

Table 10. Major and minor ions and dissolved solids detected in samples collected for the Southern Sierra Groundwater Ambient Monitoring and Assessment (GAMA) study, California, June 2006.

[The five digit number in parentheses below the constituent name is the U.S. Geological Survey parameter code used to uniquely identify a specific constituent or property. Samples from the twenty-two slow and intermediate wells were analyzed. Information about analytes given in [table 3H](#). SOSA, Southern Sierra study unit grid well; SOSAFP, Southern Sierra study unit flow-path well; MCL-CA, California Department of Public Health maximum contaminant level; SMCL-CA, California Department of Health Services secondary maximum contaminant level; LRL, laboratory reporting level; mg/L, milligrams per liter; E, estimated value; na, not available; —, not detected]

GAMA well identification number	Calcium (mg/L) (00915)	Magnesium (mg/L) (00925)	Potassium (mg/L) (00935)	Sodium (mg/L) (00930)	Bicarbonate ² (mg/L)	Carbonate ² (mg/L)	Bromide (mg/L) (71870)	Chloride (mg/L) (00940)	Fluoride (mg/L) (00950)	Iodide (mg/L) (71865)	Silica (mg/L) (00955)	Sulfate (mg/L) (00945)	Total dissolved solids (TDS) (mg/L) (70300)
Threshold type ¹	na	na	na	na	na	na	na	SMCL-CA ³	MCL-CA	na	na	SMCL-CA ³	SMCL-CA ³
Threshold level	na	na	na	na	na	na	na	250 (500)	2	na	na	250 (500)	500 (1,000)
LRL	0.02	0.008	0.16	0.2	1	1	0.02	0.2	0.1	0.002	0.04	0.18	10
Grid wells													
SOSA-03	65.2	19.8	4.64	40.6	302	—	0.07	25.6	0.5	0.004	50.5	47.6	425
SOSA-07	13.6	2.12	1.42	9.32	73	—	E0.01	2.24	0.3	0.004	19.4	3.8	86
SOSA-10	32.7	8.16	2.83	30.7	176	—	0.05	13.5	1.8	0.017	37.7	20.4	241
SOSA-13	62.3	9.03	1.02	25.3	225	—	0.07	13.2	0.1	—	22.8	27.4	300
SOSA-15	37.2	4.06	1.36	6.89	147	—	—	2.05	E0.1	—	33.3	5.3	163
SOSA-22	3.07	0.307	0.80	3.59	21	—	—	0.77	—	—	20.8	0.6	47
SOSA-35	1.84	1.52	4.03	411	825	20	0.25	42.3	0.6	0.011	27.8	171	**1,130
Flow-path wells													
SOSAFP-01	59.5	7.48	0.92	28.6	181	—	0.14	22.7	0.2	—	22.7	41.0	315
SOSAFP-02	56.7	11.1	5.94	31.9	309	—	0.03	11.3	0.4	0.03	36.4	8.5	329
SOSAFP-03	34.6	4.02	1.19	39.3	166	—	0.07	11.2	0.4	—	18.8	28.5	242
SOSAFP-04	61	10.5	1.45	31.0	220	—	0.10	25.0	0.2	—	22.5	41.4	340
SOSAFP-05	42.5	6.95	1.36	35.4	187	—	0.09	14.7	0.4	—	22.7	33.8	266
SOSAFP-06	62.9	8.34	1.00	25.9	208	—	0.10	14.2	0.1	—	23.2	28.8	302
SOSAFP-07	103	26.9	3.08	37.6	285	—	0.20	63.3	0.4	—	35.7	105	*558
SOSAFP-08	80.2	16.7	3.93	31.1	240	—	0.13	37.4	0.4	E0.002	41.2	86.4	456
SOSAFP-09	70.5	20.5	2.51	37.5	261	—	0.15	32.4	0.4	E0.001	25.8	61.0	426
SOSAFP-10	56.3	15.2	3.40	24.1	196	—	0.10	17.7	0.3	—	46.7	66.6	354
SOSAFP-11	42.3	12.3	2.61	38.0	217	—	0.16	24.2	0.4	E0.001	25.4	20.4	267
SOSAFP-12	66.3	13.1	4.37	27.4	183	—	0.12	19.0	0.5	—	42.3	85.1	371
SOSAFP-13	49.7	6.96	0.64	34.9	193	—	0.09	13.4	0.9	—	24.4	31.2	280
SOSAFP-14	66.5	9.06	0.78	33.1	227	—	0.11	17.2	0.4	—	23.9	45.4	341
SOSAFP-15	77.8	12.3	1.11	24.5	239	—	0.11	28.4	0.2	E0.001	24.2	39.4	361

*Value above recommended threshold level.

**Value above upper threshold level.

¹Maximum contaminant level thresholds are listed as MCL-US when the MCL-US and MCL-CA are identical, and as MCL-CA when the MCL-CA is lower than the MCL-US or no MCL-US exists.

²Bicarbonate and carbonate concentrations were calculated from the laboratory alkalinity and pH values (table 4) using the advanced speciation method (<http://or.water.usgs.gov/alk/methods.html>) with pK1 = 6.35, pK2 = 10.33, and pKW = 14.

³The SMCL-CA for chloride, sulfate, and total dissolved solids have recommended and upper threshold values. The upper value is shown in parentheses.