WILDERMUTH™
ENVIRONMENTAL INC.

September 16, 2013

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

Subject: ***Annual Streamflow Monitoring Report for Fiscal 2012/13, Water Rights Permit 21225***

Dear Mr. Kavounas:

Wildermuth Environmental, Inc. (WEI) hereby submits the Annual Streamflow Monitoring Report for Fiscal 2012/13. This is the fifth 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 Game (DFG) agreed that Watermaster will prepare estimates of the 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 DFG by October 1st of each year.[1] Each annual report covers the 12-month period from July 1st through June 30th.

This report describes the data and methodology used to assess stormwater diversion impacts and summarizes the diversion impact analysis for each tributary system for the period of July 1, 2012 through June 30, 2013.

As in past years, the stormwater and dry-weather discharges diverted for recharge within the Chino Basin between July 1, 2012 and June 30, 2013 were small relative to total discharge: about 16 percent of the total estimated discharge was diverted for recharge. About 76 percent of the diversions occurred between November and March during short-duration stormwater events. Watermaster's diversion for recharge provides some mitigation for the increase in stormwater and dry-weather discharge that result from the urbanization of the watershed. This reduction in stormwater and dry-weather discharges 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 DFG 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 into Prado Dam Reservoir. Day Creek and San Sevaine Creek discharge to the Santa Ana River upstream of 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 for these stations, average daily discharge data are available. The daily USGS data, daily stormwater and dry-weather discharge diversion data from IEUA, and 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 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 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 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 from 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 2012/13, Watermaster diverted a total of 5,269 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 Task Force consists of all recycling and regional water agencies in the watershed. The Basin Monitoring Task Force is administered by the Santa Ana Watershed Project Authority.

[4] Report is in preparation and will be released in late 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 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].

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 relative to the estimated discharge without Watermaster diversions is summarized in row 7 of Table 2a.

The total discharge entering the Prado Dam Reservoir from Chino Creek during fiscal 2012/13 (excluding imported water), was estimated to be about 14,685 acre-ft, ranging from a low of about 436 acre-ft/month (August) to a high of about 2,587 acre-ft/month (December). The total diversions from Chino Creek were about 438 acre-ft. About 89 percent of the diversions on Chino Creek occurred between November and March, and were coincident with the larger storm events of the year. About three

[5] The Metropolitan Water District of Southern California can supply OCWD with State Water Project water throught 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.

percent of the total discharge in Chino Creek was diverted for recharge in fiscal 2012/13. 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 as an xy scatter 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) or the difference between the red and yellow lines (average daily discharge without and with 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 (e.g. 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 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 entering the Prado Dam Reservoir from Cucamonga Creek during fiscal 2012/13 was estimated to be about 11,928 acre-ft, ranging from a low of about 235 acre-ft/month (April) to a high of about 3,347 acre-ft/month (December). The total diversions from Cucamonga Creek were about 2,614 acre-ft. About 82 percent of the diversions on Cucamonga Creek occurred between October and March and were coincident with the larger storm events of the year. About 18 percent of the total discharge in Cucamonga Creek was diverted for recharge in fiscal 2012/13.

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 as an xy scatter 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 *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 the reconstructed hydrograph of Day Creek.

The time history of stormwater and dry-weather discharge diversions, as provided by IEUA, is summarized in row 2 of Table 2c and shown in detail in Appendix C2. Diversions attributable to dry-weather flow are those diversions that occur on days when the WLAM estimated discharge is zero, or the WLAM discharge estimated discharge is less than measured diversions. Dry-weather flows that occurred on other dates, or downstream of the recharge basins, could not be estimated and the relative impact of Watermaster's diversions is still somewhat overstated. The time history of dry-weather flow diversions is summarized in row 3 of Table 2c, and shown in detail in Appendix C3.

When added together, the dry-weather diversions (Appendix C3) and stormwater discharge estimated by the WLAM (Appendix C1) yield the total estimated discharge from Day Creek to the Santa Ana River. This total discharge time history is summarized in row 4 of Table 2c, and shown in detail in Appendix C4. Subtracting the daily diversions (Appendix C2) from the total estimated daily discharges (Appendix C4) yields an estimated time history of the average daily discharge from Day Creek to the Santa Ana River after Watermaster diversions (Appendix C5). This discharge time history is summarized in row 5 of Table 2c. The percent reduction in discharge entering the Santa Ana River 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 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 2012/13 was estimated to be about 1,263 acre-ft, ranging from a low of 0 acre-ft/month (summer months) to a high of about 467 acre-ft/month (December). The total diversions from Day Creek were estimated to be about 108 acre-ft. About 95 percent of the diversions on Day Creek occurred between November and March, and were coincident with the larger storm events of the year. About eight percent of the total discharge in Day Creek was diverted for recharge in fiscal 2012/13. Figure 2c shows total monthly discharge, with and without diversions, as a stacked bar chart (acre-ft), and average daily discharge as an xy scatter plot (cfs). Stormwater runoff accounted for about 73% 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 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 IEUA, is summarized in row 2 of Table 2d and shown in detail in Appendix D2. Diversions attributable to dry-weather flow are those diversions that occur on days when the WLAM estimated discharge is zero, or the WLAM discharge estimated discharge is less than measured diversions. Dry-weather flows that occurred on other dates, or downstream of the recharge basins, could not be estimated and the relative impact of Watermaster's diversions is still somewhat overstated. The time history of dry-weather diversions flow is summarized in row 3 of Table 2d, and shown in detail in Appendix D3.

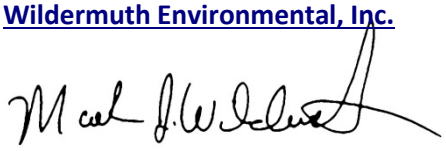
When added together, the dry-weather diversions (Appendix D3) and stormwater discharge estimated by the WLAM (Appendix D1) yield the total estimated discharge from Day Creek to the Santa Ana River. This total discharge time history is summarized in row 4 of Table 2d, and shown in detail in Appendix D4. Subtracting the daily diversions (Appendix D2) from the total estimated daily discharges (Appendix D4) yields an estimated time history of the average daily discharge from Day Creek to the Santa Ana River after Watermaster diversions (Appendix D5).This discharge time history is summarized in row 5 of Table 2d. The percent reduction in discharge entering the Santa Ana River relative to the estimated discharge of San Sevaine Creek 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 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 2012/13 was estimated to be about 1,321 acre-ft, ranging from a low of 0 acre-ft/month (summer months) to a high of about 466 acre-ft/month (December). The total diversions from San Sevaine Creek were estimated to be about 2,109 acre-ft. About 83 percent of the diversions on San Sevaine Creek occurred between October and March, and were coincident with the larger storm events of the year. About 62 percent of the total discharge in San Sevaine Creek was diverted for recharge in fiscal 2012/13. Figure 2d shows total monthly discharge, with and without diversions, as a stacked bar chart (acre-ft), and average daily discharge as an xy scatter plot (cfs). Stormwater runoff accounted for about 54% 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 five percent.

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

Respectfully,

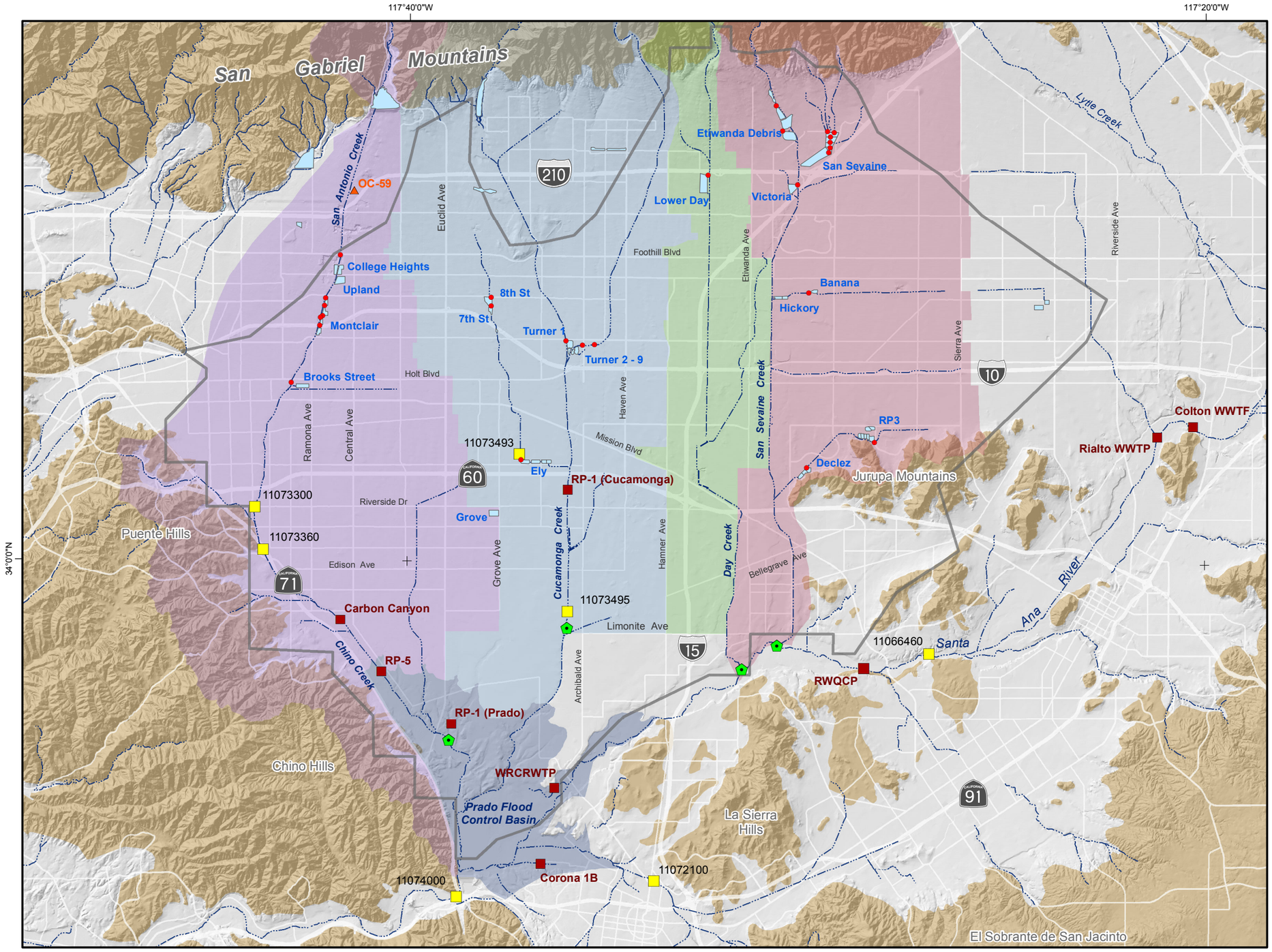
Wildermuth Environmental, Inc.



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

Samantha S. Adams
Supervising Scientist

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



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

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Water Rights Compliance Reporting
Fiscal Year 2012/2013

Stormwater Recharge Points of Diversion
Water Rights Permit 21225

Figure 1

Table 1

Total Monthly Diversions of Stormwater & Dry-Weather Discharge, Fiscal Year 2012/13[1,2]

(acre-ft)

Tributary System	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
Chino Creek													
College Heights	0	0	0	0	0	0	0	0	0	0	0	0	0
Upland	0	0	0	0	5	61	23	18	12	0	0	0	120
Montclair	0	2	0	2	26	101	23	10	18	0	21	0	204
Brooks Street	1	2	2	0	0	0	35	26	32	0	17	0	115
Tributary Total	**1**	**4**	**2**	**2**	**31**	**162**	**82**	**54**	**61**	**0**	**38**	**0**	**438**
Cucamonga Creek													
7th and 8th Street	19	20	33	30	66	278	69	89	65	24	43	12	747
Ely	6	6	6	6	11	335	71	38	64	1	23	4	572
Turner 1 and 2	83	35	31	61	61	290	149	116	48	0	0	0	874
Turner 3 and 4	24	37	31	22	30	47	14	25	14	0	0	0	244
Grove	3	3	3	3	21	58	27	24	11	0	22	2	177
Tributary Total	**135**	**101**	**104**	**122**	**189**	**1,007**	**330**	**291**	**203**	**26**	**88**	**17**	**2,614**
Day Creek													
Lower Day	1	1	1	0	8	61	15	13	5	0	0	1	108
Tributary Total	**1**	**1**	**1**	**0**	**8**	**61**	**15**	**13**	**5**	**0**	**0**	**1**	**108**
San Sevaine Creek													
San Sevaine	0	1	0	1	14	79	21	9	13	5	4	0	146
Hickory	22	50	30	51	13	6	0	8	13	0	6	2	199
Banana	0	0	0	11	5	49	18	20	8	0	3	0	113
RP-3	50	12	4	19	101	361	148	114	78	40	50	20	996
Declez	1	10	15	134	21	168	48	58	61	4	6	4	529
Etiwanda Debris Basin	0	0	0	0	1	15	14	2	1	0	0	0	32
Victoria	3	5	1	1	6	19	35	10	7	1	5	1	93
Tributary Total	**77**	**78**	**49**	**217**	**160**	**698**	**283**	**219**	**180**	**50**	**73**	**26**	**2,109**
Tributary System Total	**214**	**184**	**156**	**341**	**388**	**1,928**	**710**	**577**	**449**	**76**	**200**	**45**	**5,269**

[1] Source: A. Campbell (IEUA), personal communication, July 17, 2013.

[2] Values represent diversions of both stormwater and dry-weather discharge; values are rounded to the nearest whole number.

Table 2a

Impact of Watermaster's Diversions on Total Monthly Discharge Entering the Prado Dam Reservoir from Chino 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 in Chino Creek at USGS Gage 11073360[1]	46	37	22	118	283	581	173	116	217	18	127	19	**1,758**
(2)	Discharge from OCWD OC-59	0	0	0	0	280	0	0	0	0	0	0	0	**280**
(3)	Recycled Water Discharge from IEUA's CCWRF, RP-5, and RP-1 (Prado)	467	399	418	1,121	1,581	2,006	1,800	1,551	1,166	1,146	1,041	511	**13,208**
(4) =(1)-(2)+(3)	Estimated Discharge Entering the Prado Dam Reservoir	513	436	440	1,239	1,584	2,587	1,973	1,667	1,382	1,165	1,168	530	**14,685**
(5)	Stormwater and Dry-Weather Discharge Diversions	1	4	2	2	31	162	82	54	61	0	38	0	**438**
(6) =(4)+(5)	Estimated Discharge that would have Entered the Prado Dam Reservoir *without* Stormwater and Dry-Weather Diversions	514	440	442	1,241	1,615	2,747	2,054	1,720	1,443	1,164	1,206	530	**15,124**
(7) =(5)/(6)	Percent Reduction in Discharge Entering the Prado Dam Reservoir Relative to the Estimated Discharge *without* Diversions	0.2%	0.9%	0.4%	0.2%	1.9%	5.9%	4.0%	3.1%	4.2%	0.0%	3.2%	0.0%	**2.9%**

[1] Approved data were available for July 2012 to October 2012 (USGS Water-Data Report 2012 for Gage 11073495). Data are provisional for October 2012 to June 2013.

Table 2b

Impact of Watermaster's 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]	570	594	932	919	742	3,347	1,425	1,061	818	235	813	473	**11,928**
(2)	Stormwater and Dry-Weather Discharge Diversions	135	101	104	122	189	1,007	330	291	203	25	88	17	**2,614**
(3) =(1)+(2)	Estimated Discharge that would have Entered the Prado Dam Reservoir *without* Stormwater and Dry-Weather Diversions	706	695	1,036	1,041	931	4,354	1,755	1,352	1,007	260	902	491	**14,528**
(4) =(2)/(3)	Percent Reduction in Discharge Entering the Prado Dam Reservoir Relative to the Estimated Discharge *without* Diversions	19.2%	14.6%	10.0%	11.7%	20.3%	23.1%	18.8%	21.5%	20.1%	9.8%	9.8%	3.5%	**18.0%**

[1] Approved data were available for July 2012 to October 2012 (USGS Water-Data Report 2012 for Gage 11073495). Data are provisional for October 2012 to June 2013.

Table 2c

Impact of Watermaster's Diversions on Total Monthly Discharge Entering the Santa Ana River and Prado Dam Reservoir from Day 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 Santa Ana River *without* Stormwater and Dry-Weather Diversions *or* Dry-Weather Flows[1]	0	0	0	19	80	518	287	246	142	0	57	0	**1,348**
(2)	Stormwater and Dry-Weather Discharge Diversions	1	1	1	0	8	61	15	13	5	0	0	1	**108**
(3)	Diversions Attributable to Dry-Weather Flows[2]	1	1	1	0	0	11	3	1	2	0	0	1	**23**
(4) =(1)+(3)	Total Discharge Entering the Santa Ana River *without* Stormwater and Dry-Weather Diversions	1	1	1	19	81	529	290	247	144	0	57	1	**1,371**
(5) =(4)-(2)	Estimated Discharge Entering the Santa Ana River after Stormwater and Dry-Weather Diversions	0	0	0	19	72	467	275	233	139	0	57	0	**1,263**
(6) =(2)/(4)	Percent Reduction in Discharge Entering the Santa Ana River Relative to Discharge *without* Diversions	100%	100%	100%	3%	10%	12%	5%	5%	4%	61%	1%	100%	**7.9%**
(7)	Discharge in the Santa Ana River at USGS Gage 11066460[3]	2,265	2,467	3,425	3,490	3,450	7,054	3,403	3,609	3,671	3,472	2,838	2,524	**41,667**
(8) =(2)/(7)	Percent Reduction in Discharge Entering the Prado Dam Reservoir Relative to at 11066460[3]	0.1%	0.0%	0.0%	0.0%	0.2%	0.9%	0.4%	0.4%	0.1%	0.0%	0.0%	0.0%	**0.3%**

[1] Estimated using the WLAM.

[2] Calculated on a daily 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 flows not captured by diversions were unable to be estimated and are not included in this analysis. Thus, the impact of Watermaster's diversions is overstated.

[3] Approved data were available for July 2012 to October 2012 (USGS Water-Data Report 2012 for Gage 11073495). Data are provisional for October 2012 to June 2013.

Table 2d

Impact of Watermaster's Diversions on Total Monthly Discharge Entering the Santa Ana River and Prado Dam Reservoir from San Sevaine Creek for FY 2012/13

(acre-ft)

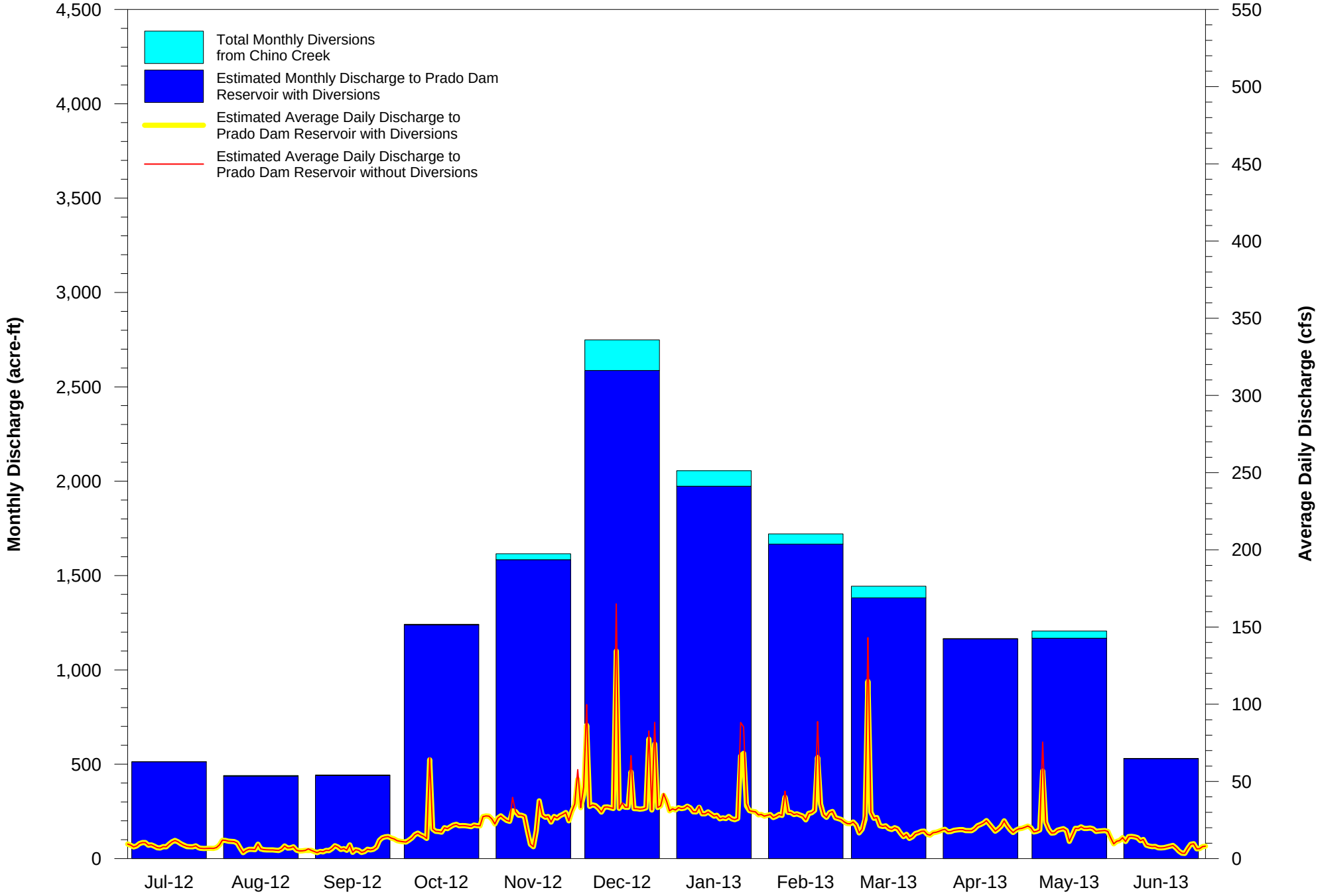
Row	Discharge Components	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Total
(1)	Discharge Entering the Santa Ana River *without* Stormwater and Dry-Weather Diversions *or* Dry-Weather Flows[1]	0	0	0	29	182	950	524	424	247	1	61	0	**2,418**
(2)	Stormwater and Dry-Weather Discharge Diversions	77	78	49	217	160	698	283	219	180	50	73	26	**2,109**
(3)	Diversions Attributable to Dry-Weather Flows[2]	77	78	49	187	41	214	99	90	62	49	38	26	**1,011**
(4) =(1)+(3)	Total Discharge Entering the Santa Ana River *without* Stormwater and Dry-Weather Diversions	77	78	49	217	223	1,164	623	515	309	50	99	26	**3,429**
(5) =(4)-(2)	Estimated Discharge Entering the Santa Ana River after Stormwater and Dry-Weather Diversions	0	0	0	0	64	466	340	295	129	0	26	0	**1,321**
(6) =(2)/(4)	Percent Reduction in Discharge Entering the Santa Ana River Relative to Discharge *without* Diversions	100%	100%	100%	100%	72%	60%	45%	43%	58%	100%	73%	100%	**61.5%**
(7)	Discharge in the Santa Ana River at USGS Gage 11066460[3]	2,265	2,467	3,425	3,490	3,450	7,054	3,403	3,609	3,671	3,472	2,838	2,524	**41,667**
(8) =(2)/(7)	Percent Reduction in Discharge Entering the Prado Dam Reservoir Relative to at 11066460[3]	3.4%	3.2%	1.4%	6.2%	4.6%	9.9%	8.3%	6.1%	4.9%	1.4%	2.6%	1.0%	**5.1%**

[1] Estimated using the WLAM.

[2] Calculated on a daily basis. Note that the WLAM does not simulate dry-weather flows on the San Sevaine 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 flows not captured by diversions were unable to be estimated and are not included in this analysis. Thus, the impact of Watermaster's diversions is overstated.

[3] Approved data were available for July 2012 to October 2012 (USGS Water-Data Report 2012 for Gage 11073495). Data are provisional for October 2012 to June 2013.

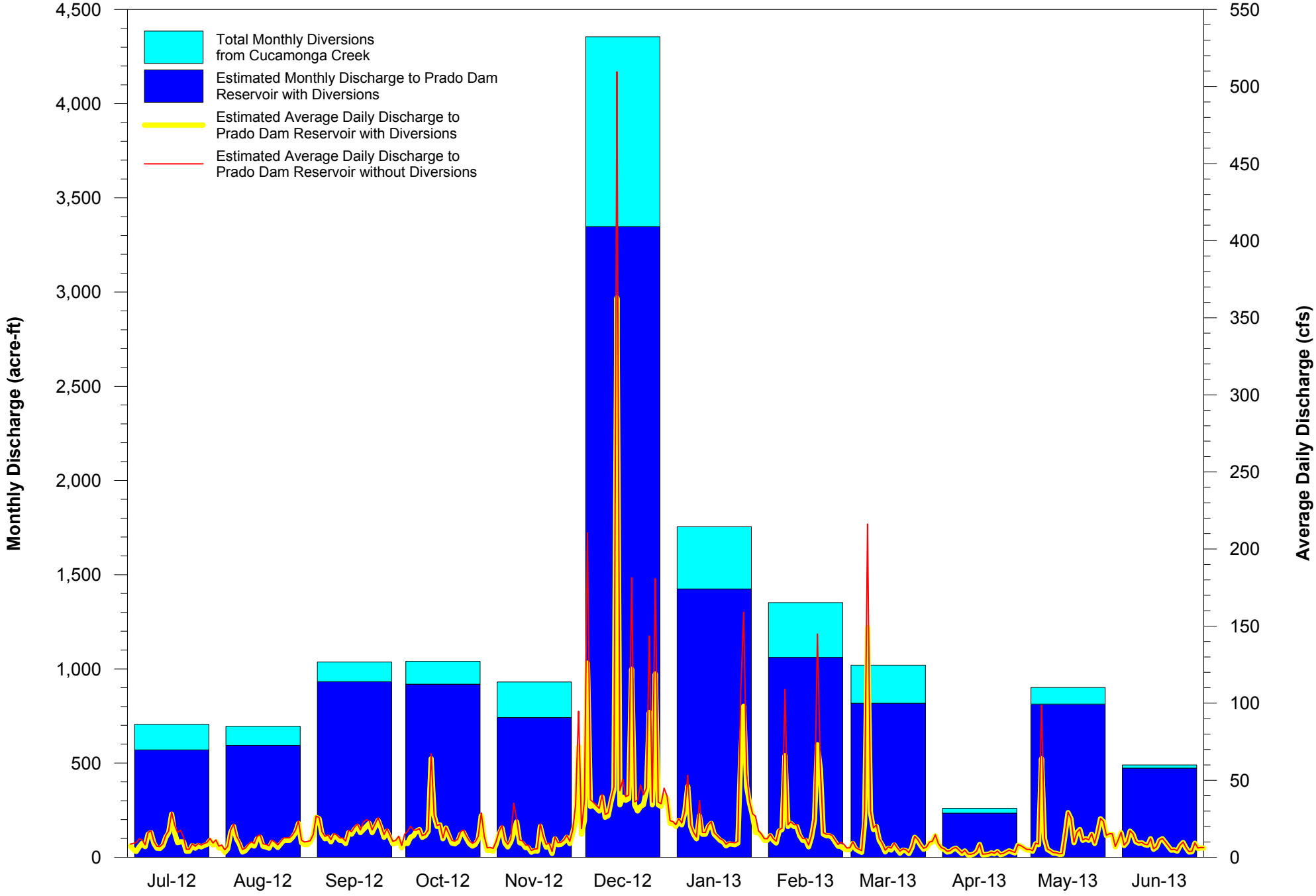
Figure 2a
Estimated Discharge from Chino Creek to Prado Dam Reservoir with and without Stormwater and Dry-Weather Discharge Diversions



08/29/2013
Chino_Creek_Figure2a.grf

WILDERMUTH ENVIRONMENTAL INC.

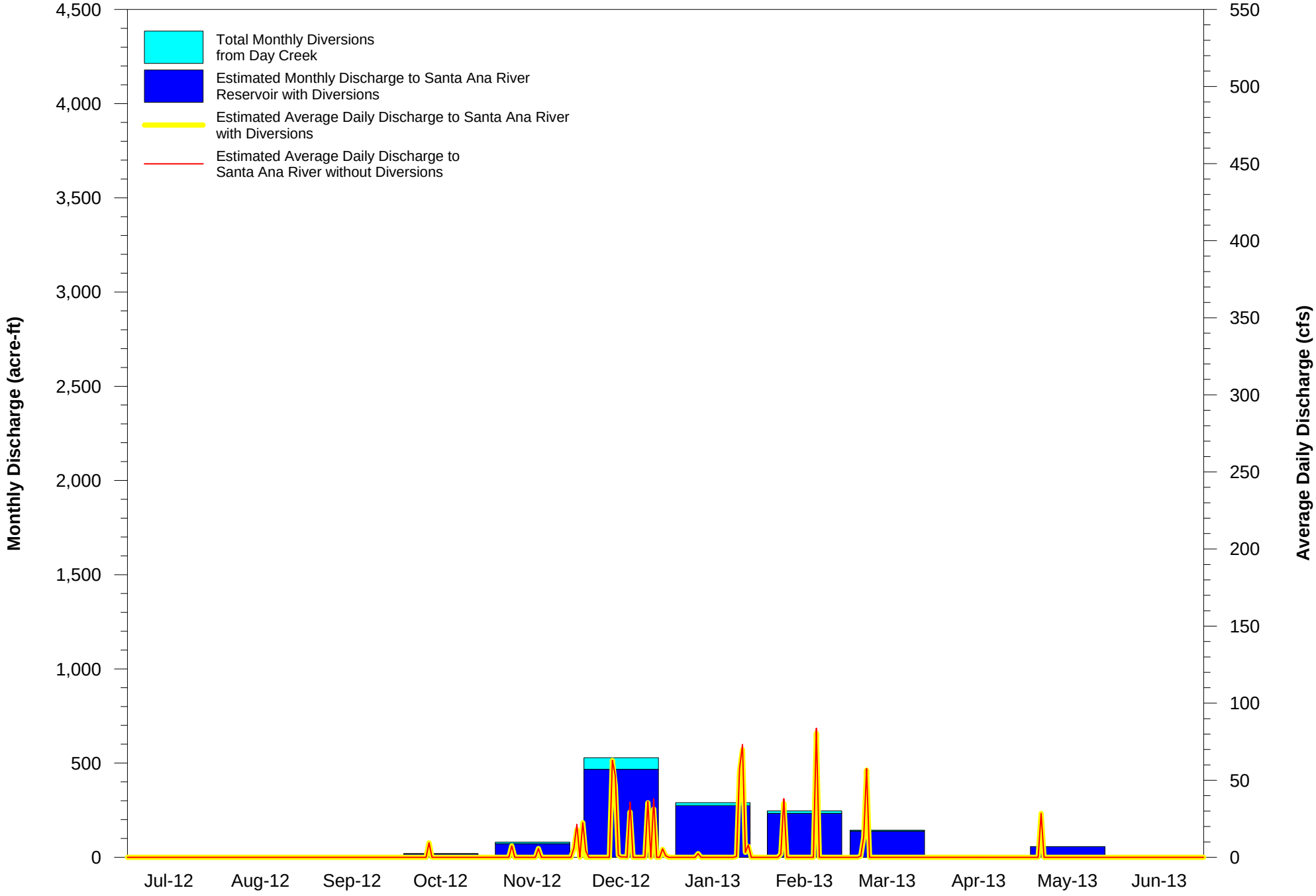
Figure 2b
Estimated Discharge from Cucamonga Creek to Prado Dam Reservoir with and without Stormwater and Dry-Weather Discharge Diversions



08/29/2013
Cucamonga_Creek_Figure2b.grf

WILDERMUTH ENVIRONMENTAL INC.

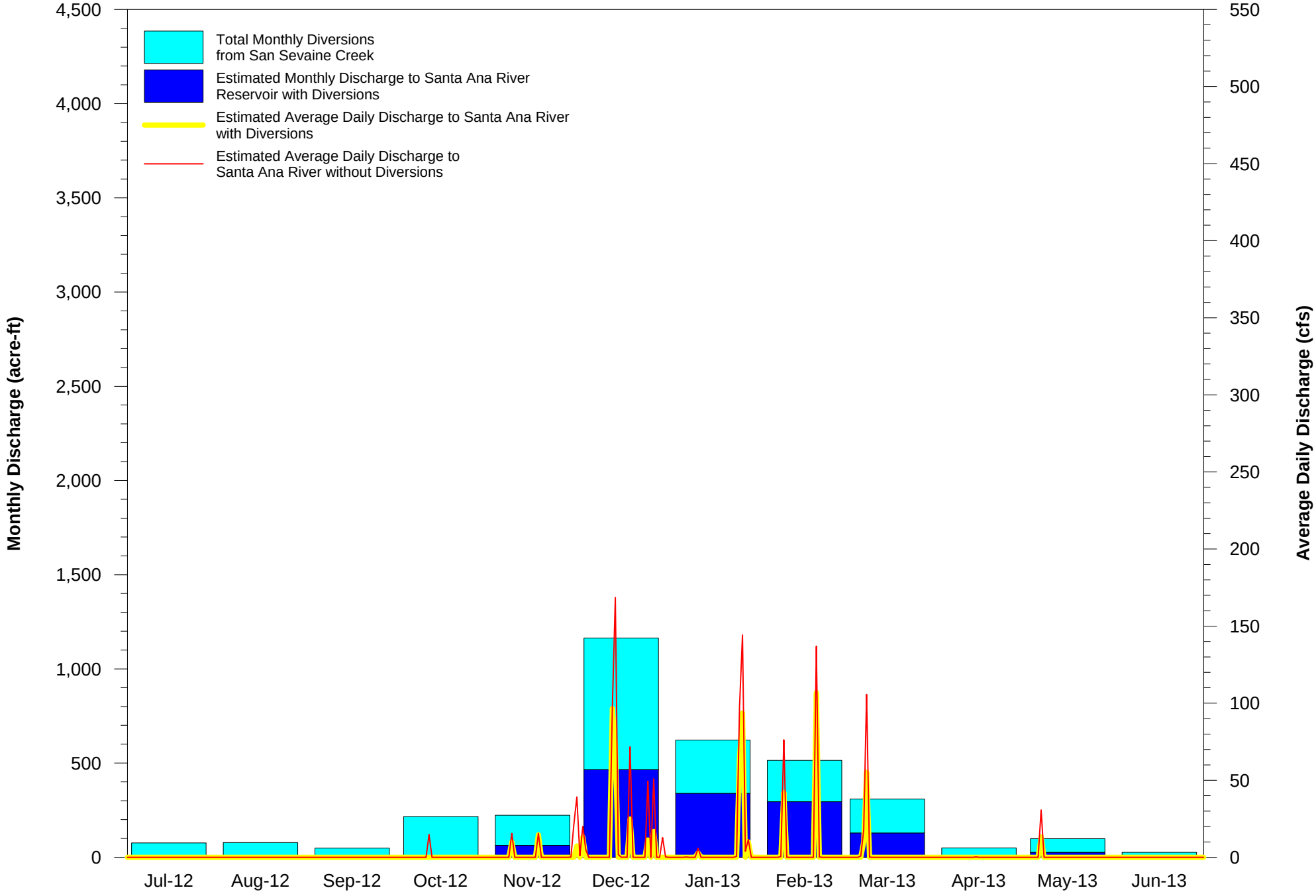
Figure 2c
Estimated Discharge from Day Creek to the Santa Ana River
with and without Stormwater and Dry-Weather Discharge Diversions



08/29/2013
Day_Creek_Figure2d.grf

WILDERMUTH ENVIRONMENTAL INC.

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



08/29/2013
San Sevaine_Creek_Figure2d.grf

WILDERMUTH ENVIRONMENTAL INC.

Appendix A1

Average Daily Discharge at USGS Gage 11073360 on Chino Creek

(cfs)

Day	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13
1	0.6	0.8	0.4	0.4	0.3	0.5	0.2	0.3	1.0	0.4	0.3	0.5
2	0.6	0.8	0.4	0.4	0.3	8.8	0.2	0.3	0.7	0.4	0.3	0.7
3	0.6	0.6	0.4	0.4	0.3	54.0	0.2	0.4	0.5	0.4	0.4	0.5
4	0.7	0.6	0.5	0.4	0.3	0.4	0.2	0.3	0.5	0.4	0.3	0.4
5	0.6	0.6	0.3	0.4	0.3	0.3	0.2	0.3	0.4	0.3	0.3	0.5
6	0.8	0.6	0.3	0.4	0.3	0.3	0.6	0.3	0.4	0.3	38.0	0.3
7	0.6	0.7	0.4	0.4	0.3	0.3	0.3	0.3	1.9	0.3	5.1	0.4
8	0.6	0.9	0.3	0.3	4.9	0.3	0.3	10.0	89.0	0.3	1.3	0.3
9	0.7	0.8	0.4	0.4	3.7	0.2	0.2	0.4	4.2	0.3	1.2	0.3
10	0.7	0.6	0.4	0.4	0.3	0.2	0.8	0.3	0.7	0.3	1.2	0.3
11	1.0	0.6	0.4	49.0	0.2	0.2	0.2	0.2	1.1	--	1.2	0.3
12	0.7	0.5	0.4	0.5	0.2	0.3	0.2	0.2	1.2	0.3	1.1	0.4
13	1.0	0.5	0.4	0.3	11.0	101.0	0.2	0.2	0.7	0.3	1.1	0.3
14	0.7	0.7	0.5	0.3	34.0	0.3	0.2	0.3	0.5	0.3	0.8	0.3
15	0.6	0.7	0.5	0.4	33.0	2.4	0.2	0.3	0.5	0.4	1.0	0.3
16	0.6	0.7	0.4	0.4	20.0	0.3	0.2	0.3	0.4	0.3	0.9	0.3
17	0.9	0.7	0.4	0.4	10.0	0.4	0.2	0.3	0.4	0.3	0.8	--
18	0.8	0.7	0.4	0.4	1.1	23.0	0.2	0.4	0.4	0.3	0.9	--
19	0.9	0.7	0.4	0.4	0.3	0.2	0.3	35.0	0.4	0.3	0.9	0.3
20	0.9	0.8	0.4	0.4	0.3	0.3	0.2	4.9	0.5	0.3	1.0	0.3
21	0.8	0.6	0.4	0.3	0.3	0.2	0.2	0.4	0.4	0.3	0.7	0.3
22	0.9	0.4	0.4	0.3	0.2	0.2	0.3	0.3	0.4	0.3	0.6	0.3
23	0.7	0.4	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.6	0.3
24	0.8	0.5	0.4	0.3	0.3	44.0	37.0	0.3	0.3	0.3	0.5	0.3
25	0.8	0.5	0.3	0.3	0.2	0.4	38.0	0.3	0.4	0.3	0.5	0.3
26	0.9	0.5	0.3	0.4	0.2	42.0	4.2	0.5	0.3	0.3	0.5	0.3
27	0.8	0.5	0.3	0.3	0.3	0.4	0.5	0.5	0.3	0.3	0.5	0.3
28	0.8	0.6	0.5	0.3	0.2	0.2	0.4	0.7	0.3	0.3	0.5	0.4
29	0.7	0.5	0.4	0.3	1.7	7.1	0.3	--	0.3	0.4	0.6	0.3
30	0.7	0.6	0.3	0.3	18.0	4.3	0.3	--	0.3	0.3	0.5	0.3
31	0.8	0.5	--	0.3	--	0.3	0.3	--	0.3	--	0.5	--
Total (cfs)	23.2	18.9	11.3	59.4	142.7	293.0	87.1	58.4	109.2	9.2	64.0	9.7
Minimum	0.6	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3
Maximum	1.0	0.9	0.5	49.0	34.0	101.0	38.0	35.0	89.0	0.4	38.0	0.7
Average	0.7	0.6	0.4	1.9	4.8	9.5	2.8	2.1	3.5	0.3	2.1	0.3
Total (acre-ft)	46.0	37.5	22.4	117.8	283.1	581.3	172.8	115.8	216.7	18.3	127.0	19.3

[1] Estimated values are shown in red (USGS Water-Data Report 2012 for Gage 11073360).

Appendix A2

Average Daily Discharge at OC-59 on San Antonio Creek

(cfs)

Day	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13
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	19.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	48.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	48.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	24.9	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	141.3	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	48.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Average	0.0	0.0	0.0	0.0	4.7	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	280.3	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-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13
1	8.8	8.0	5.0	10.8	25.4	32.5	32.0	27.2	21.7	17.3	20.7	11.1
2	8.0	11.1	4.2	10.5	22.1	32.6	31.2	27.7	21.8	18.1	19.6	12.8
3	7.0	11.1	3.4	10.4	26.0	32.3	32.8	28.2	23.2	18.6	16.9	10.5
4	7.4	10.7	4.2	11.6	27.4	33.4	32.2	26.3	21.2	17.0	17.3	13.8
5	9.1	10.5	4.0	13.0	25.8	34.5	32.5	27.1	16.2	17.2	18.3	13.9
6	9.6	10.4	5.0	15.2	24.4	34.0	33.4	28.3	18.6	17.9	18.7	13.8
7	9.7	9.4	4.8	16.1	23.8	32.3	32.6	27.7	23.5	18.3	18.4	13.1
8	8.0	5.9	6.0	15.0	26.0	29.9	30.0	29.7	25.8	18.4	17.6	11.3
9	8.2	3.1	7.9	14.1	26.8	33.1	30.0	29.5	25.8	18.4	15.3	12.1
10	7.3	4.6	7.1	12.7	27.8	33.3	32.3	29.5	25.4	17.8	15.5	8.4
11	6.0	5.4	5.6	15.0	27.8	32.8	28.8	28.3	25.5	17.0	17.2	7.7
12	6.2	5.4	6.0	18.6	27.1	32.2	28.8	28.8	20.1	17.8	17.8	7.4
13	6.8	5.3	5.0	17.3	25.8	33.4	30.0	28.0	20.1	19.0	18.3	7.6
14	7.0	8.7	8.4	17.2	23.8	32.2	28.6	27.2	20.7	21.0	17.3	6.7
15	8.8	5.6	3.6	16.7	23.5	32.2	27.2	24.8	18.9	21.7	10.2	6.7
16	10.2	5.1	5.4	19.6	22.9	33.0	27.8	28.9	18.4	22.7	14.4	6.8
17	10.8	5.0	5.0	19.0	27.4	32.8	25.5	29.4	19.6	24.3	18.7	7.1
18	10.1	5.0	3.6	20.3	27.1	33.1	26.1	30.8	18.9	22.1	18.6	9.1
19	8.7	5.0	4.2	21.3	26.5	32.2	25.7	30.5	16.1	19.8	19.6	8.2
20	7.7	4.6	5.7	21.8	26.9	32.0	27.1	30.5	13.8	17.5	18.6	6.7
21	7.0	4.6	5.3	20.9	23.4	31.9	25.5	28.0	15.3	18.9	18.9	4.6
22	6.8	5.7	5.7	21.0	27.1	32.0	24.9	26.5	12.7	20.7	19.2	3.2
23	7.0	7.7	7.1	21.0	26.0	32.6	25.7	29.4	13.8	24.1	18.7	3.1
24	7.4	6.3	11.4	20.7	27.5	33.4	29.4	30.2	15.9	20.9	17.0	6.3
25	6.2	6.5	13.1	20.4	28.5	31.1	30.2	26.1	16.4	18.4	17.3	9.0
26	5.7	7.1	13.8	21.3	29.5	32.2	29.9	25.4	17.3	16.6	17.5	9.3
27	5.7	5.0	13.9	21.0	24.1	32.6	30.6	24.8	17.5	18.1	17.6	6.0
28	5.9	4.3	12.8	20.9	30.3	33.9	30.2	23.1	15.3	19.0	17.0	6.0
29	5.9	4.5	12.4	26.9	33.0	33.9	30.0	--	14.9	19.2	12.8	7.4
30	5.9	4.6	11.3	27.4	33.3	33.0	28.0	--	16.4	20.0	9.0	7.7
31	6.3	4.8	--	27.2	--	30.6	28.3	--	16.7	--	10.7	--
Total (cfs)	235.3	201.1	210.7	565.1	797.0	1,011.0	907.5	781.7	587.6	577.8	524.7	257.6
Minimum	5.7	3.1	3.4	10.4	22.1	29.9	24.9	23.1	12.7	16.6	9.0	3.1
Maximum	10.8	11.1	13.9	27.4	33.3	34.5	33.4	30.8	25.8	24.3	20.7	13.9
Average	7.6	6.5	7.0	18.2	26.6	32.6	29.3	27.9	19.0	19.3	16.9	8.6
Total (acre-ft)	466.8	399.0	418.0	1,121.2	1,581.3	2,005.8	1,800.4	1,550.9	1,165.7	1,146.4	1,041.1	511.0

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-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13
1	9.4	8.8	5.3	11.2	25.6	33.0	32.3	27.5	22.7	17.7	21.0	11.7
2	8.7	11.9	4.5	10.9	22.4	41.4	31.5	28.0	22.5	18.5	20.0	13.6
3	7.6	11.8	3.8	10.7	26.3	86.3	33.0	28.5	23.7	18.9	17.2	11.0
4	8.2	11.3	4.6	12.0	27.7	33.8	32.4	26.6	21.7	17.4	17.6	14.2
5	9.7	11.1	4.4	13.4	26.1	34.8	32.7	27.3	16.6	17.5	18.6	14.4
6	10.4	11.0	5.3	15.5	24.7	34.3	34.0	28.6	19.0	18.3	56.7	14.1
7	10.4	10.1	5.1	16.5	24.1	32.6	32.9	28.0	25.4	18.6	23.5	13.5
8	8.6	6.8	6.4	15.3	30.9	30.1	30.3	39.7	114.8	18.7	18.9	11.6
9	8.9	3.8	8.3	14.4	30.5	33.3	30.2	30.0	30.0	18.7	16.5	12.4
10	8.0	5.3	7.5	13.1	28.1	33.5	33.2	29.8	26.1	18.1	16.7	8.7
11	7.0	6.0	5.9	64.0	28.0	33.0	29.0	28.5	26.6	17.0	18.4	8.1
12	6.8	5.9	6.4	19.1	27.3	32.5	29.0	29.0	21.3	18.1	18.9	7.8
13	7.8	5.8	5.4	17.7	17.8	134.4	30.2	28.2	20.8	19.3	19.4	7.9
14	7.6	9.4	8.9	17.5	9.3	32.5	28.8	27.5	21.2	21.3	18.2	7.0
15	9.4	6.2	4.0	17.1	7.7	34.6	27.5	25.1	19.4	22.0	11.2	6.9
16	10.8	5.8	5.8	20.0	18.0	33.3	28.1	29.2	18.8	23.1	15.2	7.1
17	11.7	5.7	5.3	19.4	37.4	33.2	25.7	29.7	20.0	24.6	19.5	7.1
18	10.9	5.6	4.0	20.6	28.2	56.1	26.4	31.2	19.2	22.4	19.5	9.1
19	9.5	5.6	4.5	21.7	26.8	32.4	25.9	65.5	16.5	20.1	20.5	8.5
20	8.7	5.4	6.1	22.2	27.2	32.3	27.3	35.4	14.2	17.8	19.5	6.9
21	7.8	5.2	5.6	21.2	23.6	32.0	25.8	28.4	15.7	19.2	19.5	4.9
22	7.7	6.1	6.1	21.4	27.3	32.2	25.2	26.8	13.1	21.0	19.8	3.5
23	7.6	8.2	7.4	21.3	26.2	32.8	26.0	29.7	14.1	24.4	19.3	3.4
24	8.3	6.8	11.8	21.0	27.8	77.4	66.4	30.5	16.2	21.2	17.6	6.6
25	7.0	7.0	13.5	20.7	28.7	31.5	68.2	26.5	16.8	18.7	17.8	9.3
26	6.6	7.6	14.1	21.7	29.8	74.2	34.1	25.9	17.6	16.9	18.0	9.6
27	6.5	5.5	14.3	21.3	24.4	33.1	31.1	25.3	17.8	18.4	18.2	6.3
28	6.6	4.9	13.3	21.1	30.5	34.1	30.5	23.8	15.7	19.3	17.5	6.4
29	6.6	5.0	12.7	27.2	34.7	41.0	30.3	--	15.2	19.6	13.4	7.7
30	6.6	5.3	11.6	27.7	51.3	37.3	28.3	--	16.7	20.3	9.5	8.0
31	7.1	5.2	--	27.5	--	30.9	28.6	--	17.0	--	11.2	--
Total (cfs)	258.5	220.0	222.0	624.5	798.5	1,304.0	994.6	840.1	696.8	587.0	588.7	267.3
Minimum	6.5	3.8	3.8	10.7	7.7	30.1	25.2	23.8	13.1	16.9	9.5	3.4
Maximum	11.7	11.9	14.3	64.0	51.3	134.4	68.2	65.5	114.8	24.6	56.7	14.4
Average	8.3	7.1	7.4	20.1	26.6	42.1	32.1	30.0	22.5	19.6	19.0	8.9
Total (acre-ft)	512.8	436.5	440.4	1,239.0	1,584.1	2,587.0	1,973.2	1,666.7	1,382.4	1,164.7	1,168.0	530.3

Appendix A5

Daily Diversions to Recharge Basins from the Chino Creek Tributary System

(cfs)

Day	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13
1	0.01	0.03	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00
2	0.01	0.03	0.06	0.00	0.00	4.94	0.00	0.00	0.00	0.00	0.02	0.00
3	0.01	0.03	0.06	0.00	0.00	13.41	0.00	0.00	0.00	0.00	0.02	0.00
4	0.01	0.03	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00
5	0.01	0.03	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00
6	0.01	0.03	0.06	0.00	0.00	0.00	0.20	0.00	0.00	0.00	18.71	0.00
7	0.01	0.03	0.06	0.00	0.00	0.00	0.00	0.00	2.52	0.00	0.02	0.00
8	0.01	0.03	0.06	0.00	8.77	0.00	0.00	4.03	28.29	0.00	0.02	0.00
9	0.01	0.03	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00
10	0.01	0.03	0.06	0.00	0.00	0.00	0.71	0.00	0.00	0.00	0.02	0.00
11	0.01	0.03	0.06	1.21	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00
12	0.01	0.03	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00
13	0.01	0.03	0.06	0.00	0.00	30.51	0.00	0.00	0.00	0.00	0.02	0.00
14	0.01	0.03	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00
15	0.01	0.03	0.06	0.00	0.00	1.66	0.00	0.00	0.00	0.00	0.02	0.00
16	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00
17	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00
18	0.03	0.03	0.00	0.00	0.00	10.64	0.00	0.00	0.00	0.00	0.02	0.00
19	0.03	0.03	0.00	0.00	0.00	0.00	0.00	23.25	0.00	0.00	0.02	0.00
20	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00
21	0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00
22	0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00
23	0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00
24	0.03	0.04	0.00	0.00	0.00	5.24	21.79	0.00	0.00	0.00	0.02	0.00
25	0.03	0.04	0.00	0.00	0.00	0.00	17.04	0.00	0.00	0.00	0.02	0.00
26	0.03	0.04	0.00	0.00	0.00	14.07	1.77	0.00	0.00	0.00	0.02	0.00
27	0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00
28	0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00
29	0.03	0.04	0.00	0.00	0.76	1.06	0.00	--	0.00	0.00	0.02	0.00
30	0.03	0.04	0.00	0.00	6.30	0.00	0.00	--	0.00	0.00	0.02	0.00
31	0.03	1.04	--	0.00	--	0.00	0.00	--	0.00	--	0.02	--
Total (cfs)	0.6	2.0	0.9	1.2	15.8	81.5	41.5	27.3	30.8	0.0	19.3	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	1.0	0.1	1.2	8.8	30.5	21.8	23.2	28.3	0.0	18.7	0.0
Average	0.0	0.1	0.0	0.0	0.5	2.6	1.3	1.0	1.0	0.0	0.6	0.0
Total (acre-ft)	1.1	4.0	1.8	2.4	31.4	161.8	82.3	54.1	61.1	0.0	38.3	0.0

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

Day	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13
1	9.4	8.8	5.4	11.2	25.6	33.0	32.3	27.5	22.7	17.7	21.1	11.7
2	8.7	11.9	4.6	10.9	22.4	46.4	31.5	28.0	22.5	18.5	20.0	13.6
3	7.6	11.8	3.9	10.7	26.3	99.7	33.0	28.5	23.7	18.9	17.3	11.0
4	8.2	11.3	4.7	12.0	27.7	33.8	32.4	26.6	21.7	17.4	17.6	14.2
5	9.7	11.1	4.4	13.4	26.1	34.8	32.7	27.3	16.6	17.5	18.6	14.4
6	10.4	11.0	5.3	15.5	24.7	34.3	34.2	28.6	19.0	18.3	75.4	14.1
7	10.4	10.1	5.2	16.5	24.1	32.6	32.9	28.0	27.9	18.6	23.5	13.5
8	8.6	6.8	6.4	15.3	39.7	30.1	30.3	43.7	143.1	18.7	19.0	11.6
9	8.9	3.9	8.4	14.4	30.5	33.3	30.2	30.0	30.0	18.7	16.5	12.4
10	8.0	5.3	7.5	13.1	28.1	33.5	33.9	29.8	26.1	18.1	16.7	8.7
11	7.0	6.0	6.0	65.2	28.0	33.0	29.0	28.5	26.6	17.0	18.4	8.1
12	6.9	6.0	6.5	19.1	27.3	32.5	29.0	29.0	21.3	18.1	18.9	7.8
13	7.8	5.8	5.4	17.7	17.8	164.9	30.2	28.2	20.8	19.3	19.4	7.9
14	7.6	9.4	8.9	17.5	9.3	32.5	28.8	27.5	21.2	21.3	18.2	7.0
15	9.4	6.3	4.1	17.1	7.7	36.2	27.5	25.1	19.4	22.0	11.2	6.9
16	10.9	5.8	5.8	20.0	18.0	33.3	28.1	29.2	18.8	23.1	15.3	7.1
17	11.8	5.7	5.3	19.4	37.4	33.2	25.7	29.7	20.0	24.6	19.6	7.1
18	10.9	5.6	4.0	20.6	28.2	66.7	26.4	31.2	19.2	22.4	19.5	9.1
19	9.6	5.7	4.5	21.7	26.8	32.4	25.9	88.7	16.5	20.1	20.6	8.5
20	8.7	5.4	6.1	22.2	27.2	32.3	27.3	35.4	14.2	17.8	19.5	6.9
21	7.8	5.3	5.6	21.2	23.6	32.0	25.8	28.4	15.7	19.2	19.5	4.9
22	7.7	6.2	6.1	21.4	27.3	32.2	25.2	26.8	13.1	21.0	19.8	3.5
23	7.7	8.2	7.4	21.3	26.2	32.8	26.0	29.7	14.1	24.4	19.3	3.4
24	8.3	6.8	11.8	21.0	27.8	82.7	88.2	30.5	16.2	21.2	17.6	6.6
25	7.0	7.0	13.5	20.7	28.7	31.5	85.2	26.5	16.8	18.7	17.9	9.3
26	6.6	7.7	14.1	21.7	29.8	88.2	35.8	25.9	17.6	16.9	18.0	9.6
27	6.6	5.5	14.3	21.3	24.4	33.1	31.1	25.3	17.8	18.4	18.2	6.3
28	6.7	4.9	13.3	21.1	30.5	34.1	30.5	23.8	15.7	19.3	17.6	6.4
29	6.6	5.0	12.7	27.2	35.4	42.0	30.3	--	15.2	19.6	13.4	7.7
30	6.6	5.3	11.6	27.7	57.6	37.3	28.3	--	16.7	20.3	9.5	8.0
31	7.1	6.3	--	27.5	--	30.9	28.6	--	17.0	--	11.2	--
Total (cfs)	259.0	222.0	222.9	625.7	814.3	1,385.5	1,036.1	867.4	727.6	587.0	608.0	267.3
Minimum	6.6	3.9	3.9	10.7	7.7	30.1	25.2	23.8	13.1	16.9	9.5	3.4
Maximum	11.8	11.9	14.3	65.2	57.6	164.9	88.2	88.7	143.1	24.6	75.4	14.4
Average	8.4	7.2	7.4	20.2	27.1	44.7	33.4	31.0	23.5	19.6	19.6	8.9
Total (acre-ft)	513.7	440.2	442.0	1,240.8	1,614.7	2,747.4	2,054.5	1,720.0	1,442.8	1,164.1	1,205.8	530.1

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-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13
1	7.4	6.3	14.0	6.1	4.0	15.0	22.0	11.0	4.9	8.4	4.7	11.0
2	4.9	3.2	26.0	9.4	8.3	24.0	20.0	11.0	5.1	5.8	4.8	16.0
3	3.8	5.5	25.0	8.9	15.0	126.0	24.0	14.0	9.0	5.0	3.9	7.6
4	6.8	16.0	15.0	13.0	19.0	33.0	21.0	11.0	5.3	3.4	8.8	9.8
5	9.1	20.0	12.0	14.0	9.2	34.0	29.0	9.3	4.1	3.7	8.2	17.0
6	6.9	12.0	13.0	17.0	6.7	32.0	46.0	17.0	3.2	5.3	64.0	15.0
7	15.0	8.6	10.0	18.0	10.0	30.0	20.0	18.0	22.0	5.9	12.0	10.0
8	16.0	3.4	14.0	13.0	16.0	39.0	15.0	66.0	149.0	4.1	5.0	9.1
9	9.0	4.3	13.0	14.0	23.0	26.0	12.0	20.0	29.0	2.3	4.0	9.5
10	5.9	6.8	11.0	17.0	9.5	27.0	27.0	22.0	18.0	4.1	2.7	8.2
11	5.7	8.4	11.0	64.0	8.9	36.0	15.0	20.0	20.0	1.6	2.6	7.8
12	7.5	7.3	8.9	27.0	6.3	44.0	15.0	20.0	11.0	1.6	1.9	12.0
13	13.0	12.0	16.0	20.0	6.2	363.0	20.0	14.0	7.8	2.1	2.0	5.2
14	16.0	13.0	15.0	21.0	3.3	34.0	22.0	11.0	3.5	3.7	15.0	6.6
15	28.0	7.1	18.0	12.0	4.3	39.0	15.0	11.0	5.8	8.3	29.0	11.0
16	16.0	6.7	20.0	19.0	4.0	37.0	13.0	6.8	4.7	1.7	25.0	12.0
17	9.5	5.9	16.0	14.0	20.0	38.0	11.0	13.0	8.0	1.8	9.5	--
18	10.0	9.6	18.0	9.3	12.0	122.0	10.0	24.0	5.2	2.0	16.0	--
19	10.0	8.2	20.0	8.7	6.6	34.0	7.4	73.0	2.7	2.9	18.0	4.6
20	3.9	6.4	22.0	10.0	7.6	30.0	8.7	57.0	4.7	2.2	11.0	4.9
21	4.0	8.8	16.0	15.0	2.5	33.0	8.5	15.0	4.3	3.7	12.0	4.0
22	7.6	11.0	20.0	16.0	12.0	34.0	8.2	14.0	2.4	1.8	11.0	7.6
23	5.9	11.0	24.0	12.0	8.2	43.0	9.2	14.0	6.2	2.1	15.0	9.6
24	7.7	11.0	19.0	8.8	8.4	94.0	67.0	13.0	13.0	3.2	9.0	6.1
25	6.7	13.0	13.0	7.3	10.0	34.0	98.0	10.0	11.0	4.2	16.0	3.4
26	7.7	16.0	17.0	8.4	13.0	119.0	46.0	7.2	7.8	3.5	25.0	3.6
27	8.4	22.0	13.0	12.0	8.9	34.0	35.0	7.0	5.2	2.8	23.0	9.1
28	11.0	9.5	8.7	27.0	16.0	33.0	27.0	5.5	6.1	7.9	14.0	5.7
29	8.0	8.3	9.3	12.0	23.0	40.0	16.0	--	9.3	7.2	15.0	6.1
30	10.0	8.2	12.0	4.4	72.0	38.0	16.0	--	9.8	6.0	15.0	6.0
31	6.0	10.0	--	4.7	--	22.0	14.0	--	14.0	--	6.7	--
Total (cfs)	287.4	299.5	469.9	463.0	373.9	1,687.0	718.0	534.8	412.1	118.3	409.8	238.5
Minimum	3.8	3.2	8.7	4.4	2.5	15.0	7.4	5.5	2.4	1.6	1.9	3.4
Maximum	28.0	22.0	26.0	64.0	72.0	363.0	98.0	73.0	149.0	8.4	64.0	17.0
Average	9.3	9.7	15.7	14.9	12.5	54.4	23.2	19.1	13.3	3.9	13.2	8.5
Total (acre-ft)	570.2	594.2	932.3	918.6	741.8	3,347.0	1,424.5	1,061.0	817.6	234.7	813.0	473.2

1 Data were not available for June 17-18, 2013. Streamflow on these days was set conservatively at 0 cfs for further calculations.

Appendix B2

Daily Diversions to Recharge Basins on the Cucamonga Creek Tributary System

(cfs)

Day	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13
1	1.2	1.7	0.8	1.6	1.8	3.6	1.2	1.1	1.1	0.5	0.4	0.3
2	4.1	1.7	0.8	5.5	1.8	13.1	1.2	1.1	1.1	0.5	0.4	0.3
3	5.8	1.7	0.8	8.0	1.8	84.5	1.2	1.1	1.1	0.5	0.4	0.3
4	5.2	1.7	1.6	7.1	1.8	4.4	1.2	1.1	1.1	0.5	0.4	0.3
5	2.3	1.7	1.6	3.7	1.8	1.8	1.0	1.1	1.1	0.5	0.4	0.3
6	1.2	1.7	1.6	0.6	1.8	1.8	7.2	1.1	1.1	0.5	34.7	0.3
7	1.2	1.7	1.5	0.7	1.8	1.8	1.2	0.9	8.2	0.5	0.4	0.3
8	1.2	1.7	1.4	1.1	19.1	1.8	1.2	43.1	67.2	0.5	0.4	0.3
9	1.2	1.7	1.5	0.8	1.8	1.8	1.2	1.1	1.1	0.5	0.4	0.3
10	1.2	1.7	1.6	0.6	1.8	1.8	9.9	1.1	1.1	0.5	0.4	0.3
11	1.2	1.7	1.6	3.2	1.8	1.8	1.1	1.2	1.1	0.5	0.4	0.3
12	1.2	1.7	1.6	0.6	1.8	1.8	1.1	1.2	1.1	0.4	0.4	0.3
13	1.2	1.7	1.6	0.6	1.6	146.6	1.1	1.2	1.1	0.4	0.4	0.3
14	1.2	1.7	1.6	0.6	1.1	9.3	1.1	1.2	1.1	0.4	0.4	0.3
15	1.2	1.7	1.6	0.6	1.1	11.5	0.9	1.2	1.0	0.4	0.4	0.3
16	5.0	1.7	1.7	0.6	1.6	2.4	1.0	1.1	1.3	0.4	0.4	0.3
17	6.6	1.7	1.7	1.2	1.8	2.4	1.1	1.1	1.3	0.4	0.3	0.3
18	7.6	1.7	4.8	1.8	1.8	59.4	1.1	1.1	1.3	0.4	0.3	0.3
19	3.1	1.7	4.4	1.8	1.8	2.0	1.1	71.9	1.3	0.4	0.3	0.3
20	1.3	1.7	1.7	1.8	1.7	7.0	1.1	1.0	0.8	0.4	0.3	0.3
21	1.3	1.7	1.7	1.8	1.3	14.0	1.2	1.0	0.6	0.4	0.3	0.3
22	1.3	1.7	1.7	1.8	1.3	6.6	1.2	1.0	0.6	0.4	0.3	0.3
23	1.3	1.7	1.7	1.8	1.3	1.8	1.1	1.1	0.6	0.4	0.4	0.3
24	1.3	1.7	1.7	1.8	1.3	49.6	41.5	1.1	0.6	0.4	0.3	0.3
25	1.3	1.7	1.7	1.8	1.3	1.8	61.0	1.1	0.6	0.4	0.3	0.3
26	1.3	1.7	1.7	1.8	1.3	61.8	8.2	1.1	0.6	0.4	0.3	0.3
27	1.3	1.7	1.7	1.8	1.6	1.8	1.2	2.9	0.6	0.4	0.3	0.3
28	1.3	1.7	1.7	1.8	1.8	1.8	1.2	2.9	0.6	0.4	0.3	0.3
29	1.3	1.7	1.7	1.8	10.9	4.9	10.6	--	0.6	0.4	0.3	0.3
30	1.3	2.0	1.7	1.8	22.7	1.8	1.2	--	0.6	0.4	0.3	0.3
31	1.3	0.8	--	1.8	--	1.8	1.2	--	0.6	--	0.3	--
Total (cfs)	68.2	51.0	52.4	61.4	95.2	507.7	166.4	146.7	102.1	12.9	44.6	8.8
Minimum	1.2	0.8	0.8	0.6	1.1	1.8	0.9	0.9	0.6	0.4	0.3	0.3
Maximum	7.6	2.0	4.8	8.0	22.7	146.6	61.0	71.9	67.2	0.5	34.7	0.3
Average	2.2	1.6	1.7	2.0	3.2	16.4	5.4	5.2	3.3	0.4	1.4	0.3
Total (acre-ft)	135.4	101.2	103.9	121.9	188.9	1,007.2	330.1	291.0	202.6	25.5	88.5	17.4

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

Day	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13
1	8.6	8.0	14.8	7.7	5.8	18.6	23.2	12.1	6.0	8.9	5.1	11.3
2	9.0	4.9	26.8	14.9	10.1	37.1	21.2	12.1	6.2	6.3	5.2	16.3
3	9.6	7.2	25.8	16.9	16.8	210.5	25.2	15.1	10.1	5.5	4.3	7.9
4	12.0	17.7	16.6	20.1	20.8	37.4	22.2	12.1	6.4	3.9	9.2	10.1
5	11.4	21.7	13.6	17.7	11.0	35.8	30.0	10.4	5.2	4.2	8.6	17.3
6	8.1	13.7	14.6	17.6	8.5	33.8	53.2	18.1	4.3	5.8	98.7	15.3
7	16.2	10.3	11.5	18.7	11.8	31.8	21.2	18.9	30.2	6.4	12.4	10.3
8	17.2	5.1	15.4	14.1	35.1	40.8	16.2	109.1	216.2	4.6	5.4	9.4
9	10.2	6.0	14.5	14.8	24.8	27.8	13.2	21.1	30.1	2.8	4.4	9.8
10	7.1	8.5	12.6	17.6	11.3	28.8	36.9	23.1	19.1	4.6	3.1	8.5
11	6.9	10.1	12.6	67.2	10.7	37.8	16.1	21.2	21.1	2.1	3.0	8.1
12	8.7	9.0	10.5	27.6	8.1	45.8	16.1	21.2	12.1	2.0	2.3	12.3
13	14.2	13.7	17.6	20.6	7.8	509.6	21.1	15.2	8.9	2.5	2.4	5.5
14	17.2	14.7	16.6	21.6	4.4	43.3	23.1	12.2	4.6	4.1	15.4	6.9
15	29.2	8.8	19.6	12.6	5.4	50.5	15.9	12.2	6.8	8.7	29.4	11.3
16	21.0	8.4	21.7	19.6	5.6	39.4	14.0	7.9	6.0	2.1	25.4	12.3
17	16.1	7.6	17.7	15.2	21.8	40.4	12.1	14.1	9.3	2.2	9.8	0.3
18	17.6	11.3	22.8	11.1	13.8	181.4	11.1	25.1	6.5	2.4	16.3	0.3
19	13.1	9.9	24.4	10.5	8.4	36.0	8.5	144.9	4.0	3.3	18.3	4.9
20	5.2	8.1	23.7	11.8	9.3	37.0	9.8	58.0	5.5	2.6	11.3	5.2
21	5.3	10.5	17.7	16.8	3.8	47.0	9.7	16.0	0.6	4.1	12.3	4.3
22	8.9	12.7	21.7	17.8	13.3	40.6	9.4	15.0	0.6	2.2	11.3	7.9
23	7.2	12.7	25.7	13.8	9.5	44.8	10.3	15.1	6.8	2.5	15.4	9.9
24	9.0	12.7	20.7	10.6	9.7	143.6	108.5	14.1	13.6	3.6	9.3	6.4
25	8.0	14.7	14.7	9.1	11.3	35.8	159.0	11.1	11.6	4.6	16.3	3.7
26	9.0	17.7	18.7	10.2	14.3	180.8	54.2	8.3	8.4	3.9	25.3	3.9
27	9.7	23.7	14.7	13.8	10.5	35.8	36.2	9.9	5.8	3.2	23.3	9.4
28	12.3	11.2	10.4	28.8	17.8	34.8	28.2	8.4	6.7	8.3	14.3	6.0
29	9.3	10.0	11.0	13.8	33.9	44.9	26.6	--	9.9	7.6	15.3	6.4
30	11.3	10.2	13.7	6.2	94.7	39.8	17.2	--	10.4	6.4	15.3	6.3
31	7.3	10.8	--	6.5	--	23.8	15.2	--	14.6	--	7.0	--
Total (cfs)	355.6	350.5	522.3	524.4	469.1	2,194.7	884.4	681.5	507.5	131.2	454.4	247.3
Minimum	5.2	4.9	10.4	6.2	3.8	18.6	8.5	7.9	0.6	2.0	2.3	0.3
Maximum	29.2	23.7	26.8	67.2	94.7	509.6	159.0	144.9	216.2	8.9	98.7	17.3
Average	11.5	11.3	17.4	16.9	15.6	70.8	28.5	24.3	16.4	4.4	14.7	8.2
Total (acre-ft)	705.6	695.4	1,036.2	1,040.5	930.7	4,354.2	1,754.6	1,352.0	1,006.9	260.2	901.5	490.6

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

Day	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13
1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	22.5	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	4.2	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	0.8	0.0	28.5	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	13.3	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	7.4	0.0	0.0	38.0	57.5	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	2.4	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	9.4	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	62.9	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	52.8	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.0	0.1	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	5.7	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	35.8	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	83.7	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	0.6	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	36.2	57.4	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	73.2	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	38.0	3.2	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	8.0	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	6.0	5.5	0.0	--	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	21.4	1.1	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	9.4	40.5	260.9	144.8	123.8	71.6	0.1	28.5	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	9.4	21.4	62.9	73.2	83.7	57.5	0.1	28.5	0.0
Average	0.0	0.0	0.0	0.3	1.4	8.4	4.7	4.4	2.3	0.0	0.9	0.0
Total (acre-ft)	0.0	0.0	0.0	18.6	80.4	517.6	287.3	245.6	142.1	0.2	56.5	0.0

Appendix C2

Daily Diversions to Recharge Basins on the Day Creek Tributary System

(cfs)

Day	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13
1	0.03	0.02	0.02	0.01	0.01	4.54	0.01	0.02	0.02	0.01	0.01	0.02
2	0.03	0.02	0.02	0.01	0.01	0.01	0.01	0.02	0.02	0.01	0.01	0.02
3	0.03	0.02	0.02	0.01	0.01	4.64	0.01	0.02	0.02	0.01	0.01	0.02
4	0.03	0.02	0.02	0.01	0.01	0.01	0.01	0.02	0.02	0.01	0.01	0.02
5	0.03	0.02	0.02	0.01	0.01	0.01	0.01	0.02	0.02	0.01	0.01	0.02
6	0.03	0.02	0.02	0.01	0.01	0.01	0.60	0.02	0.02	0.01	0.01	0.02
7	0.03	0.02	0.02	0.01	0.01	0.01	0.01	0.02	0.60	0.01	0.01	0.02
8	0.03	0.02	0.02	0.01	0.01	0.01	0.01	2.92	0.96	0.01	0.01	0.02
9	0.03	0.02	0.02	0.01	0.01	0.01	0.01	0.02	0.02	0.01	0.01	0.02
10	0.03	0.02	0.02	0.01	0.01	0.01	0.01	0.02	0.02	0.01	0.01	0.02
11	0.03	0.02	0.02	0.01	0.01	0.01	0.01	0.02	0.02	0.01	0.01	0.02
12	0.03	0.02	0.02	0.01	0.01	0.01	0.01	0.02	0.02	0.01	0.01	0.02
13	0.03	0.02	0.02	0.01	0.01	6.70	0.01	0.02	0.02	0.01	0.01	0.02
14	0.03	0.02	0.02	0.01	0.01	0.01	0.01	0.02	0.05	0.01	0.01	0.02
15	0.03	0.02	0.02	0.01	0.01	0.76	0.01	0.02	0.05	0.01	0.01	0.02
16	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.02	0.05	0.01	0.01	0.02
17	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.02	0.05	0.01	0.01	0.02
18	0.02	0.02	0.02	0.01	0.01	6.40	0.01	0.02	0.05	0.01	0.01	0.02
19	0.02	0.02	0.02	0.01	0.01	0.01	0.01	3.18	0.05	0.01	0.01	0.02
20	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.02	0.05	0.01	0.01	0.02
21	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.02	0.05	0.01	0.01	0.02
22	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.02	0.05	0.01	0.01	0.02
23	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.02	0.05	0.01	0.02	0.02
24	0.02	0.02	0.01	0.01	0.01	0.81	1.71	0.02	0.05	0.01	0.02	0.02
25	0.02	0.02	0.01	0.01	0.01	0.01	3.38	0.02	0.05	0.01	0.02	0.02
26	0.02	0.02	0.01	0.01	0.01	6.65	0.01	0.02	0.05	0.01	0.02	0.02
27	0.02	0.02	0.01	0.01	0.01	0.01	0.91	0.02	0.05	0.01	0.02	0.02
28	0.02	0.02	0.01	0.01	0.01	0.01	0.71	0.02	0.05	0.01	0.02	0.02
29	0.02	0.02	0.01	0.01	0.45	0.30	0.01	--	0.05	0.01	0.02	0.02
30	0.02	0.02	0.01	0.01	3.53	0.01	0.01	--	0.05	0.01	0.02	0.02
31	0.02	0.02	--	0.01	--	0.01	0.01	--	0.05	--	0.02	--
Total (cfs)	0.70	0.47	0.39	0.25	4.12	30.91	7.44	6.62	2.60	0.15	0.25	0.53
Minimum	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.01	0.01	0.02
Maximum	0.03	0.02	0.02	0.01	3.53	6.70	3.38	3.18	0.96	0.01	0.02	0.02
Average	0.02	0.02	0.01	0.01	0.14	1.00	0.24	0.24	0.08	0.01	0.01	0.02
Total (acre-ft)	1.38	0.93	0.78	0.49	8.18	61.33	14.76	13.14	5.16	0.30	0.49	1.05

Appendix C3

Estimated Daily Dry-Weather Flows Captured by Diversion Basins

(cfs)

Day	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13
1	0.03	0.02	0.02	0.01	0.01	4.44	0.01	0.02	0.02	0.01	0.01	0.02
2	0.03	0.02	0.02	0.01	0.01	0.00	0.01	0.02	0.02	0.01	0.01	0.02
3	0.03	0.02	0.02	0.01	0.01	0.44	0.01	0.02	0.02	0.01	0.01	0.02
4	0.03	0.02	0.02	0.01	0.01	0.01	0.01	0.02	0.02	0.01	0.01	0.02
5	0.03	0.02	0.02	0.01	0.01	0.01	0.01	0.02	0.02	0.01	0.01	0.02
6	0.03	0.02	0.02	0.01	0.01	0.01	0.60	0.02	0.00	0.01	0.00	0.02
7	0.03	0.02	0.02	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.02
8	0.03	0.02	0.02	0.01	0.00	0.01	0.01	0.00	0.00	0.01	0.01	0.02
9	0.03	0.02	0.02	0.01	0.01	0.01	0.01	0.02	0.02	0.01	0.01	0.02
10	0.03	0.02	0.02	0.01	0.01	0.01	0.00	0.02	0.02	0.01	0.01	0.02
11	0.03	0.02	0.02	0.00	0.01	0.01	0.01	0.02	0.02	0.01	0.01	0.02
12	0.03	0.02	0.02	0.01	0.01	0.00	0.01	0.02	0.02	0.01	0.01	0.02
13	0.03	0.02	0.02	0.01	0.01	0.00	0.01	0.02	0.02	0.01	0.01	0.02
14	0.03	0.02	0.02	0.01	0.01	0.00	0.01	0.02	0.05	0.00	0.01	0.02
15	0.03	0.02	0.02	0.01	0.01	0.66	0.01	0.02	0.05	0.01	0.01	0.02
16	0.02	0.02	0.01	0.01	0.01	0.00	0.01	0.02	0.05	0.01	0.01	0.02
17	0.02	0.02	0.02	0.01	0.00	0.01	0.01	0.02	0.05	0.01	0.01	0.02
18	0.02	0.02	0.02	0.01	0.01	0.00	0.01	0.02	0.05	0.01	0.01	0.02
19	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.00	0.05	0.01	0.01	0.02
20	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.02	0.05	0.01	0.01	0.02
21	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.02	0.05	0.01	0.01	0.02
22	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.02	0.05	0.01	0.01	0.02
23	0.02	0.02	0.01	0.01	0.01	0.01	0.00	0.02	0.05	0.01	0.02	0.02
24	0.02	0.02	0.01	0.01	0.01	0.00	0.00	0.02	0.05	0.01	0.02	0.02
25	0.02	0.02	0.01	0.01	0.01	0.01	0.00	0.02	0.05	0.01	0.02	0.02
26	0.02	0.02	0.01	0.01	0.01	0.00	0.00	0.02	0.05	0.01	0.02	0.02
27	0.02	0.02	0.01	0.01	0.01	0.01	0.00	0.02	0.05	0.01	0.02	0.02
28	0.02	0.02	0.01	0.01	0.01	0.01	0.71	0.02	0.05	0.01	0.02	0.02
29	0.02	0.02	0.01	0.01	0.00	0.00	0.01	--	0.05	0.01	0.02	0.02
30	0.02	0.02	0.01	0.01	0.00	0.00	0.01	--	0.05	0.01	0.02	0.02
31	0.02	0.02	--	0.01	--	0.01	0.01	--	0.05	--	0.02	--
Total (cfs)	0.70	0.47	0.39	0.24	0.13	5.62	1.43	0.50	1.02	0.15	0.24	0.53
Minimum	0.02	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
Maximum	0.03	0.02	0.02	0.01	0.01	4.44	0.71	0.02	0.05	0.01	0.02	0.02
Average	0.02	0.02	0.01	0.01	0.00	0.18	0.05	0.02	0.03	0.00	0.01	0.02
Total (acre-ft)	1.38	0.93	0.78	0.47	0.26	11.15	2.83	1.00	2.02	0.29	0.48	1.05

Appendix C4
Total Estimated Daily Discharge from San Sevaine Creek to the Santa Ana River without Watermaster Diversion (Stormwater and Dry-Weather Flows)
(cfs)

Day	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13
1	0.03	0.02	0.02	0.01	0.01	4.54	0.01	0.02	0.02	0.01	0.01	0.02
2	0.03	0.02	0.02	0.01	0.01	22.50	0.01	0.02	0.02	0.01	0.01	0.02
3	0.03	0.02	0.02	0.01	0.01	4.64	0.01	0.02	0.02	0.01	0.01	0.02
4	0.03	0.02	0.02	0.01	0.01	0.01	0.01	0.02	0.02	0.01	0.01	0.02
5	0.03	0.02	0.02	0.01	0.01	0.01	0.01	0.02	0.02	0.01	0.01	0.02
6	0.03	0.02	0.02	0.01	0.01	0.01	0.60	0.02	0.80	0.01	28.50	0.02
7	0.03	0.02	0.02	0.01	0.01	0.01	0.01	2.10	13.30	0.01	0.01	0.02
8	0.03	0.02	0.02	0.01	7.40	0.01	0.01	38.00	57.50	0.01	0.01	0.02
9	0.03	0.02	0.02	0.01	0.01	0.01	0.01	0.02	0.02	0.01	0.01	0.02
10	0.03	0.02	0.02	0.01	0.01	0.01	2.40	0.02	0.02	0.01	0.01	0.02
11	0.03	0.02	0.02	9.40	0.01	0.01	0.01	0.02	0.02	0.01	0.01	0.02
12	0.03	0.02	0.02	0.01	0.01	62.90	0.01	0.02	0.02	0.01	0.01	0.02
13	0.03	0.02	0.02	0.01	0.01	52.80	0.01	0.02	0.02	0.01	0.01	0.02
14	0.03	0.02	0.02	0.01	0.01	1.40	0.01	0.02	0.05	0.10	0.01	0.02
15	0.03	0.02	0.02	0.01	0.01	0.76	0.01	0.02	0.05	0.01	0.01	0.02
16	0.02	0.02	0.01	0.01	0.01	0.30	0.01	0.02	0.05	0.01	0.01	0.02
17	0.02	0.02	0.02	0.01	5.70	0.01	0.01	0.02	0.05	0.01	0.01	0.02
18	0.02	0.02	0.02	0.01	0.01	35.80	0.01	0.02	0.05	0.01	0.01	0.02
19	0.02	0.02	0.02	0.01	0.01	0.01	0.01	83.70	0.05	0.01	0.01	0.02
20	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.02	0.05	0.01	0.01	0.02
21	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.02	0.05	0.01	0.01	0.02
22	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.02	0.05	0.01	0.01	0.02
23	0.02	0.02	0.01	0.01	0.01	0.01	0.60	0.02	0.05	0.01	0.02	0.02
24	0.02	0.02	0.01	0.01	0.01	36.20	57.40	0.02	0.05	0.01	0.02	0.02
25	0.02	0.02	0.01	0.01	0.01	0.01	73.20	0.02	0.05	0.01	0.02	0.02
26	0.02	0.02	0.01	0.01	0.01	38.00	3.20	0.02	0.05	0.01	0.02	0.02
27	0.02	0.02	0.01	0.01	0.01	0.01	8.00	0.02	0.05	0.01	0.02	0.02
28	0.02	0.02	0.01	0.01	0.01	0.01	0.71	0.02	0.05	0.01	0.02	0.02
29	0.02	0.02	0.01	0.01	6.00	5.50	0.01	--	0.05	0.01	0.02	0.02
30	0.02	0.02	0.01	0.01	21.40	1.10	0.01	--	0.05	0.01	0.02	0.02
31	0.02	0.02	--	0.01	--	0.01	0.01	--	0.05	--	0.02	--
Total (cfs)	0.7	0.5	0.4	9.6	40.6	266.5	146.2	124.3	72.6	0.2	28.7	0.5
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	9.4	21.4	62.9	73.2	83.7	57.5	0.1	28.5	0.0
Average	0.0	0.0	0.0	0.3	1.4	8.6	4.7	4.4	2.3	0.0	0.9	0.0
Total (acre-ft)	1.4	0.9	0.8	19.1	80.6	528.8	290.1	246.6	144.1	0.5	57.0	1.0

Appendix C5
Estimated Average Daily Discharge from Day Creek to the Santa Ana River
with Watermaster Diversion
(cfs)

Day	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13
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	22.5	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	0.8	0.0	28.5	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	12.7	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	7.4	0.0	0.0	35.1	56.5	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	2.4	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	9.4	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	62.9	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	46.1	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.0	0.1	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	0.3	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	5.7	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	29.4	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	80.5	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	0.6	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	35.4	55.7	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	69.8	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	31.3	3.2	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	7.1	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	5.5	5.2	0.0	--	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	17.9	1.1	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	9.4	36.5	235.6	138.8	117.7	70.0	0.1	28.5	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	9.4	17.9	62.9	69.8	80.5	56.5	0.1	28.5	0.0
Average	0.0	0.0	0.0	0.3	1.2	7.6	4.5	4.2	2.3	0.0	0.9	0.0
Total (acre-ft)	0.0	0.0	0.0	18.6	72.4	467.4	275.4	233.5	138.9	0.2	56.5	0.0

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

Day	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13
1	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	20.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	5.0	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	0.2	0.0	0.8	0.0	30.7	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	17.9	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	15.5	0.0	0.0	76.2	105.6	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	5.9	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	14.8	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	97.4	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	168.5	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0	0.0	0.3	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	0.1	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	15.5	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	71.7	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	137.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	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	0.6	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	49.4	97.6	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	144.2	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	50.9	3.9	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	11.5	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	0.0	21.6	12.8	0.0	--	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	39.2	0.3	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	14.8	91.9	478.9	263.9	213.9	124.4	0.3	30.7	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	14.8	39.2	168.5	144.2	137.0	105.6	0.3	30.7	0.0
Average	0.0	0.0	0.0	0.5	3.1	15.4	8.5	7.6	4.0	0.0	1.0	0.0
Total (acre-ft)	0.0	0.0	0.0	29.4	182.3	950.1	523.6	424.4	246.8	0.6	60.9	0.0

Appendix D2

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

(cfs)

Day	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13
1	2.0	1.3	0.4	1.1	1.1	11.3	0.7	1.1	1.0	1.0	0.6	0.6
2	1.2	1.2	0.4	1.1	1.1	6.8	0.7	1.1	1.0	0.9	0.6	0.6
3	0.3	1.2	0.5	1.1	1.1	40.6	0.7	2.7	1.0	0.9	0.6	0.6
4	0.3	1.2	1.3	1.1	1.1	2.3	0.7	1.6	1.0	0.9	0.6	0.6
5	0.3	1.2	1.3	1.1	1.1	0.8	1.6	4.7	1.2	0.9	0.6	0.6
6	0.3	1.2	1.3	1.1	1.1	0.8	9.8	1.1	1.2	0.9	17.4	0.6
7	0.3	1.2	1.3	1.1	1.1	0.8	0.7	4.7	8.0	0.9	0.6	0.6
8	0.3	1.2	1.3	1.1	5.5	0.8	0.7	34.2	50.3	0.9	0.6	0.6
9	0.7	1.2	1.0	1.1	0.2	0.8	0.7	1.1	1.0	0.9	0.6	0.6
10	2.0	1.2	0.9	0.8	0.2	0.8	3.0	1.1	1.0	0.9	0.6	0.6
11	2.0	1.2	0.9	76.8	0.2	0.8	0.7	1.1	1.0	0.7	0.6	0.6
12	2.0	1.2	0.9	5.4	0.2	0.8	0.7	1.1	1.0	0.7	0.6	0.6
13	2.0	1.2	0.9	0.2	0.7	96.3	0.7	1.1	1.0	0.7	0.6	0.5
14	2.0	1.2	0.9	0.2	0.7	2.3	3.2	3.8	1.0	0.7	0.6	0.5
15	2.0	1.2	0.9	0.2	0.7	11.3	0.7	1.1	1.0	3.3	0.6	0.5
16	2.0	1.3	0.7	0.2	0.8	0.8	0.7	1.1	1.0	0.7	0.8	0.6
17	2.0	1.3	0.7	0.8	0.8	0.8	1.2	1.1	1.0	0.7	0.8	0.6
18	1.5	1.3	0.7	1.1	0.8	46.8	0.7	1.1	1.0	0.7	0.8	0.6
19	1.2	1.3	0.7	1.1	0.8	2.4	0.7	30.1	1.0	0.7	0.6	0.1
20	1.2	1.3	0.7	1.1	0.8	6.4	0.7	1.1	1.0	0.7	0.6	0.1
21	1.2	1.3	0.7	1.1	0.8	15.7	0.7	2.2	1.0	0.7	0.6	0.1
22	1.2	1.3	0.7	1.1	0.8	0.7	0.7	2.5	1.0	0.7	0.6	0.1
23	1.2	1.3	0.7	1.1	0.8	4.4	0.7	1.1	1.0	0.7	0.6	0.1
24	1.2	1.3	0.7	1.1	0.8	38.1	32.8	1.1	5.0	0.7	0.6	0.1
25	1.2	1.3	0.7	1.1	0.8	0.8	50.5	1.1	1.0	0.7	0.6	0.1
26	1.2	1.3	0.7	1.1	0.8	34.2	20.8	1.1	1.0	0.6	0.6	0.2
27	1.2	1.3	0.7	1.1	0.8	4.9	1.6	2.6	1.0	0.6	0.6	0.2
28	1.2	1.3	0.7	1.1	0.8	3.4	1.5	2.0	1.0	0.6	0.6	0.2
29	1.2	1.3	0.8	1.1	22.0	13.1	1.1	--	1.0	0.6	0.6	0.3
30	1.2	1.9	1.1	1.1	31.8	0.8	1.1	--	1.0	0.6	0.6	0.8
31	1.2	0.9	--	1.1	--	0.8	1.1	--	1.0	--	0.6	--
Total (cfs)	38.6	39.4	24.7	109.2	80.5	351.9	142.5	110.5	90.7	25.1	36.6	13.2
Minimum	0.3	0.9	0.4	0.2	0.2	0.7	0.7	1.1	1.0	0.6	0.6	0.1
Maximum	2.0	1.9	1.3	76.8	31.8	96.3	50.5	34.2	50.3	3.3	17.4	0.8
Average	1.2	1.3	0.8	3.5	2.7	11.4	4.6	3.9	2.9	0.8	1.2	0.4
Total (acre-ft)	76.6	78.2	49.0	216.6	159.8	698.1	282.8	219.2	179.9	49.8	72.7	26.2

Appendix D3

Estimated Daily Dry-Weather Flows Captured by Diversion Basins

(cfs)

Day	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13
1	2.0	1.3	0.4	1.1	1.1	10.3	0.7	1.1	1.0	1.0	0.6	0.6
2	1.2	1.2	0.4	1.1	1.1	0.0	0.7	1.1	1.0	0.9	0.6	0.6
3	0.3	1.2	0.5	1.1	1.1	35.6	0.7	2.7	1.0	0.9	0.6	0.6
4	0.3	1.2	1.3	1.1	1.1	2.3	0.7	1.6	1.0	0.9	0.6	0.6
5	0.3	1.2	1.3	1.1	1.1	0.8	1.6	4.7	1.2	0.9	0.6	0.6
6	0.3	1.2	1.3	1.1	1.1	0.8	9.6	1.1	0.4	0.9	0.0	0.6
7	0.3	1.2	1.3	1.1	1.1	0.8	0.7	4.2	0.0	0.9	0.6	0.6
8	0.3	1.2	1.3	1.1	0.0	0.8	0.7	0.0	0.0	0.9	0.6	0.6
9	0.7	1.2	1.0	1.1	0.2	0.8	0.7	1.1	0.9	0.9	0.6	0.6
10	2.0	1.2	0.9	0.8	0.2	0.8	0.0	1.1	1.0	0.9	0.6	0.6
11	2.0	1.2	0.9	62.0	0.2	0.8	0.7	1.1	1.0	0.7	0.6	0.6
12	2.0	1.2	0.9	5.4	0.2	0.0	0.7	1.1	1.0	0.7	0.6	0.6
13	2.0	1.2	0.9	0.2	0.7	0.0	0.7	1.1	1.0	0.7	0.6	0.5
14	2.0	1.2	0.9	0.2	0.7	0.5	3.2	3.8	1.0	0.4	0.6	0.5
15	2.0	1.2	0.9	0.2	0.7	11.3	0.7	1.1	1.0	3.3	0.6	0.5
16	2.0	1.3	0.7	0.2	0.8	0.7	0.7	1.1	1.0	0.7	0.8	0.6
17	2.0	1.3	0.7	0.8	0.0	0.8	1.2	1.1	1.0	0.7	0.8	0.6
18	1.5	1.3	0.7	1.1	0.8	0.0	0.7	1.1	1.0	0.7	0.8	0.6
19	1.2	1.3	0.7	1.1	0.8	2.4	0.7	0.0	1.0	0.7	0.6	0.1
20	1.2	1.3	0.7	1.1	0.8	6.4	0.7	0.9	1.0	0.7	0.6	0.1
21	1.2	1.3	0.7	1.1	0.8	15.7	0.7	2.2	1.0	0.7	0.6	0.1
22	1.2	1.3	0.7	1.1	0.8	0.7	0.7	2.5	1.0	0.7	0.6	0.1
23	1.2	1.3	0.7	1.1	0.8	4.4	0.1	1.1	1.0	0.7	0.6	0.1
24	1.2	1.3	0.7	1.1	0.8	0.0	0.0	1.1	5.0	0.7	0.6	0.1
25	1.2	1.3	0.7	1.1	0.8	0.8	0.0	1.1	1.0	0.7	0.6	0.1
26	1.2	1.3	0.7	1.1	0.8	0.0	16.9	1.1	1.0	0.6	0.6	0.2
27	1.2	1.3	0.7	1.1	0.8	4.9	0.0	2.6	1.0	0.6	0.6	0.2
28	1.2	1.3	0.7	1.1	0.7	3.4	1.5	2.0	1.0	0.6	0.6	0.2
29	1.2	1.3	0.8	1.1	0.4	0.3	1.1	--	1.0	0.6	0.6	0.3
30	1.2	1.9	1.1	1.1	0.0	0.5	1.1	--	1.0	0.6	0.6	0.8
31	1.2	0.9	--	1.1	--	0.8	1.1	--	1.0	--	0.6	--
Total (cfs)	38.6	39.4	24.7	94.4	20.7	107.8	49.9	45.5	31.5	24.8	19.2	13.2
Minimum	0.3	0.9	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.1
Maximum	2.0	1.9	1.3	62.0	1.1	35.6	16.9	4.7	5.0	3.3	0.8	0.8
Average	1.2	1.3	0.8	3.0	0.7	3.5	1.6	1.6	1.0	0.8	0.6	0.4
Total (acre-ft)	76.6	78.2	49.0	187.2	41.1	213.9	99.1	90.3	62.5	49.2	38.1	26.2

Appendix D4

Total Estimated Daily Discharge from San Sevaine Creek to the Santa Ana River without Watermaster Diversion (Stormwater and Dry-Weather Flows)

(cfs)

Day	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13
1	2.0	1.3	0.4	1.1	1.1	11.3	0.7	1.1	1.0	1.0	0.6	0.6
2	1.2	1.2	0.4	1.1	1.1	20.0	0.7	1.1	1.0	0.9	0.6	0.6
3	0.3	1.2	0.5	1.1	1.1	40.6	0.7	2.7	1.0	0.9	0.6	0.6
4	0.3	1.2	1.3	1.1	1.1	2.3	0.7	1.6	1.0	0.9	0.6	0.6
5	0.3	1.2	1.3	1.1	1.1	0.8	1.6	4.7	1.2	0.9	0.6	0.6
6	0.3	1.2	1.3	1.1	1.1	0.8	9.8	1.1	1.2	0.9	30.7	0.6
7	0.3	1.2	1.3	1.1	1.1	0.8	0.7	4.7	17.9	0.9	0.6	0.6
8	0.3	1.2	1.3	1.1	15.5	0.8	0.7	76.2	105.6	0.9	0.6	0.6
9	0.7	1.2	1.0	1.1	0.2	0.8	0.7	1.1	1.0	0.9	0.6	0.6
10	2.0	1.2	0.9	0.8	0.2	0.8	5.9	1.1	1.0	0.9	0.6	0.6
11	2.0	1.2	0.9	76.8	0.2	0.8	0.7	1.1	1.0	0.7	0.6	0.6
12	2.0	1.2	0.9	5.4	0.2	97.4	0.7	1.1	1.0	0.7	0.6	0.6
13	2.0	1.2	0.9	0.2	0.7	168.5	0.7	1.1	1.0	0.7	0.6	0.5
14	2.0	1.2	0.9	0.2	0.7	2.3	3.2	3.8	1.0	0.7	0.6	0.5
15	2.0	1.2	0.9	0.2	0.7	11.3	0.7	1.1	1.0	3.3	0.6	0.5
16	2.0	1.3	0.7	0.2	0.8	0.8	0.7	1.1	1.0	0.7	0.8	0.6
17	2.0	1.3	0.7	0.8	15.5	0.8	1.2	1.1	1.0	0.7	0.8	0.6
18	1.5	1.3	0.7	1.1	0.8	71.7	0.7	1.1	1.0	0.7	0.8	0.6
19	1.2	1.3	0.7	1.1	0.8	2.4	0.7	137.0	1.0	0.7	0.6	0.1
20	1.2	1.3	0.7	1.1	0.8	6.4	0.7	1.1	1.0	0.7	0.6	0.1
21	1.2	1.3	0.7	1.1	0.8	15.7	0.7	2.2	1.0	0.7	0.6	0.1
22	1.2	1.3	0.7	1.1	0.8	0.7	0.7	2.5	1.0	0.7	0.6	0.1
23	1.2	1.3	0.7	1.1	0.8	4.4	0.7	1.1	1.0	0.7	0.6	0.1
24	1.2	1.3	0.7	1.1	0.8	49.4	97.6	1.1	5.0	0.7	0.6	0.1
25	1.2	1.3	0.7	1.1	0.8	0.8	144.2	1.1	1.0	0.7	0.6	0.1
26	1.2	1.3	0.7	1.1	0.8	50.9	20.8	1.1	1.0	0.6	0.6	0.2
27	1.2	1.3	0.7	1.1	0.8	4.9	11.5	2.6	1.0	0.6	0.6	0.2
28	1.2	1.3	0.7	1.1	0.8	3.4	1.5	2.0	1.0	0.6	0.6	0.2
29	1.2	1.3	0.8	1.1	22.0	13.1	1.1	--	1.0	0.6	0.6	0.3
30	1.2	1.9	1.1	1.1	39.2	0.8	1.1	--	1.0	0.6	0.6	0.8
31	1.2	0.9	--	1.1	--	0.8	1.1	--	1.0	--	0.6	--
Total (cfs)	38.6	39.4	24.7	109.2	112.6	586.7	313.8	259.4	155.9	25.1	49.9	13.2
Minimum	0.3	0.9	0.4	0.2	0.2	0.7	0.7	1.1	1.0	0.6	0.6	0.1
Maximum	2.0	1.9	1.3	76.8	39.2	168.5	144.2	137.0	105.6	3.3	30.7	0.8
Average	1.2	1.3	0.8	3.5	3.8	18.9	10.1	9.3	5.0	0.8	1.6	0.4
Total (acre-ft)	76.6	78.2	49.0	216.6	223.4	1,164.0	622.6	514.7	309.3	49.8	99.0	26.2

Appendix D5
Estimated Average Daily Discharge from San Sevaine Creek to the Santa Ana River
with Watermaster Diversion
(cfs)

Day	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13
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	13.2	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	13.3	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.9	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	10.0	0.0	0.0	42.0	55.3	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	2.9	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	96.6	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	72.2	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	14.7	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	24.9	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	106.9	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	11.3	64.8	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	93.7	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	16.7	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	9.9	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	7.4	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	32.1	234.9	171.3	148.9	65.2	0.0	13.3	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	14.7	96.6	93.7	106.9	55.3	0.0	13.3	0.0
Average	0.0	0.0	0.0	0.0	1.1	7.6	5.5	5.3	2.1	0.0	0.4	0.0
Total (acre-ft)	0.0	0.0	0.0	0.0	63.6	466.0	339.9	295.5	129.3	0.0	26.3	0.0