

Appendix 4. Major-ion analyses for sampled wells, grouped by study, Santa Ana NAWQA, California

[Sample dates are given in Appendix 3; number below the compound is the data parameter code, which is a 5-digit number used in the USGS computerized data system, National Water Information System (NWIS), to uniquely identify a specific constituent or property; @ 180C, at 180 degrees Celsius; mg/L, milligrams per liter; —, no data; <, less than; E, estimated]

NAWQA identi- fication No.	Residue, dissolved, @ 180C, mg/L (70300)	Dissolved solids, mg/L (70301)	Calcium, dissolved, mg/L (00915)	Magnesium, dissolved, mg/L (00925)	Potassium, dissolved, mg/L (00935)	Sodium, dissolved, mg/L (00930)	Bromide, dissolved, mg/L (71870)	Chloride, dissolved, mg/L (00940)	Fluoride, dissolved, mg/L (00950)	Silica, dissolved, mg/L (00955)	Sulfate, dissolved, mg/L (00945)
COS-1	225	215	7.21	0.352	0.81	73.2	0.05	15.6	0.6	15.2	10
COS-2	659	619	107	20.3	4.58	67.4	.21	91.6	.5	20.9	175
COS-3	383	367	66.8	13	3.14	35.8	.1	35.3	.5	20.1	78.3
COS-4	838	833	44.5	10.3	2.74	247	1.08	324	.4	37.5	53.5
COS-5	296	288	42.4	8.3	1.94	44.6	.06	18	.3	20.6	64.7
COS-6	374	367	41.3	6.73	1.92	74.6	.12	46.1	.2	22.2	72
COS-7	509	495	69.4	11.8	2.42	81.6	.22	82.8	.2	22	116
COS-8	587	562	82.5	28.5	1.79	66.2	.2	80.3	.2	18.2	150
COS-9	720	693	105	25.4	5.37	84.2	.15	97.9	.5	21.4	200
COS-10	290	276	49.4	8.91	2.16	31.9	.06	19.2	.5	20	41.2
COS-11	346	330	61.2	11.4	2.23	35.4	.11	34.7	.4	20.8	63.5
COS-12	400	387	53.2	11	1.77	63.2	.15	51	.5	19.7	86
COS-13	780	762	61.8	30.4	3.33	150	.32	88.8	.4	42.5	209
COS-14	279	269	43.8	6.41	2.24	40.6	.09	24.8	.4	17.3	43.1
COS-15	244	235	23.3	4.33	1.25	53.1	.04	14	.4	16.8	39.4
COS-16	496	473	87.7	14.7	3.6	48.5	.26	63.4	.4	20.3	111
COS-17	327	304	53	11.2	1.59	35	.07	25.6	.4	20.6	48.5
COS-18	600	583	102	18.6	4.18	64.4	.21	92.2	.5	20	141
COS-19	644	613	99.6	18	4.34	78.1	.29	96.3	.4	22.3	144
COS-20	587	569	105	19.2	4.05	53.1	.16	77.2	.5	20.9	167
COL-1	3,740	3,580	282	259	106	451	2.05	437	.3	37	1,600
COL-2	1,420	1,330	221	50.1	5.59	166	.32	306	.6	22.7	289
COL-3	445	432	91.4	14.2	2.34	38.4	.09	50.6	.5	11.9	68.5
COL-4	1,020	970	173	48.6	2.19	64.9	.38	139	.2	22.3	228
COL-5	2,740	2,540	337	157	4.64	244	.6	212	.2	40.4	1,190
COL-6	4,470	4,330	181	154	3.68	970	.47	85.8	.4	17.6	2,740
COL-7	1,480	1,480	150	72.7	6.82	283	.06	155	1.3	23.6	381
COL-8	501	490	60.4	17.2	1.98	85.6	.08	80	1.4	14.2	108
COL-9	1,500	1,430	95	90	1.3	278	.5	101	2.8	25.6	433
COL-10	1,070	1,030	92.7	47	5.31	205	.83	58.4	2.7	15.7	207
COL-11	1,450	1,340	197	43.9	4.82	181	.4	102	2.2	51.3	511
COL-12	13,800	10,000	1,940	521	10.4	812	12.5	5,190	<.1	36.1	1,350
COL-13	3,030	2,880	432	101	2.53	332	1.7	491	.2	54.5	1,040
COL-14	3,120	3,030	218	90.6	4.71	711	1.51	346	2.6	23	1,010
COL-15	2,510	2,420	52.2	75	2.33	717	1.54	326	11.5	21.6	404

Appendix 4. Major-ion analyses for sampled wells, grouped by study, Santa Ana NAWQA, California—Continued

NAWQA identi- fication No.	Residue, dissolved, @ 180C, mg/L (70300)	Dissolved solids, mg/L (70301)	Calcium, dissolved, mg/L (00915)	Magnesium, dissolved, mg/L (00925)	Potassium, dissolved, mg/L (00935)	Sodium, dissolved, mg/L (00930)	Bromide, dissolved, mg/L (71870)	Chloride, dissolved, mg/L (00940)	Fluoride, dissolved, mg/L (00950)	Silica, dissolved, mg/L (00955)	Sulfate, dissolved, mg/L (00945)
COL-16	1,100	1,050	61.9	14	1.57	298	.49	76.8	1.8	15.2	280
COL-17	990	966	106	20.9	11.3	176	.79	173	3.6	20.6	390
COL-18	1,120	1,060	204	35.1	6.79	101	.75	127	.5	34.7	239
COL-19	4,980	4,880	55.7	32.7	5.19	1,720	.75	470	.9	23.5	1,180
COL-20	1,220	996	197	44.2	2.56	65	.5	266	.4	22.5	292
COL-21	24,700	25,500	645	1,350	8.39	7,970	28.8	9,430	2.9	22.4	5,270
COL-22	2,480	2,390	73.5	37.5	4.68	752	.17	349	7.7	20	583
COL-23	—	—	—	—	—	—	—	—	—	—	—
COL-24	3,200	3,100	734	116	13.8	127	2.1	183	.2	48.1	1,050
COL-25	9,770	9,000	579	497	63.1	1,560	3.31	1,540	2.9	6.2	4,170
COL-26	2,580	2,480	176	82.5	35.6	509	1.67	238	.4	35.1	950
COF-1	562	538	108	18.1	3.53	42.8	.23	62.7	.5	21.5	143
COF-2	306	297	55.9	9.73	2.42	31.3	.08	19.2	.6	20.7	45.4
COF-3	352	343	66.4	11.9	3.03	33.5	.1	31	.5	21.7	60.8
COF-4	307	300	59	10.2	2.77	30.8	.08	19.9	.6	20.7	47.6
COF-5	397	383	75.2	12.9	2.89	35.2	.12	41.5	.5	20.6	81.2
COF-6	320	311	61.2	10.4	3.02	31.6	.08	24.4	.6	20.1	51.3
COF-7	561	543	106	18.7	3.96	48	.2	73.8	.5	21.7	133
COF-8	—	—	—	—	—	—	—	—	—	—	—
COF-9	611	593	110	18.8	3.4	59.5	.27	75.7	.3	22.6	156
COF-10	579	566	86.5	16.8	4.21	77.5	.21	89.2	.5	22.7	128
COF-11	694	687	114	22	4.83	79	.67	107	.5	22.4	166
COF-12	562	547	75.2	16.9	5.96	82.6	.18	101	.5	19.5	120
COF-13	549	526	98	18.3	3.88	43.5	.2	78.2	.4	20.6	132
COF-14	609	587	112	20.7	3.23	49.8	.24	95.9	.4	21.3	128
COF-15	409	399	81.2	12.5	3.12	36.4	.13	36.6	.5	19.7	87.1
COF-16	578	551	93.6	22.8	2.45	51.4	.23	93.1	.1	22.8	130
COF-17	615	588	101	18.5	4.13	65.6	.26	97.2	.4	21.1	134
COF-18	590	594	101	19	4.37	63.5	.23	94.1	.5	21.2	137
COF-19	634	619	97.8	18.8	5.04	80.7	.25	95.4	.5	23	142
COF-20	644	604	99.8	19	4.53	74.5	.23	92.1	.5	20.6	153
COF-21	924	868	138	37.6	6.25	92	.27	115	.5	23.3	270
COF-22	—	—	—	—	—	—	—	—	—	—	—
COF-23	652	608	121	21.5	3.44	55.2	.29	85.5	.5	21.5	129
INS-1	233	232	41.2	10.8	1.53	17.2	.05	9.7	.4	30.9	15.3
INS-2	277	276	56.4	6.84	2.11	22.9	.09	18.2	.2	27.7	22
INS-3	226	227	44	8.75	1.85	19.1	.04	6.8	.1	32.6	11.4
INS-4	190	188	47	4.67	1.77	9.8	.03	3.2	.3	23.6	12.8

Appendix 4. Major-ion analyses for sampled wells, grouped by study, Santa Ana NAWQA, California—Continued

NAWQA identi- fication No.	Residue, dissolved, @ 180C, mg/L (70300)	Dissolved solids, mg/L (70301)	Calcium, dissolved, mg/L (00915)	Magnesium, dissolved, mg/L (00925)	Potassium, dissolved, mg/L (00935)	Sodium, dissolved, mg/L (00930)	Bromide, dissolved, mg/L (71870)	Chloride, dissolved, mg/L (00940)	Fluoride, dissolved, mg/L (00950)	Silica, dissolved, mg/L (00955)	Sulfate, dissolved, mg/L (00945)
INS-5	348	347	80.6	12.2	3.67	15	.08	14.2	.4	19.1	50.3
INS-6	389	386	83	15.1	2.14	15.3	.09	22.9	.4	25	58.8
INS-7	307	304	67.8	12	1.82	12.7	.13	32.8	.2	24.2	40
INS-8	250	245	61.1	9.53	2.67	9.7	.04	5.5	.3	20.1	24.3
INS-9	262	253	54	6.23	1.73	16.6	.04	10	.2	23.1	17.3
INS-10	288	277	46.3	12.4	1.63	16.9	.03	8.1	.4	45.7	39.4
INS-11	258	253	58.7	6.58	2.23	12.2	.04	7.4	.3	21.7	24.7
INS-12	274	275	54.7	11.5	1.86	16.7	.13	16.8	.2	21.8	30.6
INS-13	816	820	132	29.6	3.12	91.9	.35	125	.4	28.5	203
INS-14	505	498	92.1	13.8	3.59	55.8	.2	86.1	.3	33.1	59.9
INS-15	277	271	54.7	6.52	2.03	23.6	.12	31.5	.1	22.9	14.5
INS-16	188	184	39	3.74	1.69	15	.02	3.6	.3	21	17.7
INS-17	220	216	51.7	10.9	1.71	6.1	.03	6.5	.3	18.7	22.6
INS-18	189	180	29.5	5.85	1.69	16.7	.04	12	.2	30.6	17.1
INS-19	490	481	93.7	15.2	3.34	43.2	.15	23.6	.8	20.9	102
INS-20	223	223	47.2	7.95	2.79	14.9	.04	8.8	.9	17.9	22.6
INS-21	281	275	52.8	16.3	1.45	16.3	.06	9.5	.5	20	36.2
INS-22	318	321	48.4	9.21	2.37	40.5	.08	16.6	.8	24.6	40
INS-23	355	337	48.7	19.9	1.94	39.6	.15	31.4	.6	24.2	18.4
INS-24	595	576	107	18.8	4.68	57.5	.23	71.7	.6	24	91.4
INS-25	492	467	72.8	15.2	2.06	51.8	.18	63.2	.3	30.3	133
INS-26	696	678	119	22.6	4.3	70.7	.34	96.7	.5	22.8	78.9
INS-27	354	338	69.6	8.89	2	26.5	.07	13.6	.6	20.7	92.8
INS-28	293	282	58.5	7.55	1.91	21.7	.06	16.9	.6	19.6	33.4
INS-29	726	703	129	33	2.3	50.1	.29	89.2	.3	27.8	159
INF-1	—	—	—	—	—	—	—	—	—	—	—
INF-1a	270	262	26.1	1.88	2.21	67.5	.05	48.5	3.5	20.8	20.7
INF-2	—	—	—	—	—	—	—	—	—	—	—
INF-2a	618	—	123	16.6	3.15	46.3	.13	44.5	.3	24.1	152
INF-3	—	—	—	—	—	—	—	—	—	—	—
INF-3a	788	739	122	8.43	4.7	107	.14	82.9	.4	10.5	315
INF-4	371	334	49.5	9.31	3.74	63.8	.07	56.2	1.7	27.1	25.5
INF-5	44	—	4.75	1.71	3.35	6.9	<.01	3.9	.2	.7	E.2
INF-6	290	291	57.4	14.5	1.78	12.5	.07	14	.8	25.4	36.6
INF-6a	—	—	—	—	—	—	—	—	—	—	—
INF-7	227	228	41.2	11.3	2.02	16.2	.03	8.3	.8	25.6	24.5
INF-7a	—	—	—	—	—	—	—	—	—	—	—
INF-8	187	187	37.7	7.57	1.79	12.3	.03	6.1	.5	20.9	21.3

Appendix 4. Major-ion analyses for sampled wells, grouped by study, Santa Ana NAWQA, California—Continued

NAWQA identi- fication No.	Residue, dissolved, @ 180C, mg/L (70300)	Dissolved solids, mg/L (70301)	Calcium, dissolved, mg/L (00915)	Magnesium, dissolved, mg/L (00925)	Potassium, dissolved, mg/L (00935)	Sodium, dissolved, mg/L (00930)	Bromide, dissolved, mg/L (71870)	Chloride, dissolved, mg/L (00940)	Fluoride, dissolved, mg/L (00950)	Silica, dissolved, mg/L (00955)	Sulfate, dissolved, mg/L (00945)
INF-8a	—	—	—	—	—	—	—	—	—	—	—
INF-9	213	149	28	5.01	2.61	12.2	.02	4.3	.3	19.2	13.6
INF-9a	—	—	—	—	—	—	—	—	—	—	—
INF-10	179	175	24.3	2.44	1.98	30.6	<.01	10.9	.5	13	27.4
INF-11	272	265	26.1	3.79	2.01	59.5	.08	28.8	1.5	21.2	36.4
INF-12	253	247	19.9	1.5	1.81	65.3	.06	27.1	2.2	19	31.1
INF-13	2,200	—	390	76.4	7.2	202	.86	162	1.1	31.9	837
INF-14	—	—	—	—	—	—	—	—	—	—	—
INF-15	369	349	66.8	16.2	2.98	25.5	.05	14.2	.9	25.5	50.1
INF-16	244	240	47.1	11.3	1.85	12.8	<.01	9.8	.8	23.1	28.6
INF-17	384	373	64.5	12.2	4.24	41.6	.09	26.6	.4	20.7	82.8
INF-18	450	—	127	.066	4.3	23.2	.12	39.5	E.1	8	212
INF-19	80	—	9.24	5.57	5.53	12.9	.01	6.3	.4	1.1	<.1
INF-20	208	207	48.5	7.22	2.52	14	.02	4.7	.4	19.3	13.2
INF-21	461	454	92.7	16.9	4.41	40.1	.13	32	1.2	19.6	98.5
SAS-1	622	602	79	16	5.54	95.6	.44	158	.2	33.1	124
SAS-2	606	580	82.9	17.4	7.02	81.9	.35	101	.6	23.2	175
SAS-3	776	724	103	19.5	7.71	96.4	.45	96.8	.4	21.2	256
SAS-4	642	625	88.2	19.5	5.58	91.6	.25	81.7	.4	31.1	96
SAS-5	359	345	56.8	6.25	3.89	45	.11	25.3	.3	21.6	43.5
SAS-6	271	264	19.8	1.87	3.21	66.3	.1	20.7	.5	14.8	57.1
SAS-7	250	246	45.5	4.85	3.36	28.9	.08	22	.4	23.4	17.3
SAS-8	252	249	49.1	4.72	3.35	24.5	.07	9.7	.2	23.3	39.9
SAS-9	488	465	71.6	11.1	1.68	58.2	.11	27.8	E.1	26	178
SAS-10	470	455	14.9	1.23	.75	150	.35	134	.6	12.1	85.3
SAS-11	526	514	57.2	12	2.75	106	.46	155	E.1	14.8	82.5
SAS-12	614	538	66.7	17.8	2.77	90.2	.44	222	.6	37.8	29.4
SAS-13	888	797	101	20.2	3.53	148	1.02	345	.4	30.2	41.3
SAS-14	534	471	59.5	20.4	2.96	55.5	.64	155	.5	55.8	18.2
SAS-15	802	789	112	37.2	5.89	91.3	.48	176	.4	46.4	109
SAS-16	—	1,500	210	66.5	6.86	210	1.01	454	.3	54.4	294
SAS-17	436	432	57.6	15.6	4.57	60.8	.36	77	.3	21.9	27.9
SAS-18	236	236	35.2	2.68	3.06	41.8	.07	13.3	.4	16.7	43.1
SAS-19	286	287	57.6	6.35	3.41	26.6	.09	19.4	.2	26.3	29.9
SAS-20	502	—	45.5	7.75	3.82	129	<.01	23.1	.4	27.2	E.1
SAS-21	167	159	30.9	3.09	2.8	13.6	.04	8.5	.2	23.9	12.5
SAS-22	498	458	44.8	5.93	4.19	107	.69	195	1.1	21.1	19.8
SAS-23	187	184	36	3.01	2.66	22.2	.05	10.1	.3	20.6	6.5

Appendix 5. Analyses for nutrients and dissolved organic carbon for sampled wells, grouped by study, Santa Ana NAWQA, California

[Sample dates are given in Appendix 3; number below the compound is the data parameter code, which is a 5-digit number used in the USGS computerized data system, National Water Information System (NWIS), to uniquely identify a specific constituent or property; dissolved indicates analysis of filtered sample; mg/L, milligrams per liter; —, no data; <, less than; E, estimated]

NAWQA identification No.	Ammonia, dissolved, mg/L as N (00608)	Ammonia plus organic nitrogen, dissolved, mg/L as N (00623)	Nitrate plus nitrite, dissolved, mg/L as N (00631)	Nitrite, dissolved, mg/L as N (00613)	Phosphorus dissolved, mg/L as P (00666)	Orthophosphate, dissolved, mg/L as P (00671)	Dissolved organic carbon, mg/L (00681)
COS-1	0.308	0.41	<0.050	<0.010	0.037	0.099	2.1
COS-2	.022	.13	3.03	<.010	.03	.027	.4
COS-3	.025	<.10	1.63	<.010	.037	.035	.3
COS-4	.39	.47	.078	<.010	.011	.014	1.2
COS-5	.026	<.10	.164	<.010	.017	.023	.1
COS-6	.024	<.10	3.55	<.010	.02	.027	.1
COS-7	.027	<.10	5.22	<.010	.013	.021	.3
COS-8	.036	E.06	1.34	<.010	.013	.021	.9
COS-9	.034	.23	5.49	.455	.222	.199	1.9
COS-10	.037	<.10	.839	<.010	.035	.039	.4
COS-11	.029	<.10	1.66	<.010	.026	.029	.2
COS-12	.067	<.10	1.55	<.010	.029	.033	.5
COS-13	.04	<.10	.595	<.010	.035	.036	.3
COS-14	.034	<.10	.073	<.010	.024	.028	.2
COS-15	.036	<.10	.079	<.010	.032	.034	.4
COS-16	<.02	<.10	.884	<.010	.026	.028	.4
COS-17	<.02	<.10	1.54	<.010	.035	.033	.2
COS-18	<.02	E.07	4.34	<.010	.027	.022	.6
COS-19	<.02	<.10	4.3	<.010	.02	.018	.7
COS-20	.028	.1	2.97	<.010	.028	.03	.3
COL-1	4.12	4.5	.54	<.010	.144	.142	4
COL-2	<.020	E.09	10.7	<.010	.026	.02	1
COL-3	<.020	.11	3.23	.011	.011	<.010	1.7
COL-4	<.020	E.06	24.6	<.010	.033	.027	.65
COL-5	.026	.21	6.35	<.010	.085	.073	2.6
COL-6	.13	.23	<.050	<.010	.18	.113	1.8
COL-7	.448	.95	<.050	<.010	.042	.031	5.3
COL-8	0.055	0.22	<.050	<.010	0.034	0.031	2.7
COL-9	.314	.53	<.050	<.010	.026	.013	3.6
COL-10	.179	.48	20.5	.312	.046	.036	3
COL-11	1.23	1.5	<.050	<.010	.145	.133	4.3
COL-12	.715	.71	<.050	<.010	.043	.055	E1.9
COL-13	<.020	.27	53.3	<.010	.072	.066	1.8
COL-14	—	—	—	—	—	—	7.9
COL-15	<.020	.43	31.3	1.62	.06	.052	4.4

Appendix 5. Analyses for nutrients and dissolved organic carbon for sampled wells, grouped by study, Santa Ana NAWQA, California—Continued

NAWQA identification No.	Ammonia, dissolved, mg/L as N (00608)	Ammonia plus organic nitrogen, dissolved, mg/L as N (00623)	Nitrate plus nitrite, dissolved, mg/L as N (00631)	Nitrite, dissolved, mg/L as N (00613)	Phosphorus dissolved, mg/L as P (00666)	Orthophosphate, dissolved, mg/L as P (00671)	Dissolved organic carbon, mg/L (00681)
COL-16	<.020	.13	.079	<.010	.036	.035	2.7
COL-17	2.04	2.5	<.050	<.010	.194	.173	6.1
COL-18	2.02	2.1	<.050	<.010	.026	.035	2.1
COL-19	.681	1.6	.067	<.010	.179	.148	17
COL-20	<.020	E.07	1.93	.013	.033	.029	<.33
COL-21	3.75	5.6	<.050	.033	.13	.132	25
COL-22	.664	1.6	<.050	<.010	.208	.199	9.6
COL-23	—	—	—	—	—	—	—
COL-24	4.09	4.7	<.050	<.010	—	.252	5.1
COL-25	.415	.92	<.050	<.010	.109	.099	9.4
COL-26	.805	1	<.050	.011	—	.232	3.4
COF-1	<.020	<.10	2.24	<.010	.035	.026	—
COF-2	<.020	<.10	.753	<.010	.04	.032	—
COF-3	<.020	<.10	1.22	<.010	.039	.028	—
COF-4	<.020	<.10	.649	<.010	.043	.036	—
COF-5	<.020	<.10	2.06	<.010	.037	.03	—
COF-6	<.020	<.10	.969	<.010	.038	.033	—
COF-7	<.020	<.10	4.4	<.010	.036	.028	—
COF-8	—	—	—	—	—	—	—
COF-9	<.020	<.10	1.89	<.010	.024	.023	—
COF-10	<.020	<.10	4.17	<.010	0.036	0.032	—
COF-11	<.020	<.10	8.87	<.010	.028	.025	—
COF-12	<.020	.11	2.68	<.010	.102	.088	—
COF-13	<.020	<.10	4	<.010	.036	.03	—
COF-14	<.020	<.10	6.37	<.010	.03	.024	—
COF-15	<.020	<.10	1.07	<.010	.036	.032	—
COF-16	<.020	<.10	5.31	<.010	.012	.012	—
COF-17	<.020	E.08	5.21	<.010	.034	.031	—
COF-18	<.020	<.10	4.77	<.010	.036	.032	—
COF-19	<.020	E.07	4.6	<.010	.033	.029	—
COF-20	<.020	<.10	3.85	<.010	.032	.031	—
COF-21	<.020	.11	2.88	.034	.305	.283	—
COF-22	—	—	—	—	—	—	—
COF-23	<.020	<.10	5.62	<.010	.039	.035	—
INS-1	<.020	<.10	5.14	<.010	.029	.027	<.33
INS-2	<.020	<.10	6.1	<.010	.025	.025	<.33
INS-3	<.020	<.10	1.81	<.010	.032	.024	E.29
INS-4	<.020	<.10	.811	<.010	.024	.018	E.25

Appendix 5. Analyses for nutrients and dissolved organic carbon for sampled wells, grouped by study, Santa Ana NAWQA, California—Continued

NAWQA identification No.	Ammonia, dissolved, mg/L as N (00608)	Ammonia plus organic nitrogen, dissolved, mg/L as N (00623)	Nitrate plus nitrite, dissolved, mg/L as N (00631)	Nitrite, dissolved, mg/L as N (00613)	Phosphorus dissolved, mg/L as P (00666)	Orthophosphate, dissolved, mg/L as P (00671)	Dissolved organic carbon, mg/L (00681)
INS-5	<.020	<.10	10	<.010	.009	<.010	.38
INS-6	<.020	<.10	13.6	<.010	.015	.016	.36
INS-7	<.020	<.10	7.51	<.010	.012	<.010	.39
INS-8	<.020	<.10	1.9	<.010	.009	<.010	.37
INS-9	<.020	<.10	7.97	<.010	.026	.025	<.33
INS-10	<.020	<.10	4.2	<.010	.037	.034	<.33
INS-11	<.020	<.10	6.11	<.010	.025	.025	E.26
INS-12	<.020	<.10	7.57	<.010	.011	.013	E.25
INS-13	<.020	<.10	13.8	<.010	.048	.041	.66
INS-14	<.020	<.10	3.92	<.010	.342	.345	.36
INS-15	<.020	0.13	6.27	<.010	0.011	<.010	<.33
INS-16	<.020	1.1	2.14	<.010	.014	.013	E.16
INS-17	<.020	<.10	1.87	<.010	.006	<.010	.34
INS-18	<.020	<.10	2.96	<.010	.019	.017	.39
INS-19	<.020	<.10	8.26	<.010	.012	.011	.61
INS-20	<.020	<.10	3.9	<.010	.01	.011	.4
INS-21	<.020	<.10	3.63	<.010	E.003	<.010	.46
INS-22	<.020	<.10	8.97	<.010	.019	.016	E.20
INS-23	<.020	E.05	5.95	<.010	.022	.019	.35
INS-24	<.020	E.07	9.62	<.010	.013	.011	.57
INS-25	<.020	E.05	5.59	<.010	.014	.012	.52
INS-26	<.020	E.07	20.1	<.010	.007	<.010	.64
INS-27	<.020	<.10	1.83	<.010	.008	<.010	E.24
INS-28	<.020	<.10	7.48	<.010	.014	.01	.36
INS-29	<.020	<.10	16.7	<.010	.012	.01	.4
INF-1	—	—	—	—	—	—	—
INF-1a	.109	.17	<.050	<.010	E.005	<.010	—
INF-2	—	—	—	—	—	—	—
INF-2a	.037	E.07	<.050	<.010	E.004	<.010	—
INF-3	—	—	—	—	—	—	—
INF-3a	.19	.25	<.050	<.010	<.006	<.010	—
INF-4	.037	E.07	<.050	<.010	.035	.036	—
INF-5	1.28	1.6	<.050	<.010	.012	<.010	—
INF-6	<.020	<.10	10	<.010	.108	.1	—
INF-6a	—	—	—	—	—	—	—
INF-7	<.020	<.10	2.88	<.010	.041	.045	—
INF-7a	—	—	—	—	—	—	—
INF-8	<.020	.11	2.31	<.010	.141	.129	—

Appendix 5. Analyses for nutrients and dissolved organic carbon for sampled wells, grouped by study, Santa Ana NAWQA, California—Continued

NAWQA identification No.	Ammonia, dissolved, mg/L as N (00608)	Ammonia plus organic nitrogen, dissolved, mg/L as N (00623)	Nitrate plus nitrite, dissolved, mg/L as N (00631)	Nitrite, dissolved, mg/L as N (00613)	Phosphorus dissolved, mg/L as P (00666)	Orthophosphate, dissolved, mg/L as P (00671)	Dissolved organic carbon, mg/L (00681)
INF-8a	—	—	—	—	—	—	—
INF-9	<0.020	<0.10	0.561	<0.010	0.679	0.624	—
INF-9a	—	—	—	—	—	—	—
INF-10	.741	.98	2.12	.126	.148	.107	—
INF-11	.159	.19	2.34	.012	.203	.182	—
INF-12	<.020	<.10	1.01	<.010	.051	.044	—
INF-13	1.53	1.8	<.050	<.010	.169	.14	—
INF-14	—	—	—	—	—	—	—
INF-15	<.020	.14	9.29	.021	.007	<.010	—
INF-16	<.020	<.10	5.46	<.010	.008	<.010	—
INF-17	E.040	<.10	5.16	.007	<.006	<.018	—
INF-18	.951	1.5	.986	.13	.012	<.018	—
INF-19	15.8	16	E.029	<.006	<.006	<.018	—
INF-20	<.041	<.10	.182	<.006	.024	.027	—
INF-21	E.023	E.07	2	.089	.009	E.012	—
SAS-1	<.041	<.10	4.21	<.006	.056	.054	<.33
SAS-2	<.041	<.10	3.48	<.006	.01	<.018	<.33
SAS-3	<.041	<.10	11.2	<.006	.007	<.018	E.16
SAS-4	<.041	<.10	14.3	E.004	.014	E.015	.69
SAS-5	<.041	.15	9.72	.016	.027	.023	.84
SAS-6	<.041	<.10	2.15	.052	.025	.023	E.23
SAS-7	.825	.95	<.047	<.006	.189	.194	.98
SAS-8	.077	.15	<.047	<.006	.11	.106	.56
SAS-9	<.041	<.10	3.31	<.006	.055	.057	<.33
SAS-10	E.021	E.06	.081	E.005	.028	.03	.85
SAS-11	<.041	<.10	1.48	<.006	E.005	<.018	<.33
SAS-12	<.041	<.10	4.78	<.006	.022	.02	<.33
SAS-13	<.041	<.10	5.54	<.006	.007	<.018	<.33
SAS-14	E0.040	0.1	14	0.02	0.032	0.028	E.29
SAS-15	<.041	E.09	16	E.004	.026	.021	.61
SAS-16	<.041	<.10	3.51	<.006	.053	.046	<.33
SAS-17	<.041	<.10	16.6	<.006	.036	.031	.64
SAS-18	.046	<.10	.212	E.004	.042	.043	.43
SAS-19	<.041	<.10	5.74	<.006	.072	.071	.65
SAS-20	3.28	4	<.047	<.006	.084	.067	6.6
SAS-21	<.041	<.10	1.07	<.006	.112	.107	—
SAS-22	<.041	<.10	1.42	.008	E.003	<.018	<.33
SAS-23	.155	.18	<.047	<.006	.073	.072	.43

Appendix 6. Analyses for trace elements for sampled wells, grouped by study, aluminum through iron, Santa Ana NAWQA, California

[Sample dates are given in Appendix 3; number below the compound is the data parameter code, which is a 5-digit number used in the USGS computerized data system, National Water Information System (NWIS), to uniquely identify a specific constituent or property; dissolved indicates analysis of filtered sample; µg/L, micrograms per liter; —, no data; <, less than; E, estimated]

NAWQA identi- fication No.	Aluminum, dissolved, µg/L (01106)	Antimony, dissolved, µg/L (01095)	Arsenic, dissolved µg/L (01000)	Barium, dissolved, µg/L (01005)	Beryllium, dissolved, µg/L (01010)	Boron, dissolved, µg/L (01020)	Cadmium, dissolved, µg/L (01025)	Chromium, dissolved, µg/L (01030)	Cobalt, dissolved, µg/L (01035)	Copper, dissolved, µg/L (01040)	Iron, dissolved, µg/L (01046)
COS-1	12	<1.00	<1.0	5.9	<1.00	140	<1.00	<1.0	<1.00	<1.0	<10
COS-2	<1	<1.00	1.4	80.5	<1.00	137	<1.00	<1.0	<1.00	1.4	<10
COS-3	2	<1.00	2.1	48.7	<1.00	75	<1.00	1.3	<1.00	<1.0	<10
COS-4	<1	<1.00	2.2	146	<1.00	726	<1.00	<1.0	<1.00	<1.0	190
COS-5	3	<1.00	1.4	53.1	<1.00	70	<1.00	1.4	<1.00	2.1	<10
COS-6	1	<1.00	1.6	73.8	<1.00	102	<1.00	<1.0	<1.00	<1.0	<10
COS-7	<1	<1.00	1	121	<1.00	102	<1.00	<1.0	<1.00	1.4	<10
COS-8	1	<1.00	<1.0	54.7	<1.00	154	<1.00	—	<1.00	1.7	<10
COS-9	<1	<1.00	5.7	51.9	<1.00	274	<1.00	<1.0	2.68	6.5	<10
COS-10	<1	<1.00	1.4	60.8	<1.00	66	<1.00	—	<1.00	1	<10
COS-11	1	<1.00	<2.0	77.9	<1.00	65	<1.00	1.5	<1.00	<1.0	<10
COS-12	2	<1.00	1.4	79.6	<1.00	196	<1.00	<1.0	<1.00	<1.0	<10
COS-13	1	<1.00	3.8	41.4	<1.00	284	<1.00	<1.0	<1.00	<1.0	10
COS-14	2	<1.00	1.4	39.6	<1.00	66	<1.00	<1.0	<1.00	<1.0	<10
COS-15	5	<1.00	3.3	31.9	<1.00	76	<1.00	<1.0	<1.00	<1.0	<10
COS-16	<1	<1.00	<1.0	104	<1.00	135	<1.00	<1.0	<1.00	<1.0	<10
COS-17	1	<1.00	<1.0	53.4	<1.00	76	<1.00	2.5	<1.00	1.6	<10
COS-18	<1	<1.00	1.4	103	<1.00	147	<1.00	<1.0	<1.00	1.1	<10
COS-19	<1	<1.00	<1.0	95.9	<1.00	230	<1.00	<1.0	<1.00	2.5	<10
COS-20	3	<1.00	1.6	80.3	<1.00	105	<1.00	1.1	<1.00	<1.0	<10
COL-1	<16	<1.00	2.6	100	<1.00	253	<1.00	<1.0	1.86	5.2	260
COL-2	<5	<1.00	E.7	72.4	<1.00	451	<1.00	5.9	<1.00	2.3	<30
COL-3	<14	<1.00	E.5	103	<1.00	87	<1.00	<.8	<1.00	1.5	<10
COL-4	<17	<1.00	E.7	89.6	<1.00	137	<1.00	1.2	<1.00	2.2	<10
COL-5	<24	<2.00	2.4	36.7	<2.00	522	<2.00	E.6	<2.00	6.8	<30
COL-6	<11	<3.00	<3.0	14.3	<3.00	1,060	<3.00	<.8	<3.00	8.7	600
COL-7	2	<1.00	29.9	51.4	<1.00	597	<1.00	<.8	1.17	1.8	220
COL-8	2	<1.00	2	40.2	<1.00	205	<1.00	<.8	<1.00	1.3	50
COL-9	1	<1.00	15.7	131	<1.00	498	<1.00	<.8	1.53	2.6	430
COL-10	2	<1.00	5.4	47.5	<1.00	639	<1.00	<.8	1.29	2.7	20
COL-11	2	<1.00	7.3	69.5	<1.00	357	<1.00	<.8	2.04	3.1	7,110
COL-12	16	<7	<.9	92.1	<7	150	<7	<4.0	<7	7.6	3,340
COL-13	<1	<1.00	5.3	23.4	<1.00	400	<1.00	4.1	<1.00	5.2	<30
COL-14	3	<1.00	37.4	44.8	<1.00	980	<1.00	2.1	3.71	5.1	250
COL-15	8	<1.00	3	46.7	<1.00	1,500	<1.00	.8	1.64	5.8	E20
COL-16	3	<1.00	3.6	35.5	<1.00	366	<1.00	E.6	<1.00	1.7	120
COL-17	6	<1.00	1.1	118	<1.00	1,240	<1.00	<.8	<1.00	1.9	2,260
COL-18	2	<1.00	E.6	334	<1.00	200	<1.00	<.8	1.74	1.7	400

Appendix 6. Analyses for trace elements for sampled wells, grouped by study, aluminum through iron, Santa Ana NAWQA, California—Continued

NAWQA identi- fication No.	Aluminum, dissolved, µg/L (01106)	Antimony, dissolved, µg/L (01095)	Arsenic, dissolved µg/L (01000)	Barium, dissolved, µg/L (01005)	Beryllium, dissolved, µg/L (01010)	Boron, dissolved, µg/L (01020)	Cadmium, dissolved, µg/L (01025)	Chromium, dissolved, µg/L (01030)	Cobalt, dissolved, µg/L (01035)	Copper, dissolved, µg/L (01040)	Iron, dissolved, µg/L (01046)
COL-19	11	<1.00	11.2	39.2	<1.00	3,380	4.33	<.8	<1.00	4.4	360
COL-20	<1	<1.00	2.1	80	<1.00	112	<1.00	.8	1.53	2.7	E9
COL-21	<15	<15.0	<13.5	38.8	<15.0	2,280	<15.0	<10.0	6.12	24.4	39,200
COL-22	9	<2.00	2	54.9	<2.00	1,820	<2.00	<.8	<2.00	4.1	230
COL-23	—	—	—	—	—	—	—	—	—	—	—
COL-24	2	<2.00	25.7	164	<2.00	194	<2.00	<1.0	2.44	4.6	14,600
COL-25	4	<5.00	4.9	21.8	<5.00	2,210	<5.00	<1.0	3.42	14.9	890
COL-26	2	<2.00	<.9	53	<2.07	813	<2.00	<1.0	<2.00	4.3	6,280
COF-1	—	—	—	—	—	81	—	—	—	—	<10
COF-2	—	—	—	—	—	72	—	—	—	—	<10
COF-3	—	—	—	—	—	75	—	—	—	—	<10
COF-4	—	—	—	—	—	72	—	—	—	—	<10
COF-5	—	—	—	—	—	75	—	—	—	—	<10
COF-6	—	—	—	—	—	76	—	—	—	—	<10
COF-7	—	—	—	—	—	93	—	—	—	—	<10
COF-8	—	—	—	—	—	—	—	—	—	—	—
COF-9	—	—	—	—	—	127	—	—	—	—	<10
COF-10	—	—	—	—	—	232	—	—	—	—	<10
COF-11	—	—	—	—	—	223	—	—	—	—	<10
COF-12	—	—	—	—	—	246	—	—	—	—	<10
COF-13	—	—	—	—	—	75	—	—	—	—	<10
COF-14	—	—	—	—	—	80	—	—	—	—	<10
COF-15	—	—	—	—	—	76	—	—	—	—	<10
COF-16	—	—	—	—	—	97	—	—	—	—	<10
COF-17	—	—	—	—	—	168	—	—	—	—	<10
COF-18	—	—	—	—	—	132	—	—	—	—	<10
COF-19	—	—	—	—	—	246	—	—	—	—	<10
COF-20	—	—	—	—	—	241	—	—	—	—	<10
COF-21	—	—	—	—	—	258	—	—	—	—	10
COF-22	—	—	—	—	—	—	—	—	—	—	—
COF-23	—	—	—	—	—	124	—	—	—	—	<10
INS-1	<1	<1.00	1.7	39.1	<1.00	26	<1.00	2.4	<1.00	<1.0	<10
INS-2	<1	<1.00	E.6	59.7	<1.00	33	<1.00	3.5	<1.00	2.1	<10
INS-3	9	<1.00	1.3	84.5	<1.00	E6	<1.00	4.3	<1.00	1.6	<10
INS-4	9	<1.00	1	22.2	<1.00	E11	<1.00	1.1	<1.00	3	<10
INS-5	5	<1.00	1.8	52.6	<1.00	26	<1.00	0.9	<1.00	2.5	<10
INS-6	<1	<1.00	<.9	42.5	<1.00	20	<1.00	6.8	<1.00	2.8	<10
INS-7	11	<1.00	1.6	42.6	<1.00	20	<1.00	4.2	<1.00	3.1	<10
INS-8	<1	<1.00	1.6	21.9	<1.00	17	<1.00	<.8	<1.00	<1.0	<10
INS-9	<1	<1.00	E.6	34.6	<1.00	18	<1.00	2.9	<1.00	3.3	<10
INS-10	<1	<1.00	<.9	90.2	<1.00	28	<1.00	5	<1.00	1.2	<10

Appendix 6. Analyses for trace elements for sampled wells, grouped by study, aluminum through iron, Santa Ana NAWQA, California—Continued

NAWQA identi- fication No.	Aluminum, dissolved, µg/L (01106)	Antimony, dissolved, µg/L (01095)	Arsenic, dissolved µg/L (01000)	Barium, dissolved, µg/L (01005)	Beryllium, dissolved, µg/L (01010)	Boron, dissolved, µg/L (01020)	Cadmium, dissolved, µg/L (01025)	Chromium, dissolved, µg/L (01030)	Cobalt, dissolved, µg/L (01035)	Copper, dissolved, µg/L (01040)	Iron, dissolved, µg/L (01046)
INS-11	<1	<1.00	1.1	29.2	<1.00	15	<1.00	1.9	<1.00	1	<10
INS-12	<4	<1.00	1.8	68.3	<1.00	19	<1.00	10.6	<1.00	<1.0	<10
INS-13	<3	<1.00	2.1	96.1	<1.00	197	<1.00	<.8	<1.00	2.7	<10
INS-14	<8	<1.00	4.2	158	<1.00	144	<1.00	1.1	<1.00	2.6	E10
INS-15	<1	<1.00	1.1	46.6	<1.00	17	<1.00	5.1	<1.00	<1.0	<10
INS-16	<1	<1.00	10	12.8	<1.00	16	<1.00	E.8	<1.00	1.4	<10
INS-17	<1	<1.00	E.5	29.5	<1.00	23	<1.00	E.4	<1.00	1.4	<10
INS-18	<1	<1.00	<.9	19	<1.00	49	<1.00	<.8	<1.00	3.6	<10
INS-19	<1	<1.00	<.9	41.1	<1.00	87	<1.00	1.4	<1.00	1.3	<10
INS-20	<1	<1.00	<.9	16.7	<1.00	30	<1.00	E.5	<1.00	1.2	<10
INS-21	<1	<1.00	<.9	17.8	<1.00	18	<1.00	2.2	<1.00	1.9	50
INS-22	<1	<1.00	<.9	23.9	<1.00	25	<1.00	3.7	<1.00	1.6	<10
INS-23	<2	<1.00	<.9	55.3	<1.00	23	<1.00	7.6	<1.00	1.5	<10
INS-24	<1	<1.00	1.1	76.8	<1.00	172	<1.00	1.2	<1.00	1.8	<10
INS-25	<9	<1.00	E.5	100	<1.00	48	<1.00	<.8	<1.00	1.9	<10
INS-26	<13	<1.00	E.8	91.3	<1.00	109	<1.00	4.7	<1.00	1.6	<10
INS-27	<16	<1.00	5.7	40.2	<1.00	82	<1.00	1.7	<1.00	1.8	<10
INS-28	<12	<1.00	1.8	32.1	<1.00	87	<1.00	1.1	<1.00	<1.0	<10
INS-29	<7	<1.00	1.5	44.3	<1.00	48	<1.00	<.8	<1.00	2.1	<10
INF-1	—	—	—	—	—	—	—	—	—	—	—
INF-1a	10	<1.00	1.5	16.1	<1.00	869	<1.00	<.8	<1.00	<1.0	130
INF-2	—	—	—	—	—	—	—	—	—	—	—
INF-2a	1	<1.00	2.6	123	<1.00	633	<1.00	<.8	1.25	1.6	3,340
INF-3	—	—	—	—	—	—	—	—	—	—	—
INF-3a	<1	<1.00	<.9	103	<1.00	305	<1.00	<.8	1.23	2	7,410
INF-4	<1	<1.00	3.6	54.6	<1.00	1,170	<1.00	<.8	<1.00	<1.0	170
INF-5	1	<1.00	<.9	4.3	<1.00	32	<1.00	<.8	<1.00	<1.0	<10
INF-6	2	<1.00	<.9	16.9	<1.00	E9	<1.00	1.8	<1.00	<1.0	<10
INF-6a	—	—	—	—	—	—	—	—	—	—	—
INF-7	2	<1.00	<.9	19.7	<1.00	16	<1.00	2.6	<1.00	<1.0	<10
INF-7a	—	—	—	—	—	—	—	—	—	—	—
INF-8	2	<1.00	<.9	14.7	<1.00	20	<1.00	E.7	<1.00	1.3	<10
INF-8a	—	—	—	—	—	—	—	—	—	—	—
INF-9	<1	<1.00	E.5	10.7	<1.00	24	<1.00	<.8	<1.00	<1.0	<10
INF-9a	—	—	—	—	—	—	—	—	—	—	—
INF-10	6	<1.00	4.5	20.2	<1.00	103	<1.00	1.1	<1.00	3.4	20
INF-11	5	<1.00	9.6	30	<1.00	470	<1.00	2.6	<1.00	3.3	10
INF-12	3	<1.00	12.1	15.4	<1.00	614	<1.00	5.2	<1.00	2.1	<10
INF-13	2	<1.00	2.5	64.4	<1.00	72	<1.00	1.2	<1.00	5.2	260
INF-14	—	—	—	—	—	—	—	—	—	—	—
INF-15	2	<1.00	<.9	30.6	<1.00	24	<1.00	3.2	<1.00	1.1	E6

Appendix 6. Analyses for trace elements for sampled wells, grouped by study, aluminum through iron, Santa Ana NAWQA, California—Continued

NAWQA identi- fication No.	Aluminum, dissolved, µg/L (01106)	Antimony, dissolved, µg/L (01095)	Arsenic, dissolved µg/L (01000)	Barium, dissolved, µg/L (01005)	Beryllium, dissolved, µg/L (01010)	Boron, dissolved, µg/L (01020)	Cadmium, dissolved, µg/L (01025)	Chromium, dissolved, µg/L (01030)	Cobalt, dissolved, µg/L (01035)	Copper, dissolved, µg/L (01040)	Iron, dissolved, µg/L (01046)
INF-16	<1	<1.00	<.9	11.8	<1.00	16	<1.00	1.1	<1.00	3.4	<10
INF-17	6	<.05	.7	47.6	<.06	156	<.04	<.8	.21	4.3	50
INF-18	169	.47	2.6	20.2	<.06	75	<.04	<.8	.27	3.9	E8
INF-19	<1	<.05	.4	88.4	<.06	14	<.04	<.8	.03	2.9	120
INF-20	1	<.05	1.1	39	<.06	33	<.04	E.6	.09	3	30
INF-21	1	E.04	1.2	77.4	<.06	367	.12	<.8	.98	4.6	70
SAS-1	<1	<.05	.3	61.5	<.06	265	E.03	2.6	.14	4.4	E7
SAS-2	<1	<.05	.6	31.7	<.06	75	.06	6.4	.14	2.4	<10
SAS-3	2	<.05	1.8	32.2	<.06	135	.04	3.7	.18	2.4	E5
SAS-4	<1	<.05	.3	52.5	<.06	53	E.04	1.1	.18	1.4	30
SAS-5	<1	<.05	1.2	192	<.06	41	E.02	E.4	.11	.6	<10
SAS-6	8	E.03	3.2	61.6	<.06	39	.05	<.8	.04	.7	<10
SAS-7	1	<.05	.7	146	<.06	22	<.04	<.8	.08	.2	200
SAS-8	2	<.05	.4	111	<.06	15	<.04	<.8	.1	.5	230
SAS-9	2	.21	5.3	21.8	<.06	30	.14	<.8	.13	1.7	<10
SAS-10	17	.07	19.4	49.5	<.06	135	.11	<.8	.04	1	<10
SAS-11	2	E.03	.9	162	<.06	64	E.02	<.8	.09	1.8	<10
SAS-12	<1	E.03	1.4	159	<.06	435	E.03	.9	.11	1.2	<10
SAS-13	1	E.05	1.4	208	<.06	455	E.02	<.8	.17	1.4	10
SAS-14	<1	<0.05	0.3	124	<.06	36	<0.04	<.8	0.2	1.8	330
SAS-15	<1	<.05	5.9	151	<.06	55	E.03	<.8	.23	2.3	40
SAS-16	<1	E.03	1.6	73.9	<.06	102	.09	<.8	.34	5.2	160
SAS-17	2	.06	.9	156	<.06	95	.04	1.6	.13	3.1	<10
SAS-18	4	.1	1.5	75.9	<.06	29	.04	<.8	.08	.5	<10
SAS-19	1	.07	.8	147	<.06	25	<.04	<.8	.11	.9	<10
SAS-20	<1	<.05	9	259	<.06	144	.04	<.8	.2	E.2	370
SAS-21	<1	E.03	.8	46.4	<.06	18	<.04	<.8	.06	.9	<10
SAS-22	<1	.06	2.4	204	<.06	1,070	.05	<.8	.1	.5	10
SAS-23	<1	E.03	.8	104	<.06	19	<.04	E.5	.07	E.2	100