

Appendix E. Results of Chemical Analyses and Field Measurements on Groundwater Samples from Piezometers, October 2007

[mg/L, milligrams per liter; E, estimated; <, less than; >, greater than; °C, degrees Celsius; µS/cm, microseimens per centimeter; CaCO₃, calcium carbonate; --, no data; NPS, National Park Service. All data are reported to detection limits and reporting levels calculated for this study.]

Sampling Location	Piezometer Number	Date	Time	Total Nitrogen, whole water, mg/L	Total Nitrogen, filtered water, mg/L	Total Phosphorus, whole water, mg/L	Total Phosphorus, filtered water, mg/L	Nitrite-plus-Nitrate Nitrogen, filtered water, mg/L
NPS Laboratory	Lake at Dock	October 2, 2007	1525	0.09	--	0.009	--	<0.004
	Lab at Dock	October 2, 2007	1600	0.14	--	0.124	--	<0.004
	East 1	October 2, 2007	1700	0.13	--	0.089	--	E0.003
	East 2	October 2, 2007	1720	0.07	--	0.043	--	<0.004
	East 3	October 2, 2007	1620	0.17	--	0.109	--	0.016
	West 1	October 2, 2007	1620	0.22	--	0.06	--	<0.004
	West 2	October 2, 2007	1800	0.12	--	0.053	--	<0.004
	West 3	October 2, 2007	1740	0.32	--	0.164	--	<0.004
Log Cabin Resort	West 4	October 2, 2007	1800	0.14	--	0.053	--	<0.004
	LCR 1	October 3, 2007	1054	1.93	--	0.906	--	<0.004
	LCR 2	October 3, 2007	1115	0.31	--	0.087	--	<0.004
	LCR 3	October 3, 2007	1125	0.16	--	0.071	--	<0.004
Lady of the Lake Lane	LCR 4	October 3, 2007	1145	0.28	--	0.019	--	0.213
	LOLL 1	October 3, 2007	1730	1.14	--	0.491	--	E0.002
East Beach Drive	LOLL 2	October 4, 2007	0840	0.12	--	0.074	--	<0.004
	EBDR-1	January 23, 2008	1510	0.43	--	0.325	--	E0.002
	EBDR-2	January 23, 2008	1550	0.27	--	0.668	--	<0.004
East Beach Picnic Area	EBDR-3	January 23, 2008	1615	0.27	--	0.035	--	0.178
	EBPA-1	January 25, 2008	--	0.29	--	0.173	--	0.007
	EBPA-2	January 25, 2008	--	0.15	--	0.041	--	<0.004
Lake Crescent Institute	EBSP	January 25, 2008	--	0.22	--	E0.007	--	0.142
	LCI 1	October 3, 2007	1628	0.22	--	0.065	--	E0.002
	LCI 2	October 4, 2007	1000	0.23	--	0.067	--	<0.004
	LCI 3	October 4, 2007	1020	0.17	--	0.061	--	E0.003
Lake Crescent Lodge	LCI 4	October 4, 2007	1010	0.13	--	0.065	--	0.007
	LCL 1	October 3, 2007	1430	0.13	--	0.012	--	0.078
	LCL 2	October 3, 2007	1445	2.93	--	0.015	--	2.879
	LCL 3	October 3, 2007	1500	0.38	--	0.01	--	0.318
	LCL 4	October 3, 2007	1510	0.11	--	0.023	--	0.019
	LCL-1	January 24, 2008	0950	0.23	--	0.017	--	0.192
	LCL-1-2	January 24, 2008	--	--	--	0.016	--	0.613
	LCL-2	January 24, 2008	0940	0.28	--	0.018	--	0.235
	LCL-2-2	January 24, 2008	1100	0.27	--	0.065	--	<0.004
	LCL-3	January 24, 2008	1000	0.08	--	0.017	--	0.038
	LCL-4	January 24, 2008	1025	E0.04	--	0.015	--	0.016
	LCL-5	January 24, 2008	1015	E0.05	--	0.016	--	0.019
	LCL-6	January 24, 2008	--	0.06	--	0.016	--	0.01
LCL-6-2	January 24, 2008	1130	0.08	--	0.025	--	0.006	
LCL-7	January 24, 2008	1045	0.07	--	0.011	--	0.019	

Sampling Location	Piezometer Number	Date	Time	Total Nitrogen, whole water, mg/L	Total Nitrogen, filtered water, mg/L	Total Phosphorus, whole water, mg/L	Total Phosphorus, filtered water, mg/L	Nitrite-plus-Nitrate Nitrogen, filtered water, mg/L
West Lapoel Campground	WLP-1	January 25, 2008	1010	0.08	--	0.009	--	0.053
	WLP-2	January 25, 2008	0950	0.07	--	0.012	--	0.053
	WLP-2-2	January 25, 2008	1015	--	--	--	--	0.053
	WLP-3	January 25, 2008	1000	0.1	--	0.061	--	0.043
Lapoel Campground	LPC-1	October 4, 2007	1116	--	0.52	--	0.011	0.408
	LPC-2	October 4, 2007	1130	--	1.36	--	0.011	1.19
Fairholm Creek Campground	FCC-1	October 4, 2007	1240	--	0.21	--	0.01	0.173
	FCC-2	October 4, 2007	1310	--	0.62	--	0.028	0.469
	FCC-3	October 4, 2007	1300	--	0.38	--	0.026	0.263
Camp David Jr. Spruce Railroad Trail Head	CDJR-1	January 24, 2008	--	0.53	--	0.089	--	<0.004
	SPRR-1	January 24, 2008	1340	0.13	--	0.055	--	E0.002
	SPRR-2	January 24, 2008	1400	0.07	--	0.028	--	0.005
	SPRR-3	January 24, 2008	--	0.23	--	0.085	--	<0.004

Appendix E. Results of Chemical Analyses and Field Measurements on Groundwater Samples from Piezometers, October 2007.—Continued

Sampling Location	Piezometer Number	Date	Time	Water Temperature, °C	Specific Conductance, $\mu\text{S}/\text{cm}$ 25 °C	Dissolved Oxygen, mg/L	Alkalinity, mg/L as CaCO_3	Bicarbonate, mg/L as CaCO_3
NPS Laboratory	Lake at Dock	October 2, 2007	1525	15.6	114	--	47.0	57.1
	Lab at Dock	October 2, 2007	1600	14.7	180	--	82.9	101
	East 1	October 2, 2007	1700	13.2	156	--	38.9	47.2
	East 2	October 2, 2007	1720	13.8	92	0.2	--	--
	East 3	October 2, 2007	1620	--	92	0.1	43.0	52.3
	West 1	October 2, 2007	1620	12.7	130	--	59.1	72.1
	West 2	October 2, 2007	1800	12.2	123	<.1	53.6	65.3
	West 3	October 2, 2007	1740	11.9	158	<.1	58.1	70.9
	West 4	October 2, 2007	1800	11.9	108	--	41.7	50.8
Log Cabin Resort	LCR 1	October 3, 2007	1054	12.3	218	--	47.3	90.6
	LCR 2	October 3, 2007	1115	12.9	143	<.1	55.1	67.2
	LCR 3	October 3, 2007	1125	14.1	86	<.1	21.7	26.5
	LCR 4	October 3, 2007	1145	13.4	139	3	--	--
Lady of the Lake Lane	LOLL 1	October 3, 2007	1730	13.9	199	<.1	71.3	86.9
	LOLL 2	October 4, 2007	0840	10.2	123	--	43.8	53.1
East Beach Drive	EBDR-1	January 23, 2008	1510	6.8	61	0.03	--	--
	EBDR-2	January 23, 2008	1550	5.7	152	<.1	--	--
	EBDR-3	January 23, 2008	1615	6.7	141	3	--	--
East Beach Picnic Area	EBPA-1	January 25, 2008	--	5.5	117	0.2	--	--
	EBPA-2	January 25, 2008	--	3.4	121	--	--	--
	EBSP	January 25, 2008	--	8.1	238	--	--	--
Lake Crescent Institute	LCI 1	October 3, 2007	1628	11.4	163	--	76.3	92.4
	LCI 2	October 4, 2007	1000	12.1	126	0.3	--	--
	LCI 3	October 4, 2007	1020	11.1	107	0.2	49.5	60.4
	LCI 4	October 4, 2007	1010	11	155	--	69.2	84.4
Lake Crescent Lodge	LCL 1	October 3, 2007	1430	10.8	111	1	44.0	53.5
	LCL 2	October 3, 2007	1445	12.7	128	--	36.9	45.0
	LCL 3	October 3, 2007	1500	12.4	122	--	49.0	59.7
	LCL 4	October 3, 2007	1510	11.4	144	0.4	55.1	67.1
	LCL-1	January 24, 2008	0950	4.8	121	>1.0	--	--
	LCL-1-2	January 24, 2008	--	--	--	--	--	--
	LCL-2	January 24, 2008	0940	4.4	111	1	--	--
	LCL-2-2	January 24, 2008	1100	4.6	102	<1.0	--	--
	LCL-3	January 24, 2008	1000	4.2	96	3	--	--
	LCL-4	January 24, 2008	1025	4.6	98	6	--	--
	LCL-5	January 24, 2008	1015	4.9	102	3	--	--
	LCL-6	January 24, 2008	--	5.2	134	2	--	--
	LCL-6-2	January 24, 2008	1130	4.7	64	3	--	--
	LCL-7	January 24, 2008	1045	3.3	88	4	--	--
West Lapoel Campground	WLP-1	January 25, 2008	1010	12.6	98	3	--	--
	WLP-2	January 25, 2008	0950	12.2	92	3	--	--
	WLP-2-2	January 25, 2008	1015	11.6	91	--	--	--
	WLP-3	January 25, 2008	1000	9.6	103	>1.0	--	--

Sampling Location	Piezometer Number	Date	Time	Water Temperature, °C	Specific Conductance, $\mu\text{S}/\text{cm}$ 25 °C	Dissolved Oxygen, mg/L	Alkalinity, mg/L as CaCO_3	Bicarbonate, mg/L as CaCO_3
Lapoel Campground	LPC-1	October 4, 2007	1116	13.7	108	3	40.9	49.8
	LPC-2	October 4, 2007	1130	15	138	4	--	--
Fairholm Creek Campground	FCC-1	October 4, 2007	1240	9.9	113	5	39.0	47.4
	FCC-2	October 4, 2007	1310	11.4	184	1	71.3	86.9
	FCC-3	October 4, 2007	1300	11.4	125	--	54.9	66.9
Camp David Jr. Spruce Railroad Trail Head	CDJR-1	January 24, 2008	--	7.8	228	0.6	--	--
	SPRR-1	January 24, 2008	1340	7.7	92	5	--	--
	SPRR-2	January 24, 2008	1400	10.2	138	0.4	--	--
	SPRR-3	January 24, 2008	--	9.4	132	0.3	--	--