

Table 4. Water chemistry, tritium concentrations and stable isotope values for waters collected from features within and around Lassen Volcanic National Park, California, between September 1996 and September 2002.

Site code	Feature type	Sample #	Date	Temp. (°C)	pH (p)	pH (mF)	pH (Lm)	Cond. (mS/cm)	Al	As	B	Ba	Be	Br	Ca	Cl	F	Fe	HCO ₃	K	Li	Mg	Mn	Na	NH ₄	NO ₃	PO ₄	SiO ₂	SO ₄	Sr	Ti	V	Zn	TDS	δD-water (‰)	δ ¹⁸ O-water (‰)	Tritium (TU)		
BUMPASS HELL																																							
BH-SIE-05	P	BH05-00	07/21/00	78.7			1.20	1.83	6.3	96.4	0.0031	9.49	0.063	0.002	<0.04	14.5	<0.05	<0.04	55.1	0	7.21	0.016	19.1	0.52	15.5	26.4	0.27	0.49	396	1880	0.038	0.059	0.11	0.11	2522	-58	0.8		
BH-SIE-07	MP	BH07-00	07/21/00	94.6			1.68	2.39	1.7	15.3	0.0029	1.07	0.043	<0.001	<0.02	25.1	0.10	<0.02	16.3	0	3.17	0.002	7.24	0.25	30.6	3.02	0.37	<0.05	255	471	0.032	0.013	0.053	0.42	829	-76	-5.4		
BH-SIE-08	P	BH08-00	07/21/00	85.2			1.72	2.32	1.8	10.7	0.0095	0.024	0.078	<0.001	0.05	3.01	0.09	<0.02	4.76	0	1.92	0.002	1.15	0.041	1.76	1.53	0.33	0.14	257	355	0.028	0.010	0.015	0.23	638	-65	-2.2		
BH-SIE-09	P	BH09-00	07/21/00	73			1.43	1.95	4.4	54.5	0.031	0.18	0.077	<0.001	<0.02	2.92	<0.05	<0.02	40.8	0	4.86	0.019	2.43	0.071	7.83	0.02	0.34	1.00	293	1082	0.13	0.008	0.083	0.022	1491				
BOILING SPRINGS LAKE - DRAKESBAD - TERMINAL GEYSER																																							
BSL	L	L96-02	09/16/96	50.0	2.0			2.24		18.8	0.0002	0.21		<0.02	5.35	0.04	0.22	24.4	0	0.35	<0.01	4.81	0.17	2.45	1.00	<0.02	<0.05	116	593	0.018					767	-59	-0.7	1.56	
DB-03	NTS	L97-19	08/07/97	11.0			7.31	6.32	0.079	<0.02	0.013	0.016	0.005	<0.002	5.77	0.21	0.03	<0.01	44.4	2.44	<0.01	2.12	<0.002	6.38	<0.02	<0.05	47.1	1.71	0.045	<0.002	0.008	<0.01	147	-94	-13.3				
DB-04	NTS	L97-17	08/07/97	6.6	6.0			6.08	0.055	<0.02	0.0003	0.005	<0.002	<0.002	4.39	0.16	0.05	<0.01	32.5	2.14	<0.01	1.95	<0.002	3.92	<0.02	<0.05	34.9	0.35	0.028	<0.002	0.009	<0.01	107	-94	-13.3				
DB-05	NTS	L97-18	08/07/97	5.3				5.96	0.052	<0.02	0.0001	0.005	<0.002	<0.002	4.45	0.12	0.05	<0.01	31.0	2.06	<0.01	1.81	<0.002	3.24	<0.02	0.08	32.5	0.29	0.025	<0.002	0.009	<0.01	101	-93	-13.2				
DEVILS KITCHEN																																							
DK-12	FP	L00-05	08/05/00	93.3			1.23	1.83	8.32	157	0.0025	0.24	0.048	0.003	<0.04	62.2	1.08	<0.04	60.8	0	24.5	0.033	29.2	1.18	75.0	29.6	<0.04	1.17	387	3065		0.025	0.18	0.20	3895	-70	-6.1		
LITTLE HOT SPRINGS VALLEY																																							
LHSV-02	FM	L96-09	09/19/96	131.4				4.85		0.01	0.010	3.41		<0.02	0.06	0.03	0.13	0.09	12.6	<0.01	<0.01	0.01	<0.01	<0.01	4.21	0.15	<0.05	1.01	1.06	<0.002						23			
LHSV-02	FM	L00-07	08/06/00	122.7				4.96	0.058	0.018	0.0003	3.70	<0.001	<0.001	<0.02	0.07	0.09	<0.02	0.06	<0.8	0.03	<0.001	0.02	<0.001	0.08	3.95	<0.02	<0.05	0.41	6.65	<0.001	<0.001	0.020			21			
LHSV-VHZ-03	TS	L02-07	09/17/02	62.0				7.74		0.015	<0.0002	0.057	0.060	0.0001	<0.02	268	0.67	0.50	<0.01	400	14.7	0.021	17.6	0.57	71.2	1.31	<0.02	<0.05	99.7	620	4.33	0.021	<0.001	0.001	1499				
SULPHUR WORKS																																							
SW-09	MP	L00-02	08/04/00	87.4			2.55	2.71	2.13	3.41	0.095	4.94	0.026	<0.001	<0.02	20.5	0.42	0.66	119	0	9.42	0.007	19.5	0.64	15.8	137	<0.02	<0.05	143	887	0.020	0.034	0.094	0.14	1362	-56	-4.2		
USW-SIE-05	MP	L00-03	08/04/00	86.2			2.21	2.46	2.56	29.3	0.0092	0.49	0.013	<0.001	<0.02	8.40	1.23	0.58	108	0	5.93	0.008	10.1	0.31	8.06	134	<0.02	<0.05	195	1151	0.006	0.003	0.089	0.43	1657	-52	-2.5		
OTHER [COLD BOILING LAKE - PILOT PINNACLE - REGIONAL SPRINGS]																																							
O-CBL	L	L96-07	09/18/96	11.0	5.5			5.69		0.12	0.0018	0.007		<0.02	2.85	0.18	<0.02	0.18	22.9	0.60	<0.01	1.73	<0.01	3.87	0.13	<0.02	<0.05	3.34	1.29	0.031					37	-62	-7.5		
O-CBL	L	L97-21	08/08/97	24	4.5			5.73	0.031	0.07	<0.0001	0.006	<0.002	<0.002	2.41	0.14	0.02	0.12	15.2	0.42	<0.01	1.19	0.005	3.30	<0.02	<0.05	0.5	0.87	0.011	<0.002	0.003	0.01	37	-56	-4.3				
O-REG-CCS	NTS	L97-11	08/05/97	3.0		6.54		5.70	0.020	0.03	0.0001	0.006	<0.002	<0.002	1.40	0.11	0.02	<0.01	10.5	0.87	<0.01	0.65	<0.002	1.29	<0.02	<0.05	17.8	1.04	0.008	<0.002	0.006	<0.01	42	-97	-13.6				
O-REG-CS	NTS	L97-02	08/04/97	2.9	5.9			5.91	0.053	<0.02	0.0004	0.007	<0.002	<0.002	5.24	0.15	0.01	<0.01	32.0	0.40	<0.01	2.18	<0.002	1.73	<0.02	<0.05	16.4	0.67	0.021	<0.002	<0.002	<0.01	85	-95	-13.5				
O-REG-CVS	NTS	L97-22	08/09/97	6.4	5.7			5.70	0.032	<0.02	<0.0001	<0.002	<0.002	<0.002	3.14	0.11	0.01	<0.01	17.7	0.53	<0.01	1.10	<0.002	1.69	<0.02	<0.05	16.1	0.83	0.030	<0.002	<0.002	<0.01	56	-94	-13.3				
O-REG-DILIRON	NTS	L97-10	08/05/97	7.0			5.91	6.97	0.762	<0.02	0.0005	0.018	0.013	<0.002	20.7	0.18	0.03	2.38	12.7	5.64	<0.01	32.6	2.09	28.2	<0.02	<0.05	56.9	308	0.71	<0.002	<0.002	<0.01	875	-94	-13.4				
O-REG-DILSOU	NTS	L97-08	08/05/97	5.4			4.31	4.10	0.278	2.54	<0.0001	0.004	0.010	<0.002	29.0	0.13	0.19	<0.01	0	2.01	<0.01	3.07	0.23	9.87	0.29	<0.05	52.6	144	0.15	<0.002	<0.002	0.03	244	-95	-13.5				
O-REG-DILTHERM	TS	L97-09	08/05/97	17.0			4.45	3.89	0.405	0.3	0.0003	0.009	0.029	<0.002	43.3	0.64	0.18	3.72	0	2.41	<0.01	6.28	1.06	11.8	<0.02	<0.05	48.2	200	0.22	<0.002	<0.002	0.03	318	-91	-12.5				
O-REG-DS	NTS	L96-08	09/18/96	9.1	5.5			7.09		0.02	0.043	0.41		0.03	8.46	13.1	0.02	<0.01	56.6	2.77	0.04	3.59	<0.01	12.1	0.04	0.02	<0.05	40.2	0.49	0.069				138	-92	-13.1			
O-REG-DS	NTS	L02-13	09/20/02	9.3		5.70		7.45		0.039	0.037	0.45	0.010	<0.0001	0.04	8.56	15.5	0.03	<0.01	58.0	3.24	0.054	3.65	<0.001	13.7	0.02	0.08	0.05	37.2	0.40	0.067	<0.001	0.003	0.003	141	-97	-13.6		
O-REG-KCCS	NTS	L97-05	08/04/97	3.7	5.3			5.77	0.028	<0.02	0.0010	0.007	0.027	<0.002	2.02	0.22	0.03	<0.01	15.4	1.34	<0.01	0.76	<0.002	2.25	<0.02	<0.05	32.7	0.66	0.013	<0.002	0.005	<0.01	68	-97	-13.6				
O-REG-KCNS	NTS	L97-01	08/03/97	2.0	5.7			6.25	0.079	<0.02	0.0004	0.004	<0.002	<0.002	7.72	0.30	0.01	<0.01	47.4	1.20	<0.01	3.11	<0.002	2.79	<0.02	<0.05	27.4	0.43	0.053	<0.002	0.004	<0.01	129	-96	-13.5				
O-REG-LOST	NTS	L97-14	08/06/97	6.1	5.7			5.97	0.070	<0.02	0.0006	0.016	0.003	<0.002	7.19	0.27	0.02	<0.01	33.5	1.35	<0.01	2.19	<0.002	3.82	<0.02	<0.05	24.2	5.39	0.064	<0.002	0.007	0.02	105	-98	-13.6				
O-REG-MCTS	NTS	L97-12	08/05/97	4.5			6.01	7.11	0.173	<0.02	0.0007	0.024	0.004	<0.002	21.2	0.53	0.02	<0.01	97.5	2.27	<0.01	5.39	0.002	6.45	<0.02	<0.05	45.2	8.72	0.16	<0.002	0.006	0.02	267	-98	-13.8				
O-REG-OBS	NTS	L97-13	08/06/97	5.2			6.62	6.51	0.103	<0.02	0.0004	0.012	0.003	<0.002	11.0	0.25	0.02	<0.01	59.7	2.36	<0.01	2.74	<0.002	5.39	<0.02	<0.05	45.8	2.85	0.092	<0.002	0.009	<0.01	179	-102	-13.9				
O-REG-SLS	NTS	L97-07	08/05/97	4.8			6.11	5.19	0.055	<0.02	<0.0001	0.004	0.005	<0.002	4.09	0.11	0.03	0.01	5.0	1.05	<0.01	0.94	<0.002	2.86	0.14	<0.05	36.4	18.0	0.041	<0.002	<0.002	<0.01	73	-98	-13.6				
O-REG-SLTS	NTS	L97-20	08/08/97	3.5	5.7			5.97	0.050	<0.02	0.0006	0.																											