0.2	0.2	0.2
13	4.9	0.6	2.7	0.9	0.2	5.4	7.0	0.3	12.3	4.3	0.2	64.6
14	5.3	0.6	4.8	0.9	0.2	5.3	72.0	13.2	67.2	0.2	0.2	0.2
15	4.5	0.6	1.8	39.7	0.3	4.9	27.5	0.3	18.2	0.2	0.2	0.2
16	2.7	0.6	0.6	1.7	0.3	3.4	23.7	0.3	10.2	0.2	0.2	0.2
17	3.7	0.6	0.9	0.7	0.3	0.2	4.3	0.3	7.6	0.2	18.2	0.2
18	2.4	0.6	0.6	0.8	0.3	0.2	3.0	0.3	4.1	0.2	0.2	0.2
19	0.7	0.6	0.6	0.8	0.3	0.8	1.8	0.3	15.7	0.2	0.2	0.2
20	0.7	0.6	0.6	0.8	2.7	0.2	1.4	0.3	28.9	0.2	0.2	0.2
21	0.7	0.6	0.9	0.9	2.3	0.2	1.3	6.5	55.6	0.2	0.2	0.2
22	0.7	0.6	0.9	14.0	0.2	0.2	7.9	11.2	11.5	0.2	0.2	0.2
23	0.7	0.6	0.9	0.9	0.2	2.1	7.1	34.4	10.4	0.2	0.2	0.2
24	0.7	0.6	0.9	0.9	0.2	0.2	6.8	170.1	10.2	0.2	0.2	0.2
25	0.7	0.6	0.9	0.9	0.2	0.2	6.8	69.0	8.6	0.2	0.2	0.2
26	1.7	0.6	0.9	0.9	0.2	0.2	6.8	12.9	6.5	0.2	0.2	0.2
27	3.0	0.6	0.9	0.9	0.2	16.3	6.8	18.7	3.5	0.2	0.2	0.2
28	3.0	0.6	0.9	0.9	0.2	23.0	6.8	18.3	0.5	0.2	0.2	0.3
29	3.0	0.6	0.9	0.9	0.2	7.9	12.5	-	47.7	0.2	0.2	0.3
30	3.0	0.6	0.9	0.9	0.2	2.0	9.2	-	30.6	0.2	0.2	0.2
31	3.0	0.6	-	0.9	-	140.5	6.8	-	6.5	-	0.2	-
Minimum	**0.6**	**0.6**	**0.6**	**0.7**	**0.2**	**0.2**	**1.3**	**0.2**	**0.3**	**0.2**	**0.2**	**0.2**
Maximum	**6.9**	**4.0**	**44.5**	**39.7**	**177.2**	**214.8**	**193.7**	**170.1**	**94.6**	**4.3**	**111.3**	**64.6**
Average	**2.6**	**1.0**	**3.2**	**2.7**	**10.7**	**15.2**	**21.1**	**12.8**	**17.2**	**0.5**	**4.4**	**2.6**
Total Volume (af)	**161.3**	**60.1**	**191.9**	**163.9**	**636.9**	**935.6**	**1,299.0**	**712.2**	**1,058.0**	**32.1**	**270.5**	**152.3**

Appendix B3
Estimated Average Daily Discharge from Cucamonga Creek to Prado Dam Reservoir without Watermaster Diversions, (cfs)

Day	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23
1	4.4	14.8	1.0	7.2	0.9	48.5	467.7	25.1	958.4	81.6	59.2	9.0
2	5.7	4.3	0.7	9.5	54.3	37.7	17.1	25.9	50.9	88.3	60.1	7.1
3	8.9	6.3	1.3	7.0	3.0	25.9	48.6	21.5	42.3	84.5	74.5	10.3
4	7.5	8.8	1.8	8.0	4.0	32.3	22.8	15.2	28.5	91.2	476.3	15.5
5	1.6	4.9	3.5	8.8	4.6	30.5	961.2	19.5	28.9	64.8	78.1	12.2
6	0.8	7.3	4.1	10.1	7.0	15.4	171.5	20.7	50.4	61.9	83.2	15.1
7	5.6	25.6	6.5	10.5	64.9	8.4	134.1	29.4	36.2	77.2	80.7	11.3
8	17.2	13.3	10.5	7.0	1,207.2	9.0	94.8	32.5	32.4	85.5	66.1	9.8
9	19.6	9.9	20.6	12.2	203.8	19.2	316.8	26.0	33.9	83.2	66.2	9.1
10	21.2	5.5	13.9	19.8	63.9	19.7	1,252.3	9.0	428.6	88.4	47.6	19.3
11	11.9	9.7	321.5	19.2	44.5	877.8	100.9	20.0	219.5	92.3	48.8	24.2
12	13.4	7.8	67.2	14.9	35.5	175.0	125.8	28.2	114.9	84.0	33.3	21.2
13	5.8	9.3	48.6	13.6	32.0	142.4	88.1	25.2	120.3	72.9	32.6	89.8
14	9.3	12.5	16.4	3.6	46.9	115.3	1,492.0	59.8	826.2	77.5	62.2	14.4
15	12.8	9.7	9.7	62.3	42.2	83.9	575.5	31.8	1,558.2	87.3	38.2	8.3
16	3.9	10.2	5.0	17.7	63.4	63.0	624.7	24.0	256.2	106.2	10.2	8.9
17	5.0	6.3	5.0	4.0	76.9	57.7	20.4	16.6	193.6	124.2	32.9	7.2
18	11.8	5.2	7.3	8.2	56.0	40.7	7.5	13.2	160.1	134.2	14.5	13.4
19	3.6	7.4	6.9	6.5	40.1	19.8	1.8	21.7	187.7	70.0	13.0	19.0
20	1.5	8.5	4.7	3.2	71.1	18.6	1.5	17.3	175.9	44.4	17.5	22.8
21	3.2	10.7	3.6	2.0	41.3	44.2	8.7	35.9	784.6	41.3	16.0	13.3
22	2.8	8.4	6.3	16.8	19.0	55.3	61.5	53.0	674.5	39.4	13.7	6.8
23	2.3	3.0	8.2	4.2	20.5	189.1	92.4	148.4	685.4	38.4	8.8	9.4
24	7.6	5.2	10.2	4.4	39.6	104.2	85.0	654.1	450.2	35.8	7.9	9.2
25	4.9	16.7	19.0	5.2	33.4	497.2	121.8	1,249.0	380.6	34.0	10.9	10.6
26	7.4	4.9	12.5	2.5	39.6	498.2	135.8	340.9	373.5	25.3	9.2	8.0
27	8.6	4.7	8.7	1.2	29.8	149.3	133.8	175.7	345.5	35.5	10.3	4.4
28	5.2	7.1	9.3	3.0	27.6	130.0	96.0	166.3	244.5	32.9	15.9	2.4
29	3.9	12.4	8.2	4.6	26.1	23.0	190.5	--	282.7	39.8	10.9	1.5
30	5.4	7.5	7.3	1.4	48.6	31.7	26.8	--	202.6	42.2	10.8	0.6
31	7.3	6.2	--	1.0	--	313.5	17.6	--	84.7	--	8.0	--
Minimum	**0.8**	**3.0**	**0.7**	**1.0**	**0.9**	**8.4**	**1.5**	**9.0**	**28.5**	**25.3**	**7.9**	**0.6**
Maximum	**21.2**	**25.6**	**321.5**	**62.3**	**1,207.2**	**877.8**	**1,492.0**	**1,249.0**	**1,558.2**	**134.2**	**476.3**	**89.8**
Average	**7.4**	**8.9**	**21.6**	**9.7**	**81.6**	**125.1**	**241.8**	**118.1**	**323.0**	**68.8**	**49.0**	**13.8**
Total Volume (af)	**456.1**	**544.2**	**1,287.5**	**594.1**	**4,855.5**	**7,689.2**	**14,865.6**	**6,557.6**	**19,859.2**	**4,095.6**	**3,011.8**	**821.1**

Appendix C1 – C3

Appendix C1
WLAM Estimated Daily Discharge from Day Creek to the Santa Ana River without Watermaster Diversions (Stormwater Flow only), (cfs)

Day	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23
1	0.0	0.0	0.0	0.0	0.3	0.0	103.7	0.3	181.6	11.0	0.0	0.0
2	0.0	0.0	0.0	0.0	5.2	0.0	44.7	0.2	94.7	5.8	0.0	0.0
3	0.0	0.0	0.0	0.0	1.3	0.0	21.6	0.1	48.2	4.1	1.1	0.0
4	0.0	0.0	0.0	0.0	1.0	0.0	14.1	0.0	20.5	10.7	65.9	0.0
5	0.0	0.0	0.0	0.0	0.7	0.0	129.0	0.0	10.5	8.4	35.6	0.0
6	0.0	0.0	0.0	0.0	0.5	0.0	84.2	0.0	11.3	2.0	16.2	0.0
7	0.0	0.0	0.0	0.0	6.0	0.0	35.6	0.0	4.1	1.5	8.4	0.0
8	0.0	0.0	0.0	0.0	399.1	0.0	16.2	0.0	3.3	1.1	4.8	0.0
9	0.0	0.0	2.3	0.0	108.0	0.0	148.6	0.0	2.6	0.8	3.7	0.0
10	0.0	0.0	0.0	0.0	41.3	0.1	240.4	0.0	143.3	0.5	2.9	0.0
11	0.0	0.0	15.9	0.0	18.1	147.9	105.0	0.0	84.6	0.3	2.3	0.0
12	0.0	0.0	0.0	0.0	9.3	110.7	93.6	0.0	36.2	0.2	1.8	0.0
13	0.0	0.0	0.0	0.0	5.1	47.4	65.2	0.0	16.5	1.1	1.4	0.0
14	0.0	0.0	0.0	0.0	3.9	20.2	585.7	1.1	676.4	0.0	1.0	0.0
15	0.0	0.0	0.0	13.4	3.1	10.4	305.5	0.0	166.6	0.0	0.7	0.0
16	0.0	0.0	0.0	0.8	2.4	5.6	123.1	0.0	106.0	0.0	0.5	0.0
17	0.0	0.0	0.0	0.5	1.9	4.1	87.9	0.0	101.2	0.0	0.3	0.0
18	0.0	0.0	0.0	0.4	1.4	3.2	46.6	0.0	67.8	0.0	0.1	0.0
19	0.0	0.0	0.0	0.2	1.0	2.6	20.0	0.0	31.2	0.0	0.0	0.0
20	0.0	0.0	0.0	0.1	0.7	2.0	10.3	0.0	63.9	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.5	1.6	5.5	2.1	454.8	0.0	0.0	0.0
22	0.0	0.0	0.0	0.5	0.3	1.2	4.1	0.7	134.5	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.1	0.9	3.2	26.7	94.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.6	2.6	261.7	85.8	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.5	2.0	394.2	50.1	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.3	1.6	113.5	21.2	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	25.8	1.2	106.0	10.8	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	9.0	0.9	259.1	5.7	0.0	0.0	0.0
29	0.0	0.0	0.0	0.0	0.0	5.0	3.8	-	100.7	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	4.0	3.7	-	52.0	0.0	0.0	0.0
31	0.0	0.0	-	0.0	-	294.7	0.5	-	21.7	-	0.0	-
Minimum	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.5**	**0.0**	**2.6**	**0.0**	**0.0**	**0.0**
Maximum	**0.0**	**0.0**	**15.9**	**13.4**	**399.1**	**294.7**	**585.7**	**394.2**	**676.4**	**11.0**	**65.9**	**0.0**
Average	**0.0**	**0.0**	**0.6**	**0.5**	**20.4**	**22.5**	**74.5**	**41.6**	**93.6**	**1.6**	**4.7**	**0.0**
Total Volume (af)	**0.0**	**0.0**	**36.0**	**31.6**	**1,212.3**	**1,384.1**	**4,582.0**	**2,312.1**	**5,755.7**	**94.3**	**291.0**	**0.0**

Note: On dates highlighted in grey, stormwater was recharged in diversion basins. Stormwater can continue to be recharged for several days after a storm has passed.

Appendix C2
Daily Diversions to Recharge Basins on the Day Creek Tributary System, (cfs)

Day	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23
1	0.0	0.4	0.0	0.0	0.0	0.0	32.5	1.9	33.4	9.3	0.0	0.0
2	0.0	0.0	0.0	0.0	5.2	0.0	3.7	0.0	17.9	4.8	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	6.2	0.0	11.8	0.2	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	3.8	0.0	11.2	10.7	6.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	32.4	0.0	10.8	8.4	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	8.2	0.0	11.3	6.5	0.0	0.0
7	0.0	0.0	0.0	0.0	2.4	0.0	7.9	0.0	11.2	2.9	0.0	0.0
8	0.0	0.0	0.0	0.0	34.2	0.0	0.0	0.0	11.1	0.8	0.0	0.0
9	0.0	0.0	0.0	0.0	9.2	0.0	4.0	0.0	7.0	0.5	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	37.0	0.0	22.1	0.3	0.0	0.0
11	0.0	0.0	15.9	0.0	0.0	16.9	0.0	0.0	24.5	0.1	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	3.6	4.8	0.0	23.2	0.1	0.0	0.2
13	0.0	0.0	0.0	0.0	0.0	0.6	8.5	0.0	22.2	1.1	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	28.7	0.3	33.2	0.0	0.0	0.0
15	0.0	0.0	0.0	2.7	0.0	0.0	28.6	0.0	41.8	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	38.8	0.0	28.4	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	13.9	0.0	25.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	3.5	0.0	13.3	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.5	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.4	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	32.4	0.0	0.0	0.0
22	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.7	32.8	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	21.6	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21.7	14.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	38.2	10.1	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.7	10.5	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	1.1	0.0	19.1	4.2	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.7	21.8	8.9	0.0	0.0	0.0
29	0.0	0.0	0.0	0.0	0.0	0.0	3.8	-	18.2	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	3.7	-	17.5	0.0	0.0	0.0
31	0.0	0.0	-	0.0	-	14.1	3.0	-	11.0	-	0.0	-
Minimum	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**4.2**	**0.0**	**0.0**	**0.0**
Maximum	**0.0**	**0.4**	**15.9**	**2.7**	**34.2**	**16.9**	**38.8**	**38.2**	**41.8**	**10.7**	**6.0**	**0.2**
Average	**0.0**	**0.0**	**0.5**	**0.1**	**1.7**	**1.2**	**8.8**	**4.4**	**18.2**	**1.5**	**0.2**	**0.0**
Total Volume (af)	**0.0**	**1.6**	**31.8**	**6.7**	**101.2**	**72.7**	**543.0**	**245.9**	**1,119.3**	**90.6**	**12.5**	**0.7**

Note: On dates highlighted in grey, stormwater was recharged in diversion basins. Stormwater can continue to be recharged for several days after a storm has passed.

Appendix C3
Estimated Daily Dry-Weather Flows Captured by Diversion Basins, (cfs)

Day	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23
1	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0
31	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	-
Minimum	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Maximum	**0.0**	**0.4**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.2**
Average	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Total Volume (af)	**0.0**	**1.6**	**0.3**	**0.2**	**0.0**	**0.2**	**0.0**	**0.2**	**0.0**	**0.2**	**0.3**	**0.7**

Note: On dates highlighted in grey, stormwater was recharged in diversion basins. Stormwater can continue to be recharged for several days after a storm has passed. On dates when stormwater diversions are measured after storm flow has stopped, dry-weather flows could not be estimated and are assumed to be 0. Within each storm period, however, any diversions in excess of total WLAM estimated stormflow are assumed to be dry-weather flows.

Appendix D1 – D3

Appendix D1
WLAM Estimated Daily Discharge from San Sevaine Creek to the Santa Ana River without Watermaster Diversions (Stormwater Flow only), (cfs)

Day	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23
1	0.0	0.0	0.0	0.0	10.1	0.0	90.9	0.0	245.0	12.9	0.0	0.0
2	0.0	0.0	0.0	0.0	36.9	2.3	97.9	0.0	139.3	13.4	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	36.2	0.0	51.0	14.2	1.4	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	17.6	0.0	0.4	22.7	205.8	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	535.9	0.0	0.7	13.0	0.5	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	33.3	22.3	0.0	0.0
7	0.0	0.0	0.0	0.0	31.1	0.0	111.2	0.0	0.0	32.1	0.0	0.0
8	0.0	0.0	0.0	0.0	1,060.5	0.0	8.5	0.0	0.0	27.9	0.0	0.0
9	0.0	0.0	17.6	0.0	22.4	0.0	594.8	0.0	0.0	23.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	5.1	453.4	0.0	530.7	26.1	0.0	0.0
11	0.0	0.0	194.3	0.0	0.0	635.0	130.9	0.0	31.9	17.2	0.0	1.3
12	0.0	0.0	0.3	0.0	0.0	48.6	158.8	0.0	67.8	10.4	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	0.0	19.9	0.0	9.6	10.5	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	1,410.1	23.3	1,636.8	10.4	0.0	0.0
15	0.0	0.0	0.0	53.3	0.0	0.0	401.9	0.0	246.3	10.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	323.9	0.0	360.7	9.4	0.0	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	106.9	0.0	126.1	11.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	57.8	0.0	14.4	7.7	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	25.4	7.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	196.9	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.8	1,180.3	0.0	0.0	0.0
22	0.0	0.0	0.0	0.9	0.0	0.0	0.0	12.4	149.9	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.8	312.5	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	732.1	87.1	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	839.2	23.2	0.0	0.0	0.0
26	0.1	0.0	0.0	0.0	0.0	0.0	0.0	147.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	81.2	0.0	319.9	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	14.9	0.0	683.2	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	0.0	0.0	0.0	3.8	-	355.9	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	2.6	8.8	-	41.1	0.0	0.0	0.0
31	0.3	0.0	-	0.0	-	930.7	0.0	-	46.8	-	0.0	-
Minimum	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Maximum	**0.3**	**0.0**	**194.3**	**53.3**	**1,060.5**	**930.7**	**1,410.1**	**839.2**	**1,636.8**	**32.1**	**205.8**	**1.3**
Average	**0.0**	**0.0**	**7.1**	**1.7**	**38.7**	**55.5**	**147.5**	**102.6**	**190.7**	**10.0**	**6.7**	**0.0**
Total (af)	**0.7**	**0.0**	**420.9**	**107.6**	**2,302.8**	**3,412.3**	**9,067.8**	**5,695.9**	**11,728.3**	**597.4**	**412.0**	**2.6**

Note: On dates highlighted in grey, stormwater was recharged in diversion basins. Stormwater can continue to be recharged for several days after a storm has passed.

Appendix D2
Daily Diversions to Recharge Basins on the San Sevaine Creek Tributary System, (cfs)

Day	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23
1	0.1	2.6	0.1	0.4	0.1	0.7	90.9	4.6	67.5	12.9	5.0	0.5
2	0.1	0.1	0.1	0.4	36.9	2.3	5.2	0.9	15.8	13.4	5.0	0.5
3	0.1	0.1	0.1	0.4	0.6	0.3	36.2	0.9	13.9	14.2	5.0	0.5
4	0.1	0.1	0.1	0.3	0.2	0.3	6.3	0.9	14.9	22.7	95.6	0.5
5	0.1	0.1	0.1	0.2	0.2	0.2	134.7	0.9	24.7	13.0	4.7	0.5
6	0.1	0.1	0.1	0.2	0.2	0.2	11.4	9.5	33.3	22.3	4.3	0.5
7	0.1	0.1	0.2	0.2	29.0	0.2	5.5	9.0	34.8	32.1	3.9	0.5
8	0.1	0.1	0.2	0.2	212.4	0.2	2.8	5.3	21.4	27.9	3.3	2.8
9	0.1	0.1	10.3	0.2	22.4	0.1	64.1	5.4	8.5	23.0	3.0	0.5
10	0.1	0.1	0.4	0.2	8.4	0.1	125.8	4.8	98.0	26.1	2.7	0.5
11	0.1	0.1	24.1	0.2	11.2	173.6	7.6	4.7	31.9	17.2	2.7	0.5
12	0.1	0.1	0.5	0.2	11.0	27.1	6.7	4.3	18.3	10.4	2.6	0.5
13	0.1	0.1	2.6	0.2	10.9	2.2	5.6	5.2	12.0	10.5	2.5	0.5
14	0.1	0.1	2.1	0.2	11.2	7.7	134.8	23.3	104.3	10.4	2.4	0.5
15	0.1	0.1	0.6	44.0	2.3	14.4	65.5	13.7	93.2	10.0	2.3	0.5
16	0.1	0.1	0.6	0.2	0.1	7.8	69.6	7.8	15.6	9.4	2.1	0.5
17	0.1	0.1	0.6	0.3	0.1	2.5	6.9	1.1	20.0	11.0	2.0	0.5
18	0.1	0.1	0.6	0.2	0.1	9.4	7.2	1.1	25.2	7.7	1.8	0.5
19	0.1	0.1	4.7	0.2	0.1	14.2	7.2	1.1	25.4	7.0	1.6	0.5
20	0.1	0.1	2.5	0.2	0.3	7.4	9.1	1.1	58.6	6.4	1.3	0.3
21	0.1	0.1	2.4	0.2	0.4	1.2	11.3	13.8	124.5	6.1	1.1	0.3
22	0.1	0.1	0.6	0.9	0.4	4.5	10.8	12.4	55.3	5.9	0.9	0.3
23	0.1	0.1	0.6	0.2	0.2	0.2	14.2	45.3	11.7	5.2	0.7	0.3
24	0.1	0.1	0.6	0.2	0.2	0.2	13.7	154.0	9.1	4.9	0.5	0.3
25	0.1	0.1	0.6	0.2	0.2	0.2	7.0	150.9	8.9	7.4	0.5	0.3
26	0.1	0.1	2.0	0.2	0.1	0.2	5.4	16.9	8.9	7.4	0.5	0.3
27	0.1	0.1	1.7	0.1	0.1	26.5	3.1	34.2	26.7	7.4	0.5	0.3
28	0.1	0.1	0.4	0.1	0.2	14.9	2.5	82.4	33.7	6.3	0.5	0.3
29	0.1	0.1	0.4	0.1	0.2	0.0	3.8	-	76.9	5.0	0.5	0.3
30	0.1	0.1	0.4	0.1	0.2	0.1	8.8	-	41.1	5.0	0.5	0.3
31	0.1	0.1	-	0.1	-	165.4	13.9	-	14.5	-	0.5	-
Minimum	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.0**	**2.5**	**0.9**	**8.5**	**4.9**	**0.5**	**0.3**
Maximum	**0.1**	**2.6**	**24.1**	**44.0**	**212.4**	**173.6**	**134.8**	**154.0**	**124.5**	**32.1**	**95.6**	**2.8**
Average	**0.1**	**0.2**	**2.0**	**1.7**	**12.0**	**15.6**	**29.0**	**22.0**	**37.0**	**12.3**	**5.2**	**0.5**
Total (af)	**4.6**	**9.9**	**119.2**	**101.6**	**714.2**	**960.8**	**1,780.3**	**1,220.6**	**2,277.8**	**730.4**	**317.6**	**29.1**

Note: On dates highlighted in grey, stormwater was recharged in diversion basins. Stormwater can continue to be recharged for several days after a storm has passed.

Appendix D3
Estimated Daily Dry-Weather Flows Captured by Diversion Basins, (cfs)

Day	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23
1	0.1	2.6	0.1	0.4	0.0	0.7	0.0	4.6	0.0	0.0	5.0	0.5
2	0.1	0.1	0.1	0.4	0.0	0.0	0.0	0.9	0.0	0.0	5.0	0.5
3	0.1	0.1	0.1	0.4	0.6	0.3	0.0	0.9	0.0	0.0	3.6	0.5
4	0.1	0.1	0.1	0.3	0.2	0.3	0.0	0.9	0.0	0.0	0.0	0.5
5	0.1	0.1	0.1	0.2	0.2	0.2	0.0	0.9	0.0	0.0	4.2	0.5
6	0.1	0.1	0.1	0.2	0.2	0.2	0.0	9.5	0.0	0.0	4.3	0.5
7	0.1	0.1	0.2	0.2	0.0	0.2	0.0	9.0	0.0	0.0	3.9	0.5
8	0.1	0.1	0.2	0.2	0.0	0.2	0.0	5.3	0.0	0.0	3.3	2.8
9	0.1	0.1	0.0	0.2	0.0	0.0	0.0	5.4	0.0	0.0	3.0	0.5
10	0.1	0.1	0.0	0.2	0.0	0.0	0.0	4.8	0.0	0.0	2.7	0.5
11	0.1	0.1	0.0	0.2	0.0	0.0	0.0	4.7	0.0	0.0	2.7	0.0
12	0.1	0.1	0.2	0.2	0.0	0.0	0.0	4.3	0.0	0.0	2.6	0.5
13	0.1	0.1	2.6	0.2	0.0	0.0	0.0	5.2	0.0	0.0	2.5	0.5
14	0.1	0.1	2.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.5
15	0.1	0.1	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.5
16	0.1	0.1	0.6	0.2	0.1	0.0	0.0	7.8	0.0	0.0	2.1	0.5
17	0.1	0.1	0.6	0.3	0.1	0.0	0.0	1.1	0.0	0.0	2.0	0.5
18	0.1	0.1	0.6	0.2	0.1	0.0	0.0	1.1	0.0	0.0	1.8	0.5
19	0.1	0.1	4.7	0.2	0.1	0.0	0.0	1.1	0.0	0.0	1.6	0.5
20	0.1	0.1	2.5	0.2	0.3	0.0	0.0	1.1	0.0	6.4	1.3	0.3
21	0.1	0.1	2.4	0.2	0.4	0.0	0.0	0.0	0.0	6.1	1.1	0.3
22	0.1	0.1	0.6	0.0	0.4	0.0	0.0	0.0	0.0	5.9	0.9	0.3
23	0.1	0.1	0.6	0.2	0.2	0.0	0.0	0.0	0.0	5.2	0.7	0.3
24	0.1	0.1	0.6	0.2	0.2	0.0	0.0	0.0	0.0	4.9	0.5	0.3
25	0.1	0.1	0.6	0.0	0.2	0.0	7.0	0.0	0.0	7.4	0.5	0.3
26	0.0	0.1	2.0	0.0	0.1	0.0	5.4	0.0	0.0	7.4	0.5	0.3
27	0.1	0.1	1.7	0.1	0.1	0.0	3.1	0.0	0.0	7.4	0.5	0.3
28	0.1	0.1	0.4	0.1	0.2	0.0	2.5	0.0	0.0	6.3	0.5	0.3
29	0.1	0.1	0.4	0.1	0.2	0.0	0.0	-	0.0	5.0	0.5	0.3
30	0.1	0.1	0.4	0.1	0.2	0.0	0.0	-	0.0	5.0	0.5	0.3
31	0.0	0.1	-	0.1	-	0.0	0.0	-	0.0	-	0.5	-
Minimum	**0.0**	**0.1**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Maximum	**0.1**	**2.6**	**4.7**	**0.4**	**0.6**	**0.7**	**7.0**	**9.5**	**0.0**	**7.4**	**5.0**	**2.8**
Average	**0.1**	**0.2**	**0.8**	**0.2**	**0.1**	**0.1**	**0.6**	**2.4**	**0.0**	**2.2**	**2.0**	**0.5**
Total (af)	**4.3**	**9.9**	**49.8**	**11.8**	**8.4**	**4.0**	**35.6**	**135.9**	**0.0**	**133.0**	**124.2**	**28.2**

Note: On dates highlighted in grey, stormwater was recharged in diversion basins. Stormwater can continue to be recharged for several days after a storm has passed. On dates when stormwater diversions are measured after storm flow has stopped, dry-weather flows could not be estimated and are assumed to be zero. Within each storm period, however, any diversions in excess of total WLAM estimated stormflow are assumed to be dry-weather flows.