

Appendix 1. Selected construction and use data for sampled wells, grouped by study in chronological order of sampling, April 1999 through April 2001, Santa Ana NAWQA, California

[Ft below LSD, feet below land-surface datum;—, no data]

NAWQA identification No.	Station identification No.	State well No.	Well depth (ft below LSD)	Top perforation, (ft below LSD)	Bottom perforation (ft below LSD)
COS-1	334220118002201	005S011W26M008S	486	342	486
COS-2	334745117564501	004S010W29K001S	942	818	892
COS-3	334719118003901	004S011W26N001S	1,020	250	1,020
COS-4	334056117474601	006S009W02E001S	910	370	890
COS-5	334147117542001	005S010W34H010S	600	305	580
COS-6	334504117491901	005S009W09K001S	1,180	560	1,160
COS-7	334615117493901	005S009W04C001S	850	385	850
COS-8	334833117490301	004S009W22M001S	604	256	584
COS-9	335210117422801	003S008W34G002S	98	60	84
COS-10	334436117553601	005S010W16B003S	972	390	940
COS-11	334609117530401	005S010W01E003S	1,310	570	1,290
COS-12	334631117504101	004S009W32P002S	1,300	399	1,270
COS-13	334240117465401	005S009W25D001S	1,000	230	980
COS-14	334501118013001	005S011W09J002S	891	263	879
COS-15	334231117534001	005S010W26L001S	1,460	410	1,450
COS-16	334316117571501	005S010W20M001S	960	440	950
COS-17	334350117553201	005S010W21B004S	844	312	844
COS-18	334932117532401	004S010W14H003S	1,550	599	1,530
COS-19	335148117510101	003S009W32L001S	1,230	530	1,210
COS-20	334825117573101	004S010W20M001S	1,240	505	1,220
COL-1	334057117583501	006S011W01G002S	24	14	19
COL-2	335206117481101	003S009W34H003S	43.5	33.5	38.5
COL-3	334720117551901	004S010W27N003S	38.5	28.5	33.5
COL-4	334559117505801	005S009W07A001S	143.5	133.5	138.5
COL-5	335105117471401	004S009W02J001S	73.5	68.5	73.5
COL-6	334131117540101	005S010W35M001S	28.5	18.5	23.5
COL-7	334740118012701	004S011W27L002S	18.5	8.5	18.5
COL-8	334341117561501	005S010W20A009S	19	9	19
COL-9	334242117565901	005S010W29F009S	24	14	19
COL-10	334426117580501	005S010W18E001S	18.5	8.5	18.5
COL-11	334404117584701	005S011W13K001S	23	13	18
COL-12	334102117495901	006S009W04D001S	43.5	33.5	38.5
COL-13	334034117492101	006S009W04K001S	33.5	23.5	28.5
COL-14	334212117573601	005S010W30Q006S	28.5	18.5	23.5
COL-15	334302117561601	005S010W20R002S	19	9	19
COL-16	334529118021301	005S011W09C002S	18.5	8.5	18.5
COL-17	334302118003901	005S011W22R004S	23.5	13.5	18.5
COL-18	334149117582901	005S011W36H001S	33.5	23.5	28.5
COL-19	334420118000001	005S011W14F002S	28.5	18.5	23.5

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NAWQA identification No.	Station identification No.	State well No.	Well depth (ft below LSD)	Top perforation, (ft below LSD)	Bottom perforation (ft below LSD)
COL-20	334216117532901	005S010W26Q003S	48.5	38.5	43.5
COL-21	333954117570201	006S010W08M004S	20	10	15
COL-22	334317117571501	005S010W20E001S	20	10	15
COL-23	334652118021501	004S011W33F001S	23.5	13.5	18.5
COL-24	334249117580301	005S010W30C005S	28.5	18.5	23.5
COL-25	334002117583201	006S011W12H002S	20.5	10.5	15.5
COL-26	334248118011401	005S011W27D008S	23.5	13.5	18.5
COF-1	334335117584801	005S011W24F003S	365	285	365
COF-2	334500118003001	005S011W10J004S	371	333	361
COF-3	334613118005901	005S011W03C001S	454	425	454
COF-4	334418117573301	005S010W18G001S	1,135	345	1,125
COF-5	334603117544901	005S010W03F001S	1,080	470	1,060
COF-6	334601117582401	005S011W01H002S	960	360	912
COF-7	334704117561101	004S010W33F002S	860	475	835
COF-8	334609117530401	005S010W01E003S	1,310	570	1,290
COF-9	334231117573101	005S010W30K005S	366	201	356
COF-10	334731117540401	004S010W26N001S	216	207	216
COF-11	334659117561201	004S010W33F004S	260	130	240
COF-12	334859117520501	004S009W19D005S	300	76	288
COF-13	334710117552101	004S010W34E002S	1,158	428	1,080
COF-14	334608117525601	005S010W01E002S	654	254	623
COF-15	334744117594601	004S011W26J002S	302	242	286
COF-16	334722117491901	004S009W28R002S	504	324	450
COF-17	334753117525901	004S010W25F001S	447	240	447
COF-18	334903117535201	004S010W23B002S	356	306	356
COF-19	334949117544301	004S010W15B005S	411	277	392
COF-20	334833117555501	004S010W21L001S	592	242	572
COF-21	335118117481401	004S009W03H002S	214	40	201
COF-22	334623117502701	005S009W05B003S	500	250	500
COF-23	334503117543701	005S010W10K004S	272	150	249
OCC-1	334258117582701	005S011W24R004S	996	556	956
OCC-2	334747117582701	004S010W30E002S	1,180	520	1,160
OCC-3	334745117564501	004S010W29K001S	942	818	892
OCC-4	334244117512901	005S009W30G002S	1,270	484	1,270
OCC-5	334238117520001	005S009W30E001S	1,048	554	1,028
OCC-6	334439118011801	005S011W15D003S	306	265	291
OCC-7	334825117573101	004S010W20M001S	1,240	505	1,220
OCC-8	334552118020201	005S011W04L001S	880	374	860
OCC-9	335046117555201	004S010W09B002S	450	309	425
OCC-10	335024117582001	004S010W07E001S	510	450	498
OCC-11	335024117572601	004S010W08E005S	1,420	482	1,375

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NAWQA identification No.	Station identification No.	State well No.	Well depth (ft below LSD)	Top perforation, (ft below LSD)	Bottom perforation (ft below LSD)
OCC-12	335526118573201	003S010W07J001S	970	460	950
OCC-13	334928118000601	004S011W14K001S	1,300	540	1,280
OCC-14	334147117542001	005S010W34H010S	600	305	580
OCC-15	335110117585701	004S011W01K001S	1,275	475	1,275
OCC-16	335154118011301	003S011W34L001S	1,020	250	1,010
OCC-17	334932117532401	004S010W14H003S	1,550	599	1,530
OCC-18	335158118004201	003S011W34H003S	1,000	260	1,000
OCC-19	335004117533901	004S010W11Q002S	402	288	402
OCC-20	335148117510101	003S009W32L001S	1,230	530	1,210
OCC-21	334327117511501	005S009W19H001S	1,152	330	1,140
OCC-22	334405117534701	005S010W14L001S	1,500	348	1,480
OCC-23	334431117553501	005S010W16B004S	920	400	900
OCC-24	334436117553601	005S010W16B003S	972	390	940
OCC-25	334246117545001	005S010W27C002S	830	406	807
OCC-26	334504117491901	005S009W09K001S	1,180	560	1,160
OCC-27	334533117483101	005S009W10C002S	500	310	490
OCC-28	334340117491201	005S009W21B001S	998	397	995
OCC-29	334433117491901	005S009W16C001S	630	300	630
OCC-30	334652118021401	004S011W33L001S	864	304	864
OCC-31	335148117494001	003S009W33K005S	546	80	498
OCC-32	335145117494101	003S009W33K006S	420	90	406
OCC-33	334143117545401	005S010W34F003S	600	350	580
OCC-34	333935117394901	006S008W12Q001S	740	200	670
OCC-35	334806117492001	004S009W28A001S	820	420	770
OCC-36	334025117402101	006S008W01N001S	1,000	430	980
OCC-37	334707117502601	004S009W32B004S	905	430	885
OCC-38	334716117525301	004S010W36C002S	1,150	400	1,000
OCC-39	334809117504001	004S009W20P001S	822	342	802
OCC-40	334911117510601	004S009W17N001S	1,272	482	1,002
OCC-41	334826117521401	004S010W24J002S	910	546	888
OCC-42	334822117521401	004S010W24J001S	870	566	1,050
OCC-43	334443117523401	005S010W13B009S	1,070	400	1,050
OCC-44	334338117553901	005S010W21B003S	590	318	570
OCC-45	334501117524001	005S010W12L003S	978	305	950
OCC-46	334603117533301	005S010W02K002S	688	352	654
OCC-47	334635117512401	004S009W31R001S	1,200	250	980
OCC-48	334631117513001	004S009W31Q001S	1,200	396	1,140
OCC-49	334435117502601	005S009W17B001S	1,260	465	1,240
OCC-50	334442117553601	005S010W16B002S	986	400	960
OCC-51	334538117541901	005S010W03R003S	1,520	429	1,480
OCC-52	344712117512501	004S009W31B002S	714	372	688

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NAWQA identification No.	Station identification No.	State well No.	Well depth (ft below LSD)	Top perforation, (ft below LSD)	Bottom perforation (ft below LSD)
OCC-53	334253117555001	005S010W28C009S	990	460	980
OCC-54	334826117514101	004S009W19K001S	1,034	444	1,014
OCC-55	334958117514401	004S009W07P001S	506	200	492
OCC-56	334531117492901	005S009W09C002S	920	480	900
INS-1	340336117374201	001S007W29A001S	1,040	450	1,040
INS-2	340320117313801	001S006W29H001S	1,000	400	980
INS-3	340406117351701	001S007W23M001S	900	370	900
INS-4	340546117212501	001S005W12L001S	590	198	464
INS-5	340717117194601	001N004W32N001S	580	126	560
INS-6	340303117434701	001S008W28N001S	560	317	535
INS-7	340333117431001	001S008W28G002S	800	295	784
INS-8	341018117253201	001N005W17K002S	234	61	230
INS-9	340649117260701	001S005W06J001S	887	650	860
INS-10	340830117355101	001N007W27J001S	1,110	400	1,090
INS-11	340444117205401	001S005W34R001S	644	250	634
INS-12	335924117412201	002S008W23C001S	1,180	440	1,180
INS-13	335224117332101	003S006W31D001S	225	108	213
INS-14	340025117301101	002S006W10N001S	350	200	350
INS-15	340103117312601	002S006W09D003S	370	210	370
INS-16	340904117221001	001N005W23Q003S	900	464	884
INS-17	340703117421901	001S008W03G002S	309	84	212
INS-18	340623117104001	001S003W03Q003S	575	230	559
INS-19	340423117155201	001S004W23H001S	396	113	205
INS-20	340426117092701	001S003W23A005S	549	250	529
INS-21	340253117002701	001S001W32C001S	415	26	415
INS-22	340105117031601	002S002W11A001S	585	320	585
INS-23	335911117025501	002S002W24E002S	800	170	800
INS-24	340033117204001	002S004W07L001S	402	82	153
INS-25	334459117283201	005S006W11G001S	740	300	730
INS-26	335835117221501	002S005W23Q001S	440	82	270
INS-27	340437117170301	001S004W22B006S	654	240	462
INS-28	340438117162301	001S004W23C003S	750	537	719
INS-29	335224117351101	003S007W35C001S	515	200	250
INF-1	340439117173904	001S004W22D004S	655	650	655
INF-2	340439117173902	001S004W22D002S	200	160	200
INF-3	340439117173905	001S004W22D005S	574	555	574
INF-4	340439117173907	001S004W22D007S	55	10	45
INF-5	340707117162707	001S004W02D007S	400	340	400
INF-6	340503117104103	001S003W15K003S	770	750	770
INF-7	340503117104102	001S003W15K002S	950	930	950
INF-8	340503117104104	001S003W15K004S	510	490	510

Appendix 1. Selected construction and use data for sampled wells, grouped by study in chronological order of sampling, April 1999 through April 2001, Santa Ana NAWQA, California—Continued

NAWQA identification No.	Station identification No.	State well No.	Well depth (ft below LSD)	Top perforation, (ft below LSD)	Bottom perforation (ft below LSD)
INF-9	340503117104105	001S003W15K005S	240	220	240
INF-10	340408117165301	001S004W22J001S	860	840	860
INF-11	340408117165302	001S004W22J002S	540	520	540
INF-12	340408117165303	001S004W22J003S	260	240	260
INF-13	340408117165304	001S004W22J004S	45	25	45
INF-14	340541117074402	001S002W07Q002S	520	500	520
INF-15	340541117074401	001S002W07Q001S	790	770	790
INF-16	340505117101901	001S003W14E001S	1,020	600	1,000
INF-17	340707117162706	001S004W02D006S	530	520	530
INF-18	340707117162708	001S004W02D008S	190	170	190
INF-19	340615117170902	001S004W10B002S	700	680	700
INF-20	340615117170903	001S004W10B003S	320	300	320
INF-21	340615117170904	001S004W10B004S	120	100	120
SAS-1	334344116584001	005S001W22D003S	696	300	676
SAS-2	334407116592901	005S001W16L001S	328	—	—
SAS-3	334503116580501	005S001W10K001S	835	438	714
SAS-4	334402116565801	005S001W14K001S	403	240	394
SAS-5	334505116524001	005S001E09J003S	603	—	—
SAS-6	334542116561301	005S001W01Q001S	1,300	780	1,300
SAS-7	334705116583201	004S001W34C003S	650	—	—
SAS-8	334711116564901	004S001W35A007S	1,320	340	1,300
SAS-9	334037117224301	006S005W02M004S	960	360	940
SAS-10	333844117190801	006S004W17L001S	1,720	380	1,700
SAS-11	333753117174301	006S004W21J003S	1,430	420	1,410
SAS-12	335053117135801	004S003W06Q004S	760	240	740
SAS-13	334918117133601	004S003W18J003S	620	220	600
SAS-14	335646117143201	003S003W06D004S	428	170	420
SAS-15	334420117080901	005S003W13H001S	460	200	460
SAS-16	334047117093601	006S003W02G001S	625	100	620
SAS-17	334948117072401	004S002W18A001S	518	104	518
SAS-18	334621116564601	005S001W02A002S	1,550	470	1,310
SAS-19	334526116540501	005S001E08C001S	695	125	645
SAS-20	335123117040201	004S002W02E001S	704	404	704
SAS-21	334558116455601	005S001E06G001S	964	150	507
SAS-22	335358117114501	003S003W21A001S	450	175	450
SAS-23	334811116580801	004S001W22Q002S	1,550	470	1,530
SAC-1	334953117074801	004S002W07P001S	630	260	630
SAC-2	334527116580801	005S001W10B002S	602	322	602
SAC-3	334604116553701	005S001E06E001S	1,495	400	1,480
SAC-4	334552116580701	005S001W03K001S	1,030	600	1,020
SAC-5	334522116564901	005S001W01P001S	1,175	465	1,175

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NAWQA identification No.	Station identification No.	State well No.	Well depth (ft below LSD)	Top perforation, (ft below LSD)	Bottom perforation (ft below LSD)
SAC-6	334444116583201	005S001W10P001S	580	288	565
SAC-7	334345116585001	005S001W21A003S	670	450	650
SAC-8	334632116571001	004S001W35Q002S	1,696	364	1,676
SAC-9	334558116545701	005S001E06K003S	1,015	136	1,000
SAC-10	334553116542301	005S001E05M007S	1,480	350	1,460
SAC-11	334552116542001	005S001E05M004S	1,126	56	1,122

Appendix 2. Field parameters for sampled wells, grouped by study in chronological order of sampling from April 1999 to July 2001, Santa Ana NAWQA, California

[Number in parentheses below the water-quality property or constituent is a parameter code, a 5-digit number used in the USGS computerized data system, National Water Information System (NWIS), to uniquely identify a specific constituent or property; NTU, nephelometric turbidity units; $\mu\text{S}/\text{cm}$, microsiemens per centimeter at 25 degrees Celsius; Degrees C, degrees Celsius; —, no data; <, less than; E, estimated]

NAWQA identi- fication No.	Date (year- month- day)	Time	Turbidity, NTU (00076)	Dissolved oxygen, mg/L (00300)	Percent of dissolved oxygen, percent saturation (00301)	Field pH, standard units (00400)	Specific conduc- tance, $\mu\text{S}/\text{cm}$ @ 25C (00095)	Water temper- ature, degrees C (00010)	Total hardness, mg/L as CaCO_3 (00900)	Alkalinity, dissolved, mg/L as CaCO_3 (39086)	Bicarbonate, dissolved, mg/L as HCO_3 (00453)	Carbonate, dissolved, mg/L as CO_3 (00452)
COS-1	19990421	1030	0.2	0.3	4	8.7	358	24.5	20	152	165	10
COS-2	19990421	1620	—	2.4	27	7.9	990	17.0	350	196	239	—
COS-3	19990422	1040	—	2.4	26	7.6	586	18.0	220	178	217	—
COS-4	19990423	0940	—	1.8	22	7.6	1,280	15.5	150	184	224	—
COS-5	19990503	1350	—	.7	8	7.5	477	24.0	140	E144	175	—
COS-6	19990504	0940	—	2.4	29	7.6	562	26.5	130	143	174	—
COS-7	19990504	1420	—	4.4	52	7.6	760	23.0	220	142	174	—
COS-8	19990505	1010	—	1.9	20	7.3	856	19.0	320	214	261	—
COS-9	19990505	1320	—	—	—	7.7	1,080	19.5	370	212	259	—
COS-10	19990506	0940	—	4.0	42	7.7	443	18.0	160	164	200	—
COS-11	19990506	1330	—	4.3	47	6.9	534	20.0	200	156	188	—
COS-12	19990507	0940	—	1.7	18	7.6	596	22.5	180	155	189	—
COS-13	19990517	1410	—	1.0	13	7.3	1,210	27.0	280	288	351	—
COS-14	19990518	0930	—	.5	6	7.9	462	21.5	136	150	183	—
COS-15	19990518	1330	—	.4	5	8.1	398	25.5	76	137	167	—
COS-16	19990519	1010	2.1	1.3	14	7.6	790	20.5	280	199	242	—
COS-17	19990519	1430	2.2	2.8	30	7.5	525	19.5	178	169	206	—
COS-18	19990520	1030	—	1.4	14	7.6	950	16.5	331	201	245	—
COS-19	19990520	1440	—	.9	10	7.4	1,020	19.0	323	216	264	—
COS-20	19990521	1200	—	3.2	34	7.5	912	18.0	341	—	—	—
COL-1	20000605	2000	46.0	1.3	14	7.2	4,770	21.5	1,770	662	808	—
COL-2	20000606	1430	1.3	3.0	36	6.9	2,180	23.5	760	362	441	—
COL-3	20000607	1100	2.1	1.7	19	7.1	762	21.5	287	232	283	—
COL-4	20000608	1030	27.0	7.9	91	7.2	1,530	22.0	633	302	368	—
COL-5	20000608	1500	—	4.7	54	6.8	3,300	22.0	1,490	541	660	—
COL-6	20000609	1050	0.3	1.8	20	7.3	5,340	22.0	1,090	284	346	—
COL-7	20000619	1610	1,300	.6	7	7.1	2,320	20.5	680	653	817	—
COL-8	20000620	0950	4.5	.3	4	7.5	849	21.0	222	200	244	—
COL-9	20000620	1550	49.0	.9	10	7.1	2,180	21.0	610	660	805	—
COL-10	20000621	0910	0	.2	2	7.2	1,680	21.0	426	495	604	—
COL-11	20000621	1120	0	.2	2	6.7	1,980	25.0	673	435	480	—
COL-12	20000622	0950	0	.2	3	6.7	16,000	23.5	7,010	249	303	—
COL-13	20000717	1600	2.7	2.3	27	6.7	3,940	24.0	1,500	313	381	—
COL-14	20000718	1030	27.0	1.5	18	7.1	4,400	25.0	919	1,000	1,250	—
COL-15	20000718	1450	5.3	.3	4	7.3	3,800	25.0	440	1,090	1,360	—
COL-16	20000719	1050	18.0	.4	5	7.2	1,680	24.5	213	482	603	—

Appendix 2. Field parameters for sampled wells, grouped by study in chronological order of sampling from April 1999 to July 2001, Santa Ana NAWQA, California—Continued

NAWQA identi- fication No.	Date (year- month- day)	Time	Turbidity, NTU (00076)	Dissolved oxygen, mg/L (00300)	Percent of dissolved oxygen, percent saturation (00301)	Field pH, standard units (00400)	Specific conduc- tance, µS/cm @ 25C (00095)	Water temper- ature, degrees C (00010)	Total hardness, mg/L as CaCO ₃ (00900)	Alkalinity, dissolved, mg/L as CaCO ₃ (39086)	Bicarbonate, dissolved, mg/L as HCO ₃ (00453)	Carbonate, dissolved, mg/L as CO ₃ (00452)
COL-17	20000719	1450	200.0	.5	6	6.8	1,530	25.0	352	88	110	—
COL-18	20000720	1150	400.0	3.1	39	7.5	1,770	27.0	656	491	615	—
COL-19	20000720	1630	38.0	.9	11	7.2	7,100	26.0	275	2,290	2,800	—
COL-20	20000721	1030	20.0	.3	4	7.1	1,660	21.5	675	156	195	—
COL-21	20000731	1600	250.0	1.1	13	6.5	35,200	22.0	7,170	1,180	1,430	—
COL-22	20000801	0850	—	—	—	7.2	3,670	23.5	339	929	1,130	—
COL-23	20000801	1450	—	—	—	6.7	2,620	21.0	—	—	—	—
COL-24	20000802	0950	2.2	.9	11	6.6	3,970	25.0	2,310	1,330	1,630	—
COL-25	20000802	1330	13.0	1.5	17	6.6	11,200	23.5	3,500	941	1,150	—
COL-26	20000803	0950	6.4	.6	6	6.8	3,560	23.0	781	737	900	—
COF-1	20000807	1710	—	—	—	—	899	19.0	343	—	—	—
COF-2	20000808	0930	—	—	—	—	522	19.0	180	—	—	—
COF-3	20000808	1410	—	—	—	—	569	19.0	215	—	—	—
COF-4	20000809	0910	—	—	—	—	505	18.0	190	—	—	—
COF-5	20000809	1330	—	—	—	—	640	19.0	241	—	—	—
COF-6	20000810	1030	—	—	—	—	525	18.5	196	—	—	—
COF-7	20000810	1520	—	—	—	—	899	18.5	342	—	—	—
COF-8	20000811	0950	—	—	—	—	582	20.5	—	—	—	—
COF-9	20000821	1400	—	—	—	—	964	21.5	350	—	—	—
COF-10	20000822	0900	—	—	—	—	940	19.5	285	—	—	—
COF-11	20000822	1510	—	—	—	—	1,120	21.0	376	—	—	—
COF-12	20000823	0850	—	—	—	—	946	20.5	257	—	—	—
COF-13	20000823	1240	—	—	—	—	891	17.0	320	—	—	—
COF-14	20000824	1000	—	—	—	—	1,010	20.5	364	—	—	—
COF-15	20000824	1430	—	—	—	—	663	20.0	254	—	—	—
COF-16	20000825	0930	—	—	—	—	926	20.5	328	—	—	—
COF-17	20000918	0900	—	—	—	—	984	18.0	328	—	—	—
COF-18	20000918	1150	—	—	—	—	969	17.5	331	—	—	—
COF-19	20000919	0900	—	—	—	—	1,020	19.5	322	—	—	—
COF-20	20000919	1150	—	—	—	—	1,020	17.5	327	—	—	—
COF-21	20000920	1030	—	—	—	—	1,370	20.0	500	—	—	—
COF-22	20000920	1520	—	—	—	—	870	21.0	—	—	—	—
COF-23	20000921	0640	—	—	—	—	1,040	—	390	—	—	—
INS-1	20000403	1950	—	6.5	75	7.4	374	21.0	148	136	166	—
INS-2	20000404	1200	—	7.3	88	7.6	452	23.0	169	154	188	—
INS-3	20000404	1730	—	7.4	89	7.6	360	21.5	146	156	190	—
INS-4	20000405	1030	—	8.0	91	7.8	302	19.5	137	134	164	—
INS-5	20000405	1600	—	9.5	108	7.4	560	19.5	252	178	217	—

Appendix 2. Field parameters for sampled wells, grouped by study in chronological order of sampling from April 1999 to July 2001, Santa Ana NAWQA, California—Continued

NAWQA identi- fication No.	Date (year- month- day)	Time	Turbidity, NTU (00076)	Dissolved oxygen, mg/L (00300)	Percent of dissolved oxygen, percent saturation (00301)	Field pH, standard units (00400)	Specific conduc- tance, µS/cm @ 25C (00095)	Water temper- ature, degrees C (00010)	Total hardness, mg/L as CaCO ₃ (00900)	Alkalinity, dissolved, mg/L as CaCO ₃ (39086)	Bicarbonate, dissolved, mg/L as HCO ₃ (00453)	Carbonate, dissolved, mg/L as CO ₃ (00452)
INS-6	20000406	1050	—	8.2	94	7.6	614	20.5	270	170	208	—
INS-7	20000406	1510	—	8.3	92	7.6	498	19.0	219	132	160	—
INS-8	20000407	1000	—	7.7	84	7.4	407	16.5	192	172	210	—
INS-9	20000417	1430	—	8.3	98	7.8	410	21.0	161	147	179	—
INS-10	20000418	0930	1.1	7.8	93	7.5	416	21.0	167	146	178	—
INS-11	20000418	1450	0.1	9.0	100	7.7	409	19.0	174	153	186	—
INS-12	20000419	0940	54.0	7.8	87	7.7	448	20.0	180	148	177	—
INS-13	20000419	1430	.3	5.1	60	7.1	1,300	22.0	453	241	294	—
INS-14	20000420	1000	.5	4.8	57	7.4	834	22.5	288	224	272	—
INS-15	20000420	1530	—	8.3	99	7.7	455	22.5	164	145	177	—
INS-16	20000421	1000	.2	8.8	101	7.8	289	19.0	113	120	146	—
INS-17	20000501	1710	0.0	9.6	105	7.5	346	17.0	174	149	181	—
INS-18	20000502	1000	.1	8.5	93	6.9	267	17.5	98	89	108	—
INS-19	20000502	1600	3.0	5.4	61	7.3	757	19.5	297	234	285	—
INS-20	20000503	1000	0.0	8.5	93	7.6	386	17.0	151	136	167	—
INS-21	20000503	1440	1.6	4.5	52	7	448	16.5	199	175	214	—
INS-22	20000504	1000	0.0	5.6	69	7.6	498	21.0	159	164	200	—
INS-23	20000504	1330	0.0	7.7	95	7.5	588	21.5	204	209	255	—
INS-24	20000505	1000	0.0	3.6	41	7.2	941	20.5	345	261	318	—
INS-25	20000515	1500	3.2	8.3	93	6.9	751	19.0	245	122	148	—
INS-26	20000516	1130	.1	6.6	76	7.2	1,120	21.0	390	288	351	—
INS-27	20000517	0950	0.0	2.9	34	7.6	531	21.5	211	158	193	—
INS-28	20000517	1430	10.0	6.1	66	7.8	466	17.5	178	147	180	—
INS-29	20000518	1020	0.0	7.6	91	7.3	1,130	23.0	459	228	278	—
INF-1	20000517	1030	0.1	.7	9	8.2	443	23.5	—	—	—	—
INF-1a	20000619	1600	—	.2	2	8.4	463	24.5	73	116	—	—
INF-2	20000518	1740	—	.1	1	7.2	850	24.1	—	—	—	—
INF-2a	20000621	1120	—	.2	2	7.2	840	24.6	376	—	—	—
INF-3	20000518	1030	—	.1	1	7.7	1,050	24.5	—	—	—	—
INF-3a	20000620	1440	—	.2	3	7.3	985	27.7	342	130	—	—
INF-4	20000621	1240	0.2	.2	3	7	598	26.1	162	159	—	—
INF-5	20000622	1400	—	.2	2	9.3	86	22.4	19	39	—	—
INF-6	20000711	1100	—	9.4	109	7.6	459	20.5	203	138	—	—
INF-6a	20000808	1550	E 0.0	3.8	53	7.3	437	30.9	—	—	—	—
INF-7	20000712	1110	0.3	6.0	69	7.4	368	20.5	150	141	—	—
INF-7a	20000808	1650	E 0.0	3.6	46	7.3	355	25.8	—	—	—	—
INF-8	20000712	1400	—	9.5	109	7.2	313	20.3	130	113	—	—
INF-8a	20000808	1440	E 0.0	5.7	76	7.2	302	27.9	—	—	—	—

Appendix 2. Field parameters for sampled wells, grouped by study in chronological order of sampling from April 1999 to July 2001, Santa Ana NAWQA, California—Continued

NAWQA identi- fication No.	Date (year- month- day)	Time	Turbidity, NTU (00076)	Dissolved oxygen, mg/L (00300)	Percent of dissolved oxygen, percent saturation (00301)	Field pH, standard units (00400)	Specific conduc- tance, µS/cm @ 25C (00095)	Water temper- ature, degrees C (00010)	Total hardness, mg/L as CaCO ₃ (00900)	Alkalinity, dissolved, mg/L as CaCO ₃ (39086)	Bicarbonate, dissolved, mg/L as HCO ₃ (00453)	Carbonate, dissolved, mg/L as CO ₃ (00452)
INF-9	20000713	1140	—	5.7	67	7.3	255	21.6	91	98	—	—
INF-9a	20000808	1330	—	5.5	70	7.1	245	25.0	—	—	—	—
INF-10	20000725	1130	—	.7	9	7.8	297	26.5	71	88	—	—
INF-11	20000725	1500	—	1.2	16	7.4	440	28.0	81	122	—	—
INF-12	20000726	1110	—	1.8	21	7.9	412	22.5	56	122	—	—
INF-13	20000726	1330	—	.8	12	6.9	2,630	36.5	1,290	—	—	—
INF-14	20000731	1520	—	4.4	60	7.1	443	28.5	—	—	—	—
INF-15	20000807	1520	—	3.2	40	7.3	572	23.8	234	176	—	—
INF-16	20000809	1000	—	—	—	7.5	377	—	165	134	—	—
INF-17	20001128	1100	—	5.2	60	7.5	573	20.8	212	161	—	—
INF-18	20001128	1330	—	2.2	—	10.9	963	24.3	317	—	—	—
INF-19	20001129	1100	—	.1	1	8.5	266	20.1	46	129	—	—
INF-20	20001129	1230	—	.5	—	7.7	329	22.2	151	159	—	—
INF-21	20001129	1410	—	.1	—	7.2	668	23.9	302	230	—	—
SAS-1	20010212	1610	.8	1.1	11	7.2	1,020	26.0	264	117	143	0
SAS-2	20010213	0940	1.5	1.1	11	7.7	928	22.0	279	128	152	0
SAS-3	20010213	1510	—	2.3	30	7.4	1,140	26.5	337	122	149	0
SAS-4	20010214	1000	.7	4.7	57	7.1	977	22.5	301	243	297	0
SAS-5	20010214	1430	0.0	2.7	30	7.6	565	17.0	169	164	200	0
SAS-6	20010215	1000	0.0	.3	4	8.6	418	24.5	57	116	132	5
SAS-7	20010215	1430	0.0	.3	4	7.6	409	18.5	134	162	198	0
SAS-8	20010216	0930	0.0	.2	2	7.6	383	16.5	142	155	189	0
SAS-9	20010226	1630	4.2	1.3	16	7.2	714	23.0	220	124	152	—
SAS-10	20010227	1030	—	.1	1	8.9	820	24.5	42	91	103	4
SAS-11	20010227	1510	—	2.6	32	7.8	889	23.0	193	127	155	—
SAS-12	20010228	0950	—	4.2	50	7.2	987	21.0	240	79	97	—
SAS-13	20010228	1400	—	4.4	54	7.2	1,460	22.0	337	134	164	—
SAS-14	20010301	0950	—	6.4	80	6.9	781	23.5	233	65	80	—
SAS-15	20010301	1500	—	6.6	—	7.1	1,270	22.5	434	230	281	—
SAS-16	20010302	0930	—	5.3	65	6.7	2,380	22.5	799	321	381	—
SAS-17	20010313	1450	—	7.0	91	7.9	736	25.6	209	152	185	—
SAS-18	20010314	1000	—	.2	2	8.3	389	22.0	99	129	158	—
SAS-19	20010314	1320	—	7.6	84	7.6	453	17.5	171	151	184	—
SAS-20	20010315	1220	—	.2	2	7.5	818	23.0	146	421	513	—
SAS-21	20010315	1520	—	6.8	72	7.8	256	15.0	90	98	119	—
SAS-22	20010316	1010	—	.6	8	7.9	883	28.0	137	84	103	—
SAS-23	20010402	1050	0.0	.5	6	8	302	18.5	103	136	166	—
SAC-1	20010403	0930	—	—	—	—	3,290	—	—	—	—	—

Appendix 2. Field parameters for sampled wells, grouped by study in chronological order of sampling from April 1999 to July 2001, Santa Ana NAWQA, California—Continued

NAWQA identi- fication No.	Date (year- month- day)	Time	Turbidity, NTU (00076)	Dissolved oxygen, mg/L (00300)	Percent of dissolved oxygen, percent saturation (00301)	Field pH, standard units (00400)	Specific conduc- tance, µS/cm @ 25C (00095)	Water temper- ature, degrees C (00010)	Total hardness, mg/L as CaCO ₃ (00900)	Alkalinity, dissolved, mg/L as CaCO ₃ (39086)	Bicarbonate, dissolved, mg/L as HCO ₃ (00453)	Carbonate, dissolved, mg/L as CO ₃ (00452)
SAC-2	20010403	1150	—	—	—	—	891	—	—	—	—	—
SAC-3	20010403	1350	—	—	—	—	400	—	—	—	—	—
SAC-4	20010404	0920	—	—	—	—	1,630	—	—	—	—	—
SAC-5	20010404	1040	—	—	—	—	841	—	—	—	—	—
SAC-6	20010404	1230	—	—	—	—	1,380	—	—	—	—	—
SAC-7	20010404	1340	—	—	—	—	909	—	—	—	—	—
SAC-8	20010719	1100	—	—	—	—	422	—	—	—	—	—
SAC-9	20010719	1130	—	—	—	—	429	—	—	—	—	—
SAC-10	20010719	1310	—	—	—	—	346	—	—	—	—	—
SAC-11	20010719	1400	—	—	—	—	382	—	—	—	—	—

Appendix 3A. Quality-control summary for major ions, nutrients, dissolved organic carbon (DOC), trace elements, pesticides, and volatile organic compounds (VOCs) detected in field blanks and associated ground-water samples collected between April 1999 and July 2001, Santa Ana NAWQA, California
 (—, no detection)

Constituent	Number of field blank detections/analyses	Maximum concentration detected in blank samples	Minimum concentration detected in ground-water samples
Major ions, in milligrams per liter			
Calcium	8/14	0.23	4.75
Magnesium	2/14	.012	.066
Sodium	3/14	1.2	6.1
Bromide	1/14	.01	.01
Chloride	1/14	.4	3.2
Silica	4/14	.3	.7
Nutrients and DOC, in milligrams per liter			
Nitrogen, Ammonia	1/14	.031	.021
Nitrogen, Ammonia + Organic Nitrogen	2/14	.33	.05
Nitrogen, Nitrite +Nitrate	1/14	.036	.029
Phosphorus	1/14	.003	.003
Phosphorus, Phosphate, Ortho	1/14	.012	.01
Dissolved Organic Carbon	2/9	.2	.1
Trace elements, in micrograms per liter			
Aluminum	2/14	7	1
Barium	1/14	2.8	4.3
Boron	1/14	19	6
Copper	2/14	1.8	.2
Manganese	1/14	7	.1
Selenium	1/14	.5	.2
Zinc	4/14	3	1
Pesticide, in micrograms per liter			
Molinate	1/14	.023	.002
p,p'-DDE	1/14	.001	.001
Volatile organic compounds, in micrograms per liter			
1,2,3,4- Tetramethylbenzene	1/26	.2	1.1
Benzene	1/26	.17	.01
Carbon disulfide	2/26	.07	.01
Chloroform	3/26	.01	.01
Chloromethane	1/26	.1	.02
Dichloromethane	2/26	.3	.02
Ethylbenzene	3/26	.02	.01
Isopropylbenzene	1/26	.86	.01
Styrene	3/26	.08	—
Tetrachloroethylene	1/26	.03	.004
Toluene	9/26	.06	.004
Trichloroethylene	4/26	.58	.01
Trichlorofluoromethane	3/26	.21	.01

Appendix 3A. Quality-control summary for major ions, nutrients, dissolved organic carbon (DOC), trace elements, pesticides, and volatile organic compounds (VOCs) detected in field blanks and associated ground-water sample collected between April 1999 and July 2001, Santa Ana NAWQA, California—Continued

Constituent	Number of field blank detections/analyses	Maximum concentration detected in blank samples	Minimum concentration detected in ground-water samples
Volatile organic compounds, in micrograms per liter			
m- and p-Xylene	2/26	.03	.03
n-Propylbenzene	1/26	2.45	.04
o-Ethyl toluene	1/26	.04	.05
sec-Butylbenzene	1/26	.28	.06
Methyl tert-butyl ether (MTBE)	2/26	.1	.03

Appendix 3B. Quality-control summary for volatile organic compounds (VOCs) and pesticide compounds detected in field blanks and associated ground-water samples collected between April 1999 and July 2001, Santa Ana NAWQA, California

[All concentrations are in micrograms per liter; —, no detection]

Study/Constituent	Number of field blank detections/analyses	Maximum concentration detected in blank samples	Minimum concentration detected in ground-water samples	Number of potentially affected ground-water samples	Number of ground-water samples flagged
COSUS					
Toluene	1/2	0.06	0.01	9	9
COLUS					
Methyl tert-butyl ether (MTBE)	1/2	.1	.06	4	4
Toluene	2/2	.03	.004	10	0
Chloroform	1/2	.01	.02	0	0
COFPS					
Chloromethane	1/4	.05	.03	1	1
Dichloromethane	1/4	.03	—	—	—
Ethylbenzene	1/4	.02	—	—	—
OCCAS					
Trichlorofluoromethane (CFC-11)	1/5	.07	.02	10	0
Toluene	1/5	.02	.01	2	2
Chloroform	1/5	.01	.01	1	0
Dichloromethane	1/5	.05	—	—	—
Styrene	2/5	.08	—	—	—
INSUS					
Tetrachloroethylene (PCE)	1/3	.03	.004	7	0
Trichloroethylene (TCE)	1/3	.04	.009	3	0
p,p'-DDE	1/3	.001	—	—	—
INFPS					
Toluene	5/5	.06	.01	4	4
Chloroform	1/5	.049	.02	2	0
Benzene	1/5	.17	.01	4	1
Ethylbenzene	2/5	.01	.01	1	1
1,2,3,4-Tetramethylbenzene	1/5	.2	6.9	0	0
Carbon disulfide	1/5	.07	.02	2	0
Isopropylbenzene	1/5	.86	.02	1	0

Appendix 3B. Quality-control summary for volatile organic compounds (VOCs) and pesticide compounds detected in field blanks and associated ground-water samples collected between April 1999 and July 2001, Santa Ana NAWQA, California—Continued

Study/Constituent	Number of field blank detections/analyses	Maximum concentration detected in blank samples	Minimum concentration detected in ground-water samples	Number of potentially affected ground-water samples	Number of ground-water samples flagged
Trichloroethylene (TCE)	3/5	.58	.02	2	0
Trichlorofluoromethane (CFC-11)	2/5	.21	.02	7	0
m- and p-Xylene	2/5	.03	.05	0	0
n-Propylbenzene	1/5	2.45	.04	1	0
o-Ethyl toluene	1/5	.04	.05	0	0
sec-Butylbenzene	1/5	.28	5.5	0	0
Methyl tert-butyl ether (MTBE)	1/5	.1	.7	0	0
Styrene	1/5	.06	—	—	—
SANSUS					
Molinate	91/3	.023	.006	3	0
SANCAS					
Carbon disulfide	1/2	.04	.09	0	0

Appendix 3C. Quality-control summary of replicate data for major ions, nutrients, dissolved organic carbon (DOC), trace elements, and radioisotopes, Santa Ana NAWQA, California

Constituent	Number of replicate pairs	Mean relative standard deviation (percent)
Nickel	12	27.6
Aluminum	12	18.3
Zinc	12	15.6
Antimony	12	14.4
Orthophosphorus	15	11.4
Cobalt	12	9.8
Nitrogen, Nitrite	15	7.3
Phosphorus	15	6.2
Copper	12	5.8
Arsenic	12	5.6
Tritium	12	5.1
Selenium	12	5.1
Bromide	15	4.9
Potassium	15	4.7
Dissolved Organic Carbon	12	3.5
Iron	15	2.5
Thallium	10	2.5
Chromium	12	2.3
Boron	15	2.1
Vanadium	10	1.9
Ammonia + Organic Nitrogen	15	1.8
Molybdenum	12	1.7
Lithium	10	1.5
Chloride	15	1.4
Deuterium	4	1.4
Fluoride	15	1.3
Nitrite+Nitrate, Nitrogen	15	1.3
Sodium	15	1.2
Uranium	12	1.1
Radon	6	.9
Sulfate	15	.7
Calcium	15	.7
Strontium	10	.6
Magnesium	15	.4
Barium	12	.4
Manganese	15	.4
Silica	15	.3
Lead	12	.0
Nitrogen, Ammonia	15	.0
Beryllium	12	.0
Cadmium	12	.0
Silver	12	.0

Appendix 3D. Quality-control summary of replicate pesticide samples with mean relative standard deviations greater than zero, Santa Ana NAWQA, California

[All other pesticide compounds (tables 1 and 2) had mean relative standard deviations equal to zero]

Constituent	Mean relative standard deviation (percent)
Deethyldeisopropylatrazine	7.16
Diphenamid	4.15
Methyl parathion	1.85
Deethylatrazine	1.75
Simazine	1.55
Atrazine	1.47
Bromoxynil	1.08
Bromacil	.87
Deisopropylatrazine	.62
Propanil	.61
Diuron	.51
Tebuthiuron	.32
Prometon	.12

Appendix 3E. Quality-control summary of replicate volatile organic compound (VOC) samples with mean relative standard deviations greater than zero, Santa Ana NAWQA, California

[All other VOC compounds (table 3) had mean relative standard deviations equal to zero]

Constituent	Mean relative standard deviation (percent)
Toluene	8.09
Trichlorofluoromethane	3.50
Naphthalene	3.04
m- and p-Xylene	2.89
o-Ethyl toluene	2.84
Benzene	2.84
1,2,3,4-Tetramethylbenzene	2.81
sec-Butylbenzene	2.77
Ethylbenzene	2.65
o-Xylene	2.50
Chloroform	1.26
1,1-Dichloroethylene	1.11
1,1,2-Trichlorotrifluoroethane	.99
Trichloroethylene	.84
1,1,1-Trichloroethane	.81
1,4-Dichlorobenzene	.81
n-Propylbenzene	.51
Methyl tert-butyl ether	.49
Dichlorodifluoromethane	.39
1,1-Dichloroethane	.38
1,2-Dibromo-3-chloropropane	.37
Isopropylbenzene	.37
Bromodichloromethane	.28
cis-1,2-Dichloroethylene	.25
Tetrachloroethylene	.14

Appendix 3F. Quality-control summary of field-spike recoveries and mean relative standard deviations for pesticide schedule 2001, ordered by mean recovery, Santa Ana NAWQA, California

Constituent	Number of spike samples	Mean recovery, in percent	Number of spike replicate pairs	Mean relative standard deviation of spike replicates, in percent
Carbaryl	8	151.9	5	9.2
Carbofuran	8	141.0	5	6.2
Terbacil	8	122.1	5	2.1
Tebuthiuron	8	121.5	5	1.8
Simazine	8	120.1	5	2.1
Linuron	8	109.5	5	6.5
Atrazine	8	108.0	5	2.7
Propanil	8	106.4	5	2.4
Parathion	8	105.2	5	2.4
Acetochlor	8	104.8	5	1.9
Cyanazine	8	103.4	5	3.5
Metolachlor	8	103.3	5	2.1
Alachlor	8	102.6	5	1.8
Thiobencarb	8	102.2	5	3.3
Propachlor	8	101.3	5	1.2
Metribuzin	8	98.0	5	2.9
Napropamide	8	97.9	5	5.1
Malathion	8	96.4	5	5.2
Butylate	8	96.3	5	1.9
Parathion-methyl	8	95.6	5	3.2
Propyzamide	8	95.4	5	2.0
Dacthal	8	95.2	5	2.0
Ethoprophos	8	94.7	5	5.5
Ethalfuralin	8	94.5	5	2.8
Dieldrin	8	94.4	5	3.5
EPTC	8	94.4	5	2.9
Molinate	8	94.2	5	1.9
Azinphos-methyl	8	94.1	5	5.8
Pebulate	8	93.7	5	1.9
Fonofos	8	93.1	5	2.7
Tri-allate	8	92.2	5	2.8
Diazinon	8	92.0	5	2.7
Lindane	8	90.9	5	1.4
alpha-HCH	8	90.0	5	1.6
2,6-Diethylaniline	8	89.1	5	2.3
Prometon	8	89.0	5	6.7
Pendimethalin	8	85.2	5	4.4
Chlorpyrifos	8	78.7	5	5.0
Trifluralin	8	78.7	5	1.8
Propargite	8	78.6	5	3.6
Benfluralin	8	75.7	5	2.1
Terbufos	8	72.9	5	3.7
Deethylatrazine	8	72.1	5	7.9
Phorate	8	71.9	5	4.8

Appendix 3F. Quality-control summary of field-spike recoveries and mean relative standard deviations for pesticide schedule 2001, ordered by mean recovery, Santa Ana NAWQA, California—Continued

Constituent	Number of spike samples	Mean recovery, in percent	Number of spike replicate pairs	Mean relative standard deviation of spike replicates, in percent
p,p'-DDE	8	57.8	5	4.9
Disulfoton	8	54.3	5	8.8
cis-Permethrin	8	49.2	5	4.3

Appendix 3G. Quality-control summary of laboratory-spike recoveries and mean relative standard deviations for pesticide schedule 2060, ordered by mean recovery, Santa Ana NAWQA, California

Pesticide	Number of spike samples	Mean recovery, in percent	Number of spike replicate pairs	Mean relative standard deviation of spike replicates, in percent
Flumetsulam	6	159.2	6	5.33
Chlorimuron ethyl	6	153.2	6	4.87
Imazethapyr	6	148.8	6	8.37
Nicosulfuron	6	135.9	6	5.28
Imidacloprid	6	133.8	6	4.32
Imazaquin	6	132.0	6	7.45
Bensulfuron-methyl	6	128.6	6	5.37
Sulfometuron-methyl	6	116.3	6	3.80
Propiconazole	6	104.8	6	4.85
Siduron	6	98.9	6	4.37
Caffeine	6	98.6	6	5.24
Tebuthiuron	6	96.7	6	4.09
Diuron	6	96.2	6	3.60
2-Hydroxycarbofuran	6	95.1	6	4.03
Neburon	6	94.0	6	5.79
Triclopyr	7	93.6	6	3.59
Bromxynil	7	92.2	6	7.36
Acifluorfen	7	92.1	6	16.46
Propham	6	91.0	6	6.00
Picloram	7	90.6	6	12.05
Fluometuron	6	88.2	6	3.61
Norflurazon	6	88.2	6	6.98
Dichlorprop	7	87.9	6	5.20
Dacthal monoacid	7	87.9	6	7.46
3(4-Chlorophenyl)-1-methyl urea	6	87.3	6	5.11
Carbaryl	6	87.2	6	2.74
Dinoseb	7	86.9	6	18.02
Methiocarb	6	86.4	6	7.05
Metalaxyl	6	86.1	6	3.52
Benomyl	6	85.8	6	6.24
Propoxur	6	85.8	6	3.68
Oryzalin	6	84.6	6	5.48
Cabofuran	6	83.8	6	2.66
Bentazon	7	83.7	6	14.09
Diphenamid	6	83.1	6	5.01
Chloramben methyl ester	6	81.4	6	6.85
Dicamba	7	81.0	6	3.39

Appendix 3G. Quality-control summary of laboratory-spike recoveries and mean relative standard deviations for pesticide schedule 2060, ordered by mean recovery, Santa Ana NAWQA, California—Continued

Pesticide	Number of spike samples	Mean recovery, in percent	Number of spike replicate pairs	Mean relative standard deviation of spike replicates, in percent
Deisopropylatrazine	6	80.0	6	3.47
Atrazine	6	79.8	6	6.69
3-Hydroxycarbonfuran	6	79.3	6	4.99
2,4-D	7	79.0	6	4.71
Linuron	6	78.6	6	3.37
Tebacil	6	78.3	6	8.41
MCPA	7	77.9	6	7.25
2,4-D methyl ester	6	77.1	6	4.62
Deethylatrazine	6	77.0	6	5.52
Renuron	6	76.0	6	8.08
Bendiocarb	6	74.0	6	5.77
Bromacil	6	73.5	6	7.24
Clopyralid	7	67.8	6	12.87
Cycloate	6	63.8	6	7.01
2,4-DB	7	63.0	6	13.27
MCPB	7	60.9	6	10.91
3-Ketocarbonfuran	6	59.2	6	9.59
Methomyl oxime	6	56.0	6	7.45
Oxamyl	6	54.5	6	8.70
Deethyldeisoproplatazine	6	48.7	6	20.93
Aldicarb sulfoxide	6	44.3	6	25.82
Chlorothalonil	7	39.5	6	23.96
Aldicarb sulfone	6	38.4	6	15.94
Aldicarb	6	37.5	6	14.19
Oxamyl oxime	6	31.8	6	20.99
Metsulfuron methyl	6	29.6	6	29.15
Tribenuron-methyl	6	23.4	6	15.19
Methomyl oxime	6	20.7	6	10.98

Appendix 3H. Quality-control summary of field-spike recoveries and mean relative standard deviations for volatile organic compounds, ordered by mean recovery Santa Ana NAWQA, California

Constituent	Number of spike samples	Mean recovery, in percent	Number of spike replicate pairs	Mean relative standard deviation of spike replicates, in percent
n-Propylbenzene	12	700.9	7	13.5
Methyl acrylonitrile	12	548.3	7	6.9
Benzene	12	522.5	7	13.1
Isopropylbenzene	12	497.7	7	13.4
3-Chlorpropene	12	439.8	7	13.3
Bromoform	12	221.9	7	14.7
trans-1,3-Dichloropropene	12	192.4	7	10.2
Dichlorodifluoromethane	12	181.4	7	23.3
sec-Butylbenzene	12	167.2	7	13.6
Naphthalene	12	158.8	7	9.4
m-and p-Xylene	12	150.1	7	13.4
Methyl iodide	12	144.0	7	17.8
1,2,3,4-Tetramethylbenzene	12	114.8	7	9.7
bromochloromethane	12	114.2	7	9.8
Bromodichloromethane	12	98.0	7	11.0
Chloroform (trichloromethane)	12	94.9	7	10.8
Methyl methacrylonitrile	12	94.9	7	9.0
Trichlorofluoromethane (CFC-11)	12	94.2	7	15.3
o-Ethyl toluene	12	91.7	7	13.2
Chloromethane	12	90.6	7	14.1
trans-1,4-Dichloro-2-butene	12	90.5	7	8.0
Tetrahydrofuran	12	88.4	7	6.2
Carbon disulfide	12	87.5	7	13.6
Toluene	12	86.5	7	12.2
Acetone	12	85.2	7	6.7
Chloroethane	12	85.2	7	11.6
1,2,3-Trichloropropane	12	84.5	7	6.2
Acrylonitrile	12	83.0	7	7.8
2-Butanone	12	82.9	7	7.2
1,2,3-Trimethylbenzene	12	82.8	7	12.0
1,1,2,2-Tetrachloroethane	12	82.5	7	8.9
Ethyl methacrylate	12	82.4	7	8.1
Bromoethene	12	82.4	7	14.3
1,3-Dichloropropane	12	82.2	7	8.5
1,2-Dichloroethane	12	82.0	7	10.7
Vinyl chloride	12	81.4	7	13.1
tert-Butylbenzene	12	80.1	7	13.4
Tetrachloromethane	12	79.5	7	14.0
1,2,3-Trichlorobenzene	12	79.1	7	11.3
Butylbenzene	12	78.9	7	14.4

Appendix 3H. Quality-control summary of field-spike recoveries and mean relative standard deviations for volatile organic compounds, ordered by mean recovery Santa Ana NAWQA, California—Continued

Constituent	Number of spike samples	Mean recovery, in percent	Number of spike replicate pairs	Mean relative standard deviation of spike replicates, in percent
1,1,2-Trichloroethane	12	78.2	7	13.7
Dibromochloromethane	12	77.2	7	9.6
1,1,2-Trichloroethane	12	77.1	7	9.5
Hexachlorobutadiene	12	76.7	7	14.6
Bromoform	12	76.4	7	7.2
Methyl acrylate	12	76.2	7	7.1
4-Methyl-2-pentanone	12	76.1	7	7.3
1,2-Dichlorobenzene	12	74.5	7	10.4
Tetrachloroethylene (PCE)	12	74.3	7	14.0
Methyl tert-butyl ether (MTBE)	12	74.1	7	11.2
1,2,4-Trimethylbenzene	12	73.1	7	13.9
Ethylbenzene	12	72.9	7	12.3
1,2,4-Trichlorobenzene	12	71.8	7	11.4
Dibromomethane	12	71.7	7	8.4
Diethyl ether	12	71.6	7	9.5
Diisopropyl ether	12	71.4	7	11.4
cis-1,3-Dichloropropene	12	71.3	7	12.1
1,2,3,5-Tetramethylbenzene	12	71.2	7	10.8
1,2-Dibromoethane	12	71.0	7	9.8
1,2-Dibromo-3-chloropropane	12	71.0	7	7.7
4-Isopropyl-1-methylbenzene	12	70.9	7	13.7
1,2-Dichloropropane	12	70.4	7	12.5
2-Hexanone	12	70.2	7	5.3
1,3-Dichlorobenzene	12	69.9	7	11.9
1,3,5-Trimethylbenzene	12	69.1	7	13.5
trans-1,2-Dichloroethylene	12	68.9	7	14.1
tert-Pentyl methyl ether	12	68.7	7	10.1
1,1,2,2-Tetrachloroethane	12	68.7	7	11.4
1,1-Dichloropropene	12	68.3	7	13.4
Chlorobenzene	12	67.4	7	11.7
4-Chlorotoluene	12	67.2	7	11.8
1,1-Dichloroethane	12	67.2	7	14.6
Bromobenzene	12	66.9	7	10.6
Trichloroethylene (TCE)	12	66.6	7	14.3
o-Xylene	12	66.2	7	12.8
Ethyl tert-butyl ether	12	66.1	7	11.1
2-Chlorotoluene	12	65.9	7	12.5
1,4-Dichlorobenzene	12	65.9	7	12.1
1,1-Dichloroethylene	12	64.5	7	15.2
2,2-Dichloropropane	12	64.2	7	14.4
cis-1,2-Dichloroethylene	12	63.9	7	14.9

Appendix 3H. Quality-control summary of field-spike recoveries and mean relative standard deviations for volatile organic compounds, ordered by mean recovery Santa Ana NAWQA, California—Continued

Constituent	Number of spike samples	Mean recovery, in percent	Number of spike replicate pairs	Mean relative standard deviation of spike replicates, in percent
Styrene	12	63.1	7	12.5
Dichloromethane	12	58.6	7	11.1
Hexachlorobutadiene	12	57.0	7	13.2
1,1,1-Trichloroethane	12	56.5	7	15.3