GCC Energy Hydrologic Monitoring Data

Hay Gulch Ditch Upgradient

Year		2018				2019				2020				2021				2022				2023				2024				2025			
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		2	5	8	11	2	5	8	11	2	5	8	12	2	6	9	11	3	6	9	12	3	5	8	11	2	6	8	11	2	6	8	11
Sample Date		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	11/29	2/26	6/20	8/20	11/25	2/8	6/16	8/18	11/6
Lab Analysis (Y/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	Y	Y	Y	Y
Field Parameters:																																	
Flow Rate	cfs	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	0.64	0.44	0.66	1.85	0.11	0.03	1.40	0.05	0.69
Temperature	deg C	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	3.2	5.5	13.6	16.6	5.9	6.5	16.1	25.0	10.0
pH	SU	7.90	7.58	9.07	7.16	6.40	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	7.70	7.76	7.68	7.73	8.05	7.68	7.58	7.90	8.08	8.26
Specific Conductance	µS/cm	1041	304	307	307	752	306	275	682	902	314	528	434	1024	189	280	252	553	832	570	708	1508	442	764	1013	1058	532	306	989	1237	434	1176	563
Oxygen Reduction Potential	mV	-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	-76.4	-117.6	-9.7	21.4	-121.4	-91.3	140.1	-44.1	325.1
Dissolved Oxygen	mg/L	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	8.0	6.7	6.1	6.7	8.6	7.8	7.5	5.7	9.2
Lab Analytical Results:																																	
Hardness as CaCO3	mg/L	489	101	153	149	393	136	125	372	405	150	287	213	588	93	131	120	280	383	273	336	697	293	342	434	458	245	141	460	532	204	533	255
pH (Lab)	SU	8.39	7.99	9.07	7.86	7.45	7.69	7.83	7.40	7.22	7.60	8.01	7.92	7.57	7.72	7.44	7.52	7.81	7.87	7.81	7.98	7.56	7.91	7.56	7.85	7.96	7.76	7.96	7.70	7.70	7.88	8.02	8.04
Total Dissolved Solids (Lab)	mg/L	700	140	215	175	535	205	225	635	587	255	340	160	685	210	185	140	380	520	355	410	955	380	480	600	615	295	150	600	685	225	790	325
Total Suspended Solids	mg/L	6.01	106.00	6.25	14.80	22.00	113.00	20.00	5.38	<4.0	140.00	19.50	13.20	55.00	133.00	51.00	13.20	13.40	5.07	45.40	<2.50	121.00	38.00	9.79	< 2.50	10.00	57.30	4.92	26.70	12.40	29.40	10.40	2.78
Calcium	mg/L	87.3	26.3	39.1	40.3	79.8	34.6	32.4	79.3	81.5	36.1	63.2	49.9	113.0	25.8	35.8	34.2	61.7	70.8	55.0	69.9	124.0	63.5	70.2	86.3	90.2	50.0	37.0	90.1	102.0	46.6	94.1	57.0
Magnesium	mg/L	65.9	8.6	13.5	11.9	47.0	12.1	10.8	42.2	49.0	14.5	31.3	21.5	74.3	6.9	10.1	8.4	30.5	50.1	33.1	39.2	93.9	32.6	40.5	53.0	56.6	29.1	11.8	57.1	67.5	21.2	72.3	27.3
Sodium	mg/L	34.60	3.31	5.33	5.00	19.10	7.24	5.81	25.40	30.90	7.67	10.90	8.39	34.30	2.71	3.97	3.53	13.80	19.30	12.40	15.10	36.80	18.10	20.60	31.60	30.50	16.90	5.13	21.80	25.50	9.71	33.60	11.50
Potassium	mg/L	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	6.33	4.89	3.32	1.30	4.39	6.08	1.48	4.64	2.01
Alkalinity, Total	mg/L	244	67	111	120	260	390	103	233	315	102	220	137	340	68	98	87	162	330	209	231	365	179	247	300	326	175	111	301	425	133	420	183
Alkalinity, Bicarbonate	mg/L	244	67	107	120	260	390	103	233	295	102	220	131	340	68	98	87	162	330	209	231	365	179	247	300	326	175	111	301	425	133	420	183
Alkalinity, Carbonate	mg/L	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
Alkalinity, Hydroxide	mg/L	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
Chloride	mg/L	46.70	3.12	6.70	5.58	48.10	7.75	6.04	22.80	31.60	9.64	24.50	14.80	85.90	3.17	5.23	3.44	32.30	33.60	21.90	29.20	108.00	36.10	41.70	45.80	51.20	21.60	7.84	55.70	65.80	18.30	82.80	24.70
Fluoride	mg/L	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	0.189	< 0.200	0.223	0.215	0.271	0.303	0.205	0.270	0.227
Sulfate as SO4	mg/L	229.0	34.0	49.7	45.0	128.0	47.2	35.6	107.0	151.0	44.0	86.3	64.4	211.0	26.4	42.2	40.0	95.5	121.0	85.1	99.4	314.0	116.0	114.0	152.0	159.0	76.6	38.8	146.0	179.0	59.8	200.0	78.0
Total Organic Carbon (TOC)	mg/L	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	2.80	0.83	1.86	5.18	1.74	0.90	3.93	6.04	4.35	6.45	8.35	8.72	1.41	2.59	4.03	1.55	3.26	1.55
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	< 5.00
Nitrate/Nitrite as N	mg/L	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	0.113	0.038	0.085	0.024	0.070	0.082	0.107	0.069	0.035
Sodium Adsorption Ratio (SAR)	no unit	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	0.66	0.63	0.47	0.19	0.44	0.48	0.30	0.63	0.31
Ammonia as N ^	mg/L	NA	NA	NA	NA	NA	NA	NA	<0.100	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	<0.0500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aluminum	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.250	<0.050	< 0.050	< 0.100	< 0.100	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Arsenic	mg/L	<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	0.0010	<0.0005	0.0005	0.0010	0.0007	0.0009	<0.0025	0.0006	0.0008	< 0.0010	0.0011	< 0.0010	< 0.0010	< 0.0010	0.0011	< 0.0010	< 0.0020	< 0.0010
Cadmium	mg/L	<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	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0025	<0.0005	< 0.0005	< 0.0010	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0010	< 0.0005
Copper	mg/L	0.0007	0.0011	0.0011	0.0013	0.0026	0.0013	0.0012	0.0005	0.0005	0.0010	0.0006	0.0005	0.0007	0.0009	0.0012	0.0006	0.0011	0.0011	0.0007	0.0069	0.0102	0.0036	0.0020	< 0.0040	0.0031	0.0036	0.0053	0.0084	0.0186	0.0196	0.0095	0.0043
Iron	mg/L	<0.0500	<0.0500	<0.0500	<0.0500	0.2550	0.0550	<0.0500	0.3160	0.5510	<0.0500	<0.0500	<0.0500	0.1030	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	0.2720	<0.0500	0.2370	< 0.1000	0.5280	0.0810	<0.0500	0.4060	1.2100	<0.0500	< 0.050	< 0.050
Lead	mg/L	<0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0025	<0.0005	< 0.0005	< 0.0010	< 0.0005	< 0.0005	< 0.0005	0.0007	0.0015	0.0013	< 0.0010	< 0.0005
Manganese	mg/L	0.0049	0.0093	0.0016	0.0043	0.1270	0.0349	0.0096	0.1130	0.3680	0.0297	0.0087	0.0047	0.1490	0.0042	0.0156	0.0074	0.0337	0.0761	0.0241	0.0398	0.4320	0.0989	0.1400	0.3170	0.7540	0.1020	0.0157	0.1720	0.5000	0.0113	0.0432	0.0144
Mercury (total)	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002																
Mercury (total low-level)	ng/L															<10.0	<10.0	<0.200	<100	<100	<100	<100	<100	<100	<100	<10.0	<10.0	<10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
Molybdenum	mg/L	<0.0025	0.0010	0.0012	0.0009	0.0011	0.0009	0.0011	0.0007	0.0005	0.0009	0.0009	0.0009	0.0007	0.0009	0.0011	0.0008	0.0009	0.0014	0.0012	0.0012	<0.0025	0.0008	0.0013	< 0.0010	0.0009	0.0012	0.0010	0.0009	0.0010	0.0009	0.0012	0.0009
Selenium	mg/L	<0.0050	<0.0010	<0.0010	<0.0010	0.0017	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0018	<0.0010	<0.0010	<0.001	<0.0010	0.0012	<0.001	0.0011	<0.0050	<0.0010	< 0.0010	< 0.0020	0.0013	0.0018	< 0.0010	0.0013	0.0016	< 0.0010	0.0031	0.0014
Silica (Si02)	mg/L	11.00	8.40	8.64	8.31	11.30	8.55	9.17	13.40	13.00	7.57	7.36	9.86	13.40	7.18	9.33	8.95	9.73	13.90	10.60	11.30	12.30	12.00	11.90	14.00	13.20	10.50	9.51	12.00	12.80	9.78	12.40	9.73
Silicon	mg/L	5.14	3.93	4.04	3.88	5.29	3.99	4.29	6.25	6.06	3.54	3.44	4.61	6.26	3.36	4.36	4.18	4.55	6.49	4.96	5.30	5.77	5.61	5.59	6.53	6.19	4.90	4.44	5.61	5.99	4.57	5.78	4.55
Uranium	mg/L	0.0013	0.0001	0.0002	0.0003	0.0009	0.0003	0.0004	0.0007	<0.0005	<0.0005	0.0006	<0.0005	0.0013	<0.0005	<0.0005	<0.0005	0.0005	0.0008	0.0006	0.0006	<0.0025	<0.0005	0.0010	< 0.0010	0.0005	0.0005	< 0.0005	0.0009	0.0011	< 0.0005	0.0015	0.0005
Zinc	mg/L	<0.0100	<0.0020	0.0033	<0.0020	0.0044	<0.0020	<0.0020	0.0033	0.0087	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0050	<0.0100	0.0047	0.0022	< 0.0040	0.0056	0.0095	0.0123	0.0116	0.0243	0.0249	0.0160	0.0139

Notes & Definitions:

Historical data prior to 2018 can be found in earlier posted versions of this table

^ 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

Hay Gulch Ditch Downgradient

Year		**2018**				**2019**				**2020**				**2021**				**2022**				**2023**				**2024**				**2025**			
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		2	5	8	11	2	5	8	11	2	6	8	12	2	6	9	11	3	6	9	12	3	5	8	11	2	6	8	11	2	6	8	11
Sample Date		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	11/21	2/26	6/20	8/20	11/25	2/8	6/16	8/18	11/6
Lab Analysis (Y/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	Y	Y	Y	Y
Field Parameters:																																	
Flow Rate	***cfs***	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	0.08	0.06	0.57	0.43	0.02	0.02	0.14	0.23	0.13
Temperature	***deg C***	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	7.36	5.85	15.03	14.51	8.37	6.83	12.55	20	9.97
pH	***SU***	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	8.29	8.23	8.35	8.14	8.00	8.01	8.12	7.90	7.96
Specific Conductance	***µS/cm***	742	304	356	309	577	202	295	554	882	137	237	478	815	131	184	311	636	150	248	292	891	762	835	976	984	358	378	845	1044	471	177	348
Oxygen Reduction Potential	***mV***	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	-29.4	-12.0	47.6	79.7	-28.0	21.1	146.3	-37.0	328.3
Dissolved Oxygen	***mg/L***	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	9.0	9.8	7.2	6.8	7.7	9.3	7.8	6.3	8.3
Lab Analytical Results:																																	
Hardness as CaCO3	***mg/L***	329	140	182	167	281	92	137	295	416	64	120	232	419	65	91	143	346	66	96	138	433	337	497	467	439	180	184	411	461	227	78	163
pH (Lab)	***SU***	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	8.07	8.04	8.20	8.04	8.00	8.04	8.01	8.15	7.79
Total Dissolved Solids (Lab)	***mg/L***	420	220	260	185	390	185	195	355	573	120	135	370	435	175	90	120	410	30	90	225	555	475	625	575	570	195	225	545	565	250	100	215
Total Suspended Solids	***mg/L***	49.50	<2.00	5.67	4.40	18.40	153.00	22.50	<4.00	4.20	17.50	28.60	10.50	28.00	8.40	4.80	5.44	18.30	29.20	3.67	8.00	17.80	62.00	16.00	3.38	25.70	31.30	9.15	6.39	11.00	8.25	4.44	5.26
Calcium	***mg/L***	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	101.0	75.8	114.0	110.0	99.9	42.9	47.0	97.9	108.0	55.4	23.4	46.3
Magnesium	***mg/L***	34.2	11.2	14.4	13.4	31.0	6.5	12.3	30.8	49.0	3.2	8.4	22.7	42.2	2.9	3.9	11.0	34.2	3.0	5.0	9.7	43.8	35.8	51.9	47.1	46.0	17.6	16.3	40.4	46.7	21.6	4.7	11.6
Sodium	***mg/L***	18.10	5.42	6.49	5.15	16.50	5.03	6.62	17.00	28.50	1.90	3.68	9.03	15.80	1.14	1.75	4.71	16.40	1.58	2.04	4.08	18.60	18.50	29.60	21.70	21.60	8.83	6.83	19.90	23.00	10.90	3.26	5.67
Potassium	***mg/L***	2.84	1.14	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	4.82	3.73	1.36	1.53	3.62	3.74	1.89	< 1.00	1.33
Alkalinity, Total	***mg/L***	265	112	170	140	150	340	140	194	297	48	110	158	315	52	72	116	282	46	73	103	303	218	293	325	312	129	139	345	360	155	59	122
Alkalinity, Bicarbonate	***mg/L***	259	104	170	140	150	340	140	188	283	48	110	154	315	52	72	116	282	46	73	103	293	218	265	325	296	129	139	345	360	155	59	122
Alkalinity, Carbonate	***mg/L***	<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	28.0	< 10.0	16.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
Alkalinity, Hydroxide	***mg/L***	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
Chloride	***mg/L***	23.10	7.54	7.47	5.69	40.20	16.90	7.65	14.80	30.70	1.87	4.42	17.10	59.00	1.16	1.21	5.07	15.00	1.23	1.69	6.57	39.60	39.40	50.50	42.70	51.60	12.70	11.90	46.30	53.90	20.40	2.02	9.93
Fluoride	***mg/L***	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	0.201	0.201	0.216	0.223	0.273	0.287	0.201	0.225	0.226
Sulfate as SO4	***mg/L***	86.5	40.2	46.8	45.0	91.4	18.5	42.7	83.3	143.0	14.2	32.4	70.2	90.1	17.3	25.7	46.3	74.7	18.8	26.4	42.2	138.0	127.0	168.0	138.0	142.0	47.6	48.6	125.0	148.0	58.6	21.4	45.5
Total Organic Carbon (TOC)	***mg/L***	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	4.04	3.74	2.01	2.35	2.43	2.13	1.63	1.46	1.55
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	< 5.00
Nitrate/Nitrite as N	***mg/L***	<0.020	<0.020	<0.020	<0.020	0.170	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	< 0.020	0.072	0.056	0.025	0.099	0.065	0.028	< 0.020	< 0.020
Sodium Adsorption Ratio (SAR)	***no unit***	0.43	0.20	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	0.44	0.46	0.29	0.22	0.42	0.47	0.31	0.16	0.19
Ammonia as N ^	***mg/L***	NA	NA	NA	NA	NA	NA	NA	<0.100	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	<0.0500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aluminum	***mg/L***	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	< 0.100	<0.050	< 0.100	< 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	0.0008	<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	< 0.0005	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	0.0010	< 0.0010
Cadmium	***mg/L***	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	< 0.0010	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Copper	***mg/L***	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	0.0010	0.0007	0.0009	0.0034	0.0010	0.0045	0.0070	0.0026	0.0029	0.0025	0.0028	0.0022	0.0194	0.0058	0.0051	0.0067	0.0083	0.0078
Iron	***mg/L***	<0.050	<0.050	<0.050	<0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.100	<0.050	< 0.100	< 0.050	< 0.050	< 0.050	< 0.050	< 0.250	< 0.050	< 0.050	< 0.050	< 0.050
Lead	***mg/L***	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	< 0.0010	<0.0005	< 0.0010	< 0.0005	< 0.0005	< 0.0005	0.0016	< 0.0005	0.0006	< 0.0005	< 0.0005	0.0007
Manganese	***mg/L***	0.0962	0.0038	0.0445	0.0102	0.0480	0.0125	0.0033	0.0102	0.0286	0.0012	0.0046	0.0116	0.1330	0.0011	0.0021	0.0124	0.0082	0.0024	0.0175	0.0315	0.0552	0.0233	0.0156	0.0490	0.0844	0.0055	0.0153	0.0428	0.0220	0.0143	0.0090	0.0110
Mercury (total)	***mg/L***	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.00002																
Mercury (total low-level)	***ng/L***															<10.0	<10.0	<0.2	<100	<100	<100	<100	<100	<100	<100	<10.0	<10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
Molybdenum	***mg/L***	0.0010	0.0011	0.0012	0.0010	0.0010	0.0011	0.0012	0.0007	0.0006	0.0008	0.0012	0.0009	0.0009	0.0009	0.0010	0.0009	0.0010	0.0010	0.0011	0.0009	<0.001	0.0009	0.0010	0.0008	0.0009	0.0010	0.0009	0.0008	0.0008	0.0009	0.0010	0.0009
Selenium	***mg/L***	0.0011	<0.0010	<0.0010	<0.001	0.0012	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0015	<0.0010	<0.0010	<0.0010	0.0010	0.0011	<0.0010	<0.0010	< 0.0020	0.0010	< 0.0020	0.0013	0.0014	0.0014	< 0.0010	0.0014	0.0012	< 0.0010	< 0.0010	< 0.0012
Silica (Si02)	***mg/L***	10.70	8.41	8.77	8.66	8.46	5.70	8.86	11.80	12.30	6.38	7.14	10.60	12.90	6.68	8.84	9.38	12.00	6.98	7.96	8.75	11.30	11.80	13.40	13.80	11.30	9.03	9.95	12.60	12.10	9.69	4.67	9.20
Silicon	***mg/L***	5.01	3.93	4.10	4.05	3.95	2.67	4.14	5.50	5.75	2.98	3.34	4.94	6.01	3.12	4.13	4.38	5.59	3.26	3.72	4.09	5.26	5.50	6.25	6.47	5.27	4.22	4.65	5.90	5.64	4.53	2.18	4.30
Uranium	***mg/L***	0.0012	0.0004	0.0005	0.0003	0.0009	0.0002	0.0004	0.0007	0.0006	<0.0005	<0.0005	0.0005	0.0009	<0.0005	<0.0005	<0.0005	0.0008	<0.0005	<0.0005	<0.0005	0.0010	0.0007	0.0010	0.0009	0.0011	< 0.0005	< 0.0005	0.0011	0.0013	< 0.0005	< 0.0005	< 0.0005
Zinc	***mg/L***	<0.0020	0.0074	0.0048	0.0035	0.0022	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	0.0022	<0.0020	0.0065	0.0042	<0.0020	< 0.0040	0.0032	0.0026	0.0031	0.0260	0.0154	0.0328	0.0190	0.0166	0.0231

Notes & Definitions:

Historical data prior to 2018 can be found in earlier posted versions of this table

~ re-sample on 12/19/23 following detection of 9.10 mg/L on 11/21/23

^ 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

Well #1 Upgradient																																	
Year		**2018**				**2019**				**2020**				**2021**				**2022**				**2023**				**2024**				**2025**			
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		2	5	8	11	2	5	8	11	2	6	8	12	2	5	8	11	3	6	8	12	3	5	8	11	2	6	8	11	2	5	8	11
Sample Date		2/22	5/14	8/9	11/7	2/25	5/23	8/16	11/14	2/13	6/1	8/31	12/14	2/11	5/19	8/12	11/12	3/1	6/2	8/17	12/16	3/29	5/19	8/21	11/21	2/26	6/20	8/20	11/25	2/8	5/27	8/18	11/6
Lab Analysis (Y/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	Y	Y	Y	Y
Field Parameters:																																	
Purge Flow Rate	***gpm***	7.2	7.2	10.0	7.2	10.0	8.3	11.0	6.5	8.0	10.0	8.0	8.0	8.0	8.0	8.0	4.0	8.0	5.0	9.0	6.0	7.1	10.2	8.8	6.1	8.1	8.7	4.8	6.5	6.4	7.4	7.8	0.1
Total Purged	***gal***	268	280	267	305	300	321	327	293	314	300	291	280	302	324	300	400	300	300	400	350	270	280	304	264	270	265	263	262	265	266	260	261
Depth to Water	***ft bgs***	5.40	5.77	5.65	6.50	5.98	4.50	5.68	6.08	5.55	4.17	6.25	3.72	6.48	5.82	7.25	6.55	6.47	6.80	6.80	6.30	4.92	4.42	6.15	6.40	5.70	6.10	6.40	6.70	6.00	5.91	7.10	6.90
Temperature	***deg C***	11.5	11.7	12.0	12.5	11.7	11.5	11.8	12.9	11.6	12.1	12.3	11.5	11.6	12.2	12.3	12.0	12.0	12.3	12.0	11.7	11.8	11.7	12.7	12.3	12.3	11.7	12.7	11.8	11.4	12.2	14.2	11.9
pH	***SU***	7.56	7.49	7.35	7.34	7.44	7.39	7.37	7.32	7.37	7.38	7.57	7.60	7.54	7.56	7.59	7.57	7.46	7.54	7.49	6.84	7.67	7.53	7.67	7.52	7.59	7.36	7.46	7.47	7.41	7.42	7.48	7.54
Specific Conductance	***µS/cm***	1278	1218	1289	1204	1235	1308	1253	1232	1277	1268	1067	1190	1142	1235	1212	1301	1235	1301	1235	1282	1313	1375	1201	1287	1312	1238	1265	1225	1361	1275	1237	1286
Oxygen Reduction Potential	***mV***	-185.3	-219.3	-251.6	-273.0	-232.0	-194.0	-192.0	-159.9	-193.0	-221.7	-187.2	-138.1	-153.4	-208.9	-202.5	-272.2	-306.3	-231.9	-351.0	-306.7	-162.0	-126.9	-157.9	-238.5	-260.6	-174.9	-212.8	-300.6	-211.5	-203.6	-227.8	-163.3
Lab Analytical Results:																																	
Hardness as CaCO3	***mg/L***	274	275	369	287	252	350	303	263	290	319	255	247	298	313	236	286	271	311	281	317	334	561	301	303	330	304	321	301	316	350	288	324
pH (Lab)	***SU***	7.75	7.95	7.48	7.50	7.77	7.56	7.23	7.35	7.12	7.26	7.53	7.72	7.39	7.33	7.47	7.23	7.51	7.67	7.46	7.39	7.43	NA*	7.62	7.44	7.67	7.52	7.57	7.54	7.55	7.42	7.58	7.45
Total Dissolved Solids (Lab)	***mg/L***	745	770	835	730	735	860	780	705	700	775	710	690	755	785	750	745	725	790	735	745	765	835	740	755	745	750	730	730	640	770	730	765
Calcium	***mg/L***	53.4	53.8	71.5	56.7	49.1	67.8	58.2	51.5	56.5	61.6	49.6	47.4	58.1	60.9	45.4	54.8	53.3	60.3	52.1	60.2	64.2	107.0	58.1	58.1	61.3	58.9	61.4	57.6	59.3	64.2	53.6	59.2
Magnesium	***mg/L***	34.2	34.1	46.4	35.4	31.4	43.8	38.3	32.7	36.1	40.0	31.7	31.1	37.2	39.1	29.8	36.1	33.5	39.0	36.6	40.5	42.2	71.2	37.7	38.4	43.0	38.1	40.7	38.3	40.7	46.0	37.4	42.9
Sodium	***mg/L***	183.0	191.0	154.0	212.0	196.0	172.0	167.0	198.0	183.0	178.0	193.0	196.0	204.0	172.0	177.0	182.0	185.0	172.0	179.0	166.0	168.0	106.0	192.0	174.0	158.0	173.0	177.0	182.0	164.0	160.0	175.0	180.0
Potassium	***mg/L***	3.09	3.03	3.16	3.15	3.01	3.32	3.01	3.01	<5	3.05	3.05	3.02	<5.00	3.00	<5.00	<5.00	2.93	3.09	2.94	<5.00	<5.00	3.04	< 5.00	2.89	2.80	3.00	3.03	2.97	2.99	< 5.00	3.01	3.39
Alkalinity, Total	***mg/L***	620	595	630	640	610	615	615	590	600	576	520	605	570	620	600	770	640	650	570	615	640	590	602	610	590	625	630	635	635	640	590	655
Alkalinity, Bicarbonate	***mg/L***	620	595	630	640	610	615	615	590	600	576	520	587	570	620	600	770	640	590	570	615	640	590	602	610	590	625	630	635	635	640	590	655
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	18.0	<10.0	<10.0	<10.0	<10.0	<10.0	60.0	<10.0	<10.0	<10.0	<10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
Alkalinity, Hydroxide	***mg/L***	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
Chloride	***mg/L***	4.30	4.35	4.34	4.23	4.35	4.59	4.36	6.19	4.76	4.76	4.62	4.34	4.27	4.91	4.89	4.93	4.46	4.50	4.75	4.78	4.77	6.43	4.76	4.83	5.05	5.38	4.84	4.71	4.87	4.86	4.63	5.01
Fluoride	***mg/L***	0.354	0.335	0.390	0.359	0.355	0.349	0.335	<0.500	0.348	0.366	0.356	0.342	0.311	0.338	0.350	0.284	0.349	0.268	0.332	0.334	0.340	0.320	0.304	0.268	0.266	0.352	0.340	0.436	0.389	0.342	0.322	0.338
Sulfate as SO4	***mg/L***	106.0	97.2	147.0	89.9	91.4	131.0	112.0	92.1	104.0	110.0	79.6	87.9	102.0	110.0	98.5	122.0	96.4	114.0	103.0	114.0	122.0	174.0	90.8	102.0	117.0	108.0	112.0	101.0	120.0	130.0	100.0	115.0
Total Organic Carbon (TOC)	***mg/L***	3.37	3.50	3.94	3.35	3.31	3.70	3.53	3.14	3.29	3.37	3.32	3.17	3.26	3.27	3.23	3.23	3.04	3.46	3.45	1.82	3.36	4.62	3.17	2.99	5.09	3.46	3.44	3.46	3.59	3.35	3.16	3.33
Nitrate/Nitrite as N	***mg/L***	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.040	< 0.020	< 0.020
Ammonia as N ^	***mg/L***	NA	NA	NA	NA	NA	NA	NA	0.931	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	0.0590	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aluminum	***mg/L***	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.100	<0.250	<0.050	<0.150	<0.050	<0.250	<0.050	<0.250	<0.250	<0.050	<0.050	<0.050	<0.250	<0.250	<0.100	< 0.250	< 0.100	< 0.100	< 0.100	< 0.050	< 0.050	< 0.050	< 0.250	< 0.050	< 0.100
Arsenic	***mg/L***	0.0005	0.0005	0.0005	<0.0005	0.0005	0.0005	<0.0005	<0.0010	<0.0005	<0.0005	<0.0010	0.0008	<0.0025	0.0005	<0.0005	<0.0025	<0.0005	0.0006	<0.0005	<0.0025	<0.0025	0.0013	< 0.0010	< 0.0010	< 0.0020	< 0.0020	< 0.0010	< 0.0020	< 0.0050	< 0.0020	< 0.0020	0.0013
Cadmium	***mg/L***	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0002	<0.0001	<0.0005	<0.0005	<0.0005	<0.0025	<0.0005	<0.0005	<0.0005	<0.0025	<0.0025	<0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0005	< 0.0010	< 0.0025	< 0.0010	< 0.0010	< 0.0005
Copper	***mg/L***	0.0035	0.0030	0.0022	0.0025	0.0042	0.0015	0.0019	0.0012	0.0017	0.0017	0.0021	0.0007	<0.0025	0.0039	0.0038	0.0059	0.0053	0.0067	0.0069	0.0067	0.0031	0.0022	0.0016	0.0035	0.0055	0.0067	0.0052	0.0112	0.0056	0.0058	0.0077	0.0062
Iron	***mg/L***	1.440	1.390	1.980	1.520	1.260	1.740	1.580	1.410	1.490	1.530	1.240	1.700	1.660	1.690	1.190	1.430	1.250	1.650	1.320	2.070	1.700	4.630	1.560	1.810	2.030	1.650	2.010	1.690	1.880	0.454	1.790	1.880
Lead	***mg/L***	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0010	<0.0005	<0.0005	<0.0010	<0.0005	<0.0025	<0.0005	<0.0005	<0.0025	<0.0005	<0.0005	<0.0005	<0.0025	<0.0025	<0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0100	< 0.0050	< 0.0010	< 0.0025	< 0.0010	< 0.0010	< 0.0005
Manganese	***mg/L***	0.3070	0.3060	0.4980	0.2860	0.3550	0.4390	0.4280	0.3540	0.3660	0.3690	0.2970	0.2970	0.4140	0.3880	0.3080	0.3870	0.3250	0.4100	0.3490	0.5010	0.4710	0.9220	0.1620	0.4220	0.5170	0.4510	0.4020	0.4180	0.4660	0.5220	0.4390	0.3940
Mercury (dissolved)	***mg/L***	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0050	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002															
Mercury (dissolved low-level)	***ng/L***																		<5	<100	<100	<100	<100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
Molybdenum	***mg/L***	<0.0005	<0.0005	0.0006	<0.0005	0.0005	<0.0005	<0.0005	<0.0010	<0.0005	<0.0005	<0.0010	0.0005	<0.0025	<0.0005	<0.0005	<0.0025	<0.0005	<0.0005	0.0005	<0.0025	<0.0025	0.0013	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0005	< 0.0010	< 0.0025	< 0.0010	< 0.0010	0.0006
Selenium	***mg/L***	<0.0010	0.0171	0.0120	0.0022	0.0032	0.0024	<0.0010	<0.0020	<0.001	<0.0010	0.0095	0.0171	0.0902	0.0324	0.0331	0.0439	0.0021	0.0089	0.0131	<0.005	0.0406	<0.002	0.0022	0.0113	0.0075	0.0640	0.0055	< 0.0020	< 0.0050	0.0160	0.0129	0.0321
Silica (Si02)	***mg/L***	13.40	14.60	13.80	13.70	13.50	13.10	13.10	14.30	13.10	13.10	13.60	14.30	13.00	13.90	12.50	13.20	14.20	13.30	13.40	12.90	13.20	14.40	14.00	13.90	12.90	13.30	13.60	13.60	13.10	2.58	13.40	12.50
Silicon	***mg/L***	6.27	6.81	6.45	6.41	6.30	6.13	6.11	6.68	6.13	6.14	6.37	6.67	6.10	6.50	5.84	6.17	6.62	6.21	6.28	6.01	6.17	6.74	6.55	6.51	6.05	6.22	6.34	6.37	6.14	1.20	6.26	5.82
Uranium	***mg/L***	0.0002	0.0001	0.0002	0.0002	0.0002	0.0002	0.0002	<0.0002	<0.0005	<0.0005	<0.0010	<0.0005	<0.0025	<0.0005	<0.0005	<0.0025	<0.0005	<0.0005	<0.0005	<0.0025	<0.0025	<0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0100	< 0.0050	< 0.0010	< 0.0025	< 0.0010	< 0.0010	< 0.0005
Zinc	***mg/L***	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0040	<0.0020	<0.0020	<0.0040	<0.0020	<0.0100	<0.0020	<0.0020	<0.0100	<0.0020	<0.0020	<0.0020	<0.0100	<0.0100	<0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0020	0.0144	< 0.0100	0.0086	< 0.0040	0.0119

Notes & Definitions:

Historical data prior to 2018 can be found in earlier posted versions of this table

^	**one-time analysis**
*	**sample out of holding time**
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

Well #2 Downgradient

Year		**2018**					**2019**				**2020**				**2021**				**2022**				**2023**				**2024**				**2025**			
Quarter		Q1	Q2	Q3	Q4	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		2	5	8	8	11	2	5	8	11	2	6	8	12	2	5	8	11	2	5	8	12	3	5	8	11	2	6	8	11	2	5	8	11
Sample Date		2/22	5/7	8/8	8/9	11/7	2/27	5/22	8/16	11/13	2/6	6/1	8/26	12/14	2/11	5/19	8/12	11/10	2/28	5/9	8/9	12/13	3/28	5/19	8/18	11/21	2/26	6/20	8/20	11/24	2/8	5/27	8/18	11/6
Lab Analysis (Y/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	Y	Y	Y	Y	Y
Field Parameters:																																			
Purge Flow Rate	***gpm***	0.10	1.00	0.10	1.00	0.50	0.25	0.50	0.25	0.50	0.25	0.25	0.25	0.13	0.50	0.25	0.25	0.25	0.25	0.25	0.25	0.04	0.33	0.60	0.34	0.19	0.23	0.38	0.23	0.35	0.16	0.25	0.46	0.30
Total Purged	***gal***	6.0	11.0	2.0	6.5	7.5	13.0	10.0	9.0	7.5	12.0	8.0	7.0	7.0	12.0	9.0	7.0	12.0	6.0	9.0	19.0	0.4	5.4	8.0	5.2	4.6	4.8	4.4	3.6	3.3	3.3	4.1	3.3	3.2
Depth to Water	***ft bgs***	6.68	7.40	6.65	6.59	5.17	5.85	0.92	3.60	5.20	5.60	4.00	6.29	7.48	8.10	8.70	8.32	8.75	9.14	9.70	10.25	9.65	8.55	8.65	8.95	10.07	9.70	10.50	11.75	12.78	12.70	11.20	12.70	13.10
Temperature	***deg C***	9.8	8.9	14.0	11.1	11.9	9.1	8.1	10.5	11.5	10.4	9.1	11.5	11.0	9.8	9.4	11.2	12.1	10.1	9.5	11.1	11.2	9.2	8.7	11.3	11.4	9.8	9.2	10.3	11.2	9.9	9.3	11.2	11.7
pH	***SU***	7.59	7.48	7.84	7.20	7.15	7.41	7.34	7.23	7.19	7.32	7.41	7.44	7.56	7.50	7.54	7.57	7.53	7.53	7.50	7.45	7.79	7.72	7.52	7.59	7.47	7.57	7.32	7.42	7.40	7.35	7.41	7.45	7.40
Specific Conductance	***µS/cm***	887	847	828	895	955	960	1091	1051	1083	1083	1134	1017	1099	964	939	1038	1073	1050	1019	1063	1201	1193	1253	1184	1202	1139	1093	1109	1119	1184	1143	1174	1201
Oxygen Reduction Potential	***mV***	-44.9	-34.0	-75.6	-127.0	-91.9	48.4	-57.8	-30.1	-5.5	25.3	-51.3	19.9	3.2	-4.8	-48.3	-26.0	-33.5	-94.0	-13.3	-207.6	-266.7	15.1	2.1	-18.4	-115.3	-112.5	-67.6	-39.7	-78.7	34.8	53.5	-189.2	251.0
Lab Analytical Results:																																			
Hardness as CaCO3	***mg/L***	412	415	422	415	465	488	537	513	603	540	575	560	569	624	529	503	521	500	527	551	557	503	641	646	582	500	540	553	555	532	539	570	599
pH (Lab)	***SU***	7.62	7.60	7.61	7.45	7.50	7.50	7.40	7.04	7.12	7.20	7.09	7.30	7.20	7.17	7.15	7.32	7.24	7.57	7.53	7.71	7.54	7.40	NA*	7.40	7.45	7.57	7.51	7.61	7.50	7.56	7.47	7.55	7.49
Total Dissolved Solids (Lab)	***mg/L***	515	545	545	575	550	575	695	655	690	695	730	665	685	660	655	685	655	605	645	680	695	770	775	855	745	660	670	680	690	660	725	740	745
Calcium	***mg/L***	70.1	70.2	72.7	70.4	78.7	81.3	87.1	83.3	99.4	87.2	92.2	90.1	90.0	97.9	81.2	76.8	80.1	76.0	79.1	84.6	84.1	76.4	101.0	98.9	88.3	73.4	80.4	84.3	82.6	78.6	78.0	82.7	89.5
Magnesium	***mg/L***	57.4	58.2	58.4	58.2	65.2	69.2	77.6	74.0	86.3	78.2	83.7	81.3	83.7	92.2	79.2	75.6	77.9	75.3	80.0	82.5	84.3	75.8	94.7	97.0	87.8	76.8	82.3	83.2	84.7	81.4	83.7	88.2	91.1
Sodium	***mg/L***	19.4	19.2	19.6	19.1	21.3	22.1	23.4	21.4	25.5	23.3	24.5	23.8	24.5	26.9	23.4	23.1	23.3	23.3	24.9	26.1	62.7	24.6	30.7	33.8	29.3	27.0	28.6	30.1	30.7	29.1	30.1	31.5	33.7
Potassium	***mg/L***	1.76	1.68	2.00	1.82	2.08	1.97	1.94	2.06	2.40	2.04	2.00	2.06	2.22	<5.00	1.94	<5.00	2.12	2.01	1.99	2.28	2.42	<2.00	2.51	2.80	2.26	2.02	2.07	2.30	2.39	2.27	2.51	2.38	2.85
Alkalinity, Total	***mg/L***	333	350	380	328	340	395	460	365	348	324	324	345	341	385	375	380	540	372	385	288	358	379	395	379	390	372	385	400	420	415	390	340	435
Alkalinity, Bicarbonate	***mg/L***	333	350	380	328	340	395	460	365	348	324	324	345	333	385	375	380	540	372	385	288	358	379	395	379	390	372	385	400	420	415	390	340	435
Alkalinity, Carbonate	***mg/L***	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
Alkalinity, Hydroxide	***mg/L***	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
Chloride	***mg/L***	24.70	27.20	34.50	34.10	39.30	40.10	42.90	45.20	47.20	48.90	50.30	44.80	44.60	46.00	45.90	37.00	44.30	41.10	38.10	41.90	53.10	49.20	54.40	52.00	46.90	43.00	44.10	43.40	41.30	46.10	50.70	52.00	53.30
Fluoride	***mg/L***	0.244	0.224	0.259	0.281	0.263	0.244	0.246	0.221	<0.500	<0.500	<0.500	0.254	0.248	0.216	0.236	<0.500	0.210	0.251	0.217	0.229	0.268	0.262	0.210	0.220	< 0.200	< 0.200	0.236	0.234	0.244	0.268	0.222	0.217	0.231
Sulfate as SO4	***mg/L***	104.0	102.0	112.0	111.0	137.0	138.0	196.0	189.0	182.0	199.0	230.0	204.0	219.0	190.0	199.0	186.0	176.0	187.0	160.0	190.0	235.0	224.0	258.0	239.0	214.0	195.0	199.0	196.0	185.0	193.0	208.0	213.0	217.0
Total Organic Carbon (TOC)	***mg/L***	2.10	2.02	2.06	1.93	2.08	1.87	2.69	2.28	1.99	1.80	1.84	1.87	1.74	2.18	1.74	1.77	1.73	1.73	1.56	1.68	1.04	1.77	3.14	1.88	1.65	1.79	1.71	1.93	1.65	1.59	1.52	1.54	1.58
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	0.029	<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	<0.100	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	<0.0500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aluminum	***mg/L***	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.100	<0.050	<0.250	<0.050	<0.250	<0.050	<0.050	<0.050	<0.050	<0.100	<0.100	<0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.100
Arsenic	***mg/L***	0.0010	0.0009	0.0012	0.0012	0.0010	0.0012	0.0011	0.0012	0.0012	0.0011	0.0009	<0.001	0.0013	<0.0025	0.0009	0.0012	<0.0025	0.0007	0.0005	0.0009	0.0015	<0.001	<0.001	< 0.0010	< 0.0010	0.0011	< 0.0020	< 0.0010	< 0.0010	< 0.0010	< 0.0020	< 0.0020	0.0010
Cadmium	***mg/L***	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0005	<0.0005	<0.0005	<0.0025	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	< 0.0010	< 0.0010	< 0.0005	< 0.0010	< 0.0005	< 0.0005	< 0.0005	< 0.0010	< 0.0010	< 0.0005
Copper	***mg/L***	0.0056	0.0002	0.0006	0.0004	0.0003	0.0010	0.0016	0.0003	0.0002	<0.0005	<0.0005	<0.0010	<0.0005	<0.0025	0.0006	0.0005	<0.0025	<0.0005	0.0006	0.0006	0.0032	0.0050	0.0017	0.0215	0.0023	0.0025	< 0.0020	0.0096	0.0044	0.0018	0.0053	0.0067	0.0073
Iron	***mg/L***	0.060	0.073	0.089	0.163	0.082	0.062	0.116	0.105	0.119	0.094	0.107	0.109	0.159	<0.250	<0.050	<0.250	0.076	<0.050	0.069	0.054	0.134	<0.100	<0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.100
Lead	***mg/L***	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0010	<0.0005	<0.0025	<0.0005	<0.0005	<0.0025	<0.0005	<0.0005	<0.0005	<0.0010	<0.0010	<0.0010	< 0.0010	< 0.0010	< 0.0005	< 0.0010	0.0008	< 0.0005	< 0.0005	< 0.0010	< 0.0010	0.0008
Manganese	***mg/L***	0.3040	0.3060	0.3490	0.3750	0.3200	0.4230	0.5040	0.4040	0.4270	0.4540	0.4440	0.4120	0.4410	0.4220	0.4010	0.3890	0.4380	0.4030	0.3840	0.3970	0.4770	0.4310	0.2930	0.4160	0.4640	0.3990	0.4400	0.3730	0.3650	0.3310	0.3990	0.4210	0.3740
Mercury (dissolved)	***mg/L***	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0050	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002															
Mercury (dissolved low-level)	***ng/L***																			<5	<100	<100	<100	<100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
Molybdenum	***mg/L***	0.0024	0.0022	0.0024	0.0029	0.0024	0.0029	0.0026	0.0019	0.0024	0.0021	0.0023	0.0024	0.0027	0.0026	0.0026	0.0028	0.0027	0.0029	0.0029	0.0032	0.0033	0.0030	0.0027	0.0032	0.0032	0.0032	0.0032	0.0029	0.0031	0.0031	0.0031	0.0030	0.0030
Selenium	***mg/L***	0.0012	<0.001	0.0012	0.0015	0.0013	0.0021	0.0010	0.0011	0.0011	<0.010	0.0012	<0.002	0.0012	0.0069	0.0012	0.0012	<0.010	0.0013	<0.001	0.0013	<0.002	<0.002	<0.002	< 0.0020	< 0.0020	0.0013	0.0082	0.0019	0.0011	0.0010	< 0.0020	0.0020	0.0061
Silica (Si02)	***mg/L***	11.10	11.50	11.40	11.50	11.00	11.20	10.50	11.60	12.80	11.20	10.60	11.50	12.70	11.20	10.90	11.30	12.20	11.10	11.30	12.30	11.70	9.61	11.40	12.50	12.20	10.40	11.00	11.70	11.80	11.20	11.00	11.70	11.20
Silicon	***mg/L***	5.19	5.39	5.34	5.38	5.15	5.26	4.93	5.44	5.99	5.22	4.98	5.39	5.94	5.24	5.09	5.30	5.72	5.17	5.29	5.76	5.46	4.49	5.35	5.85	5.70	4.84	5.12	5.47	5.52	5.22	5.12	5.45	5.24
Uranium	***mg/L***	0.0013	0.0013	0.0013	0.0015	0.0014	0.0019	0.0016	0.0012	0.0015	0.0016	0.0016	0.0013	0.0017	<0.0025	0.0015	0.0015	<0.0025	0.0017	0.0016	0.0015	0.0017	0.0017	0.0022	0.0020	0.0019	0.0017	0.0018	0.0018	0.0018	0.0018	0.0019	0.0019	0.0018
Zinc	***mg/L***	0.0053	0.0022	0.0028	<0.0020	<0.0020	0.0025	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0040	<0.0020	<0.0100	<0.0020	<0.0020	<0.0100	<0.0020	<0.0020	<0.0020	<0.0040	<0.0040	<0.0040	0.0198	< 0.0040	< 0.0020	< 0.0040	0.0113	0.0119	0.0021	0.0133	0.0146	0.0138

Notes & Definitions:

Historical data prior to 2018 can be found in earlier posted versions of this table

^	one-time analysis
*	sample out of holding time
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

Wiltse Well																																	
Year		**2018**				**2019**				**2020**				**2021**				**2022**				**2023**				**2024**				**2025**			
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		2	5	8	11	2	5	8	11	2	5	8	12	2	5	8	11	3	6	8	11	3	5	8	11	2	6	8	11	2	5	8	11
Sample Date		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	11/29	2/23	6/21	8/20	11/25	2/11	5/30	8/19	11/7
Lab Analysis (Y/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	Y	Y	Y	Y
Field Parameters:																																	
Purge Flow Rate	***gpm***	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	14.3	19.2	11.5	11.8	10.8	19.4	23.6	18.1	11.6
Total Purged	***gal***	2700	2890	2783	2747	3017	3200	3010	3058	3825	3495	3200	3030	2920	3000	1800	2800	2900	2950	3000	3000	4000	4000	3100	2612	3753	3100	3199	3861	3678	3467	3044	3354
Depth to Water	***ft bgs***	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	3.10	0.80	3.30	2.65	0.30	0.95	1.70	3.20	2.10
Temperature	***deg C***	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	11.9	7.3	10.5	11.9	8.5	7.7	10.3	11.1	9.8
pH	***SU***	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	7.12	7.20	6.96	6.99	7.07	6.87	7.08	7.3	7.23
Specific Conductance	***µS/cm***	2232	2144	2072	2167	2170	2151	1964	1970	2171	2017	1450	1984	1739	1789	2012	2038	1965	2039	2285	2268	2518	2449	2332	2571	2651	2336	2542	2368	2490	2140	2047	2263
Oxygen Reduction Potential	***mV***	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	45.5	-30.9	12.7	10.7	-51.8	41.8	64.1	-142.2	218.7
Lab Analytical Results:																																	
Hardness as CaCO3	***mg/L***	1090	1160	1130	1180	1150	1080	1080	1060	982	1060	1070	1130	1090	1070	1080	1080	1070	1070	1300	1200	1330	1340	1380	1320	1340	1320	1350	1280	1210	1190	1070	1320
pH (Lab)	***SU***	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	7.45	7.18	7.10	7.15	7.11	7.12	7.07	7.32	7.15
Total Dissolved Solids (Lab)	***mg/L***	1740	1740	1750	1720	1710	1670	1520	1480	1600	1560	1580	1540	1550	1500	1580	1640	1520	1580	1850	1740	2120	1980	1920	2050	2080	1900	2070	1880	1900	1700	1590	1810
Calcium	***mg/L***	211.0	216.0	221.0	230.0	226.0	214.0	214.0	208.0	191.0	206.0	206.0	215.0	208.0	199.0	206.0	209.0	208.0	206.0	255.0	232.0	261.0	269.0	273.0	251.0	255.0	259.0	265.0	252.0	229.0	230.0	212.0	258.0
Magnesium	***mg/L***	136.0	150.0	139.0	147.0	143.0	132.0	132.0	132.0	123.0	132.0	136.0	144.0	138.0	140.0	136.0	136.0	133.0	135.0	160.0	151.0	164.0	162.0	170.0	168.0	170.0	163.0	167.0	157.0	155.0	149.0	130.0	164.0
Sodium	***mg/L***	80.4	82.3	79.1	81.2	83.2	89.4	72.4	67.3	68.1	69.1	64.0	67.5	65.1	61.1	61.6	63.6	61.0	60.1	77.8	71.6	99.0	94.2	82.4	78.9	87.4	66.5	73.9	72.9	63.1	61.4	55.4	70.9
Potassium	***mg/L***	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	5.31	4.52	4.98	5.29	4.85	< 5.00	4.84	4.37	< 5.00
Alkalinity, Total	***mg/L***	445	435	463	505	515	469	474	460	460	431	475	470	480	480	480	520	505	485	530	468	485	435	460	465	480	495	530	525	457	480	435	535
Alkalinity, Bicarbonate	***mg/L***	445	435	463	505	515	469	474	460	460	431	475	470	480	480	480	520	505	485	530	468	485	435	460	465	480	495	530	525	457	480	435	535
Alkalinity, Carbonate	***mg/L***	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
Alkalinity, Hydroxide	***mg/L***	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
Chloride	***mg/L***	66.70	60.00	57.20	57.50	67.20	67.80	49.90	48.20	57.70	51.80	58.10	57.90	54.80	52.30	49.00	52.40	49.80	45.70	57.50	52.20	79.00	73.00	59.00	62.20	70.50	57.20	59.10	48.60	48.30	44.90	44.10	47.40
Fluoride	***mg/L***	<0.500	<0.500	<0.500	0.298	0.324	0.306	<0.500	<0.500	<0.500	<0.500	0.304	0.292	0.276	0.280	<0.500	0.280	0.286	0.240	0.288	0.288	<0.500	<0.500	< 0.500	< 0.500	< 0.500	< 0.500	< 0.500	0.356	0.338	< 0.500	0.276	0.302
Sulfate as SO4	***mg/L***	832.0	714.0	733.0	741.0	801.0	709.0	627.0	627.0	711.0	633.0	704.0	728.0	683.0	661.0	679.0	697.0	688.0	702.0	818.0	873.0	1070.0	1060.0	960.0	1020.0	1140.0	947.0	1040.0	930.0	1050.0	868.0	732.0	861.0
Total Organic Carbon (TOC)	***mg/L***	3.37	3.50	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	3.96	4.72	3.76	3.87	4.11	3.64	3.77	3.57	3.51
Nitrate/Nitrite as N	***mg/L***	2.260	2.480	2.260	1.990	1.950	0.651	0.896	1.310	1.050	0.865	1.250	1.480	1.820	1.490	2.060	1.870	1.690	1.530	1.160	1.010	0.469	0.619	2.320	2.850	2.090	0.469	1.530	1.100	1.470	1.090	1.320	1.050
Ammonia as N ^	***mg/L***	NA	NA	NA	NA	NA	NA	NA	<0.100	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	<0.0500	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***	<0.100	<0.050	<0.050	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.250	<0.100	<0.050	<0.250	<0.050	<0.250	<0.100	<0.050	<0.100	<0.100	<0.100	<0.250	<0.250	< 0.250	< 0.250	< 0.150	< 0.100	< 0.050	< 0.050	< 0.250	< 0.100	< 0.100	< 0.250
Arsenic	***mg/L***	0.0009	0.0006	<0.0025	<0.001	<0.0010	0.0006	<0.0010	<0.0010	<0.0010	<0.0025	<0.0010	0.0005	<0.0025	<0.0025	<0.0025	<0.0010	<0.0005	0.0007	<0.001	<0.001	<0.0025	<0.0025	< 0.0025	< 0.0025	< 0.0050	< 0.0020	< 0.0010	< 0.0020	< 0.0050	< 0.0020	< 0.0010	< 0.0020
Cadmium	***mg/L***	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	<0.0001	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0001	<0.0005	<0.0025	<0.0025	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.0025	<0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0010	< 0.0005	< 0.0010	< 0.0025	< 0.0010	< 0.0005	< 0.0010
Copper	***mg/L***	0.0020	0.0019	0.0018	0.0030	0.0020	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	< 0.0100	0.0090	0.0052	0.0190	0.0216	< 0.0050	< 0.0040	0.0028	0.0029
Iron	***mg/L***	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	< 0.250	< 0.150	0.194	0.220	< 0.250	< 0.250	< 0.100	< 0.100	< 0.250
Lead	***mg/L***	<0.0005	<0.0005	<0.0005	<0.001	<0.0010	<0.0005	<0.0010	<0.0010	<0.0010	<0.0025	<0.0010	<0.0005	<0.0025	<0.0025	<0.0025	<0.0010	<0.0005	<0.0005	<0.001	<0.0025	<0.0025	<0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0010	0.0017	0.0013	< 0.0025	< 0.0010	< 0.0005	< 0.0010
Manganese	***mg/L***	0.8450	0.9970	1.3700	1.0800	0.9370	0.3570	0.9020	0.8920	0.4190	0.8160	1.0300	0.9430	1.2100	0.9800	1.4000	1.3400	1.2600	1.3500	0.9740	0.9820	0.5070	0.8420	1.6400	1.3300	0.6350	1.2200	1.1400	0.9630	1.0200	0.2780	1.4600	0.9740
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															
Mercury (dissolved low-level)	***ng/L***																		<5	<100	<100	<100	<100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
Molybdenum	***mg/L***	0.0020	0.0020	0.0020	0.0019	0.0017	0.0014	0.0020	0.0017	0.0013	<0.0025	0.0018	0.0017	<0.0025	<0.0025	<0.0025	0.0017	0.0017	0.0018	0.0019	0.0017	<0.0025	<0.0025	< 0.0025	< 0.0025	< 0.0025	0.0020	0.0022	0.0021	< 0.0025	< 0.0010	0.0028	0.0020
Selenium	***mg/L***	0.0027	0.0025	0.0025	<0.002	0.0025	0.0016	<0.0020	<0.0020	<0.0020	<0.0050	<0.0020	0.0022	<0.0050	<0.0050	<0.0050	<0.0020	0.0015	0.0019	0.0020	0.0029	<0.0050	<0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0020	0.0019	< 0.0020	< 0.0050	< 0.0020	0.0028	0.0027
Silica (Si02)	***mg/L***	14.10	15.90	16.20	15.90	14.10	13.20	15.40	14.90	12.20	12.90	13.80	15.70	14.60	14.80	15.40	16.00	15.20	14.50	15.90	14.30	12.70	14.70	15.80	14.70	12.40	14.90	15.20	14.00	12.70	13.10	13.40	13.50
Silicon	***mg/L***	6.58	7.42	7.58	7.44	6.60	6.19	7.20	6.96	5.72	6.05	6.43	7.33	6.82	6.91	7.19	7.50	7.13	6.76	7.43	6.69	5.91	6.85	7.37	6.89	5.80	6.96	7.09	6.56	5.94	6.13	6.27	6.33
Uranium	***mg/L***	0.0025	0.0024	0.0024	0.0032	0.0036	0.0044	0.0029	0.0023	0.0039	0.0032	0.0024	0.0032	<0.0025	<0.0025	<0.0025	0.0025	0.0022	0.0025	0.0034	0.0035	0.0048	0.0036	0.0026	0.0030	0.0043	0.0031	0.0034	0.0039	0.0028	< 0.0010	0.0026	0.0034
Zinc	***mg/L***	0.0216	0.0225	0.0214	0.0172	0.0175	0.0128	0.0138	0.0108	0.0122	0.0132	0.0118	0.0098	0.0130	0.0116	0.0311	0.0276	0.0162	0.0180	0.0157	0.0157	0.0156	0.0152	0.0255	0.0164	0.0143	0.0173	0.0290	0.0391	0.0232	0.0070	0.0165	0.0125

Notes & Definitions:

Historical data prior to 2018 can be found in earlier posted versions of this table

^ one-time analysis
*** sample out of holding time**
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-HGA-4

Year		2018				2019				2020				2021				2022				2023				2024				2025			
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		1	2	5	8	11	2	5	8	11	2	5	8	12	2	5	8	11	2	5	8	12	3	5	8	11	2	6	8	11	2	5	8	11
Sample Date		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	11/29	2/26	6/20	8/20	11/24	2/8	5/30	8/18	11/6
Lab Analysis (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	Y	Y	Y	Y	Y	Y
Field Parameters:																																		
Purge Flow Rate	gpm	NM	0.10	1.50	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	0.05	0.08	0.08	0.06	0.05	0.08	0.01	0.03	0.08
Total Purged	gal	19	21	21	19	21	24	22	21	21	22	21	20	21	21	21	20	22	21	21	22	0.5	0.4	0.5	0.25	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Depth to Water	ft bgs	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	0.85	0.35	3.05	0.65	1.29	0.85	1.62	4.85	1.72
Temperature	deg C	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	8.3	8.8	10.0	13.5	8.9	9.0	11.6	12.6	9.7
pH	SU	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	7.49	7.49	7.26	7.29	7.32	7.21	7.24	7.49	7.54
Specific Conductance	µS/cm	1141	1154	1098	1057	1167	1183	1102	1083	1127	1122	1093	1022	1158	975	1093	1108	1160	1197	1102	1198	970	1003	955	908	993	970	917	909	955	1005	876	930	1001
Oxygen Reduction Potential	mV	-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	-212.7	-216.3	-155.2	-167.8	-219.3	-156.2	-140.1	-238.5	-88.7
Lab Analytical Results:																																		
Hardness as CaCO3	mg/L		561	555	524	625	613	563	544	624	563	528	571	612	630	582	515	627	598	574	653	328	423	448	467	424	410	430	438	446	432	460	416	434
pH (Lab)	SU		7.58	8.15	7.33	7.12	7.20	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	7.41	7.39	7.38	7.34	7.36	7.31	7.29	7.28	7.42
Total Dissolved Solids (Lab)	mg/L		740	730	695	770	795	695	695	715	705	685	700	665	685	680	735	790	790	785	745	400	555	545	525	555	570	525	575	535	505	290	555	570
Calcium	mg/L		110.0	108.0	102.0	124.0	122.0	110.0	106.0	123.0	112.0	101.0	111.0	122.0	126.0	114.0	98.7	125.0	119.0	110.0	130.0	65.8	78.5	84.9	88.1	79.3	75.3	81.1	81.7	83.6	81.2	84.8	77.4	81.7
Magnesium	mg/L		69.3	69.0	65.4	76.5	74.7	70.3	67.9	76.8	68.9	67.0	71.7	74.9	76.8	72.0	65.2	76.6	72.9	72.5	79.9	39.7	55.1	57.2	59.9	54.9	54.0	55.3	56.8	57.7	55.6	60.3	54.2	56.0
Sodium	mg/L		26.5	30.4	29.9	27.6	27.0	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	38.0	37.3	38.1	38.5	40.4	38.6	40.6	39.0	40.5
Potassium	mg/L		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	2.21	2.14	2.17	2.22	2.24	2.21	2.45	2.30	2.44
Alkalinity, Total	mg/L		460	425	410	460	455	445	455	432	435	416	485	457	475	465	470	580	470	435	500	245	460	420	361	370	390	410	425	410	415	410	355	415
Alkalinity, Bicarbonate	mg/L		460	425	410	460	455	445	455	432	435	416	485	457	475	465	470	580	470	435	500	245	460	420	361	370	390	410	425	410	415	410	355	415
Alkalinity, Carbonate	mg/L		<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
Alkalinity, Hydroxide	mg/L		<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
Chloride	mg/L		8.43	7.57	6.47	9.40	10.50	8.06	8.44	9.46	8.39	7.64	8.78	10.10	9.65	9.41	11.10	13.90	12.00	10.20	14.60	28.70	3.40	3.41	3.62	3.56	3.63	3.72	3.58	3.45	3.55	3.39	3.33	3.56
Fluoride	mg/L		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	0.331	0.342	0.403	0.403	0.408	0.469	0.413	0.384	0.408
Sulfate as SO4	mg/L		222.0	190.0	169.0	201.0	221.0	186.0	212.0	190.0	193.0	181.0	179.0	187.0	191.0	184.0	194.0	199.0	216.0	183.0	215.0	99.5	150.0	161.0	158.0	143.0	142.0	146.0	145.0	151.0	155.0	152.0	136.0	146.0
Total Organic Carbon (TOC)	mg/L		4.56	4.57	4.30	4.72	4.82	4.45	4.58	4.35	4.80	4.30	4.56	4.67	4.31	4.36	4.55	4.84	5.47	4.21	4.64	0.96	4.32	6.87	4.55	3.84	4.98	4.00	4.52	4.12	4.72	3.88	4.08	4.05
Nitrate/Nitrite as N	mg/L		<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	0.073	<0.020	<5.00	< 0.100	< 0.020	< 0.020	0.423	< 0.020	< 0.100	< 0.020	< 0.020	< 0.020	< 0.020
Ammonia as N ^	mg/L		NA	NA	NA	NA	NA	NA	NA	0.528	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	<0.0500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aluminum	mg/L		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.100	<0.100	<0.100	<0.050	<0.050	<0.050	<0.250	<0.250	<0.050	<0.050	<0.050	<0.050	<0.100	<0.050	< 0.100	< 0.100	< 0.050	< 0.100	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Arsenic	mg/L		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	0.0039	0.0040	0.0027	0.0039	0.0033	0.0031	0.0032	0.0031	0.0035
Cadmium	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	<0.0001	<0.0001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0010	<0.0005	< 0.0010	< 0.0010	< 0.0005	< 0.0010	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Copper	mg/L		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	< 0.0040	0.0018	< 0.0020	0.0013	0.0023	0.0012	0.0027	0.0036	0.0011
Iron	mg/L		7.600	7.920	8.550	8.440	8.350	7.980	8.380	9.760	8.590	8.220	8.950	9.310	9.600	9.290	8.520	8.440	8.250	9.410	9.730	<0.05	9.760	10.500	9.390	9.530	9.070	9.600	10.400	9.060	9.530	9.380	9.470	9.650
Lead	mg/L		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0010	<0.0010	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0010	<0.0005	< 0.0010	< 0.0010	< 0.0005	< 0.0010	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Manganese	mg/L		1.9900	1.8100	1.5800	2.1300	2.5600	2.1200	1.8400	1.7800	1.7700	1.4900	1.6600	2.3600	2.5400	2.5100	1.7900	2.8600	3.0300	2.2900	3.0000	0.0622	0.4790	0.4410	0.4220	0.4540	0.4160	0.4370	0.3920	0.3920	0.4120	0.3820	0.4070	0.3970
Mercury (dissolved)	mg/L		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0050	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002															
Mercury (dissolved low-level)	ng/L																			<5	<100	<100	<100	<100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
Molybdenum	mg/L		0.0030	0.0031	0.0038	0.0029	0.0026	0.0027	0.0029	0.0031	0.0025	0.0030	0.0032	0.0029	0.0027	0.0030	0.0033	0.0024	0.0026	0.0030	0.0030	0.0011	0.0054	0.0055	0.0057	0.0055	0.0058	0.0058	0.0054	0.0052	0.0056	0.0050	0.0050	0.0050
Selenium	mg/L		<0.0010	0.0020	0.0016	<0.001	0.0010	<0.0010	<0.0010	<0.0010	<0.001	<0.0020	<0.0020	<0.001	<0.0010	0.0010	0.0057	0.0017	0.0011	<0.0010	0.0010	0.0011	<0.0020	<0.0010	< 0.0020	< 0.0020	< 0.0010	0.0024	< 0.0010	< 0.0010	< 0.0010	0.0020	0.0014	0.0078
Silica (Si02)	mg/L		15.80	16.40	15.70	17.30	15.90	14.90	14.90	16.50	15.20	13.90	15.40	18.30	16.90	16.30	14.30	17.70	16.70	16.00	17.80	11.70	12.60	14.10	14.00	13.00	12.50	12.70	13.00	12.80	12.60	13.00	12.70	12.00
Silicon	mg/L		7.37	7.67	7.34	8.10	7.46	6.96	6.96	7.69	7.09	6.48	7.21	8.56	7.88	7.61	6.68	8.29	7.81	7.50	8.34	5.48	5.89	6.59	6.57	6.06	5.85	5.95	6.10	5.99	5.88	6.09	5.96	5.60
Uranium	mg/L		0.0004	0.0004	0.0003	0.0005	0.0005	0.0004	0.0004	0.0003	<0.0005	<0.0010	<0.0010	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0006	<0.0010	<0.0005	< 0.0010	< 0.0010	< 0.0005	< 0.0010	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Zinc	mg/L		<0.002	<0.002	<0.002	<0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0040	<0.0040	<0.0020	<0.0020	<0.0020	<0.0020	<0.0100	<0.0020	<0.0020	<0.0020	0.0056	<0.0040	<0.0020	< 0.0040	< 0.0040	< 0.0020	< 0.0040	< 0.0020	< 0.0020	< 0.0020	0.0113	0.0123	< 0.0020

Notes & Definitions:

Historical data prior to 2018 can be found in earlier posted versions of this table

^	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-1-A

Year		2018									2019				2020				2021				2022				2023				2024				2025			
Quarter		Q1			Q2		Q3			Q4	Q1			Q4	Q1			Q4	Q1			Q4	Q1			Q4	Q1			Q4	Q1			Q4	Q1			Q4
Month		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	11	3	6	8	11	1	5	8	11
Sample Date		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	11/14	3/17	6/19	8/6	11/18	1/25	5/13	8/15	11/4
Lab Analysis (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	Y	Y	Y	Y
Field Parameters:																																						
Purge Flow Rate	gpm	NM	0.10	NM	0.10	0.10	***	0.12	0.10	0.09	0.12	0.12	0.06	0.25	0.25	0.25	0.13	0.13	0.13	0.13	0.25	0.25	0.25	0.25	0.15	0.25	0.08	0.10	0.10	0.18	0.10	0.11	0.10	0.09	0.17	0.05	0.23	0.12
Total Purged	gal	1.5	2.0	1.5	1.0	1.3		1.5	1.5	1.6	1.0	1.5	1.1	1.5	1.0	1.0	1.0	1.3	1.0	2.0	1.0	1.3	1.0	1.0	1.0	1.0	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Depth to Water	ft bgs	216.21	216.47	216.47	216.54	216.54		216.63	216.63	216.65	216.55	216.43	216.33	216.13	216.05	215.85	215.56	215.80	215.60	215.53	215.71	215.65	215.55	216.15	215.65	215.70	215.60	215.20	215.35	215.30	215.25	215.15	215.55	215.23	215.22	214.70	215.45	215.55
Temperature	deg C	9.5	9.0	8.7	9.6	9.2		9.9	10.0	8.9	7.5	10.3	9.6	9.7	8.1	9.1	9.6	9.4	8.4	9.6	10.1	9.2	9.5	10.2	10.5	9.0	8.6	10.8	11.0	9.0	7.8	10.4	10.0	8.8	8.1	10.0	13.5	10.7
pH	SU	7.19	7.37	7.28	6.80	6.97		6.99	7.05	7.01	7.13	6.96	7.05	7.00	7.13	7.18	7.22	7.24	7.19	7.30	7.35	7.17	7.22	7.31	7.29	6.82	7.34	7.49	7.37	7.54	7.60	6.97	7.14	7.05	7.15	7.22	7.35	6.61
Specific Conductance	µS/cm	1700	1723	1735	1647	1761		1734	1815	1781	1776	1681	1757	1737	1797	1855	1664	1670	1550	1647	1691	1792	1707	1717	1770	1733	1780	1676	1745	1738	1754	1656	1722	1710	1785	1436	1388	1690
Oxygen Reduction Potential	mV	-44.6	-52.8	-37.5	142.4	0.4		-26.4	-33.2	101.4	-11.8	25.4	-18.7	3.6	12.7	4.2	-20.1	111.4	23.8	-13.4	-6.5	38.2	-110.5	-51.9	-159.7	-29.9	4.8	93.8	4.0	-32.1	-63.1	-27.3	-59.6	-64.5	-11.5	-32.8	94.2	242.1
Lab Analytical Results:																																						
Hardness as CaCO3	mg/L		159			156			160	174	159	153	148	150	159	165	161	168	168	150	158	157	152	149	146	172	174	158	150	166	160	171	161	154	163	167	159	151
pH (Lab)	SU		7.22			7.45			7.17	7.27	7.13	7.03	7.14	6.92	7.19	6.91	7.23	7.17	7.22	7.13	7.10	7.05	7.30	7.15	7.36	7.37	7.01	7.20	7.38	7.39	6.95	7.24	7.32	7.27	7.34	7.18	7.35	7.26
Total Dissolved Solids (Lab)	mg/L		1100			1150			1040	1130	1160	1150	1150	1140	1190	1150	1150	1170	1250	1150	1190	1150	1140	1140	1150	1050	1150	1180	1200	1110	1120	1110	1100	1060	1100	990	1100	1150
Calcium	mg/L		30.5			29.7			30.9	34.0	31.2	29.8	27.9	29.0	30.9	31.6	30.6	32.8	32.1	28.3	29.9	30.0	28.5	28.0	27.4	32.6	33.2	29.9	27.7	31.2	30.4	33.0	30.6	28.8	30.8	31.5	29.8	28.8
Magnesium	mg/L		20.1			19.9			20.1	21.5	19.7	19.1	18.9	18.8	19.9	20.8	20.6	20.9	21.4	19.2	20.3	20.0	19.7	19.2	18.7	21.9	22.0	20.2	19.6	21.3	20.3	21.5	20.6	19.9	20.9	21.4	20.5	19.3
Sodium	mg/L		348.0			327.0			333.0	358.0	357.0	319.0	348.0	333.0	337.0	349.0	348.0	353.0	357.0	314.0	333.0	340.0	321.0	319.0	318.0	361.0	351.0	345.0	333.0	324.0	336.0	358.0	327.0	341.0	331.0	333.0	335.0	340.0
Potassium	mg/L		<5.00			2.12			2.23	2.47	2.34	2.18	2.29	2.12	2.13	<5.00	2.29	<3.00	<5.00	2.18	<5.00	2.34	2.23	2.01	2.12	2.11	<5.00	2.15	< 5.00	< 2.00	2.14	2.22	2.35	2.15	< 5.00	< 5.00	2.31	2.27
Alkalinity, Total	mg/L		415			353			385	395	375	355	368	420	360	340	325	366	400	400	370	440	405	425	410	361	372	391	368	375	370	385	410	420	425	387	360	435
Alkalinity, Bicarbonate	mg/L		415			353			385	395	375	355	368	420	360	340	325	366	400	400	370	440	405	425	410	361	372	391	368	375	370	385	410	420	425	387	360	435
Alkalinity, Carbonate	mg/L		<10.0			<10.0			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
Alkalinity, Hydroxide	mg/L		<10.0			<10.0			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
Chloride	mg/L		2.19			<5.00			2.12	2.20	2.74	2.33	2.72	2.66	2.74	2.71	2.74	2.88	2.73	2.34	2.78	<5.00	2.80	2.46	2.59	2.40	2.49	2.71	2.55	2.50	2.57	2.59	< 5.00	2.52	< 5.00	2.45	2.35	2.70
Fluoride	mg/L		0.240			<0.5			0.260	0.240	0.266	0.242	0.252	0.246	0.234	0.228	0.240	0.264	0.212	0.223	0.240	<0.5	<0.200	0.250	0.254	0.246	0.262	0.198	0.224	< 0.200	0.250	0.248	< 0.500	0.290	< 0.500	0.227	0.231	0.232
Sulfate as SO4	mg/L		518.0			522.0			515.0	511.0	508.0	494.0	537.0	495.0	506.0	532.0	510.0	508.0	553.0	531.0	507.0	458.0	503.0	516.0	532.0	517.0	562.0	607.0	587.0	510.0	557.0	552.0	493.0	477.0	537.0	507.0	465.0	482.0
Total Organic Carbon (TOC)	mg/L		1.51			1.54			1.60	1.75	1.61	1.67	1.59	1.50	1.55	1.55	1.49	1.57	1.58	1.49	1.57	1.51	1.56	1.41	1.39	1.41	1.63	1.76	1.55	1.55	1.66	1.53	1.49	1.61	1.83	1.46	1.90	1.67
Nitrate/Nitrite as N	mg/L		<0.020			<0.020			<0.020	0.028	<0.020	<0.020	<0.020	0.020	<0.020	0.046	<0.020	<0.020	<0.020	<0.020	0.036	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.040	< 0.020	< 0.020	< 0.020	< 0.020	0.722	< 0.020	< 0.020	< 0.020	< 0.020	0.033
Ammonia as N ^	mg/L		NA			NA			NA	NA	NA	NA	NA	0.387	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	<0.0500	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		<0.250			<0.050			<0.050	<0.100	<0.100	<0.050	<0.050	<0.050	<0.100	<0.250	<0.050	<0.050	<0.250	<0.050	<0.250	<0.100	<0.050	<0.050	<0.100	<0.100	<0.250	<0.250	< 0.250	< 0.100	< 0.100	< 0.100	< 0.050	< 0.050	< 0.250	< 0.250	< 0.050	< 0.050
Arsenic	mg/L		<0.0025			<0.0005			<0.0005	<0.0005	<0.0010	<0.0005	<0.0005	<0.0005	<0.0010	<0.0010	<0.0025	<0.0005	<0.0015	<0.0015	<0.0025	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.0025	<0.0025	< 0.0025	< 0.0010	< 0.0020	< 0.0020	< 0.0010	< 0.0010	< 0.0050	< 0.0020	< 0.0020	< 0.0020
Cadmium	mg/L		<0.0005			<0.0001			<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	<0.0005	<0.0001	<0.0003	<0.0015	<0.0025	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.0025	<0.0025	< 0.0025	< 0.0010	< 0.0010	< 0.0010	< 0.0005	< 0.0005	< 0.0025	< 0.0010	< 0.0010	< 0.0010
Copper	mg/L		0.0066			0.0041			0.0048	0.0048	0.0075	0.0064	0.0040	0.0147	0.0034	0.0012	0.0040	0.0024	0.0026	0.0059	0.0068	0.0086	0.0145	0.0112	0.0096	0.0078	0.0121	0.0193	0.0046	0.0079	0.0130	0.0149	0.0142	0.0201	0.0164	0.0154	0.0254	0.0168
Iron	mg/L		0.590			0.614			0.644	0.647	0.581	0.589	0.613	0.510	0.614	0.559	0.637	0.579	0.572	0.610	0.592	0.647	0.533	0.544	0.451	0.406	<0.250	<0.250	< 0.250	0.437	0.155	0.412	< 0.050	0.319	< 0.250	0.440	0.396	< 0.050
Lead	mg/L		<0.0025			<0.0005			<0.0005	<0.0005	<0.0010	<0.0005	<0.0005	<0.0005	<0.0010	<0.0010	<0.0025	<0.0015	<0.0015	<0.0015	<0.0025	<0.0010	<0.0005	<0.0005	<0.001	<0.001	<0.0025	<0.0025	< 0.0025	< 0.0010	< 0.0010	< 0.0010	< 0.0005	0.0007	< 0.0025	< 0.0010	0.0010	< 0.0010
Manganese	mg/L		0.0279			0.0260			0.0242	0.0282	0.0281	0.0235	0.0270	0.0248	0.0303	0.0329	0.0320	0.0313	0.0367	0.0316	0.0328	0.0287	0.0289	0.0295	0.0359	0.0260	0.0149	0.0027	0.0128	0.0400	0.0125	0.0306	0.0009	0.0297	0.0219	0.0507	0.0316	< 0.0010
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															
Mercury (dissolved low-level)	ng/L																							<5	<100	<100	<100	<100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
Molybdenum	mg/L		<0.0025			0.0009			0.0008	0.0007	<0.0010	<0.0005	<0.0005	<0.0005	<0.0010	<0.0010	<0.0025	<0.0015	<0.0015	<0.0015	<0.0025	<0.0010	<0.0005	<0.0005	<0.0010	<0.0010	<0.0025	<0.0025	< 0.0025	< 0.0010	< 0.0010	< 0.0010	< 0.0005	< 0.0005	< 0.0025	< 0.0010	< 0.0010	< 0.0010
Selenium	mg/L		<0.0050			<0.0010			<0.0010	<0.0010	<0.0020	<0.0010	<0.0010	<0.0010	<0.0020	<0.0020	<0.0050	<0.0030	<0.0030	<0.0030	<0.0050	<0.0020	<0.0010	<0.0010	<0.0020	<0.0020	<0.0050	<0.0050	< 0.0050	< 0.0020	< 0.0020	< 0.0020	< 0.0010	< 0.0010	< 0.0050	< 0.0020	< 0.0020	< 0.0020
Silica (Si02)	mg/L		11.20			11.20			11.40	12.00	11.10	11.20	11.60	11.00	11.10	10.40	11.10	11.50	11.30	10.70	10.70	11.60	11.20	10.80	10.40	11.20	10.60	10.60	9.44	11.30	10.50	10.80	10.80	10.20	10.60	10.70	11.30	9.96
Silicon	mg/L		5.24			5.25			5.31	5.62	5.20	5.23	5.43	5.13	5.19	4.85	5.17	5.37	5.27	5.00	5.01	5.42	5.25	5.07	4.85	5.24	4.94	4.95	4.41	5.28	4.89	5.05	5.07	4.79	4.94	5.00	5.27	4.66
Uranium	mg/L		<0.0005			0.0003			0.0002	0.0003	0.0002	0.0001	0.0001	0.0001	<0.0010	<0.0010	<0.0025	<0.0025	<0.0015	<0.0015	<0.0025	<0.0010	<0.0005	<0.0005	<0.0010	<0.0010	<0.0025	<0.0025	< 0.0025	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0005	< 0.0025	< 0.0010	< 0.0010	< 0.0010
Zinc	mg/L		<0.0100			0.0051			<0.0100	<0.002	<0.0040	0.0022	<0.0040	0.0020	<0.0040	<0.0040	<0.0100	<0.0060	<0.0060	<0.0060	<0.0100	<0.0040	<0.0020	<0.0020	<0.0040	<0.0040	<0.0100	0.0051	< 0.0100	< 0.0040	0.0043	< 0.0040	< 0.0020	0.0179	0.0143	0.0161	0.0204	0.0131

Notes & Definitions:

Historical data prior to 2018 can be found in earlier posted versions of this table

*** *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

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-1-MI

Year		2018									2019				2020				2021				2022				2023				2024				2025			
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		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	11	3	6	8	11	1	5	8	11
Sample Date		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	11/14	3/17	6/19	8/6	11/18	1/25	5/13	8/15	11/4
Lab Analysis (Y/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	N	N	N	N	N	N	N	N	N
Field Parameters:																																						
Purge Flow Rate	gpm	dry	dry	dry	dry	dry	***	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry
Total Purged	gal																																					
Depth to Water	ft bgs																																					
Temperature	deg C																																					
pH	SU																																					
Specific Conductance	µS/cm																																					
Oxygen Reduction Potential	mV																																					
Lab Analytical Results:																																						
Hardness as CaCO3	mg/L																																					
pH (Lab)	SU																																					
Total Dissolved Solids (Lab)	mg/L																																					
Calcium	mg/L																																					
Magnesium	mg/L																																					
Sodium	mg/L																																					
Potassium	mg/L																																					
Alkalinity, Total	mg/L																																					
Alkalinity, Bicarbonate	mg/L																																					
Alkalinity, Carbonate	mg/L																																					
Alkalinity, Hydroxide	mg/L																																					
Chloride	mg/L																																					
Fluoride	mg/L																																					
Sulfate as SO4	mg/L																																					
Total Organic Carbon (TOC)	mg/L																																					
Nitrate/Nitrite as N	mg/L																																					
Aluminum	mg/L																																					
Arsenic	mg/L																																					
Cadmium	mg/L																																					
Copper	mg/L																																					
Iron	mg/L																																					
Lead	mg/L																																					
Manganese	mg/L																																					
Mercury (dissolved)	mg/L																																					
Mercury (dissolved low-level)	ng/L																																					
Molybdenum	mg/L																																					
Selenium	mg/L																																					
Silica (Si02)	mg/L																																					
Silicon	mg/L																																					
Uranium	mg/L																																					
Zinc	mg/L																																					

Notes & Definitions:

Historical data prior to 2018 can be found in earlier posted versions of this table

**** 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

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-1-C

Year		2018									2019				2020				2021				2022				2023				2024				2025			
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		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	11	3	6	8	11	1	5	8	11
Sample Date		1/2	2/9	3/22	4/11	5/10	--	7/23	8/7	11/18	2/20	5/30	8/14	11/5	2/12	5/28	9/1	11/16	2/15	5/20	8/23	11/17	3/17	6/14	9/12	12/4	3/19	6/14	8/16	11/14	3/17	6/19	8/6	11/18	1/25	5/13	8/15	11/4
Lab Analysis (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	N	N	N	N	N	N	N	N	N	N	N	N
Field Parameters:																																						
Purge Flow Rate	gpm	MM	0.1	NM	0.1	0.1	***	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.2												
Total Purged	gal	1	1	1	1	1		1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1												
Depth to Water	ft bgs	216.38	216.38	216.37	216.35	216.41		216.41	216.05	216.04	216.41	216.20	216.02	216.04	216.12	216.10	216.41	216.66	216.66	216.66	216.66	216.66	216.66	216.66	216.66	216.04												
Temperature	deg C	9.7	9.6	6.7	9.2	10.5		20.0	14.1	9.7	5.4	9.8	10.4	11.1	6.4	9.5	11.2	9.7	7.0	10.7	12.1	10.1	7.7	12.3	12.7	7.4	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry
pH	SU	7.11	7.19	7.32	7.03	7.05		6.91	6.97	6.93	7.09	6.80	6.65	6.70	6.79	6.85	6.93	6.99	7.40	7.18	7.16	7.15	7.12	7.20	7.23	6.67												
Specific Conductance	µS/cm	2778	2738	2751	2700	2749		2693	2675	2751	2621	3139	3172	3080	3005	3002	2653	2709	2410	2249	2290	2554	2223	2362	2278	2104												
Oxygen Reduction Potential	mV	6.2	-4.3	-29.6	-15.3	-42.3		-41.8	-32.5	-110.0	-23.4	27.6	10.5	51.0	50.7	-57.7	21.8	49.6	57.5	-16.8	0.0	-7.0	-92.9	-49.3	-191.8	-77.0												
Lab Analytical Results:																																						
Hardness as CaCO3	mg/L		1190			1130			1120	1180	1010	1820	1840	1700	1600	1590	1400	1420	1320	953	975	920	750	766	638	640												
pH (Lab)	SU		7.22			7.20			7.20	7.02	7.24	6.93	6.67	6.63	6.80	6.62	6.83	7.12	7.08	6.86	7.04	6.89	7.22	7.06	7.40	6.98												
Total Dissolved Solids (Lab)	mg/L		2360			2340			2170	2200	1960	2880	2890	2750	2610	2460	2420	2450	2330	1910	1850	1840	1680	1770	1640	1490												
Calcium	mg/L		219.0			203.0			203.0	219.0	188.0	340.0	342.0	318.0	301.0	294.0	248.0	265.0	241.0	175.0	178.0	168.0	142.0	137.0	113.0	117.0												
Magnesium	mg/L		156.0			150.0			148.0	154.0	131.0	237.0	240.0	219.0	207.0	207.0	189.0	183.0	173.0	126.0	129.0	122.0	95.7	103.0	86.6	84.4												
Sodium	mg/L		260.0			239.0			239.0	255.0	265.0	146.0	119.0	119.0	143.0	155.0	168.0	194.0	206.0	196.0	214.0	234.0	229.0	240.0	261.0	266.0												
Potassium	mg/L		<5.00			3.07			3.04	2.65	3.13	<5.00	<5.00	<5.00	3.05	<5.00	2.82	<5.00	<5.00	2.68	<5.00	<3.00	2.68	2.48	<5.00	2.27												
Alkalinity, Total	mg/L		570			580			560	410	525	530	518	505	515	490	445	520	580	480	485	640	510	530	570	454												
Alkalinity, Bicarbonate	mg/L		570			580			560	410	525	530	518	505	515	490	445	520	580	480	485	640	510	530	570	454												
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		7.78			7.75			5.97	6.22	6.36	10.20	9.31	8.78	8.54	8.20	8.15	7.14	7.13	5.30	5.04	7.12	4.87	5.55	5.59	4.32												
Fluoride	mg/L		1.030			0.960			0.888	0.924	0.975	0.670	0.525	0.565	0.615	0.695	0.705	0.750	0.804	0.654	0.716	0.755	0.712	1.040	1.240	0.916												
Sulfate as SO4	mg/L		1160.0			1210.0			1090.0	1080.0	1070.0	1630.0	1730.0	1520.0	1400.0	1370.0	1280.0	1180.0	1150.0	940.0	872.0	886.0	805.0	908.0	821.0	728.0												
Total Organic Carbon (TOC)	mg/L		2.21			2.20			2.35	2.37	2.32	2.62	2.52	2.30	2.30	2.32	2.20	2.13	2.26	1.92	1.93	1.91	1.79	1.80	1.74	1.77												
Nitrate/Nitrite as N	mg/L		<0.020			<0.020			0.036	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020												
Ammonia as N ^	mg/L		NA			NA			NA	NA	NA	NA	NA	0.140	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	<0.100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA												
Aluminum	mg/L		<0.250			<0.05			<0.05	<0.100	<0.100	<0.250	<0.250	<0.250	<0.150	<0.250	<0.050	<0.050	<0.250	<0.100	<0.250	<0.150	<0.050	<0.100	<0.250	<0.100												
Arsenic	mg/L		<0.0025			0.0051			0.0052	0.0035	0.0038	0.0048	0.0034	<0.0025	<0.0025	0.0019	<0.0025	<0.0005	<0.0025	<0.0025	<0.0025	<0.0010	0.0009	0.0024	0.0028	<0.0010												
Cadmium	mg/L		<0.0005			<0.0001			<0.0001	<0.0001	<0.0002	<0.0001	<0.0002	<0.0005	<0.0005	<0.0003	<0.0005	<0.0001	<0.0005	<0.0025	<0.0025	<0.0010	<0.0005	<0.001	<0.0025	<0.0010												
Copper	mg/L		0.0052			0.0030			0.0049	0.0033	0.0054	0.0057	0.0014	0.0096	<0.0025	<0.0015	<0.0025	<0.0005	<0.0025	0.0042	0.0043	0.0064	0.0093	0.0086	0.0104	0.0120												
Iron	mg/L		<0.250			0.643			1.010	1.120	0.988	2.300	0.819	0.543	0.570	0.606	0.619	0.855	0.769	0.552	0.573	0.724	0.630	0.671	0.679	<0.100												
Lead	mg/L		<0.0025			<0.0005			<0.0005	<0.0005	<0.0010	<0.0005	<0.0010	<0.0025	<0.0025	<0.0015	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0010	<0.0005	<0.0010	<0.0025	<0.0010												
Manganese	mg/L		0.0989			0.1530			0.1400	0.1060	0.0807	0.0750	0.0562	0.0512	0.0537	0.0473	0.0445	0.0496	0.0482	0.0419	0.0383	0.0346	0.0362	0.0342	0.0304	0.0295												
Mercury (dissolved)	mg/L		<0.0002			<0.0002			<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002															
Mercury (dissolved low-level)	ng/L																							<5	<100	<100												
Molybdenum	mg/L		<0.0025			0.0006			<0.0025	<0.0005	<0.0010	<0.0005	<0.0010	<0.0025	<0.0025	<0.0015	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0010	<0.0005	<0.0010	<0.0025	<0.0010												
Selenium	mg/L		<0.0050			<0.001			<0.0050	0.0011	<0.0020	0.0016	0.0023	<0.0050	<0.0050	<0.0030	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0020	<0.0010	<0.0020	<0.005	<0.002												
Silica (Si02)	mg/L		14.80			15.20			14.70	14.50	14.00	16.60	17.30	16.40	15.70	13.80	14.10	14.80	14.40	15.00	14.50	14.80	14.20	13.00	11.70	13.40												
Silicon	mg/L		6.94			7.09			6.87	6.78	6.55	7.75	8.07	7.65	7.35	6.47	6.60	6.93	6.75	7.00	6.79	6.94	6.66	6.07	5.47	6.26												
Uranium	mg/L		0.0024			0.0025			0.0022	0.0021	0.0016	0.0020	0.0025	0.0023	<0.0025	0.0020	<0.0025	<0.0015	<0.0025	<0.0025	<0.0025	0.0010	0.0008	<0.0010	<0.0025	<0.0010												
Zinc	mg/L		<0.0100			0.0062			<0.0100	0.0055	<0.0040	0.0085	0.0077	<0.0100	<0.0100	<0.0060	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0040	0.0021	<0.0040	<0.0100	0.0071												

Notes & Definitions:

Historical data prior to 2018 can be found in earlier posted versions of this table

*** *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

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-2-A

Year		2018							2019				2020				2021				2022				2023				2024				2025			
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		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	11	3	6	8	11	1	5	8	11
Sample Date		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	11/13	3/17	6/19	8/6	11/18	1/25	5/12	8/15	11/1
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	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
Total Purged	gal																																			
Depth to Water	ft bgs																																			
Temperature	deg C																																			
pH	SU																																			
Specific Conductance	µS/cm																																			
Oxygen Reduction Potential	mV																																			
Lab Analytical Results:																																				
Hardness as CaCO3	mg/L																																			
pH (Lab)	SU																																			
Total Dissolved Solids (Lab)	mg/L																																			
Calcium	mg/L																																			
Magnesium	mg/L																																			
Sodium	mg/L																																			
Potassium	mg/L																																			
Alkalinity, Total	mg/L																																			
Alkalinity, Bicarbonate	mg/L																																			
Alkalinity, Carbonate	mg/L																																			
Alkalinity, Hydroxide	mg/L																																			
Chloride	mg/L																																			
Fluoride	mg/L																																			
Sulfate as SO4	mg/L																																			
Total Organic Carbon (TOC)	mg/L																																			
Nitrate/Nitrite as N	mg/L																																			
Aluminum	mg/L																																			
Arsenic	mg/L																																			
Cadmium	mg/L																																			
Copper	mg/L																																			
Iron	mg/L																																			
Lead	mg/L																																			
Manganese	mg/L																																			
Mercury (dissolved)	mg/L																																			
Mercury (dissolved low-level)	ng/L																																			
Molybdenum	mg/L																																			
Selenium	mg/L																																			
Silica (Si02)	mg/L																																			
Silicon	mg/L																																			
Uranium	mg/L																																			
Zinc	mg/L																																			

Notes & Definitions:

Historical data prior to 2018 can be found in earlier posted versions of this table

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-2-MI

Year		2018							2019				2020				2021				2022				2023				2024				2025			
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		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	11	3	6	8	11	1	5	8	11
Sample Date		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	11/13	3/17	6/19	8/6	11/18	1/25	5/12	8/15	11/1
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	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
Total Purged	gal																																			
Depth to Water	ft bgs																																			
Temperature	deg C																																			
pH	SU																																			
Specific Conductance	µS/cm																																			
Oxygen Reduction Potential	mV																																			
Lab Analytical Results:																																				
Hardness as CaCO3	mg/L																																			
pH (Lab)	SU																																			
Total Dissolved Solids (Lab)	mg/L																																			
Calcium	mg/L																																			
Magnesium	mg/L																																			
Sodium	mg/L																																			
Potassium	mg/L																																			
Alkalinity, Total	mg/L																																			
Alkalinity, Bicarbonate	mg/L																																			
Alkalinity, Carbonate	mg/L																																			
Alkalinity, Hydroxide	mg/L																																			
Chloride	mg/L																																			
Fluoride	mg/L																																			
Sulfate as SO4	mg/L																																			
Total Organic Carbon (TOC)	mg/L																																			
Nitrate/Nitrite as N	mg/L																																			
Aluminum	mg/L																																			
Arsenic	mg/L																																			
Cadmium	mg/L																																			
Copper	mg/L																																			
Iron	mg/L																																			
Lead	mg/L																																			
Manganese	mg/L																																			
Mercury (dissolved)	mg/L																																			
Mercury (dissolved low-level)	ng/L																																			
Molybdenum	mg/L																																			
Selenium	mg/L																																			
Silica (Si02)	mg/L																																			
Silicon	mg/L																																			
Uranium	mg/L																																			
Zinc	mg/L																																			

Notes & Definitions:

Historical data prior to 2018 can be found in earlier posted versions of this table

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-2-C																																					
Year		2018							2019				2020				2021				2022				2023				2024				2025			
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		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	11	3	6	8	11	1	5	8	11
Sample Date		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	11/13	3/17	6/19	8/6	11/18	1/25	5/12	8/15	11/1
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	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 (Si02)	*mg/L*																																				
Silicon	*mg/L*																																				
Uranium	*mg/L*																																				
Zinc	*mg/L*																																				

Notes & Definitions:

Historical data prior to 2018 can be found in earlier posted versions of this table

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-3-A

Year		2018							2019				2020				2021				2022				2023				2024				2025			
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		1	2	3	4	5	8	11	2	5	8	11	2	5	8	12	2	5	8	11	2	5	9	11	3	6	8	11	2	6	8	11	2	5	8	11
Sample Date		1/3	2/21	3/23	4/12	5/7	8/8	11/6	2/27	5/21	8/14	11/12	2/4	5/26	8/31	12/1	2/10	5/18	8/10	11/9	2/24	5/11	9/6	11/18	3/16	6/15	8/8	11/16	2/21	6/20	8/13	11/24	2/7	5/14	8/17	11/3
Lab Analysis (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	Y	Y	Y	Y	Y
Field Parameters:																																				
Purge Flow Rate	gpm	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	0.15	0.22	0.31	0.33	0.17	0.20	0.20	0.32	0.15
Total Purged	gal	1.3	1.5	1.5	1.0	1.3	1.0	1.1	1.5	1.3	1.3	1.5	1.1	1.2	1.5	1.3	1.3	1.5	1.5	1.5	1.5	2.0	1.5	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Depth to Water	ft bgs	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	295.81	295.22	295.07	295.12	294.87	294.57	294.34	294.97	294.67
Temperature	deg C	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	11.8	11.8	14.0	13.3	11.7	12.3	13.0	14.5	11.6
pH	SU	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	8.50	8.48	8.37	8.48	8.58	8.60	8.56	6.69	8.85
Specific Conductance	µS/cm	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	903	937	560	748	899	1670	1552	1898	1000
Oxygen Reduction Potential	mV	-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	-256.7	-162.8	-151.5	-172.6	-267.5	-198.5	-151.2	-248.3	-183.7
Lab Analytical Results:																																				
Hardness as CaCO3	mg/L		11.50			11.20	12.60	14.10	11.90	10.70	10.40	11.10	10.80	10.30	11.10	9.41	10.50	8.14	8.89	8.68	8.56	9.01	9.33	7.59	8.38	8.76	5.89	9.30	8.16	8.68	9.42	8.11	6.88	7.70	7.20	9.30
pH (Lab)	SU		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	8.37	8.20	8.44	8.50	8.23	8.42	8.48	6.66	6.78
Total Dissolved Solids (Lab)	mg/L		1680			1670	1600	1540	1500	1530	1520	1510	1500	1460	1380	1460	1410	1350	1420	1360	1220	1400	1320	1280	1390	1310	1300	1290	1320	1280	1340	1190	1260	1260	1250	1200
Calcium	mg/L		3.3			3.2	3.7	4.2	3.6	3.2	3.1	3.3	3.1	3.1	3.0	2.8	3.1	2.5	2.6	2.5	2.4	2.6	2.6	2.2	2.4	2.5	2.4	2.6	2.3	2.5	2.6	2.3	1.9	2.0	2.0	2.6
Magnesium	mg/L		0.8			0.8	0.8	0.9	0.7	0.7	0.7	0.7	0.7	0.6	0.9	0.6	0.7	0.5	0.6	0.6	0.6	0.6	0.7	0.5	0.6	0.6	< 0.500	0.7	0.6	0.6	0.7	0.6	0.5	0.7	0.5	0.7
Sodium	mg/L		562.0			542.0	562.0	605.0	543.0	525.0	553.0	528.0	520.0	507.0	510.0	505.0	536.0	471.0	462.0	448.0	462.0	473.0	476.0	420.0	440.0	456.0	450.0	459.0	436.0	458.0	454.0	455.0	454.0	438.0	457.0	456.0
Potassium	mg/L		<2.00			1.80	<2.00	2.17	<2.00	1.92	<2.00	<5.00	<3.00	<5.00	<5.00	<5.00	<5.00	<3.00	<5.00	<2.00	1.34	<2.00	<2.00	<5.00	<5.00	<5.00	< 5.00	< 3.00	< 3.00	< 2.00	1.36	1.34	< 5.00	< 5.00	1.46	< 2.00
Alkalinity, Total	mg/L		430			480	480	475	540	450	459	420	460	430	440	470	520	530	465	485	495	560	500	400	454	458	447	465	465	510	580	520	525	510	510	575
Alkalinity, Bicarbonate	mg/L		360			480	420	385	330	430	423	420	460	400	440	450	520	530	465	435	455	480	500	400	454	458	415	455	465	510	580	520	485	330	510	575
Alkalinity, Carbonate	mg/L		70.0			<10.0	60.0	90.0	210.0	20.0	36.0	<10.0	<10.0	30.0	<10.0	20.0	<10.0	<10.0	<10.0	50.0	40.0	80.0	<10.0	<10.0	<10.0	<10.0	32.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	40.0	180.0	< 10.0	< 10.0
Alkalinity, Hydroxide	mg/L		<10.0			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
Chloride	mg/L		16.40			16.10	15.10	16.00	15.20	15.00	15.00	14.70	13.90	13.90	13.50	14.00	13.50	14.00	14.10	14.60	14.20	14.20	15.90	15.40	16.00	16.10	16.90	16.20	17.30	17.50	18.20	17.60	20.10	20.60	22.90	22.10
Fluoride	mg/L		<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	0.284	< 0.500	0.368	0.390	0.388	0.446	< 0.500	0.395	0.413
Sulfate as SO4	mg/L		812.0			756.0	706.0	682.0	716.0	699.0	724.0	633.0	637.0	656.0	624.0	644.0	600.0	601.0	599.0	515.0	584.0	555.0	557.0	565.0	571.0	573.0	560.0	552.0	545.0	545.0	525.0	520.0	512.0	441.0	417.0	486.0
Total Organic Carbon (TOC)	mg/L		5.32			4.70	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	2.93	3.25	2.96	3.93	2.94	2.89	2.86	3.89	3.40
Nitrate/Nitrite as N	mg/L		<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	< 0.020	< 0.020	< 0.020	0.060	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Ammonia as N ^	mg/L		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	NA	NA	NA	NA	NA	NA	NA
Ortho-Phosphate as P ^	mg/L		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	NA	NA	NA	NA	NA	NA
Aluminum	mg/L		<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	< 0.150	< 0.150	< 0.100	< 0.050	< 0.050	< 0.250	< 0.250	< 0.050	< 0.100
Arsenic	mg/L		<0.0025			0.0006	<0.0025	<0.0010	<0.0010	<0.0025	<0.0010	<0.0010	<0.0010	<0.0010	<0.0025	<0.0025	0.0026	0.0006	0.0010	0.0018	0.0009	<0.0010	<0.0010	<0.0010	<0.0025	<0.0025	< 0.0025	< 0.0025	< 0.0020	< 0.0020	< 0.0010	< 0.0010	0.0010	< 0.0020	< 0.0020	< 0.0020
Cadmium	mg/L		<0.0005			<0.0001	<0.0001	<0.0002	<0.0002	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0010	<0.0010	<0.0005	<0.0010	<0.0010	<0.0010	<0.0025	<0.0025	< 0.0025	< 0.0025	< 0.0010	< 0.0010	< 0.0005	< 0.0005	< 0.0005	< 0.0010	< 0.0010	< 0.0010
Copper	mg/L		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	0.0096	0.0159	0.0180	0.0255	0.0203	0.0176	0.0135	0.0208	0.0152
Iron	mg/L		<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	< 0.150	< 0.150	< 0.100	< 0.050	< 0.050	< 0.250	< 0.250	< 0.050	0.114
Lead	mg/L		<0.0025			<0.0005	<0.0005	<0.0010	<0.0010	<0.0025	<0.0010	<0.0010	<0.0010	<0.0025	<0.0025	<0.0025	<0.0025	<0.001	<0.0010	<0.0010	<0.0005	<0.001	<0.002	<0.0010	<0.0025	<0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0010	< 0.0005	< 0.0005	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Manganese	mg/L		0.0232			0.0180	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	0.0091	< 0.0010	0.0091	0.0076	0.0069	0.0071	0.0069	0.0088	0.0157
Mercury (dissolved)	mg/L		<0.0002			<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0050	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002															
Mercury (dissolved low-level)	ng/L																					<5	<100	<100	<100	<100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
Molybdenum	mg/L		0.0065			0.0046	0.0043	0.0033	0.0030	0.0030	0.0018	0.0027	0.0022	0.0015	<0.0025	<0.0025	<0.0025	0.0015	0.0013	<0.001	0.0012	<0.001	0.0017	0.0012	<0.0025	<0.0025	< 0.0025	< 0.0025	0.0018	0.0016	0.0009	0.0024	0.0009	< 0.0010	0.0010	0.0013
Selenium	mg/L		<0.0050			0.0109	<0.0050	0.0028	0.0039	<0.005	0.0020	<0.0020	<0.0020	0.0033	0.0086	<0.0050	0.1290	0.0276	0.0167	0.0855	0.0162	0.0029	0.0106	<0.0020	0.0236	0.0174	< 0.0050	0.0094	0.0063	0.0427	< 0.0010	< 0.0010	0.0194	0.0350	0.0042	0.0219
Silica (Si02)	mg/L		11.10			11.00	12.00	12.80	11.70	11.00	12.70	11.80	11.60	10.50	11.00	11.20	11.30	10.10	10.70	10.90	10.80	10.70	11.10	9.39	9.32	9.89	9.16	10.90	9.34	10.10	10.10	10.30	10.20	10.40	10.40	9.99
Silicon	mg/L		5.18			5.17	5.62	5.97	5.46	5.16	5.95	5.53	5.43	4.92	5.14	5.22	5.28	4.73	4.98	5.11	5.07	5.01	5.19	4.39	4.36	4.63	4.28	5.09	4.36	4.73	4.72	4.83	4.78	4.87	4.84	4.67
Uranium	mg/L		0.0030			0.0026	0.0026	0.0027	0.0018	0.0014	0.0012	0.0011	0.0010	<0.0025	<0.0025	<0.0025	<0.0025	<0.0010	<0.0010	<0.0010	0.0005	<0.0010	<0.0010	<0.0010	<0.0025	<0.0025	< 0.0025	< 0.0025	< 0.0010	< 0.0010	< 0.0005	< 0.0005	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Zinc	mg/L		<0.0100			<0.002	<0.002	<0.0040	<0.0040	<0.0100	<0.0080	<0.0040	<0.0040	<0.0040	<0.0100	<0.0100	<0.0100	<0.0020	<0.0040	<0.0040	<0.0020	<0.0040	<0.0040	0.0041	<0.0100	<0.0100	< 0.0100	< 0.0100	< 0.0040	< 0.0040	0.0028	0.0042	0.0032	0.0092	0.0096	0.0054

Notes & Definitions:

Historical data prior to 2018 can be found in earlier posted versions of this table

^	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-3-MI

Year		2018							2019				2020				2021				2022				2023				2024				2025			
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		1	2	3	4	5	8	11	2	5	8	11	2	5	8	12	2	5	8	11	2	5	9	11	3	6	8	11	2	6	8	11	2	5	8	11
Sample Date		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	11/16	2/21	6/20	8/13	11/24	2/7	5/14	8/17	11/3
Lab Analysis (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	Y	Y	Y	Y	Y
Field Parameters:																																				
Purge Flow Rate	gpm	NM	0.10	NM	0.10	0.10	0.10	0.10	0.12	0.12	0.06	0.25	0.50	0.25	0.13	0.13	0.10	0.13	0.13	0.25	0.25	0.25	0.15	0.10	0.11	0.12	0.26	0.33	0.09	0.17	0.17	0.17	0.19	0.21	0.15	0.15
Total Purged	gal	1.3	1.5	1.5	1.0	1.3	1.0	1.1	1.5	1.3	2.0	1.0	1.5	1.3	1.8	1.3	1.3	1.5	1.5	1.3	1.5	2.0	1.3	1.3	1.1	1.1	1.1	1.1	1.1	1.3	1.1	1.1	1.1	1.1	1.1	1.1
Depth to Water	ft bgs	240.73	240.55	240.65	240.84	241.04	241.97	242.13	242.15	242.32	246.55	243.07	242.85	243.05	243.6	243.9	243.93	244.25	244.28	244.15	242.90	244.05	244.65	244.3	243.83	249.55	242.86	242.65	242.35	242.40	242.35	242.9	242.27	242.27	242.45	252.65
Temperature	deg C	11.9	11.3	11.9	11.8	12.6	13.0	12.4	11.6	11.3	13.2	12.3	11.6	12.6	12.8	11.7	11.5	12.8	13.0	11.9	11.4	13.2	13.7	11.6	11.7	12.5	13.1	12.3	11.7	13.1	12.5	11.6	11.9	11.7	16.1	12.3
pH	SU	8.84	8.83	8.84	8.51	8.48	8.49	8.46	8.51	8.55	8.71	8.75	8.71	8.92	9.01	9.09	9.03	9.06	9.13	9.11	9.07	9.04	9.03	8.81	9.06	9.03	9.00	8.89	8.97	8.80	8.73	8.89	8.91	8.90	7.01	7.50
Specific Conductance	µS/cm	1790	1810	1771	1772	1727	1709	1746	1753	1739	1691	1739	1758	1737	1560	1555	1519	1232	1647	1765	1705	1686	1720	1739	1609	1737	1702	1784	1788	1704	1753	1764	1860	1738	1725	1704
Oxygen Reduction Potential	mV	-136.0	-131.4	-160.7	-99.9	-103.9	-127.8	-176.5	-113.0	-84.5	43.9	-130.8	-104.3	-174.5	-111.0	-132.4	-94.6	-120.4	-142.9	-163.3	-207.2	-104.2	-184.3	-158.9	-186.8	-192.3	-213.0	-263.6	-279.2	-222.1	-156.7	-213.9	-136.5	-94.5	-236.2	22.9
Lab Analytical Results:																																				
Hardness as CaCO3	mg/L		9.92			8.65	8.63	8.88	7.63	6.84	7.98	6.64	6.50	7.25	6.39	5.94	6.63	5.06	5.39	5.21	5.28	5.13	<3.31	<3.31	<3.31	<3.31	< 3.31	5.20	4.21	5.20	5.63	4.96	4.88	5.08	4.88	15.90
pH (Lab)	SU		8.66			8.56	8.58	8.34	8.50	8.45	8.58	8.62	8.61	8.59	8.87	8.77	8.72	8.84	8.81	8.88	8.78	8.87	8.76	8.78	8.63	8.71	8.84	8.85	8.76	8.76	8.71	8.79	8.87	8.78	8.69	6.94
Total Dissolved Solids (Lab)	mg/L		1170			1210	1110	1120	1120	1170	1010	1130	1130	1130	1060	1160	1120	1110	1180	1130	1070	1140	1080	1070	1140	1100	1070	1050	1120	1060	1120	1100	1060	1110	1070	1100
Calcium	mg/L		2.2			1.9	2.0	2.0	1.9	1.7	2.0	1.7	1.6	1.8	1.6	1.4	1.7	1.3	1.3	1.3	1.3	1.3	1.1	1.2	1.2	1.1	1.1	1.3	1.1	1.3	1.4	1.2	1.3	1.2	1.2	4.8
Magnesium	mg/L		1.1			0.9	0.9	0.9	0.7	0.6	0.7	0.6	0.6	0.7	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.4	<0.500	<0.500	<0.500	<0.500	< 0.500	0.4	0.3	0.5	0.5	0.5	0.4	0.5	0.4	1.0
Sodium	mg/L		459.0			417.0	446.0	476.0	434.0	419.0	454.0	437.0	437.0	427.0	431.0	431.0	468.0	410.0	403.0	390.0	413.0	415.0	374.0	389.0	397.0	408.0	398.0	405.0	388.0	413.0	411.0	413.0	436.0	408.0	431.0	468.0
Potassium	mg/L		<2.00			1.63	<2.00	<2.00	1.39	1.65	<2.00	<5.00	<2.00	<5.00	<3.00	<4.00	<5.00	<2.00	<2.00	<2.00	1.27	<2.00	<5.00	<5.00	<5.00	<5.00	< 5.00	< 2.00	< 2.00	< 2.00	1.23	1.25	1.49	< 5.00	1.35	< 2.00
Alkalinity, Total	mg/L		700			680	730	720	685	755	720	690	705	680	625	770	690	690	705	705	740	740	780	760	680	700	660	630	670	730	700	685	720	650	670	695
Alkalinity, Bicarbonate	mg/L		600			500	630	610	485	605	590	610	645	550	465	690	450	550	555	565	580	580	480	540	620	572	590	510	590	630	670	555	600	450	670	695
Alkalinity, Carbonate	mg/L		100.0			180.0	100.0	110.0	200.0	150.0	130.0	80.0	60.0	130.0	160.0	80.0	240.0	140.0	150.0	140.0	160.0	160.0	300.0	220.0	60.0	128.0	70.0	120.0	80.0	100.0	30.0	130.0	120.0	200.0	< 10.0	< 10.0
Alkalinity, Hydroxide	mg/L		<10.0			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
Chloride	mg/L		10.70			10.70	8.54	8.83	9.21	9.25	10.20	9.13	9.21	9.61	9.45	10.00	9.84	10.50	10.40	10.40	10.60	10.20	11.20	10.70	10.90	10.80	10.80	10.70	10.70	10.60	10.30	9.63	10.20	10.30	9.92	9.29
Fluoride	mg/L		1.300			1.200	1.160	1.190	1.210	1.220	1.190	1.190	1.130	1.130	1.090	1.120	1.030	1.090	1.070	0.980	1.100	0.982	1.110	1.080	1.100	1.020	0.862	0.924	0.940	1.120	1.090	1.110	1.180	1.040	1.000	0.912
Sulfate as SO4	mg/L		245.0			250.0	226.0	230.0	232.0	229.0	236.0	224.0	227.0	231.0	222.0	110.0	223.0	227.0	228.0	230.0	233.0	213.0	240.0	238.0	240.0	243.0	242.0	241.0	245.0	255.0	247.0	239.0	256.0	239.0	236.0	241.0
Total Organic Carbon (TOC)	mg/L		9.24			8.67	7.83	7.28	6.73	6.56	6.17	5.78	5.58	6.07	5.79	5.46	5.34	5.33	5.40	5.26	5.14	4.94	5.06	2.89	5.14	4.22	4.72	4.52	5.37	4.49	4.50	4.32	4.33	3.86	4.82	3.97
Nitrate/Nitrite as N	mg/L		<0.020			<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.034	<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	2.420	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	0.038	< 0.020
Ammonia as N ^	mg/L		NA			NA	NA	NA	NA	NA	NA	0.317	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	0.3480	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		<0.100			<0.050	<0.050	<0.10	<0.050	<0.050	0.167	<0.250	<0.100	<0.250	<0.150	<0.200	<0.250	<0.100	<0.100	<0.100	<0.050	<0.100	<0.250	<0.250	<0.250	<0.250	< 0.250	< 0.100	< 0.100	< 0.100	< 0.050	< 0.050	< 0.050	< 0.250	< 0.050	< 0.100
Arsenic	mg/L		0.0160			0.0152	0.0127	0.0104	0.0149	0.0107	0.0142	0.0099	0.0093	0.0086	0.0061	0.0070	0.0083	0.0091	0.0091	0.0078	0.0095	0.0082	0.0084	0.0085	0.0078	0.0094	0.0076	0.0084	0.0067	0.0049	0.0040	0.0041	0.0044	0.0036	0.0035	0.0021
Cadmium	mg/L		<0.0001			<0.0001	<0.0001	<0.0002	<0.0001	<0.0005	<0.0001	<0.0002	<0.0002	<0.0005	<0.0005	<0.0004	<0.0005	<0.0005	<0.0010	<0.0010	<0.0005	<0.0010	<0.0010	<0.0010	<0.0025	<0.0025	< 0.0025	< 0.0010	< 0.0010	< 0.0010	< 0.0005	< 0.0005	< 0.0005	< 0.0010	< 0.0010	< 0.0010
Copper	mg/L		0.0122			0.0048	0.0071	0.0073	0.0068	0.0063	0.0049	0.0037	0.0024	<0.0025	0.0046	0.0045	0.0031	0.0131	0.0143	0.0097	0.0072	0.0126	0.0170	0.0089	0.0143	0.0187	0.0080	0.0081	0.0136	0.0167	0.0243	0.0197	0.0181	0.0135	0.0199	0.0153
Iron	mg/L		<0.100			<0.05	<0.05	<0.1	<0.050	<0.050	<0.100	<0.250	<0.100	<0.250	<0.150	<0.200	<0.250	<0.100	<0.100	<0.100	<0.050	<0.100	<0.250	<0.250	<0.250	<0.250	< 0.250	< 0.100	< 0.100	< 0.100	< 0.050	< 0.050	< 0.050	< 0.250	< 0.050	1.520
Lead	mg/L		<0.0005			<0.0005	<0.0005	<0.0010	<0.0005	<0.0025	<0.0005	<0.0010	<0.0010	<0.0025	<0.0025	<0.0020	<0.0025	<0.0005	<0.0010	<0.0010	<0.0005	<0.0010	<0.0020	<0.0010	<0.0025	<0.0025	< 0.0025	< 0.0010	< 0.0025	< 0.0010	< 0.0005	< 0.0005	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Manganese	mg/L		0.0049			0.0060	0.0054	0.0072	0.0078	0.0082	0.0079	0.0099	0.0095	0.0102	0.0072	0.0070	0.0069	0.0057	0.0058	0.0054	0.0051	0.0049	0.0047	0.0058	0.0063	0.0058	0.0055	0.0059	0.0057	0.0066	0.0064	0.0058	0.0061	0.0062	0.0062	0.0346
Mercury (dissolved)	mg/L		<0.0002			<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0050	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002															
Mercury (dissolved low-level)	ng/L																					<5	<100	<100	<100	<100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
Molybdenum	mg/L		0.0170			0.0160	0.0149	0.0158	0.0157	0.0167	0.0277	0.0372	0.0204	0.0195	0.0149	0.0163	0.0162	0.0160	0.0149	0.0140	0.0148	0.0143	0.0150	0.0150	0.0136	0.0143	0.0125	0.0139	0.0130	0.0135	0.0126	0.0117	0.0117	0.0109	0.0114	0.0073
Selenium	mg/L		0.0010			0.0019	<0.0050	<0.002	0.0034	<0.005	<0.0010	<0.0020	<0.0020	<0.0050	<0.0050	<0.004	0.0462	0.0033	<0.0020	0.0091	0.0018	<0.0020	<0.0020	<0.0020	<0.0050	<0.005	< 0.0050	0.0032	0.0023	0.0155	< 0.0010	< 0.0010	0.0049	0.0111	0.0025	0.0078
Silica (Si02)	mg/L		9.33			8.83	9.49	10.20	8.95	8.85	9.73	9.46	8.80	8.24	8.84	9.11	9.64	8.11	8.77	8.82	9.04	8.63	7.45	7.80	7.62	7.81	7.47	9.17	7.98	8.30	8.86	9.24	9.59	9.21	9.35	9.61
Silicon	mg/L		4.36			4.13	4.44	4.76	4.18	4.14	4.55	4.42	4.11	3.85	4.13	4.26	4.51	3.79	4.10	4.12	4.22	4.03	3.48	3.65	3.56	3.65	3.49	4.29	3.73	3.88	4.14	4.32	4.48	4.30	4.37	4.49
Uranium	mg/L		0.0125			0.0126	0.0111	0.0110	0.0110	0.0085	0.0080	0.0070	0.0063	0.0059	0.0043	0.0049	0.0049	0.0043	0.0041	0.0033	0.0035	0.0032	0.0034	0.0032	0.0025	<0.0025	< 0.0025	0.0026	0.0021	0.0030	0.0022	0.0020	0.0023	0.0018	0.0019	< 0.0010
Zinc	mg/L		<0.0020			0.0023	0.0023	<0.0040	0.0028	<0.0100	0.0070	<0.0040	<0.0040	<0.0100	<0.0100	<0.0080	<0.0100	<0.0020	<0.0040	<0.0040	<0.0020	<0.0040	<0.0040	<0.0040	<0.0100	<0.0100	< 0.0100	< 0.0040	< 0.0040	0.0078	< 0.0020	0.0023	0.0106	0.0106	0.0086	0.0146

Notes & Definitions:

Historical data prior to 2018 can be found in earlier posted versions of this table

^	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-3-C

Year		2018							2019				2020				2021				2022				2023				2024				2025			
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		1	2	3	4	5	8	11	2	5	9	11	3	5	8	12	2	5	8	11	2	5	9	12	3	6	8	11	2	6	8	11	2	5	8	11
Sample Date		1/3	2/21	3/23	4/12	5/7	8/8	11/6	2/27	5/21	9/17	11/12	3/13	5/26	8/31	12/1	2/10	5/18	8/10	11/10	2/24	5/11	9/6	12/13	3/29	6/15	8/8	11/16	2/21	6/20	8/13	11/24	2/7	5/14	8/17	11/3
Lab Analysis (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	Y	Y	Y	Y	Y
Field Parameters:																																				
Purge Flow Rate	gpm	NM	0.10	NM	0.10	0.10	0.10	0.10	0.06	0.06	0.13	0.13	0.10	0.03	0.08	0.13	0.13	0.13	0.13	0.13	0.15	0.10	0.15	0.03	0.24	0.09	0.11	0.10	0.12	0.08	0.11	0.17	0.17	0.10	0.09	0.14
Total Purged	gal	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	1.3	1.5	1.5	1.5	1.5	1.0	1.0	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Depth to Water	ft bgs	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	294.41	293.85	293.66	293.60	293.43	293.15	292.93	293.20	292.45
Temperature	deg C	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	11.7	12.7	13.8	12.1	11.7	11.9	12.4	14.8	11.6
pH	SU	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	8.26	8.24	8.17	8.24	8.25	8.24	8.23	8.46	7.61
Specific Conductance	µS/cm	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	5584	2560	5377	5484	5498	5799	5361	5232	5447
Oxygen Reduction Potential	mV	-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	-275.0	-231.2	-199.2	-210.9	-266.8	-206.2	-211.1	-178.1	-82.8
Lab Analytical Results:																																				
Hardness as CaCO3	mg/L		16.10			40.30	17.90	21.70	17.30	16.80	18.60	18.60	18.30	16.00	18.10	16.90	18.50	14.80	16.90	16.70	16.00	17.40	20.40	16.40	17.10	13.70	16.10	17.70	16.30	18.70	19.00	19.30	18.20	19.90	17.90	19.50
pH (Lab)	SU		8.35			8.34	8.31	8.24	8.20	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	8.27	8.39	8.20	8.26	8.23	8.30	8.21	8.25	8.48
Total Dissolved Solids (Lab)	mg/L		3540			3610	3520	3360	3300	3440	3500	3390	3220	3180	3170	3280	3200	3230	3300	3200	3270	3250	3280	3140	3150	2310	3220	3300	3360	3270	3390	3340	3350	3350	3400	3380
Calcium	mg/L		3.8			7.3	4.0	4.7	4.1	3.7	4.3	4.2	4.3	3.8	4.0	3.7	4.3	3.6	3.8	3.8	3.7	4.1	4.5	3.7	3.9	3.3	3.6	4.0	3.7	4.3	4.3	4.4	4.1	4.5	4.0	4.4
Magnesium	mg/L		1.6			5.4	1.9	2.4	1.8	1.8	1.9	1.9	1.9	1.6	2.0	1.8	1.9	1.4	1.8	1.8	1.7	1.7	2.2	1.8	1.8	1.3	1.7	1.9	1.7	2.0	2.0	2.0	1.9	2.1	1.9	2.1
Sodium	mg/L		1200.0			1350.0	1220.0	1460.0	1270.0	1100.0	1360.0	1300.0	1280.0	1240.0	1250.0	1250.0	1360.0	1220.0	1220.0	1170.0	1200.0	1260.0	1360.0	1170.0	1260.0	906.0	1240.0	1270.0	1240.0	1300.0	1320.0	1310.0	1360.0	1340.0	1340.0	1420.0
Potassium	mg/L		<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	<10.0	<5.00	< 10.0	< 10.0	< 6.00	< 10.0	3.97	4.42	< 5.00	< 5.00	4.26	< 5.00
Alkalinity, Total	mg/L		1910			1760	1730	2050	2000	2110	2190	2130	2160	2050	1820	2090	2170	2130	2140	2230	2180	2170	2110	2120	2220	1410	2140	2140	2180	2280	2160	2190	2170	2130	2060	2070
Alkalinity, Bicarbonate	mg/L		1810			1600	1670	1900	1830	2000	2020	2070	2000	1800	1690	1970	1710	1910	1950	1950	1820	1870	1990	2120	1920	1410	2070	2060	2060	2040	2000	1930	1970	1770	1880	1950
Alkalinity, Carbonate	mg/L		100.0			160.0	60.0	150.0	170.0	110.0	170.0	60.0	160.0	250.0	130.0	120.0	460.0	220.0	190.0	280.0	360.0	300.0	120.0	<10.0	300.0	<10.0	70.0	80.0	120.0	240.0	160.0	260.0	200.0	360.0	180.0	120.0
Alkalinity, Hydroxide	mg/L		<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	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
Chloride	mg/L		549.00			544.00	524.00	561.00	577.00	575.00	620.00	542.00	549.00	555.00	552.00	578.00	574.00	577.00	582.00	462.00	608.00	605.00	613.00	604.00	622.00	360.00	639.00	644.00	646.00	649.00	634.00	628.00	664.00	593.00	661.00	658.00
Fluoride	mg/L		4.150			3.520	3.840	4.040	4.040	3.910	3.780	3.660	3.610	3.510	3.470	3.530	3.370	3.340	3.360	3.160	3.370	3.060	3.510	3.250	3.380	1.960	2.590	2.910	3.140	3.590	3.390	3.570	3.930	3.160	3.230	3.020
Sulfate as SO4	mg/L		<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	<10.0	252.0	< 10.0	< 10.0	< 5.00	2.4	< 10.0	< 5.00	< 5.00	< 10.0	< 5.00	< 5.00
Total Organic Carbon (TOC)	mg/L		337.00			343.00	306.00	141.00	122.00	129.00	132.00	107.00	81.90	23.40	17.10	15.70	15.70	16.30	15.70	16.40	17.90	16.20	16.10	10.40	19.20	5.72	18.90	19.20	20.50	19.90	19.90	21.40	19.60	15.10	20.00	20.90
Nitrate/Nitrite as N	mg/L		<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	<0.040	<0.020	<0.020	<0.100	<0.020	<0.020	<0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Ammonia as N ^	mg/L		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	NA	NA	NA	NA	NA	NA	NA	
Ortho-Phosphate as P ^	mg/L		NA			NA	NA	NA	NA	NA	NA	0.2120	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		<0.500			1.470	<0.500	<0.250	<0.250	<0.500	<0.250	<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	< 0.500	< 0.300	< 0.500	< 0.050	< 0.050	< 0.250	< 0.250	< 0.150	< 0.250
Arsenic	mg/L		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	0.0170	0.0171	0.0211	0.0204	0.0205	0.0193	0.0210	0.0223	0.0181
Cadmium	mg/L		<0.0005			<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0010	<0.001	<0.0010	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.005	<0.0035	< 0.0050	< 0.0050	< 0.0025	< 0.0050	0.0007	< 0.0015	< 0.0025	< 0.0025	< 0.0050	< 0.0025
Copper	mg/L		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	0.0293	0.0460	0.0522	0.0742	0.0784	0.0534	0.0540	0.0747	0.0492
Iron	mg/L		<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	< 0.500	< 0.300	< 0.500	0.293	0.238	< 0.250	0.333	0.301	0.513
Lead	mg/L		<0.0025			<0.0025	<0.0025	<0.0025	<0.0025	<0.005	<0.0025	<0.0025	<0.0025	<0.0025	<0.0050	<0.0050	<0.0050	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.005	<0.0025	<0.005	<0.0035	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.0016	< 0.0015	< 0.0025	< 0.0025	< 0.0050	< 0.0025
Manganese	mg/L		0.0307			0.0275	0.0243	0.0252	0.0483	0.0630	0.0378	0.0266	0.0245	0.0175	0.0102	0.0079	0.0052	0.0046	0.0034	0.0032	0.0028	0.0040	0.0025	0.0034	0.0054	0.0065	< 0.0050	< 0.0050	< 0.0025	< 0.0050	0.0023	0.0027	< 0.0025	< 0.0025	< 0.0050	0.0072
Mercury (dissolved)	mg/L		<0.0002			<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0050	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002															
Mercury (dissolved low-level)	ng/L																					<5	<500	<100	<100	<100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
Molybdenum	mg/L		0.0221			0.0189	0.0155	0.0140	0.0134	0.0121	0.0081	0.0075	0.0082	0.0085	0.0076	0.0075	0.0080	0.0069	0.0061	0.0061	0.0059	0.0065	0.0058	0.0056	0.0111	0.0093	0.0065	0.0059	0.0057	< 0.0050	0.0052	0.0042	0.0043	0.0037	< 0.0050	0.0073
Selenium	mg/L		0.0383			0.0268	0.0232	0.0261	0.0464	0.0203	0.0203	0.0173	0.0125	0.0129	0.0135	0.0191	0.0270	0.0411	0.0372	0.0319	0.0335	0.0185	0.0247	0.0199	0.0259	0.0396	0.0242	0.0282	0.0241	0.0580	0.0355	0.0305	0.0368	0.0475	0.0459	0.0407
Silica (Si02)	mg/L		<10.7			9.69	8.68	10.70	8.24	8.35	9.06	<10.7	<10.7	<10.7	<10.7	<10.7	<10.7	7.48	8.40	8.33	7.79	7.59	8.75	7.04	<10.7	8.03	< 10.7	< 10.7	7.28	< 10.7	7.65	8.69	8.55	8.57	7.89	7.77
Silicon	mg/L		<5.00			4.53	4.06	5.01	3.85	3.90	4.24	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	3.50	3.93	3.89	3.64	3.55	4.09	3.29	<5.00	3.75	< 5.00	< 5.00	3.41	< 5.00	3.58	4.06	4.00	4.01	3.69	3.63
Uranium	mg/L		0.0091			0.0087	0.0089	0.0113	0.0077	0.0046	0.0053	0.0034	0.0045	0.0033	<0.0050	<0.0050	<0.0050	0.0025	0.0025	<0.0025	<0.0025	<0.0025	0.0025	0.0025	0.0051	0.0044	< 0.0050	< 0.0050	< 0.0025	< 0.0050	0.0029	0.0025	< 0.0025	< 0.0025	< 0.0050	< 0.0025
Zinc	mg/L		<0.0100			<0.0100	0.0664	0.0814	0.1230	0.1280	0.0567	0.0886	<0.0100	<0.0100	<0.0200	0.0332	0.0294	0.0363	0.0347	0.0377	0.0404	0.0181	0.0385	0.0228	<0.0200	0.0229	< 0.0200	< 0.0200	< 0.0100	< 0.0200	0.0161	0.0258	< 0.0100	0.0256	0.0215	0.0173

Notes & Definitions:

Historical data prior to 2018 can be found in earlier posted versions of this table

^	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-4-A

Year		2018							2019				2020				2021				2022				2023				2024				2025			
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		1	2	3	4	5	8	11	2	5	8	11	2	5	8	11	2	5	8	11	2	5	9	11	3	6	8	11	2	6	8	11	2	5	8	11
Sample Date		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	6/15	8/7	11/16	2/12	6/20	8/13	11/22	2/7	5/14	8/17	11/3
Lab Analysis (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	Y	Y	Y	Y	Y
Field Parameters:																																				
Purge Flow Rate	gpm	NM	0.10	NM	0.10	0.10	0.10	0.10	0.06	0.06	0.06	0.13	0.03	0.03	0.13	0.13	0.05	0.13	0.25	0.20	0.22	0.13	0.13	0.06	0.05	0.03	0.08	0.05	0.06	0.04	0.05	0.70	0.08	0.08	0.06	0.07
Total Purged	gal	1.3	1.5	1.5	1.0	1.5	1.5	1.1	1.5	1.3	1.1	1.0	1.5	1.2	1.3	1.3	1.3	1.3	1.5	1.3	1.8	1.5	1.0	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Depth to Water	ft bgs	334.31	334.73	334.81	335.07	335.58	336.06	336.73	335.6	335.07	335.21	335.16	336.35	337.16	336.88	336.13	335.46	335.72	335.93	336.16	336.01	336.31	336.74	337.16	337.66	330.46	335.36	335.49	335.38	335.96	335.81	337.98	337.81	337.86	337.87	337.73
Temperature	deg C	10.9	9.8	11.4	10.9	17.8	12.9	11.6	11.1	10.4	13.6	11.6	10.3	12.5	14.0	12.3	10.3	11.2	12.1	11.6	9.4	12.4	15.6	12.4	11.6	15.0	15.2	12.4	10.9	14.1	12.8	12.3	11.4	12.2	17.0	15.0
pH	SU	8.33	8.37	8.41	8.19	8.20	8.10	8.12	8.15	8.08	8.02	8.11	8.07	8.19	8.27	8.30	8.25	8.30	8.38	8.38	8.35	8.34	8.33	8.77	8.41	8.38	8.33	8.25	8.25	8.12	7.18	7.43	8.01	8.06	8.11	7.84
Specific Conductance	µS/cm	2259	2267	2207	2214	2183	2192	2246	2205	2237	2201	2211	2271	2273	2165	2249	2052	1618	2205	2268	2294	2244	2236	2236	2090	2246	2171	2298	2291	2212	2249	2261	2394	2220	2269	2168
Oxygen Reduction Potential	mV	-35.2	-75.9	-117.3	-77.9	-81.8	-137.5	-157.6	-92.3	-89.3	-54.3	-19.8	15.3	-71.3	-11.5	-10.6	29.0	-63.4	-48.7	-77.3	-153.2	-78.6	-203.9	-66.6	35.8	-41.9	-76.5	-167.0	-207.3	-80.1	4.7	-93.1	-37.0	-16.9	-156.9	265.7
Lab Analytical Results:																																				
Hardness as CaCO3	mg/L		7.73			7.84	7.69	8.81	7.76	7.31	8.62	8.00	8.19	7.46	7.87	7.77	8.87	7.02	5.81	7.54	8.32	7.88	8.44	7.41	7.78	8.02	6.50	7.47	7.88	8.97	8.43	8.10	7.35	7.76	7.05	7.71
pH (Lab)	SU		8.28			8.31	8.21	8.24	8.05	8.08	8.15	8.02	8.11	7.90	8.19	8.16	8.04	8.15	8.09	8.21	8.24	8.24	8.50	8.29	8.10	8.12	8.23	8.30	8.07	8.21	7.62	7.92	8.03	8.05	8.02	7.99
Total Dissolved Solids (Lab)	mg/L		1490			1470	1430	1350	1450	1410	1540	1490	1500	1480	1460	1560	1370	1430	1510	1470	1400	1540	1480	1430	1390	1480	1480	1400	1350	1430	1500	1470	1420	1470	1230	1470
Calcium	mg/L		1.8			1.8	1.7	1.9	1.8	1.7	1.9	1.8	1.9	1.7	1.8	1.7	2.0	1.7	1.4	1.8	1.9	1.9	2.0	1.7	1.7	1.8	1.6	1.8	1.8	2.1	2.0	1.9	1.6	1.6	1.5	1.7
Magnesium	mg/L		0.8			0.8	0.8	1.0	0.8	0.8	0.9	0.8	0.9	0.8	0.8	0.8	0.9	0.7	0.6	0.8	0.9	0.8	0.9	0.8	0.8	0.8	0.6	0.8	0.8	0.9	0.9	0.8	0.8	0.9	0.8	0.8
Sodium	mg/L		507.0			528.0	531.0	568.0	535.0	515.0	548.0	529.0	551.0	498.0	533.0	531.0	565.0	507.0	411.0	488.0	504.0	523.0	520.0	482.0	559.0	535.0	503.0	509.0	538.0	520.0	564.0	513.0	525.0	508.0	513.0	563.0
Potassium	mg/L		<2.00			1.50	<2.00	<2.00	<2.00	<2.00	4.75	<5.00	<3.00	<5.00	<5.00	<5.00	<5.00	<3.00	<5.00	<2.00	<2.00	<2.00	<2.00	<5.00	<5.00	1.24	< 5.00	< 5.00	< 3.00	< 2.00	1.53	1.53	< 5.00	< 5.00	< 2.00	< 2.00
Alkalinity, Total	mg/L		530			560	575	575	545	565	575	544	560	585	605	538	620	590	580	670	535	605	590	480	569	579	562	515	555	585	615	590	590	555	530	590
Alkalinity, Bicarbonate	mg/L		490			560	555	575	505	544	535	528	560	545	565	530	620	530	580	670	485	455	590	480	531	579	524	515	545	585	615	590	590	465	530	590
Alkalinity, Carbonate	mg/L		40.0			<10.0	20.0	<10.0	40.0	32.0	40.0	16.0	<10.0	40.0	40.0	<10.0	<10.0	60.0	<10.0	<10.0	50.0	150.0	<10.0	<10.0	38.0	<10.0	38.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	90.0	< 10.0	< 10.0
Alkalinity, Hydroxide	mg/L		<10.0			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
Chloride	mg/L		10.00			9.94	9.55	8.60	8.93	8.99	8.91	8.76	8.83	8.89	10.10	9.15	8.79	9.15	9.17	9.04	9.04	8.97	9.89	9.61	9.72	10.30	10.60	10.30	11.30	< 25.0	10.10	10.10	10.00	10.10	9.57	9.97
Fluoride	mg/L		<0.500			<0.500	<0.500	0.143	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.500	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.500	<0.500	0.165	< 0.500	< 0.500	< 1.00	< 2.50	< 0.500	< 0.500	< 0.200	< 0.500	< 0.200	< 0.200
Sulfate as SO4	mg/L		579.0			561.0	522.0	450.0	567.0	584.0	615.0	559.0	557.0	580.0	542.0	607.0	561.0	577.0	593.0	551.0	581.0	525.0	580.0	590.0	602.0	594.0	571.0	583.0	586.0	576.0	586.0	570.0	592.0	552.0	535.0	543.0
Total Organic Carbon (TOC)	mg/L		3.46			3.59	3.60	3.59	3.47	3.40	3.33	3.25	3.10	3.49	3.48	3.27	3.42	3.42	3.23	3.28	3.31	3.32	3.40	1.99	3.78	3.35	3.44	2.86	3.69	3.34	3.53	3.47	3.34	3.13	3.51	3.21
Nitrate/Nitrite as N	mg/L		<0.020			<0.02	<0.02	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.255	<0.020	<0.020	<0.020	<0.020	< 0.020	< 0.020	< 0.020	0.025	< 0.020	< 0.020	< 0.020	< 0.020	0.050	0.423
Ammonia as N ^	mg/L		NA			NA	NA	NA	NA	NA	NA	0.312	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	<0.0500	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		<0.100			<0.05	<0.05	<0.100	<0.100	<0.100	<0.100	<0.250	<0.150	<0.250	<0.250	<0.250	<0.250	<0.150	<0.250	<0.100	<0.100	<0.100	<0.100	<0.250	<0.250	<0.250	< 0.250	< 0.250	< 0.150	< 0.100	< 0.050	< 0.050	< 0.250	< 0.250	< 0.100	< 0.100
Arsenic	mg/L		0.0019			0.0005	<0.0025	<0.0010	<0.0010	<0.0005	<0.0005	<0.0010	<0.0010	<0.0010	<0.0025	<0.0025	<0.0025	0.0005	<0.0010	<0.0010	0.0008	<0.0010	<0.001	<0.001	<0.0025	<0.0025	< 0.0025	< 0.0025	< 0.0050	< 0.0020	< 0.0010	< 0.0020	< 0.0020	< 0.0020	< 0.0050	< 0.0020
Cadmium	mg/L		<0.0001			<0.0001	<0.0001	<0.0002	<0.0002	<0.0001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0010	<0.0010	<0.0005	<0.0010	<0.001	<0.001	<0.0025	<0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0010	< 0.0005	< 0.0010	< 0.0010	< 0.0010	< 0.0025	< 0.0010
Copper	mg/L		0.0124			0.0077	0.0105	0.0084	0.0081	0.0061	0.0120	0.0037	0.0034	0.0020	0.0056	0.0053	0.0036	0.0135	0.0161	0.0126	0.0097	0.0133	0.0215	0.0213	0.0207	0.0201	0.0044	0.0108	0.0185	0.0204	0.0290	0.0303	0.0339	0.0273	0.0367	0.0236
Iron	mg/L		<0.100			<0.050	<0.050	<0.100	<0.100	<0.100	<0.100	<0.250	<0.150	<0.250	<0.250	<0.250	<0.250	<0.150	<0.250	<0.100	<0.100	<0.100	<0.100	<0.250	<0.250	<0.250	< 0.250	< 0.250	< 0.150	< 0.100	< 0.050	< 0.050	< 0.250	< 0.250	< 0.100	< 0.100
Lead	mg/L		<0.0005			<0.0005	<0.0005	<0.0010	<0.0010	<0.0005	<0.0010	<0.0010	<0.0010	<0.0010	<0.0025	<0.0025	<0.0025	<0.0005	<0.0010	<0.0010	<0.0005	<0.001	<0.002	<0.0010	<0.0025	<0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0010	< 0.0005	< 0.0010	< 0.0025	0.0015	< 0.0025	< 0.0010
Manganese	mg/L		0.0035			0.0033	<0.0075	0.0034	0.0032	0.0031	0.0026	0.0016	0.0033	0.0031	0.0029	0.0035	0.0029	0.0029	0.0030	0.0030	0.0032	0.0033	0.0035	0.0031	0.0036	0.0030	0.0032	0.0029	0.0029	0.0029	0.0027	0.0046	0.0029	0.0026	0.0030	0.0012
Mercury (dissolved)	mg/L		<0.0002			<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0050	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002															
Mercury (dissolved low-level)	ng/L																					<5	<100	<100	<100	<100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
Molybdenum	mg/L		0.0005			<0.0005	<0.0005	<0.0010	<0.0010	<0.0005	<0.0005	<0.0010	<0.0010	<0.0010	<0.0025	<0.0025	<0.0025	<0.0005	<0.0010	<0.0010	<0.0005	<0.0010	<0.0010	<0.0010	<0.0025	<0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0010	< 0.0005	< 0.0010	< 0.0010	< 0.0010	< 0.0025	< 0.0010
Selenium	mg/L		0.0014			0.0025	<0.0050	<0.0020	0.0036	<0.0010	<0.0010	<0.0020	<0.0020	<0.0020	<0.0050	<0.0050	<0.0050	<0.0010	<0.0020	<0.0040	0.0010	<0.0020	<0.0020	<0.0020	<0.0050	<0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0020	< 0.0010	< 0.0020	< 0.0020	< 0.0020	< 0.0050	0.0023
Silica (Si02)	mg/L		9.47			10.00	10.20	11.20	9.65	9.81	11.00	10.50	10.30	8.55	9.44	9.96	10.40	8.98	8.57	10.00	9.75	9.80	10.30	8.80	10.30	9.55	8.45	9.58	9.79	9.45	9.93	9.87	9.94	9.71	9.37	9.32
Silicon	mg/L		4.43			4.70	4.77	5.22	4.51	4.59	5.14	4.89	4.79	4.00	4.42	4.65	4.87	4.20	4.01	4.67	4.56	4.58	4.80	4.11	4.82	4.46	3.95	4.48	4.58	4.42	4.64	4.62	4.64	4.54	4.38	4.36
Uranium	mg/L		0.0003			<0.0001	<0.0005	<0.0002	<0.0002	<0.0001	<0.0002	<0.0002	<0.0010	<0.0010	<0.0025	<0.0025	<0.0025	<0.0005	<0.0010	<0.0010	<0.0005	<0.0010	<0.0010	<0.0010	<0.0025	<0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0010	< 0.0005	< 0.0010	< 0.0025	< 0.0010	< 0.0025	< 0.0010
Zinc	mg/L		0.0022			0.0024	<0.0100	<0.0040	<0.0040	0.0033	<0.0020	<0.0040	<0.0040	<0.0040	<0.0100	<0.0100	<0.0100	0.0021	<0.0040	<0.0040	<0.0020	<0.0040	<0.0040	<0.0040	<0.0100	<0.0100	< 0.0100	< 0.0100	< 0.0100	0.0088	0.0058	0.0224	0.0323	0.0262	0.0290	0.0518

Notes & Definitions:

Historical data prior to 2018 can be found in earlier posted versions of this table

^	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-4-MI

Year		2018							2019				2020				2021				2022				2023				2024				2025			
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		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	11	2	6	8	11	2	5	8	11
Sample Date		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	11/16	2/12	6/20	8/13	11/22	2/7	5/14	8/17	11/3
Lab Analysis (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	Y	Y	Y	Y	Y
Field Parameters:																																				
Purge Flow Rate	gpm	NM	0.10	NM	0.10	0.10	0.10	0.10	0.06	0.06	0.13	0.25	0.13	0.13	0.13	0.13	0.13	0.13	0.25	0.25	0.25	0.25	0.15	0.09	0.22	0.13	0.91	0.12	0.12	0.14	0.12	0.12	0.12	0.07	0.13	0.08
Total Purged	gal	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	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Depth to Water	ft bgs	330.52	330.42	330.53	330.50	329.62	331.10	336.57	331.10	331.06	331.92	332.10	332.50	332.87	332.45	333.29	333.22	329.27	333.57	333.65	333.45	333.80	334.22	334.15	334.35	334.85	335.30	335.55	335.18	335.80	335.72	335.30	335.00	334.71	334.76	334.40
Temperature	deg C	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	12.1	10.9	12.5	12.7	12.4	11.2	11.7	15.0	12.7
pH	SU	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	8.53	8.08	7.63	7.61	8.20	8.49	8.56	8.31	8.31
Specific Conductance	µS/cm	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	1791	1784	1695	1712	1780	1866	1726	1419	1649
Oxygen Reduction Potential	mV	-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	-267.6	-266.9	-140.8	-93.9	-157.0	-182.8	-142.8	-308.6	21.8
Lab Analytical Results:																																				
Hardness as CaCO3	mg/L		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	3.91	3.70	4.92	4.90	5.10	4.80	< 3.31	4.28	4.63
pH (Lab)	SU		8.47			8.48	8.31	8.47	8.35	8.30	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	8.59	7.39	8.23	8.26	8.37	8.49	8.40	8.18	7.94
Total Dissolved Solids (Lab)	mg/L		1220			1140	1120	1100	1130	1130	1140	1120	1110	1110	1070	1170	1130	1100	1130	1090	1100	1140	1070	1060	1030	1030	1060	1050	1000	1030	1120	1070	1030	1110	1060	1070
Calcium	mg/L		1.6			1.6	1.6	1.6	1.4	1.3	1.5	1.3	1.2	1.2	1.3	1.1	2.0	1.1	1.2	1.1	1.1	1.1	1.1	1.0	1.0	1.0	0.8	1.0	1.0	1.4	1.3	1.4	1.3	1.2	1.1	1.3
Magnesium	mg/L		0.5			0.5	0.5	0.6	0.4	0.4	0.5	<0.500	0.4	<0.500	0.5	<0.400	<0.500	0.3	0.4	0.4	0.4	0.3	0.4	<0.500	0.3	0.4	< 0.500	0.4	0.3	0.4	0.4	0.4	0.4	< 0.500	0.4	0.4
Sodium	mg/L		447.0			471.0	470.0	500.0	462.0	458.0	496.0	477.0	441.0	460.0	459.0	458.0	476.0	431.0	427.0	418.0	430.0	443.0	448.0	384.0	468.0	427.0	428.0	424.0	439.0	427.0	440.0	450.0	466.0	443.0	462.0	487.0
Potassium	mg/L		<2.00			1.39	<2.00	<2.00	1.43	1.77	2.03	<5.00	<2.00	<5.00	<3.00	<4.00	<5.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<5.00	<2.00	<2.00	< 5.00	< 2.00	< 2.00	< 2.00	1.39	1.33	1.81	< 5.00	1.45	< 2.00
Alkalinity, Total	mg/L		965			955	968	995	510	890	970	978	985	1030	1020	1010	990	1020	985	1140	935	1020	1180	920	1040	965	955	985	975	1040	1070	1090	1020	980	960	1030
Alkalinity, Bicarbonate	mg/L		875			865	896	885	420	650	880	886	895	935	940	965	910	900	865	1020	825	870	1040	720	980	865	907	945	975	995	1020	905	920	840	940	1030
Alkalinity, Carbonate	mg/L		90.0			90.0	72.0	110.0	90.0	240.0	90.0	92.0	90.0	90.0	80.0	40.0	80.0	120.0	120.0	120.0	110.0	150.0	140.0	200.0	60.0	100.0	48.0	40.0	< 10.0	40.0	50.0	180.0	100.0	140.0	20.0	< 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	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
Chloride	mg/L		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	25.40	3.91	< 5.00	3.62	< 5.00	3.46	3.36	< 5.00	3.25	< 5.00	3.14	3.23
Fluoride	mg/L		5.020			4.820	4.840	4.940	5.490	5.440	5.380	5.310	5.110	5.160	5.000	5.270	4.920	5.030	5.200	4.780	5.160	4.730	5.420	5.130	5.420	5.310	4.320	4.830	5.080	5.660	5.570	5.740	5.810	5.180	5.000	4.620
Sulfate as SO4	mg/L		68.6			54.4	48.3	47.6	38.7	34.4	31.9	28.2	24.6	21.9	20.0	18.7	17.1	16.1	16.4	13.7	13.4	12.4	12.7	11.7	21.8	10.1	< 5.00	8.2	8.5	9.0	8.9	9.3	9.4	8.4	7.8	6.4
Total Organic Carbon (TOC)	mg/L		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	4.05	4.07	3.57	3.53	3.66	3.51	3.14	4.49	3.69
Nitrate/Nitrite as N	mg/L		<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	< 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	0.240	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	0.2800	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		<0.100			<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	< 0.100	< 0.100	< 0.100	< 0.050	< 0.050	< 0.050	< 0.250	< 0.050	< 0.100
Arsenic	mg/L		0.0139			0.0153	0.0140	0.0119	0.0164	0.0111	0.0116	0.0107	0.0127	0.0139	0.0084	0.0092	0.0088	0.0110	0.0099	0.0093	0.0120	0.0092	0.0094	0.0090	0.0100	0.0074	0.0090	0.0101	0.0079	0.0082	0.0078	0.0088	0.0093	0.0059	0.0074	0.0059
Cadmium	mg/L		<0.0001			<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	<0.0001	<0.0005	<0.0004	<0.0005	<0.0005	<0.0010	<0.0010	<0.0005	<0.0010	<0.0010	<0.0010	<0.0010	<0.0025	< 0.0025	< 0.0010	< 0.0010	< 0.0010	< 0.0005	< 0.0005	< 0.0005	< 0.0010	< 0.0010	< 0.0010
Copper	mg/L		0.0079			0.0063	0.0071	0.0078	0.0087	0.0153	0.0051	0.0027	0.0028	0.0020	0.0052	0.0045	0.0040	0.0103	0.0134	0.0107	0.0116	0.0107	0.0177	0.0177	0.0196	0.0049	0.0039	0.0086	0.0159	0.0165	0.0258	0.0191	0.0147	0.0146	0.0207	0.0169
Iron	mg/L		<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	< 0.100	< 0.100	< 0.100	< 0.050	< 0.050	< 0.050	< 0.250	< 0.050	< 0.100
Lead	mg/L		<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	< 0.0010	< 0.0010	< 0.0010	< 0.0005	< 0.0005	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Manganese	mg/L		0.0080			0.0070	0.0068	0.0084	0.0091	0.0084	0.0084	0.0073	0.0085	0.0086	0.0086	0.0092	0.0094	0.0073	0.0075	0.0077	0.0076	0.0080	0.0078	0.0084	0.0076	0.0077	0.0079	0.0074	0.0080	0.0116	0.0079	0.0103	0.0093	0.0086	0.0116	0.0117
Mercury (dissolved)	mg/L		<0.0002			<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0050	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002															
Mercury (dissolved low-level)	ng/L																					<5	<100	<100	<100	<100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
Molybdenum	mg/L		0.0151			0.0119	0.0115	0.0129	0.0121	0.0119	0.0108	0.0101	0.0096	0.0091	0.0081	0.0089	0.0082	0.0076	0.0068	0.0065	0.0065	0.0062	0.0064	0.0064	0.0060	0.0052	0.0051	0.0050	0.0048	0.0046	0.0045	0.0041	0.0043	0.0043	0.0354	0.0183
Selenium	mg/L		<0.0010			0.0022	0.0113	<0.0020	0.0020	<0.0010	<0.0010	<0.0020	<0.0020	<0.0010	<0.005	<0.0040	0.0143	<0.0010	<0.0020	<0.0040	<0.0010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0050	< 0.0050	< 0.0020	< 0.0020	< 0.0020	< 0.0010	< 0.0010	0.0023	< 0.0020	< 0.0020	0.0153
Silica (Si02)	mg/L		8.30			8.90	9.29	10.30	8.86	9.06	10.20	9.51	8.21	7.81	8.39	8.88	9.26	7.82	8.69	8.54	8.49	8.30	8.76	6.89	9.27	8.23	6.72	8.64	8.09	8.08	8.97	9.45	9.81	9.23	8.81	8.56
Silicon	mg/L		3.88			4.16	4.34	4.81	4.14	4.24	4.76	4.45	3.84	3.65	3.92	4.15	4.33	3.66	4.06	3.99	3.97	3.88	4.09	3.22	4.34	3.85	3.14	4.04	3.78	3.78	4.20	4.42	4.59	4.31	4.12	4.00
Uranium	mg/L		0.0183			0.0173	0.0151	0.0191	0.0269	0.0176	0.0168	0.0145	0.0163	0.0195	0.0121	0.0139	0.0137	0.0115	0.0112	0.0097	0.0089	0.0086	0.0084	0.0088	0.0075	0.0063	0.0063	0.0070	0.0079	0.0051	0.0065	0.0052	0.0052	0.0050	0.0045	0.0035
Zinc	mg/L		<0.0020			<0.0020	<0.0020	<0.0040	<0.0020	<0.0020	<0.0100	<0.0040	<0.0040	<0.0040	<0.0100	<0.0080	<0.0100	<0.0020	<0.0040	<0.0040	<0.0020	<0.0040	<0.0040	<0.0040	0.0044	<0.0100	< 0.0100	< 0.0040	< 0.0040	< 0.0040	< 0.0020	0.0036	< 0.0020	0.0085	0.0094	0.0117

Notes & Definitions:

Historical data prior to 2018 can be found in earlier posted versions of this table

^	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-4-C

Year		2018							2019				2020				2021				2022				2023				2024				2025			
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		1	2	3	4	5	8	11	2	5	8	11	2	5	8	12	2	5	8	11	2	5	9	11	3	5	8	11	2	6	8	11	2	5	8	11
Sample Date		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	SQI inst	2/10	5/18	8/10	11/10	2/23	5/11	9/1	11/17	3/9	5/31	8/18	11/16	2/12	6/20	8/13	11/22	2/7	5/14	8/18	11/3
Lab Analysis (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	Y	Y	Y	Y	Y
Field Parameters:																																				
Purge Flow Rate	gpm	NM	0.10	NM	0.10	0.10	0.10	0.20	0.12	0.06	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	0.08	0.12	0.11	0.08	0.09	0.10	0.08	0.10	0.14
Total Purged	gal	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	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Depth to Water	ft bgs	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	311.55	311.35	310.24	311.74	311.77	312.30	311.85	312.05	312.60
Temperature	deg C	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	12.4	11.0	12.8	12.7	11.3	11.1	12.1	15.6	11.9
pH	SU	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	8.02	8.00	7.91	7.98	7.96	7.90	7.96	8.15	8.09
Specific Conductance	µS/cm	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	5842	5792	5580	5751	5761	6075	5662	5619	5468
Oxygen Reduction Potential	mV	-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	-255.3	-250.2	-190.4	-194.8	-231.9	-182.9	-190.8	-93.6	-134.6
Lab Analytical Results:																																				
Hardness as CaCO3	mg/L		26.50			26.20	25.90	28.60	23.60	22.50	25.20	24.40	24.00	22.70	23.00	21.80	25.60	19.60	21.90	20.90	22.20	21.40	26.00	20.10	21.10	21.00	24.30	22.10	23.50	20.90	23.70	23.60	22.00	23.00	22.70	24.40
pH (Lab)	SU		7.84			7.97	7.96	8.27	7.90	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	8.13	7.65	8.01	8.05	7.94	7.99	7.97	8.13	8.11
Total Dissolved Solids (Lab)	mg/L		3730			3660	3650	3590	3580	3590	3610	3610	3580	3570	3510	3610	3720	3540	3600	3630	3520	3580	3670	3530	3620	3450	3390	3560	3420	3490	3590	3510	3500	3510	3570	3590
Calcium	mg/L		6.3			6.2	5.9	6.6	5.5	5.2	5.8	5.6	5.6	5.3	5.3	5.2	6.0	4.6	5.1	4.8	5.0	5.1	6.0	4.7	4.8	4.8	5.7	5.2	5.5	4.9	5.5	5.6	5.2	5.2	5.3	5.6
Magnesium	mg/L		2.6			2.6	2.7	2.9	2.4	2.3	2.6	2.5	2.4	2.3	2.4	2.2	2.6	2.0	2.3	2.2	2.3	2.1	2.7	2.1	2.2	2.2	2.5	2.2	2.4	2.1	2.4	2.4	2.2	2.4	2.3	2.5
Sodium	mg/L		1410.0			1400.0	1410.0	1590.0	1410.0	1370.0	1440.0	1430.0	1440.0	1390.0	1400.0	1400.0	1520.0	1310.0	1340.0	1270.0	1360.0	1350.0	1530.0	1290.0	1410.0	1360.0	1440.0	1360.0	1410.0	1370.0	1480.0	1370.0	1440.0	1370.0	1390.0	1560.0
Potassium	mg/L		<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	< 10.0	< 6.00	4.13	4.32	4.71	< 5.00	< 5.00	4.33	< 5.00
Alkalinity, Total	mg/L		2600			2410	2480	2450	2470	2550	2500	2470	2480	2460	2500	2950	2470	2500	2410	2630	2360	2500	2430	2250	2580	2240	2460	2460	2350	2580	2620	2410	2460	2420	2470	2440
Alkalinity, Bicarbonate	mg/L		2600			2330	2480	2450	2470	2350	2390	2410	2420	2340	2390	2880	2430	2360	2290	2410	2180	2300	2430	2250	2490	2240	2330	2420	2330	2380	2280	2410	2320	2160	2310	2340
Alkalinity, Carbonate	mg/L		<10.0			80.0	<10.0	<10.0	<10.0	200.0	110.0	60.0	60.0	120.0	110.0	70.0	40.0	140.0	120.0	220.0	180.0	200.0	<10.0	<10.0	90.0	<10.0	130.0	40.0	20.0	200.0	340.0	< 10.0	140.0	260.0	160.0	100.0
Alkalinity, Hydroxide	mg/L		<10.0			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
Chloride	mg/L		592.00			573.00	533.00	590.00	575.00	554.00	580.00	525.00	528.00	555.00	543.00	565.00	557.00	553.00	572.00	561.00	562.00	563.00	570.00	583.00	576.00	581.00	566.00	586.00	575.00	579.00	573.00	548.00	597.00	515.00	571.00	586.00
Fluoride	mg/L		2.530			2.520	2.480	2.540	2.640	2.620	2.590	2.510	2.410	2.360	2.340	2.370	2.210	2.160	2.280	2.040	2.260	2.020	2.340	2.220	2.230	2.150	2.100	2.020	1.750	2.740	2.370	3.200	2.730	2.230	2.290	2.200
Sulfate as SO4	mg/L		34.5			27.0	18.7	11.2	5.1	<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	<5.00	< 10.0	< 10.0	11.1	< 10.0	< 10.0	< 2.00	< 5.00	< 10.0	< 5.00	< 5.00
Total Organic Carbon (TOC)	mg/L		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	19.60	6.25	5.89	6.08	6.76	6.52	4.21	6.16	5.76
Nitrate/Nitrite as N	mg/L		<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	< 0.020	0.252	< 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	0.424	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	0.1820	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		<0.500			<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	< 0.500	< 0.300	< 0.100	< 0.050	< 0.050	< 0.250	< 0.250	0.541	0.342
Arsenic	mg/L		0.0246			0.0195	0.0202	0.0164	0.0211	0.0171	0.0178	0.0179	0.0203	0.0195	0.0150	0.0182	0.0177	0.0212	0.0248	0.0213	0.0213	0.0172	0.0219	0.0207	0.0218	0.0155	0.0237	0.0179	0.0181	0.0221	0.0215	0.0211	0.0221	0.0202	0.0255	0.0259
Cadmium	mg/L		<0.0005			<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.0010	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0050	<0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.0008	< 0.0015	< 0.0025	< 0.0025	< 0.0050	< 0.0025
Copper	mg/L		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	0.0292	0.0487	0.0566	0.0641	0.0624	0.0656	0.0492	0.0612	0.0580
Iron	mg/L		<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	0.604	< 0.300	0.604	0.682	0.722	0.551	0.579	0.234	0.446
Lead	mg/L		<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	< 0.0050	< 0.0050	< 0.0050	< 0.0005	< 0.0015	< 0.0025	< 0.0025	< 0.0050	< 0.0025
Manganese	mg/L		0.0647			0.0529	0.0381	0.0283	0.0268	0.0174	0.0162	0.0096	0.0209	0.0103	0.0080	0.0076	0.0059	0.0063	0.0050	0.0047	0.0051	0.0046	0.0049	0.0046	<0.0050	<0.005	< 0.0050	< 0.0050	0.0067	< 0.0050	0.0034	0.0081	0.0041	0.0034	0.0064	0.0059
Mercury (dissolved)	mg/L		<0.0002			<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0050	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002															
Mercury (dissolved low-level)	ng/L																					<5	<500	<100	<100	<100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
Molybdenum	mg/L		0.0086			0.0072	0.0071	0.0057	0.0074	0.0070	0.0056	0.0047	0.0045	0.0044	<0.005	<0.005	<0.0050	0.0037	0.0031	0.0031	0.0033	0.0031	0.0036	0.0034	<0.0050	<0.005	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.0028	0.0035	0.0027	< 0.0025	0.0118	0.0112
Selenium	mg/L		0.0378			0.0317	0.0260	0.0211	0.0339	0.0195	0.0195	0.0156	0.0140	0.0129	0.0112	0.0182	<0.0100	0.0186	0.0280	0.0269	0.0219	0.0146	0.0218	0.0256	0.0258	0.0194	0.0119	0.0216	0.0271	0.0303	0.0276	0.0274	0.0250	0.0377	0.0397	0.0353
Silica (Si02)	mg/L		<10.7			11.00	11.20	12.80	10.10	10.50	11.30	11.00	9.90	<10.7	<10.7	<10.7	10.80	8.35	9.54	9.37	9.28	8.56	10.40	<10.7	<10.7	<10.7	< 10.7	< 10.7	9.10	8.50	10.90	9.87	9.77	9.37	11.20	12.20
Silicon	mg/L		<5.00			5.16	5.24	6.00	4.70	4.89	5.29	5.14	4.62	<5.00	<5.00	<5.00	5.06	3.91	4.46	4.38	4.34	4.00	4.87	<5.00	<5.00	<5.00	< 5.00	< 5.00	4.24	3.95	5.10	4.61	4.57	4.38	5.23	5.68
Uranium	mg/L		0.0311			0.0311	0.0277	0.0246	0.0215	0.0154	0.0086	0.0073	0.0063	0.0039	<0.0050	<0.0050	<0.0050	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0050	<0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.0009	< 0.0015	< 0.0025	< 0.0025	< 0.0050	< 0.0025
Zinc	mg/L		<0.0100			<0.0100	<0.0100	<0.0100	<0.0100	0.0038	<0.0100	<0.0100	<0.0100	<0.0100	<0.0200	<0.0200	<0.0200	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0200	<0.0200	< 0.0200	< 0.0200	< 0.0200	< 0.0200	< 0.0020	< 0.0060	0.0183	< 0.0100	0.0205	0.0157

Notes & Definitions:

Historical data prior to 2018 can be found in earlier posted versions of this table

^	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-A

Year		**2018**	**2019**										**2020**				**2021**				**2022**				**2023**				**2024**				**2025**			
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	Q1	Q2	Q3	Q4
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	11	2	6	8	11	2	5	8	11
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	11/16	2/5	6/19	8/13	11/21	2/7	5/14	8/17	11/3
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	N	N	N	N	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	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry
pH	***SU***	7.32	6.64	6.66	6.74	6.65	6.73	6.76	6.75	6.76	6.80	6.79	6.89	6.95	6.97	7.10	7.03	7.10	7.11	7.11	7.02	7.05														
Specific Conductance	***µS/cm***	6573	6053	6072	6107	6012	6057	5725	5598	5562	5451	5108	5043	4779	4339	4656	4051	3198	4238	4465	4486	4477														
Oxygen Reduction Potential	***mV***	-22.8	19.4	24.6	12.6	11.8	34.8	86.6	25.8	6.5	29.2	20.5	36.7	51.7	62.3	55.2	73.5	83.5	5.2	26.5	-56.1	2.4														
Lab Analytical Results:																																					
Hardness as CaCO3	***mg/L***	4360		4190			3920			3540		3070	3200	2780	2690	2710	2660	2550	2740	2510	2440	2490														
pH (Lab)	***SU***	7.10		6.85			6.77			6.85		6.87	6.90	6.93	6.66	7.04	7.20	6.93	7.10	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***	615.0		559.0			553.0			492.0		431.0	467.0	400.0	398.0	406.0	398.0	378.0	415.0	370.0	359.0	365.0														
Magnesium	***mg/L***	687.0		678.0			617.0			560.0		484.0	495.0	431.0	411.0	413.0	404.0	390.0	413.0	385.0	374.0	383.0														
Sodium	***mg/L***	294.0		283.0			296.0			304.0		276.0	296.0	274.0	261.0	273.0	272.0	266.0	263.0	254.0	257.0	268.0														
Potassium	***mg/L***	15.00		14.40			12.40			12.80		11.10	<20.0	10.60	10.30	10.50	11.10	10.70	11.00	10.40	10.70	10.60														
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***	97.40		28.60			27.30			29.90		29.60	28.40	29.00	26.00	26.60	24.90	25.80	26.00	26.60	26.20	26.10														
Fluoride	***mg/L***	2.830		<0.500			<0.500			<0.500		<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500														
Sulfate as SO4	***mg/L***	205.0		4300.0			4280.0			4260.0		3460.0	3080.0	3020.0	3160.0	2890.0	2620.0	2740.0	2780.0	2790.0	2870.0	2820.0														
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		2.720	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA														
Ortho-Phosphate as P ^	***mg/L***	NA		NA			NA			NA		<0.0500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA														
Aluminum	***mg/L***	<0.500		<0.250			<0.250			<0.250		<0.250	<1.00	<0.500	<0.250	<0.500	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250														
Arsenic	***mg/L***	<0.0025		<0.0025			0.0009			<0.0025		<0.0025	<0.0025	<0.0050	<0.0025	<0.0050	<0.0025	<0.0025	<0.0025	<0.0025	<0.0020	<0.0025														
Cadmium	***mg/L***	<0.0005		<0.0005			0.0001			<0.0005		<0.0005	<0.0005	<0.0010	<0.0005	<0.0010	<0.0005	<0.0025	<0.0025	<0.0025	<0.0020	<0.0025														
Copper	***mg/L***	0.0116		0.0081			0.0035			0.0039		0.0017	0.0028	<0.0050	<0.0025	<0.0050	<0.0025	0.0068	0.0082	0.0063	0.0065	0.0093														
Iron	***mg/L***	1.370		3.750			3.930			3.220		2.720	1.950	1.380	1.100	1.240	1.170	0.890	1.480	1.150	1.410	1.370														
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***	0.7880		0.8020			0.7240			0.6900		0.5850	0.5510	0.5260	0.5200	0.4540	0.4370	0.3970	0.4070	0.3910	0.4200	0.4310														
Mercury (dissolved)	***mg/L***	<0.0002		<0.0002			<0.0002			<0.0002		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002															
Mercury (dissolved low-level)	***ng/L***																					<5														
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 (Si02)	***mg/L***	12.30		11.90			14.30			13.40		12.50	<21.4	11.00	11.40	12.30	11.90	13.20	14.30	13.60	12.70	12.30														
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				2024				2025			
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	Q1	Q2	Q3	Q4
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	11	2	6	8	11	2	5	8	11
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	11/16	2/5	6/19	8/13	11/21	2/7	5/14	8/17	11/3
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	N	N	N	N	N	N	N	N	N
Field Parameters:																																					
Purge Flow Rate	gpm	NM	NM	NM	0.50	0.10	0.02	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
Total Purged	gal	11.3	0.5	1.5	0.5	1.0	0.9																														
Depth to Water	ft bgs	374.49	368.09	367.92	370.49	369.50	371.00																														
Temperature	deg C	14.3	13.6	10.8	9.7	16.7	3.9																														
pH	SU	8.26	7.43	7.21	7.55	7.97	7.84																														
Specific Conductance	µS/cm	3390	3620	3132	2619	2202	2527																														
Oxygen Reduction Potential	mV	103.0	-80.2	77.6	59.8	38.3	64.9																														
Lab Analytical Results:																																					
Hardness as CaCO3	mg/L	679		147																																	
pH (Lab)	SU	8.18		8.35																																	
Total Dissolved Solids (Lab)	mg/L	2480		1880																																	
Calcium	mg/L	104.0		23.4																																	
Magnesium	mg/L	102.0		21.6																																	
Sodium	mg/L	646.0		565.0																																	
Potassium	mg/L	12.00		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	175.00		178.00																																	
Fluoride	mg/L	2.060		2.460																																	
Sulfate as SO4	mg/L	1210.0		585.0																																	
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	0.050		0.022																																	
Mercury (dissolved)	mg/L	<0.0002		<0.0002																																	
Molybdenum	mg/L	0.0558		0.0690																																	
Selenium	mg/L	0.0098		0.0127																																	
Silica (Si02)	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				2024				2025			
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	Q1	Q2	Q3	Q4
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	11	2	6	8	11	2	5	8	11
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	11/16	2/5	6/19	8/13	11/21	2/7	5/14	8/17	11/3
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	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 (Si02)	*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-6-LM

Year		2018	2019											2020				2021				2022				2023				2024				2025			
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	Q1	Q2	Q3	Q4
Month		12	1	2	3	4	5	6	7	8	9	10	11	2	5	8	11	2	5	8	11	2	5	8	11	3	5	8	11	2	6	8	11	2	5	8	11
Sample Date		12/30	1/31	2/25	3/21	4/23	5/20	6/19	7/23	8/15	9/24	10/28	11/7	2/5	5/14	8/11	11/25	2/9	5/17	8/9	11/9	2/15	5/10	8/31	11/25	3/13	5/31	8/8	11/16	2/12	6/19	8/13	11/21	2/7	5/14	8/17	11/3
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	Y	Y	Y	Y	Y	Y	Y	Y	Y
Field Parameters:																																					
Purge Flow Rate	gpm	NM	NM	0.06	2.00	0.03	0.03	0.10	0.06	0.03	0.02	0.01	0.03	0.01	0.13	0.01	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.20	0.06	0.03	0.05	0.05	0.19	0.03	0.02	0.05	0.05	0.05	0.04	0.04
Total Purged	gal	1	1	2	2	2	2	1	1	2	2	2	2	2	2	2	2	2	2	2	2	1	2	1	1	1	2	1	1	1	1	1	1	1	1	1	1
Depth to Water	ft bgs	535.72	538.73	539.34	540.64	539.98	537.58	540.00	540.35	540.24	540.17	539.80	540.18	539.70	539.45	539.98	540.30	539.78	540.20	541.25	541.34	541.00	541.30	542.20	541.30	541.37	541.50	541.88	541.85	541.65	541.65	541.97	542.05	541.85	541.80	542.10	542.10
Temperature	deg C	7.9	14.3	7.8	8.1	9.1	9.3	11.7	14.0	13.4	11.6	10.1	12.4	10.5	11.3	14.8	11.4	10.2	11.6	14.4	11.1	11.0	11.8	13.1	10.4	8.7	14.4	13.5	10.9	8.7	12.2	16.0	9.3	11.0	11.5	14.8	13.0
pH	SU	7.64	7.38	7.51	7.54	7.49	7.54	7.67	7.80	7.65	7.43	7.45	7.37	7.39	7.54	7.44	7.47	7.44	7.54	7.52	7.49	7.46	7.56	7.64	7.70	7.77	7.58	7.67	7.55	7.65	7.36	7.49	7.48	7.57	7.39	7.72	7.50
Specific Conductance	µS/cm	6011	3784	3503	1461	1164	1296	1400	1272	1532	2104	2267	2113	2283	2287	2442	2495	2136	1629	2531	2478	2362	2297	2053	1889	1599	1321	1525	1655	1498	1153	1030	997	886	770	729	718
Oxygen Reduction Potential	mV	185.3	10.7	40.9	-32.8	-35.8	-111.0	-194.5	-163.6	-67.2	6.4	-48.0	19.9	-128.9	-222.9	32.1	21.8	3.5	-188.8	-2.6	-36.6	-135.8	-112.6	-181.6	-132.5	-80.3	-41.7	-75.3	-173.0	-249.9	-122.1	-77.2	-229.4	-157.6	-62.9	-261.4	91.6
Lab Analytical Results:																																					
Hardness as CaCO3	mg/L	2260		1270			431			621			843	1060	965	1130	1160	1120	1010	1280	1130	1030	954	971	870	687	456	573	621	535	414	335	282	213	200	190	174
pH (Lab)	SU	7.60		7.52			7.47			7.59			7.32	7.43	7.18	6.95	7.45	7.49	7.45	7.37	7.57	7.54	7.60	7.90	7.60	7.75	7.58	7.79	7.76	7.48	7.24	7.73	7.54	7.65	7.82	7.90	7.71
Total Dissolved Solids (Lab)	mg/L	5100		2840			875			1150			1630	1840	1840	2040	2020	1990	1830	2290	2050	1990	1840	1870	1620	1290	940	1030	1060	940	755	680	575	440	445	425	410
Calcium	mg/L	367.0		216.0			75.9			103.0			136.0	173.0	150.0	179.0	184.0	176.0	154.0	201.0	174.0	159.0	145.0	152.0	133.0	109.0	76.8	91.5	99.1	86.9	70.5	58.1	49.2	39.8	38.2	35.6	33.1
Magnesium	mg/L	325.0		177.0			58.7			88.3			122.0	153.0	143.0	165.0	171.0	166.0	152.0	189.0	170.0	154.0	144.0	143.0	131.0	101.0	64.2	83.5	90.6	77.2	57.8	46.2	38.6	27.5	25.4	24.5	22.1
Sodium	mg/L	459.0		248.0			129.0			153.0			172.0	203.0	188.0	194.0	194.0	188.0	169.0	177.0	166.0	162.0	158.0	163.0	150.0	139.0	125.0	128.0	132.0	131.0	123.0	122.0	119.0	115.0	105.0	102.0	106.0
Potassium	mg/L	173.00		64.50			14.00			13.70			11.30	11.00	7.82	7.20	6.04	5.96	5.22	5.69	4.99	5.22	<5.00	4.84	4.34	4.04	3.14	< 5.00	3.34	3.47	3.11	2.89	2.63	2.48	2.55	2.94	2.65
Alkalinity, Total	mg/L	205		315			371			381			355	320	353	335	329	336	346	330	380	365	365	337	310	368	470	390	355	355	360	430	410	440	405	400	410
Alkalinity, Bicarbonate	mg/L	205		315			371			381			355	320	353	335	329	336	346	330	380	365	365	337	310	368	470	390	355	355	360	430	410	440	405	400	410
Alkalinity, Carbonate	mg/L	<10.0		<10.0			<10.0			<10.0			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
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
Chloride	mg/L	256.00		43.70			5.73			8.70			11.40	11.00	11.70	12.20	12.40	11.00	10.50	12.60	11.10	10.50	10.90	10.70	9.29	6.75	5.09	5.75	6.09	6.04	4.47	3.61	3.06	2.18	< 1.00	2.08	2.06
Fluoride	mg/L	0.530		<0.500			0.324			<0.500			<0.500	0.352	<0.500	0.346	0.356	0.318	0.340	0.418	0.306	0.328	<0.500	0.310	0.322	0.328	0.254	< 0.200	0.240	< 0.500	0.306	0.316	0.335	0.344	< 0.100	0.259	0.266
Sulfate as SO4	mg/L	3050.0		1790.0			338.0			492.0			830.0	951.0	904.0	1260.0	1170.0	1020.0	978.0	1300.0	1100.0	555.0	931.0	1010.0	848.0	563.0	366.0	500.0	534.0	451.0	298.0	209.0	144.0	63.0	8.5	46.3	30.2
Total Organic Carbon (TOC)	mg/L	3.46		2.61			1.57			1.78			1.85	1.76	1.84	1.87	1.93	3.17	1.81	1.91	1.94	1.83	1.74	2.08	1.29	2.13	<2.5	1.66	0.76	1.70	1.74	1.36	1.36	1.13	1.21	1.28	1.35
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	0.022	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	0.026
Ammonia as N ^	mg/L	NA		NA			NA			NA			1.990	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			<0.0500	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	<0.250		<0.250			<0.050			<0.050			<0.100	<0.250	<0.250	<0.150	<0.250	<0.250	<0.150	<0.100	<0.100	<0.250	<0.250	<0.100	<0.100	<0.100	<0.100	< 0.250	< 0.100	< 0.100	< 0.100	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Arsenic	mg/L	0.0039		0.0049			0.0036			0.0038			0.0035	0.0044	0.0034	0.0038	0.0036	0.0038	0.0038	0.0039	0.0038	0.0042	0.0034	0.0034	0.0043	0.0054	0.0030	< 0.0025	0.0040	0.0052	0.0030	0.0030	0.0030	0.0027	0.0020	0.0017	0.0015
Cadmium	mg/L	<0.0005		<0.0005			<0.0001			<0.0001			<0.0002	<0.0002	<0.0005	<0.0003	<0.0005	<0.0005	<0.0015	<0.0010	<0.0010	<0.0010	<0.0025	<0.001	<0.0010	<0.0025	<0.0010	< 0.0025	< 0.0010	< 0.0010	< 0.0010	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Copper	mg/L	0.0135		0.0064			0.0017			0.0018			0.0069	0.0014	<0.0025	<0.0015	<0.0025	<0.0025	0.0042	0.0046	0.0040	0.0044	0.0038	0.0054	0.0030	0.0100	0.0016	< 0.0025	0.0032	0.0060	0.0050	0.0135	0.0088	0.0106	0.0031	0.0232	0.0074
Iron	mg/L	<0.250		<0.250			<0.050			<0.050			<0.100	<0.250	<0.250	<0.150	<0.250	<0.250	<0.150	<0.100	<0.100	<0.250	<0.250	<0.100	<0.100	0.152	<0.1	< 0.250	< 0.100	< 0.100	< 0.100	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Lead	mg/L	<0.0025		<0.0025			<0.0005			<0.0005			<0.0010	<0.001	<0.0025	<0.0015	<0.0025	<0.0025	<0.0015	<0.0010	<0.0010	<0.0010	<0.0025	<0.001	<0.0010	<0.0025	<0.001	< 0.0025	< 0.0010	< 0.0025	< 0.0010	< 0.0005	0.0008	0.0011	< 0.0005	0.0021	< 0.0005
Manganese	mg/L	0.3830		0.2230			0.0692			0.1480			0.1660	0.1840	0.1710	0.2670	0.2920	0.2530	0.2030	0.2570	0.2630	0.3390	0.2490	0.1740	0.2200	0.2210	0.0961	0.1110	0.0727	0.2150	0.0820	0.0359	0.0719	0.0411	0.0302	< 0.0010	0.0009
Mercury (dissolved)	mg/L	<0.0002		<0.0002			<0.0002			<0.0002			<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002															
Mercury (dissolved low-level)	ng/L																						<5	<100	<100	<100	<100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
Molybdenum	mg/L	0.0490		0.0169			0.0037			0.0025			0.0022	0.0020	<0.0025	0.0023	<0.0025	<0.0025	<0.0015	0.0016	0.0013	0.0013	<0.0025	0.0014	0.0011	<0.0025	<0.0010	< 0.0025	< 0.0010	< 0.0010	< 0.0010	0.0007	0.0005	< 0.0005	< 0.0005	0.0005	< 0.0005
Selenium	mg/L	0.0080		<0.0050			<0.0010			<0.0010			<0.0020	<0.002	<0.0050	<0.0030	<0.0050	0.0151	<0.0030	<0.0020	<0.0040	<0.0020	<0.0050	0.0028	0.0026	0.0060	0.0028	< 0.0050	0.0031	< 0.0020	0.0241	< 0.0010	< 0.0010	0.0132	0.0244	< 0.0010	< 0.0010
Silica (Si02)	mg/L	10.50		13.50			17.00			17.40			15.90	17.10	15.10	14.70	16.00	15.60	16.40	16.80	16.60	16.00	15.50	17.30	16.70	16.80	17.40	16.30	17.20	16.40	17.20	18.20	16.90	17.70	18.00	19.10	17.00
Silicon	mg/L	4.91		6.29			7.96			8.12			7.43	7.97	7.07	6.88	7.47	7.30	7.68	7.85	7.75	7.49	7.24	8.07	7.80	7.84	8.12	7.64	8.06	7.68	8.02	8.52	7.92	8.27	8.42	8.91	7.93
Uranium	mg/L	0.0230		0.0075			0.0039			0.0054			0.0047	0.0055	0.0043	0.0046	0.0042	0.0039	0.0030	0.0037	0.0032	0.0028	0.0025	0.0026	0.0025	<0.0025	0.0011	< 0.0025	0.0020	< 0.0025	0.0012	0.0009	0.0006	< 0.0010	< 0.0005	< 0.0005	< 0.0005
Zinc	mg/L	0.0323		<0.0100			<0.0020			<0.0040			<0.0040	<0.004	<0.0100	0.0069	<0.0100	<0.0100	<0.0060	<0.0040	<0.0040	<0.0040	<0.0100	<0.0040	<0.0040	<0.0100	<0.0040	< 0.0100	< 0.0040	< 0.0040	< 0.0040	< 0.0020	0.0160	0.0217	0.0080	0.0181	0.0122

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-7-EAA

Year		2018	2019												2020				2021				2022				2023				2024				2025			
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	Q1	Q2	Q3	Q4
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	11	3	6	8	11	1	5	8	11
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	11/13	3/17	6/19	8/6	11/18	1/25	5/12	8/15	11/1
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	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	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	0.17	0.10	0.07	0.06	0.01	0.15	0.12	0.16	0.11
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	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	0.4	0.4	0.4	0.4	0.4	0.4	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	36.85	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	25.60	27.45	25.40	26.30	25.00	25.00	23.10	28.10	28.10
Temperature	deg C	10.0	10.0	10.0	9.9	10.1	10.4	10.4	10.6	10.5	10.3	10.4	10.6	10.4	12.1	10.3	10.3	10.1	10.5	10.9	10.6	10.5	10.7	10.8	11.1	13.1	11.7	11.8	11.4	10.1	12.9	11.6	9.0	9.8	12.3	13.5	10.9
pH	SU	6.99	7.01	7.04	6.93	7.00	7.06	7.07	6.28	6.95	7.06	7.03	7.06	6.91	7.17	7.09	7.12	7.14	7.19	7.24	7.23	7.12	7.15	7.14	6.28	7.28	7.16	7.11	7.16	7.24	6.90	6.89	6.94	6.88	6.96	7.11	7.02
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	1966	2082	1905	1932	2069	2062	1610	2977	1739
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	-117.9	-133.9	-102.0	-59.0	-160.4	-70.9	-45.1	-190.6	73.4
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	1010	1080	1080	1030	997	993	1110	952	939
pH (Lab)	SU	7.20		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	7.16	6.84	7.07	7.10	7.13	7.09	7.08	7.47	7.27
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	1560	1570	1550	1550	1650	1540	1490	1490	1470
Calcium	mg/L	170.0		179.0			171.0			173.0			162.0	165.0	175.0	183.0	157.0	186.0	167.0	167.0	164.0	173.0	166.0	154.0	165.0	174.0	161.0	151.0	173.0	184.0	186.0	177.0	170.0	169.0	185.0	161.0	162.0
Magnesium	mg/L	124.0		142.0			135.0			137.0			144.0	134.0	142.0	150.0	133.0	152.0	131.0	138.0	133.0	149.0	132.0	129.0	134.0	143.0	134.0	127.0	141.0	150.0	149.0	141.0	139.0	139.0	157.0	133.0	130.0
Sodium	mg/L	75.3		81.3			75.0			75.2			74.9	73.7	76.0	80.9	73.4	81.4	75.0	74.6	72.0	77.8	71.9	71.6	72.3	76.3	75.6	69.2	77.1	80.6	80.5	77.1	78.1	75.6	82.7	77.2	76.2
Potassium	mg/L	3.87		3.90			<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	3.46	3.62	3.84	3.78	3.65	< 5.00	< 5.00	3.91	3.91
Alkalinity, Total	mg/L	380		367			405			392			350	357	355	268	430	420	395	340	440	425	425	400	310	378	410	437	425	440	455	437	460	440	430	390	435
Alkalinity, Bicarbonate	mg/L	380		367			405			392			425	357	355	268	430	420	395	340	440	425	425	400	310	378	410	437	425	440	455	437	460	440	430	390	435
Alkalinity, Carbonate	mg/L	<10.0		<10.0			<10.0			<10.0			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
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
Chloride	mg/L	11.90		10.70			10.80			10.90			11.60	10.30	10.70	10.20	10.10	10.40	10.10	10.50	10.30	10.10	10.30	11.20	11.00	11.10	10.80	11.80	11.90	11.50	11.40	11.60	11.20	12.80	11.30	10.80	11.30
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	0.238	0.282	0.298	< 0.500	0.314	< 0.500	< 0.500	0.300	0.313
Sulfate as SO4	mg/L	732.0		736.0			733.0			844.0			746.0	774.0	803.0	767.0	742.0	757.0	746.0	796.0	751.0	755.0	743.0	759.0	761.0	827.0	709.0	719.0	828.0	842.0	821.0	790.0	747.0	867.0	798.0	734.0	821.0
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	4.24	5.38	5.12	4.40	4.99	5.11	3.91	4.42	10.90
Nitrate/Nitrite as N	mg/L	<0.020		<0.020			<0.020			<0.020			<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.100	< 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	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	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	< 0.100	< 0.150	< 0.100	< 0.050	0.197	< 0.250	< 0.250	< 0.050	< 0.100
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	0.0010	< 0.0020	< 0.0020	< 0.0010	< 0.0010	< 0.0050	< 0.0010	< 0.0020	< 0.0020
Cadmium	mg/L	<0.0001		<0.0002			<0.0001			<0.0001			<0.0002	<0.0002	<0.0002	<0.0003	<0.0005	<0.0001	<0.0025	<0.0025	<0.0010	<0.0005	<0.0005	<0.0025	<0.0010	<0.0025	<0.0025	< 0.0025	< 0.0010	< 0.0010	< 0.0010	< 0.0005	< 0.0005	< 0.0025	< 0.0005	< 0.0010	< 0.0010
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	0.0018	0.0048	0.0044	0.0045	0.0186	< 0.0050	0.0077	0.0108	0.0076
Iron	mg/L	1.820		1.950			1.810			2.120			2.000	1.840	1.710	2.160	2.150	2.080	1.920	1.750	1.630	2.050	1.690	1.750	1.570	1.990	0.265	< 0.250	0.251	0.259	0.421	0.379	0.404	1.750	1.900	2.740	2.230
Lead	mg/L	<0.0005		<0.0010			<0.0005			<0.0005			<0.0010	<0.0010	<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	< 0.0010	< 0.0010	< 0.0010	< 0.0005	0.0015	< 0.0025	0.0005	< 0.0010	< 0.0010
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	4.40	4.65	4.61	4.65	4.69	4.44	4.81	4.67	4.47
Mercury (dissolved)	mg/L	<0.0002		<0.0002			<0.0002			<0.0002			<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002															
Mercury (dissolved low-level)	ng/L																						<5	<100	<100	<100	<100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
Molybdenum	mg/L	0.0008		0.0011			0.0007			0.0009			<0.0010	0.0010	<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	< 0.0010	< 0.0010	< 0.0010	0.0008	0.0007	< 0.0025	< 0.0005	< 0.0010	< 0.0010
Selenium	mg/L	<0.0020		<0.0020			<0.0010			0.0011			<0.0020	<0.0020	<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	< 0.0020	< 0.0020	< 0.0020	0.0010	< 0.0010	< 0.0050	< 0.0010	< 0.0020	< 0.0020
Silica (Si02)	mg/L	16.60		16.10			16.10			16.90			16.80	16.40	15.80	16.90	14.90	17.70	17.10	16.70	17.20	18.30	16.80	16.10	16.90	17.50	17.00	15.20	16.50	16.30	17.10	16.50	16.70	15.80	17.30	17.20	15.10
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	7.72	7.60	8.00	7.70	7.80	7.41	8.09	8.02	7.08
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	0.0025	0.0025	0.0025	0.0025	0.0025	< 0.0025	0.0010	0.0018	0.0018
Zinc	mg/L	<0.0050		<0.0040			0.0021			0.0020			<0.0040	<0.0040	<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	< 0.0040	< 0.0040	< 0.0040	0.0033	0.0170	< 0.0100	0.0123	0.0166	0.0092

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-EAA

Year		2018	2019												2020				2021				2022				2023				2024				2025			
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	Q1	Q2	Q3	Q4
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	11	3	6	8	11	1	5	8	11
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	11/13	3/17	6/19	8/6	11/21	1/25	5/13	8/15	11/1
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	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	0.33	0.11	0.09	0.38	0.15	0.60	0.06	0.09	0.11	0.06	0.11	0.13
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	0.4	0.4	0.4	0.4	0.4	0.4	0.4	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	34.90	36.45	31.78	32.91	33.00	32.52	31.73	33.45	33.90
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	12.3	9.8	11.7	12.2	10.9	9.9	11.2	11.7	10.8
pH	SU	7.12	7.09	7.13	7.17	7.09	7.02	7.17	7.09	7.05	7.03	6.99	6.99	6.99	7.14	7.19	7.19	7.20	7.27	7.31	7.30	7.18	7.23	7.23	6.59	7.20	7.27	7.23	7.07	7.35	6.97	7.02	7.06	6.92	7.11	7.24	7.15
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	1761	1955	1849	1851	1848	1971	1577	1752	1754
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	-103.6	-175.8	-96.2	-99.4	-147.0	-73.2	-82.7	-162.9	73.0
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	901	962	975	957	936	918	960	872	897
pH (Lab)	SU	7.28		7.36			7.13			7.05			7.01	7.11	6.96	7.18	7.10	7.03	6.97	7.06	6.81	7.19	7.16	7.27	7.25	7.05	7.03	7.33	7.43	7.02	7.20	7.17	7.30	7.19	7.10	7.25	7.19
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	1430	1480	1420	1460	1470	1460	1230	1430	1390
Calcium	mg/L	152.0		151.0			148.0			154.0			143.0	149.0	153.0	160.0	134.0	156.0	146.0	146.0	149.0	158.0	150.0	143.0	149.0	163.0	159.0	152.0	156.0	168.0	169.0	167.0	162.0	158.0	164.0	148.0	155.0
Magnesium	mg/L	119.0		118.0			120.0			121.0			124.0	119.0	127.0	130.0	115.0	127.0	115.0	120.0	118.0	131.0	119.0	115.0	121.0	130.0	130.0	123.0	125.0	132.0	134.0	131.0	129.0	127.0	134.0	122.0	124.0
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	77.4	79.4	80.3	78.8	81.2	77.7	80.3	75.4	79.1
Potassium	mg/L	3.80		3.27			3.55			3.18			3.52	3.80	<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	3.24	3.58	3.61	3.69	3.70	< 5.00	< 5.00	< 5.00	3.50
Alkalinity, Total	mg/L	400		435			450			431			445	404	385	288	480	450	445	385	490	460	465	480	430	417	448	417	415	435	475	480	470	465	465	380	460
Alkalinity, Bicarbonate	mg/L	400		435			450			431			445	404	385	288	480	450	445	385	490	460	465	480	430	417	448	417	415	435	475	480	470	465	465	380	460
Alkalinity, Carbonate	mg/L	<10.0		<10.0			<10.0			<10.0			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<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
Chloride	mg/L	9.83		10.50			10.30			11.10			11.00	10.20	10.30	10.10	11.30	10.40	10.20	10.30	10.50	10.50	10.60	11.70	11.40	11.60	11.80	12.20	12.20	12.30	11.80	12.20	12.50	12.60	12.00	11.90	13.90
Fluoride	mg/L	0.380		0.370			0.338			0.342			<0.500	0.330	0.346	0.336	0.334	0.292	0.306	0.350	0.272	0.304	0.204	0.332	0.316	0.358	0.284	< 0.200	0.266	0.330	0.312	< 0.500	< 0.500	< 0.500	0.315	0.308	0.345
Sulfate as SO4	mg/L	533.0		559.0			606.0			643.0			577.0	602.0	625.0	605.0	582.0	609.0	595.0	615.0	599.0	608.0	597.0	627.0	619.0	686.0	675.0	685.0	748.0	768.0	731.0	713.0	697.0	732.0	693.0	673.0	787.0
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	3.64	4.76	4.00	4.20	5.82	5.25	3.47	5.60	6.27
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	<0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Ammonia as N ^	mg/L	NA		NA			NA			NA			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
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	<0.100		<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	< 0.100	< 0.100	< 0.100	< 0.050	< 0.050	< 0.250	< 0.250	< 0.050	< 0.100
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	0.0020	< 0.0020	< 0.0020	0.0015	0.0016	< 0.0050	0.0025	< 0.0050	0.0024
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	< 0.0010	< 0.0010	< 0.0010	< 0.0005	< 0.0005	< 0.0025	< 0.0010	< 0.0025	< 0.0010
Copper	mg/L	0.0004		0.0024			0.0023			0.0008			0.0010	0.0010	<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	0.0020	0.0048	0.0030	0.0033	0.0160	< 0.0050	0.0146	0.0083	0.0165
Iron	mg/L	2.120		2.130			2.420			2.460			2.300	2.280	2.290	2.310	0.762	2.330	2.250	2.200	2.220	2.520	2.220	2.280	2.270	2.430	2.430	2.190	2.240	2.340	2.370	2.320	2.230	2.230	2.300	2.590	2.850
Lead	mg/L	<0.0005		<0.0010			<0.0005			<0.0005			<0.0005	<0.0010	<0.0010	<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	< 0.0010	< 0.0010	< 0.0010	< 0.0005	0.0012	< 0.0025	< 0.0010	< 0.0025	0.0019
Manganese	mg/L	3.17		3.52			3.06			3.37			3.39	3.70	3.36	3.54	3.81	3.55	3.50	3.60	3.66	3.77	3.70	3.77	3.87	3.98	3.85	3.91	4.16	3.88	4.26	4.23	4.24	4.04	4.37	4.01	3.74
Mercury (dissolved)	mg/L	<0.0002		<0.0002			<0.0002			<0.0002			<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002															
Mercury (dissolved low-level)	ng/L																						<5	<100	<100	<100	<100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
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	< 0.0010	< 0.0010	< 0.0010	0.0009	0.0009	< 0.0025	< 0.0010	< 0.0025	< 0.0010
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	< 0.0020	< 0.0020	0.0037	< 0.0010	< 0.0010	< 0.0050	< 0.0020	< 0.0050	< 0.0020
Silica (Si02)	mg/L	16.30		15.30			15.70			16.10			15.90	15.70	15.00	16.10	14.20	16.00	16.50	15.50	16.40	17.30	16.00	15.40	16.20	16.90	16.60	15.40	16.50	15.90	16.30	16.10	16.20	14.90	15.00	15.80	14.90
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	7.72	7.44	7.61	7.54	7.56	6.97	7.02	7.40	6.99
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	0.0019	0.0019	0.0020	0.0021	0.0019	< 0.0025	0.0018	< 0.0025	0.0017
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	< 0.0040	< 0.0040	< 0.0040	0.0024	0.0227	< 0.0100	0.0236	0.0174	0.0164

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-MI

Year		2018	2019												2020				2021				2022				2023				2024				2025			
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	Q1	Q2	Q3	Q4
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	11	3	6	8	11	1	5	8	11
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	11/13	3/17	6/19	8/6	11/21	1/25	5/13	8/15	11/1
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	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	0.25	0.13	0.15	0.50	0.12	0.13	0.23	0.19	0.11	0.18	0.17	0.19	0.09	0.19	0.03	0.28
Total Purged	gal	27.5	18.0	1.0	3.0	1.5	2.5	2.5	2.3	3.0	2.0	2.5	1.0	1.0	1.0	2.0	1.0	2.0	3.0	1.0	1.0	1.0	0.8	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	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	42.85	43.51	39.90	40.52	40.62	40.25	39.60	50.94	41.42
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	12.1	10.3	12.3	12.6	11.2	10.4	12.0	11.5	11.0
pH	SU	7.57	7.50	7.48	7.47	7.34	7.31	7.48	7.42	7.38	7.30	7.23	7.15	7.08	7.44	7.44	7.43	7.47	7.59	7.55	7.56	7.41	7.54	7.59	6.92	7.52	7.54	7.51	7.52	7.66	7.33	7.28	7.35	7.21	7.41	7.57	7.44
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	1544	1642	1526	1580	1578	1673	1327	158	1534
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	-178.2	-22.8	-160.5	-118.0	-249.6	-122.3	-173.2	-244.0	4.7
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	361	366	388	389	386	389	394	340	377
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	7.66	7.11	7.47	7.44	7.48	7.42	7.31	7.54	7.40
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	1050	995	985	1030	995	1040	895	1020	965
Calcium	mg/L	34.0		48.5			52.4			49.7			51.3	48.7	58.5	65.9	62.6	69.7	54.0	70.3	59.8	75.5	71.2	69.2	72.3	76.0	72.1	67.4	66.3	68.4	72.9	73.5	71.3	70.3	72.1	61.0	69.5
Magnesium	mg/L	19.9		31.0			34.5			31.4			33.8	32.1	39.6	46.2	44.4	49.1	37.2	48.9	40.8	52.7	48.7	48.8	50.8	52.3	50.4	47.1	47.5	47.4	50.1	50.0	50.6	51.9	52.0	45.6	49.3
Sodium	mg/L	344.0		312.0			289.0			289.0			275.0	269.0	272.0	260.0	232.0	237.0	256.0	229.0	238.0	226.0	220.0	213.0	210.0	230.0	236.0	216.0	215.0	219.0	221.0	228.0	217.0	207.0	220.0	208.0	220.0
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	5.12	5.38	5.65	5.73	5.73	5.70	6.00	5.58	5.59
Alkalinity, Total	mg/L	500		565			560			573			585	543	545	448	590	590	575	570	605	590	590	500	540	550	568	553	560	555	595	580	610	585	590	540	590
Alkalinity, Bicarbonate	mg/L	500		565			560			573			585	543	545	448	590	590	575	570	605	590	590	500	540	550	568	553	560	555	595	580	610	585	590	540	590
Alkalinity, Carbonate	mg/L	<10.0		<10.0			<10.0			<10.0			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<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
Chloride	mg/L	12.70		10.00			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	8.35	8.67	8.73	9.13	8.77	9.71	8.39	8.08	8.61
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	0.112	< 0.200	< 0.200	< 0.200	< 0.200	< 0.500	< 0.500	< 0.500	0.118	0.123	0.127
Sulfate as SO4	mg/L	347.0		353.0			343.0			366.0			317.0	314.0	316.0	335.0	319.0	326.0	314.0	324.0	312.0	325.0	322.0	352.0	351.0	335.0	327.0	323.0	320.0	329.0	329.0	356.0	319.0	378.0	336.0	312.0	360.0
Total Organic Carbon (TOC)	mg/L	2.73		2.83			2.81			2.74			2.65	2.60	2.94	2.87	2.76	2.60	2.74	2.97	2.66	2.77	2.77	2.96	1.66	2.75	2.62	4.25	2.76	3.44	2.70	2.80	2.93	3.02	2.60	3.31	2.63
Nitrate/Nitrite as N	mg/L	<0.020		<0.020			<0.020			<0.020			<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Ammonia as N ^	mg/L	NA		NA			NA			NA			1.310	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			<0.0500	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		<0.100			<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	< 0.100	< 0.100	< 0.100	< 0.050	< 0.050	< 0.250	< 0.250	< 0.050	< 0.100
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	< 0.0010	< 0.0020	< 0.0020	< 0.0010	< 0.0010	< 0.0050	< 0.0020	< 0.0050	< 0.0020
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	< 0.0010	< 0.0010	< 0.0010	< 0.0005	< 0.0005	< 0.0025	< 0.0010	< 0.0025	< 0.0010
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	0.0044	0.0088	0.0083	0.0081	0.0086	0.0083	0.0089	0.0080	0.0094
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	< 0.100	0.135	0.127	0.078	0.051	< 0.250	< 0.250	< 0.050	< 0.100
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	< 0.0010	< 0.0010	< 0.0010	< 0.0005	< 0.0005	< 0.0025	< 0.0010	< 0.0025	< 0.0010
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	0.0562	0.0595	0.0632	0.0521	0.0578	0.0619	0.0623	0.0610	0.0577
Mercury (dissolved)	mg/L	<0.0002		<0.0002			<0.0002			<0.0002			<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002															
Mercury (dissolved low-level)	ng/L																						<5	<100	<100	<100	<100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
Molybdenum	mg/L	0.0005		<0.0010			<0.0005			<0.0005			<0.0005	<0.0010	<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	< 0.0010	< 0.0010	< 0.0010	< 0.0005	< 0.0005	< 0.0025	< 0.0010	< 0.0025	< 0.0010
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	0.0076	0.0057	0.0274	0.0023	< 0.0010	< 0.0050	0.0099	< 0.0050	0.0080
Silica (Si02)	mg/L	12.10		12.40			12.80			12.50			12.60	12.20	11.90	12.90	12.10	13.50	13.20	13.60	13.70	15.20	14.00	13.60	14.00	13.70	13.90	12.50	13.80	13.20	13.80	14.00	13.70	13.50	13.30	13.50	12.60
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	6.45	6.16	6.45	6.54	6.38	6.29	6.22	6.30	5.87
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	< 0.0010	< 0.0010	< 0.0010	< 0.0005	< 0.0005	< 0.0025	< 0.0010	< 0.0025	< 0.0010
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	<0.0020	<0.0100	<0.0040	<0.0100	0.0047	< 0.0100	< 0.0040	< 0.0040	< 0.0040	< 0.0020	< 0.0020	< 0.0100	0.0199	0.0109	0.0095

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-LM

Year		2018	2019												2020				2021				2022				2023				2024				2025			
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	Q1	Q2	Q3	Q4
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	11	3	6	8	11	1	5	8	11
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	11/13	3/17	6/19	8/6	11/21	1/25	5/13	8/15	11/1
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	Y	Y	Y	Y	Y	Y	Y	Y	Y
Field Parameters:																																					
Purge Flow Rate	gpm	NM	1.00	0.25	1.00	0.50	0.10	0.25	0.25	0.50	0.25	0.12	0.25	0.25	0.25	0.13	0.13	0.13	0.13	0.25	0.25	0.25	0.25	0.15	NM	0.14	0.03	0.16	0.20	0.15	0.20	0.18	0.14	0.19	0.12	0.12	0.09
Total Purged	gal	30.0	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	1.0	NM	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	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	125.92	124.95	125.05	125.12	125.05	126.05	127.25	127.80	128.20
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	13.2	11.5	12.8	13.8	12.3	10.4	12.6	13.5	12.1
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	8.84	8.94	8.66	8.67	8.44	8.62	8.71	8.83	8.82
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	1224	1305	1229	1227	1261	1365	1255	1215	1227
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	-210.0	-26.4	-149.5	-106.3	-179.2	-77.9	-71.2	-176.4	15.6
Lab Analytical Results:																																					
Hardness as CaCO3	mg/L	45.00		7.29			16.90			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	7.08	6.62	6.92	7.96	6.78	6.16	7.45	6.48	6.80
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	8.84	8.42	8.66	8.70	8.73	8.64	8.60	8.71	8.21
Total Dissolved Solids (Lab)	mg/L	1420		770			780			785			780	840	730	740	700	795	720	740	760	740	795	755	685	765	745	805	755	755	760	760	750	775	740	760	775
Calcium	mg/L	10.8		1.9			3.8			1.8			1.7	1.8	2.1	2.1	1.7	1.9	1.9	1.9	1.9	2.0	1.8	1.7	1.7	1.6	1.7	1.6	1.9	1.8	1.8	2.1	1.8	1.6	1.9	1.7	1.8
Magnesium	mg/L	4.390		0.600			1.770			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	0.583	0.534	0.563	0.655	0.532	0.509	0.675	0.544	0.561
Sodium	mg/L	382.0		341.0			317.0			306.0			305.0	309.0	315.0	337.0	304.0	319.0	315.0	308.0	291.0	316.0	298.0	298.0	301.0	287.0	315.0	289.0	299.0	304.0	311.0	304.0	310.0	300.0	312.0	291.0	316.0
Potassium	mg/L	45.70		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	2.07	2.00	2.13	2.22	2.07	< 5.00	< 5.00	2.08	2.08
Alkalinity, Total	mg/L	615		720			745			731			745	685	630	675	780	730	755	750	770	780	765	760	750	714	732	714	700	690	760	745	765	740	740	730	730
Alkalinity, Bicarbonate	mg/L	535		610			645			645			685	595	530	585	680	630	645	650	620	640	655	580	510	666	732	646	620	640	640	665	665	670	600	630	640
Alkalinity, Carbonate	mg/L	80.0		110.0			100.0			86.0			60.0	90.0	100.0	90.0	100.0	100.0	110.0	100.0	150.0	140.0	110.0	180.0	240.0	48.0	<10.0	68.0	80.0	50.0	120.0	80.0	100.0	70.0	140.0	100.0	90.0
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
Chloride	mg/L	175.00		5.11			6.80			2.63			2.48	3.04	3.01	2.98	2.47	2.50	2.48	2.55	2.47	2.47	2.49	2.64	2.65	2.66	2.76	2.67	2.75	2.66	2.64	2.57	< 5.00	< 5.00	2.50	2.41	2.72
Fluoride	mg/L	2.060		3.910			3.950			3.970			3.880	3.610	3.630	3.530	3.660	3.580	3.480	3.670	3.400	3.440	3.250	3.790	3.730	3.840	3.650	3.150	3.420	3.930	3.940	3.860	3.920	4.130	3.800	3.710	3.630
Sulfate as SO4	mg/L	190.00		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	0.89	< 2.00	< 2.00	< 2.00	< 2.00	< 2.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00
Total Organic Carbon (TOC)	mg/L	2.80		1.80			3.33			1.94			1.69	1.69	1.92	1.82	1.66	1.20	1.71	1.79	1.60	1.70	1.72	1.77	1.13	1.73	1.43	1.89	1.70	2.43	1.70	1.72	1.61	1.94	1.49	1.74	1.80
Nitrate/Nitrite as N	mg/L	<0.020		<0.020			<0.020			<0.020			<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	< 0.020	< 0.020	< 0.020	< 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	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	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	< 0.050	< 0.100	< 0.100	< 0.050	< 0.050	< 0.250	< 0.250	< 0.050	< 0.100
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	< 0.0010	< 0.0020	< 0.0020	< 0.0010	< 0.0010	< 0.0010	< 0.0020	< 0.0020	< 0.0010
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	< 0.0010	< 0.0010	< 0.0010	< 0.0005	< 0.0005	< 0.0005	< 0.0010	< 0.0010	< 0.0005
Copper	mg/L	0.0337		0.0077			0.0047			0.0041			0.0051	0.0033	0.0012	0.0017	<0.0025	0.0025	0.0057	0.0068	0.0065	0.0075	0.0167	0.0052	0.0079	0.0043	0.0155	0.0040	0.0068	0.0128	0.0132	0.0130	0.0143	0.0130	0.0128	0.0139	0.0142
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	< 0.050	< 0.100	< 0.100	< 0.050	< 0.050	< 0.250	< 0.250	< 0.050	< 0.100
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	< 0.0010	< 0.0010	< 0.0010	< 0.0005	< 0.0005	< 0.0005	< 0.0010	< 0.0010	0.0005
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	0.0027	0.0034	0.0031	0.0029	0.0027	0.0022	0.0024	0.0023	0.0023
Mercury (dissolved)	mg/L	<0.0002		<0.0002			<0.0002			<0.0002			<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002															
Mercury (dissolved low-level)	ng/L																						<5	<100	<100	<100	<100	< 100	< 100	< 100	< 100	< 100	< 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	< 0.0010	< 0.0010	< 0.0010	< 0.0005	< 0.0005	< 0.0005	< 0.0010	< 0.0010	0.0005
Selenium	mg/L	0.0020		<0.0020			<0.0010			<0.0010			<0.0010	<0.0010	<0.0020	<0.0030	<0.0050	0.0031	<0.0030	<0.0050	<0.0020	<0.0010	<0.0010	<0.0050	<0.0010	<0.0050	<0.0030	< 0.0050	< 0.0020	< 0.0020	< 0.0020	0.0013	< 0.0010	< 0.0010	< 0.0020	< 0.0020	< 0.0010
Silica (Si02)	mg/L	9.09		8.45			8.68			8.28			7.77	7.62	7.40	7.84	7.40	8.17	8.21	7.82	8.28	8.44	8.13	7.63	8.45	6.83	7.53	6.17	8.14	7.52	7.80	7.80	8.31	8.23	8.27	7.35	7.67
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	3.80	3.51	3.65	3.65	3.89	3.85	3.87	3.44	3.59
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	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0005	< 0.0005	< 0.0010	< 0.0010	< 0.0005
Zinc	mg/L	0.0080		<0.0040			0.0023			<0.0020			<0.0020	<0.0020	<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	< 0.0040	< 0.0040	< 0.0040	< 0.0020	0.0107	0.0089	0.0135	0.0120	0.0108

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				2024				2025			
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	Q1	Q2	Q3	Q4
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	11	3	6	8	11	1	5	8	11
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	11/13	3/17	6/19	8/6	11/21	1/25	5/13	8/15	11/1
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	Y	Y	Y	Y	Y	Y	Y	Y	Y
Field Parameters:																																					
Purge Flow Rate	gpm	0.25	1.00	0.50	3.00	0.50	0.25	0.50	1.00	0.50	0.50	0.75	0.25	0.25	0.25	0.25	0.25	0.75	0.25	0.25	0.25	0.25	0.25	0.13	1.00	0.22	0.18	0.13	0.16	0.22	0.13	0.13	0.13	0.13	0.06	0.22	0.07
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	2.0	1.8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
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	128.50	128.25	128.19	128.36	128.10	127.75	127.80	128.06	128.05
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	13.3	12.2	13.1	13.5	12.6	11.8	13.2	14.3	13.0
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	7.67	7.61	7.56	7.53	7.57	7.69	7.33	7.34	7.38	7.24	7.37	7.53	7.55
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	815	854	813	824	830	880	822	792	803
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	-140.3	-210.9	-141.2	-101.5	-189.8	-90.2	-93.1	-204.7	4.2
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	269	279	282	296	281	268	292	266	276
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	7.70	7.26	7.52	7.56	7.55	7.54	7.47	7.55	7.54
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	505	460	490	480	490	450	275	490	475
Calcium	mg/L	112.0		120.0			105.0			73.1			52.1	49.3	53.8	53.3	49.1	52.2	53.3	53.0	51.1	55.7	53.1	52.4	52.0	57.9	53.3	52.4	51.4	53.5	55.1	57.7	53.4	50.6	54.8	50.0	52.3
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	34.1	35.4	35.2	36.9	35.9	34.4	37.7	34.2	35.2
Sodium	mg/L	106.0		124.0			102.0			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	75.1	76.0	78.2	77.5	78.1	74.0	78.4	73.4	78.3
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	1.46	1.54	< 2.00	1.67	1.61	< 5.00	1.64	1.55	1.57
Alkalinity, Total	mg/L	370		415			435			393			390	339	340	315	410	370	385	360	385	362	380	356	410	350	388	350	335	370	375	375	405	365	390	360	395
Alkalinity, Bicarbonate	mg/L	370		415			435			393			390	339	340	315	410	370	385	360	385	362	380	340	410	338	388	350	335	370	375	375	405	365	390	360	395
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	< 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
Chloride	mg/L	18.80		18.50			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	3.58	3.56	3.56	3.48	3.37	3.62	3.52	3.46	3.86
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	0.159	0.206	0.201	0.211	0.233	0.215	0.202	0.201	0.207
Sulfate as SO4	mg/L	478.0		471.0			390.0			232.0			127.0	109.0	103.0	99.2	99.0	101.0	96.3	102.0	98.4	100.0	94.7	106.0	107.0	107.0	106.0	104.0	104.0	106.0	107.0	106.0	102.0	108.0	108.0	105.0	105.0
Total Organic Carbon (TOC)	mg/L	4.17		4.02			2.92			2.21			1.75	1.63	1.63	1.61	1.44	0.93	1.42	1.54	1.40	1.54	1.36	1.60	0.77	1.44	1.15	1.59	< 1.00	1.45	1.46	1.40	1.47	1.50	1.26	1.35	1.44
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	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Ammonia as N ^	mg/L	NA		NA			NA			NA			0.199	NA	NA	NA	NA	NA	NA	NA	NA	NA	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	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	< 0.050	< 0.050	< 0.100	< 0.050	< 0.050	< 0.250	< 0.050	< 0.050	< 0.050
Arsenic	mg/L	0.0074		0.0124			0.0190			0.0156			0.0104	0.0073	0.0075	0.0064	0.0058	0.0074	0.0055	0.0017	0.0051	0.0046	0.0047	0.0042	0.0037	0.0033	0.0036	0.0029	0.0030	0.0029	0.0029	0.0030	0.0026	0.0026	0.0025	< 0.0020	0.0022
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	< 0.0005	< 0.0005	< 0.0010	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0010	< 0.0005
Copper	mg/L	0.0016		0.0025			0.0017			0.0011			0.0004	0.0010	<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	0.0026	0.0030	0.0038	0.0039	0.0052	0.0029	0.0051	0.0070	0.0046
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	0.051	0.066	< 0.100	0.064	0.051	< 0.250	0.063	0.056	0.075
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	< 0.0005	< 0.0005	< 0.0010	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0010	< 0.0005
Manganese	mg/L	1.3100		1.2200			0.6970			0.5050			0.3130	0.3030	0.3070	0.2590	0.2190	0.1960	0.1750	0.0772	0.1610	0.1630	0.1500	0.1450	0.1340	0.1220	0.1110	0.1200	0.1050	0.0976	0.1110	0.0906	0.0880	0.0822	0.0767	0.0769	0.0669
Mercury (dissolved)	mg/L	<0.0002		<0.0002			<0.0002			<0.0002			<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002															
Mercury (dissolved low-level)	ng/L																						<5	<100	<100	<100	<100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 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	<0.0010	<0.0005	<0.0025	<0.0005	< 0.0010	< 0.0005	< 0.0005	< 0.0010	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0010	< 0.0005
Selenium	mg/L	0.0012		<0.0020			<0.0010			<0.0010			<0.0010	<0.001	<0.0010	<0.0020	<0.0020	0.0038	<0.0020	<0.0020	0.0031	<0.0010	0.0014	<0.0020	0.0012	<0.0050	0.0006	< 0.0020	< 0.0010	0.0019	< 0.0020	0.0026	< 0.0010	< 0.0010	0.0014	< 0.0020	0.0016
Silica (Si02)	mg/L	14.10		16.30			17.70			18.50			18.00	18.90	18.70	19.90	18.50	20.10	21.50	20.00	20.80	22.20	20.40	20.80	20.90	22.60	21.50	20.60	20.80	20.40	20.00	20.50	20.10	18.90	20.10	20.40	19.00
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	10.40	9.54	9.75	9.75	10.60	10.00	9.61	9.71	9.55	9.36	9.59	9.41	8.83	9.39	9.54	8.90
Uranium	mg/L	0.0052		0.0040			0.0010			0.0009			0.0004	<0.0005	<0.0005	<0.0010	<0.0010	<0.0005	<0.001	<0.0010	<0.0005	<0.0005	<0.0025	<0.0010	<0.0005	<0.0025	0.0001	< 0.0010	< 0.0005	< 0.0005	< 0.0010	< 0.0010	< 0.0005	< 0.0005	< 0.0005	< 0.0010	< 0.0005
Zinc	mg/L	0.0344		<0.0040			<0.0020			<0.0080			<0.0020	<0.0020	<0.0100	<0.0040	<0.0040	<0.0020	<0.004	<0.0040	<0.0020	<0.0020	<0.0020	<0.0040	<0.0020	<0.0100	0.0009	< 0.0040	< 0.0020	0.0046	< 0.0040	< 0.0020	0.0039	< 0.0020	0.0128	0.0104	0.0106

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.*