



ANNEX F5

GROUNDWATER MONITORING RESULTS

TABLE F5.1 GROUNDWATER MONITORING RESULTS (JANUARY 2023)

Parameters	Units	MWX-1	MWX-2	MWX-3	MWX-4	MWX-5	MWX-6	MWX-7	MWX-8	MWX-9	MWX-10	MWX-11	MWX-12	MWX-13	MWX-14
Water Level	mPD	2.85	2.94	2.91	2.91	2.92	2.89	2.55	2.91	2.54	2.43	2.95	6.79	35.59	41.91
Bicarbonate Alkalinity as CaCO ₃	mg/L	100	256	139	<1	<1	<1	33	<1	123	221	251	54	18	13
Carbonate Alkalinity as CaCO ₃	mg/L	<1	<1	<1	63	77	113	29	90	<1	<1	<1	<1	<1	<1
Total Alkalinity as CaCO ₃	mg/L	100	256	139	101	132	189	62	131	123	221	251	54	18	13
pH Value	pH Unit	8	7.9	7.9	10.9	11.1	11.3	9.3	10.9	8.2	7.9	7.6	7	5.9	5.9
Electrical Conductivity	µS/cm	1270	922	1130	945	1260	1320	2440	1770	1000	948	856	306	92	98
Ammonia	mg/L	0.8	0.02	1.58	4.27	2.34	3.74	6.35	8.64	1.22	0.02	0.13	0.02	<0.01	<0.01
Chloride	mg/L	305	38	204	175	206	190	665	364	184	114	74	21	15	18
Nitrite	mg/L	<0.01	0.02	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01
Phosphorus	mg/L	0.01	0.01	0.01	<0.01	<0.01	<0.01	0.02	<0.01	0.02	0.01	0.01	0.04	0.01	<0.01
Sulphate	mg/L	70	197	90	74	124	100	36	196	88	93	83	61	3	4
Sulphide	mg/L	0.2	<0.1	<0.1	7.2	7.7	17.4	2.5	5.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Kjeldahl Nitrogen	mg/L	0.8	0.1	1.8	5	2.4	4.2	7.1	9.6	1.4	0.1	0.2	0.1	<0.1	<0.1
Nitrate	mg/L	<0.01	0.59	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.03	0.01	<0.01	0.01	0.1	0.08
Total Nitrogen	mg/L	0.8	0.7	1.8	5	2.5	4.2	7.1	9.7	1.4	0.1	0.2	0.1	0.1	<0.1
Boron	µg/L	110	180	200	200	200	180	690	190	270	180	90	20	20	10
Calcium	mg/L	63.6	59.6	72.6	35.3	35	33.6	22.5	40.4	53.8	84.2	96.7	24.8	0.85	1.01
Mercury	µg/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20

Parameters	Units	MWX-1	MWX-2	MWX-3	MWX-4	MWX-5	MWX-6	MWX-7	MWX-8	MWX-9	MWX-10	MWX-11	MWX-12	MWX-13	MWX-14
Magnesium	mg/L	8.39	57.5	4.79	0.13	<0.05	<0.05	3.2	<0.05	6.27	7.01	6.84	4.26	0.98	0.88
Sodium	mg/L	151	47.4	120	113	151	161	370	247	113	88.9	51.5	22.6	12.3	13.2
Iron	mg/L	0.06	<0.04	0.09	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Potassium	mg/L	20.8	11.8	27.2	29.8	54.9	56.2	49.5	64.8	21.6	13.1	9.26	2.95	3.63	3.41
Cadmium	µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chromium	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Copper	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Lead	µg/L	<1	<1	<1	<1	<1	1	<1	<1	<1	<1	<1	<1	<1	<1
Manganese	µg/L	664	156	848	<1	<1	<1	<1	<1	58	657	754	590	18	8
Nickel	µg/L	<1	<1	<1	1	1	2	<1	4	<1	<1	<1	<1	<1	<1
Zinc	µg/L	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	24	11	<10
Biochemical Oxygen Demand	mg/L	<2	<2	2	<2	<2	7	<2	<2	2	3	<2	<2	<2	<2
Chemical Oxygen Demand	mg/L	7	3	15	24	30	44	11	38	8	8	4	<2	2	2
Total Organic Carbon	mg/L	4	1	8	10	12	12	6	16	4	4	2	<1	<1	<1

TABLE F5.2 GROUNDWATER MONITORING RESULTS (FEBRUARY 2023)

Parameters	Units	MWX-1	MWX-2	MWX-3	MWX-4	MWX-5	MWX-6	MWX-7	MWX-8	MWX-9	MWX-10	MWX-11	MWX-12	MWX-13	MWX-14
Water Level	mPD	2.41	2.71	2.94	2.37	2.72	1.71	2.64	2.96	2.84	2.03	3.17	6.29	Dry	41.41
Bicarbonate Alkalinity as CaCO ₃	mg/L	132	260	126	<1	<1	<1	42	<1	123	242	223	56	NA	12
Carbonate Alkalinity as CaCO ₃	mg/L	<1	<1	<1	72	88	134	24	79	<1	<1	<1	<1	NA	<1
Total Alkalinity as CaCO ₃	mg/L	132	260	126	108	141	204	66	117	123	242	223	56	NA	12
pH Value	pH Unit	7.9	8	8	10.9	11.2	11.4	9.2	10.9	8.3	8	8	7	NA	5.6
Electrical Conductivity	µS/cm	998	874	1110	960	1280	1300	2430	2050	862	776	667	302	NA	99
Ammonia	mg/L	<0.01	<0.01	0.18	0.48	0.27	0.44	0.66	0.96	1.74	0.04	0.17	<0.01	NA	<0.01
Chloride	mg/L	179	41	203	188	215	193	652	458	151	72	51	21	NA	18
Nitrite	mg/L	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	0.15	<0.01	<0.01	<0.01	<0.01	<0.01	NA	<0.01
Phosphorus	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	0.03	0.02	0.01	0.03	NA	<0.01
Sulphate	mg/L	60	141	79	63	123	79	41	167	58	36	47	55	NA	4
Sulphide	mg/L	<0.1	<0.1	<0.1	8.9	13.8	22.4	1.9	4.8	0.1	<0.1	<0.1	<0.1	NA	<0.1
Total Kjeldahl Nitrogen	mg/L	0.1	<0.1	1.9	6	3.2	5.3	6.5	10.9	1.8	<0.1	0.3	<0.1	NA	<0.1
Nitrate	mg/L	<0.01	0.45	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	NA	0.07
Total Nitrogen	mg/L	0.1	0.5	1.9	6	3.2	5.3	6.6	10.9	1.8	<0.1	0.3	<0.1	NA	0.1
Boron	µg/L	130	180	200	190	200	190	710	240	320	90	80	20	NA	10
Calcium	mg/L	58.8	57.5	63.9	38.1	38.5	31.3	25.1	51.5	40.9	79.8	74.8	25.2	NA	0.92
Mercury	µg/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	NA	<0.20



Parameters	Units	MWX-1	MWX-2	MWX-3	MWX-4	MWX-5	MWX-6	MWX-7	MWX-8	MWX-9	MWX-10	MWX-11	MWX-12	MWX-13	MWX-14
Magnesium	mg/L	7.33	51.3	4.17	<0.05	<0.05	<0.05	4.64	<0.05	6.4	7.53	6	4.14	NA	0.89
Sodium	mg/L	114	46.9	125	115	158	161	437	320	102	57.9	48.6	25.9	NA	14.2
Iron	mg/L	0.05	<0.04	0.1	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.38	NA	<0.04
Potassium	mg/L	19.8	10.6	27	31.3	56.8	54.9	50.4	72	18.6	8.34	8.51	3.01	NA	3.82
Cadmium	µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	NA	<0.2
Chromium	µg/L	<1	<1	<1	<1	1	<1	<1	<1	<1	<1	<1	<1	NA	<1
Copper	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1
Lead	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1
Manganese	µg/L	573	172	751	<1	2	<1	1	<1	82	1120	750	726	NA	7
Nickel	µg/L	<1	<1	<1	1	1	2	<1	4	<1	<1	<1	<1	NA	<1
Zinc	µg/L	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	13	NA	10
Biochemical Oxygen Demand	mg/L	<2	<2	<2	6	4	10	<2	3	<2	<2	<2	<2	NA	<2
Chemical Oxygen Demand	mg/L	6	6	16	28	30	38	12	34	10	4	4	5	NA	<2
Total Organic Carbon	mg/L	4	4	10	8	10	11	6	15	7	2	<1	3	NA	<1

TABLE F5.3 GROUNDWATER MONITORING RESULTS (MARCH 2023)

Parameters	Units	MWX-1	MWX-2	MWX-3	MWX-4	MWX-5	MWX-6	MWX-7	MWX-8	MWX-9	MWX-10	MWX-11	MWX-12	MWX-13	MWX-14
Water Level	mPD	2.71	2.81	2.91	2.67	2.85	2.66	2.36	2.61	2.28	2.16	2.75	6.33	35.38	39.36
Bicarbonate Alkalinity as CaCO ₃	mg/L	155	256	113	<1	<1	<1	34	<1	131	214	235	55	17	16
Carbonate Alkalinity as CaCO ₃	mg/L	<1	<1	<1	62	52	120	26	79	<1	<1	<1	<1	<1	<1
Total Alkalinity as CaCO ₃	mg/L	155	256	113	96	76	202	61	129	131	214	235	55	17	16
pH Value	pH Unit	7.8	8	8	10.7	10.7	11.3	9.3	10.9	8.3	7.9	8	7	5.6	5.8
Electrical Conductivity	µS/cm	982	874	1090	1130	1430	1340	2240	2920	786	727	694	298	93	107
Ammonia	mg/L	0.26	<0.01	1.74	6.17	2.61	4.23	3.25	13.8	1.27	0.02	0.17	0.01	0.02	0.03
Chloride	mg/L	166	40	217	238	320	206	535	821	133	81	53	21	14	18
Nitrite	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	2.8	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Phosphorus	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.04	0.02	0.02	0.04	0.01	<0.01
Sulphate	mg/L	61	132	78	63	120	96	62	90	46	43	48	48	3	5
Sulphide	mg/L	<0.1	<0.1	0.2	10	8	27.8	1.2	25.2	1.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Kjeldahl Nitrogen	mg/L	0.4	<0.1	2.2	6.7	3.5	4.8	3.3	13.8	1.5	0.1	0.4	0.1	<0.1	0.1
Nitrate	mg/L	0.07	0.41	0.01	<0.01	<0.01	0.02	0.65	<0.01	<0.01	0.01	<0.01	0.01	0.1	0.07
Total Nitrogen	mg/L	0.4	0.5	2.2	6.7	3.5	4.9	6.7	13.8	1.5	0.1	0.4	0.1	0.2	0.2
Boron	µg/L	140	180	220	190	190	180	400	430	320	80	80	20	10	10
Calcium	mg/L	57.6	59.4	60.9	40.5	35.2	36.1	17.3	80.4	42.3	80.3	81.1	24.7	0.82	1.01
Mercury	µg/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20



Parameters	Units	MWX-1	MWX-2	MWX-3	MWX-4	MWX-5	MWX-6	MWX-7	MWX-8	MWX-9	MWX-10	MWX-11	MWX-12	MWX-13	MWX-14
Magnesium	mg/L	8.5	49.4	3.44	<0.05	<0.05	<0.05	1.6	<0.05	6.22	7.26	6.29	3.78	0.94	0.8
Sodium	mg/L	108	45.1	123	138	185	157	286	415	90.9	43.7	49.7	23.9	13.3	13.5
Iron	mg/L	<0.04	<0.04	0.09	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.04	0.29	<0.04	<0.04
Potassium	mg/L	18.8	10.5	26	31.4	53.1	54	54.6	69	15.2	7.05	8.72	2.9	3.89	3.56
Cadmium	µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chromium	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Copper	µg/L	<1	<1	<1	<1	<1	<1	1	<1	<1	1	<1	<1	1	<1
Lead	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Manganese	µg/L	1220	197	633	<1	<1	<1	<1	<1	126	1130	759	590	12	8
Nickel	µg/L	<1	<1	<1	1	<1	2	1	2	<1	<1	<1	<1	<1	<1
Zinc	µg/L	<10	<10	<10	<10	<10	<10	<10	<10	<10	15	<10	<10	11	13
Biochemical Oxygen Demand	mg/L	<2	<2	<2	<2	2	3	<2	<2	<2	<2	<2	<2	<2	<2
Chemical Oxygen Demand	mg/L	11	6	19	34	30	48	30	42	10	8	8	12	5	5
Total Organic Carbon	mg/L	6	6	6	9	6	10	6	13	5	5	5	4	3	2

TABLE F5.4 GROUNDWATER MONITORING RESULTS (APRIL 2023)

Parameters	Units	MWX-1	MWX-2	MWX-3	MWX-4	MWX-5	MWX-6	MWX-7	MWX-8	MWX-9	MWX-10	MWX-11	MWX-12	MWX-13	MWX-14
Water Level	mPD	3.51	2.91	2.84	2.97	2.52	2.41	2.44	2.46	2.34	3.23	2.77	6.39	35.42	42.11
Bicarbonate Alkalinity as CaCO ₃	mg/L	180	265	175	41	47	126	38	17	126	199	232	54	17	13
Carbonate Alkalinity as CaCO ₃	mg/L	<1	<1	<1	<1	<1	<1	<1	30	<1	<1	<1	<1	<1	<1
Total Alkalinity as CaCO ₃	mg/L	180	265	175	46	66	196	38	48	126	199	232	54	17	13
pH Value	pH Unit	7.7	8	8	10	10.6	11.4	8.2	9.4	8.3	7.9	7.9	7.2	5.9	5.6
Electrical Conductivity	µS/cm	978	843	1080	1140	1670	1290	1810	1780	890	818	676	297	91	98
Ammonia	mg/L	0.18	0.01	1.04	3.91	2.24	3.74	0.48	7.07	1.6	<0.01	0.14	0.02	<0.01	<0.01
Chloride	mg/L	177	42	145	251	407	218	359	410	175	114	50	23	15	18
Nitrite	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.95	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Phosphorus	mg/L	<0.01	0.01	0.01	<0.01	<0.01	0.01	<0.01	<0.01	0.1	0.02	0.01	0.04	0.01	0.01
Sulphate	mg/L	56	122	91	140	118	78	290	160	57	51	54	50	3	4
Sulphide	mg/L	<0.1	<0.1	<0.1	4.1	5.3	19.4	<0.1	<0.1	0.4	<0.1	<0.1	<0.1	<0.1	<0.1
Total Kjeldahl Nitrogen	mg/L	0.3	<0.1	1.2	4.5	2.7	4.6	<1.0	7.8	1.7	<0.1	0.2	0.4	<0.1	<0.1
Nitrate	mg/L	0.06	0.21	<0.01	<0.01	<0.01	<0.01	2.98	<0.01	<0.01	<0.01	<0.01	0.02	0.09	0.06
Total Nitrogen	mg/L	0.3	0.2	1.2	4.5	2.7	4.6	4.4	7.8	1.7	<0.1	0.2	0.4	0.2	0.1
Boron	µg/L	150	190	220	210	180	180	280	250	340	100	80	30	20	20
Calcium	mg/L	59.1	55	81.3	44.6	46.9	37.4	61.7	23.4	42.4	73.9	65.5	26.3	0.82	1.03
Mercury	µg/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20

Parameters	Units	MWX-1	MWX-2	MWX-3	MWX-4	MWX-5	MWX-6	MWX-7	MWX-8	MWX-9	MWX-10	MWX-11	MWX-12	MWX-13	MWX-14
Magnesium	mg/L	9.65	47.8	4.7	1.44	0.17	<0.05	2.6	0.32	5.48	7.4	6.23	4.09	1.03	0.91
Sodium	mg/L	101	40.7	102	140	229	150	240	263	104	71.6	52.3	25.1	14.1	15
Iron	mg/L	<0.04	<0.04	0.11	<0.04	<0.04	<0.04	<0.04	<0.04	0.07	<0.04	0.11	0.19	<0.04	<0.04
Potassium	mg/L	18.2	9.69	26.1	33.4	58.6	54.4	63.1	59.3	16.9	7.15	8.62	2.93	4.06	3.86
Cadmium	µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chromium	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Copper	µg/L	<1	1	<1	<1	<1	<1	2	<1	<1	<1	<1	<1	<1	<1
Lead	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Manganese	µg/L	1560	47	659	<1	<1	<1	2	1	116	1360	544	414	5	5
Nickel	µg/L	<1	<1	<1	<1	<1	1	1	3	<1	<1	<1	<1	<1	<1
Zinc	µg/L	<10	<10	<10	<10	<10	<10	<10	17	<10	<10	<10	<10	<10	<10
Biochemical Oxygen Demand	mg/L	<2	<2	<2	<2	<2	8	<2	3	<2	<2	<2	<2	<2	<2
Chemical Oxygen Demand	mg/L	5	4	17	22	27	54	27	25	13	7	7	7	<2	4
Total Organic Carbon	mg/L	4	2	7	8	7	10	9	11	5	4	5	4	<1	2

TABLE F5.5 GROUNDWATER MONITORING RESULTS (MAY 2023)

Parameters	Units	MWX-1	MWX-2	MWX-3	MWX-4	MWX-5	MWX-6	MWX-7	MWX-8	MWX-9	MWX-10	MWX-11	MWX-12	MWX-13	MWX-14
Water Level	mPD	2.81	3.21	2.74	2.87	3.12	3.01	2.54	2.46	3.04	2.43	2.77	5.89	34.82	41.51
Bicarbonate Alkalinity as CaCO ₃	mg/L	187	258	183	<1	<1	<1	25	<1	124	226	190	56	17	14
Carbonate Alkalinity as CaCO ₃	mg/L	<1	<1	<1	62	62	126	9	84	<1	<1	<1	<1	<1	<1
Total Alkalinity as CaCO ₃	mg/L	187	258	183	111	76	172	35	96	124	226	190	56	17	14
pH Value	pH Unit	7.7	8	8	10.9	10.7	11.3	9.2	10.5	8.2	7.9	8	7	5.8	5.7
Electrical Conductivity	µS/cm	1020	955	1090	1060	1570	1230	1630	1740	1090	1120	597	293	92	100
Ammonia	mg/L	0.32	<0.01	0.91	4.9	2.44	3.51	0.29	8.63	1.05	<0.01	0.14	<0.01	<0.01	<0.01
Chloride	mg/L	123	50	158	191	350	192	266	343	151	124	44	21	14	17
Nitrite	mg/L	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	0.29	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Phosphorus	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	0.02	<0.01	<0.01
Sulphate	mg/L	43	148	100	58	109	85	164	151	81	111	47	44	3	5
Sulphide	mg/L	<0.1	<0.1	<0.1	7.9	5.5	13.7	<0.1	4.4	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Kjeldahl Nitrogen	mg/L	0.4	<0.1	1.2	5.4	2.8	4.4	1.6	9.7	1.3	0.1	0.2	<0.1	<0.1	<0.1
Nitrate	mg/L	<0.01	0.41	<0.01	<0.01	<0.01	<0.01	3.96	0.01	<0.01	<0.01	<0.01	<0.01	0.08	0.07
Total Nitrogen	mg/L	0.4	0.4	1.2	5.4	2.8	4.4	5.8	9.7	1.3	0.1	0.2	<0.1	<0.1	<0.1
Boron	µg/L	140	180	190	170	170	160	240	170	300	250	70	20	20	10
Calcium	mg/L	64.2	61.7	84.6	45.3	44.6	41	28.5	33	59.7	96	65.9	24.7	1.07	1.1
Mercury	µg/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20



Parameters	Units	MWX-1	MWX-2	MWX-3	MWX-4	MWX-5	MWX-6	MWX-7	MWX-8	MWX-9	MWX-10	MWX-11	MWX-12	MWX-13	MWX-14
Magnesium	mg/L	11.9	54.7	5.55	0.14	0.08	<0.05	0.59	<0.05	5.14	7.11	5.22	4	1	0.87
Sodium	mg/L	103	52.7	98.8	117	212	147	241	236	121	118	42.4	23.9	13.2	14.1
Iron	mg/L	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Potassium	mg/L	18.7	11	24.8	31.8	57.7	55.8	63.5	61.9	20.4	11.9	8.17	2.86	3.84	3.68
Cadmium	µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chromium	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Copper	µg/L	<1	<1	<1	<1	<1	<1	2	<1	<1	2	<1	<1	1	<1
Lead	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Manganese	µg/L	2070	102	773	<1	<1	<1	<1	<1	127	495	577	133	14	9
Nickel	µg/L	<1	<1	<1	1	<1	2	1	5	<1	<1	<1	<1	<1	<1
Zinc	µg/L	<10	<10	<10	<10	<10	<10	<10	<10	<10	11	11	<10	17	12
Biochemical Oxygen Demand	mg/L	<2	<2	<2	<2	<2	4	<2	<2	<2	<2	<2	<2	<2	<2
Chemical Oxygen Demand	mg/L	4	3	16	29	38	36	29	70	6	9	5	<2	5	<2
Total Organic Carbon	mg/L	3	<1	5	9	8	10	11	14	5	2	3	<1	3	<1

TABLE F5.6 GROUNDWATER MONITORING RESULTS (JUNE 2023)

Parameters	Units	MWX-1	MWX-2	MWX-3	MWX-4	MWX-5	MWX-6	MWX-7	MWX-8	MWX-9	MWX-10	MWX-11	MWX-12	MWX-13	MWX-14
Water Level	mPD	2.91	3.31	3.04	4.07	3.12	2.01	2.74	3.06	2.84	2.43	3.67	6.19	35.02	40.61
Bicarbonate Alkalinity as CaCO ₃	mg/L	165	259	162	35	<1	<1	29	<1	126	250	215	55	17	14
Carbonate Alkalinity as CaCO ₃	mg/L	<1	<1	<1	29	52	129	18	101	<1	<1	<1	<1	<1	<1
Total Alkalinity as CaCO ₃	mg/L	165	259	162	64	98	161	48	112	126	250	215	55	17	14
pH Value	pH Unit	7.7	8.1	8	9.5	10.8	11.3	9.6	10.9	7.9	7.9	8.1	7.1	5.8	5.7
Electrical Conductivity	µS/cm	1210	1060	1100	863	1450	1170	1590	1860	1640	1010	774	294	93	100
Ammonia	mg/L	0.17	<0.01	1.05	3.02	2.58	3.44	0.48	7.28	0.24	0.03	0.17	0.02	0.04	<0.01
Chloride	mg/L	237	44	148	172	285	133	258	403	275	122	51	23	15	18
Nitrite	mg/L	<0.01	0.01	<0.01	<0.01	<0.01	0.01	0.57	0.01	0.05	<0.01	<0.01	0.01	<0.01	0.01
Phosphorus	mg/L	<0.01	0.02	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	0.01	0.04	<0.01	<0.01
Sulphate	mg/L	64	150	74	96	127	72	165	173	316	90	71	44	3	4
Sulphide	mg/L	<0.1	<0.1	<0.1	4.7	7.9	15.1	<0.1	5.8	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Kjeldahl Nitrogen	mg/L	0.2	<0.1	1.4	3.8	3.2	4.4	2.1	8.6	0.9	0.2	0.3	0.2	0.2	<0.1
Nitrate	mg/L	<0.01	0.64	<0.01	<0.01	<0.01	<0.01	3.23	<0.01	0.83	0.01	<0.01	<0.01	0.09	0.06
Total Nitrogen	mg/L	0.2	0.7	1.4	3.8	3.2	4.4	5.9	8.6	1.7	0.2	0.3	0.2	0.2	0.2
Boron	µg/L	170	210	230	240	220	190	280	200	410	220	110	30	20	20
Calcium	mg/L	76	61.3	65.8	18.4	33.6	39.6	17.8	50.1	98.4	88.6	86.2	24	0.83	1.07
Mercury	µg/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20



Parameters	Units	MWX-1	MWX-2	MWX-3	MWX-4	MWX-5	MWX-6	MWX-7	MWX-8	MWX-9	MWX-10	MWX-11	MWX-12	MWX-13	MWX-14
Magnesium	mg/L	13	55.7	5.73	2.03	<0.05	<0.05	0.93	<0.05	4.64	8.11	6.91	3.79	0.96	0.84
Sodium	mg/L	122	51.9	94.4	104	154	135	215	248	161	91.6	50	24	13.1	14
Iron	mg/L	<0.04	<0.04	0.06	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.05	0.48	<0.04	<0.04
Potassium	mg/L	19.9	12.1	31.2	26.2	44.5	48.3	52.8	62.9	28.6	11.4	8	2.9	3.89	3.73
Cadmium	µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chromium	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	1	<1	<1	<1	<1	<1
Copper	µg/L	<1	<1	<1	<1	<1	<1	4	<1	5	1	<1	<1	1	<1
Lead	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Manganese	µg/L	1400	4	961	<1	<1	<1	<1	<1	48	278	768	710	18	8
Nickel	µg/L	<1	<1	<1	<1	<1	2	2	5	<1	<1	<1	<1	<1	<1
Zinc	µg/L	<10	<10	<10	34	<10	<10	<10	<10	<10	<10	<10	11	19	12
Biochemical Oxygen Demand	mg/L	<2	<2	<2	<2	3	3	<2	3	<2	<2	<2	<2	<2	<2
Chemical Oxygen Demand	mg/L	7	<2	14	18	26	44	28	36	22	3	5	2	<2	5
Total Organic Carbon	mg/L	2	<1	6	7	8	9	11	12	9	2	<1	<1	<1	1

TABLE F5.7 GROUNDWATER MONITORING RESULTS (JULY 2023)

Parameters	Units	MWX-1	MWX-2	MWX-3	MWX-4	MWX-5	MWX-6	MWX-7	MWX-8	MWX-9	MWX-10	MWX-11	MWX-12	MWX-13	MWX-14
Water Level	mPD	4.71	3.81	3.44	3.97	3.72	3.41	3.54	3.36	4.14	4.13	3.77	6.99	37.02	43.41
Bicarbonate Alkalinity as CaCO ₃	mg/L	140	235	172	<1	37	<1	<1	<1	145	237	200	54	17	14
Carbonate Alkalinity as CaCO ₃	mg/L	<1	<1	<1	68	9	132	88	78	<1	<1	<1	<1	<1	<1
Total Alkalinity as CaCO ₃	mg/L	140	235	172	72	46	179	112	104	145	237	200	54	17	14
pH Value	pH Unit	7.7	8.1	8	10.4	8.9	11.3	10.9	11	8	7.8	7.9	7	5.8	5.7
Electrical Conductivity	µS/cm	944	3340	1080	692	1340	1250	1400	2070	7110	1200	641	300	91	101
Ammonia	mg/L	0.07	0.6	1.43	2.37	1.47	3.44	5.16	4.53	0.4	<0.01	<0.01	<0.01	<0.01	<0.01
Chloride	mg/L	173	752	177	125	270	194	243	466	2110	159	46	21	14	17
Nitrite	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.03	0.02	<0.01	<0.01	<0.01	<0.01	<0.01
Phosphorus	mg/L	<0.01	0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	0.1	0.02	0.01	0.04	0.01	<0.01
Sulphate	mg/L	68	390	115	72	184	114	164	252	500	155	71	57	3	4
Sulphide	mg/L	<0.1	<0.1	<0.1	4.1	0.5	6.4	1.9	2.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Kjeldahl Nitrogen	mg/L	0.2	0.6	1.7	2.8	2	4.4	5.9	6.1	0.6	0.2	0.1	<0.1	<0.1	<0.1
Nitrate	mg/L	0.35	0.79	<0.01	<0.01	<0.01	0.01	<0.01	0.04	0.43	0.02	0.04	<0.01	0.12	0.08
Total Nitrogen	mg/L	0.6	1.4	1.7	2.8	2	4.5	5.9	6.1	1.1	0.2	0.2	<0.1	0.2	0.1
Boron	µg/L	120	460	200	210	210	190	220	170	1520	350	110	30	20	20
Calcium	mg/L	58.4	81.5	77.6	20	29.8	33.8	22.1	76.6	135	92.6	81.7	24.2	0.73	1.15
Mercury	µg/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20



Parameters	Units	MWX-1	MWX-2	MWX-3	MWX-4	MWX-5	MWX-6	MWX-7	MWX-8	MWX-9	MWX-10	MWX-11	MWX-12	MWX-13	MWX-14
Magnesium	mg/L	7.88	78.2	4.78	0.66	0.48	<0.05	<0.05	<0.05	96.1	8.42	4.69	3.75	0.92	0.8
Sodium	mg/L	97	419	110	89.4	177	153	198	266	1180	127	36	22.9	12.4	13.3
Iron	mg/L	<0.04	<0.04	0.07	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.43	<0.04	<0.04
Potassium	mg/L	16.9	30.4	26	24.9	58.6	55.3	52.1	75.3	67.5	13.7	8.88	2.74	3.59	3.54
Cadmium	µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chromium	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Copper	µg/L	<1	<1	<1	<1	<1	<1	2	<1	2	1	3	<1	<1	<1
Lead	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Manganese	µg/L	176	157	962	2	6	<1	<1	2	162	795	47	755	18	9
Nickel	µg/L	<1	<1	<1	<1	<1	2	2	3	<1	<1	<1	<1	<1	<1
Zinc	µg/L	12	10	495	<10	<10	<10	<10	<10	<10	<10	17	20	<10	16
Biochemical Oxygen Demand	mg/L	<2	<2	<2	<2	<2	6	<2	<2	<2	<2	<2	<2	<2	<2
Chemical Oxygen Demand	mg/L	7	28	18	19	30	43	41	32	23	10	7	<2	<2	<2
Total Organic Carbon	mg/L	3	<1	4	5	9	10	12	10	4	3	2	<1	<1	<1

TABLE F5.8 GROUNDWATER MONITORING RESULTS (AUGUST 2023)

Parameters	Units	MWX-1	MWX-2	MWX-3	MWX-4	MWX-5	MWX-6	MWX-7	MWX-8	MWX-9	MWX-10	MWX-11	MWX-12	MWX-13	MWX-14
Water Level	mPD	3.11	3.71	2.94	3.57	3.02	2.81	3.04	3.36	4.24	3.33	3.37	6.89	36.52	44.01
Bicarbonate Alkalinity as CaCO ₃	mg/L	141	264	198	22	50	12	18	8	166	230	198	54	17	13
Carbonate Alkalinity as CaCO ₃	mg/L	<1	<1	<1	50	5	133	74	68	<1	<1	<1	<1	<1	<1
Total Alkalinity as CaCO ₃	mg/L	141	264	198	73	54	145	92	76	166	230	198	54	17	13
pH Value	pH Unit	7.6	8.4	8.3	10.4	8.6	11.3	10.7	11	8.2	8.2	8.3	7.4	5.8	5.7
Electrical Conductivity	µS/cm	1000	1420	987	794	1300	1100	1350	2240	10400	994	663	300	94	96
Ammonia	mg/L	0.14	0.05	1.33	3.47	1.6	4.32	4.94	7.52	0.72	<0.01	0.05	<0.01	<0.01	<0.01
Chloride	mg/L	201	146	140	159	257	205	263	548	3360	118	48	21	15	18
Nitrite	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.12	0.08	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Phosphorus	mg/L	<0.01	0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.06	0.02	0.01	0.05	<0.01	<0.01
Sulphate	mg/L	64	315	94	79	167	96	170	240	637	117	73	57	3	4
Sulphide	mg/L	<0.1	<0.1	<0.1	3.9	<0.1	12.1	<0.1	2.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Kjeldahl Nitrogen	mg/L	0.2	<0.1	1.4	3.5	1.8	4.5	5.1	7.7	0.8	0.1	0.1	<0.1	<0.1	<0.1
Nitrate	mg/L	0.04	1.14	0.01	<0.01	<0.01	0.01	0.03	0.02	0.02	<0.01	<0.01	0.01	0.1	0.13
Total Nitrogen	mg/L	0.3	1.2	1.4	3.5	1.8	4.5	5.2	7.8	0.8	0.1	0.1	<0.1	0.1	0.1
Boron	µg/L	130	230	200	200	210	180	220	170	2120	270	110	30	20	20
Calcium	mg/L	59.3	76.9	76.1	23	23.6	31.3	19.5	79.4	115	88.2	80.6	23.9	0.79	0.88
Mercury	µg/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20



Parameters	Units	MWX-1	MWX-2	MWX-3	MWX-4	MWX-5	MWX-6	MWX-7	MWX-8	MWX-9	MWX-10	MWX-11	MWX-12	MWX-13	MWX-14
Magnesium	mg/L	8.99	65.4	5.13	0.41	0.41	<0.05	<0.05	0.45	152	8.13	4.95	1.32	0.9	0.77
Sodium	mg/L	109	105	86.2	105	181	161	189	313	1800	95.8	37.8	23.2	12.6	12.8
Iron	mg/L	<0.04	<0.04	0.12	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.46	<0.04	<0.04
Potassium	mg/L	20	18.5	27.5	26	60.4	55.1	51.2	81.1	78.3	14.6	8.26	2.52	3.58	3.39
Cadmium	µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chromium	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Copper	µg/L	<1	<1	<1	<1	1	<1	4	<1	<1	<1	<1	<1	<1	<1
Lead	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Manganese	µg/L	426	142	901	<1	4	<1	<1	<1	239	812	436	735	16	6
Nickel	µg/L	<1	<1	<1	<1	<1	2	2	4	<1	<1	<1	<1	<1	<1
Zinc	µg/L	<10	<10	<10	<10	<10	29	12	<10	<10	<10	16	27	14	16
Biochemical Oxygen Demand	mg/L	<2	<2	<2	2	<2	9	<2	4	2	<2	<2	<2	<2	<2
Chemical Oxygen Demand	mg/L	4	3	13	24	24	49	28	30	54	4	6	<2	<2	<2
Total Organic Carbon	mg/L	2	<1	8	6	9	10	12	12	7	2	2	<1	<1	1

TABLE F5.9 GROUNDWATER MONITORING RESULTS (SEPTEMBER 2023)

Parameters	Units	MWX-1	MWX-2	MWX-3	MWX-4	MWX-5	MWX-6	MWX-7	MWX-8	MWX-9	MWX-10	MWX-11	MWX-12	MWX-13	MWX-14
Water Level	mPD	3.81	4.01	4.54	4.47	3.92	4.01	3.74	4.96	5.04	4.93	6.47	7.49	38.72	46.41
Bicarbonate Alkalinity as CaCO ₃	mg/L	141	264	198	22	50	12	18	8	166	230	198	54	17	13
Carbonate Alkalinity as CaCO ₃	mg/L	<1	<1	<1	<1	10	116	70	73	<1	<1	<1	<1	<1	<1
Total Alkalinity as CaCO ₃	mg/L	115	215	192	48	54	152	92	108	162	260	135	57	18	16
pH Value	pH Unit	8	8	7.9	8.3	9	11	10.6	11	8	7.3	7.8	6.9	5.7	5.7
Electrical Conductivity	µS/cm	1120	5770	1340	1800	900	1090	1460	2850	14400	1190	441	318	95	145
Ammonia	mg/L	0.12	0.95	1.6	0.6	0.48	2.86	4.8	5.32	0.55	<0.01	<0.01	<0.01	<0.01	<0.01
Chloride	mg/L	196	1550	210	338	148	156	310	693	4400	124	33	20	15	24
Nitrite	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.12	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Phosphorus	mg/L	0.01	0.02	0.01	0.02	<0.01	<0.01	<0.01	<0.01	0.06	0.02	<0.01	0.03	0.01	<0.01
Sulphate	mg/L	130	447	162	321	139	117	141	216	790	147	39	65	3	10
Sulphide	mg/L	<0.1	<0.1	<0.1	0.4	0.6	5.5	3.8	2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Kjeldahl Nitrogen	mg/L	0.4	1.9	1.8	1.1	1	4	6.4	6.3	0.6	0.2	0.1	0.1	<0.1	<0.1
Nitrate	mg/L	<0.01	1.74	0.02	<0.01	<0.01	<0.01	0.01	0.07	<0.01	<0.01	0.15	<0.01	0.13	0.21
Total Nitrogen	mg/L	0.4	3.7	1.8	1.1	1	4	6.4	6.5	0.6	0.2	0.3	0.1	0.1	0.2
Boron	µg/L	170	710	220	400	240	250	280	200	2560	430	100	30	20	20
Calcium	mg/L	58.4	101	117	76.9	24.8	17.4	23.3	116	127	103	52.1	28.8	0.82	2.6
Mercury	µg/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20



Parameters	Units	MWX-1	MWX-2	MWX-3	MWX-4	MWX-5	MWX-6	MWX-7	MWX-8	MWX-9	MWX-10	MWX-11	MWX-12	MWX-13	MWX-14
Magnesium	mg/L	6.83	106	8.51	2.05	0.61	<0.05	0.2	223	223	8.91	3.03	4.24	0.96	1.67
Sodium	mg/L	140	903	127	259	118	158	223	386	2410	134	29.3	25.1	14.1	18.5
Iron	mg/L	<0.04	<0.04	0.14	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.24	<0.04	<0.04
Potassium	mg/L	24.3	53.7	32.5	42.6	52	61.8	62.4	100	135	16.2	8.29	3.53	4.34	5.31
Cadmium	µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chromium	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Copper	µg/L	<1	<1	<1	<1	1	1	<1	<1	<1	1	1	4	2	2
Lead	µg/L	<1	<1	<1	<1	<1	2	<1	<1	<1	<1	<1	<1	<1	<1
Manganese	µg/L	487	221	1180	28	6	<1	<1	<1	249	1100	18	746	10	9
Nickel	µg/L	<1	<1	<1	<1	<1	2	2	3	<1	<1	<1	<1	<1	<1
Zinc	µg/L	324	<10	68	<10	<10	<10	20	<10	12	11	<10	22	23	24
Biochemical Oxygen Demand	mg/L	<2	<2	<2	2	<2	4	3	2	<2	<2	<2	<2	<2	<2
Chemical Oxygen Demand	mg/L	15	14	18	19	20	36	40	32	<20	9	7	7	8	8
Total Organic Carbon	mg/L	7	2	6	9	6	10	11	9	<5	4	4	2	4	4

TABLE F5.10 GROUNDWATER MONITORING RESULTS (OCTOBER 2023)

Parameters	Units	MWX-1	MWX-2	MWX-3	MWX-4	MWX-5	MWX-6	MWX-7	MWX-8	MWX-9	MWX-10	MWX-11	MWX-12	MWX-13	MWX-14
Water Level	mPD	3.81	3.91	4.04	4.77	4.72	4.71	4.14	4.76	5.64	5.33	5.47	7.49	39.42	46.01
Bicarbonate Alkalinity as CaCO ₃	mg/L	106	191	184	135	47	2	<1	<1	171	200	118	52	17	13
Carbonate Alkalinity as CaCO ₃	mg/L	<1	<1	<1	<1	24	138	68	74	<1	<1	<1	<1	<1	<1
Total Alkalinity as CaCO ₃	mg/L	106	191	184	135	71	141	82	108	171	200	118	52	17	13
pH Value	pH Unit	8	7.9	7.6	8	9.3	10.4	10.4	10.9	8	7.7	7.6	6.8	5.7	5.5
Electrical Conductivity	µS/cm	837	5580	1060	964	732	934	1610	2650	14000	834	353	331	94	125
Ammonia	mg/L	0.26	1.2	1.43	0.18	0.64	2.23	6.03	4.76	0.5	<0.01	<0.01	<0.01	<0.01	0.06
Chloride	mg/L	158	1710	165	144	106	139	400	636	4400	92	23	20	15	24
Nitrite	mg/L	<0.01	<0.01	<0.01	<0.01	0.11	<0.01	<0.01	0.09	<0.01	<0.01	<0.01	0.04	<0.01	<0.01
Phosphorus	mg/L	0.01	0.01	0.01	0.03	<0.01	<0.01	0.01	<0.01	0.06	0.02	<0.01	0.01	<0.01	<0.01
Sulphate	mg/L	100	334	151	176	138	95	138	248	768	131	34	79	4	6
Sulphide	mg/L	<0.1	<0.1	0.2	<0.1	<0.1	4.3	4.1	2.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Kjeldahl Nitrogen	mg/L	0.4	1.2	1.5	0.4	1	2.5	6.4	4.9	0.5	<0.1	<0.1	0.2	<0.1	<0.1
Nitrate	mg/L	0.04	0.23	<0.01	<0.01	0.02	0.01	<0.01	0.07	<0.01	0.04	0.52	0.7	0.13	0.18
Total Nitrogen	mg/L	0.5	1.5	1.5	0.4	1.1	2.6	6.4	5.1	0.5	0.1	0.6	0.9	0.2	0.2
Boron	µg/L	130	720	220	230	260	260	380	210	2790	260	80	30	20	20
Calcium	mg/L	40.7	101	90.8	77	8.12	8.12	22.9	104	99.8	81.6	44.7	29.1	0.89	1.56
Mercury	µg/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20

Parameters	Units	MWX-1	MWX-2	MWX-3	MWX-4	MWX-5	MWX-6	MWX-7	MWX-8	MWX-9	MWX-10	MWX-11	MWX-12	MWX-13	MWX-14
Magnesium	mg/L	4.66	99.6	6.28	4.43	0.26	<0.05	0.06	0.07	222	6.69	2.61	4.83	1.03	1.34
Sodium	mg/L	104	850	102	100	103	140	252	362	2380	79.2	23.3	26.4	14	17.2
Iron	mg/L	<0.04	<0.04	0.08	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Potassium	mg/L	19.1	46	26.1	20.3	42.9	55.6	53.7	89.4	107	12.4	6.09	5.67	4.04	4.58
Cadmium	µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.6	<0.2	<0.2
Chromium	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Copper	µg/L	<1	<1	<1	<1	2	10	<1	<1	<1	2	<1	<1	2	<1
Lead	µg/L	<1	<1	<1	<1	<1	2	<1	<1	<1	<1	<1	1	<1	<1
Manganese	µg/L	304	193	903	42	2	<1	<1	<1	224	548	6	531	10	9
Nickel	µg/L	<1	<1	<1	<1	<1	2	1	2	<1	<1	<1	<1	<1	<1
Zinc	µg/L	<10	419	<10	<10	<10	33	<10	<10	11	773	<10	49	33	13
Biochemical Oxygen Demand	mg/L	<2	<2	<2	<2	<2	3	<2	<2	<2	<2	<2	<2	<2	<2
Chemical Oxygen Demand	mg/L	9	5	12	13	14	35	31	26	32	7	7	4	3	2
Total Organic Carbon	mg/L	6	2	7	5	3	7	7	6	5	4	5	1	1	2

TABLE F5.11 GROUNDWATER MONITORING RESULTS (NOVEMBER 2023)

Parameters	Units	MWX-1	MWX-2	MWX-3	MWX-4	MWX-5	MWX-6	MWX-7	MWX-8	MWX-9	MWX-10	MWX-11	MWX-12	MWX-13	MWX-14
Water Level	mPD	3.11	3.51	3.24	3.27	3.32	3.51	3.64	4.46	4.34	4.33	3.87	7.29	37.52	45.81
Bicarbonate Alkalinity as CaCO ₃	mg/L	119	253	154	26	10	<1	<1	<1	168	231	133	54	16	13
Carbonate Alkalinity as CaCO ₃	mg/L	<1	<1	<1	23	55	139	110	82	<1	<1	<1	<1	<1	<1
Total Alkalinity as CaCO ₃	mg/L	119	253	154	49	65	181	149	102	168	231	133	54	16	13
pH Value	pH Unit	8	7.9	7.9	9.3	9.9	11.1	11	11	8	7.8	7.8	7	5.8	5.6
Electrical Conductivity	µS/cm	1070	1100	1190	736	1020	1160	1240	2350	15100	1150	343	311	91	117
Ammonia	mg/L	0.3	0.03	1.68	1.81	2.06	3.79	6.53	4.76	0.54	0.02	0.02	0.05	<0.01	<0.01
Chloride	mg/L	204	40	216	142	197	188	222	570	4780	160	19	20	14	24
Nitrite	mg/L	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	0.01	0.04	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Phosphorus	mg/L	0.01	0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.07	0.03	0.01	0.03	<0.01	<0.01
Sulphate	mg/L	130	330	148	109	154	35	172	256	862	153	16	69	3	4
Sulphide	mg/L	<0.1	<0.1	0.2	3.1	2.9	11.2	7.3	0.7	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Kjeldahl Nitrogen	mg/L	0.6	<0.1	1.8	1.9	2.5	4.4	7.2	4.9	0.6	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrate	mg/L	<0.01	4.57	0.01	<0.01	<0.01	0.01	<0.01	0.08	0.01	<0.01	0.06	0.01	0.13	0.17
Total Nitrogen	mg/L	0.6	4.6	1.8	1.9	2.5	4.4	7.2	5	0.6	<0.1	<0.1	<0.1	0.2	0.2
Boron	µg/L	160	230	220	210	210	220	260	190	2550	280	40	20	10	10
Calcium	mg/L	49.8	79.3	80	22	15.4	26.3	26	86.6	111	92.6	45.1	27.1	0.85	1.46
Mercury	µg/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20

Parameters	Units	MWX-1	MWX-2	MWX-3	MWX-4	MWX-5	MWX-6	MWX-7	MWX-8	MWX-9	MWX-10	MWX-11	MWX-12	MWX-13	MWX-14
Magnesium	mg/L	6.04	55.1	6.09	0.82	0.12	<0.05	<0.05	<0.05	246	9.87	2.72	4.51	1.07	1.3
Sodium	mg/L	124	55.6	112	95.2	139	144	167	321	2420	118	19.3	24	13.2	16.5
Iron	mg/L	<0.04	<0.04	0.06	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.29	<0.04	<0.04
Potassium	mg/L	21.8	15.9	26	20.8	47.4	53	49.8	83.8	109	11.6	6.07	3.19	3.96	4.36
Cadmium	µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chromium	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Copper	µg/L	<1	<1	<1	<1	<1	1	<1	<1	<1	<1	<1	<1	2	3
Lead	µg/L	<1	<1	<1	<1	<1	1	<1	<1	<1	<1	<1	<1	<1	<1
Manganese	µg/L	366	133	1040	6	<1	<1	<1	<1	263	1970	15	776	11	9
Nickel	µg/L	<1	<1	<1	<1	1	2	2	3	<1	<1	<1	<1	<1	<1
Zinc	µg/L	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	20	61	611
Biochemical Oxygen Demand	mg/L	<2	<2	3	2	<2	7	5	2	<2	<2	<2	<2	<2	<2
Chemical Oxygen Demand	mg/L	10	2	15	14	22	35	38	24	28	5	<2	2	<2	3
Total Organic Carbon	mg/L	6	1	9	6	7	11	12	9	<5	2	<1	1	<1	1

TABLE F5.12 GROUNDWATER MONITORING RESULTS (DECEMBER 2023)

Parameters	Units	MWX-1	MWX-2	MWX-3	MWX-4	MWX-5	MWX-6	MWX-7	MWX-8	MWX-9	MWX-10	MWX-11	MWX-12	MWX-13	MWX-14
Water Level	mPD	3.01	2.95	2.89	2.62	3.36	3.18	2.46	2.78	3.12	3.34	3.15	8.63	36.16	44.99
Bicarbonate Alkalinity as CaCO ₃	mg/L	171	260	154	9	<1	<1	4	<1	101	198	170	54	17	13
Carbonate Alkalinity as CaCO ₃	mg/L	<1	<1	<1	42	96	137	66	78	<1	<1	<1	<1	<1	<1
Total Alkalinity as CaCO ₃	mg/L	171	260	154	50	133	189	71	114	101	198	170	54	17	13
pH Value	pH Unit	8	8	8.1	9.8	11.1	11.3	10.2	10.9	8	8	8.2	7.1	5.9	5.8
Electrical Conductivity	µS/cm	1070	1000	1140	786	1110	1190	2040	3330	2010	722	430	303	91	99
Ammonia	mg/L	0.04	0.02	1.54	2.9	2.17	4.36	5.8	13	1.39	0.02	0.03	<0.01	0.02	<0.01
Chloride	mg/L	185	40	218	156	187	189	552	819	448	73	26	20	15	20
Nitrite	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Phosphorus	mg/L	0.01	0.02	0.01	0.01	<0.01	0.01	0.02	<0.01	0.02	0.02	0.01	0.04	0.01	<0.01
Sulphate	mg/L	69	227	98	87	108	88	74	105	222	48	18	61	3	2
Sulphide	mg/L	<0.1	<0.1	0.1	2.7	7.1	10.1	4.1	12.4	0.2	<0.1	<0.1	<0.1	<0.1	<0.1
Total Kjeldahl Nitrogen	mg/L	0.1	<1.0	1.8	3	2.2	5.1	6	13.2	1.8	0.1	0.1	<0.1	<0.1	<0.1
Nitrate	mg/L	<0.01	5.38	<0.01	<0.01	<0.01	<0.01	0.01	0.01	<0.01	<0.01	<0.01	<0.01	0.1	0.12
Total Nitrogen	mg/L	0.1	5.4	1.8	3	2.2	5.1	6	13.2	1.8	0.1	0.1	<0.1	0.2	0.2
Boron	µg/L	180	230	230	230	210	210	520	430	340	130	70	20	10	10
Calcium	mg/L	60.3	73.5	78.8	19.9	29.7	27.6	26.4	107	119	69.8	57.6	24	0.89	0.92
Mercury	µg/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20

Parameters	Units	MWX-1	MWX-2	MWX-3	MWX-4	MWX-5	MWX-6	MWX-7	MWX-8	MWX-9	MWX-10	MWX-11	MWX-12	MWX-13	MWX-14
Magnesium	mg/L	8.85	51.9	5.48	0.29	<0.05	<0.05	0.36	<0.05	5.11	5.83	3.1	4.09	0.99	0.97
Sodium	mg/L	116	51.9	119	107	147	154	323	486	252	58.9	24.1	22.6	12.4	13.6
Iron	mg/L	<0.04	<0.04	0.05	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.41	<0.04	<0.04
Potassium	mg/L	21.2	14.4	27.6	23	53.4	54	58.4	83.6	35.9	9.74	6.31	2.6	3.46	3.41
Cadmium	µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chromium	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Copper	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	1	<1	<1	1
Lead	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Manganese	µg/L	444	139	919	2	<1	<1	<1	<1	278	580	460	691	14	7
Nickel	µg/L	<1	<1	<1	<1	1	2	<1	1	<1	<1	<1	<1	<1	<1
Zinc	µg/L	<10	267	<10	<10	61	<10	<10	<10	<10	12	<10	20	26	15
Biochemical Oxygen Demand	mg/L	<2	<2	<2	<2	4	10	<2	9	2	<2	<2	<2	<2	<2
Chemical Oxygen Demand	mg/L	3	<2	19	19	28	54	18	40	24	6	<2	<2	<2	<2
Total Organic Carbon	mg/L	1	<1	8	6	6	10	4	11	11	<1	<1	<1	<1	<1

FIGURE F5.1 GRAPHICAL PRESENTATION FOR GROUNDWATER MONITORING (MWX-1)

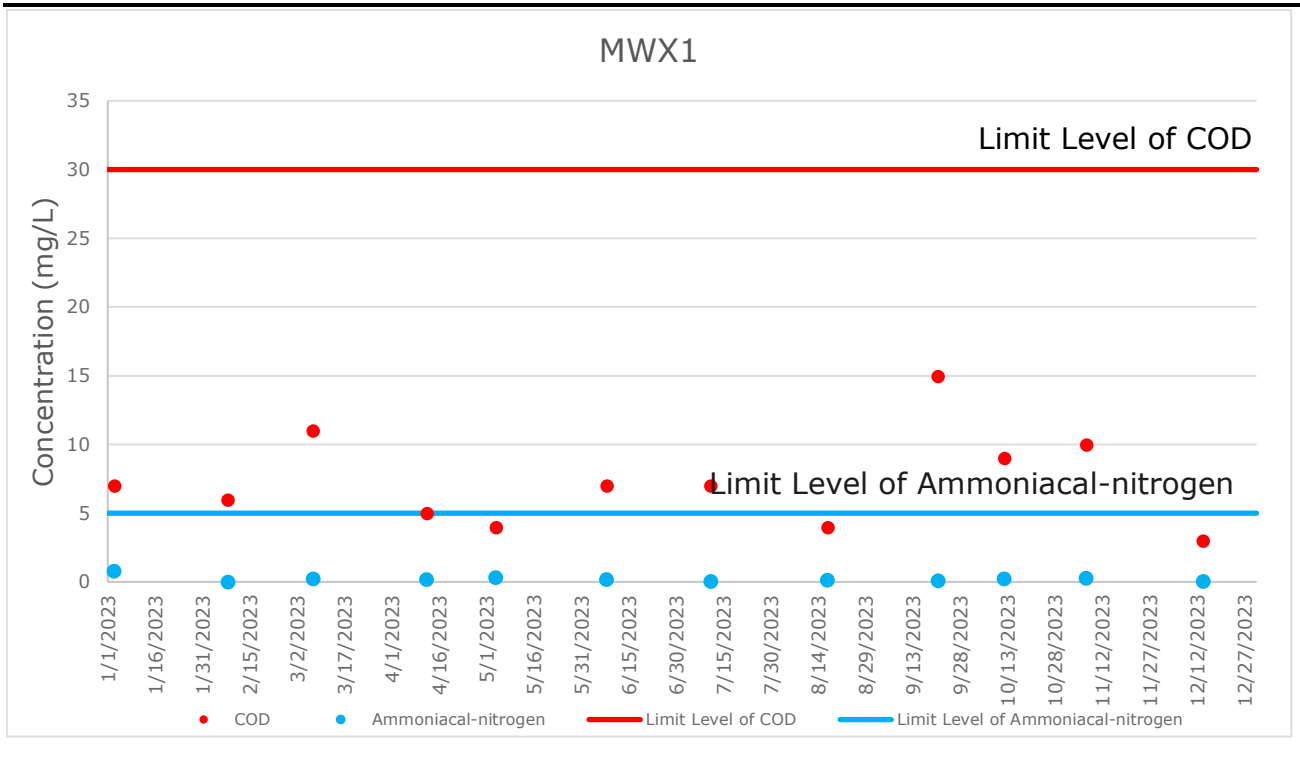


FIGURE F5.2 GRAPHICAL PRESENTATION FOR GROUNDWATER MONITORING (MWX-2)

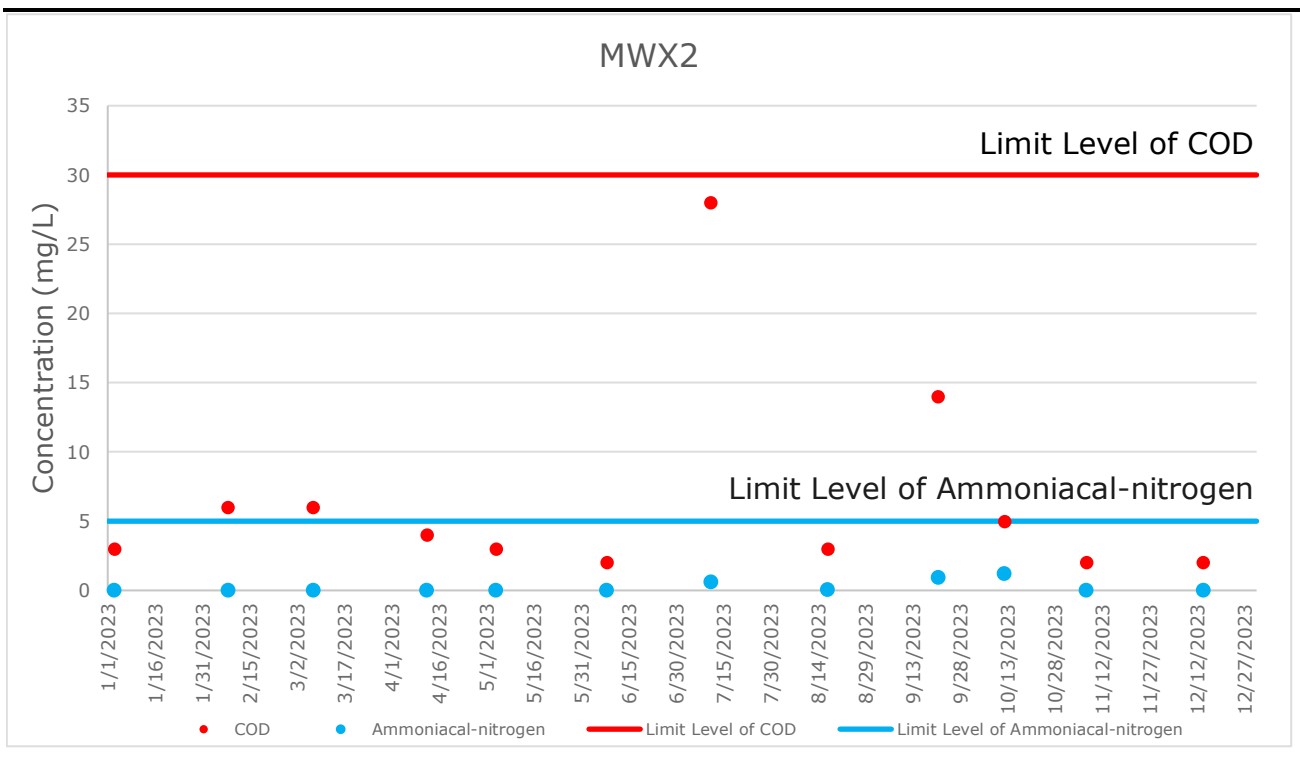


FIGURE F5.3 GRAPHICAL PRESENTATION FOR GROUNDWATER MONITORING (MWX-3)

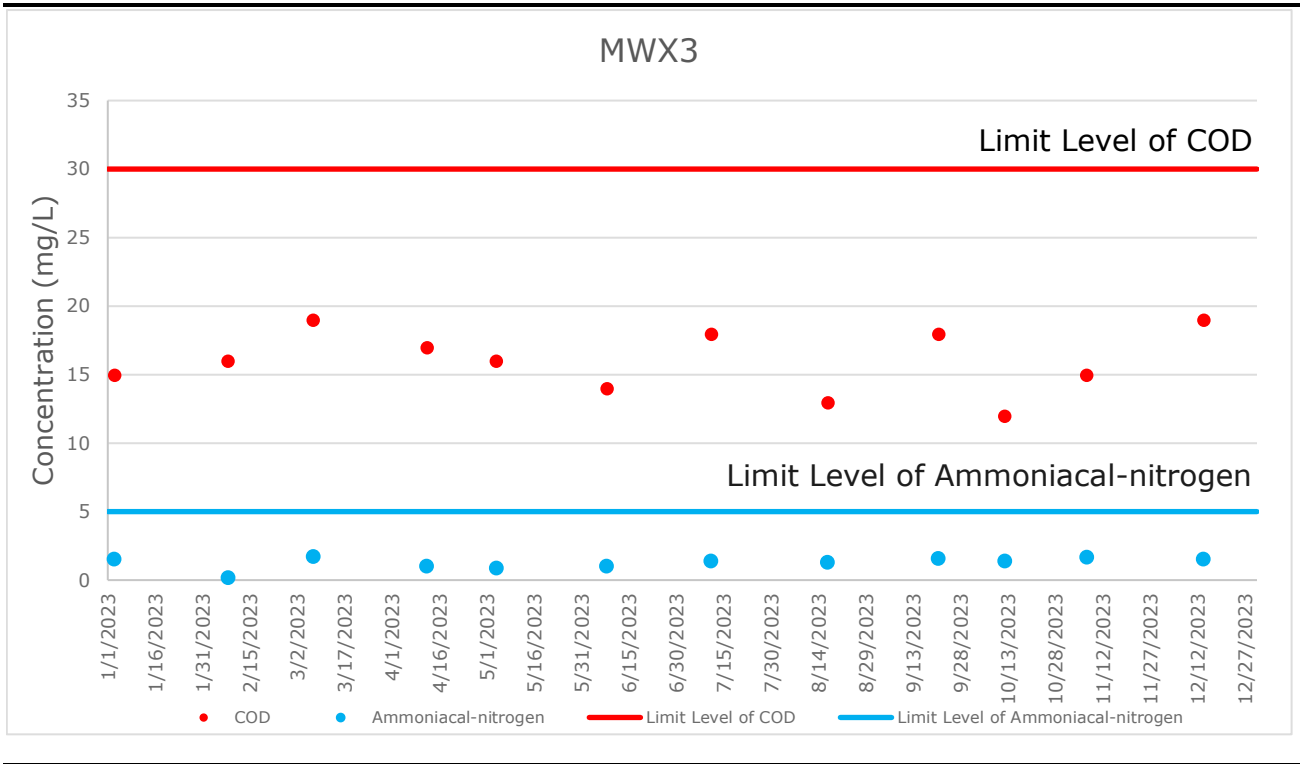


FIGURE F5.4 GRAPHICAL PRESENTATION FOR GROUNDWATER MONITORING (MWX-4)

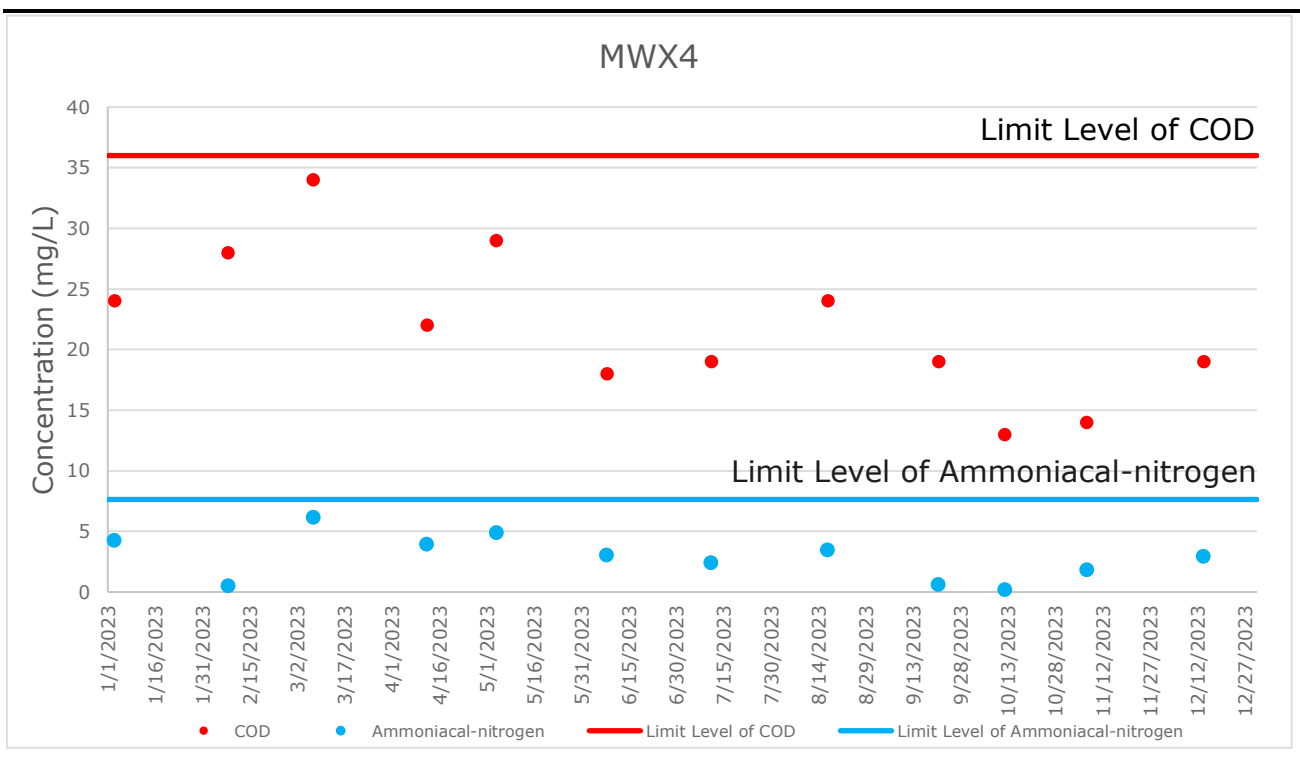


FIGURE F5.5 GRAPHICAL PRESENTATION FOR GROUNDWATER MONITORING (MWX-5)

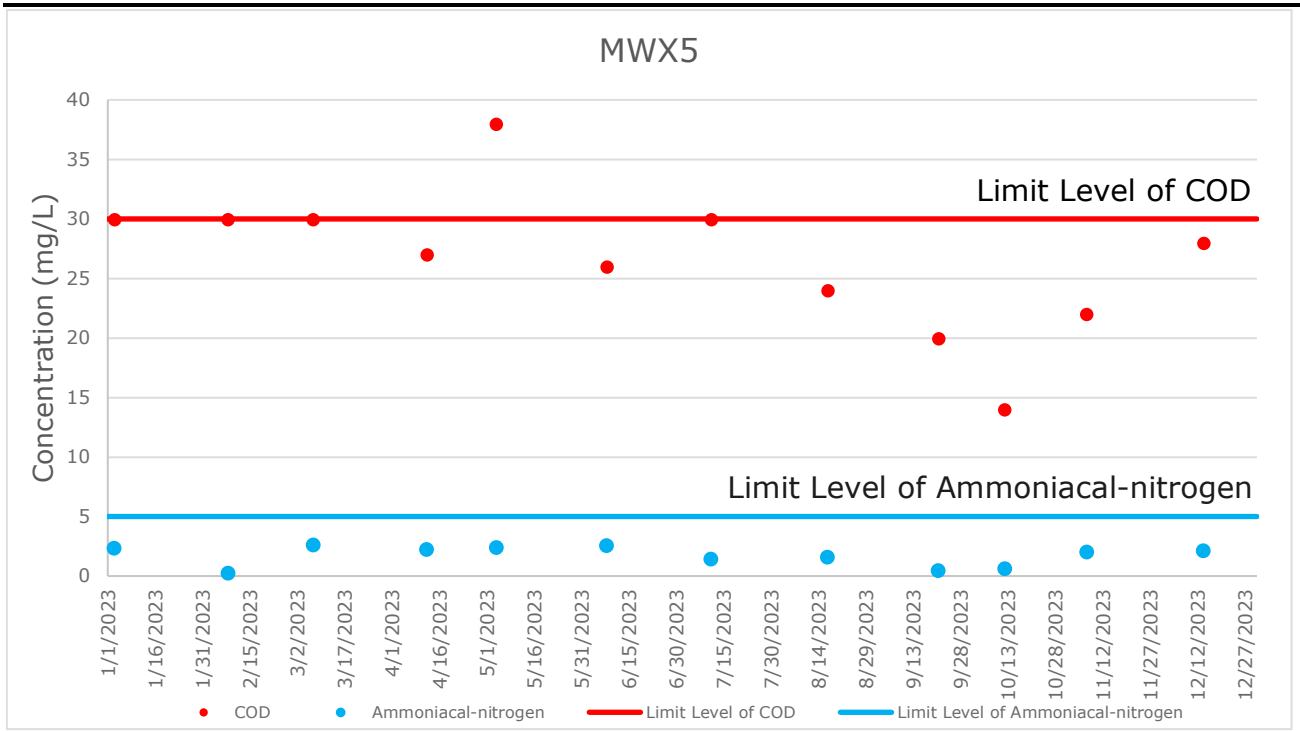


FIGURE F5.6 GRAPHICAL PRESENTATION FOR GROUNDWATER MONITORING (MWX-6)

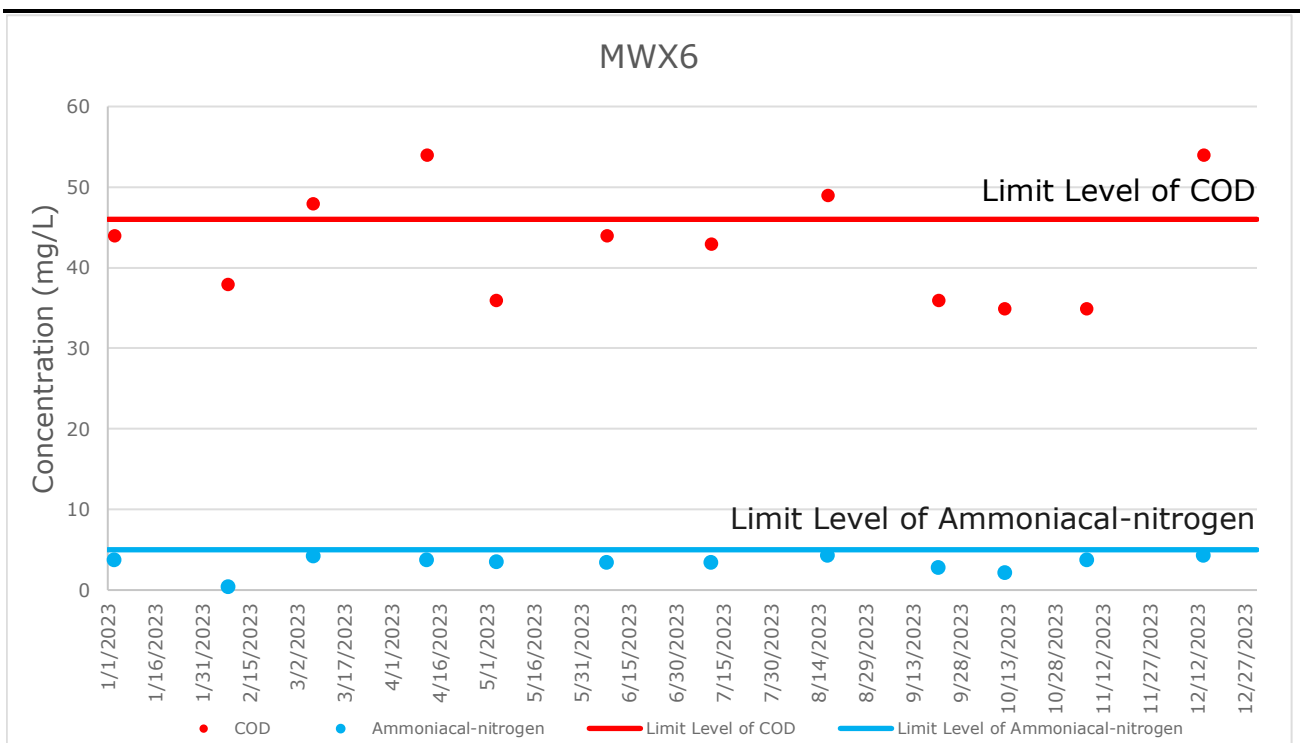


FIGURE F5.7 GRAPHICAL PRESENTATION FOR GROUNDWATER MONITORING (MWX-7)

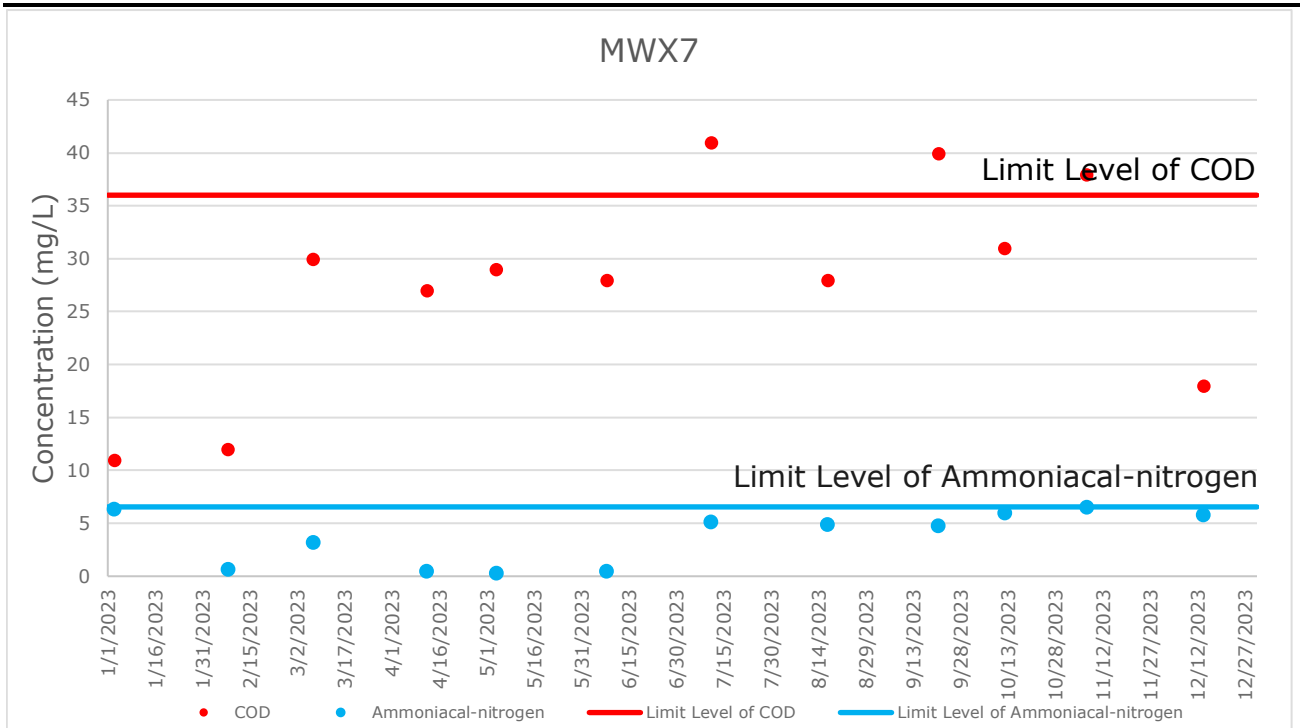


FIGURE F5.8 GRAPHICAL PRESENTATION FOR GROUNDWATER MONITORING (MWX-8)

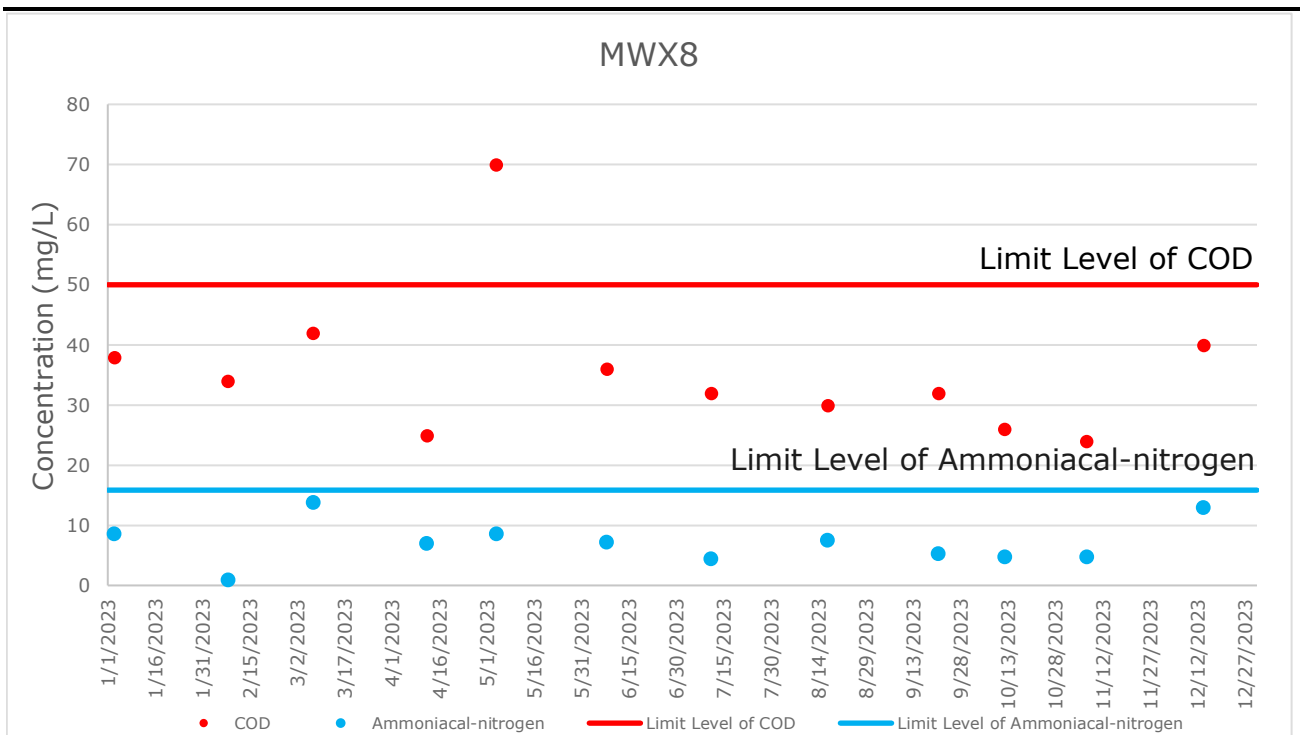


FIGURE F5.9 GRAPHICAL PRESENTATION FOR GROUNDWATER MONITORING (MWX-9)

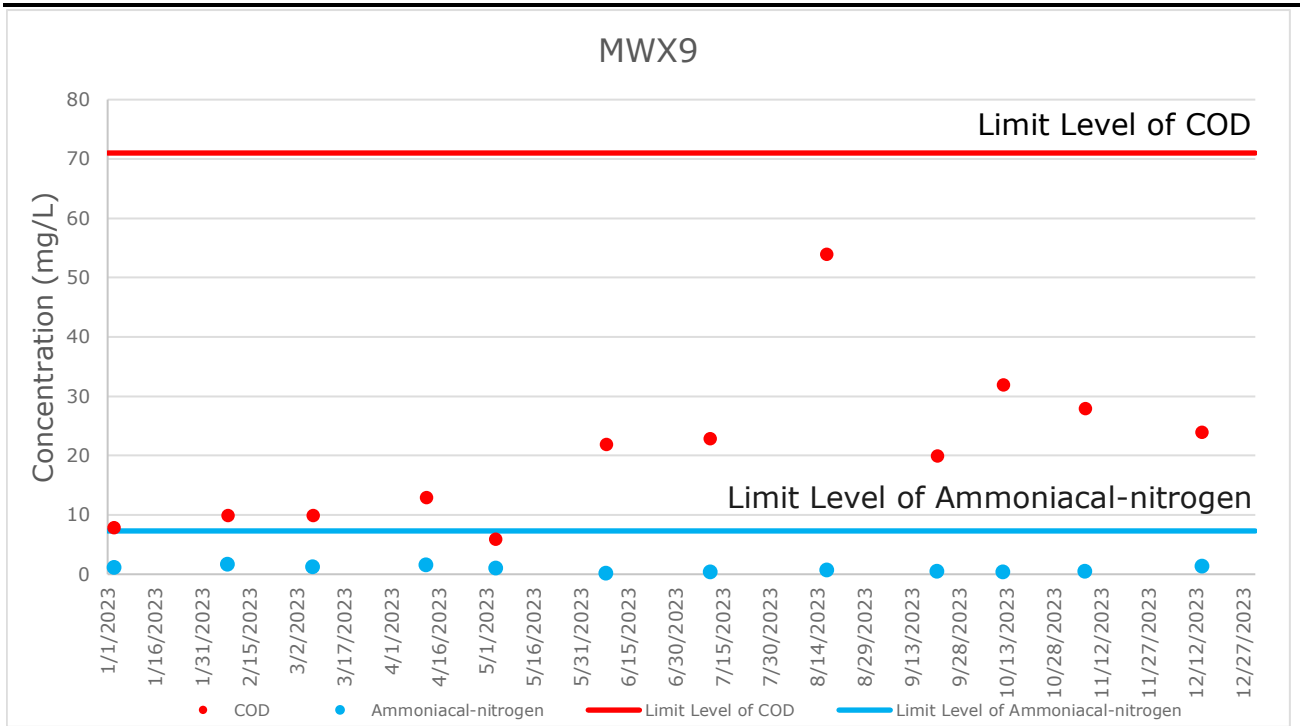


FIGURE F5.10 GRAPHICAL PRESENTATION FOR GROUNDWATER MONITORING (MWX-10)

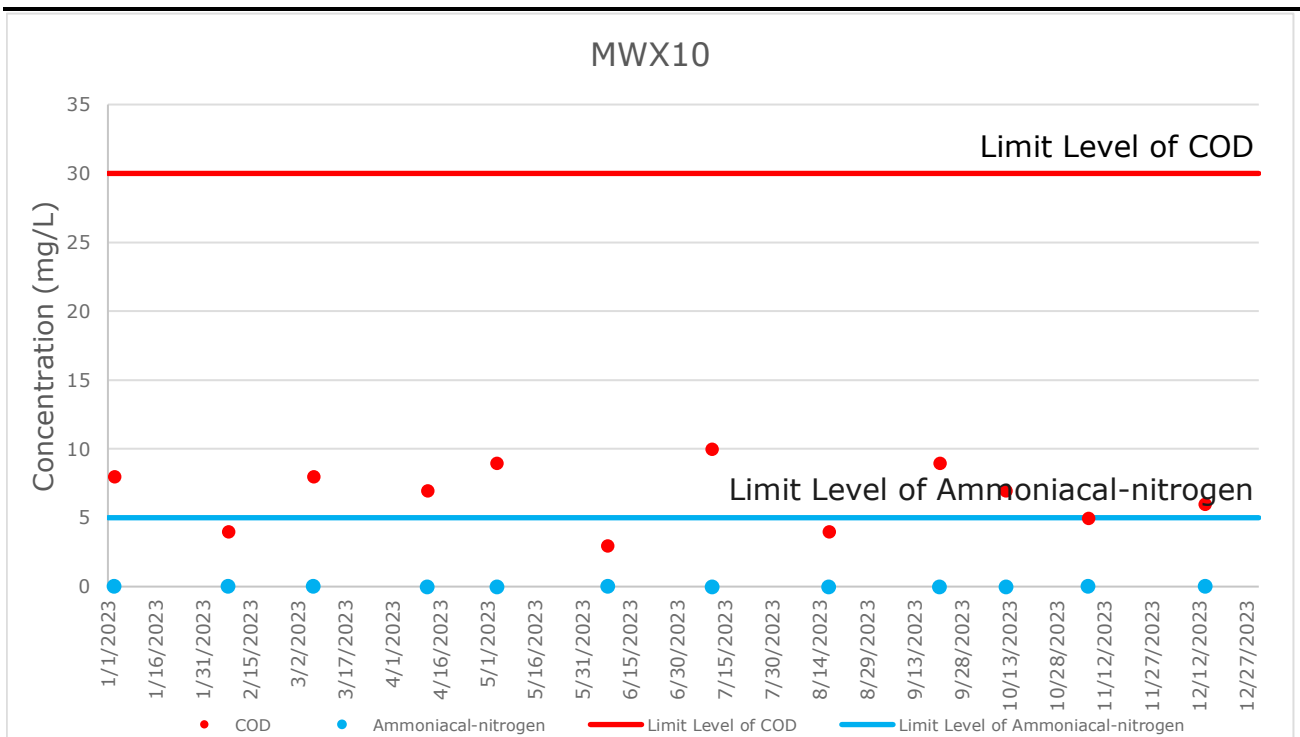


FIGURE F5.11 GRAPHICAL PRESENTATION FOR GROUNDWATER MONITORING (MWX-11)

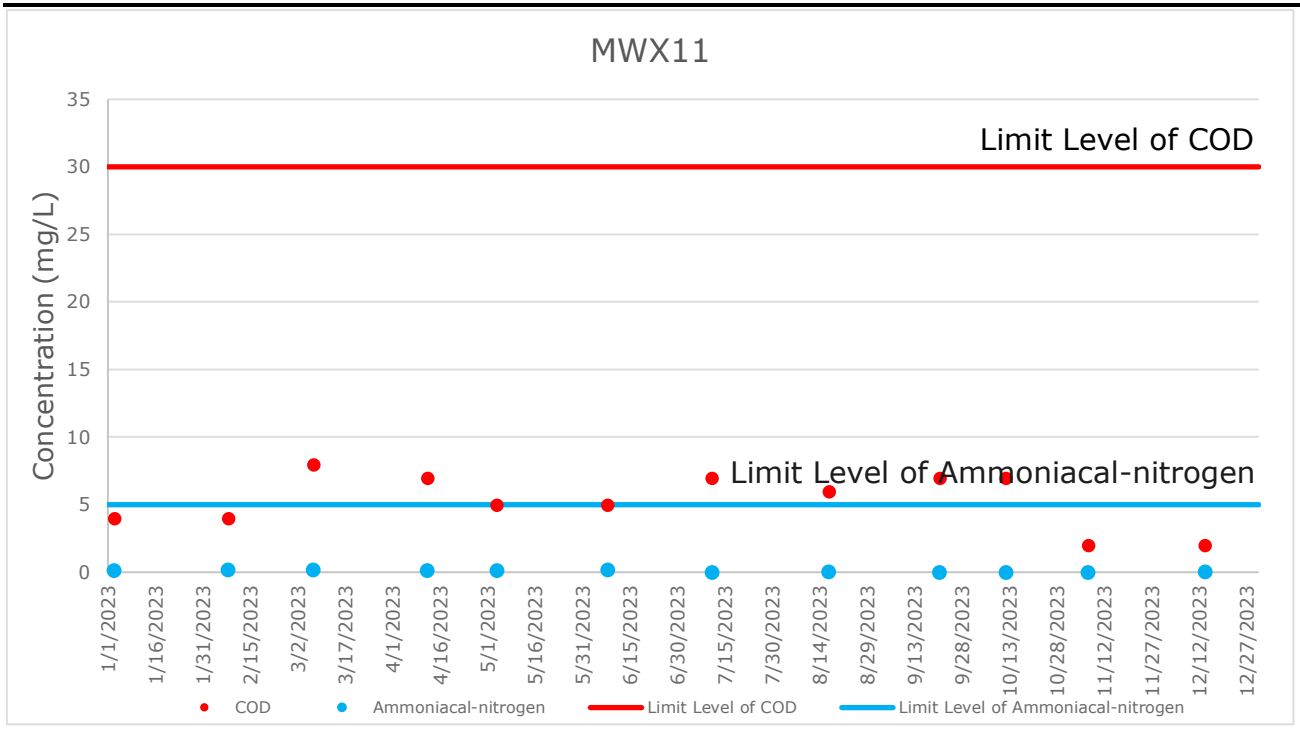


FIGURE F5.12 GRAPHICAL PRESENTATION FOR GROUNDWATER MONITORING (MWX-12)

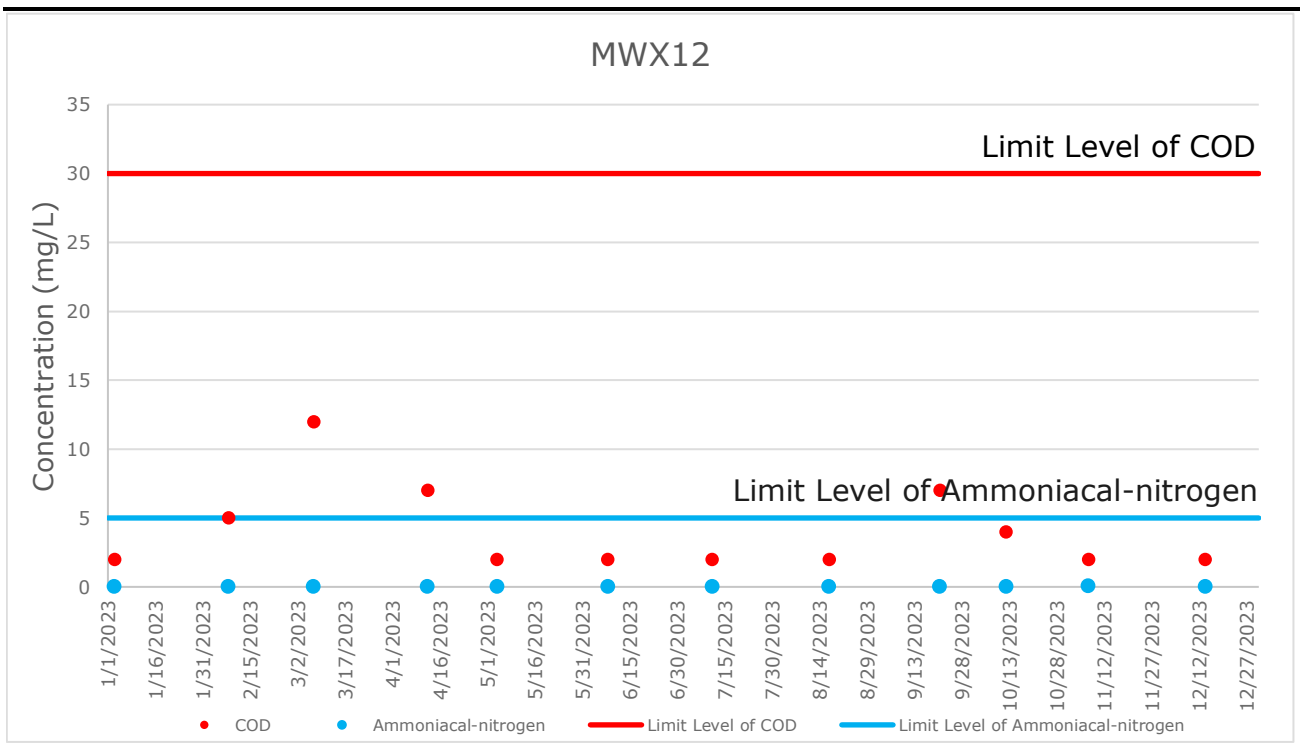


FIGURE F5.13 GRAPHICAL PRESENTATION FOR GROUNDWATER MONITORING (MWX-13)

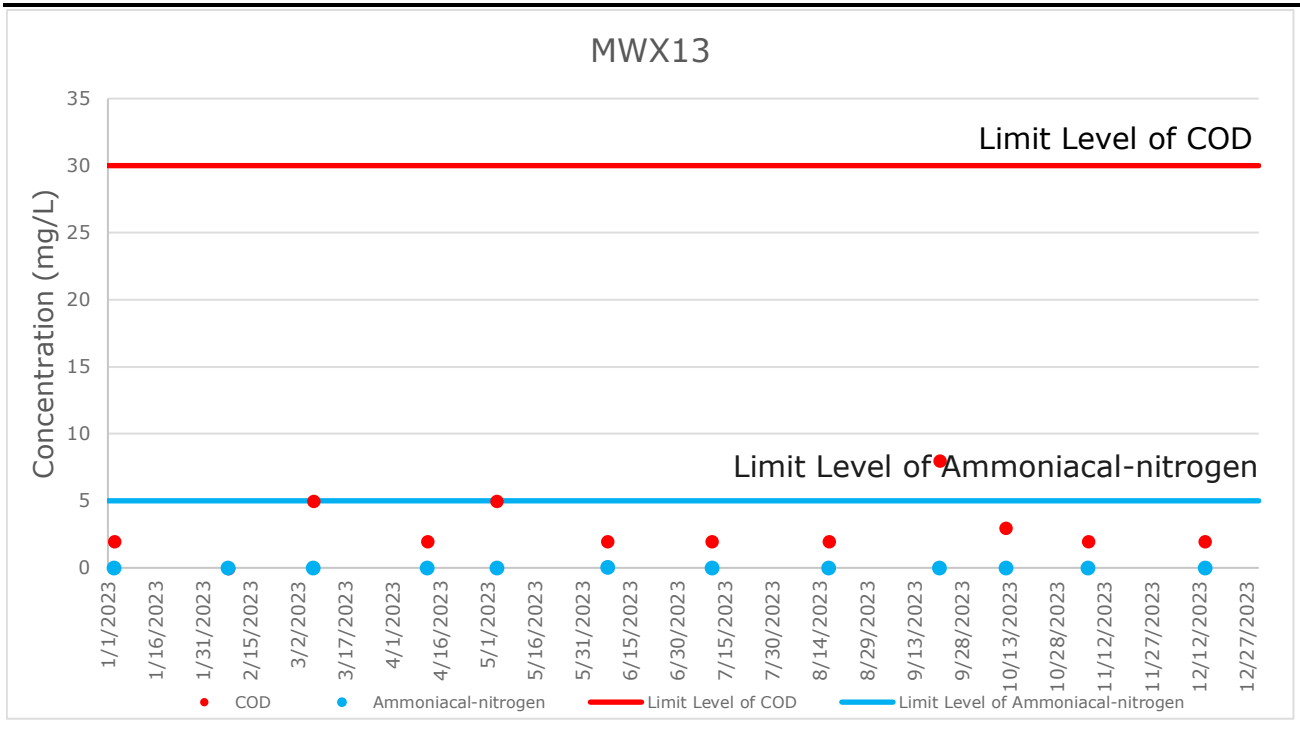


FIGURE F5.14 GRAPHICAL PRESENTATION FOR GROUNDWATER MONITORING (MWX-14)

