WILDERMUTH ENVIRONMENTAL, INC.

September 26, 2016

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 2015/16***

Dear Mr. Kavounas:

Wildermuth Environmental, Inc. (WEI) hereby submits the Annual Streamflow Monitoring Report for Fiscal 2015/16. This is the eighth 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 fiscal 2015/2016 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 19 percent of the total estimated discharge was diverted for recharge. About 82 percent of the diversions occurred between September and March during short-duration stormwater events. Watermaster's diversions for recharge mitigate some of the increase in stormwater and dry-weather discharge resulting from the urbanization of the watershed. This reduction in stormwater and dry-weather discharge improves water quality in the Santa Ana River and its Chino Basin tributaries and reduces channel erosion in these drainages.

DATA COLLECTION AND METHODOLOGY

There are four main tributary systems to the Santa Ana River from which stormwater and dry-weather discharges are diverted for groundwater recharge by Watermaster and the Inland Empire Utilities Agency (IEUA): 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). These creeks, their drainage areas, and other significant hydrologic features are shown in Figure 1. Chino Creek and Cucamonga Creek

[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.

discharge directly to the Prado Dam Reservoir. 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 the 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 WEI'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 is 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.[2] The Basin Monitoring Program Task Force periodically calibrates the WLAM.[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 2012 as part of the Chino Basin Groundwater Model recalibration and development of the *2013 Amendment to the 2010 Recharge Master Plan Update*.[4] The WLAM was updated to reflect, among other changes, an improved understanding of recharge basin operations and the rerouting of water in Etiwanda Channel from Day Creek to San Sevaine Creek. The updated version of the WLAM was used for this analysis. Additionally, for the present analysis, the land use was updated in the WLAM to reflect 2012 conditions, the latest available data.

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 fiscal 2015/16, Watermaster diverted a total of 9,187 acre-feet (acre-ft) 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. The impact analyses of these diversions are provided below.

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

[3] The Basin Monitoring Program Task Force consists of all recycling and regional water agencies in the watershed. The Basin Monitoring Program Task Force is administered by the Santa Ana Watershed Project Authority.

[4] Wildermuth Environmental, Inc. (2013). *2013 Amendment to the 2010 Recharge Master Plan Update*. Prepared for the Chino Basin Watermaster and Inland Empire Utilities Agency. September 2013.

Chino Creek

The objective of this analysis is to illustrate the impact of Watermaster's diversions on perennial 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 on discharge to the Prado Dam Reservoir is assessed at the point on Chino Creek where recycled water from the IEUA RP-1 (Prado) recycling plant discharges to Chino Creek (see *Points of Discharge Estimation* feature in Figure 1).[6] Because discharge to the Chino Creek tributary system from OCWD OC-59 is an irregularly occurring discharge, 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] During fiscal 2015/16, 4,079 acre-ft of imported water was discharged to Chino Creek through OC-59, all during the month of June 2016.

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 (Appendix A2) plus the average daily discharge from each of the IEUA's recycled water discharge points (Carbon Canyon, RP1-Prado, and RP5) (Appendix A3). These discharges are summarized as monthly totals in rows 1 through 3 of Table 2a and are shown in detail as daily totals in Appendices A1 through A3. The resulting daily discharge time history, summarized in row 4 of Table 2a and shown in detail in Appendix A4, approximates actual daily discharge in Chino Creek after Watermaster's diversions and without OCWD OC-59 discharges. Note that this estimation does not account for additional stormwater inputs generated by the Chino Creek drainage area that enter the creek downstream of USGS gage 11073360. These unaccounted for downstream flows are generated by an area that covers 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 5 of Table 2a and shown in detail in Appendix A5. When added together, the daily discharge time histories from Appendices A4 and A5 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 6 of Table 2a and shown in detail in Appendix A6. 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 7 of Table 2a.

The total discharge that entered the Prado Dam Reservoir from Chino Creek during fiscal 2015/16 was estimated to be about 12,789 acre-ft, ranging from a low of about 339 acre-ft/month (August) to a high of about 2,476 acre-ft/month (January). Total diversions from Chino Creek were about 1,000 acre-ft. The estimated total discharge that would have entered the Prado Dam Reservoir without stormwater and dry-

[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.

[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, *FORTY-FIFTH ANNUAL REPORT OF THE SANTA ANA RIVER WATERMASTER FOR WATER YEAR OCTOBER 1, 2014 - SEPTEMBER 30, 2015*. Prepared in April 2016 by the Santa Ana River Watermaster for the ORANGE COUNTY WATER DISTRICT v. CITY OF CHINO, et al. CASE NO. 117628 - COUNTY OF ORANGE.

weather diversions is about 13,789 acre-ft; thus, about 7.3 percent of the total estimated discharge in Chino Creek was diverted for recharge in fiscal 2015/16. 78 percent of the diversions on Chino Creek occurred between December 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 (acre-ft), 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 the majority of 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 *Points of Discharge Estimation* 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 1 of Table 2b and is shown in detail as daily values in Appendix B1. Note that this estimation does not account for additional stormwater inputs generated by the Cucamonga Creek drainage area that enter the creek downstream of USGS gage 11073495. The unaccounted for downstream flows are generated by an area that covers approximately 13 square miles and represent 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 2 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 3 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 4 of Table 2b.

The total discharge that entered the Prado Dam Reservoir from Cucamonga Creek during fiscal 2015/16 was estimated to be about 17,999 acre-ft, ranging from a low of about 165 acre-ft/month (August) to a high of about 3,900 acre-ft/month (January). Total diversions from Cucamonga Creek were about 4,515 acre-ft. The estimated total discharge that would have entered Prado Dam Reservoir without stormwater and dry-weather diversions is about 22,515 acre-ft; thus, about 20.1 percent of the total discharge in Cucamonga Creek was diverted for recharge in fiscal 2015/16. 68 percent of the diversions on Cucamonga Creek occurred between October and April 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 (acre-ft), 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 the majority of 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 *Points of Discharge Estimation* feature on 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 1 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 2 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 primarily 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 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 2c and shown in detail in Appendix C3. 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 1 of Table 2c) and the estimated dry-weather diversions (row 3 of Table 2c) yield the total estimated discharge from Day Creek to the Santa Ana River. This total discharge is summarized in row 4 of Table 2c. Subtracting the diversions (row 2 of Table 2c) from the total estimated discharges (row 4 of Table 2c) yields an estimated monthly discharge from Day Creek to the Santa Ana River after Watermaster diversions. This calculation is done on a monthly basis. 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. 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 5 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 6 of Table 2c. Table 2c also summarizes the discharge measured at USGS gage 11066460 (row 7), 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 8 of Table 2c.

Total discharge to the Santa Ana River from Day Creek during fiscal 2015/16 was estimated to be about 4,177 acre-ft, ranging from a low of 0 acre-ft/month (summer months) to a high of about 1,770 acre-

ft/month (January). Total diversions from Day Creek were about 281 acre-ft, of which about 44 acre-ft were dry-weather flows. The estimated discharge that would have entered the Santa Ana River without stormwater and dry-weather diversions is 4,458 acre-ft; thus, about 6.3 percent of the total discharge in Day Creek was diverted for recharge in fiscal 2015/16. The percent reduction in discharge entering the Prado Dam Reservoir was about 0.6 percent.

Figure 2c shows total monthly discharge, with and without diversions, as a stacked bar chart (acre-ft), and average daily discharge, with and without diversions, as an xy plot (cfs). Stormwater runoff accounted for about 84 percent of Watermaster's diversions, which occurred during short-duration events, while the remainder of the diversions were dry-weather flows.

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 *Points of Discharge Estimation* 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 2 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 primarily 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 1 of Table 2d) and the estimated dry-weather diversions (row 3 of Table 2d) yield the total estimated discharge from San Sevaine Creek to the Santa Ana River. This total discharge is summarized in row 4 of Table 2d. Subtracting the diversions (row 2 of Table 2d) from the total estimated discharges (row 4 of Table 2d) yields an estimated monthly discharge from San Sevaine Creek to the Santa Ana River after Watermaster diversions. This calculation is done on a monthly basis. 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. The estimated monthly discharge is summarized in row 5 of Table 2d.

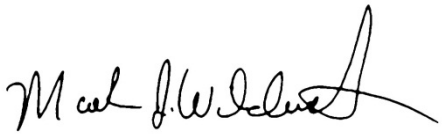
The percent reduction in discharge entering the Santa Ana River from San Sevaine Creek relative to the estimated discharge without Watermaster diversions is summarized in row 6 of Table 2d. Table 2d also summarizes the discharge measured at USGS gage 11066460 (row 7), the closest gage on the Santa Ana 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 8 of Table 2d.

Total discharge to the Santa Ana River from San Sevaine Creek during fiscal 2015/16 was estimated to be about 4,383 acre-ft, ranging from a low of 0 acre-ft/month (summer months) to a high of about 2,533 acre-ft/month (January). Total diversions from San Sevaine Creek were about 3,391 acre-ft, of which about 636 acre-ft were dry-weather flows. The estimated discharge that would have entered the Santa Ana River without stormwater and dry-weather diversions is 7,773 acre-ft; thus, about 44 percent of the total discharge in San Sevaine Creek was diverted for recharge in fiscal 2015/16. The percent reduction in discharge entering the Prado Dam Reservoir was about 7.2 percent.
Figure 2d shows total monthly discharge, with and without diversions, as a stacked bar chart (acre-ft), and average daily discharge, with and without diversions, as an xy plot (cfs). Stormwater runoff accounted for about 81 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 call me or Mark Wildermuth at (949) 420-3030.

Respectfully,

Wildermuth Environmental, Inc.



Garrett Rapp, RCE 86007 (exp. 9/30/2018)
Staff Engineer

Mark J. Wildermuth, MS, RCE 32331 (exp. 12/31/2016)
President

Encl. Tables 1, 2a through 2d; Figures 1 and 2a through 2d; and Appendices A through D

117°40'0"W

117°20'0"W

34°0'0"N

San Gabriel Mountains

San Antonio Creek

OC-59

210

Euclid Ave

Foothill Blvd

Etiwanda Ave

Lytle Creek

Riverside Ave

Holt Blvd

Ramona Ave

Central Ave

Haven Ave

Mission Blvd

San Sevaine Creek

Sierra Ave

10

Colton WWTF

Rialto WWTP

RP-1 (Cucamonga)

Jurupa Mountains

11073300

Riverside Dr

Puente Hills

11073360

Edison Ave

71

Grove Ave

Cucamonga Creek

Hamner Ave

Day Creek

Bellegrave Ave

60

Santa Ana River

Carbon Canyon

11073495

Limonite Ave

Chino Creek

RP-5

15

11066460

RWQCP

Archibald Ave

RP-1 (Prado)

Chino Hills

WRCRWTP

Prado Flood Control Basin

La Sierra Hills

91

11074000

Corona 1B

11072100

El Sobrante de San Jacinto

Main Map Features

- Flood Control and Conservation Basins
- Rivers and Streams
- Active Points of Diversion
- Active USGS Gaging Stations
- Recycled Water Discharge Location
- Points of Discharge Estimation
- OCWD OC-59 State Water Project Turnout
- Chino Basin Legal Boundary

Drainage Areas

- Chino Creek System
- Cucamonga Creek System
- Day Creek System
- San Sevaine and Etiwanda Creek Systems
- Prado Dam Reservoir

Geology

Consolidated Bedrock

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

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Date: 8/25/2016

Document Name: Figure 1

0 4 8 Miles

0 4 8 12 KM

Water Rights Compliance Reporting
Fiscal Year 2015/2016

Stormwater Recharge Points of Diversion
Water Rights Permit 21225

Figure 1

Table 1
Total Monthly Stormwater Recharge Fiscal Year 2015/16
(acre-ft)

Tributary System	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Total
Chino Creek													
College Heights	0	0	0	0	0	0	0	0	0	0	0	0	0
Upland	17	0	29	19	12	28	154	19	90	10	3	0	382
Montclair	17	0	42	22	15	42	174	20	89	19	0	0	441
Brooks Street	0	0	0	0	0	0	54	22	90	11	0	0	177
Tributary Total	**34**	**0**	**71**	**41**	**26**	**70**	**383**	**61**	**269**	**41**	**3**	**0**	**1,000**
Cucamonga Creek													
7th and 8th Street	45	4	76	39	18	86	249	93	200	34	72	5	921
Ely	285	3	215	75	41	92	337	59	177	24	197	1	1,507
Turner 1 and 2	0	1	120	98	45	105	269	51	165	19	38	5	915
Turner 3 and 4	87	15	74	64	44	144	82	41	47	49	33	20	699
Grove	37	0	82	60	20	42	100	15	53	15	47	0	472
Tributary Total	**454**	**22**	**567**	**337**	**169**	**470**	**1,037**	**258**	**643**	**141**	**386**	**30**	**4,515**
Day Creek													
Lower Day	17	21	19	24	0	27	119	14	37	0	2	1	281
Tributary Total	**17**	**21**	**19**	**24**	**0**	**27**	**119**	**14**	**37**	**0**	**2**	**1**	**281**
San Sevaine Creek													
San Sevaine	9	0	52	48	1	80	244	33	88	29	1	0	584
Hickory	0	0	9	14	14	64	35	5	22	21	0	0	185
Banana	0	0	40	105	30	59	71	7	38	0	15	0	365
RP-3	133	31	123	86	53	188	239	54	208	49	48	11	1,224
Declez	49	3	147	36	4	49	158	34	92	20	12	3	607
Etiwanda Debris Basin	2	0	13	8	0	20	26	0	0	14	0	0	84
Victoria	4	1	37	35	0	86	87	10	79	1	2	1	342
Tributary Total	**197**	**34**	**422**	**333**	**102**	**547**	**860**	**143**	**527**	**134**	**78**	**15**	**3,391**
Tributary System Total	**701**	**78**	**1,079**	**735**	**298**	**1,114**	**2,398**	**476**	**1,476**	**317**	**469**	**46**	**9,187**

[1] Source: A. Campbell (IEUA), personal communication, July 13, 2016.

[2] 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 2015/16

(acre-ft)

Row	Discharge Components	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Total
(1)	Discharge in Chino Creek at USGS Gage 11073360[1]	160	8	508	264	75	185	927	108	482	59	15	4,095	**6,885**
(2)	Discharge to San Antonio Creek from OCWD OC-59	0	0	0	0	0	0	0	0	0	0	0	4,079	**4,079**
(3)	Recycled Water Discharge from IEUA's CCWRF, RP-5, and RP-1 (Prado)	424	331	603	685	871	1,019	1,549	1,186	1,033	878	868	405	**9,853**
(4) =(1)-(2)+(3)	Estimated Discharge Entering the Prado Dam Reservoir[2]	584	339	1,111	949	945	1,204	2,476	1,293	1,515	937	882	552	**12,789**
(5)	Stormwater and Dry-Weather Discharge Diversions	34	0	71	41	26	70	383	61	269	41	3	0	**1,000**
(6) =(4)+(5)	Estimated Discharge That Would Have Entered the Prado Dam Reservoir *without* Stormwater and Dry-Weather Diversions	618	339	1,183	990	972	1,275	2,858	1,355	1,785	978	886	552	**13,789**
(7) =(5)/(6)	Percent Reduction in Discharge Entering the Prado Dam Reservoir Relative to the Estimated Discharge *without* Diversions	5.5%	0.0%	6.0%	4.2%	2.7%	5.5%	13.4%	4.5%	15.1%	4.2%	0.4%	0.0%	**7.3%**

[1] For October 14, 2015 to June 30, 2016, data are provisional; for July 1, 2015 to October 13, 2015, data have been approved by the USGS.

[2] Calculated on a monthly basis except for June, where it is calculated on a daily basis due to the discrepancy between OC-59 discharge volumes and USGS gaged flow in Chino Creek. See footnote 1 on Appendix A4.

Table 2b

Impact of Stormwater Diversions on Total Monthly Discharge Entering the Prado Dam Reservoir from Cucamonga Creek for FY 2015/16

(acre-ft)

Row	Discharge Components	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Total
(1)	Discharge Entering the Prado Dam Reservoir after Stormwater and Dry-Weather Diversions (USGS Gage 11073495)[1]	617	165	1,559	1,714	1,665	1,817	3,900	911	2,369	1,101	1,843	340	**17,999**
(2)	Stormwater and Dry-Weather Discharge Diversions	454	22	567	337	169	470	1,037	258	643	141	386	30	**4,515**
(3) =(1)+(2)	Estimated Discharge That Would Have Entered the Prado Dam Reservoir *without* Stormwater and Dry-Weather Diversions	1,071	187	2,126	2,050	1,834	2,287	4,937	1,169	3,013	1,243	2,229	370	**22,515**
(4) =(2)/(3)	Percent Reduction in Discharge Entering the Prado Dam Reservoir Relative to the Estimated Discharge *without* Diversions	42.4%	11.8%	26.7%	16.4%	9.2%	20.5%	21.0%	22.1%	21.3%	11.4%	17.3%	8.2%	**20.1%**

[1] For October 7, 2015 to June 30, 2016, data are provisional; for July 1, 2015 to October 6, 2015, data have been approved by the USGS.

Table 2c
Impact of Stormwater Diversions on Total Monthly Discharge Entering the Santa Ana River from Day Creek for FY 2015/16
(acre-ft)

Row	Discharge Components	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Total
(1)	Discharge Entering the Santa Ana River *without* Stormwater and Dry-Weather Diversions *or* Dry-Weather Flows[1]	323	0	845	160	34	213	1,814	187	464	13	361	0	**4,414**
(2)	Stormwater and Dry-Weather Discharge Diversions[2]	17	21	19	24	0	27	119	14	37	0	2	1	**281**
(3)	Diversions Attributable to Dry-Weather Flows[3]	1	21	1	2	0	11	5	1	0	0	1	1	**44**
(4) =(1)+(3)	Total Discharge Entering the Santa Ana River *without* Stormwater and Dry-Weather Diversions[4]	324	21	846	162	34	224	1,819	188	464	13	361	1	**4,458**
(5) =(4)-(2)	Estimated Discharge Entering the Santa Ana River after Stormwater and Dry-Weather Diversions	308	0	827	138	34	197	1,700	174	427	13	359	0	**4,177**
(6) =(2)/(4)	Percent Reduction in Discharge Entering the Santa Ana River Relative to Discharge *without* Diversions	0%	100%	2%	15%	1%	12%	7%	7%	8%	1%	1%	0%	**6.3%**
(7)	Discharge in the Santa Ana River at USGS Gage 11066460[5]	3,303	2,248	5,809	2,436	3,045	2,607	12,305	3,139	4,244	3,230	2,799	2,180	**47,346**
(8) =(2)/(7)	Percent Reduction in Discharge Entering the Santa Ana River Relative to Discharge at 11066460[5]	0.5%	1.0%	0.3%	1.0%	0.0%	1.0%	1.0%	0.4%	0.9%	0.0%	0.1%	0.0%	**0.6%**

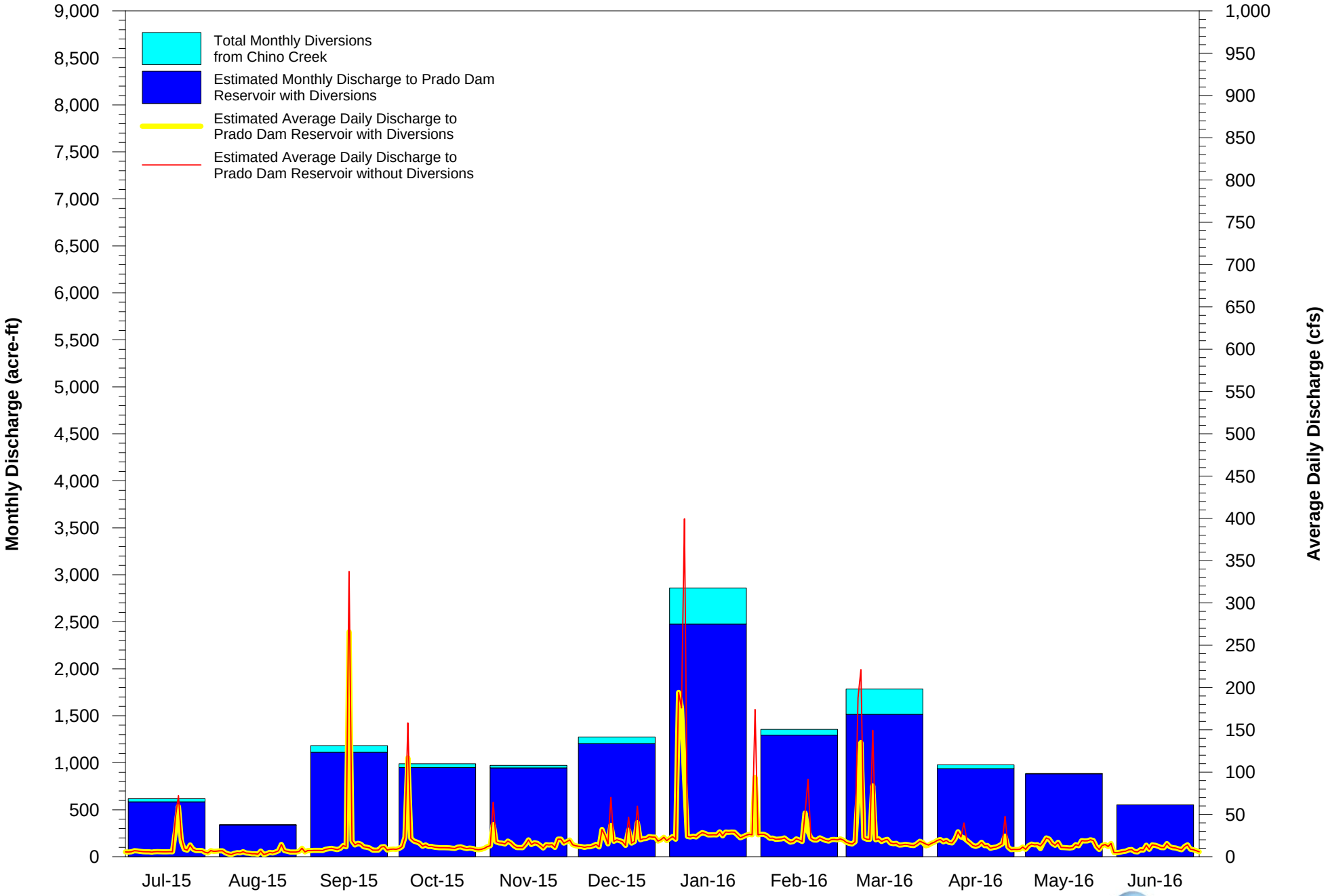
[1] Estimated using the WLAM.
[2] Calculated on a monthly basis.
[3] Calculated on a monthly basis. Note that the WLAM does not simulate dry-weather flows on the Day Creek tributary system. Thus, there are dates on which the measured diversions from Day Creek are greater than the WLAM's estimated discharge 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.
[4] Calculated on a monthly basis.
[5] For June 7, 2015 to June 30, 2016, data are provisional; for July 1, 2015 to June 6, 2016, data have been approved by the USGS.

Table 2d
Impact of Stormwater Diversions on Total Monthly Discharge Entering the Santa Ana River from San Sevaine Creek for FY 2015/16
(acre-ft)

Row	Discharge Components	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Total
(1)	Discharge Entering the Santa Ana River *without* Stormwater and Dry-Weather Diversions *or* Dry-Weather Flows[1]	586	0	1,237	194	29	450	3,378	253	718	34	259	0	**7,137**
(2)	Stormwater and Dry-Weather Discharge Diversions[2]	197	34	422	333	102	547	860	143	527	134	78	15	**3,391**
(3)	Diversions Attributable to Dry-Weather Flows[3]	22	34	40	147	74	111	14	13	45	103	18	15	**636**
(4) =(1)+(3)	Total Discharge Entering the Santa Ana River *without* Stormwater and Dry-Weather Diversions[4]	607	34	1,277	340	103	561	3,392	266	762	138	278	15	**7,773**
(5) =(4)-(2)	Estimated Discharge Entering the Santa Ana River after Stormwater and Dry-Weather Diversions	411	0	855	8	1	14	2,533	123	235	3	200	0	**4,383**
(6) =(2)/(4)	Percent Reduction in Discharge Entering the Santa Ana River Relative to Discharge *without* Diversions	32%	100%	33%	98%	99%	97%	25%	54%	69%	98%	28%	100%	**44%**
(7)	Discharge in the Santa Ana River at USGS Gage 11066460[5]	3,303	2,248	5,809	2,436	3,045	2,607	12,305	3,139	4,244	3,230	2,799	2,180	**47,346**
(8) =(2)/(7)	Percent Reduction in Discharge Entering the Santa Ana River Relative to Discharge at 11066460[5]	5.9%	1.5%	7.3%	13.7%	3.3%	21.0%	7.0%	4.5%	12.4%	4.2%	2.8%	0.7%	**7.2%**

[1] Estimated using the WLAM.
[2] Calculated on a monthly basis.
[3] 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 D1-D3) or downstream of the recharge basins are not included in these calculations.
[4] Calculated on a monthly basis.
[5] For June 7, 2016 to June 30, 2016, data are provisional; for July 1, 2015 to June 6, 2016, data have been approved by the USGS.

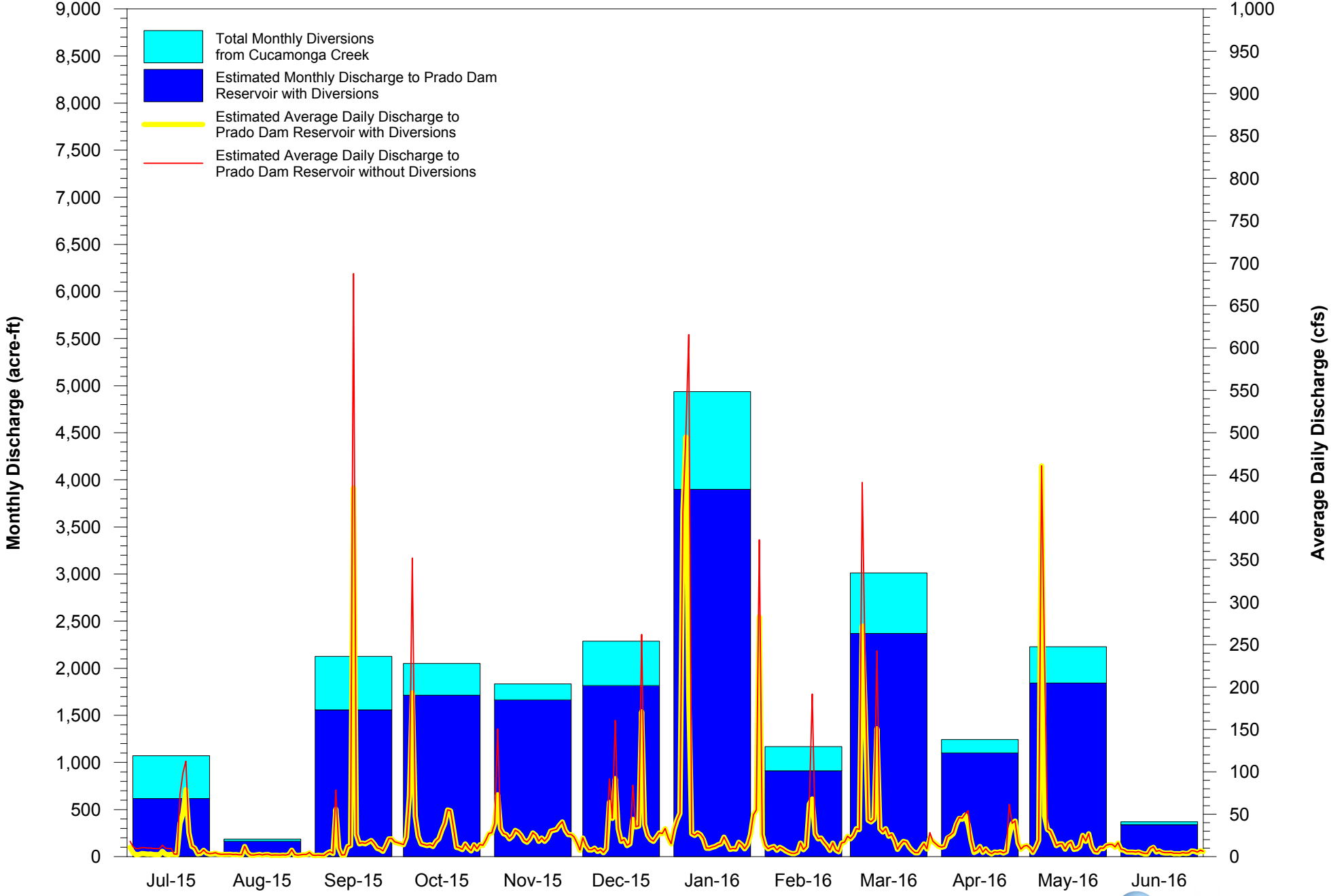
Figure 2a
Estimated Discharge from Chino Creek to Prado Dam Reservoir
With and without Stormwater and Dry-Weather Discharge Diversions



09/07/2016
Chino_Creek_Figure2a.grf

WEI
Wildermuth Environmental, Inc.

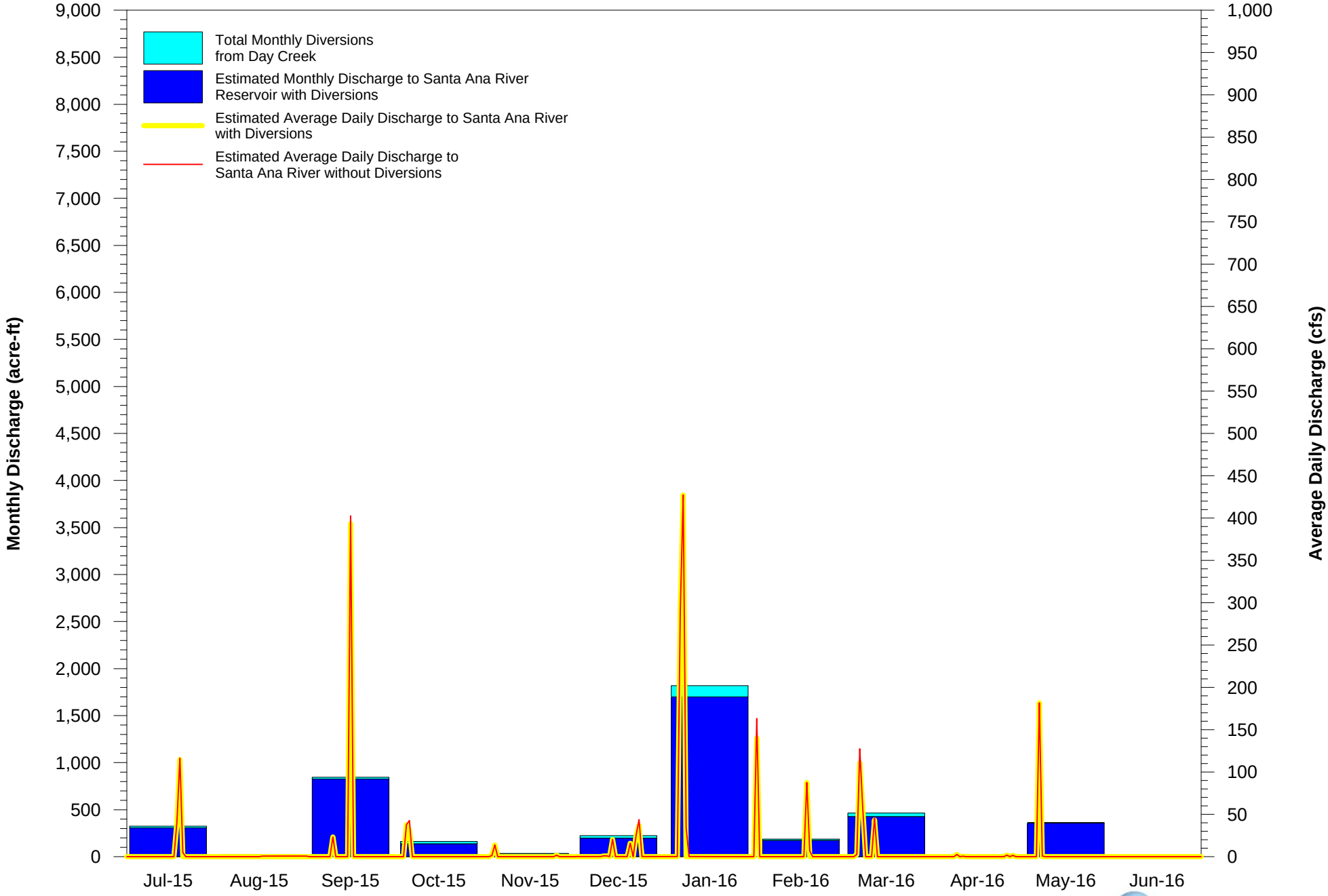
Figure 2b
Estimated Discharge from Cucamonga Creek to Prado Dam Reservoir
With and without Stormwater and Dry-Weather Discharge Diversions



09/07/2016
Cucamonga_Creek_Figure2b.grf

WEI
Wildermuth Environmental, Inc.

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



09/07/2016
Day_Creek_Figure2c.grf

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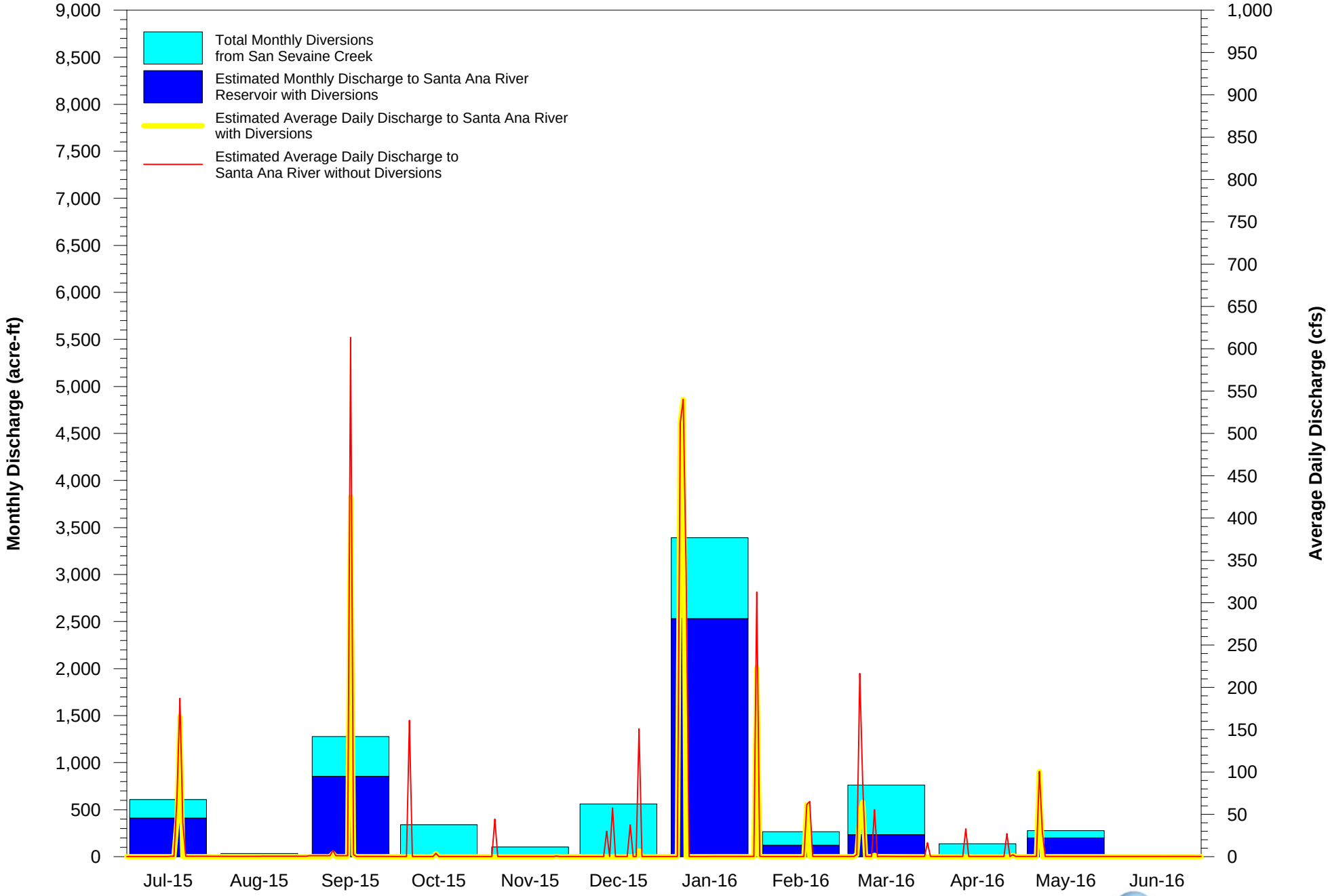
Figure 2d
Estimated Discharge from San Sevaine Creek to the Santa Ana River
With and without Stormwater and Dry-Weather Discharge Diversions



09/07/2016
San Sevaine_Creek_Figure2d.grf

WEI
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Appendix A1
Average Daily Discharge at USGS Gage 11073360 on Chino Creek
(cfs)

Day	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16
1	0.2	0.1	0.1	0.1	0.2	0.2	0.4	0.4	0.2	0.3	0.2	35.0
2	0.2	0.1	0.1	0.1	0.6	0.2	0.4	0.3	0.2	0.5	0.3	72.0
3	0.1	0.1	0.1	0.1	26.0	0.2	0.4	0.2	0.2	0.3	0.3	66.0
4	0.1	0.1	0.1	3.4	0.3	0.3	0.4	0.2	0.2	0.3	0.2	60.0
5	0.1	0.1	0.1	95.0	0.3	0.3	172.0	0.2	0.2	1.5	0.2	61.0
6	0.1	0.2	0.1	1.4	0.3	0.2	147.0	0.2	54.0	0.3	0.3	61.0
7	0.1	0.1	0.1	0.4	0.3	0.3	69.0	0.3	115.0	0.2	0.2	67.0
8	0.1	0.1	0.1	0.8	0.2	0.3	0.7	0.2	1.0	0.4	0.2	71.0
9	0.1	0.1	0.3	2.0	0.3	0.5	0.5	0.3	0.5	9.0	0.2	69.0
10	0.1	0.1	0.1	1.9	0.2	16.0	0.5	0.2	0.3	0.2	0.3	66.0
11	0.1	0.1	0.1	2.0	0.2	8.5	0.5	0.2	64.0	0.2	0.2	64.0
12	0.1	0.1	0.1	1.9	0.4	0.4	0.4	0.3	0.5	0.3	0.3	65.0
13	0.1	0.1	0.1	1.9	0.2	19.0	0.4	0.2	0.3	0.2	0.3	72.0
14	0.1	0.1	0.1	2.0	0.0	1.4	0.5	0.2	0.4	0.2	0.2	74.0
15	0.1	0.1	250.0	1.8	0.2	0.4	0.5	0.3	0.3	0.2	0.2	73.0
16	0.1	0.1	2.5	1.8	0.8	0.3	0.5	0.2	0.3	0.2	0.2	73.0
17	0.1	0.1	0.2	1.6	0.2	0.4	0.5	37.0	0.3	0.2	0.2	74.0
18	23.0	0.1	0.2	1.2	0.3	0.4	0.5	11.0	0.3	0.2	0.3	74.0
19	46.0	0.1	0.1	1.5	0.3	19.0	0.5	0.3	0.3	0.3	0.3	71.0
20	7.9	0.1	0.1	1.4	0.3	0.9	0.5	0.2	0.3	0.2	0.3	70.0
21	0.2	0.1	0.1	1.5	0.3	0.5	0.4	0.2	0.4	0.2	0.2	75.0
22	0.2	0.1	0.1	1.4	0.2	20.0	0.4	0.2	0.3	0.2	0.2	75.0
23	0.1	0.1	0.2	1.1	0.2	0.6	0.4	0.2	0.3	0.3	0.2	74.0
24	0.1	0.1	0.1	0.3	0.3	0.5	0.5	0.2	0.3	0.2	0.3	73.0
25	0.1	0.1	0.1	0.2	3.8	0.4	0.6	0.2	0.3	12.0	0.3	74.0
26	0.1	0.1	0.1	0.3	0.3	0.4	0.4	0.2	0.3	0.3	0.4	73.0
27	0.1	0.1	0.1	0.9	0.3	0.3	0.5	0.2	0.3	0.2	0.2	72.0
28	0.1	0.1	0.1	2.0	0.2	0.4	0.4	0.2	0.4	0.3	0.2	73.0
29	0.1	0.1	0.1	1.4	0.2	0.4	0.4	0.2	0.8	0.2	0.2	72.0
30	0.3	0.1	0.1	1.2	0.3	0.4	0.4	--	0.3	0.3	0.2	65.0
31	0.2	0.1	--	0.4	--	0.4	67.0	--	0.3	--	0.2	--
Total (cfs)	80.5	3.8	256.2	132.9	37.6	93.3	467.2	54.3	243.1	29.7	7.4	2,064.0
Minimum	0.1	0.1	0.1	0.1	0.0	0.2	0.4	0.2	0.2	0.2	0.2	35.0
Maximum	46.0	0.2	250.0	95.0	26.0	20.0	172.0	37.0	115.0	12.0	0.4	75.0
Average	2.6	0.1	8.5	4.3	1.3	3.0	15.1	1.9	7.8	1.0	0.2	68.8
Total (acre-ft)	159.7	7.5	508.3	263.7	74.6	185.2	927.0	107.8	482.3	59.0	14.7	4,095.0

[1] For October 14, 2015 to June 30, 2016, data are provisional; for July 1, 2015 to October 13, 2015, data have been approved by the USGS.

Appendix A2

Average Daily Discharge at OC-59 on San Antonio Creek

(cfs)

Day	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	46.3
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	78.2
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	75.5
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	71.3
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	71.4
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	71.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	72.7
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	72.5
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	68.8
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	63.5
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	62.4
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	62.1
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	70.5
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	71.9
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	72.1
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	71.9
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	71.1
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	71.1
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	64.7
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	68.6
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	68.7
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	68.7
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	68.9
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	68.7
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	67.5
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	68.5
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	69.4
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	69.6
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	--	0.0	0.0	0.0	63.5
31	0.0	0.0	--	0.0	--	0.0	0.0	--	0.0	--	0.0	--
Total (cfs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2,055.9
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	46.3
Maximum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	78.2
Average	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	68.5
Total (acre-ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4,078.9

Appendix A3

Average Daily Discharge of All IEUA Recycled Water Effluent Discharges to Chino Creek

(cfs)

Day	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16
1	5.4	6.5	7.3	8.7	11.8	12.8	18.7	25.5	19.5	16.9	11.3	5.0
2	5.4	6.8	7.1	9.6	12.4	12.2	21.3	26.3	16.9	18.9	8.5	4.8
3	5.7	6.8	7.4	11.8	12.1	11.8	23.5	26.3	15.6	20.0	12.7	5.3
4	7.0	4.5	7.4	19.5	17.3	10.8	20.3	24.8	14.9	17.3	14.7	6.0
5	6.8	3.1	7.4	22.0	16.1	11.6	22.3	21.7	17.5	17.9	13.8	6.7
6	6.2	2.5	7.3	20.4	15.8	11.6	28.9	21.8	18.6	16.6	14.1	8.2
7	5.9	3.9	8.7	18.1	14.7	12.7	28.2	20.3	20.0	16.1	9.3	8.5
8	5.7	4.6	9.3	16.6	18.3	14.4	23.4	20.6	21.2	20.7	16.4	6.0
9	5.7	4.5	9.6	13.8	16.1	11.1	22.9	20.9	20.3	20.6	22.0	5.6
10	5.4	5.9	9.0	10.5	12.8	16.2	23.8	22.0	20.3	23.2	20.6	5.7
11	5.9	4.3	8.2	12.1	10.7	14.1	22.9	19.2	20.0	22.0	15.6	6.3
12	5.9	4.0	9.6	10.2	10.5	14.7	26.0	17.0	19.5	18.9	13.3	10.7
13	5.9	3.4	13.1	10.4	10.5	18.1	28.2	17.8	20.9	16.2	16.9	7.3
14	5.7	3.4	11.6	9.4	14.5	16.9	27.2	20.9	17.6	13.1	10.7	11.9
15	5.7	2.9	16.1	9.0	19.8	19.6	25.4	19.5	19.3	12.1	10.7	12.5
16	5.9	6.7	16.1	8.8	13.6	18.7	25.4	17.8	20.3	13.3	10.4	11.3
17	5.7	2.5	13.6	9.3	16.4	17.3	25.5	14.7	15.9	16.9	10.1	7.9
18	7.9	3.4	15.6	9.4	15.6	13.0	25.4	19.3	15.2	12.8	10.5	7.7
19	13.3	5.1	14.9	9.1	13.0	12.5	28.9	21.3	15.5	13.0	13.9	9.3
20	9.9	4.3	11.6	8.7	10.1	15.2	24.1	19.6	13.5	9.7	12.7	6.8
21	8.5	5.4	11.1	8.4	14.1	17.5	28.8	19.5	13.6	10.7	18.9	4.3
22	7.6	6.8	10.2	9.9	13.6	20.3	28.5	22.1	14.4	11.3	18.4	4.0
23	13.8	14.4	7.7	10.7	14.1	19.5	28.8	20.4	13.9	12.8	18.6	3.9
24	8.7	7.1	7.6	10.2	10.7	20.7	28.6	19.0	13.1	14.9	19.8	4.2
25	7.3	6.3	7.7	9.4	17.0	21.0	25.1	18.3	13.0	12.4	18.9	6.8
26	7.3	5.4	11.4	9.9	20.6	23.4	22.0	20.1	15.2	11.0	11.8	8.7
27	7.1	5.4	11.9	9.0	15.8	22.9	23.4	20.3	17.9	8.2	8.4	5.4
28	5.3	5.4	7.7	6.7	17.5	22.7	25.1	19.8	16.4	8.4	13.1	4.6
29	4.3	6.0	8.7	6.8	19.6	18.1	26.0	20.9	12.1	8.4	14.2	4.6
30	7.0	9.9	9.0	7.6	13.9	19.6	25.5	--	13.5	8.5	11.9	4.3
31	6.2	5.6	--	9.6	--	22.6	26.8	--	15.5	--	15.5	--
Total (cfs)	213.9	166.9	304.0	345.3	438.9	513.8	780.6	597.6	520.7	442.6	437.3	204.4
Minimum	4.3	2.5	7.1	6.7	10.1	10.8	18.7	14.7	12.1	8.2	8.4	3.9
Maximum	13.8	14.4	16.1	22.0	20.6	23.4	28.9	26.3	21.2	23.2	22.0	12.5
Average	6.9	5.4	10.1	11.1	14.6	16.6	25.2	20.6	16.8	14.8	14.1	6.8
Total (acre-ft)	424.5	331.2	603.1	685.1	870.7	1,019.3	1,548.7	1,185.7	1,033.1	878.1	867.7	405.4

Appendix A4
Estimated Average Daily Discharge from Chino Creek to Prado Dam Reservoir
after Watermaster Diversions and Removal of OCWD OC-59 Discharge
(cfs)

Day	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16[1]
1	5.7	6.6	7.4	8.8	12.0	13.0	19.1	25.9	19.7	17.2	11.5	5.0
2	5.6	6.9	7.2	9.7	13.0	12.4	21.7	26.5	17.1	19.4	8.8	4.8
3	5.8	6.9	7.5	11.8	38.1	12.0	23.9	26.5	15.8	20.3	12.9	5.3
4	7.1	4.6	7.5	22.9	17.6	11.1	20.7	25.0	15.0	17.6	14.9	6.0
5	6.9	3.2	7.5	117.0	16.4	11.9	194.3	21.9	17.7	19.4	14.0	6.7
6	6.3	2.6	7.4	21.8	16.1	11.8	175.9	22.0	72.6	16.8	14.3	8.2
7	6.0	4.0	8.8	18.5	15.0	13.0	97.2	20.5	135.0	16.3	9.5	8.5
8	5.8	4.8	9.4	17.4	18.5	14.7	24.0	20.8	22.2	21.1	16.6	6.0
9	5.8	4.6	9.9	15.8	16.3	11.6	23.4	21.1	20.7	29.6	22.2	5.7
10	5.5	6.0	9.1	12.4	13.1	32.2	24.3	22.2	20.6	23.4	20.8	8.2
11	6.0	4.4	8.3	14.1	10.9	22.6	23.4	19.4	84.0	22.2	15.9	7.9
12	6.0	4.2	9.7	12.1	10.9	15.1	26.4	17.3	20.0	19.1	13.6	13.6
13	6.0	3.5	13.2	12.3	10.7	37.1	28.6	18.0	21.2	16.5	17.2	8.8
14	5.8	3.5	11.7	11.4	14.5	18.3	27.7	21.1	18.0	13.4	10.9	14.0
15	5.8	3.1	266.1	10.8	20.0	20.0	25.8	19.7	19.7	12.3	10.9	13.5
16	6.0	6.8	18.6	10.6	14.4	19.0	25.8	18.0	20.6	13.5	10.6	12.4
17	5.8	2.6	13.8	10.9	16.6	17.7	26.0	51.7	16.3	17.1	10.3	10.8
18	30.9	3.5	15.8	10.6	15.9	13.4	25.8	30.3	15.5	13.1	10.8	10.7
19	59.3	5.2	15.0	10.6	13.3	31.5	29.4	21.7	15.8	13.2	14.2	15.6
20	17.8	4.5	11.7	10.1	10.3	16.1	24.6	19.9	13.7	10.0	13.0	11.9
21	8.7	5.5	11.3	9.9	14.3	18.0	29.2	19.7	14.0	10.9	19.1	10.7
22	7.7	6.9	10.4	11.3	13.9	40.3	28.9	22.3	14.7	11.5	18.6	10.3
23	13.9	14.5	7.9	11.8	14.3	20.1	29.2	20.6	14.2	13.1	18.8	9.2
24	8.8	7.2	7.7	10.5	10.9	21.2	29.1	19.2	13.5	15.1	20.1	8.2
25	7.4	6.5	7.9	9.7	20.8	21.4	25.7	18.5	13.3	24.4	19.2	12.2
26	7.4	5.5	11.6	10.2	20.9	23.7	22.4	20.3	15.5	11.3	12.1	14.2
27	7.2	5.5	12.0	9.8	16.1	23.2	23.8	20.5	18.2	8.4	8.6	8.9
28	5.4	5.6	7.9	8.7	17.7	23.2	25.5	20.0	16.8	8.6	13.4	8.2
29	4.5	6.2	8.8	8.2	19.8	18.5	26.4	21.1	12.9	8.6	14.5	7.1
30	7.2	10.0	9.1	8.8	14.2	20.0	26.0	--	13.8	8.8	12.1	5.8
31	6.3	5.7	--	10.0	--	23.0	93.8	--	15.8	--	15.7	--
Total (cfs)	294.4	170.7	560.2	478.2	476.5	607.1	1,247.9	651.9	763.8	472.3	444.8	278.3
Minimum	4.5	2.6	7.2	8.2	10.3	11.1	19.1	17.3	12.9	8.4	8.6	4.8
Maximum	59.3	14.5	266.1	117.0	38.1	40.3	194.3	51.7	135.0	29.6	22.2	15.6
Average	9.5	5.5	18.7	15.4	15.9	19.6	40.3	22.5	24.6	15.7	14.3	9.3
Total (acre-ft)	584.1	338.7	1,111.4	948.7	945.3	1,204.5	2,475.7	1,293.4	1,515.4	937.1	882.4	552.2

[1] Recall that A4 = A1-A2+A3. For several days in June, the OC-59 discharge (A2) exceeded the measured discharge at USGS gage 11073360 (A1). For these days, A1-A2 was set equal to zero.

Appendix A5

Daily Diversions to Recharge Basins from the Chino Creek Tributary System

(cfs)

Day	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16
1	0.0	0.0	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	13.3	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	20.8	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	58.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	152.4	0.0	43.5	0.0	1.6	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	1.3	0.0	0.0	33.0	8.9	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	0.0
13	0.0	0.0	0.0	0.0	0.0	16.7	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	35.9	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	8.3	0.0	0.0	0.0	0.0	0.0	0.0	30.9	0.0	0.0	0.0	0.0
19	6.5	0.0	0.0	0.0	0.0	7.7	0.0	0.0	0.0	0.0	0.0	0.0
20	2.3	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	9.8	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	11.7	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	1.1	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	40.4	--	0.0	--	0.0	--
Total (cfs)	17.1	0.0	35.9	20.8	13.3	35.5	192.8	30.9	135.6	20.6	1.6	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	8.3	0.0	35.9	20.8	13.3	16.7	152.4	30.9	58.0	11.7	1.6	0.0
Average	0.6	0.0	1.2	0.7	0.4	1.1	6.2	1.1	4.4	0.7	0.1	0.0
Total (acre-ft)	34.0	0.0	71.2	41.2	26.3	70.4	382.6	61.3	269.1	40.9	3.2	0.0

[1] On days when the non-replenishment discharge recorded was greater than the measured recharge, the total diversion volume was manually changed to 0

Appendix A6
Estimated Average Daily Discharge from Chino Creek to Prado Dam Reservoir
without Watermaster Diversion
(cfs)

Day	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16
1	5.7	6.6	7.4	8.8	12.0	13.0	19.1	25.9	19.7	17.2	11.5	5.0
2	5.6	6.9	7.2	9.7	13.0	12.4	21.7	26.5	17.1	19.4	8.8	4.8
3	5.8	6.9	7.5	11.8	51.3	12.0	23.9	26.5	15.8	20.3	12.9	5.3
4	7.1	4.6	7.5	22.9	17.6	11.1	20.7	25.0	15.0	17.6	14.9	6.0
5	6.9	3.2	7.5	137.7	16.4	11.9	194.3	21.9	17.7	19.4	14.0	6.7
6	6.3	2.6	7.4	21.8	16.1	11.8	175.9	22.0	130.6	16.8	14.3	8.2
7	6.0	4.0	8.8	18.5	15.0	13.0	249.6	20.5	178.5	16.3	11.1	8.5
8	5.8	4.8	9.4	17.4	18.5	14.7	24.0	20.8	22.2	21.1	16.6	6.0
9	5.8	4.6	9.9	15.8	16.3	11.6	23.4	21.1	20.7	29.6	22.2	5.7
10	5.5	6.0	9.1	12.4	13.1	32.2	24.3	22.2	20.6	23.4	20.8	8.2
11	6.0	4.4	8.3	14.1	10.9	23.9	23.4	19.4	117.0	31.1	15.9	7.9
12	6.0	4.2	9.7	12.1	10.9	15.1	26.4	17.3	20.0	19.1	13.6	13.6
13	6.0	3.5	13.2	12.3	10.7	53.8	28.6	18.0	21.2	16.5	17.2	8.8
14	5.8	3.5	11.7	11.4	14.5	18.3	27.7	21.1	18.0	13.4	10.9	14.0
15	5.8	3.1	302.0	10.8	20.0	20.0	25.8	19.7	19.7	12.3	10.9	13.5
16	6.0	6.8	18.6	10.6	14.4	19.0	25.8	18.0	20.6	13.5	10.6	12.4
17	5.8	2.6	13.8	10.9	16.6	17.7	26.0	51.7	16.3	17.1	10.3	10.8
18	39.2	3.5	15.8	10.6	15.9	13.4	25.8	61.2	15.5	13.1	10.8	10.7
19	65.8	5.2	15.0	10.6	13.3	39.2	29.4	21.7	15.8	13.2	14.2	15.6
20	20.1	4.5	11.7	10.1	10.3	16.1	24.6	19.9	13.7	10.0	13.0	11.9
21	8.7	5.5	11.3	9.9	14.3	18.0	29.2	19.7	14.0	10.9	19.1	10.7
22	7.7	6.9	10.4	11.3	13.9	50.1	28.9	22.3	14.7	11.5	18.6	10.3
23	13.9	14.5	7.9	11.8	14.3	20.1	29.2	20.6	14.2	13.1	18.8	9.2
24	8.8	7.2	7.7	10.5	10.9	21.2	29.1	19.2	13.5	15.1	20.1	8.2
25	7.4	6.5	7.9	9.7	20.8	21.4	25.7	18.5	13.3	36.1	19.2	12.2
26	7.4	5.5	11.6	10.2	20.9	23.7	22.4	20.3	15.5	11.3	12.1	14.2
27	7.2	5.5	12.0	9.8	16.1	23.2	23.8	20.5	18.2	8.4	8.6	8.9
28	5.4	5.6	7.9	8.7	17.7	23.2	25.5	20.0	16.8	8.6	13.4	8.2
29	4.5	6.2	8.8	8.2	19.8	18.5	26.4	21.1	14.0	8.6	14.5	7.1
30	7.2	10.0	9.1	8.8	14.2	20.0	26.0	--	13.8	8.8	12.1	5.8
31	6.3	5.7	--	10.0	--	23.0	134.2	--	15.8	--	15.7	--
Total (cfs)	311.5	170.7	596.1	498.9	489.7	642.6	1,440.7	682.8	899.5	493.0	446.4	278.3
Minimum	4.5	2.6	7.2	8.2	10.3	11.1	19.1	17.3	13.3	8.4	8.6	4.8
Maximum	65.8	14.5	302.0	137.7	51.3	53.8	249.6	61.2	178.5	36.1	22.2	15.6
Average	10.0	5.5	19.9	16.1	16.3	20.7	46.5	23.5	29.0	16.4	14.4	9.3
Total (acre-ft)	618.1	338.7	1,182.6	989.9	971.7	1,274.8	2,858.3	1,354.7	1,784.6	978.1	885.6	552.2

Appendix B1

Estimated Average Daily Discharge from Cucamonga Creek to Prado Dam Reservoir after Watermaster Diversions

(Average Daily Discharge at USGS Gage 11073495)

(cfs)

Day	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16
1	11.0	2.5	1.7	15.0	28.0	7.5	15.0	26.0	24.0	12.0	13.0	16.0
2	4.7	2.6	1.2	14.0	39.0	22.0	32.0	13.0	21.0	11.0	10.0	8.3
3	2.3	2.6	1.6	23.0	73.0	13.0	43.0	9.2	25.0	12.0	4.8	7.5
4	2.5	2.7	1.3	71.0	33.0	7.9	51.0	11.0	33.0	22.0	11.0	5.4
5	3.6	2.2	1.2	193.0	27.0	7.8	406.0	12.0	32.0	24.0	19.0	5.4
6	3.4	2.5	4.0	48.0	26.0	10.0	495.0	7.5	272.0	27.0	461.0	5.3
7	2.9	2.0	5.8	24.0	21.0	6.1	193.0	11.0	171.0	38.0	48.0	4.8
8	3.1	2.0	3.7	15.0	24.0	8.0	27.0	9.2	43.0	45.0	32.0	5.6
9	2.5	12.0	56.0	14.0	31.0	4.6	25.0	6.7	41.0	44.0	30.0	4.2
10	2.4	4.4	9.8	13.0	29.0	9.0	28.0	4.9	44.0	49.0	22.0	3.2
11	2.3	1.7	1.7	14.0	25.0	64.0	26.0	3.7	151.0	38.0	13.0	3.1
12	6.4	1.6	1.9	12.0	19.0	45.0	20.0	3.5	33.0	19.0	15.0	9.0
13	3.0	2.1	12.0	18.0	17.0	92.0	9.9	5.1	29.0	4.8	15.0	11.0
14	2.3	2.6	13.0	21.0	21.0	33.0	9.8	16.0	33.0	6.5	8.8	5.5
15	2.6	1.7	435.0	31.0	28.0	18.0	11.0	8.2	24.0	12.0	15.0	6.7
16	2.6	2.4	26.0	39.0	25.0	20.0	12.0	12.0	26.0	4.9	17.0	4.7
17	2.4	2.5	15.0	55.0	18.0	13.0	14.0	62.0	19.0	9.2	8.5	4.1
18	39.0	1.3	16.0	54.0	22.0	15.0	15.0	68.0	8.5	5.0	9.2	4.1
19	51.0	1.6	15.0	33.0	18.0	44.0	23.0	27.0	14.0	3.1	12.0	4.4
20	79.0	1.6	17.0	11.0	22.0	35.0	16.0	21.0	18.0	5.4	25.0	3.4
21	28.0	1.4	19.0	10.0	30.0	36.0	8.5	22.0	17.0	4.9	18.0	3.5
22	12.0	1.7	15.0	8.3	31.0	171.0	9.4	17.0	11.0	5.8	27.0	3.3
23	10.0	1.5	9.8	15.0	32.0	38.0	8.9	13.0	7.1	4.2	12.0	4.3
24	3.3	2.4	8.7	9.9	37.0	25.0	17.0	7.4	4.4	5.7	5.9	3.7
25	3.8	7.6	6.2	6.7	41.0	20.0	14.0	16.0	4.4	25.0	5.2	3.9
26	7.5	2.0	13.0	14.0	31.0	18.0	9.1	7.9	10.0	39.0	10.0	6.7
27	4.1	1.3	21.0	8.8	26.0	23.0	14.0	5.7	15.0	42.0	9.4	6.3
28	3.0	1.7	21.0	14.0	26.0	28.0	26.0	16.0	8.9	16.0	13.0	4.8
29	3.3	2.2	17.0	13.0	23.0	27.0	49.0	17.0	22.0	8.6	14.0	7.1
30	4.2	2.2	16.0	19.0	16.0	33.0	55.0	--	18.0	12.0	14.0	5.9
31	2.8	4.5	--	27.0	--	22.0	283.0	--	15.0	--	11.0	--
Total (cfs)	311.0	83.1	785.6	863.7	839.0	915.9	1,965.6	459.0	1,194.3	555.1	928.8	171.2
Minimum	2.3	1.3	1.2	6.7	16.0	4.6	8.5	3.5	4.4	3.1	4.8	3.1
Maximum	79.0	12.0	435.0	193.0	73.0	171.0	495.0	68.0	272.0	49.0	461.0	16.0
Average	10.0	2.7	26.2	27.9	28.0	29.5	63.4	15.8	38.5	18.5	30.0	5.7
Total (acre-ft)	617.0	164.9	1,558.6	1,713.6	1,664.6	1,817.1	3,899.8	910.7	2,369.5	1,101.3	1,842.7	339.7

[1] For October 7, 2015 to June 30, 2016, data are provisional; for July 1, 2015 to October 6, 2015, data have been approved by the USGS.

Appendix B2

Daily Diversions to Recharge Basins on the Cucamonga Creek Tributary System

(cfs)

Day	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16
1	7.1	0.3	0.2	0.3	0.3	0.4	0.3	0.3	0.2	0.3	0.3	0.5
2	7.1	0.3	0.2	0.3	0.2	0.4	0.3	0.3	0.2	0.3	0.3	0.5
3	7.1	0.3	0.2	0.3	77.8	0.4	0.3	0.3	0.2	0.3	0.3	0.5
4	7.1	0.3	0.2	0.3	0.3	0.4	0.3	0.3	0.2	1.4	0.3	0.5
5	7.1	0.3	0.2	159.2	0.3	0.4	0.0	0.3	0.2	1.4	0.3	0.5
6	7.1	0.3	0.2	0.3	0.3	0.4	0.0	0.3	169.5	1.4	0.0	0.5
7	7.1	0.3	0.2	0.3	0.3	0.4	422.8	0.3	49.8	1.4	187.2	0.5
8	7.1	0.3	0.2	0.3	0.3	0.4	0.2	0.3	0.2	1.4	0.1	0.5
9	7.1	0.3	22.7	0.3	0.3	0.4	0.2	0.3	0.2	1.4	0.1	0.5
10	7.1	0.3	0.2	0.3	0.3	0.4	0.2	0.3	0.2	1.4	0.1	0.6
11	7.1	0.3	0.2	0.3	0.3	27.7	0.2	0.3	91.7	16.1	0.1	0.6
12	7.1	0.3	0.2	0.3	0.3	0.4	1.6	0.3	0.0	1.4	0.1	0.6
13	7.1	0.3	0.2	0.3	0.3	68.8	0.3	0.3	0.2	1.4	0.2	0.6
14	7.1	0.3	0.2	0.3	0.3	0.4	0.3	0.3	0.3	1.4	0.2	0.6
15	7.1	0.3	252.8	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.2	0.6
16	0.5	0.4	0.5	0.4	0.3	0.4	0.3	0.3	0.3	0.3	0.2	0.6
17	0.5	0.4	0.5	0.4	0.3	0.4	0.3	0.0	0.3	0.3	0.2	0.6
18	34.2	0.4	0.5	0.4	0.3	0.4	0.3	123.9	0.3	0.3	0.2	0.6
19	47.8	0.4	0.5	0.4	0.3	40.3	0.3	0.3	0.3	0.3	0.2	0.6
20	33.6	0.4	0.5	0.4	0.3	0.4	0.3	0.3	0.3	0.3	0.2	0.6
21	0.5	0.4	0.5	0.4	0.3	0.4	0.3	0.2	0.3	0.3	0.2	0.6
22	0.5	0.4	0.5	0.4	0.3	91.2	0.3	0.2	0.3	0.3	0.2	0.5
23	0.5	0.4	0.5	0.4	0.3	0.3	0.3	0.2	0.3	0.3	0.2	0.5
24	0.5	0.4	0.5	0.4	0.3	0.3	0.3	0.2	0.3	0.3	0.2	0.5
25	0.5	0.4	0.5	0.4	0.3	0.3	0.3	0.2	0.3	36.7	0.2	0.5
26	0.5	0.4	0.5	0.4	0.3	0.3	0.3	0.2	0.3	0.3	0.2	0.5
27	0.5	0.4	0.5	0.4	0.3	0.3	0.3	0.2	0.3	0.3	0.5	0.5
28	0.5	0.4	0.5	0.4	0.3	0.3	0.3	0.2	0.3	0.3	0.5	0.5
29	0.5	0.4	0.5	0.4	0.3	0.3	0.3	0.2	6.3	0.3	0.5	0.5
30	0.5	0.4	0.5	0.4	0.3	0.3	0.3	--	0.3	0.3	0.5	0.5
31	0.5	0.4	--	0.4	--	0.3	90.8	--	0.3	--	0.5	--
Total (cfs)	228.7	11.1	286.0	169.8	85.3	236.8	522.6	130.0	324.1	71.3	194.7	15.3
Minimum	0.5	0.3	0.2	0.3	0.2	0.3	0.0	0.0	0.0	0.3	0.0	0.5
Maximum	47.8	0.4	252.8	159.2	77.8	91.2	422.8	123.9	169.5	36.7	187.2	0.6
Average	7.4	0.4	9.5	5.5	2.8	7.6	16.9	4.5	10.5	2.4	6.3	0.5
Total (acre-ft)	453.8	22.0	567.4	336.9	169.2	469.9	1,036.8	258.0	643.1	141.5	386.3	30.3

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

Day	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16
1	18.1	2.8	1.9	15.3	28.3	7.9	15.3	26.3	24.2	12.3	13.3	16.5
2	11.8	2.9	1.4	14.3	39.2	22.4	32.3	13.3	21.2	11.3	10.3	8.8
3	9.4	2.9	1.8	23.3	150.8	13.4	43.3	9.5	25.2	12.3	5.1	8.0
4	9.6	3.0	1.5	71.3	33.3	8.3	51.3	11.3	33.2	23.4	11.3	5.9
5	10.7	2.5	1.4	352.2	27.3	8.2	406.0	12.3	32.2	25.4	19.3	5.9
6	10.5	2.8	4.2	48.3	26.3	10.4	495.0	7.8	441.5	28.4	461.0	5.8
7	10.0	2.3	6.0	24.3	21.3	6.5	615.8	11.3	220.8	39.4	235.2	5.3
8	10.2	2.3	3.9	15.3	24.3	8.4	27.2	9.5	43.2	46.4	32.1	6.1
9	9.6	12.3	78.7	14.3	31.3	5.0	25.2	7.0	41.2	45.4	30.1	4.7
10	9.5	4.7	10.0	13.3	29.3	9.4	28.2	5.2	44.2	50.4	22.1	3.8
11	9.4	2.0	1.9	14.3	25.3	91.7	26.2	4.0	242.7	54.1	13.1	3.7
12	13.5	1.9	2.1	12.3	19.3	45.4	21.6	3.8	33.0	20.4	15.1	9.6
13	10.1	2.4	12.2	18.3	17.3	160.8	10.2	5.4	29.2	6.2	15.2	11.6
14	9.4	2.9	13.2	21.3	21.3	33.4	10.1	16.3	33.3	7.9	9.0	6.1
15	9.7	2.0	687.8	31.3	28.3	18.4	11.3	8.5	24.3	12.3	15.2	7.3
16	3.1	2.8	26.5	39.4	25.3	20.4	12.3	12.3	26.3	5.2	17.2	5.3
17	2.9	2.9	15.5	55.4	18.3	13.4	14.3	62.0	19.3	9.5	8.7	4.7
18	73.2	1.7	16.5	54.4	22.3	15.4	15.3	191.9	8.8	5.3	9.4	4.7
19	98.8	2.0	15.5	33.4	18.3	84.3	23.3	27.3	14.3	3.4	12.2	5.0
20	112.6	2.0	17.5	11.4	22.3	35.4	16.3	21.3	18.3	5.7	25.2	4.0
21	28.5	1.8	19.5	10.4	30.3	36.4	8.8	22.2	17.3	5.2	18.2	4.1
22	12.5	2.1	15.5	8.7	31.3	262.2	9.7	17.2	11.3	6.1	27.2	3.8
23	10.5	1.9	10.3	15.4	32.3	38.3	9.2	13.2	7.4	4.5	12.2	4.8
24	3.8	2.8	9.2	10.3	37.3	25.3	17.3	7.6	4.7	6.0	6.1	4.2
25	4.3	8.0	6.7	7.1	41.3	20.3	14.3	16.2	4.7	61.7	5.4	4.4
26	8.0	2.4	13.5	14.4	31.3	18.3	9.4	8.1	10.3	39.3	10.2	7.2
27	4.6	1.7	21.5	9.2	26.3	23.3	14.3	5.9	15.3	42.3	9.9	6.8
28	3.5	2.1	21.5	14.4	26.3	28.3	26.3	16.2	9.2	16.3	13.5	5.3
29	3.8	2.6	17.5	13.4	23.3	27.3	49.3	17.2	28.3	8.9	14.5	7.6
30	4.7	2.6	16.5	19.4	16.3	33.3	55.3	--	18.3	12.3	14.5	6.4
31	3.3	4.9	--	27.4	--	22.3	373.8	--	15.3	--	11.5	--
Total (cfs)	539.7	94.2	1,071.6	1,033.5	924.3	1,152.7	2,488.2	589.0	1,518.4	626.4	1,123.5	186.5
Minimum	2.9	1.7	1.4	7.1	16.3	5.0	8.8	3.8	4.7	3.4	5.1	3.7
Maximum	112.6	12.3	687.8	352.2	150.8	262.2	615.8	191.9	441.5	61.7	461.0	16.5
Average	17.4	3.0	35.7	33.3	30.8	37.2	80.3	20.3	49.0	20.9	36.2	6.2
Total (acre-ft)	1,070.8	186.9	2,126.0	2,050.5	1,833.8	2,287.0	4,936.5	1,168.6	3,012.6	1,242.8	2,229.0	370.0

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

Day	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16
1	0.0	0.0	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	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	13.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	37.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	42.7	0.0	0.0	289.3	0.0	2.6	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	457.0	0.0	127.5	0.0	181.9	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	4.5	0.0	58.4	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	2.6	0.0	0.0
9	0.0	0.0	23.3	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.6	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	45.4	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	0.0
13	0.0	0.0	0.0	0.0	0.0	20.5	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	402.6	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	93.5	0.0	0.0	0.0	0.0
18	41.7	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0
19	121.3	0.0	0.0	0.0	0.0	16.0	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	25.2	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	43.8	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	1.7	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	1.8	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	1.6	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	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	0.1	--	0.0	0.0	0.0	0.0
31	0.0	0.0	--	0.0	--	0.0	163.3	--	0.0	--	0.0	--
Total (cfs)	163.0	0.0	425.9	80.6	16.9	107.6	914.2	94.3	233.9	6.7	181.9	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	121.3	0.0	402.6	42.7	13.9	43.8	457.0	93.5	127.5	2.6	181.9	0.0
Average	5.3	0.0	14.2	2.6	0.6	3.5	29.5	3.3	7.5	0.2	5.9	0.0
Total (acre-ft)	323.4	0.0	845.0	159.9	33.5	213.5	1,813.8	187.1	464.1	13.3	360.9	0.0

[1] On dates highlighted in grey, stormwater was recharged in diversion basins. After storms, stormwater can continue to be recharged for several days after the storm has passed.

Appendix C2

Daily Diversions to Recharge Basins on the Day Creek Tributary System

(cfs)

Day	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16
1	0.03	0.02	0.01	0.02	0.01	0.22	0.20	0.02	0.01	0.00	0.01	0.01
2	0.03	0.02	0.01	0.02	0.00	0.22	0.20	0.02	0.01	0.01	0.01	0.01
3	0.03	0.02	0.01	0.02	0.00	0.22	0.20	0.02	0.01	0.01	0.01	0.01
4	0.03	0.02	0.01	0.02	0.01	0.22	0.20	0.02	0.01	0.01	0.01	0.01
5	0.03	0.02	0.01	11.18	0.01	0.22	0.00	0.02	0.01	0.01	0.01	0.01
6	0.03	0.02	0.01	0.02	0.01	0.22	0.00	0.02	16.51	0.01	0.00	0.01
7	0.03	0.02	0.01	0.02	0.01	0.22	34.15	0.02	0.00	0.01	0.71	0.01
8	0.03	0.02	0.01	0.02	0.01	0.22	0.20	0.02	0.01	0.01	0.01	0.01
9	0.03	0.02	0.01	0.02	0.01	0.22	0.20	0.02	0.01	0.01	0.01	0.01
10	0.03	0.02	0.01	0.02	0.01	0.22	0.20	0.02	0.01	0.01	0.01	0.02
11	0.03	0.02	0.01	0.02	0.01	0.22	0.20	0.02	1.98	0.00	0.01	0.02
12	0.03	0.02	0.01	0.02	0.01	0.22	0.20	0.02	0.00	0.01	0.01	0.02
13	0.03	0.02	0.01	0.02	0.01	0.22	0.22	0.02	0.01	0.01	0.01	0.02
14	0.03	0.02	0.01	0.02	0.01	0.22	0.22	0.02	0.00	0.01	0.01	0.02
15	0.03	0.02	9.12	0.02	0.01	0.22	0.22	0.02	0.01	0.00	0.01	0.02
16	0.01	0.66	0.02	0.04	0.01	0.22	0.02	0.02	0.01	0.00	0.01	0.02
17	0.01	0.66	0.02	0.04	0.01	0.22	0.02	0.00	0.01	0.00	0.01	0.02
18	1.47	0.66	0.02	0.04	0.01	0.22	0.02	6.69	0.01	0.00	0.01	0.02
19	1.47	0.66	0.02	0.04	0.01	0.22	0.02	0.01	0.01	0.00	0.01	0.02
20	4.99	0.66	0.02	0.04	0.01	0.22	0.02	0.01	0.01	0.00	0.01	0.02
21	0.01	0.66	0.02	0.04	0.01	0.22	0.02	0.01	0.01	0.00	0.01	0.02
22	0.01	0.66	0.02	0.04	0.01	7.03	0.02	0.01	0.01	0.00	0.01	0.02
23	0.01	0.66	0.02	0.04	0.01	0.22	0.02	0.01	0.01	0.00	0.01	0.00
24	0.01	0.66	0.02	0.04	0.01	0.22	0.02	0.01	0.01	0.00	0.01	0.00
25	0.01	0.66	0.02	0.04	0.01	0.22	0.02	0.01	0.01	0.00	0.01	0.00
26	0.01	0.66	0.02	0.04	0.01	0.22	0.02	0.01	0.01	0.00	0.01	0.00
27	0.01	0.66	0.02	0.04	0.01	0.22	0.02	0.01	0.01	0.00	0.01	0.00
28	0.01	0.66	0.02	0.04	0.01	0.22	0.02	0.01	0.01	0.00	0.01	0.00
29	0.01	0.66	0.02	0.04	0.01	0.22	0.02	0.01	0.00	0.01	0.01	0.00
30	0.01	0.66	0.02	0.04	0.01	0.22	0.02	--	0.01	0.01	0.01	0.00
31	0.01	0.66	--	0.04	--	0.20	23.11	--	0.01	--	0.01	--
Total (cfs)	8.44	10.79	9.42	12.11	0.14	13.52	59.98	7.05	18.64	0.09	0.99	0.44
Minimum	0.01	0.02	0.01	0.02	0.00	0.20	0.00	0.00	0.00	0.00	0.00	0.00
Maximum	4.99	0.66	9.12	11.18	0.01	7.03	34.15	6.69	16.51	0.01	0.71	0.02
Average	0.27	0.35	0.31	0.39	0.00	0.44	1.93	0.24	0.60	0.00	0.03	0.01
Total (acre-ft)	16.74	21.41	18.69	24.02	0.28	26.82	118.99	13.99	36.99	0.18	1.95	0.87

[1] On dates highlighted in grey, stormwater was recharged in diversion basins. After storms, stormwater can continue to be recharged for several days after the storm has passed.

Appendix C3

Estimated Daily Dry-Weather Flows Captured by Diversion Basins

(cfs)

Day	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16
1	0.03	0.02	0.01	0.02	0.01	0.22	0.20	0.02	0.01	0.00	0.01	0.01
2	0.03	0.02	0.01	0.02	0.00	0.22	0.20	0.02	0.01	0.01	0.01	0.01
3	0.03	0.02	0.01	0.02	0.00	0.22	0.20	0.02	0.01	0.01	0.01	0.01
4	0.03	0.02	0.01	0.00	0.01	0.22	0.20	0.02	0.01	0.01	0.01	0.01
5	0.03	0.02	0.01	0.00	0.01	0.22	0.00	0.02	0.00	0.01	0.01	0.01
6	0.03	0.02	0.01	0.02	0.01	0.22	0.00	0.02	0.00	0.01	0.00	0.01
7	0.03	0.02	0.01	0.02	0.01	0.22	0.00	0.02	0.00	0.01	0.00	0.01
8	0.03	0.02	0.01	0.02	0.01	0.22	0.20	0.02	0.01	0.00	0.01	0.01
9	0.03	0.02	0.00	0.02	0.01	0.22	0.20	0.02	0.01	0.00	0.01	0.01
10	0.03	0.02	0.01	0.02	0.01	0.00	0.20	0.02	0.01	0.00	0.01	0.02
11	0.03	0.02	0.01	0.02	0.01	0.00	0.20	0.02	0.00	0.00	0.01	0.02
12	0.03	0.02	0.01	0.02	0.01	0.22	0.20	0.02	0.00	0.01	0.01	0.02
13	0.03	0.02	0.01	0.02	0.01	0.00	0.22	0.02	0.01	0.01	0.01	0.02
14	0.03	0.02	0.01	0.02	0.01	0.22	0.22	0.02	0.00	0.01	0.01	0.02
15	0.03	0.02	0.00	0.02	0.01	0.22	0.22	0.02	0.01	0.00	0.01	0.02
16	0.01	0.66	0.02	0.04	0.01	0.22	0.02	0.02	0.01	0.00	0.01	0.02
17	0.01	0.66	0.02	0.04	0.01	0.22	0.02	0.00	0.01	0.00	0.01	0.02
18	0.00	0.66	0.02	0.04	0.01	0.22	0.02	0.00	0.01	0.00	0.01	0.02
19	0.00	0.66	0.02	0.04	0.01	0.00	0.02	0.01	0.01	0.00	0.01	0.02
20	0.00	0.66	0.02	0.04	0.01	0.22	0.02	0.01	0.01	0.00	0.01	0.02
21	0.01	0.66	0.02	0.04	0.01	0.00	0.02	0.01	0.01	0.00	0.01	0.02
22	0.01	0.66	0.02	0.04	0.01	0.00	0.02	0.01	0.01	0.00	0.01	0.02
23	0.01	0.66	0.02	0.04	0.01	0.22	0.02	0.01	0.01	0.00	0.01	0.00
24	0.01	0.66	0.02	0.04	0.00	0.22	0.02	0.01	0.01	0.00	0.01	0.00
25	0.01	0.66	0.02	0.04	0.01	0.22	0.02	0.01	0.01	0.00	0.01	0.00
26	0.01	0.66	0.02	0.04	0.01	0.22	0.02	0.01	0.01	0.00	0.01	0.00
27	0.01	0.66	0.02	0.04	0.01	0.22	0.02	0.01	0.01	0.00	0.01	0.00
28	0.01	0.66	0.02	0.04	0.01	0.22	0.02	0.01	0.01	0.00	0.01	0.00
29	0.01	0.66	0.02	0.04	0.01	0.22	0.02	0.01	0.00	0.01	0.01	0.00
30	0.01	0.66	0.02	0.04	0.01	0.22	0.00	--	0.01	0.01	0.01	0.00
31	0.01	0.66	--	0.04	--	0.20	0.00	--	0.01	--	0.01	0.00
Total (cfs)	0.52	10.79	0.29	0.91	0.14	5.40	2.70	0.36	0.15	0.07	0.28	0.44
Minimum	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum	0.03	0.66	0.02	0.04	0.01	0.22	0.22	0.02	0.01	0.01	0.01	0.02
Average	0.02	0.35	0.01	0.03	0.00	0.17	0.09	0.01	0.00	0.00	0.01	0.01
Total (acre-ft)	1.03	21.41	0.58	1.80	0.27	10.72	5.36	0.71	0.30	0.15	0.55	0.87

[1] On dates highlighted in grey, stormwater was recharged in diversion basins. After storms, stormwater can continue to be recharged for several days after the 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
WLAM Estimated Daily Discharge from San Sevaine Creek to the Santa Ana River without Watermaster Diversions (Stormwater Flow only)
(cfs)

Day	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	11.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	43.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	49.7	0.0	0.0	513.0	0.0	2.6	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	867.7	0.0	216.5	0.0	130.1	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	9.1	0.0	86.6	0.0	0.5	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	9.0	0.0	0.0
9	0.0	0.0	7.5	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0	0.0	1.8	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	4.1	0.0	0.0	55.4	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	0.0
13	0.0	0.0	0.0	0.0	0.0	45.5	0.0	0.0	0.4	0.0	0.0	0.0
14	0.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	613.5	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	2.5	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	124.8	0.0	0.0	0.0	0.0
18	68.9	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0	0.0	0.0
19	226.0	0.0	0.0	0.0	0.0	23.3	0.0	0.0	0.0	0.0	0.0	0.0
20	0.4	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	37.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	114.3	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.8	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	3.3	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	2.2	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	0.1	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	0.3	--	0.0	0.0	0.0	--
31	0.0	0.0	--	0.0	--	0.0	312.6	--	0.0	--	0.0	--
Total (cfs)	295.3	0.0	623.5	97.6	14.7	226.7	1,702.7	127.4	361.7	17.2	130.6	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	226.0	0.0	613.5	49.7	11.3	114.3	867.7	124.8	216.5	9.0	130.1	0.0
Average	9.5	0.0	20.8	3.1	0.5	7.3	54.9	4.4	11.7	0.6	4.2	0.0
Total (acre-ft)	585.9	0.0	1,237.0	193.6	29.2	449.8	3,378.2	252.8	717.6	34.1	259.1	0.0

[1] On dates highlighted in grey, stormwater was recharged in diversion basins. After storms, stormwater can continue to be recharged for several days after the storm has passed.

Appendix D2

Daily Diversions to Recharge Basins on the San Sevaine Creek Tributary System

(cfs)

Day	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16
1	0.20	0.48	1.27	0.20	0.24	0.23	0.25	0.23	0.27	0.26	0.32	0.27
2	0.20	0.48	1.27	0.20	0.24	0.23	0.25	0.23	0.27	0.26	0.32	0.27
3	0.20	0.48	1.27	0.20	44.36	0.23	0.25	0.23	0.27	0.26	0.32	0.27
4	0.20	0.48	1.27	0.20	0.24	0.23	0.25	0.23	0.27	0.26	0.32	0.27
5	0.20	0.48	1.27	161.06	0.24	0.23	0.00	0.23	0.27	0.26	0.32	0.27
6	0.20	0.48	1.27	0.20	0.24	0.23	0.00	0.23	166.70	0.26	0.00	0.27
7	0.20	0.48	1.27	0.20	0.24	0.23	336.44	0.23	22.15	0.26	29.85	0.27
8	0.20	0.48	1.27	0.20	0.24	0.23	0.25	0.23	0.27	0.26	0.32	0.27
9	0.20	0.48	3.58	0.20	0.24	0.23	0.25	0.23	0.27	0.26	0.32	0.25
10	0.20	0.48	1.27	0.20	0.24	0.23	0.25	0.23	0.27	0.26	0.32	0.22
11	0.20	0.48	1.27	0.20	0.24	30.08	0.25	0.23	53.61	32.96	0.32	0.22
12	0.20	0.48	1.27	0.20	0.24	0.23	0.25	0.23	0.00	0.26	0.38	0.22
13	0.20	0.48	1.27	0.20	0.24	57.59	0.25	0.23	0.27	0.26	0.33	0.22
14	0.20	0.48	1.27	0.20	0.24	0.23	0.22	0.23	0.26	0.26	0.33	0.22
15	0.20	0.48	188.56	0.20	0.24	0.23	0.22	0.23	0.26	0.26	0.33	0.22
16	0.60	0.62	0.28	0.24	0.24	0.23	0.29	0.23	0.26	0.26	0.33	0.22
17	0.60	0.62	0.28	0.24	0.24	0.23	0.29	0.00	0.26	0.26	0.33	0.22
18	27.04	0.62	0.28	0.24	0.24	0.23	0.29	65.27	0.26	0.26	0.33	0.22
19	21.80	0.62	0.28	0.24	0.24	37.67	0.29	0.27	0.26	0.26	0.33	0.22
20	39.32	0.62	0.28	0.24	0.24	0.23	0.29	0.27	0.26	0.26	0.33	0.22
21	0.60	0.62	0.28	0.24	0.24	0.23	0.29	0.27	0.26	0.26	0.33	0.22
22	0.60	0.62	0.28	0.24	0.24	143.98	0.29	0.27	0.26	0.26	0.33	0.22
23	0.60	0.62	0.28	0.24	0.24	0.23	0.29	0.27	0.26	0.26	0.33	0.29
24	0.60	0.62	0.28	0.24	0.24	0.23	0.29	0.27	0.26	0.26	0.33	0.29
25	0.60	0.62	0.28	0.24	0.24	0.23	0.29	0.27	0.26	27.24	0.33	0.29
26	0.60	0.62	0.28	0.24	0.24	0.23	0.29	0.27	0.26	0.26	0.33	0.29
27	0.60	0.62	0.28	0.24	0.24	0.23	0.29	0.27	0.26	0.26	0.27	0.29
28	0.60	0.62	0.28	0.24	0.24	0.23	0.29	0.27	0.26	0.26	0.27	0.29
29	0.60	0.62	0.28	0.24	0.24	0.23	0.29	0.27	16.41	0.32	0.27	0.29
30	0.60	0.62	0.30	0.24	0.24	0.25	0.29	--	0.26	0.32	0.27	0.29
31	0.60	0.62	--	0.24	--	0.25	89.43	--	0.26	--	0.27	--
Total (cfs)	99.0	17.2	212.8	167.7	51.4	275.6	433.2	72.0	265.7	67.7	39.2	7.6
Minimum	0.2	0.5	0.3	0.2	0.2	0.2	0.0	0.0	0.0	0.3	0.0	0.2
Maximum	39.3	0.6	188.6	161.1	44.4	144.0	336.4	65.3	166.7	33.0	29.9	0.3
Average	3.2	0.6	7.1	5.4	1.7	8.9	14.0	2.5	8.6	2.3	1.3	0.3
Total (acre-ft)	196.5	34.1	422.1	332.7	101.9	546.8	859.5	142.8	527.2	134.3	77.7	15.0

[1] On dates highlighted in grey, stormwater was recharged in diversion basins. After storms, stormwater can continue to be recharged for several days after the storm has passed.

Appendix D3

Estimated Daily Dry-Weather Flows Captured by Diversion Basins

(cfs)

Day	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16
1	0.20	0.48	1.27	0.20	0.24	0.23	0.25	0.00	0.27	0.26	0.32	0.27
2	0.20	0.48	1.27	0.20	0.00	0.23	0.25	0.23	0.27	0.00	0.32	0.27
3	0.20	0.48	1.27	0.20	30.80	0.23	0.25	0.23	0.27	0.26	0.32	0.27
4	0.20	0.48	1.27	0.00	0.24	0.23	0.25	0.23	0.27	0.26	0.32	0.27
5	0.20	0.48	1.27	67.66	0.24	0.23	0.00	0.23	0.00	0.26	0.32	0.27
6	0.20	0.48	1.27	0.20	0.24	0.23	0.00	0.23	0.00	0.26	0.00	0.27
7	0.20	0.48	1.27	0.20	0.24	0.23	0.00	0.23	0.00	0.26	0.00	0.27
8	0.20	0.48	1.27	0.20	0.24	0.23	0.25	0.23	0.17	0.00	0.32	0.27
9	0.20	0.48	0.00	0.20	0.24	0.23	0.25	0.23	0.27	0.00	0.32	0.25
10	0.20	0.48	1.27	0.20	0.24	0.00	0.25	0.23	0.27	0.00	0.32	0.22
11	0.20	0.48	1.27	0.20	0.24	23.81	0.25	0.23	0.00	22.05	0.32	0.22
12	0.20	0.48	1.27	0.20	0.24	0.23	0.25	0.23	0.00	0.26	0.38	0.22
13	0.20	0.48	1.27	0.20	0.24	12.09	0.25	0.23	0.00	0.26	0.33	0.22
14	0.20	0.48	1.27	0.00	0.24	0.23	0.22	0.23	0.26	0.26	0.33	0.22
15	0.20	0.48	0.00	0.20	0.14	0.23	0.22	0.23	0.26	0.26	0.33	0.22
16	0.60	0.62	0.00	0.24	0.24	0.23	0.29	0.23	0.26	0.26	0.33	0.22
17	0.60	0.62	0.28	0.24	0.24	0.23	0.29	0.00	0.26	0.26	0.33	0.22
18	0.00	0.62	0.28	0.24	0.24	0.23	0.29	0.00	0.26	0.26	0.33	0.22
19	0.00	0.62	0.28	0.24	0.24	14.37	0.29	0.27	0.26	0.26	0.33	0.22
20	0.00	0.62	0.28	0.24	0.24	0.23	0.29	0.27	0.26	0.26	0.33	0.22
21	0.60	0.62	0.28	0.24	0.24	0.00	0.29	0.27	0.26	0.26	0.33	0.22
22	0.60	0.62	0.28	0.24	0.24	0.00	0.29	0.27	0.26	0.26	0.33	0.22
23	0.60	0.62	0.28	0.24	0.24	0.13	0.29	0.27	0.26	0.26	0.33	0.29
24	0.60	0.62	0.28	0.24	0.00	0.23	0.29	0.27	0.26	0.26	0.33	0.29
25	0.60	0.62	0.28	0.24	0.24	0.23	0.29	0.27	0.26	23.94	0.33	0.29
26	0.60	0.62	0.28	0.24	0.24	0.23	0.29	0.27	0.26	0.26	0.33	0.29
27	0.60	0.62	0.28	0.24	0.24	0.23	0.29	0.27	0.26	0.00	0.27	0.29
28	0.60	0.62	0.28	0.24	0.24	0.23	0.29	0.27	0.26	0.26	0.27	0.29
29	0.60	0.62	0.28	0.24	0.24	0.23	0.29	0.27	16.31	0.32	0.27	0.29
30	0.60	0.62	0.30	0.24	0.24	0.25	0.00	--	0.26	0.32	0.27	0.29
31	0.60	0.62	--	0.24	--	0.25	0.00	--	0.26	--	0.27	--
Total (cfs)	10.9	17.2	20.4	73.9	37.2	56.0	7.1	6.5	22.5	52.2	9.3	7.6
Minimum	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Maximum	0.6	0.6	1.3	67.7	30.8	23.8	0.3	0.3	16.3	23.9	0.4	0.3
Average	0.4	0.6	0.7	2.4	1.2	1.8	0.2	0.2	0.7	1.7	0.3	0.3
Total (acre-ft)	21.6	34.1	40.4	146.6	73.9	111.0	14.0	12.8	44.6	103.5	18.4	15.0

[1] On dates highlighted in grey, stormwater was recharged in diversion basins. After storms, stormwater can continue to be recharged for several days after the 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.