

GCC Energy Hydrologic Monitoring Data

Hay Gulch Ditch Upgradient																																									
Year	2016												2017				2018				2019				2020				2021				2022				2023				
	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	Q3	Q4				
	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	12	2	6	9	11	3	6	9	12	3	5	8	
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	9/13	12/20	3/27	5/18	8/24		
Lab Analysis (Y/N)	Y	N	N	Y	N	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	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	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	0.01	0.07	NM	0.74	0.89		
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	15.0	2.7	0.1	17.8	16.0	
pH	SU	7.75	8.27	7.95	8.15	8.24	8.26	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	7.11	7.94	7.15	6.19	7.85	8.01	7.7	
Specific Conductance	µS/cm	247	323	197	141	189	207	233	210	258	234	687	455	454	106	549	868	1041	304	307	752	306	275	682	902	314	528	434	1024	189	280	252	553	832	570	708	1508	442	764		
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	-108.9	-148.2	13.3	-8.6	-27.5	
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	8.1	10.4	9.0	7.3	6.0	
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	273	336	697	293	342
pH (Lab)	SU	8.17			8.04			8.16			8.19				8.06	8.06	8.22	8.31	8.39	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	7.81	7.98	7.56	7.91	7.56	
Total Dissolved Solids (Lab)	mg/L	170			75			165			180				285	65.0	390	650	700	140	215	175	535	205	225	635	587	255	340	160	685	210	185	140	380	520	355	410	955	380	480
Total Suspended Solids	mg/L	30.0			117			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	19.5	13.2	55	133	51	13.2	13.4	5.07	45.4	<2.5	121	38.0	9.79
Calcium	mg/L	33.5			24			33.0			38.4				53.6	20.8	64.9	86.6	87.3	26.3	39.1	40.3	79.8	34.6	32.4	79.3	81.5	34.0	63.2	49.9	113	25.8	35.8	34.2	61.7	70.8	55.0	69.9	124	63.5	70.2
Magnesium	mg/L	10.9			5.08			9.01			13.7				29.8	4.21	37.5	58.3	65.9	8.61	13.5	11.9	47.0	12.1	10.8	42.2	49	14.5	31.3	21.5	74.3	6.87	10.1	8.35	30.5	50.1	33.1	39.2	93.9	32.6	40.5
Sodium	mg/L	4.46			2.19			3.90			6				10.9	1.97	13.8	27.1	34.6	3.31	5.33	5.00	19.1	7.24	5.81	25.4	30.9	7.67	10.9	8.39	34.3	2.71	3.97	3.53	13.8	13.4	15.1	36.8	18.1	20.6	
Potassium	mg/L	<1			<1			1.35			<1.00				<1.00	1.75	2.15	3.05	3.52	1.18	1.24	<1.00	3.89	1.57	1.07	3.25	3.65	1.86	1.85	1.53	4.74	<1.00	3.28	<1.00	3.39	3.58	2.18	2.82	6.20	2.79	2.97
Alkalinity, Total	mg/L	160			65			98.0			118				185	55.0	177	305	244	67	111	120	260	390	103	233	315	102	220	137	340	68	98	87.0	162	330	209	231	365	179	247
Alkalinity, Bicarbonate	mg/L	160			65			94.0			118				185	55.0	161	285	244	67	107	120	260	390	103	233	295	102	220	131	340	68	98	87.0	162	330	209	231	365	179	247
Alkalinity, Carbonate	mg/L	<10.0			<10.0			<10.0			<10.0				<10.0	<10.0	16.0	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
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
Chloride	mg/L	5.77			2.07			4.32			7.92				22.7	1.76	30.8	48.2	46.7	3.12	6.70	5.58	48.1	7.75	6.04	22.8	31.6	9.64	24.5	14.8	85.9	3.17	5.23	3.44	32.3	33.6	21.9	29.2	108	36.1	41.7
Fluoride	mg/L	0.213			0.208			0.223			0.208				0.215	0.195	0.265	0.283	0.285	0.224	0.272	0.224	0.252	0.208	0.214	<0.500	0.239	<0.500	0.226	0.226	0.235	0.188	0.227	0.179	0.178	0.260	0.238	0.227	0.266	0.185	0.235
Sulfate as SO4	mg/L	42.1			17.7			29.0			45.3				87.7	15.0	99.0	179	229	34	49.7	45.0	128	47.2	35.6	107	151	44.0	86.3	64.4	211	26.4	42.2	40.0	95.5	121	85.1	99.4	314	116	114
Total Organic Carbon (TOC)	mg/L	1.41			1.6			2.21			1.14				2.49	1.15	1.90	1.99	1.81	2.31	1.61	1.09	4.94	3.08	1.84	4.54	5.45	2.93	1.65	1.22	2.69	1.39	2.8	0.832	1.86	5.18	1.74	0.897	3.93	6.04	4.35
Oil & Grease	mg/L	<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	<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			0.028			<0.020			<0.020				0.053	<0.020	0.045	0.088	0.105	0.026	<0.020	<0.020	0.263	0.050	0.072	0.104	0.044	0.302	0.042	0.026	0.282	0.049	0.026	<0.02	0.118	0.165	<0.02	0.066	0.850	0.133	0.298
Sodium Adsorption Ratio (SAR)	no unit	0.17			0.1			0.16			0.21				0.30	0.10	0.34	0.55	0.68	0.14	0.18	0.16	0.42	0.26	0.22	0.55	0.65	0.26	0.29	0.25	0.62	0.12	0.15	0.14	0.36	0.43	0.33	0.37	0.61	0.46	0.48
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
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
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	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Arsenic	mg/L	<0.0005			<0.0005			<0.0005			<0.0005				0.0005	<0.0005	0.0009	0.0007	<0.0025	<0.0005	0.0009	<0.0005	0.0007	0.0006	0.0007	0.0005	0.0006	<0.0005	0.0007	<0.0005	0.0012	<0.0005	0.001	<0.0005	0.0005	0.0010	0.0007	0.0009	<0.0025	0.0006	0.0008
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
Copper	mg/L	0.0006			0.0011			0.0011			0.0005				0.0008	0.0013	0.0006	0.0005	0.0007	0.00																					

GCC Energy Hydrologic Monitoring Data

Hay Gulch Ditch Downgradient																																																																							
Year	2016																																																																						
	2016				2017				2018				2019				2020				2021				2022				2023																																										
	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	Q3	Q4	Q1	Q2	Q3	Q4																																							
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	9	12	3	5	8																																
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	5/7	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	9/13	12/20	3/27	5/18	8/18																																
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																																
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	0.06	0.04	0.01	0.07	0.10	1.34	0.20									
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	dry																							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	18.02	4.05	4.52	15.48	14.54									
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	dry																							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	6.50	6.42	8.43	8.30	7.68									
Specific Conductance	µS/cm	429	530	297	116	308	257	1183	420	421	728	678	987	17	114	164	dry																							742	304	356	309	577	202	295	554	882	137	237	478	815	131	184	311	636	150	248	292	891	762	835									
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	dry																							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	39.9	-132.7	66.9	79.6	-148.0									
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	dry																							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	7.0	9.7	10.2	6.8	7.3									
Lab Analytical Results:																																																																							
Hardness as CaCO3	mg/L	226			67.8				480					503	59.1	91.4	dry																							329	140	182	167	281	91.9	137	295	416	63.6	120	232	419	64.8	90.7	143	346	65.7	95.9	138	433	337	497									
pH (Lab)	SU	8.42			8.13				8.25					8.15	7.98	7.98	dry																							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	7.68	7.97	7.95	8.09	8.28									
Total Dissolved Solids (Lab)	mg/L	270			55				630					615	65.0	80.0	dry																							420	220	260	185	390	185	195	355	573	120	135	370	435	175	90	120	410	29.9	89.9	225	555	475	625									
Total Suspended Solids	mg/L	27.3			18				4.20					12.7	3.00	<0.500	dry																							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	3.67	8.00	17.8	62.0	16.0									
Calcium	mg/L	55.5			21.9				94.7					112	19.0	29.5	dry																							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	30.2	39.0	101	75.8	114									
Magnesium	mg/L	21.1			3.15				59.1					54.6	2.86	4.31	dry																							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	5.01	9.73	43.8	35.8	51.9									
Sodium	mg/L	8.69			1.57				16.8					22.5	1.49	2.37	dry																							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	2.04	4.08	18.6	18.5	29.6									
Potassium	mg/L	1.49			<1				4.48					2.33	<1.00	<1.00	dry																							2.84	1.31	1.58	1.34	3.13	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	<1.00	1.07	2.94	2.77	6.45									
Alkalinity, Total	mg/L	220			59				220					320	47.0	85.0	dry																							265	112	170	140	150	340	140	194	297	48	110	158	315	52	72	116	282	46.0	73.0	103	303	218	293									
Alkalinity, Bicarbonate	mg/L	220			59				140					320	47.0	85.0	dry																							259	104	170	140	150	340	140	188	283	48	110	154	315	52	72	116	282	46.0	73.0	103	293	218	265									
Alkalinity, Carbonate	mg/L	<10			<10				80.0					<10.0	<10.0	<10.0	dry																							<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	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	28.0								
Alkalinity, Hydroxide	mg/L	<10			<10				<10					<10.0	<10.0	<10.0	dry																							<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	9.40			1.26				97.9					31.9	<1.00	1.54	dry																							23.1	7.54	7.47	5.69	40.2	16.9	7.65	14.8	30.7	1.87	4.42	17.1	5.0	1.16	1.21	5.07	15.0	1.23	1.69	6.57	39.6	39.4	50.5									
Fluoride	mg/L	0.244			0.195				0.244					0.224	0.290	0.227	dry																							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	0.221	0.213	0.274	0.202	0.231									
Sulfate as SO4	mg/L	68.1			13.5				144					204	11.3	17.9	dry																							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	26.4	42.2	138	127	168									
Total Organic Carbon (TOC)	mg/L	1.53			1.4				3.48					1.65	1.28	0.932	dry																							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	1.13	1.01	<5.00	6.19	6.17									
Oil & Grease	mg/L	<5			<5				<5					<5.00	<5.00	<5.00	dry																							<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	<5.00	<5.00	<5.00								
Nitrate/Nitrite as N	mg/L	<0.02			0.026				0.027					<0.020	<0.020	<0.020	dry																							<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	<0.020	0.041	<0.02	<0.02	<0.02	0.361	0.170	0.078									
Sodium Adsorption Ratio (SAR)	no unit	0.25			0.03				0.33					0.28	0.08	0.11	dry																							0.43	0.2	0.20	0.17	0.43	0.22	0.24	0.41	0.61	0.10	0.14	0.26	0.34	0.06	0.08	0.17	0.38	0.08	0.90	0.15	0.39	0.44	0.58									
Ammonia as N ^	mg/L	NA			NA				NA					NA	NA	NA	dry																							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	dry																							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	dry																							<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	<0.100	<0.050	<0.100					
Arsenic	mg/L	0.0005			<0.0005				0.0015					0.0006	0.0005	0.0006	dry																							0.0005	0.0005	0.0008	<0.0005	0.0006	0.0006	0.0006	0.0005	0.0006	<0.0005	0.0007	<0.0005	0.0013	<0.0005	0.0007	<0.0005	<0.0005	0.0010	0.0007	0.0005	<0.001	0.0009	<0.0010	<0.0010								
Cadmium	mg/L	<0.0001			<0.0001				<0.0001					<0.0001	<0.0001	<0.0001	dry																							<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			0.0016				0.0012					0.0004	0.0020	0.0013	dry																							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	0.0010	0.0045	0.00											

GCC Energy Hydrologic Monitoring Data

Wiltse Well																																														
Year	Quarter	2016												2017				2018				2019				2020				2021				2022			2023									
		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	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3										
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	12	2	5	8	11	3	6	8	11	3	5	8							
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	8/10	11/26	3/28	5/19	8/18							
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							
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	25.0	16.7	34.8	38.5	46.9						
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	3058	3825	3495	3200	3030	2920	3000	1800	2800	2900	2950	3000	3000	4000	4000	4000	3100					
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	0.30	0.00	0.00	2.05	3.40	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	2.82	1.60	0.30	0.20	3.35						
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	12.4	9.7	7.2	9.0	11.3						
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	7.23	7.17	7.21	7.14	7.07	7.46	7.26	7.22						
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	2285	2268	2518	2449	2332						
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	29.9	-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	-76.3	41.4	34.4	39.9	5.5						
Lab Analytical Results:																																														
Hardness as CaCO3	mg/L	990			1050				1030								1040	1060	1140	1150	1090	1160	1130	1180	1150	1080	1080	1060	982	1060	1070	1130	1090	1070	1080	1080	1070	1070	1300	1200	1330	1340	1380			
pH (Lab)	SU	7.22			7.34				7.29								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	7.39	7.42	7.17	NA*	7.03			
Total Dissolved Solids (Lab)	mg/L	1580			1480				1520								1480	1510	1680	1740	1740	1740	1750	1720	1710	1670	1520	1480	1600	1560	1580	1540	1550	1500	1580	1640	1520	1580	1850	1740	2120	1980	1920			
Calcium	mg/L	197			208				206								205	211	219	226	211	216	221	230	226	214	214	208	191	206	206	215	208	199	206	209	208	206	255	232	261	269	273			
Magnesium	mg/L	121			128				126								128	129	143	142	136	150	139	147	143	132	132	123	132	136	144	138	140	136	136	133	135	160	151	164	162	170				
Sodium	mg/L	95.9			75.2				80.7								110	87.5	80.7	83.4	80.4	82.3	79.1	81.2	83.2	89.4	72.4	67.3	68.1	69.1	64	67.5	65.1	61.1	61.6	63.6	61.0	60.1	77.8	71.6	99.0	94.2	82.4			
Potassium	mg/L	4.64			4.56				4.90								4.61	4.79	4.62	<5.00	4.73	4.98	5.01	5.00	5.01	4.77	4.92	4.85	4.33	<5.00	4.48	4.54	<5.00	4.35	<5.00	4.41	4.42	4.41	4.92	4.20	5.43	5.12	5.74			
Alkalinity, Total	mg/L	460			500				470								410	445	510	475	445	435	463	505	515	469	474	460	460	431	475	470	480	480	480	520	505	485	530	468	485	435	460			
Alkalinity, Bicarbonate	mg/L	440			500				470								410	445	510	475	445	435	463	505	515	469	474	460	460	431	475	470	480	480	520	505	485	530	468	485	435	460				
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	<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			
Chloride	mg/L	81.0			76.3				62.3								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	57.5	52.2	79.0	73.0	59.0			
Fluoride	mg/L	0.285			<0.5				<0.5								<0.500	0.332	<0.500	<0.500	<0.500	<0.500	<0.500	<0.298	0.324	0.306	<0.500	<0.500	<0.500	0.304	0.292	0.276	0.28	<0.500	0.280	0.286	0.240	0.288	0.288	<0.500	<0.500	<0.500				
Sulfate as SO4	mg/L	671			595				656								731	702	779	772	832	714	733	741	801	709	627	627	711	633	704	728	683	661	679	697	688	702	818	873	1070	1060	960			
Total Organic Carbon (TOC)	mg/L	3.54			4.1				3.15								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	3.72	1.95	5.38	5.82	6.11			
Nitrate/Nitrite as N	mg/L	0.456			0.891				1.08								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	1.16	1.01	0.469	0.619	2.32			
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		
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		
Aluminum	mg/L	<0.05			<0.05				<0.05								<0.050	<0.1	<0.050	<0.250	<0.100	<0.050	<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	<0.100	<0.100	<0.100	<0.100	<0.100		
Arsenic	mg/L	<0.0025			<0.0025				0.0005								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	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
Cadmium	mg/L	<0.0005			<0.0005				<0.0001								<0.0001	<0.0001	<0.0001	<0.0005	<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	0.0018			0.0024				0.0020								0.0023	0.0019	0.0025	0.0097	0.0020	0.0019	0.0018	0.0030	0.002	0.0021	0.0021	0.0012	0.0020	<0.0025	0.0013	0.0006	0.0028	<0.0025	<0.0025	0.0033	0.0031	0.0049	0.0038	0.0060	0.0119	0.0043	0.0035			
Iron	mg/L	0.100			<0.05				0.060								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	0.161	0.178	0.255	0.252	<0.250			
Lead	mg/L	<0.0025			<0.0025				<0.0005								&																													

GCC Energy Hydrologic Monitoring Data

		MW-HGA-4																																					
Year	2016	2017												2018				2019				2020				2021				2022				2023					
	Quarter	Q4	Q1			Q2			Q3			Q4			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4					
Month	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
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	8/9	12/16	3/28	5/18	8/18		
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	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	0.25	0.13	0.25	0.13	0.25	0.25	0.25	0.25	0.25	0.50	0.08	0.23	0.10		
Total Purged	gal	21	21	21	21	21	19.5	20	20	21	21	21	24	19	21	21	19	21	24	22	21	21	22	21	20	21	21	21	20	22	21	21	22	21	22	0.5	0.4	0.5	0.25
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	1.61	0.92	0.47	1.03	4.05	
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	9.2	9.1	8.2	10.0	11.5	
pH	SU	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	7.19	6.93	7.62	7.45	7.53	
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	1198	970	1003	955	908	
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	-273.0	-198.3	-129.2	-125.2	-165.3	
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	653	328	423	448	467	
pH (Lab)	SU	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	7.20	7.63	7.08	7.37	7.33	
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	745	400	555	545	525	
Calcium	mg/L	147			118			121			102		118			110	108	102	124	122	110	106	123	112	101	111	122	126	114	98.7	125	119	110	130	65.8	78.5	84.9	88.1	
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	79.9	39.7	55.1	57.2	59.9	
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	27.1	14.9	36.9	39.4	41.5	
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	2.13	3.07	2.16	2.40	2.56	
Alkalinity, Total	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	500	245	460	420	361	
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	500	245	460	420	361	
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	<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	<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	14.6	28.7	3.40	3.41	3.62	
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	0.450	0.231	0.397	0.357	0.374	
Sulfate as SO4	mg/L	240			229			192			205		204			222	190	169	201	221	186	212	190	193	181	179	187	191	184	194	199	216	183	215	99.5	150	161	158	
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	4.8	4.30	4.56	4.67	4.31	4.36	4.55	4.84	5.47	4.21	4.64	0.964	4.32	6.87	4.55	
Nitrate/Nitrite as N	mg/L	<0.020			<0.020			<0.020			<0.020		<0.100			<0.020	<0.020	<0.020	<0.020	0.173	<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	0.073	<0.020	<5.00	<0.100
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
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
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	<0.100	<0.100	<0.100	<0.050	<0.050	<0.050	<0.250	<0.250	<0.050	<0.050	<0.050	<0.050	<0.050	<0.100	<0.050	<0.100	
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	0.0034	0.0005	0.0041	0.0040	0.0040	
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	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0010	<0.0010	
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	0.0005	0.0068	<0.0010	0.0027	<0.0010	
Iron	mg/L	3.71			7.29			7.32			0.378		7.84			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	8.44	8.25	9.41	9.73	<0.05	9.76	10.5	9.39	
Lead	mg/L	<0.0005			<0.0005		</																																

GCC Energy Hydrologic Monitoring Data

MW-1-MI																																			
Year	2017								2018								2019				2020				2021				2022				2023		
Quarter	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	Q3	Q4	Q1	Q2	Q3					
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	9	12	3	6	8
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	9/12	12/4	3/18	6/14	8/16
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	N	N	N	N	N
Field Parameters:																																			
Purge Flow Rate	gpm	NM	NM*	NM	NM																														
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	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	dry	
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-2-A																																				
Year	2017							2018							2019				2020				2021				2022				2023					
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	Q3			
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	9	12	3	6	8			
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	9/8	12/4	3/31	6/14	8/18			
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	N	N	N	N	N			
Field Parameters:																																				
Purge Flow Rate	gpm																																			
Total Purged	gal																																			
Depth to Water	ft bgs																																			
Temperature	deg C	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	dry	dry	dry	dry	dry	dry	dry	dry
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	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	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.
deg C	degrees Celsius	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.
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		

GCC Energy Hydrologic Monitoring Data

MW-2-MI																																	
Year	2017								2018					2019				2020				2021				2022				2023			
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	Q3
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	9	12	3	6	8
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	9/8	12/4	3/31	6/14	8/18
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	N	N	N	N	N
Field Parameters:																																	
Purge Flow Rate	gpm																																
Total Purged	gal																																
Depth to Water	ft bgs																																
Temperature	deg C																																
pH	SU																																
Specific Conductance	µS/cm																																
Oxygen Reduction Potential	mV																																
	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	dry	dry	dry	dry	dry	dry
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	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	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.
deg C	degrees Celsius	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.
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	

GCC Energy Hydrologic Monitoring Data

MW-2-C																																			
Year	2017							2018							2019				2020				2021				2022				2023				
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	Q3				
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	9	12	3	6	8		
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	9/8	12/4	3/31	6/14	8/18		
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	N	N	N	N	N		
Field Parameters:																																			
Purge Flow Rate	gpm																																		
Total Purged	gal																																		
Depth to Water	ft bgs																																		
Temperature	deg C	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	dry	dry	dry				
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				2023											
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	Q3	Q4	Q1	Q2	Q3													
Month	3	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	1	2	3	4	1	2	3													
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	6/8	7/11	8/6	9/14	10/14	11/6	11/22	12/1	12/2	12/11	12/18	1/10	1/18	2/8	2/11	2/24	3/11	3/24													
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	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	0.13	0.05	0.13	0.15	0.13	0.25	0.25	0.13	0.04	0.13	0.11	0.15										
Total Purged	gal	30.0	2.0	NM	NM	NM	1.0	1.0	1.0	1.3	1.5	1.5	1.0	1.3	1.0	1.1	1.5	1.3	1.5	1.1	1.2	1.5	1.3	1.3	1.5	1.5	1.5	1.5	2.0	1.5	1.1	1.1	1.1	1.1										
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	296.67	296.74	296.96	296.62	295.59	295.32	295.97									
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	13.0	15.6	12.2	11.8	12.7	15.2									
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	8.21	8.12	8.66	8.06	7.97	8.63									
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	2121	2055	2066	2057	2094	2050	1374									
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	-124.2	-269.9	-199.6	-43.5	-91.0	-162.4									
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	9.33	7.59	8.38	8.76	5.89			
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	8.09	8.15	7.63	7.97	8.40			
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	1320	1280	1390	1310	1300			
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	2.59	2.21	2.42	2.51	2.36			
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	0.694	0.503	0.570	0.603	< 0.500			
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	476	420	440	456	450			
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	< 5.00	< 5.00	< 5.00	< 5.00	< 5.00	< 3.00	< 5.00	< 5.00	< 2.00	1.34	< 2.00	< 2.00	< 5.00	< 5.00	< 5.00	< 5.00		
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	500	400	454	458	447			
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	500	400	454	458	415			
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	< 10.0	50.0	40.0	80.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	32.0			
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			
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	15.9	15.4	16.0	16.1	16.9			
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	0.362	< 0.500	< 0.500	0.316	< 0.500			
Sulfate as SO4	mg/L	729	802			840		730						812						756	706	682	716	699	724	633	637	656	624	644	600	599	515	584	555	557	565	571	573	560				
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	3.02	1.54	3.04	< 2.5	4.44			
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	< 0.020	< 0.020	0.117	0.061	< 0.020			
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	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	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	< 0.100	< 0.250	< 0.250	< 0.250	< 0.250			
Arsenic	mg/L	0.0025	< 0.0025			< 0.0025		< 0.0025						< 0.0025						0.0006	< 0.0025	< 0.0010	< 0.0010	< 0.0010	< 0.0005	< 0.0010	< 0.0010	< 0.0025	< 0.0025	0.0026	0.0006	0.001	0.0018	0.0009	< 0.0010	< 0.0010	< 0.0010	< 0.0025	< 0.0025	< 0.0025				
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	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0025	< 0.0025	< 0.0025			
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	0.0189	0.0106	0.0155	0.0196	0.0065			
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	< 0.100	< 0.250	< 0.250	< 0.250	< 0.250			
Lead	mg/L	< 0.0005	< 0.0025			< 0.0025		< 0.0025						< 0.0025						< 0.0005	< 0.0005	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	< 0.0010	< 0.0010	< 0.0005	< 0.001	< 0.0010	< 0.0025	< 0.0025	< 0.0025			
Manganese	mg/L	0.0042	0.0251			0.0194		0.0269						0.0187						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	0.0097	0.0108	0.0119	0.0096	0.0098			
Mercury (dissolved)</																																												

GCC Energy Hydrologic Monitoring Data

MW-3-MI																																																								
Year	2017								2018								2019								2020								2021								2022								2023							
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	Q3	Q4	Q1	Q2	Q3	Q4																				
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	9	11	2	5	9	11	3	6	8																		
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	9/6	11/18	3/16	6/15	8/8																						
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	Y	Y	Y	Y	Y	Y																					
Field Parameters:																																																								
Purge Flow Rate	gpm																																																							
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																																																							
Ammonia as N ^	mg/L																																																							
Ortho-Phosphate as P ^	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:

- | | |
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| <ul style="list-style-type: none"> ^ 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 | <ul style="list-style-type: none"> 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. 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. |
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GCC Energy Hydrologic Monitoring Data

MW-3-C																																					
Year	2017								2018							2019				2020				2021				2022				2023					
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	Q3					
Month	3	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	3/27	6/30	7/27	8/24	9/28	10/27	11/17	12/7	1/3	2/21	3/23	4/12	5/7	6/8	7/16	8/8	9/17	10/12	11/12	12/1	1/10	2/10	3/13	4/12	5/12	6/10	7/10	8/11	9/10	10/10	11/10	12/13					
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	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	0.06	0.06	0.13	0.13	0.10	0.03	0.08	0.13	0.13	0.13	0.13	0.15	0.10	0.15	0.03	0.24	0.09	0.11					
Total Purged	gal	20.0	2.0	NM	NM	NM	1.0	1.0	1.0	1.5	1.5	1.5	1.0	1.3	1.3	1.1	1.3	1.5	10.0	1.5	11.0	1.1	1.3	1.5	1.3	1.5	1.5	1.5	1.5	1.0	1.0	1.1	1.1				
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	295.45	295.10	294.25	293.70	294.46		
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	14.4	1.9	13.2	12.9	14.6		
pH	SU	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	8.29	9.15	8.44	8.42	8.37		
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	5306	2397	5300	5353	5283		
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	-307.9	-277.2	57.8	-199.5	-202.4		
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	20.4	16.4	17.1	13.7	16.1		
pH (Lab)	SU	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	8.18	8.49	8.81	8.29	8.21		
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	3280	3140	3150	2310	3220		
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	4.49	3.68	3.91	3.32	3.63		
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	2.23	1.75	1.77	1.33	1.70		
Sodium	mg/L	796	890		1100		1130			1200				1350	1220	1460	1270	1100	1360	1300	1280	1240	1250	1250	1360	1220	1220	1170	1200	1260	1360	1170	1260	906	1240		
Potassium	mg/L	3.47	3.24		4.01		<5.00			<10.0				<5.00	<5.00	<5.00	<5.00	5.24	<5.00	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<6.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<10.0	<5.00	<10.0
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	2110	2120	2220	1410	2140		
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	1990	1920	1410	2070			
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	120	<10.0	300	<10.0	70.0		
Alkalinity, Hydroxide	mg/L	<10.0	<10.0		<10.0		<10.0			<10.0				<10.0	NA	<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	613	604	622	360	639		
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	3.16	3.37	3.06	3.51	3.25	3.38	1.96	2.59		
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	<5.00	<5.00	<5.00	<10.0	252	<10.0	
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	16.1	10.4	19.2	5.72	18.9		
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	<0.020	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.020	<0.100	<0.020	<0.020	<0.020		
Ammonia as N ^	mg/L	NA	NA		NA		NA			NA				NA	NA	NA	NA	NA	NA	0.500	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	0.212	NA	NA	NA	NA	NA	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	<0.250	<0.250	<0.500	<0.250	<0.500	
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	0.0151	0.0146	0.0194	0.0206	0.0149		
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	<0.0005	<0.0010	<0.0001	<0.0010	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.005	<0.0035	<0.0050	
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	0.0555	0.0268	0.0220	0.0571	0.0185		
Iron	mg/L	<0.050	<0.050		<0.050		<0.250			<0.500				0.252	<0.500	<0.250	<0.250	0.344	0.328	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.300	0.464	0.310	0.260	0.305	0.427	<0.250	<0.500	<0.25	<0.500		
Lead	mg/L	0.0085	<0.0050		<0.0050		<0.0025			<0.0025				<0.0025	<0.0025	<0.0025	<0.0025	<0.005	<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	<0.005	<0.0025	<0.005	<0.0035	<0.0050	
Manganese	mg/L	0.0091	0.0188		0.0178		0.02																														

GCC Energy Hydrologic Monitoring Data

MW-4-MI																																													
Year	2017								2018								2019				2020				2021				2022				2023												
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	Q3													
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	9	11	3	5	8											
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	9/1	11/17	3/9	5/31	8/7											
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	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	0.06	0.13	0.25	0.13	0.13	0.13	0.13	0.13	0.13	0.25	0.25	0.25	0.25	0.15	0.09	0.22	0.13	0.91													
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	1.0	1.3	1.1	1.1	1.1										
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	334.22	334.15	334.35	334.85	335.3										
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	13.0	11.5	11.5	12.9	12.5										
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	8.51	7.87	8.62	8.62	8.62										
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	1718	1749	1673	1728	1710										
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	-247.1	-131.9	85.0	-139.7	-81.2										
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	4.59	<3.31	3.84	4.11	<3.31				
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	8.68	8.48	8.25	8.41	8.44				
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	1070	1060	1030	1030	1060				
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	1.13	1.06	1.03	1.02	0.838				
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	0.431	<0.500	0.338	0.381	<0.500				
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	448	384	468	427	428				
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	<7.00	<2.00	<5.00	<3.00	<4.00	<5.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<5.00	<2.00	<2.00	<2.00	<5.00			
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	1180	920	1040	965	955				
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	1040	720	980	865	907				
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	40	80	120	120	120	110	150	140	200	60.0	100	48.0					
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			
Chloride	mg/L	2.18	7.50			8.78		9.11						8.74						7.99	5.68	5.38	5.98	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	4.29	<5.00	25.4	3.91	<5.00				
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	5.42	5.13	5.42	5.31	4.32				
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	12.7	11.7	21.8	10.1	<5.00				
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	4.73	2.31	4.82	4.52	4.06				
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	0.040	<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	0.240	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	0.280	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aluminum	mg/L	<0.050	<0.100			<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	<0.100	<0.100	<0.250	<0.100	<0.100	<0.250			
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	0.0094	0.0090	0.0100	0.0074	0.0090				
Cadmium	mg/L	<0.0001	<0.0001			<0.0005		<0.0005						<0.0001						<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0002	<0.0002	<0.0002	<0.0001	<0.0005	<0.0004	<0.0005	<0.0005	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0025	
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	0.0177	0.0177	0.0196	0.0049	0.0039				
Iron	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	<0.100	<0.250	<0.100	<0.100	<0.250				
Lead	mg/L	0.0010	<0.0005			<0.0025		<0.0025						<0.0005						<0.0005	<0.0005	<0.0010	<0.0005	<0.0005	<0.0005	<0.0010	<0.0010	<0.0005	<0.0025	<0.0020	<0.0025	<0.0005	<0.0010	<0.0010	<0.0005	<0.0010	<0.002	<0.0010	<0.001	<0.0025	<0.0025				
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	0.0076	0.0080	0.0078	0.0084	0.0076	0.0077	0.0079			
Mercury (dissolved)	mg/L	<0.0002	<0.0002			<0.0002		<0.0002						<0.0002						<0.0002	<0.0002	<0.0002	<0.0002																						

GCC Energy Hydrologic Monitoring Data

MW-4-C																																																								
Year	2017								2018								2019								2020								2021								2022								2023							
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	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4																				
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	9	11	2	5	9	11	3	5	8																		
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	9/1	11/17	3/9	5/31	8/18																						
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	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	0.06	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.10	0.13	0.13	0.13	0.25	0.25	0.18	0.08	0.09	0.16	0.08																						
Total Purged	gal	7.0	1.5	NM	NM	1.0	1.0	1.0	1.5	1.5	1.5	1.0	1.5	1.0	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	1.0	1.1	1.1	1.1	1.1																						
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	311.45	310.88	311.37	310.15	311.45	311.85																					
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	12.2	13.8	12.1	11.1	13.8	13.7																					
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	8.05	8.06	8.28	8.15	8.09	8.17																					
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	5645	5589	5649	5116	5678	5560																					
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	-129.3	-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	-278.7	-161.3	-158.1	-168.9	-182.7																					
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	21.4	26.0	20.1	21.1	21.0	24.3																		
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	8.07	8.19	8.15	7.98	8.12	8.04																		
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	3580	3670	3530	3620	3450	3390																		
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	5.14	6.01	4.65	4.78	4.78	5.69																		
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	2.07	2.68	2.07	2.22	2.20	2.45																		
Sodium	mg/L	908	1510			1490		1400					1410				1400	1410	1590	1410	1370	1440	1430	1440	1390	1400	1400	1520	1310	1340	1270	1360	1350	1530	1290	1410	1360	1440																		
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	<5.00	<5.00	<10.0	<10.0	<10.0	<10.0																		
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	2500	2430	2250	2580	2240	2460																		
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	2300	2430	2250	2490	2240	2330																		
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	40	140	120	220	180	200	200	<10.0	<10.0	90.0	<10.0	130																		
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																		
Chloride	mg/L	181	550			587		608					592				573	533	590	575	554	580	525	528	555	543	565	557	553	572	561	562	563	570	583	576	581	566																		
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	2.02	2.34	2.22	2.23	2.15	2.10																		
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	<5.00	<5.00	<10.0	<10.0	<10.0	<10.0																		
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	4.91	4.39	3.19	4.75	5.54	7.10																		
Nitrate/Nitrite as N	mg/L	<2.00	<0.500			<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	<0.040	<0.020	<0.100	<0.020	<0.020	<0.02	<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																	
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																	
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	<0.250	<0.250	<0.500	<0.500	<0.500	<0.500																		
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	0.0172	0.0219	0.0207	0.0218	0.0155	0.0237																		
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	<0.0001	<0.0001	<0.0010	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0050	<0.0050																		
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	0.0371	0.0618	0.0573	0.0606	0.0160	0.0731																		
Iron	mg/L	<0.050	<0.050			<0.050		<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	0.801	0.795	<0.500	0.731	0.572	0.630																		
Lead	mg/L	<0.0005	<0.0050			<0.0050		<0.0050					<0.0025				<0.0025	<0.0025	<0.0025	<0.0025	<0.0005	<0.0025	<0.0025	<0.0025	<0.0025	<0.0050	<0.0050	<0.0050	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0050	<0.0025	<0.0050	<0.005	<0.0050																		
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	0.005	0.0047																									

GCC Energy Hydrologic Monitoring Data

MW-5-A																																					
Year	2017						2018						2019				2020				2021				2022				2023								
Quarter	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	Q3				
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	9	12	3	6	8		
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	11/26	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	6/16	9/8	12/4	3/18	6/14	8/16		
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	N	N	N	N	N	N	N		
Field Parameters:																																					
Purge Flow Rate	gpm																																				
Total Purged	gal																																				
Depth to Water	ft bgs																																				
Temperature	deg C	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	dry	dry	dry	dry	dry	dry		
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																																				
Ammonia as N ^	mg/L																																				
Ortho-Phosphate as P ^	mg/L																																				
Aluminum	mg/L																																				
Arsenic	mg/L																																				
Cadmium	mg/L																																				
Copper	mg/L																																				
Iron	mg/L																																				
Lead	mg/L																																				
Manganese	mg/L																																				
Mercury (total)	mg/L																																				
Mercury (total 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:

- *** La Plata County stage 3 fire restrictions prevented sampling activity
 - ^ 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-5-MI																																															
Year	2017						2018						2019						2020						2021						2022						2023										
Quarter	Q2		Q3		Q4		Q1		Q2		Q3		Q4		Q1		Q2		Q3		Q4		Q1		Q2		Q3		Q4		Q1		Q2		Q3		Q4										
Month	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	11	2	5	8	11	2	5	8	11	2	5	8	11	2	5	8	11	2	5	8	11	2	5	8	11	3	6	9	12	3	6	9
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	11/5-6	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	6/16	9/12	12/4	3/18	6/14	8/16												
Lab Analysis (Y/N)	Y	N	N	Y	N	Y	N	N	Y	NM	N	Y	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							
Field Parameters:																																															
Purge Flow Rate	gpm	NM	NM	NM	NM	NM	NM	NM	0.10	NM	0.10	0.10	***	0.10	0.10	0.10	0.12	0.12	0.06	0.12	0.13	0.13	0.13	0.13	0.13	0.13	0.20	0.20	0.25	0.13	0.15	0.20	0.05	0.04	0.10												
Total Purged	gal	7.5	NM	NM	NM	1.3	1.0	1.0	1.0	1.5	1.5	1.0	1.3		1.3	1.0	1.1	1.3	1.3	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.3	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.9	0.9	0.9									
Depth to Water	ft bgs	276.48	264.03	236.52	268.98	263.77	262.82	263.78	263.77	263.67	263.69	263.74		263.90	263.92	264.68	263.45	263.70	263.92	263.93	263.82	262.72	264.31	264.39	265.57	265.87	265.22	265.48	265.12	265.18	265.02	264.77	264.92	264.15	265.15												
Temperature	deg C	22.5	NM	NM	11.1	10.4	9.9	8.8	9.3	9.9	9.5	9.5	10.1		12.5	11.7	9.6	6.7	10.2	11.1	10.6	9.2	10.6	11.8	10.5	8.3	12.3	11.7	10.3	9.0	12.7	12.7	9.1	8.8	11.9	13.0											
pH	SU	8.38	NM	NM	8.81	8.81	8.86	8.84	8.84	8.83	8.87	8.59	8.55		8.56	8.61	8.54	8.62	8.36	8.45	8.42	8.30	8.55	8.62	8.65	8.58	8.51	8.61	8.58	8.43	8.15	8.51	8.11	8.53	8.51	8.38											
Specific Conductance	µS/cm	1355	NM	NM	1621	1647	1637	1670	1664	1622	1610	1592	1596		1553	1558	1570	1607	1527	1572	1572	1546	1592	1518	1561	1425	~	1527	1589	1601	1552	1574	1615	1650	1619	1563											
Oxygen Reduction Potential	mV	77.1	NM	NM	47.8	50.6	53.3	41.5	12.6	12.0	-33.8	5.7	-21.3		-44.7	14.5	-38.2	-39.7	-12.1	-16.0	10.5	39.0	-90.5	-25.4	21.0	-27.1	-0.8	-26.7	-12.8	-95.3	44.8	-36.1	-29.0	9.1	-17.3	35.2											
Lab Analytical Results:																																															
Hardness as CaCO3	mg/L	13.6			14.0		10.2			10.5			9.11			9.34	9.48	8.79	8.47	8.74	7.97	8.89	8.72	9.18	9.1	9.45	8.96	7.88	9.30	9.16	9.33	8.38	8.38	8.73	9.10	8.29											
pH (Lab)	SU	8.80			8.66		8.58			8.62			8.67			8.60	8.50	8.54	8.14	8.37	8.35	8.28	8.17	8.34	8.38	8.37	8.28	8.31	8.20	8.37	8.23	8.41	8.29	8.17	8.21	7.38											
Total Dissolved Solids (Lab)	mg/L	1160			1120		1070			1030			1010			990	975	1050	975	1010	945	980	950	980	900	955	945	1010	945	1010	1000	1040	980	995	990	1030											
Calcium	mg/L	3.89			3.69		2.87			2.74			2.36			2.37	2.39	2.25	2.16	2.20	2.00	2.17	2.24	2.3	2.36	2.42	2.28	2.13	2.30	2.34	2.41	2.13	2.19	2.25	2.30	2.03											
Magnesium	mg/L	0.943			1.16		0.750			0.880			0.78			0.829	0.854	0.769	0.748	0.787	0.724	0.842	0.758	0.837	0.779	0.826	0.791	0.623	0.863	0.806	0.808	0.743	0.705	0.757	0.813	0.779											
Sodium	mg/L	428			433		411			416			398			404	417	416	384	392	392	405	407	405	413	435	380	402	391	389	379	386	408	421	412	393											
Potassium	mg/L	<5.00			1.70		<5.00			1.68			1.25			<2.00	<2.00	1.9	1.29	1.35	1.05	<2.00	<5.00	1.21	<3.00	<3.00	1.16	<5.00	<2.00	1.19	1.01	<2.00	<2.00	<5.00	0.795	<5.00											
Alkalinity, Total	mg/L	940			985		945			1000			900			940	900	860	945	905	935	885	865	760	935	935	935	930	1000	965	935	980	935	925	960	904											
Alkalinity, Bicarbonate	mg/L	730			815		855			820			780			760	810	720	805	775	825	805	775	680	845	825	825	820	920	875	845	980	935	895	960	858											
Alkalinity, Carbonate	mg/L	210			170		140			180			120			180	90.0	140	140	130	110	80	90.0	80	90	110	110	110	80.0	90.0	90.0	<10.0	<10.0	30.0	<10.0	46.0											
Alkalinity, Hydroxide	mg/L	<10.0			<10.0		<10.0			<10.0			<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	11.4			6.32		8.60			5.93			7.48			5.23	4.98	5.17	5.3	5.11	5.43	5.47	5.30	5.4	5.23	5.27	4.93	4.78	6.80	5.19	5.32	5.66	5.32	5.42	5.47	5.23											
Fluoride	mg/L	0.954			0.606		0.815			0.535			0.565			0.536	0.340	0.367	0.404	0.327	0.440	0.34	0.308	0.278	0.274	0.25	0.272	0.304	<0.500	0.248	0.262	<0.500	0.340	0.318	0.286	0.256											
Sulfate as SO4	mg/L	32.6			38.1		32.3			21.6			17.3			13.3	9.01	7.39	7.62	6.48	6.36	6.47	5.99	5.86	5.71	6.8	6.37	6.31	6.94	7.30	7.51	7.69	7.40	7.98	7.52	6.53											
Total Organic Carbon (TOC)	mg/L	6.32			3.42		3.69			3.65			3.82			3.78	3.68	3.46	3.46	3.24	2.78	2.73	2.72	2.78	2.57	2.64	2.50	2.66	2.40	2.49	2.42	2.51	1.33	2.15	2.15	2.70											
Nitrate/Nitrite as N	mg/L	0.599			<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	0.042	0.039	0.104	0.085	0.093	<0.020	0.056	0.020	0.052											
Ammonia as N ^	mg/L	NA			NA		NA			NA			NA			NA	NA	NA	NA	NA	NA	<0.100	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	<0.0500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA										
Aluminum	mg/L	<0.250			<0.050		<0.250			<0.050			<0.100			<0.100	<0.100	<0.050	<0.050	<0.050	<0.050	<0.100	<0.250	<0.050	<0.150	<0.150	<0.050	<0.250	<0.100	<0.050	<0.100	<0.100	<0.100	<0.250	<0.250												
Arsenic	mg/L	0.0129			0.0200		0.0151			0.0192			0.0232			0.0234	0.0165	0.0177	0.0176	0.0194	0.0147	0.0133	0.0126	0.0139	0.0145	0.0143	0.0142	0.0117	0.0076	0.0104	0.0103	0.0101	0.0100	0.0108	0.0085	0.0080											
Cadmium	mg/L	<0.0005			<0.0001		<0.0005			<0.0001			<0.0001			<0.0001	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0002	<0.0005	<0.0005	<0.0003	<0.0003	<0.0005	<0.0025	<0.0025	<0.0005	<0.0005	<0.0005	<0.0010	<0.001	<0.0025	<0.0025											
Copper	mg/L	0.0229			0.0074		0.0060			0.0076			0.0049			0.0072	0.0074	0.0103	0.0148	0.0054	0.0056	0.0041	<0.0025	0.0048	0.0028	0.003	0.0088	0.0083	0.0095	0.0105	0.0173	0.0138	0.0135	0.0113	0.0174	0.0041											
Iron	mg/L	<0.250			<0.050		<0.050			<0.050			<0.050			<0.100	<0.100	<0.050	<0.050	<0.050	<0.100	<0.250	<0.050	<0.150	<0.150	<0.050	<0.250	<0.100	<0.050	<0.100	<0.100	<0.100	<0.250	<0.250	<0.250												
Lead	mg/L	<0.0025			<0.0005		<0.0025			<0.0005			<0.0005			<0.0005	<0.001	<0.0010	<0.0005	<0.0005	<0.0010	<0.001	<0.0025	<0.0025	<0.0015	<0.0015	<0.0005	<0.0025	<0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.0025	<0.0025										
Manganese	mg/L	<0.0025			0.0036		0.0066			0.0082			0.0104			0.0121	0.0155	0.017	0.0146	0.0158	0.0156	0.019	0.0169	0.0203	0.0225	0.0215	0.0188	0.0187	0.0181	0.0163	0.0160	0.0172	0.0129	0.0129	0.0139	0.0143											
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	<0.0002	<0.0002											
Mercury (total low-level)	ng/L																																														
Molybdenum	mg/L	0.0395			0.0274		0.0247			0.0158			0.0113			0.0114	0.0078	0.0066	0.0053	0.0051	0.0038	0.0038	0.0031	0.0027	0.0028	0.0028	0.0026	<0.00																			

GCC Energy Hydrologic Monitoring Data

MW-5-C																																																																						
Year	2017										2018										2019										2020										2021										2022										2023									
Quarter	Q2					Q3					Q4					Q1					Q2					Q3					Q4					Q1					Q2					Q3					Q4																			
Month	6	7	8	9	9	10	11	11	12	1	2	3	4	5	6	7	8	11	1	2	5	8	11	1	2	5	9	11	1	2	5	8	11	1	2	5	8	11	1	2	5	8	11	1	2	5	8	11																						
Sample Date	6/7	7/18	8/23	9/7	9/26	10/26	11/2	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	6/16	9/12	12/4	3/18	6/14	8/16																																	
Lab Analysis (Y/N)	N	N	N	N	Y	N	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	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y																												
Field Parameters:																																																																						
Purge Flow Rate	gpm	NM	NM	NM	NM	NM	0.10	NM	NM	NM	0.10	NM	0.10	0.10	***	0.10	0.10	0.10	0.12	0.12	0.06	0.25	0.13	0.25	0.13	0.13	0.25	0.15	0.25	0.28	0.25	0.25	0.15	0.20	0.09																																			
Total Purged	gal	NM	NM	NM	NM	NM	3.0	1.0	1.0	1.5	2.0	1.5	1.0	1.3		1.3	1.5	1.6	1.3	1.5	1.3	1.1	1.0	1.0	1.0	1.0	1.5	1.5	1.0	1.5	1.0	1.0	1.0	1.0	0.9																																			
Depth to Water	ft bgs	248.15	240.80	235.02	233.20	230.75	229.44	228.45	227.43	227.64	225.40	222.46	219.31	218.22	216.04	210.87	210.50	205.10	198.44	193.20	191.11	189.20	187.50	187.70	189.72	192.15	195.08	197.82	200.27	202.00	204.14	205.57	206.15	207.75	208.90																																			
Temperature	deg C	NM	NM	NM	35.3	11.3	NM	9.5	9.7	9.0	9.3	9.4	9.6	9.7	10.1	10.7	10.7	9.4	8.6	10.1	10.9	10.3	8.8	10.9	10.9	10.0	9.1	10.5	10.8	9.6	9.6	NM	10.8	9.2	9.1																																			
pH	SU	NM	NM	NM	8.75	7.58	NM	7.59	7.63	7.64	7.65	7.68	7.77	7.56	7.60	7.52	7.61	7.55	7.72	7.72	7.74	7.77	7.87	7.83	7.93	7.91	7.93	8.01	8.05	8.03	7.86	7.84	7.85	7.81	7.84																																			
Specific Conductance	µS/cm	NM	NM	NM	0	4903	NM	4905	4827	4977	4974	4958	4285	4787	4772	4674	4687	4768	4623	4418	4355	4359	4230	4152	3677	4013	3625	3206	3685	3835	3695	3540	3565	3723	3782																																			
Oxygen Reduction Potential	mV	NM	NM	NM	48.2	-24.8	NM	7.6	-74.2	-110.5	-99.8	-90.5	-84.6	-49.6	-51.3	-59.5	-66.4	-138.0	-56.2	-29.9	-88.2	-58.7	-45.5	-128.2	-88.6	-52.8	-49.8	-116.6	-104.5	-101.3	-187.4	-84.5	-180.7	-39.2	8.3																																			
Lab Analytical Results:																																																																						
Hardness as CaCO3	mg/L				80.3						67.7				61.3				50.3					51.2	51.4	43	41.1	38.8	34.9	34.8	33.2	30.8	31.7	29.4	28.0	23.9	26.0	26.8	28.1	32.6	29.1	31.5																												
pH (Lab)	SU				7.57						8.11				7.74				7.79					7.64	7.69	7.72	7.46	7.75	7.66	7.74	7.73	7.8	7.92	8.03	7.82	7.87	7.81	7.88	7.65	7.85	7.98	7.67																												
Total Dissolved Solids (Lab)	mg/L				3470						3540				3480				3430					3290	3260	3160	3090	3130	3010	2970	2800	2750	2640	2710	2590	2670	2520	2530	2400	2400	2160	4910																												
Calcium	mg/L				18.3						15.4				11.1				11.1					11.4	11.5	9.78	9.34	8.69	7.70	7.73	7.50	6.78	7.02	6.7	6.28	5.54	5.78	6.45	7.10	8.22	7.38	8.15																												
Magnesium	mg/L				8.40						7.11				6.57				5.46					5.52	5.50	4.51	4.32	4.14	3.81	3.78	3.51	3.37	3.43	3.08	2.98	2.43	2.82	2.59	2.51	2.93	2.59	2.70																												
Sodium	mg/L				1280						1220				1250				1200					1230	1250	1220	1070	1120	1050	1050	1060	1010	1030	1070	999	942	922	875	857	1020	916	939																												
Potassium	mg/L				4.57						<5.00				<5.00				3.6					<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<10.0	2.75	<10.0	<10.0	<10.0	2.63	<10.0	<5.00	2.59	<4.00	<5.00	<5.00	<10.0																												
Alkalinity, Total	mg/L				1480						1540				1590				1490					1520	1540	1560	1630	1620	1580	1550	1520	1590	1570	1610	1580	1540	1690	1630	1670	1680	1600	1790																												
Alkalinity, Bicarbonate	mg/L				1480						1540				1590				1490					1520	1540	1560	1630	1620	1520	1550	1470	1480	1510	1550	1580	1540	1450	1590	1670	1680	1600	1690																												
Alkalinity, Carbonate	mg/L				<10.0						<10.0				<10.0				<10.0					<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	50.0	110	60	60	<10.0	<10.0	<10.0	240	40.0	<10.0	<10.0	<10.0	100																												
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																												
Chloride	mg/L				8.66						10.6				10.1				<10.0					7.15	7.08	7.1	7.02	6.62	6.32	6.58	6.12	6.02	6.04	5.84	4.05	5.95	5.93	5.78	<4.00	3.75	<5.00	<5.00																												
Fluoride	mg/L				1.90						1.93				1.89				1.79					1.74	1.80	1.95	2.01	1.95	1.98	1.96	2.01	2.01	2.03	1.99	2.09	2.09	1.96	2.00	2.32	2.42	2.28	2.44																												
Sulfate as SO4	mg/L				1470						1600				1190				1220					1130	1070	1040	975	948	836	799	721	679	686	693	700	607	560	553	479	466	475	493																												
Total Organic Carbon (TOC)	mg/L				2.86						2.94				3.24				3.06					3.28	3.64	3.05	3.00	3.03	2.62	2.7	2.73	2.87	2.69	2.7	2.46	2.8	2.54	2.38	2.16	2.39	1.56	2.35																												
Nitrate/Nitrite as N	mg/L				<0.100						<0.020				<0.020				<0.02					0.026	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.040	<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																										
Ortho-Phosphate as P ^	mg/L				NA						NA				NA				NA					NA	NA	NA	NA	NA	<0.250	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA																										
Aluminum	mg/L				<0.050						<0.250				<0.250				<0.050					<0.250	<0.250	<0.250	<0.25	<0.250	<0.250	<0.500	<0.050	<0.050	<0.500	<0.500	<0.250	<0.100	<0.200	<0.250	<0.250	<0.050	<0.050																													
Arsenic	mg/L				<0.0025						<0.0050				0.0044				0.0044	0.0036	0.004	0.0013	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0050	<0.005	<0.0050	<0.0005	<0.0050	<0.0025	<0.0015	<0.0020	<0.0025	<0.0025	<0.0025	<0.0025	<0.0050																												
Cadmium	mg/L				<0.0005						<0.0010				<0.0005				<0.0005	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0005	<0.0010	<0.0010	<0.0010	<0.0005	<0.0010	<0.0005	<0.0005	<0.0005	<0.0005	<0.0025	<0.0015	<0.0020	<0.0025	<0.0025	<0.0050																														
Copper	mg/L				0.0272						0.0161				0.0342				0.0171					0.0226	0.0178	0.0294	0.01	0.0138	0.0303	0.0165	0.0040	0.0101	0.0078	0.0066	0.0296	0.0202	0.0242	0.0313	0.0823	0.0355	0.0250	0.0130																												
Iron	mg/L				<0.050						<0.250				0.399				0.237					<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.500	0.113	<0.500	<0.500	0.223	<0.500	0.273	0.130	<0.200	<0.250	<0.250	<0.500																													
Lead	mg/L				<0.0025						<0.0050				<0.0025				<0.0025	<0.0025	<0.0025	<0.0005	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.005	<0.005	<0.0050	<0.0005	<0.0050	<0.0025	<0.0015	<0.0020	<0.0025	<0.0025	<0.0050																														
Manganese	mg/L				0.0367						0.0283				0.0138				0.0128					0.0131	0.0117	0.0115	0.0079	0.0078	0.0076	0.0081	0.0059	<0.0050	0.0053	<0.0050	0.0029	0.0049	0.0139	0.0099	0.0074	0.0078																														
Mercury (total)	mg/L				<0.0002																																																																	

GCC Energy Hydrologic Monitoring Data

MW-6-A																												
Year	2018	2019										2020				2021				2022				2023				
Quarter	Q4	Q1			Q2			Q3				Q4		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Month	12	1	2	3	4	5	6	7	8	9	11	2	5	8	11	2	5	8	11	2	5	8	11	3	5	8		
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	8/31	11/25	3/13	5/18	8/8		
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	N	N	N	N	N		
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 CaCO ₃	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 SO ₄	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	<0.0025	<0.0025						
Cadmium	mg/L	<0.0005		<0.0005			0.0001			<0.0005		<0.0005	<0.0010	<0.0005	<0.0010	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005						
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	<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 (SiO ₂)	mg/L	12.3		11.9			14.3			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
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.
 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-MI																												
Year	2018	2019											2020				2021				2022				2023			
Quarter	Q4	Q1			Q2				Q3				Q4				Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	
Month	12	1	2	3	4	5	5	6	7	8	9	11	2	5	8	11	2	5	8	11	2	5	8	11	3	5	8	
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	8/1	11/25	3/13	5/31	8/8	
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	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	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry
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
 - 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. "<" 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-C																											
Year	2018	2019										2020				2021				2022				2023			
Quarter	Q4	Q1			Q2			Q3			Q4		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Month	12	1	2	3	4	5	6	7	8	9	11	2	5	8	11	2	5	8	11	2	5	8	11	3	5	8	
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	8/1	11/25	3/13	5/18	8/8	
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	
Field Parameters:																											
Purge Flow Rate	gpm																										
Total Purged	gal																										
Depth to Water	ft bgs																										
Temperature	deg C	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
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

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.
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-7-EAA																												
Year	2018	2019											2020				2021				2022				2023			
Quarter	Q4	Q1			Q2			Q3			Q4		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	
Month	12	1	2	3	4	5	6	7	8	9	10	11	2	5	8	11	2	5	8	11	3	6	9	11	3	6	8	
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	9/8	11/28	3/18	6/14	8/8	
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	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	0.25	0.25	0.20	0.11	0.16	
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	17.0	0.5	0.4	0.4	0.4	
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	36.71	36.40	35.85	29.10	28.40	
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	10.3	10.3	10.1	10.5	10.9	10.6	10.5	10.7	10.8	11.1	13.1	11.7	11.8	
pH	SU	6.99	7.01	7.04	6.93	7.00	7.06	7.07	6.28	6.95	7.06	6.91	7.17	7.09	7.12	7.14	7.19	7.24	7.23	7.12	7.15	7.14	6.28	7.28	7.16	7.11		
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	1896	1880	1808	1754	1785	1831
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	-73.8	-196.7	-86.9	-10.9	-32.4	-60.3
Lab Analytical Results:																												
Hardness as CaCO3	mg/L	936		1030			982			997			1020	963	1020	1080	939	1090	958	986	957	1040	958	916	962	1020	952	902
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	7.12	7.24	7.18	6.95	6.95	7.25
Total Dissolved Solids (Lab)	mg/L	1460		1480			1490			1480			1530	1520	1430	1480	1450	1590	1460	1510	1580	1500	1500	1490	1420	1500	1400	1450
Calcium	mg/L	170		179			171			173			162	165	175	183	157	186	167	167	164	173	166	154	165	174	161	151
Magnesium	mg/L	124		142			135			137			144	134	142	150	133	152	131	138	133	149	132	129	134	143	134	127
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	71.9	71.6	72.3	76.3	75.6	69.2
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	3.59	3.71	3.66	<5.00	3.63	<5.00
Alkalinity, Total	mg/L	380		367			405			392			350	357	355	268	430	420	395	340	440	425	425	400	310	378	410	437
Alkalinity, Bicarbonate	mg/L	380		367			405			392			425	357	355	268	430	420	395	340	440	425	425	400	310	378	410	437
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	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	10.3	11.2	11.0	11.1	10.8	11.8
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	<0.200	0.310	0.306	0.340	0.262	<0.200
Sulfate as SO4	mg/L	732		736			733			844			746	774	803	767	742	757	746	796	751	755	743	759	761	827	709	719
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	3.42	3.38	2.12	3.68	3.31	5.57
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
Ammonia as N ^	mg/L	NA		NA			NA			NA			0.178	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			<0.0500	NA	NA	NA	NA	NA	NA	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	<0.050	<0.100	<0.100	<0.250	<0.250	<0.250
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	0.0014	<0.0025	0.0013	<0.0025	<0.0025	<0.0025
Cadmium	mg/L	<0.0001		<0.0002			<0.0001			<0.0001			<0.0002	<0.0002	<0.0002	<0.0003	<0.0005	<0.0001	<0.00025	<0.00025	<0.0010	<0.0005	<0.0005	<0.00025	<0.0010	<0.0025	<0.0025	<0.0025
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	0.0036	<0.0025	0.0030	<0.0025	0.0028	0.0032
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	1.69	1.75	1.57	1.99	0.265	<0.250
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	<0.0005	<0.0025	<0.0025	<0.0025	<0.0025	<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	4.58	4.61	4.75	4.69	4.22	4.46
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																											
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	0.0007	<0.0025	<0.0010	<0.0025	<0.0025	<0.0025
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	0.0012	<0.0050	<0.0020	<0.0050	<0.0050	<0.0050
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	16.8	16.1	16.9	17.5	17.0	15.2
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	7.86	7.54	7.92	8.16	7.95	7.11
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	0.0018	<0.0025	0.0016	<0.0025	0.0018	<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	0.0041	<0.0100	<0.0040	<0.0100	<0.0100	<0.0100

Notes & Definitions:

- ^ one-time analysis
- Y/N yes or no
- gpm gallons per minute
- deg C degrees Celsius
- SU standard

GCC Energy Hydrologic Monitoring Data

MW-8-EAA																													
Year	2018	2019										2020				2021				2022				2023					
Quarter	Q4	Q1			Q2			Q3				Q4		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	
Month	12	1	2	3	4	5	6	7	8	9	10	11	2	5	8	11	2	5	8	11	3	6	9	11	3	6	8		
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	9/8	11/28	3/18	6/14	8/8		
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	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	0.25	0.25	0.25	0.25	0.33	0.11	0.09
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	15.0	16.0	0.5	0.5	0.4	0.4	
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	41.00	41.30	41.30	41.50	37.19	37.40	
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	10.7	10.8	10.7	9.7	11.0	11.6	12.2	
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	7.23	7.23	6.59	7.20	7.27	7.23	
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	1763	1763	1793	1665	1766	1742	
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	-111.7	-230.9	-23.9	182.6	-81.5	-86.6	
Lab Analytical Results:																													
Hardness as CaCO3	mg/L	870		861			864			883			867	861	907	937	810	914	838	859	859	937	867	831	871	940	932	887	
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	7.16	7.27	7.25	7.05	7.03	7.33	
Total Dissolved Solids (Lab)	mg/L	1220		1290			1240			1280			1380	1290	1260	1280	1310	1400	1320	1320	1340	1380	1330	1360	1300	1320	1350	1400	
Calcium	mg/L	152		151			148			154			143	149	153	160	134	156	146	146	149	158	150	143	149	163	159	152	
Magnesium	mg/L	119		118			120			121			124	119	127	130	115	127	115	120	118	131	119	115	121	130	130	123	
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	75.0	75.0	75.3	80.5	79.8	75.5	
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	3.35	3.45	3.42	<5.00	3.73	< 5.00	
Alkalinity, Total	mg/L	400		435			450			431			445	404	385	288	480	450	445	385	490	460	465	480	430	417	448	417	
Alkalinity, Bicarbonate	mg/L	400		435			450			431			445	404	385	288	480	450	445	385	490	460	465	480	430	417	448	417	
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
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	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	10.6	11.7	11.4	11.6	11.8	12.2	
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	0.204	0.332	0.316	0.358	0.284	< 0.200	
Sulfate as SO4	mg/L	533		559			606			643			577	602	625	605	582	609	595	615	599	608	597	627	619	686	675	685	
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	3.56	3.64	1.82	3.63	3.25	5.64	
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	0.493	<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
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
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	<0.050	<0.100	<0.100	<0.250	<0.250	< 0.250	
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	0.0019	<0.0025	0.0020	0.0027	<0.0025	< 0.0025	
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	<0.0005	<0.0025	<0.0010	<0.0025	<0.0025	< 0.0025	
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	0.0031	<0.0025	0.0021	<0.0025	0.0084	< 0.0025	
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	2.22	2.28	2.27	2.43	2.43	2.19	
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	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	< 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	3.70	3.77	3.87	3.98	3.85	3.91	
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)	mg/L																												
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	0.0009	<0.0025	<0.0010	<0.0025	<0.0025	< 0.0025	
Selenium	mg/L	<0.0020		<0.0020			0.0010			0.0013			<0.0010	<0.0020	<0.0020	<0.0030	<0.0050	0.0046	<0.0030	<0.0050	0.0035	<0.0010	0.0015	<0.0050	<0.0020	<0.0050	<0.0050	< 0.0050	
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	16.0	15.4	16.2	16.9	16.6	15.4	
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	7.47	7.18	7.60	7.89	7.75	7.22	
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	<0.0025	<0.0025	0.0016	<0.0025	0.0017	< 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	0.0021	<0.0100	<0.0040	<0.0100	0.0063	< 0.0100	

Notes & Definitions:

GCC Energy Hydrologic Monitoring Data

MW-8-MI																													
Year	2018	2019										2020				2021				2022				2023					
Quarter	Q4	Q1			Q2			Q3				Q4			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Month	12	1	2	3	4	5	6	7	8	9	10	11	2	5	8	11	2	5	8	11	3	6	9	11	3	6	8		
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	9/8	11/28	3/18	6/14	8/8		
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	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	0.15	0.50	0.12	0.13	0.23		
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	2.0	1.0	2.0	3.0	1.0	1.0	1.0	0.8	0.5	0.5	0.6	0.6	0.6		
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	48.00	48.00	48.25	47.75	44.65	44.52	
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	12.5	14.3	9.9	11.7	11.5	11.9	
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	7.43	7.47	7.59	7.55	7.56	7.41	7.54	7.59	6.92	7.52	7.54	7.51		
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	1575	1505	1631	1632	1607	1538	
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	-150.6	-262.2	-172.4	-79.7	-134.6	-148.3	
Lab Analytical Results:																													
Hardness as CaCO3	mg/L	167		249			273			253			267	254	309	355	339	376	288	377	317	406	378	374	390	405	388	363	
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	7.38	7.70	7.45	7.30	7.36	7.67	
Total Dissolved Solids (Lab)	mg/L	1050		1030			1100			1110			1050	1060	1040	1010	1040	1060	1040	1000	1100	1050	1040	1050	990	1050	995	1060	
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	71.2	69.2	72.3	76.0	72.1	67.4	
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	48.7	48.8	50.8	52.3	50.4	47.1	
Sodium	mg/L	344		312			289			289			275	269	272	260	232	237	256	229	238	226	220	213	210	230	236	216	
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	5.47	5.59	5.63	5.44	6.18	5.09	
Alkalinity, Total	mg/L	500		565			560			573			585	543	545	448	590	590	575	570	605	590	590	500	540	550	568	553	
Alkalinity, Bicarbonate	mg/L	500		565			560			573			585	543	545	448	590	590	575	570	605	590	590	500	540	550	568	553	
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	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	8.36	8.88	8.60	8.56	8.39	8.80	
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	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	
Sulfate as SO4	mg/L	347		353			343			366			317	314	316	335	319	326	314	324	312	325	322	352	351	335	327	323	
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	2.77	2.96	1.66	2.75	2.62	4.25	
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	
Ammonia as N ^	mg/L	NA		NA			NA			NA			1.31	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			<0.0500	NA	NA	NA	NA	NA	NA	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	<0.050	<0.100	<0.100	<0.250	<0.250	<0.250	
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	0.0006	<0.0025	0.0010	<0.0025	<0.0025	<0.0025	
Cadmium	mg/L	<0.0001		<0.0002			<0.0001			<0.0001			<0.0001	<0.0002	<0.0003	<0.0003	<0.0003	<0.0003	<0.0015	<0.0025	<0.0010	<0.0005	<0.0005	<0.0025	<0.0010	<0.0025	<0.0025	<0.0025	
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	0.0087	0.0038	0.0044	0.0025	0.0104	0.0031	
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	0.090	<0.100	<0.100	<0.250	0.082	<0.250	
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	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<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	0.0553	0.0597	0.0693	0.0569	0.0560	0.0562	
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)	mg/L																					<5.00	<100	<100	<100	<100	<100	<100	
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	<0.0005	<0.0025	<0.0010	<0.0025	<0.0025	<0.0025	
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	0.0040	<0.0050	0.0183	0.0119	0.0049	0.0050	
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	14.0	13.6	14.0	13.7	13.9	12.5	
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	6.57	6.35	6.52	6.42	6.48	5.85	
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	<0.0025	<0.0025	<0.0010	<0.0025	<0.0025	<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	&						

GCC Energy Hydrologic Monitoring Data

MW-8-LM																													
Year	2018	2019										2020				2021				2022				2023					
Quarter	Q4	Q1			Q2			Q3				Q4		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	
Month	12	1	2	3	4	5	6	7	8	9	10	11	2	5	8	11	2	5	8	11	3	6	9	11	3	6	8		
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	9/8	11/28	3/18	6/14	8/8		
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	Y	Y	Y	Y	Y		
Field Parameters:																													
Lab Analytical Results:																													
Purge Flow Rate	gpm	NM	1.00	0.25	1.00	0.50	0.10	0.25	0.25	0.50	0.25	0.12	0.25	0.25	0.13	0.13	0.13	0.13	0.25	0.25	0.25	0.25	0.15	NM	0.14	0.03	0.16		
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	1.0	NM	0.7	0.7	0.7		
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	123.75	126.81	NM	126.10	125.80	126.12	
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	14.1	13.4	11.9	12.7	13.0	13.1	
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	8.84	8.82	8.29	8.88	8.88	8.83	
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	1232	1255	1276	1233	1252	1241	
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	-149.4	-247.4	-66.9	-58.6	-137.0	-147.9	
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	6.61	6.43	6.29	4.01	6.22	4.01	
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	8.63	8.99	8.59	8.47	8.51	8.71	
Total Dissolved Solids (Lab)	mg/L	1420		770			780			785			780	840	730	740	700	795	720	740	760	740	795	685	765	745	805		
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	1.77	1.70	1.65	1.61	1.71	1.61	
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	0.580	0.530	0.532	0.524	<0.500	0.473	<0.500	
Sodium	mg/L	382		341			317			306			305	309	315	337	304	319	315	308	291	316	298	298	301	287	315	289	
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	2.06	<2.00	2.12	<5.00	1.85	<5.00	
Alkalinity, Total	mg/L	615		720			745			731			745	685	630	675	780	730	755	750	770	780	765	760	714	732	714		
Alkalinity, Bicarbonate	mg/L	535		610			645			645			685	595	530	585	680	630	645	650	620	640	655	580	510	666	732	646	
Alkalinity, Carbonate	mg/L	80.0		110			100			86.0			60.0	90	100	90	100	100	110	100	150	140	110	180	240	48.0	<10.0	68.0	
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	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	2.49	2.64	2.65	2.66	2.76	2.67	
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	3.25	3.79	3.73	3.84	3.65	3.15	
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	<1.00	<2.00	<2.00	<2.00	0.886	<2.00	
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	1.72	1.77	1.13	1.73	1.43	1.89	
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	
Ammonia as N ^	mg/L	NA		NA			NA			NA			0.282	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			<0.0500	NA	NA	NA	NA	NA	NA	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	<0.050	<0.100	<0.050	<0.250	<0.250	<0.250	
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	0.0008	<0.0025	<0.0005	<0.0025	<0.0015	<0.0025	
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	<0.0005	<0.0025	<0.0005	<0.0025	<0.0015	<0.0025	
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	0.0167	0.0052	0.0079	0.0043	0.0155	0.0040	
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	<0.050	<0.100	<0.050	<0.250	<0.250	<0.250	
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	<0.0025	<0.0025	<0.0005	<0.0025	0.0002	<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	0.0027	<0.0025	0.0027	0.0028	0.0027	0.0028	
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	<100	<100	<100	<100	<100
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	<0.0005	<0.0025	<0.0005	<0.0025	<0.0015	<0.0025	
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	<0.0010	<0.0050	<0.0010	<0.0050	<0.0030	<0.0050	
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	8.13	7.63	8.45	6.83	7.53	6.17	
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	3.80	3.56	3.95	3.19	3.52	2.89	
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	<0.0025	<0.0025	<0.0005	<0.0025	<0.0015	<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	0.0079	<0.0100	0.0022	<0.0100	0.0032	<0.0100	

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

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.
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-8-PL																													
Year	2018	2019										2020				2021				2022				2023					
Quarter	Q4	Q1			Q2			Q3				Q4			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Month	12	1	2	3	4	5	6	7	8	9	10	11	2	5	8	11	2	5	8	11	3	6	9	11	3	6	8		
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	9/8	11/28	3/18	6/14	8/8		
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	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	0.75	0.25	0.25	0.25	0.25	0.25	0.75	0.25	0.25	0.25	0.25	0.25	0.13	1.00	0.22	0.18	0.13		
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	1.8	1.0	1.0	1.0	1.0		
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	128.40	128.53	128.75	128.10	128.05	128.48	
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	14.1	14.3	12.8	13.2	14.2	13.4	
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	7.49	7.44	7.47	7.61	7.56	7.53	
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	826	822	848	853	825	814	
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	-94.6	-215.9	-104.0	-36.3	-87.6	-113.8	
Lab Analytical Results:																													
Hardness as CaCO3	mg/L	617		644			596			411			294	278	298	292	268	281	283	280	272	292	276	275	274	303	282	274	
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	7.47	7.88	7.39	7.33	7.36	7.51	
Total Dissolved Solids (Lab)	mg/L	1150		1090			995			705			620	500	490	525	465	525	505	475	465	485	505	500	430	500	465	540	
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	53.1	52.4	52.0	57.9	53.3	52.4	
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	34.9	35.1	34.9	38.4	36.1	34.8	
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	75.4	76.3	75.0	81.7	77.4	75.3	
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	1.48	1.53	1.55	<2.00	1.59	<2.00	
Alkalinity, Total	mg/L	370		415			435			393			390	339	340	315	410	370	385	360	385	362	380	356	410	350	388	350	
Alkalinity, Bicarbonate	mg/L	370		415			435			393			390	339	340	315	410	370	385	360	385	362	380	340	410	338	388	350	
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	16.0	<10.0	12.0	<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	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	3.34	3.66	3.51	3.70	3.61	3.67	
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	0.159	0.198	0.187	0.218	0.175	0.126	
Sulfate as SO4	mg/L	478		471			390			232			127	109	103	99.2	99	101	96.3	102	98.4	100	94.7	106	107	107	106	104	
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	1.36	1.60	0.774	1.44	1.15	1.59	
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	0.052	<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	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	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	<0.050	<0.050	<0.050	<0.100	<0.050	<0.100	
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	0.0047	0.0042	0.0037	0.0033	0.0036	0.0029	
Cadmium	mg/L	<0.0001		<0.0002			<0.0001			<0.0001			<0.0001	<0.0002	<0.0001	<0.0002	<0.0002	<0.0001	<0.0010	<0.0010	<0.0005	<0.0005	<0.0005	<0.0010	<0.0005	<0.0025	<0.0005	<0.0010	
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	0.0040	0.0014	0.0015	0.0028	0.0027	0.0020	
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	<0.050	0.063	0.057	<0.100	0.062	<0.100	
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	<0.0010	<0.0005	<0.0005	<0.0025	<0.0010	<0.0025	<0.0025	<0.0005	<0.0010	
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	0.150	0.145	0.134	0.122	0.111	0.120	
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																											<100	
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	<0.0005	<0.0005	<0.0010	<0.0005	<0.0025	<0.0005	<0.0010
Selenium	mg/L	0.0012		<0.0020			<0.0010			<0.0010			<0.0010	<0.001	<0.0010	<0.0020	<0.0020	0.0038	<0.0020	<0.0020	0.0031	<0.0010	0.0014	<0.0020	0.0012	<0.0050	0.0006	<0.0020	
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	20.4	20.8	20.9	22.6	21.5	20.6	
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	9.54	9.75	9.75	10.6	10.0	9.61	
Uranium	mg/L	0.0052		0.0040			0.0010			0.0009			0.0004	<0.0005	<0.0005	<0.0010	<0.0010	<0.0005	<0.0005	<0.0010	<0.0005	<0.0005	<0.0025	<0.0010	<0.0005	<0.0025	<0.0001	<0.0010	
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	<0.0020	<0.0040	<0.0020	<0.0100	0.0009	<0.0040	