Upper Santa Ana River Integrated Model Summary Report

Part 4 of 5: Tables

DRAFT

Prepared For: San Bernardino Valley Municipal Water District

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TABLES

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Table 1

Geologic and Hydrogeologic Conceptual Model of the Upper Santa Ana River Groundwater Basin and Assignment of Model Layers

Chino/Temescal Basin			Riverside-Arlington Basin			Rialto-Colton Basin				SBBA			Yucaipa Basin		
Geologic Unit	Hydrogeologic Unit	Model Layer	Geologic Unit	Hydrogeologic Unit	Model Layer	Geologic Unit	Hydrogeologic Unit		Model Layer	Geologic Unit	Hydrogeologic Unit	Model Layer	Geologic Unit	Hydrogeologic Unit	Model Layer
							Upper Basin	Lower Basin							
Very Young and Young Axial-Channel and Wash Deposits[1] (Holocene)	Shallow Aquifer	1	Very Young and Young Axial-Channel and Wash Deposits[1] (Holocene)	Axial Channel and Wash Deposits	1	Very Young and Young Axial-Channel and Wash Deposits[1] (Holocene)	Axial Channel and Wash Deposits Not Present	Axial Channel and Wash Deposits	1	Very Young and Young Axial-Channel and Wash Deposits[1] (Holocene)	River Channel and Upper Confining Member	1	Very Young and Young Axial-Channel and Wash Deposits[1] (Holocene)	Axial Channel and Wash Deposits	1
Very Young and Young Alluvial Deposits[2] (Holocene)			Very Young and Young Alluvial Deposits[2] (Holocene)	Upper Alluvium		Very Young and Young Alluvial Deposits[2] (Holocene)	Upper Water-Bearing Unit	Upper Water-Bearing Unit		Very Young and Young Alluvial Deposits[2] (Holocene)	Upper Water-Bearing		Very Young and Young Alluvial Deposits[2] (Holocene)	Late Quaternary	
Old and Very Old Alluvial Deposits[3] (Pleistocene)		2	Old and Very Old Alluvial Deposits[3] (Pleistocene)		2	Old and Very Old Alluvial Deposits[3] (Pleistocene)	Middle Water-Bearing Shallow Zone (Intermediate Aquifer or B Aquifer)		2	Old and Very Old Alluvial Deposits[3] (Pleistocene)	Middle Confining Member	2	Old and Very Old Alluvial Deposits[3] (Pleistocene)		2
	Upper Deep Aquifer	3			3		Middle Water-Bearing Upper Deep Zone (BC Aquitard or Perching Layer)	Middle Water-Bearing Unit	3		Middle Water-Bearing	3	Live Oak Canyon Deposits (Pleistocene)	Live Oak Canyon Deposits	3
	Lower Deep Aquifer	4		Lower Alluvium	4		Middle Water-Bearing Lower Deep Zone (Upper Regional Aquifer or C Aquifer)		4		Lower Confining Member	4			4
Fernando Group (Pleistocene)		5			5	(?)	Lower Water-Bearing Unit (Lower Regional Aquifer)	Lower Water-Bearing Unit	5		Lower Water-Bearing (upper portion)	5			5
Puente Formation (Miocene) ?	Consolidated	6	--	--	6	(?)	Consolidated	Consolidated	6	(?)	Lower Water-Bearing (lower portion)	6	San Timoteo Formation (Plio-Pleistocene) Mt. Eden (Miocene)	San Timoteo Consolidated	6
Granitic Rock	Basement	7	Granitic Rock	Basement	7	Granitic Rock	Basement	Basement	7	Metamorphic Rock	Basement	7	Granitic Rock	Basement	7
Source: WEI, 2015				Source: WRIME, 2010			Sources: Woolfenden and Kadhim, 1997; Geo-Logic, 2014)			Source: Danskin et al., 2006			Sources: GEOSCIENCE, 2017; USGS, in progress		

[1] Including alluvial-valley deposits.

[2] Including colluvium, eolian deposits, talus, and landslide deposits.

[3] Including colluvium, eolian deposits, talus, landslide deposits, and regolith.

Table 2

Summary of Aquifer Parameters

Basin	Layer	Kx (Ky)			Kv			Sy			S		
		Min	Average	Max	Min	Average	Max	Min	Average	Max	Min	Average	Max
		feet/day			feet/day			Unitless			Unitless		
ISARM	1	3.6E-01	1.0E+02	4.5E+02	3.3E-06	5.2E+00	3.3E+02	1.0E-02	1.3E-01	3.5E-01	2.3E-05	8.2E-04	3.4E-02
	2	3.6E-01	8.0E+01	4.5E+02	3.3E-06	2.3E+00	3.3E+02	1.0E-02	1.3E-01	3.5E-01	1.4E-08	7.6E-06	5.0E-04
	3	1.0E-02	4.0E+01	4.5E+02	5.0E-09	1.8E+00	3.3E+02	1.0E-02	1.3E-01	3.0E-01	1.8E-09	1.1E-04	3.0E-02
	4	6.3E-02	4.0E+01	4.5E+02	2.0E-08	1.3E+00	3.3E+02	1.0E-02	1.3E-01	3.0E-01	1.1E-09	2.1E-05	2.1E-03
	5	1.1E-01	3.9E+01	4.5E+02	2.0E-08	1.4E+00	3.3E+02	1.0E-02	1.3E-01	3.0E-01	1.1E-09	2.2E-05	2.6E-03
SBBA	1	5.0E-01	8.5E+01	4.5E+02	5.0E-02	8.2E+00	3.0E+01	5.0E-02	1.9E-01	2.5E-01	8.3E-05	1.0E-03	2.6E-02
	2	5.0E-01	1.3E+01	3.0E+02	5.0E-02	1.3E+00	3.0E+01	4.0E-02	1.5E-01	2.0E-01	2.1E-07	2.4E-06	1.0E-05
	3	5.0E-01	1.6E+01	3.6E+02	5.0E-02	1.5E+00	3.0E+01	4.0E-02	1.5E-01	2.0E-01	1.8E-07	2.5E-06	1.0E-05
	4	3.0E-01	8.2E+00	3.0E+02	5.0E-02	9.2E-01	3.0E+01	4.0E-02	1.5E-01	2.0E-01	1.6E-07	2.7E-06	1.0E-05
	5	3.0E-01	1.0E+01	3.0E+02	5.0E-02	1.3E+00	3.0E+01	4.0E-02	1.5E-01	2.0E-01	9.8E-08	2.1E-06	1.0E-05
Yucaipa	1	4.0E-01	2.4E+01	2.1E+02	1.5E-01	5.2E-01	2.0E+00	8.0E-02	1.0E-01	1.3E-01	1.7E-04	6.8E-04	1.1E-02
	2	1.0E+00	1.2E+01	1.0E+02	1.5E-01	2.9E-01	5.0E-01	8.0E-02	1.2E-01	2.0E-01	1.2E-07	7.3E-05	5.0E-04
	3	1.0E+00	2.0E+01	2.0E+02	1.5E-01	2.9E-01	5.0E-01	8.0E-02	1.2E-01	2.0E-01	1.4E-06	1.0E-04	5.0E-04
	4	1.0E+00	2.0E+01	2.0E+02	1.5E-01	2.9E-01	5.0E-01	8.0E-02	1.2E-01	2.0E-01	1.4E-06	1.0E-04	5.0E-04
	5	8.0E-01	1.1E+01	6.0E+01	3.0E-01	3.0E-01	3.0E-01	8.0E-02	1.2E-01	2.0E-01	7.5E-07	4.1E-05	2.0E-04
Rialto Colton	1	2.2E+00	8.4E+01	3.0E+02	2.2E-01	7.8E+00	2.1E+01	2.0E-02	7.7E-02	3.0E-01	9.4E-05	3.9E-04	1.6E-03
	2	1.9E+00	5.2E+01	2.9E+02	1.8E-03	9.3E-01	7.7E+00	2.0E-02	2.0E-01	3.0E-01	6.6E-08	5.7E-06	1.6E-05
	3	5.0E-01	1.3E+01	4.0E+01	5.0E-09	1.3E+00	4.0E+00	2.0E-02	1.0E-01	3.0E-01	3.1E-07	1.5E-03	3.0E-02
	4	6.3E-02	4.5E+01	2.7E+02	2.5E-06	2.0E+00	8.0E+00	2.0E-02	1.8E-01	3.0E-01	1.9E-08	1.5E-04	2.1E-03
	5	2.2E+00	2.6E+01	8.1E+01	8.6E-06	1.6E+00	5.2E+00	3.6E-02	1.6E-01	3.0E-01	1.3E-07	2.4E-04	2.6E-03
Riverside Arlington	1	1.0E+01	1.5E+02	4.5E+02	6.6E-01	1.2E+01	3.3E+02	1.0E-02	1.7E-01	3.5E-01	2.3E-05	2.0E-03	3.4E-02
	2	1.0E+01	1.6E+02	4.5E+02	6.6E-01	1.2E+01	3.3E+02	1.0E-02	1.8E-01	3.5E-01	1.0E-06	3.4E-06	5.0E-04
	3	6.6E+00	1.1E+02	3.6E+02	6.6E-01	1.1E+01	3.3E+02	1.0E-02	1.8E-01	2.5E-01	3.3E-06	3.5E-06	5.0E-04
	4	6.6E+00	1.1E+02	3.6E+02	6.6E-01	1.1E+01	3.3E+02	1.0E-02	1.8E-01	2.5E-01	3.3E-06	3.5E-06	5.0E-04
	5	6.6E+00	1.1E+02	3.6E+02	6.6E-01	1.1E+01	3.3E+02	1.0E-02	1.8E-01	2.5E-01	3.3E-06	3.6E-06	5.0E-04
Chino	1	3.6E-01	1.2E+02	4.5E+02	3.3E-06	2.1E+00	3.8E+01	6.2E-02	1.1E-01	1.6E-01	1.3E-04	4.5E-04	7.1E-03
	2	3.6E-01	1.1E+02	4.5E+02	3.3E-06	7.8E-01	2.8E+00	6.2E-02	1.1E-01	1.6E-01	1.4E-08	4.9E-07	3.1E-06
	3	1.0E-02	5.2E+01	4.5E+02	1.3E-06	7.7E-01	2.8E+00	6.2E-02	1.1E-01	1.6E-01	1.8E-09	3.5E-06	5.5E-05
	4	1.1E-01	5.2E+01	4.5E+02	2.0E-08	7.6E-02	2.8E-01	6.2E-02	1.1E-01	1.6E-01	1.1E-09	3.2E-06	5.5E-05
	5	1.1E-01	5.2E+01	4.5E+02	2.0E-08	7.6E-02	2.8E-01	6.2E-02	1.1E-01	1.6E-01	1.1E-09	3.2E-06	5.5E-05
Temescal	1	4.6E+00	8.2E+01	3.8E+02	2.4E-01	1.6E+00	3.8E+01	8.3E-02	9.7E-02	1.6E-01	8.4E-05	6.3E-04	1.1E-02
	2	4.6E+00	8.0E+01	3.1E+02	2.4E-01	1.1E+00	1.3E+00	8.3E-02	9.7E-02	1.6E-01	2.2E-07	8.8E-07	1.0E-06
	3	4.5E+00	1.7E+01	8.9E+01	3.7E-01	9.1E-01	1.1E+00	8.3E-02	9.7E-02	1.6E-01	1.5E-07	3.4E-06	1.2E-05
	4	4.3E+00	1.7E+01	6.7E+01	1.8E-02	8.7E-02	1.4E-01	8.3E-02	9.7E-02	1.6E-01	6.9E-08	5.7E-06	1.2E-05
	5	4.3E+00	1.7E+01	6.7E+01	1.8E-02	8.7E-02	1.4E-01	8.3E-02	9.7E-02	1.6E-01	6.9E-08	5.7E-06	1.2E-05

Table 3

Target Wells Used for Model Calibration
Yucaipa Basin Model Area

Number	Owner	Well Name	Surface Elevation [ft, amsl]	Screened Interval Depth [ft, bgs]	Top Depth of Selected Model Layer [ft,bgs]	Bottom Depth of Selected Model Layer [ft,bgs]	Model Layer	Number of Water Level Data	Range of Available Water Level Data		Hydrograph
1	City of Redlands	Chicken_Hill	2,200	198-485	0	256	1	332	1975	2016	
2	Western Heights Water Company	WHWC_Well_6	2,166	135-578	0	265	1	41	1966	2008	
3	Yucaipa Valley Water District	YVWD_Well_10	2,314	170-500	0	184	1	458	1966	2016	
4	Yucaipa Valley Water District	YVWD_Well_13	3,194	26-307	0	76	1	422	1974	2016	*
5	Yucaipa Valley Water District	YVWD_Well_15	2,814	50-129	0	72	1	284	1973	2000	
6	Yucaipa Valley Water District	YVWD_Well_20	2,746	190-590	0	268	1	111	1974	1999	
7	Yucaipa Valley Water District	YVWD_Well_25	3,857	45-55	0	70	1	28	2004	2016	*
8	Yucaipa Valley Water District	YVWD_Well_28	3,138		0	204	1	141	2000	2016	*
9	Yucaipa Valley Water District	YVWD_Well_31	3,086	340-460	0	165	1	95	1987	1999	
10	Yucaipa Valley Water District	YVWD_Well_33	3,137	340-460	0	75	1	57	1987	1995	
11	Yucaipa Valley Water District	YVWD_Well_36	3,192	251-260, 260-430	0	156	1	55	1986	1994	
12	Yucaipa Valley Water District	YVWD_Well_43	2,941	49-350	0	283	1	203	1997	2016	*
13	Yucaipa Valley Water District	YVWD_Well_5	2,565	190-199, 220-227, 236-245, 254-355, 366-400, 422-470	0	238	1	496	1971	2016	
14	Yucaipa Valley Water District	YVWD_Well_51	2,720	230-590	0	324	1	194	1991	2016	*
15	Yucaipa Valley Water District	YVWD_Well_57	2,324	100-650	0	311	1	39	2001	2002	
16	City of Redlands	Hog_Canyon_2	2,250	260-440, 460-680	193	591	2	91	2003	2014	*
17	Landmark Land Co. / Oak Valley Country Club	Covington_Well	2,189	210-760, 760-1060	256	1,049	2	30	1998	2016	*
18	South Mesa Water Company	SMWC_Well_11	2,385	205-363	187	801	2	170	1970	2016	
19	South Mesa Water Company	SMWC_Well_5	2,357	264-514	192	948	2	173	1970	2016	
20	South Mesa Water Company	SMWC_Well_7	2,320	242-800	222	923	2	171	1970	2016	
21	South Mesa Water Company	SMWC_Well_9	2,361	250-760, 800-985	215	842	2	173	1970	2016	
22	USGS	01S/02W-36A004S	2,750	500-520	257	583	2	186	2001	2016	*
23	USGS	01S/02W-36A005S	2,750	350-370	257	583	2	80	2001	2016	*
24	USGS	02S/02W-04L004S	2,070	590-610	221	755	2	116	2004	2016	*
25	USGS	02S/02W-04L005S	2,070	440-460	221	755	2	115	2004	2016	*
26	USGS	02S/02W-04L006S	2,070	230-250	221	755	2	119	2004	2016	*
27	USGS	02S_02W-02F004S	2,410	500-550	214	509	2	120	2004	2016	*
28	USGS	02S_02W-02F005S	2,410	380-400	214	509	2	119	2004	2016	*
29	USGS	02S_02W-02F006S	2,410	290-310	214	509	2	110	2004	2016	*
30	Western Heights Water Company	WHWC_Well_10	2,083	330-670	224	643	2	150	1966	2016	*
31	Western Heights Water Company	WHWC_Well_11	2,085	705-1205, 1210-1690	229	788	2	117	2006	2016	*
32	Western Heights Water Company	WHWC_Well_12	2,099	390-1090	234	846	2	92	1999	2016	
33	Western Heights Water Company	WHWC_Well_14	2,075	410-1090	221	756	2	102	2007	2016	
34	Western Heights Water Company	WHWC_Well_2A	2,091	400-620	217	743	2	108	1987	2016	
35	Yucaipa Valley Water District	YVWD_Well_11	2,391	260-450	200	531	2	363	1966	2010	
36	Yucaipa Valley Water District	YVWD_Well_12	2,382	350-563, 613-625	164	466	2	220	1971	2016	*
37	Yucaipa Valley Water District	YVWD_Well_18	2,604	290-584	232	578	2	309	1971	2016	
38	Yucaipa Valley Water District	YVWD_Well_2	2,423	350-563, 613-625	176	488	2	239	1971	2016	
39	Yucaipa Valley Water District	YVWD_Well_24	2,437	320-585	173	466	2	34	2000	2016	

Target Wells Used for Model Calibration
Yucaipa Basin Model Area

Number	Owner	Well Name	Surface Elevation [ft, amsl]	Screened Interval Depth [ft, bgs]	Top Depth of Selected Model Layer [ft,bgs]	Bottom Depth of Selected Model Layer [ft,bgs]	Model Layer	Number of Water Level Data	Range of Available Water Level Data		Hydrograph
40	Yucaipa Valley Water District	YVWD_Well_44	2,739	275-650	256	586	2	199	1987	2016	
41	Yucaipa Valley Water District	YVWD_Well_46	2,620	340-1130	255	607	2	76	1991	2016	*
42	Yucaipa Valley Water District	YVWD_Well_49	2,293	480-620, 670-800, 830-880, 910-1160	221	596	2	220	1991	2016	
43	Yucaipa Valley Water District	YVWD_Well_50	2,578	330-350	149	331	2	274	1990	2015	
44	Yucaipa Valley Water District	YVWD_Well_53	2,728	450-950	264	608	2	208	1993	2016	
45	Yucaipa Valley Water District	YVWD_Well_55	2,502	460-1030	227	548	2	84	2002	2016	
46	Yucaipa Valley Water District	YVWD_Well_56	2,583	512-832	228	545	2	103	2004	2016	*
47	Yucaipa Valley Water District	YVWD_Well_6	2,561	197-607	184	393	2	313	1987	2016	*
48	Yucaipa Valley Water District	YVWD_Well_9	2,622	120-706	83	203	2	274	1971	2010	
49	City of Redlands	Redlands_Yucaipa_Blvd	2,158		636	1,063	3	3	1986	1992	
50	El Camino Ranch	19D3	2,476		83	93	3	22	1998	2008	
51	South Mesa Water Company	SMWC_Well_1	2,416		816	1,851	3	90	1967	2016	*
52	South Mesa Water Company	SMWC_Well_12	2,359		663	1,228	3	155	1986	2016	
53	South Mesa Water Company	SMWC_Well_16	2,360		847	1,760	3	172	1970	2016	*
54	South Mesa Water Company	SMWC_Well_17	2,310		560	986	3	24	2013	2016	
55	South Mesa Water Company	SMWC_Well_6	2,475		485	802	3	162	1967	2002	
56	Unknown	Crafton_Hills	2,200		636	1,042	3	12	1992	2005	
57	Unknown	MW-1	1,358		151	161	3	3	2016	2016	
58	Unknown	MW-2	1,437		167	177	3	3	2016	2016	
59	Unknown	MW-3	1,528		387	397	3	3	2016	2016	
60	Unknown	MW-5A	1,354		150	160	3	4	2016	2016	
61	Unknown	MW-5B	1,354		150	160	3	4	2016	2016	
62	USGS	01S/02W-36A003S	2,750	640-660	583	725	3	173	2000	2016	*
63	USGS	02S/02W-04L002S	2,070	1010-1050	755	1,377	3	115	2004	2016	*
64	USGS	02S/02W-04L003S	2,070	830-850	755	1,377	3	98	2004	2016	*
65	USGS	02S_02W-12H004S	2,560	380-400	279	462	3	210	1998	2016	*
66	USGS	N.E._Yucaipa	3,390		191	201	3	48	1968	2008	*
67	USGS	Oak_Glen_Road	2,820		607	665	3	62	1969	2013	
68	Western Heights Water Company	WHWC_Well_3	2,086		782	1,429	3	16	1983	2006	*
69	Western Heights Water Company	WHWC_Well_9	2,092		774	1,460	3	18	1967	2007	
70	Yucaipa Valley Water District	Chapman_#2	2,490		512	701	3	23	1992	1999	
71	Yucaipa Valley Water District	Chapman_#4	2,640		539	719	3	91	1991	2001	
72	Yucaipa Valley Water District	Chlorinator	3,765		130	140	3	233	1987	2008	
73	Yucaipa Valley Water District	Dairy_Barn_Well	2,265		804	1,572	3	30	1992	1996	
74	Yucaipa Valley Water District	Donovan	2,770		615	684	3	116	1987	1999	
75	Yucaipa Valley Water District	Pendleton	3,002		252	262	3	95	1992	2015	
76	Yucaipa Valley Water District	SBVMWD_Wilson_Basin	2,805		604	672	3	187	1992	2016	
77	Yucaipa Valley Water District	Yucaipa_2nd_Street	2,600		375	432	3	263	1990	2012	
78	Yucaipa Valley Water District	YVWD_Well_14	3,345		75	85	3	138	2000	2016	*
79	Yucaipa Valley Water District	YVWD_Well_19	2,782		481	523	3	250	1973	1999	

Table 3

Target Wells Used for Model Calibration
Yucaipa Basin Model Area

Number	Owner	Well Name	Surface Elevation [ft, amsl]	Screened Interval Depth [ft, bgs]	Top Depth of Selected Model Layer [ft,bgs]	Bottom Depth of Selected Model Layer [ft,bgs]	Model Layer	Number of Water Level Data	Range of Available Water Level Data		Hydrograph
80	Yucaipa Valley Water District	YVWD_Well_26	2,858		156	166	3	61	2000	2010	
81	Yucaipa Valley Water District	YVWD_Well_4	2,349		552	871	3	305	1971	2008	
82	Yucaipa Valley Water District	YVWD_Well_47	2,450		596	963	3	183	1991	2009	
83	Yucaipa Valley Water District	YVWD_Well_54	2,205		911	1,721	3	23	2004	2006	
84	Yucaipa Valley Water District	YVWD_Well_7	2,714		533	561	3	429	1966	2016	
85	USGS	02S_02W-12H003S	2,560	510-530	462	594	4	208	1998	2016	*
86	USGS	01S/02W-36A002S	2,750	820-840	762	772	5	185	2001	2016	*
87	USGS	02S_02W-02F002S	2,410	870-930	554	564	5	98	2008	2016	*
88	USGS	02S_02W-02F003S	2,410	730-750	554	564	5	113	2004	2016	*
89	USGS	02S_02W-12H001S	2,560	830-850	594	604	5	199	1998	2016	*
90	USGS	02S_02W-12H002S	2,560	635-655	594	604	5	198	1999	2016	*
91	Yucaipa Valley Water District	YVWD_Well_27	2,861	164-314	133	143	5	196	1987	2016	*
92	Yucaipa Valley Water District	YVWD_Well_27A	2,859	160-207	142	152	5	260	1992	2016	
93	Yucaipa Valley Water District	YVWD_Well_37	2,780	468-694	353	363	5	190	1987	2016	*

Target Wells Used for Model Calibration
SBBA Model Area

Number	Owner	Well Name	Surface Elevation [ft, amsl]	Screened Interval Depth [ft, bgs]	Top Depth of Selected Model Layer [ft,bgs]	Bottom Depth of Selected Model Layer [ft,bgs]	Model Layer	Number of Water Level Data	Range of Available Water Level Data		Hydrograph
1	City of Colton	No_14	1,059	150-270, 342-348, 396-428, 452-474, 500-520	0	316	1	119	1983	2000	*
2	City of Riverside	Raub_1	1,023		0	338	1	251	1966	2014	*
3	City of Riverside	Thorne_Well_No_10	1,002	79-125, 132-145, 167-172, 191-196	0	297	1	287	1966	2007	*
4	City of San Bernardino	31st_MtView	1,232	325-553	0	409	1	391	1983	2016	
5	City of San Bernardino	Antil_3	1,054		0	256	1	53	1983	1996	
6	City of San Bernardino	Antil_4	1,053		0	245	1	63	1983	1996	
7	City of San Bernardino	Baseline_California	1,185		0	384	1	258	1993	2016	
8	City of San Bernardino	Cajon1	1,884		0	335	1	103	1983	2004	
9	City of San Bernardino	Cajon2	1,887	143-418	0	335	1	219	1983	2016	
10	City of San Bernardino	Cajon3	1,895	150-347	0	304	1	373	1984	2016	*
11	City of San Bernardino	CajonCyn	2,328	40-169	0	130	1	410	1966	2016	
12	City of San Bernardino	DevilCanyon1	1,529	186-236	0	236	1	621	1966	2016	
13	City of San Bernardino	DevilCanyon3	1,889		0	523	1	263	1981	2016	
14	City of San Bernardino	DevilCanyon4	1,903		0	130	1	344	1983	2016	
15	City of San Bernardino	DevilCanyon5	1,562		0	348	1	293	1985	2016	*
16	City of San Bernardino	DTSC001A	1,311		0	394	1	15	1996	2000	
17	City of San Bernardino	DTSC001B	1,311		0	394	1	171	1996	2016	
18	City of San Bernardino	DTSC001C	1,310		0	394	1	173	1996	2016	
19	City of San Bernardino	DTSC002A	1,307		0	399	1	16	1996	2014	
20	City of San Bernardino	DTSC002B	1,307		0	400	1	166	1996	2016	
21	City of San Bernardino	DTSC002C	1,307		0	399	1	168	1996	2016	
22	City of San Bernardino	EPA006PA	1,396		0	300	1	138	2003	2016	
23	City of San Bernardino	EPA007PA	1,404		0	316	1	136	2003	2016	
24	City of San Bernardino	Kenwood1	2,351	73-403	0	398	1	227	1991	2016	
25	City of San Bernardino	Mill_D	1,000	144-172, 188-202, 212-217, 258-272, 288-305, 317-323, 414-417	0	341	1	216	1984	2016	
26	City of San Bernardino	MWColima	1,278	240-340, 418-442	0	444	1	56	1983	2000	
27	City of San Bernardino	MWPaperboard	1,328	227-431	0	449	1	178	1983	2014	*
28	City of San Bernardino	MWState	1,227	60-128, 248-345	0	378	1	152	1983	2012	
29	City of San Bernardino	Newmark1	1,413	186-406	0	330	1	360	1983	2016	*
30	City of San Bernardino	Newmark2	1,405	148-240, 252-336	0	338	1	363	1983	2016	
31	City of San Bernardino	Newmark3	1,406	232-270, 283-305, 331-462	0	331	1	533	1966	2016	
32	City of San Bernardino	PerrisHill2	1,159		0	303	1	52	1983	1996	
33	City of San Bernardino	PerrisHill3	1,165	102-148, 156-202	0	272	1	222	1983	2006	
34	City of San Bernardino	PerrisHill4	1,168	130-215, 244-291	0	315	1	346	1983	2016	
35	City of San Bernardino	PerrisHill5	1,174	126-142, 156-210, 310-352	0	312	1	343	1983	2016	
36	City of San Bernardino	So_G_St	1,030	130-152, 208-250, 276-296, 338-348	0	351	1	82	1968	2005	*
37	City of San Bernardino	Vincent	2,314	44-174	0	173	1	326	1984	2016	*
38	City of San Bernardino	Waterman	1,244	258-267, 295-315	0	404	1	403	1983	2016	
39	City of San Bernardino / Newmark Muscoy EPA	DTSC003A	1,288		0	435	1	98	1996	2013	

Target Wells Used for Model Calibration
SBBA Model Area

Number	Owner	Well Name	Surface Elevation [ft, amsl]	Screened Interval Depth [ft, bgs]	Top Depth of Selected Model Layer [ft,bgs]	Bottom Depth of Selected Model Layer [ft,bgs]	Model Layer	Number of Water Level Data	Range of Available Water Level Data		Hydrograph
40	City of San Bernardino / Newmark Muscoy EPA	EPA001PA	1,094	380-400	0	390	1	167	2003	2016	
41	City of San Bernardino / Newmark Muscoy EPA	EPA002PA	1,092	230-250	0	383	1	183	2003	2016	
42	City of San Bernardino / Newmark Muscoy EPA	EPA003PA	1,095	230-250	0	382	1	153	2003	2016	
43	City of San Bernardino / Newmark Muscoy EPA	EPA004PA	1,086	310-330	0	338	1	140	2003	2016	
44	City of San Bernardino / Newmark Muscoy EPA	EPA005PA	1,083	230-250	0	290	1	166	2003	2016	
45	City of San Bernardino / Newmark Muscoy EPA	EPA108PA	1,119		0	447	1	174	2003	2016	
46	City of San Bernardino / Newmark Muscoy EPA	EPA109PA	1,137		0	510	1	14	2005	2015	
47	City of San Bernardino / Newmark Muscoy EPA	EPA109PB	1,137		0	510	1	12	2005	2015	
48	City of San Bernardino / Newmark Muscoy EPA	EPA110PA	1,145		0	537	1	149	2005	2014	
49	City of San Bernardino / Newmark Muscoy EPA	EPA110PB	1,145		0	537	1	202	2005	2016	
50	City of San Bernardino / Newmark Muscoy EPA	EPA110PC	1,145		0	537	1	195	2005	2016	
51	City of San Bernardino / Newmark Muscoy EPA	EPA110PD	1,146		0	537	1	171	2005	2016	
52	City of San Bernardino / Newmark Muscoy EPA	EPA111PA	1,166		0	554	1	71	2005	2009	
53	City of San Bernardino / Newmark Muscoy EPA	EPA111PB	1,166		0	554	1	181	2005	2016	
54	City of San Bernardino / Newmark Muscoy EPA	EPA111PC	1,166		0	554	1	173	2005	2016	
55	City of San Bernardino / Newmark Muscoy EPA	EPA112PA	1,180		0	423	1	86	2003	2012	
56	City of San Bernardino / Newmark Muscoy EPA	EPA112PB	1,182		0	423	1	37	2003	2011	
57	City of San Bernardino / Newmark Muscoy EPA	MW002A	1,414		0	327	1	58	1996	2014	
58	City of San Bernardino / Newmark Muscoy EPA	MW003A	1,418		0	324	1	32	1996	2006	
59	City of San Bernardino / Newmark Muscoy EPA	MW004A	1,411		0	326	1	239	1994	2016	
60	City of San Bernardino / Newmark Muscoy EPA	MW005A	1,411		0	338	1	32	1996	2006	
61	City of San Bernardino / Newmark Muscoy EPA	MW006A	1,436		0	322	1	173	1996	2016	
62	City of San Bernardino / Newmark Muscoy EPA	MW008A	1,475	275-295	0	295	1	174	1996	2016	

Target Wells Used for Model Calibration
SBBA Model Area

Number	Owner	Well Name	Surface Elevation [ft, amsl]	Screened Interval Depth [ft, bgs]	Top Depth of Selected Model Layer [ft,bgs]	Bottom Depth of Selected Model Layer [ft,bgs]	Model Layer	Number of Water Level Data	Range of Available Water Level Data		Hydrograph
63	City of San Bernardino / Newmark Muscoy EPA	MW009A	1,379		0	282	1	218	1994	2016	
64	City of San Bernardino / Newmark Muscoy EPA	MW010A	1,128	350-380	0	409	1	224	1994	2016	
65	City of San Bernardino / Newmark Muscoy EPA	MW012A	1,090	240-270	0	394	1	221	1996	2016	
66	City of San Bernardino / Newmark Muscoy EPA	MW014A	1,077	270-300	0	302	1	225	1996	2016	
67	City of San Bernardino / Newmark Muscoy EPA	MW016A	1,385		0	344	1	203	1996	2016	
68	City of San Bernardino / Newmark Muscoy EPA	MW017A	1,394		0	347	1	209	1996	2016	
69	City of San Bernardino / Newmark Muscoy EPA	MW126	1,554	220-240	0	326	1	50	1996	2013	
70	City of San Bernardino / Newmark Muscoy EPA	MW127A	1,546	341-361	0	458	1	194	1994	2016	
71	City of San Bernardino / Newmark Muscoy EPA	MW127B	1,546	431-451	0	458	1	194	1994	2016	
72	City of San Bernardino / Newmark Muscoy EPA	MW128A	1,215	410-440	0	464	1	231	1994	2016	
73	City of San Bernardino / Newmark Muscoy EPA	MW129A	1,200	443-473	0	422	1	231	1994	2016	
74	City of San Bernardino / Newmark Muscoy EPA	MW130A	1,176	340-370	0	577	1	225	1994	2016	
75	City of San Bernardino / Newmark Muscoy EPA	MW130B	1,175	550-580	0	577	1	221	1994	2016	
76	City of San Bernardino / Newmark Muscoy EPA	MW132A	1,477	142-182	0	303	1	91	2001	2015	
77	City of San Bernardino / Newmark Muscoy EPA	MW133A	1,432	185-225	0	252	1	96	2001	2015	
78	City of San Bernardino / Newmark Muscoy EPA	MW133B	1,432	280-320	0	252	1	96	2001	2015	
79	City of San Bernardino / Newmark Muscoy EPA	MW134	1,421	140-180	0	158	1	97	2001	2015	
80	City of San Bernardino / Newmark Muscoy EPA	MW136A	1,123	420-440	0	465	1	168	2002	2016	
81	City of San Bernardino / Newmark Muscoy EPA	MW137A	1,145	330-350	0	423	1	182	2002	2016	
82	City of San Bernardino / Newmark Muscoy EPA	MW138A	1,158	320-340	0	364	1	217	2002	2016	
83	City of San Bernardino / Newmark Muscoy EPA	MW139A	1,170	360-380	0	417	1	163	2002	2016	
84	East Valley Water District	No120NF3	1,410	118-232	0	321	1	143	1987	2016	*
85	East Valley Water District	Plant_No._14	1,092	42-44, 95-102, 111-130	0	205	1	574	1966	2005	*
86	East Valley Water District	Plant_No_68	1,149		0	197	1	526	1966	2004	*
87	East Valley Water District	PlantNo40	1,197	110-157, 190-226, 231-245	0	302	1	521	1966	2016	
88	East Valley Water District	Tri-City	1,195		0	140	1	446	1966	2016	*

Table 4

Target Wells Used for Model Calibration
SBBA Model Area

Number	Owner	Well Name	Surface Elevation [ft, amsl]	Screened Interval Depth [ft, bgs]	Top Depth of Selected Model Layer [ft,bgs]	Bottom Depth of Selected Model Layer [ft,bgs]	Model Layer	Number of Water Level Data	Range of Available Water Level Data		Hydrograph
89	Fontana Water Company	FU13	1,552		0	541	1	27	1991	2016	
90	Fontana Water Company	FU26	2,065	80-140	0	472	1	52	1991	2016	
91	Fontana Water Company	FU27	2,243	66-114	0	50	1	25	1991	2016	
92	Gage Canal Company	LowerKelly	1,040		0	282	1	56	1991	2015	*
93	GeoLogic Associates (Landfills)	CJ001	1,759	276-316	0	249	1	29	1991	2012	
94	GeoLogic Associates (Landfills)	CJ001A	1,742	311-351	0	305	1	16	1995	2012	
95	GeoLogic Associates (Landfills)	CJ002	1,687	278-320	0	433	1	34	1995	2012	
96	GeoLogic Associates (Landfills)	CJ003	1,692	289-330	0	307	1	44	1995	2012	
97	GeoLogic Associates (Landfills)	CJ008	1,768	234-244	0	196	1	46	1996	2015	
98	GeoLogic Associates (Landfills)	CJ009RD	1,746	200-210	0	309	1	20	1996	2007	
99	GeoLogic Associates (Landfills)	CJ010	1,711	135-145	0	112	1	48	1996	2015	
100	GeoLogic Associates (Landfills)	CJ011	1,676	179-189	0	271	1	49	1996	2014	
101	GeoLogic Associates (Landfills)	CJ012	1,668	246-256	0	403	1	50	1996	2015	
102	GeoLogic Associates (Landfills)	CJ014	1,665	245-255	0	525	1	96	1995	2013	
103	GeoLogic Associates (Landfills)	CJ015	1,668	355-378	0	403	1	115	1995	2015	
104	GeoLogic Associates (Landfills)	CJ016	1,733	250-270	0	166	1	96	1996	2015	
105	Grant Water Company	Grant	1,270	80-90, 174-204, 220-309	0	381	1	37	1985	2005	
106	Inland Valley Development	Local_No_2	1,087		0	278	1	60	1982	2005	*
107	Lockheed-Martin	LMW-1Port1	1,102	115-125	0	276	1	14	1997	2007	
108	Lockheed-Martin	LMW-1Port2	1,102	165-175	0	276	1	17	1997	2007	
109	Lockheed-Martin	LMW-1Port3	1,102	215-225	0	276	1	34	1997	2015	
110	Lockheed-Martin	LMW-2Port1	1,095	120-130	0	328	1	12	1997	2007	
111	Lockheed-Martin	LMW-2Port2	1,096	175-185	0	328	1	24	1997	2013	
112	Lockheed-Martin	LMW-2Port3	1,097	210-220	0	328	1	34	1997	2015	
113	Lockheed-Martin	LMW-2Port4	1,098	275-285	0	328	1	34	1997	2015	
114	Lockheed-Martin	LMW-3Port1	1,072	150-160	0	365	1	18	1998	2007	
115	Lockheed-Martin	LMW-3Port2	1,072	225-235	0	365	1	34	1998	2015	
116	Lockheed-Martin	LMW-3Port3	1,072	295-305	0	365	1	34	1998	2015	
117	Lockheed-Martin	LMW-3Port4	1,072	350-360	0	365	1	34	1998	2015	
118	Lockheed-Martin	LMW-6Port1	1,071	170-180	0	256	1	22	1998	2015	
119	Lockheed-Martin	LMW-6Port2	1,071	225-235	0	256	1	34	1998	2015	
120	Lockheed-Martin	LMW-7Port1	1,113	100-110	0	245	1	13	1998	2007	
121	Lockheed-Martin	LMW-7Port2	1,113	255-265	0	245	1	34	1998	2015	
122	Lockheed-Martin	LMW-7Port3	1,113	350-360	0	245	1	34	1998	2015	
123	Lockheed-Martin	LMW-7Port4	1,113	420-430	0	245	1	34	1998	2015	
124	Muscoy Mutual Water Company	MuscoyMutual1	1,487		0	626	1	194	1983	1987	
125	Muscoy Mutual Water Company	MuscoyMutual3	1,511		0	628	1	144	1983	1986	
126	Muscoy Mutual Water Company	MuscoyMutual5	1,485	144-625	0	619	1	103	1996	2016	
127	Ramirez, J.J.	Alabama	1,223	79-209	0	240	1	63	1984	2002	
128	REDLANDS UNIFIED SCHOOL DISTRICT	OpalSt	1,653		0	182	1	142	1966	1988	
129	Unknown	1S1W19P	2,758		0	282	1	4	1968	1986	

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Target Wells Used for Model Calibration
SBBA Model Area

Number	Owner	Well Name	Surface Elevation [ft, amsl]	Screened Interval Depth [ft, bgs]	Top Depth of Selected Model Layer [ft,bgs]	Bottom Depth of Selected Model Layer [ft,bgs]	Model Layer	Number of Water Level Data	Range of Available Water Level Data		Hydrograph
130	Unknown	Highland/Roosevelt	1,535		0	157	1	82	1969	2005	
131	Unknown	Lugonia	1,135		0	246	1	118	1966	2002	*
132	Unknown	MW131A	1,548	300-340	0	486	1	83	2002	2015	
133	Unknown	MW131B	1,548	435-475	0	486	1	7	2002	2008	
134	Unknown	MWCOE001A	1,620	289-309	0	447	1	24	1998	2014	
135	Unknown	MWCOE001B	1,620	345-365	0	447	1	32	1998	2015	
136	Unknown	MWCOE002	1,670	330-350	0	364	1	28	1999	2015	
137	Unknown	MWCOE003	1,669	418-438	0	433	1	25	1999	2015	
138	Unknown	MWCOE005	1,768		0	134	1	30	1999	2015	
139	Unknown	MWCOE006	1,749		0	84	1	29	1999	2015	
140	Unknown	MWCOE007	1,757	125-145	0	130	1	31	1999	2015	
141	Unknown	PZ124	1,576	120-160	0	296	1	19	1996	2013	
142	USGS	Commerce_Center_3	1,000	240-260	0	303	1	205	2001	2016	*
143	USGS	Commerce_Center_4	1,000	25-45	0	303	1	143	2001	2013	*
144	USGS	GarnerParkA	1,120	162-176	0	420	1	242	1986	2013	*
145	USGS	GarnerParkB	1,120	243-258	0	420	1	320	1986	2016	*
146	USGS	HarlemSprings	1,120	90-93, 145-152, 179-185	0	160	1	10	1984	1991	
147	USGS	MeadowbrookParkA	1,015	100-120	0	342	1	322	1991	2016	*
148	USGS	MeadowbrookParkB	1,015	300-320	0	342	1	320	1991	2016	*
149	USGS	Riverview_Dr_5	1,360	220-240	0	371	1	162	2001	2014	*
150	USGS	USGS_5th_Sierra	1,042		0	326	1	404	1966	2006	*
151	USGS	WhittierAve	1,203		0	331	1	49	1970	2008	*
152	USGS/SBVMWD	16th_Crestview	1,130		0	249	1	367	1966	2008	*
153	USGS/SBVMWD	Cone_Camp_3	1,639	280-300	0	359	1	196	1997	2014	*
154	USGS/SBVMWD	Cone_Camp_4	1,639	124-144	0	359	1	72	1998	2012	*
155	USGS/SBVMWD	Cone_Camp_5	1,639	91-101	0	359	1	36	1998	2012	*
156	USGS/SBVMWD	Cone_Camp_6	1,639	65-75	0	359	1	31	1998	2012	*
157	USGS/SBVMWD	SBVMWD_Backyard_1	975	160-200	0	296	1	306	1989	2016	*
158	USGS/SBVMWD	SBVMWD_Backyard_5	975	16-26	0	296	1	73	2001	2007	*
159	USGS/SBVMWD	SierraHighSchoolA	1,077	170-190	0	190	1	316	1991	2016	*
160	USGS/SBVMWD/York Nursery	Del_Rosa	1,477		0	320	1	60	1984	2000	
161	City of Redlands	Airport_No_2	1,469	365-450	354	457	2	103	1997	2016	*
162	City of Redlands	Orange5	1,290	153-490	385	506	2	185	1983	2016	
163	City of Riverside (Bear Valley Mutual WC)	SBAve1	1,480	300-573	324	459	2	193	1984	2016	*
164	City of San Bernardino	Lytle_Creek_#2	1,240	245-1205	370	483	2	224	1990	2014	
165	City of San Bernardino	Mallory3	1,320	380-448, 478-484, 510-628	448	539	2	362	1983	2016	
166	City of San Bernardino	Newmark4	1,414	300-404	328	416	2	492	1967	2016	
167	City of San Bernardino / Newmark Muscoy EPA	DTSC003C	1,288		448	474	2	191	1996	2016	*
168	City of San Bernardino / Newmark Muscoy EPA	MW002B	1,414		327	430	2	58	1996	2014	

Target Wells Used for Model Calibration
SBBA Model Area

Number	Owner	Well Name	Surface Elevation [ft, amsl]	Screened Interval Depth [ft, bgs]	Top Depth of Selected Model Layer [ft,bgs]	Bottom Depth of Selected Model Layer [ft,bgs]	Model Layer	Number of Water Level Data	Range of Available Water Level Data		Hydrograph
169	City of San Bernardino / Newmark Muscoy EPA	MW003B	1,418		324	421	2	31	1996	2006	
170	City of San Bernardino / Newmark Muscoy EPA	MW004B	1,411		326	447	2	239	1994	2016	
171	City of San Bernardino / Newmark Muscoy EPA	MW005B	1,411		338	438	2	32	1996	2006	
172	City of San Bernardino / Newmark Muscoy EPA	MW006B	1,436		322	379	2	173	1996	2016	
173	City of San Bernardino / Newmark Muscoy EPA	MW007A	1,437		307	481	2	221	1994	2016	
174	City of San Bernardino / Newmark Muscoy EPA	MW009B	1,379	345-365	282	511	2	220	1994	2016	
175	City of San Bernardino / Newmark Muscoy EPA	MW013A	1,080	365-395	339	452	2	268	1996	2016	
176	City of San Bernardino / Newmark Muscoy EPA	MW016B	1,385		344	462	2	205	1996	2016	
177	City of San Bernardino / Newmark Muscoy EPA	MW017B	1,394		347	432	2	206	1996	2016	
178	City of San Bernardino / Newmark Muscoy EPA	MW132B	1,477	370-410	303	470	2	95	2001	2015	
179	City of San Bernardino / Newmark Muscoy EPA	MW136B	1,123	500-520	465	593	2	180	2002	2016	
180	East Valley Water District	Plant_No_136_DunkirkNo1	1,245	297-322, 330-390	314	543	2	522	1972	2016	
181	East Valley Water District	Plant_No_142	1,541	250-308, 326-348, 360-414	472	543	2	406	1970	2016	*
182	Lockheed-Martin	LMW-1Port4	1,102	280-290	276	465	2	34	1997	2015	
183	Lockheed-Martin	LMW-1Port5	1,102	335-345	276	465	2	34	1997	2015	
184	Lockheed-Martin	LMW-1Port6	1,102	405-415	276	465	2	34	1997	2015	
185	Lockheed-Martin	LMW-2Port5	1,099	345-355	328	502	2	34	1997	2015	
186	Lockheed-Martin	LMW-2Port6	1,100	390-400	328	502	2	34	1997	2015	
187	Lockheed-Martin	LMW-2Port7	1,101	480-490	328	502	2	34	1997	2015	
188	Lockheed-Martin	LMW-3Port5	1,072	435-445	365	526	2	34	1998	2015	
189	Lockheed-Martin	LMW-3Port6	1,072	490-500	365	526	2	34	1998	2015	
190	Lockheed-Martin	LMW-6Port3	1,071	295-305	256	477	2	34	1998	2015	
191	Lockheed-Martin	LMW-6Port4	1,071	380-390	256	477	2	34	1998	2015	
192	Lockheed-Martin	LMW-7Port5	1,113	510-520	245	497	2	34	1998	2015	
193	Lockheed-Martin	LMW-7Port6	1,113	595-605	245	497	2	34	1998	2015	
194	Unknown	140501	1,852	235-281, 281-490	258	268	2	28	1983	1998	*
195	USGS	Riverview_Dr_4	1,360	490-510	371	533	2	215	2001	2016	*
196	USGS/SBVMWD (Water Exploration, Inc.)	Kendall	1,322	200-350, 415-1100	357	528	2	110	1966	2005	
197	Western Fruit Growers	WFG#2	2,130	60-120, 125-152	194	300	2	30	1984	2005	
198	City of Redlands	Well_32	1,318		523	621	3	488	1966	2016	*
199	City of San Bernardino	10th_J	1,113	270-830, 850-970, 1000-1030	597	693	3	268	1990	2016	
200	City of San Bernardino	16th_Sierra	1,135	490-680	478	745	3	344	1983	2016	
201	City of San Bernardino	17th_Sierra1	1,142	494-572, 576-670	488	750	3	136	1983	2002	

Table 4

Target Wells Used for Model Calibration
SBBA Model Area

Number	Owner	Well Name	Surface Elevation [ft, amsl]	Screened Interval Depth [ft, bgs]	Top Depth of Selected Model Layer [ft,bgs]	Bottom Depth of Selected Model Layer [ft,bgs]	Model Layer	Number of Water Level Data	Range of Available Water Level Data		Hydrograph
202	City of San Bernardino	17th_Sierra2	1,140	210-990	488	750	3	139	1991	2008	
203	City of San Bernardino	19th_1	1,231	150-276, 322-356, 388-400, 470-512, 554-563, 575-611, 646-658	470	666	3	269	1983	2016	*
204	City of San Bernardino	19th_2	1,236	185-286, 286-346, 346-355, 610-665	466	659	3	363	1983	2016	
205	City of San Bernardino	23rd_E	1,175	354-370, 428-448, 494-828	477	796	3	275	1983	2008	*
206	City of San Bernardino	27th_Acacia	1,183	243-259, 290-410, 442-456, 477-717	464	724	3	388	1983	2016	
207	City of San Bernardino	30th_MtView	1,227	373-523	455	497	3	651	1966	2016	*
208	City of San Bernardino	40th_Valencia	1,355	220-920	503	726	3	248	1991	2016	
209	City of San Bernardino	Gilbert_Street	1,123	480-603, 625-685	346	649	3	364	1983	2015	
210	City of San Bernardino	Leroy	1,239	450-660	463	662	3	463	1967	2016	*
211	City of San Bernardino	Lynwood	1,236	320-335, 344-584, 629-660	476	644	3	245	1983	2016	
212	City of San Bernardino	Lytle_Creek_#3	1,248		272	282	3	205	1983	2016	
213	City of San Bernardino / Newmark Muscoy EPA	MW007B	1,437		481	508	3	222	1994	2016	
214	City of San Bernardino / Newmark Muscoy EPA	MW008B	1,475	470-490	460	510	3	172	1996	2016	
215	City of San Bernardino / Newmark Muscoy EPA	MW010B	1,128	490-520	485	720	3	242	1994	2016	
216	City of San Bernardino / Newmark Muscoy EPA	MW011A	1,101	500-530	463	738	3	223	1994	2016	
217	City of San Bernardino / Newmark Muscoy EPA	MW012B	1,089	670-700	583	746	3	219	1996	2016	
218	City of San Bernardino / Newmark Muscoy EPA	MW013B	1,080	525-555	452	689	3	236	1996	2016	
219	City of San Bernardino / Newmark Muscoy EPA	MW014B	1,077	570-600	389	682	3	233	1996	2016	
220	City of San Bernardino / Newmark Muscoy EPA	MW015A	1,070	520-550	343	707	3	222	1996	2016	
221	City of San Bernardino / Newmark Muscoy EPA	MW015B	1,070	690-720	343	707	3	231	1996	2016	
222	City of San Bernardino / Newmark Muscoy EPA	MW128B	1,215	690-720	564	732	3	250	1994	2016	
223	City of San Bernardino / Newmark Muscoy EPA	MW137B	1,145	520-540	489	592	3	177	2002	2016	
224	City of San Bernardino / Newmark Muscoy EPA	MW138B	1,158	550-570	402	580	3	209	2002	2016	
225	City of San Bernardino / Newmark Muscoy EPA	MW139B	1,170	540-560	482	589	3	159	2002	2016	
226	East Valley Water District	Plant_No_24A	1,245	340-384, 440-456, 495-552, 629-657	490	662	3	542	1966	2016	
227	Gage Canal Company	Gage_Well_30-1	1,054	478-618, 636-644, 672-676, 682-700, 758-762, 808-822, 838-874, 907-911	491	737	3	155	1966	2011	*
228	Lockheed-Martin	LMW-1Port7	1,102	475-485	465	618	3	34	1997	2015	
229	Lockheed-Martin	LMW-1Port8	1,102	525-535	465	618	3	34	1997	2015	
230	Lockheed-Martin	LMW-1Port9	1,102	605-615	465	618	3	34	1997	2015	
231	Lockheed-Martin	LMW-2Port8	1,102	550-560	502	650	3	34	1997	2015	

Target Wells Used for Model Calibration
SBBA Model Area

Number	Owner	Well Name	Surface Elevation [ft, amsl]	Screened Interval Depth [ft, bgs]	Top Depth of Selected Model Layer [ft,bgs]	Bottom Depth of Selected Model Layer [ft,bgs]	Model Layer	Number of Water Level Data	Range of Available Water Level Data		Hydrograph
232	Lockheed-Martin	LMW-2Port9	1,103	590-600	502	650	3	34	1997	2015	
233	Lockheed-Martin	LMW-3Port7	1,072	580-590	526	724	3	34	1998	2015	
234	Lockheed-Martin	LMW-3Port8	1,072	635-645	526	724	3	36	1996	2015	
235	Lockheed-Martin	LMW-6Port5	1,071	540-550	477	694	3	34	1998	2015	
236	Lockheed-Martin	LMW-6Port6	1,071	620-630	477	694	3	33	1998	2015	
237	Mount Vernon Water Company	MtVernon	1,259	225-308, 348-374, 382-422, 462-592	472	660	3	237	1971	2016	
238	Unknown	1	1,310		299	529	3	120	1975	2008	
239	USGS	Commerce_Center_2	1,000	520-540	509	685	3	208	2001	2016	*
240	USGS	GarnerParkC	1,120	538-552	510	675	3	324	1986	2016	*
241	USGS	MeadowbrookParkC	1,015	680-700	616	783	3	320	1991	2016	*
242	USGS/SBVMWD	Cone_Camp_2	1,639	500-520	480	631	3	215	1997	2015	*
243	USGS/SBVMWD	SBVMWD_Backyard_2	975	650-655	378	676	3	218	2001	2016	*
244	USGS/SBVMWD	SBVMWD_Backyard_3	975	555-574	378	676	3	169	2001	2016	*
245	USGS/SBVMWD	SBVMWD_Backyard_4	975	388-398	378	676	3	94	2001	2016	*
246	USGS/SBVMWD	SierraHighSchoolB	1,077	340-400	314	468	3	304	1991	2016	*
247	USGS/SBVMWD	SierraHighSchoolC	1,077	520-530	314	468	3	316	1991	2016	*
248	West Valley Water District (was WSBCWD)	Well_No_1	1,473	200-630	772	890	3	267	1966	2007	*
249	West Valley Water District (was WSBCWD)	Well_No_13	1,160	180-224, 252-288, 346-378, 428-448, 490-500, 536-604	442	636	3	569	1966	2001	*
250	West Valley Water District (was WSBCWD)	WellNo7	1,269	502-510, 569-673, 775-794, 833-850, 871-896	554	728	3	304	1968	2007	
251	City of Redlands	Agate_No_2	1,720	283-465	358	392	4	408	1980	2016	
252	City of San Bernardino / Newmark Muscoy EPA	EPA003PB	1,095	760-780	720	845	4	142	2003	2016	
253	City of San Bernardino / Newmark Muscoy EPA	EPA108PB	1,119		651	847	4	193	2003	2016	
254	City of San Bernardino / Newmark Muscoy EPA	EPA109PC	1,137		609	963	4	14	2005	2015	
255	City of San Bernardino / Newmark Muscoy EPA	EPA110PE	1,149		645	1,014	4	70	2005	2016	
256	City of San Bernardino / Newmark Muscoy EPA	MW010C	1,127	750-780	720	872	4	60	1994	2005	
257	City of San Bernardino / Newmark Muscoy EPA	MW011B	1,101	770-800	738	843	4	260	1994	2016	
258	City of San Bernardino / Newmark Muscoy EPA	MW013C	1,080	815-845	689	854	4	227	1996	2016	*
259	City of San Bernardino / Newmark Muscoy EPA	MW128C	1,215	860-890	732	966	4	223	1994	2016	
260	City of San Bernardino / Newmark Muscoy EPA	MW129B	1,199	730-760	698	1,011	4	215	1994	2016	
261	City of San Bernardino / Newmark Muscoy EPA	MW129C	1,199	851-881	698	1,011	4	218	1994	2016	
262	City of San Bernardino / Newmark Muscoy EPA	MW130C	1,175	890-920	734	1,050	4	260	1994	2016	

Table 4

Target Wells Used for Model Calibration
SBBA Model Area

Number	Owner	Well Name	Surface Elevation [ft, amsl]	Screened Interval Depth [ft, bgs]	Top Depth of Selected Model Layer [ft,bgs]	Bottom Depth of Selected Model Layer [ft,bgs]	Model Layer	Number of Water Level Data	Range of Available Water Level Data		Hydrograph
263	City of San Bernardino / Newmark Muscoy EPA	MW136C	1,123	730-750	657	827	4	190	2002	2016	
264	City of San Bernardino / Newmark Muscoy EPA	MW137C	1,145	790-810	592	916	4	180	2002	2016	
265	City of San Bernardino / Newmark Muscoy EPA	MW139C	1,170	790-810	589	951	4	168	2002	2016	
266	Lockheed-Martin	LMW-1Port10	1,102	695-705	618	782	4	33	1997	2015	
267	Lockheed-Martin	LMW-2Port10	1,104	690-700	650	816	4	18	1997	2013	
268	Lockheed-Martin	LMW-7Port7	1,113	665-675	616	807	4	34	1998	2015	
269	USGS	Riverview_Dr_3	1,360	750-770	680	803	4	214	2001	2016	*
270	City of San Bernardino	7th	1,056	552-830, 861-938	824	987	5	364	1983	2016	*
271	City of San Bernardino	Antil_5	1,058	1250-1374	800	1,101	5	137	1983	2007	
272	City of San Bernardino	Antil_6	1,053	416-640, 836-908, 923-973, 1015-1108	808	1,029	5	358	1983	2016	
273	City of San Bernardino	Hanford_No_1	1,030	680-734	868	1,028	5	278	1983	2016	*
274	City of San Bernardino / Newmark Muscoy EPA	EPA001PB	1,094	980-1000	863	1,096	5	202	2003	2016	
275	City of San Bernardino / Newmark Muscoy EPA	EPA002PB	1,092	880-900	847	1,076	5	218	2005	2016	
276	City of San Bernardino / Newmark Muscoy EPA	EPA004PB	1,086	980-1000	833	1,022	5	181	2003	2016	
277	City of San Bernardino / Newmark Muscoy EPA	EPA005PB	1,083	880-900	814	991	5	173	2003	2016	
278	City of San Bernardino / Newmark Muscoy EPA	MW011C	1,101	1070-1100	843	1,027	5	222	1994	2016	*
279	City of San Bernardino / Newmark Muscoy EPA	MW012C	1,082	1040-1070	835	1,070	5	49	1996	2005	
280	City of San Bernardino / Newmark Muscoy EPA	MW014C	1,060	1060-1090	826	1,023	5	59	1996	2005	
281	City of San Bernardino / Newmark Muscoy EPA	MW015C	1,061	1020-1050	795	916	5	66	1996	2006	
282	City of San Bernardino / Newmark Muscoy EPA	MW135C	1,112	850-870	792	1,081	5	191	2002	2016	
283	City of San Bernardino / Newmark Muscoy EPA	MW138C	1,158	960-980	938	1,203	5	183	2002	2016	
284	USGS	Commerce_Center_1	1,000	840-860	834	1,169	5	279	1995	2016	*
285	USGS	Riverview_Dr_1	1,360	1075-1095	803	968	5	259	1995	2016	*
286	USGS	Riverview_Dr_2	1,360	930-950	803	968	5	217	2001	2016	*
287	USGS/SBVMWD	Cone_Camp_1	1,639	770-790	737	766	5	252	1995	2016	*

Table 5

Target Wells Used for Model Calibration
Rialto-Colton Basin Model Area

Number	Owner	Well Name	Surface Elevation [ft, amsl]	Screened Interval Depth [ft, bgs]	Top Depth of Selected Model Layer [ft,bgs]	Bottom Depth of Selected Model Layer [ft,bgs]	Model Layer	Number of Water Level Data	Range of Available Water Level Data		Hydrograph
1	City of Colton	Colton-16	1,096	226-350, 418-490, 694-753	0	316	1	148	1998	2016	
2	City of Colton	Colton-23	975	200-260, 280-930	0	246	1	180	1998	2016	*
3	City of Riverside	Fault-11	1,015		0	234	1	116	1967	2016	*
4	City of Riverside	Fault-13	1,019		0	238	1	72	2009	2016	*
5	City of Riverside	Meeks	950	103-432	0	234	1	2	1992	2011	*
6	City of Riverside	Mill	940	135-435	0	220	1	2	1992	2011	
7	City of Riverside	Patterson	1,072	112-194, 198-263, 276-282, 290-326	0	250	1	134	1966	2016	
8	City of Riverside	Vaughn	959	101-125, 126-145, 167-194, 227-242, 264-270, 372-409	0	247	1	1	2011	2011	*
9	Riverside Highland Water Company	CR-4	947		0	183	1	26	1966	1970	
10	Riverside Highland Water Company	CR-4A	948	18-114, 164-170	0	181	1	51	1966	2015	
11	Unknown	1N/5W-19A01	1,795		0	262	1	6	1966	1992	
12	USGS	1S/4W-16P04S	1,015		0	242	1	48	1967	2008	
13	USGS	1S/4W-20H04	993	270-290	0	215	1	228	1993	2016	*
14	USGS	1S/4W-20H05	993	150-170	0	215	1	228	1993	2016	*
15	USGS	1S/4W-27M02S	993	189-209	0	174	1	116	2003	2016	*
16	USGS	1S/4W-27M03S	993	135-155	0	174	1	115	2003	2016	*
17	West Valley Water District	WVWD-21	1,854	80-120, 176-208, 212-224	0	300	1	473	1966	2003	
18	West Valley Water District	WVWD-23	1,868	100-580	0	347	1	530	1966	2016	*
19	West Valley Water District	WVWD-24	1,854	224-300	0	347	1	433	1966	2010	
20	West Valley Water District	WVWD-31	1,848	55-300	0	346	1	148	2000	2016	
21	City of Colton	Colton-15	1,097	244-344, 356-436, 500-514, 522-534	212	344	2	196	1966	2016	
22	City of Colton	Colton-17	1,100	194-778	213	348	2	372	1966	2016	
23	City of Colton	Colton-9	1,122	201-216, 267-326	213	348	2	20	1966	1970	
24	City of Colton	Katz/Hollow	987		158	466	2	71	1998	2007	
25	Emhart Industries	CMW-03A	1,665	429-449	207	506	2	19	2006	2011	
26	Emhart Industries	CMW-03B	1,665	459-479	207	506	2	22	2006	2011	
27	Emhart Industries	CMW-03C	1,665	504-524	207	506	2	22	2006	2011	
28	Emhart Industries	CMW-04A	1,658	400-440	229	512	2	17	2006	2011	
29	Emhart Industries	CMW-04B	1,658	455-475	229	512	2	18	2006	2011	
30	Emhart Industries	CMW-04C	1,658	490-510	229	512	2	22	2006	2011	
31	Emhart Industries	CMW-05A	1,648	400-440	244	510	2	14	2006	2009	*
32	Emhart Industries	CMW-05B	1,648	460-480	244	510	2	22	2006	2011	*
33	Emhart Industries	CMW-05C	1,648	500-520	244	510	2	22	2006	2011	*
34	Fontana Water Company	F10A	1,406	520-620	111	390	2	68	1992	2000	*
35	Fontana Water Company	F-23	1,542	282-312	136	441	2	27	1997	1999	*
36	Fontana Water Company	F38A	1,520		141	432	2	58	1995	1999	*
37	Fontana Water Company	F49A	1,418	300-1040	92	399	2	126	2001	2014	*
38	Goodrich Corp	CPW-17B	1,135	310-320	213	348	2	7	2010	2016	
39	Goodrich Corp	PW-1	1,704	440-480	233	511	2	38	2004	2014	
40	Goodrich Corp	PW-14A	1,170	295-305	206	343	2	3	2014	2016	

Table 5

Target Wells Used for Model Calibration
Rialto-Colton Basin Model Area

Number	Owner	Well Name	Surface Elevation [ft, amsl]	Screened Interval Depth [ft, bgs]	Top Depth of Selected Model Layer [ft,bgs]	Bottom Depth of Selected Model Layer [ft,bgs]	Model Layer	Number of Water Level Data	Range of Available Water Level Data		Hydrograph
41	Goodrich Corp	PW-2	1,639	455-495	189	506	2	38	2004	2014	
42	Goodrich Corp	PW-3	1,612	456-496	197	501	2	38	2004	2014	
43	Goodrich Corp	PW-4	1,627	470-510	231	510	2	37	2004	2014	
44	Goodrich Corp	PW-8A	1,515	440-450	138	420	2	16	2006	2014	
45	Meeks & Daley Water Company	MDWC-36	963		245	406	2	268	1966	1988	
46	Pyro Spectaculars	CMW-01A	1,654	428-448	200	508	2	15	2006	2011	
47	Pyro Spectaculars	CMW-01B	1,654	470-490	200	508	2	22	2006	2011	
48	Pyro Spectaculars	CMW-01C	1,654	513-533	200	508	2	23	2006	2011	
49	Pyro Spectaculars	CMW-02A	1,656	432-452	191	504	2	16	2006	2013	
50	Pyro Spectaculars	CMW-02B	1,656	471-491	191	504	2	24	2006	2014	
51	Pyro Spectaculars	CMW-02C	1,656	511-531	191	504	2	24	2006	2014	
52	San Bernardino County	F-10	1,586	366-406	117	479	2	141	1994	2015	
53	San Bernardino County	F-11	1,657	386-426	134	523	2	110	1994	2013	
54	San Bernardino County	F-14	1,531	380-390	119	447	2	85	1996	2003	
55	San Bernardino County	F-15	1,544	290-320	139	456	2	63	1996	2013	
56	San Bernardino County	F-16	1,533	354-364	123	451	2	65	1996	2001	
57	San Bernardino County	F-17	1,541	319-339	121	456	2	42	1996	1999	
58	San Bernardino County	F-18	1,525	368-378	116	446	2	83	1996	2003	
59	San Bernardino County	F-19	1,584	322-337	115	475	2	60	1996	2013	
60	San Bernardino County	F-2	1,543	333-353	135	463	2	114	1987	2014	
61	San Bernardino County	F-20	1,525	366-381	113	445	2	80	1996	2003	
62	San Bernardino County	F-21	1,513	297-317	120	432	2	60	1996	2012	
63	San Bernardino County	F-22	1,492	281-301	119	418	2	33	1997	2012	
64	San Bernardino County	F-24	1,561	345-355	122	455	2	80	1996	2014	
65	San Bernardino County	F-25	1,450	276-306	115	395	2	80	1997	2013	
66	San Bernardino County	F-26D	1,542	394-434	129	464	2	124	1997	2016	
67	San Bernardino County	F-26S	1,542	297-347	129	464	2	108	1997	2014	
68	San Bernardino County	F-28	1,435	310-330	109	395	2	65	1998	2014	
69	San Bernardino County	F-29	1,416	352-372	121	394	2	34	1998	2001	
70	San Bernardino County	F-2A	1,542	298-328	135	463	2	99	1987	2013	
71	San Bernardino County	F-3	1,582	357-397	119	482	2	119	1987	2008	
72	San Bernardino County	F-30	1,577	285-305	129	458	2	25	1998	2000	
73	San Bernardino County	F-31	1,562	321-341	131	454	2	38	1998	2001	
74	San Bernardino County	F-33A	1,534	310-350	119	451	2	10	2008	2013	
75	San Bernardino County	F-33B	1,534	380-420	119	451	2	25	2008	2016	
76	San Bernardino County	F-34A	1,536	300-340	138	455	2	12	2008	2013	
77	San Bernardino County	F-34B	1,536	360-400	138	455	2	25	2008	2016	
78	San Bernardino County	F-4	1,617	379-399	121	497	2	3	1987	1988	
79	San Bernardino County	F-5	1,542	307-349	127	462	2	157	1988	2016	
80	San Bernardino County	F-6AD	1,576	495-500	118	486	2	59	2002	2016	
81	San Bernardino County	F-6AS	1,576	417-437	118	486	2	68	2002	2016	
82	San Bernardino County	F-6S	1,574	337-457	117	486	2	106	1990	2016	

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Rialto-Colton Basin Model Area

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83	San Bernardino County	F-7	1,555	308-428	110	461	2	212	1990	2016	
84	San Bernardino County	F-8	1,591	312-432	121	473	2	161	1994	2016	
85	San Bernardino County	F-9	1,543	394-434	129	464	2	166	1994	2016	
86	San Bernardino County	M-1S	1,431	368-398, 433-458	123	431	2	25	2005	2010	*
87	San Bernardino County	M-2-Z1	1,389	407-412	121	372	2	20	2005	2013	*
88	San Bernardino County	M-6-Z1	1,447	390-400	109	442	2	34	2008	2016	
89	San Bernardino County	N-10S	1,485	405-435	125	445	2	66	2003	2016	
90	San Bernardino County	N-11S	1,461	403-413	133	426	2	62	2004	2016	
91	San Bernardino County	N-12S	1,515	428-438	118	468	2	62	2004	2016	
92	San Bernardino County	N-13S	1,471	368-388	110	447	2	63	2004	2016	
93	San Bernardino County	N-14S	1,420	408-438	122	432	2	45	2004	2010	
94	San Bernardino County	N-16B	1,531	385-445	115	453	2	35	2008	2016	
95	San Bernardino County	N-17B	1,455	355-405	100	429	2	29	2008	2015	
96	San Bernardino County	N-17C-1	1,455	450-490	100	429	2	33	2008	2015	
97	San Bernardino County	N-18B	1,426	350-390	86	411	2	36	2008	2016	
98	San Bernardino County	N-1D	1,571	496-501	130	466	2	53	2002	2016	
99	San Bernardino County	N-1S	1,571	395-425	130	466	2	45	2002	2014	
100	San Bernardino County	N-2D	1,620	497-502	143	479	2	62	2002	2016	
101	San Bernardino County	N-2S	1,620	415-445	143	479	2	42	2002	2014	
102	San Bernardino County	N-3S	1,578	442-462	117	490	2	72	2002	2016	
103	San Bernardino County	N-4S	1,648	445-515	135	512	2	34	2002	2015	
104	San Bernardino County	N-5S	1,591	372-402, 442-472	119	487	2	69	2002	2016	
105	San Bernardino County	N-6S	1,539	412-422, 427-432	122	468	2	66	2003	2016	
106	San Bernardino County	N-7S	1,539	375-395, 405-410	116	459	2	66	2003	2016	
107	San Bernardino County	N-8S	1,544	446-461	113	479	2	70	2003	2016	
108	San Bernardino County	N-9S	1,515	460-470	118	468	2	1	2003	2003	
109	San Bernardino County	S-2	1,512	486-496	129	427	2	26	2005	2016	
110	Unknown	#2	1,071		316	400	2	1	1971	1971	
111	Unknown	TW-1	1,644		143	493	2	28	2005	2013	
112	USGS	1N/5W-27D02	1,543	225-245, 342-362, 450-470	155	439	2	233	1993	2016	*
113	USGS	1N/5W-28J02	1,512	330-350, 430-450	137	415	2	223	1993	2016	*
114	USGS	1N/5W-29Q05	1,543	300-320	126	458	2	43	1994	2001	*
115	USGS	1S/4W-08E04	1,110	310-330	261	360	2	236	1992	2016	*
116	USGS	1S/4W-27M01	1,001	283-303	174	457	2	119	2003	2016	*
117	USGS	1S/5W-13B05S	1,160	270-290	189	308	2	60	2008	2016	*
118	West Valley Water District	WVWD-22A	1,558		144	261	2	137	2003	2016	
119	City of Rialto	Rialto-1	1,540	605-865, 890-958	448	668	4	534	1966	2016	
120	City of Rialto	Rialto-2	1,508	588-750, 780-818, 850-870, 965-1000	374	599	4	538	1966	2016	
121	City of Rialto	Rialto-3	1,417	525-860	440	528	4	496	1972	2016	*
122	City of Rialto	Rialto-4	1,352	116-400	320	517	4	543	1966	2016	*
123	City of Rialto	Rialto-5	1,318	240-280, 360-820	312	486	4	271	1994	2016	
124	City of Rialto	Rialto-6	1,305	440-830, 930-970	257	504	4	258	1989	2016	*

Target Wells Used for Model Calibration
Rialto-Colton Basin Model Area

Number	Owner	Well Name	Surface Elevation [ft, amsl]	Screened Interval Depth [ft, bgs]	Top Depth of Selected Model Layer [ft,bgs]	Bottom Depth of Selected Model Layer [ft,bgs]	Model Layer	Number of Water Level Data	Range of Available Water Level Data		Hydrograph
125	City of Rialto	Rialto-7	1,302	312-552	313	534	4	212	1971	2016	
126	City of Rialto	Rialto-High	1,160	270-290, 420-440, 540-560, 675-695	318	525	4	2	2010	2011	
127	City of Riverside	Johnson-1	956	194-220, 224-230, 250-260, 296-324, 334-402, 430-440, 480-510, 542-554, 560-574, 580-596	422	525	4	368	1966	2016	
128	City of Riverside	Johnson-4	956	300-410, 500-530, 570-610, 730-820	417	522	4	40	2006	2014	
129	EPA	EPA-MP1A	1,226	363-373	267	499	4	7	2010	2016	
130	EPA	EPA-MP1B	1,226	459-469	267	499	4	7	2010	2016	
131	EPA	EPA-MP2A	1,270	346-356	299	450	4	7	2010	2016	
132	EPA	EPA-MP2B	1,270	406-416	299	450	4	7	2010	2016	
133	EPA	EPA-MP3A	1,363	454-464	299	593	4	7	2010	2016	
134	EPA	EPA-MP3B	1,363	590-600	299	593	4	7	2010	2016	
135	EPA	EPA-MP4A	1,458	411-421	377	621	4	5	2010	2014	
136	EPA	EPA-MP4B	1,458	505-515	377	621	4	5	2010	2014	
137	EPA	EPA-MP4C	1,458	585-595	377	621	4	5	2010	2014	
138	EPA	EPA-MP5A	1,285	352-362	280	439	4	7	2010	2016	
139	EPA	EPA-MP5B	1,285	408-418	280	439	4	7	2010	2016	
140	EPA	EPA-MP6A	1,273	351-361	276	525	4	7	2010	2016	
141	EPA	EPA-MP6B	1,273	445-455	276	525	4	7	2010	2016	
142	EPA	EPA-MP7A	1,227	355-365	289	526	4	3	2014	2016	
143	EPA	EPA-MP7B	1,227	430-440	289	526	4	3	2014	2016	
144	EPA	EPA-MP7C	1,227	500-510	289	526	4	3	2014	2016	
145	EPA	EPA-MP8A	1,220	345-355	267	489	4	3	2014	2016	
146	EPA	EPA-MP8B	1,220	395-405	267	489	4	3	2014	2016	
147	EPA	EPA-MP8C	1,220	490-500	267	489	4	3	2014	2016	
148	Fontana Water Company	F10C	1,406	400-790	707	872	4	120	2002	2016	*
149	Fontana Water Company	F13A	1,510	520-990	452	583	4	181	1998	2016	*
150	Goodrich Corp	CPW-16A	1,181	292-302	293	525	4	9	2009	2016	
151	Goodrich Corp	CPW-16B	1,181	375-385	293	525	4	8	2010	2016	
152	Goodrich Corp	CPW-16C	1,181	414-424	293	525	4	8	2010	2016	
153	Goodrich Corp	CPW-16D	1,181	510-520	293	525	4	8	2010	2016	
154	Goodrich Corp	CPW-17C	1,135	410-420	358	551	4	7	2010	2016	
155	Goodrich Corp	CPW-17D	1,135	500-510	358	551	4	7	2010	2016	
156	Goodrich Corp	PW-10A	1,269	355-365	263	494	4	6	2013	2016	
157	Goodrich Corp	PW-10B	1,269	455-465	263	494	4	6	2013	2016	
158	Goodrich Corp	PW-11A	1,221	350-360	272	506	4	6	2013	2016	
159	Goodrich Corp	PW-11B	1,221	445-455	272	506	4	6	2013	2016	
160	Goodrich Corp	PW-12A	1,242	330-340	266	491	4	6	2013	2016	
161	Goodrich Corp	PW-12B	1,242	390-400	266	491	4	6	2013	2016	
162	Goodrich Corp	PW-13A	1,150	335-345	323	532	4	3	2014	2016	
163	Goodrich Corp	PW-13B	1,150	390-400	323	532	4	3	2014	2016	
164	Goodrich Corp	PW-13C	1,150	470-480	323	532	4	3	2014	2016	

Target Wells Used for Model Calibration
Rialto-Colton Basin Model Area

Number	Owner	Well Name	Surface Elevation [ft, amsl]	Screened Interval Depth [ft, bgs]	Top Depth of Selected Model Layer [ft,bgs]	Bottom Depth of Selected Model Layer [ft,bgs]	Model Layer	Number of Water Level Data	Range of Available Water Level Data		Hydrograph
165	Goodrich Corp	PW-14B	1,170	360-370	353	550	4	3	2014	2016	
166	Goodrich Corp	PW-14C	1,170	420-430	353	550	4	3	2014	2016	
167	Goodrich Corp	PW-14D	1,170	520-530	353	550	4	3	2014	2016	
168	Goodrich Corp	PW-2A	1,640		575	682	4	31	2004	2007	
169	Goodrich Corp	PW-3A	1,612		547	681	4	29	2004	2012	
170	Goodrich Corp	PW-4A	1,627		556	693	4	37	2004	2013	
171	Goodrich Corp	PW-5A	1,424	465-475	368	575	4	18	2006	2014	
172	Goodrich Corp	PW-5B	1,424	510-520	368	575	4	18	2006	2014	
173	Goodrich Corp	PW-5C	1,424	555-565	368	575	4	18	2006	2014	
174	Goodrich Corp	PW-6A	1,409	440-450	347	515	4	17	2006	2014	
175	Goodrich Corp	PW-6B	1,409	475-485	347	515	4	17	2006	2014	
176	Goodrich Corp	PW-7A	1,401	430-440	322	596	4	17	2006	2014	
177	Goodrich Corp	PW-7B	1,401	495-505	322	596	4	17	2006	2014	
178	Goodrich Corp	PW-7C	1,401	565-575	322	596	4	17	2006	2014	
179	Goodrich Corp	PW-8B	1,515	545-555	442	631	4	16	2006	2014	
180	Goodrich Corp	PW-9A	1,304	350-360	257	506	4	18	2006	2016	
181	Goodrich Corp	PW-9B	1,304	410-420	257	506	4	17	2006	2016	
182	Goodrich Corp	PW-9C	1,304	480-490	257	506	4	18	2006	2016	
183	San Bernardino County	F-27	1,462	414-424	427	578	4	99	1998	2016	
184	San Bernardino County	F-32	1,414	402-422	427	580	4	94	1998	2016	
185	San Bernardino County	M-1D	1,431	510-535	441	543	4	52	2005	2016	
186	San Bernardino County	M-2-Z2	1,390	452-462	382	501	4	46	2005	2016	
187	San Bernardino County	M-3-Z1	1,464	497-507	442	556	4	46	2005	2016	
188	San Bernardino County	M-3-Z2	1,464	527-537	442	556	4	46	2005	2016	
189	San Bernardino County	M-3-Z3	1,464	557-567	442	556	4	42	2005	2016	
190	San Bernardino County	M-4S	1,409	440-470	430	509	4	48	2005	2016	
191	San Bernardino County	M-5-Z2	1,436	470-480	443	527	4	35	2008	2016	
192	San Bernardino County	M-6-Z2	1,448	480-490	461	578	4	34	2008	2016	
193	San Bernardino County	N-10D	1,485	546-556	455	572	4	66	2003	2016	
194	San Bernardino County	N-11D	1,461	460-495	436	576	4	51	2004	2014	
195	San Bernardino County	N-15S	1,375	375-405	335	495	4	35	2004	2010	
196	San Bernardino County	N-18C-1	1,426	450-490	442	552	4	17	2008	2012	
197	San Bernardino County	N-18C-2	1,426	540-580	442	552	4	39	2008	2016	
198	San Bernardino County	N-3D	1,578	545-555	533	629	4	2	2002	2003	
199	San Bernardino County	N-4D	1,648	601-631	555	645	4	8	2002	2004	
200	San Bernardino County	N-6D	1,539	524-534	512	618	4	7	2003	2007	
201	San Bernardino County	N-7D	1,539	520-530	480	596	4	6	2003	2004	
202	San Bernardino County	N-8D	1,544	517-527	507	610	4	3	2003	2003	
203	San Bernardino County	N-9D	1,515	520-530	498	595	4	38	2003	2010	
204	Sequoia Country Club	Edmunds	1,184		359	598	4	15	1966	1979	
205	USGS	1N/5W-21K03	1,648	575-595	377	636	4	226	1992	2016	*
206	USGS	1N/5W-21K04	1,648	435-455	377	636	4	225	1993	2016	*

Table 5

Target Wells Used for Model Calibration
Rialto-Colton Basin Model Area

Number	Owner	Well Name	Surface Elevation [ft, amsl]	Screened Interval Depth [ft, bgs]	Top Depth of Selected Model Layer [ft,bgs]	Bottom Depth of Selected Model Layer [ft,bgs]	Model Layer	Number of Water Level Data	Range of Available Water Level Data		Hydrograph
207	USGS	1N/5W-22N03	1,583	415-435	172	613	4	211	1992	2016	*
208	USGS	1N/5W-22N04	1,583	575-595	172	613	4	206	1993	2016	*
209	USGS	1N/5W-22N05	1,583	340-360	172	613	4	203	1993	2016	*
210	USGS	1N/5W-26L01	1,458	322-352	269	707	4	55	1993	2015	*
211	USGS	1N/5W-29Q04	1,543	530-550	471	598	4	137	1994	2009	*
212	USGS	1N/5W-34D04	1,463	472-492	433	578	4	197	1992	2012	*
213	USGS	1N/5W-35B03	1,408	650-670	240	716	4	219	1992	2016	*
214	USGS	1N/5W-35B04	1,408	370-390	240	716	4	219	1992	2016	*
215	USGS	1S/4W-20H03	993	490-510	417	570	4	229	1993	2016	*
216	USGS	1S/5W-03A03	1,358	853-873	322	518	4	58	2008	2016	*
217	USGS	1S/5W-03A06S	1,358	500-520	322	518	4	61	2008	2016	*
218	USGS	1S/5W-04D02	1,397		401	577	4	154	1967	2008	
219	USGS	1S/5W-11F03	1,244	422-442	286	456	4	238	1992	2016	*
220	USGS	1S/5W-11F04	1,244	310-330	286	456	4	234	1992	2016	*
221	USGS	1S/5W-13B04S	1,160	420-440	318	525	4	60	2008	2016	*
222	USGS	Cactus-Res	1,358	660-680	322	518	4	2	2010	2011	
223	West Valley Water District	WVWD-11	1,287	310-787	298	479	4	518	1966	2016	*
224	West Valley Water District	WVWD-16	1,175	198-464	286	511	4	500	1966	2016	*
225	West Valley Water District	WVWD-17	1,175	280-409, 520-688	278	520	4	481	1966	2016	
226	West Valley Water District	WVWD-22	1,508		435	631	4	1	1992	1992	
227	West Valley Water District	WVWD-33	1,360	460-950	326	513	4	286	1991	2016	*
228	EPA	EPA-MP1C	1,226	559-569	499	748	5	7	2010	2016	
229	EPA	EPA-MP1D	1,226	740-790	499	748	5	7	2010	2016	
230	EPA	EPA-MP1E	1,226	795-805	499	748	5	6	2010	2016	
231	EPA	EPA-MP2C	1,270	506-516	450	735	5	7	2010	2016	*
232	EPA	EPA-MP2D	1,270	612-622	450	735	5	7	2010	2016	
233	EPA	EPA-MP2E	1,270	712-722	450	735	5	7	2010	2016	
234	EPA	EPA-MP3C	1,363	684-694	593	914	5	7	2010	2016	
235	EPA	EPA-MP3D	1,363	811-827	593	914	5	6	2010	2016	
236	EPA	EPA-MP3E	1,363	897-907	593	914	5	6	2010	2016	
237	EPA	EPA-MP4D	1,458	639-649	621	1,010	5	5	2010	2014	
238	EPA	EPA-MP4E	1,458	752-762	621	1,010	5	5	2010	2014	
239	EPA	EPA-MP5C	1,285	502-512	439	771	5	7	2010	2016	
240	EPA	EPA-MP5D	1,285	626-636	439	771	5	7	2010	2016	
241	EPA	EPA-MP5E	1,285	737-747	439	771	5	6	2010	2016	
242	EPA	EPA-MP6C	1,273	569-579	525	820	5	7	2010	2016	*
243	EPA	EPA-MP6D	1,273	656-666	525	820	5	7	2010	2016	
244	EPA	EPA-MP6E	1,273	762-772	525	820	5	6	2010	2016	
245	EPA	EPA-MP7D	1,227	585-595	526	788	5	3	2014	2016	
246	EPA	EPA-MP7E	1,227	700-710	526	788	5	3	2014	2016	
247	EPA	EPA-MP8D	1,220	605-615	489	723	5	3	2014	2016	
248	EPA	EPA-MP8E	1,220	720-730	489	723	5	3	2014	2016	

Target Wells Used for Model Calibration
Rialto-Colton Basin Model Area

Number	Owner	Well Name	Surface Elevation [ft, amsl]	Screened Interval Depth [ft, bgs]	Top Depth of Selected Model Layer [ft,bgs]	Bottom Depth of Selected Model Layer [ft,bgs]	Model Layer	Number of Water Level Data	Range of Available Water Level Data		Hydrograph
249	Fontana Water Company	F10B	1,406	500-1030	664	982	5	198	1995	2016	*
250	Fontana Water Company	F13B	1,510	600-1120	583	786	5	168	2000	2016	*
251	Fontana Water Company	F15A	1,630	470-1220	705	977	5	165	2000	2016	*
252	Goodrich Corp	CPW-16E	1,181	635-645	525	756	5	8	2010	2016	
253	Goodrich Corp	CPW-16F	1,181	715-725	525	756	5	8	2010	2016	
254	Goodrich Corp	CPW-16G	1,181	750-760	525	756	5	7	2010	2016	
255	Goodrich Corp	CPW-17E	1,135	560-570	551	895	5	6	2010	2016	
256	Goodrich Corp	CPW-17F	1,135	608-618	551	895	5	6	2010	2016	
257	Goodrich Corp	CPW-17G	1,135	708-718	551	895	5	6	2010	2016	
258	Goodrich Corp	PW-10C	1,269	540-550	494	786	5	6	2013	2016	
259	Goodrich Corp	PW-10D	1,269	600-610	494	786	5	6	2013	2016	
260	Goodrich Corp	PW-10E	1,269	740-750	494	786	5	6	2013	2016	
261	Goodrich Corp	PW-11C	1,221	555-565	506	758	5	6	2013	2016	
262	Goodrich Corp	PW-11D	1,221	690-700	506	758	5	6	2013	2016	
263	Goodrich Corp	PW-11E	1,221	745-755	506	758	5	6	2013	2016	
264	Goodrich Corp	PW-12C	1,242	495-505	491	750	5	6	2013	2016	
265	Goodrich Corp	PW-12D	1,242	550-560	491	750	5	6	2013	2016	
266	Goodrich Corp	PW-12E	1,242	720-730	491	750	5	6	2013	2016	
267	Goodrich Corp	PW-13D	1,150	520-530	532	791	5	3	2014	2016	
268	Goodrich Corp	PW-13E	1,150	600-610	532	791	5	3	2014	2016	
269	Goodrich Corp	PW-14E	1,170	600-610	550	853	5	3	2014	2016	
270	Goodrich Corp	PW-5D	1,424	615-625	575	970	5	18	2006	2014	
271	Goodrich Corp	PW-5E	1,424	670-680	575	970	5	18	2006	2014	
272	Goodrich Corp	PW-6C	1,409	520-530	515	950	5	17	2006	2014	
273	Goodrich Corp	PW-6D	1,409	600-610	515	950	5	17	2006	2014	
274	Goodrich Corp	PW-6E	1,409	655-665	515	950	5	17	2006	2014	
275	Goodrich Corp	PW-7D	1,401	635-645	596	937	5	17	2006	2014	
276	Goodrich Corp	PW-7E	1,401	685-695	596	937	5	17	2006	2014	
277	Goodrich Corp	PW-7F	1,401	750-760	596	937	5	16	2006	2014	
278	Goodrich Corp	PW-7G	1,401	815-825	596	937	5	17	2006	2014	
279	Goodrich Corp	PW-8C	1,515	645-655	631	891	5	16	2006	2014	
280	Goodrich Corp	PW-8D	1,515	720-730	631	891	5	16	2006	2014	
281	Goodrich Corp	PW-8E	1,515	770-780	631	891	5	15	2006	2014	
282	Goodrich Corp	PW-9D	1,304	560-570	506	825	5	18	2006	2016	
283	Goodrich Corp	PW-9E	1,304	645-655	506	825	5	18	2006	2016	*
284	Goodrich Corp	PW-9F	1,304	715-725	506	825	5	18	2006	2016	
285	Goodrich Corp	PW-9G	1,304	805-815	506	825	5	18	2006	2016	
286	San Bernardino County	M-2-Z3	1,390	507-517	501	940	5	46	2005	2016	
287	San Bernardino County	M-2-Z4	1,390	532-542	501	940	5	46	2005	2016	
288	San Bernardino County	M-2-Z5	1,390	582-592	501	940	5	46	2005	2016	
289	San Bernardino County	M-2-Z6	1,390	637-647	501	940	5	46	2005	2016	
290	San Bernardino County	M-2-Z7	1,390	677-687	501	940	5	46	2005	2016	

Table 5

Target Wells Used for Model Calibration
Rialto-Colton Basin Model Area

Number	Owner	Well Name	Surface Elevation [ft, amsl]	Screened Interval Depth [ft, bgs]	Top Depth of Selected Model Layer [ft,bgs]	Bottom Depth of Selected Model Layer [ft,bgs]	Model Layer	Number of Water Level Data	Range of Available Water Level Data		Hydrograph
291	San Bernardino County	M-3-Z4	1,464	577-587	556	899	5	42	2005	2016	
292	San Bernardino County	M-3-Z5	1,464	617-627	556	899	5	42	2005	2016	
293	San Bernardino County	M-3-Z6	1,464	632-642	556	899	5	42	2005	2016	
294	San Bernardino County	M-3-Z7	1,464	667-677	556	899	5	42	2005	2016	
295	San Bernardino County	M-4D	1,408	570-590	509	970	5	48	2005	2016	
296	San Bernardino County	M-5-Z3	1,436	525-535	527	917	5	35	2008	2016	
297	San Bernardino County	M-5-Z4	1,436	570-580	527	917	5	35	2008	2016	
298	San Bernardino County	M-5-Z5	1,436	635-645	527	917	5	35	2008	2016	
299	San Bernardino County	M-5-Z6	1,436	675-685	527	917	5	35	2008	2016	
300	San Bernardino County	M-5-Z7	1,436	720-730	527	917	5	35	2008	2016	
301	San Bernardino County	M-6-Z3	1,448	540-550	578	787	5	30	2008	2016	
302	San Bernardino County	M-6-Z4	1,448	590-600	578	787	5	29	2008	2016	
303	San Bernardino County	M-6-Z5	1,448	630-640	578	787	5	29	2008	2016	
304	San Bernardino County	M-6-Z6	1,448	690-700	578	787	5	29	2008	2016	
305	San Bernardino County	M-6-Z7	1,448	730-740	578	787	5	29	2008	2016	
306	San Bernardino County	N-13D	1,471	560-570	552	860	5	66	2004	2016	
307	San Bernardino County	N-14D	1,420	560-580	533	945	5	75	2004	2016	*
308	San Bernardino County	N-15D	1,375	625-640	495	915	5	60	2004	2016	
309	USGS	1N/5W-21K01	1,645	960-980	636	970	5	229	1992	2016	*
310	USGS	1N/5W-21K02	1,648	740-760	636	970	5	229	1992	2016	*
311	USGS	1N/5W-22N01	1,580	960-980	613	1,002	5	219	1992	2016	*
312	USGS	1N/5W-22N02	1,583	720-740	613	1,002	5	215	1992	2016	*
313	USGS	1N/5W-29Q01	1,540	975-995	598	877	5	210	1994	2016	*
314	USGS	1N/5W-29Q02	1,543	755-775	598	877	5	197	1994	2016	*
315	USGS	1N/5W-29Q03	1,543	640-660	598	877	5	205	1994	2016	*
316	USGS	1N/5W-34D01	1,460	970-990	578	929	5	221	1992	2016	*
317	USGS	1N/5W-34D02	1,463	760-780	578	929	5	223	1992	2016	*
318	USGS	1N/5W-34D03	1,463	590-610	578	929	5	224	1992	2016	*
319	USGS	1N/5W-35B01	1,405	910-930	716	993	5	219	1992	2016	*
320	USGS	1N/5W-35B02	1,408	790-810	716	993	5	219	1992	2016	*
321	USGS	1S/4W-08E01	1,110	970-990	542	950	5	233	1992	2016	*
322	USGS	1S/4W-08E02	1,110	750-770	542	950	5	235	1992	2016	*
323	USGS	1S/4W-08E03	1,110	577-597	542	950	5	234	1992	2016	*
324	USGS	1S/4W-20H01	990	918-938	570	837	5	228	1993	2016	*
325	USGS	1S/4W-20H02	993	598-618	570	837	5	229	1993	2016	*
326	USGS	1S/5W-03A07S	1,358	400-420	518	879	5	62	2008	2016	*
327	USGS	1S/5W-11F01	1,244	930-950	456	727	5	231	1992	2016	*
328	USGS	1S/5W-11F02	1,244	694-714	456	727	5	233	1992	2016	*
329	USGS	1S/5W-13B01S	1,160	960-980	525	764	5	59	2008	2016	*
330	USGS	1S/5W-13B02S	1,160	675-695	525	764	5	59	2008	2016	*
331	USGS	1S/5W-13B03S	1,160	540-560	525	764	5	77	2008	2016	*
332	West Valley Water District	WVWD-10	1,340	384-420, 588-594	561	885	5	438	1967	2016	*

Table 5

Target Wells Used for Model Calibration
Rialto-Colton Basin Model Area

Number	Owner	Well Name	Surface Elevation [ft, amsl]	Screened Interval Depth [ft, bgs]	Top Depth of Selected Model Layer [ft,bgs]	Bottom Depth of Selected Model Layer [ft,bgs]	Model Layer	Number of Water Level Data	Range of Available Water Level Data		Hydrograph
333	West Valley Water District	WVWD-54	1,680	695-755, 775-1205	668	1,030	5	100	2007	2016	*

Table 6

Target Wells Used for Model Calibration
Riverside-Arlington Basin Model Area

Number	Owner	Well Name	Surface Elevation [ft, amsl]	Screened Interval Depth [ft, bgs]	Top Depth of Selected Model Layer [ft,bgs]	Bottom Depth of Selected Model Layer [ft,bgs]	Model Layer	Number of Water Level Data	Range of Available Water Level Data		Hydrograph
1	California Portland Cement	CPC EAST SIDE	973		0	128	1	45	1994	2016	*
2	City of Colton	Colton 24	1,092		0	305	1	196	1998	2016	*
3	City of Riverside	ARMY 3	751		0	50	1	219	1966	2016	*
4	City of Riverside	FAIRMONT PARK 2	800	62-205	0	116	1	29	1968	2004	*
5	City of Riverside	RR1	781		0	137	1	58	1966	2016	*
6	City of Riverside	TWIN BUTTE #6	880	50-130, 130-280	0	133	1	284	1966	2015	*
7	Riverside Cement Co.	58-1	953		0	184	1	45	1966	1998	*
8	Rubidoux Community Services Dist.	#14, 46ST	755		0	129	1	42	1993	2016	*
9	Rubidoux Community Services Dist.	#16 HUNTER	742	25-70	0	65	1	50	1966	2001	*
10	USGS	01S/04W-29H07S	935	190-210	0	222	1	158	2002	2016	*
11	USGS	01S/04W-29H08S	935	47-67	0	222	1	62	2002	2011	*
12	USGS	01S/04W-29K03S	925	230-250	0	234	1	159	2002	2016	*
13	USGS	01S/04W-29K04S	925	140-160	0	234	1	159	2002	2016	*
14	USGS	01S/04W-29K05S	925	52-72	0	234	1	74	2002	2011	*
15	West Valley Water District	PL29/CRAM-WRIGHT	1,020	162-236	0	297	1	347	1966	2009	*
16	Western Municipal Water Dist.	1	968	55-68	0	276	1	76	1966	2016	*
17	Western Municipal Water Dist.	8	904	20-388	0	167	1	69	1966	2016	*
18	Western Municipal Water Dist.	02S05W17K01	807		0	144	1	62	1966	2016	*
19	Western Municipal Water Dist.	02S05W23F01	843		0	114	1	117	1966	2016	*
20	Western Municipal Water Dist.	1 (RIO RANCHO)	768	55-68	0	79	1	49	1966	2001	*
21	Western Municipal Water Dist.	1, AUGA MENSA	922		0	166	1	47	1966	2001	*
22	Western Municipal Water Dist.	8TH ST	958		0	272	1	71	1966	2015	*
23	Western Municipal Water Dist.	DISPOSAL	960	130-178, 188-200	0	130	1	53	1966	1987	*
24	Western Municipal Water Dist.	DOUBLE D RANCH	876		0	137	1	38	1966	2006	*
25	Western Municipal Water Dist.	IRRIGATION (2S/5W14D01)	800		0	112	1	120	1966	2016	*
26	Western Municipal Water Dist.	IRRIGATION (3S/5W-08B02)	804		0	49	1	140	1966	2016	*
27	Western Municipal Water Dist.	LAURA LANE	768		0	84	1	48	1994	2016	*
28	Western Municipal Water Dist.	SANTA FE ELEXTRIC A-1	1,004		0	351	1	69	1966	2016	*
29	Western Municipal Water Dist.	WATER TOWER	785		0	50	1	85	1966	2016	*
30	California Portland Cement	CPC #6	1,014		140	196	2	52	1966	2016	*
31	City of Riverside	BUCHANAN	696	32-100	50	121	2	206	1966	2013	*
32	City of Riverside	CUTIS	1,000		90	220	2	44	1967	1998	*
33	City of Riverside	HOLES	755	110-162	50	100	2	210	1966	2015	*
34	City of Riverside	LINCOLN HEIGHTS	856		51	130	2	165	1993	2016	*
35	City of Riverside	MULBERRY	872	143-300	111	188	2	230	1966	2014	*
36	City of Riverside	PALMYRITA 1	892	192-226, 232-244	104	202	2	175	1966	2000	*
37	City of Riverside	POLK	715		49	76	2	122	1966	2006	*
38	City of Riverside	WALTON	719		51	101	2	271	1966	2015	*
39	Jurupa Community Services Dist.	SUNNYSLOPE #5	902	131-136, 143-280	173	214	2	40	1993	2016	*
40	Riverside Highland Water Company	RN #21	1,000		112	314	2	407	1966	2016	*

Target Wells Used for Model Calibration
Riverside-Arlington Basin Model Area

Number	Owner	Well Name	Surface Elevation [ft, amsl]	Screened Interval Depth [ft, bgs]	Top Depth of Selected Model Layer [ft,bgs]	Bottom Depth of Selected Model Layer [ft,bgs]	Model Layer	Number of Water Level Data	Range of Available Water Level Data		Hydrograph
41	Rubidoux Community Services Dist.	#3 28TH ST	863	170-134	111	163	2	79	1966	2016	*
42	Western Municipal Water Dist.	02S04W19E01	929		97	190	2	41	1966	1998	*
43	Western Municipal Water Dist.	ABRAHAM	817		51	74	2	143	1966	2016	*
44	Western Municipal Water Dist.	DAILY 2	725		59	69	2	100	1966	2016	*
45	Western Municipal Water Dist.	DOI	719	310-410	51	102	2	83	1994	2012	*
46	Western Municipal Water Dist.	JACKSON	879		52	85	2	83	1966	2016	*
47	Western Municipal Water Dist.	PIERCE ST SEWER 3	699		50	126	2	92	1994	2016	*
48	Western Municipal Water Dist.	RIV CANNEL 62/CE#3	942	130-204, 216-222, 302-342	118	226	2	80	1966	2016	*
49	City of Riverside	ORANGE ACRES	879	124-138, 150-168	115	136	3	148	1993	2016	*
50	Unknow	NA	991		197	278	3	111	1966	2006	*
51	USGS	01S/04W-29H06S	935	420-440	272	517	4	158	2002	2016	*
52	USGS	01S/04W-29K02S	925	310-330	300	466	4	159	2002	2016	*
53	USGS	01S/04W-29H04S	935	800-820	517	527	5	157	2002	2016	*
54	USGS	01S/04W-29H05S	935	580-600	517	527	5	157	2002	2016	*
55	USGS	01S/04W-29K01S	925	530-550	466	476	5	159	2002	2016	*

Table 7

Target Wells Used for Model Calibration
Chino Basin Model Area

Number	Owner	Well Name	Surface Elevation [ft, amsl]	Screened Interval Depth [ft, bgs]	Top Depth of Selected Model Layer [ft,bgs]	Bottom Depth of Selected Model Layer [ft,bgs]	Model Layer	Number of Water Level Data	Range of Available Water Level Data		Hydrograph
1	California Speedway	Cal_Speed1	1,119	452-484, 502-507, 543-546, 582-628, 678-746, 766-805	0	600	1	67	1966	2009	*
2	Chino Basin Desalter Authority	I_10_L1	647	180-270, 290-340	0	232	1	160	2000	2016	*
3	Chino Basin Desalter Authority	I_11_L1	646	160-260	0	223	1	58	2000	2015	
4	Chino Basin Desalter Authority	I_13_L1	628	180-352	0	197	1	14	2005	2007	
5	Chino Basin Desalter Authority	I_14_L1	633	100-136, 146-174, 184-460	0	202	1	58	2005	2016	
6	Chino Basin Desalter Authority	I_15_L1	638	100-140, 150-310	0	213	1	66	2005	2016	
7	Chino Basin Desalter Authority	I_5_L1	625	160-245, 345-385	0	209	1	89	2000	2016	
8	Chino Basin Desalter Authority	I_6_L1	627	175-305	0	205	1	128	2000	2016	
9	Chino Basin Desalter Authority	I_7_L1	629	180-300	0	204	1	120	2000	2016	
10	Chino Basin Desalter Authority	I_8_L1	636	180-275, 340-415	0	224	1	95	2000	2016	
11	Chino Basin Desalter Authority	I_9_L1	645	190-220, 260-340, 390-430	0	230	1	70	2000	2016	
12	Chino Basin Desalter Authority	II_1_L1	684	155-288, 308-390	0	292	1	99	2007	2016	
13	Chino Basin Desalter Authority	II_2	689	156-312	0	302	1	74	2007	2016	
14	Chino Basin Desalter Authority	II_3_L1	692	160-325	0	304	1	59	2007	2016	
15	Chino Basin Desalter Authority	II_4_L1	696	156-340	0	306	1	30	2007	2016	
16	Chino Basin Desalter Authority	II_6	710	150-295	0	294	1	52	2007	2016	
17	Chino Basin Desalter Authority	II_7	694	140-245	0	237	1	80	2007	2016	
18	Chino Basin Desalter Authority	II_8_L1	690	130-230	0	212	1	95	2007	2016	
19	Chino Basin Desalter Authority	II_9A	717	160-195, 206-295	0	287	1	87	2007	2016	
20	Chino Basin Watermaster	AP-PA_10	646	213-233	0	267	1	167	2002	2016	*
21	City of Chino	C_09	853	310-1030	0	476	1	199	1978	2016	*
22	City of Chino	C_13	738	290-360, 410-430, 460-560, 600-720	0	380	1	155	1989	2016	*
23	City of Chino	C_15_L1	709	270-400, 626-820	0	288	1	173	2000	2016	*
24	City of Chino	CDF Well 17	719	230-270, 300-350, 395-405, 445-455, 480-550	0	331	1	90	2009	2016	*
25	City of Chino	YMCA	662		0	295	1	202	1997	2016	*
26	City of Chino Hills	CH_HIL_15A_L1	629	190-310	0	206	1	244	1991	2016	*
27	City of Corona	COR 06	681		0	122	1	29	1986	2000	*
28	City of Corona	COR 08	663		0	88	1	33	1985	2000	*
29	City of Corona	COR 11	650		0	322	1	91	1984	2000	*
30	City of Corona	COR 14	734		0	308	1	163	1984	2016	*
31	City of Corona	COR 15	640		0	178	1	96	1985	2016	*
32	City of Norco	NOR_11	686	180-320	0	271	1	164	1989	2016	*
33	City of Ontario	ONT_04_L1	1,062	526-910	0	602	1	90	1966	2008	*
34	City of Ontario	ONT_07	958		0	570	1	63	1967	2000	*
35	City of Ontario	ONT_08	892	175-188, 260-287, 348-360, 492-524	0	519	1	33	1966	1987	*
36	City of Ontario	ONT_11_L1	935	464-625, 770-1080	0	559	1	98	1966	2008	*
37	City of Ontario	ONT_20	1,047	401-418, 618-692	0	553	1	114	1986	2016	*
38	City of Ontario	ONT_31_L1	938	400-980	0	508	1	122	1986	2016	*
39	City of Pomona	P_16	885	270-275, 288-328	0	504	1	384	1966	2016	*
40	City of Pomona	P_29	758	248-267, 314-324, 327-352	0	344	1	252	1979	2016	*
41	County of San Bernardino	MIL_M-01	869	241-261	0	496	1	106	1987	2002	

Target Wells Used for Model Calibration
Chino Basin Model Area

Number	Owner	Well Name	Surface Elevation [ft, amsl]	Screened Interval Depth [ft, bgs]	Top Depth of Selected Model Layer [ft,bgs]	Bottom Depth of Selected Model Layer [ft,bgs]	Model Layer	Number of Water Level Data	Range of Available Water Level Data		Hydrograph
42	Cucamonga Valley Water District	CVWD_3_L1	1,063	341-363, 383-405, 432-442, 589-604, 623-635, 703-715, 741-810	0	529	1	551	1966	2016	*
43	Cucamonga Valley Water District	CVWD_35	1,194	485-510, 516-550, 560-790	0	599	1	139	1982	2005	*
44	Fontana Water Company	F21A	1,024	231-731	0	543	1	235	1966	2016	*
45	Fontana Water Company	F30A	1,247	507-557, 658-748, 780-864	0	600	1	317	1966	2016	*
46	Fontana Water Company	FU6	1,050	1-492	0	442	1	121	1966	1998	*
47	General Electric Corporation	MW-11	941	380-399	0	563	1	97	1992	2016	*
48	Inland Empire Utilities Agency	HCMP-5_1	575	90-130	0	143	1	141	2005	2016	
49	Inland Empire Utilities Agency	IEUA_MW_2	567		0	135	1	132	1995	2007	*
50	Inland Empire Utilities Agency	PB-1_1	536	25-55	0	54	1	21	2015	2016	
51	Inland Empire Utilities Agency	PB-2	575	42-62	0	144	1	20	2015	2016	*
52	Inland Empire Utilities Agency	PB-3_1	584	45-55	0	100	1	20	2015	2016	
53	Inland Empire Utilities Agency	PB-3_2	584	80-100	0	137	1	20	2015	2016	
54	Inland Empire Utilities Agency	PB-4_1	579	15-25	0	81	1	21	2015	2016	
55	Inland Empire Utilities Agency	PB-4_2	579	45-75	0	81	1	21	2015	2016	
56	Inland Empire Utilities Agency	PB-5_1	525	30-50	0	63	1	21	2015	2016	
57	Inland Empire Utilities Agency	PB-5_2	520	60-80	0	63	1	21	2015	2016	
58	Inland Empire Utilities Agency	PB-6_1	520	30-40	0	73	1	21	2015	2016	
59	Inland Empire Utilities Agency	PB-6_2	520	59-89	0	73	1	21	2015	2016	
60	Inland Empire Utilities Agency	PB-7_1	517	10-15	0	77	1	21	2015	2016	
61	Inland Empire Utilities Agency	PB-7_2	518	60-85	0	77	1	21	2015	2016	*
62	Inland Empire Utilities Agency	PB-8	537	60-90	0	61	1	19	2015	2016	
63	Inland Empire Utilities Agency	PB-9_1	560	30-40	0	49	1	21	2015	2016	
64	Inland Empire Utilities Agency	RP2_MW3	537	15-35	0	61	1	50	2012	2016	
65	Jurupa Community Services District	JCSD_05_L1	748	235-335	0	235	1	17	1986	1996	
66	Jurupa Community Services District	JCSD_06	843	198-210, 238-248, 270-386	0	377	1	84	1990	2016	
67	Jurupa Community Services District	JCSD_08	766	185-248, 255-261	0	286	1	171	1989	2016	
68	Jurupa Community Services District	JCSD_11	774	215-285, 304-312	0	305	1	105	1990	2016	
69	Jurupa Community Services District	JCSD_12_L1	772	215-330	0	308	1	136	1989	2016	
70	Jurupa Community Services District	JCSD_13_L1	847	220-446	0	375	1	59	1989	2016	
71	Jurupa Community Services District	JCSD_14_L1	770	210-370	0	323	1	176	1989	2016	
72	Jurupa Community Services District	JCSD_15_L1	789	224-364	0	319	1	166	1989	2016	
73	Jurupa Community Services District	JCSD_16_L2	777	225-245, 260-275	0	321	1	179	1989	2016	*
74	Jurupa Community Services District	JCSD_17_L1	824	250-290, 300-400	0	348	1	155	1989	2016	

Target Wells Used for Model Calibration
Chino Basin Model Area

Number	Owner	Well Name	Surface Elevation [ft, amsl]	Screened Interval Depth [ft, bgs]	Top Depth of Selected Model Layer [ft,bgs]	Bottom Depth of Selected Model Layer [ft,bgs]	Model Layer	Number of Water Level Data	Range of Available Water Level Data		Hydrograph
75	Jurupa Community Services District	JCSD_18_L1	810	230-390	0	333	1	148	1989	2016	
76	Jurupa Community Services District	JCSD_19_L1	843		0	393	1	92	1966	2016	
77	Jurupa Community Services District	JCSD_20_L1	830	170-185, 250-270, 286-360, 380-406	0	375	1	101	1966	2016	
78	Jurupa Community Services District	JCSD_22_L1	812		0	339	1	107	2004	2016	
79	Jurupa Community Services District	JCSD_23_L1	767	265-390	0	302	1	104	2005	2016	
80	Jurupa Community Services District	JCSD_24_L1	747	105-420	0	217	1	94	1992	2016	
81	Jurupa Community Services District	JCSD_25_L1	805	280-420	0	341	1	87	2009	2016	
82	Jurupa Community Services District	JCSD_42_L1	623	90-190	0	124	1	87	2009	2016	
83	San Antonio Water Company	SAWC_18	1,092	342-476, 601-649, 696-722	0	600	1	385	1966	2016	*
84	Santa Ana River Water Company	SARWC_07	695	100-172	0	157	1	135	1966	2008	*
85	SCE Co	NA_1202311	758		0	338	1	175	2001	2016	*
86	State of California, California Institution for Men	MW-24I	614	157-172	0	173	1	171	1998	2016	
87	State of California, California Institution for Men	MW-24S	613	94-104	0	175	1	156	1998	2016	
88	State of California, Department of Toxic Substances Control	FC-936A2	751		0	88	1	227	1993	2016	*
89	United States, Geological Survey (USGS)	01N/06W-26A01S	1,540		0	601	1	137	2002	2016	*
90	United States, Geological Survey (USGS)	01N/06W-26A02S	1,540		0	601	1	138	2002	2016	*
91	United States, Geological Survey (USGS)	01N/06W-26A03S	1,540		0	601	1	138	2002	2016	*
92	United States, Geological Survey (USGS)	01N/06W-26K02S	1,470		0	600	1	119	2002	2016	*
93	United States, Geological Survey (USGS)	01N/06W-26K03S	1,470		0	600	1	118	2002	2016	*
94	United States, Geological Survey (USGS)	Archibald_1	538	75-85	0	119	1	162	2001	2016	*
95	West End Consolidated Water Co.	West_End_1	1,221		0	600	1	198	1966	1985	
96	West Valley Water District	WVWD_20	1,083	370-392, 514-516	0	488	1	556	1966	2016	*
97	Chino Basin Desalter Authority	I_4_L1	607	200-280, 390-480	188	204	2	51	2001	2016	
98	City of Ontario	ONT_09_L1	1,153	610-840, 850-1054, 1067-1125	601	766	2	98	1966	2011	*
99	City of Ontario	ONT_36_L1	892	530-1000	522	547	2	119	1986	2016	*
100	Inland Empire Utilities Agency	PB-1_2	537	75-95	54	142	2	21	2015	2016	*
101	Inland Empire Utilities Agency	PB-9_2	560	70-95	49	125	2	21	2015	2016	
102	State of California, California Institution for Men	CIM_09	605	182-204	151	201	2	51	1988	2005	*

Table 7

Target Wells Used for Model Calibration
Chino Basin Model Area

Number	Owner	Well Name	Surface Elevation [ft, amsl]	Screened Interval Depth [ft, bgs]	Top Depth of Selected Model Layer [ft,bgs]	Bottom Depth of Selected Model Layer [ft,bgs]	Model Layer	Number of Water Level Data	Range of Available Water Level Data		Hydrograph
103	Chino Basin Desalter Authority	I_1	622	290-300, 320-400, 480-500	219	626	3	13	2003	2016	
104	Chino Basin Desalter Authority	I_2	605	230-330, 405-475	201	600	3	25	2000	2016	
105	Chino Basin Desalter Authority	I_3	598	235-275, 350-470, 500-525	194	588	3	59	2000	2016	
106	Chino Basin Watermaster	AP-PA_7	646	438-448	292	749	3	157	2003	2016	*
107	City of Chino Hills	CH_HIL_15B	629	360-440, 480-900	229	730	3	142	1991	2013	
108	City of Chino Hills	CH_HIL_18A	693	420-460, 480-980	349	798	3	275	1990	2016	*
109	City of Chino Hills	CH_HIL_19	682	340-420, 460-760, 800-1000	334	787	3	209	1991	2014	*
110	Fontana Water Company	F31A_L2	1,394	700-1030	693	720	3	215	1988	2016	*
111	Fontana Water Company	F35A_L2	1,243	700-852	656	845	4	287	1966	2011	*

Table 8

Streamflow Gaging Stations Used for Model Calibration

Station Number	Station Name	Range of Available Daily Discharge Data	
11057500	San Timoteo Creek near Loma Linda	1-Oct-54	31-Dec-16
11060400	Warm Creek near San Bernardino	1-Mar-64	31-Dec-16
11059300	Santa Ana River at E Street	1-Mar-39	31-Dec-16
11066460	Santa Ana River at MWD Crossing	9-Mar-70	31-Dec-16
11074000	Santa Ana River below Prado Dam	1-Oct-40	31-Dec-16

Table 9

Yucaipa Basin Groundwater Balance
1966 to 2016

Calender Year	Areal Recharge from Precipitation	Recharge from Mountain Front Runoff	Anthropogenic Return Flow	Streambed Percolation	Artificial Recharge	Total Inflow	Groundwater Pumping	Evapotranspiration	Rising Water Discharge to Streamflow	Underflow Outflow to the SBBA	Total Outflow	Change in Storage	Cumulative Change in Storage
	acre-ft						acre-ft					acre-ft	
1966	3,375	3,095	314	5,914	0	12,699	6,493	1,016	7,840	12,176	27,524	-14,826	-14,826
1967	3,939	5,204	314	6,924	0	16,382	6,563	982	6,113	10,604	24,262	-7,880	-22,706
1968	2,173	2,695	315	734	0	5,917	6,578	898	4,853	9,690	22,019	-16,101	-38,808
1969	6,779	7,344	314	28,703	0	43,141	6,163	1,003	5,062	9,587	21,815	21,325	-17,482
1970	2,763	3,023	314	2,808	0	8,908	6,429	852	3,535	9,078	19,894	-10,986	-28,468
1971	2,490	2,834	314	2,191	0	7,830	6,366	825	3,140	8,886	19,217	-11,387	-39,855
1972	1,936	1,938	315	1,347	0	5,536	6,530	803	2,788	8,737	18,858	-13,322	-53,177
1973	3,842	5,135	314	7,974	0	17,266	6,273	847	2,710	8,586	18,416	-1,150	-54,327
1974	2,940	3,292	314	3,106	0	9,652	6,525	802	2,414	8,453	18,193	-8,541	-62,868
1975	2,516	3,268	314	2,439	0	8,538	6,302	778	2,175	8,446	17,701	-9,163	-72,031
1976	2,909	3,318	315	2,702	0	9,245	6,306	774	2,035	8,470	17,585	-8,341	-80,371
1977	2,756	3,138	314	2,239	0	8,447	6,198	768	1,890	8,411	17,268	-8,821	-89,192
1978	7,467	8,466	314	28,920	0	45,167	6,283	940	2,565	8,560	18,349	26,818	-62,374
1979	3,793	5,367	314	7,989	0	17,463	6,446	823	2,097	8,268	17,633	-170	-62,543
1980	4,905	6,920	315	20,794	0	32,934	6,994	924	2,395	8,010	18,323	14,611	-47,932
1981	2,011	2,246	314	1,634	0	6,205	7,124	755	1,804	7,602	17,285	-11,080	-59,012
1982	4,501	5,415	314	10,056	0	20,287	5,633	782	1,845	7,534	15,794	4,493	-54,519
1983	7,281	8,258	314	23,255	0	39,108	5,740	917	2,262	7,858	16,777	22,331	-32,188
1984	2,295	2,661	315	2,275	0	7,546	7,627	774	1,683	7,549	17,632	-10,086	-42,274
1985	2,666	3,334	314	2,487	0	8,802	7,622	760	1,634	7,655	17,671	-8,868	-51,142
1986	3,305	4,061	314	3,872	0	11,553	8,018	790	1,683	7,262	17,752	-6,199	-57,341
1987	2,645	3,094	314	2,923	0	8,977	7,842	753	1,590	7,080	17,266	-8,288	-65,630
1988	2,599	2,981	315	2,857	0	8,752	9,005	756	1,589	7,116	18,466	-9,714	-75,343
1989	2,326	2,577	314	3,026	0	8,243	9,533	760	1,583	7,172	19,047	-10,804	-86,147
1990	2,109	2,182	314	3,947	0	8,552	9,704	744	1,504	7,008	18,960	-10,408	-96,555
1991	4,101	4,446	314	11,558	0	20,419	9,573	790	1,622	7,090	19,074	1,345	-95,210
1992	4,560	5,514	315	15,277	0	25,665	9,696	800	1,848	7,098	19,442	6,223	-88,987
1993	8,480	8,576	314	39,637	0	57,007	9,954	942	2,428	7,515	20,839	36,168	-52,819
1994	2,546	3,120	314	5,790	0	11,771	10,311	776	1,639	7,173	19,899	-8,128	-60,948
1995	6,510	7,797	314	35,810	0	50,431	10,343	906	2,238	7,470	20,958	29,473	-31,475
1996	3,391	4,106	315	9,000	0	16,811	11,582	781	1,673	7,272	21,308	-4,497	-35,971
1997	3,729	4,733	314	13,624	0	22,400	11,677	809	1,786	7,312	21,584	816	-35,156
1998	6,465	8,069	314	29,202	0	44,050	10,593	947	2,435	7,551	21,526	22,525	-12,631
1999	1,525	1,662	314	3,730	0	7,231	12,621	767	1,645	7,155	22,187	-14,956	-27,587
2000	2,230	2,664	315	5,893	0	11,102	13,676	757	1,614	7,100	23,147	-12,046	-39,632
2001	1,704	1,546	314	3,747	0	7,311	13,120	736	1,516	6,956	22,328	-15,017	-54,649
2002	1,820	1,461	1,013	3,437	61	7,792	14,613	736	1,505	6,942	23,796	-16,005	-70,654
2003	3,876	4,665	959	13,727	1,149	24,376	13,624	826	1,730	7,482	23,662	714	-69,940

Table 9

Yucaipa Basin Groundwater Balance
1966 to 2016

Calender Year	Areal Recharge from Precipitation	Recharge from Mountain Front Runoff	Anthropogenic Return Flow	Streambed Percolation	Artificial Recharge	Total Inflow	Groundwater Pumping	Evapotranspiration	Rising Water Discharge to Streamflow	Underflow Outflow to the SBBA	Total Outflow	Change in Storage	Cumulative Change in Storage
	acre-ft						acre-ft					acre-ft	
2004	3,330	3,782	1,192	8,358	667	17,329	14,201	759	1,554	7,110	23,625	-6,296	-76,236
2005	5,967	7,283	840	30,921	14	45,026	13,638	896	2,173	7,405	24,113	20,913	-55,322
2006	2,687	3,575	938	7,471	24	14,696	13,668	770	1,527	7,192	23,158	-8,462	-63,784
2007	1,675	1,523	982	3,557	0	7,736	13,229	733	1,410	7,355	22,727	-14,991	-78,775
2008	3,446	4,511	961	11,866	1,001	21,785	11,117	749	1,436	7,351	20,652	1,133	-77,642
2009	2,403	2,995	929	6,546	1,952	14,825	9,769	747	1,397	7,350	19,263	-4,437	-82,080
2010	5,347	6,289	791	21,125	4,603	38,155	10,659	849	1,858	7,454	20,820	17,335	-64,745
2011	3,218	5,054	971	13,117	2,558	24,919	9,431	864	1,702	7,496	19,493	5,426	-59,319
2012	1,870	1,944	1,112	4,499	3,055	12,480	10,132	737	1,321	7,264	19,455	-6,975	-66,295
2013	1,880	1,770	1,040	4,223	1,874	10,786	10,312	725	1,255	7,237	19,529	-8,743	-75,038
2014	2,068	1,930	1,100	4,679	67	9,845	11,898	727	1,230	7,319	21,175	-11,330	-86,368
2015	2,052	2,140	922	4,950	0	10,065	8,076	726	1,220	7,343	17,366	-7,301	-93,669
2016	2,455	2,891	924	5,943	0	12,213	7,798	728	1,183	7,354	17,062	-4,849	-98,518
Average 1966 to 2016	**3,444**	**4,037**	**510**	**9,780**	**334**	**18,105**	**9,208**	**812**	**2,191**	**7,826**	**20,037**	**-1,932**	

Table 10

SBBA Groundwater Balance
1966 to 2016

Calender Year	Areal Recharge from Precipitation	Recharge from Mountain Front Runoff	Anthropogenic Return Flow	Streambed Percolation	Artificial Recharge	Underflow Inflow from Yucaipa Basin	Underflow Inflow from San Timoteo Canyon	Total Inflow	Groundwater Pumping	Evapotranspiration	Underflow Outflow to Rialto-Colton Basin	Total Outflow	Change in Storage	Cumulative Change in Storage
	acre-ft								acre-ft				acre-ft	
1966	6,037	18,453	21,579	85,680	0	12,176	3,222	147,147	169,572	3,740	15,105	188,418	-41,271	-41,271
1967	6,830	17,191	19,279	98,373	0	10,604	3,178	155,455	153,868	3,308	15,277	172,452	-16,997	-58,268
1968	3,622	8,361	21,395	79,755	0	9,690	3,144	125,967	174,117	3,132	14,417	191,666	-65,699	-123,967
1969	11,503	59,929	18,232	429,852	0	9,587	3,093	532,197	144,294	3,788	20,468	168,551	363,646	239,679
1970	5,920	10,521	22,390	79,184	1,325	9,078	3,051	131,469	171,005	3,381	21,450	195,836	-64,367	175,312
1971	5,627	8,766	22,812	74,648	2,740	8,886	3,010	126,491	176,162	3,286	19,731	199,180	-72,688	102,623
1972	3,385	6,540	22,856	68,458	2,820	8,737	2,978	115,775	172,788	3,229	18,789	194,806	-79,031	23,592
1973	5,819	15,866	19,545	87,013	50,502	8,586	2,930	190,260	152,850	3,217	18,157	174,224	16,036	39,628
1974	6,192	10,430	19,560	77,915	27,662	8,453	2,891	153,103	154,127	3,181	17,076	174,384	-21,282	18,347
1975	5,041	8,740	18,382	75,034	23,850	8,446	2,852	142,345	155,214	3,135	15,996	174,344	-31,999	-13,652
1976	6,035	8,623	17,905	74,140	20,344	8,470	2,822	138,339	155,728	3,097	15,208	174,032	-35,694	-49,346
1977	6,136	6,521	18,768	69,071	29,708	8,411	2,777	141,391	156,850	3,062	14,882	174,794	-33,403	-82,749
1978	11,259	30,714	16,428	397,804	72,810	8,560	2,740	540,315	138,488	3,906	20,445	162,839	377,475	294,726
1979	6,553	28,690	17,323	227,231	51,014	8,268	2,704	341,783	152,574	4,467	23,898	180,939	160,844	455,570
1980	9,893	61,184	18,140	386,422	48,265	8,010	2,675	534,589	154,453	5,351	27,316	187,121	347,468	803,038
1981	4,954	9,351	20,316	111,784	29,242	7,602	2,633	185,882	173,499	5,098	26,912	205,510	-19,628	783,411
1982	8,734	17,217	17,232	201,835	31,471	7,534	2,598	286,623	152,527	5,273	25,803	183,604	103,019	886,429
1983	12,527	45,793	15,884	409,547	22,681	7,858	2,564	516,853	145,677	6,043	28,062	179,783	337,070	1,223,499
1984	4,196	10,937	20,522	79,474	12,483	7,549	2,537	137,699	192,328	4,875	26,495	223,698	-86,000	1,137,499
1985	4,538	8,609	20,262	77,154	7,412	7,655	2,497	128,127	200,196	4,365	23,239	227,801	-99,673	1,037,826
1986	6,014	12,011	19,015	87,911	12,060	7,262	2,465	146,737	185,471	4,087	21,297	210,854	-64,118	973,708
1987	5,771	6,814	18,942	70,754	6,587	7,080	2,432	118,380	193,826	3,907	19,485	217,218	-98,838	874,871
1988	5,296	5,901	19,857	71,682	7,459	7,116	2,407	119,718	207,246	3,666	17,891	228,803	-109,085	765,786
1989	3,866	4,922	19,716	61,296	12,335	7,172	2,370	111,676	194,016	3,471	17,060	214,547	-102,871	662,915
1990	4,062	3,603	17,880	55,876	14,390	7,008	2,339	105,159	189,299	3,382	17,113	209,794	-104,635	558,279
1991	7,030	7,455	18,631	70,749	14,256	7,090	2,309	127,519	185,046	3,382	16,845	205,273	-77,754	480,525
1992	8,730	11,076	18,258	205,149	19,386	7,098	2,285	271,982	179,183	4,196	18,203	201,582	70,400	550,925
1993	10,640	47,513	18,592	349,122	46,575	7,515	2,250	482,207	182,558	5,321	20,387	208,266	273,941	824,867
1994	5,674	9,997	20,036	77,118	19,436	7,173	2,221	141,656	200,817	4,278	20,674	225,769	-84,113	740,754
1995	8,843	34,894	19,991	289,985	26,758	7,470	2,192	390,134	196,624	5,174	21,856	223,653	166,481	907,234
1996	7,350	12,968	20,255	86,198	19,946	7,272	2,170	156,159	206,848	4,316	21,479	232,642	-76,483	830,751
1997	6,306	10,013	20,161	83,403	14,965	7,312	2,137	144,298	203,890	3,840	19,516	227,245	-82,947	747,804
1998	10,416	32,512	17,503	282,822	44,940	7,551	2,110	397,855	181,673	5,248	22,004	208,925	188,930	936,734
1999	3,310	6,573	20,275	52,474	11,815	7,155	2,082	103,685	218,057	4,116	21,499	243,672	-139,987	796,747
2000	4,707	5,863	22,490	51,388	16,497	7,100	2,062	110,108	231,047	3,543	19,271	253,861	-143,753	652,994
2001	2,339	4,342	18,407	56,850	16,580	6,956	2,030	107,505	196,328	3,459	18,829	218,616	-111,111	541,883

Table 10

SBBA Groundwater Balance
1966 to 2016

Calender Year	Areal Recharge from Precipitation	Recharge from Mountain Front Runoff	Anthropogenic Return Flow	Streambed Percolation	Artificial Recharge	Underflow Inflow from Yucaipa Basin	Underflow Inflow from San Timoteo Canyon	Total Inflow	Groundwater Pumping	Evapotranspiration	Underflow Outflow to Rialto-Colton Basin	Total Outflow	Change in Storage	Cumulative Change in Storage
	acre-ft								acre-ft				acre-ft	
2002	3,190	3,244	20,304	47,046	26,086	6,942	2,004	108,816	218,735	3,340	17,692	239,766	-130,950	410,932
2003	6,246	6,390	19,093	64,634	24,374	7,482	1,979	130,198	200,880	3,121	17,462	221,463	-91,265	319,668
2004	6,921	5,101	20,169	64,223	17,098	7,110	1,960	122,582	199,444	3,034	17,539	220,017	-97,434	222,234
2005	8,309	34,361	19,383	364,859	38,248	7,405	1,930	474,494	198,890	4,054	20,317	223,261	251,233	473,467
2006	5,069	14,476	20,601	68,454	23,806	7,192	1,906	141,504	199,942	3,743	20,543	224,228	-82,724	390,743
2007	3,918	4,869	22,328	52,889	15,639	7,355	1,881	108,879	229,577	3,368	18,286	251,232	-142,352	248,390
2008	5,376	8,969	21,198	63,847	28,067	7,351	1,862	136,669	214,023	3,233	17,165	234,421	-97,752	150,639
2009	3,944	6,063	19,627	57,140	25,748	7,350	1,832	121,705	189,460	3,019	16,933	209,412	-87,707	62,931
2010	10,310	12,945	18,037	194,212	39,236	7,454	1,808	284,002	175,526	3,425	17,730	196,680	87,321	150,252
2011	4,944	25,693	18,244	158,647	57,428	7,496	1,783	274,237	181,350	3,576	18,579	203,505	70,732	220,985
2012	4,686	6,989	19,121	54,487	35,235	7,264	1,764	129,547	199,816	3,145	16,896	219,857	-90,310	130,675
2013	3,933	4,877	18,411	44,817	21,068	7,237	1,734	102,078	191,715	2,965	16,422	211,101	-109,023	21,651
2014	4,879	3,562	17,510	44,342	5,292	7,319	1,710	84,615	184,515	2,742	15,394	202,651	-118,036	-96,384
2015	3,883	3,972	14,845	44,445	10,182	7,343	1,686	86,356	162,469	2,615	14,315	179,399	-93,042	-189,427
2016	3,901	3,603	14,683	44,745	10,245	7,354	1,666	86,196	147,666	2,456	13,648	163,771	-77,575	-267,002
Average 1966 to 2016	**6,170**	**14,784**	**19,262**	**127,685**	**21,884**	**7,826**	**2,358**	**199,970**	**182,201**	**3,768**	**19,236**	**205,205**	**-5,235**	

Table 11

Rialto-Colton Groundwater Balance
1966 to 2016

Calender Year	Areal Recharge from Precipitation	Recharge from Mountain Front Runoff	Anthropogenic Return Flow	Streambed Percolation	Artificial Recharge	Underflow Inflow from Lytle Basin	Underflow Inflow from Bunker Hill Basin	Total Inflow	Groundwater Pumping	Evapotranspiration	Underflow Outflow to North Riverside Basin	Total Outflow	Change in Storage	Cumulative Change in Storage
	acre-ft								acre-ft				acre-ft	
1966	874	3,811	4,024	2,017	0	8,901	6,205	25,832	13,694	0	10,911	24,605	1,227	1,227
1967	874	3,781	3,485	2,017	0	9,978	5,298	25,434	11,623	0	11,347	22,970	2,464	3,691
1968	876	2,199	4,264	2,017	0	10,101	4,316	23,774	14,184	0	14,930	29,114	-5,340	-1,649
1969	874	9,943	3,541	2,544	0	15,351	5,118	37,370	11,809	0	13,008	24,817	12,553	10,904
1970	876	2,442	3,463	2,017	0	16,663	4,786	30,248	11,549	0	16,782	28,331	1,917	12,821
1971	876	2,166	3,386	2,017	0	15,080	4,651	28,176	11,294	0	18,318	29,611	-1,435	11,385
1972	879	1,953	3,102	2,017	0	13,904	4,884	26,740	10,168	0	21,170	31,338	-4,599	6,787
1973	876	2,944	2,327	2,017	0	13,150	5,007	26,322	7,760	0	13,258	21,017	5,304	12,091
1974	876	2,492	2,643	2,017	0	12,718	4,359	25,105	8,764	0	12,258	21,022	4,083	16,174
1975	876	2,087	3,303	2,017	0	11,806	4,189	24,279	11,204	0	14,245	25,448	-1,170	15,005
1976	879	2,100	3,454	2,017	0	11,010	4,198	23,658	11,501	0	16,560	28,061	-4,403	10,602
1977	876	2,058	2,610	2,017	0	10,612	4,270	22,444	8,706	0	16,240	24,946	-2,502	8,099
1978	876	8,751	2,274	2,942	0	15,258	5,187	35,288	7,585	0	12,068	19,653	15,635	23,734
1979	876	4,350	2,134	2,637	0	18,874	5,024	33,895	7,109	0	16,022	23,131	10,764	34,498
1980	879	8,539	1,702	3,044	0	22,336	4,981	41,480	5,662	0	14,587	20,249	21,231	55,729
1981	876	2,188	1,889	3,038	0	21,880	5,032	34,903	6,340	0	25,980	32,320	2,582	58,312
1982	4,062	3,510	1,927	3,044	3,210	20,508	5,295	41,557	6,265	0	18,890	25,155	16,402	74,714
1983	13,517	7,609	1,403	3,044	4,742	23,083	4,980	58,377	4,668	0	12,060	16,728	41,649	116,363
1984	13,554	2,542	2,714	2,017	3,459	22,368	4,128	50,782	8,690	0	14,187	22,876	27,906	144,269
1985	13,517	2,119	3,018	2,017	3,874	19,511	3,728	47,784	10,068	0	15,230	25,299	22,486	166,754
1986	13,517	2,756	3,000	2,017	5,353	17,668	3,629	47,939	9,950	0	14,250	24,199	23,740	190,494
1987	3,993	1,961	3,931	2,017	3,028	16,146	3,340	34,417	13,112	0	15,025	28,136	6,280	196,775
1988	879	2,063	4,253	2,017	4,581	14,854	3,037	31,684	14,163	0	15,599	29,763	1,922	198,696
1989	876	1,830	4,655	2,017	4,524	13,700	3,359	30,962	17,941	0	16,585	34,526	-3,565	195,132
1990	876	1,649	5,263	2,017	65	13,209	3,904	26,983	17,938	0	17,906	35,844	-8,861	186,271
1991	876	2,138	4,271	2,017	441	12,732	4,112	26,588	14,522	0	17,906	32,427	-5,840	180,431
1992	879	3,705	5,406	3,032	1,547	13,737	4,467	32,772	18,027	0	18,670	36,697	-3,925	176,507
1993	876	8,425	4,988	3,032	3,763	15,722	4,665	41,471	16,044	0	16,790	32,834	8,637	185,144
1994	876	1,538	4,708	2,017	263	16,420	4,254	30,077	14,998	0	17,701	32,698	-2,622	182,522
1995	876	4,704	5,341	3,032	0	17,410	4,445	35,810	17,460	1	17,219	34,679	1,131	183,653
1996	879	2,640	5,274	1,879	78	17,133	4,346	32,229	19,267	0	19,487	38,753	-6,524	177,129
1997	876	2,330	4,542	1,756	0	15,259	4,257	29,021	14,919	0	21,182	36,101	-7,080	170,048
1998	876	4,650	3,472	2,414	0	16,718	5,286	33,416	11,575	0	18,099	29,673	3,743	173,792
1999	876	2,052	3,954	2,017	84	16,624	4,874	30,482	12,093	0	20,723	32,817	-2,334	171,457
2000	879	1,979	4,106	1,950	0	14,728	4,542	28,185	15,832	0	21,811	37,644	-9,458	161,999
2001	876	2,159	5,835	1,692	0	13,810	5,019	29,391	19,331	0	20,920	40,251	-10,859	151,139

Rialto-Colton Groundwater Balance
1966 to 2016

Calender Year	Areal Recharge from Precipitation	Recharge from Mountain Front Runoff	Anthropogenic Return Flow	Streambed Percolation	Artificial Recharge	Underflow Inflow from Lytle Basin	Underflow Inflow from Bunker Hill Basin	Total Inflow	Groundwater Pumping	Evapotranspiration	Underflow Outflow to North Riverside Basin	Total Outflow	Change in Storage	Cumulative Change in Storage
	acre-ft								acre-ft				acre-ft	
2002	876	1,753	7,397	1,420	0	13,044	4,648	29,139	24,666	0	24,293	48,959	-19,820	131,320
2003	876	2,043	7,757	1,895	0	12,712	4,750	30,033	24,981	0	17,405	42,386	-12,354	118,966
2004	879	2,565	7,301	1,941	0	12,395	5,144	30,225	24,289	0	17,737	42,026	-11,801	107,165
2005	876	8,393	5,623	2,590	0	14,235	6,082	37,800	18,761	0	12,085	30,845	6,954	114,119
2006	876	4,457	5,246	2,017	0	14,674	5,869	33,139	17,705	0	15,117	32,822	317	114,436
2007	876	2,355	6,274	1,849	0	12,997	5,289	29,641	20,925	0	19,109	40,034	-10,393	104,043
2008	879	2,649	6,194	1,872	0	12,207	4,958	28,759	20,540	0	16,903	37,443	-8,684	95,359
2009	876	2,630	7,032	1,944	0	11,530	5,403	29,416	23,338	0	20,899	44,237	-14,821	80,538
2010	876	3,963	7,308	2,496	0	11,718	6,012	32,373	25,369	0	18,774	44,143	-11,770	68,768
2011	876	3,113	6,146	2,019	0	12,916	5,662	30,733	20,484	0	12,574	33,058	-2,325	66,443
2012	879	1,744	6,034	1,837	0	12,102	4,794	27,389	20,070	0	17,174	37,244	-9,855	56,589
2013	876	1,717	6,285	1,949	0	11,715	4,707	27,249	20,964	0	19,699	40,663	-13,414	43,175
2014	876	1,830	6,118	1,846	1,439	10,689	4,705	27,503	21,400	0	20,083	41,483	-13,980	29,194
2015	876	1,601	3,867	1,898	0	9,917	4,398	22,556	12,897	0	19,012	31,909	-9,352	19,842
2016	879	1,872	3,895	1,755	0	9,458	4,191	22,049	12,957	0	18,792	31,749	-9,699	10,143
Average 1966 to 2016	**1,992**	**3,272**	**4,356**	**2,172**	**793**	**14,535**	**4,702**	**31,821**	**14,611**	**0**	**17,011**	**31,622**	**199**	

Table 12

Riverside-Arlington Groundwater Balance
1966 to 2016

Calender Year	Areal Recharge from Precipitation and Applied Water	Recharge from Mountain Front Runoff	Streambed Percolation	Recharge from RIX Percolation	Underflow Inflow from Rialto-Colton Basin	Total Inflow	Groundwater Pumping	Pumping from RIX	Evapotra-nspiration	Rising Water Discharge to Streamflow	Underflow Outflow to Chino Basin	Underflow Outflow to Hole Lake	Underflow Outflow to Temescal Basin at Arlington Narrows	Total Outflow	Change in Storage	Cumulative Change in Storage
	acre-ft						acre-ft								acre-ft	
1966	13,364	11,853	44,869	0	10,911	80,997	63,704	0	3,000	9,090	14,176	1,434	1,721	93,126	-12,129	-12,129
1967	10,824	9,873	70,845	0	11,347	102,890	61,132	0	2,957	8,885	13,608	1,288	1,978	89,848	13,042	913
1968	10,013	9,318	32,760	0	14,930	67,021	70,324	0	2,902	8,727	13,761	1,179	2,133	99,025	-32,004	-31,091
1969	24,521	23,583	66,295	0	13,008	127,408	61,564	0	3,025	13,602	13,533	1,328	2,269	95,321	32,086	995
1970	12,476	11,106	48,174	0	16,782	88,538	66,770	0	2,750	8,484	13,562	1,308	2,235	95,109	-6,571	-5,576
1971	12,075	10,771	30,611	0	18,318	71,775	66,511	0	2,705	8,330	13,189	1,368	2,189	94,291	-22,516	-28,093
1972	9,163	8,655	22,078	0	21,170	61,066	72,632	0	2,387	7,862	12,488	1,455	2,119	98,943	-37,877	-65,970
1973	10,019	10,650	67,125	0	13,258	101,051	61,110	0	2,436	8,187	12,204	1,469	1,995	87,402	13,649	-52,321
1974	11,230	10,632	50,984	0	12,258	85,105	63,825	0	2,364	8,239	13,201	1,515	1,865	91,008	-5,903	-58,224
1975	7,964	8,097	39,406	0	14,245	69,712	53,253	0	2,216	7,847	13,274	1,519	1,810	79,919	-10,207	-68,432
1976	10,018	9,903	42,557	0	16,560	79,038	58,274	0	2,190	7,727	13,315	1,550	1,802	84,860	-5,822	-74,254
1977	9,796	9,915	41,774	0	16,240	77,725	53,537	0	2,152	7,653	13,431	1,561	1,814	80,148	-2,423	-76,677
1978	20,533	22,681	74,773	0	12,068	130,055	43,032	0	2,733	12,566	14,122	1,627	1,852	75,932	54,123	-22,554
1979	11,172	13,141	50,700	0	16,022	91,035	46,364	0	2,872	13,029	15,378	1,454	1,944	81,040	9,995	-12,559
1980	18,810	20,548	64,225	0	14,587	118,170	51,230	0	3,028	13,862	16,192	1,540	2,040	87,892	30,278	17,719
1981	6,763	7,621	21,052	0	25,980	61,417	56,437	0	2,798	12,770	16,197	1,583	2,116	91,901	-30,484	-12,765
1982	9,138	10,954	49,398	0	18,890	88,380	38,956	0	2,796	12,899	15,415	1,688	2,146	73,900	14,480	1,715
1983	12,882	15,873	82,528	0	12,060	123,342	36,265	0	3,123	13,874	15,531	1,842	2,236	72,870	50,472	52,187
1984	7,562	9,014	48,364	0	14,187	79,126	49,880	0	3,088	9,728	16,976	1,850	2,388	83,908	-4,782	47,405
1985	4,879	6,182	47,989	0	15,230	74,280	43,554	0	2,986	9,712	17,129	1,849	2,500	77,729	-3,449	43,955
1986	5,661	7,846	52,182	0	14,250	79,939	42,335	0	3,032	9,670	16,741	1,814	2,601	76,193	3,746	47,701
1987	4,439	6,309	49,701	0	15,025	75,473	40,107	0	3,113	9,712	16,665	1,758	2,685	74,040	1,433	49,134
1988	4,824	6,815	45,777	0	15,599	73,015	41,202	0	3,085	9,645	16,929	1,694	2,782	75,338	-2,324	46,810
1989	4,000	5,776	46,166	0	16,585	72,527	60,061	0	2,967	9,485	17,393	1,632	2,872	94,410	-21,882	24,928
1990	3,795	5,860	50,508	0	17,906	78,070	61,686	0	2,854	9,251	17,396	1,547	2,995	95,729	-17,659	7,269
1991	9,578	12,269	57,210	0	17,906	96,963	63,150	0	2,845	9,287	17,897	1,510	2,881	97,571	-608	6,661
1992	6,016	8,740	58,391	0	18,670	91,817	52,847	0	1,954	13,338	17,760	1,435	2,695	90,029	1,788	8,448
1993	16,469	20,556	63,834	0	16,790	117,649	52,299	0	2,220	13,920	17,921	1,497	2,611	90,468	27,181	35,630
1994	4,449	6,416	54,559	0	17,701	83,125	53,447	0	2,142	9,683	18,380	1,415	2,579	87,645	-4,521	31,109
1995	11,710	15,244	51,660	0	17,219	95,833	47,780	0	2,270	14,030	18,298	1,480	2,416	86,274	9,559	40,668
1996	4,330	6,130	50,539	25,728	19,487	106,213	54,608	31,082	2,097	9,820	17,815	1,469	2,415	119,306	-13,092	27,576
1997	4,921	7,264	41,219	35,094	21,182	109,681	59,060	44,820	2,067	10,085	17,329	1,473	2,182	137,015	-27,335	241
1998	13,030	17,014	68,155	34,644	18,099	150,941	49,796	48,708	2,079	14,542	17,321	1,556	1,953	135,954	14,987	15,228
1999	3,786	5,583	51,340	34,940	20,723	116,372	62,006	48,040	2,044	10,092	16,970	1,480	1,928	142,560	-26,188	-10,960
2000	4,008	5,711	51,715	34,326	21,811	117,570	64,304	47,227	2,039	10,195	16,546	1,437	1,811	143,560	-25,990	-36,950

Table 12

Riverside-Arlington Groundwater Balance
1966 to 2016

Calender Year	Areal Recharge from Precipitation and Applied Water	Recharge from Mountain Front Runoff	Streambed Percolation	Recharge from RIX Percolation	Underflow Inflow from Rialto-Colton Basin	Total Inflow	Groundwater Pumping	Pumping from RIX	Evapotra-nspiration	Rising Water Discharge to Streamflow	Underflow Outflow to Chino Basin	Underflow Outflow to Hole Lake	Underflow Outflow to Temescal Basin at Arlington Narrows	Total Outflow	Change in Storage	Cumulative Change in Storage
	acre-ft						acre-ft								acre-ft	
2001	4,259	6,697	56,526	29,416	20,920	117,819	60,176	41,637	2,023	10,114	16,035	1,393	1,576	132,955	-15,136	-52,086
2002	4,058	5,655	46,763	30,485	24,293	111,254	60,253	38,269	2,002	9,967	16,370	1,320	1,350	129,532	-18,278	-70,364
2003	6,154	8,580	62,046	28,674	17,405	122,859	56,526	38,559	2,000	9,988	17,224	1,252	1,216	126,764	-3,905	-74,269
2004	6,268	7,838	66,817	30,291	17,737	128,951	63,066	38,066	1,981	9,911	17,191	1,163	1,009	132,387	-3,436	-77,705
2005	12,926	16,751	83,088	26,350	12,085	151,200	60,262	36,090	1,967	14,153	18,888	1,183	785	133,328	17,872	-59,833
2006	3,186	4,576	76,849	27,945	15,117	127,673	62,597	38,220	1,977	9,522	18,941	1,055	730	133,042	-5,369	-65,202
2007	3,678	4,943	52,682	28,124	19,109	108,535	66,816	35,802	1,990	9,777	18,541	989	622	134,538	-26,003	-91,204
2008	3,732	3,430	67,978	28,200	16,903	120,243	62,802	35,902	2,868	9,489	17,794	951	504	130,311	-10,068	-101,272
2009	3,671	3,415	62,256	28,124	20,899	118,365	70,380	35,802	2,818	9,304	17,984	908	418	137,613	-19,248	-120,520
2010	11,538	9,879	83,219	28,124	18,774	151,533	56,572	35,802	2,809	13,223	18,353	876	260	127,895	23,638	-96,883
2011	3,037	2,772	81,567	28,124	12,574	128,074	58,024	35,802	2,800	10,218	18,409	839	295	126,387	1,687	-95,195
2012	3,346	3,314	52,683	28,200	17,174	104,717	58,776	35,902	2,761	8,967	18,194	749	306	125,655	-20,938	-116,133
2013	3,186	3,073	53,929	28,124	19,699	108,011	57,890	35,802	2,739	8,882	17,550	682	308	123,853	-15,842	-131,975
2014	3,612	3,465	56,228	28,124	20,083	111,512	56,736	35,802	2,698	8,772	17,154	625	262	122,047	-10,535	-142,510
2015	3,078	2,971	49,170	28,124	19,012	102,355	46,604	35,802	2,662	8,640	16,413	568	264	110,951	-8,596	-151,106
2016	3,851	3,532	53,516	28,200	18,792	107,892	50,688	35,902	2,684	8,613	16,363	505	254	115,008	-7,116	-158,222
Average 1966 to 2016	**8,114**	**9,192**	**54,800**	**12,144**	**17,011**	**101,261**	**56,298**	**15,863**	**2,551**	**10,301**	**16,264**	**1,346**	**1,739**	**104,363**	**-3,102**	

Table 13

Chino Basin Groundwater Balance
1966 to 2016

Calender Year	Areal Recharge from Precipitation	Recharge from Mountain Front Runoff	Anthropogenic Return Flow	Artificial Recharge	Streambed Percolation	Underflow Inflow from North Riverside Basin	Underflow Inflow from Six Basins and Cucamonga Basin	Underflow Inflow from Temecula Basin	Total Inflow	Groundwater Pumping			Evapotra-nspiration	Rising Water Discharge to Streamflow	Total Outflow	Change in Storage	Cumulative Change in Storage
										Pool 1 (Ag)	Pool 2 & 3 (Non-Ag & Appropriator)	CDA					
	acre-ft									acre-ft						acre-ft	
1966	18,455	4,352	65,526	18,967	27,259	14,176	23,960	9,475	182,171	155,075	63,446	0	21,217	22,745	262,483	-80,312	-80,312
1967	35,257	4,731	64,964	17,606	34,509	13,608	25,138	8,406	204,220	151,553	53,308	0	20,461	21,374	246,697	-42,477	-122,789
1968	17,591	5,171	64,363	19,981	34,990	13,761	26,318	7,219	189,394	148,067	57,796	0	19,380	18,534	243,778	-54,383	-177,173
1969	77,157	5,704	61,638	21,098	49,699	13,533	27,672	6,928	263,429	140,245	57,691	0	20,496	24,163	242,595	20,834	-156,338
1970	20,270	5,930	58,242	18,510	37,381	13,562	28,260	5,925	188,080	129,627	59,144	0	19,164	17,167	225,103	-37,023	-193,361
1971	14,873	5,672	59,037	17,331	39,162	13,189	27,590	5,127	181,982	131,643	59,961	0	19,159	15,236	226,000	-44,018	-237,379
1972	12,343	5,544	61,964	12,450	38,812	12,488	27,291	4,401	175,293	140,717	58,585	0	18,277	13,207	230,786	-55,493	-292,872
1973	28,434	5,762	62,239	7,683	41,964	12,204	27,824	4,069	190,179	141,184	59,994	0	18,278	14,469	233,924	-43,745	-336,617
1974	20,031	5,909	59,702	6,472	42,894	13,201	28,206	3,594	180,008	130,765	68,427	0	17,742	12,843	229,776	-49,769	-386,385
1975	14,471	5,620	58,267	5,847	39,973	13,274	27,453	3,188	168,092	123,163	74,628	0	17,262	11,659	226,712	-58,620	-445,005
1976	14,518	5,240	58,251	6,151	44,462	13,315	26,499	2,803	171,239	124,316	70,695	0	17,126	10,848	222,984	-51,745	-496,750
1977	14,828	5,277	58,806	16,653	46,221	13,431	26,560	2,577	184,352	126,204	69,459	0	17,465	11,400	224,528	-40,175	-536,926
1978	71,836	5,803	57,363	27,280	59,178	14,122	27,929	3,201	266,711	121,095	67,309	0	19,569	20,158	228,132	38,579	-498,347
1979	31,027	6,270	56,876	36,317	48,872	15,378	29,145	3,427	227,313	117,945	68,736	0	19,526	18,056	224,263	3,050	-495,297
1980	72,131	6,517	57,211	13,535	53,907	16,192	29,825	4,372	253,690	116,664	73,739	0	20,174	21,849	232,426	21,263	-474,034
1981	14,271	6,492	55,817	32,896	51,844	16,197	29,723	4,101	211,340	113,708	72,160	0	19,509	18,544	223,920	-12,580	-486,614
1982	30,482	6,621	54,055	28,834	53,496	15,415	30,059	4,124	223,085	110,921	66,295	0	19,657	19,499	216,372	6,714	-479,900
1983	73,978	7,068	53,141	40,080	53,028	15,531	31,222	4,646	278,695	102,477	69,618	0	20,732	22,609	215,436	63,258	-416,642
1984	15,695	7,529	53,951	10,454	40,867	16,976	32,459	4,158	182,088	97,866	77,003	0	19,432	15,420	209,721	-27,632	-444,275
1985	16,863	8,243	56,879	28,333	44,616	17,129	34,283	4,156	210,503	103,015	81,297	0	19,346	16,182	219,840	-9,336	-453,611
1986	26,774	8,998	59,631	27,342	44,304	16,741	36,248	4,045	224,082	106,705	83,727	0	19,743	16,464	226,639	-2,557	-456,168
1987	10,628	8,858	60,241	15,522	44,992	16,665	35,883	3,981	196,771	105,842	89,577	0	19,458	16,210	231,087	-34,316	-490,484
1988	11,241	8,559	60,053	8,938	45,799	16,929	35,142	3,816	190,477	102,312	94,464	0	19,333	15,873	231,982	-41,504	-531,988
1989	10,136	8,291	61,037	11,940	44,581	17,393	34,409	3,806	191,593	96,502	101,396	0	19,466	16,126	233,490	-41,897	-573,885
1990	12,922	7,816	56,928	9,095	45,077	17,396	33,172	3,592	185,998	89,415	94,330	0	19,298	15,604	218,648	-32,649	-606,534
1991	23,666	7,813	53,385	8,799	45,860	17,897	33,162	3,845	194,427	84,330	93,984	0	19,299	15,799	213,411	-18,985	-625,519
1992	37,710	8,453	52,367	13,895	54,881	17,760	34,866	4,552	224,484	81,550	91,917	0	20,809	22,419	216,695	7,789	-617,730
1993	91,487	8,771	52,608	17,204	49,315	17,921	35,658	4,769	277,733	80,036	85,977	0	21,711	23,369	211,093	66,641	-551,089
1994	18,576	8,829	52,813	28,493	39,716	18,380	35,809	4,204	206,820	79,040	91,242	0	20,953	16,640	207,875	-1,054	-552,143
1995	63,855	8,239	51,645	5,609	48,979	18,298	34,272	4,822	235,720	72,662	101,712	0	22,105	23,306	219,786	15,934	-536,209
1996	32,882	7,972	51,305	5,571	36,933	17,815	33,611	4,231	190,320	66,773	111,583	0	21,654	16,445	216,455	-26,135	-562,344
1997	29,306	8,954	49,639	11,153	37,831	17,329	36,135	4,153	194,500	68,424	106,358	0	21,792	16,305	212,879	-18,379	-580,723
1998	50,680	9,963	48,322	13,946	45,422	17,321	38,761	4,552	228,967	63,333	109,326	0	23,036	23,113	218,809	10,158	-570,565
1999	13,973	9,520	47,342	5,981	34,183	16,970	37,608	3,923	169,500	51,058	126,811	0	22,605	16,402	216,875	-47,375	-617,940

Table 13

Chino Basin Groundwater Balance
1966 to 2016

Calender Year	Areal Recharge from Precipitation	Recharge from Mountain Front Runoff	Anthropogenic Return Flow	Artificial Recharge	Streambed Percolation	Underflow Inflow from North Riverside Basin	Underflow Inflow from Six Basins and Cucamonga Basin	Underflow Inflow from Temecula Basin	Total Inflow	Groundwater Pumping			Evapotra-nspiration	Rising Water Discharge to Streamflow	Total Outflow	Change in Storage	Cumulative Change in Storage
										Pool 1 (Ag)	Pool 2 & 3 (Non-Ag & Appropriator)	CDA					
	acre-ft									acre-ft						acre-ft	
2000	17,615	9,024	46,968	11,407	34,478	16,546	36,352	3,383	175,774	46,556	124,095	3,994	22,749	15,939	213,334	-37,560	-655,500
2001	15,880	9,251	47,347	12,079	35,394	16,035	36,908	3,240	176,135	45,354	122,961	8,723	22,630	15,738	215,406	-39,272	-694,772
2002	11,131	9,218	46,602	14,541	35,477	16,370	36,822	2,536	172,698	41,991	123,406	9,948	22,598	15,225	213,168	-40,470	-735,242
2003	26,102	8,984	46,210	10,326	35,121	17,224	36,212	1,820	181,999	40,870	123,247	10,522	22,895	14,536	212,069	-30,070	-765,312
2004	23,883	8,843	46,060	19,303	35,041	17,191	35,880	1,201	187,402	40,728	118,412	10,229	22,946	14,002	206,317	-18,915	-784,227
2005	72,314	8,530	46,796	37,917	40,537	18,888	35,029	2,031	262,042	40,863	110,343	13,165	24,125	20,708	209,203	52,839	-731,388
2006	27,603	8,049	48,044	60,773	32,475	18,941	33,777	1,365	231,027	38,115	113,724	21,416	23,411	13,943	210,609	20,418	-710,970
2007	12,974	8,050	48,323	11,554	36,899	18,541	33,781	998	171,121	34,302	121,701	26,664	23,016	13,518	219,202	-48,081	-759,051
2008	31,492	8,513	46,975	13,213	36,676	17,794	35,021	877	190,562	31,738	130,667	29,960	22,157	13,448	227,971	-37,409	-796,461
2009	23,606	8,819	44,247	12,690	37,879	17,984	35,783	457	181,465	28,411	122,987	30,749	22,119	13,287	217,554	-36,089	-832,549
2010	69,345	9,156	41,979	32,416	45,089	18,353	36,661	720	253,719	26,053	103,114	28,950	23,131	19,971	201,219	52,500	-780,049
2011	42,372	8,300	41,535	50,499	34,957	18,409	34,431	465	230,967	25,652	98,553	28,880	22,933	14,434	190,452	40,515	-739,534
2012	20,914	7,135	41,893	17,094	37,044	18,194	31,433	286	173,991	24,054	109,185	27,754	22,486	13,216	196,696	-22,704	-762,238
2013	11,800	7,115	43,459	17,812	37,302	17,550	31,347	-25	166,359	21,715	117,489	28,190	22,361	12,982	202,737	-36,378	-798,616
2014	17,137	7,115	42,072	19,833	37,479	17,154	31,347	-184	171,952	18,620	108,629	29,652	22,344	12,778	192,024	-20,072	-818,688
2015	16,939	7,115	37,543	18,747	36,509	16,413	31,347	-444	164,170	16,597	102,428	29,106	22,442	12,621	183,195	-19,025	-837,713
2016	24,645	7,135	35,186	28,017	35,164	16,363	31,433	-451	177,492	17,296	98,232	28,237	22,541	12,671	178,977	-1,485	-839,198
Average 1966 to 2016	**29,688**	**7,467**	**52,683**	**18,788**	**41,657**	**16,264**	**32,269**	**3,382**	**202,199**	**82,611**	**91,390**	**7,179**	**20,826**	**16,648**	**218,654**	**-16,455**	

Temescal Basin Groundwater Balance
1966 to 2016

Calender Year	Areal Recharge from Precipitation	Recharge from Mountain Front Runoff	Anthropogenic Return Flow	Streambed Percolation	Underflow Inflow from Arlington Narrows	Total Inflow	Groundwater Pumping	Evapotranspiration	Underflow Outflow to Chino Basin	Total Outflow	Change in Storage	Cumulative Change in Storage
	acre-ft						acre-ft				acre-ft	
1966	1,903	4,537	2,746	4,050	1,721	14,957	16,621	6,132	9,475	32,228	-17,272	-17,272
1967	3,391	4,537	2,681	4,804	1,978	17,391	16,157	5,083	8,406	29,646	-12,255	-29,527
1968	2,091	4,549	2,798	4,338	2,133	15,909	17,549	4,077	7,219	28,845	-12,936	-42,463
1969	5,814	4,537	2,391	7,869	2,269	22,880	14,021	3,741	6,928	24,689	-1,809	-44,272
1970	2,418	4,537	2,592	4,825	2,235	16,607	16,017	3,285	5,925	25,227	-8,620	-52,892
1971	2,020	4,537	2,583	4,510	2,189	15,839	15,971	2,872	5,127	23,970	-8,131	-61,024
1972	1,814	4,549	2,839	3,751	2,119	15,072	18,107	2,541	4,401	25,049	-9,977	-71,001
1973	3,307	4,537	2,679	4,908	1,995	17,427	16,667	2,362	4,069	23,098	-5,671	-76,672
1974	2,482	4,537	2,738	4,623	1,865	16,245	17,642	2,218	3,594	23,455	-7,210	-83,882
1975	2,022	4,537	2,652	4,375	1,810	15,396	16,435	2,098	3,188	21,721	-6,325	-90,207
1976	1,181	4,549	2,685	4,361	1,802	14,579	16,621	1,992	2,803	21,416	-6,837	-97,044
1977	1,444	4,537	2,565	4,906	1,814	15,265	15,479	1,954	2,577	20,010	-4,745	-101,789
1978	5,598	4,537	2,264	9,229	1,852	23,480	12,303	2,088	3,201	17,593	5,887	-95,902
1979	3,111	4,537	1,880	7,681	1,944	19,152	8,357	2,208	3,427	13,992	5,160	-90,742
1980	4,609	4,549	2,138	9,643	2,040	22,979	10,075	2,382	4,372	16,829	6,150	-84,592
1981	1,237	4,537	1,914	7,803	2,116	17,606	8,543	2,371	4,101	15,015	2,591	-82,001
1982	2,774	4,537	1,899	7,937	2,146	19,293	8,310	2,381	4,124	14,815	4,479	-77,522
1983	4,649	4,537	1,920	9,528	2,236	22,870	6,778	2,519	4,646	13,944	8,926	-68,596
1984	1,505	4,549	2,171	5,374	2,388	15,987	8,357	2,473	4,158	14,988	999	-67,597
1985	2,326	4,537	2,081	5,952	2,500	17,395	8,125	2,407	4,156	14,688	2,707	-64,890
1986	3,335	4,537	2,176	5,922	2,601	18,572	8,171	2,400	4,045	14,615	3,956	-60,934
1987	2,455	4,537	2,210	5,917	2,685	17,804	9,007	2,350	3,981	15,338	2,466	-58,468
1988	2,635	4,549	2,159	5,912	2,782	18,039	9,473	2,333	3,816	15,622	2,417	-56,050
1989	2,036	4,537	1,173	5,916	2,872	16,533	11,050	2,293	3,806	17,148	-615	-56,666
1990	1,964	4,537	2,470	5,943	2,995	17,908	10,469	2,251	3,592	16,312	1,596	-55,069
1991	3,194	4,537	2,046	5,932	2,881	18,591	7,150	2,310	3,845	13,305	5,286	-49,784
1992	3,915	4,549	2,217	9,828	2,695	23,205	8,991	2,442	4,552	15,985	7,219	-42,564
1993	5,842	4,537	2,511	9,811	2,611	25,312	10,139	2,585	4,769	17,493	7,819	-34,745
1994	2,552	4,537	2,362	5,978	2,579	18,008	8,858	2,520	4,204	15,582	2,426	-32,319
1995	4,674	4,537	2,284	9,919	2,416	23,830	8,769	2,586	4,822	16,177	7,653	-24,666
1996	2,778	4,549	1,954	6,031	2,415	17,727	9,883	2,456	4,231	16,570	1,157	-23,509
1997	2,398	4,537	2,414	6,046	2,182	17,577	10,813	2,466	4,153	17,432	145	-23,364
1998	4,222	4,537	2,532	10,028	1,953	23,272	12,295	2,516	4,552	19,363	3,909	-19,456
1999	1,317	4,537	2,610	6,100	1,928	16,493	12,662	2,367	3,923	18,952	-2,459	-21,915
2000	1,796	4,549	2,476	6,118	1,811	16,750	11,452	2,258	3,383	17,093	-343	-22,258
2001	1,847	4,537	2,774	6,133	1,576	16,866	13,060	2,212	3,240	18,513	-1,647	-23,905
2002	1,239	4,537	3,592	6,154	1,350	16,872	19,587	2,071	2,536	24,195	-7,323	-31,227

Temescal Basin Groundwater Balance
1966 to 2016

Calender Year	Areal Recharge from Precipitation	Recharge from Mountain Front Runoff	Anthropogenic Return Flow	Streambed Percolation	Underflow Inflow from Arlington Narrows	Total Inflow	Groundwater Pumping	Evapotranspiration	Underflow Outflow to Chino Basin	Total Outflow	Change in Storage	Cumulative Change in Storage
	acre-ft						acre-ft				acre-ft	
2003	2,418	4,537	3,528	6,184	1,216	17,882	18,556	1,908	1,820	22,285	-4,402	-35,630
2004	2,206	4,549	3,662	6,199	1,009	17,624	19,012	1,798	1,201	22,011	-4,386	-40,016
2005	3,761	4,537	4,190	10,213	785	23,485	20,539	1,806	2,031	24,376	-891	-40,907
2006	1,697	4,537	4,368	6,203	730	17,534	19,507	1,759	1,365	22,631	-5,097	-46,003
2007	983	4,537	4,096	6,212	622	16,450	18,248	1,713	998	20,959	-4,509	-50,512
2008	1,777	4,549	4,140	6,214	504	17,185	19,739	1,696	877	22,312	-5,127	-55,639
2009	1,637	4,537	3,846	6,216	418	16,654	18,254	1,671	457	20,383	-3,729	-59,368
2010	3,348	4,537	3,857	10,228	260	22,230	17,538	1,691	720	19,950	2,280	-57,088
2011	2,374	4,537	3,769	6,534	295	17,509	16,580	1,677	465	18,722	-1,214	-58,302
2012	1,411	4,549	3,950	6,218	306	16,435	17,901	1,651	286	19,839	-3,404	-61,706
2013	1,168	4,537	3,980	6,222	308	16,216	18,769	1,616	-25	20,360	-4,144	-65,850
2014	1,397	4,537	3,754	6,224	262	16,174	17,419	1,598	-184	18,832	-2,658	-68,509
2015	1,305	4,537	3,310	6,226	264	15,642	16,065	1,583	-444	17,204	-1,562	-70,071
2016	1,685	4,549	2,766	6,226	254	15,479	13,392	1,592	-451	14,533	946	-69,124
Average 1966 to 2016	**2,570**	**4,540**	**2,772**	**6,539**	**1,739**	**18,160**	**13,755**	**2,380**	**3,382**	**19,516**	**-1,355**	

Prado Basin Groundwater Balance
1966 to 2016

Calender Year	Areal Recharge from Precipitation	Streambed Percolation	Underflow Inflow	Total Inflow	Groundwater Pumping	Evapotranspiration	Rising Water Discharge to Streamflow	Total Outflow	Change in Storage	Cumulative Change in Storage
	acre-ft				acre-ft				acre-ft	
1966	7,511	12,473	25,579	45,563	10,467	18,610	22,745	51,822	-6,259	-6,259
1967	8,298	17,633	19,831	45,762	10,176	17,685	21,374	49,235	-3,473	-9,732
1968	7,439	15,629	16,538	39,607	9,969	16,195	18,534	44,698	-5,091	-14,823
1969	9,718	29,351	13,063	52,132	9,456	16,524	24,163	50,144	1,988	-12,835
1970	6,975	18,711	13,004	38,690	8,766	15,345	17,167	41,279	-2,589	-15,424
1971	6,762	18,194	11,584	36,540	8,910	15,093	15,236	39,239	-2,699	-18,122
1972	6,966	16,343	9,311	32,620	9,494	14,054	13,207	36,754	-4,134	-22,257
1973	7,833	19,838	7,792	35,462	9,527	13,907	14,469	37,903	-2,441	-24,697
1974	7,021	19,971	6,916	33,908	8,880	13,288	12,843	35,011	-1,103	-25,801
1975	6,456	16,512	7,250	30,219	8,417	12,739	11,659	32,815	-2,597	-28,397
1976	6,359	20,283	5,442	32,083	8,476	12,577	10,848	31,902	182	-28,215
1977	6,562	22,813	4,022	33,397	8,554	12,891	11,400	32,844	553	-27,662
1978	9,745	34,871	3,618	48,234	8,245	14,394	20,158	42,797	5,438	-22,225
1979	7,641	24,935	7,195	39,771	8,595	14,435	18,056	41,087	-1,315	-23,540
1980	9,503	32,002	7,056	48,561	9,590	15,146	21,849	46,584	1,977	-21,563
1981	6,268	27,845	7,856	41,969	8,964	14,578	18,544	42,085	-116	-21,680
1982	7,145	29,401	7,953	44,500	8,537	14,501	19,499	42,537	1,963	-19,717
1983	8,383	32,169	8,155	48,707	7,791	15,547	22,609	45,947	2,760	-16,956
1984	5,610	20,122	9,903	35,634	6,838	14,896	15,420	37,155	-1,520	-18,477
1985	6,011	22,339	8,894	37,243	6,124	14,955	16,182	37,261	-17	-18,494
1986	7,121	22,538	8,914	38,573	7,298	15,208	16,464	38,970	-398	-18,892
1987	5,668	22,837	9,604	38,108	9,089	14,879	16,210	40,178	-2,070	-20,962
1988	5,484	23,133	9,820	38,437	7,998	14,790	15,873	38,661	-224	-21,187
1989	5,668	22,694	8,272	36,635	6,893	14,756	16,126	37,775	-1,140	-22,327
1990	5,561	23,231	8,324	37,115	7,509	14,546	15,604	37,659	-544	-22,871
1991	6,121	23,886	8,629	38,636	7,000	14,646	15,799	37,445	1,192	-21,679
1992	6,839	32,168	8,592	47,599	6,323	15,768	22,419	44,510	3,089	-18,590
1993	9,325	29,932	10,117	49,374	6,521	16,644	23,369	46,534	2,840	-15,750
1994	6,216	20,947	12,050	39,214	7,457	16,383	16,640	40,480	-1,266	-17,016
1995	8,069	29,084	12,849	50,002	7,136	16,980	23,306	47,422	2,580	-14,436
1996	5,487	19,249	14,274	39,010	6,366	16,837	16,445	39,648	-638	-15,074
1997	4,835	19,217	15,491	39,543	6,174	16,979	16,305	39,458	85	-14,989
1998	6,762	26,632	15,592	48,985	5,864	17,691	23,113	46,669	2,317	-12,672
1999	4,061	17,610	15,839	37,509	4,404	17,510	16,402	38,315	-806	-13,478
2000	4,048	17,504	15,975	37,527	4,266	17,499	15,939	37,704	-177	-13,656
2001	4,062	18,433	14,840	37,335	4,751	17,325	15,738	37,814	-479	-14,134
2002	3,326	18,635	13,252	35,213	3,809	17,146	15,225	36,180	-967	-15,101
2003	4,127	18,446	12,573	35,146	3,178	17,247	14,536	34,961	185	-14,916

Table 15

Prado Basin Groundwater Balance
1966 to 2016

Calender Year	Areal Recharge from Precipitation	Streambed Percolation	Underflow Inflow	Total Inflow	Groundwater Pumping	Evapotranspiration	Rising Water Discharge to Streamflow	Total Outflow	Change in Storage	Cumulative Change in Storage
	acre-ft				acre-ft				acre-ft	
2004	3,515	18,458	11,964	33,937	3,175	17,178	14,002	34,355	-418	-15,334
2005	5,863	26,657	12,682	45,202	3,540	17,713	20,708	41,961	3,241	-12,093
2006	3,827	18,657	12,254	34,738	3,211	17,399	13,943	34,553	185	-11,907
2007	3,246	20,173	11,254	34,673	3,068	17,162	13,518	33,748	925	-10,982
2008	3,502	20,050	10,671	34,222	3,043	16,896	13,448	33,387	835	-10,147
2009	3,484	19,932	10,472	33,888	3,065	16,935	13,287	33,287	601	-9,545
2010	4,755	27,751	10,358	42,864	2,518	17,448	19,971	39,937	2,927	-6,618
2011	4,658	19,656	11,618	35,932	2,818	17,459	14,434	34,711	1,221	-5,397
2012	3,305	19,705	11,327	34,336	2,949	17,229	13,216	33,394	942	-4,455
2013	3,147	19,547	11,120	33,814	2,497	17,102	12,982	32,582	1,232	-3,223
2014	2,998	19,709	10,685	33,393	1,917	17,051	12,778	31,746	1,647	-1,576
2015	3,018	19,044	10,970	33,032	1,968	17,119	12,621	31,707	1,324	-252
2016	2,825	18,091	11,857	32,773	1,865	17,205	12,671	31,742	1,031	780
Average 1966 to 2016	**5,865**	**22,060**	**11,043**	**38,968**	**6,342**	**15,963**	**16,648**	**38,953**	**15**	

Integrated SAR Model Scenario Runs

Scenario	Description	HCP Activity (Refer to Table 2)
1	**Evaluate Flow in the SAR and Identify Factors that May be Causing Reduced Flows**	-
2	**Evaluate the Proposed HCP Covered Activities**	-
2a	**Baseline Conditions (No HCP Covered Activities)**	None
2b	**All HCP Covered Activities with Hydrologic Effects**	-
2b.1	*All HCP Activities (Hydrology 1966-1990)*	All
2b.2	*All HCP Activities (Climate Change Alternative 1)*	All
2b.3	*All HCP Activities (Climate Change Alternative 2)*	All
2c	**Baseflow Reduction Activities**	-
2c.1	*SNRC + San Bernardino Baseflow Reduction Activities + Rialto Baseflow Reduction*	EV.4.01-4.03, WD.1, Rial.1
2c.2	*SNRC + San Bernardino Baseflow Reduction Activities*	EV.4.01-4.03, WD.1
2c.3	*Rialto Baseflow Reduction*	Rial.1
2c.4	*SNRC Only*	EV.4.01-4.03
2c.5	*SAR Sustainable Parks and Tributaries Water Reuse Project*	RPU.10
2c.6	*Western Riverside County Regional Wastewater Treatment Plant Enhancement and Expansion*	West.13
2c.7	*IEUA Baseflow Reduction Activities*	IEUA.3.01-3.06
2c.8	*IEUA Reduced Flow from WWTPs*	IEUA.4
2d	**Active Recharge Activities (Stormwater Capture Activities)**	-
2d.1	*Phase I Active Recharge Activities (Improvements to Existing Basins)*	VD.2.03, VD.2.07, VD.2.11-2.13, CD.4
2d.2	*Phase II Active Recharge Activities (New Facilities) along Lytle Creek*	VD.2.09
2d.3	*Phase II Active Recharge Activities (New Facilities) along Cajon Creek and Cable Creek*	VD.2.01-2.02, VD.2.08
2d.4	*Phase II Active Recharge Activities (New Facilities) along City Creek, Plunge Creek, and Mill Creek*	VD.2.05-2.06, VD.2.10
2d.5	*Enhanced Recharge Project (Stormflow from Seven Oaks Dam)*	VD.3
2d.6	*Riverside North Aquifer Storage and Recovery Project (revised)*	RPU.5/VD.2.14
2d.7	*Evaluation of Valley District Stormwater Capture Program at Prado Dam*	RPU.5/VD.2.14, VD.3, CD.4, VD.2.01-2.13

Scenario	Description	HCP Activity (Refer to Table 2)
2e	**IEUA Activities**	-
2e.1	*IEUA Stormflow Activities*	IEUA.1.01-1.12
2e.2	*All IEUA Activities*	IEUA.1.01-1.12, IEUA.3.01-3.06
2f	**Western's Victoria Recharge Basin Project**	West.6
2g	**Clean Water Factory -5 MGD from CWF to City Creek (CWF + Sterling)**	WD.1, EV.4.01-4.03
2h	**RIX Operational Scenarios**	-
2h.1	*High Pulse Event*	WD.1 - con m
2h.2	*Extended RIX Shutdown (RIX wells full flow of 10,000 gpm for an 8-hr and 16-hr RIX shutdown)*	WD.1 - con m
2h.3	*18.5 MGD RIX Discharge, Including 2.8 MGD Overextraction*	WD.1
2h.4	*18.5 MGD RIX Discharge, Including 6 MGD Overextraction*	WD.1
4	**Evaluate Groundwater Management Activities and Changes in Groundwater Pumping**	-
4.1	**Average Climate (1966-1990 Hydrology) and Optimized Use of SWP Recharge**	None
4.2	**Average Climate (1966-1990 Hydrology) and All HCP Covered Activities**	All
4.3	**Average Climate (1966-1990 Hydrology) and Phased HCP Covered Activities**	TBD
4.4	**Prolonged Drought Climate (1999-2016 Hydrology) and Optimized Use of SWP Recharge**	None
4.5	**Prolonged Drought Climate (1999-2016 Hydrology) and All HCP Covered Activities**	All
4.6	**Prolonged Drought Climate (1999-2016 Hydrology) and Phased HCP Covered Activities**	TBD

con m Indicates covered activity conservation measure alternative

HCP Covered Activities Included in the Scenario Runs

Project ID	Activity	Type	Project Description									
			Removed/Diverted/Relocated From:		Moved/Relocated To:			Removed/Diverted/Relocated From:		Moved/Relocated To:		
			Streamflow	Recycled Water Discharge	Surface Water Discharge	Artificial Recharge	Reuse/Recycled Water System	Streamflow	Recycled Water Discharge	Surface Water Discharge	Artificial Recharge	Reuse/Recycled Water System
			[acre-ft/yr]					[cfs]				
CD.4	Mill Creek Diversion Project	Stormwater Capture	940	-	-	940	-	1.3	-	-	1.3	-
EV.4.01-4.03	Sterling Natural Resource Center	Recycled Water	-	8,950 (Reduction from RIX)	280 (confluence of City Creek and SAR)	8,670 (7,150 in City Creek and 1,520 in Redlands Basins)	-	-	12.4 (Reduction from RIX)	0.4 (confluence of City Creek and SAR)	12.0 (9.9 in City Creek and 2.1 in Redlands Basins)	-
IEUA.1.01	Wineville Basin	Stormwater Capture	3,430 (combined with IEUA.1.06 and IEUA.1.10)	-	-	3,430 (combined with IEUA.1.06 and IEUA.1.10)	-	4.7 (combined with IEUA.1.06 and IEUA.1.10)	-	-	4.7 (combined with IEUA.1.06 and IEUA.1.10)	-
IEUA.1.02	Lower Day Basin	Stormwater Capture	1,240	-	-	1,240	-	1.7	-	-	1.7	-
IEUA.1.03	San Sevaine Basin Cells 1-5	Stormwater Capture	880	-	-	880	-	1.2	-	-	1.2	-
IEUA.1.04	Victoria Basin Improvements	Stormwater Capture	90	-	-	90	-	0.1	-	-	0.1	-
IEUA.1.05	Montclair Basin Cells 1-4	Stormwater Capture	150	-	-	150	-	0.2	-	-	0.2	-
IEUA.1.06	Jurupa Basin	Stormwater Capture	3,430 (combined with IEUA.1.01 and IEUA.1.10)	-	-	3,430 (combined with IEUA.1.01 and IEUA.1.10)	-	4.7 (combined with IEUA.1.01 and IEUA.1.10)	-	-	4.7 (combined with IEUA.1.01 and IEUA.1.10)	-
IEUA.1.07	Declez Basin	Stormwater Capture	330	-	-	330	-	0.5	-	-	0.5	-
IEUA.1.08	CSI Basin	Stormwater Capture	120	-	-	120	-	0.2	-	-	0.2	-
IEUA.1.09	Ely Basin	Stormwater Capture	250	-	-	250	-	0.3	-	-	0.3	-
IEUA.1.10	RP3 Basin	Stormwater Capture	3,430 (combined with IEUA.1.01 and IEUA.1.06)	-	-	3,430 (combined with IEUA.1.01 and IEUA.1.06)	-	4.7 (combined with IEUA.1.01 and IEUA.1.06)	-	-	4.7 (combined with IEUA.1.01 and IEUA.1.06)	-
IEUA.1.11	Turner Basin	Stormwater Capture	30	-	-	30	-	0.0	-	-	0.0	-
IEUA.1.12	East Declez Basin	Stormwater Capture	330	-	-	330	-	0.5	-	-	0.5	-
IEUA.3.01	Cucamonga Creek Dry-Weather Flow Diversion to Regional Water Recycling Plant No. 1 Project	Dry-Weather Flow Capture	600 (combined with IEUA.3.02 and IEUA.3.06)	-	-	-	600 (combined with IEUA.3.02 and IEUA.3.06)	0.8 (combined with IEUA.3.02 and IEUA.3.06)	-	-	-	0.8 (combined with IEUA.3.02 and IEUA.3.06)
IEUA.3.02	Cucamonga Creek at Interstate 10 Dry-Weather Flow Diversion to Regional Water Recycling Plant No. 1 Project	Dry-Weather Flow Capture	600 (combined with IEUA.3.01 and IEUA.3.06)	-	-	-	600 (combined with IEUA.3.01 and IEUA.3.06)	0.8 (combined with IEUA.3.01 and IEUA.3.06)	-	-	-	0.8 (combined with IEUA.3.01 and IEUA.3.06)
IEUA.3.03	Chino Creek at Chino Hills Parkway Dry-Weather Flow Diversion to Carbon Canyon Water Recycling Facility Project	Dry-Weather Flow Capture	140	-	-	-	140	0.2	-	-	-	0.2
IEUA.3.04	Day Creek at Wineville Basin Outflow Diversion to Regional Water Recycling Plant No. 1 Project	Dry-Weather Flow Capture	390	-	-	-	390	0.5	-	-	-	0.5
IEUA.3.05	San Sevaine Creek Diversion to Regional Water Recycling Plant No. 1 Project	Dry-Weather Flow Capture	670	-	-	-	670	0.9	-	-	-	0.9
IEUA.3.06	Lower Deer Creek Diversion to Regional Water Recycling Plant No. 5 Project	Dry-Weather Flow Capture	600 (combined with IEUA.3.01 and IEUA.3.02)	-	-	-	600 (combined with IEUA.3.01 and IEUA.3.02)	0.8 (combined with IEUA.3.01 and IEUA.3.02)	-	-	-	0.8 (combined with IEUA.3.01 and IEUA.3.02)
IEUA.4	IEUA Reduced Flow from WWTPs	Recycled Water	-	9,860 (Reduction from IEUA WWTPs)	-	-	-	-	13.6 (Reduction from IEUA WWTPs)	-	-	-
Rial.1	Rialto Wastewater Treatment Plant Reuse Project	Recycled Water	-	1,390	-	-	1,390	-	1.9	-	-	1.9
RPU.5	Riverside North Aquifer Storage and Recovery Project	Stormwater Capture	6,110 (with all upstream HCP activities) / 5,950 (without all upstream HCP activities)	-	-	6,110 (with all upstream HCP activities) / 5,950 (without all upstream HCP activities)	-	8.4 (with all upstream HCP activities) / 8.2 (without all upstream HCP activities)	-	-	8.4 (with all upstream HCP activities) / 8.2 (without all upstream HCP activities)	-

HCP Covered Activities Included in the Scenario Runs

Project ID	Activity	Type	Project Description									
			Removed/Diverted/Relocated From:		Moved/Relocated To:			Removed/Diverted/Relocated From:		Moved/Relocated To:		
			Streamflow	Recycled Water Discharge	Surface Water Discharge	Artificial Recharge	Reuse/Recycled Water System	Streamflow	Recycled Water Discharge	Surface Water Discharge	Artificial Recharge	Reuse/Recycled Water System
			[acre-ft/yr]					[cfs]				
RPU.8*	Riverside Basin Recharge Project	Stormwater Capture	1,460	-	-	1,460	-	2.0	-	-	2.0	-
RPU.10	Santa Ana River Sustainable Parks and Tributaries Water Reuse Project	Recycled Water	-	12,650 (Reduction from RWQCP)	4,920 (670 at Anza Drain, 1,450 at Old Farm Rd, 670 at Tequesquite, and 2,130 at Evans Drain)	-	7,730	-	17.5 (Reduction from RWQCP)	6.7 (0.9 at Anza Drain, 2.0 at Old Farm Rd, 0.9 at Tequesquite, and 2.9 at Evans Drain)	-	10.7
VD.1	Cactus Basin Recharge Project	Stormwater Capture	1,360	-	-	1,360	-	1.9	-	-	1.9	-
VD.2.01	Cajon Creek	Stormwater Capture	1,120	-	-	1,120	-	1.5	-	-	1.5	-
VD.2.02	Cable Creek	Stormwater Capture	2,420	-	-	2,420	-	3.3	-	-	3.3	-
VD.2.03	Lytle Creek	Stormwater Capture	3,620	-	-	3,620	-	5.0	-	-	5.0	-
VD.2.05	City Creek	Stormwater Capture	4,600	-	-	4,600	-	6.4	-	-	6.4	-
VD.2.06	Plunge Creek – Basin 1	Stormwater Capture	900	-	-	900	-	1.2	-	-	1.2	-
VD.2.07	Cajon-Vulcan 1	Stormwater Capture	490	-	-	490	-	0.7	-	-	0.7	-
VD.2.08	Vulcan 2	Stormwater Capture	2,450	-	-	2,450	-	3.4	-	-	3.4	-
VD.2.09	Lytle-Cajon	Stormwater Capture	2,910	-	-	2,910	-	4.0	-	-	4.0	-
VD.2.10	Plunge Creek – Basin 2	Stormwater Capture	2,210	-	-	2,210	-	3.1	-	-	3.1	-
VD.2.11	Devil Creek	Stormwater Capture	1,910	-	-	1,910	-	2.6	-	-	2.6	-
VD.2.12	Waterman Basin Spreading Grounds	Stormwater Capture	1,420	-	-	1,420	-	2.0	-	-	2.0	-
VD.2.13	Twin Creek Spreading Grounds	Stormwater Capture	3,310	-	-	3,310	-	4.6	-	-	4.6	-
VD.3	Enhanced Recharge Project	Stormwater Capture	3,720	-	-	3,720	-	5.1	-	-	5.1	-
WD.1	SBMWD Recycled Water Project	Recycled Water	-	5,600 (Reduction from RIX)	-	-	5,600 (Clean Water Factory)	-	7.7 (Reduction from RIX)	-	-	7.7 (Clean Water Factory)
West.3*	Recycled Water Live Stream Discharge	Recycled Water	-	200 (Reduction from WRCRWA)	200 (emergency discharge to Mockingbird Creek)	-	-	-	0.3 (Reduction from WRCRWA)	0.3 (emergency discharge to Mockingbird Creek)	-	-
West.6*	Arlington Basin Water Quality Improvement Project	Stormwater Capture	300	-	-	2,150 (300 from streamflow diversion and 1,850 from imported/recycled water)	-	0.4	-	-	3.0 (0.4 from streamflow diversion and 2.6 from imported/recycled water)	-
West.13	Western Riverside County Regional Wastewater Treatment Plant Enhancement and Expansion	Recycled Water	-	10,080	-	-	10,080	-	13.9	-	-	13.9

* Surface Hydrology not connected to main stem of the SAR, but need to evaluate habitat effect(s) for covered species

Groundwater Pumping for Baseline Scenario Run – Integrated SAR Model

Groundwater Basin	Owner	Annual Average 2012-2016 [Acre-ft/yr]	Annual Average Baseline Scenario [Acre-ft/yr]
Yucaipa	Redlands, City of	12	0
Yucaipa	South Mesa Water Company	1,914	1,914
Yucaipa	Western Heights Water Company	1,924	1,924
Yucaipa	Yucaipa Valley Water District	5,793	5,793
	Subtotal	**9,643**	**9,632**
SBBA	Colton, City of	4,740	2,083
SBBA	East Valley Water District	16,355	11,130
SBBA	Fontana Water Company	6,514	8,922
SBBA	Loma Linda, City of	5,236	6,046
SBBA	Marygold Mutual Water Company	0	0
SBBA	Meeks & Daley Water Company	1,609	32
SBBA	Muscoy Mutual Water Company	1,331	2,111
SBBA	Newmark Muscoy EPA	18,919	19,654
SBBA	Redlands, City of	23,054	15,725
SBBA	Rialto, City of	2,817	3,284
SBBA	Riverside Highland Water Company	1,582	1,289
SBBA	Riverside, City of	31,879	39,978
SBBA	Riverside, City Of-Gage Canal	29,137	25,778
SBBA	San Bernardino Valley MWD	6,379	7,500
SBBA	San Bernardino, City of	23,415	24,324
SBBA	Terrace Water Company	615	905
SBBA	UNIVERSITY OF CALIFORNIA, REGENTS OF	0	0
SBBA	West Valley Water District	4,584	6,625
SBBA	Private/Others	8,333	19,132
	Subtotal	**186,498**	**194,517**
Rialto Colton	Colton, City of	2,282	7,892
Rialto Colton (No Man's Land)	Fontana Water Company	4,192	3,595
Rialto Colton	Fontana Water Company	5,260	2,069
Rialto Colton	Rialto, City of	2,170	3,129
Rialto Colton	Riverside, City of	469	2,700
Rialto Colton	West Valley Water District	3,168	3,805
Rialto Colton	Private/Others	116	857
	Subtotal	**17,657**	**24,046**
Riverside-Arlington	Colton, City of	2,872	1,028
Riverside-Arlington	Jurupa Community Services District	493	374
Riverside-Arlington	Rialto, City of	944	599
Riverside-Arlington	Riverside Highland Water Company	1,987	161
Riverside-Arlington	Riverside, City of	24,513	26,229
Riverside-Arlington	Riverside, City Of-Gage Canal	4,176	4,469
Riverside-Arlington	RUBIDOUX C.S.D.	7,148	9,971
Riverside-Arlington	San Bernardino RIX Extraction	35,842	33,875
Riverside-Arlington	West Valley Water District	1,936	1,269
Riverside-Arlington	WESTERN MUNICIPAL WATER DISTRICT	6,060	9,974
Riverside-Arlington	Private/Others	4,009	4,987
	Subtotal	**89,980**	**92,937**
Chino	Ameron	34	32
Chino	Angelica Textile Service	33	32
Chino	Arrowhead Mtn Spring Water Co	388	400
Chino	California Speedway	1,726	1,988
Chino	Chino Basin Desalter Authority	28,588	40,000
Chino	City of Chino	6,259	10,765
Chino	City of Chino Hills	2,369	3,502
Chino	City of Norco	1,457	2,299
Chino	City of Ontario	21,162	21,814
Chino	City of Pomona	11,375	15,921
Chino	City of Upland	2,439	2,790
Chino	Cucamonga Valley Water District	17,206	16,439
Chino	Fontana Water Company	13,274	14,255
Chino	General Electric Corporation	1,331	1,668
Chino	Golden State Water Company	827	374
Chino	Jurupa Community Services District	13,786	13,515
Chino	Marygold Mutual Water Company	1,077	1,435
Chino	Monte Vista Water District	9,631	6,448
Chino	Niagara Water Company	1,489	1,502
Chino	Orange County Water District	147	127
Chino	Reliant Energy, Etiwanda Llc	274	279
Chino	San Antonio Water Company	0	0
Chino	San Antonio Winery	8	7
Chino	San Bern Cty Gen Svs Dept Of Comm Res	439	709
Chino	Santa Ana River Water Company	0	0
Chino	State of California, California Institution for Men	3,350	2,698
Chino	Private/Others	15,928	6,899
	Subtotal	**154,595**	**165,897**
Temescal	City of Corona	16,709	13,614
	Subtotal	**16,709**	**13,614**
	Total Pumping	**475,084**	**500,642**

Average Streamflow – Scenario Runs

Model Scenario	Description	E Street	MWD Crossing	Prado Dam
		cfs		
TM5a				
Scenario 2a	Baseline Conditions (No HCP Covered Activities)	52	103	279
Scenario 2b.1	All HCP Activities (Hydrology 1966-1990)	47	80	215
Scenario 2c.1	SNRC + San Bernardino Baseflow Reduction Activities + Rialto Baseflow Reduction	55	78	252
Scenario 2c.2	SNRC + San Bernardino Baseflow Reduction Activities	55	80	255
Scenario 2c.3	Rialto Baseflow Reduction	52	100	274
Scenario 2d.5	Enhanced Recharge Project (Stormflow from Seven Oaks Dam)	50	95	272
Scenario 2d.7	Evaluation of Valley District Stormwater Capture Program at Prado Dam	43	94	269
TM5b				
Calibration (1966-2016)	Calibration	81	113	286
Calibration (1966-1990)		93	91	207
Scenario 2a	Baseline Conditions (No HCP Covered Activities)	51	97	272
Scenario 2c.4	SNRC Only	53	86	260
Scenario 2c.5	SAR Sustainable Parks and Tributaries Water Reuse Project	51	101	259
Scenario 2c.6	Western Riverside County Regional Wastewater Treatment Plant Enhancement and Expansion	51	98	260
Scenario 2c.7	IEUA Baseflow Reduction Activities	52	97	270
Scenario 2d.1	Phase I Active Recharge Activities (Improvements to Existing Basins)	49	93	268
Scenario 2d.2	Phase II Active Recharge Activities (New Facilities) along Lytle Creek	52	95	271
Scenario 2d.3	Phase II Active Recharge Activities (New Facilities) along Cajon Creek and Cable Creek	52	94	268
Scenario 2d.4	Phase II Active Recharge Activities (New Facilities) along City Creek, Plunge Creek, and Mill Creek	46	90	266
Scenario 2d.6	Riverside North Aquifer Storage and Recovery Project (revised)	52	95	270
Scenario 2e.1	IEUA Stormflow Activities	51	96	264
Scenario 2e.2	All IEUA Activities	51	96	261
TM5c				

Calibration (1966-2016)	Calibration	86	116	290
Calibration (1966-1990)		96	94	211
Scenario 2a	Baseline Conditions (No HCP Covered Activities)	54	93	269
Scenario 2b.1	All HCP Activities	50	71	206
Scenario 2b.2	All HCP Activities (Climate Change Alternative 1)	48	69	201
Scenario 2b.3	All HCP Activities (Climate Change Alternative 2)	46	67	197
Scenario 2c.8	IEUA Baseflow Reduction Activities	54	93	255
Scenario 2f	Western's Victoria Recharge Basin Project	54	94	269
Scenario 2g	Clean Water Factory -5 MGD from CWF to City Creek (CWF + Sterling)	55	78	253
Scenario 2h.3	18.5 MGD RIX Discharge, Including 2.8 MGD Overextraction	57	79	255
Scenario 2h.4	18.5 MGD RIX Discharge, Including 6 MGD Overextraction	57	76	252
Scenario 4.1	Average Climate (1966-1990 Hydrology) and Optimized Use of SWP Recharge	53	89	221
Scenario 4.2	Average Climate (1966-1990 Hydrology) and All HCP Covered Activities	48	60	192
Scenario 4.4	Prolonged Drought Climate (1999-2016 Hydrology) and Optimized Use of SWP Recharge	38	97	235
Scenario 4.5	Prolonged Drought Climate (1999-2016 Hydrology) and All HCP Covered Activities	35	76	215

Average Rising Water – Scenario Runs

Model Scenario	Description	Yucaipa	Riverside-Arlington	Prado
		acre-ft/yr		
TM5a				
Scenario 2a	Baseline Conditions (No HCP Covered Activities)	320	10,150	14,720
Scenario 2b.1	All HCP Activities (Hydrology 1966-1990)	330	10,200	13,600
Scenario 2c.1	SNRC + San Bernardino Baseflow Reduction Activities + Rialto Baseflow Reduction	320	8,830	14,690
Scenario 2c.2	SNRC + San Bernardino Baseflow Reduction Activities	330	8,910	14,690
Scenario 2c.3	Rialto Baseflow Reduction	320	10,130	14,720
Scenario 2d.5	Enhanced Recharge Project (Stormflow from Seven Oaks Dam)	320	10,140	14,720
Scenario 2d.7	Evaluation of Valley District Stormwater Capture Program at Prado Dam	330	10,170	14,700
TM5b				
Calibration (1966-2016)	Calibration	870	10,310	16,580
Calibration (1966-1990)		1,270	10,050	17,040
Scenario 2a	Baseline Conditions (No HCP Covered Activities)	320	10,130	14,320
Scenario 2c.4	SNRC Only	330	9,420	14,300
Scenario 2c.5	SAR Sustainable Parks and Tributaries Water Reuse Project	330	10,150	14,290
Scenario 2c.6	Western Riverside County Regional Wastewater Treatment Plant Enhancement and Expansion	320	10,140	14,050
Scenario 2c.7	IEUA Baseflow Reduction Activities	320	10,140	14,310
Scenario 2d.1	Phase I Active Recharge Activities (Improvements to Existing Basins)	320	10,110	14,310
Scenario 2d.2	Phase II Active Recharge Activities (New Facilities) along Lytle Creek	320	10,140	14,330
Scenario 2d.3	Phase II Active Recharge Activities (New Facilities) along Cajon Creek and Cable Creek	320	10,130	14,310
Scenario 2d.4	Phase II Active Recharge Activities (New Facilities) along City Creek, Plunge Creek, and Mill Creek	330	10,140	14,320
Scenario 2d.6	Riverside North Aquifer Storage and Recovery Project (revised)	320	10,160	14,320
Scenario 2e.1	IEUA Stormflow Activities	330	10,150	14,350
Scenario 2e.2	All IEUA Activities	320	10,160	14,340

TM5c				
Calibration (1966-2016)	Calibration	2,170	10,160	16,570
Calibration (1966-1990)		2,750	9,950	17,140
Scenario 2a	Baseline Conditions (No HCP Covered Activities)	1,100	9,870	14,170
Scenario 2b.1	All HCP Activities	1,140	9,770	12,940
Scenario 2b.2	All HCP Activities (Climate Change Alternative 1)	1,100	9,590	12,500
Scenario 2b.3	All HCP Activities (Climate Change Alternative 2)	1,060	9,510	12,150
Scenario 2c.8	IEUA Baseflow Reduction Activities	1,100	9,870	13,990
Scenario 2f	Western's Victoria Recharge Basin Project	1,100	10,060	14,170
Scenario 2g	Clean Water Factory -5 MGD from CWF to City Creek (CWF + Sterling)	1,130	8,660	14,160
Scenario 2h.3	18.5 MGD RIX Discharge, Including 2.8 MGD Overextraction	1,120	8,750	14,160
Scenario 2h.4	18.5 MGD RIX Discharge, Including 6 MGD Overextraction	1,120	8,510	14,160
Scenario 4.1	Average Climate (1966-1990 Hydrology) and Optimized Use of SWP Recharge	1,100	9,320	12,850
Scenario 4.2	Average Climate (1966-1990 Hydrology) and All HCP Covered Activities	1,120	8,470	12,660
Scenario 4.4	Prolonged Drought Climate (1999-2016 Hydrology) and Optimized Use of SWP Recharge	1,110	8,900	14,190
Scenario 4.5	Prolonged Drought Climate (1999-2016 Hydrology) and All HCP Covered Activities	1,110	8,070	14,040

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Table 21

Assumptions for RIX

Scenario	Description	Inflow	Plant Production	Planned Discharge	SNRC	Planned Discharge Location from CWF (5 mgd)		
						Purple Pipe	City Creek	Redlands Basins
		MGD						
2a	**Baseline Conditions (No HCP Covered Activities)**	27.5	30.2	30.2		0	0	0
2b.1	*All HCP Activities (Hydrology 1966-1990)*	15.3	16.8	16.8	yes	2 MGD in Summer 1.5 MGD in Winter	3 MGD in Summer 3.5 MGD in Winter	0
2c.5	*SNRC Only*	19.9	21.8	21.8	yes	0	0	0
2g	**Reroute Clean Water Factory -5 MGD from CWF to City Creek (CWF + SNRC)**	15.3	16.8	16.8	yes	0	0	5
2h	**RIX Operational Scenarios**							
2h.3	*18.5 MGD RIX Discharge, Including 2.8 MGD Overextraction*	15.7	18.5	18.5	yes	2 MGD in Summer 1.5 MGD in Winter	3 MGD in Summer 3.5 MGD in Winter	0
2h.4	*18.5 MGD RIX Discharge, Including 6 MGD Overextraction*	12.5	18.5	18.5	yes	2 MGD in Summer 1.5 MGD in Winter	3 MGD in Summer 3.5 MGD in Winter	0
4	**Evaluate Groundwater Management Activities and Changes in Groundwater Pumping**							
4.1	*Average Climate (1966-1990 Hydrology) and Optimized Use of SWP Recharge*	27.5	30.2	30.2		0	0	0
4.2	*Average Climate (1966-1990 Hydrology) and All HCP Covered Activities*	15.3	16.8	16.8	yes	2 MGD in Summer 1.5 MGD in Winter	3 MGD in Summer 3.5 MGD in Winter	0
4.3	*Average Climate (1966-1990 Hydrology) and Phased HCP Covered Activities*	27.5	30.2	30.2		0	0	0
4.4	*Prolonged Drought Climate (1999-2016 Hydrology) and Optimized Use of SWP Recharge*	27.5	30.2	30.2		0	0	0
4.5	*Prolonged Drought Climate (1999-2016 Hydrology) and All HCP Covered Activities*	15.3	16.8	16.8	yes	2 MGD in Summer 1.5 MGD in Winter	3 MGD in Summer 3.5 MGD in Winter	0

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