

Surface Water and Groundwater Quality Data, Newberry EGS Demonstration Project

Monitoring Location	Sample Type	Date	Field Parameters					Laboratory Analytical Results												
			Temp, (°C)	pH (SU)	Cond. (mS/m)	ORP (mV)	Turbidity (NTU)	Alkalinity, Total (mg/L CaCO ₃)	Alkalinity/HCO ₃ ⁻ (mg/L CaCO ₃)	Alkalinity/CO ₃ ²⁻ (mg/L CaCO ₃)	Alkalinity/OH ⁻ (mg/L CaCO ₃)	Aluminum (mg/L)	Ammonia (mg/L N)	Arsenic (mg/L)	Barium (mg/L)	Boron (mg/L)	Calcium (mg/L)	Cesium (mg/L)	Chloride (mg/L)	Chromium (mg/L)
PLHS	B	10/7/2011	49.9	6.09	0.99	81	-	540	540	<2	<2	<0.05	<0.1	0.015	0.28	0.76	48	0.004	7	<0.002
PLHS	B	7/26/2012	50.4	6.64-6.72	0.672-0.691	174	-	520	520	<2	<2	<0.05	<0.1	0.013	0.12	0.77	43	0.004	5	<0.002
PLHS	D	11/27/2012	46.8	6.33	0.917	145	0.08	660	660	<2	<2	<0.05	<0.1	0.014	0.24	0.9	56	0.004	7.5	<0.002
PLHS	P	1/6/2013	42.1	6.7	0.815	152	0.75	390	390	<2	<2	<0.05	<0.1	0.018	0.02	0.88	32	<0.002	3.8	<0.002
PLHS	P	2/9/2013	46.1	7.05	0.584	232	0.64	450	450	<2	<2	<0.05	<0.1	0.012	0.054	0.88	37	0.002	5.0	<0.002
PLHS	P	3/12/2013	39	6.35	0.764	176	0.08	550	550	<2	<2	<0.05	<0.1	0.022	0.011	0.72	50	0.004	7	<0.002
PLHS	P	4/10/2013	37.2	6.67	177	0.501	0.83	550	550	<2	<2	<0.05	<0.1	0.024	0.011	0.74	52	0.004	7.7	<0.002
PLHS	P	5/15/2013	39.8	6.53	174	0.793	-0.14	550	550	<2	<2	<0.05	<0.1	0.024	0.012	0.73	52	0.005	7.7	<0.002
PLHS	P	7/19/2013	52.4	6.2	-	-	0.07	580	580	<2	<2	<0.05	<0.1	0.011	0.2	0.76	50	0.004	6.8	<0.002
ELHS	B	10/6/2011	54.5	6.26	1.29	-37	28.1	740	740	<2	<2	<0.05	0.1	0.003	0.005	0.61	130	<0.002	4.5	<0.002
ELHS	B	7/26/2012	38.8	6.46	0.83	33	-	500	500	<2	<2	<0.05	0.2	<0.002	0.014	0.8	86	<0.002	1.7	<0.002
ELHS	D	11/29/2012	46.8	6.33	0.91	145	0.08	160	160	<2	<2	<0.05	<0.1	0.006	0.019	1	35	<0.002	1.4	<0.002
ELHS	P	1/6/2013	16	8.66	0.225	127	0.06	130	130	<2	<2	<0.05	<0.1	<0.002	0.019	0.98	29	<0.002	0.7	<0.002
ELHS	P	2/9/2013	28.4	6.58	0.684	134	0.1	510	510	<2	<2	<0.05	<0.1	<0.002	0.011	0.91	77	<0.002	3.8	<0.002
ELHS	P	3/12/2013	48.8	6.49	0.425	146	1.20	250	250	<2	<2	<0.05	0.2	<0.002	0.015	0.96	43	<0.002	2	<0.002
ELHS	P	4/10/2013	42	6.75	85	0.345	3.99	260	260	<2	<2	<0.05	<0.1	<0.002	0.013	0.95	46	<0.002	2.3	<0.002
ELHS	P	5/15/2013	22.9	6.77	132	0.289	0.47	150	150	<2	<2	<0.05	<0.1	<0.002	0.018	0.95	32	<0.002	0.8	<0.002
ELHS	P	7/19/2013	32.9	6.8	-	-	0.6	130	130	<2	<2	<0.05	<0.1	<0.002	0.017	1	30	<0.002	0.8	<0.002
PCG	B	7/26/2012	11.5	7.37	0.06	124	-	48	48	<2	<2	<0.05	<0.1	<0.002	0.003	<0.05	4.3	<0.002	1.7	<0.002
PCG	P	6/22/2013	9.7	7.98	108	0.48	0.12	44	44	<2	<2	<0.05	<0.1	<0.002	0.003	<0.05	4.4	<0.002	1.4	<0.002
PCG	P	7/23/2013	11.9	7.35	-	0.248	-	44	44	<2	<2	<0.05	<0.1	<0.002	<0.004	<0.05	4	<0.002	1.1	<0.002
VC	B	7/26/2012	7.9	6.43	0.051	142	err	44	44	<2	<2	<0.05	0.2	<0.002	0.005	<0.05	3.9	<0.002	1.4	<0.002
VC	P	6/22/2013	5.7	7.21	165	0.027	-0.12	41	41	<2	<2	<0.05	<0.1	0.002	0.004	<0.05	3.9	<0.002	1.2	<0.002
VC	P	7/23/2013	14.1	6.5	-	0.248	0.01	41	41	<2	<2	<0.05	<0.1	<0.002	<0.004	<0.05	4.2	<0.002	1	<0.002
NEWW	B	10/7/2011	8.6	7.27	0.064	124	0.55	50	50	<2	<2	<0.05	<0.1	<0.002	0.002	<0.05	5.5	<0.002	1.7	<0.002
NEWW	B	10/6/2011	9.1	7.38	0.093	120	Error	57	57	<2	<2	<0.05	<0.1	<0.002	0.002	<0.05	8.2	<0.002	2.4	<0.002
NEWW	B	7/26/2012	10.3	7.53	0.067	184	-	57	57	<2	<2	<0.05	<0.1	<0.002	0.004	<0.05	7.8	<0.002	2.3	<0.002
NEWW	P	1/18/2013	7.9	7.38	0.086	93	0.17	60	60	<2	<2	<0.05	<0.1	<0.002	0.003	<0.05	7.8	<0.002	2.3	<0.002
NEWW	P	2/28/2013	8.5	7.32	0.80	136	0.03	-	-	<2	<2	<0.05	-	<0.002	0.005	<0.05	7.9	<0.002	-	<0.002
NEWW	P	3/22/2013	8.7	7.20	0.077	137	-0.05	58	58	<2	<2	<0.05	<0.1	<0.002	0.004	<0.05	8	<0.002	2.4	<0.002
Pad 16 Water Well	B	8/16/2012	6	7.7	0.013	169	NA	42	42	<2	<2	<0.05	0.1	<0.002	0.002	<0.05	5	<0.002	0.7	<0.002
Pad 16 Water Well	D	11/26/2012	7.7	7.79	0.033	122	0.15	39	39	<2	<2	<0.05	<0.1	<0.004	<0.002	<0.05	5.1	<0.002	0.9	<0.002
Pad 16 Water Well	P	9/12/2013	6.88	8.2	-65	-	0.84	40	40	<2	<2	<0.05	<0.1	<0.002	0.003	<0.05	5.1	<0.001	0.8	<0.002
Pad 29 Water Well	P	8/10/2011	NA	NA	NA	NA	NA	240	240	<2	<2	<0.05	0.3	0.032	0.009	0.55	19	<0.002	4	<0.002
Pad 29 Water Well	B	8/12/2011	NA	NA	NA	NA	NA	240	240	<2										

Surface Water and Groundwater Quality Data, Newberry EGS Demonstration Project (continued)

Monitoring Location	Sample Type	Date	Laboratory Analytical Results																
			F (mg/L)	Fe (mg/L)	Li (mg/L)	Mg (mg/L)	Mn (mg/L)	Hg (mg/L)	NO ₃ (mg/L N)	P (mg/L)	K (mg/L)	Rb (mg/L)	SiO ₂ (mg/L)	Na (mg/L)	Sr (mg/L)	SO ₄ (mg/L)	TDS (mg/L)	δ ² H	δ ¹⁸ O
PLHS	B	10/7/2011	0.9	0.13	0.2	42	2.7	<0.0002	<0.5	0.2	13	0.032	160	110	0.2	3.5	720	-108.3	-14.44
PLHS	B	7/26/2012	0.6	<0.05	0.15	41	1.3	<0.0002	<0.5	0.14	11	0.032	150	96	0.18	3.2	630	-104.05	-13.75
PLHS(dup)	B	7/26/2012	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	-104.05	-13.78
PLHS	D	11/27/2012	0.9	<0.05	0.2	48	1.2	<0.0001	<0.5	0.13	16	0.04	220	140	0.2	3.5	820	—	—
PLHS	P	1/6/2013	0.8	<0.05	<0.1	41	0.031	<0.0001	1.3	0.04	6.6	0.016	58	58	0.11	4.9	380	—	—
PLHS	P	2/9/2013	0.8	<0.05	0.1	44	0.45	<0.0002	<0.5	0.06	8.8	0.022	100	78	0.15	3.4	500	—	—
PLHS	P	3/12/2013	0.8	<0.05	0.18	42	0.32	<0.0002	<0.5	0.18	13	0.039	180	110	0.15	12	690	—	—
PLHS	P	4/10/2013	0.9	<0.05	0.17	43	0.46	<0.0001	<0.5	0.17	13	0.038	170	110	0.2	12	690	-105.93	-14.19
PLHS	P	5/15/2013	0.9	<0.05	0.2	43	1	<0.0001	<0.5	0.18	13	0.04	170	110	0.21	12	710	-107.96	-14.35
PLHS	P	7/19/2013	0.5	<0.1	0.2	44	1.7	<0.0001	<0.5	0.12	14	0.034	210	120	0.2	3.4	740	-109.13	-14.41
ELHS	B	10/6/2011	0.5	0.15	<0.1	54	0.58	<0.0002	<0.5	0.15	13	0.012	180	90	0.36	<0.2	900	-113.6	-15.16
ELHS	B	7/26/2012	<0.1	0.56	<0.1	37	0.41	<0.0002	<0.5	0.12	9	0.015	110	63	0.27	26	590	-98.5	-12.4
ELHS(dup)	B	7/26/2012	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	-97.4	-12.2
ELHS	D	11/29/2012	0.2	0.17	<0.1	17	0.15	<0.0001	<0.5	0.08	4.8	0.013	37	32	0.11	54	270	—	—
ELHS	P	1/6/2013	0.2	0.06	<0.1	14	0.042	<0.0001	<0.5	0.03	4.2	0.011	19	27	0.12	61	230	—	—
ELHS	P	2/9/2013	0.3	<0.05	<0.1	39	0.45	<0.0002	<0.5	0.34	9.2	0.03	190	64	0.22	5.8	640	—	—
ELHS	P	3/12/2013	0.3	0.06	<0.1	21	0.23	<0.0002	<0.5	0.1	5.7	0.018	71	37	0.15	46	350	—	—
ELHS	P	4/10/2013	0.2	0.09	<0.1	22	0.33	<0.0001	<0.5	0.13	5.9	0.018	76	39	0.15	42	380	-92.5	-10.7
ELHS	P	5/15/2013	0.1	0.08	<0.1	14	0.098	<0.0001	<0.5	0.02	4.5	0.012	26	28	0.12	58	250	-82.9	-8.9
ELHS	P	7/19/2013	0.1	<0.1	<0.1	14	0.067	<0.0001	<0.5	<0.02	4.3	0.011	22	29	0.12	59	240	-79.87	-8.60
PCG	B	7/26/2012	0.2	<0.05	<0.1	3.5	<0.002	<0.0002	0.5	0.09	1.4	0.004	35	7.9	<0.05	1.5	70	-120.46	-16.2
PCG(dup)	B	7/26/2012	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	-120.22	-16.26
PCG	P	6/22/2013	0.1	<0.05	<0.1	3.7	0.003	<0.0001	<0.5	0.07	1.8	0.003	36	8.4	<0.05	0.6	76	-120.56	-16.14
PCG	P	7/23/2013	<0.1	<0.1	<0.1	3.4	<0.004	<0.0001	<0.5	0.07	1.5	0.003	37	7.8	<0.05	0.4	70	-120.09	-16.21
VC	B	7/26/2012	0.8	<0.05	<0.1	3	0.003	<0.0002	0.9	0.1	1.8	0.004	44	7.3	<0.05	0.4	76	-111.54	-15.4
VC(dup)	B	7/26/2012	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	-111.38	-15.37
VC	P	6/22/2013	0.7	0.07	<0.1	3.1	<0.002	<0.0001	<0.5	0.09	1.9	0.004	45	7.3	<0.05	0.4	86	-112.28	-15.3
VC	P	7/23/2013	0.6	<0.1	<0.1	3.1	<0.004	<0.0001	<0.5	0.08	1.9	0.004	47	7.1	<0.05	0.4	70	-112.16	-15.28
NEWW	B	10/7/2011	0.2	<0.05	<0.1	4.3	<0.002	<0.0002	<0.5	0.31	1.5	0.002	43	9.1	<0.05	0.5	92	-120.5	-16.14
NEWW	B	10/6/2011	0.2	0.1	<0.1	4.7	0.002	<0.0002	0.9	0.22	1.4	<0.002	42	10	<0.05	1.7	110	-119.8	-15.72
NEWW	B	7/26/2012	0.2	<0.05	<0.1	4.4	<0.002	<0.0002	1.9	0.18	1.4	<0.004	45	9.9	<0.05	2	100	-118.3	-15.8
NEWW	P	1/18/2013	0.2	<0.05	<0.1	4.5	0.002	<0.0002	1.3	0.17	1.4	<0.002	44	10	<0.05	1.5	96	—	—
NEWW	P	2/28/2013	—	<0.05	<0.1	4.6	0.002	<0.0002	—	—	1.4	<0.002	46	10	<0.05	—	—	—	—
NEWW	P	3/22/2013	0.1	<0.05	<0.1	4.5	0.002	<0.0002	1.1	0.18	1.4	<0.002	49	10	<0.05	1.5	100	-120.98	-15.68
Pad 16 Water Well	B	8/16/2012	0.2	0.08	<0.1	2.6	0.002	<0.0002	<0.5	0.12	1.1	0.003	41	6.8	<0.05	0.3	70	—	—
Pad 16 Water Well	D	11/26/2012	0.2	0.06	<0.1	2.5	0.002	<0.0001	<0.5	0.12	0.98	0.003	39	6.3	<0.05	0.3	76	—	—
Pad 16 Water Well	P	9/12/2013	0.2	<0.05	<0.1	2.6	0.003	<0.0001	<0.5	0.1	1.6	0.002	39	6.2	<0.05	0.3	74	-113.96	-15.58
Pad 29 Water Well	B	8/10/2011	0.8	0.1	<0.1	24	0.002	NA	0.29	0.15	4.7	0.014	59	44	0.08	2.5	280	—	—
Pad 29 Water Well	B	8/12/2011	0.8	0.07	<0.1	25	<0.002	NA	0.13	0.16	4.8</td								

