

Table 1 - Model Boundaries

No.	AQUIFER BOUNDARY	MODEL BOUNDARY
1	Underflow from Bunker Hill Basin	Specified Flux: Injection wells represent underflow through the San Jacinto fault. The underflow rates range from approximately 800 AFY to 8,100 AFY for 1965-2007. Applies to Layers 1 and 2. No injection wells were assigned to Layer 3.
2	Underflow from Rialto Basin	General Head: General head boundary represents underflow from northern parts of Rialto Basin. There is a 45 feet of head difference along this boundary. The groundwater heads at this boundary are based on MVWD Well 16 (01S/05W-12L01S). Applies to all three model layers.
3	Chino Basin Boundary at Bloomington Boundary	Specified Flux: Underflow through the Bloomington Boundary is represented by five extraction wells in Layers 2 and 3. Layer 1 is not present at this boundary.
4	Groundwater Discharge at Riverside Narrows	Constant Heads: Constant head are used at Riverside Narrows to represent groundwater discharge to the Santa Ana River. Constant heads are assigned to Layers 1 and 2. Layer 3 is inactive at this boundary.
5	Underflow to Hole Lake Area	General Head: General head boundary represents discharge to Hole Lake area. General head cells are assigned to Layer 2. Layers 1 and 3 are inactive at this boundary. General head cells are assigned to Layer 2. Layers 1 and 3 are inactive at this boundary.
6	Underflow to Temescal Basin at Arlington Narrows	General Head: General head boundary represents underflow to Temescal Basin through the Arlington Narrows.
7	Underflow through Rialto-Colton Fault	Horizontal Flow Barrier: Horizontal flow barrier represents the Rialto-Colton Fault. Groundwater flow occurs through the fault mostly in the southern parts of the fault near the Santa Ana River. Significant head difference exists across the Rialto-Colton Fault near the Bloomington Boundary. Applies to all three model layers.
8	Groundwater Interaction with Santa Ana River	RIVER: RIVER package is used to simulate the aquifer interaction with Santa Ana River in Layer 1. Applies only to Layer 1.

Table 2
Hydrologic Soil Characteristics and Land Use Areas of
Subregions for 1993 Land Use Conditions

Subregion	Basin	Soil Class	Land use (acres)				Total Area (acres)
			AG	URB	NV	PARK	
1	Arlington	B	72	862	72	21	1,026
2	Arlington	B	0	908	71	41	1,021
3	Arlington	B	14	1,203	108	27	1,351
4	Arlington	C	0	298	116	0	414
5	Arlington	B	0	929	0	49	978
6	Arlington	B	0	378	34	8	420
7	Arlington	D	17	465	85	0	567
8	Arlington	B	156	401	36	6	599
9	Arlington	B	256	581	9	9	854
10	Arlington	B	79	883	30	0	992
11	Arlington	B	0	594	74	74	743
12	Arlington	C	364	15	4	0	383
13	Arlington	B	397	19	51	0	467
14	Arlington	B	216	124	14	0	355
15	Arlington	B	379	20	0	0	399
16	Arlington	B	604	71	213	0	889
17	Arlington	C	876	219	0	0	1,095
18	Arlington	D	31	816	143	31	1,020
19	Arlington	C	983	52	0	0	1,034
20	Arlington	C	0	195	0	49	243
21	Rialto-Colton	A-B	0	972	0	51	1,023
22	Rialto-Colton	A	0	101	572	0	672
23	Rialto-Colton	B	0	748	112	0	860
24	Rialto-Colton	A-B	0	1,849	58	39	1,946
25	Riverside	B	0	722	0	46	769
26	Riverside	B	0	1,437	0	29	1,467
27	Riverside	B	302	10	6	0	317
28	Riverside	C	23	516	28	0	567
29	Riverside	C	71	366	106	47	590
30	Riverside	A-B	0	75	1,420	0	1,494
31	Riverside	B	0	448	29	0	477
32	Riverside	B	78	581	208	0	867
33	Riverside	B	0	125	531	0	656
34	Riverside	B	28	1,325	0	42	1,394
35	Riverside	C	0	418	100	106	625
36	Riverside	B	0	396	99	0	495
37	Riverside	B	0	478	10	5	493
38	Riverside	B	0	111	632	0	743
39	Riverside	A-B	84	0	206	0	290
40	Riverside	A	0	10	475	0	485
41	Riverside	A-B	51	127	667	0	844
42	Riverside	A-B	65	0	575	6	646

Subregion	Basin	Soil Class	Land use (acres)				Total Area (acres)
			AG	URB	NV	PARK	
43	Riverside	A-B	280	815	38	140	1,274
44	Riverside	C	0	582	161	23	765
45	Riverside	A-B	28	576	98	0	702
46	Riverside	A-B	292	136	251	0	678
47	Riverside	B	17	398	150	12	576
48	Riverside	B	262	437	166	9	874
49	Riverside	B	37	669	15	15	735
50	Riverside	B	747	11	391	0	1,150
51	Riverside	A-B	0	487	0	0	487
52	Riverside	A	0	0	567	0	567
53	Riverside	A-B	0	0	685	0	685
54	Riverside	A	0	0	508	0	508
55	Riverside	B	0	435	109	0	543
56	Riverside	B-C	0	492	117	6	615
57	Riverside	A	0	195	278	15	487
58	Riverside	A	0	0	639	0	639
59	Riverside	B	0	468	42	10	521
60	Riverside	C	0	0	1,196	0	1,196
61	Riverside	C	0	139	177	0	317
62	Riverside	B-C	0	184	553	0	737
63	Riverside	A-B-C	0	0	548	0	548
64	Riverside	A-B	65	622	105	16	807
65	Riverside	A-B	78	473	36	12	598
66	Riverside	A	0	529	227	0	756
67	Riverside	A	0	948	105	0	1,053
68	Riverside	C	400	17	4	0	421
69	Riverside	B-C	45	602	68	38	752
70	Riverside	C	0	1,053	145	118	1,316
71	Riverside	C	0	601	0	12	613
72	Riverside	C	0	487	0	5	492
73	Riverside	B	523	71	113	0	707
74	Riverside	C	22	284	15	48	368
75	Riverside	B	44	774	18	44	880
76	Riverside	C	39	857	79	10	985
77	Riverside	A-B	149	299	548	0	996
78	Riverside	C	0	64	731	0	795
79	Riverside	C	15	670	22	37	744
80	Riverside	C	0	95	185	0	280
81	Riverside	C	0	132	57	0	189
82	Riverside	B	0	1,354	0	42	1,396
83	Riverside	B	0	20	217	158	395
84	Riverside	B	0	409	0	84	493
85	Small Watersheds	C	16	62	1,476	0	1,554
86	Small Watersheds	C	0	874	1,425	0	2,299
87	Small Watersheds	C	12	1,172	12	12	1,208

Subregion	Basin	Soil Class	Land use (acres)				Total Area (acres)
			AG	URB	NV	PARK	
88	Small Watersheds	C	0	21	392	0	413
89	Small Watersheds	C	0	3,087	2,058	0	5,145
90	Small Watersheds	C	635	882	2,012	0	3,530
91	Small Watersheds	C	263	346	775	0	1,385
92	Small Watersheds	C	842	1,384	782	0	3,008
93	Small Watersheds	C	831	128	639	0	1,598
94	Small Watersheds	C	1,643	2,660	3,520	0	7,822
95	Small Watersheds	C	124	247	803	62	1,236
96	Small Watersheds	C	0	491	353	17	862
97	Small Watersheds	B-C	0	270	115	12	397
98	Small Watersheds	C	34	30	362	0	426
99	Small Watersheds	C	79	31	8	0	118
100	Small Watersheds	C	315	108	399	8	830
101	Small Watersheds	C	6	61	20	0	87
102	Small Watersheds	C	0	120	587	0	707
103	Small Watersheds	C	0	1,439	626	21	2,085
104	Small Watersheds	C	0	33	269	0	302
105	Small Watersheds	C	3	61	215	0	279
106	Small Watersheds	C	6	157	466	0	629
107	Small Watersheds	C	0	0	453	0	453
108	Small Watersheds	C	0	13	313	0	326
109	Small Watersheds	C	19	77	1,836	0	1,933
110	Small Watersheds	C	0	268	67	0	334
111	Small Watersheds	C	26	51	436	0	513
112	Small Watersheds	C	158	39	1,119	0	1,316
113	Small Watersheds	C	0	164	364	0	527
Subtotals							
Rialto-Colton			0	3,670	742	90	4,502
Riverside			3,744	23,529	14,454	1,135	42,863
Arlington			4,443	9,032	1,060	314	14,849
Total Model Area (acres)			8,188	36,231	16,256	1,539	62,214
Small Watersheds			5,012	14,275	21,903	132	41,323

Table 3
Hydrologic Soil Characteristics and Land Use Areas
of Subregions for 2008 land Use Conditions

Subregion	Basin	Soil Class	Land use				Total Area
			AG	URB	NV	PARK	
1	Arlington	B	0	893	72	62	1,026
2	Arlington	B	0	970	0	51	1,021
3	Arlington	B	0	1,311	0	41	1,351
4	Arlington	C	0	372	29	12	414
5	Arlington	B	0	939	0	39	978
6	Arlington	B	0	395	0	25	420
7	Arlington	D	0	510	57	0	567
8	Arlington	B	0	539	48	12	599
9	Arlington	B	0	812	0	43	854
10	Arlington	B	0	932	0	60	992
11	Arlington	B	0	624	0	119	743
12	Arlington	C	357	27	0	0	383
13	Arlington	B	458	0	9	0	467
14	Arlington	B	99	255	0	0	355
15	Arlington	B	339	60	0	0	399
16	Arlington	B	800	44	44	0	889
17	Arlington	C	679	394	0	22	1,095
18	Arlington	D	0	979	10	31	1,020
19	Arlington	C	910	124	0	0	1,034
20	Arlington	C	0	195	0	49	243
21	Rialto-Colton	A-B	0	1,023	0	0	1,023
22	Rialto-Colton	A	0	148	525	0	672
23	Rialto-Colton	B	0	731	0	129	860
24	Rialto-Colton	A-B	0	1,946	0	0	1,946
25	Riverside	B	0	738	0	31	769
26	Riverside	B	0	1,437	0	29	1,467
27	Riverside	B	311	6	0	0	317
28	Riverside	C	0	516	40	11	567
29	Riverside	C	0	460	88	41	590
30	Riverside	A-B	0	90	1,405	0	1,494
31	Riverside	B	0	467	0	10	477
32	Riverside	B	0	797	43	26	867
33	Riverside	B	98	216	341	0	656
34	Riverside	B	0	1,366	0	28	1,394
35	Riverside	C	0	500	0	125	625
36	Riverside	B	0	441	54	0	495
37	Riverside	B	0	483	10	0	493
38	Riverside	B	0	164	580	0	743
39	Riverside	A-B	0	6	284	0	290
40	Riverside	A	0	19	397	68	485
41	Riverside	A-B	0	211	633	0	844
42	Riverside	A-B	0	575	65	6	646

Subregion	Basin	Soil Class	Land use				Total Area
			AG	URB	NV	PARK	
43	Riverside	A-B	0	981	127	166	1,274
44	Riverside	C	0	605	115	46	765
45	Riverside	A-B	0	576	70	56	702
46	Riverside	A-B	0	651	27	0	678
47	Riverside	B	0	524	52	0	576
48	Riverside	B	70	760	44	0	874
49	Riverside	B	0	713	15	7	735
50	Riverside	B	57	57	1,035	0	1,150
51	Riverside	A-B	0	487	0	0	487
52	Riverside	A	0	51	516	0	567
53	Riverside	A-B	0	27	658	0	685
54	Riverside	A	0	51	457	0	508
55	Riverside	B	0	451	81	11	543
56	Riverside	B-C	0	492	0	123	615
57	Riverside	A	0	429	58	0	487
58	Riverside	A	0	192	447	0	639
59	Riverside	B	0	484	0	36	521
60	Riverside	C	0	0	1,196	0	1,196
61	Riverside	C	0	149	168	0	317
62	Riverside	B-C	0	280	457	0	737
63	Riverside	A-B-C	0	0	548	0	548
64	Riverside	A-B	0	654	153	0	807
65	Riverside	A-B	0	461	138	0	598
66	Riverside	A	0	529	113	113	756
67	Riverside	A	0	1,022	0	32	1,053
68	Riverside	C	295	109	17	0	421
69	Riverside	B-C	0	602	0	150	752
70	Riverside	C	0	1,172	0	145	1,316
71	Riverside	C	0	601	0	12	613
72	Riverside	C	0	487	0	5	492
73	Riverside	B	594	113	0	0	707
74	Riverside	C	0	313	0	55	368
75	Riverside	B	0	845	9	26	880
76	Riverside	C	0	936	30	20	985
77	Riverside	A-B	100	398	498	0	996
78	Riverside	C	0	48	747	0	795
79	Riverside	C	0	700	0	45	744
80	Riverside	C	0	98	182	0	280
81	Riverside	C	0	132	57	0	189
82	Riverside	B	0	1,354	0	42	1,396
83	Riverside	B	0	36	43	316	395
84	Riverside	B	0	454	0	39	493
85	Small Watersheds	C	0	0	1,554	0	1,554
86	Small Watersheds	C	0	1,104	1,196	0	2,299
87	Small Watersheds	C	0	1,111	0	97	1,208

Subregion	Basin	Soil Class	Land use				Total Area
			AG	URB	NV	PARK	
88	Small Watersheds	C	0	62	351	0	413
89	Small Watersheds	C	0	3,859	1,029	257	5,145
90	Small Watersheds	C	0	2,118	1,412	0	3,530
91	Small Watersheds	C	0	623	762	0	1,385
92	Small Watersheds	C	150	2,256	602	0	3,008
93	Small Watersheds	C	799	160	639	0	1,598
94	Small Watersheds	C	1,173	3,129	3,520	0	7,822
95	Small Watersheds	C	49	371	569	247	1,236
96	Small Watersheds	C	0	517	345	0	862
97	Small Watersheds	B-C	0	290	79	28	397
98	Small Watersheds	C	0	85	341	0	426
99	Small Watersheds	C	0	41	77	0	118
100	Small Watersheds	C	374	374	83	0	830
101	Small Watersheds	C	0	74	13	0	87
102	Small Watersheds	C	0	297	410	0	707
103	Small Watersheds	C	0	1,668	417	0	2,085
104	Small Watersheds	C	0	121	181	0	302
105	Small Watersheds	C	0	42	237	0	279
106	Small Watersheds	C	13	201	415	0	629
107	Small Watersheds	C	0	32	421	0	453
108	Small Watersheds	C	0	7	320	0	326
109	Small Watersheds	C	0	0	1,933	0	1,933
110	Small Watersheds	C	0	301	33	0	334
111	Small Watersheds	C	36	103	359	15	513
112	Small Watersheds	C	0	461	856	0	1,316
113	Small Watersheds	C	0	258	269	0	527
Subtotals							
Rialto-Colton			0	3,848	525	129	4,502
Riverside			1,525	27,516	12,000	1,821	42,863
Arlington			3,641	10,375	269	564	14,849
Total Model Area (acres)			5,167	41,739	12,794	2,515	62,214
Small Watersheds			2,594	19,663	18,421	644	41,323

Table 4 - Monthly Average Groundwater Production from Wells in Model Area

Basin	No.	StateWellIN	Name	Agency	X	Y	Monthly Average (AF/Mo)
Riverside North	<i>Private Pumpers</i>						
	1	01S05W36C11S	3	AGUA MANSA PROPERTIES	466,956	3,767,486	45
	2	02S05W01P03S		Bradford, Ivan	466,468	3,764,413	1
	3	01S04W30B01S	Well #8	CALIFORNIA PORTLAND CEMENT COMPANY	469,064	3,768,931	163
	4	01S04W30D06S	CPC #5	CALIFORNIA PORTLAND CEMENT COMPANY	468,012	3,769,075	71
	5	01S05W25A02S	CPC #7	CALIFORNIA PORTLAND CEMENT COMPANY	467,757	3,769,027	60
	6	01S05W25A03S	CPC #6	CALIFORNIA PORTLAND CEMENT COMPANY	467,791	3,769,115	45
	7	01S05W35G02S	1, Agua Mansa	CORRIDOR LAND COMPANY	465,460	3,766,849	7
	8	01S05W35R	DOUBLE D RANCH	CORRIDOR LAND COMPANY	466,010	3,766,248	6
	9	02S05W01E	South #1, Riverbotto	CORRIDOR LAND COMPANY	466,313	3,765,341	2
	10	01S04W30R		COUNTRY CLUB STORAGE	469,243	3,767,591	9
	11	01S05W34J01S	CACTUS	EL RIVINO COUNTRY CLUB	464,592	3,766,469	64
	12	01S05W36B	OLD DUNN	Fisher, Charlotte	467,270	3,767,489	2
	13	01S05W24R01S	1 SOUTH	GENERAL AMERICAN TRANSPORTATION CORP (GATX)	467,494	3,769,256	2
	14	01S05W34A	1	GREEN ACRES	464,433	3,767,537	7
	15	01S05W34K	56	GREEN ACRES MEMORIAL PARK ASS'N	464,023	3,766,474	17
	16	01S05W34K02S	NO 57	GREEN ACRES MEMORIAL PARK ASS'N	463,959	3,766,477	12
	17	01S05W34L02S	8TH ST	GREEN ACRES MEMORIAL PARK ASS'N	463,806	3,766,809	9
	18	01S05W25M	1 Colton	HOLLIDAY TRUCKING	466,273	3,768,284	6
	19	01S05W25M04S	COLTON #2	HOLLIDAY TRUCKING	466,286	3,768,280	3
	20	02S05W01Q		Howell, Orus	467,159	3,764,417	4
	21	02S05W02G	63-1	MADISON, ERIN	465,725	3,765,230	25
	22	01S04W30P01S	DAIRY	McDANIEL & SON DAIRY	468,376	3,767,953	1
	23	02S05W02J	Klein /Sand River #1	MILESTONE RANCH	466,044	3,764,897	19
	24	02S04W06Q	1 HOUSE	ROQUET, HARRY V.	468,706	3,764,758	6
	25	01S05W25B02S	SEINTURIER	VULCAN - CAL MAT	467,148	3,769,087	15
	26	01S05W25R	Ward Duck	WOODLAND FARMS	467,501	3,767,788	32
	27	02S04W05F03S	RN#6	COLTON, CITY OF	470,177	3,765,308	67
	28	02S05W02H	South well, Holly		466,068	3,765,490	-
	29	01S04W29H03S	COLTON		469,785	3,768,277	1
	30	01S05W33A02S	Gas A-2	RANCHO DE SANTA FE	462,940	3,767,402	13
	31	01S04W28M01S	2	VILLELLI ENTERPRISES	471,406	3,768,303	32
	32	01S05W34B01S		FIRESTONE GROUP LTD	464,663	3,767,562	8
	33	01S05W35D01S	1	HAMADA BROS	464,615	3,767,600	32
	34	02S04W06Pa		ROQUET, HARRY V.	468,580	3,764,678	61
	35	02S05W01Q01S	WILLIAMS	Stapakis, William	467,198	3,764,686	19
	36	02S05W02Q	RNCH 1	Bradica, Louis	465,600	3,764,664	5
	37	01S05W36M	Small	ASPHALT RECYCLING	467,075	3,766,905	3
	38	01S05W36F	ALLEE RANCH	ALLEE RANCH	467,559	3,767,576	14
	39	01S05W35J	2 Service Rock CO	SERVICE ROCK CO	466,532	3,767,013	1
40	02S05W02C	1	INTER COUNTY WATER COMPANY	465,387	3,765,716	13	
<i>Water Agencies with Minimal Annual Production</i>							
41	02S04W05M01S	PICO #64	GRAND TERRACE, CITY OF	469,734	3,764,794	12	
42	01S04W32E11S	8	LA SIERRA WATER COMPANY	469,675	3,766,952	139	
43	01S04W32E09S	10	LA SIERRA WATER COMPANY	469,819	3,767,028	87	
44	01S04W29Q03S	FLUME 4	LA SIERRA WATER COMPANY	470,531	3,767,829	57	
45	01S04W29Q04S	FLUME 6	LA SIERRA WATER COMPANY	470,373	3,767,624	98	
46	01S04W32E07S	7	LA SIERRA WATER COMPANY	469,761	3,766,976	49	
47	02S04W06A01S	1	MERRYFIELD WATER COMPANY	469,168	3,765,927	12	
48	01S05W25L02S	DISPOSAL	RIALTO, CITY OF	466,700	3,768,225	5	
49	02S04W06R04S	Riv Canal 61	RIVERSIDE CANAL POWER CO.	469,387	3,764,733	11	
50	02S04W06R05S	Riv Canal 62/CE #3	RIVERSIDE CANAL POWER CO.	469,392	3,764,699	7	
51	02S04W06R06S	Riv canal 63/CE #4	RIVERSIDE CANAL POWER CO.	469,394	3,764,637	7	
52	02S04W06J01S	Riv Canal 60	RIVERSIDE CANAL POWER CO.	469,384	3,764,807	2	
53	02S04W05F02S		JUMAL WATER COMPANY	470,206	3,765,349	8	
54	01S04W32B02S	#7	WEST RIVERSIDE 350 WATER COMPANY	470,616	3,767,377	95	
55	01S04W32E02S	6	LA SIERRA WATER COMPANY	466,700	3,768,225	-	
56	01S05W36C09S	NO 1	JURUPA WATER COMPANY	468,580	3,764,678	1	
57	01S05W36C10S	1 AND HALF	JURUPA WATER COMPANY	468,706	3,764,758	42	
58	01S04W32B01S	350' #5	WEST RIVERSIDE 350 WATER COMPANY	470,399	3,767,181	30	
<i>Meeks & Daley Water Company</i>							
59	02S04W06A03S	PALM AVE	ELSINORE VALLEY M.W.D.	469,401	3,765,928	119	
<i>City of Colton</i>							
60	01S04W18N	#24	COLTON, CITY OF	467,964	3,770,865	129	
<i>Riverside Highland Water Company</i>							
61	02S04W06R01S	RN #7	RIVERSIDE HIGHLAND WATER CO	469,404	3,764,382	107	
62	01S04W28N06S	RN #17	RIVERSIDE HIGHLAND WATER CO	471,115	3,767,798	118	
63	01S04W28L02S	RN #20	RIVERSIDE HIGHLAND WATER CO	471,727	3,767,995	54	
64	01S04W32M04S	LV #3	RIVERSIDE HIGHLAND WATER CO	469,715	3,766,591	54	
65	01S04W32M01S	LV #1	RIVERSIDE HIGHLAND WATER CO	469,736	3,766,575	15	
66	01S04W32M02S	LV #2	RIVERSIDE HIGHLAND WATER CO	469,685	3,766,598	3	
<i>City of Riverside</i>							
67	02S04W05E01S	VAN BUREN #1	RIVERSIDE, CITY OF	469,815	3,765,200	240	
68	02S04W05E02S	VAN BUREN #2	RIVERSIDE, CITY OF	469,536	3,765,192	234	
69	02S05W02R01S	JURUPA 5	RIVERSIDE, CITY OF	465,863	3,764,450	112	
70	02S05W02Q08S	JURUPA 7	RIVERSIDE, CITY OF	465,732	3,764,362	136	
71	02S05W02R03S	JURUPA 3	RIVERSIDE, CITY OF	465,834	3,764,454	68	
72	02S05W01G02S	Main Pellisi	RIVERSIDE, CITY OF	467,141	3,765,254	49	
73	01S04W29R01S	FLUME 3	RIVERSIDE, CITY OF	470,618	3,767,990	58	
74	01S04W29H01S	FLUME 2	RIVERSIDE, CITY OF	470,813	3,768,386	74	
75	01S05W25R04S	TWIN BUTTE # 6	RIVERSIDE, CITY OF	467,602	3,767,774	82	
76	02S05W02R02S	JURUPA 4	RIVERSIDE, CITY OF	465,844	3,764,385	20	
77	01S05W36L01S	AGUA MANSA	RIVERSIDE, CITY OF	466,883	3,766,420	6	
78	01S04W29Q01S	FLUME 5	RIVERSIDE, CITY OF	470,453	3,767,590	18	
79	02S05W02Q07S	JURUPA 6	RIVERSIDE, CITY OF	465,724	3,764,407	15	
80	02S05W01J03S	Dom Pellisi	RIVERSIDE, CITY OF	467,486	3,764,990	1	
81	02S04W05C01S	DEBERRY	RIVERSIDE, CITY OF-GAGE CANAL	470,025	3,765,719	123	
<i>West Valley Water District</i>							
82	01S05W24M02S	#18A	WEST VALLEY WATER DIST	466,274	3,769,876	141	
83	01S05W36E03S	#41	WEST VALLEY WATER DIST	466,435	3,766,941	93	
84	01S05W23Q01S	PL 29 / Cram-Wright	WEST VALLEY WATER DIST	465,570	3,769,302	40	
85	01S05W23N01S	PLANT NO 19	WEST VALLEY WATER DIST	464,814	3,769,275	48	
86	01S05W24M01S	PL 18/Slover Mutual	WEST VALLEY WATER DIST	466,295	3,769,840	2	
87	01S05W34B02S	PLANT NO 26	WEST VALLEY WATER DIST	463,843	3,767,307	10	
88	01S05W34D01S	PLANT NO 25	WEST VALLEY WATER DIST	463,185	3,767,583	19	

Basin	No.	StateWellIN	Name	Agency	X	Y	Monthly Average (AF/Mo)	
Riverside South	89	03S05W08B02S	Irrigation	CALIF BAPTIST UNIVERSITY	460,860	3,754,590	9	
	90	02S05W23Q03S	FREEWAY	CALIF DEPT OF TRANSPORTATION DIST 8R	465,676	3,759,594	38	
	91	03S05W09A01S	CBLNCA 1	CARPENTER COMPANY	462,702	3,754,137	25	
	92	02S05W22D01S	"G" (Jones Ranch)	LORING RANCH 31503 LP	463,059	3,761,073	10	
	93	02S05W02Fa	1 VALENCIA	MADISON, ERIN	465,206	3,765,464	17	
	94	02S05W21B01S	"E" (Jones Ranch)	MASTERCRAFT HOMES	462,361	3,760,895	19	
	95	02S05W22C02S	C	MASTERCRAFT HOMES	463,365	3,761,087	26	
	96	02S05W21A01S	F	MASTERCRAFT HOMES	462,942	3,760,979	30	
	97	02S05W22D	A (LEVEE)	MICHAEL, C.	463,227	3,760,869	25	
	98	02S05W03A03S	60-1 Blending Pile	RIVERSIDE CEMENT COMPANY	464,446	3,765,733	62	
	99	02S05W03F02S	88-1	RIVERSIDE CEMENT COMPANY	463,792	3,765,169	30	
	100	02S05W03J	CRESTMOR	RIVERSIDE CEMENT COMPANY	464,420	3,764,993	76	
	101	02S05W15B10S	1	RIVERSIDE THOROUGHbred FARM	464,037	3,762,520	41	
	102	02S05W15B11S	#2	RIVERSIDE THOROUGHbred FARM	463,954	3,762,491	10	
	103	02S04W08N02S	PALMYRTA	Schwab, A. M.	469,499	3,763,115	3	
	104	02S05W10C04S	1	UNIVERSAL FOREST PRODUCTS	463,840	3,764,329	1	
	105	02S05W10C03S	2	UNIVERSAL FOREST PRODUCTS	463,889	3,764,325	1	
	106	02S05W10C01S	3	UNIVERSAL FOREST PRODUCTS	463,935	3,764,328	1	
	107	02S04W08D02S	#8, HIGHGROVE	UNIVERSITY OF CALIFORNIA, REGENTS OF	469,481	3,764,231	19	
	108	02S05W25F02S	#2	VICTORIA COUNTRY CLUB	466,836	3,758,755	35	
	109	02S04W07P	0	GRUBBS, V. W.	468,547	3,763,087	2	
	110	02S04W19J02S	COOK 2	SCOPE CORPORATION	469,355	3,760,100	5	
	111	02S04W19R01S	HALL 1	SCOPE CORPORATION	469,251	3,759,872	3	
	112	02S05W03R03S	2	AGUA MANSA PROPERTIES	464,421	3,764,987	1	
	113	02S05W05R02S	PATA 66	PROPERTY ACQUISITION COMPANY	461,104	3,764,765	8	
	114	02S05W23G02S	6TH ST	MIPO CORP, DBA MISSION	465,524	3,760,369	3	
	115	02S05W23L01S	AIR COND	CITIZENS NATIONAL COMPANY	465,346	3,760,292	2	
	116	02S05W32K01S	WAYMAN	Zike, Vera	460,907	3,757,019	3	
	117	02S05W25F01S	CLEARWATER	VICTORIA COUNTRY CLUB	466,818	3,758,736	25	
	118	02S04W07N	CIT ST 2	Burns, F.L. & Laura	468,072	3,762,958	1	
	119	02S04W18C	3	HUNTER ENGINEERING COMPANY	468,544	3,762,368	4	
	120	02S05W14E	1, Palmyrita	Johnson, Truman	464,627	3,762,287	26	
	121	02S05W02F	CHINO NO 3	MADISON, ERIN	465,192	3,765,447	24	
	122	02S05W02L	64-1	MADISON, ERIN	465,142	3,765,053	18	
	123	02S05W32A01S		VON KANEL, ALFRED	461,117	3,757,713	4	
	Water Agencies with Minimal Annual Production							
	124	02S05W03B02S	2	CRESTMORE HEIGHTS MUTUAL WATER COMPANY	463,918	3,765,971	1	
	125	02S05W03B	3	CRESTMORE HEIGHTS MUTUAL WATER COMPANY	463,858	3,765,972	4	
	126	02S05W11J		ALAMO WATER COMPANY	465,926	3,763,489	26	
	127	02S05W08K04S	#1	EMPIRE WATER	461,143	3,763,414	3	
	128	02S05W08K05S	#2	EMPIRE WATER	460,919	3,763,345	33	
	129	02S05W08G04S	3	JURUPA COMMUNITY SERVICES DISTRICT	460,919	3,763,898	24	
	130	02S05W08G05S	#21	JURUPA COMMUNITY SERVICES DISTRICT	460,918	3,763,991	43	
	131	02S05W05R	PEARSON MUTAL	JURUPA COMMUNITY SERVICES DISTRICT	461,057	3,764,818	7	
	132	02S05W08G01S	Sunnyslope #5	JURUPA COMMUNITY SERVICES DISTRICT	460,974	3,763,937	32	
	133	02S05W08K02S	6	JURUPA COMMUNITY SERVICES DISTRICT	461,027	3,763,690	11	
	134	02S05W08K03S	#7	JURUPA COMMUNITY SERVICES DISTRICT	461,056	3,763,742	14	
	135	02S05W02L01S	1	RIVINO WATER COMPANY	465,203	3,765,156	15	
	136	02S05W14D01S	Irrigation	RIVERSIDE COUNTY FLOOD CONTROL	464,934	3,762,652	1	
	137	02S05W21K	Edmunds "D"	RIVERSIDE COUNTY PARKS DEPARTMENT	462,446	3,760,199	36	
	138	02S05W21K01S	HQ	RIVERSIDE COUNTY PARKS DEPARTMENT	462,166	3,760,113	5	
	139	02S05W21M01S	PIC LAK 12	RIVERSIDE COUNTY PARKS DEPARTMENT	461,421	3,760,178	36	
	140	02S05W21M04S	PIC LAK 14	RIVERSIDE COUNTY PARKS DEPARTMENT	461,500	3,760,233	16	
	141	02S05W21M03S	PIC LAK 8	RIVERSIDE COUNTY PARKS DEPARTMENT	461,451	3,760,210	1	
	Riverside Highland Water Company							
	142	02S04W08M01S	RN #21	RIVERSIDE HIGHLAND WATER CO	469,798	3,763,515	55	
	143	02S04W08M02S	RN #22	RIVERSIDE HIGHLAND WATER CO	469,487	3,763,522	56	
	City of Riverside							
	144	02S05W23Q01S	11TH ST	RIVERSIDE, CITY OF	465,714	3,759,596	113	
	145	02S05W24D01S	1ST ST	RIVERSIDE, CITY OF	466,484	3,760,756	112	
	146	02S05W12P02S	BRUNTON	RIVERSIDE, CITY OF	466,904	3,763,145	22	
	147	02S05W13Q02S	CUNHAM 2	RIVERSIDE, CITY OF	467,131	3,761,312	121	
	148	02S04W07L01S	ELECTRIC Street	RIVERSIDE, CITY OF	468,345	3,763,508	214	
	149	02S05W14E01S	FAIRMONT PARK 2	RIVERSIDE, CITY OF	464,888	3,762,101	51	
	150	02S05W14G02S	FAIRMOUNT PARK #1	RIVERSIDE, CITY OF	465,467	3,762,112	40	
	151	02S05W23R01S	FILL	RIVERSIDE, CITY OF	465,897	3,759,544	123	
	152	02S05W12B01S	GARNER #1 (T&G)	RIVERSIDE, CITY OF	467,217	3,764,115	20	
	153	02S05W12B04S	GARNER B	RIVERSIDE, CITY OF	467,213	3,764,058	126	
	154	02S05W12C03S	GARNER C	RIVERSIDE, CITY OF	466,896	3,764,214	244	
	155	02S05W12B06S	GARNER D	RIVERSIDE, CITY OF	467,074	3,764,146	202	
	156	02S05W11B	JURUPA 1	RIVERSIDE, CITY OF	465,695	3,764,307	31	
	157	03S05W09E01S	LINCOLN HEIGHTS	RIVERSIDE, CITY OF	461,660	3,753,966	16	
	158	02S05W12P01S	Moore Griffith #1	RIVERSIDE, CITY OF	466,935	3,762,887	95	
	159	02S05W14G03S	MORI	RIVERSIDE, CITY OF	465,643	3,761,992	64	
	160	02S05W23J01S	MULBERRY	RIVERSIDE, CITY OF	465,857	3,759,888	22	
	161	03S05W03F01S	ORANGE ACRES	RIVERSIDE, CITY OF	463,728	3,755,679	5	
	162	02S04W07N03S	PALMYRITA #2	RIVERSIDE, CITY OF	467,899	3,762,932	131	
	163	02S05W12A03S	RUSSELL B	RIVERSIDE, CITY OF	467,489	3,764,104	134	
	164	02S05W12B07S	Russell C	RIVERSIDE, CITY OF	467,637	3,764,019	134	
	165	02S05W12K02S	TWIN SPRINGS 1&2	RIVERSIDE, CITY OF	467,380	3,763,363	214	
	166	02S04W08D04S	HIGHGROVE 3	RIVERSIDE, CITY OF	469,530	3,764,125	-	
	167	02S04W08E01S	HIGHGROVE 1	RIVERSIDE, CITY OF	469,804	3,763,894	18	
	168	02S04W19J01S	LEMONA 1	RIVERSIDE, CITY OF	469,123	3,759,962	1	
	169	02S05W12A01S	RUSSELL	RIVERSIDE, CITY OF	467,548	3,764,038	104	
	170	02S05W28A01S	SANITARY	RIVERSIDE, CITY OF	462,946	3,759,457	-	
	171	02S05W29G	JENSEN	RIVERSIDE, CITY OF	460,115	3,758,994	87	
	172	02S05W26F01S	Olivewood 1	RIVERSIDE, CITY OF-GAGE CANAL	465,054	3,758,729	55	
	173	02S05W26E02S	Olivewood 2	RIVERSIDE, CITY OF-GAGE CANAL	464,847	3,758,845	93	
	174	02S05W26M01S	Olivewood 3	RIVERSIDE, CITY OF-GAGE CANAL	464,922	3,758,660	39	
	Rubidoux Community Service District							
	175	02S05W17R03S	#11 CLEMENTS (OLD 4)	RUBIDOUX C.S.D.	461,184	3,761,326	42	
	176	02S05W21C01S	#12, Airport	RUBIDOUX C.S.D.	461,900	3,761,089	61	
	177	02S05W20H04S	#13 HUNTER 6	RUBIDOUX C.S.D.	461,302	3,760,368	26	
	178	02S05W20A01S	#14, 46th St	RUBIDOUX C.S.D.	461,247	3,760,967	43	
	179	02S05W20J02S	#16 HUNTER	RUBIDOUX C.S.D.	461,310	3,760,273	12	
	180	02S05W15L11S	#17	RUBIDOUX C.S.D.	463,532	3,761,836	207	
	181	02S05W15L12	#18	RUBIDOUX C.S.D.	463,510	3,761,858	246	
	182	02S05W16J	#19 (1, Ft Fremont)	RUBIDOUX C.S.D.	462,732	3,761,597	9	
	183	02S05W15L01S	#1-CRESTMORE	RUBIDOUX C.S.D.	463,394	3,761,814	39	
	184	02S05W16H06S	#2, Troyer	RUBIDOUX C.S.D.	462,564	3,762,124	76	
	185	02S05W10P01S	#3 28TH ST	RUBIDOUX C.S.D.	463,595	3,763,094	17	
	186	02S05W11C02S	#4, Old Skotty	RUBIDOUX C.S.D.	464,320	3,764,514	59	
	187	02S05W15M01S	#5 Daly #1(New 36th)	RUBIDOUX C.S.D.	463,272	3,761,660	30	
	188	02S05W15M02S	#7, Daly #2	RUBIDOUX C.S.D.	463,515	3,761,840	16	
	189	02S05W15L09S	#8, 34th & Daly	RUBIDOUX C.S.D.	463,377	3,761,812	5	
	190	02S05W16R01S	1 (Rio Rancho)	RUBIDOUX C.S.D.	462,832	3,761,452	6	
	191	02S05W15L	Gould (New Daly #8)	RUBIDOUX C.S.D.	463,389	3,761,827	164	
	192	02S05W16G04S	NO 1	RUBIDOUX C.S.D.	462,420	3,762,201	5	
	193	02S05W10K06S	NO 1, W Riv Mutual	RUBIDOUX C.S.D.	464,415	3,763,451	19	
	194	02S05W16Ja	#20 2-Ft Fremont SW	RUBIDOUX C.S.D.	462,732	3,761,597	7	
	195	02S05W16E06S	OLD #4	RUBIDOUX C.S.D.	461,535	3,762,045	24	

Basin	No.	StateWellIN	Name	Agency	X	Y	Monthly Average (AF/Mo)
Arlington	<i>Private Pumpers</i>						
	196	03S06W14P03S	GOLDEN	CITY NATIONAL BANK TRUSTEE	455,451	3,751,209	96
	197	03S06W22K03S	MAGOLIA ELEC	CITY NATIONAL BANK TRUSTEE	454,307	3,750,412	16
	198	03S05W08E02S	Water Tower	DEPT. OF INTERIOR, BUREAU OF INDIAN AFFAIRS	459,902	3,753,942	13
	199	03S06W22L04S	SWISS DAIRY	GEM'S CABINET SHOP	453,935	3,750,255	1
	200	02S06W36R	PAYTON	KONING, WALT & CORY	457,754	3,756,470	3
	201	03S06W15R	1 4001-B	LA SIERRA UNIVERSITY	454,374	3,751,574	33
	202	03S06W15R2a	5 4001-A	LA SIERRA UNIVERSITY	454,633	3,751,426	31
	203	03S06W21A2a	6 3991-B	LA SIERRA UNIVERSITY	454,654	3,751,373	39
	204	03S06W15R3a	4 3991-A (Old #2)	LA SIERRA UNIVERSITY	454,633	3,751,426	33
	205	03S05W07G	Garfield P1	ARLINGTON MUTUAL WATER COMPANY	458,962	3,754,122	17
	206	03S06W12A	1	LEASE ASSOCIATED-COURTESY ESCROW	457,990	3,754,415	14
	207	03S06W12R	HOSPITAL	RIVERSIDE COUNTY PARKS DEPARTMENT	457,955	3,753,086	16
	208	03S06W13A		REYNOLDS, HARRY C	457,494	3,752,091	22
	209	03S06W13M03S	POLK ST	CITY NATIONAL BANK TRUSTEE	456,571	3,752,073	49
	210	03S06W13Q	1	SWEANEY GROUP ARL HTS CITRUS	456,776	3,751,571	5
	211	03S06W13Aa	MEGGSN	RIVERSIDE, COUNTY OF	457,696	3,752,152	19
	212	03S05W07C	1	LOVING HOMES GREENS HOMEOWNERS	458,506	3,754,312	11
	<i>City of Riverside</i>						
	213	03S06W22K04S	TWIN BUTTES 1	RIVERSIDE, CITY OF	454,220	3,750,407	27
	214	03S06W13N02S	DALY 2	RIVERSIDE, CITY OF	456,583	3,751,424	17
	215	03S05W06Q04S	ISELIN 1	RIVERSIDE, CITY OF	459,104	3,754,738	12
	216	03S05W06Q05S	ISELIN 2	RIVERSIDE, CITY OF	459,131	3,754,715	10
	217	03S05W06Q02S	ARMY 1	RIVERSIDE, CITY OF	459,268	3,754,825	8
	218	03S05W06Q03S	ARMY 3	RIVERSIDE, CITY OF	459,113	3,754,716	9
	219	03S06W22K01S	BUCHANAN #1	RIVERSIDE, CITY OF	453,871	3,750,185	5
	220	03S06W22L01S	BUCHANAN #2	RIVERSIDE, CITY OF	453,865	3,750,179	8
	221	03S06W13B01S	HOLE 2	RIVERSIDE, CITY OF	457,627	3,752,807	65
	222	03S06W13E05S	POLK	RIVERSIDE, CITY OF	456,529	3,752,157	118
	223	03S06W13N01S	DALY 1	RIVERSIDE, CITY OF	456,547	3,751,468	26
	224	03S06W14Q01S	WALTON	RIVERSIDE, CITY OF	456,043	3,751,377	9
	225	03S06W22P	DUNLOP	RIVERSIDE, CITY OF	453,269	3,749,679	32
	226	03S06W13B02S	HOLE 1	RIVERSIDE, CITY OF	457,638	3,752,797	35
	<i>Western Municipal Water District</i>						
	227	03S06W23C01S	WMWD-DS #4	WESTERN MUNICIPAL WATER DISTRICT	455,206	3,751,041	103
	228	03S06W23C02S	WMWD-DS #3	WESTERN MUNICIPAL WATER DISTRICT	455,204	3,751,036	101
	229	03S06W14Q02S	WMWD-DS #5	WESTERN MUNICIPAL WATER DISTRICT	455,744	3,751,405	95
	230	03S06W23E01S	WMWD-DS #2	WESTERN MUNICIPAL WATER DISTRICT	454,939	3,750,885	87
	231	03S06W22H01S	WMWD-DS #1	WESTERN MUNICIPAL WATER DISTRICT	454,700	3,750,699	74
	<i>Private Pumpers</i>						
232	01S04W21N01S	36	MEEKS & DALEY WATER COMPANY	471,446	3,769,589	78	
<i>City of Colton</i>							
233	01S04W18F01S	17	COLTON, CITY OF	468,321	3,771,749	60	
234	01S04W18G01S	15	COLTON, CITY OF	468,682	3,771,753	49	
235	01S04W27L03S	22	COLTON, CITY OF	473,189	3,768,336	53	
236	01S04W21K01S	#23	COLTON, CITY OF	472,237	3,769,934	159	
237	01S04W18B	9	COLTON, CITY OF	468,670	3,772,205	10	
<i>City of Riverside</i>							
238	01S04W21L01S	VAUGHN 1	RIVERSIDE, CITY OF	471,785	3,769,823	57	
239	01S04W28D01S	MILL	RIVERSIDE, CITY OF	471,160	3,768,851	20	
240	01S04W21Q03S	JOHNSON 1	RIVERSIDE, CITY OF	471,924	3,769,571	49	
241	01S04W28C01S	MEEKS 1	RIVERSIDE, CITY OF	471,501	3,769,187	25	
<i>Riverside Highland Water Company</i>							
242	01S04W28K02S	CR 4-A	RIVERSIDE HIGHLAND WATER CO	471,884	3,768,186	17	
243	01S04W28K01S	CR #4	RIVERSIDE HIGHLAND WATER CO	471,892	3,768,245	16	
<i>Private Pumpers</i>							
<i>City of Colton</i>							
<i>City of Riverside</i>							
<i>Riverside Highland Water Company</i>							

Table 5 - Aquifer Parameters

Zone	Kx (ft/d)	Ky (ft/d)	Kz (ft/d)	Ss	Sy
Model Layer 1					
1	302	302	30	0.000001	0.25
2	328	328	33	0.000001	0.15
3	197	197	20	0.000001	0.22
4	197	197	20	0.000001	0.15
5	164	164	16	0.000001	0.15
Model Layer 2					
6	262	262	26	0.000001	0.25
7	328	328	33	0.000001	0.2
8	148	148	15	0.000001	0.22
9	102	102	10	0.000001	0.2
10	102	102	10	0.000001	0.1
11	16	16	2	0.000001	0.15
12	102	102	10	0.000001	0.2
13	66	66	7	0.000001	0.08
14	49	49	5	0.000001	0.2
15	10	10	1	0.000001	0.2
16	7	7	1	0.000001	0.2
17	279	279	28	0.000001	0.35
Model Layer 3					
16	7	7	1	0.000001	0.20
18	74	74	7	0.000001	0.25
19	328	328	33	0.000001	0.15
20	98	98	10	0.000001	0.15
21	59	59	6	0.000001	0.10
22	59	59	6	0.000001	0.10
23	102	102	10	0.000001	0.10
24	10	10	1	0.000001	0.06
25	49	49	5	0.000001	0.30

Table 6 - Characteristics of Model Calibration Wells

Map ID	State Well No.	Local Name	Active Years	Average Pumping (AFY)	Is Well used in other model?	Ground Surface Elevation	2006 Groundwater Elevation	Well Screen Interval		
						Feet above MSL	Feet above MSL	#	Depth to Top (ft)	Depth to Bottom (ft)
Management Zone - Arlington										
A1	03S06W24Q01s	Abraham			WEI	817	799			
A3	03S06W22K01	BUCHANAN #1	1965-1966, 1971-1975 1983, 1988, 1996	13	GeoTrans/WEI	696	653	1	32	100
A4	03S06W22K04	Twin Buttes 1	1965-1991	177		692	651			
A8	03S06W22G	Pierce St Sewer 3				699	656			
A12	03S06W14Q01	Walton	1964-1974	23		719	663			
A15	03S06W13N02	Daly 2	1964-1974 1976-1983	88	GeoTrans	725	679			
A16		DOI				719	675	1	310	410
A17	03S05W17K02	Jackson			WEI	879	828			
A18	03S06W13E05	POLK	1965-1974	331	WEI	715	677			
A19	03S06W13B02	HOLE 2	1965-1975	184	GeoTrans	755	709	1	110	162
A21	03S05W08E02	Water Tower	2000-2007	30	WEI	785	758			
A23	03S05W08B02	Irrigation	1997-2007	28	WEI	804	760			
A24	03S05W06Q03	ARMY 3	1966-1974 1977-1997	19	WEI	751	742			
Management Zone - Colton										
C1	01S04W28K02	CR 4-A	1966-1969 1971-1972 1974-1979 1984-1989 1992	84	USGS	947	889	1	18	185
C7	01S04W21Q03	JOHNSON 1	1695-1972 1974-1977 1982	190	USGS	959	882	1	194	596
C12	01S04W16P04	Fault 13				1,016	857			
Management Zone - Rialto										
R1	01S04W17M01	Patterson				1,069	890			
Management Zone - Riverside A										
RA4	02S05W20J02	#16 HUNTER	1965-1983 1985-1997	106		742	737	1	25	70
RA7	02S05W16R01	1 (Rio Rancho)	1965-1997	60		768	753	1	55	68
RA9	02S05W14E01	FAIRMONT PARK 2	1965-1977 1979, 1981-1996, 2007	449	CH2M	800	782	1	62	205
RA10	02S05W14D01	Irrigation	1997-2007	28	CH2M	800	781			
RA11	02S05W10P01	#3 28TH ST	1965-1979 1985-1988 1993 1997-2006	117	CH2M	863	782	1	170	134
RA16	01S05W35R01	DOUBLE D RANCH	1965-2006	74	CH2M	876	823			
RA17	01S04W32E11	8	1964-1980	622		904	881	1	20	388
RA21	01S05W25R04	TWIN BUTTE # 6	1964-1972 1974-1976 1987-1990	292	CH2M	880	854	1	50	130
				2				2	130	280
RA24	01S04W30A	CPC East Side				973	876			
Management Zone - Riverside B										
RB1	02S05W03A01	58-1			CH2M	953	819			
RB2	01S05W34L02	8TH ST	1965-1975 1980-2007	100	CH2M	958	821			
RB3	01S05W35G02	1, Agua Mansa	1965-1969 1987-2004	39	CH2M	922	846			
RB5	01S05W33A01	Santa Fe Electric A-1			CH2M	1,004	832			
RB7	01S05W35D01	1	1965-1988	93	CH2M	968	836	1	55	68
RB9	01S05W25L02	DISPOSAL	1965-1978 1980-1989	30	CH2M	960	891	1	130	178
				2				2	188	200
RB11	01S05W25A03	CPC #6	1965-2007	540	CH2M	1,014	880			
RB12	01S05W23Q01	PL 29 / Cram-Wright	1965-1972 1976-1995	234		1,020	851	1	162	236
Management Zone - Riverside C										
RC1	02S05W20A01	#14, 46th St	1985-1999 2005,2007	191		755	748			
RC3	02S05W17K01	NA			CH2M	807	745			
RC4	02S05W08G03	Sunnyslope #5	1965-1979 1984-1986 1997-1999	212		902	755	1	131	136
				2				2	143	280
Management Zone - Riverside D										
RD1	03S05W09E01	LINCOLN HEIGHTS	1965-1967 1969-1977	52		856	768			
RD2	03S05W03F01	ORANGE ACRES	1965-1976	15		879	754	1	124	138
				2				2	150	168
RD3	02S05W32Q	Laura Lane				768	749			
RD4	02S05W32B01	RR 1			CH2M	781	742			
Management Zone - Riverside E										
RE9	02S05W23J01	MULBERRY	1965-1976 1979,1981	76	GeoTrans/CH2M	872	777	1	143	300
RE12	02S05W23F01	NA			CH2M	843	773			
RE13	02S04W19E01	NA			CH2M	929	785			
Management Zone - Riverside F										
RF2	02S04W07N01	PALMYRITA 1			GeoTrans	892	787	1	192	226
								2	232	244
RF5	02S04W08M01	RN #21	1965-2006	571		1,000	827			
RF7	02S04W06R05	Riv Canal 62/CE #3	1965-1987 1993-1994 1996-1997 2000	58		942	831	1	130	204
				2				2	216	222
				2				3	302	342
RF10	01S04W32Q02	Curtis			CH2M	1,000	834	1		

Table 7 - Residuals Statistics

Residual Statistics	Calibration 1965-2005	Validation 2006-2007
Mean Absolute Residual, ft	12.1	13.2
Percent of Simulated Groundwater Elevations within 25 feet of Observed Groundwater Elevations (%)	91%	91%
Percent of Simulated Groundwater Elevations within 15 feet of Observed Groundwater Elevations (%)	78%	60%
Percent of Simulated Groundwater Elevations within 10 feet of Observed Groundwater Elevations (%)	64%	45%
Residual Mean, ft	0.8	10.4
Residual Standard Deviation, ft	16.0	11.8
Minimum Residual, ft	-113.0	-21.4
Maximum Residual, ft	73.1	32.3
Range in Observed Groundwater Elevations, ft	302.1	245.1
Residual Standard Deviation / Range in Observed Groundwater Elevations (%)	5%	5%

Table 8 - Annual Groundwater Budget for Rialto-Colton Basin (acre-feet/yr)

[source: Calibrated RAGFM Model]

Year	Estimated Deep Percolation				INFLOW								OUTFLOW				Storage Change	Cumulative Storage Change	
	Ag Areas - Rain	Ag Areas - Applied Water	Urban Areas - Rain	Urban Areas - Applied Water	Total Deep Percolation	Santa Ana River Loss to Groundwater (from streamflows except RIX discharge to SAR)	Santa Ana River Loss to Groundwater (from RIX discharge to SAR)	Underflow from Rialto Basin (with No RIX conditions)	Underflow from Rialto Basin (due to RIX operation)	Underflow from Riverside North Basin (with No RIX conditions)	Change in Underflow from Riverside North Basin (due to RIX operation)	Underflow from Bunker Hill Basin	Total Inflow	GW Extraction	Underflow to Riverside North Basin (with No RIX conditions)	Change in Underflow to Riverside North Basin (due to RIX operation)			Total Outflow
Column No.	a	b	c	d	1 = a+b+c+d	2	3	4	5	6	7	8	9	11	12	13	14	15	16
1965	1,315	1,036	36	0	2,388	1,866	0	13,153	0	0	0	1,213	18,621	4,215	28,623	0	32,838	-14,217	-14,217
1966	675	1,052	14	0	1,741	5,480	0	10,959	0	28	0	1,055	19,263	4,916	18,927	0	23,843	-4,580	-18,797
1967	492	933	0	0	1,425	3,474	0	15,683	0	0	0	960	21,542	3,287	19,147	0	22,434	-891	-19,688
1968	298	1,035	0	0	1,334	3,086	0	17,753	0	0	0	871	23,043	4,727	22,247	0	26,974	-3,932	-23,620
1969	1,771	888	248	5	2,911	32,480	0	11,120	0	2,092	0	870	49,473	2,315	14,375	0	16,689	32,784	9,164
1970	499	1,101	1	10	1,611	3,903	0	6,711	0	0	0	1,037	13,262	2,792	21,968	0	24,760	-11,497	-2,334
1971	355	1,161	2	14	1,532	3,431	0	12,894	0	0	0	1,231	19,088	3,281	21,294	0	24,575	-5,487	-7,821
1972	174	946	2	20	1,142	3,004	0	13,983	0	0	0	1,359	19,488	3,250	22,008	0	25,258	-5,770	-13,591
1973	428	709	3	25	1,165	5,574	0	15,110	0	0	0	1,515	23,365	1,434	20,017	0	21,451	1,914	-11,677
1974	511	809	4	30	1,354	4,705	0	16,841	0	0	0	1,712	24,612	2,584	20,452	0	23,036	1,576	-10,101
1975	223	678	1	33	935	2,769	0	16,089	0	0	0	1,715	21,509	4,680	19,885	0	24,566	-3,057	-13,159
1976	387	741	8	35	1,171	3,187	0	16,753	0	0	0	1,779	22,890	3,714	20,211	0	23,924	-1,034	-14,193
1977	426	644	8	37	1,116	3,157	0	21,248	0	0	0	1,763	27,284	3,483	20,862	0	24,345	2,940	-11,253
1978	1,269	413	409	95	2,187	16,626	0	14,321	0	2,345	0	1,845	37,323	2,111	13,877	0	15,988	21,335	10,082
1979	514	497	61	69	1,141	6,605	0	13,329	0	7	0	4,518	25,599	3,837	18,269	0	22,105	3,494	13,576
1980	981	501	415	99	1,997	22,927	0	9,012	0	1,099	0	1,162	36,196	1,563	17,914	0	19,477	16,720	30,295
1981	152	445	5	63	665	3,867	0	12,400	0	0	0	5,091	22,021	1,307	25,360	0	26,667	-4,646	25,649
1982	424	257	122	90	893	6,732	0	15,270	0	0	0	6,574	29,470	2,546	22,629	0	25,175	4,295	29,945
1983	636	223	279	126	1,264	23,815	0	14,354	0	84	0	7,620	47,137	1,476	23,447	0	24,923	22,214	52,158
1984	191	345	11	84	630	5,457	0	14,131	0	0	0	8,076	28,294	2,919	30,747	0	33,665	-5,372	46,787
1985	68	218	6	82	374	5,302	0	18,194	0	0	0	7,989	31,858	4,384	29,643	0	34,027	-2,169	44,618
1986	136	179	11	84	410	7,760	0	21,011	0	0	0	6,881	36,062	4,103	28,400	0	32,502	3,559	48,177
1987	61	123	7	86	277	4,727	0	21,447	0	0	0	6,191	32,642	4,726	29,738	0	34,464	-1,822	46,355
1988	67	85	9	95	255	4,466	0	22,900	0	0	0	5,139	32,759	5,490	29,156	0	34,647	-1,887	44,468
1989	16	54	5	99	173	4,101	0	21,988	0	0	0	3,911	30,173	4,413	29,466	0	33,879	-3,706	40,762
1990	3	5	6	104	118	3,982	0	20,845	0	0	0	3,475	28,420	3,776	29,209	0	32,984	-4,564	36,198
1991	172	8	299	188	667	5,821	0	19,528	0	0	0	2,487	28,503	4,948	27,757	0	32,706	-4,203	31,995
1992	56	5	70	121	252	7,150	0	17,591	0	0	0	2,013	27,006	5,766	24,020	0	29,787	-2,781	29,214
1993	412	4	825	102	1,343	17,240	0	15,524	0	478	0	2,093	36,677	5,330	22,401	0	27,731	8,946	38,160
1994	24	4	11	102	141	3,944	0	17,645	0	0	0	1,827	23,557	6,029	24,884	0	30,913	-7,356	30,804
1995	246	4	489	118	858	13,450	0	16,532	0	197	0	1,954	32,991	5,367	22,459	0	27,826	5,165	35,969
1996	5	3	11	110	129	3,753	0	18,037	34	0	0	2,135	24,088	6,175	25,726	367	32,269	-8,181	27,788
1997	24	4	20	104	153	2,893	0	20,530	202	0	0	2,144	25,921	4,923	25,919	727	31,569	-5,649	22,139
1998	273	2	671	96	1,042	10,839	0	21,155	425	205	-19	2,410	36,057	3,126	21,874	882	25,881	10,175	32,315
1999	2	3	4	99	108	2,082	0	21,352	623	0	0	2,437	26,601	4,131	28,399	1,457	33,987	-7,386	24,929
2000	3	3	11	106	124	1,829	0	24,234	921	0	0	2,378	29,486	4,903	28,949	1,644	35,496	-6,010	18,919
2001	30	2	15	104	151	1,630	0	21,544	1,167	0	0	2,138	26,629	4,156	27,218	1,926	33,300	-6,670	12,249
2002	1	2	6	108	117	1,006	0	19,587	1,269	0	0	1,827	23,806	4,038	26,843	1,199	32,079	-8,273	3,975
2003	84	2	116	156	359	2,299	0	17,697	1,187	0	0	1,438	22,979	4,545	22,927	1,043	28,516	-5,537	-1,562
2004	19	7	183	166	375	3,918	0	21,468	1,115	0	0	1,129	28,006	4,594	22,164	817	27,576	430	-1,132
2005	226	1	705	93	1,025	16,057	0	19,158	962	1,852	102	895	40,051	3,946	17,393	216	21,554	18,497	17,366
2006	0	1	2	99	102	4,133	0	14,842	798	1	0	765	20,641	4,234	23,677	828	28,738	-8,098	9,268
2007	1	1	6	104	112	1,765	0	13,703	819	0	0	775	17,174	4,667	21,723	921	27,312	-10,138	-870
90-07 Avg	88	3	192	116	399	5,766	0	18,943	529	152	5	1,907	27,700	4,703	24,641	668	30,012	-2,313	
96-07 Avg	56	3	146	112	316	4,350	0	19,442	793	171	7	1,706	26,787	4,453	24,401	1,002	29,856	-3,070	
65-07 Avg	317	352	119	78	867	6,797	0	16,922	221	195	2	2,707	27,711	3,912	23,540	280	27,731	-20	

Table 9 - Annual Groundwater Budget for Riverside North Basin (acre-feet/yr)

[source: Calibrated RAGFM Model]

Year	INFLOW												OUTFLOW										Storage Change	Cumulative Storage Change		
	Estimated Deep Percolation				Total Deep Percolation	Natural Recharge at Basin Boundary and Streambed Recharge	Santa Ana River Loss to Groundwater (from streamflows except RIX discharge to SAR)	Santa Ana River Loss to Groundwater (from RIX discharge to SAR)	RIX Percolation Basin Feed	Underflow from Rialto Colton Basin (with no RIX conditions)	Change in Underflow from Rialto Colton Basin (due to RIX operation)	Underflow from Riverside South Basin (with no RIX conditions)	Change in Underflow from Riverside South Basin (due to RIX operation)	Total Inflow	Santa Ana River Gain from Groundwater (with no RIX conditions)	Change in Santa Ana River Gain from Groundwater (due to RIX operation)	GW Extraction (Other than RIX)	RIX Extraction Well Production	Underflow to Rialto Colton Basin (with no RIX conditions)	Change in Underflow to Rialto Colton Basin (due to RIX operation)	Underflow to Riverside South Basin (with no RIX conditions)	Change in Underflow to Riverside South Basin (due to RIX operation)			Underflow to Chino Basin	Total Outflow
Ag Areas - Rain	Ag Areas - Applied Water	Urban Areas - Rain	Urban Areas - Applied Water	1 = a+b+c+d																			2	3a		
1965	3,129	1,925	73	0	5,126	362	8,535	0	0	28,623	0	5,710	0	48,357	0	0	30,484	0	0	20,459	0	1,912	52,854	-4,498	-4,498	
1966	1,566	1,962	21	0	3,549	226	17,145	0	0	18,927	0	3,355	0	43,202	0	0	27,175	0	28	16,472	0	1,851	45,526	-2,324	-6,822	
1967	1,006	1,699	0	0	2,705	174	14,591	0	0	19,147	0	2,191	0	38,808	0	0	27,629	0	0	16,320	0	1,871	45,820	-7,012	-13,834	
1968	616	1,889	0	0	2,504	156	13,254	0	0	22,247	0	2,721	0	40,882	0	0	35,351	0	0	13,249	0	1,815	50,415	-9,533	-23,366	
1969	5,125	1,703	610	10	7,447	559	85,623	0	0	14,375	0	2,109	0	110,113	42	0	26,694	0	2,092	31,925	0	2,077	62,830	47,283	23,916	
1970	1,023	2,069	2	21	3,116	192	16,412	0	0	21,968	0	1,763	0	43,452	0	0	26,141	0	0	24,227	0	2,401	52,769	-9,317	14,600	
1971	736	2,221	4	29	2,989	183	15,000	0	0	21,294	0	2,441	0	41,907	0	0	28,014	0	0	20,618	0	2,342	50,975	-9,068	5,532	
1972	371	1,854	4	42	2,271	136	13,393	0	0	22,008	0	2,361	0	40,170	0	0	27,081	0	0	20,924	0	2,180	50,185	-10,015	-4,482	
1973	1,302	1,418	8	54	2,782	196	22,851	0	0	20,017	0	1,568	0	47,414	0	0	20,970	0	0	21,576	0	2,185	44,731	2,683	-1,800	
1974	1,118	1,657	9	62	2,845	169	19,682	0	0	20,452	0	2,022	0	45,172	0	0	21,256	0	0	22,958	0	2,205	46,419	-1,247	-3,047	
1975	489	1,402	3	71	1,966	112	17,639	0	0	19,885	0	1,900	0	41,503	0	0	21,776	0	0	21,224	0	2,166	45,165	-3,663	-6,709	
1976	885	1,554	18	81	2,539	142	20,107	0	0	20,211	0	1,905	0	44,903	0	0	23,434	0	0	20,989	0	2,160	46,584	-1,681	-8,390	
1977	977	1,371	16	85	2,449	133	20,171	0	0	20,862	0	1,842	0	45,456	0	0	22,309	0	0	21,128	0	2,182	45,618	-162	-8,552	
1978	3,948	968	973	227	6,116	493	68,937	0	0	13,877	0	1,205	0	90,628	40	0	15,767	0	2,345	33,758	0	2,468	54,379	36,249	27,697	
1979	1,729	1,203	144	157	3,233	242	33,594	0	0	18,269	0	1,469	0	56,807	18	0	17,442	0	7	32,431	0	2,819	52,717	4,090	31,787	
1980	3,193	1,234	970	232	5,628	422	59,255	0	0	17,914	0	2,227	0	85,446	2,953	0	18,065	0	1,099	41,628	0	3,042	66,787	18,658	50,446	
1981	394	1,132	11	141	1,678	80	23,943	0	0	25,360	0	3,833	0	54,894	224	0	23,238	0	0	35,881	0	3,083	62,426	-7,532	42,914	
1982	1,366	727	275	213	2,581	167	35,133	0	0	22,629	0	3,837	0	64,348	470	0	16,981	0	0	36,068	0	3,134	56,653	7,695	50,609	
1983	2,231	655	627	306	3,820	276	53,877	0	0	23,447	0	3,214	0	84,633	8,361	0	11,558	0	84	44,247	0	3,323	67,572	17,061	67,670	
1984	646	1,086	27	194	1,954	99	25,912	0	0	30,747	0	4,898	0	63,610	4,573	0	16,834	0	0	43,937	0	3,384	68,728	-5,119	62,551	
1985	224	766	13	194	1,197	45	27,178	0	0	29,643	0	4,199	0	62,262	2,612	0	19,073	0	0	40,491	0	3,437	65,613	-3,350	59,201	
1986	540	736	29	204	1,509	76	31,539	0	0	28,400	0	4,311	0	65,835	3,369	0	17,031	0	0	41,039	0	3,449	64,888	946	60,147	
1987	264	603	17	210	1,093	35	25,767	0	0	29,738	0	4,130	0	60,763	2,074	0	15,564	0	0	41,286	0	3,423	62,348	-1,585	58,562	
1988	361	569	20	242	1,192	34	25,355	0	0	29,156	0	4,416	0	60,154	1,556	0	16,635	0	0	40,126	0	3,420	61,737	-1,584	56,978	
1989	109	606	12	256	982	23	24,761	0	0	29,466	0	4,464	0	59,695	984	0	25,290	0	0	37,426	0	3,395	67,095	-7,400	49,578	
1990	156	487	15	277	935	17	25,124	0	0	29,209	0	4,106	0	59,391	373	0	26,129	0	0	34,725	0	3,333	64,560	-5,170	44,409	
1991	1,053	530	681	540	2,804	154	30,112	0	0	27,757	0	3,995	0	64,823	488	0	28,035	0	0	34,542	0	3,335	66,400	-1,578	42,831	
1992	585	374	180	436	1,575	59	34,730	0	0	24,020	0	3,782	0	64,166	613	0	21,979	0	0	36,113	0	3,316	62,022	2,145	44,976	
1993	2,387	314	1,989	453	5,143	372	48,083	0	0	22,401	0	3,821	0	79,820	4,291	0	21,916	0	478	41,334	0	3,431	71,449	8,370	53,346	
1994	246	333	45	435	1,059	33	24,199	0	0	24,884	0	3,971	0	54,145	798	0	19,708	0	0	36,390	0	3,387	60,283	-6,139	47,207	
1995	1,626	292	1,148	442	3,508	241	41,966	0	0	22,459	0	4,077	0	72,250	2,870	0	23,917	0	197	37,388	0	3,429	67,801	4,449	51,657	
1996	179	315	37	410	942	22	19,031	4,705	25,728	25,726	367	4,395	-366	80,551	527	-26	21,304	31,082	0	33,543	448	3,351	90,229	-9,678	41,979	
1997	320	347	67	362	1,097	40	15,521	6,974	35,094	25,919	727	4,464	-703	89,133	54	-54	20,571	44,820	0	32,751	-153	3,242	101,232	-12,099	29,880	
1998	1,878	217	1,559	316	3,970	306	43,937	11,208	34,644	21,874	882	3,931	-729	120,023	972	-889	19,106	48,708	205	38,532	-1,085	3,255	108,786	11,237	41,117	
1999	111	309	11	304	735	27	14,556	7,498	34,940	28,399	1,457	4,393	-935	91,071	0	0	22,400	48,041	0	33,138	-2,114	3,187	104,651	-13,580	27,537	
2000	124	313	29	294	760	33	13,414	7,257	34,326	28,949	1,644	3,907	-1,102	89,188	0	0	23,036	47,227	0	30,385	-3,048	3,043	100,643	-11,456	16,082	
2001	344	243	40	264	891	59	12,560	7,087	29,416	27,218	1,926	3,597	-1,242	81,513	0	0	18,972	41,637	0	28,986	-4,285	2,908	88,219	-6,706	9,376	
2002	103	341	12	268	725	34	8,994	6,772	30,486	26,843	1,199	4,145	-1,294	77,903	0	0	20,538	38,269	0	26,048	-3,407	2,752	84,199	-6,297	3,079	
2003	752	247	250	383	1,633	102	16,185	6,977	28,674	22,927	1,043	3,937	-1,160	80,318	0	0	18,206	38,559	0	26,592	-3,193	2,748	82,912	-2,594	484	
2004	387	269	372	392	1,420	68	21,948	6,814	30,291	22,164	817	3,685	-1,195	86,013	0	0	17,049	38,067	0	28,080	-2,857	2,696	83,035	2,977	3,462	
2005	1,766	210	1,627	231	3,834	330	62,899	10,044	26,350	17,393	216	3,077	-586	123,556	572	-553	19,516	36,091	1,852	102	39,617	-808	2,924	99,313	24,243	27,705
2006	59	223	5	252	538	23	22,672	7,453	27,945	23,677	828	4,104	-932	86,308	43	-43	22,350	38,220	1	33,959	-1,668	3,019	95,882	-9,574	18,131	
2007	81	276	13	256	626	26	13,125	6,734	28,124	21,723	921	4,412	-1,072	74,619	0	0	20,088	35,802	0	28,934	-2,152	2,868	85,540	-10,921	7,210	
90-07 Avg	675	313	449	351	1,789	108	26,059	4,973	20,334	24,641	668	3,989	-629	81,933	645	-87	21,379	27,029	152	5	33,392	-1,351	3,124	84,286	-2,354	
96-07 Avg	509	276	335	311	1,431	89	22,070	7,460	30,501	24,401	1,002	4,004	-943	90,016	181	-130	20,261	40,544	171	7	31,714	-2,027	2,999	93,720	-3,704	
65-07 Avg	1,058	899	278	217	2,453	155	27,644	2,082	8,512	23,540	280	3,393	-263	67,795	904	-36	21,782	11,314	195	2	31,196	-566	2,836	67,628	168	

Table 10 - Annual Groundwater Budget for Riverside South Basin (acre-feet/yr)

[source: Calibrated RAGFM Model]

Year	INFLOW											OUTFLOW							Storage Change	Cumulative Storage Change	
	Estimated Deep Percolation				Total Deep Percolation	Natural Recharge at Basin Boundary and Streambed Recharge	Santa Ana River Loss to Groundwater (from streamflows except RIX discharge to SAR)	Santa Ana River Loss to Groundwater (from RIX discharge to SAR)	Underflow from Arlington Basin	Underflow from Riverside North Basin (with no RIX conditions)	Change in Underflow from Riverside North Basin (due to RIX operation)	Total Inflow	Santa Ana River Gain from Groundwater (with no RIX conditions)	Change in Santa Ana River Gain from Groundwater (due to RIX operation)	GW Extraction	Underflow to Arlington Basin	Underflow to Riverside North Basin (with no RIX conditions)	Change in Underflow to Riverside North Basin (due to RIX operation)			Total Outflow
	Ag Areas - Rain	Ag Areas - Applied Water	Urban Areas - Rain	Urban Areas - Applied Water																	
Column No.	a	b	c	d	1 = a+b+c+d	2	3a	3b	4	5a	5b	6	7a	7b	8	9	10a	10b	11	12	13
1965	4,661	2,790	106	0	7,557	6,835	10,609	0	627	20,459	0	46,087	12,679	0	27,355	430	5,710	0	46,173	-86	-86
1966	2,220	3,074	22	0	5,316	4,570	13,527	0	467	16,472	0	40,351	14,139	0	26,852	431	3,355	0	44,777	-4,426	-4,513
1967	1,774	2,549	0	0	4,324	3,707	15,516	0	393	16,320	0	40,259	16,552	0	25,873	472	2,191	0	45,088	-4,829	-9,342
1968	1,096	2,896	0	0	3,992	3,480	15,605	0	453	13,249	0	36,779	15,411	0	26,888	491	2,721	0	45,511	-8,731	-18,073
1969	6,656	2,591	684	48	9,979	10,381	28,605	0	806	31,925	0	81,697	28,119	0	26,074	474	2,109	0	56,775	24,922	6,849
1970	1,781	3,121	12	103	5,018	4,109	15,379	0	827	24,227	0	49,559	19,021	0	31,693	373	1,763	0	52,851	-3,292	3,557
1971	1,293	3,436	18	141	4,889	3,926	15,505	0	809	20,618	0	45,748	18,048	0	30,051	408	2,441	0	50,947	-5,199	-1,642
1972	659	2,882	19	203	3,762	3,158	15,825	0	802	20,924	0	44,471	16,086	0	37,280	425	2,361	0	56,152	-11,681	-13,322
1973	1,697	2,179	26	243	4,146	4,320	20,591	0	818	21,576	0	51,451	17,890	0	32,489	447	1,568	0	52,395	-944	-14,266
1974	1,734	2,558	38	289	4,618	3,918	19,282	0	792	22,958	0	51,567	17,670	0	37,701	453	2,022	0	57,847	-6,279	-20,546
1975	869	2,118	14	322	3,323	2,939	17,708	0	816	21,224	0	46,010	17,791	0	27,928	399	1,900	0	48,018	-2,008	-22,553
1976	1,475	2,320	76	339	4,210	3,593	19,460	0	816	20,989	0	49,069	18,085	0	31,568	351	1,905	0	51,909	-2,841	-25,394
1977	1,667	1,996	67	356	4,087	3,571	19,222	0	791	21,128	0	48,798	18,119	0	27,930	356	1,842	0	48,247	552	-24,842
1978	5,592	1,388	1,194	554	8,728	10,056	26,531	0	982	33,758	0	80,054	28,466	0	24,017	510	1,205	0	54,198	25,856	1,014
1979	2,283	1,779	218	527	4,807	5,539	18,683	0	1,002	32,431	0	62,461	29,450	0	25,415	525	1,469	0	56,860	5,601	6,615
1980	4,455	1,884	1,147	668	8,154	8,861	21,145	0	1,296	41,628	0	81,083	36,559	0	30,004	423	2,227	0	69,212	11,872	18,487
1981	698	1,650	44	580	2,973	2,704	17,072	0	1,116	35,881	0	59,746	30,073	0	29,568	374	3,833	0	63,849	-4,103	14,384
1982	1,979	1,015	387	629	4,011	4,491	18,902	0	1,082	36,068	0	64,554	33,207	0	19,701	273	3,837	0	57,018	7,535	21,920
1983	3,159	903	874	673	5,608	6,873	21,069	0	1,157	44,247	0	78,954	42,273	0	22,788	251	3,214	0	68,526	10,428	32,348
1984	956	1,641	92	751	3,440	3,241	16,851	0	1,084	43,937	0	68,553	36,453	0	31,634	261	4,898	0	73,247	-4,694	27,654
1985	384	1,141	49	728	2,302	2,153	16,688	0	1,050	40,491	0	62,684	36,028	0	23,120	253	4,199	0	63,601	-917	26,737
1986	768	1,072	94	734	2,669	2,976	17,099	0	1,031	41,039	0	64,814	38,024	0	23,645	246	4,311	0	66,225	-1,411	25,326
1987	434	912	59	746	2,151	2,194	16,094	0	968	41,286	0	62,694	36,248	0	23,345	243	4,130	0	63,966	-1,272	24,053
1988	603	871	70	819	2,363	2,282	16,166	0	913	40,126	0	61,850	36,164	0	23,603	239	4,416	0	64,422	-2,572	21,481
1989	186	956	35	845	2,023	1,900	18,012	0	853	37,426	0	60,213	32,517	0	33,768	233	4,464	0	70,982	-10,769	10,712
1990	254	793	46	879	1,971	1,938	18,318	0	819	34,725	0	57,770	30,368	0	30,923	226	4,106	0	65,622	-7,852	2,860
1991	1,547	865	843	1,262	4,517	4,901	18,512	0	867	34,542	0	63,339	30,775	0	28,572	222	3,995	0	63,564	-225	2,635
1992	873	665	390	1,264	3,192	3,241	19,587	0	862	36,113	0	62,995	31,519	0	25,663	224	3,782	0	61,188	1,806	4,441
1993	3,239	581	2,399	1,363	7,582	9,145	19,671	0	1,096	41,334	0	78,826	37,375	0	25,689	239	3,821	0	67,124	11,702	16,143
1994	388	635	138	1,369	2,529	2,311	16,586	0	1,040	36,390	0	58,857	32,254	0	27,229	258	3,971	0	63,712	-4,855	11,288
1995	2,199	565	1,491	1,364	5,618	6,551	18,462	0	1,106	37,388	0	69,127	37,145	0	21,608	253	4,077	0	63,083	6,044	17,332
1996	353	589	138	1,483	2,564	2,149	13,168	3,928	1,020	33,543	448	56,820	30,829	3,101	23,326	265	4,395	-366	61,550	-4,730	12,602
1997	513	670	250	1,412	2,845	2,609	12,044	6,134	965	32,751	-153	57,195	26,849	5,156	27,800	261	4,464	-703	63,826	-6,631	5,971
1998	2,571	406	1,928	1,277	6,182	7,665	19,647	2,893	1,048	38,532	-1,085	74,883	32,402	2,868	27,683	259	3,931	-729	66,414	8,469	14,440
1999	225	637	51	1,353	2,265	1,877	14,112	6,702	937	33,138	-2,114	56,916	25,653	4,823	32,765	285	4,393	-935	66,986	-10,070	4,370
2000	240	627	139	1,453	2,459	1,974	13,616	7,420	847	30,385	-3,048	53,653	23,181	4,775	30,759	309	3,907	-1,102	61,828	-8,175	-3,804
2001	509	458	181	1,426	2,574	2,603	14,024	7,632	798	28,986	-4,285	52,332	21,122	4,578	32,148	304	3,597	-1,242	60,508	-8,176	-11,980
2002	225	696	79	1,484	2,484	1,911	12,740	8,546	711	26,048	-3,407	49,033	18,072	4,905	29,377	313	4,145	-1,294	55,518	-6,485	-18,465
2003	935	453	424	1,518	3,329	3,601	16,112	7,353	718	26,592	-3,193	54,512	19,728	4,562	29,408	329	3,937	-1,160	56,804	-2,292	-20,757
2004	641	500	730	1,637	3,508	3,088	19,148	7,018	675	28,080	-2,857	58,661	19,197	4,442	34,833	354	3,685	-1,195	61,316	-2,655	-23,412
2005	2,435	400	2,083	1,334	6,252	7,635	25,241	2,385	771	39,617	-808	81,093	30,027	2,802	31,689	389	3,077	-586	67,398	13,695	-9,716
2006	152	459	22	1,405	2,037	1,739	17,344	5,984	690	33,959	-1,668	60,085	23,760	4,663	29,838	414	4,104	-932	61,847	-1,762	-11,479
2007	194	571	80	1,475	2,321	1,835	15,392	7,449	646	28,934	-2,152	54,426	19,738	5,317	37,031	440	4,412	-1,072	65,867	-11,441	-22,919
90-07 Avg	972	587	634	1,375	3,568	3,710	16,873	4,080	868	33,392	-1,351	61,140	27,222	2,888	29,241	297	3,989	-629	63,009	-1,868	
96-07 Avg	749	539	509	1,438	3,235	3,224	16,049	6,120	819	31,714	-2,027	59,134	24,213	4,333	30,555	327	4,004	-943	62,488	-3,354	
65-07 Avg	1,548	1,402	390	815	4,155	4,152	17,555	1,708	869	31,196	-566	59,070	26,397	1,209	28,526	342	3,393	-263	59,603	-533	

Table 11 - Annual Groundwater Budget for Riverside North and Riverside South Basins (acre-feet/yr)

[source: Calibrated RAGFM Model]

Year	INFLOW												OUTFLOW								Storage Change	Cumulative Storage Change		
	Estimated Deep Percolation				Total Deep Percolation	Natural Recharge at Basin Boundary and Streambed Recharge	Santa Ana River Loss to Groundwater (from streamflows except RIX discharge to SAR)	Santa Ana River Loss to Groundwater (from RIX discharge to SAR)	RIX Percolation Basin Feed	Underflow from Arlington Basin	Underflow from Rialto Colton Basin (with no RIX conditions)	Change in Underflow from Rialto Colton Basin (due to RIX operation)	Total Inflow	Santa Ana River Gain from Groundwater (with no RIX conditions)	Change in Santa Ana River Gain from Groundwater (due to RIX operation)	GW Extraction (No RIX)	RIX Extraction Well Production	Underflow to Arlington Basin	Underflow to Rialto Colton Basin (with no RIX conditions)	Change in Underflow to Rialto Colton Basin (due to RIX operation)			Underflow to Chino Basin	Total Outflow
	Ag Areas - Rain	Ag Areas - Applied Water	Urban Areas - Rain	Urban Areas - Applied Water																				
Column No.	a	b	c	d	1 = a+b+c+d	2	3a	3b	4	5	6a	6b	7	8a	8b	9	10	11	12a	12b	13	14	15	16
1965	7,790	4,715	178	0	12,683	7,197	19,144	0	0	627	28,623	0	68,275	12,679	0	57,839	0	430	0	0	1,912	72,858	-4,584	-4,584
1966	3,786	5,035	43	0	8,865	4,796	30,672	0	0	467	18,927	0	63,726	14,139	0	54,027	0	431	28	0	1,851	70,476	-6,750	-11,334
1967	2,780	4,248	0	0	7,028	3,881	30,107	0	0	393	19,147	0	60,556	16,552	0	53,502	0	472	0	0	1,871	72,397	-11,841	-23,175
1968	1,711	4,785	0	0	6,496	3,636	28,859	0	0	453	22,247	0	61,691	15,411	0	62,239	0	491	0	0	1,815	79,955	-18,264	-41,439
1969	11,781	4,294	1,294	58	17,427	10,941	114,228	0	0	806	14,375	0	157,776	28,161	0	52,768	0	474	2,092	0	2,077	85,572	72,205	30,765
1970	2,805	5,191	14	124	8,134	4,302	31,791	0	0	827	21,968	0	67,022	19,021	0	57,835	0	373	0	0	2,401	79,630	-12,608	18,157
1971	2,029	5,657	22	170	7,878	4,109	30,505	0	0	809	21,294	0	64,596	18,048	0	58,065	0	408	0	0	2,342	78,863	-14,267	3,890
1972	1,029	4,736	23	245	6,034	3,294	29,218	0	0	802	22,008	0	61,356	16,086	0	64,361	0	425	0	0	2,180	83,051	-21,695	-17,805
1973	2,999	3,597	34	297	6,927	4,516	43,443	0	0	818	20,017	0	75,720	17,890	0	53,459	0	447	0	0	2,185	73,981	1,739	-16,066
1974	2,852	4,215	46	350	7,463	4,087	38,964	0	0	792	20,452	0	71,758	17,670	0	58,956	0	453	0	0	2,205	79,285	-7,527	-23,592
1975	1,358	3,520	17	393	5,289	3,051	35,346	0	0	816	19,885	0	64,389	17,791	0	49,703	0	399	0	0	2,166	70,059	-5,671	-29,263
1976	2,360	3,874	94	420	6,749	3,735	39,567	0	0	816	20,211	0	71,078	18,085	0	55,003	0	351	0	0	2,160	75,599	-4,522	-33,784
1977	2,644	3,367	83	441	6,536	3,704	39,393	0	0	791	20,862	0	71,285	18,119	0	50,238	0	356	0	0	2,182	70,895	390	-33,394
1978	9,540	2,356	2,167	781	14,844	10,548	95,468	0	0	982	13,877	0	135,719	28,506	0	39,785	0	510	2,345	0	2,468	73,613	62,106	28,711
1979	4,011	2,982	362	684	8,039	5,781	52,277	0	0	1,002	18,269	0	85,367	29,467	0	42,857	0	525	7	0	2,819	75,676	9,691	38,403
1980	7,648	3,117	2,117	901	13,782	9,283	80,400	0	0	1,296	17,914	0	122,674	39,512	0	48,069	0	423	1,099	0	3,042	92,144	30,530	68,933
1981	1,092	2,782	55	721	4,650	2,784	41,015	0	0	1,116	25,360	0	74,926	30,297	0	52,806	0	374	0	0	3,083	86,561	-11,635	57,298
1982	3,345	1,743	663	842	6,593	4,658	54,035	0	0	1,082	22,629	0	88,996	33,677	0	36,682	0	273	0	0	3,134	73,766	15,230	72,529
1983	5,390	1,558	1,500	980	9,428	7,149	74,946	0	0	1,157	23,447	0	116,127	50,633	0	34,346	0	251	84	0	3,323	88,638	27,489	100,018
1984	1,602	2,728	119	945	5,394	3,340	42,764	0	0	1,084	30,747	0	83,328	41,026	0	48,469	0	261	0	0	3,384	93,141	-9,813	90,205
1985	608	1,906	62	922	3,499	2,198	43,866	0	0	1,050	29,643	0	80,256	38,640	0	42,193	0	253	0	0	3,437	84,524	-4,267	85,938
1986	1,309	1,808	123	938	4,178	3,053	48,638	0	0	1,031	28,400	0	85,299	41,392	0	40,676	0	246	0	0	3,449	85,764	-465	85,473
1987	697	1,515	76	956	3,244	2,228	41,861	0	0	968	29,738	0	78,040	38,322	0	38,910	0	243	0	0	3,423	80,898	-2,858	82,615
1988	963	1,440	90	1,061	3,555	2,316	41,521	0	0	913	29,156	0	77,462	37,720	0	40,239	0	239	0	0	3,420	81,618	-4,156	78,459
1989	295	1,562	47	1,101	3,005	1,923	42,773	0	0	853	29,466	0	78,019	33,501	0	59,058	0	233	0	0	3,395	96,188	-18,168	60,291
1990	410	1,280	61	1,155	2,906	1,955	43,442	0	0	819	29,209	0	78,330	30,741	0	57,052	0	226	0	0	3,333	91,352	-13,022	47,269
1991	2,601	1,395	1,524	1,802	7,321	5,055	48,624	0	0	867	27,757	0	89,624	31,263	0	56,607	0	222	0	0	3,335	91,427	-1,803	45,466
1992	1,458	1,039	570	1,700	4,767	3,300	54,317	0	0	862	24,020	0	87,265	32,133	0	47,642	0	224	0	0	3,316	83,314	3,951	49,417
1993	5,627	895	4,387	1,816	12,725	9,516	67,753	0	0	1,096	22,401	0	113,491	41,666	0	47,605	0	239	478	0	3,431	93,419	20,072	69,489
1994	634	968	182	1,804	3,588	2,343	40,785	0	0	1,040	24,884	0	72,640	33,052	0	46,937	0	258	0	0	3,387	83,634	-10,994	58,495
1995	3,824	858	2,639	1,806	9,126	6,792	60,428	0	0	1,106	22,459	0	99,912	40,015	0	45,525	0	253	197	0	3,429	89,418	10,494	68,989
1996	533	905	176	1,893	3,506	2,172	32,199	8,633	25,728	1,020	25,726	367	99,351	31,355	3,075	44,630	31,082	265	0	0	3,351	113,758	-14,408	54,581
1997	833	1,018	317	1,775	3,942	2,649	27,565	13,107	35,094	965	25,919	727	109,969	26,903	5,102	48,371	44,820	261	0	0	3,242	128,699	-18,730	35,851
1998	4,448	624	3,487	1,593	10,152	7,971	63,584	14,101	34,644	1,048	21,874	882	154,255	33,373	1,979	46,789	48,708	259	205	-19	3,255	134,549	19,706	55,557
1999	335	946	62	1,657	3,000	1,904	28,668	14,200	34,940	937	28,399	1,457	113,505	25,653	4,823	55,165	48,041	285	0	0	3,187	137,154	-23,650	31,908
2000	364	940	168	1,747	3,219	2,008	27,031	14,676	34,326	847	28,949	1,644	112,699	23,181	4,775	53,794	47,227	309	0	0	3,043	132,329	-19,630	12,277
2001	853	701	221	1,691	3,466	2,662	26,583	14,718	29,416	798	27,218	1,926	106,788	21,122	4,578	51,120	41,637	304	0	0	2,908	121,670	-14,882	-2,605
2002	328	1,038	92	1,751	3,209	1,945	21,734	15,318	30,486	711	26,843	1,199	101,444	18,072	4,905	49,915	38,269	313	0	0	2,752	114,226	-12,781	-15,386
2003	1,687	700	674	1,901	4,961	3,703	32,297	14,330	28,674	718	22,927	1,043	108,654	19,728	4,562	47,614	38,559	329	0	0	2,748	113,540	-4,886	-20,272
2004	1,028	769	1,103	2,029	4,929	3,156	41,096	13,832	30,291	675	22,164	817	116,960	19,197	4,442	51,882	38,067	354	0	0	2,696	116,638	323	-19,950
2005	4,201	610	3,711	1,565	10,086	7,965	88,140	12,429	26,350	771	17,393	216	163,350	30,599	2,249	51,206	36,091	389	1,852	102	2,924	125,411	37,938	17,988
2006	211	681	26	1,657	2,575	1,762	40,015	13,437	27,945	690	23,677	828	110,929	23,803	4,620	52,188	38,220	414	1	0	3,019	122,266	-11,336	6,652
2007	275	847	93	1,732	2,947	1,861	28,517	14,183	28,124	646	21,723	921	98,923	19,738	5,317	57,119	35,802	440	0	0	2,868	121,284	-22,362	-15,709
90-07 Avg	1,647	901	1,083	1,726	5,357	3,818	42,932	9,054	20,334	868	24,641	668	107,672	27,866	2,801	50,620	27,029	297	152	5	3,124	111,894	-4,222	
96-07 Avg	1,258	815	844	1,749	4,666	3,313	38,119	13,580	30,501	819	24,401	1,002	116,402	24,394	4,202	50,816	40,544	327	171	7	2,999	123,460	-7,058	
65-07 Avg	2,606	2,301	668	1,033	6,608	4,308	45,199	3,790	8,512	869	23,540	280	93,105	27,301	1,173	50,308	11,314	342	195	2	2,836	93,471	-365	

Table 12 - Annual Groundwater Budget for Arlington Basin (acre-feet/yr)

[source: Calibrated RAGFM Model]

Year	INFLOW								OUTFLOW						Storage Change	Cumulative Storage Change	
	Estimated Deep Percolation				Total Deep Percolation	Natural Recharge at Basin Boundary and Streambed Recharge	Underflow from Temescal Basin	Underflow from Riverside South Basin	Total Inflow	GW Extraction	Desalters Extraction	Underflow to Temescal Basin	Underflow to Hole Lake Area	Underflow to Riverside South Basin			Total Outflow
	Ag Areas - Rain	Ag Areas - Applied Water	Urban Areas - Rain	Urban Areas - Applied Water													
Column No.	a	b	c	d	1 = a+b+c+d	2	3	4	5	6	7	8	9	10	11	12	13
1965	1,854	1,852	47	0	3,753	9,778	0	430	13,961	9,063	0	2,454	271	627	12,414	1,547	1,547
1966	949	1,807	7	0	2,763	7,056	0	431	10,250	9,670	0	2,835	366	467	13,337	-3,087	-1,540
1967	737	1,640	0	0	2,377	5,991	0	472	8,840	7,623	0	2,680	443	393	11,139	-2,299	-3,839
1968	404	1,810	0	0	2,214	5,681	0	491	8,386	8,077	0	2,537	443	453	11,510	-3,124	-6,963
1969	2,247	1,580	330	3	4,160	12,640	0	474	17,274	8,789	0	2,121	514	806	12,230	5,044	-1,919
1970	749	1,978	1	7	2,735	6,803	0	373	9,911	8,928	0	1,827	486	827	12,068	-2,157	-4,076
1971	551	2,105	1	10	2,667	6,661	0	408	9,736	8,439	0	1,681	481	809	11,411	-1,675	-5,751
1972	273	1,728	1	14	2,017	5,360	0	425	7,802	8,263	0	1,620	492	802	11,177	-3,375	-9,127
1973	579	1,324	2	17	1,922	6,133	0	447	8,502	7,644	0	1,522	473	818	10,457	-1,954	-11,081
1974	839	1,550	3	20	2,412	6,544	0	453	9,409	4,861	0	1,387	481	792	7,521	1,888	-9,193
1975	374	1,341	1	23	1,738	5,045	0	399	7,182	3,544	0	1,321	478	816	6,158	1,024	-8,169
1976	629	1,522	6	25	2,182	6,166	0	351	8,700	3,265	0	1,301	491	816	5,873	2,827	-5,342
1977	720	1,388	5	26	2,138	6,210	0	356	8,704	3,293	0	1,261	500	791	5,845	2,860	-2,483
1978	2,009	906	465	98	3,478	12,130	0	510	16,117	3,243	0	2,071	556	982	6,851	9,266	6,784
1979	775	1,093	59	54	1,981	7,359	0	525	9,865	3,502	0	2,313	508	1,002	7,324	2,541	9,324
1980	1,615	1,146	444	86	3,291	11,263	0	423	14,976	3,156	0	2,397	571	1,296	7,419	7,558	16,882
1981	266	1,129	3	41	1,439	4,836	0	374	6,649	3,625	0	2,618	586	1,116	7,945	-1,295	15,587
1982	767	689	114	72	1,642	6,295	0	273	8,210	2,270	0	2,865	634	1,082	6,849	1,360	16,947
1983	1,109	667	273	126	2,175	8,722	0	251	11,148	1,915	0	2,888	691	1,157	6,650	4,498	21,445
1984	413	1,068	7	53	1,540	5,673	0	261	7,475	1,406	0	3,444	679	1,084	6,613	862	22,307
1985	177	763	4	52	995	3,983	0	253	5,231	1,356	0	3,942	680	1,050	7,028	-1,797	20,510
1986	271	733	7	53	1,063	4,792	0	246	6,101	1,654	0	4,290	669	1,031	7,644	-1,543	18,967
1987	216	632	4	52	904	4,080	0	243	5,227	1,193	0	4,256	653	968	7,071	-1,844	17,124
1988	292	644	5	60	1,001	4,498	0	239	5,738	959	0	4,088	640	913	6,600	-862	16,262
1989	73	670	3	59	806	3,853	0	233	4,891	996	0	3,986	629	853	6,464	-1,573	14,689
1990	127	562	3	61	753	3,904	0	226	4,883	1,136	3,491	3,513	608	819	9,567	-4,684	10,005
1991	530	635	253	155	1,574	7,213	0	222	9,009	996	5,540	2,783	610	867	10,796	-1,787	8,218
1992	428	476	50	82	1,035	5,439	0	224	6,698	841	4,358	2,171	581	862	8,814	-2,115	6,103
1993	1,153	432	747	67	2,400	11,038	0	239	13,677	1,169	3,197	2,431	620	1,096	8,512	5,165	11,267
1994	171	478	7	70	727	4,072	0	258	5,057	662	5,585	2,726	570	1,040	10,583	-5,527	5,741
1995	835	405	408	85	1,733	8,450	0	253	10,436	1,250	461	2,135	597	1,106	5,549	4,887	10,628
1996	175	462	7	79	724	3,954	0	265	4,943	1,247	7,094	2,248	574	1,020	12,182	-7,239	3,388
1997	252	496	13	78	838	4,609	0	261	5,708	1,593	7,410	2,299	562	965	12,829	-7,120	-3,732
1998	865	317	596	73	1,851	9,037	0	259	11,147	733	1,495	1,380	595	1,048	5,250	5,897	2,165
1999	131	477	3	76	688	3,674	0	285	4,648	862	4,647	1,523	552	937	8,521	-3,874	-1,709
2000	138	469	8	81	696	3,698	0	309	4,703	4,812	7,154	783	533	847	14,129	-9,426	-11,135
2001	210	361	11	82	663	4,031	295	304	5,293	4,957	6,025	338	511	798	12,629	-7,336	-18,471
2002	110	548	4	85	748	3,705	81	313	4,847	1,052	7,430	258	482	711	9,934	-5,086	-23,557
2003	312	366	66	120	864	4,873	0	329	6,067	1,371	6,441	173	456	718	9,159	-3,093	-26,650
2004	345	396	134	139	1,015	4,677	84	354	6,130	2,031	7,887	1	424	675	11,018	-4,887	-31,537
2005	810	325	630	81	1,846	8,781	212	389	11,228	1,607	5,898	0	432	771	8,708	2,520	-29,017
2006	72	373	2	88	535	2,810	344	414	4,103	1,658	7,656	0	383	690	10,387	-6,284	-35,301
2007	80	472	4	90	646	3,078	524	440	4,688	1,122	7,389	0	349	646	9,506	-4,819	-40,119
90-07 Avg (Desalters Active)	375	447	164	89	1,074	5,391	86	297	6,848	1,617	5,509	1,376	524	868	9,893	-3,045	
96-07 Avg (RIX Active)	292	422	123	89	926	4,744	128	327	6,125	1,920	6,377	750	488	819	10,354	-4,229	
65-07 Avg	596	926	110	59	1,691	6,153	36	342	8,222	3,391	2,306	2,057	532	869	9,155	-933	

Table 13 - Annual Groundwater Budget for Model Area (acre-feet/yr)

[source: Calibrated RAGFM Model]

Year	Estimated Deep Percolation				INFLOW									OUTFLOW							Storage Change	Cumulative Storage Change			
	Ag Areas - Rain	Ag Areas - Applied Water	Urban Areas - Rain	Urban Areas - Applied Water	Total Deep Percolation	Natural Recharge at Basin Boundary and Streambed Recharge	Santa Ana River Loss to Groundwater (from streamflows except RIX discharge to SAR)	Santa Ana River Loss to Groundwater (from RIX discharge to SAR)	RIX Percolation Basin Feed	Underflow from Temescal Basin	Underflow from Rialto Basin (with No RIX conditions)	Underflow from Rialto Basin (due to RIX operation)	Underflow from Bunker Hill Basin	Total Inflow	Santa Ana River Gain from Groundwater (with no RIX conditions)	Change in Santa Ana River Gain from Groundwater (due to RIX operation)	GW Extraction (No RIX)	RIX Extraction Well Production	Desalters Extraction	Underflow to Temescal Basin			Underflow to Hole Lake Area	Underflow to Chino Basin	Total Outflow
Column No.	a	b	c	d	1 = a+b+c+d	2	3a	3b	4	5	6a	6b	7	8	9a	9b	10	11	12	13	14	15	16	17	18
1965	10,960	7,603	262	0	18,824	16,976	21,010	0	0	0	13,153	0	1,213	71,176	12,679	0	71,116	0	0	2,454	271	1,912	88,431	-17,254	-17,254
1966	5,411	7,894	64	0	13,369	11,852	36,152	0	0	0	10,959	0	1,055	73,387	14,139	0	68,613	0	0	2,835	366	1,851	87,804	-14,417	-31,671
1967	4,009	6,821	0	0	10,830	9,872	33,581	0	0	0	15,683	0	960	70,926	16,552	0	64,412	0	0	2,680	443	1,871	85,957	-15,031	-46,703
1968	2,414	7,630	0	0	10,044	9,317	31,945	0	0	0	17,753	0	871	69,929	15,411	0	75,044	0	0	2,537	443	1,815	95,249	-25,320	-72,022
1969	15,798	6,762	1,872	66	24,498	23,581	146,708	0	0	0	11,120	0	870	206,777	28,161	0	63,872	0	0	2,121	514	2,077	96,744	110,032	38,010
1970	4,052	8,270	16	142	12,480	11,105	35,694	0	0	0	6,711	0	1,037	67,027	19,021	0	69,554	0	0	1,827	486	2,401	93,290	-26,263	11,747
1971	2,934	8,924	25	194	12,077	10,770	33,936	0	0	0	12,894	0	1,231	70,908	18,048	0	69,784	0	0	1,681	481	2,342	92,337	-21,429	-9,682
1972	1,476	7,411	26	279	9,193	8,654	32,221	0	0	0	13,983	0	1,359	65,411	16,086	0	75,874	0	0	1,620	492	2,180	96,251	-30,840	-40,522
1973	4,006	5,630	40	339	10,015	10,649	49,017	0	0	0	15,110	0	1,515	86,306	17,890	0	62,537	0	0	1,522	473	2,185	84,608	1,698	-38,824
1974	4,202	6,574	53	400	11,229	10,631	43,669	0	0	0	16,841	0	1,712	84,082	17,670	0	66,402	0	0	1,387	481	2,205	88,145	-4,063	-42,887
1975	1,955	5,539	20	449	7,962	8,096	38,116	0	0	0	16,089	0	1,715	71,979	17,791	0	57,928	0	0	1,321	478	2,166	79,683	-7,704	-50,591
1976	3,377	6,136	108	481	10,102	9,901	42,754	0	0	0	16,753	0	1,779	81,290	18,085	0	61,981	0	0	1,301	491	2,160	84,019	-2,729	-53,320
1977	3,790	5,399	96	504	9,790	9,914	42,549	0	0	0	21,248	0	1,763	85,265	18,119	0	57,014	0	0	1,261	500	2,182	79,075	6,189	-47,130
1978	12,818	3,675	3,040	975	20,508	22,678	112,094	0	0	0	14,321	0	1,845	171,446	28,506	0	45,138	0	0	2,071	556	2,468	78,739	92,707	45,577
1979	5,301	4,571	482	807	11,161	13,140	58,881	0	0	0	13,329	0	4,518	101,029	29,467	0	50,195	0	0	2,313	508	2,819	85,303	15,726	61,303
1980	10,243	4,764	2,976	1,086	19,070	20,546	103,326	0	0	0	9,012	0	1,162	153,116	39,512	0	52,787	0	0	2,397	571	3,042	98,309	54,807	116,110
1981	1,510	4,356	63	825	6,754	7,620	44,882	0	0	0	12,400	0	5,091	76,746	30,297	0	57,738	0	0	2,618	586	3,083	94,322	-17,576	98,534
1982	4,536	2,689	899	1,004	9,128	10,952	60,767	0	0	0	15,270	0	6,574	102,692	33,677	0	41,497	0	0	2,865	634	3,134	81,806	20,886	119,420
1983	7,134	2,448	2,052	1,232	12,866	15,871	98,760	0	0	0	14,354	0	7,620	149,472	50,633	0	37,373	0	0	2,888	691	3,323	95,272	54,201	173,621
1984	2,205	4,141	137	1,082	7,564	9,013	48,221	0	0	0	14,131	0	8,076	87,005	41,026	0	52,793	0	0	3,444	679	3,384	101,326	-14,322	159,299
1985	852	2,887	72	1,056	4,867	6,181	49,167	0	0	0	18,194	0	7,989	86,398	38,640	0	47,933	0	0	3,942	680	3,437	94,631	-8,233	151,065
1986	1,715	2,720	141	1,074	5,651	7,845	56,398	0	0	0	21,011	0	6,881	97,785	41,392	0	46,433	0	0	4,290	669	3,449	96,233	1,551	152,617
1987	974	2,270	87	1,094	4,425	6,309	46,589	0	0	0	21,447	0	6,191	84,960	38,322	0	44,829	0	0	4,256	653	3,423	91,484	-6,524	146,093
1988	1,323	2,169	104	1,216	4,811	6,814	45,987	0	0	0	22,900	0	5,139	85,650	37,720	0	46,688	0	0	4,088	640	3,420	92,555	-6,905	139,188
1989	384	2,286	54	1,259	3,983	5,776	46,874	0	0	0	21,988	0	3,911	82,531	33,501	0	64,467	0	0	3,986	629	3,395	105,979	-23,447	115,741
1990	540	1,847	70	1,320	3,777	5,859	47,424	0	0	0	20,845	0	3,475	81,380	30,741	0	61,964	0	3,491	3,513	608	3,333	103,650	-22,270	93,471
1991	3,303	2,038	2,076	2,145	9,562	12,268	54,446	0	0	0	19,528	0	2,487	98,290	31,263	0	62,551	0	5,540	2,783	610	3,335	106,082	-7,792	85,679
1992	1,942	1,520	689	1,902	6,054	8,739	61,466	0	0	0	17,591	0	2,013	95,863	32,133	0	54,249	0	4,358	2,171	581	3,316	96,808	-945	84,733
1993	7,192	1,331	5,960	1,985	16,468	20,554	84,993	0	0	0	15,524	0	2,093	139,632	41,666	0	54,104	0	3,197	2,431	620	3,431	105,448	34,183	118,917
1994	829	1,450	201	1,976	4,456	6,415	44,729	0	0	0	17,645	0	1,827	75,071	33,052	0	53,628	0	5,585	2,726	570	3,387	98,948	-23,877	95,040
1995	4,905	1,266	3,536	2,009	11,717	15,242	73,879	0	0	0	16,532	0	1,954	119,324	40,015	0	52,142	0	461	2,135	597	3,429	98,779	20,545	115,585
1996	714	1,370	194	2,082	4,359	6,126	35,951	8,633	25,728	0	18,037	34	2,135	101,004	31,355	3,075	52,053	31,082	7,094	2,248	574	3,351	130,832	-29,828	85,757
1997	1,109	1,518	349	1,956	4,933	7,259	30,458	13,107	35,094	0	20,530	202	2,144	113,726	26,903	5,102	54,888	44,820	7,410	2,299	562	3,242	145,226	-31,499	54,258
1998	5,586	942	4,754	1,763	13,045	17,008	74,423	14,101	34,644	0	21,155	425	2,410	177,211	33,373	1,979	50,647	48,708	1,495	1,380	595	3,255	141,432	35,778	90,036
1999	468	1,426	70	1,832	3,796	5,578	30,750	14,200	34,940	0	21,352	623	2,437	113,676	25,653	4,823	60,158	48,041	4,647	1,523	552	3,187	148,584	-34,909	55,128
2000	505	1,412	187	1,935	4,039	5,706	28,859	14,676	34,326	0	24,234	921	2,378	115,140	23,181	4,775	63,509	47,227	7,154	783	533	3,043	150,206	-35,066	20,062
2001	1,093	1,064	247	1,876	4,280	6,693	28,213	14,718	29,416	295	21,544	1,167	2,138	108,464	21,122	4,578	60,233	41,637	6,025	338	511	2,908	137,353	-28,889	-8,827
2002	440	1,588	102	1,944	4,074	5,651	22,740	15,318	30,486	81	19,587	1,269	1,827	101,032	18,072	4,905	55,004	38,269	7,430	258	482	2,752	127,173	-26,141	-34,968
2003	2,083	1,068	856	2,177	6,184	8,576	34,596	14,330	28,674	0	17,697	1,187	1,438	112,682	19,728	4,562	53,531	38,559	6,441	173	456	2,748	126,197	-13,516	-48,484
2004	1,393	1,172	1,420	2,334	6,319	7,834	45,014	13,832	30,291	84	21,468	1,115	1,129	127,086	19,197	4,442	58,507	38,067	7,887	1	424	2,696	131,220	-4,135	-52,619
2005	5,237	935	5,046	1,739	12,957	16,746	104,197	12,429	26,350	212	19,158	962	895	193,906	30,599	2,249	56,759	36,091	5,898	0	432	2,924	134,951	58,955	6,337
2006	284	1,055	30	1,844	3,213	4,572	44,148	13,437	27,945	344	14,842	798	765	110,064	23,803	4,620	58,079	38,220	7,656	0	383	3,019	135,781	-25,717	-19,381
2007	355	1,320	104	1,925	3,705	4,939	30,282	14,183	28,124	524	13,703	819	775	97,053	19,738	5,317	62,909	35,802	7,389	0	349	2,868	134,372	-37,318	-56,699
90-07 Avg	2,110	1,351	1,438	1,930	6,830	9,209	48,698	9,054	20,334	86	18,943	529	1,907	115,589	27,866	2,801	56,940	27,029	5,509	1,376	524	3,124	125,169	-9,580	
96-07 Avg	1,605	1,239	1,113	1,951	5,909	8,057	42,469	13,580	30,501	128	19,442	793	1,706	122,587	24,394	4,202	57,190	40,544	6,377	750	488	2,999	136,944	-14,357	
65-07 Avg	3,520	3,579	897	1,170	9,166	10,461	51,997	3,790	8,512	36	16,922	221	2,707	103,812	27,301	1,173	57,611	11,314	2,306	2,057	532	2,836	105,130	-1,319	

Table 14 - Impact of RIX Operation on Santa Ana River Flows (acre-feet/yr)

[source: Calibrated RAGFM Model]

Santa Ana River Reaches ---->	Santa Ana River at Riverside North and Riverside South Basins							
Year ↓	Santa Ana River Gain				Santa Ana River Loss			Net Gain
	RIX Discharge to Santa Ana River (Column 10 of Table 11 plus other tertiary treatment effluents)	Change in Santa Ana River Gain in Riverside North Basin (Column 8b of Table 11)	Santa Ana River Gain in Riverside South Basin (Column 7b of Table 10)	Total Santa Ana River Gain in Riverside North and Riverside South Basins (Sum of Columns 1 to 3)	Santa Ana River Loss to Groundwater in Riverside North Basin (Column 3b of Table 11)	Santa Ana River Loss to Groundwater in Riverside South Basin (Column 3b of Table 10)	Total Santa Ana River Loss in Riverside North and Riverside South Basins (Sum of Columns 5 and 6)	Net Impact of RIX on Santa Ana River Flows in Riverside North and Riverside South Basins (Column 4 minus Column 7)
Column No. ---->	1	2	3	4	5	6	7	8
1996	31,082	-26	3,101	34,157	4,705	3,928	8,633	25,524
1997	44,820	-54	5,156	49,922	6,974	6,134	13,107	36,815
1998	48,708	-889	2,868	50,687	11,208	2,893	14,101	36,587
1999	48,041	0	4,823	52,864	7,498	6,702	14,200	38,664
2000	47,227	0	4,775	52,002	7,257	7,420	14,676	37,326
2001	47,123	0	4,578	51,701	7,087	7,632	14,718	36,983
2002	43,794	0	4,905	48,699	6,772	8,546	15,318	33,382
2003	45,714	0	4,562	50,276	6,977	7,353	14,330	35,946
2004	44,465	0	4,442	48,906	6,814	7,018	13,832	35,074
2005	42,268	-553	2,802	44,517	10,044	2,385	12,429	32,089
2006	45,321	-43	4,663	49,941	7,453	5,984	13,437	36,504
2007	43,154	0	5,317	48,471	6,734	7,449	14,183	34,288
RIX Impact on Santa Ana River Flows for 1996 - 2007	44,310	-130	4,333	48,512	7,460	6,120	13,580	34,932

[source: Calibrated RAGFM Model]

Table 15 - Impact of RIX Operation on Groundwater in Riverside Basin (acre-feet/yr)

Basins ---->	Riverside North Basin											Riverside South Basin							Riverside North and South Basins		
	Inflow					Outflow						Net	Inflow			Outflow				Net	NET IMPACT OF RIX (Sum of Columns 11 and 18)
	Change in Santa Ana River Loss to Groundwater (Column 3b of Table 11)	RIX Percolation Basin Feed (Column 4 of Table 11)	Change in Underflow from Rialto Colton Basin (Column 5b of Table 11)	Change in Underflow from Riverside South Basin (Column 6b of Table 11)	Total Change in Inflow to Riverside North Basin (Sum of Columns 1 to 4)	Change in Santa Ana River Gain from Groundwater (Column 8b of Table 11)	RIX Extraction Well Production (Column 10 of Table 11)	Change in Underflow to Rialto Colton Basin (Column 11b of Table 11)	Change in Underflow to Riverside South Basin (Column 12b of Table 11)	Total Change in Outflow from Riverside North Basin (Sum of Columns 6 to 9)	Net Impact of RIX on Groundwater in Riverside North Basin (Column 5 minus Column 10)	Change in Santa Ana River Loss to Groundwater (Column 3b of Table 10)	Change in Underflow from Riverside North Basin (Column 5b of Table 10)	Total Change in Inflow to Riverside South Basin (Sum of Columns 12 and 13)	Change in Santa Ana River Gain from Groundwater (Column 7b of Table 10)	Change in Underflow to Riverside North Basin (Column 10b of Table 10)	Total Change in Outflow from Riverside North Basin (Sum of Columns 15 and 16)	Net Impact of RIX on Groundwater in Riverside South Basin (Column 14 minus Column 17)			
Column No. ---->	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19		
1996	4,705	25,728	367	-366	30,435	-26	31,082	0	448	31,504	-1,069	3,928	448	4,376	3,101	-366	2,735	1,641	571		
1997	6,974	35,094	727	-703	42,092	-54	44,820	0	-153	44,613	-2,522	6,134	-153	5,981	5,156	-703	4,452	1,528	-993		
1998	11,208	34,644	882	-729	46,005	-889	48,708	-19	-1,085	46,715	-711	2,893	-1,085	1,808	2,868	-729	2,140	-331	-1,042		
1999	7,498	34,940	1,457	-935	42,961	0	48,041	0	-2,114	45,926	-2,965	6,702	-2,114	4,587	4,823	-935	3,889	698	-2,267		
2000	7,257	34,326	1,644	-1,102	42,124	0	47,227	0	-3,048	44,180	-2,056	7,420	-3,048	4,372	4,775	-1,102	3,672	700	-1,356		
2001	7,087	29,416	1,926	-1,242	37,187	0	41,637	0	-4,285	37,353	-165	7,632	-4,285	3,347	4,578	-1,242	3,336	11	-155		
2002	6,772	30,486	1,199	-1,294	37,162	0	38,269	0	-3,407	34,862	2,300	8,546	-3,407	5,139	4,905	-1,294	3,611	1,527	3,828		
2003	6,977	28,674	1,043	-1,160	35,534	0	38,559	0	-3,193	35,366	168	7,353	-3,193	4,160	4,562	-1,160	3,402	758	926		
2004	6,814	30,291	817	-1,195	36,727	0	38,067	0	-2,857	35,210	1,517	7,018	-2,857	4,162	4,442	-1,195	3,247	915	2,431		
2005	10,044	26,350	216	-586	36,024	-553	36,091	102	-808	34,832	1,192	2,385	-808	1,577	2,802	-586	2,216	-639	553		
2006	7,453	27,945	828	-932	35,295	-43	38,220	0	-1,668	36,510	-1,215	5,984	-1,668	4,317	4,663	-932	3,732	585	-630		
2007	6,734	28,124	921	-1,072	34,708	0	35,802	0	-2,152	33,650	1,058	7,449	-2,152	5,297	5,317	-1,072	4,245	1,052	2,110		
RIX Impact on Groundwater for 1996 - 2007	7,460	30,501	1,002	-943	38,021	-130	40,544	7	-2,027	38,393	-372	6,120	-2,027	4,094	4,333	-943	3,390	704	331		

Table 16 - Existing Conditions (EC) Baseline Assumptions and Data

Data Type	Assumptions and Source of Data
Initial Groundwater Levels	Groundwater levels from the end of the simulation period (December 2007) of the RAGFM
Land Use Conditions	The latest land use conditions from SCAG, as used in the calibrated RAGFM
Precipitation	Precipitation data for the forty three-year period of 1965 to 2007 are used for estimation of deep percolation
Deep Percolation from Precipitation and Applied Water	Deep percolation rates were calculated based on the 2007 land and water use conditions and 1965-2007 hydrology
Groundwater Production	<p>Rialto-Colton Basin</p> <ul style="list-style-type: none"> - 2007 groundwater production rate of 4,700 AFY <p>Riverside North Basin</p> <ul style="list-style-type: none"> - 8,200 AFY groundwater production from Flume Wells 2-6. - 2007 groundwater production rates from all other wells operating in 2007 <p>Riverside South Basin</p> <ul style="list-style-type: none"> - 2007 groundwater production rates from all other wells operating in 2007, except Jurupa CSD Well 21 and Empire Water Company Wells 1 and 2 operating at 50% of 2007 rates. <p>Arlington Basin</p> <ul style="list-style-type: none"> - 5,200 AFY from WMWD Desalter wells (operating at 70% of 2007 rates) and 1,150 AFY from all other wells
Santa Ana River Streamflow Rates	Santa Ana River streamflow data for the forty three-year period of 1965 to 2007 are used for estimation of river losses and gains. Seven Oaks Dam operation is not incorporated. Historical data for San Bernardino Wastewater Treatment Plant discharges to the Santa Ana River above E Street gage are deducted from E Street gage data.
Simulation Period	43 years hydrologic period of 1965-2007.
RIX Operation	<p>2007 recharge and production data consists of:</p> <ul style="list-style-type: none"> - 35,500 AFY Influent Flow* - 28,100 AFY Percolation Basin Feed - 35,800 AFY Extraction Well Production - 43,200 Effluent Discharge to Santa Ana River <p>(* - Data provided by RIX indicates 500 AFY of shortage for RIX effluent discharge to Santa Ana River. This is attributed to flow measurement errors at RIX)</p>

Table 17 - Water Budget for RIX Operation

(Based on 2007 RIX operation and RAGFM EC Baseline results)

RIX Components	Quantity (AFY)
INFLOW: Secondary wastewater from WWTP (from 2007 RIX Operation Data)	35,500
<i>Delivered to Percolation Basins</i>	28,100
<i>Delivered to Tertiary Treatment Facility at RIX</i>	7,400
Total Discharge to SAR (from 2007 RIX Operation Data)	43,200
<i>RIX Extraction Well Production</i>	35,800
<i>Tertiary Treatment (DynaSand Filter) Effluent</i>	7,400
Recharge through SAR streambed (from RAGFM EC Baseline)	8,600
<i>Riverside North Basin</i>	5,300
<i>Riverside South Basin</i>	3,300
OUTFLOW: RIX Discharge Surface Outflow at Riverside Narrows (from RAGFM EC Baseline, Table 22)	34,600
Net Loss of RIX Flow to Groundwater	900

Table 18 - Annual Groundwater Budget for Riverside North Basin for EC Baseline (acre-feet/yr)

[source: RAGFM Model]

Simulation Year	Hydrologic Year	INFLOW														OUTFLOW										Storage Change	Cumulative Storage Change
		Estimated Deep Percolation				Total Deep Percolation	Natural Recharge at Basin Boundary and Streambed Recharge	Santa Ana River Loss to Groundwater (from natural streamflows; does not include RIX discharge to SAR)	Santa Ana River Loss to Groundwater (from RIX discharge to SAR)	RIX Percolation Basin Feed	Underflow from Rialto Colton Basin (with no RIX conditions)	Change in Underflow from Rialto Colton Basin (due to RIX operation)	Underflow from Riverside South Basin (with no RIX conditions)	Change in Underflow from Riverside South Basin (due to RIX operation)	Total Inflow	Santa Ana River Gain from Groundwater (with no RIX conditions)	Change in Santa Ana River Gain from Groundwater (due to RIX operation)	GW Production (Other than RIX)	RIX Extraction Well Production	Underflow to Rialto Colton Basin (with No RIX conditions)	Change in Underflow to Rialto Colton Basin (due to RIX operation)	Underflow to Riverside South Basin (with No RIX conditions)	Change in Underflow to Riverside South Basin (due to RIX operation)	Underflow to Chino Basin	Total Outflow		
		Ag Areas - Rain	Ag Areas - Applied Water	Urban Areas - Rain	Urban Areas - Applied Water																						
Column No. ---->		a	b	c	d	1 = a+b+c+d	2	3a	3b	4	5a	5b	6a	6b	7	8a	8b	9	10	11a	11b	12a	12b	13	14	15	16
1	1965	801	192	412	191	1,596	124	9,390	6,246	28,124	24,479	478	4,204	-862	73,779	0	0	28,265	35,802	0	0	24,153	-813	1,912	89,318	-15,540	-15,540
2	1966	376	231	186	222	1,015	55	15,985	6,217	28,124	21,464	617	4,161	-1,009	76,629	0	0	28,265	35,802	35	-2	22,317	-1,791	1,851	86,478	-9,848	-25,388
3	1967	143	178	51	213	585	28	7,491	6,411	28,124	21,381	524	4,018	-1,068	67,495	0	0	28,265	35,802	6	0	21,409	-2,198	1,871	85,153	-17,658	-43,046
4	1968	84	201	22	258	566	25	3,910	6,807	28,200	24,197	358	4,299	-1,190	67,171	0	0	28,301	35,902	0	0	18,583	-2,742	1,815	81,860	-14,689	-57,735
5	1969	1,779	212	1,964	254	4,209	339	80,501	5,198	28,124	13,716	342	3,087	-417	135,100	0	0	28,265	35,802	3,840	19	30,436	-1,542	2,077	98,895	36,205	-21,530
6	1970	150	241	25	272	688	31	7,475	6,346	28,124	23,831	389	4,577	-1,240	70,221	0	0	28,265	35,802	0	0	23,544	-2,672	2,401	87,339	-17,118	-38,648
7	1971	106	263	26	250	645	27	5,997	6,558	28,124	24,892	256	4,423	-1,258	69,665	0	0	28,265	35,802	0	0	20,285	-3,143	2,342	83,550	-13,885	-52,533
8	1972	59	248	23	270	601	27	3,808	6,603	28,200	25,763	95	4,336	-1,245	68,188	0	0	28,301	35,902	0	0	18,775	-3,655	2,180	81,503	-13,316	-65,849
9	1973	498	204	39	271	1,011	83	11,791	5,839	28,124	25,102	-52	4,009	-1,148	74,760	0	0	28,265	35,802	0	0	18,589	-4,061	2,185	80,780	-6,020	-71,868
10	1974	202	240	30	261	733	38	7,807	6,121	28,124	26,849	-186	4,235	-1,196	72,526	0	0	28,265	35,802	0	0	18,111	-4,444	2,205	79,939	-7,413	-79,282
11	1975	80	203	10	257	550	24	6,091	6,283	28,124	27,942	-378	4,403	-1,249	71,790	0	0	28,265	35,802	0	0	17,861	-4,922	2,166	79,171	-7,381	-86,663
12	1976	175	217	50	244	686	31	8,783	5,824	28,200	28,311	-576	4,385	-1,143	74,502	0	0	28,301	35,902	0	0	18,016	-5,295	2,160	79,085	-4,583	-91,246
13	1977	175	188	36	234	633	26	7,778	5,484	28,124	29,867	-738	4,449	-1,017	74,607	0	0	28,265	35,802	0	0	18,216	-5,656	2,182	78,808	-4,201	-95,447
14	1978	1,708	179	1,667	455	4,008	365	59,387	4,149	28,124	21,812	-672	3,728	-496	120,407	0	0	28,265	35,802	1,598	125	25,367	-4,098	2,468	89,526	30,881	-64,567
15	1979	838	232	250	321	1,640	151	21,287	4,764	28,124	28,108	-659	4,460	-1,229	86,648	0	0	28,265	35,802	0	0	24,426	-4,653	2,819	86,658	-11	-64,577
16	1980	1,474	249	1,510	422	3,654	312	77,776	4,373	28,200	19,769	-308	4,193	-613	137,358	10	-10	28,301	35,902	3,454	68	34,143	-2,979	3,042	101,932	35,426	-29,152
17	1981	92	229	18	257	589	26	11,951	4,977	28,124	31,224	-296	5,288	-1,291	80,592	0	0	28,265	35,802	0	0	27,311	-3,764	3,083	90,697	-10,105	-39,257
18	1982	611	171	404	343	1,529	118	24,494	4,423	28,124	30,776	-175	4,672	-1,147	92,814	0	0	28,265	35,802	0	0	25,865	-3,701	3,134	89,365	3,448	-35,809
19	1983	1,152	150	871	435	2,607	221	78,271	4,534	28,124	21,032	90	3,732	-668	137,943	87	-60	28,265	35,802	755	5	35,391	-2,345	3,323	101,223	36,720	912
20	1984	266	274	37	277	853	53	21,260	4,326	28,200	33,187	346	5,426	-1,026	92,625	0	0	28,301	35,902	0	0	33,673	-2,520	3,384	98,741	-6,116	-5,204
21	1985	64	213	15	259	551	25	19,952	4,421	28,124	34,171	554	5,353	-1,050	92,102	0	0	28,265	35,802	0	0	31,306	-2,599	3,437	96,211	-4,108	-9,313
22	1986	301	223	35	254	813	57	26,258	4,392	28,124	33,456	705	5,269	-1,047	98,026	1	-1	28,265	35,802	0	0	31,833	-2,676	3,449	96,672	1,353	-7,959
23	1987	84	204	18	238	545	24	15,318	4,723	28,124	36,122	714	5,502	-1,153	89,920	0	0	28,265	35,802	0	0	30,110	-2,872	3,423	94,728	-4,808	-12,767
24	1988	128	204	18	260	609	26	13,362	4,882	28,200	36,412	714	5,476	-1,197	88,485	0	0	28,301	35,902	0	0	29,084	-3,034	3,420	93,674	-5,188	-17,955
25	1989	46	246	12	255	558	24	11,084	5,078	28,124	36,200	646	5,425	-1,252	85,887	0	0	28,265	35,802	0	0	27,932	-3,236	3,395	92,157	-6,270	-24,226
26	1990	70	255	12	255	572	25	9,761	5,208	28,124	35,708	555	5,370	-1,308	84,014	0	0	28,265	35,802	0	0	26,922	-3,539	3,333	90,782	-6,768	-30,994
27	1991	797	285	711	475	2,267	161	15,802	5,159	28,124	33,355	473	5,201	-1,322	89,220	0	0	28,265	35,802	2	0	27,135	-3,790	3,335	90,749	-1,529	-32,523
28	1992	404	217	147	293	1,061	68	21,311	4,895	28,200	31,377	418	5,022	-1,273	91,081	0	0	28,301	35,902	7	0	27,320	-3,817	3,316	91,031	50	-32,473
29	1993	1,957	195	2,034	251	4,438	382	19,577	6,210	28,124	24,246	282	4,588	-912	121,146	101	-93	28,265	35,802	1,409	2	34,267	-2,507	3,431	100,676	20,470	-12,003
30	1994	181	210	26	256	673	39	10,121	5,229	28,124	32,644	472	5,585	-1,268	81,619	0	0	28,265	35,802	0	0	28,540	-3,076	3,387	92,917	-11,298	-23,301
31	1995	1,361	190	1,150	298	2,999	247	40,699	5,870	28,124	25,951	452	4,838	-1,018	108,162	48	-43	28,265	35,802	459	1	32,285	-2,587	3,429	97,659	10,503	-12,798
32	1996	119	214	23	272	628	28	15,476	5,078	28,200	31,568	565	5,457	-1,244	85,756	0	0	28,301	35,902	1	0	28,613	-3,097	3,351	93,071	-7,315	-20,113
33	1997	245	242	46	257	789	44	13,145	5,265	28,124	31,655	586	5,317	-1,290	83,635	0	0	28,265	35,802	1	0	26,886	-3,364	3,242	90,832	-7,197	-27,310
34	1998	1,656	159	1,590	245	3,650	314	42,814	4,395	28,124	25,937	698	4,487	-980	109,439	17	-16	28,265	35,802	226	-11	30,910	-3,084	3,255	95,363	14,076	-13,234
35	1999	78	224	9	252	563	24	11,380	5,028	28,124	32,640	717	5,462	-1,247	82,691	0	0	28,265	35,802	0	0	28,026	-3,156	3,187	92,124	-9,433	-22,667
36	2000	95	241	25	264	624	29	10,434	5,225	28,200	33,408	678	5,310	-1,291	82,618	0	0	28,301	35,902	0	0	26,400	-3,373	3,043	90,273	-7,655	-30,321
37	2001	300	200	40	259	798	54	9,427	5,263	28,124	33,053	554	5,227	-1,338	81,163	0	0	28,265	35,802	0	0	25,134	-3,698	2,908	88,411	-7,248	-37,570
38	2002	83	285	11	263	643	27	6,627	5,498	28,124	32,601	360	5,246	-1,453	77,674	0	0	28,265	35,802	0	0	23,751	-4,299	2,752	86,270	-8,596	-46,165
39	2003	714	223	253	382	1,572	101	12,388	5,149	28,124	29,773	249	4,817	-1,311	80,861	0	0	28,265	35,802	0	0	23,428	-4,307	2,748	85,935	-5,073	-51,239
40	2004	369	255	373	391	1,388	66	16,366	5,149	28,200	29,064	117	4,706	-1,306	83,750	0	0	28,301	35,902	0	0	22,627	-4,491	2,696	85,036	-1,285	-52,524
41	2005	1,767	209	1,619	230	3,826	330	59,531	4,030	28,124	20,730	356	3,901	-848	119,981	0	0	28,265	35,802	1,458	4	31,284	-3,447	2,924	96,289	23,692	-28,832
42	2006	58	223	5	252	538	23	18,808	4,866	28,124	27,720	427	4,992	-1,207	84,290	0	0	28,265	35,802	0	0	27,481	-3,387	3,019	91,179	-6,889	-35,721
43	2007	81	276	13	256	625	26	10,020	5,189	28,124	28,537	348	5,160	-1,350	76,680	0	0	28,265	35,802	0	0	24,215	-3,851	2,868	87,299	-10,619	-46,340
Average Conditions		Inflow														Outflow										Storage Change	
Hydrological Conditions	Normal	Long Term (65-07) Simulation Year 1-43	505	220	368	282	1,375	99	21,747	5,295	28,142	28,373	258	4,739	-1,120	88,907	6	-5	28,2								

Table 19 - Annual Groundwater Budget for Riverside South Basin for EC Baseline (acre-feet/yr)

[source: RAGFM Model]

Simulation Year	Hydrologic Year	INFLOW											OUTFLOW							Storage Change	Cumulative Storage Change		
		Estimated Deep Percolation				Total Deep Percolation	Natural Recharge at Basin Boundary and Streambed Recharge	Santa Ana River Loss to Groundwater (from natural streamflows; does not include RIX discharge to SAR)	Santa Ana River Loss to Groundwater (from RIX discharge to SAR)	Underflow from Arlington Basin	Underflow from Riverside North Basin (with no RIX conditions)	Change in Underflow from Riverside North Basin (due to RIX operation)	Total Inflow	Santa Ana River Gain from Groundwater (with no RIX conditions)	Change in Santa Ana River Gain from Groundwater (due to RIX operation)	GW Production	Underflow to Arlington Basin	Underflow to Riverside North Basin (with no RIX conditions)	Change in Underflow to Riverside North Basin (due to RIX operation)			Total Outflow	
		Ag Areas - Rain	Ag Areas - Applied Water	Urban Areas - Rain	Urban Areas - Applied Water																		
Column No. ---->		a	b	c	d	1 = a+b+c+d	2	3a	3b	4	5a	5b	6	7a	7b	8	9	10a	10b	11	12	13	
1	1965	1,161	367	856	1,233	3,618	4,089	12,391	9,329	629	24,153	-813	53,397	16,996	4,873	36,463	470	4,204	-862	62,145	-8,748	-8,748	
2	1966	526	430	393	1,427	2,775	2,515	14,329	9,168	591	22,317	-1,791	49,904	14,782	5,490	36,463	483	4,161	-1,009	60,370	-10,466	-19,213	
3	1967	329	335	155	1,303	2,123	1,974	12,014	10,314	573	21,409	-2,198	46,209	13,350	5,349	36,463	488	4,018	-1,068	58,600	-12,391	-31,604	
4	1968	184	408	113	1,453	2,157	1,843	10,280	12,861	541	18,583	-2,742	43,524	11,103	5,796	36,527	486	4,299	-1,190	57,021	-13,497	-45,101	
5	1969	2,487	381	2,493	1,444	6,805	7,954	35,997	354	651	30,436	-1,542	80,654	20,096	3,840	36,463	502	3,087	-417	63,571	17,083	-28,018	
6	1970	353	443	171	1,564	2,531	2,119	12,830	10,040	575	23,544	-2,672	48,966	11,981	5,693	36,463	477	4,577	-1,240	57,950	-8,984	-37,002	
7	1971	238	545	174	1,447	2,404	1,869	12,121	11,676	574	20,285	-3,143	45,785	10,635	5,757	36,463	463	4,423	-1,258	56,484	-10,698	-47,701	
8	1972	125	483	136	1,568	2,312	1,665	9,961	14,107	556	18,775	-3,655	43,721	9,900	5,606	36,527	446	4,336	-1,245	55,570	-11,849	-59,549	
9	1973	621	369	159	1,516	2,664	2,913	15,736	11,124	559	18,589	-4,061	47,524	10,533	4,951	36,463	434	4,009	-1,148	55,242	-7,718	-67,267	
10	1974	393	466	180	1,503	2,543	2,137	12,836	13,911	527	18,111	-4,444	45,622	9,322	5,337	36,463	427	4,235	-1,196	54,588	-8,966	-76,233	
11	1975	208	380	61	1,452	2,101	1,680	11,275	15,689	501	17,861	-4,922	44,185	8,202	5,837	36,463	422	4,403	-1,249	54,078	-9,892	-86,126	
12	1976	339	467	289	1,377	2,472	2,024	13,790	14,883	493	18,016	-5,295	46,383	8,008	5,986	36,413	418	4,385	-1,143	54,067	-7,685	-93,811	
13	1977	375	424	234	1,292	2,325	2,038	13,464	15,398	481	18,216	-5,656	46,267	7,417	6,177	36,259	413	4,449	-1,017	53,699	-7,432	-101,243	
14	1978	2,578	320	2,321	1,576	6,795	7,957	40,906	-185	594	25,367	-4,098	77,337	13,588	4,023	36,259	448	3,728	-496	57,551	19,787	-81,456	
15	1979	1,085	434	486	1,507	3,512	4,060	21,495	8,889	582	24,426	-4,653	58,311	11,189	4,289	36,259	430	4,460	-1,229	55,397	2,914	-78,542	
16	1980	2,181	502	2,013	1,720	6,416	6,841	40,654	-214	703	34,143	-2,979	85,564	15,362	4,807	36,323	441	4,193	-613	60,513	25,051	-53,491	
17	1981	226	416	108	1,484	2,234	1,797	15,709	9,884	684	27,311	-3,764	53,856	10,068	5,521	36,259	412	5,288	-1,291	56,258	-2,402	-55,893	
18	1982	927	294	692	1,451	3,365	3,538	25,028	4,596	726	25,865	-3,701	59,417	11,886	5,076	36,259	404	4,672	-1,147	57,150	2,267	-53,626	
19	1983	1,628	289	1,466	1,359	4,742	5,704	39,540	98	764	35,391	-2,345	83,894	19,133	4,465	36,259	411	3,732	-668	63,332	20,562	-33,064	
20	1984	425	536	189	1,606	2,755	2,241	20,572	5,576	672	33,673	-2,520	62,970	14,568	4,976	36,323	416	5,426	-1,026	60,683	2,287	-30,777	
21	1985	152	398	98	1,480	2,129	1,618	19,727	6,024	641	31,306	-2,599	58,846	14,348	5,063	36,259	424	5,353	-1,050	60,398	-1,552	-32,329	
22	1986	426	406	177	1,425	2,434	2,357	21,072	5,842	605	31,833	-2,676	61,467	15,194	4,892	36,259	435	5,269	-1,047	61,001	466	-31,863	
23	1987	194	386	109	1,392	2,081	1,771	17,084	7,477	546	30,110	-2,872	56,198	13,108	5,343	36,259	452	5,502	-1,153	59,512	-3,314	-35,177	
24	1988	302	402	128	1,462	2,294	1,824	15,949	8,379	505	29,084	-3,034	55,001	12,366	5,474	36,323	470	5,476	-1,197	58,911	-3,911	-39,088	
25	1989	112	499	59	1,459	2,129	1,567	14,328	9,682	459	27,932	-3,236	52,861	11,366	5,725	36,259	484	5,425	-1,252	58,007	-5,146	-44,234	
26	1990	162	466	78	1,467	2,173	1,675	13,655	10,579	428	26,922	-3,539	51,893	10,674	5,749	36,259	498	5,370	-1,308	57,241	-5,348	-49,582	
27	1991	1,195	519	994	1,698	4,407	4,271	16,053	9,830	460	27,135	-3,790	58,366	11,329	5,761	36,259	523	5,201	-1,322	57,751	616	-48,967	
28	1992	622	409	472	1,511	3,014	2,812	19,823	7,864	450	27,320	-3,817	57,466	12,020	5,394	36,323	526	5,022	-1,273	58,014	-547	-49,514	
29	1993	2,769	357	2,569	1,429	7,124	8,125	27,625	4,545	585	34,267	-2,507	79,763	16,724	5,235	36,259	566	4,588	-912	62,461	17,302	-32,211	
30	1994	304	404	145	1,428	2,281	2,025	13,313	10,302	541	28,540	-3,076	53,927	11,339	6,177	36,259	533	5,585	-1,268	58,625	-4,698	-36,909	
31	1995	1,875	380	1,582	1,417	5,254	5,823	23,623	5,948	658	32,285	-2,587	71,005	15,911	5,595	36,259	530	4,838	-1,018	62,115	8,890	-28,020	
32	1996	268	392	150	1,545	2,353	1,904	15,909	8,818	609	28,613	-3,097	55,109	12,398	6,161	36,323	507	5,457	-1,244	59,602	-4,494	-32,514	
33	1997	407	472	264	1,469	2,612	2,301	14,106	10,201	599	26,886	-3,364	53,341	11,643	6,153	36,259	495	5,317	-1,290	58,576	-5,235	-37,749	
34	1998	2,292	288	2,013	1,318	5,911	6,952	26,601	3,975	690	30,910	-3,084	71,956	17,106	4,581	36,259	513	4,487	-980	61,967	9,989	-27,760	
35	1999	184	484	55	1,394	2,118	1,672	14,284	9,247	595	28,026	-3,156	52,786	12,428	5,444	36,259	500	5,462	-1,247	58,846	-6,060	-33,819	
36	2000	197	487	148	1,500	2,332	1,777	13,572	10,500	582	26,400	-3,373	51,790	11,663	5,733	36,323	496	5,310	-1,291	58,235	-6,445	-40,265	
37	2001	451	357	184	1,469	2,461	2,380	13,497	10,781	565	25,134	-3,698	51,119	10,849	5,771	36,259	490	5,227	-1,338	57,258	-6,138	-46,403	
38	2002	203	585	85	1,520	2,394	1,737	11,634	12,873	504	23,751	-4,299	48,594	9,534	6,060	36,259	490	5,246	-1,453	56,136	-7,542	-53,945	
39	2003	887	397	428	1,540	3,252	3,333	16,367	9,975	531	23,428	-4,307	52,578	10,778	5,403	36,259	492	4,817	-1,311	56,438	-3,860	-57,805	
40	2004	610	469	743	1,652	3,474	2,869	18,146	9,634	506	22,627	-4,491	52,765	10,767	5,285	36,323	493	4,706	-1,306	56,268	-3,503	-61,308	
41	2005	2,433	400	2,077	1,334	6,244	7,202	32,851	2,571	608	31,284	-3,447	77,313	16,814	4,461	36,259	520	3,901	-848	61,108	16,204	-45,103	
42	2006	152	458	22	1,404	2,036	1,663	17,923	8,694	529	27,481	-3,387	54,939	12,518	4,919	36,259	505	4,992	-1,207	57,987	-3,048	-48,151	
43	2007	194	571	80	1,475	2,321	1,758	14,073	10,932	524	24,215	-3,851	49,973	10,187	5,638	36,259	496	5,160	-1,350	56,389	-6,416	-54,568	
Average Conditions		Inflow											Outflow							Storage Change			
Hydrological Conditions	Normal	Long Term (65-07)	762	425	590	1,467	3,244	3,171	18,655	8,655	574	26,092	-3,355	57,036	12,539	5,346	36,328	473	4,739	-1,120	58,305	-1,269	
		Simulation Year 1-43	788	429	607	1,480	3,305	3,227	19,801	7,707	581	28,493	-3,353	59,761	12,871	5,350	36,274	481	5,017	-1,160	58,834	927	
		Short Term (79-07)																					
	Wet	Long Term (91-98)	1,217	402	1,024	1,477	4,119	4,277	19,632	7,685	574	29,495	-3,165	62,616	13,559	5,632	36,275	524	5,062	-1,163	59,889	2,728	
		Simulation Year 27-34	1,438	376	1,181	1,516	4,511	4,983	30,555	3,845	676	28,751	-3,590	69,730	13,538	4,697	36,270	424	4,345	-907	58,367	11,363	
	Dry	Long Term (70-77)	332	447	175	1,465	2,419	2,056	12,752	13,354	533	19,174	-4,231	46,057	9,500	5,668	36,439	437	4,352	-1,187	55,210	-9,153	
Simulation Year 6-13		253	442	120	1,470	2,285	1,865	17,484	7,651	551	30,123	-2,925	57,033	13,089	5,317	36,277	454	5,403	-1,148	59,393	-2,360		
Recent Hydrologic Conditions (96-07 Avg)		690	447	521	1,468	3,126	2,962	17,414	9,017	570	26,563												

Table 20 - Annual Groundwater Budget for Arlington Basin for EC Baseline (acre-feet/yr)

[source: RAGFM Model]

Simulation Year	Hydrologic Year	INFLOW									OUTFLOW						Storage Change	Cumulative Storage Change	
		Estimated Deep Percolation				Total Deep Percolation	Natural Recharge at Basin Boundary and Streambed Recharge	Underflow from Temescal Basin	Underflow from Riverside South Basin	Total Inflow	GW Production	Desalters Production	Underflow to Temescal Basin	Underflow to Hole Lake Area	Underflow to Riverside South Basin	Total Outflow			
		Ag Areas - Rain	Ag Areas - Applied Water	Urban Areas - Rain	Urban Areas - Applied Water														
Column No. ---->		a	b	c	d	1 = a+b+c+d	2	3	4	5	6	7	8	9	10	11	12	13	
1	1965	490	306	149	67	1,013	5,422	36	470	6,941	1,152	5,172	38	325	629	7,316	-375	-375	
2	1966	225	353	45	77	699	3,654	100	483	4,937	1,152	5,172	0	309	591	7,224	-2,287	-2,662	
3	1967	164	298	19	75	557	3,073	114	488	4,233	1,152	5,172	0	286	573	7,183	-2,950	-5,612	
4	1968	94	338	8	91	531	2,868	144	486	4,030	1,155	5,182	2	263	541	7,143	-3,113	-8,725	
5	1969	831	322	771	89	2,013	9,157	471	502	12,143	1,152	5,172	6	274	651	7,255	4,888	-3,837	
6	1970	177	390	9	95	672	3,373	555	477	5,077	1,152	5,172	0	250	575	7,148	-2,071	-5,909	
7	1971	135	434	10	88	667	3,149	532	463	4,810	1,152	5,172	0	227	574	7,124	-2,314	-8,223	
8	1972	71	384	9	95	560	2,705	487	446	4,197	1,155	5,182	0	209	556	7,102	-2,905	-11,128	
9	1973	203	309	10	95	618	3,857	413	434	5,321	1,152	5,172	0	195	559	7,078	-1,756	-12,884	
10	1974	210	373	10	91	685	3,441	509	427	5,061	1,152	5,172	0	179	527	7,029	-1,968	-14,852	
11	1975	104	330	4	90	529	2,773	702	422	4,425	1,152	5,172	0	161	501	6,985	-2,560	-17,412	
12	1976	185	374	18	88	665	3,361	889	418	5,333	1,155	5,182	0	144	493	6,975	-1,641	-19,053	
13	1977	217	347	13	84	660	3,441	1,141	413	5,656	1,152	5,172	0	127	481	6,932	-1,277	-20,330	
14	1978	916	270	711	193	2,090	9,579	1,451	448	13,567	1,152	5,172	0	145	594	7,063	6,504	-13,826	
15	1979	354	342	91	117	904	5,205	1,445	430	7,985	1,152	5,172	0	132	582	7,038	947	-12,879	
16	1980	774	370	646	164	1,953	8,498	1,498	441	12,390	1,155	5,182	0	140	703	7,180	5,210	-7,669	
17	1981	104	366	7	90	567	2,963	1,418	412	5,360	1,152	5,172	0	124	684	7,131	-1,771	-9,440	
18	1982	360	253	156	127	896	4,715	1,327	404	7,341	1,152	5,172	0	120	726	7,170	171	-9,269	
19	1983	589	243	372	188	1,393	7,132	1,461	411	10,397	1,152	5,172	0	133	764	7,221	3,176	-6,093	
20	1984	186	430	12	97	725	3,562	1,365	416	6,068	1,155	5,182	0	131	672	7,141	-1,073	-7,166	
21	1985	81	331	6	91	508	2,643	1,208	424	4,783	1,152	5,172	0	129	641	7,094	-2,311	-9,477	
22	1986	150	342	11	88	591	3,440	1,050	435	5,516	1,152	5,172	0	128	605	7,057	-1,541	-11,018	
23	1987	111	319	7	84	521	2,883	1,023	452	4,879	1,152	5,172	0	125	546	6,995	-2,116	-13,134	
24	1988	165	347	7	93	611	3,086	1,134	470	5,301	1,155	5,182	0	121	505	6,963	-1,662	-14,796	
25	1989	48	402	4	89	544	2,669	1,221	484	4,917	1,152	5,172	0	115	459	6,898	-1,981	-16,777	
26	1990	85	377	4	89	556	2,810	1,309	498	5,173	1,152	5,172	0	108	428	6,859	-1,687	-18,464	
27	1991	406	425	283	191	1,305	5,800	1,359	523	8,987	1,152	5,172	0	110	460	6,894	2,093	-16,371	
28	1992	305	330	58	107	800	4,184	1,432	526	6,942	1,155	5,182	0	105	450	6,891	51	-16,320	
29	1993	924	304	820	88	2,136	9,690	1,247	566	13,639	1,152	5,172	0	128	585	7,037	6,603	-9,718	
30	1994	127	339	9	89	564	3,131	947	533	5,176	1,152	5,172	0	112	541	6,977	-1,802	-11,519	
31	1995	675	296	442	104	1,516	7,282	1,172	530	10,500	1,152	5,172	0	120	658	7,103	3,398	-8,122	
32	1996	133	341	8	97	579	3,069	1,131	507	5,286	1,155	5,182	0	115	609	7,061	-1,775	-9,897	
33	1997	195	375	14	92	677	3,606	730	495	5,508	1,152	5,172	0	113	599	7,036	-1,528	-11,425	
34	1998	741	247	633	86	1,707	8,222	1,013	513	11,455	1,152	5,172	0	139	690	7,153	4,302	-7,123	
35	1999	105	377	3	88	574	2,815	1,104	500	4,992	1,152	5,172	0	137	595	7,056	-2,063	-9,186	
36	2000	114	381	9	92	596	2,896	881	496	4,870	1,155	5,182	0	135	582	7,054	-2,184	-11,371	
37	2001	180	301	12	91	584	3,386	1,184	490	5,644	1,152	5,172	0	134	565	7,023	-1,379	-12,750	
38	2002	98	474	4	92	669	3,010	755	490	4,923	1,152	5,172	0	132	504	6,960	-2,036	-14,786	
39	2003	290	332	67	125	815	4,427	655	492	6,389	1,152	5,172	0	132	531	6,987	-597	-15,383	
40	2004	331	376	136	142	985	4,343	776	493	6,598	1,155	5,182	0	128	506	6,971	-374	-15,757	
41	2005	807	324	626	81	1,839	8,402	721	520	11,482	1,152	5,172	0	149	608	7,081	4,401	-11,355	
42	2006	72	372	2	88	534	2,683	766	505	4,489	1,152	5,172	0	137	529	6,990	-2,500	-13,856	
43	2007	80	471	4	90	645	2,925	814	496	4,880	1,152	5,172	0	126	524	6,974	-2,094	-15,950	
Average Conditions		Inflow									Outflow						Storage Change		
Hydrological Conditions	Normal	Long Term (65-07)	293	349	145	102	890	4,403	923	473	6,688	1,152	5,175	1	157	574	7,059	-371	
		Simulation Year 1-43	296	351	154	106	907	4,465	1,109	481	6,961	1,152	5,175	0	126	581	7,034	-73	
	Wet	Long Term (91-98)	438	332	283	107	1,160	5,623	1,129	524	8,437	1,152	5,175	0	118	574	7,019	1,418	
		Simulation Year 27-34	516	307	331	146	1,300	6,348	1,434	424	9,507	1,152	5,174	0	132	676	7,134	2,373	
	Dry	Long Term (70-77)	163	368	10	91	632	3,262	653	437	4,985	1,152	5,175	0	186	533	7,047	-2,062	
		Simulation Year 6-13	118	364	7	90	579	3,013	1,187	454	5,234	1,152	5,175	0	123	551	7,001	-1,767	
Recent Hydrologic Conditions (96-07 Avg)		262	364	127	97	850	4,149	878	500	6,376	1,152	5,175	0	131	570	7,029	-652		
Long Term Hydrologic Conditions (65-07 Avg)		293	349	145	102	890	4,403	923	473	6,688	1,152	5,175	1	157	574	7,059	-371		

Table 21 - Impact of RIX Operation on Groundwater in Riverside Basin for EC Baseline (acre-feet/yr)

[source: RAGFM Model]

Basins ---->		Riverside North Basin										Riverside South Basin							Riverside North and South Basins		
Simulation Year	Hydrologic Year	Inflow					Outflow					Net	Inflow			Outflow			Net	NET IMPACT OF RIX (Sum of Columns 11 and 18)	
		Change in Santa Ana River Loss to Groundwater (Column 3b of Table 18)	RIX Percolation Basin Feed (Column 4 of Table 18)	Change in Underflow from Rialto Colton Basin (Column 5b of Table 18)	Change in Underflow from Riverside South Basin (Column 6b of Table 18)	Total Change in Inflow to Riverside North Basin (Sum of Columns 1 to 4)	Change in Santa Ana River Gain from Groundwater (Column 8b of Table 18)	RIX Extraction Well Production (Column 10 of Table 18)	Change in Underflow to Rialto Colton Basin (Column 11b of Table 18)	Change in Underflow to Riverside South Basin (Column 12b of Table 18)	Total Change in Outflow from Riverside North Basin (Sum of Columns 6 to 9)	Net Impact of RIX on Groundwater in Riverside North Basin (Column 5 minus Column 10)	Change in Santa Ana River Loss to Groundwater (Column 3b of Table 19)	Change in Underflow from Riverside North Basin (Column 5b of Table 19)	Total Change in Inflow to Riverside South Basin (Sum of Columns 12 and 13)	Change in Santa Ana River Gain from Groundwater (Column 7b of Table 19)	Change in Underflow to Riverside North Basin (Column 10b of Table 19)	Total Change in Outflow from Riverside North Basin (Sum of Columns 15 and 16)	Net Impact of RIX on Groundwater in Riverside South Basin (Column 14 minus Column 17)		
Column No. ---->		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
1	1965	6,246	28,124	478	-862	33,986	0	35,802	0	-813	34,989	-1,003	9,329	-813	8,516	4,873	-862	4,012	4,504	3,502	
2	1966	6,217	28,124	617	-1,009	33,948	0	35,802	-2	-1,791	34,009	-61	9,168	-1,791	7,377	5,490	-1,009	4,481	2,896	2,835	
3	1967	6,411	28,124	524	-1,068	33,991	0	35,802	0	-2,198	33,604	388	10,314	-2,198	8,116	5,349	-1,068	4,281	3,836	4,223	
4	1968	6,807	28,200	358	-1,190	34,175	0	35,902	0	-2,742	33,161	1,015	12,861	-2,742	10,119	5,796	-1,190	4,606	5,514	6,528	
5	1969	5,198	28,124	342	-417	33,247	0	35,802	19	-1,542	34,278	-1,031	354	-1,542	-1,188	3,840	-417	3,423	-4,611	-5,642	
6	1970	6,346	28,124	389	-1,240	33,619	0	35,802	0	-2,672	33,129	490	10,040	-2,672	7,367	5,693	-1,240	4,452	2,915	3,405	
7	1971	6,558	28,124	256	-1,258	33,681	0	35,802	0	-3,143	32,659	1,022	11,676	-3,143	8,533	5,757	-1,258	4,500	4,033	5,056	
8	1972	6,603	28,200	95	-1,245	33,653	0	35,902	0	-3,655	32,247	1,405	14,107	-3,655	10,452	5,606	-1,245	4,361	6,091	7,497	
9	1973	5,839	28,124	-52	-1,148	32,764	0	35,802	0	-4,061	31,741	1,023	11,124	-4,061	7,063	4,951	-1,148	3,803	3,260	4,283	
10	1974	6,121	28,124	-186	-1,196	32,864	0	35,802	0	-4,444	31,358	1,505	13,911	-4,444	9,468	5,337	-1,196	4,141	5,327	6,832	
11	1975	6,283	28,124	-378	-1,249	32,780	0	35,802	0	-4,922	30,879	1,901	15,689	-4,922	10,767	5,837	-1,249	4,588	6,179	8,080	
12	1976	5,824	28,200	-576	-1,143	32,305	0	35,902	0	-5,295	30,608	1,697	14,883	-5,295	9,589	5,986	-1,143	4,843	4,746	6,443	
13	1977	5,484	28,124	-738	-1,017	31,853	0	35,802	0	-5,656	30,146	1,707	15,398	-5,656	9,742	6,177	-1,017	5,161	4,581	6,289	
14	1978	4,149	28,124	-496	-496	31,106	0	35,802	125	-4,098	31,829	-723	-185	-4,098	4,023	-496	3,528	-7,810	-8,533	-8,533	
15	1979	4,764	28,124	-659	-1,229	31,001	0	35,802	0	-4,653	31,149	-148	8,889	-4,653	4,236	4,289	-1,229	3,060	1,176	1,028	
16	1980	4,373	28,200	-308	-613	31,652	-10	35,902	68	-2,979	32,982	-1,329	-214	-2,979	-3,193	4,807	-613	4,194	-7,388	-8,717	
17	1981	4,977	28,124	-296	-1,291	31,515	0	35,802	0	-3,764	32,038	-523	9,884	-3,764	6,120	5,521	-1,291	4,230	1,890	1,367	
18	1982	4,423	28,124	-175	-1,147	31,225	0	35,802	0	-3,701	32,101	-876	896	-3,701	4,596	5,076	-1,147	3,930	-3,034	-3,910	
19	1983	4,534	28,124	90	-668	32,081	-60	35,802	5	-2,345	33,402	-1,322	98	-2,345	-2,247	4,465	-668	3,797	-6,044	-7,365	
20	1984	4,326	28,200	346	-1,026	31,846	0	35,902	0	-2,520	33,382	-1,537	5,576	-2,520	3,056	4,976	-1,026	3,950	-893	-2,430	
21	1985	4,421	28,124	554	-1,050	32,049	0	35,802	0	-2,599	33,203	-1,153	6,024	-2,599	3,424	5,063	-1,050	4,014	-589	-1,742	
22	1986	4,392	28,124	705	-1,047	32,174	-1	35,802	0	-2,676	33,124	-950	5,842	-2,676	3,165	4,892	-1,047	3,844	-679	-1,629	
23	1987	4,723	28,124	714	-1,153	32,409	0	35,802	0	-2,872	32,930	-522	7,477	-2,872	4,605	5,343	-1,153	4,190	416	-106	
24	1988	4,882	28,200	714	-1,197	32,600	0	35,902	0	-3,034	32,868	-268	8,379	-3,034	5,345	5,474	-1,197	4,277	1,068	799	
25	1989	5,078	28,124	646	-1,252	32,596	0	35,802	0	-3,236	32,566	30	9,682	-3,236	6,446	5,725	-1,252	4,473	1,973	2,003	
26	1990	5,208	28,124	555	-1,308	32,579	0	35,802	0	-3,539	32,263	316	10,579	-3,539	7,039	5,749	-1,308	4,440	2,599	2,915	
27	1991	5,159	28,124	473	-1,322	32,434	0	35,802	0	-3,790	32,012	422	9,830	-3,790	6,040	5,761	-1,322	4,439	1,601	2,023	
28	1992	4,895	28,200	418	-1,273	32,241	0	35,902	0	-3,817	32,086	155	7,864	-3,817	4,047	5,394	-1,273	4,121	-74	81	
29	1993	6,210	28,124	282	-912	33,705	-93	35,802	2	-2,507	33,204	501	4,545	-2,507	2,038	5,235	-912	4,323	-2,285	-1,784	
30	1994	5,229	28,124	472	-1,268	32,557	0	35,802	0	-3,076	32,726	-169	10,302	-3,076	7,226	6,177	-1,268	4,908	2,317	2,148	
31	1995	5,870	28,124	452	-1,018	33,429	-43	35,802	1	-2,587	33,173	256	5,948	-2,587	3,361	5,595	-1,018	4,577	-1,216	-961	
32	1996	5,078	28,200	565	-1,244	32,599	0	35,902	0	-3,097	32,805	-206	8,818	-3,097	5,720	6,161	-1,244	4,916	804	598	
33	1997	5,265	28,124	586	-1,290	32,686	0	35,802	0	-3,364	32,437	248	10,201	-3,364	6,837	6,153	-1,290	4,862	1,974	2,223	
34	1998	4,395	28,124	698	-980	32,237	-16	35,802	-11	-3,084	32,691	-454	3,975	-3,084	891	4,581	-980	3,602	-2,711	-3,164	
35	1999	5,028	28,124	717	-1,247	32,622	0	35,802	0	-3,156	32,646	-25	9,247	-3,156	6,092	5,444	-1,247	4,197	1,895	1,870	
36	2000	5,225	28,200	678	-1,291	32,814	0	35,902	0	-3,373	32,529	285	10,500	-3,373	7,126	5,733	-1,291	4,443	2,684	2,968	
37	2001	5,263	28,124	554	-1,338	32,603	0	35,802	0	-3,698	32,104	499	10,781	-3,698	7,083	5,771	-1,338	4,433	2,651	3,150	
38	2002	5,498	28,124	360	-1,453	32,530	0	35,802	0	-4,299	31,503	1,027	12,873	-4,299	8,574	6,060	-1,453	4,607	3,967	4,994	
39	2003	5,149	28,124	249	-1,311	32,211	0	35,802	0	-4,307	31,495	716	9,975	-4,307	5,668	5,403	-1,311	4,091	1,577	2,293	
40	2004	5,149	28,200	117	-1,306	32,161	0	35,902	0	-4,491	31,411	750	9,634	-4,491	5,143	5,285	-1,306	3,979	1,164	1,914	
41	2005	4,030	28,124	356	-848	31,662	0	35,802	4	-3,447	32,358	-696	2,571	-3,447	-876	4,461	-848	3,614	-4,490	-5,185	
42	2006	4,866	28,124	427	-1,207	32,210	0	35,802	0	-3,387	32,414	-204	8,694	-3,387	5,307	4,919	-1,207	3,712	1,594	1,390	
43	2007	5,189	28,124	348	-1,350	32,312	0	35,802	0	-3,851	31,951	361	10,932	-3,851	7,081	5,638	-1,350	4,287	2,794	3,155	
Hydrological Conditions	Average Conditions		Riverside North Basin										Riverside South Basin							Riverside Basin	
	Normal	Long Term (65-07)	5,295	28,142	258	-1,120	32,575	-5	35,825	5	-3,355	32,470	105	8,655	-3,355	5,300	5,346	-1,120	4,225	1,074	1,180
		Simulation Year 1-43	4,952	28,143	367	-1,160	32,301	-8	35,826	2	-3,353	32,467	-166	7,707	-3,353	4,354	5,350	-1,160	4,190	164	-3
	Wet	Long Term (91-98)	5,263	28,143	493	-1,163	32,736	-19	35,827	-1	-3,165	32,642	94	7,685	-3,165	4,520	5,632	-1,163	4,469	51	145
		Simulation Year 27-34	4,537	28,137	-337	-907	31,430	-12	35,819	33	-3,590	32,250	-820	3,845	-3,590	255	4,697	-907	3,790	-3,535	-4,355
	Dry	Short Term (78-83)	6,132	28,143	-149	-1,187	32,940	0	35,827	0	-4,231	31,596	1,344	13,354	-4,231	9,123	5,668	-1,187	4,481	4,642	5,985
		Simulation Year 14-19	4,719	28,146	605	-1,148	32,322	0	35,831	0	-2,925	32,905	-583	7,651	-2,925	4,726	5,317	-1,148	4,170	556	-27
Recent Hydrologic Conditions (96-07 Avg)		5,011	28,143	471	-1,239	32,387	-1	35,827	-1	-3,630	32,195	192	9,017	-3,630	5,387	5,467	-1,239	4,229	1,159	1,350	
Long Term Hydrologic Conditions (65-07 Avg)		5,295	28,142	258	-1,120	32,575	-5	35,825	5	-3,355	32,470	105	8,655	-3,355	5,300	5,346	-1,120	4,225	1,074	1,180	

Table 22 - Impact of RIX Operation on Santa Ana River Flows for EC Baseline (acre-feet/yr)

[source: RAGFM Model]

Santa Ana River Reaches ---->		Santa Ana River at Riverside North and Riverside South Basins								
Simulation Year	Hydrologic Year	Santa Ana River Gain				Santa Ana River Loss			Net Gain	
		RIX Discharge to Santa Ana River (Column 10 of Table 18 plus other tertiary treatment effluents)	Change in Santa Ana River Gain in Riverside North Basin (Column 8b of Table 18)	Santa Ana River Gain in Riverside South Basin (Column 7b of Table 19)	Total Santa Ana River Gain in Riverside North and Riverside South Basins (Sum of Columns 1 to 3)	Santa Ana River Loss to Groundwater in Riverside North Basin (Column 3b of Table 18)	Santa Ana River Loss to Groundwater in Riverside South Basin (Column 3b of Table 19)	Total Santa Ana River Loss in Riverside North and Riverside South Basins (Sum of Columns 5 and 6)	Net Impact of RIX on Santa Ana River Flows in Riverside North and Riverside South Basins (Column 4 minus Column 7)	
Column No. ---->		1	2	3	4	5	6	7	8	
1	1965	43,154	0	4,873	48,027	6,246	9,329	15,575	32,453	
2	1966	43,154	0	5,490	48,644	6,217	9,168	15,385	33,259	
3	1967	43,154	0	5,349	48,503	6,411	10,314	16,725	31,777	
4	1968	43,275	0	5,796	49,070	6,807	12,861	19,668	29,403	
5	1969	43,154	0	3,840	46,994	5,198	354	5,552	41,442	
6	1970	43,154	0	5,693	48,847	6,346	10,040	16,386	32,461	
7	1971	43,154	0	5,757	48,911	6,558	11,676	18,234	30,677	
8	1972	43,275	0	5,606	48,881	6,603	14,107	20,710	28,171	
9	1973	43,154	0	4,951	48,105	5,839	11,124	16,963	31,142	
10	1974	43,154	0	5,337	48,491	6,121	13,911	20,033	28,458	
11	1975	43,154	0	5,837	48,991	6,283	15,689	21,972	27,019	
12	1976	43,275	0	5,986	49,261	5,824	14,883	20,707	28,554	
13	1977	43,154	0	6,177	49,331	5,484	15,398	20,882	28,449	
14	1978	43,154	0	4,023	47,177	4,149	-185	3,965	43,213	
15	1979	43,154	0	4,289	47,443	4,764	8,889	13,653	33,789	
16	1980	43,275	-10	4,807	48,073	4,373	-214	4,160	43,913	
17	1981	43,154	0	5,521	48,675	4,977	9,884	14,862	33,814	
18	1982	43,154	0	5,076	48,230	4,423	4,596	9,019	39,211	
19	1983	43,154	-60	4,465	47,559	4,534	98	4,632	42,927	
20	1984	43,275	0	4,976	48,251	4,326	5,576	9,902	38,348	
21	1985	43,154	0	5,063	48,217	4,421	6,024	10,444	37,773	
22	1986	43,154	-1	4,892	48,045	4,392	5,842	10,234	37,811	
23	1987	43,154	0	5,343	48,497	4,723	7,477	12,201	36,296	
24	1988	43,275	0	5,474	48,749	4,882	8,379	13,261	35,488	
25	1989	43,154	0	5,725	48,879	5,078	9,682	14,760	34,120	
26	1990	43,154	0	5,749	48,903	5,208	10,579	15,786	33,117	
27	1991	43,154	0	5,761	48,915	5,159	9,830	14,989	33,926	
28	1992	43,275	0	5,394	48,669	4,895	7,864	12,760	35,909	
29	1993	43,154	-93	5,235	48,295	6,210	4,545	10,755	37,540	
30	1994	43,154	0	6,177	49,331	5,229	10,302	15,530	33,800	
31	1995	43,154	-43	5,595	48,706	5,870	5,948	11,818	36,888	
32	1996	43,275	0	6,161	49,436	5,078	8,818	13,895	35,540	
33	1997	43,154	0	6,153	49,307	5,265	10,201	15,466	33,840	
34	1998	43,154	-16	4,581	47,719	4,395	3,975	8,370	39,349	
35	1999	43,154	0	5,444	48,598	5,028	9,247	14,275	34,323	
36	2000	43,275	0	5,733	49,008	5,225	10,500	15,725	33,283	
37	2001	43,154	0	5,771	48,925	5,263	10,781	16,044	32,880	
38	2002	43,154	0	6,060	49,214	5,498	12,873	18,371	30,843	
39	2003	43,154	0	5,403	48,557	5,149	9,975	15,124	33,433	
40	2004	43,275	0	5,285	48,559	5,149	9,634	14,784	33,776	
41	2005	43,154	0	4,461	47,615	4,030	2,571	6,601	41,014	
42	2006	43,154	0	4,919	48,073	4,866	8,694	13,560	34,513	
43	2007	43,154	0	5,638	48,792	5,189	10,932	16,122	32,670	
Average Conditions		Santa Ana River Gain				Santa Ana River Loss			Net Gain	
Hydrological Conditions	Normal	Long Term (65-07)								
		Simulation Year 1-43	43,182	-5	5,346	48,523	5,295	8,655	13,950	34,572
	Wet	Short Term (79-07)	43,183	-8	5,350	48,525	4,952	7,707	12,659	35,867
		Simulation Year 15-43	43,184	-19	5,632	48,797	5,263	7,685	12,948	35,849
	Dry	Long Term (91-98)	43,174	-12	4,697	47,860	4,537	3,845	8,382	39,478
		Simulation Year 27-34	43,184	0	5,668	48,852	6,132	13,354	19,486	29,366
Recent Hydrologic Conditions (96-07 Avg)		43,184	-1	5,467	48,650	5,011	9,017	14,028	34,622	
Long Term Hydrologic Conditions (65-07 Avg)		43,182	-5	5,346	48,523	5,295	8,655	13,950	34,572	

Table 23 Safe Yield Estimation (acre-feet/yr)

[source: RAGFM Model]

Basins ---->		Riverside North Basin			Riverside South Basin			Arlington Basin			
Simulation Year	Hydrologic Year	Groundwater Production (Column 9 of Table 5-2)	Storage Change (Column 15 of Table 5-2)	Yield (Column 1 plus Column 3)	Groundwater Production (Column 8 of Table 5-3)	Storage Change (Column 12 of Table 5-2)	Yield (Column 4 plus Column 5)	Groundwater Production (Column 6 plus Column 7 of Table 5-4)	Storage Change (Column 12 of Table 5-4)	Yield (Column 7 plus Column 8)	
Column No. ---->		1	2	5	4	5	6	7	8	9	
1	1965	28,265	-15,540	12,725	36,463	-8,748	27,715	6,324	-375	5,949	
2	1966	28,265	-9,848	18,416	36,463	-10,466	25,997	6,324	-2,287	4,037	
3	1967	28,265	-17,658	10,606	36,463	-12,391	24,072	6,324	-2,950	3,373	
4	1968	28,301	-14,689	13,613	36,527	-13,497	23,031	6,337	-3,113	3,224	
5	1969	28,265	36,205	64,470	36,463	17,083	53,546	6,324	4,888	11,212	
6	1970	28,265	-17,118	11,146	36,463	-8,984	27,479	6,324	-2,071	4,252	
7	1971	28,265	-13,885	14,380	36,463	-10,698	25,765	6,324	-2,314	4,010	
8	1972	28,301	-13,316	14,985	36,527	-11,849	24,679	6,337	-2,905	3,432	
9	1973	28,265	-6,020	22,245	36,463	-7,718	28,745	6,324	-1,756	4,568	
10	1974	28,265	-7,413	20,851	36,463	-8,966	27,497	6,324	-1,968	4,356	
11	1975	28,265	-7,381	20,883	36,463	-9,892	26,571	6,324	-2,560	3,764	
12	1976	28,301	-4,583	23,718	36,413	-7,685	28,729	6,337	-1,641	4,696	
13	1977	28,265	-4,201	24,064	36,259	-7,432	28,827	6,324	-1,277	5,047	
14	1978	28,265	30,881	59,145	36,259	19,787	56,046	6,324	6,504	12,828	
15	1979	28,265	-11	28,254	36,259	2,914	39,173	6,324	947	7,270	
16	1980	28,301	35,426	63,727	36,323	25,051	61,374	6,337	5,210	11,547	
17	1981	28,265	-10,105	18,159	36,259	-2,402	33,857	6,324	-1,771	4,553	
18	1982	28,265	3,448	31,713	36,259	2,267	38,526	6,324	171	6,495	
19	1983	28,265	36,720	64,985	36,259	20,562	56,821	6,324	3,176	9,500	
20	1984	28,301	-6,116	22,185	36,323	2,287	38,610	6,337	-1,073	5,264	
21	1985	28,265	-4,108	24,156	36,259	-1,552	34,707	6,324	-2,311	4,012	
22	1986	28,265	1,353	29,618	36,259	466	36,725	6,324	-1,541	4,783	
23	1987	28,265	-4,808	23,457	36,259	-3,314	32,945	6,324	-2,116	4,208	
24	1988	28,301	-5,188	23,113	36,323	-3,911	32,412	6,337	-1,662	4,675	
25	1989	28,265	-6,270	21,994	36,259	-5,146	31,113	6,324	-1,981	4,343	
26	1990	28,265	-6,768	21,496	36,259	-5,348	30,911	6,324	-1,687	4,637	
27	1991	28,265	-1,529	26,736	36,259	616	36,875	6,324	2,093	8,417	
28	1992	28,301	50	28,352	36,323	-547	35,776	6,337	51	6,388	
29	1993	28,265	20,470	48,735	36,259	17,302	53,561	6,324	6,603	12,926	
30	1994	28,265	-11,298	16,967	36,259	-4,698	31,561	6,324	-1,802	4,522	
31	1995	28,265	10,503	38,767	36,259	8,890	45,149	6,324	3,398	9,722	
32	1996	28,301	-7,315	20,987	36,323	-4,494	31,829	6,337	-1,775	4,562	
33	1997	28,265	-7,197	21,068	36,259	-5,235	31,024	6,324	-1,528	4,795	
34	1998	28,265	14,076	42,340	36,259	9,989	46,248	6,324	4,302	10,626	
35	1999	28,265	-9,433	18,832	36,259	-6,060	30,199	6,324	-2,063	4,261	
36	2000	28,301	-7,655	20,646	36,323	-6,445	29,878	6,337	-2,184	4,153	
37	2001	28,265	-7,248	21,016	36,259	-6,138	30,121	6,324	-1,379	4,945	
38	2002	28,265	-8,596	19,669	36,259	-7,542	28,717	6,324	-2,036	4,288	
39	2003	28,265	-5,073	23,191	36,259	-3,860	32,399	6,324	-597	5,727	
40	2004	28,301	-1,285	27,016	36,323	-3,503	32,820	6,337	-374	5,964	
41	2005	28,265	23,692	51,957	36,259	16,204	52,463	6,324	4,401	10,725	
42	2006	28,265	-6,889	21,376	36,259	-3,048	33,211	6,324	-2,500	3,823	
43	2007	28,265	-10,619	17,645	36,259	-6,416	29,843	6,324	-2,094	4,230	
Average Conditions		Riverside North Basin			Riverside South Basin			Arlington Basin			
Hydrological Conditions	Normal	Long Term (65-07) Simulation Year 1-43	28,273	-1,078	27,195	36,328	-1,269	35,059	6,327	-371	5,956
		Short Term (79-07) Simulation Year 15-43	28,273	629	28,902	36,274	927	37,202	6,327	-73	6,254
	Wet	Long Term (91-98) Simulation Year 27-34	28,274	2,220	30,494	36,275	2,728	39,003	6,327	1,418	7,745
		Short Term (78-83) Simulation Year 14-19	28,271	16,060	44,331	36,270	11,363	47,633	6,326	2,373	8,699
	Dry	Long Term (70-77) Simulation Year 6-13	28,274	-9,240	19,034	36,439	-9,153	27,286	6,327	-2,062	4,266
		Short Term (84-90) Simulation Year 20-26	28,275	-4,558	23,717	36,277	-2,360	33,918	6,328	-1,767	4,560
Recent Hydrologic Conditions (96-07 Avg)		28,274	-2,795	25,479	36,275	-2,212	34,063	6,327	-652	5,675	
Safe Yield = Annual groundwater production which would result in a zero change in groundwater storage		Recent (96-07) Hydrological Conditions			25,500			34,100			5,700
		Long Term (65-07) Hydrological Conditions			27,200			35,100			6,000

Table 24 - Summary of Safe Yield Estimates

Basin	Range of Yield based on Long Term Hydrologic Conditions (AFY)			Yield Based on Recent Hydrological Conditions, 1996 to 2007 (AFY)	Safe Yield (AFY)
	Wet	Dry	Normal		
Riverside North	30,500	19,000	27,200	25,500	27,200
Riverside South	39,000	27,300	35,100	34,100	35,100
Arlington	7,700	4,300	6,000	5,700	6,000

Table 25 - Monthly Recharge Rates at ASR Facilities (AF/month)

(Source of Recharge Water: Santa Ana River Flows)

ASR Facility	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total (AFY)
On-Channel Recharge Basin	1,112	1,284	1,544	1,386	1,193	788	524	378	323	331	474	662	10,000
Off-Channel Basins			750	750						750	750		3,000
Total Annual Recharge at ASR Facilities (AFY)													13,000

Table 27 - Long-Term Water Budgets and Basin Conditions Under Various Simulations

Flow Components		Simulation												
		Existing Conditions Baseline			Scenario 2			Scenario 3			Scenario 4			
		Riverside North Basin	Riverside South Basin	Arlington Basin	Riverside North Basin	Riverside South Basin	Arlington Basin	Riverside North Basin	Riverside South Basin	Arlington Basin	Riverside North Basin	Riverside South Basin	Arlington Basin	
BASIN OUTFLOW	Groundwater Production (AF/yr)													
	Flume Wells 2-6	8,210			10,000			10,000			8,210	-	-	
	Flume Well 7				4,360			4,360			4,360	-	-	
	Colton Wells 30 and 31				8,070			8,070			4,035	-	-	
	West Valley New Wells							8,630			3,090			
	WMWD Desalter Wells 1-5			5,200			7,800			7,420	-	-	5,025	
	WMWD New Desalter Wells									1,935	-	-	3,610	
	RIX Extraction**	35,800			35,800			35,800			35,800			
	Pellissier ASR Extraction Wells										-	10,000	-	
	Other Wells**	20,090	36,330	1,130	20,090	36,330	1,200	20,090	36,480	1,385	20,075	36,310	335	
Subtotal	64,100	36,330	6,330	78,320	36,330	9,000	86,950	36,480	10,740	75,570	46,310	8,970		
Net Boundary Outflow (AF/yr)														
Riverside North Basin														
Riverside South Basin	19,120		100	18,070		680	22,820		230	25,650				
Arlington Basin											280			
Chino Basin	2,840			2,840			2,840			2,840				
Temescal Basin & Hole Lake Area			160			260			130			50		
Subtotal	21,960	0	260	20,910	0	940	25,660	0	360	28,490	280	50		
Santa Ana River Gain (AF/yr)														
Santa Ana River Gain from Groundwater		17,890			17,560			19,560			15,850			
TOTAL OUTFLOW	86,060	54,220	6,590	99,230	53,890	9,940	112,610	56,040	11,100	104,060	62,440	9,020		
BASIN INFLOW	Groundwater Recharge at Recharge Facilities (AF/yr)													
	ASR On-Channel Facility (in Rialto-Colton Basin)***				10,000			21,920			6,000			
	ASR Off-Channel Facility				3,000			8,980			10,000			
	Pellissier ASR Facility										28,100			
	RIX Percolation Basin Feed**	28,100			28,100			28,100						
	Arlington Basin Recharge Facilities						3,000			3,980			2,970	
	Subtotal	28,100	0	0	31,100	0	3,000	37,080	0	3,980	44,100	0	2,970	
	Natural Groundwater Recharge (AF/yr)													
	Deep Percolation from Precipitation and Applied Water	1,360	3,240	890	1,350	3,240	890	1,740	3,240	890	1,350	3,230	890	
	Natural Recharge at Basin Boundaries and Streambed Recharge	140	3,170	4,400	140	3,170	4,340	140	3,200	4,350	150	3,110	4,450	
Subtotal	1,500	6,410	5,290	1,490	6,410	5,230	1,880	6,440	5,240	1,500	6,340	5,340		
Net Boundary Inflow (AF/yr)														
Rialto-Colton Basin	28,320			38,390			44,810			30,320				
Riverside North Basin		19,120			18,070			22,820			25,650			
Riverside South Basin												280		
Arlington Basin		100			680			230						
Temescal Basin			920			1,450			1,460			390		
Subtotal	28,320	19,220	920	38,390	18,750	1,450	44,810	23,050	1,460	30,320	25,650	670		
Santa Ana River Loss (AF/yr)														
Santa Ana River Loss to Groundwater	27,040	27,310		27,020	27,470		28,610	25,850		26,550	28,700			
TOTAL INFLOW	84,960	52,940	6,210	98,000	52,630	9,680	112,380	55,340	10,680	102,470	60,690	8,980		
BASIN STORAGE CHANGE	Long-Term Average Storage Change (AF/yr)* (Storage Change = Inflow - Outflow)													
	-1,100	-1,280	-380	-1,230	-1,260	-260	-230	-700	-420	-1,590	-1,750	-40		
LONG-TERM IMPACT ON GROUNDWATER ELEVATIONS	Long-Term Average Groundwater Head (ft)*													
	1969 Western Judgment Index Wells	Johnson 1 (in Rialto-Colton Basin)	861.2			866.0			889.7			854.6		
		Flume 2	850.9			849.7			880.2			843.3		
		Flume 5	847.5			845.5			873.2			840.4		
		Average of 3 index wells	853.2			853.7			881.0			846.1		
	Riverside North Basin	RA24 (CPC East Side)	850.2			848.5			871.8			842.5		
		RA21 (Twin Butte #6)	829.4			826.8			840.8			819.8		
		RA17 (#8)	833.1			826.7			854.7			820.7		
	Riverside South Basin	RE9 (Mulberry)		755.5			753.1			763.7			745.5	
		RC1 (#14, 46th Street)		743.6			743.5			743.8			743.1	
		RD3 (Laura Lane)		739.7			743.6			741.6			735.5	
	Arlington Basin	A3 (Buchanan #1)			623.5			638.9			607.9			638.9
		A21 (Water Tower)			737.7			728.3			736.3			728.3

Notes:
 * - Long-term average is over the 43 years of simulation representing the long-term hydrologic conditions of 1965 to 2007.
 ** - Based on 2007 groundwater recharge and production data.
 *** - ASR On-Channel Facility recharge is not included in the water budget calculations of Riverside North Basin as this facility is located in Rialto-Colton Basin. Impact of ASR On-Channel Facility is observed in changes in boundary inflow from Rialto-Colton Basin to Riverside North Basin