

GCC Energy Hydrologic Monitoring Data

Year	Well #1 Upgradient																																					
	2016										2017										2018				2019				2020				2021				2022	
	Quarter		Q1		Q2		Q3		Q4		Q1		Q2		Q3		Q4		Q1		Q2		Q3		Q4		Q1		Q2		Q3		Q4		Q1		Q2	
	Month		3	4	5	6	7	8	9	10	11	12	1	2	3	6	9	11	2	5	8	11	2	5	8	11	2	5	8	11	2	5	8	11	3	6		
	Sample Date		3/30	4/27	5/26	6/23	7/19	8/24	9/21	10/24	11/30	12/14	1/18	2/27	3/22	6/28	9/28	11/29	2/22	5/14	8/9	11/7	2/25	5/23	8/16	11/14	2/13	6/1	8/31	12/14	2/11	5/19	8/12	11/12	3/1	6/2		
	Lab Analysis (Y/N)		Y	N	N	Y	N	N	Y	N	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
	Field Parameters:																																					
Purge Flow Rate	gpm	1.5	7.9	7.1	5.8	7.1	7.4	6.8	7.5	9.3	7.5	7.7	7.5	8.2	7.0	7.1	7.5	7.2	7.2	10	7.2	10.0	8.3	11.0	6.5	8.0	10.0	8.0	8.0	8.0	8.0	8.0	4.0	8.0	5.0			
Total Purged	gal	306	522	870	297	280	284	288	300	280	295	298	297	291	286	259	287	268	280	267	305	300	321	327	293	314	300	291	280	302	324	300	400	300	300			
Depth to Water	ft bgs	440	5.07	4.60	4.95	5.55	6.30	6.03	5.73	5.69	5.08	4.30	3.80	3.82	4.50	5.51	5.50	5.40	5.77	5.65	6.50	5.98	4.50	5.68	6.08	5.55	4.17	6.25	7.32	6.48	5.82	7.25	6.55	6.47	6.80			
Temperature	deg C	8.8	13.1	11.9	14.2	14.1	12.7	12.5	12.6	10.6	11.3	10.9	10.4	11.2	11.9	11.8	11.6	11.5	11.7	12.0	12.5	11.7	11.5	11.8	12.9	11.6	12.1	12.3	11.5	11.6	12.2	12.3	12.0	12.0	12.3			
pH	su	7.77	7.57	7.46	7.6	7.69	7.59	7.67	7.77	7.72	7.68	7.6	7.67	7.59	7.6	7.58	7.56	7.49	7.35	7.34	7.44	7.39	7.37	7.32	7.37	7.38	7.57	7.6	7.54	7.56	7.59	7.57	7.46	7.54				
Specific Conductance	µS/cm	124	1199	1284	1246	1176	1223	1280	1305	1392	1415	1380	1218	1218	1289	1304	1235	1180	1180	1218	1218	1235	1180	1180	1218	1218	1218	1218	1218	1218	1218	1218	1218	1218	1218			
Oxygen Reduction Potential	mV	-123.1	-162.2	-142.5	-185.4	-156.6	-196.8	-140.6	-148.9	-152.9	-141.0	-143.6	-125.6	-132.2	-201	-176.9	-213.20	-185.3	-219.3	-251.6	-273.0	-232.0	-194.0	-192.0	-159.9	-193.0	-221.7	-187.2	-138.1	-153.4	-208.9	-202.5	-272.2	-306	-231.9			
Lab Analytical Results:																																						
Hardness as CaCO3	mg/L	230				306			216		271			391	277	215	280	274	275	369	287	252	350	303	263	290	319	255	247	298	313	236	286	271	311			
pH (Lab)	su	7.73				7.57			7.58		7.59			7.46	7.74	7.66	7.56	7.75	7.95	7.48	7.50	7.77	7.56	7.23	7.35	7.12	7.26	7.53	7.72	7.39	7.33	7.47	7.23	7.51	7.67			
Total Dissolved Solids (Lab)	mg/L	760				745			735		725			775	725	705	790	745	770	835	730	735	860	780	705	700	775	710	690	755	785	750	745	725	790			
Calcium	mg/L	44.0	59.7			42.4			51.7		77.7	54.0	41.6	55.6	53.4	53.8	71.5	56.7	49.1	67.8	58.2	51.5	56.5	61.6	49.6	47.4	58.1	60.9	60.9	45.4	54.8	53.3	60.3					
Magnesium	mg/L	29.1	38.2			26.7			34.5		49.1	34.6	27.1	34.4	34.2	34.1	46.4	35.4	31.4	43.8	38.3	32.7	36.1	40.0	31.7	31.1	37.2	39.1	29.8	36.1	33.5	39.0						
Sodium	mg/L	199				196			210		189			167	189	203	195	183	191	154	212	196	172	167	198	183	178	193	196	204	172	177	182	185	172			
Potassium	mg/L	3.00				3.15			3.01		3.01			3.30	3.00	3.09	2.99	3.09	3.03	3.16	3.15	3.01	3.32	3.01	3.01	<5	3.05	3.05	3.02	<5.00	3.00	<5.00	<5.00	2.93	3.00			
Alkalinity, Total	mg/L	610				660			620		615			640	585	670	625	620	595	630	640	610	615	615	590	600	576	520	605	770	620	600	770	640	650			
Alkalinity, Bicarbonate	mg/L	610				615			610		615			640	585	670	625	620	595	630	640	610	615	590	600	576	520	605	770	620	600	770	640	650				
Alkalinity, Carbonate	mg/L	40.0				<10.0			<10.0		<10.0			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0				
Alkalinity, Hydroxide	mg/L	<10.0				<10.0			<10.0		<10.0			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0				
Chloride	mg/L	4.33				6.12			4.30		4.44			4.53	4.32	6.21	4.39	4.30	4.35	4.34	4.23	4.35	4.59	4.36	4.19	4.76	4.76	4.62	4.34	4.27	4.91	4.89	4.93	4.46	4.50			
Fluoride	mg/L	0.347				<0.5			0.353		0.337			0.337	0.362	<0.500	0.358	0.354	0.335	0.390	0.359	0.355	0.349	0.335	<0.500	0.348	0.366	0.356	0.342	0.311	0.338	0.35	0.284	0.349	0.268			
Sulfate as SO4	mg/L	90.1				108			83.8		117			156	97.4	74.0	101	106	97.2	147	89.9	91.4	31.1	112	92.1	104	110	79.6	87.9	102	110	98.5	122	96.4	114			
Total Organic Carbon (TOC)	mg/L	2.54				3.3			2.80		3.18			3.84	5.82	2.84	3.33	3.37	3.5	3.94	3.35	3.31	3.70	3.53	3.14	3.29	3.37	3.32	3.17	3.26	3.27	3.23	3.23	3.04	3.46			
Nitrate/Nitrite as N	mg/L	<0.020				<0.020			<0.020		<0.200			<0.020	<0.400	<0.400	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020				
Ammonia as N ^	mg/L	NA				NA			NA		NA			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
Ortho-Phosphate as P ^	mg/L	NA				NA			NA		NA			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
Aluminum	mg/L	<0.050				<0.050			<0.050		<0.050			<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050				
Cadmium	mg/L	<0.0005				<0.0005			<0.0005		<0.0005			<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005				
Cadmium	mg/L	<0.0001				<0.0001			<0.0001		<0.0001			<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				
Copper	mg/L	0.0035				0.003			0.0021		0.0041			0.0020	0.0020	0.0030	0.0027	0.0035	0.003	0.0022	0.0025	0.0042	0.0015	0.0019	0.0012	0.0017	0.0017	0.0021	0.0007	<0.0025	0.0039	0.0038	0.0059	0.0053	0.0067			
Iron	mg/L	1.20				1.51			0.946		1.64			2.01	1.34	0.101	1.44	1.44	1.39	1.98	1.52	1.26	1.74	1.58	1.41	1.49	1.53	1.24	1.17	1.66	1.69	1.19	1.43	1.25	1.65			
Lead	mg/L	<0.0005				<0.0005			<0.0005		<0.0005			<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005				
Manganese	mg/L	0.267				0.344			0.221		0.312			0.491	0.315	0.202	0.311	0.307	0.306	0.498	0.286	0.355	0.439	0.428	0.354	0.366	0.369	0.297	0.297	0.414	0.388	0.308	0.387	0.325	0.410			
Mercury (dissolved)	mg/L	<0.0002				<0.0002			<0.0002		<0.0002			<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002				
Mercury (dissolved low-level)	ng/L																																			<5.00		
Molybdenum	mg/L	<0.0005				<0.0005			<0.0005		0.0005			<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0006	<0.0005	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005				
Selenium	mg/L	<0.001				<0.001			<0.001		<0.001			0.0245	<0.0010	<0.0010	<0.0010	<0.0010	0.0171	0.0120	0.0022	0.0032	0.0024	<0.0010	<0.0020	<0.001	<0.0010	0.0095	0.0171	0.0902	0.0324	0.0331	0.0439	0.0021	0.0089			
Silica (SiO2)	mg/L	13.8				15.2			14.0		12.9			0.242	14.9	14.3	14.7	13.4	14.6	13.8	13.7	13.5	13.1	13.1	14.3	13.1	13.1	13.6	14.3	13	13.9	12.5	13.2	14.2	13.1			
Sulfur	mg/L	7.12				6.84			6.6																													

Notes & Definitions:

Y/N	yes or no
gpm	gallons per minute
deg C	degrees Celsius
SU	standard pH units
µS/cm	microsiemens per centimeter
mV	millivolts
mg/L	milligram per liter
pCi/L	picocuries per liter
NM	not measured (field)
NA	not analyzed (lab)
ng/L	nanogram per liter

1. "*c*" value denotes that the quantification of that analyte is below the reporting level for the analytical laboratory, acceptable by environmental water quality laboratory industry standards.
2. Total alkalinity is measured by titration with hydrochloric acid to a set pH point, reporting this value as an equivalent amount of calcium carbonate. This value is then partitioned into bicarbonate, carbonate and hydroxide depending on the initial pH of the sample solution, each components reported as equivalent CaCO₃.
3. Industry standard Quality Assurance/Quality Control (QA/QC) protocol are followed for this hydrologic monitoring program by both GCE Energy and the contracted environmental water quality analytical laboratories. QA/QC results are not shown in this table.

GCC Energy Hydrologic Monitoring Data

Hay Gulch Ditch Upgradient																																											
	Year	2016												2017				2018				2019				2020				2021				2022									
	Quarter	Q1			Q2			Q3			Q4			Q1			Q2			Q3			Q4			Q1			Q2			Q3			Q4			Q1			Q2		
	Month	3	4	5	6	7	8	9	10	11	12	1	2	3	6	9	11	2	5	8	11	2	5	8	11	2	5	8	11	2	5	8	11	2	5	8	11	3	6				
	Sample Date	3/31	4/22	5/26	6/23	7/20	8/25	9/21	10/19	11/29	12/13	1/26	2/27	3/22	6/28	9/21	11/28	2/22	5/14	8/9	11/8	2/28	5/23	8/16	11/13	2/13	5/13	8/13	12/3	2/22	6/3	9/1	11/15	3/24	6/20								
Lab Analysis (Y/N)	Y	N	N	N	Y	N	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y						
Field Parameters:																																											
Flow Rate	cfs	0.70	1.0	1.20	1.60	1.0	1.0	1.10	1.0	NM	1.0	NM	0.82	0.28	2.70	NM	NM	NM	0.60	0.70	0.70	0.25	3.63	1.17	NM	NM	0.92	0.13	1.02	0.06	0.16	NM	0.67	0.16	0.07								
Temperature	deg C	9.8	20.9	11.3	21.1	20.8	16.8	14.9	16.4	5.9	7.0	1.5	4.7	10.7	20.2	19.7	8.8	4.7	11.3	22.1	1.1	5.9	5.9	16.9	5.7	1.5	16.5	18.1	2.0	5.8	11.3	15.5	7.1	8.6	17.8								
pH	SU	7.75	8.27	7.95	8.15	8.24	8.68	8.47	8.19	8.79	8.58	8.2	8.69	8.77	8.88	8.39	7.60	7.9	7.58	9.07	7.16	6.4	7.53	8.03	7.33	7.75	8.39	8.65	8.08	7.83	7.75	8.07	6.94	7.71	7.94								
Specific Conductance	µS/cm	247	323	197	141	189	207	233	210	258	234	687	455	454	106	549	868	1041	304	307	307	752	306	275	682	902	314	528	434	1024	189	280	252	553	832								
Oxygen Reduction Potential	mV	76.4	114.7	97.2	51.6	53.6	82.8	72.5	105.9	92.4	116.3	66.3	-12	-10.6	23.8	86.1	95.10	-164.1	111.4	-181.3	13.9	103.7	-24.0	24.4	-22.4	-4.5	81.7	118.9	120.3	51.6	86.6	58.3	109.2	3.2	97.8								
Dissolved Oxygen	mg/L	8.1	6.4	8.0	6.0	6.5	6.9	7.2	4.7	6.7	6.1	10.6	9.0	6.9	4.8	6.7	9.3	9.4	8.5	6.4	10.2	8.0	8.9	7.8	7.9	7.0	7.5	8.4	10.4	8.7	8.5	7.1	9.2	8.5	8.5								
Lab Analytical Results:																																											
Hardness as CaCO3	mg/L	128			80.9			119		152			257	69.2	316	456	489	101	153	149	393	136	125	372	405	150	287	213	588	92.6	131	120	280	383									
pH (Lab)	SU	8.17			8.04			8.16		8.19			8.06	8.06	8.22	8.31	8.39	7.99	9.07	7.86	7.45	7.69	7.83	7.40	7.22	7.60	8.01	7.92	7.57	7.72	7.44	7.52	7.81	7.87									
Total Dissolved Solids (Lab)	mg/L	170			75			165		180			285	65.0	890	650	700	140	215	175	535	205	225	635	587	255	340	160	685	210	185	140	380	520									
Total Suspended Solids	mg/L	30.0			17			17.0		4.8			2.50	63.5	2.00	5.75	6.01	106	6.25	14.8	22.0	113	20.0	5.38	<4.0	140	195	13.2	55	133	51	13.2	13.4	5.07									
Calcium	mg/L	33.5			24			33.0		38.4			53.6</																														

Notes & Definitions:

^ one-time analysis
 Y/N yes or no
 gpm gallons per minute
 deg C degrees Celsius
 SU standard pH units
 µS/cm microsiemens per centimeter
 mV millivolts
 mg/L milligram per liter
 pCi/L picocuries per liter
 NM not measured (field)
 NA not analyzed (lab)
 ng/L nanogram per liter

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GCC Energy Hydrologic Monitoring Data

Hay Gulch Ditch Downgradient																																			
Year	2016												2017				2018				2019				2020				2021				2022		
Quarter	Q1	Q2		Q3			Q4			Q1		Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
Month	3	4	5	6	7	8	9	10	11	12	1	2	3	6	9	11	2	5	8	11	2	5	8	11	2	6	8	12	2	6	9	11	3	6	
Sample Date	3/31	4/22	5/26	6/23	7/20	8/25	9/21	10/19	11/29	12/13	1/26	2/27	3/22	6/28	9/1	11/28	2/22	5/7	8/9	11/7	2/28	5/23	8/16	11/13	2/6	6/1	8/13	12/3	2/22	6/3	9/1	11/15	3/24	6/20	
Lab Analysis (Y/N)	Y	N	N	Y	N	N	Y	N	Y	N	N	N	N	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
Field Parameters:																																			
Flow Rate	cfs	1.10	1.20	1.10	NM	1.10	1.10	NM	0.80	NM	NM	NM	0.80	0.30	0.30	NM	dry	NM	NM	NM	0.50	0.25	0.30	1.05	NM	NM	1.50	0.13	NM	0.001	0.40	NM	0.67	0.060	0.040
Temperature	deg C	11.8	17.6	10.9	21.9	21.3	18.8	16.1	11.8	7.0	6.6	7.2	5.0	12.7	17.6	18.7		6.3	11.3	20.6	4.7	6.88	8.23	15.15	3.51	3.73	14.21	20.4	6.83	10.37	13.35	10.47	4.00	9.21	17.71
pH	SU	8.57	8.55	8.14	8.14	8.55	8.37	8.3	8.36	8.64	8.06	7.28	8.06	9.00	8.53	8.66		8.33	7.58	7.43	7.48	6.42	7.77	7.61	8.38	7.94	8.24	8.00	7.7	7.76	8.12	8.26	7.00	7.22	7.53
Specific Conductance	µS/cm	429	530	297	116	308	257	1183	420	421	728	678	987	17	114	164		742	304	356	309	577	202	295	554	882	137	237	478	815	331	184	311	636	150
Oxygen Reduction Potential	mV	57.5	105.9	33.2	32.5	68.6	38.4	18.7	88.6	117.5	155.2	147.6	-15.5	137.8	185.3	48		51.6	111.4	-10.0	-88.9	125.6	50.6	111.6	-108.1	124.2	104.8	103.0	127.8	-26.5	85.1	119.5	122.7	-85.2	136.1
Dissolved Oxygen	mg/L	7.9	7.7	8.7	6.0	6.7	5.6	6.8	7.1	6.5	7.2	7.6	9.8	5.6	6.4	7.1	9.8	8.5	6.3	9.1	7.6	8.8	7.2	9.6	9.5	8.0	6.4	9.6	6.8	7.8	6.7	9.8	NM	7.2	
Lab Analytical Results:																																			
Hardness as CaCO3	mg/L	226			67.8			480					503	59.1	91.4		329	140	182	167	281	91.9	137	295	416	63.6	120	232	419	64.8	90.7	143	346	65.7	
pH (Lab)	SU	8.42			8.13			8.25					8.15	7.98	7.98		8.17	8.05	8.09	7.95	7.84	7.68	7.73	7.73	7.80	7.49	7.59	7.85	7.83	7.74	7.58	7.39	8.01	7.86	
Total Dissolved Solids (Lab)	mg/L	270			55			630					615	65.0	80.0		420	220	260	185	390	185	195	355	573	120	135	370	435	175	90	120	410	29.9	
Total Suspended Solids	mg/L	27.3			18			4.20					12.7	3.00	<0.500		49.5	<2.00	5.67	4.40	18.4	153.0	22.5	<4.00	4.20	17.5	28.6	10.5	28.0	8.4	4.8	5.44	18.3	29.2	
Calcium	mg/L	55.5			21.9			94.7					112	19.0	29.5		75.4	37.5	49.0	44.7	61.6	26.0	34.5	67.2	85.6	20.3	34.2	55.6	98.2	21.2	29.8	39.3	82.1	21.4	
Magnesium	mg/L	21.1			3.15			59.1					54.6	2.86	4.31		34.2	11.2	14.4	13.4	31	6.54	12.3	30.8	49.0	3.15	8.38	22.7	42.2	2.86	3.94	11.0	34.2	2.96	
Sodium	mg/L	8.69			1.57			16.8					22.5	1.49	2.37		18.1	5.42	6.49	5.15	16.5	5.03	6.62	17.0	28.5	1.90	3.68	9.03	15.8	1.14	1.75	4.71	16.4	1.58	
Potassium	mg/L	1.49			<1			4.48					2.33	<1.00	<1.00		2.84	1.14	1.58	1.34	1.33	1.31	1.27	2.60	3.81	<1.00	1.36	1.89	3.75	<1.00	1.02	1.30	2.89	<1.00	
Alkalinity, Total	mg/L	220			59			220					265	112	170	140	265	112	170	140	150	340	140	194	297	48	110	158	315	52	72	116	282	46.0	
Alkalinity, Bicarbonate	mg/L	220			59			140					320	47.0	85.0		259	104	170	140	150	340	140	188	283	48	110	154	315	52	72	116	282	46.0	
Alkalinity, Carbonate	mg/L	<10			<10			80.0					<10.0	<10.0	<10.0		<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	14.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0		
Alkalinity, Hydroxide	mg/L	<10			<10			<10					<10.0	<10.0	<10.0		<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	
Chloride	mg/L	9.40			1.26			97.9					31.9	<1.00	1.54		23.1	7.54	7.47	5.69	40.2	16.9	7.65	14.8	30.7	1.87	4.42	17.1	59	1.16	1.21	5.07	15.0	1.23	
Fluoride	mg/L	0.244			0.195			0.244					0.224	0.290	0.227		0.308	0.228	0.295	0.228	0.232	0.205	0.218	0.252	0.272	0.185	0.224	0.244	0.246	0.195	0.216	0.185	0.257	0.191	
Sulfate as SO4	mg/L	68.1			13.5			144					204	11.3	17.9		86.5	40.2	46.8	45.0	91.4	18.5	42.7	83.3	143	14.2	32.4	70.2	90.1	17.3	25.7	46.3	74.7	18.8	
Total Organic Carbon (TOC)	mg/L	1.53			1.4			3.48					2.31	2.16	0.932		1.56	1.28	1.33	1.76	2.90	2.37	2.10	3.26	4.53	1.39	1.47	1.55	2.31	1.18	1.48	1.12	1.42	1.10	
Oil & Grease	mg/L	<5			<5			<5					<5.00	<5.00	<5.00		<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	
Nitrate/Nitrite as N	mg/L	<0.02			0.026			0.027					<0.020	<0.020	<0.020		<0.020	<0.020	<0.020	<0.020	0.17	0.146	0.090	<0.020	0.056	0.031	0.053	<0.020	0.148	0.021	<0.020	0.041	<0.02		
Sodium Adsorption Ratio (SAR)	no unit	0.25			0.03			0.33					0.44	0.08	0.11		0.43	0.2	0.20	0.17	0.43	0.22	0.24	0.41	0.61	0.30	0.14	0.26	0.34	0.06	0.08	0.17	0.38	0.08	
Ammonia as N ^	mg/L	NA			NA			NA					NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ortho-Phosphate as P ^	mg/L	NA			NA			NA					NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aluminum	mg/L	<0.05			<0.05			<0.05					<0.050	<0.050	<0.050		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	
Arsenic	mg/L	0.0005			<0.0005			0.0015					0.0006	0.0005	0.0006		0.0005	0.0005	0.0008	0.0005	0.0006	0.0006	0.0006	0.0006	0.0006	<0.0005	0.0006	<0.0005	0.0013	<0.0005	0.0007	<0.0005	<0.0005	0.0010	
Cadmium	mg/L	<0.0001			<0.0001			<0.0001					<0.0001	<0.0001	<0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
Copper	mg/L	0.0004			0.0016			0.0012					0.0005	0.0008	0.0008		0.0005	0.0008	0.0008	0.0008	<0.0010	0.0021	0.0009	0.0007	0.0006	0.0014	0.0009	0.0005	0.0006	0.0011	0.001	0.0007	0.0009	0.0034	
Iron	mg/L	<0.05			<0.05			<0.05					<0.050	<0.050	<0.050		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	
Lead	mg/L	<0.0005			<0.0005			<0.0005					<0.0005	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
Manganese	mg/L	0.0039			0.0044			0.0059					0.0112	0.0009	0.0010		0.0962	0.0038	0.0445	0.0102	0.048	0.0125	0.0033	0.0102	0.0286	0.0102	0.0046	0.0116	0.133	0.0011	0.0021	0.0124	0.0082	0.0024	
Mercury (total)	mg/L	<0.0002			<0.0002			<0.0002					<0.0002	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
Mercury (Total low-level)	ng/L																																		
Molybdenum	mg/L	<0.0005			0.0008			0.0013					<0.0005	0.0009	0.0011		0.0010	0.0011	0.0012	0.0010	0.001	0.0011	0.0012	0.0007	0.0006	0.0008	0.0012	0.0009	0.0009	0.0009	0.0009	0.0010	0.0010	<0.001	
Selenium	mg/L	<0.001			<0.001			0.0036					0.0022	<0.0010	<0.0010		0.0011	<0.0010	<0.0010	<0.001	0.0012	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0015	<0.0010				

GCC Energy Hydrologic Monitoring Data

Well #2 Downgradient																																										
Year	2016												2017										2018				2019				2020				2021				2022			
Quarter	Q1			Q2			Q3			Q4			Q1			Q2			Q3			Q4			Q1			Q2			Q3			Q4			Q1		Q2			
Month	3	4	5	6	7	8	9	10	11	12	1	2	3	6	9	11	2	5	8	8	11	2	5	8	11	2	6	8	12	2	5	8	11	2	5	8	11	2	5			
Sample Date	3/30	4/21	5/25	6/23	7/19	8/24	9/20	10/19	11/30	12/14	1/26	2/27	3/22	6/13	9/21	11/28	2/22	5/7	8/8	8/9	11/7	2/27	5/22	8/16	11/13	2/6	6/1	8/26	12/14	2/11	5/19	8/12	11/10	2/28	5/9							
Lab Analysis (Y/N)	Y	N	N	Y	N	N	Y	N	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		
Field Parameters:																																										
Purge Flow Rate	gpm	0.50	0.50	0.50	0.50	0.50	0.50	NM	7.20	2.00	NM	NM	NM	NM	NM	NM	0.1	1.00	0.10	1.00	0.50	0.25	0.50	0.25	0.50	0.25	0.25	0.25	0.13	0.50	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25		
Total Purged	gal	7	6	7	7	6	6	6	6	6	8	8	8	8	8	6	6	11	2	6.5	7.5	13	10	9	8	12	8	7	7	12	9	7	12	6	9							
Depth to Water	ft bgs	3.69	3.17	4.25	1.42	4.17	4.17	5.50	6.4	4.7	5	3.95	2.74	6.35	0.95	4.85	5.68	6.68	7.4	6.65	6.59	5.17	5.85	0.92	3.60	5.20	5.60	4.00	6.29	7.48	8.10	8.70	8.32	8.75	9.14	9.70						
Temperature	deg C	6.3	10.1	13.5	18.4	19.8	14.0	14.1	13.3	10.4	12.4	7.0	4.4	8.4	17.1	12.1	11.7	9.8	8.9	14.0	11.1	11.9	9.1	8.1	10.5	11.5	10.4	9.1	11.5	11.0	9.8	9.4	11.2	12.1	10.1	9.5						
pH	SU	7.58	7.6	7.6	7.64	7.68	7.73	7.53	7.66	7.65	7.71	7.57	7.68	7.78	7.56	7.66	7.52	7.59	7.48	7.84	7.70	7.15	7.41	7.34	7.23	7.19	7.32	7.41	7.44	7.56	7.50	7.54	7.57	7.53	7.53	7.53	7.53	7.53	7.53	7.53		
Specific Conductance	µS/cm	899	867	804	600	369	815	877	881	904	872	908	1193	921	633	852	879	887	847	828	895	955	960	1091	1051	1083	1083	1134	1017	1099	964	939	1038	1073	1050	1019						
Oxygen Reduction Potential	mV	-9.4	-13.7	-35.7	-66.9	-112.1	-76.3	-88.3	-82	-72.7	-81.1	-66.8	-55.7	-67	-54.3	-53.7	-63.70	-44.9	-34	-75.6	-127	-91.9	48.4	-57.8	-30.1	-5.5	25.3	-51.3	19.9	3.2	-4.8	-48.3	-26.0	-33.5	-94.0	-13.3						
Lab Analytical Results:																																										
Hardness as CaCO3	mg/L	444			314			452		432				485	352	378	449	412	415	422	415	465	488	537	513	603	540	575	560	569	624	529	503	521	500	500	527					
pH (Lab)	SU	7.63		7.66		7.48		7.55		7.55				7.72	7.6	7.51	7.51	7.62	7.6	7.61	7.45	7.50	7.5	7.4	7.04	7.12	7.20	7.09	7.3	7.2	7.17	7.15	7.32	7.24	7.57	7.53						
Total Dissolved Solids (Lab)	mg/L	685		470		525		495		495				635	415	525	540	515	545	545	575	550	575	695	655	690	695	730	665	685	660	655	685	655	605	645						
Calcium	mg/L	72.2		54.9		75.9		72.7		72.7				81.0	60.9	64.8	78.0	70.1	70.2	72.7	70.4	78.7	81.3	87.1	83.3	99.4	87.2	92.2	90.1	90	97.9	81.2	76.8	80.1	76.0	79.1						
Magnesium	mg/L	63.9		43.1		63.8		60.8		60.8				68.7	48.5	52.6	61.8	57.4	58.2	58.4	58.2	65.2	69.2	77.6	74.0	86.3	78.2	83.7	81.3	83.7	92.2	79.2	75.6	77.9	75.3	80.0						
Sodium	mg/L	22.2		16.5		19.8		20.7		20.7				21.8	16.1	17.0	20.1	19.4	19.2	19.6	19.1	21.3	22.1	23.4	21.4	25.5	23.3	24.5	23.8	24.5	26.9	23.4	23.1	23.3	23.3	24.9						
Potassium	mg/L	2.04		2.1		2.16		2.05		2.05				1.94	2.22	1.64	2.19	1.76	1.68	2.00	1.82	2.08	1.97	1.94	2.06	2.40	2.04	2.00	2.06	2.22	<5.00	1.94	<5.00	2.12	2.01	1.99						
Alkalinity, Total	mg/L	342		280		380		380		380				375	285	395	375	333	350	380	328	340	395	460	365	348	324	324	345	341	385	375	380	540	372	385						
Alkalinity, Bicarbonate	mg/L	338		280		380		380		380				375	285	395	375	333	350	380	328	340	395	460	365	348	324	324	345	333	385	375	380	540	372	385						
Alkalinity, Carbonate	mg/L	<10.0		<10.0		<10.0		<10.0		<10.0				<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0		
Alkalinity, Hydroxide	mg/L	<10.0		<10.0		<10.0		<10.0		<10.0				<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	
Chloride	mg/L	35.8		6.8		27.4		26.2		26.2				23.3	7.11	19.0	23.4	24.7	27.2	34.5	34.1	39.3	40.1	42.9	45.2	47.2	48.9	50.3	44.8	44.6	46	45.9	37	44.3	41.1	38.1						
Fluoride	mg/L	0.230		0.298		0.272		0.256		0.256				0.228	0.313	0.263	0.246	0.244	0.224	0.259	0.281	0.263	0.244	0.246	0.221	<0.500	<0.500	<0.500	0.254	0.248	0.216	0.236	<0.500	0.210	0.251	0.217						
Sulfate as SO4	mg/L	129		70		114		117		117				153	75.2	98.4	94.7	104	102	112	111	137	138	196	189	182	199	230	204	219	190	199	186	176	187	160						
Total Organic Carbon (TOC)	mg/L	3.34		14		2.64		3.4		3.4				3.52	3.56	2.61	2.25	2.10	2.02	2.06	1.93	2.08	1.87	2.69	2.28	1.99	1.80	1.84	1.87	1.74	2.18	1.74	1.77	1.73	1.73	1.56						
Nitrate/Nitrite as N	mg/L	0.042		<0.02		<0.02		0.089		0.089				<0.020	<0.02	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	
Ammonia as N ^	mg/L	NA		NA		NA		NA		NA				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Ortho-Phosphate as P ^	mg/L	NA		NA		NA		NA		NA				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Aluminum	mg/L	0.156		<0.05		<0.05		<0.05		<0.050				<0.050	<0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.100	<0.050	<0.250	<0.050	<0.250	<0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	
Arsenic	mg/L	0.0008		0.0015		0.0010		0.0013		0.0013				0.0009	0.0017	0.0006	0.0011	0.0010	0.0009	0.0012	0.0012	0.0010	0.0012	0.0011	0.0012	0.0012	0.0011	0.0009	<0.001	0.0013	<0.0025	0.0009	0.0012	<0.0025	0.0007	0.0005						
Cadmium	mg/L	<0.0001		<0.0001		<0.0001		<0.0001		<0.0001				<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
Copper	mg/L	0.0004		0.0005		0.0005		0.0005		0.0005				0.0007	0.0002	0.0004	0.0001	0.0056	0.0002	0.0006	0.0004	0.0003	0.001	0.0016	0.0003	0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Iron	mg/L	0.081		0.085		0.118		0.118		0.118				0.213	<0.050	<0.050	0.074	0.060	0.073	0.089	0.163	0.082	0.062	0.116	0.105	0.119	0.094	0.107	0.109	0.159	<0.250	<0.050	<0.250	0.076	<0.050	0.069						
Lead	mg/L	<0.0005		<0.0005		<0.0005		<0.0005		0.0078				<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
Manganese	mg/L	0.497		0.54		0.354		0.359		0.359				0.384	0.259	0.307	0.309	0.304	0.306	0.349	0.375	0.320	0.423	0.504	0.404	0.427	0.454	0.444	0.412	0.441	0.422	0.404	0.389	0.438	0.403	0.384						
Mercury (dissolved)	mg/L	<0.0002		<0.0002		<0.0002		<0.0002		<0.0002				<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00															

GCC Energy Hydrologic Monitoring Data

Wiltse Well																																									
Year		2016										2017					2018					2019					2020					2021					2022				
Quarter	Month	Q1	Q2			Q3			Q4			Q1			Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2						
		3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12						
Sample Date		3/31	4/27	5/25	6/23	7/19	8/24	9/20	10/24	11/29	12/13	1/18	2/27	3/21	6/13	9/28	11/28	2/22	5/16	8/9	11/8	2/28	5/23	8/19	11/11	2/17	5/13	8/12	12/15	2/24	5/21	8/11	11/3	3/1	6/1						
Lab Analysis (Y/N)		Y	N	N	Y	N	N	Y	N	Y	N	N	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y						
Field Parameters:																																									
Purge Flow Rate	gpm	150.0	38.5	23.4	18.6	19.9	17.3	15.8	17.0	10.6	18.1	39.5	39.6	39.6	NM	18.3	23.5	11.9	12.0	18.5	12.3	28.0	38.0	18.0	17.0	35.0	24.4	16.0	18.0	15.0	12.5	8.5	24.0	18.0	25.0						
Total Purged	gal	5850	4228	4229	3686	2844	2979	2637	2724	2992	2916	3595	3580	3560	2980	2712	2423	2700	2890	2783	2747	3017	3200	3010	258	3825	3495	3200	3030	2920	3000	1800	2800	2900	295						
Depth to Water	ft bgs	0.35	0.00	0.85	2.15	2.99	2.60	3.32	6.85	1.90	1.95	3.00	0.00	2.05	3.40	0.00	2.05	3.40	3.35	3.93	4.13	3.78	2.40	0.05	2.47	2.68	0.43	1.60	3.18	5.65	3.64	3.70	4.55	4.10	4.70	3.70					
Temperature	deg C	6.7	8.8	10.4	10.7	11.5	12.1	11.5	11.0	9.1	8.8	7.6	7.2	7.5	10.3	11.3	9.7	8.0	10.2	11.7	10.4	8.0	9.3	10.7	9.9	6.7	9.8	11.7	8.7	8.9	9.9	11.3	10.8	9.5	10.8						
pH	SU	7.22	7.32	7.34	7.26	7.26	7.24	7.22	7.22	7.32	7.29	7.2	7.17	7.12	7.41	7.27	7.3	7.26	7.13	7.04	7.07	7.17	7.08	7.09	7.09	7.01	7.12	7.22	7.26	7.25	7.23	7.33	7.28	7.17	7.21						
Specific Conductance	µS/cm	2043	1633	1805	1768	1478	1602	1941	1937	2014	2036	2262	2276	2085	1869	2074	2190	2232	2144	2072	2167	2170	2151	1964	1970	2171	2017	1450	1984	1739	1789	2012	2038	1965	2039						
Oxygen Reduction Potential	mV	105.6	17.9	20.1	38.5	26.9	20.0	28.6	21.6	13.7	20.9	3.2	18.3	6.0	13.3	19.5	19.2	14.3	21.9	-52.7	-18.8	-22.7	-10.6	-23.7	51.9	49.33	71.9	72.2	73.7	6.9	31.2	41.5	50.5	-26.1	32.4						
Lab Analytical Results:																																									
Hardness as CaCO3	mg/L	990			1050			1030		963				1040	1060	1140	1150	1090	1160	1130	1180	1150	1080	1080	1060	982	1060	1070	1130	1090	1070	1080	1080	1070	1070						
pH (Lab)	SU	7.22			7.34			7.29		7.36				7.22	7.46	7.30	7.33	7.70	8.35	7.22	7.42	7.38	7.35	7.11	7.09	7.12	7.09	7.29	6.86	7.27	6.98	7.25	7.52	7.25	7.15						
Total Dissolved Solids (Lab)	mg/L	1580			1480			1520		1520				1480	1510	1680	1740	1740	1740	1750	1720	1710	1670	1520	1480	1600	1560	1580	1540	1550	1500	1580	1640	1520	1580						
Calcium	mg/L	197			208			206		186				205	211	219	226	211	216	221	230	226	214	214	208	191	206	206	215	208	199	206	209	208	206						
Magnesium	mg/L	121			128			126		121				128	129	143	142	136	150	139	147	143	132	132	132	123	132	136	144	138	140	136	136	133	135						
Sodium	mg/L	95.9			75.2			80.7		82.4				110	87.5	80.7	83.4	80.4	82.3	79.1	81.2	83.2	88.4	72.4	67.3	68.1	69.1	64	67.5	65.1	61.1	61.6	63.6	61.0	60.1						
Potassium	mg/L	4.64			4.56			4.42		4.56				4.61	4.79	4.62	4.52	<5.00	4.73	4.98	5.01	5.01	4.77	4.92	4.85	4.33	<5.00	4.48	4.54	<5.00	4.35	<5.00	4.41	4.41	4.41						
Alkalinity, Total	mg/L	460			500			470		445				410	445	510	475	445	435	463	505	515	469	474	460	460	431	475	470	480	480	480	520	505	485						
Alkalinity, Bicarbonate	mg/L	440			500			470		450				410	445	510	475	445	435	463	505	515	469	474	460	460	431	475	470	480	480	480	520	505	485						
Alkalinity, Carbonate	mg/L	20.0			<10.0			<10.0		<10.0				<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0						
Alkalinity, Hydroxide	mg/L	<10.0			<10.0			<10.0		<10.0				<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0						
Chloride	mg/L	81.0			76.3			62.3		70.1				72.5	72.5	68.7	68.9	66.7	60	57.2	57.5	67.2	67.8	49.9	48.2	57.7	51.8	58.1	57.9	54.8	52.3	49	52.4	49.8	45.7						
Fluoride	mg/L	0.285			<0.5			<0.5		<0.5				<0.500	0.332	<0.500	<0.500	<0.500	<0.500	0.298	0.324	0.306	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	0.304	0.292	0.276	0.28	<0.500	0.280	0.286	0.240					
Sulfate as SO4	mg/L	671			595			676		673				731	702	779	772	832	714	733	741	801	709	627	627	711	633	704	728	683	661	679	697	688	702						
Total Organic Carbon (TOC)	mg/L	3.54			4.1			3.15		3.02				3.40	3.54	3.34	3.26	3.37	3.5	3.51	3.63	3.82	4.87	4.27	3.30	4.22	3.80	3.69	3.43	3.29	3.33	3.48	3.37	3.21	3.19						
Nitrate/Nitrite as N	mg/L	0.456			0.891			1.08		0.965				0.492	1.07	1.80	1.94	2.26	2.48	2.26	1.99	1.95	0.651	0.896	1.31	1.05	0.865	1.25	1.48	1.82	1.49	2.06	1.87	1.69	1.53						
Ammonia as N ^	mg/L	NA			NA			NA		NA				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA						
Ortho-Phosphate as P ^	mg/L	NA			NA			NA		NA				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA						
Aluminum	mg/L	<0.05			<0.05			<0.05		<0.050				<0.050	<0.1	<0.050	<0.250	<0.100	<0.050	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100						
Arsenic	mg/L	<0.0025			<0.0025			0.0005		0.0008				0.0009	0.0006	0.0005	0.0029	0.0009	0.0006	<0.0025	<0.001	<0.0010	0.0006	<0.0010	<0.0010	<0.0010	<0.0025	<0.0010	0.0005	<0.0025	<0.0025	<0.0025	<0.0005	<0.0005	<0.0005						
Cadmium	mg/L	<0.0005			<0.0005			<0.0005		<0.0001				<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	<0.0001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0001	<0.0005	<0.0025	<0.0005	<0.0005	<0.0005						
Copper	mg/L	0.0018			0.0024			0.0020		0.0038				0.0023	0.0019	0.0025	0.0097	0.0020	0.0019	0.0018	0.0030	0.0002	0.0021	0.0021	0.0012	0.0002	<0.0025	0.0013	0.0006	0.0028	<0.0025	<0.0025	0.0033	0.0031	0.0049						
Iron	mg/L	0.100			<0.05			0.060		0.136				0.286	0.161	<0.050	<0.250	0.132	0.151	0.125	0.121	0.151	0.379	0.287	0.209	0.285	<0.250	<0.100	0.216	<0.250	0.304	<0.250	0.154	0.129	0.212						
Lead	mg/L	<0.0025			<0.0025			<0.0005		<0.0005				0.0005	<0.0005	<0.0005	<0.0025	<0.0005	<0.0005	<0.0005	<0.0010	<0.0010	<0.0005	<0.0010	<0.0010	<0.0010	<0.0025	<0.0010	<0.0025	<0.0025	<0.0025	<0.0025	<0.0010	<0.0005	<0.0005						
Manganese	mg/L	0.673			0.857			0.756		0.608				0.440	0.797	0.881	4.50	0.845	0.997	1.37	1.08	0.937	0.357	0.902	0.892	0.419	0.8	1.03	0.98	1.4	1.34	1.26	1.35								
Mercury (dissolved)	mg/L	<0.0002			<0.0002			<0.0002		<0.0002				<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<5.00						
Molybdenum	mg/L	<0.0025			<0.0025			0.0017		0.0016				0.0016	0.0021	0.0021	0.0093	0.0020	0.002	0.002	0.0019	0.0017	0.0014	0.0020	0.0017	0.0013	<0.0025	0.0018	0.0017	<0.0025	<0.0025	<0.0025	0.0017	0.0017	0.0018						
Selenium	mg/L	<0.0050			<0.0050			0.0013		0.0023				0.0027	0.0019	0.0016	0.0087	0.0027	0.0025	0.0025	0.0022	0.0025	0.0016	0.0020	<0.0020	<0.0050	<0.0050	<0.0020	<0.0020	<0.0020	<0.0050	<0.0050	<0.0020	0.0015	0.0019						
Silica (SiO2)	mg/L	13.9			16.1			16.4		14.3				14.7	15.5	16.1	13.4	14.1	15.9	16.2	15.9	14.1	13.2	15.4	14.9	12.2	12.9	13.8	15.7	14.6	14.8	15.4	16.0	15.2	14.5						
Silican	mg/L	6.51			7.53			7.67		6.69				6.85	7.22	7.54	6.29	6.58	7.42	7.58																					

Notes & Definitions:

^	one-time analysis
Y/N	yes or no
gpm	gallons per minute
deg C	degrees Celsius
SU	standard pH units
µS/cm	microsiemens per centimeter
mV	millivolts
mg/L	milligram per liter
pCi/L	picocurie per liter
NM	not measured (field)
NA	not analyzed (lab)
ng/L	nanogram per liter

1. "c" values denote that the quantification of that analyte is below the reporting level for the analytical laboratory, acceptable by environmental water quality laboratory industry standards.
2. Total alkalinity is measured by titration with hydrochloric acid to a set pH point, reporting this value as an equivalent amount of calcium carbonate. This value is then partitioned into bicarbonate, carbonate and hydroxide depending on the initial pH of the sample solution, each components reported as equivalent CaCO₃.
3. Industry standard Quality Assurance/Quality Control (QA/QC) protocol are followed for this hydrologic monitoring program by both GCC Energy and the contracted environmental water quality analytical laboratories. QA/QC results are not shown by this table.

GCC Energy Hydrologic Monitoring Data

MW-HGA-4																																	
Year	2016	2017												2018				2019				2020				2021				2022			
Quarter	Q4	Q1			Q2			Q3			Q4			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2		
Month	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	5	8	11	2	5	8	11	2	5	8	12	2	5	8	11	2	5	
Sample Date	12/12	1/26	2/28	3/22	4/27	5/31	6/13	7/27	8/16	9/21	10/27	11/28	12/12	1/3	2/22	5/15	8/9	11/8	2/28	5/23	8/16	11/13	2/13	5/13	8/26	12/14	2/22	5/19	8/12	11/12	2/28	5/9	
Lab Analysis (Y/N)	Y	N	N	Y	N	N	Y	N	N	Y	N	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
Field Parameters:																																	
Purge Flow Rate	gpm	0.5	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	9.40	NM	0.1	1.5	2.00	1.00	1.12	1.00	1.00	0.25	1.00	0.25	0.13	0.25	0.13	0.25	0.25	0.25	0.25	0.25	
Total Purged	gal	21	21	21	21	21	21	19.5	20	20	21	21	24	19	21	21	19	21	24	22	21	21	22	21	20	21	21	21	20	22	21	21	
Depth to Water	ft bgs	0.73	0.57	0.60	0.83	0.94	2.06	2.53	3.25	2.65	3.31	3.31	1.76	4.31	1.37	0.55	2.60	3.98	1.90	0.49	0.42	1.95	1.15	0.38	2.36	3.80	1.75	0.90	2.91	3.95	2.33	0.95	2.02
Temperature	deg C	7.3	4.8	6.4	8.1	7.2	9.9	8.4	8.6	8.8	9.0	9.2	9.0	9.3	8.8	7.8	8.1	8.7	8.8	7.6	7.7	8.5	8.8	7.9	7.4	9.2	8.6	7.8	8.2	8.9	9.2	8.3	8.1
pH	µS/cm	7.29	7.36	7.40	7.41	7.33	7.36	7.40	7.36	7.35	7.33	7.31	7.27	7.27	7.33	7.30	7.18	7.27	7.05	7.15	7.18	7.16	7.09	7.12	7.23	7.28	7.31	7.29	7.34	7.37	7.31	7.25	7.28
Specific Conductance	µS/cm	1284	1257	1201	1155	1153	1113	1055	1099	1050	1124	1072	1171	1160	1141	1154	1098	1057	1167	1183	1102	1083	1127	1122	1093	1022	1158	975	1093	1108	1160	1197	1102
Oxygen Reduction Potential	mV	-72.1	-86.6	-105.1	-104.4	-74.5	-91.3	-134.7	-137.6	-131.0	-139.5	-77.3	-157.9	-70.1	-96.6	-157.3	-130.9	-230.8	-190.9	-128.3	-140.7	-130.9	-104.9	-107.8	-86.7	-61.1	-64.7	-67.9	-116.8	-104.9	-105.8	-185.5	-113.0
Lab Analytical Results:																																	
Hardness as CaCO3	mg/L	724			611			616			522		595		561	555	524	625	613	563	544	624	563	528	571	612	630	582	515	627	598	574	
pH (Lab)	mg/L	7.30			7.17			7.31			7.25		7.21		7.58	8.15	7.33	7.12	7.2	8.17	6.95	6.88	6.78	6.89	7.07	6.95	7.38	6.89	7.05	7.03	7.22	7.26	
Total Dissolved Solids (Lab)	mg/L	855			710			715			750		775		740	730	695	770	795	695	695	715	705	685	700	665	685	680	735	790	790	785	
Calcium	mg/L	147			118			121			102		118		110	108	102	124	122	110	106	125	112	101	111	122	126	114	98.7	125	119	110	
Magnesium	mg/L	86.7			76.7			76.6			64.9		72.8		69.3	69	65.4	76.5	74.7	70.3	67.9	76.8	68.9	67.0	71.7	74.9	76.8	72	65.2	76.6	72.9	72.5	
Sodium	mg/L	19.5			27.4			28.6			24.9		27.2		26.5	30.4	29.9	27.6	27	28.6	28.3	31.9	27.9	30.3	30.5	26.8	28.4	27.4	26.4	23.1	23.9	28.1	
Potassium	mg/L	2.02			2.13			2.11			1.75		2.21		2.17	2.22	2.33	2.13	2.16	2.00	2.10	2.38	2.05	2.06	2.08	2.11	2.24	2.03	<5.00	<5.00	1.82	2.02	
Alkalinity, Total	mg/L	545			465			465			465		475		460	425	410	460	455	445	455	432	435	416	485	457	475	465	470	580	470	435	
Alkalinity, Bicarbonate	mg/L	545			465			415			465		475		460	425	410	460	455	445	455	432	435	416	485	457	475	465	470	580	470	435	
Alkalinity, Carbonate	mg/L	ND			<10.0			<10.0			<10.0		<10.0		<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	
Alkalinity, Hydroxide	mg/L	ND			<10.0			<10.0			<10.0		<10.0		<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	
Chloride	mg/L	10.9			8.75			7.95			8.96		8.74		8.43	7.57	6.47	9.40	10.5	8.06	8.44	9.46	8.39	7.64	8.78	10.1	9.65	9.41	11.1	13.9	12.0	10.2	
Fluoride	mg/L	0.577			0.485			0.506			0.517		0.495		0.496	0.459	0.482	0.487	0.484	0.456	0.443	0.520	0.447	0.449	0.431	0.473	0.424	0.434	<0.500	0.420	0.472	0.413	
Sulfate as SO4	mg/L	240			229			192			205		204		222	190	169	201	221	186	212	190	197	181	179	187	191	184	194	199	216	183	
Total Organic Carbon (TOC)	mg/L	NA			4.54			4.35			4.69		4.79		4.56	4.57	4.30	4.72	4.82	4.45	4.58	4.35	4.48	4.30	4.56	4.67	4.31	4.36	4.55	4.84	5.47	4.21	
Nitrate/Nitrite as N	mg/L	<0.020			<0.020			<0.020			<0.020		<0.100		<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	
Ammonia as N ^	mg/L	NA			NA			NA			NA		NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ortho-Phosphate as P ^	mg/L	NA			NA			NA			NA		NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aluminum	mg/L	0.423			<0.050			<0.050			<0.050		<0.050		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.100	<0.100	<0.100	<0.050	<0.050	<0.050	<0.250	<0.250	<0.050	<0.050	
Arsenic	mg/L	0.0030			0.0029			0.0028			<0.0005		0.0035		0.0037	0.0034	0.0036	0.0032	0.0031	0.0029	0.0028	0.0033	0.0022	0.0025	0.0026	0.0038	0.0036	0.0033	0.0034	0.0027	0.0036	0.0031	
Cadmium	mg/L	<0.0001			<0.0001			<0.0001			<0.0001		<0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	<0.0001	<0.0001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
Copper	mg/L	0.0006			0.0008			0.0002			0.0004		0.0002		0.0006	0.0008	0.0004	0.0008	<0.0010	0.0003	0.0004	0.0002	0.0005	<0.0010	<0.0010	<0.0005	0.0006	0.0007	0.0009	<0.0025	<0.0005	0.0010	
Iron	mg/L	3.71			7.29			7.32			0.378		7.04		7.60	7.92	8.55	8.44	8.35	7.98	8.38	9.76	8.59	8.22	8.95	9.31	9.6	9.29	8.52	8.48	8.25	9.41	
Lead	mg/L	<0.0005			<0.0005			<0.0005			<0.0005		<0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0010	<0.0010	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
Manganese	mg/L	4.07			2.78			2.37			2.03		2.11		1.99	1.81	1.58	2.13	2.56	2.12	1.84	1.78	1.77	1.49	1.616	2.36	2.54	2.51	1.79	2.86	3.03	2.29	
Mercury (dissolved)	mg/L	ND			<0.0002			<0.0002			<0.0002		<0.0002		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
Mercury (dissolved low-level)	ng/L																																<5.00
Molybdenum	mg/L	0.0013			0.0024			0.0027			0.0028		0.0027		0.0030	0.0031	0.0038	0.0029	0.0026	0.0027	0.0029	0.0031	0.0025	0.0030	0.0032	0.0029	0.0027	0.003	0.0033	0.0024	0.0026	0.0030	
Selenium	mg/L	<0.001			0.0030			<0.001			<0.0010		<0.0010		<0.0010	0.0002	0.0016	<0.001	0.0001	<0.0010	<0.0010	<0.0010	<0.0005	<0.0020	<0.0020	<0.0002	<0.0001	<0.0010	0.0001	0.0057	0.0017	0.0011	<0.0010
Silica (SiO2)	mg/L	22.3			16.8			18			16.5		17.9		15.8	16.4	15.7	17.3	15.9	14.9	14.9	16.5	15.2	13.9	15.4	18.3	16.9	16.3	14.3	17.7	16.7	16.0	
Silicon	mg/L	10.4			7.86			8.41			7.72		8.35		7.37	7.67	7.34	8.10	7.46	6.96	6.96	7.69	7.09	6.48	7.28	7.86	7.61	6.68	8.29	7.81	7.50	7.50	
Uranium	mg/L	0.0010			0.0004			0.0004			0.0004		0.0004		0.0004	0.0004	0.0003	0.0005	0.0005	0.0005	0.0004	0.0004	0.0003	<0.0005	<0.0010	<0.0010	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
Zinc	mg/L	0.0039			0.0046			<0.002			<0.0040		<0.0020		<0.002	<0.002	<0.002	<0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0040	<0.0040	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020

Notes & Definitions:

^	one-time analysis
Y/N	yes or no
gpm	gallons per minute
deg C	degrees Celsius
SU	standard pH units
µS/cm	microsiemens per centimeter
mV	millivolts
mg/L	milligram per liter
pCi/L	picouries per liter
NM	not measured (field)
NA	not analyzed (lab)
ng/L	nanogram per liter

1. "c" values denote that quantification of that analyte is below the reporting level for the analytical laboratory, acceptable by environmental water quality laboratory industry standards.
2. Total alkalinity is measured by titration with hydrochloric acid to a set pH point, reporting this value as an equivalent amount of calcium carbonate. This value is then partitioned into bicarbonate, carbonate and hydroxide depending on the initial pH of the sample solution, each components reported as equivalent CaCO₃.
3. Industry standard Quality Assurance/Quality Control (QA/QC) protocol are followed for this hydrologic monitoring program by both GCC Energy and the contracted environmental water quality analytical laboratories. QA/QC results are not shown in this table.

GCC Energy Hydrologic Monitoring Data

		MW-1-A																																					
		2017												2018								2019				2020				2021				2022					
		Year		Q2		Q3			Q4			Q1		Q2		Q3		Q4		Q1		Q2		Q3		Q4		Q1		Q2		Q3		Q4		Q1		Q2	
		Month	6	7	8	9	9	10	11	12	1	2	3	4	5	6	7	8	11	2	5	8	11	2	5	9	11	2	5	8	11	3	4	Q1	Q2				
		Sample Date	6/7	7/18	8/23	9/7	9/26	10/26	11/16	12/5	1/2	2/9	3/22	4/11	5/10	—	7/23	8/7	11/1	2/20	5/30	8/14	11/5	2/12	5/28	9/1	11/16	2/15	5/20	8/23	11/17	3/17	6/14						
Lab Analysis (Y/N)		Y	N	N	N	Y	N	Y	N	N	Y	N	N	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y					
Field Parameters:																																							
Purge Flow Rate	gpm	NM	NM*	NM*	NM	NM	NM	NM	NM	0.1	NM	0.1	0.1	0.12	0.10	0.09	0.12	0.12	0.06	0.25	0.25	0.25	0.13	0.13	0.13	0.13	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25					
Total Purged	gal	12.8	NM*	NM*	NM	NM	NM	2.0	2.0	1.0	1.5	2	1.5	1	1.3	1.5	1.5	1.6	1.0	1.5	1.1	1.5	1.0	1.0	1.0	1.3	1.0	2.0	1.0	1.3	1.0	1.1	1.0	1.1					
Depth to Water	ft bgs	215.42	NM*	215.92	215.54	216.33	216.31	216.47	216.58	216.21	216.47	216.47	216.54	216.63	216.63	216.65	216.55	216.43	216.33	216.13	216.05	215.85	215.56	215.80	215.60	215.60	215.13	215.71	215.65	215.55	215.55	216.15	216.15						
Temperature	deg C	17.7	NM*	NM*	NM*	10.7	9.7	9.1	9.1	8.7	9.5	9.0	8.7	9.6	9.2	9.9	10.0	8.9	7.5	10.3	9.6	9.7	8.1	9.1	9.1	9.4	8.4	9.1	10.1	9.2	9.5	10.2	10.2						
SU	mg/L	7.78	NM*	NM*	NM*	7.35	7.38	7.29	7.28	7.25	7.19	7.37	7.28	6.8	6.97	6.99	7.05	7.01	7.13	6.96	7.05	7.00	7.13	7.18	7.22	7.24	7.19	7.30	7.35	7.17	7.22	7.31	7.31						
Specific Conductance	µS/cm	1362	NM*	NM*	1555	1563	1616	1650	1693	1700	1723	1735	1647	1761	1761	1734	1815	1781	1776	1681	1757	1737	1797	1855	1664	1670	1550	1647	1691	1792	1707	1717	1717						
Oxygen Reduction Potential	mV	-34.6	NM*	NM*	-54.7	-46.5	-50.0	-48.3	-49.6	-44.6	-52.8	-37.5	142.4	0.4	-26.4	-33.2	101.4	-11.8	25.4	-18.7	3.6	12.7	4.2	-20.1	111.4	23.8	-13.4	-6.5	38.2	-110.5	-51.9	-51.9	-51.9						
Lab Analytical Results:																																							
Hardness as CaCO3	mg/L	124				133		130		159		156		160	174	159	153	148	150	159	165	161	168	168	150	158	157	152	149	149	149	149	149						
pH (Lab)	SU	7.74				7.35		7.33		7.22		7.45		7.17	7.27	7.13	7.03	7.14	6.92	7.19	6.91	7.23	7.17	7.22	7.13	7.1	7.05	7.30	7.30	7.35	7.35	7.35	7.35						
Total Dissolved Solids (Lab)	mg/L	975				1080		1120		1100		1040	1130	1160	1150	1150	1150	1140	1150	1150	1150	1150	1150	1150	1150	1150	1150	1150	1150	1150	1150	1150	1150						
Calcium	mg/L	24.7				25.8		24.9		30.5		29.7		30.9	34.0	31.2	29.8	27.9	29.0	30.9	31.6	30.6	32.8	32.1	28.3	29.9	30.0	28.5	28.0										
Magnesium	mg/L	15.1				16.7		16.6		20.1		19.9		20.1	21.5	19.7	19.1	18.9	18.8	19.9	20.8	20.6	20.9	21.4	19.2	20.3	20.0	19.7	19.2										
Sodium	mg/L	324				329		325		348		327		333	358	357	319	348	333	337	349	348	353	357	314	333	340	321	319										
Potassium	mg/L	1.98				2.02		<5.00		<5.00		2.12		2.23	2.47	2.34	2.18	2.29	2.12	2.13	<5.00	2.19	<3.00	<5.00	<5.00	2.18	<5.00	2.34	2.23	2.01									
Alkalinity, Total	mg/L	375				450		380		415		353		385	395	375	355	368	420	360	340	325	366	400	400	370	440	405	425										
Alkalinity, Bicarbonate	mg/L	375				450		380		415		353		385	395	375	355	368	420	360	340	325	366	400	400	370	440	405	425										
Alkalinity, Carbonate	mg/L	<10.0				<10.0		<10.0		<10.0		<10.0		<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0						
Alkalinity, Hydroxide	mg/L	<10.0				<10.0		<10.0		<10.0		<10.0		<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0						
Chloride	mg/L	2.75				2.16		<5.00		2.19		<5.00		2.12	2.20	2.74	2.33	2.72	2.66	2.74	2.71	2.74	2.88	2.73	2.24	2.78	<5.00	2.80	2.46										
Fluoride	mg/L	0.268				0.245		<0.500		0.240		<0.5		0.260	0.240	0.266	0.242	0.252	0.246	0.234	0.228	0.24	0.264	0.212	0.233	0.24	<0.5	<0.200	0.250										
Sulfate as SO4	mg/L	427				432		511		518		522		515	511	508	494	537	495	506	532	510	508	553	531	507	458	503	516										
Total Organic Carbon (TOC)	mg/L	5.03				1.36		1.58		1.51		1.54		1.60	1.75	1.61	1.67	1.59	1.50	1.55	1.55	1.49	1.57	1.58	1.49	1.57	1.51	1.56	1.41										
Nitrate/Nitrite as N	mg/L	<0.200				<0.400		<0.100		<0.020		<0.020		<0.020	0.028	<0.020	<0.020	<0.020	0.020	<0.020	0.046	<0.020	<0.020	<0.020	<0.020	0.036	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020						
Ammonia as N ^	mg/L	NA				NA		NA		NA		NA		NA	NA	NA	NA	NA	0.387	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA						
Ortho-Phosphate as P ^	mg/L	NA				NA		NA		NA		NA		NA	NA	NA	NA	NA	<0.0500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA						
Aluminum	mg/L	<0.050				<0.050		<0.250		<0.250		<0.050		<0.050	<0.100	<0.100	<0.050	<0.050	<0.050	<0.100	<0.250	<0.050	<0.050	<0.050	<0.250	<0.050	<0.250	<0.100	<0.050	<0.050	<0.050	<0.050	<0.050						
Arsenic	mg/L	<0.0005				<0.0005		<0.0025		<0.0025		<0.0005		<0.0005	<0.0005	<0.0010	<0.0005	<0.0005	<0.0005	<0.0010	<0.0010	<0.0025	<0.0005	<0.0015	<0.0015	<0.0025	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005						
Cadmium	mg/L	<0.0001				<0.0001		<0.0005		<0.0005		<0.0001		<0.0001	<0.0002	<0.0002	<0.0001	<0.0001	<0.0002	<0.0002	<0.0005	<0.0005	<0.0003	<0.0015	<0.0015	<0.0025	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005						
Copper	mg/L	0.0043				0.0057		0.0045		0.0066		0.0041		0.0048	0.0048	0.0075	0.0064	0.0040	0.0147	0.034	0.0012	0.004	0.0024	0.0026	0.0059	0.0068	0.0086	0.0145	0.0112										
Iron	mg/L	0.128				0.367		<0.250		0.590		0.614		0.644	0.647	0.581	0.589	0.613	0.510	0.614	0.559	0.637	0.579	0.572	0.61	0.592	0.647	0.533	0.544										
Lead	mg/L	<0.0005				<0.0005		<0.0025		<0.0025		<0.0005		<0.0005	<0.0005	<0.0010	<0.0005	<0.0005	<0.0005	<0.0010	<0.0010	<0.0025	<0.0015	<0.0015	<0.0015	<0.0025	<0.0010	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005						
Manganese	mg/L	0.0260				0.0218		0.0259		0.0279		0.026		0.0242	0.0285	0.0281	0.0235	0.0270	0.0248	0.0303	0.0329	0.032	0.0316	0.0367	0.0316	0.0328	0.0287	0.0289	0.0295										
Mercury (dissolved)	mg/L	<0.0002				<0.0002		<0.0002		<0.0002		<0.0002		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002						
Mercury (dissolved low-level)	ng/L																																	<5.00					
Molybdenum	mg/L	0.0007				0.0010		<0.0025		<0.0025		0.0009		0.0008	0.0007	<0.0010	<0.0005	<0.0005	<0.0005	<0.0010	<0.0010	<0.0025	<0.0015	<0.0015	<0.0015	<0.0025	<0.0010	<0.0005	<0.0010	<0.0005	<0.0005	<0.0005	<0.0005						
Selenium	mg/L	<0.0010				<0.0010		<0.0050		<0.0050		<0.0010		<0.0010	<0.0020	<0.0010	<0.0010	<0.0010	<0.0010	<0.0020	<0.0020	<0.0050	<0.0030	<0.0030	<0.0050	<0.0020	<0.0010	<0.0005	<0.0010	<0.0005	<0.0005	<0.0005	<0.0005						
Silica (SiO2)	mg/L	12.3				11.9		8.27		11.2		11.2		11.4	12.0	11.1	11.2	11.6	11.0	11.1	10.4	11.1	11.5	11.3	10.7	10.7	11.6	11.2	10.8										
Silicon	mg/L	5.74				5.56		3.87		5.24		5.25		5.31	5.62	5.2	5.23	5.43	5.13	5.19	4.85	5.17	5.37	5.27	5.00	5.01	5.42	5.25	5.07										
Uranium	mg/L	0.0004				0.0002		<0.0005		<0.0005		0.0003		0.0002	0.0003	0.0002	0.0001	0.0001	0.0001	<0.0010	<0.0010	<0.0025	<0.0025	<0.0015	<0.0015	<0.0025	<0.0010	<0.0005	<0.0010	<0.0005	<0.0005	<0.0005	<0.0005						
Zinc	mg/L	0.0270				0.0088		<0.0100		<0.0100		0.0051		<0.0100	<0.002																								

Notes & Definitions:

*** La Plata County stage 3 fire restrictions prevented sampling activity

- one-time analysis

Y/N yes or no

gpm **gallons per**

deg C degrees C

SU standard pH units

S/cm microsiemens per centimeter

mV millivolts

mg/L milligram per liter

pCi/L picocuries per liter

NM not measured (field)

NA not analyzed

ng/L nanogram per liter

1. "*c*" values denote that the quantification of that analyte is below the reporting level for the analytical laboratory, acceptable by environmental water quality laboratory industry standards.
2. Total alkalinity is measured by titration with hydrochloric acid to a set pH point, reporting this value as an equivalent amount of calcium carbonate. This value is then partitioned into bicarbonate, carbonate and hydroxide depending on the initial pH of the sample solution, each components reported as equivalent CaCO₃.
3. Industry standard Quality Assurance/Quality Control (QA/QC) protocol are followed for this hydrologic monitoring program by both GCC Energy and the contracted environmental water quality analytical laboratories. QA/QC results are not shown in this table.

GCC Energy Hydrologic Monitoring Data

MW-1-MI																																						
Year	2017												2018												2019				2020				2021				2022	
Quarter	Q2	Q3			Q4			Q1			Q2		Q3			Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2								
Month	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	11	2	5	8	11	2	5	9	11	2	5	8	11	3	6								
Sample Date	6/7	7/18	8/23	9/26	10/26	11/16	12/5	1/2	2/9	3/22	4/11	5/10	--	7/23	8/7	11/1	2/20	5/30	8/14	11/5	2/12	5/28	9/1	11/16	2/15	5/20	8/23	11/17	3/17	6/14								
Lab Analysis (Y/N)	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N								
Field Parameters:																																						
Purge Flow Rate	gpm	NM	NM*	NM	NM	dry	dry	dry	dry	dry	dry	dry	***	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry								
Total Purged	gal	19.5	NM*	<0.5	NM																																	
Depth to Water	ft bgs	259.99	NM*	258.29	258.34																																	
Temperature	deg C	15.8	NM*	11.8	21.7																																	
pH	SU	8	NM*	7.94	7.86																																	
Specific Conductance	µS/cm	2032	NM*	2137	2119																																	
Oxygen Reduction Potential	mV	160.5	NM*	65.7	61.4																																	
Lab Analytical Results:																																						
Hardness as CaCO3	mg/L	231																																				
pH (Lab)	SU	8.14																																				
Total Dissolved Solids (Lab)	mg/L	1520																																				
Calcium	mg/L	46.7																																				
Magnesium	mg/L	27.9																																				
Sodium	mg/L	470																																				
Potassium	mg/L	2.55																																				
Alkalinity, Total	mg/L	600																																				
Alkalinity, Bicarbonate	mg/L	600																																				
Alkalinity, Carbonate	mg/L	<10.0																																				
Alkalinity, Hydroxide	mg/L	<10.0																																				
Chloride	mg/L	7.69																																				
Fluoride	mg/L	1.14																																				
Sulfate as SO4	mg/L	739																																				
Total Organic Carbon (TOC)	mg/L	5.14																																				
Nitrate/Nitrite as N	mg/L	0.103																																				
Aluminum	mg/L	<0.050																																				
Arsenic	mg/L	0.0029																																				
Cadmium	mg/L	<0.0001																																				
Copper	mg/L	0.0067																																				
Iron	mg/L	<0.050																																				
Lead	mg/L	0.0010																																				
Manganese	mg/L	0.0445																																				
Mercury (dissolved)	mg/L	<0.0002																																				
Mercury (dissolved low-level)	ng/L																																					
Molybdenum	mg/L	0.0796																																				
Selenium	mg/L	0.0028																																				
Silica (SiO2)	mg/L	11.6																																				
Silicon	mg/L	5.44																																				
Uranium	mg/L	0.0505																																				
Zinc	mg/L	1.52																																				

Notes & Definitions:

- *** La Plata County stage 3 fire restrictions prevented sampling activity
- Y/N yes or no
- gpm gallons per minute
- deg C degrees Celsius
- SU standard pH units
- µS/cm microsiemens per centimeter
- mV millivolts
- mg/L milligram per liter
- pCi/L picocuries per liter
- NM not measured (field)
- NA not analyzed (lab)
- ng/L nanogram per liter
- "<" values denote that the quantification of that analyte is below the reporting level for the analytical laboratory, acceptable by environmental water quality laboratory industry standards.
 - Total alkalinity is measured by titration with hydrochloric acid to a set pH point, reporting this value as an equivalent amount of calcium carbonate. This value is then partitioned into bicarbonate, carbonate and hydroxide depending on the initial pH of the sample solution, each components reported as equivalent CaCO3.
 - Industry standard Quality Assurance/Quality Control (QA/QC) protocol are followed for this hydrologic monitoring program by both GCC Energy and the contracted environmental water quality analytical laboratories. QA/QC results are not shown in this table.

GCC Energy Hydrologic Monitoring Data

MW-1-C																																	
Year	2017								2018								2019				2020				2021				2022				
Quarter	Q2	Q3			Q4			Q1			Q2			Q3			Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2		
Month	6	7	8	9	9	10	11	12	1	2	3	4	5	6	7	8	11	2	5	8	11	2	5	9	11	2	5	8	11	3	6		
Sample Date	6/7	7/18	8/23	9/7	9/26	10/26	11/16	12/5	1/2	2/9	3/22	4/11	5/10	—	7/23	8/7	11/18	2/20	5/30	8/14	11/5	2/12	5/28	9/1	11/16	2/15	5/20	8/23	11/17	3/17	6/14		
Lab Analysis (Y/N)	Y	N	N	N	Y	N	Y	N	N	Y	N	N	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		
Field Parameters:																																	
Purge Flow Rate	gpm	NM	NM*	NM*	NM	NM	NM	NM	NM	0.1	NM	0.1	0.1	***	0.05	0.1	0.10	0.06	0.02	0.03	0.01	0.01	0.10	0.05	0.05	0.05	0.05	0.01	0.13	0.13	0.13		
Total Purged	gal	5	NM*	NM*	NM	NM	1.00	1.00	1.00	1	1	1	1	1.25	1	1	1.10	1.00	1.10	1.00	1.00	1.00	0.75	0.80	1.00	1.00	2.00	1.00	1.25	1.00	1.00		
Depth to Water	ft bgs	216.5	NM*	216.91	216.95	216.59	216.52	216.48	216.52	216.38	216.38	216.37	216.35	216.41	216.41	216.05	216.04	216.41	216.20	216.02	216.04	216.12	216.10	216.41	216.66	216.66	216.66	216.66	216.66	216.66	216.66		
Temperature	deg C	16.0	NM*	NM*	NM	12.9	11.7	10.6	7.0	9.7	9.6	6.7	9.2	10.5	20.0	14.1	9.7	5.4	9.8	10.4	11.1	6.4	9.5	11.2	9.7	7.0	10.7	12.1	10.1	7.7	12.3		
pH	SU	7.52	NM*	NM*	NM	7.17	7.16	7.15	7.17	7.11	7.19	7.32	7.03	7.05	6.91	6.97	6.93	7.09	6.80	6.65	6.70	6.79	6.85	6.93	6.99	7.40	7.18	7.16	7.15	7.12	7.20		
Specific Conductance	µS/cm	2446	NM*	NM*	NM	2725	2738	2739	2778	2778	2738	2751	2700	2749	2693	2675	2751	2621	3139	3172	3080	3005	3002	2653	2709	2410	2249	2290	2554	2223	2362		
Oxygen Reduction Potential	mV	74.3	NM*	NM*	NM	77.4	31.7	23.9	13.0	6.2	-4.3	-29.6	-15.3	-42.3	-41.8	-32.5	-110.0	-23.4	27.6	10.5	51.0	50.7	-57.7	21.8	49.6	57.5	-16.8	0.0	-7.0	-92.9	-49.3		
Lab Analytical Results:																																	
Hardness as CaCO3	mg/L	498				1290		1180			1190			1130			1120	1180	1010	1820	1840	1700	1600	1590	1400	1420	1320	953	975	920	750	766	
pH (Lab)	SU	8.35				7.36		7.34			7.22			7.2			7.20	7.02	7.24	6.93	6.67	6.63	6.80	6.62	6.83	7.12	7.08	6.86	7.04	6.89	7.22	7.06	
Total Dissolved Solids (Lab)	mg/L	2020				2440		2360			2360			2340			2170	2200	1960	2880	2890	2750	2610	2460	2420	2450	2330	1910	1850	1840	1680	1770	
Calcium	mg/L	96.0				234		216			219			203			203	219	188	340	342	318	301	294	248	265	241	175	178	168	142	137	
Magnesium	mg/L	62.8				172		155			156			150			148	154	131	237	240	219	207	207	189	183	173	126	129	122	95.7	103	
Sodium	mg/L	506				242		253			260			239			239	255	265	146	119	119	143	155	168	194	206	196	214	234	229	240	
Potassium	mg/L	11.4				3.81		<5.00			<5.00			3.07			3.04	2.65	3.13	<5.00	<5.00	<5.00	3.05	<5.00	2.82	<5.00	<5.00	2.68	<5.00	<3.00	2.68	2.48	
Alkalinity, Total	mg/L	530				700		540			570			580			560	410	525	530	518	505	515	490	445	520	580	480	485	640	510	530	
Alkalinity, Bicarbonate	mg/L	530				700		540			570			580			560	410	525	530	518	505	515	490	445	520	580	480	485	640	510	530	
Alkalinity, Carbonate	mg/L	<10.0				<10.0		<10.0			<10.0			<10.0			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0		
Alkalinity, Hydroxide	mg/L	<10.0				<10.0		<10.0			<10.0			<10.0			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0		
Chloride	mg/L	24.2				6.97		8.03			7.78			7.75			5.97	6.22	6.36	10.2	9.31	8.78	8.54	8.20	8.15	7.14	7.13	5.3	5.04	7.12	4.87	5.55	
Fluoride	mg/L	1.59				0.864		0.955			1.03			0.96			0.888	0.924	0.975	0.67	0.525	0.565	0.615	0.695	0.705	0.750	0.804	0.654	0.716	0.755	0.712	1.04	
Sulfate as SO4	mg/L	1090				1350		1230			1160			1210			1090	1080	1070	1630	1730	1520	1400	1370	1280	1180	1150	940	872	886	805	908	
Total Organic Carbon (TOC)	mg/L	4.56				2.84		2.12			2.21			2.2			2.35	2.37	2.32	2.62	2.52	2.30	2.30	2.32	2.2	2.13	2.26	1.92	1.93	1.91	1.79	1.80	
Nitrate/Nitrite as N	mg/L	<2.00				<0.400		<0.100			<0.020			<0.020			0.036	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020		
Ammonia as N ^A	mg/L	NA				NA		NA			NA			NA			NA	NA	NA	NA	NA	0.140	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Ortho-Phosphate as P ^A	mg/L	NA				NA		NA			NA			NA			NA	NA	NA	NA	NA	<0.100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Aluminum	mg/L	<0.050				<0.050		<0.250			<0.250			<0.05			<0.05	<0.100	<0.100	<0.250	<0.250	<0.150	<0.150	<0.050	<0.050	<0.050	<0.250	<0.100	<0.250	<0.150	<0.050	<0.100	
Arsenic	mg/L	0.0029				0.0016		<0.0025			<0.0025			0.0051			0.0052	0.0035	0.0038	0.0048	0.0034	<0.0025	<0.0025	0.0019	<0.0025	<0.0005	<0.0025	<0.0025	<0.0025	<0.0010	0.0009	0.0024	
Cadmium	mg/L	<0.0001				<0.0001		<0.0005			<0.0005			<0.0001			<0.0001	<0.0001	<0.0002	<0.0001	<0.0002	<0.0005	<0.0005	<0.0003	<0.0005	<0.0001	<0.0005	<0.0025	<0.0025	<0.0010	<0.0005	<0.001	
Copper	mg/L	0.0088				0.0085		0.0036			0.0052			0.003			0.0049	0.0033	0.0054	0.0057	0.0014	0.0096	<0.0025	<0.0015	<0.0025	<0.0005	<0.0025	0.0042	0.0043	0.0064	0.0093	0.0086	
Iron	mg/L	<0.050				<0.050		<0.250			0.643			1.01			1.01	1.12	0.988	2.3	0.819	0.543	0.570	0.606	0.619	0.855	0.769	0.552	0.573	0.724	0.630	0.671	
Lead	mg/L	<0.0005				<0.0005		<0.0025			<0.0025			<0.0005			<0.0005	<0.0005	<0.0010	<0.0005	<0.0010	<0.0025	<0.0025	<0.0015	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0010	<0.0005	<0.0010	
Manganese	mg/L	0.0744				0.0853		0.0959			0.0989			0.153			0.140	0.106	0.0807	0.075	0.0562	0.0512	0.0537	0.0473	0.0445	0.0496	0.0482	0.0419	0.0383	0.0346	0.0362	0.0342	
Mercury (dissolved)	mg/L	<0.0002				<0.0002		<0.0002			<0.0002			<0.0002			<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002		
Mercury (dissolved low-level)	ng/L																																<5.00
Molybdenum	mg/L	0.0164				0.0049		<0.0025			<0.0025			0.0006			<0.0025	<0.0005	<0.0010	<0.0005	<0.0010	<0.0025	<0.0025	<0.0015	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.001	<0.0005	<0.001	
Selenium	mg/L	0.0136				0.0012		<0.0050			<0.0050			<0.001			<0.0050	0.0011	<0.0020	0.0016	0.0023	<0.0050	<0.0050	<0.0030	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0020	<0.0010	<0.0020	
Silica (SiO2)	mg/L	10.6				16.6		13.2			14.8			15.2			14.7	14.5	14	16.6	17.3	16.4	15.7	13.8	14.1	14.8	14.4	15.0	14.5	14.8	14.2	13.0	
Silicon	mg/L	4.94				7.77		6.16			6.94			7.09			6.87	6.78	6.55	7.75	8.07	7.65	7.35	6.47	6.6	6.93	6.75	7.00	6.79	6.94	6.66	6.07	
Uranium	mg/L	0.0500				0.0044		0.0028																									

GCC Energy Hydrologic Monitoring Data

MW-2-A																												
Year	2017							2018							2019				2020				2021				2022	
Quarter	Q1	Q2	Q3		Q4		Q1			Q2		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	
Month	3	6	7	8	10	11	12	1	2	3	4	5	8	11	2	5	8	11	2	5	9	11	2	5	8	11	3	6
Sample Date	3/30	6/7	7/18	8/23	10/30	11/16	12/5	1/2	2/9	3/22	4/11	5/10	8/7	11/1	2/20	5/29	8/14	11/6	2/11	5/27	9/1	11/24	2/15	5/20	8/24	11/17	3/23	6/14
Lab Analysis (Y/N)	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Field Parameters:																												
Purge Flow Rate	gpm	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry
Total Purged	gal																											
Depth to Water	ft bgs																											
Temperature	deg C																											
pH	SU																											
Specific Conductance	µS/cm																											
Oxygen Reduction Potential	mV																											
Lab Analytical Results:																												
Hardness as CaCO3	mg/L																											
pH (Lab)	SU																											
Total Dissolved Solids (Lab)	mg/L																											
Calcium	mg/L																											
Magnesium	mg/L																											
Sodium	mg/L																											
Potassium	mg/L																											
Alkalinity, Total	mg/L																											
Alkalinity, Bicarbonate	mg/L																											
Alkalinity, Carbonate	mg/L																											
Alkalinity, Hydroxide	mg/L																											
Chloride	mg/L																											
Fluoride	mg/L																											
Sulfate as SO4	mg/L																											
Total Organic Carbon (TOC)	mg/L																											
Nitrate/Nitrite as N	mg/L																											
Aluminum	mg/L																											
Arsenic	mg/L																											
Cadmium	mg/L																											
Copper	mg/L																											
Iron	mg/L																											
Lead	mg/L																											
Manganese	mg/L																											
Mercury (dissolved)	mg/L																											
Mercury (dissolved low-level)	ng/L																											
Molybdenum	mg/L																											
Selenium	mg/L																											
Silica (SiO2)	mg/L																											
Silicon	mg/L																											
Uranium	mg/L																											
Zinc	mg/L																											

Notes & Definitions:

Y/N	yes or no
gpm	gallons per minute
deg C	degrees Celsius
SU	standard pH units
µS/cm	microsiemens per centimeter
mV	millivolts
mg/L	milligram per liter
pCi/L	picocuries per liter
NM	not measured (field)
NA	not analyzed (lab)
ng/L	nanogram per liter

- "<" values denote that the quantification of that analyte is below the reporting level for the analytical laboratory, acceptable by environmental water quality laboratory industry standards.
- Total alkalinity is measured by titration with hydrochloric acid to a set pH point, reporting this value as an equivalent amount of calcium carbonate. This value is then partitioned into bicarbonate, carbonate and hydroxide depending on the initial pH of the sample solution, each components reported as equivalent CaCO3.
- Industry standard Quality Assurance/Quality Control (QA/QC) protocol are followed for this hydrologic monitoring program by both GCC Energy and the contracted environmental water quality analytical laboratories. QA/QC results are not shown in this table.

GCC Energy Hydrologic Monitoring Data

MW-2-MI																														
Year	2017												2018				2019				2020				2021				2022	
	Quarter	Q1	Q2	Q3		Q4		Q1			Q2		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2		
Month	3	6	7	8	10	11	12	1	2	3	4	5	8	11	2	5	8	11	2	5	9	11	2	5	8	11	3	6		
Sample Date	3/30	6/7	7/18	8/23	10/30	11/16	12/5	1/2	2/9	3/22	4/11	5/10	8/7	11/1	2/20	5/29	8/14	11/6	2/11	5/27	9/1	11/24	2/15	5/20	8/24	11/17	3/23	6/14		
Lab Analysis (Y/N)	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N		
Field Parameters:																														
Purge Flow Rate	gpm	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry		
Total Purged	gal																													
Depth to Water	ft bgs																													
Temperature	deg C																													
pH	SU																													
Specific Conductance	µS/cm																													
Oxygen Reduction Potential	mV																													
Lab Analytical Results:																														
Hardness as CaCO3	mg/L																													
pH (Lab)	SU																													
Total Dissolved Solids (Lab)	mg/L																													
Calcium	mg/L																													
Magnesium	mg/L																													
Sodium	mg/L																													
Potassium	mg/L																													
Alkalinity, Total	mg/L																													
Alkalinity, Bicarbonate	mg/L																													
Alkalinity, Carbonate	mg/L																													
Alkalinity, Hydroxide	mg/L																													
Chloride	mg/L																													
Fluoride	mg/L																													
Sulfate as SO4	mg/L																													
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Nitrate/Nitrite as N	mg/L																													
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Arsenic	mg/L																													
Cadmium	mg/L																													
Copper	mg/L																													
Iron	mg/L																													
Lead	mg/L																													
Manganese	mg/L																													
Mercury (dissolved)	mg/L																													
Mercury (dissolved low-level)	ng/L																													
Molybdenum	mg/L																													
Selenium	mg/L																													
Silica (SiO2)	mg/L																													
Silicon	mg/L																													
Uranium	mg/L																													
Zinc	mg/L																													

Notes & Definitions:

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deg C	degrees Celsius
SU	standard pH units
µS/cm	microsiemens per centimeter
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mg/L	milligram per liter
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NM	not measured (field)
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ng/L	nanogram per liter

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- Total alkalinity is measured by titration with hydrochloric acid to a set pH point, reporting this value as an equivalent amount of calcium carbonate. This value is then partitioned into bicarbonate, carbonate and hydroxide depending on the initial pH of the sample solution, each components reported as equivalent CaCO3.
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GCC Energy Hydrologic Monitoring Data

MW-2-C																												
Year	2017						2018								2019				2020				2021				2022	
Quarter	Q1	Q2	Q3		Q4		Q1			Q2		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	
Month	3	6	7	8	10	11	12	1	2	3	4	5	8	11	2	5	8	11	2	5	9	11	2	5	8	11	3	6
Sample Date	3/30	6/7	7/18	8/23	10/30	11/16	12/5	1/2	2/9	3/22	4/11	5/10	8/7	11/1	2/20	5/29	8/14	11/6	2/11	5/27	9/1	11/24	2/15	5/20	8/24	11/17	3/23	6/14
Lab Analysis (Y/N)	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Field Parameters:																												
Purge Flow Rate	gpm	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry
Total Purged	gal																											
Depth to Water	ft bgs																											
Temperature	deg C																											
pH	SU																											
Specific Conductance	µS/cm																											
Oxygen Reduction Potential	mV																											
Lab Analytical Results:																												
Hardness as CaCO3	mg/L																											
pH (Lab)	SU																											
Total Dissolved Solids (Lab)	mg/L																											
Calcium	mg/L																											
Magnesium	mg/L																											
Sodium	mg/L																											
Potassium	mg/L																											
Alkalinity, Total	mg/L																											
Alkalinity, Bicarbonate	mg/L																											
Alkalinity, Carbonate	mg/L																											
Alkalinity, Hydroxide	mg/L																											
Chloride	mg/L																											
Fluoride	mg/L																											
Sulfate as SO4	mg/L																											
Total Organic Carbon (TOC)	mg/L																											
Nitrate/Nitrite as N	mg/L																											
Aluminum	mg/L																											
Arsenic	mg/L																											
Cadmium	mg/L																											
Copper	mg/L																											
Iron	mg/L																											
Lead	mg/L																											
Manganese	mg/L																											
Mercury (dissolved)	mg/L																											
Mercury (dissolved low-level)	ng/L																											
Molybdenum	mg/L																											
Selenium	mg/L																											
Silica (SiO2)	mg/L																											
Silicon	mg/L																											
Uranium	mg/L																											
Zinc	mg/L																											

Notes & Definitions:

Y/N	yes or no
gpm	gallons per minute
deg C	degrees Celsius
SU	standard pH units
µS/cm	microsiemens per centimeter
mV	millivolts
mg/L	milligram per liter
pCi/L	picocuries per liter
NM	not measured (field)
NA	not analyzed (lab)
ng/L	nanogram per liter

- "<" values denote that the quantification of that analyte is below the reporting level for the analytical laboratory, acceptable by environmental water quality laboratory industry standards.
- Total alkalinity is measured by titration with hydrochloric acid to a set pH point, reporting this value as an equivalent amount of calcium carbonate. This value is then partitioned into bicarbonate, carbonate and hydroxide depending on the initial pH of the sample solution, each components reported as equivalent CaCO3.
- Industry standard Quality Assurance/Quality Control (QA/QC) protocol are followed for this hydrologic monitoring program by both GCC Energy and the contracted environmental water quality analytical laboratories. QA/QC results are not shown in this table.

GCC Energy Hydrologic Monitoring Data

MW-3-A																														
Year	2017												2018				2019				2020				2021				2022	
Quarter	Q1	Q2	Q3			Q4			Q1			Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2		
Month	3	6	7	8	9	10	11	12	1	2	3	4	5	8	11	2	5	8	11	2	5	8	12	2	5	8	11	2	5	
Sample Date	3/27	6/30	7/18	8/24	9/28	10/27	11/17	12/7	1/3	2/21	3/23	4/12	5/7	8/8	11/6	2/27	5/21	8/14	11/12	2/4	5/26	8/31	12/1	2/10	5/18	8/10	11/9	2/24	5/11	
Lab Analysis (Y/N)	Y	Y	N	N	Y	N	Y	N	N	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		
Field Parameters:																														
Purge Flow Rate	gpm	0.50	NM	NM	NM	NM	NM	NM	NM	0.10	NM	0.10	0.10	0.10	0.10	0.12	0.15	0.06	0.25	0.12	0.13	0.13	0.05	0.13	0.15	0.13	0.25	0.25		
Total Purged	gal	30.0	2.0	NM	NM	NM	NM	1.0	1.0	1.3	1.5	1.5	1.0	1.3	1.0	1.1	1.5	1.3	1.3	1.5	1.1	1.2	1.5	1.3	1.5	1.5	1.5	2.0		
Depth to Water	ft bgs	297.35	298.24	297.45	298.24	298.11	298.12	298.01	298.05	298.37	298.04	297.86	297.76	298.17	298.55	298.27	297.85	296.79	297.27	297.33	296.47	296.87	297.21	297.02	296.97	296.72	297.47	297.46		
Temperature	deg C	11.7	13.2	19.5	12.6	12.3	12.5	11.7	12.0	11.8	11.7	12.2	11.9	13.5	13.5	11.9	11.8	12.1	NM	13.1	11.5	13.2	13.1	11.9	12.1	12.4	13.6	12.2	11.4	
pH	SU	8.82	8.75	8.56	8.67	8.72	8.64	8.61	8.57	8.54	8.52	8.61	8.21	8.38	8.30	8.31	8.28	8.31	8.13	8.51	8.11	8.26	8.23	8.39	8.53	8.46	8.42	8.47	8.35	
Specific Conductance	µS/cm	2535	2446	2115	2524	2470	2430	2483	2494	2528	2506	2458	2415	2253	2336	2391	2355	2309	NM	2204	2211	2249	2112	2192	1930	1525	2091	2127	2055	
Oxygen Reduction Potential	mV	-269.0	-101.5	-55.3	-87.4	-142.3	-124.5	-125.6	-146.8	-120.3	-125.2	-181.6	-135.8	-138.2	-155.8	-164.6	-145.9	-132.3	-138.6	-120.1	-65.7	-156.8	-98.8	-89.3	-101.3	-157.1	-149.0	-156.8	-221.2	
Lab Analytical Results:																														
Hardness as CaCO3	mg/L	7.53	12.6			12.6		10.4		11.5		11.2	12.6	14.1	11.9	10.7	10.4	11.1	10.8	10.3	11.1	9.41	10.5	8.14	8.89	8.68	8.56	9.01		
pH (Lab)	SU	8.63	8.69			8.53		8.29		8.45		8.36	8.37	8.24	8.28	8.29	8.27	8.39	8.09	7.68	8.16	8.13	8.13	8.22	8.21	8.19	8.17	8.28		
Total Dissolved Solids (Lab)	mg/L	1630	1670			1630		1690		1680		1670	1600	1540	1500	1530	1520	1510	1500	1460	1380	1460	1410	1350	1420	1360	1220	1400		
Calcium	mg/L	2.00	3.67			3.63		3.27		3.33		3.2	3.71	4.15	3.55	3.16	3.08	3.34	3.14	3.07	3.02	2.83	3.07	2.48	2.59	2.53	2.42	2.63		
Magnesium	mg/L	0.616	0.823			0.859		0.550		0.776		0.774	0.811	0.913	0.739	0.692	0.655	0.680	0.723	0.645	0.866	0.568	0.698	0.475	0.586	0.577	0.610	0.594		
Sodium	mg/L	566	585			589		551		562		542	562	605	543	525	553	528	520	507	510	505	536	471	462	448	462	473		
Potassium	mg/L	1.72	2.02			2.04		<5.00		<2.00		1.8	<2.00	2.17	<2.00	1.92	<2.00	<5.00	<3.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<2.00	1.34	<2.00		
Alkalinity, Total	mg/L	530	470			500		490		430		480	480	475	540	450	459	420	460	430	440	470	520	530	465	485	495	560		
Alkalinity, Bicarbonate	mg/L	380	470			440		460		360		480	420	385	330	430	423	420	460	400	440	450	520	530	465	435	455	480		
Alkalinity, Carbonate	mg/L	150	<10.0			60.0		30.0		70.0		<10.0	60.0	90.0	210	20	36.0	<10.0	<10.0	30.0	<10.0	20	<10.0	<10.0	<10.0	<10.0	40.0	80.0		
Alkalinity, Hydroxide	mg/L	<10.0	<10.0			<10.0		<10.0		<10.0		<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0		
Chloride	mg/L	16.1	17.4			18.5		16.9		16.4		16.1	15.1	16.0	15.2	15	15.0	14.7	13.9	13.9	13.5	14	13.5	14	14.1	14.6	14.2	14.2		
Fluoride	mg/L	0.464	0.488			0.535		<0.500		<0.500		<0.5	NA	0.383	0.406	0.404	0.396	<0.500	0.370	0.374	0.366	0.372	0.336	0.352	0.366	0.314	0.356	0.324		
Sulfate as SO4	mg/L	729	802			840		730		812		756	706	682	716	699	724	633	637	656	624	644	600	601	599	515	584	555		
Total Organic Carbon (TOC)	mg/L	3.52	10.0			7.26		6.07		5.32		4.7	4.62	4.52	4.15	4.10	3.84	3.81	3.42	3.48	3.39	3.15	3.16	3.18	3.01	3.02	2.96	2.84		
Nitrate/Nitrite as N	mg/L	<0.100	<0.100			<0.020		<0.020		<0.020		<0.020	<0.020	<0.020	0.266	<0.020	<0.020	<0.020	0.024	0.026	0.039	0.032	<0.020	0.024	<0.020	<0.020	0.022	0.030		
Ammonia as N ^	mg/L	NA	NA			NA		NA		NA		NA	NA	NA	NA	NA	NA	0.354	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Ortho-Phosphate as P ^	mg/L	NA	NA			NA		NA		NA		NA	NA	NA	NA	NA	NA	0.0730	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Aluminum	mg/L	<0.050	<0.050			<0.050		<0.250		<0.100		<0.050	<0.050	<0.100	<0.100	<0.050	<0.100	<0.250	<0.150	<0.250	<0.250	<0.250	<0.250	<0.150	<0.250	<0.100	<0.050	<0.100		
Arsenic	mg/L	0.0025	<0.0025			<0.0025		<0.0025		<0.0025		0.0006	<0.0025	<0.0010	<0.0010	<0.0025	<0.0010	<0.0010	<0.0010	<0.0010	<0.0025	<0.0025	0.0026	0.0006	0.001	0.0018	0.0009	<0.0010		
Cadmium	mg/L	<0.0001	<0.0005			<0.0005		<0.0005		<0.0005		<0.0001	<0.0001	<0.0002	<0.0002	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0010	<0.0005	<0.0010		
Copper	mg/L	0.0061	0.0081			0.0080		0.0079		0.0236		0.0063	0.0117	0.0086	0.0137	0.0078	0.0067	0.0039	0.0037	0.0021	0.0051	0.0055	0.0037	0.0157	0.0156	0.0113	0.0088	0.0114		
Iron	mg/L	<0.050	<0.050			<0.050		<0.250		<0.100		<0.05	<0.05	<0.100	<0.100	<0.050	<0.100	<0.250	<0.150	<0.250	<0.250	<0.250	<0.250	<0.150	<0.250	<0.100	<0.050	<0.100		
Lead	mg/L	<0.0005	<0.0025			<0.0025		<0.0025		<0.0025		<0.0005	<0.0005	<0.0010	<0.0010	<0.0025	<0.0010	<0.0010	<0.0010	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.001	<0.0010	<0.0010	<0.0005		
Manganese	mg/L	0.0042	0.0251			0.0194		0.0269		0.0232		0.018	0.0222	0.0187	0.0172	0.0185	0.0166	0.0140	0.0162	0.0136	0.0120	0.0125	0.0128	0.0121	0.0096	0.0101	0.0113	0.0100		
Mercury (dissolved)	mg/L	<0.0002	<0.0002			<0.0002		<0.0002		<0.0002		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002		
Mercury (dissolved low-level)	ng/L																											<5.00		
Molybdenum	mg/L	0.0005	0.0274			0.0091		0.0078		0.0065		0.0046	0.0043	0.0033	0.003	0.003	0.0018	0.0027	0.0022	0.0015	<0.0025	<0.0025	<0.0025	0.0015	0.0013	<0.001	0.0012	<0.001		
Selenium	mg/L	0.0577	<0.0050			<0.0050		<0.0050		<0.0050		0.0109	<0.0050	0.0028	0.0039	<0.005	0.0020	<0.0020	<0.0020	0.0033	0.0086	<0.0050	0.129	0.0276	0.0167	0.0855	0.0162	0.0029		
Silica (SiO2)	mg/L	10.1	10.9			11.6		7.66		11.1		11	12.0	12.8	11.7	11	12.7	11.8	11.6	10.5	11.0	11.2	11.3	10.1	10.7	10.9	10.8	10.7		
Silicon	mg/L	4.70	5.10			5.41		3.58		5.18		5.17	5.62	5.97	5.46	5.16	5.95	5.53	5.43	4.92	5.14	5.22	5.28	4.73	4.98	5.11	5.07	5.01		
Uranium	mg/L	0.0002	0.0040			0.0051		0.0036		0.0030		0.0026	0.0026	0.0027	0.0018	0.0014	0.0012	0.0011	0.0010	<0.0025	<0.0025	<0.0025	<0.0025	<0.0010	<0.0010	<0.0005	<0.001			
Zinc	mg/L	0.0031	<0.0100			<0.0100		<0.0100		<0.0100		<0.0100	<0.002	<0.002	<0.0040	<0.001	<0.0080	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0100	<0.0100	<0.0100	<0.0020	<0.0040	<0.0020		

GCC Energy Hydrologic Monitoring Data

MW-3-MI																																		
Year	2017								2018								2019								2020				2021				2022	
Quarter	Q1	Q2	Q3			Q4			Q1			Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2						
Month	3	6	7	8	9	10	11	12	1	2	3	4	5	8	11	2	5	8	11	2	5	8	12	2	5	8	11	2	5					
Sample Date	3/27	6/30	7/18	8/16	9/28	10/27	11/17	12/7	1/3	2/21	3/23	4/12	5/7	8/8	11/6	2/27	5/21	8/21	11/12	2/4	5/26	8/31	12/1	2/10	5/18	8/10	11/9	2/24	5/11					
Lab Analysis (Y/N)	Y	Y	N	N	Y	N	Y	N	N	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y						
Field Parameters:																																		
Purge Flow Rate	gpm	0.50	NM	NM	NM	NM	NM	NM	NM	0.10	NM	0.10	0.10	0.10	0.10	0.12	0.12	0.06	0.25	0.50	0.25	0.13	0.13	0.10	0.13	0.13	0.25	0.25						
Total Purged	gal	19.0	2.0	NM	NM	NM	NM	1.0	1.0	1.3	1.5	1.5	1.0	1.3	1.0	1.1	1.5	1.3	2.0	1.0	1.5	1.3	1.8	1.3	1.3	1.5	1.5	1.3	2.0					
Depth to Water	ft bgs	304.49	241.15	240.46	240.53	240.46	240.44	240.44	240.58	240.73	240.55	240.65	240.84	241.04	241.97	242.13	242.32	246.55	243.07	242.85	243.05	243.6	243.9	243.93	244.25	244.28	244.15	242.90	244.05					
Temperature	deg C	10.0	12.6	22.0	12.9	11.0	12.1	11.7	11.7	11.9	11.3	11.9	11.8	12.6	13.0	12.4	11.6	11.3	13.2	12.3	11.6	12.6	12.8	11.7	11.5	12.8	13.0	11.9	11.4					
pH	SU	9.34	8.94	8.46	8.90	8.74	8.90	8.86	8.86	8.84	8.83	8.84	8.51	8.48	8.49	8.46	8.51	8.55	8.71	8.75	8.71	8.92	9.01	9.09	9.03	9.06	9.13	9.11	9.07					
Specific Conductance	µS/cm	1907	1699	1402	1598	1737	1729	1745	1786	1790	1810	1771	1772	1727	1709	1746	1753	1739	1691	1739	1758	1737	1560	1555	1519	1232	1647	1765	1705					
Oxygen Reduction Potential	mV	-87.0	-54.5	-26.4	-108.2	-107.3	-113.8	-124.2	-163.1	-136.0	-131.4	-160.7	-99.9	-103.9	-127.8	-176.5	-113.0	-84.5	43.9	-130.8	-104.3	-174.5	-111.0	-132.4	-94.6	-120.4	-142.9	-163.3	-207.2					
Lab Analytical Results:																																		
Hardness as CaCO3	mg/L	4.85	8.73			9.02		7.75		9.92			8.65	8.63	8.88	7.63	6.84	7.98	6.64	6.50	7.25	6.39	5.94	6.63	5.06	5.39	5.21	5.28	5.13					
pH (Lab)	SU	8.95	8.75			8.72		8.72		8.66			8.56	8.58	8.34	8.5	8.45	8.58	8.62	8.61	8.59	8.87	8.77	8.72	8.84	8.81	8.88	8.78	8.87					
Total Dissolved Solids (Lab)	mg/L	1550	1120			1140		1080		1170			1210	1110	1120	1120	1170	1010	1130	1130	1060	1160	1120	1110	1180	1130	1070	1140						
Calcium	mg/L	1.32	2.32			2.34		2.06		2.22			1.91	1.95	2.03	1.87	1.7	2.04	1.73	1.63	1.76	1.62	1.42	1.66	1.28	1.34	1.25	1.30	1.32					
Magnesium	mg/L	0.374	0.714			0.775		0.632		1.07			0.945	0.911	0.926	0.715	0.629	0.703	0.561	0.591	0.694	0.570	0.579	0.606	0.454	0.5	0.508	0.496	0.442					
Sodium	mg/L	420	430			440		411		459			417	446	476	434	419	454	437	437	427	431	431	468	410	403	390	413	415					
Potassium	mg/L	2.15	2.21			1.93		<5.00		<2.00			1.63	<2.00	<2.00	1.39	1.65	<2.00	<5.00	<2.00	<5.00	<3.00	<4.00	<5.00	<2.00	<2.00	<2.00	1.27	<2.00					
Alkalinity, Total	mg/L	740	675			700		660		700			680	730	720	685	755	720	690	705	680	625	770	690	690	705	705	740	740					
Alkalinity, Bicarbonate	mg/L	510	555			600		570		600			500	630	610	485	605	590	610	645	550	465	690	450	550	555	565	580	580					
Alkalinity, Carbonate	mg/L	230	120			100		90.0		100			180	100	110	200	150	130	80.0	60.0	130	160	80	240	140	150	140	160	160					
Alkalinity, Hydroxide	mg/L	<10.0	<10.0			<10.0		<10.0		<10.0			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0					
Chloride	mg/L	8.66	10.1			10.7		10.6		10.7			10.7	8.54	8.83	9.21	9.25	10.2	9.13	9.21	9.61	9.45	10	9.84	10.5	10.4	10.4	10.6	10.2					
Fluoride	mg/L	0.952	1.34			1.26		1.26		1.30			1.2	1.16	1.19	1.21	1.22	1.19	1.19	1.13	1.13	1.09	1.12	1.03	1.09	1.07	0.980	1.10	0.982					
Sulfate as SO4	mg/L	165	241			247		254		245			250	226	230	232	229	236	224	227	231	222	110	223	227	228	230	233	213					
Total Organic Carbon (TOC)	mg/L	8.34	14.8			10.9		10.3		9.24			8.67	7.83	7.28	6.73	6.56	6.17	5.78	5.58	6.07	5.79	5.46	5.34	5.33	5.4	5.26	5.14	4.94					
Nitrate/Nitrite as N	mg/L	<0.020	<0.020			<0.020		<0.020		<0.020			<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020					
Ammonia as N ^	mg/L	NA	NA			NA		NA		NA			NA	NA	NA	NA	NA	NA	0.317	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA				
Ortho-Phosphate as P ^	mg/L	NA	NA			NA		NA		NA			NA	NA	NA	NA	NA	NA	0.348	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA				
Aluminum	mg/L	<0.050	0.102			<0.050		<0.250		<0.100			<0.050	<0.050	<0.10	<0.050	<0.050	0.167	<0.250	<0.100	<0.250	<0.150	<0.200	<0.250	<0.100	<0.100	<0.100	<0.050	<0.100					
Arsenic	mg/L	0.0134	0.0167			0.0131		0.0135		0.0160			0.0152	0.0127	0.0104	0.0149	0.0107	0.0142	0.0099	0.0093	0.0086	0.0061	0.007	0.0083	0.0091	0.0091	0.0078	0.0095	0.0082					
Cadmium	mg/L	<0.0001	<0.0005			<0.0005		<0.0005		<0.0001			<0.0001	<0.0001	<0.0002	<0.0001	<0.0005	<0.0001	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0004	<0.0005	<0.0005	<0.0010	<0.0010	<0.0005					
Copper	mg/L	0.0055	0.0058			0.0065		0.0059		0.0122			0.0048	0.0071	0.0073	0.0068	0.0063	0.0049	0.0037	0.0024	<0.0025	0.0046	0.0045	0.0031	0.0131	0.0143	0.0097	0.0072	0.0126					
Iron	mg/L	<0.050	<0.100			<0.050		<0.250		<0.100			<0.05	<0.05	<0.1	<0.050	<0.050	<0.100	<0.250	<0.100	<0.250	<0.150	<0.200	<0.250	<0.100	<0.100	<0.100	<0.050	<0.100					
Lead	mg/L	0.0024	<0.0025			<0.0025		<0.0025		<0.0005			<0.0005	<0.0005	<0.0010	<0.0005	<0.0025	<0.0005	<0.0010	<0.0010	<0.0025	<0.0025	<0.0020	<0.0025	<0.0005	<0.0010	<0.0010	<0.0005	<0.0010					
Manganese	mg/L	0.0022	0.0058			0.0033		0.0045		0.0049			0.006	0.0054	0.0072	0.0078	0.0082	0.0079	0.0099	0.0095	0.0102	0.0072	0.007	0.0069	0.0057	0.0058	0.0054	0.0051	0.0049					
Mercury (dissolved)	mg/L	<0.0002	<0.0002			<0.0002		<0.0002		<0.0002			<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002					
Mercury (dissolved low-level)	ng/L																													<5.00				
Molybdenum	mg/L	0.0061	0.0211			0.0148		0.0152		0.0170			0.016	0.0149	0.0158	0.0157	0.0167	0.0277	0.0372	0.0204	0.0195	0.0149	0.0163	0.0162	0.016	0.0149	0.0140	0.0148	0.0143					
Selenium	mg/L	0.0013	<0.0050			<0.0050		<0.0050		0.0010			0.0019	<0.0050	<0.002	0.0034	<0.005	<0.0010	<0.0020	<0.0020	<0.0050	<0.0050	<0.004	0.0462	0.0033	<0.0020	0.0091	0.0018	<0.0020					
Silica (SiO2)	mg/L	7.97	8.18			9.05		5.35		9.33			8.83	9.49	10.2	8.95	8.85	9.73	9.46	8.80	8.24	8.84	9.11	9.64	8.11	8.77	8.82	9.04	8.63					
Silicon	mg/L	3.73	3.82			4.23		2.50		4.36			4.13	4.44	4.76	4.18	4.14	4.55	4.42	4.11	3.85	4.13	4.26	4.51	3.79	4.1	4.12	4.22	4.03					
Uranium	mg/L	0.0049	0.0084			0.0140		0.0124		0.0125			0.0126	0.0111	0.0110	0.011	0.0085	0.0080	0.0070	0.0063	0.0059	0.0043	0.0049	0.0049	0.0043	0.0041	0.0033	0.0035	0.0032					
Zinc	mg/L	0.0405	<0.0100			<0.0100		<0.0100		<0.0020			<0.0023	0.0023	<0.0040	<0.0040	<0.0070	<0.0040	<0.0040	<0.0060	<0.0100	<0.0100	<0.0080	<0.0100	<0.0020	<0.0040	<0.0040	<0.0020	<0.0040					

GCC Energy Hydrologic Monitoring Data

MW-3-C																															
Year	2017								2018								2019				2020				2021				2022		
Quarter	Q1	Q2	Q3			Q4			Q1		Q2		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
Month	3	6	7	8	9	10	11	12	1	2	3	4	5	8	11	2	5	9	11	3	5	8	12	2	5	8	11	2	5		
Sample Date	3/27	6/30	7/27	8/24	9/28	10/27	11/17	12/7	1/3	2/21	3/23	4/12	5/7	8/8	11/6	2/27	5/21	9/17	11/12	3/13	5/26	8/31	12/1	2/10	5/18	8/10	11/10	2/24	5/11		
Lab Analysis (Y/N)	Y	Y	N	N	Y	N	Y	N	N	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		
Field Parameters:																															
Purge Flow Rate	gpm	0.50	NM	NM	NM	NM	NM	NM	NM	0.10	NM	0.10	0.10	0.10	0.10	0.06	0.06	0.13	0.13	0.10	0.03	0.08	0.13	0.13	0.13	0.13	0.13	0.15	0.10		
Total Purged	gal	20.0	2.0	NM	NM	NM	NM	1.0	1.0	1.0	1.5	1.5	1.5	1.0	1.3	1.1	1.3	1.5	10.0	1.5	11.0	1.1	1.3	1.5	1.3	1.5	1.3	1.5	1.5		
Depth to Water	ft bgs	304.21	296.3	296.93	296.87	297.43	297.46	297.43	297.35	297.01	296.66	296.57	296.62	296.78	297.12	296.80	296.39	295.56	295.70	295.50	299.35	294.99	294.60	295.26	295.97	295.25	295.70	295.68	294.45	295.11	
Temperature	deg C	10.5	12.9	13.1	12.5	11.8	12.7	11.5	11.7	11.7	11.4	11.6	12.2	13.0	13.3	11.5	11.0	11.4	13.5	12.5	11.3	13.4	15.0	14.0	9.9	12.3	15.6	9.6	9.4	13.2	
pH	µS	8.61	8.57	8.51	8.46	8.44	8.48	8.41	8.48	8.43	8.43	8.45	8.25	8.28	8.26	8.17	8.28	8.29	8.31	8.20	7.98	8.44	8.45	8.73	8.71	8.50	8.71	8.85	8.62	8.43	
Specific Conductance	µS/cm	3549	3588	3815	4112	4351	4412	4659	4596	4923	4864	5063	5019	4916	4953	5127	5155	5184	5144	5144	4921	3143	5039	4251	4426	3755	4571	5244	4564	4694	
Oxygen Reduction Potential	mV	-129.0	-87.2	-137.5	-128.8	-149.9	-198.3	-200.7	-222.2	-187.9	-183.5	-155.4	-154.7	-161.4	-180.5	-217.6	-185.4	-188.5	-151.8	-184.4	-155.0	-240.5	-174.4	-150.0	-202.7	-149.6	-255.3	-227.4	-325.6	-223.4	
Lab Analytical Results:																															
Hardness as CaCO3	mg/L	14.4	11.8			15.1		14.9			16.1			40.3	17.9	21.7	17.3	16.8	18.6	18.6	18.3	16.0	18.1	16.9	18.5	14.8	16.9	16.7	16.0	17.4	
pH (Lab)	µS	8.5	8.48			8.35		8.28			8.35			8.34	8.31	8.24	8.2	8.23	8.31	8.12	7.98	8.41	8.36	8.36	8.43	8.38	8.47	8.87	8.44	8.47	
Total Dissolved Solids (Lab)	mg/L	2130	2360			3070		3310			3540			3610	3520	3360	3300	3440	3500	3390	3220	3180	3170	3280	3200	3230	3300	3200	3270	3250	
Calcium	mg/L	3.60	2.87			3.50		3.58			3.81			7.28	4.01	4.70	4.05	3.74	4.30	4.23	4.26	3.81	3.97	3.72	4.25	3.59	3.84	3.76	3.66	4.10	
Magnesium	mg/L	1.31	1.12			1.55		1.44			1.59			5.38	1.92	2.41	1.75	1.8	1.91	1.94	1.86	1.58	1.98	1.84	1.92	1.42	1.77	1.78	1.67	1.74	
Sodium	mg/L	796	890			1100		1130			1200			1350	1220	1460	1270	1100	1360	1300	1280	1240	1250	1250	1360	1420	1220	1170	1200	1260	
Potassium	mg/L	3.47	3.24			4.01	<5.00			<10.0	1.50			<5.00	<5.00	<5.00	5.24	<5.00	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<6.00	<5.00	<5.00	<5.00	<5.00	
Alkalinity, Total	mg/L	1490	1570			1690		1880			1910			1760	1730	2050	2000	2110	2190	2130	2160	2050	1820	2090	2170	2130	2140	2230	2180	2170	
Alkalinity, Bicarbonate	mg/L	1360	1480			1650		1830			1810			1600	1670	1900	1830	2000	2020	2070	2000	1800	1690	1970	1710	1910	1950	1950	1820	1870	
Alkalinity, Carbonate	mg/L	130	90.0			40.0		50.0			100			160	60.0	150	170	110	170	60.0	160	250	130	120	460	220	190	280	360	300	
Alkalinity, Hydroxide	mg/L	<10.0	<10.0			<10.0		<10.0			<10.0			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	
Chloride	mg/L	182	330			477		506			549			544	524	561	577	575	620	542	549	555	552	578	574	577	582	462	608	605	
Fluoride	mg/L	4.89	4.94			4.52		4.34			4.15			3.52	3.84	4.04	4.04	3.91	3.78	3.66	3.61	3.51	3.47	3.53	3.37	3.34	3.36	3.15	3.37	3.06	
Sulfate as SO4	mg/L	73.4	73.5			46.4		24.5			<10.0			<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	
Total Organic Carbon (TOC)	mg/L	10.6	58.5			219		251			337			343	306	141	122	129	132	107	81.9	23.4	17.1	15.7	15.7	16.3	15.7	16.4	17.9	16.2	
Nitrate/Nitrite as N	mg/L	<0.020	<0.400			<0.400		<0.020			<0.020			<0.02	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.02	<0.020	<0.020	<0.020	<0.040	<0.020	<0.020	
Ammonia as N ⁺	mg/L	NA	NA			NA		NA			NA			NA	NA	NA	NA	NA	NA	NA	0.500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ortho-Phosphate as P ⁺	mg/L	NA	NA			NA		NA			NA			NA	NA	NA	NA	NA	NA	0.212	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aluminum	mg/L	<0.050	<0.100			<0.050		<0.250			<0.500			1.47	<0.500	<0.250	<0.250	<0.500	<0.250	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.300	<0.250	<0.250	<0.250	<0.250
Arsenic	mg/L	0.0115	0.0088			0.0098		0.0091			0.0194			0.0168	0.0148	0.0155	0.0218	0.0171	0.0192	0.0188	0.0087	0.0133	0.0106	0.0125	0.0113	0.0163	0.0195	0.0170	0.0157	0.0130	
Cadmium	mg/L	<0.0001	<0.0010			<0.0010		<0.0005			<0.0005			<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0010	<0.0001	<0.0005	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
Copper	mg/L	0.0109	0.0147			0.0174		0.0160			0.0409			0.0183	0.0257	0.0227	0.0223	0.0168	0.0102	0.0109	0.0069	0.0064	0.0136	0.0156	0.0102	0.0499	0.0434	0.0323	0.0287	0.0347	
Iron	mg/L	<0.050	<0.050			<0.050		<0.250			<0.500			0.252	<0.500	<0.250	0.344	0.328	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.400	0.0640	0.310	0.260	0.305	
Lead	mg/L	0.0085	<0.0050			<0.0050		<0.0025			<0.0025			<0.0025	<0.0025	<0.0025	<0.0025	<0.0005	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0050	<0.0050	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
Manganese	mg/L	0.0091	0.0188			0.0178		0.0202			0.0307			0.0275	0.0243	0.0252	0.0483	0.063	0.0378	0.0266	0.0245	0.0150	0.0102	0.0079	0.0052	0.0046	0.0034	0.0032	0.0028	0.0040	
Mercury (dissolved)	mg/L	<0.0002	<0.0002			<0.0002		<0.0002			<0.0002			<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Mercury (dissolved low-level)	ng/L																														<5.00
Molybdenum	mg/L	0.0143	0.0291			0.0241		0.0241			0.0221			0.0189	0.0155	0.0140	0.0134	0.0121	0.0081	0.0075	0.0082	0.0085	0.0076	0.0075	0.008	0.0069	0.0061	0.0061	0.0059	0.0065	
Selenium	mg/L	0.0233	0.0121			0.0349		0.0240			0.0383			0.0268	0.0232	0.0261	0.0464	0.0203	0.0073	0.0125	0.0129	0.0135	0.0191	0.027	0.0411	0.0372	0.0319	0.0335	0.0185		
Silica (SiO2)	mg/L	7.82	8.86			9.16		6.01			<10.0			9.69	8.68	10.7	8.24	8.35	9.06	<10.7	<10.7	<10.7	<10.7	<10.7	<10.7	<10.7	<10.7	<10.7	<10.7	<10.7	<10.7
Silicon	mg/L	3.66	4.14			4.28		2.81			<5.0			4.53	4.06	5.01	3.85	3.9	4.24	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
Uranium	mg/L	0.0091	0.0102			0.0137		0.0100			0.0091			0.0087	0.0089	0.0113	0.0077	0.0046	0.0053	0.0043	0.0045	0.0033	<0.0050	<0.0050	<0.0050	0.0025	0.0025	<0.0025	<0.0025	<0.0025	<0.0025
Zinc	mg/L	0.375	<0.0200			<0.0200		<0.0100			<0.0100			<0.0100	0.0664	0.0814	0.123	0.128	0.0567	0.0886	<0.0100	<0.0100	<0.0200	0.0332	0.0294	0.0363	0.0447	0.0377	0.0404	0.0181	

Notes & Definitions:

Y/N	yes or no
gpm	gallons per minute
deg C	degrees Celsius
SU	standard pH units
µS/cm	microsiemens per centimeter
mV	millivolts
mg/L	milligram per liter
pCi/L	pico curies per liter
NM	not measured (field)
NA	not analyzed (lab)
ng/L	nanogram per liter

1. "*c*" values denote that the quantification of that analyte is below the reporting level for the analytical laboratory, acceptable by environmental water quality laboratory industry standards.
2. Total alkalinity is measured by titration with hydrochloric acid to a set pH point, reporting this value as an equivalent amount of calcium carbonate. This value is then partitioned into bicarbonate, carbonate and hydroxide depending on the initial pH of the sample solution, each components reported as equivalent CaCO₃.
3. Industry standard Quality Assurance/Quality Control (QA/QC) protocol are followed for this hydrologic monitoring program by both GCC Energy and the contracted environmental water quality analytical laboratories. QA/QC results are not shown in this table.

GCC Energy Hydrologic Monitoring Data

MW-4-A																															
Year	2017												2018				2019				2020				2021						
	Q1	Q2	Q3			Q4			Q1			Q2			Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
Quarter	3	6	7	8	9	10	11	12	1	2	3	4	5	8	11	2	5	8	11	2	5	8	11	2	5	8	11	2	5		
Month	3/29	6/30	7/19	8/23	9/28	10/27	11/17	12/7	1/3	2/21	3/23	4/12	5/14	8/8	11/5	2/27	5/22	8/15	11/12	2/6	5/26	8/27	11/25	2/10	5/18	8/10	11/10	2/23	5/11		
Sample Date	Y	Y	N	N	Y	N	Y	N	N	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			
Lab Analysis (Y/N)	Y	Y	N	N	Y	N	Y	N	N	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			
Field Parameters:																															
Purge Flow Rate	gpm	NM	NM	NM	NM	NM	NM	NM	NM	0.10	NM	0.10	0.10	0.10	0.10	0.06	0.06	0.06	0.13	0.03	0.03	0.13	0.13	0.05	0.13	0.25	0.20	0.22	0.13		
Total Purged	gal	19.0	2.0	1.5	0.5	1.0	1.0	1.0	1.0	1.3	1.5	1.5	1.0	1.5	1.5	1.1	1.5	1.3	1.1	1.0	1.5	1.2	1.3	1.3	1.3	1.3	1.5	1.3	1.8	1.5	
Depth to Water	ft bgs	338.6	334.96	335.59	334.79	334.81	334.86	332.29	334.09	334.31	334.73	334.81	335.07	335.58	336.06	336.73	335.6	335.07	335.21	335.16	336.35	337.16	336.88	336.13	335.46	335.72	335.93	336.16	336.01	336.31	
Temperature	deg C	15.6	16.8	25.5	17.6	11.9	11.6	10.8	10.1	10.9	9.8	11.4	10.9	17.8	12.9	11.6	11.1	10.4	13.6	11.6	10.3	12.5	14.0	12.3	10.3	11.2	12.1	11.6	9.4	12.4	
pH	SU	8.61	8.29	8.55	7.98	8.41	8.32	8.38	8.32	8.33	8.37	8.41	8.19	8.20	8.10	8.12	8.15	8.08	8.02	8.11	8.07	8.19	8.27	8.30	8.25	8.30	8.38	8.38	8.35	8.34	
Specific Conductance	µS/cm	2163	2053	1876	2096	2180	2165	2186	2261	2259	2267	2207	2214	2183	2192	2246	2205	2237	2201	2211	2271	2273	2165	2249	2052	1618	2205	2268	2294	2244	
Oxygen Reduction Potential	mV	28.6	54.0	60.2	61.7	-8.6	-27.0	-12.3	-51.8	-35.2	-75.9	-117.3	-77.9	-81.8	-137.5	-157.6	-92.3	-89.3	-54.3	-19.8	15.3	-71.3	-11.5	-10.6	29.0	-63.4	-48.7	-77.3	-153.2	-78.6	
Lab Analytical Results:																															
Hardness as CaCO3	mg/L	9.16	9.85			7.77		7.11			7.73			7.84	7.69	8.81	7.76	7.31	8.62	8.00	8.19	7.46	7.87	7.77	8.87	7.02	5.81	7.54	8.32	7.88	
pH (Lab)	SU	8.2	8.40			8.36		8.40			8.28			8.31	8.21	8.24	8.05	8.08	8.15	8.02	8.11	7.90	8.19	8.16	8.04	8.15	8.09	8.21	8.24	8.24	
Total Dissolved Solids (Lab)	mg/L	1470	1470			1450		1500			1490			1470	1430	1350	1450	1410	1540	1490	1500	1480	1460	1560	1370	1430	1510	1470	1400	1540	
Calcium	mg/L	2.23	2.43			1.76		1.87			1.81			1.75	1.71	1.92	1.77	1.68	1.94	1.82	1.88	1.67	1.79	1.73	2.04	1.65	1.41	1.76	1.87	1.88	
Magnesium	mg/L	0.871	0.916			0.823		0.591			0.778			0.846	0.832	0.973	0.809	0.756	0.914	0.837	0.850	0.798	0.826	0.836	0.917	0.704	0.555	0.765	0.890	0.771	
Sodium	mg/L	515	537			513		511			507			528	531	568	535	515	548	529	551	498	533	531	565	507	411	488	504	523	
Potassium	mg/L	1.57	1.75			1.63		<5.00			<2.00			1.5	<2.00	<2.00	<2.00	<2.00	4.75	<5.00	<3.00	<5.00	<5.00	<5.00	<5.00	<3.00	<5.00	<2.00	<2.00	<2.00	
Alkalinity, Total	mg/L	635	560			630		590			530			560	575	575	545	565	575	544	560	585	605	538	620	590	580	670	535	605	
Alkalinity, Bicarbonate	mg/L	635	560			590		560			490			560	555	575	505	544	535	528	560	545	565	530	620	530	580	670	485	455	
Alkalinity, Carbonate	mg/L	<10.0	<10.0			40.0		30.0			40.0			<10.0	20.0	<10.0	40	32	40.0	16.0	<10.0	40.0	40	<10.0	<10.0	60	<10.0	<10.0	50.0	150	
Alkalinity, Hydroxide	mg/L	<10.0	<10.0			<10.0		<10.0			<10.0			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	
Chloride	mg/L	9.56	9.66			10.3		10.3			10.0			9.94	9.55	8.60	8.93	8.99	8.91	8.76	8.83	8.89	10.1	9.15	8.79	9.15	9.17	9.04	9.04	8.97	
Fluoride	mg/L	<0.400	<0.400			<0.500		<0.500			<0.500			<0.500	<0.500	0.143	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.500	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	
Sulfate as SO4	mg/L	594	588			783		594			579			561	522	450	567	584	615	559	557	580	542	607	561	577	593	551	581	525	
Total Organic Carbon (TOC)	mg/L	6.63	11.7			3.52		3.27			3.46			3.59	3.60	3.59	3.47	3.40	3.33	3.25	3.10	3.49	3.48	3.27	3.42	3.42	3.23	3.28	3.31	3.32	
Nitrate/Nitrite as N	mg/L	0.035	<0.020			<0.020		<0.020			<0.020			<0.02	<0.02	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.255	
Ammonia as N ^	mg/L	NA	NA			NA		NA			NA			NA	NA	NA	NA	NA	NA	0.312	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ortho-Phosphate as P ^	mg/L	NA	NA			NA		NA			NA			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aluminum	mg/L	<0.050	<0.050			<0.050		<0.250			<0.100			<0.05	<0.05	<0.100	<0.100	<0.100	<0.100	<0.250	<0.150	<0.250	<0.250	<0.250	<0.250	<0.250	<0.150	<0.250	<0.100	<0.100	<0.100
Arsenic	mg/L	0.0016	<0.0025			<0.0025		<0.0025			0.0019			0.0005	<0.0025	<0.0010	<0.0010	<0.0005	<0.0005	<0.0010	<0.0010	<0.0010	<0.0010	<0.0025	<0.0025	<0.0025	0.0005	<0.0010	<0.0010	0.0008	<0.0010
Cadmium	mg/L	<0.0001	<0.0005			<0.0005		<0.0005			<0.0001			<0.0001	<0.0001	<0.0002	<0.0002	<0.0001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0010	<0.0010	<0.0005	<0.0010
Copper	mg/L	0.0053	0.0093			0.0076		0.0073			0.0124			0.0077	0.0105	0.0084	0.0081	0.0061	0.0120	0.0037	0.0034	0.0020	0.0056	0.0053	0.0036	0.0135	0.0161	0.0126	0.0097	0.0133	
Iron	mg/L	<0.050	<0.050			<0.050		<0.250			<0.100			<0.050	<0.050	<0.100	<0.100	<0.100	<0.100	<0.250	<0.150	<0.250	<0.250	<0.250	<0.250	<0.150	<0.250	<0.100	<0.100	<0.100	<0.100
Lead	mg/L	0.0014	<0.0025			<0.0025		<0.0005			<0.0005			<0.0005	<0.0005	<0.0010	<0.0010	<0.0005	<0.0010	<0.0010	<0.0010	<0.0010	<0.0025	<0.0025	<0.0025	<0.0005	<0.0010	<0.0010	<0.0005	<0.001	
Manganese	mg/L	0.0044	0.0063			0.0044		0.0040			0.0035			0.0033	<0.0075	0.0034	0.0032	0.0031	0.0026	0.0016	0.0033	0.0031	0.0029	0.0035	0.0029	0.0029	0.003	0.0030	0.0032	0.0033	
Mercury (dissolved)	mg/L	<0.0002	<0.0002			<0.0002		<0.0002			<0.0002			<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
Mercury (dissolved low-level)	ng/L																														<5.00
Molybdenum	mg/L	0.0009	0.0275			<0.0025		<0.0025			0.0005			<0.0005	<0.0005	<0.0010	<0.0010	<0.0005	<0.0005	<0.0010	<0.0010	<0.0010	<0.0025	<0.0025	<0.0025	<0.0005	<0.0010	<0.0010	<0.0005	<0.0010	
Selenium	mg/L	0.0016	<0.0050			<0.0050		<0.0050			0.0014			0.0025	<0.0050	<0.0020	0.0036	<0.0010	<0.0010	<0.0020	<0.0020	<0.0020	<0.0050	<0.0050	<0.0050	<0.0010	<0.0020	<0.0040	0.0010	<0.0020	
Silica (SiO2)	mg/L	10.2	10.6			9.99		6.85			9.47			10	10.2	11.2	9.65	9.81	11.0	10.5	10.3	8.55	9.44	9.96	10.4	8.98	8.57	10.0	9.75	9.80	
Silicon	mg/L	4.75	4.97			4.67		3.20			4.43			4.7	4.77																

GCC Energy Hydrologic Monitoring Data

MW-4-MI																															
Year	2017												2018				2019				2020				2021				2022		
Quarter	Q1	Q2	Q3			Q4			Q1			Q2		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2		
Month	3	6	7	8	9	10	11	12	1	2	3	4	5	8	11	2	5	8	11	2	5	8	11	2	5	8	11	2	5		
Sample Date	3/30	6/16	7/27	8/23	9/28	10/27	11/17	12/7	1/3	2/21	3/23	4/12	5/14	8/8	11/5	2/27	5/22	8/15	11/12	2/6	5/26	8/27	11/25	2/10	5/18	8/10	11/10	2/23	5/11		
Lab Analysis (Y/N)	Y	Y	N	N	Y	N	Y	N	N	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		
Field Parameters:																															
Purge Flow Rate	gpm	NM	NM	NM	NM	NM	NM	NM	NM	0.10	NM	0.10	0.10	0.10	0.10	0.06	0.06	0.13	0.25	0.13	0.13	0.13	0.13	0.13	0.13	0.25	0.25	0.25	0.25		
Total Purged	gal	0.5	6.5	NM	NM	1.0	1.0	1.0	1.0	1.3	1.5	1.5	1.0	1.3	1.8	1.6	2.0	1.3	1.1	1.0	1.3	1.2	1.3	1.3	1.5	1.3	1.5	1.5	1.3	1.5	
Depth to Water	ft bgs	378.2	330.15	330.94	330.85	330.81	330.8	330.74	330.67	330.52	330.42	330.53	330.5	329.62	331.1	336.57	331.1	331.06	331.92	332.1	332.5	332.87	332.45	333.29	333.22	329.27	333.57	333.65	333.45	333.8	
Temperature	deg C	15.0	14.6	12.9	12.5	11.4	10.7	11.3	11.4	11.2	11.0	10.5	10.9	10.1	11.8	11.3	11.1	10.8	13.3	11.6	11.8	12.2	12.9	11.8	10.8	11.6	12.1	11.7	11.0	12.0	
pH	SU	9.08	8.91	8.78	8.79	8.76	8.76	8.73	8.67	8.62	8.48	8.53	8.01	8.50	8.14	8.25	8.38	8.23	8.14	8.26	8.18	8.42	8.45	8.57	8.57	8.60	8.59	8.59	8.46	8.56	
Specific Conductance	µS/cm	1581	1668	1731	1708	1784	1794	1804	1833	1848	1856	1841	1816	1739	1756	1808	1716	1800	1830	1776	1795	1794	1730	1777	1605	1258	1711	1761	1745	1727	
Oxygen Reduction Potential	mV	155.2	64.7	9.8	35.2	-29.6	-37.3	-111.5	-89.2	-112.5	-151.3	-145.7	-117.7	-130.0	-178.2	-202.3	-140.4	-154.7	-127.3	-76.8	-50.6	-131.2	-92.0	-87.7	-53.9	-105.9	-97.8	-118.1	-141.5	-128.8	
Lab Analytical Results:																															
Hardness as CaCO3	mg/L	5.43	8.71			7.07		4.20		6.01				5.88	6.06	6.39	5.35	4.93	5.65	3.31	4.70	<3.31	5.19	2.84	4.91	3.79	4.59	4.53	4.17	4.15	
pH (Lab)	SU	8.83	8.59			8.63		8.51		8.47				8.48	8.31	8.47	8.35	8.3	8.44	8.08	8.33	8.02	8.28	8.38	8.21	8.38	8.28	8.59	8.35	8.42	
Total Dissolved Solids (Lab)	mg/L	1160	1170			1180		1180		1220				1140	1120	1100	1130	1130	1140	1120	1110	1110	1070	1170	1130	1100	1130	1090	1100	1140	
Calcium	mg/L	1.53	2.32			1.88		1.68		1.64				1.55	1.56	1.60	1.44	1.3	1.51	1.32	1.21	1.22	1.32	1.14	1.97	1.05	1.23	1.09	1.05	1.13	
Magnesium	mg/L	0.392	0.707			0.579		<0.500		0.465				0.49	0.524	0.580	0.428	0.408	0.458	<0.500	0.406	<0.500	0.459	<0.400	<0.500	0.285	0.37	0.441	0.372	0.321	
Sodium	mg/L	408	458			449		452		447				471	470	500	462	458	496	477	441	460	459	458	476	431	427	418	430	443	
Potassium	mg/L	1.46	<2.00			1.73		<5.00		<2.00				1.39	<2.00	<2.00	1.43	1.77	2.03	<5.00	<2.00	<5.00	<3.00	<4.00	<5.00	<2.00	<2.00	<2.00	<2.00	<2.00	
Alkalinity, Total	mg/L	965	915			1100		985		965				955	968	995	510	890	970	978	985	1030	1020	1010	990	1020	985	1140	935	1020	
Alkalinity, Bicarbonate	mg/L	775	825			880		885		875				865	896	885	420	650	880	886	895	935	940	965	910	900	865	1020	825	870	
Alkalinity, Carbonate	mg/L	190	90.0			220		100		90.0				90	72.0	110	90	240	90.0	92.0	90.0	90.0	80	40	80	120	120	120	110	150	
Alkalinity, Hydroxide	mg/L	<10.0	<10.0			<10.0		<10.0		<10.0				<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0		
Chloride	mg/L	2.18	7.50			8.78		9.11		8.74				7.99	5.68	5.38	5.98	5.83	5.47	5.37	5.11	5.02	4.97	4.89	4.85	4.91	4.98	4.55	4.36		
Fluoride	mg/L	4.72	5.02			5.09		5.10		5.02				4.82	4.84	4.94	5.49	5.44	5.38	5.31	5.11	5.16	5	5.27	4.92	5.03	5.2	4.78	5.16	4.73	
Sulfate as SO4	mg/L	17.4	64.7			76.6		77.5		68.6				54.4	48.3	47.6	38.7	34.4	31.9	28.2	24.6	21.9	20	18.7	17.1	16.1	16.4	13.7	13.4	12.4	
Total Organic Carbon (TOC)	mg/L	2.64	6.49			8.58		9.53		9.54				9.25	8.94	8.48	8.37	8.25	7.81	6.42	6.63	6.55	5.93	5.77	5.78	5.36	5.29	5.09	4.80	4.28	
Nitrate/Nitrite as N	mg/L	<0.020	<0.020			<0.020		<0.020		<0.020				<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	
Ammonia as N ^	mg/L	NA	NA			NA		NA		NA				NA	NA	NA	NA	NA	NA	NA	0.240	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ortho-Phosphate as P ^	mg/L	NA	NA			NA		NA		NA				NA	NA	NA	NA	NA	NA	NA	NA	0.280	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aluminum	mg/L	<0.050	<0.100			<0.050		<0.250		<0.100				<0.050	<0.100	<0.100	<0.050	<0.050	<0.100	<0.250	<0.100	<0.250	<0.150	<0.200	<0.250	<0.100	<0.100	<0.100	<0.100	<0.100	
Arsenic	mg/L	0.0099	0.0220			0.0131		0.0122		0.0139				0.0153	0.014	0.0119	0.0164	0.0111	0.0116	0.0107	0.0127	0.0139	0.0084	0.0092	0.0088	0.011	0.0099	0.0093	0.0120	0.0092	
Cadmium	mg/L	<0.0001	<0.0001			<0.0005		<0.0005		<0.0001				<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	<0.0001	<0.0005	<0.0004	<0.0005	<0.0005	<0.0010	<0.0010	<0.0005	<0.0010	
Copper	mg/L	0.0059	0.0058			0.0071		0.0070		0.0079				0.0063	0.0071	0.0078	0.0087	0.0153	0.0051	0.0027	0.0028	0.0020	0.0052	0.0045	0.004	0.0103	0.0134	0.0107	0.0116	0.0107	
Iron	mg/L	<0.050	<0.100			<0.050		<0.250		<0.100				<0.050	<0.100	<0.100	<0.050	<0.100	<0.250	<0.100	<0.250	<0.150	<0.200	<0.250	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	
Lead	mg/L	0.0010	<0.0005			<0.0025		<0.0005		<0.0005				<0.0005	<0.0005	<0.0010	<0.0005	<0.0005	<0.0010	<0.0010	<0.0010	<0.0005	<0.0025	<0.0020	<0.0025	<0.0005	<0.0010	<0.0010	<0.0005	<0.0010	
Manganese	mg/L	0.0020	0.0066			0.0081		0.0124		0.0080				0.007	0.0068	0.0084	0.0091	0.0084	0.0084	0.0073	0.0085	0.0086	0.0086	0.0092	0.0094	0.0073	0.0075	0.0077	0.0076	0.0080	
Mercury (dissolved)	mg/L	<0.0002	<0.0002			<0.0002		<0.0002		<0.0002				<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
Mercury (dissolved low-level)	ng/L																														<5.00
Molybdenum	mg/L	0.0020	0.0160			0.0127		0.0134		0.0151				0.0119	0.0115	0.0129	0.0121	0.0119	0.0108	0.0101	0.0096	0.0091	0.0081	0.0089	0.0082	0.0076	0.0068	0.0065	0.0065	0.0062	
Selenium	mg/L	<0.0010	0.0012			<0.0050		<0.0050		<0.0010				0.0022	0.0113	<0.0020	0.002	<0.0010	<0.0010	<0.0020	<0.0020	<0.0010	<0.005	<0.0040	0.0143	<0.0010	<0.0020	<0.0040	<0.0010	<0.0020	
Silica (SiO2)	mg/L	7.27	8.01			8.80		<5.35		8.30				8.9	9.29	10.3	8.86	9.06	10.2	9.51	8.21	7.81	8.39	8.88	9.26	7.82	8.69	8.54	8.49	8.30	
Silicon	mg/L	3.40	3.75			4.11		2.50		3.88				4.16	4.34	4.81	4.14	4.24	4.76	4.45	3.84	3.65	3.92	4.15	4.33	3.66	4.06	3.99	3.97	3.88	
Uranium	mg/L	0.0043	0.0126			0.0184		0.0169		0.0183				0.0173	0.0151	0.0191	0.0269	0.0176	0.0168	0.0145	0.0163	0.0195	0.0121	0.0139	0.0137	0.0115	0.0112	0.0097	0.0089	0.0086	
Zinc	mg/L	0.113	0.0697			<0.0100		<0.0100		<0.0020				<0.0020	<0.0020	<0.0020	<0.0020	<0.0100	<0.0100	<0.0040	<0.0040	<0.0040	<0.0100	<0.0080	<0.0100	<0.0100	<0.0020	<0.0040	<0.0040	<0.0040	

GCC Energy Hydrologic Monitoring Data

MW-4-C																														
Year	2017								2018								2019				2020				2021				2022	
Quarter	Q1	Q2	Q3			Q4			Q1			Q2			Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Month	3	6	7	8	9	10	11	12	1	2	3	4	5	8	11	2	5	8	11	2	5	8	12	2	5	8	11	2	5	
Sample Date	3/30	6/16	7/27	8/23	9/28	10/27	11/17	12/7	1/3	2/21	3/23	4/12	5/14	8/8	11/5	2/27	5/22	8/15	11/12	2/4	5/26	8/27	12/1	2/10	5/18	8/10	11/10	2/23	5/11	
Lab Analysis (Y/N)	Y	Y	N	N	Y	N	Y	N	N	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
Field Parameters:																														
Purge Flow Rate	gpm	NM	NM	NM	NM	NM	NM	NM	NM	0.1	NM	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	
Total Purged	gal	7.0	1.5	NM	NM	1.0	1.0	1.0	1.0	1.5	1.5	1.5	1.0	1.3	1.3	1.5	1.3	1.1	1.0	1.5	1.2	1.5	1.3	1.5	1.5	1.5	1.5	1.5	1.5	
Depth to Water	ft bgs	328.33	314.05	309.87	306.86	303.96	303.80	302.47	304.80	282.35	281.30	303.30	304.05	NM	302.55	302.17	302.45	303.93	304.93	305.73	306.44	304.90	307.80	308.05	308.65	308.58	309.32	309.90	309.80	
Temperature	deg C	13.3	17.4	12.7	12.0	13.9	11.8	11.2	11.0	11.7	10.8	12.5	11.4	12.4	12.9	11.5	11.3	11.2	12.5	11.7	11.2	12.7	13.0	11.4	10.0	11.4	12.3	11.7	10.3	
pH	SU	8.33	7.62	7.68	7.70	7.69	7.75	7.72	7.79	7.80	7.88	7.94	7.75	7.79	7.76	7.79	7.87	7.86	7.81	7.85	7.87	7.97	8.00	8.05	8.02	8.05	8.12	8.11	8.06	
Specific Conductance	µS/cm	3792	5944	5997	5885	5813	5721	5782	5604	5834	5903	5628	5792	5592	5583	5775	5710	5712	5930	5636	5729	5636	5429	5665	5106	4047	5454	5687	5698	
Oxygen Reduction Potential	mV	57.3	20.3	-101.5	-111.2	-103.7	-117.4	-109.0	-120.1	-123.8	-154.3	-131.3	-134.9	-157.6	-209.0	-160.1	-180.1	-156.8	-148.7	-135.9	-147.7	-132.1	-128.7	-106.2	-100.6	-142.3	-173.0	-255.6	-178.7	
Lab Analytical Results:																														
Hardness as CaCO3	mg/L	46.3	55.9			38.9		30.0			26.5			26.2	25.9	28.6	23.6	22.5	25.2	24.4	24.0	22.7	23	21.8	25.6	19.6	21.9	20.9	22.2	
pH (Lab)	SU	7.61	7.77			7.79		7.98			7.84			7.97	7.96	8.27	7.9	7.92	7.95	7.85	7.95	7.76	7.92	7.94	7.96	7.97	7.96	8.08	8.01	
Total Dissolved Solids (Lab)	mg/L	3230	4050			3750		3780			3730			3660	3650	3590	3580	3590	3610	3610	3580	3570	3510	3610	3720	3540	3600	3630	3520	
Calcium	mg/L	13.6	13.7			9.15		7.45			6.32			6.15	5.90	6.60	5.5	5.21	5.83	5.61	5.57	5.31	5.3	5.15	5.98	4.64	5.07	4.77	5.04	
Magnesium	mg/L	2.99	5.26			3.90		2.76			2.61			2.62	2.72	2.94	2.39	2.3	2.57	2.53	2.44	2.30	2.36	2.18	2.58	1.95	2.25	2.19	2.33	
Sodium	mg/L	908	1510			1490		1400			1410			1400	1410	1590	1410	1370	1440	1430	1440	1390	1400	1400	1520	1310	1340	1270	1360	
Potassium	mg/L	4.38	5.71			6.07		<10.0			<10.0			<5.00	<5.00	5.36	<5.00	<5.00	5.42	<10.0	<5.00	<10.0	<10.0	<10.0	<10.0	<6.00	<5.00	<5.00	<5.00	
Alkalinity, Total	mg/L	1250	2360			2780		2680			2600			2410	2480	2450	2470	2550	2500	2470	2480	2460	2500	2950	2470	2500	2410	2630	2360	
Alkalinity, Bicarbonate	mg/L	1250	2360			2780		2640			2600			2330	2480	2450	2470	2350	2390	2410	2420	2340	2390	2880	2430	2360	2290	2410	2180	
Alkalinity, Carbonate	mg/L	<10.0	<10.0			<10.0		40.0			<10.0			80	<10.0	<10.0	<10.0	200	110	60.0	60.0	120	110	70	40	140	120	220	180	
Alkalinity, Hydroxide	mg/L	<10.0	<10.0			<10.0		<10.0			<10.0			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0		
Chloride	mg/L	181	550			587		608			592			573	533	590	575	554	580	525	528	555	543	565	557	553	572	561	562	
Fluoride	mg/L	1.29	2.04			2.17		2.43			2.53			2.52	2.48	2.54	2.64	2.62	2.59	2.51	2.41	2.36	2.34	2.37	2.21	2.16	2.28	2.04	2.26	
Sulfate as SO4	mg/L	534	487			70.2		26.0			34.5			27	18.7	11.2	5.07	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	
Total Organic Carbon (TOC)	mg/L	30	6.42			5.08		3.64			3.23			3.23	2.80	3.46	3.24	2.62	2.63	4.18	2.23	2.50	2.31	3.72	4.57	4.92	4.81	4.70	5.93	
Nitrate/Nitrite as N	mg/L	<2.00	<5.00			<0.400		<0.100			<0.020			<0.020	<0.020	<0.020	0.061	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	
Ammonia as N^A	mg/L	NA	NA			NA		NA			NA			NA	NA	NA	NA	NA	NA	0.424	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Ortho-Phosphate as P^A	mg/L	NA	NA			NA		NA			NA			NA	NA	NA	NA	NA	NA	0.182	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Aluminum	mg/L	<0.050	<0.050			<0.050		<0.500			<0.500			<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.500	<0.250	<0.500	<0.500	<0.500	<0.500	<0.300	<0.250	<0.250	<0.250	
Arsenic	mg/L	0.0059	0.0119			0.0128		0.0152			0.0246			0.0195	0.0202	0.0164	0.0211	0.0171	0.0178	0.0179	0.0203	0.0195	0.015	0.0182	0.0177	0.0212	0.0248	0.0213	0.0213	
Cadmium	mg/L	<0.0001	<0.0010			<0.0010		<0.0010			<0.0005			<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.0010	<0.0025	<0.0025	<0.0025	<0.0025	
Copper	mg/L	0.0125	0.0243			0.0221		0.0208			0.0482			0.0389	0.0280	0.0230	0.0249	0.0382	0.0198	0.0107	0.0111	0.0069	0.0151	0.0148	0.0111	0.0464	0.0499	0.0370	0.0302	
Iron	mg/L	<0.050	<0.050			<0.500		<0.500			<0.500			0.373	0.397	0.474	0.279	0.391	0.522	0.619	0.591	0.551	<0.500	0.553	0.837	0.355	0.793	0.551	0.598	
Lead	mg/L	<0.0005	<0.0050			<0.0050		<0.0050			<0.0025			<0.0025	<0.0025	<0.0025	<0.0005	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0050	<0.0050	<0.0050	<0.0025	<0.0025	<0.0025	<0.0025	
Manganese	mg/L	0.0269	0.0772			0.0554		0.0571			0.0647			0.0529	0.0381	0.0283	0.0268	0.0174	0.0162	0.0096	0.0209	0.0103	0.008	0.0076	0.0059	0.0063	0.0047	0.0051	0.0046	
Mercury (dissolved)	mg/L	<0.0002	<0.0002			<0.0002		<0.0002			<0.0002			<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0050	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
Mercury (dissolved low-level)	ng/L																													<5.00
Molybdenum	mg/L	0.0526	0.115			0.0138		0.0106			0.0086			0.0072	0.0071	0.0057	0.0074	0.007	0.0056	0.0047	0.0045	0.0044	<0.005	<0.005	<0.0050	0.0037	0.0031	0.0031	0.0033	
Selenium	mg/L	0.0248	0.0231			0.0214		0.0269			0.0038			0.0037	0.0260	0.0211	0.0039	0.0195	0.0195	0.0156	0.0140	0.0129	0.0112	0.0182	<0.0100	0.0186	0.0208	0.0269	0.0219	
Silica (SiO2)	mg/L	9.85	12.6			12.9		<10.7			<10.7			11	11.2	12.8	10.1	10.5	11.3	11.0	9.88	<10.7	<10.7	<10.7	10.8	8.35	9.54	9.37	9.28	
Silicon	mg/L	4.61	5.88			6.2		<5.00			<5.00			5.16	5.24	6.00	4.7	4.89	5.29	5.14	4.62	<5.00	<5.00	<5.00	5.06	3.91	4.46	4.38	4.40	
Uranium	mg/L	0.0297	0.121			0.0984		0.0545			0.0311			0.0311	0.0277	0.0246	0.0215	0.0154	0.0086	0.0073	0.0063	0.0039	<0.0050	<0.0050	<0.0050	<0.0025	<0.0025	<0.0025	<0.0025	
Zinc	mg/L	0.0156	0.0265			<0.0200		<0.0200			<0.0100			<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0200	<0.0200	<0.0100	<0.0100	<0.0100	<0.0100	

Notes & Definitions:

Δ	one-time analysis
Y/N	yes or no
gpm	gallons per minute
deg C	degrees Celsius
SU	standard pH units
$\mu\text{S}/\text{cm}$	microsiemens per centimeter
mV	millivolts
mg/L	milligram per liter
pCi/L	pico curies per liter
NM	not measured (field)
NA	not analyzed (lab)
ng/L	nanogram per liter

1. "*c*" values denote that the quantification of that analyte is below the reporting level for the analytical laboratory, acceptable by environmental water quality laboratory industry standards.
2. Total alkalinity is measured by titration with hydrochloric acid to a set pH point, reporting this value as an equivalent amount of calcium carbonate. This value is then partitioned into bicarbonate, carbonate and hydroxide depending on the initial pH of the sample solution, each components reported as equivalent CaCO₃.
3. Industry standard Quality Assurance/Quality Control (QA/QC) protocol are followed for this hydrologic monitoring program by both GCC Energy and the contracted environmental water quality analytical laboratories. QA/QC results are not shown in this table.

GCC Energy Hydrologic Monitoring Data

MW-6-A																						
Year	2018	2019										2020				2021				2022		
Quarter	Q4	Q1			Q2			Q3			Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	
Month	12	1	2	3	4	5	6	7	8	9	11	2	5	8	11	2	5	8	11	2	5	
Sample Date	12/28	1/31	2/21	3/21	4/23	5/20	6/19	7/23	8/15	9/24	11/7	2/5	5/14	8/11	11/25	2/9	5/17	8/9	11/9	2/15	5/10	
Lab Analysis (Y/N)	Y	N	Y	N	N	Y	N	N	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
Field Parameters:																						
Purge Flow Rate	gpm	NM	NM	0.10	2.00	0.03	0.03	0.03	0.06	0.03	0.02	0.01	0.05	0.13	0.05	0.05	0.05	0.02	0.13	0.02	0.05	0.10
Total Purged	gal	36.3	0.5	0.5	2.0	2.0	1.3	1.0	1.3	1.1	1.3	1.5	1.1	1.0	1.3	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Depth to Water	ft bgs	304.33	306.41	307.40	309.60	311.05	312.50	314.20	315.75	316.43	NM	318.70	315.46	319.63	319.64	319.65	319.66	319.66	319.64	319.66	320.30	320.68
Temperature	deg C	7.4	10.7	8.1	7.5	9.6	7.3	12.5	12.3	11.9	10.4	10.4	7.8	9.8	19.5	8.0	9.7	12.6	19.4	10.7	11.5	17.3
pH	SU	7.32	6.64	6.66	6.74	6.65	6.73	6.76	6.75	6.76	6.80	6.79	6.89	6.95	6.97	7.10	7.03	7.10	7.11	7.11	7.02	7.05
Specific Conductance	µS/cm	6573	6053	6072	6107	6012	6057	5725	5598	5562	5451	5108	5043	4779	4339	4656	4051	3198	4238	4465	4486	4477
Oxygen Reduction Potential	mV	-22.8	19.4	24.6	12.6	11.8	34.8	86.6	25.8	6.5	29.2	20.5	36.7	51.7	62.3	55.2	73.5	83.5	5.2	26.5	-56.1	2.4
Lab Analytical Results:																						
Hardness as CaCO3	mg/L	4360		4190			3920			3540		3070	3200	2780	2690	2710	2660	2550	2740	2510	2440	2490
pH (Lab)	SU	7.10		6.85			6.77			6.85		6.87	6.9	6.93	6.66	7.04	7.20	6.93	7.1	6.98	7.19	7.26
Total Dissolved Solids (Lab)	mg/L	6520		6520			120*			6080		5210	4980	4670	4490	4570	4480	4390	4440	4310	4440	4450
Calcium	mg/L	615		559			553			492		431	467	400	398	406	398	378	415	370	359	365
Magnesium	mg/L	687		678			617			560		484	495	431	411	413	404	390	413	385	374	383
Sodium	mg/L	294		283			296			304		276	296	274	261	273	272	266	263	254	257	268
Potassium	mg/L	15.0		14.4			12.4			12.8		11.1	<20.0	10.6	10.3	10.5	11.1	10.7	11	10.4	10.7	10.6
Alkalinity, Total	mg/L	160		160			143			183		220	215	233	236	246	245	290	255	295	285	270
Alkalinity, Bicarbonate	mg/L	160		160			143			183		220	215	233	236	246	245	290	255	295	285	270
Alkalinity, Carbonate	mg/L	<10.0		<10.0			<10.0			<10.0		<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Alkalinity, Hydroxide	mg/L	<10.0		<10.0			<10.0			<10.0		<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Chloride	mg/L	97.4		28.6			27.3			29.9		29.6	28.4	29.0	26.0	26.6	24.9	25.8	26	26.6	26.2	26.1
Fluoride	mg/L	2.83		<0.500			<0.500			<0.500		<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
Sulfate as SO4	mg/L	205		4300			4280			4260		3460	3080	3020	3160	2890	2620	2740	2780	2790	2870	2820
Total Organic Carbon (TOC)	mg/L	3.45		3.08			2.91			3.57		3.10	3.16	3.39	3.31	3.26	1.71	3.82	3.33	3.25	3.26	3.14
Nitrate/Nitrite as N	mg/L	<0.020		<0.020			<0.020			<0.020		<0.020	0.049	0.154	0.117	0.093	0.039	0.156	0.118	0.096	0.131	0.103
Ammonia as N ^	mg/L	NA		NA			NA			NA		2.72	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ortho-Phosphate as P ^	mg/L	NA		NA			NA			NA		<0.0500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aluminum	mg/L	<0.500		<0.250			<0.250			<0.250		<0.250	<1.00	<0.500	<0.250	<0.500	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250
Arsenic	mg/L	<0.0025		<0.0025			0.0009			<0.0025		<0.0025	<0.0025	<0.0050	<0.0025	<0.0050	<0.0025	<0.0025	<0.0025	<0.0025	<0.0020	<0.0025
Cadmium	mg/L	<0.0005		<0.0005			0.0001			<0.0005		<0.0005	<0.0005	<0.0010	<0.0005	<0.0010	<0.0005	<0.0025	<0.0025	<0.0025	<0.0020	<0.0025
Copper	mg/L	0.0116		0.0081			0.0035			0.0039		0.0017	0.0028	<0.0050	<0.0025	<0.0050	<0.0025	0.0068	0.0082	0.0063	0.0065	0.0093
Iron	mg/L	1.37		3.75			3.93			3.22		2.72	1.95	1.38	1.10	1.24	1.17	0.890	1.48	1.15	1.41	1.37
Lead	mg/L	<0.0025		<0.0025			<0.0005			<0.0025		<0.0025	<0.0025	<0.0050	<0.0025	<0.0050	<0.0025	<0.0025	<0.0025	<0.0025	<0.0020	<0.0025
Manganese	mg/L	0.788		0.802			0.724			0.690		0.585	0.551	0.526	0.520	0.454	0.437	0.397	0.407	0.391	0.420	0.431
Mercury (dissolved)	mg/L	<0.0002		<0.0002			<0.0002			<0.0002		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
Mercury (dissolved low-level)	ng/L																					<5.00
Molybdenum	mg/L	<0.0025		<0.0025			<0.0005			<0.0025		<0.0025	<0.0025	<0.0050	<0.0025	<0.005	<0.0025	<0.0025	<0.0025	<0.0025	<0.0020	<0.0025
Selenium	mg/L	<0.0050		<0.0050			0.0028			<0.0050		<0.0050	<0.005	<0.0100	<0.0050	<0.0100	<0.0050	<0.0050	<0.0050	<0.0100	<0.0040	<0.0050
Silica (SiO2)	mg/L	12.3		11.9			12.5			13.4		12.5	<21.4	11.0	11.4	12.3	11.9	13.2	14.3	13.6	12.7	12.3
Silicon	mg/L	5.77		5.57			6.69			6.28		5.83	<10.00	5.17	5.35	5.76	5.58	6.17	6.67	6.36	5.96	5.73
Uranium	mg/L	<0.0005		<0.0005			<0.0001			<0.0005		<0.0005	<0.0025	<0.0050	<0.0025	<0.0050	<0.0025	<0.0025	<0.0025	<0.0025	<0.0020	<0.0025
Zinc	mg/L	0.0689		<0.0100			0.0082			0.0108		0.0117	0.0107	<0.0200	0.0159	<0.0200	<0.0100	<0.0100	<0.0100	<0.0100	<0.0080	<0.0100

Notes & Definitions:

- * Anomalous value under review
- ^ one-time analysis
- Y/N yes or no
- gpm gallons per minute
- deg C degrees Celsius
- SU standard pH units
- µS/cm microsiemens per centimeter
- mV millivolts
- mg/L milligram per liter
- pCi/L picocuries per liter
- NM not measured (field)
- NA not analyzed (lab)
- ng/L nanogram per liter

- "<" values denote that the quantification of that analyte is below the reporting level for the analytical laboratory, acceptable by environmental water quality laboratory industry standards.
- Total alkalinity is measured by titration with hydrochloric acid to a set pH point, reporting this value as an equivalent amount of calcium carbonate. This value is then partitioned into bicarbonate, carbonate and hydroxide depending on the initial pH of the sample solution, each components reported as equivalent CaCO3.
- Industry standard Quality Assurance/Quality Control (QA/QC) protocol are followed for this hydrologic monitoring program by both GCC Energy and the contracted environmental water quality analytical laboratories. QA/QC results are not shown in this table.

GCC Energy Hydrologic Monitoring Data

MW-6-MI																						
Year	2018	2019											2020				2021				2022	
Quarter	Q4	Q1			Q2				Q3			Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Month	12	1	2	3	4	5	5	6	7	8	9	11	2	5	8	11	2	5	8	11	2	5
Sample Date	12/29	1/31	2/25	3/21	4/19	5/20	5/30	6/19	7/23	8/15	9/24	11/7	2/5	5/14	8/11	11/24	2/9	5/17	8/9	11/9	2/15	5/10
Lab Analysis (Y/N)	Y	N	Y	N	N	N [#]	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Field Parameters:																						
Purge Flow Rate	gpm	NM	NM	NM	0.5	0.1	0.015															
Total Purged	gal	11.3	0.5	1.5	0.5	1.0	0.9															
Depth to Water	ft bgs	374.49	368.09	367.92	370.49	369.50	371.00															
Temperature	deg C	14.3	13.6	10.8	9.7	16.7	3.9															
pH	SU	8.26	7.43	7.21	7.55	7.97	7.84															
Specific Conductance	µS/cm	3390	3620	3132	2619	2202	2527															
Oxygen Reduction Potential	mV	103.0	-80.2	77.6	59.8	38.3	64.9															
Lab Analytical Results:																						
Hardness as CaCO3	mg/L	679		147																		
pH (Lab)	SU	8.18		8.35																		
Total Dissolved Solids (Lab)	mg/L	2480		1880																		
Calcium	mg/L	104		23.4																		
Magnesium	mg/L	102		21.6																		
Sodium	mg/L	646		565																		
Potassium	mg/L	12.0		5.30																		
Alkalinity, Total	mg/L	395		615																		
Alkalinity, Bicarbonate	mg/L	345		615																		
Alkalinity, Carbonate	mg/L	50.0		<10.0																		
Alkalinity, Hydroxide	mg/L	<10.0		<10.0																		
Chloride	mg/L	175		178																		
Fluoride	mg/L	2.06		2.46																		
Sulfate as SO4	mg/L	1210		585																		
Total Organic Carbon (TOC)	mg/L	3.63		4.55																		
Nitrate/Nitrite as N	mg/L	0.023		<0.020																		
Aluminum	mg/L	<0.100		<0.100																		
Arsenic	mg/L	0.0084		0.0144																		
Cadmium	mg/L	<0.0001		<0.0002																		
Copper	mg/L	0.0113		0.0112																		
Iron	mg/L	<0.100		<0.100																		
Lead	mg/L	<0.0005		<0.0010																		
Manganese	mg/L	0.0500		0.0224																		
Mercury (dissolved)	mg/L	<0.0002		<0.0002																		
Mercury (dissolved low-level)	ng/L																					
Molybdenum	mg/L	0.0558		0.0690																		
Selenium	mg/L	0.0098		0.0127																		
Silica (SiO2)	mg/L	9.93		9.05																		
Silicon	mg/L	4.64		4.23																		
Uranium	mg/L	0.0200		0.0118																		
Zinc	mg/L	0.0092		0.0143																		

Notes & Definitions:

- | | | |
|-------|--|--|
| # | No sample collected, due to low yield, insufficient volume for lab sample after field parameters we measured | |
| Y/N | yes or no | 1. "<" values denote that the quantification of that analyte is below the reporting level for the analytical laboratory, acceptable by environmental water quality laboratory industry standards. |
| gpm | gallons per minute | |
| deg C | degrees Celsius | |
| SU | standard pH units | 2. Total alkalinity is measured by titration with hydrochloric acid to a set pH point, reporting this value as an equivalent amount of calcium carbonate. This value is then partitioned into bicarbonate, carbonate and hydroxide depending on the initial pH of the sample solution, each components reported as equivalent CaCO3. |
| µS/cm | microsiemens per centimeter | |
| mV | millivolts | |
| mg/L | milligram per liter | |
| pCi/L | picocuries per liter | |
| NM | not measured (field) | 3. Industry standard Quality Assurance/Quality Control (QA/QC) protocol are followed for this hydrologic monitoring program by both GCC Energy and the contracted environmental water quality analytical laboratories. QA/QC results are not shown in this table. |
| NA | not analyzed (lab) | |
| ng/L | nanogram per liter | |

GCC Energy Hydrologic Monitoring Data

MW-6-C																					
Year	2018	2019										2020				2021				2022	
Quarter	Q4	Q1			Q2			Q3			Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Month	12	1	2	3	4	5	6	7	8	9	11	2	5	8	11	2	5	8	11	2	5
Sample Date	12/24	1/30	2/21	3/21	4/23	5/20	6/19	7/23	8/15	9/24	11/7	2/5	5/12	8/11	11/24	2/9	5/17	8/9	11/9	2/15	5/10
Lab Analysis (Y/N)	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Field Parameters:																					
Purge Flow Rate	gpm	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry
Total Purged	gal																				
Depth to Water	ft bgs																				
Temperature	deg C																				
pH	SU																				
Specific Conductance	µS/cm																				
Oxygen Reduction Potential	mV																				
Lab Analytical Results:																					
Hardness as CaCO3	mg/L																				
pH (Lab)	SU																				
Total Dissolved Solids (Lab)	mg/L																				
Calcium	mg/L																				
Magnesium	mg/L																				
Sodium	mg/L																				
Potassium	mg/L																				
Alkalinity, Total	mg/L																				
Alkalinity, Bicarbonate	mg/L																				
Alkalinity, Carbonate	mg/L																				
Alkalinity, Hydroxide	mg/L																				
Chloride	mg/L																				
Fluoride	mg/L																				
Sulfate as SO4	mg/L																				
Total Organic Carbon (TOC)	mg/L																				
Nitrate/Nitrite as N	mg/L																				
Aluminum	mg/L																				
Arsenic	mg/L																				
Cadmium	mg/L																				
Copper	mg/L																				
Iron	mg/L																				
Lead	mg/L																				
Manganese	mg/L																				
Mercury (dissolved)	mg/L																				
Mercury (dissolved low-level)	ng/L																				
Molybdenum	mg/L																				
Selenium	mg/L																				
Silica (SiO2)	mg/L																				
Silicon	mg/L																				
Uranium	mg/L																				
Zinc	mg/L																				

Notes & Definitions:

Y/N	yes or no
gpm	gallons per minute
deg C	degrees Celsius
SU	standard pH units
µS/cm	microsiemens per centimeter
mV	millivolts
mg/L	milligram per liter
pCi/L	picocuries per liter
NM	not measured (field)
NA	not analyzed (lab)
ng/L	nanogram per liter

- "<" values denote that the quantification of that analyte is below the reporting level for the analytical laboratory, acceptable by environmental water quality laboratory industry standards.
- Total alkalinity is measured by titration with hydrochloric acid to a set pH point, reporting this value as an equivalent amount of calcium carbonate. This value is then partitioned into bicarbonate, carbonate and hydroxide depending on the initial pH of the sample solution, each components reported as equivalent CaCO3.
- Industry standard Quality Assurance/Quality Control (QA/QC) protocol are followed for this hydrologic monitoring program by both GCC Energy and the contracted environmental water quality analytical laboratories. QA/QC results are not shown in this table.

GCC Energy Hydrologic Monitoring Data

MW-6-LM																						
Year	2018	2019											2020				2021				2022	
Quarter	Q4	Q1			Q2			Q3			Q4		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Month	12	1	2	3	4	5	6	7	8	9	10	11	2	5	8	11	2	5	8	11	2	5
Sample Date	12/30	1/31	2/25	3/21	4/23	5/20	6/19	7/23	8/15	9/24	10/28	11/7	2/5	5/14	8/11	11/25	2/9	5/17	8/9	11/9	2/15	5/10
Lab Analysis (Y/N)	Y	N	Y	N	N	Y	N	N	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Field Parameters:																						
Purge Flow Rate	gpm	NM	NM	0.06	2.00	0.03	0.03	0.10	0.06	0.03	0.02	0.01	0.03	0.01	0.13	0.01	0.13	0.13	0.13	0.13	0.13	0.13
Total Purged	gal	0.5	0.5	1.5	2.0	2.0	2.3	1.3	1.3	1.8	2.0	1.5	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.0	1.5
Depth to Water	ft bgs	535.72	538.73	539.34	540.64	539.98	537.58	540.00	540.35	540.24	540.17	539.80	540.18	539.70	539.45	539.98	540.30	539.78	540.20	541.25	541.34	541.00
Temperature	deg C	7.9	14.3	7.8	8.1	9.1	9.3	11.7	14.0	13.4	11.6	10.1	12.4	10.5	11.3	14.8	11.4	10.2	11.6	14.4	11.1	11.0
pH	SU	7.64	7.38	7.51	7.54	7.49	7.54	7.67	7.80	7.65	7.43	7.45	7.37	7.39	7.54	7.44	7.47	7.44	7.54	7.52	7.49	7.46
Specific Conductance	µS/cm	6011	3784	3503	1461	1164	1296	1400	1272	1532	2104	2267	2113	2283	2287	2442	2495	2136	1629	2531	2478	2362
Oxygen Reduction Potential	mV	185.3	10.7	40.9	-32.8	-35.8	-111.0	-194.5	-163.6	-67.2	6.4	-48.0	19.9	-128.9	-222.9	32.1	21.8	3.5	-188.8	-2.6	-36.6	-135.8
Lab Analytical Results:																						
Hardness as CaCO3	mg/L	2260		1270			431			621			843	1060	965	1130	1160	1120	1010	1280	1130	1030
pH (Lab)	SU	7.60		7.52			7.47			7.59			7.32	7.43	7.18	6.95	7.45	7.49	7.45	7.37	7.57	7.54
Total Dissolved Solids (Lab)	mg/L	5100		2840			875			1150			1630	1840	1840	2040	2020	1990	1830	2290	2050	1990
Calcium	mg/L	367		216			75.9			103			136	173	150	179	184	176	154	201	174	159
Magnesium	mg/L	325		177			58.7			88.3			122	153	143	165	171	166	152	189	170	154
Sodium	mg/L	459		248			129			153			172	203	188	194	194	188	169	177	166	162
Potassium	mg/L	173		64.5			14.0			13.7			11.3	11	7.82	7.20	6.04	5.96	5.22	5.69	4.99	5.22
Alkalinity, Total	mg/L	205		315			371			381			355	320	353	335	329	336	346	330	380	365
Alkalinity, Bicarbonate	mg/L	205		315			371			381			355	320	353	335	329	336	346	330	380	365
Alkalinity, Carbonate	mg/L	<10.0		<10.0			<10.0			<10.0			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Alkalinity, Hydroxide	mg/L	<10.0		<10.0			<10.0			<10.0			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Chloride	mg/L	256		43.7			5.73			8.70			11.4	11	11.7	12.2	12.4	11	10.5	12.6	11.1	10.5
Fluoride	mg/L	0.530		<0.500			0.324			<0.500			<0.500	0.352	<0.500	0.346	0.356	0.318	0.340	0.418	0.306	0.328
Sulfate as SO4	mg/L	3050		1790			338			492			830	951	904	1260	1170	1020	978	1300	1100	555
Total Organic Carbon (TOC)	mg/L	3.46		2.61			1.57			1.78			1.85	1.76	1.84	1.87	1.93	3.17	1.81	1.91	1.94	1.83
Nitrate/Nitrite as N	mg/L	<0.020		<0.020			<0.020			<0.020			<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Ammonia as N ^	mg/L	NA		NA			NA			NA			1.99	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ortho-Phosphate as P ^	mg/L	NA		NA			NA			NA			<0.0500	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aluminum	mg/L	<0.250		<0.250			<0.050			<0.050			<0.100	<0.250	<0.250	<0.150	<0.250	<0.250	<0.150	<0.100	<0.100	<0.250
Arsenic	mg/L	0.0039		0.0049			0.0036			0.0038			0.0035	0.0044	0.0034	0.0038	0.0036	0.0038	0.0038	0.0039	0.0038	0.0042
Cadmium	mg/L	<0.0005		<0.0005			<0.0001			<0.0001			<0.0002	<0.0002	<0.0005	<0.0003	<0.0005	<0.0005	<0.0015	<0.0010	<0.0010	<0.0025
Copper	mg/L	0.0135		0.0064			0.0017			0.0018			0.0069	0.0014	<0.0025	<0.0015	<0.0025	<0.0025	0.0042	0.0046	0.0040	0.0044
Iron	mg/L	<0.250		<0.250			<0.050			<0.050			<0.100	<0.250	<0.250	<0.150	<0.250	<0.250	<0.150	<0.100	<0.100	<0.250
Lead	mg/L	<0.0025		<0.0025			<0.0005			<0.0005			<0.0010	<0.001	<0.0025	<0.0015	<0.0025	<0.0025	<0.0015	<0.0010	<0.0010	<0.0025
Manganese	mg/L	0.383		0.223			0.0692			0.148			0.166	0.184	0.171	0.267	0.292	0.253	0.203	0.257	0.263	0.339
Mercury (dissolved)	mg/L	<0.0002		<0.0002			<0.0002			<0.0002			<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Mercury (dissolved low-level)	ng/L																					<5.00
Molybdenum	mg/L	0.0490		0.0169			0.0037			0.0025			0.0022	0.002	<0.0025	0.0023	<0.0025	<0.0025	<0.0015	0.0016	0.0013	0.0013
Selenium	mg/L	0.0080		<0.0050			<0.0010			<0.0010			<0.0020	<0.002	<0.0050	<0.0030	<0.0050	0.0151	<0.0030	<0.0020	<0.0040	<0.0020
Silica (SiO2)	mg/L	10.5		13.5			17.0			17.4			15.9	17.1	15.1	14.7	16.0	15.6	16.4	16.8	16.6	16.0
Silicon	mg/L	4.91		6.29			7.96			8.12			7.43	7.97	7.07	6.88	7.47	7.3	7.68	7.85	7.75	7.49
Uranium	mg/L	0.0230		0.0075			0.0039			0.0054			0.0047	0.0055	0.0043	0.0046	0.0042	0.0039	0.0030	0.0037	0.0032	0.0028
Zinc	mg/L	0.0323		<0.0100			<0.0020			<0.0040			<0.0040	<0.004	<0.0100	0.0069	<0.0100	<0.0100	<0.0060	<0.0040	<0.0040	<0.0040

Notes & Definitions:

^ one-time analysis
Y/N yes or no
gpm gallons per minute
deg C degrees Celsius
SU standard pH units
µS/cm microsiemens per centimeter
mV millivolts
mg/L milligram per liter
pCi/L picocuries per liter
NM not measured (field)
NA not analyzed (lab)
ng/L nanogram per liter

- "<" values denote that the quantification of that analyte is below the reporting level for the analytical laboratory, acceptable by environmental water quality laboratory industry standards.
- Total alkalinity is measured by titration with hydrochloric acid to a set pH point, reporting this value as an equivalent amount of calcium carbonate. This value is then partitioned into bicarbonate, carbonate and hydroxide depending on the initial pH of the sample solution, each components reported as equivalent CaCO3.
- Industry standard Quality Assurance/Quality Control (QA/QC) protocol are followed for this hydrologic monitoring program by both GCC Energy and the contracted environmental water quality analytical laboratories. QA/QC results are not shown in this table.

GCC Energy Hydrologic Monitoring Data

MW-7-EAA																							
Year	2018	2019										2020				2021				2022			
Quarter	Q4	Q1				Q2			Q3			Q4		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Month	12	1	2	3	4	5	6	7	8	9	10	11	2	5	8	11	2	5	8	11	3	6	
Sample Date	12/23	1/29	2/19	3/20	4/16	5/29	6/20	7/24	8/13	9/27	10/24	11/6	2/11	5/27	8/25	11/11	2/16	5/24	8/24	11/30	3/23	6/7	
Lab Analysis (Y/N)	Y	N	Y	N	N	Y	N	N	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
Field Parameters:																							
Purge Flow Rate	gpm	1.10	1.10	1.00	3.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.25	0.13	0.25	0.25	0.13	0.25	0.25	0.25	0.25	
Total Purged	gal	15.0	18.0	15.0	3.0	15.0	16.0	15.3	15.3	17.0	15.0	15.0	36.5	15.0	16.0	17.0	15.0	17.0	17.0	18.0	18.0	17.0	
Depth to Water	ft bgs	36.13	36.27	36.45	36.52	36.70	36.25	36.22	36.48	36.49	36.88	36.85	36.72	35.40	36.35	37.10	36.20	35.33	36.91	35.92	35.90	35.70	
Temperature	deg C	10.0	10.0	10.0	9.9	10.1	10.4	10.4	10.6	10.5	10.3	10.4	10.6	10.4	12.1	10.3	10.3	10.1	10.5	10.9	10.6	10.5	
pH	SU	6.99	7.01	7.04	6.93	7.00	7.06	7.07	6.28	6.95	7.06	7.03	7.06	6.91	7.17	7.09	7.12	7.14	7.19	7.24	7.23	7.12	
Specific Conductance	µS/cm	2001	1910	1910	1926	1912	1767	1836	1885	1890	1913	1936	1922	1993	1890	1772	1628	1672	1805	1814	1878	1882	
Oxygen Reduction Potential	mV	-68.0	-36.7	-41.4	-38.1	-48.8	14.1	-13.8	-33.9	-37.8	-29.5	-25.6	-21.3	0.9	-49.2	17.6	-8.6	2.2	-55.8	-41.9	-20.4	-133.6	
Lab Analytical Results:																							
Hardness as CaCO3	mg/L	936		1030			982			997			1020	963	1020	1080	939	1090	958	986	957	1040	
pH (Lab)	SU	7.2		7.37			7.17			7.09			6.99	6.92	6.89	7.23	7.06	6.99	6.92	7.03	7.01	7.11	
Total Dissolved Solids (Lab)	mg/L	1460		1480			1490			1480			1530	1520	1430	1480	1450	1590	1460	1510	1580	1500	
Calcium	mg/L	170		179			171			173			162	165	175	183	157	186	167	167	164	173	
Magnesium	mg/L	124		142			135			137			144	134	142	150	133	152	131	138	133	149	
Sodium	mg/L	75.3		81.3			75.0			75.2			74.9	73.7	76.0	80.9	73.4	81.4	75	74.6	72.0	77.8	
Potassium	mg/L	3.87		3.9			<5.00			3.74			3.74	3.82	<5.00	<5.00	<5.00	4.25	<5.00	<5.00	3.69	3.88	
Alkalinity, Total	mg/L	380		367			405			392			350	357	355	268	430	420	395	340	440	425	
Alkalinity, Bicarbonate	mg/L	380		367			405			392			425	357	355	268	430	420	395	340	440	425	
Alkalinity, Carbonate	mg/L	<10.0		<10.0			<10.0			<10.0			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	
Alkalinity, Hydroxide	mg/L	<10.0		<10.0			<10.0			<10.0			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	
Chloride	mg/L	11.9		10.7			10.8			10.9			11.6	10.3	10.7	10.2	10.1	10.4	10.1	10.5	10.3	10.1	
Fluoride	mg/L	<0.500		0.332			0.322			0.322			<0.500	0.354	0.330	0.322	0.322	0.300	0.304	0.312	0.260	0.292	
Sulfate as SO4	mg/L	732		736			733			844			746	774	803	767	742	757	746	796	751	755	
Total Organic Carbon (TOC)	mg/L	3.72		3.57			3.73			3.70			3.45	3.42	3.63	4.01	3.39	3.00	3.42	3.63	3.38	3.50	
Nitrate/Nitrite as N	mg/L	<0.020		<0.020			<0.020			<0.020			<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	
Silica as N ^	mg/L	NA		NA			NA			NA			0.178	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Ortho-Phosphate as P ^	mg/L	NA		NA			NA			NA			<0.0500	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Aluminum	mg/L	<0.050		<0.100			<0.250			<0.100			<0.050	<0.100	<0.250	<0.250	<0.250	<0.150	<0.250	<0.250	<0.100	<0.050	
Arsenic	mg/L	0.0014		0.0015			0.0013			0.0016			0.0013	0.0013	0.0011	<0.0015	<0.0025	0.0016	<0.0025	<0.0025	0.0011	0.0009	
Cadmium	mg/L	<0.0001		<0.0002			<0.0001			<0.0001			<0.0002	<0.0002	<0.0002	<0.0003	<0.0005	<0.0001	<0.0025	<0.0025	<0.0010	<0.0005	
Copper	mg/L	0.0003		0.0018			0.0011			0.0008			0.0006	<0.0010	<0.0010	<0.0015	<0.0025	0.0007	<0.0025	<0.0025	0.0018	0.0021	
Iron	mg/L	1.82		1.95			1.81			2.12			2.00	1.84	1.71	2.16	2.15	2.08	1.92	1.75	1.63	2.05	
Lead	mg/L	<0.0005		<0.0010			<0.0005			<0.0005			<0.0010	<0.001	<0.0010	<0.0015	<0.0025	<0.0005	<0.0025	<0.0025	<0.0010	<0.0025	
Manganese	mg/L	3.72		4.49			4.01			4.22			4.76	4.86	3.63	4.49	4.42	5.22	4.21	4.39	4.66	4.48	
Mercury (dissolved)	mg/L	<0.0002		<0.0002			<0.0002			<0.0002			<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002		
Mercury (dissolved low-level)	ng/L																					<5.00	
Molybdenum	mg/L	0.0008		0.0011			0.0007			0.0009			<0.0010	0.001	<0.0010	<0.0015	<0.0025	0.0006	<0.0025	<0.0025	<0.0010	0.0007	
Selenium	mg/L	<0.0020		<0.0020			<0.0010			0.0011			<0.0020	<0.002	<0.0020	<0.0030	<0.0050	<0.0010	<0.0050	<0.0050	<0.0020	<0.0010	
Silica (SiO2)	mg/L	16.6		16.1			16.1			16.9			16.8	16.4	15.8	16.9	14.9	17.7	17.1	16.7	17.2	18.3	
Silicon	mg/L	7.75		7.52			7.55			7.90			7.83	7.67	7.37	7.91	6.96	8.28	7.97	7.81	8.03	8.57	
Uranium	mg/L	0.0021		0.0018			0.0017			0.0018			0.0020	0.0019	0.0016	0.0018	<0.0025	0.0018	<0.0025	<0.0025	0.0015	<0.0025	
Zinc	mg/L	<0.0050		<0.0040			0.0021			0.0020			<0.0040	<0.004	<0.0040	<0.0060	<0.0100	0.0022	<0.0100	<0.0100	<0.0040	<0.0020	

Notes & Definitions:

^ one-time analysis
 Y/N yes or no
 gpm gallons per minute
 deg C degrees Celsius
 SU standard pH units
 µS/cm microsiemens per centimeter
 mV millivolts
 mg/L milligram per liter
 pCi/L picocuries per liter
 NM not measured (field)
 NA not analyzed (lab)
 ng/L nanogram per liter

- "<" values denote that the quantification of that analyte is below the reporting level for the analytical laboratory, acceptable by environmental water quality laboratory industry standards.
- Total alkalinity is measured by titration with hydrochloric acid to a set pH point, reporting this value as an equivalent amount of calcium carbonate. This value is then partitioned into bicarbonate, carbonate and hydroxide depending on the initial pH of the sample solution, each components reported as equivalent CaCO3.
- Industry standard Quality Assurance/Quality Control (QA/QC) protocol are followed for this hydrologic monitoring program by both GCC Energy and the contracted environmental water quality analytical laboratories. QA/QC results are not shown in this table.

GCC Energy Hydrologic Monitoring Data

MW-8-EAA																						
Year	2018	2019											2020				2021				2022	
Quarter	Q4	Q1			Q2			Q3			Q4		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Month	12	1	2	3	4	5	6	7	8	9	10	11	2	5	8	11	2	5	8	11	3	6
Sample Date	12/23	1/29	2/19	3/20	4/16	5/29	6/20	7/24	8/13	9/27	10/24	11/6	2/11	5/27	8/25	11/11	2/16	5/24	8/24	11/30	3/23	6/7
Lab Analysis (Y/N)	Y	N	Y	N	N	Y	N	N	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Field Parameters:																						
Purge Flow Rate	gpm	0.85	1.10	0.50	3.00	0.50	0.75	1.00	1.00	0.75	0.50	1.00	0.25	1.00	0.25	0.13	0.13	0.13	0.13	0.25	0.25	0.25
Total Purged	gal	18.0	14.0	15.0	3.0	15.0	17.0	15.3	15.3	18.0	15.3	15.5	15.0	15.2	15.0	16.0	15.0	15.0	16.0	15.0	14.0	15.0
Depth to Water	ft bgs	40.00	39.95	40.10	43.45	40.44	40.05	39.94	40.10	40.08	40.25	40.31	40.22	40.40	40.45	34.50	40.83	41.22	41.00	40.98	48.04	40.95
Temperature	deg C	10.3	10.2	10.0	9.9	10.3	10.5	10.6	10.5	10.6	10.3	10.2	11.2	10.5	11.0	11.1	11.0	10.9	11.0	11.2	10.7	10.8
pH	SU	7.12	7.09	7.13	7.17	7.09	7.02	7.17	7.09	7.05	7.03	6.99	6.99	6.99	7.14	7.19	7.19	7.20	7.27	7.31	7.30	7.18
Specific Conductance	µS/cm	1781	1696	1720	1725	1729	1628	1676	1699	172	1739	1774	1739	1758	1760	1675	1716	1570	1642	1671	1746	1750
Oxygen Reduction Potential	mV	-65.0	-52.8	-51.8	-53.0	-59.7	11.0	-29.5	-46.6	-44.8	-33.5	-38.8	-39.2	-18.2	-72.4	1.4	-14.7	-20.2	-63.3	-57.4	-37.2	-156.9
Lab Analytical Results:																						
Hardness as CaCO3	mg/L	870		861			864			883			867	861	907	937	810	914	838	859	859	937
pH (Lab)	SU	7.28		7.36			7.13			7.05			7.01	7.11	6.96	7.18	7.1	7.03	6.97	7.06	6.81	7.19
Total Dissolved Solids (Lab)	mg/L	1220		1290			1240			1280			1380	1290	1260	1280	1310	1400	1320	1320	1340	1380
Calcium	mg/L	152		151			148			154			143	149	153	160	134	156	146	146	149	158
Magnesium	mg/L	119		118			120			121			124	119	127	130	115	127	115	120	118	131
Sodium	mg/L	81.7		82.6			77.2			78.6			77.1	77.2	77.7	82.9	74.3	80.9	76.1	75.8	74.9	81.2
Potassium	mg/L	3.80		3.27			3.55			3.18			3.52	3.8	<5.00	<5.00	<5.00	3.63	3.49	<5.00	3.36	3.65
Alkalinity, Total	mg/L	400		435			450			431			445	404	385	288	480	450	445	385	490	460
Alkalinity, Bicarbonate	mg/L	400		435			450			431			445	404	385	288	480	450	445	385	490	460
Alkalinity, Carbonate	mg/L	<10.0		<10.0			<10.0			<10.0			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Alkalinity, Hydroxide	mg/L	<10.0		<10.0			<10.0			<10.0			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Chloride	mg/L	9.83		10.5			10.3			11.1			11.0	10.2	10.3	10.1	11.3	10.4	10.2	10.3	10.5	10.5
Fluoride	mg/L	0.380		0.370			0.338			0.342			<0.500	0.33	0.346	0.336	0.334	0.292	0.306	0.35	0.272	0.304
Sulfate as SO4	mg/L	533		559			606			643			577	602	625	605	582	609	595	615	599	608
Total Organic Carbon (TOC)	mg/L	3.77		3.59			3.77			3.68			3.52	3.49	3.56	3.82	3.54	3.04	3.65	3.71	3.48	3.49
Nitrate/Nitrite as N	mg/L	<0.020		<0.020			<0.020			<0.020			<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Ammonia as N ^	mg/L	NA		NA			NA			NA			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ortho-Phosphate as P ^	mg/L	NA		NA			NA			NA			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aluminum	mg/L	<0.100		<0.100			<0.050			<0.100			<0.050	<0.100	<0.250	<0.250	<0.250	<0.150	<0.050	<0.250	<0.100	<0.050
Arsenic	mg/L	0.0020		0.0018			0.0018			0.0021			0.0018	0.0017	0.0017	0.0018	<0.0025	0.0018	0.0018	<0.0025	0.0017	0.0015
Cadmium	mg/L	<0.0001		<0.0002			<0.0001			<0.0001			<0.0001	<0.0002	<0.0002	<0.0003	<0.0005	<0.0003	<0.0015	<0.0025	<0.0010	<0.0005
Copper	mg/L	0.0004		0.0024			0.0023			0.0008			0.0010	0.001	<0.0010	<0.0015	<0.0025	<0.0015	<0.0015	<0.0025	0.0017	0.0021
Iron	mg/L	2.12		2.13			2.42			2.46			2.30	2.28	2.29	2.31	0.762	2.33	2.25	2.2	2.22	2.52
Lead	mg/L	<0.0005		<0.0010			<0.0005			<0.0005			<0.0005	<0.001	<0.0010	<0.0015	<0.0025	<0.0015	<0.0015	<0.0025	<0.001	<0.0025
Manganese	mg/L	3.17		3.52			3.06			3.37			3.39	3.7	3.36	3.54	3.81	3.55	3.5	3.6	3.66	3.77
Mercury (dissolved)	mg/L	<0.0002		<0.0002			<0.0002			<0.0002			<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Mercury (dissolved low-level)	ng/L																					<5.00
Molybdenum	mg/L	0.0009		0.0011			0.0008			0.0011			0.0008	<0.0010	<0.0010	<0.0015	<0.0025	<0.0015	<0.0015	<0.0025	<0.0010	0.0009
Selenium	mg/L	<0.0020		<0.0020			0.0010			0.0013			<0.0010	<0.0020	<0.0020	<0.0030	<0.0050	0.0046	<0.003	<0.0050	0.0035	<0.0010
Silica (SiO2)	mg/L	16.3		15.3			15.7			16.1			15.9	15.7	15.0	16.1	14.2	16.0	16.5	15.5	16.4	17.3
Silicon	mg/L	7.63		7.15			7.32			7.52			7.42	7.32	7.02	7.53	6.63	7.48	7.72	7.24	7.68	8.10
Uranium	mg/L	0.0021		0.0017			0.0016			0.0018			0.0019	0.0019	0.0017	0.0017	<0.0025	0.0016	0.0016	<0.0025	0.0015	<0.0025
Zinc	mg/L	<0.0050		<0.0040			<0.0020			<0.0020			<0.0020	<0.0040	<0.0040	<0.0060	<0.0100	<0.0060	<0.0060	<0.0100	<0.0040	<0.0020

Notes & Definitions:

^ one-time analysis
 Y/N yes or no
 gpm gallons per minute
 deg C degrees Celsius
 SU standard pH units
 µS/cm microsiemens per centimeter
 mV millivolts
 mg/L milligram per liter
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- "<" values denote that the quantification of that analyte is below the reporting level for the analytical laboratory, acceptable by environmental water quality laboratory industry standards.
- Total alkalinity is measured by titration with hydrochloric acid to a set pH point, reporting this value as an equivalent amount of calcium carbonate. This value is then partitioned into bicarbonate, carbonate and hydroxide depending on the initial pH of the sample solution, each components reported as equivalent CaCO3.
- Industry standard Quality Assurance/Quality Control (QA/QC) protocol are followed for this hydrologic monitoring program by both GCC Energy and the contracted environmental water quality analytical laboratories. QA/QC results are not shown in this table.

GCC Energy Hydrologic Monitoring Data

MW-8-MI																						
Year	2018	2019										2020				2021				2022		
Quarter	Q4	Q1			Q2			Q3			Q4		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Month	12	1	2	3	4	5	6	7	8	9	10	11	2	5	8	11	2	5	8	11	3	6
Sample Date	12/23	1/29	2/19	3/20	4/16	5/29	6/20	7/24	8/13	9/27	10/24	11/6	2/11	5/27	8/25	11/11	2/16	5/24	8/24	11/30	3/23	6/7
Lab Analysis (Y/N)	Y	N	Y	N	N	Y	N	N	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Field Parameters:																						
Purge Flow Rate	gpm	1.10	1.00	0.50	3.00	0.50	0.50	0.25	0.50	0.75	0.50	1.00	0.25	0.25	0.13	0.10	0.25	0.25	0.13	0.25	0.25	0.13
Total Purged	gal	27.5	18.0	1.0	3.0	1.5	2.5	2.5	2.3	3.0	2.0	2.5	1.0	1.0	1.0	2.0	1.0	2.0	3.0	1.0	1.0	0.8
Depth to Water	ft bgs	45.75	43.48	43.50	44.30	44.47	44.10	44.24	44.45	44.59	44.90	45.12	45.10	45.20	45.42	45.84	46.24	46.38	46.54	47.27	46.84	47.69
Temperature	deg C	10.8	10.8	10.6	11.2	10.4	11.1	11.4	11.0	11.4	10.9	10.3	11.4	10.2	11.3	13.1	11.3	10.0	11.6	11.9	11.1	10.9
pH	SU	7.57	7.50	7.48	7.47	7.34	7.31	7.48	7.42	7.38	7.30	7.23	7.15	7.08	7.44	7.44	7.43	7.47	7.59	7.55	7.56	7.41
Specific Conductance	µS/cm	1786	1667	1651	1658	1643	1595	1639	1645	1658	1637	1689	1642	1651	1659	1598	1628	1468	1616	1554	1629	1596
Oxygen Reduction Potential	mV	-84.4	-177.1	-122.1	-113.3	-87.2	-54.4	-97.1	-116.4	-119.4	-88.4	-82.0	-59.3	-136.6	-184.9	-107.0	-112.2	-72.0	-131.9	-123.1	-115.9	-195.3
Lab Analytical Results:																						
Hardness as CaCO3	mg/L	167		249			273			253			267	254	309	355	339	376	288	377	317	406
pH (Lab)	SU	7.73		7.54			7.24			7.46			7.44	7.53	7.25	7.34	7.27	7.33	7.36	7.31	7.06	7.36
Total Dissolved Solids (Lab)	mg/L	1050		1030			1100			1110			1050	1060	1040	1010	1040	1060	1040	1000	1100	1050
Calcium	mg/L	34.0		48.5			52.4			49.7			51.3	48.7	58.5	65.9	62.6	69.7	54	70.3	59.8	75.5
Magnesium	mg/L	19.9		31.0			34.5			31.4			33.8	32.1	39.6	46.2	44.4	49.1	37.2	48.9	40.8	52.7
Sodium	mg/L	344		312			289			289			275	269	272	260	232	237	256	229	238	226
Potassium	mg/L	4.47		5.25			<5.00			4.55			5.07	4.71	5.00	5.56	5.22	5.88	5.05	5.69	5.14	5.98
Alkalinity, Total	mg/L	500		565			560			573			585	543	545	448	590	590	575	570	605	590
Alkalinity, Bicarbonate	mg/L	500		565			560			573			585	543	545	448	590	590	575	570	605	590
Alkalinity, Carbonate	mg/L	<10.0		<10.0			<10.0			<10.0			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Alkalinity, Hydroxide	mg/L	<10.0		<10.0			<10.0			<10.0			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Chloride	mg/L	12.7		10.0			9.33			9.06			9.66	8.19	8.23	8.12	7.91	7.96	8.07	7.85	7.91	7.70
Fluoride	mg/L	<0.500		<0.200			<0.200			<0.200			<0.500	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200
Sulfate as SO4	mg/L	347		353			366			317			317	314	316	335	319	326	314	324	312	325
Total Organic Carbon (TOC)	mg/L	2.73		2.83			2.81			2.74			2.65	2.6	2.94	2.87	2.76	2.6	2.74	2.97	2.66	2.77
Nitrate/Nitrite as N	mg/L	<0.020		<0.020			<0.020			<0.020			<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Ammonia as N ^	mg/L	NA		NA			NA			NA			1.31	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ortho-Phosphate as P ^	mg/L	NA		NA			NA			NA			<0.0500	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aluminum	mg/L	<0.050		<0.100			<0.250			<0.100			<0.050	<0.100	<0.250	<0.250	<0.250	<0.150	<0.050	<0.250	<0.100	<0.050
Arsenic	mg/L	0.0008		<0.0010			0.0006			0.0005			0.0005	<0.0010	<0.0010	<0.0015	<0.0025	<0.0015	<0.0015	<0.0025	<0.0010	0.0005
Cadmium	mg/L	<0.0001		<0.0002			<0.0001			<0.0001			<0.0001	<0.0002	<0.0002	<0.0003	<0.0005	<0.0003	<0.0015	<0.0025	<0.0010	<0.0005
Copper	mg/L	0.0031		0.0066			0.0036			0.0035			0.0037	0.0027	<0.0010	<0.0015	<0.0025	0.0015	0.0046	0.0047	0.0054	0.0055
Iron	mg/L	0.137		0.162			<0.250			0.129			0.130	0.108	<0.250	<0.250	<0.250	<0.150	0.113	<0.250	0.168	0.113
Lead	mg/L	<0.0005		<0.0010			<0.0005			<0.0005			<0.0005	<0.0010	<0.0025	<0.0015	<0.0025	<0.0015	<0.0015	<0.0025	<0.0010	<0.0025
Manganese	mg/L	0.0495		0.0383			0.0327			0.0351			0.0377	0.0391	0.0393	0.0551	0.0546	0.0579	0.0412	0.0544	0.0443	0.0603
Mercury (dissolved)	mg/L	<0.0002		<0.0002			<0.0002			<0.0002			<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Mercury (dissolved low-level)	ng/L																					<5.00
Molybdenum	mg/L	0.0005		<0.0010			<0.0005			<0.0005			<0.0005	<0.001	<0.0010	<0.0015	<0.0025	<0.0015	<0.0015	<0.0025	<0.0010	<0.0005
Selenium	mg/L	<0.0020		<0.0020			0.0010			0.0010			<0.0010	<0.0020	0.0020	<0.0030	<0.0050	0.0425	0.0037	0.0072	0.0264	0.0016
Silica (SiO2)	mg/L	12.1		12.4			12.8			12.5			12.6	12.2	11.9	12.9	12.1	13.5	13.2	13.6	13.7	15.2
Silicon	mg/L	5.65		5.78			5.99			5.83			5.88	5.71	5.55	6.05	5.67	6.32	6.17	6.35	6.39	7.08
Uranium	mg/L	0.0002		0.0002			0.0002			0.0001			0.0001	<0.0010	<0.0025	<0.0015	<0.0025	<0.0015	<0.0015	<0.0025	<0.0010	<0.0025
Zinc	mg/L	<0.0050		<0.0040			<0.0020			<0.0020			<0.0020	<0.0040	<0.0040	<0.0060	<0.0100	<0.0060	<0.0060	<0.0100	<0.0040	<0.0020

Notes & Definitions:

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 Y/N yes or no
 gpm gallons per minute
 deg C degrees Celsius
 SU standard pH units
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- "<" values denote that the quantification of that analyte is below the reporting level for the analytical laboratory, acceptable by environmental water quality laboratory industry standards.
- Total alkalinity is measured by titration with hydrochloric acid to a set pH point, reporting this value as an equivalent amount of calcium carbonate. This value is then partitioned into bicarbonate, carbonate and hydroxide depending on the initial pH of the sample solution, each components reported as equivalent CaCO3.
- Industry standard Quality Assurance/Quality Control (QA/QC) protocol are followed for this hydrologic monitoring program by both GCC Energy and the contracted environmental water quality analytical laboratories. QA/QC results are not shown in this table.

GCC Energy Hydrologic Monitoring Data

MW-8-LM																						
Year	2018	2019										2020				2021				2022		
Quarter	Q4	Q1			Q2			Q3			Q4		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Month	12	1	2	3	4	5	6	7	8	9	10	11	2	5	8	11	2	5	8	11	3	6
Sample Date	12/28	1/29	2/19	3/21	4/16	5/29	6/18	7/24	8/13	9/27	10/24	11/6	2/11	5/27	8/25	11/11	2/16	5/24	8/24	11/30	3/23	6/7
Lab Analysis (Y/N)	Y	N	Y	N	N	Y	N	N	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Field Parameters:																						
Purge Flow Rate	gpm	NM	1.00	0.25	1.00	0.50	0.10	0.25	0.50	0.25	0.12	0.25	0.25	0.25	0.13	0.13	0.13	0.13	0.25	0.25	0.25	0.25
Total Purged	gal	30	4.0	1.5	1.0	2.0	1.3	6.8	2.0	2.0	1.0	1.0	1.5	1.0	1.0	2.0	1.0	2.0	1.5	1.0	1.0	1.0
Depth to Water	ft bgs	136.39	130.52	134.30	144.03	140.03	137.48	142.23	144.15	138.06	137.50	137.60	137.34	139.15	129.70	127.90	125.75	126.72	126.13	125.25	123.55	124.10
Temperature	deg C	4.1	13.9	13.2	8.7	13.6	13.9	12.8	13.7	13.4	13.0	11.7	13.3	11.4	13.4	13.6	8.8	12.1	12.8	13.5	12.5	12.3
pH	SU	8.37	8.70	8.71	8.41	8.70	8.50	8.66	8.64	8.58	8.44	8.44	8.47	7.98	8.76	8.83	8.81	8.82	8.90	8.90	8.91	8.79
Specific Conductance	µS/cm	2306	1274	1265	1310	1262	1234	1264	1226	1269	1252	1299	1255	1294	1282	1055	1117	1132	1121	1196	1262	1260
Oxygen Reduction Potential	mV	37.5	-114.3	112.8	77.0	-36.2	33.2	-63.9	-93.5	-103.0	-115.9	-94.4	-47.4	-106.6	-204.5	-106.9	-93.6	-87.8	-164.1	-106.1	-99.3	-241.3
Lab Analytical Results:																						
Hardness as CaCO3	mg/L	45.0		7.29			16.9			6.67			6.38	6.79	7.76	7.53	6.35	6.93	7.23	4.65	7.11	7.29
pH (Lab)	SU	8.57		8.63			8.02			8.56			8.52	8.55	8.41	8.45	8.48	8.54	8.57	8.48	8.31	8.61
Total Dissolved Solids (Lab)	mg/L	1420		770			780			785			780	840	730	740	700	795	720	740	760	740
Calcium	mg/L	10.8		1.93			3.84			1.78			1.68	1.77	2.09	2.05	1.71	1.87	1.92	1.86	1.88	1.96
Magnesium	mg/L	4.39		0.600			1.77			0.541			0.528	0.574	0.620	0.587	0.502	0.550	0.592	<0.500	0.587	0.530
Sodium	mg/L	382		341			317			306			305	309	315	337	304	319	315	308	291	316
Potassium	mg/L	45.7		3.49			<5.00			2.27			2.18	2.06	<5.00	<5.00	<5.00	<3.00	2.24	<5.00	2.12	2.31
Alkalinity, Total	mg/L	615		720			745			731			745	685	630	675	780	730	755	750	770	780
Alkalinity, Bicarbonate	mg/L	535		610			645			645			685	595	530	585	680	630	645	650	620	640
Alkalinity, Carbonate	mg/L	80.0		110			100			86.0			60.0	90	100	90	100	100	110	100	150	140
Alkalinity, Hydroxide	mg/L	<10.0		<10.0			<10.0			<10.0			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Chloride	mg/L	175		5.11			6.80			2.63			2.48	3.04	3.01	2.98	2.47	2.5	2.48	2.55	2.47	2.47
Fluoride	mg/L	2.06		3.91			3.95			3.97			3.88	3.61	3.63	3.53	3.66	3.58	3.48	3.67	3.40	3.44
Sulfate as SO4	mg/L	190		3.79			9.58			1.02			<1.00	<2.00	<2.00	<2.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
Total Organic Carbon (TOC)	mg/L	2.80		1.80			3.33			1.94			1.69	1.69	1.92	1.82	1.66	1.2	1.71	1.79	1.60	1.70
Nitrate/Nitrite as N	mg/L	<0.020		<0.020			<0.020			<0.020			<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Ammonia as N ^	mg/L	NA		NA			NA			NA			0.282	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ortho-Phosphate as P ^	mg/L	NA		NA			NA			NA			<0.0500	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aluminum	mg/L	<0.050		<0.100			<0.250			<0.050			<0.050	<0.100	<0.250	<0.250	<0.250	<0.150	<0.050	<0.250	<0.100	<0.050
Arsenic	mg/L	0.0106		<0.0010			0.0006			0.0007			0.0006	<0.0005	<0.0010	<0.0015	<0.0025	<0.0015	<0.0015	<0.0025	<0.0010	0.0008
Cadmium	mg/L	<0.0001		<0.0002			<0.0001			<0.0001			<0.0001	<0.0001	<0.0002	<0.0003	<0.0005	<0.0003	<0.0015	<0.0025	<0.0010	<0.0005
Copper	mg/L	0.0337		0.0077			0.0047			0.0041			0.0051	0.0033	0.0012	0.0017	<0.0025	0.0025	0.0057	0.0068	0.0065	0.0075
Iron	mg/L	<0.050		<0.100			<0.250			<0.050			<0.050	<0.100	<0.250	<0.250	<0.250	<0.150	<0.050	<0.250	<0.100	<0.050
Lead	mg/L	<0.0005		<0.0010			<0.0005			<0.0005			<0.0010	<0.0005	<0.0010	<0.0015	<0.0025	<0.0015	<0.0015	<0.0025	<0.0010	<0.0025
Manganese	mg/L	0.0258		0.0038			0.0150			0.0020			0.0026	0.0025	0.0029	0.0026	0.0028	0.0024	0.0021	0.0025	0.0023	0.0022
Mercury (dissolved)	mg/L	<0.0002		<0.0002			<0.0002			<0.0002			<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Mercury (dissolved low-level)	ng/L																					<5.00
Molybdenum	mg/L	0.0142		<0.0010			0.0009			<0.0005			<0.0005	<0.0005	<0.0010	<0.0015	<0.0025	<0.0015	<0.0015	<0.0025	<0.0010	<0.0005
Selenium	mg/L	0.0020		<0.0020			<0.0010			<0.0010			<0.0010	<0.0010	<0.0020	<0.0030	<0.0050	0.0031	<0.0030	<0.0050	<0.0020	<0.0010
Silica (SiO2)	mg/L	9.09		8.45			8.68			8.28			7.77	7.62	7.40	7.84	7.4	8.17	8.21	7.82	8.28	8.44
Silicon	mg/L	4.25		3.95			4.06			3.87			3.63	3.56	3.46	3.67	3.46	3.82	3.84	3.66	3.87	3.95
Uranium	mg/L	0.0044		<0.0002			0.0001			0.0001			<0.0002	<0.0005	<0.0010	<0.0015	<0.0025	<0.0015	<0.0015	<0.0025	<0.0010	<0.0025
Zinc	mg/L	0.0080		<0.0040			0.0023			<0.0020			<0.0020	<0.002	<0.0040	<0.0060	<0.0100	<0.0060	<0.0060	<0.0100	<0.0040	<0.0020

Notes & Definitions:

^ one-time analysis
 Y/N yes or no
 gpm gallons per minute
 deg C degrees Celsius
 SU standard pH units
 µS/cm microsiemens per centimeter
 mV millivolts
 mg/L milligram per liter
 pCi/L picocuries per liter
 NM not measured (field)
 NA not analyzed (lab)
 ng/L nanogram per liter

- "<" values denote that the quantification of that analyte is below the reporting level for the analytical laboratory, acceptable by environmental water quality laboratory industry standards.
- Total alkalinity is measured by titration with hydrochloric acid to a set pH point, reporting this value as an equivalent amount of calcium carbonate. This value is then partitioned into bicarbonate, carbonate and hydroxide depending on the initial pH of the sample solution, each components reported as equivalent CaCO3.
- Industry standard Quality Assurance/Quality Control (QA/QC) protocol are followed for this hydrologic monitoring program by both GCC Energy and the contracted environmental water quality analytical laboratories. QA/QC results are not shown in this table.

GCC Energy Hydrologic Monitoring Data

MW-8-PL																							
Year	2018	2019										2020				2021				2022			
Quarter	Q4	Q1			Q2			Q3			Q4		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	
Month	12	1	2	3	4	5	6	7	8	9	10	11	2	5	8	11	2	5	8	11	3	6	
Sample Date	12/27	1/29	2/19	3/20	4/16	5/29	6/20	7/24	8/13	9/27	10/24	11/6	2/11	5/27	8/25	11/11	2/16	5/24	8/24	11/30	3/23	6/7	
Lab Analysis (Y/N)	Y	N	Y	N	N	Y	N	N	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
Field Parameters:																							
Purge Flow Rate	gpm	0.25	1.00	0.50	3.00	0.50	0.25	0.50	1.00	0.50	0.50	0.75	0.25	0.25	0.25	0.25	0.75	0.25	0.25	0.25	0.25	0.25	
Total Purged	gal	20.0	5.0	2.0	3.0	2.0	3.0	2.5	2.3	2.5	2.0	2.5	1.3	2.0	2.0	2.3	2.0	2.0	2.0	2.0	2.0	2.0	
Depth to Water	ft bgs	125.97	126.29	126.40	127.10	126.98	126.70	126.82	127.25	127.38	127.42	127.48	127.59	127.32	127.34	128.00	127.31	127.50	127.83	127.89	127.90	128.30	
Temperature	deg C	10.3	14.2	13.4	12.9	13.2	14.2	14.8	14.7	14.9	14.0	13.2	14.9	13.8	14.8	14.9	14.1	12.9	14.6	14.8	13.4	14.1	
pH	SU	7.50	7.30	7.49	7.30	7.29	7.31	7.57	7.56	7.52	7.45	7.47	7.52	7.55	7.47	7.52	7.52	7.53	7.58	7.55	7.57	7.43	
Specific Conductance	µS/cm	1690	1531	1571	1558	1554	1411	1326	1165	1083	947	940	900	862	844	792	827	760	813	816	836	817	
Oxygen Reduction Potential	mV	30.2	-116.5	97.9	-108.7	-110.6	34.2	-57.6	-74.0	-79.5	-51.3	-52.5	-30.8	-59.9	-101.9	-38.0	-37.3	-11.5	-76.6	-64.4	-53.5	-161.9	
Lab Analytical Results:																							
Hardness as CaCO3	mg/L	617		644			596			411			294	278	298	292	268	281	283	280	272	292	
pH (Lab)	SU	7.28		7.40			7.26			7.22			7.39	7.47	7.19	7.16	7.41	7.36	7.41	7.29	7.16	7.42	
Total Dissolved Solids (Lab)	mg/L	1150		1090			995			705			620	500	490	525	465	525	505	475	465	485	
Calcium	mg/L	112		120			105			73.1			52.1	49.3	53.8	53.3	49.1	52.2	53.3	53	51.1	55.7	
Magnesium	mg/L	82.1		83.8			81.4			55.4			39.7	37.6	39.7	38.5	35.4	36.6	36.5	35.9	35.0	37.1	
Sodium	mg/L	106		124			102			91.7			83.3	78.5	80.4	81.6	77.2	78.6	79.7	77.8	73.7	80.8	
Potassium	mg/L	5.14		5.62			<5.00			2.80			2.35	2.32	2.11	<2.00	<2.00	1.78	1.73	<2.00	1.54	1.71	
Alkalinity, Total	mg/L	370		415			435			393			390	339	340	315	410	370	385	360	385	362	
Alkalinity, Bicarbonate	mg/L	370		415			435			393			390	339	340	315	410	370	385	360	385	362	
Alkalinity, Carbonate	mg/L	<10.0		<10.0			<10.0			<10.0			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	
Alkalinity, Hydroxide	mg/L	<10.0		<10.0			<10.0			<10.0			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	
Chloride	mg/L	18.8		18.5			9.03			5.61			5.66	3.51	3.38	3.33	3.32	3.39	3.30	3.33	3.38	3.33	
Fluoride	mg/L	0.505		0.474			0.290			0.291			<0.500	0.258	0.240	0.233	0.224	0.219	0.200	0.222	0.196	0.195	
Sulfate as SO4	mg/L	478		471			390			232			127	109	103	99.2	99	101	96.3	102	98.4	100	
Total Organic Carbon (TOC)	mg/L	4.17		4.02			2.92			2.21			1.75	1.63	1.63	1.61	1.44	0.928	1.42	1.54	1.40	1.54	
Nitrate/Nitrite as N	mg/L	<0.020		<0.020			<0.020			<0.020			<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	
Ammonia as N ^	mg/L	NA		NA			NA			NA			0.199	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Ortho-Phosphate as P ^	mg/L	NA		NA			NA			NA			<0.0500	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Aluminum	mg/L	<0.050		<0.100			<0.250			<0.050			<0.050	<0.050	<0.100	<0.100	<0.100	<0.050	<0.050	<0.100	<0.050	<0.050	
Arsenic	mg/L	0.0074		0.0124			0.0190			0.0156			0.0104	0.0073	0.0075	0.0064	0.0058	0.0074	0.0055	0.0017	0.0051	0.0046	
Cadmium	mg/L	<0.0001		<0.0001			<0.0001			<0.0001			<0.0001	<0.0002	<0.0001	<0.0002	<0.0002	<0.0001	<0.0010	<0.0010	<0.0005	<0.0005	
Copper	mg/L	0.0016		0.0025			0.0017			0.0011			0.0004	0.001	<0.0025	<0.001	0.0014	0.0005	0.0013	<0.0010	0.0015	0.0023	
Iron	mg/L	<0.050		0.352			<0.250			0.129			0.075	0.054	<0.100	<0.100	<0.100	<0.050	<0.050	<0.100	0.070	0.079	
Lead	mg/L	<0.0005		<0.0010			<0.0005			<0.0005			<0.0005	<0.0005	<0.0005	<0.0010	<0.0010	<0.0005	<0.0010	<0.0005	<0.0005	<0.0025	
Manganese	mg/L	1.31		1.22			0.697			0.505			0.313	0.303	0.307	0.259	0.219	0.196	0.175	0.0772	0.161	0.163	
Mercury (dissolved)	mg/L	<0.0002		<0.0002			<0.0002			<0.0002			<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
Mercury (dissolved low-level)	ng/L																					<5.00	
Molybdenum	mg/L	0.0090		0.0068			0.0020			0.0021			0.0017	0.0008	<0.0005	<0.0010	<0.0010	<0.0005	<0.0010	<0.0010	<0.0005	<0.0005	
Selenium	mg/L	0.0012		<0.0020			<0.0010			<0.0010			<0.0010	<0.001	<0.0010	<0.0020	<0.0020	0.0038	<0.002	<0.0020	0.0031	<0.0010	
Silica (SiO2)	mg/L	14.1		16.3			17.7			18.5			18.0	18.9	18.7	19.9	18.5	20.1	21.5	20	20.8	22.2	
Silicon	mg/L	6.58		7.64			8.28			8.67			8.42	8.82	8.75	9.28	8.66	9.40	10.00	9.37	9.71	10.4	
Uranium	mg/L	0.0052		0.0040			0.0010			0.0009			0.0004	<0.0005	<0.0005	<0.0010	<0.0010	<0.0005	<0.001	<0.0010	<0.0005	<0.0005	
Zinc	mg/L	0.0344		<0.0040			<0.0020			<0.0080			<0.0020	<0.0020	<0.0100	<0.0040	<0.0040	<0.0020	<0.004	<0.0040	<0.0020	<0.0020	

Notes & Definitions:

^ one-time analysis
 Y/N yes or no
 gpm gallons per minute
 deg C degrees Celsius
 SU standard pH units
 µS/cm microsiemens per centimeter
 mV millivolts
 mg/L milligram per liter
 pCi/L picocuries per liter
 NM not measured (field)
 NA not analyzed (lab)
 ng/L nanogram per liter

- "<" values denote that the quantification of that analyte is below the reporting level for the analytical laboratory, acceptable by environmental water quality laboratory industry standards.
- Total alkalinity is measured by titration with hydrochloric acid to a set pH point, reporting this value as an equivalent amount of calcium carbonate. This value is then partitioned into bicarbonate, carbonate and hydroxide depending on the initial pH of the sample solution, each components reported as equivalent CaCO3.
- Industry standard Quality Assurance/Quality Control (QA/QC) protocol are followed for this hydrologic monitoring program by both GCC Energy and the contracted environmental water quality analytical laboratories. QA/QC results are not shown in this table.