WILDERMUTH ENVIRONMENTAL, INC.

September 30, 2014

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 2013/14***

Dear Mr. Kavounas:

Wildermuth Environmental, Inc. (WEI) hereby submits the Annual Streamflow Monitoring Report for Fiscal 2013/14. This is the sixth 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 will 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 these estimates, and submit these 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 July 1, 2013 through June 30, 2014 reporting period.

As in past years, the stormwater and dry-weather discharges diverted for recharge within the Chino Basin between July 1, 2013 and June 30, 2014 were small relative to total discharge: about 14 percent of the total estimated discharge was diverted for recharge. About 88 percent of the diversions occurred between October and April during short-duration stormwater events. Watermaster's diversions for recharge provide some mitigation for the increase in stormwater and dry-weather discharge that has resulted 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

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

drainage areas, and other significant hydrologic features are shown in Figure 1. Chino Creek and Cucamonga Creek 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 at these stations, average daily discharge data are available. The 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 these 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 instead 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] To ensure the model uses the most recent data, 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, 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.

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

DIVERSION IMPACT ANALYSIS

During fiscal 2013/14, Watermaster diverted a total of 4,293 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. The impact analyses of these diversions for recharge are provided below.

[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

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 point,[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] The objective of this analysis is to illustrate the impact of Watermaster's diversions on the perennial flows in Chino Creek. Because the water discharged 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 Prado Dam Reservoir.[7] No imported water was discharged to Chino Creek during the reporting period.

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 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. The 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 2013/14 was estimated to be about 11,333 acre-ft, ranging from a low of about 317 acre-ft/month (August) to a high of about 2,028 acre-ft/month (February). Total diversions from Chino Creek were about 628 acre-ft. About 98 percent of the diversions on Chino Creek occurred between October and April and were

[5] The Metropolitan Water District of Southern California can supply OCWD with State Water Project water through the OC-59 connection, which discharges water to San Antonio Creek, and subsequently to Chino Creek, through 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-FIRST ANNUAL REPORT OF THE SANTA ANA RIVER WATERMASTER FOR WATER YEAR OCTOBER 1, 2010 - SEPTEMBER 30, 2011*, prepared in June 2012 by the Santa Ana River Watermaster for ORANGE COUNTY WATER DISTRICT v. CITY OF CHINO, et al. CASE NO. 117628 - COUNTY OF ORANGE.

coincident with the larger storm events of the year. About 5.2 percent of the total discharge in Chino Creek was diverted for recharge in fiscal 2013/14.

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 line graph (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) or the difference between the red and yellow lines (average daily discharge with and without 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 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 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 2013/14 was estimated to be about 11,562 acre-ft, ranging from a low of about 207 acre-ft/month (June) to a high of about 2,691 acre-ft/month (February). Total diversions from Cucamonga Creek were about 1,840 acre-ft. About 87 percent of the diversions on Cucamonga Creek occurred between October and April and were coincident with the larger storm events of the year. About 13.7 percent of the total discharge in Cucamonga Creek was diverted for recharge in fiscal 2013/14.

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 line graph (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, as provided by the IEUA, 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 in basins. When the volume of stormwater diverted for recharge is large, recharge may continue to occur after storm flows in the creek have stopped (i.e. WLAM flow is zero). Periods of stormwater recharge are highlighted grey in Appendices C1, C2, and C3. During storm periods, dry-weather flows are not estimated and are assumed to be 0. However, there are instances when the reported diversions are in excess of total WLAM estimated stormwater flow; in this case, the excess diversions are assumed to be dry-weather flows. 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 still somewhat 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, except when a single stormwater recharge period spans multiple months (e.g. February 26th through March 5th). Within each storm period (highlighted in grey in Appendices C1, C2, and C3), total diversions are subtracted from 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 5 of Table 2c. This methodology for calculating stream discharge after Watermaster diversions has been revised from previous annual reports. This methodology was adopted to more accurately characterize the impact of Watermaster's diversions from Day Creek. The methodology used in previous analyses slightly over-estimated dry-weather diversions and slightly under-estimated stormwater diversions.

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 2013/14 was estimated to be about 1,857 acre-ft, ranging from a low of 0 acre-ft/month (summer months) to a high of about 1,267 acre-ft/month (February). Total diversions from Day Creek were about 113 acre-ft, of which about 23 acre-ft were dry-weather flow. Over 99 percent of the diversions on Day Creek occurred between October and April and were coincident with the larger storm events of the year. About 5.8 percent of the total discharge in Day Creek was diverted for recharge in fiscal 2013/14. 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 line graph (cfs). Stormwater runoff accounted for about 80% of Watermaster's diversions, which occurred during short-duration events, while the remainder of the diversions was from dry-weather flows. The percent reduction in discharge to the Prado Dam Reservoir is less than one percent.

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 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 San Sevaine Creek.

The time history of stormwater and dry-weather discharge diversions, as provided by the IEUA, 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 in basins. When the volume of stormwater diverted for recharge is large, recharge may continue to occur after storm flows in the creek have stopped (i.e. WLAM flow is zero). Periods of stormwater recharge are highlighted grey in Appendices D1, D2, and D3. During storm periods, dry-weather flows are not estimated and are assumed to be 0. However, there are instances when the reported diversions are in excess of total WLAM estimated stormwater flow; in this case, the excess diversions are assumed to be dry-weather flows. 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 still somewhat 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 Day 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 Day Creek to the Santa Ana River after Watermaster diversions. This calculation is done on a monthly basis, except when a single stormwater recharge period spans multiple months (e.g. February 26th through March 5th). Within each storm period (highlighted in grey in Appendices D1, D2, and D3), total diversions are subtracted from 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 5 of Table 2d. This methodology for calculating stream discharge after Watermaster diversions has been revised from previous annual reports. This methodology was adopted to more accurately characterize the impact of Watermaster's diversions from San Sevaine Creek. The methodology used in previous analyses slightly over-estimated dry-weather diversions and slightly under-estimated stormwater diversions.

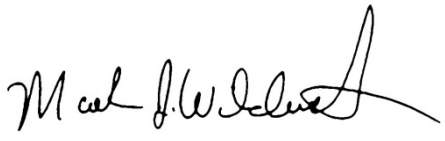
The percent reduction in discharge entering the Santa Ana River from San Sevaine Creek relative to the estimated discharge without Watermaster diversions is summarized in row 6 of Table 2d. Table 2d also summarizes the discharge measured at USGS gage 11066460 (row 7), the closest gage on the Santa Ana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

Total discharge to the Santa Ana River from San Sevaine Creek during fiscal 2013/14 was estimated to be about 2,108 acre-ft, ranging from a low of 0 acre-ft/month (summer months) to a high of about 1,540 acre-ft/month (February). Total diversions from San Sevaine Creek were about 1,712 acre-ft, of which about 675 acre-ft were dry-weather flow. About 84 percent of the diversions on San Sevaine Creek occurred between October and April and were coincident with the larger storm events of the year. About 45 percent of the total discharge in San Sevaine Creek was diverted for recharge in fiscal 2013/14. 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 line graph (cfs). Stormwater runoff accounted for about 61% of Watermaster's diversions, which occurred during short-duration events, while the remainder of diversions was from dry-weather flows. The percent reduction in discharge to the Prado Dam Reservoir is about 4.3 percent.

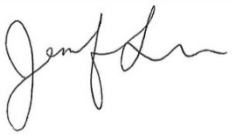
Should you have any questions regarding the information contained herein, please call me or Samantha Adams at (949) 420-3030.

Respectfully,

Wildermuth Environmental, Inc.



Mark J. Wildermuth, MS, RCE 32331 (exp. 12/31/2014)
President



Samantha S. Adams
Principal Scientist

Jennifer Sun
Staff Scientist I

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

College Heights

Upland

Montclair

Brooks Street

Euclid Ave

210

Foothill Blvd

Holt Blvd

Ramona Ave

Central Ave

8th St

7th St

Turner 1

Turner 2 - 9

Haven Ave

Etiwanda Debris

Lower Day

Victoria

San Sevaine

Etiwanda Ave

San Sevaine Creek

Lytle Creek

Riverside Ave

Banana

Hickory

Sierra Ave

10

RP3

Colton WWTF

Rialto WWTP

Declez

Jurupa Mountains

11073493

Ely

Mission Blvd

60

RP-1 (Cucamonga)

Riverside Dr

Grove

11073300

Puente Hills

11073360

Edison Ave

71

Grove Ave

Cucamonga Creek

Hamner Ave

Day Creek

Bellegrave Ave

Santa Ana River

11073495

Limonite Ave

15

11066460

Santa Ana

Carbon Canyon

Chino Creek

RP-5

RWQCP

Archibald Ave

RP-1 (Prado)

Chino Hills

WRCRWTP

Prado Flood Control Basin

La Sierra Hills

91

Corona 1B

11074000

11072100

El Sobrante de San Jacinto

Main Map Features

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

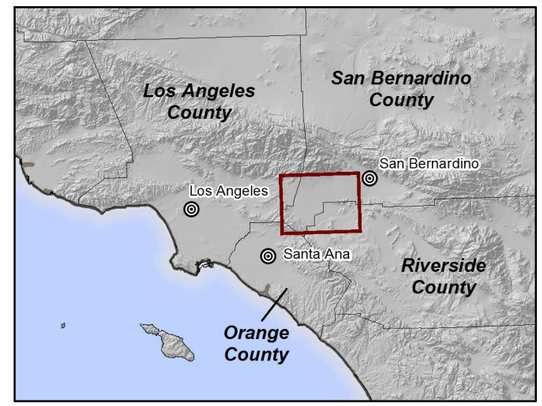
Drainage Areas

- 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



Prepared by:
WEI
23692 Birtcher Drive
Lake Forest, CA 92630
949.420.3030
www.weiwater.com

Author: MAB

Date: 8/28/2014

Document Name: Figure 1

0 4 8 Miles

0 4 8 12 KM

Water Rights Compliance Reporting
Fiscal Year 2013/2014

Stormwater Recharge Points of Diversion
Water Rights Permit 21225

Figure 1

Table 1
Total Monthly Stormwater Recharge Fiscal Year 2013/14
(acre-ft)

Tributary System	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Total
Chino Creek													
College Heights	0	0	0	0	0	0	0	1	3	0	0	0	4
Upland	0	0	0	7	9	8	1	49	12	9	0	0	94
Montclair	0	0	0	8	23	48	11	178	59	79	10	0	416
Brooks Street	1	1	0	23	4	8	3	47	12	14	0	0	114
Tributary Total	**1**	**1**	**0**	**38**	**36**	**63**	**16**	**275**	**86**	**101**	**10**	**0**	**628**
Cucamonga Creek													
7th and 8th Street	13	13	11	48	49	45	27	59	45	79	26	24	438
Ely	6	4	6	15	21	24	8	294	63	83	9	15	548
Turner 1 and 2	0	0	0	0	0	72	45	94	63	61	21	11	368
Turner 3 and 4	0	0	24	20	17	5	16	62	50	0	23	12	228
Grove	3	4	4	20	26	28	13	107	10	39	2	2	258
Tributary Total	**22**	**21**	**45**	**103**	**113**	**174**	**109**	**616**	**231**	**262**	**81**	**64**	**1,840**
Day Creek													
Lower Day	1	3	5	7	2	5	5	34	41	10	1	0	113
Tributary Total	**1**	**3**	**5**	**7**	**2**	**5**	**5**	**34**	**41**	**10**	**1**	**0**	**113**
San Sevaine Creek													
San Sevaine	0	0	0	11	39	5	0	69	20	17	0	0	161
Hickory	4	0	0	1	59	8	10	19	13	23	33	2	170
Banana	0	0	0	0	22	6	9	39	9	2	0	0	87
RP-3	72	68	58	54	60	73	44	131	103	47	3	6	718
Declez	6	3	2	18	52	66	3	24	56	108	1	2	342
Etiwanda Debris Basin	0	0	0	3	0	2	1	30	7	2	0	0	44
Victoria	2	2	2	7	12	10	2	37	99	15	2	2	190
Tributary Total	**83**	**73**	**62**	**94**	**243**	**171**	**68**	**347**	**306**	**214**	**39**	**11**	**1,712**
Tributary System Total	**108**	**99**	**112**	**241**	**395**	**414**	**197**	**1,272**	**663**	**587**	**131**	**75**	**4,293**

[1] Source: A. Campbell (IEUA), personal communication, July 23, 2014.

[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 2013/14

(acre-ft)

Row	Discharge Components	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Total
(1)	Discharge in Chino Creek at USGS Gage 11073360[1]	23	26	28	55	105	51	30	882	193	234	21	18	**1,666**
(2)	Discharge to San Antonio Creek from OCWD OC-59	0	0	0	0	0	0	0	0	0	0	0	0	**0**
(3)	Recycled Water Discharge from IEUA's CCWRF, RP-5, and RP-1 (Prado)	403	291	337	698	1,183	1,250	1,184	1,145	1,300	871	598	407	**9,667**
(4) =(1)-(2)+(3)	Estimated Discharge Entering the Prado Dam Reservoir	426	317	365	753	1,288	1,301	1,214	2,028	1,492	1,105	619	426	**11,333**
(5)	Stormwater and Dry-Weather Discharge Diversions	1	1	0	38	36	63	15	275	86	101	10	0	**628**
(6) =(4)+(5)	Estimated Discharge That Would Have Entered the Prado Dam Reservoir *without* Stormwater and Dry-Weather Diversions	427	318	365	791	1,324	1,365	1,229	2,302	1,578	1,206	629	426	**11,961**
(7) =(5)/(6)	Percent Reduction in Discharge Entering the Prado Dam Reservoir Relative to the Estimated Discharge *without* Diversions	0.3%	0.4%	0.0%	4.8%	2.7%	4.6%	1.3%	11.9%	5.4%	8.4%	1.6%	0.0%	**5.2%**

[1] Data are provisional for March 12, 2014 to June 30, 2014; for July 1, 2013 to March 11, 2014, data are approved.

Table 2b

Impact of Stormwater Diversions on Total Monthly Discharge Entering the Prado Dam Reservoir from Cucamonga Creek for FY 2012/13

(acre-ft)

Row	Discharge Components	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Total
(1)	Discharge Entering the Prado Dam Reservoir after Stormwater and Dry-Weather Diversions (USGS Gage 11073495)[1]	422	419	379	880	956	1,027	958	2,691	2,165	1,063	396	207	**11,562**
(2)	Stormwater and Dry-Weather Discharge Diversions	23	21	45	103	112	174	109	615	231	262	82	64	**1,840**
(3) =(1)+(2)	Estimated Discharge That Would Have Entered the Prado Dam Reservoir *without* Stormwater and Dry-Weather Diversions	445	440	424	983	1,068	1,202	1,068	3,306	2,396	1,324	477	271	**13,403**
(4) =(2)/(3)	Percent Reduction in Discharge Entering the Prado Dam Reservoir Relative to the Estimated Discharge *without* Diversions	5.2%	4.7%	10.6%	10.5%	10.5%	14.5%	10.2%	18.6%	9.6%	19.8%	17.1%	23.6%	**13.7%**

[1] Data are provisional for March 10, 2014 to June 30, 2014; for July 1, 2013 to March 9, 2014, data are approved.

Table 2c
Impact of Stormwater Diversions on Total Monthly Discharge Entering the Santa Ana River from Day Creek for FY 2013/14
(acre-ft)

Row	Discharge Components	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Total
(1)	Discharge Entering the Santa Ana River *without* Stormwater and Dry-Weather Diversions *or* Dry-Weather Flows[1]	0	0	0	82	156	47	5	1,298	170	190	0	0	**1,948**
(2)	Stormwater and Dry-Weather Discharge Diversions	1	3	5	7	2	5	5	34	41	10	1	0	**113**
(3)	Diversions Attributable to Dry-Weather Flows[2]	1	3	5	3	1	2	3	3	1	1	1	0	**23**
(4)[3] =(1)+(3)	Total Discharge Entering the Santa Ana River *without* Stormwater and Dry-Weather Diversions	1	3	5	85	157	49	8	1,301	171	191	1	0	**1,971**
(5)[4] =(4)-(2)	Estimated Discharge Entering the Santa Ana River after Stormwater and Dry-Weather Diversions	0	0	0	78	154	44	3	1,267	130	181	0	0	**1,857**
(6) =(2)/(4)	Percent Reduction in Discharge Entering the Santa Ana River Relative to Discharge *without* Diversions	100%	100%	100%	8%	2%	10%	60%	3%	24%	5%	100%	100%	**5.8%**
(7)	Discharge in the Santa Ana River at USGS Gage 11066460[5]	2,276	1,984	2,044	2,903	6,918	2,829	2,272	5,730	5,190	3,506	2,254	2,123	**40,027**
(8) =(2)/(7)	Percent Reduction in Discharge Entering the Santa Ana River Relative to Discharge at 11066460[5]	0.1%	0.2%	0.2%	0.2%	0.0%	0.2%	0.2%	0.6%	0.8%	0.3%	0.0%	0.0%	**0.3%**

[1] Estimated using the WLAM.

[2] 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.

[3] Calculated on a monthly basis.

[4] Calculated on a monthly basis, except when a single storm spans multiple months. Within each storm period (highlighted in grey in Appendices C1-C3), all diversions that occurred were subtracted from stormwater flows generated during this storm, including diversions that were recharged on dates after 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 (ie. storm period from February 26 to March 5, 2014).

[5] Data are provisional for October 24, 2013 to June 30, 2014; for July 1, 2013 to October 23, 2013, data are approved.

Table 2d

Impact of Stormwater Diversions on Total Monthly Discharge Entering the Santa Ana River from San Sevaine Creek for FY 2013/14

(acre-ft)

Row	Discharge Components	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Total
(1)	Discharge Entering the Santa Ana River *without* Stormwater and Dry-Weather Diversions *or* Dry-Weather Flows[1]	0	0	0	176	507	68	10	1,904	224	256	0	0	**3,144**
(2)	Stormwater and Dry-Weather Discharge Diversions	83	73	62	94	243	171	68	347	306	214	39	11	**1,712**
(3)	Diversions Attributable to Dry-Weather Flows[2]	83	73	62	60	60	104	59	72	30	22	39	11	**675**
(4)[3] =(1)+(3)	Total Discharge Entering the Santa Ana River *without* Stormwater and Dry-Weather Diversions	83	73	62	237	567	171	68	1,976	254	278	39	11	**3,820**
(5)[4] =(4)-(2)	Estimated Discharge Entering the Santa Ana River after Stormwater and Dry-Weather Diversions	0	0	0	143	324	0	0	1,540	37	64	0	0	**2,108**
(6) =(2)/(4)	Percent Reduction in Discharge Entering the Santa Ana River Relative to Discharge *without* Diversions	100%	100%	100%	39%	43%	100%	100%	18%	120%	77%	100%	100%	**45%**
(7)	Discharge in the Santa Ana River at USGS Gage 11066460[4]	2,276	1,984	2,044	2,903	6,918	2,829	2,272	5,730	5,190	3,506	2,254	2,123	**40,027**
(8) =(2)/(7)	Percent Reduction in Discharge Entering the Santa Ana River Relative to Discharge at 11066460[4]	3.7%	3.7%	3.1%	3.2%	3.5%	6.1%	3.0%	6.1%	5.9%	6.1%	1.7%	0.5%	**4.3%**

[1] Estimated using the WLAM.

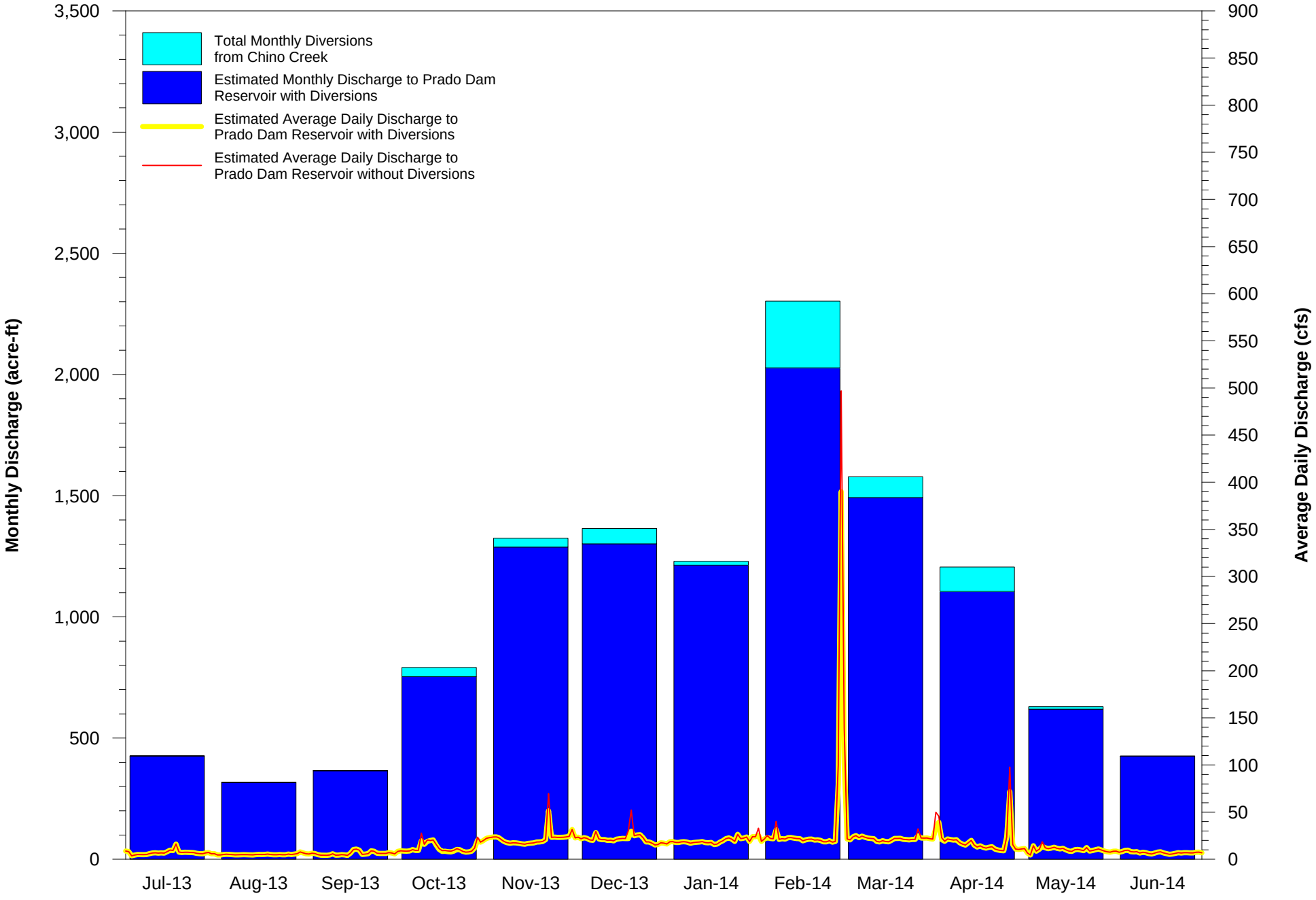
[2] Calculated on a monthly basis. Note that the WLAM does not simulate dry-weather flows on the Day Creek tributary system. Thus, dates occur on which the measured diversions from Day Creek are greater than the WLAM's estimated discharge to the Santa Ana river without diversions. For these dates, the difference between the measured diversions and estimated discharge can be attributed to dry-weather discharge. Dry-weather diversions that occur on other dates or downstream of the recharge basins are not included in these calculations.

[3] Calculated on a monthly basis

[4] Calculated on a monthly basis, except when a single storm spans multiple months. Within each storm period (highlighted in grey in Appendices D1-D3), all diversions that occurred were subtracted from stormwater flows generated during this storm, including diversions that were recharged on dates after 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 (ie. storm period from February 26 to March 5, 2014).

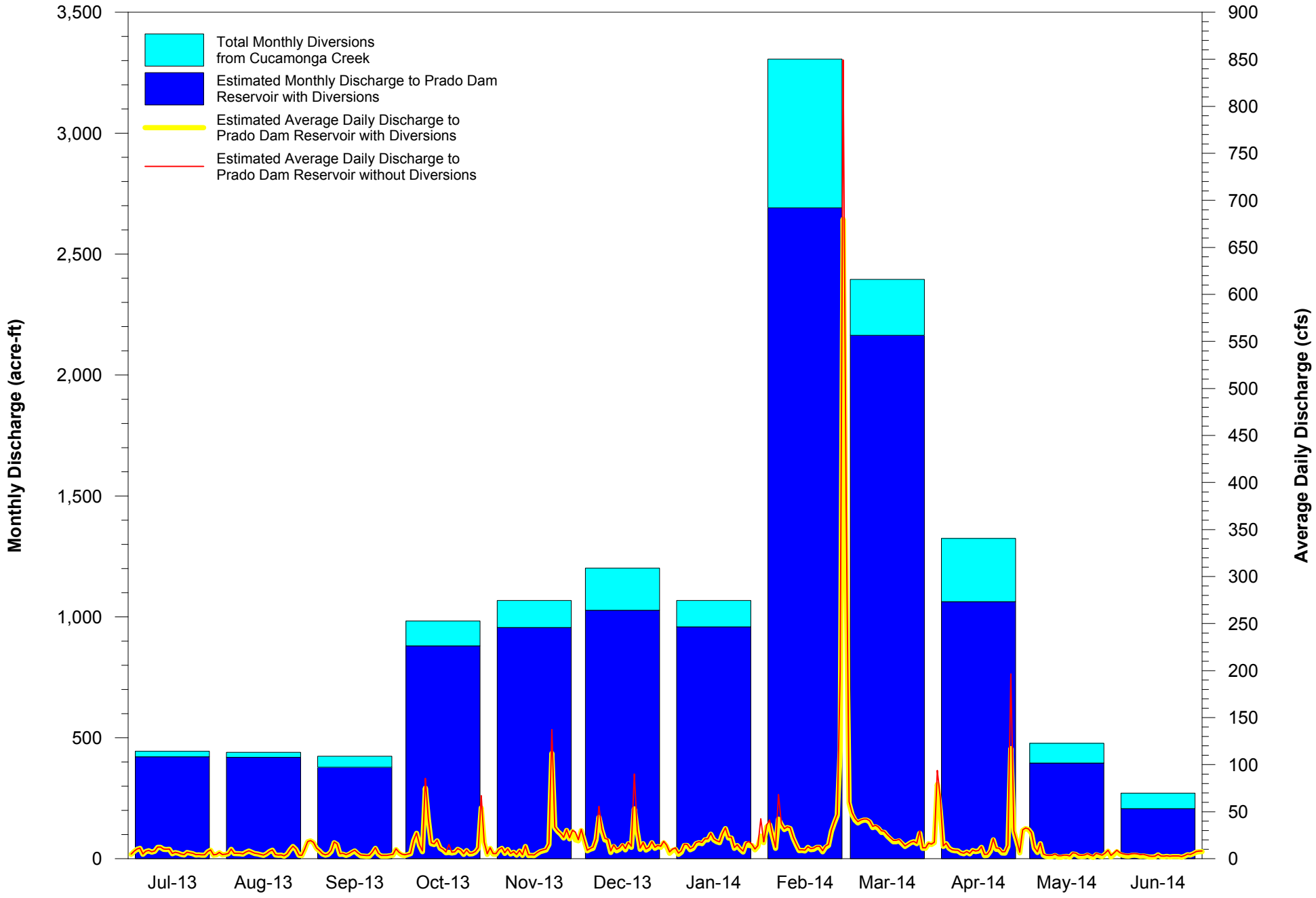
[5] Data are provisional for October 24, 2013 to June 30, 2014; for July 1, 2013 to October 23, 2013, data are approved.

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



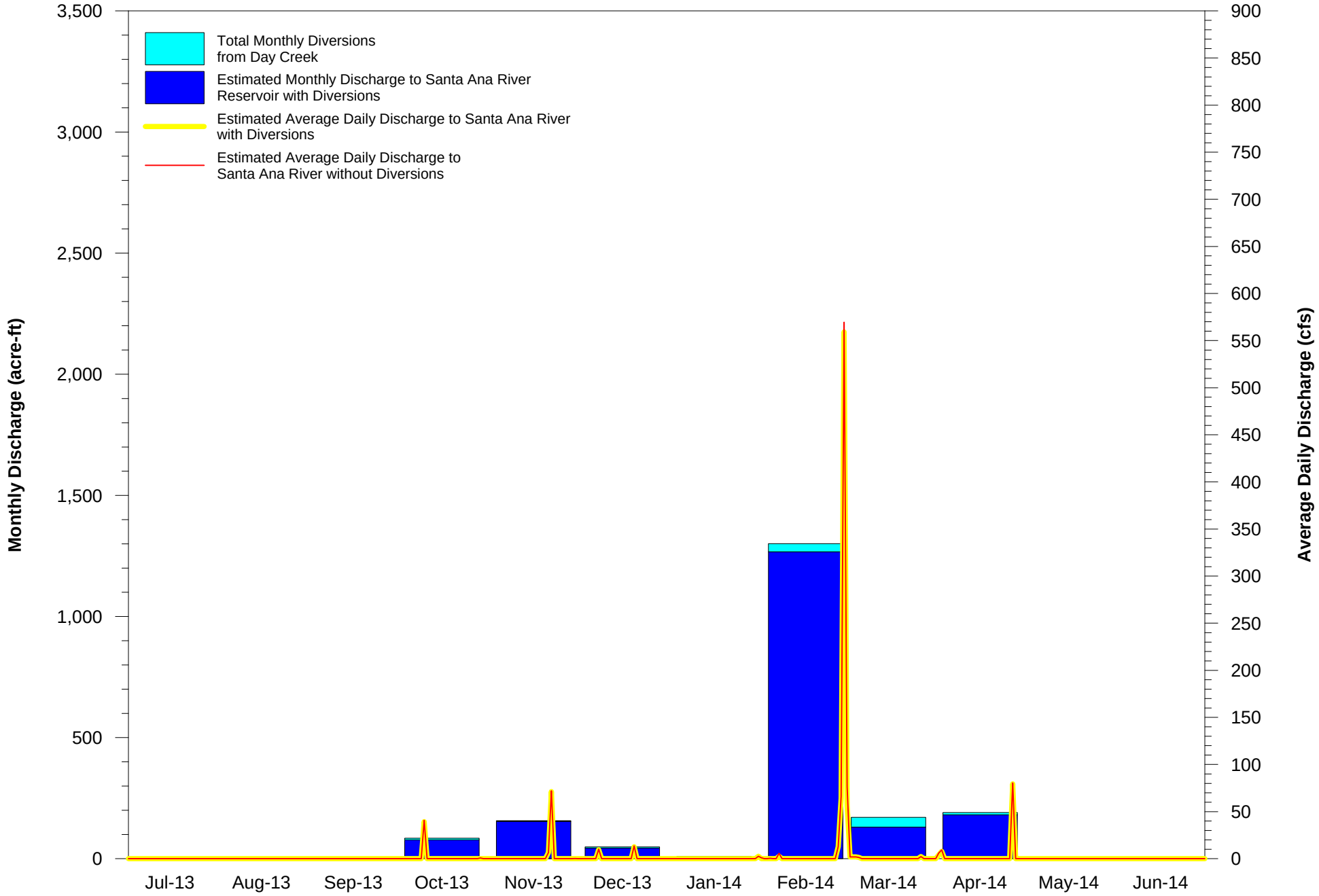
08/28/2014
Chino_Creek_Figure2a.grf

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



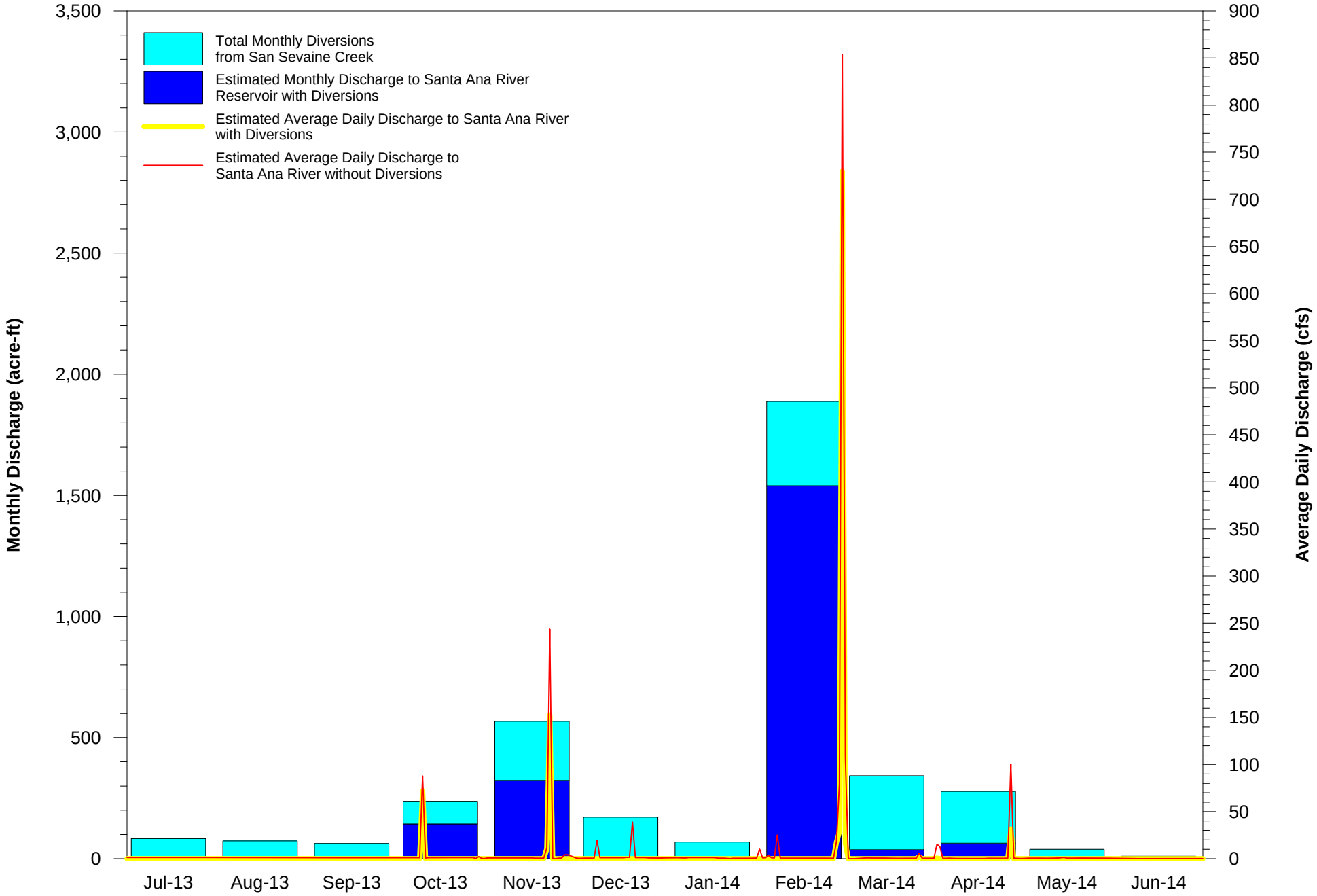
08/28/2014
Cucamonga_Creek_Figure2b.grf

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



09/03/2014
Day_Creek_Figure2d.grf

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



09/04/2014
San Sevaine_Creek_Figure2d.grf

Appendix A1

Average Daily Discharge at USGS Gage 11073360 on Chino Creek

(cfs)

Day	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14
1	0.3	0.4	0.5	0.3	0.4	0.6	0.3	0.5	83.0	13.0	0.4	0.3
2	0.4	0.4	0.7	0.3	0.4	0.4	0.3	1.7	1.9	20.0	0.4	0.4
3	0.4	0.4	0.5	0.3	0.4	0.6	0.3	1.2	0.6	0.4	0.3	0.4
4	0.4	0.3	0.4	0.4	0.5	0.3	0.3	0.4	0.6	0.4	0.3	0.3
5	0.4	0.3	0.4	0.3	0.6	0.2	0.3	0.4	0.5	0.3	0.4	0.3
6	0.4	0.4	0.4	0.3	0.6	0.2	0.3	9.3	0.3	0.4	0.4	0.3
7	0.3	0.3	0.4	0.3	0.6	7.9	0.3	0.8	0.3	0.4	0.5	0.3
8	0.3	0.4	0.3	0.3	0.6	0.9	0.4	0.4	0.3	0.4	0.4	0.3
9	0.4	0.3	1.6	9.5	0.3	0.4	0.3	0.4	0.3	0.4	0.4	0.3
10	0.3	0.4	0.8	0.5	0.5	0.3	0.4	0.5	0.3	0.4	0.3	0.3
11	0.4	0.3	0.8	0.5	0.7	0.3	0.4	0.5	0.3	0.4	0.3	0.3
12	0.4	0.4	0.7	0.4	0.5	0.3	0.4	0.5	0.3	0.4	0.3	0.3
13	0.4	0.4	0.6	0.4	0.3	0.2	0.4	0.4	0.3	0.4	0.3	0.3
14	0.4	0.5	0.3	0.4	0.4	0.2	0.4	0.5	0.3	0.4	0.4	0.3
15	0.4	0.5	0.3	0.4	0.4	0.2	0.4	0.4	0.3	0.4	0.3	0.3
16	0.4	0.5	0.4	0.7	0.3	0.3	0.3	0.4	0.3	0.4	0.4	0.3
17	0.4	0.5	0.4	0.3	0.3	0.3	0.4	0.4	0.3	0.4	0.4	0.3
18	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.5	0.3	0.4	0.3	0.3
19	0.3	0.5	0.4	0.3	0.3	8.4	0.4	0.5	0.3	0.4	0.4	0.3
20	0.4	0.4	0.4	0.3	0.5	0.4	0.4	0.4	0.3	0.4	0.3	0.3
21	0.5	0.5	0.4	0.4	30.0	0.3	0.4	0.5	0.3	0.4	0.3	0.3
22	0.4	0.4	0.3	0.3	0.5	0.3	0.4	0.4	0.3	0.4	0.3	0.3
23	0.4	0.4	0.4	0.4	0.9	0.3	0.4	0.4	0.3	0.4	0.3	0.3
24	0.4	0.4	0.4	0.4	1.0	0.3	0.4	0.5	0.3	0.4	0.3	0.4
25	0.4	0.4	0.5	0.4	0.5	0.3	0.4	0.5	0.3	16.0	0.3	0.3
26	0.4	0.4	0.4	0.4	0.5	0.3	0.4	0.5	3.1	59.0	0.4	0.3
27	0.4	0.5	0.3	0.4	0.3	0.3	0.4	57.0	0.3	0.4	0.4	0.3
28	0.3	0.6	0.3	6.7	0.3	0.3	0.4	365.0	0.3	0.4	0.3	0.3
29	0.3	0.5	0.3	1.1	9.6	0.3	0.4	--	0.3	0.4	0.3	0.3
30	0.4	0.5	0.3	0.4	0.8	0.3	1.3	--	0.3	0.4	0.3	0.3
31	0.4	0.6	--	0.4	--	0.3	3.5	--	0.3	--	0.3	--
Total (cfs)	11.4	13.1	14.1	27.8	53.1	25.8	15.0	444.8	97.1	117.7	10.8	9.2
Minimum	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.4	0.3	0.3	0.3	0.3
Maximum	0.5	0.6	1.6	9.5	30.0	8.4	3.5	365.0	83.0	59.0	0.5	0.4
Average	0.4	0.4	0.5	0.9	1.8	0.8	0.5	15.9	3.1	3.9	0.3	0.3
Total (acre-ft)	22.6	26.0	28.1	55.1	105.4	51.2	29.8	882.5	192.7	233.5	21.3	18.3

[1] Data are provisional for March 12, 2014 to June 30, 2014; for July 1, 2013 to March 11, 2014, data are approved.

Appendix A2

Average Daily Discharge at OC-59 on San Antonio Creek

(cfs)

Day	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14
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	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	0.0
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	--
Total (cfs)	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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 (acre-ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Appendix A3

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

(cfs)

Day	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14
1	8.4	4.2	5.1	8.0	22.6	22.9	18.3	18.6	19.8	20.1	11.0	8.4
2	7.7	4.2	5.7	8.7	23.1	21.3	18.4	19.8	19.6	19.3	6.2	7.1
3	3.2	4.6	5.6	8.4	23.4	22.3	17.6	21.7	20.0	20.4	4.2	7.7
4	4.0	5.0	4.5	8.2	22.6	22.0	17.5	21.7	23.2	18.7	14.1	9.1
5	4.6	4.8	3.9	8.5	20.4	20.3	18.3	21.3	24.6	21.2	8.2	9.3
6	4.6	4.5	3.9	9.9	17.9	20.0	18.3	22.0	22.6	20.4	10.4	7.7
7	4.6	4.3	3.9	9.1	17.0	20.4	17.8	20.3	24.3	20.0	13.0	7.4
8	4.6	4.3	4.2	9.1	16.4	20.7	16.7	21.5	23.1	20.3	11.8	7.7
9	5.6	4.5	4.2	10.1	17.2	20.4	17.3	21.0	22.1	17.3	10.8	6.3
10	6.3	4.5	3.6	15.3	16.9	20.6	17.6	22.4	21.8	15.8	11.4	7.1
11	6.5	4.5	3.7	18.6	16.2	19.6	17.9	22.6	21.5	14.7	12.4	6.7
12	6.2	4.3	4.2	19.5	15.8	20.0	18.4	22.0	18.6	17.2	11.3	5.7
13	6.3	4.2	4.2	20.1	15.6	19.3	17.3	21.5	18.1	19.6	10.7	5.3
14	6.2	4.5	3.7	14.7	16.4	21.0	17.2	21.3	19.3	14.5	11.3	6.2
15	7.6	4.6	6.2	10.2	16.7	21.5	17.5	19.2	18.6	12.5	9.6	7.3
16	9.3	4.5	9.9	7.7	17.0	21.8	15.3	20.1	18.3	13.9	8.4	7.6
17	9.0	4.6	10.4	8.2	17.9	21.7	15.8	20.9	19.8	12.2	8.0	6.5
18	15.8	5.1	9.3	7.7	18.1	21.7	17.8	20.9	21.8	11.4	9.7	5.7
19	7.3	4.5	4.8	7.4	18.6	21.3	19.3	19.8	21.8	12.4	10.1	5.0
20	6.8	4.3	5.1	8.4	20.4	24.6	21.5	20.1	22.0	13.0	9.6	5.3
21	7.0	4.3	5.6	10.1	21.3	25.5	22.3	19.5	20.9	10.4	8.8	6.0
22	7.0	4.6	8.7	9.7	22.7	25.7	20.9	18.1	20.6	9.4	12.1	6.7
23	6.8	4.3	8.0	8.0	22.6	22.4	18.6	18.1	20.3	9.0	8.4	6.3
24	6.7	4.3	6.0	7.1	22.3	18.1	26.1	19.2	20.7	8.7	9.0	6.7
25	5.9	5.1	5.7	7.4	22.7	18.1	21.5	17.6	20.7	7.7	9.7	6.7
26	5.6	4.6	5.7	8.2	22.9	16.7	22.1	18.4	21.8	12.8	10.5	6.5
27	5.4	5.0	5.9	11.6	23.4	14.9	23.2	22.6	22.3	15.2	9.4	6.5
28	6.3	5.4	6.8	13.5	24.0	15.3	18.4	25.1	22.1	10.4	8.4	7.1
29	6.8	7.3	6.3	17.0	22.0	17.2	23.5	--	22.3	10.1	7.6	7.3
30	5.4	6.2	5.4	19.5	22.0	16.9	22.6	--	21.5	10.5	7.3	6.5
31	5.6	5.3	--	21.8	--	15.9	21.7	--	21.0	--	8.2	--
Total (cfs)	203.1	146.5	170.0	351.8	596.1	630.1	596.7	577.2	655.0	439.2	301.4	205.3
Minimum	3.2	4.2	3.6	7.1	15.6	14.9	15.3	17.6	18.1	7.7	4.2	5.0
Maximum	15.8	7.3	10.4	21.8	24.0	25.7	26.1	25.1	24.6	21.2	14.1	9.3
Average	6.6	4.7	5.7	11.3	19.9	20.3	19.2	20.6	21.1	14.6	9.7	6.8
Total (acre-ft)	403.0	290.7	337.3	697.9	1,182.6	1,250.1	1,183.8	1,145.1	1,299.5	871.4	597.9	407.3

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-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14
1	8.7	4.6	5.6	8.4	22.9	23.5	18.5	19.0	102.8	33.1	11.4	8.6
2	8.1	4.5	6.4	9.0	23.5	21.8	18.7	21.5	21.5	39.3	6.6	7.5
3	3.6	5.0	6.0	8.7	23.7	22.9	17.9	22.9	20.5	20.8	4.5	8.1
4	4.4	5.3	4.9	8.6	23.1	22.3	17.8	22.1	23.8	19.1	14.4	9.4
5	5.0	5.1	4.3	8.8	21.0	20.5	18.5	21.8	25.1	21.5	8.6	9.6
6	5.0	4.8	4.3	10.2	18.6	20.2	18.5	31.3	22.9	20.8	10.7	8.0
7	5.0	4.7	4.3	9.5	17.6	28.3	18.1	21.1	24.6	20.3	13.5	7.8
8	5.0	4.7	4.5	9.5	17.0	21.6	17.1	21.9	23.3	20.7	12.1	8.0
9	5.9	4.8	5.8	19.6	17.5	20.8	17.7	21.4	22.4	17.7	11.2	6.6
10	6.7	4.8	4.4	15.8	17.3	20.8	18.0	22.9	22.1	16.1	11.8	7.4
11	6.9	4.8	4.5	19.0	16.9	20.0	18.3	23.0	21.8	15.1	12.7	6.9
12	6.5	4.7	4.9	19.9	16.3	20.2	18.8	22.4	18.8	17.6	11.6	6.0
13	6.7	4.6	4.7	20.5	16.0	19.6	17.8	21.9	18.4	20.0	11.0	5.6
14	6.5	4.9	4.1	15.1	16.7	21.3	17.5	21.8	19.6	14.9	11.6	6.5
15	8.0	5.1	6.5	10.6	17.1	21.7	17.8	19.6	18.9	12.9	9.9	7.5
16	9.7	5.0	10.3	8.4	17.3	22.1	15.6	20.5	18.5	14.3	8.8	7.9
17	9.3	5.1	10.8	8.5	18.2	22.0	16.1	21.3	20.1	12.6	8.4	6.8
18	16.1	5.5	9.7	8.1	18.4	22.0	18.1	21.4	22.1	11.8	10.1	6.1
19	7.6	5.0	5.2	7.7	18.9	29.7	19.7	20.3	22.1	12.7	10.5	5.3
20	7.2	4.8	5.5	8.7	20.9	25.0	21.9	20.6	22.3	13.3	9.9	5.6
21	7.4	4.8	6.0	10.5	51.3	25.8	22.7	20.0	21.2	10.7	9.1	6.3
22	7.4	5.1	9.0	10.1	23.3	26.0	21.3	18.5	20.9	9.9	12.4	6.9
23	7.2	4.8	8.5	8.4	23.5	22.7	18.9	18.5	20.6	9.3	8.7	6.7
24	7.0	4.7	6.4	7.5	23.3	18.4	26.5	19.6	21.0	9.0	9.3	7.0
25	6.3	5.5	6.2	7.8	23.2	18.4	21.9	18.1	21.0	23.7	10.1	7.0
26	5.9	5.1	6.1	8.6	23.4	17.0	22.5	18.9	24.9	71.8	10.9	6.8
27	5.8	5.4	6.2	12.0	23.7	15.2	23.6	79.6	22.6	15.6	9.8	6.8
28	6.7	6.0	7.1	20.2	24.2	15.6	18.8	390.1	22.4	10.8	8.7	7.4
29	7.1	7.8	6.6	18.1	31.6	17.4	23.9	--	22.6	10.5	7.9	7.5
30	5.8	6.7	5.7	19.9	22.7	17.1	23.9	--	21.8	10.9	7.6	6.8
31	5.9	5.8	--	22.2	--	16.2	25.2	--	21.3	--	8.5	--
Total (cfs)	214.5	159.6	184.2	379.6	649.2	655.9	611.7	1,022.0	752.1	556.9	312.1	214.5
Minimum	3.6	4.5	4.1	7.5	16.0	15.2	15.6	18.1	18.4	9.0	4.5	5.3
Maximum	16.1	7.8	10.8	22.2	51.3	29.7	26.5	390.1	102.8	71.8	14.4	9.6
Average	6.9	5.1	6.1	12.2	21.6	21.2	19.7	36.5	24.3	18.6	10.1	7.2
Total (acre-ft)	425.6	316.6	365.4	753.1	1,287.9	1,301.3	1,213.6	2,027.6	1,492.2	1,104.9	619.2	425.6

Appendix A5

Daily Diversions to Recharge Basins from the Chino Creek Tributary System

(cfs)

Day	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14
1	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	35.94	16.68	0.00	0.00
2	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.40	0.00	0.00
3	0.00	0.04	0.00	0.00	0.00	0.00	0.00	2.37	0.00	2.02	0.00	0.00
4	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.04	0.00	0.00	0.00	0.00	0.00	8.92	0.00	0.00	0.00	0.00
7	0.00	0.04	0.00	0.00	0.00	1.26	0.00	0.00	0.00	0.00	5.04	0.00
8	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.04	0.00	8.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.04	0.00	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.04	0.00	0.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.04	0.00	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.04	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.04	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.04	0.00	0.00	0.81	0.00	8.27	0.00	0.00	0.00	0.00	0.00	0.00
19	0.04	0.00	0.00	0.81	0.00	22.43	0.00	0.00	0.00	0.00	0.00	0.00
20	0.04	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.04	0.00	0.00	0.81	18.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.31	25.91	0.00	0.00
27	0.04	0.00	0.00	0.00	0.00	0.00	0.00	20.41	0.00	0.00	0.00	0.00
28	0.04	0.00	0.00	3.28	0.00	0.00	0.00	106.80	0.00	0.00	0.00	0.00
29	0.04	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00	0.00	0.00
30	0.04	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00	0.00	0.00
31	0.04	0.00	--	0.00	--	0.00	7.81	--	0.00	--	0.00	--
Total (cfs)	0.6	0.6	0.0	19.3	18.3	32.0	7.8	138.5	43.2	51.0	5.0	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	0.0	8.2	18.3	22.4	7.8	106.8	35.9	25.9	5.0	0.0
Average	0.0	0.0	0.0	0.6	0.6	1.0	0.3	4.9	1.4	1.7	0.2	0.0
Total (acre-ft)	1.3	1.2	0.0	38.2	36.3	63.4	15.5	274.8	85.8	101.2	10.0	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-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14
1	8.7	4.6	5.6	8.4	22.9	23.5	18.5	19.0	138.7	49.8	11.4	8.6
2	8.1	4.6	6.4	9.0	23.5	21.8	18.7	21.5	21.5	45.7	6.6	7.5
3	3.6	5.1	6.0	8.7	23.7	22.9	17.9	25.2	20.5	22.8	4.5	8.1
4	4.4	5.3	4.9	8.6	23.1	22.3	17.8	22.1	23.8	19.1	14.4	9.4
5	5.0	5.2	4.3	8.8	21.0	20.5	18.5	21.8	25.1	21.5	8.6	9.6
6	5.0	4.9	4.3	10.2	18.6	20.2	18.5	40.2	22.9	20.8	10.7	8.0
7	5.0	4.7	4.3	9.5	17.6	29.6	18.1	21.1	24.6	20.3	18.5	7.8
8	5.0	4.7	4.5	9.5	17.0	21.6	17.1	21.9	23.3	20.7	12.1	8.0
9	5.9	4.8	5.8	27.8	17.5	20.8	17.7	21.4	22.4	17.7	11.2	6.6
10	6.7	4.9	4.4	15.8	17.3	20.8	18.0	22.9	22.1	16.1	11.8	7.4
11	6.9	4.9	4.5	20.5	16.9	20.0	18.3	23.0	21.8	15.1	12.7	6.9
12	6.5	4.8	4.9	19.9	16.3	20.2	18.8	22.4	18.8	17.6	11.6	6.0
13	6.7	4.6	4.7	20.5	16.0	19.6	17.8	21.9	18.4	20.0	11.0	5.6
14	6.5	5.0	4.1	15.7	16.7	21.3	17.5	21.8	19.6	14.9	11.6	6.5
15	8.0	5.2	6.5	11.4	17.1	21.7	17.8	19.6	18.9	12.9	9.9	7.5
16	9.7	5.0	10.3	9.2	17.3	22.1	15.6	20.5	18.5	14.3	8.8	7.9
17	9.4	5.1	10.8	9.3	18.2	22.0	16.1	21.3	20.1	12.6	8.4	6.8
18	16.2	5.5	9.7	8.9	18.4	30.2	18.1	21.4	22.1	11.8	10.1	6.1
19	7.6	5.0	5.2	8.6	18.9	52.2	19.7	20.3	22.1	12.7	10.5	5.3
20	7.2	4.8	5.5	9.5	20.9	25.0	21.9	20.6	22.3	13.3	9.9	5.6
21	7.5	4.8	6.0	11.3	69.6	25.8	22.7	20.0	21.2	10.7	9.1	6.3
22	7.4	5.1	9.0	10.1	23.3	26.0	21.3	18.5	20.9	9.9	12.4	6.9
23	7.2	4.8	8.5	8.4	23.5	22.7	18.9	18.5	20.6	9.3	8.7	6.7
24	7.1	4.7	6.4	7.5	23.3	18.4	26.5	19.6	21.0	9.0	9.3	7.0
25	6.3	5.5	6.2	7.8	23.2	18.4	21.9	18.1	21.0	23.7	10.1	7.0
26	6.0	5.1	6.1	8.6	23.4	17.0	22.5	18.9	32.2	97.7	10.9	6.8
27	5.9	5.4	6.2	12.0	23.7	15.2	23.6	100.0	22.6	15.6	9.8	6.8
28	6.7	6.0	7.1	23.4	24.2	15.6	18.8	496.9	22.4	10.8	8.7	7.4
29	7.2	7.8	6.6	18.1	31.6	17.4	23.9	--	22.6	10.5	7.9	7.5
30	5.8	6.7	5.7	19.9	22.7	17.1	23.9	--	21.8	10.9	7.6	6.8
31	6.0	5.8	--	22.2	--	16.2	33.0	--	21.3	--	8.5	--
Total (cfs)	215.1	160.2	184.2	398.8	667.5	687.9	619.5	1,160.5	795.4	607.9	317.2	214.5
Minimum	3.6	4.6	4.1	7.5	16.0	15.2	15.6	18.1	18.4	9.0	4.5	5.3
Maximum	16.2	7.8	10.8	27.8	69.6	52.2	33.0	496.9	138.7	97.7	18.5	9.6
Average	6.9	5.2	6.1	12.9	22.2	22.2	20.0	41.4	25.7	20.3	10.2	7.2
Total (acre-ft)	426.8	317.8	365.4	791.3	1,324.2	1,364.7	1,229.1	2,302.4	1,578.0	1,206.1	629.2	425.6

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-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14
1	4.5	4.1	17.0	4.0	4.8	30.0	8.7	17.0	298.0	79.0	32.0	7.5
2	7.7	4.4	11.0	3.3	4.7	19.0	10.0	34.0	59.0	51.0	31.0	4.8
3	10.0	5.2	8.4	4.3	9.1	8.4	4.5	36.0	47.0	13.0	27.0	3.6
4	11.0	10.0	5.0	5.4	11.0	10.0	6.9	24.0	41.0	16.0	11.0	2.9
5	4.7	5.5	3.7	19.0	5.6	11.0	14.0	11.0	38.0	11.0	6.6	2.7
6	7.6	5.4	4.5	27.0	9.7	20.0	14.0	42.0	40.0	9.0	16.0	3.5
7	8.5	5.3	7.7	14.0	4.9	44.0	9.5	36.0	41.0	8.5	3.7	3.7
8	7.0	4.8	17.0	7.4	6.9	30.0	11.0	31.0	41.0	8.4	2.2	3.4
9	7.9	6.7	15.0	75.0	3.7	20.0	16.0	33.0	39.0	6.1	2.0	2.6
10	12.0	8.1	4.5	42.0	8.1	19.0	17.0	32.0	33.0	5.3	2.1	2.9
11	12.0	6.8	4.8	16.0	3.5	6.6	16.0	22.0	34.0	7.1	3.4	2.4
12	10.0	5.5	3.5	15.0	13.0	13.0	20.0	15.0	32.0	5.1	1.7	1.8
13	9.7	5.0	4.6	19.0	3.4	8.4	20.0	8.6	28.0	8.7	1.6	1.8
14	10.0	4.2	6.6	11.0	3.5	10.0	26.0	8.8	28.0	7.6	2.3	2.0
15	5.2	3.5	8.2	9.2	3.3	14.0	20.0	8.3	24.0	8.1	2.5	4.1
16	6.5	5.1	5.3	6.3	5.5	9.4	18.0	12.0	21.0	12.0	1.6	2.1
17	5.8	7.6	3.1	6.7	7.4	16.0	17.0	9.6	18.0	3.3	5.0	2.0
18	4.5	9.1	2.8	6.1	8.4	12.0	26.0	10.0	18.0	3.5	4.6	2.5
19	4.0	4.0	2.5	6.6	9.3	53.0	32.0	12.0	19.0	8.0	2.6	1.9
20	6.6	3.6	2.7	10.0	15.0	29.0	22.0	12.0	16.0	20.0	2.3	2.3
21	5.9	3.8	6.1	8.4	112.0	10.0	22.0	7.3	13.0	10.0	2.5	2.3
22	5.3	2.7	11.0	4.5	33.0	16.0	11.0	12.0	15.0	9.8	3.7	2.2
23	3.9	4.7	4.9	8.6	29.0	9.2	14.0	14.0	17.0	6.0	2.2	1.6
24	4.1	9.3	2.7	5.0	26.0	11.0	10.0	29.0	18.0	5.9	1.3	2.6
25	3.7	13.0	2.7	5.3	22.0	17.0	7.1	38.0	16.0	13.0	4.2	4.2
26	3.8	10.0	2.7	7.0	30.0	11.0	16.0	46.0	27.0	117.0	3.2	3.9
27	7.3	3.6	3.2	11.0	21.0	13.0	14.0	116.0	11.0	29.0	2.1	5.2
28	9.0	3.3	3.8	54.0	29.0	12.0	14.0	680.0	11.0	18.0	4.8	7.0
29	3.7	10.0	9.7	17.0	20.0	17.0	9.4	--	16.0	6.2	8.0	7.4
30	4.2	18.0	6.1	4.5	19.0	13.0	13.0	--	15.0	30.0	1.8	7.5
31	6.4	19.0	--	11.0	--	5.7	24.0	--	17.0	--	4.4	--
Total (cfs)	212.5	211.3	190.8	443.6	481.8	517.7	483.1	1,356.6	1,091.0	535.6	199.4	104.4
Minimum	3.7	2.7	2.5	3.3	3.3	5.7	4.5	7.3	11.0	3.3	1.3	1.6
Maximum	12.0	19.0	17.0	75.0	112.0	53.0	32.0	680.0	298.0	117.0	32.0	7.5
Average	6.9	6.8	6.4	14.3	16.1	16.7	15.6	48.5	35.2	17.9	6.4	3.5
Total (acre-ft)	421.6	419.2	378.5	880.1	955.9	1,027.1	958.5	2,691.5	2,164.5	1,062.6	395.6	207.1

[1] Data are provisional for March 10, 2014 to June 30, 2014; for July 1, 2013 to March 9, 2014, data are approved.

Appendix B2

Daily Diversions to Recharge Basins on the Cucamonga Creek Tributary System

(cfs)

Day	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14
1	0.4	0.4	0.3	0.9	0.7	1.2	1.5	0.9	80.1	14.9	0.7	1.6
2	0.4	0.4	0.3	0.9	0.7	0.9	1.5	1.8	1.5	14.6	0.7	1.7
3	0.4	0.4	0.3	0.6	0.7	0.7	1.5	5.2	1.9	0.6	0.7	1.7
4	0.4	0.4	0.3	0.3	0.7	0.9	1.5	0.9	1.9	0.6	0.7	1.7
5	0.4	0.4	0.3	0.3	0.7	1.4	1.5	1.2	1.4	0.6	0.7	1.7
6	0.4	0.4	0.5	0.3	0.7	1.7	1.2	26.3	1.2	0.6	0.7	1.7
7	0.4	0.4	0.9	0.5	0.7	11.6	1.2	0.9	1.2	0.6	1.2	1.7
8	0.4	0.4	0.9	0.9	0.7	1.7	1.2	1.0	1.2	0.6	1.6	1.7
9	0.4	0.4	0.9	10.4	0.7	1.7	1.2	1.0	1.2	0.6	1.6	1.7
10	0.4	0.4	0.9	0.5	0.7	1.7	1.2	1.0	1.4	0.6	1.6	1.7
11	0.4	0.4	0.9	0.9	0.7	1.7	1.2	1.0	1.6	0.6	1.6	1.4
12	0.4	0.4	0.9	0.9	0.7	1.7	1.2	1.0	1.6	0.6	1.6	1.0
13	0.4	0.4	0.9	0.9	0.7	1.7	1.2	0.8	1.7	0.6	1.6	0.7
14	0.4	0.4	0.9	0.9	0.7	1.7	1.1	0.8	1.1	0.6	1.6	0.7
15	0.4	0.4	0.9	0.9	0.7	1.7	1.0	0.8	1.6	0.6	1.2	0.7
16	0.4	0.3	0.9	0.8	1.0	1.3	1.1	0.8	1.6	0.8	1.3	0.7
17	0.4	0.3	0.9	8.3	1.0	1.3	0.9	1.0	1.6	1.3	1.3	0.7
18	0.4	0.3	0.9	0.8	1.0	1.2	0.9	1.2	1.6	1.3	1.3	0.7
19	0.4	0.3	0.9	0.8	1.0	37.1	0.9	1.2	1.6	1.3	1.3	0.7
20	0.4	0.3	0.9	0.8	1.0	1.2	0.9	1.2	1.2	1.3	1.3	0.7
21	0.4	0.3	0.9	0.8	25.4	1.2	0.9	1.2	0.6	1.3	1.5	0.7
22	0.4	0.3	0.9	0.8	0.7	1.2	0.9	1.4	0.6	1.3	1.7	0.7
23	0.4	0.3	0.9	0.8	0.7	1.2	0.9	1.2	0.6	1.3	1.7	0.7
24	0.4	0.3	0.9	0.8	0.7	1.2	0.9	1.2	0.6	1.6	1.7	0.7
25	0.4	0.3	0.9	0.7	0.7	1.2	0.9	1.2	0.6	1.3	1.7	0.7
26	0.4	0.3	0.9	0.7	0.9	1.2	0.9	1.2	2.8	79.4	1.7	0.7
27	0.4	0.3	0.9	0.7	1.2	1.2	4.4	83.5	0.6	0.6	1.7	0.7
28	0.4	0.3	0.9	13.1	1.2	1.2	1.2	169.2	0.6	0.7	1.0	0.7
29	0.4	0.3	0.9	0.7	8.4	1.5	0.9	--	0.6	0.8	1.0	0.7
30	0.4	0.3	0.9	0.7	1.2	1.5	0.9	--	0.6	0.7	1.7	0.7
31	0.4	0.3	--	0.7	--	1.5	18.6	--	0.6	--	1.7	--
Total (cfs)	11.6	10.4	22.7	51.9	56.5	87.9	55.0	309.9	116.5	131.9	41.2	32.2
Minimum	0.4	0.3	0.3	0.3	0.7	0.7	0.9	0.8	0.6	0.6	0.7	0.7
Maximum	0.4	0.4	0.9	13.1	25.4	37.1	18.6	169.2	80.1	79.4	1.7	1.7
Average	0.4	0.3	0.8	1.7	1.9	2.8	1.8	11.1	3.8	4.4	1.3	1.1
Total (acre-ft)	22.9	20.6	45.0	103.0	112.0	174.5	109.2	614.8	231.1	261.7	81.7	64.0

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

Day	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14
1	4.9	4.5	17.3	4.9	5.5	31.2	10.2	17.9	378.1	93.9	32.7	9.1
2	8.1	4.8	11.3	4.2	5.4	19.9	11.5	35.8	60.5	65.6	31.7	6.5
3	10.4	5.6	8.7	4.9	9.8	9.1	6.0	41.2	48.9	13.6	27.7	5.3
4	11.4	10.4	5.3	5.7	11.7	10.9	8.4	24.9	42.9	16.6	11.7	4.6
5	5.1	5.9	4.0	19.3	6.3	12.4	15.5	12.2	39.4	11.6	7.3	4.4
6	8.0	5.8	5.0	27.3	10.4	21.7	15.2	68.3	41.2	9.6	16.7	5.2
7	8.9	5.7	8.6	14.5	5.6	55.6	10.7	36.9	42.2	9.1	4.9	5.4
8	7.4	5.2	17.9	8.3	7.6	31.7	12.2	32.0	42.2	9.0	3.8	5.1
9	8.3	7.1	15.9	85.4	4.4	21.7	17.2	34.0	40.2	6.7	3.6	4.3
10	12.4	8.5	5.4	42.5	8.8	20.7	18.2	33.0	34.4	5.9	3.7	4.6
11	12.4	7.2	5.7	16.9	4.2	8.3	17.2	23.0	35.6	7.7	5.0	3.8
12	10.4	5.9	4.4	15.9	13.7	14.7	21.2	16.0	33.6	5.7	3.3	2.8
13	10.1	5.4	5.5	19.9	4.1	10.1	21.2	9.4	29.7	9.3	3.2	2.5
14	10.4	4.6	7.5	11.9	4.2	11.7	27.1	9.6	29.1	8.2	3.9	2.7
15	5.6	3.9	9.1	10.1	4.0	15.7	21.0	9.1	25.6	8.7	3.7	4.8
16	6.9	5.4	6.2	7.1	6.5	10.7	19.1	12.8	22.6	12.8	2.9	2.8
17	6.2	7.9	4.0	15.0	8.4	17.3	17.9	10.6	19.6	4.6	6.3	2.7
18	4.9	9.4	3.7	6.9	9.4	13.2	26.9	11.2	19.6	4.8	5.9	3.2
19	4.4	4.3	3.4	7.4	10.3	90.1	32.9	13.2	20.6	9.3	3.9	2.6
20	7.0	3.9	3.6	10.8	16.0	30.2	22.9	13.2	17.2	21.3	3.6	3.0
21	6.3	4.1	7.0	9.2	137.4	11.2	22.9	8.5	13.6	11.3	4.0	3.0
22	5.7	3.0	11.9	5.3	33.7	17.2	11.9	13.4	15.6	11.1	5.4	2.9
23	4.3	5.0	5.8	9.4	29.7	10.4	14.9	15.2	17.6	7.3	3.9	2.3
24	4.5	9.6	3.6	5.8	26.7	12.2	10.9	30.2	18.6	7.5	3.0	3.3
25	4.1	13.3	3.6	6.0	22.7	18.2	8.0	39.2	16.6	14.3	5.9	4.9
26	4.2	10.3	3.6	7.7	30.9	12.2	16.9	47.2	29.8	196.4	4.9	4.6
27	7.7	3.9	4.1	11.7	22.2	14.2	18.4	199.5	11.6	29.6	3.8	5.9
28	9.4	3.6	4.7	67.1	30.2	13.2	15.2	849.2	11.6	18.7	5.8	7.7
29	4.1	10.3	10.6	17.7	28.4	18.5	10.3	--	16.6	7.0	9.0	8.1
30	4.6	18.3	7.0	5.2	20.2	14.5	13.9	--	15.6	30.7	3.5	8.2
31	6.8	19.3	--	11.7	--	7.2	42.6	--	17.6	--	6.1	--
Total (cfs)	224.1	221.7	213.5	495.5	538.3	605.6	538.1	1,666.5	1,207.5	667.5	240.6	136.6
Minimum	4.1	3.0	3.4	4.2	4.0	7.2	6.0	8.5	11.6	4.6	2.9	2.3
Maximum	12.4	19.3	17.9	85.4	137.4	90.1	42.6	849.2	378.1	196.4	32.7	9.1
Average	7.2	7.2	7.1	16.0	17.9	19.5	17.4	59.5	39.0	22.3	7.8	4.6
Total (acre-ft)	444.5	439.8	423.6	983.1	1,067.9	1,201.6	1,067.6	3,306.2	2,395.6	1,324.4	477.3	271.1

Appendix C1

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

(cfs)

Day	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	83.4	6.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.3	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	5.7	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	10.1	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	40.7	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	0.0
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	13.6	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	6.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	72.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.1	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	12.8	2.3	80.4	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66.2	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.6	0.0	0.0	0.0	569.5	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	2.6	--	0.0	--	0.0	--
Total (cfs)	0.0	0.0	0.0	41.3	78.6	23.7	2.6	654.2	85.7	95.7	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	0.0	40.7	72.0	13.6	2.6	569.5	83.4	80.4	0.0	0.0
Average	0.0	0.0	0.0	1.3	2.6	0.8	0.1	23.4	2.8	3.2	0.0	0.0
Total (acre-ft)	0.0	0.0	0.0	81.9	155.9	47.0	5.2	1,297.9	170.0	189.9	0.0	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-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14
1	0.02	0.02	0.08	0.08	0.01	0.02	0.05	0.05	12.95	2.02	0.02	0.01
2	0.02	0.02	0.08	0.08	0.01	0.02	0.05	0.05	1.94	1.51	0.02	0.01
3	0.02	0.02	0.08	0.08	0.01	0.02	0.05	0.35	1.94	0.02	0.02	0.01
4	0.02	0.02	0.08	0.08	0.01	0.02	0.05	0.05	1.94	0.02	0.02	0.01
5	0.02	0.02	0.08	0.08	0.01	0.02	0.05	0.05	1.29	0.02	0.02	0.01
6	0.02	0.02	0.08	0.08	0.01	0.02	0.05	3.18	0.02	0.02	0.02	0.01
7	0.02	0.02	0.08	0.08	0.01	0.60	0.05	0.05	0.02	0.02	0.02	0.01
8	0.02	0.02	0.08	0.08	0.01	0.02	0.05	0.05	0.02	0.02	0.02	0.01
9	0.02	0.02	0.08	1.39	0.01	0.02	0.05	0.05	0.02	0.02	0.02	0.01
10	0.02	0.02	0.08	0.08	0.01	0.02	0.05	0.05	0.02	0.02	0.02	0.01
11	0.02	0.02	0.08	0.08	0.01	0.02	0.05	0.05	0.02	0.02	0.02	0.01
12	0.02	0.02	0.08	0.08	0.01	0.02	0.05	0.05	0.02	0.02	0.02	0.01
13	0.02	0.02	0.08	0.08	0.01	0.02	0.05	0.05	0.02	0.02	0.02	0.01
14	0.02	0.02	0.08	0.08	0.01	0.02	0.05	0.05	0.02	0.02	0.02	0.01
15	0.02	0.02	0.08	0.08	0.01	0.02	0.05	0.05	0.02	0.02	0.02	0.01
16	0.02	0.08	0.08	0.01	0.02	0.05	0.05	0.05	0.02	0.02	0.02	0.01
17	0.02	0.08	0.08	0.01	0.02	0.05	0.05	0.05	0.02	0.02	0.02	0.01
18	0.02	0.08	0.08	0.01	0.02	0.05	0.05	0.05	0.02	0.02	0.02	0.01
19	0.02	0.08	0.08	0.01	0.02	1.01	0.05	0.05	0.02	0.02	0.02	0.01
20	0.02	0.08	0.08	0.01	0.02	0.05	0.05	0.05	0.02	0.02	0.02	0.01
21	0.02	0.08	0.08	0.01	0.81	0.05	0.05	0.05	0.02	0.02	0.02	0.01
22	0.02	0.08	0.08	0.01	0.02	0.05	0.05	0.05	0.02	0.02	0.02	0.01
23	0.02	0.08	0.08	0.01	0.02	0.05	0.05	0.05	0.02	0.02	0.02	0.01
24	0.02	0.08	0.08	0.01	0.02	0.05	0.05	0.05	0.02	0.02	0.02	0.01
25	0.02	0.08	0.08	0.01	0.02	0.05	0.05	0.05	0.02	0.02	0.02	0.01
26	0.02	0.08	0.08	0.01	0.02	0.05	0.05	0.05	0.03	0.91	0.02	0.01
27	0.02	0.08	0.08	0.01	0.02	0.05	0.05	2.22	0.02	0.02	0.02	0.01
28	0.02	0.08	0.08	0.76	0.02	0.05	0.05	10.28	0.02	0.02	0.02	0.01
29	0.02	0.08	0.08	0.01	0.15	0.05	0.05	--	0.02	0.02	0.02	0.01
30	0.02	0.08	0.08	0.01	0.02	0.05	0.05	--	0.02	0.02	0.02	0.01
31	0.02	0.08	--	0.01	--	0.05	1.01	--	0.02	--	0.02	--
Total (cfs)	0.62	1.59	2.42	3.35	1.23	2.50	2.37	17.12	20.46	4.84	0.47	0.15
Minimum	0.02	0.02	0.08	0.01	0.01	0.02	0.05	0.05	0.02	0.02	0.02	0.01
Maximum	0.02	0.08	0.08	1.39	0.81	1.01	1.01	10.28	12.95	2.02	0.02	0.01
Average	0.02	0.05	0.08	0.11	0.04	0.08	0.08	0.61	0.66	0.16	0.02	0.01
Total (acre-ft)	1.24	3.16	4.80	6.65	2.44	4.97	4.70	33.96	40.59	9.61	0.93	0.30

[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-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14
1	0.02	0.02	0.08	0.08	0.01	0.02	0.05	0.05	0.00	0.00	0.02	0.01
2	0.02	0.02	0.08	0.08	0.01	0.02	0.05	0.05	0.00	0.00	0.02	0.01
3	0.02	0.02	0.08	0.08	0.01	0.02	0.05	0.35	0.00	0.02	0.02	0.01
4	0.02	0.02	0.08	0.08	0.01	0.02	0.05	0.05	0.00	0.02	0.02	0.01
5	0.02	0.02	0.08	0.08	0.01	0.02	0.05	0.05	0.00	0.02	0.02	0.01
6	0.02	0.02	0.08	0.08	0.01	0.02	0.05	0.00	0.02	0.02	0.02	0.01
7	0.02	0.02	0.08	0.08	0.01	0.00	0.05	0.05	0.02	0.02	0.02	0.01
8	0.02	0.02	0.08	0.08	0.01	0.02	0.05	0.05	0.02	0.02	0.02	0.01
9	0.02	0.02	0.08	0.00	0.01	0.02	0.05	0.05	0.02	0.02	0.02	0.01
10	0.02	0.02	0.08	0.08	0.01	0.02	0.05	0.05	0.02	0.02	0.02	0.01
11	0.02	0.02	0.08	0.08	0.01	0.02	0.05	0.05	0.02	0.02	0.02	0.01
12	0.02	0.02	0.08	0.08	0.01	0.02	0.05	0.05	0.02	0.02	0.02	0.01
13	0.02	0.02	0.08	0.08	0.01	0.02	0.05	0.05	0.02	0.02	0.02	0.01
14	0.02	0.02	0.08	0.08	0.01	0.02	0.05	0.05	0.02	0.02	0.02	0.01
15	0.02	0.02	0.08	0.08	0.01	0.02	0.05	0.05	0.02	0.02	0.02	0.01
16	0.02	0.08	0.08	0.01	0.02	0.05	0.05	0.05	0.02	0.02	0.02	0.01
17	0.02	0.08	0.08	0.01	0.02	0.05	0.05	0.05	0.02	0.02	0.02	0.01
18	0.02	0.08	0.08	0.01	0.02	0.05	0.05	0.05	0.02	0.02	0.02	0.01
19	0.02	0.08	0.08	0.01	0.02	0.00	0.05	0.05	0.02	0.02	0.02	0.01
20	0.02	0.08	0.08	0.01	0.00	0.05	0.05	0.05	0.02	0.02	0.02	0.01
21	0.02	0.08	0.08	0.01	0.00	0.05	0.05	0.05	0.02	0.02	0.02	0.01
22	0.02	0.08	0.08	0.01	0.00	0.05	0.05	0.05	0.02	0.02	0.02	0.01
23	0.02	0.08	0.08	0.01	0.02	0.05	0.05	0.05	0.02	0.02	0.02	0.01
24	0.02	0.08	0.08	0.01	0.02	0.05	0.05	0.05	0.02	0.02	0.02	0.01
25	0.02	0.08	0.08	0.01	0.02	0.05	0.05	0.05	0.02	0.02	0.02	0.01
26	0.02	0.08	0.08	0.01	0.02	0.05	0.05	0.00	0.00	0.00	0.02	0.01
27	0.02	0.08	0.08	0.01	0.02	0.05	0.05	0.00	0.02	0.02	0.02	0.01
28	0.02	0.08	0.08	0.16	0.02	0.05	0.05	0.00	0.02	0.02	0.02	0.01
29	0.02	0.08	0.08	0.01	0.15	0.05	0.05	--	0.02	0.02	0.02	0.01
30	0.02	0.08	0.08	0.01	0.02	0.05	0.05	--	0.02	0.02	0.02	0.01
31	0.02	0.08	--	0.01	--	0.05	0.00	--	0.02	--	0.02	--
Total (cfs)	0.62	1.59	2.42	1.36	0.39	0.89	1.36	1.40	0.38	0.41	0.47	0.15
Minimum	0.02	0.02	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.01
Maximum	0.02	0.08	0.08	0.16	0.15	0.05	0.05	0.35	0.02	0.02	0.02	0.01
Average	0.02	0.05	0.08	0.04	0.01	0.03	0.04	0.05	0.01	0.01	0.02	0.01
Total (acre-ft)	1.24	3.16	4.80	2.70	0.78	1.77	2.70	2.77	0.75	0.81	0.93	0.30

[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-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	107.1	15.3	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	12.8	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	9.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	19.2	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	87.9	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	0.0
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	14.9	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	11.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	243.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.3	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	18.0	5.6	100.6	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	78.9	0.0	0.2	0.0	0.0
28	0.0	0.0	0.0	1.0	0.0	0.0	0.0	853.7	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	4.8	--	0.0	--	0.0	--
Total (cfs)	0.0	0.0	0.0	88.9	255.6	34.1	4.8	959.6	112.9	128.9	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	0.0	87.9	243.8	19.2	4.8	853.7	107.1	100.6	0.0	0.0
Average	0.0	0.0	0.0	2.9	8.5	1.1	0.2	34.3	3.6	4.3	0.0	0.0
Total (acre-ft)	0.0	0.0	0.0	176.4	507.1	67.7	9.5	1,903.8	224.0	255.7	0.0	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-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14
1	1.4	1.4	1.0	1.0	0.8	0.4	1.2	1.0	82.8	12.0	0.2	0.6
2	1.4	1.4	1.0	1.0	0.8	0.5	0.9	1.0	5.6	15.4	0.6	0.4
3	1.4	1.4	1.0	1.0	0.8	0.6	0.9	3.7	9.1	0.5	0.6	0.2
4	1.4	1.4	1.0	1.0	0.8	0.6	0.9	1.0	30.0	0.4	0.6	0.2
5	1.4	1.4	1.0	1.0	0.8	0.6	0.9	0.9	7.8	0.6	0.6	0.2
6	1.3	1.4	1.0	1.0	0.8	0.5	0.9	25.0	0.6	0.6	0.6	0.2
7	1.4	1.4	1.0	1.0	0.8	19.2	1.2	0.7	0.8	0.3	0.6	0.2
8	1.4	1.4	1.0	1.0	0.8	1.1	1.2	0.7	0.8	0.3	0.6	0.2
9	1.4	1.4	1.0	15.7	0.8	1.1	1.2	0.7	0.8	0.3	0.6	0.2
10	1.4	1.4	1.0	0.7	0.8	1.1	1.2	0.7	0.8	0.3	0.6	0.2
11	1.4	1.4	1.0	1.0	0.8	1.1	1.2	0.7	0.8	0.3	0.6	0.2
12	1.4	1.4	1.0	1.0	0.8	1.1	1.2	0.7	0.8	0.3	0.6	0.2
13	1.4	1.4	1.0	1.0	0.8	1.1	1.2	0.7	0.8	0.3	1.1	0.2
14	1.4	1.4	1.0	1.0	0.8	1.1	1.2	0.7	0.8	0.3	1.4	0.2
15	1.4	1.4	1.0	1.0	0.8	1.1	1.2	0.7	0.7	0.3	0.6	0.2
16	1.4	1.0	1.0	1.2	0.6	1.1	1.1	0.7	0.5	0.3	0.6	0.2
17	1.4	1.0	1.0	1.2	0.6	1.5	0.7	0.7	0.5	0.3	0.6	0.2
18	1.4	1.0	1.0	1.2	0.6	1.5	0.7	0.7	0.5	0.5	0.6	0.2
19	1.4	1.0	1.0	1.2	0.6	38.9	0.7	0.7	0.5	0.5	0.6	0.2
20	1.4	1.0	1.0	1.2	1.1	1.2	0.4	0.7	0.5	0.5	0.6	0.2
21	1.4	1.0	1.0	1.2	86.2	1.2	0.2	0.7	0.5	0.5	0.6	0.2
22	1.4	1.0	1.0	1.2	4.2	1.2	0.5	0.7	0.5	0.5	0.6	0.2
23	1.4	1.0	1.0	1.2	1.1	1.2	0.5	0.7	0.5	0.5	0.6	0.2
24	1.4	1.0	1.0	1.2	0.6	0.9	0.5	0.5	0.5	0.5	0.6	0.2
25	1.4	1.0	1.0	1.2	0.6	0.9	0.5	0.7	0.5	0.7	0.6	0.2
26	1.4	1.0	1.0	1.2	4.2	0.9	0.5	0.7	3.4	69.1	0.6	0.2
27	1.4	1.0	1.0	0.3	4.2	0.9	0.5	50.2	0.5	0.5	0.6	0.2
28	1.4	1.0	1.0	2.2	3.1	0.9	0.5	79.0	0.5	0.3	0.6	0.2
29	1.4	1.0	1.0	0.3	1.9	0.9	0.7	--	0.5	0.3	0.6	0.2
30	1.4	1.0	1.0	0.3	0.6	0.9	0.8	--	0.5	0.3	0.6	0.2
31	1.4	1.0	--	0.8	--	0.9	10.1	--	0.5	--	0.6	--
Total (cfs)	42.0	37.0	31.4	47.2	122.7	86.4	34.4	175.1	154.0	107.8	19.6	5.4
Minimum	1.3	1.0	1.0	0.3	0.6	0.4	0.2	0.5	0.5	0.3	0.2	0.2
Maximum	1.4	1.4	1.0	15.7	86.2	38.9	10.1	79.0	82.8	69.1	1.4	0.6
Average	1.4	1.2	1.0	1.5	4.1	2.8	1.1	6.3	5.0	3.6	0.6	0.2
Total (acre-ft)	83.4	73.5	62.4	93.6	243.3	171.3	68.2	347.5	305.5	213.8	38.8	10.7

[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-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14
1	1.4	1.4	1.0	1.0	0.8	0.4	1.2	1.0	0.0	0.0	0.2	0.6
2	1.4	1.4	1.0	1.0	0.8	0.5	0.9	1.0	0.0	0.0	0.6	0.4
3	1.4	1.4	1.0	1.0	0.8	0.6	0.9	3.7	0.0	0.5	0.6	0.2
4	1.4	1.4	1.0	1.0	0.8	0.6	0.9	1.0	0.0	0.4	0.6	0.2
5	1.4	1.4	1.0	1.0	0.8	0.6	0.9	0.9	0.0	0.6	0.6	0.2
6	1.3	1.4	1.0	1.0	0.8	0.5	0.9	16.0	0.6	0.6	0.6	0.2
7	1.4	1.4	1.0	1.0	0.8	0.0	1.2	0.7	0.8	0.3	0.6	0.2
8	1.4	1.4	1.0	1.0	0.8	1.1	1.2	0.7	0.8	0.3	0.6	0.2
9	1.4	1.4	1.0	0.0	0.8	1.1	1.2	0.7	0.8	0.3	0.6	0.2
10	1.4	1.4	1.0	0.7	0.8	1.1	1.2	0.7	0.8	0.3	0.6	0.2
11	1.4	1.4	1.0	1.0	0.8	1.1	1.2	0.7	0.8	0.3	0.6	0.2
12	1.4	1.4	1.0	1.0	0.8	1.1	1.2	0.7	0.8	0.3	0.6	0.2
13	1.4	1.4	1.0	1.0	0.8	1.1	1.2	0.7	0.8	0.3	1.1	0.2
14	1.4	1.4	1.0	1.0	0.8	1.1	1.2	0.7	0.8	0.3	1.4	0.2
15	1.4	1.4	1.0	1.0	0.8	1.1	1.2	0.7	0.7	0.3	0.6	0.2
16	1.4	1.0	1.0	1.2	0.6	1.1	1.1	0.7	0.5	0.3	0.6	0.2
17	1.4	1.0	1.0	1.2	0.6	1.5	0.7	0.7	0.5	0.3	0.6	0.2
18	1.4	1.0	1.0	1.2	0.6	1.5	0.7	0.7	0.5	0.5	0.6	0.2
19	1.4	1.0	1.0	1.2	0.6	24.0	0.7	0.7	0.5	0.5	0.6	0.2
20	1.4	1.0	1.0	1.2	0.0	1.2	0.4	0.7	0.5	0.5	0.6	0.2
21	1.4	1.0	1.0	1.2	0.0	1.2	0.2	0.7	0.5	0.5	0.6	0.2
22	1.4	1.0	1.0	1.2	0.0	1.2	0.5	0.7	0.5	0.5	0.6	0.2
23	1.4	1.0	1.0	1.2	0.0	1.2	0.5	0.7	0.5	0.5	0.6	0.2
24	1.4	1.0	1.0	1.2	0.6	0.9	0.5	0.5	0.5	0.5	0.6	0.2
25	1.4	1.0	1.0	1.2	0.6	0.9	0.5	0.7	0.5	0.7	0.6	0.2
26	1.4	1.0	1.0	1.2	4.2	0.9	0.5	0.0	0.0	0.0	0.6	0.2
27	1.4	1.0	1.0	0.3	4.2	0.9	0.5	0.0	0.5	0.3	0.6	0.2
28	1.4	1.0	1.0	1.2	3.1	0.9	0.5	0.0	0.5	0.3	0.6	0.2
29	1.4	1.0	1.0	0.3	1.9	0.9	0.7	--	0.5	0.3	0.6	0.2
30	1.4	1.0	1.0	0.3	0.6	0.9	0.8	--	0.5	0.3	0.6	0.2
31	1.4	1.0	--	0.8	--	0.9	5.3	--	0.5	--	0.6	--
Total (cfs)	42.0	37.0	31.4	30.5	30.1	52.3	29.6	36.2	15.2	11.0	19.6	5.4
Minimum	1.3	1.0	1.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.2	0.2
Maximum	1.4	1.4	1.0	1.2	4.2	24.0	5.3	16.0	0.8	0.7	1.4	0.6
Average	1.4	1.2	1.0	1.0	1.0	1.7	1.0	1.3	0.5	0.4	0.6	0.2
Total (acre-ft)	83.4	73.5	62.4	60.5	59.7	103.8	58.7	71.9	30.1	21.9	38.8	10.7

[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.