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November 1, 2022

Mr. Bruce Bernard
Calvin, Giordano & Associates, Inc.
1800 Eller Drive, Suite 600
Fort Lauderdale, FL, 33316

Miromar Lakes Water Quality Sampling Report – August 2022

Dear Mr. Bernard

GHD Services Inc. (GHD) is pleased to present the results of our water quality sampling services for Lakes 3 and 6 – Miromar Lakes.

1. Water Quality Sampling – August 2022

The August 2022 sampling event consisted of the collection of surface water samples from a total of five (5) test locations (WQ #1 through #4 and #6) from Lake 6 – Miromar Lakes, and one (1) location (WQ #5) at the outfall of Lake 3 within the Miromar Lakes Golf Club as identified on **Figure 1**.

The sampling plan includes sample collection at the following locations and depths:

Sample Identification	Sampling Location	Sample Depth
WQ Location #1	Rip Rap in front of the Miromar Lakes Pkwy Bridge	18 inches
WQ Location #2	Mouth of Canal (west of Via Portofino Way)	18 inches
WQ Location #3A	Back of Weir (southeast of Via Navona Way)	18 inches
WQ Location #4	Beach front (east of the Miromar Lakes Pkwy & Montlelago Ct.)	18 inches
WQ Location #5	Lake 3 Outfall within the Miromar Lakes Golf Club	18 inches
WQ Location #6	Front of Weir (southeast of Via Navona Way)	36 inches

Conductivity, dissolved oxygen, pH, and temperature were measured in the field with a calibrated YSI Model 556 multi-parameter water quality meter. Turbidity and total water depth were measured at the time of sample collection. Surface Water Field Sheets are attached. Field data is summarized in the **Table**.

Samples are collected using direct-dip sampling methods. The samples are capped, labeled, packed on ice, and transported to Benchmark EnviroAnalytical, Inc., in North Port, Florida. Benchmark EnviroAnalytical, Inc. is certified by the State of Florida and NELAP (National Environmental Laboratory Accreditation Conference). Laboratory analysis are conducted for 5-Day Biochemical Oxygen Demand (BOD5), Total Suspended Solids (TSS), Total Nitrogen, nitrogen speciation (ammonia, TKN, and nitrate + nitrite), Total Phosphorus, Ortho Phosphorus (Field Filtered) and Chlorophyll-*a*.

All samples collected during the August 2022 sampling event were prepared and analyzed within the method required holding times. The laboratory data have been reviewed with respect to authenticity, precision, limits of detection, and accuracy of the data. The laboratory analytical results are summarized in the attached **Laboratory Analytical Report.**

Trend graphs have been prepared for each monitor location for laboratory analytical results and select field measurements. The trend graphs include water quality action levels for select parameters as developed and presented in the Lake Management Plan for Miromar Lakes. GHD recommends that if a single measurement exceeds an action level the District notify their lake maintenance contractor to inspect the lake(s) for evidence of potential algal blooms and treat as needed. If a subsequent measurement exceeds an action level, it is recommended the District investigate potential reasons behind the change and take appropriate action(s) as applicable based on the findings.

2. Analytical Summary

It appears that between the prior sampling event in February 2022 and the recent sampling event conducted on August 22, 2022:

- BOD5 levels remained consistent and undetected except for at WQL #2, which slightly increased, and WQL #5, which slightly decreased;
- Dissolved Oxygen and DO% results varied, but remained relatively constant according to historical trends;
- TKN and Total Nitrogen slightly increased at all locations except for WQL #6, where they slightly decreased;
- Orthophosphorus and Total Phosphorous remained consistent at all locations;
- Total Suspended Solids and turbidity remained relatively constant at all locations;
- pH slightly increased at all locations;
- Chlorophyll-a results showed an overall increasing trend, slightly increasing in WQL #1, WQL #3, WQL #6, and increasing in WQL #2, WQL #4, and WQL #5. WQL #5 had a chlorophyll-a concentration of 21.7 mg/m3, which is in exceedance of the action limit for chlorophyll-a, 20 mg/m3.

The dissolved oxygen readings at the monitoring locations fluctuate throughout the year as anticipated given the temperature of the water and biological activity. The dissolved oxygen remains well above the action level for dissolved oxygen percent (%) (a minimum of 38%). All sample locations displayed an increasing trend of dissolved oxygen percent for the most recent August 2022 sampling event when compared to recent sampling events. WQL #1 and WQL #5 were monitored due to a previous decreasing trend in dissolved oxygen percent. Both locations displayed an increase since the previous sampling event. The dissolved oxygen fluctuates throughout the year with apparent lows during the latter part of the year (e.g. September to December months). GHD recommends the District notify their lake maintenance contractor to continue to watch for evidence of algal blooms during these time periods.

The pH at the monitoring locations have shown an increasing trend in the past four (4) sampling events. The pH during this month's sampling event increased at all locations and exceeded the upper action limit of 8.5 SU in five (5) out of six (6) water quality locations. WQL #1, #2, #3, #4, and #6 had the following pH during the August 2022 sampling event: 8.64, 8.56, 8.57, 8.76, and 8.76, respectively. The pH across all locations has historically fluctuated and is dependent on many factors. For instance, the pH during the March 2021 sampling event also saw five (5) out of six (6) water quality locations at or above the upper action limit before significantly dropping the next sampling event in August 2021 to values vastly under the upper action limit, but still above the lower action limit. It should be noted that prior to the August 2021 sampling event, an upward pH trend (similar to the one being seen in the current August 2022 sampling event) was seen across six (6) prior sampling events (April 2019 to March 2021) before dropping in August 2021.

The concentrations of chlorophyll-a were below the action level at all sample locations this month except for WQL #5, which was just over the action limit (20 mg/m3) at a concentration of 21.7 mg/m3. It appears chlorophyll-a is elevated in Lake 3 during the monitor events conducted in warmer months of the year. This

month's results have increased since the previous February 2022 sampling event but are consistent with historical levels.

During the August 2022 monitoring event, the concentrations of total phosphorous remained consistent with historical levels, all being below the lower action level limit.

The concentrations of orthophosphate remained consistent with historical levels at all locations, and all below the action level limit. The orthophosphate at all sample locations slightly increased, except for WQL #2, where it remained the same.

While the total nitrogen has fluctuated in concentration in the past. For the August 2022 sampling event, total nitrogen has increased at all sampling locations except WQL #6, where it slightly decreased. All locations remain below action levels. GHD will continue to closely monitor total nitrogen trends.

While turbidity has fluctuated in the past, the observed turbidity generally has stayed well below the action level and remained consistent with historical levels this month.

Based on historical data, it appears the BOD tends to be elevated during April/May. While the BOD fluctuates, including detections above the action level, the BOD generally does not remain above its action level for more than one monitoring event. This month, BOD at all sample locations were below the action level and relatively stable. During the months of April/May, particularly at Lake 3, the lake maintenance contractor may need to inspect the lakes more often for evidence of potential algal blooms and treat as needed.

The conductivity at the monitoring locations fluctuates throughout the year but generally remain similar to other monitoring locations with the exception of WQL #5, which is higher. The WQL #5 is at the weir of the Lake 3 on the golf course, whereas the other sample locations are from Lake 6 in the residential development area. Therefore, the variation from WQL #5 to the other locations is not unexpected. WQL #5 has consistently higher levels of conductivity than other monitoring locations since the beginning of sampling the location in August 2016, save two (2) sampling events. Conductivity at all water quality locations during the August 2022 remained consistent with the previous sampling event.

While the concentration of total suspended solids (TSS) has fluctuated, it generally remains below the action level. The results from August 2022 sampling event were consistent with historical trends and below the action level.

3. Conclusions and Recommendations

It appears water quality conditions from the August 2022 sampling event have remained relatively consistent when compared to the previous February 2022 sampling event with the exception of overall increases in pH, chlorophyll-a, and total nitrogen. Chlorophyll-a levels are historically higher in monitoring events conducted in warmer months and total nitrogen levels remain below action levels.

The pH levels have consistently and linearly risen over the past four (4) sampling events since August 2021. All sampling locations except WQL #5 saw pH in exceedance of the upper action limit of 8.5 SU. A similar elevating trend was seen between the April 2019 and March 2021 sampling events, before dramatically dropping in August 2021.

Cyanobacteria (blue-green algae) prefers basic water (between a pH of 7.5 and 10 SU). However, this is the first sampling event in recent history resulting in the majority of sample locations being above the upper action limit (five (5) out of six (6)). In addition, total nitrogen, total phosphorus, and chlorophyll-a concentrations remain mostly under their respective action levels. Therefore, GHD recommends continued water quality monitoring at this time. GHD also recommends the District notify their lake maintenance contractor to increase visual monitoring and inspect the lakes for evidence of potential algal blooms and treat as needed. If subsequent water quality measurements continue to exceed their respective action

limits, it will be recommended that the District investigate potential reasons behind the change and take appropriate action(s) as applicable based on the findings.

The next tri-annual sampling event is planned for November 2022.

Please call if you have questions or need additional information.

Regards,

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Encl: Attachments: Table
Figure
Trend Graphs
Laboratory Analytical Reports
Surface Water Field Sheets

Table 1

Analytical Results Summary
Surface Water Quality Monitoring
Miromar Lakes, Fort Myers, Florida
August 2022

Sample Location/Sample ID:		WQ Location #1 / WQL1																		
Sample Date:		**04/27/16**	**08/03/16**	**10/31/16**	**01/31/17**	**05/04/17**	**08/02/17**	**12/06/17**	**04/26/18**	**08/22/18**	**12/11/18**	**04/16/19**	**10/24/2019**	**2/17/2020**	**06/03/2020**	**10/21/2020**	**03/03/2021**	**08/05/2021**	**10/26/2021**	**02/17/2022**	**08/22/2022**
Field Parameters	**Units**																				
Total Water Depth	Feet	7.66	NS	6.1	5.83	3.5	6.2	4.89	2.90	5.7	4.95	6.83	7.2	4.2	3.9	6.5	5.4	6.0	6.0	6.0	5.0
Sample Depth	Feet	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Conductivity, field	umhos/cm	408	353	387	369.3	405	413.1	348.2	407.3	354.6	312.7	387.3	348.4	369	689	300	292	358	304	304	295
Dissolved oxygen (DO), field	mg/L	8.03	5.91	7.53	8.13	7.95	5.91	6.95	6.89	7.39	8.54	6.49	6.1	8.02	6.05	7.07	7.51	7.0	5.74	5.74	6.12
Dissolved oxygen (DO), field	%	100.9*	79.3	89.4	88.5	101.6	79.6	83.0	87.6	98.9	96.0	80.9	78.1	94.5	77.0	87.1	90.6	93.1	72.3	72.3	83.1
pH, field	s.u.	8.44	8.19	7.92	8.13	7.97	8.23	8.08	8.37	8.24	8.31	8.13	8.36	8.26	8.29	8.57	8.82	8.10	8.32	8.50	8.64
Temperature, field	Deg C	27.08	30.8	24	19.5	28.0	31	24.3	27.7	30.6	21.1	26.6	28.1	23.44	29.1	26.6	25.0	29.91	27.4	27.4	31.5
Turbidity, field	NTU	2.41	3.44	3.55	4.64	8.16	5.05	3.02	2.90	5.53	4.39	3.32	3.71	1.66	3.63	2.42	1.58	1.87	1.82	1.82	2.93
Secchi Disk	Depth	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	4.80	4.20	3.90	6.0	5.4	6.0	NS	5.0	NS
Wet Parameters	**Units**																				
Ammonia-N	mg/L	U	0.026 I	U	0.035	0.008 U	0.008 U	0.026 I	0.008 U	0.022 I	0.008 U	0.008 U	0.017 I	0.008 U	0.008 U	0.008 U	0.008 U	0.008 I	0.008 U	0.008 U	0.008 I
TAN criteria calculation	mg/L	0.24	0.29	0.67	0.66	0.48	0.27	0.52	0.26	0.27	0.45	0.42	0.26	0.42	0.28	NS	NS	NS	NS	NS	NS
Total kjeldahl nitrogen (TKN)	mg/L	0.626	0.878	0.911	0.968	0.611	0.580	0.629	0.551	0.565	0.632	0.619	0.588	0.632	0.591	0.05 U	0.480	0.474	0.531	0.430	0.630
Total nitrogen	mg/L	0.626	0.878	0.911	0.974	0.616	0.592	0.629	0.565	0.574	0.639	0.619	0.588	0.639	0.591	0.05 U	0.480	0.474	0.531	0.430	0.818
Nitrite/Nitrate	mg/L	U	U	U	0.006 I	0.005 I	0.012 I	0.004 U	0.014 I	0.009 I	0.007 I	0.006 U	0.006 U	0.007 I	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.188
Ortho phosphorus (Field Filtered)	mg/L	0.074	0.071	0.030	0.012	0.027	0.038	0.026	0.014	0.017	0.014	0.024	0.026	0.028	0.051	0.0126	0.024	0.011	0.014	0.003 I	0.018
Total phosphorus	mg/L	0.087	0.091	0.068	0.038	0.027 I	0.041	0.121	0.017 I	0.018 I	0.026 I	0.034	0.063	0.035	0.053	0.011 I	0.059	0.022 I	0.030 I	0.017 I	0.017 I
Chlorophyll	mg/m3	5.91	7.32	7.86	11.1	8.42	9.27	5.25	10.1	10.1	6.92	3.72	7.81	3.71	3.96	5.76	3.55	7.44	7.06	3.36	8.28
Total suspended solids (TSS)	mg/L	2.35	3.49	4.80	7.00	7.80	6.15	3.67	3.67	4.00	4.20	1.20 I	2.20 I	3.50	3.20	2.40	2.00 I	2.80	0.667 I	2.50	2.20 I
Biochemical oxygen demand (total BOD5)	mg/L	0.706 I	U	U	1.06 I	1.40 I	1.05 I	1 U	1.16 I	2.72 I	1.85 I	1.24 I	1.03 I	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U

Sample Location/Sample ID:		WQ Location #2 / WQL2																		
Sample Date:		**04/27/16**	**08/03/16**	**10/31/16**	**01/31/17**	**05/04/17**	**08/02/17**	**12/06/17**	**04/26/18**	**08/22/18**	**12/11/18**	**04/16/19**	**10/24/2019**	**2/17/2020**	**06/03/2020**	**10/21/2020**	**03/03/2021**	**08/05/2021**	**10/26/2021**	**02/17/2022**	**08/22/2022**
Field Parameters	**Units**																				
Total Water Depth	Feet	7.43	NS	9.2	8.56	6	6.2	8.01	6.00	10.2	8.65	8.31	10.4	7.8	6.35	9.0	8.8	10.25	7.5	8.5	6.0
Sample Depth	Feet	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Conductivity, field	umhos/cm	422	359	384	385.7	414	435.0	638.9	417.0	363.7	321.2	411.8	346.4	373	701	300	303	346	305	322	293
Dissolved oxygen (DO), field	mg/L	7.67	5.55	7.12	8.05	7.87	6.21	6.58	6.95	7.52	9.90	6.88	6.27	8.12	5.86	4.64	7.04	7.09	8.64	8.18	7.63
Dissolved oxygen (DO), field	%	97.4	74.0	84.7	87.6	101.8	82.9	77.7	88.0	100.2	110.0	85.9	81.0	96.2	77.2	51.1	86.9	93.7	99.9	90.4	99.2
pH, field	s.u.	8.37	8.07	7.68	7.97	8.21	8.11	7.89	8.31	8.03	8.06	8.25	8.27	8.49	8.31	8.26	8.72	8.0	8.22	8.44	8.56
Temperature, field	Deg C	27.62	30.4	24.1	19.5	28.7	30.5	23.7	27.5	30.4	20.5	26.7	28.5	23.9	30.1	27.1	25.5	29.87	27.4	20.2	31.6
Turbidity, field	NTU	3.97	31.71	4.38	4.66	7.15	3.12	3.20	8.22	3.75	5.76	3.37	3.55	2.18	3.49	2.40	3.41	2.44	2.13	2.07	2.90
Secchi Disk	Depth	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5.30	NS	5.5	6.5	7.0	7.0	NS	7.0	NS
Wet Parameters	**Units**																				
Ammonia-N	mg/L	U	0.019 I	U	0.071	0.008 U	0.008 U	0.036	0.008 U	0.008 U	0.008 U	0.027	0.008 U	0.008 U	0.008 U	0.009 I	0.008 U	0.017 I	0.008 U	0.008 U	0.008 U
TAN criteria calculation	mg/L	0.26	0.36	0.90	0.84	0.32	0.34	0.71	0.30	0.38	0.69	0.34	0.30	0.28	0.25	NS	NS	NS	NS	NS	NS
Total kjeldahl nitrogen (TKN)	mg/L	0.745	1.15	0.888	1.04	0.507	0.641	0.710	0.675	0.613	0.693	0.606	0.605	0.403	0.556	0.500	0.450	0.469	0.542	0.538	0.635
Total nitrogen	mg/L	0.745	1.15	0.900	1.04	0.514	0.645	0.710	0.690	0.618	0.698	0.606	0.605	0.403	0.556	0.500	0.450	0.469	0.542	0.538	0.806
Nitrite/Nitrate	mg/L	U	U	0.012 I	U	0.007 I	0.004 I	0.004 U	0.015 I	0.005 I	0.006 I	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.171
Ortho phosphorus (Field Filtered)	mg/L	0.077	0.070	0.064	0.015	0.028	0.050	0.025	0.015	0.020	0.008	0.002 U	0.055	0.035	0.053	0.0288	0.026	0.016	0.015	0.010	0.010
Total phosphorus	mg/L	0.079	0.087	0.066	0.031 I	0.054	0.065	0.042	0.023 I	0.008 U	0.009 I	0.008 U	0.073	0.069	0.062	0.012 I	0.032	0.017 I	0.036	0.020 I	0.021 I
Chlorophyll	mg/m3	6.59	7.28	8.08	11.7	7.76	7.13	5.42	8.35	9.06	8.80	5.28	9.11	4.34	5.11	6.13	2.04	5.95	7.37	3.72	11.6
Total suspended solids (TSS)	mg/L	4.21	3.90	4.60	7.20	6.60	2.60	3.60	8.00	1.00 I	4.67	3.80	2.40	3.00	2.40	2.40	2.80	2.80	2.00 I	1.75 I	2.00 I
Biochemical oxygen demand (total BOD5)	mg/L	0.778 I	U	U	1.33 I	1.13 I	1 U	1 U	1.36 I	1.89 I	1.10 I	1.40 I	1.50 I	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.03

Table 1

Analytical Results Summary
Surface Water Quality Monitoring
Miromar Lakes, Fort Myers, Florida
August 2022

Sample Location/Sample ID:		WQ Location #3A / WQL3A																			
Sample Date:		**04/27/16**	**08/03/16**	**10/31/16**	**01/31/17**	**05/04/17**	**08/02/17**	**12/06/17**	**04/26/18**	**08/22/18**	**12/11/18**	**04/16/19**	**10/24/2019**	**2/17/2020**	**06/03/2020**	**10/21/2020**	**03/03/2021**	**08/05/2021**	**10/26/2021**	**02/17/2022**	**08/22/2022**
Field Parameters	**Units**																				
Total Water Depth	Feet	3.78	3.64	3.52	2.81	1.5	4.6	3.35	3.2	3.6	5.87	2.95	4.5	3	1.5	4.0	3.0	3.33	3.75	2.0	3.33
Sample Depth	Feet	1.5	1.5	1.5	1.5	1.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1	1.5	1.5	1.5	1.5	1.5	1.5
Conductivity, field	umhos/cm	406	329	255	375.7	430	200.4	339	418.9	365.1	323	391.9	373.2	381	690	293	297	363	313	321	296
Dissolved oxygen (DO), field	mg/L	7.31	4.78	2.93	7.40	14.02	1.38	6.49	6.16	7.33	8.44	5.82	2.05	5.77	6.49	6.41	5.62	3.15	8.43	6.70	6.88
Dissolved oxygen (DO), field	%	91.8	62.9	34.3	81.5	198	17.42	76.4	78.2	97.9	94.3	72.7	25.7	68.5	85.4	80.5	70.2	39.0	98.9	73.5	93.2
pH, field	s.u.	8.44	8.0	6.99	7.96	9.32	6.91	7.97	8.15	8.13	7.53	8.21	7.34	7.93	8.44	8.38	8.49	7.16	7.97	8.49	8.57
Temperature, field	Deg C	27.0	29.7	23.2	20.1	33.7	27.3	23.5	27.6	30.5	20.8	26.7	26.8	23.77	29.3	27.0	25.4	26.24	27.6	19.7	31.3
Turbidity, field	NTU	7.64	78.77	3.48	5.42	86.9	2.99	3.05	3.94	3.63	4.20	2.20	2.79	1.31	3.49	2.76	4.13	1.77	2.70	2.17	2.11
Secchi Disk	Depth	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	Lake Bottom	Lake Bottom	Lake Bottom	4.0	3.0	3.33	NS	2.0	NS
Wet Parameters	**Units**																				
Ammonia-N	mg/L	U	0.029 I	0.044	0.027 I	0.008 U	0.008 U	0.009 I	U	0.023 I	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.009 I	0.008 U	0.035	0.008 U	0.008 U	0.008 U
TAN criteria calculation	mg/L	0.25	0.42	1.54	0.82	0.04	1.22	0.65	0.38	0.32	1.29	0.37	1.02	0.67	0.21	NS	NS	NS	NS	NS	NS
Total kjeldahl nitrogen (TKN)	mg/L	0.581	0.949	1.11	1.06	3.73	0.642	0.634	0.645	0.621	0.949	0.598	0.635	0.451	0.510	0.216	0.526	0.546	0.565	0.607	0.809
Total nitrogen	mg/L	0.581	0.949	1.13	1.06	3.73	0.650	0.634	0.658	0.626	0.954	0.598	0.635	0.451	0.510	0.216	0.526	0.546	0.565	0.607	0.982
Nitrite/Nitrate	mg/L	U	U	0.021	U	0.008 I	0.008 I	0.004 U	0.013 I	0.005 I	0.006 I	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.173
Ortho phosphorus (Field Filtered)	mg/L	0.073	0.012	0.051	0.012	0.018	0.029	0.031	0.016	0.020	0.025	0.014	0.060	0.043	0.048	0.0199	0.030	0.017	0.012	0.009	0.017
Total phosphorus	mg/L	0.088	0.026 I	0.052	0.033	0.090	0.039	0.048	0.024 I	0.008 U	0.019 I	0.018 I	0.066	0.069	0.064	0.012 I	0.046	0.021 I	0.017 I	0.022 I	0.020 I
Chlorophyll	mg/m3	5.76	8.71	10.1	10.4	249	10.1	4.83	7.85	10.6	8.15	4.60	7.88	3.79	5.10	5.52	4.00	7.06	7.99	4.09	9.16
Total suspended solids (TSS)	mg/L	7.06	6.42	5.11	7.20	95.0	3.80	4.00	3.60	6.00	4.33	2.60	2.40	1.50 I	4.80	2.40	4.20	2.00 I	3	1.75 I	1.67 I
Biochemical oxygen demand (total BOD5)	mg/L	U	U	U	1.11 I	10.6	1.39 I	1 U	1.12 I	1.66 I	1.19 I	2.32 I	1.27 I	1 U	1 U	1 U	1.30 I	1.32 I	1 U	1 U	1.0 U

Sample Location/Sample ID:		WQ Location #3B / WQL3B											WQL6	WQL6	WQL6	WQL6	WQL6	WQL6	WQL6	WQL6	WQL6
Sample Date:		**04/27/16**	**08/03/16**	**10/31/16**	**01/31/17**	**05/04/17**	**08/02/17**	**12/06/17**	**04/26/18**	**08/22/18**	**12/11/18**	**04/16/19**	**10/24/2019**	**2/17/2020**	**06/03/2020**	**10/21/2020**	**03/03/2021**	**08/05/2021**	**10/26/2021**	**02/17/2022**	**08/22/2022**
Field Parameters	**Units**																				
Total Water Depth	Feet	3.78	4	3.52	2.98	2	4.6	6.94	3.2	3.6	5.87	3.50	12.5	17.6	15.5	10.5	14.4	12.3	10.5	14.0	5.5
Sample Depth	Feet	3	3	3	2.5	1.5	3	3.0	NS	3	3	3	3	3	3	1.5	3	3	3.0	1.5	1.5
Conductivity, field	umhos/cm	405	341	369	313.1	406	384.1	338.6	NS	354.5	322.4	391.3	340.8	362	688	290	295	365	305	319	294
Dissolved oxygen (DO), field	mg/L	7.32	6.22	6.82	6.58	8.46	5.59	5.87	NS	7.39	6.32	5.7	5.63	8.44	6.49	6.66	7.43	6.82	8.25	8.40	7.52
Dissolved oxygen (DO), field	%	91.1	82.8	81.2	67.9	109.3	74.0	68.8	NS	98.8	70.6	71.2	72.4	99.2	85.7	83.4	90.4	90.3	85.4	90.8	99.8
pH, field	s.u.	8.46	8.14	7.68	7.77	8.12	8.10	8.00	NS	8.18	8.08	8.22	8.16	8.5	8.51	8.63	8.74	7.59	8.25	8.48	8.76
Temperature, field	Deg C	26.55	30.3	24.1	16.9	28.6	30.0	23.3	NS	30.6	20.8	26.7	28.3	23.28	29.4	29.3	25.2	30.07	27.6	19.6	31.4
Turbidity, field	NTU	7.98	10.03	3.15	21.38	3.93	4.15	2.84	NS	26.26	7.10	2.17	4.85	1.48	2.83	2.13	1.75	2.19	1.79	2.79	2.89
Secchi Disk	Depth	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5.80	8.00	7.20	7.0	7.5	6.4	NS	7.0	NS
Wet Parameters	**Units**																				
Ammonia-N	mg/L	U	0.15 I	U	0.097	0.008 U	0.008 U	0.028 I	NS	0.015 I	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.009 I	0.008 U	0.012 I	0.008 U	0.008 U	0.008 U
TAN criteria calculation	mg/L	0.24	0.32	0.90	1.29	0.37	0.35	0.63	NS	0.30	0.66	0.36	0.36	0.28	0.19	NS	NS	NS	NS	NS	NS
Total kjeldahl nitrogen (TKN)	mg/L	0.736	0.880	1.04	2.90	0.462	0.715	0.731	NS	0.757	0.722	0.683	0.612	0.414	0.490	0.05 U	0.559	0.448	0.496	0.782	0.539
Total nitrogen	mg/L	0.744	0.880	1.05	2.90	0.472	0.715	0.731	NS	0.763	0.727	0.683	0.612	0.414	0.490	0.05 U	0.559	0.448	0.496	0.782	0.539
Nitrite/Nitrate	mg/L	0.008 I	U	0.012 I	U	0.010 I	0.004 U	0.004 U	NS	0.006 I	0.006 I	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U
Ortho phosphorus (Field Filtered)	mg/L	0.088	0.064	0.029	0.012	0.029	0.226	0.272	NS	0.020	0.022	0.027	0.063	0.032	0.059	0.0155	0.026	0.002 I	0.014	0.010	0.014
Total phosphorus	mg/L	0.092	0.098	0.031 I	0.168	0.054	1.08	0.501	NS	0.013 I	0.033	0.029 I	0.067	0.035	0.064	0.016 I	0.055	0.023 I	0.038	0.020 I	0.015 I
Chlorophyll	mg/m3	5.99	7.05	7.57	64.5	5.44	9.14	3.94	NS	10.8	7.61	5.38	8.86	3.18	4.95	4.80	2.48	7.62	6.69	4.19	8.55
Total suspended solids (TSS)	mg/L	7.11	5.78	3.80	44.7	4.20	4.80	3.20	NS	26.0	3.33	6.20	2.60	1.25 I	3.20	2.60	1.80 I	1.20 I	3	1.25 I	2.40
Biochemical oxygen demand (total BOD5)	mg/L	0.556 I	U	U	6.47	1 U	1.45 I	1 U	NS	2.01 I	1 U	1.16 I	1.04 I	1 U	1 U	1.39 I	1 U	1 U	1 U	1 U	1.0 U

Table 1

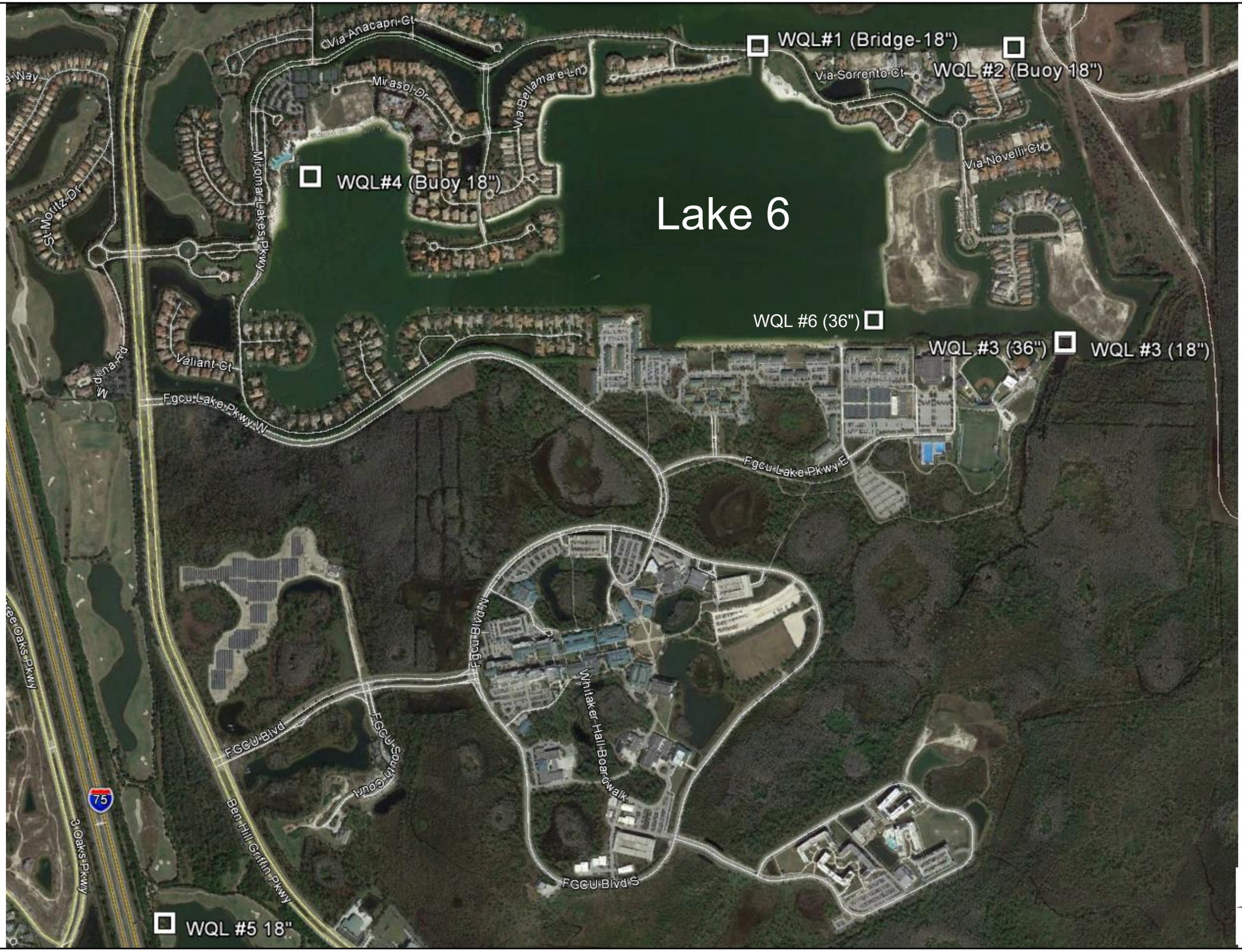
Analytical Results Summary
Surface Water Quality Monitoring
Miromar Lakes, Fort Myers, Florida
August 2022

Sample Location/Sample ID:		WQ Location #4 / WQL4																			
Sample Date:		**04/27/16**	**08/03/16**	**10/31/16**	**01/31/17**	**05/04/17**	**08/02/17**	**12/06/17**	**04/26/18**	**08/22/18**	**12/11/18**	**04/16/19**	**10/24/2019**	**2/17/2020**	**06/03/2020**	**10/21/2020**	**03/03/2021**	**08/05/2021**	**10/26/2021**	**02/17/2022**	**08/22/2022**
Field Parameters	**Units**																				
Total Water Depth	Feet	12	7.77	14.88	7.91	5.0	10.7	7.9	6.90	11.8	10.7	14.20	15.4	13.55	12.55	13.0	8.01	7.2	7.0	5.5	6.0
Sample Depth	Feet	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	NM	1.5
Conductivity, field	umhos/cm	403	340	373	361.8	405	404.8	342.0	399.7	342	310.3	382.1	337.0	363	682	286	291	349	302	318	293
Dissolved oxygen (DO), field	mg/L	7.72	6.55	7.14	8.06	8.33	5.02	5.73	7.13	6.96	7.84	7.28	6.42	8.45	6.42	1.41	7.75	7.31	6.69	8.22	7.06
Dissolved oxygen (DO), field	%	96.4	88.3	85.6	88.3	106.6	66.8	68.2	89.2	92.9	87.8	90.2	82.8	99.4	83.4	17.0	93.5	94.2	89.1	90.6	97.8
pH, field	s.u.	8.58	8.31	7.59	8.10	7.65	8.16	8.08	8.39	8.34	7.99	7.97	8.38	8.58	8.57	8.66	8.80	6.62	8.21	8.26	8.76
Temperature, field	Deg C	26.71	31.1	24.5	19.8	28.1	30.3	24.1	26.8	30.5	20.9	26.3	28.5	23.49	29.9	27.5	24.8	29.95	27.6	19.7	31.9
Turbidity, field	NTU	1.87	2.04	4.44	3.02	3.11	1.81	2.48	3.38	3.56	4.10	2.72	2.58	1.04	2.48	1.85	2.28	1.76	3.19	3.14	2.07
Secchi Disk	Depth	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5.50	8.50	7.00	6.5	8.01	7.2	NS	5.5	NS
Wet Parameters	**Units**																				
Ammonia-N	mg/L	U	0.023 I	U	0.012 I	0.008 U	0.008 U	0.026 I	0.008 U	0.014 I	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.025 I	0.008 U	0.008 U	0.071
TAN criteria calculation	mg/L	0.20	0.23	0.96	0.68	0.72	0.31	0.53	0.27	0.23	0.74	0.54	0.25	0.24	0.16	NS	NS	NS	NS	NS	NS
Total kjeldahl nitrogen (TKN)	mg/L	0.868	0.887	0.780	0.976	0.518	0.570	0.612	0.610	0.640	0.885	0.615	0.126 I	0.371	0.633	0.05 U	0.538	0.469	0.555	0.430	0.784
Total nitrogen	mg/L	0.868	0.887	0.808	0.976	0.524	0.570	0.612	0.623	0.645	0.885	0.615	0.126	0.371	0.633	0.05 U	0.538	0.469	0.555	0.446	0.969
Nitrite/Nitrate	mg/L	U	U	0.028	U	0.006 I	0.004 U	0.004 U	0.013 I	0.005 I	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.016 I	0.185
Ortho phosphorus (Field Filtered)	mg/L	0.094	0.017	0.024	0.017	0.030	0.044	0.027	0.019	0.017	0.022	0.026	0.065	0.037	0.042	0.0180	0.021	0.012	0.016	0.010	0.016
Total phosphorus	mg/L	0.101	0.021 I	0.027 I	0.038	0.048	0.067	0.038	0.030 I	0.044	0.043	0.038	0.070	0.064	0.064	0.014 I	0.043	0.032	0.043	0.020 I	0.017 I
Chlorophyll	mg/m3	4.92	7.11	7.78	9.09	3.94	9.31	4.62	8.66	10.5	8.43	3.43	7.38	2.75	3.78	5.05	1.74	5.39	7.27	3.82	14.2
Total suspended solids (TSS)	mg/L	2.33	2.84	3.60	5.20	3.26	2.60	1.60 I	2.00 I	5.50	2.33	3.40	3.20	1.25 I	3.40	1.80 I	0.570 U	3.60	2.00 I	1.25 I	0.570 U
Biochemical oxygen demand (total BOD5)	mg/L	U	U	U	1.09 I	1 U	1 U	1 U	1.16 I	1.47 I	1 U	1 U	1.07 I	1 U	1 U	1.51 I	1 U	1 U	1 U	1 U	1.0 U

Sample Location/Sample ID:		WQ Location #5 / WQL5																			
Sample Date:		**04/27/16**	**08/03/16**	**10/31/16**	**01/31/17**	**05/04/17**	**08/02/17**	**12/06/17**	**04/26/18**	**08/22/18**	**12/11/18**	**04/16/19**	**10/24/2019**	**2/17/2020**	**06/03/2020**	**10/21/2020**	**03/03/2021**	**08/05/2021**	**10/26/2021**	**02/17/2022**	**08/22/2022**
Field Parameters	**Units**																				
Total Water Depth	Feet	NS	2	2.03	1.42	2.5	4.32	2.84	S	2.7	1.10	1.50	1.98	1.72	<1	2.0	2.5	NM	4.0	2.0	2.5
Sample Depth	Feet	NS	1.5	1.5	0.5	1.5	1.5	1.5	S	1.5	0.5	0.75	1.0	1	<1	1.5	1.5	1.5	1.5	0.5	1.5
Conductivity, field	umhos/cm	NS	411	515	462.0	464	478.4	447.9	464.1	405.1	427.2	475.8	465.0	480	802	373	409	82.9	423	438	397.6
Dissolved oxygen (DO), field	mg/L	NS	4.84	6.22	6.88	8.50	8.03	4.21	5.47	6.09	4.21	5.00	3.20	7.6	5.18	7.65	3.05	6.07	4.69	8.40	6.31
Dissolved oxygen (DO), field	%	NS	64.7	77.2	72.2	111.1	109.1	49.6	68.2	81.2	46.1	61.0	41.3	89.3	69.0	96.5	37.5	80.6	60.1	53.4	85.1
pH, field	s.u.	NS	7.83	7.77	7.65	7.77	8.10	7.58	7.61	7.80	6.38	6.44	7.99	8.35	8.28	8.18	8.04	8.12	8.01	8.15	8.41
Temperature, field	Deg C	NS	30.6	26.4	17.7	29.3	31.5	23.6	26.6	30.4	19.8	25.4	28.4	23.42	30.3	27.4	25.3	30.19	27.9	20.6	32.2
Turbidity, field	NTU	NS	2.08	3.62	3.60	5.77	4.65	1.99	4.93	3.40	4.18	4.98	4.71	2.45	5.74	2.96	2.27	4.05	17.12	2.10	2.30
Secchi Disk	Depth	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	Lake Bottom	Lake Bottom	Lake Bottom	NS	NS	NS	NS	NS	NS
Wet Parameters	**Units**																				
Ammonia-N	mg/L	NS	0.033	U	0.008 I	0.008 U	0.008 U	0.034	0.008 U	0.010 I	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.023 I	0.008 U	0.008 U	0.008 U	0.008 U
TAN criteria calculation	mg/L	NS	0.49	0.70	1.40	0.58	0.32	1.03	0.82	0.52	2.19	1.51	0.46	0.36	0.26	NS	NS	NS	NS	NS	NS
Total kjeldahl nitrogen (TKN)	mg/L	NS	0.845	0.786	0.962	0.754	0.756	0.838	1.11	0.857	0.944	0.902	0.807	0.688	1.08	0.137 I	0.755	0.720	0.668	0.925	0.883
Total nitrogen	mg/L	NS	0.845	0.794	0.962	0.762	0.760	0.854	1.13	0.863	0.957	0.902	0.807	0.688	1.08	0.137	0.755	0.720	0.668	0.925	1.06
Nitrite/Nitrate	mg/L	NS	U	0.008 I	U	0.008 I	0.004 I	0.016	0.016	0.006 I	0.013 I	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.177
Ortho phosphorus (Field Filtered)	mg/L	NS	0.022	0.042	0.017	0.027	0.019	0.022	0.016	0.015	0.019	0.023	0.050	0.038	0.055	0.075	0.029	0.014	0.008	0.010	0.016
Total phosphorus	mg/L	NS	0.065	0.042	0.036	0.035	0.067	0.046	0.027 I	0.025 I	0.024 I	0.028 I	0.081	0.049	0.102	0.084	0.067	0.035	0.027 I	0.034	0.024 I
Chlorophyll	mg/m3	NS	15.1	12.5	13.9	16.0	25.0	17.3	27.6	19.8	15.4	23.4	15.7	12.6	30.4	22.7	4.93	22.9	16.5	5.08	21.7
Total suspended solids (TSS)	mg/L	NS	4.10	4.80	5.00	8.11	11.0	0.570 U	6.20	4.00	3.00	7.60	2.40	3.25	9.00	4.20	3.00	5.40	2.33	1.50 I	2.00 I
Biochemical oxygen demand (total BOD5)	mg/L	NS	1.31 I	1.56 I	1.36 I	2.41 I	2.14 I	1.64 I	3.38 I	1.15 I	1.38 I	3.39 I	1.54 I	1.32 I	3.01 I	1.73 I	1 U	1.55 I	1 U	1.32 I	1.22

Notes:

S - Sample collected from edge of lake
U - Not detected at the associated reporting limit
* DO values at or above 100% are possible super-saturation conditions due to high water temperatures and/or high volume of algae.
NM - Not Measured
NS - Not sampled during noted event
I - Reported value is between method detection limit and the practical quantitation limit



SITE:

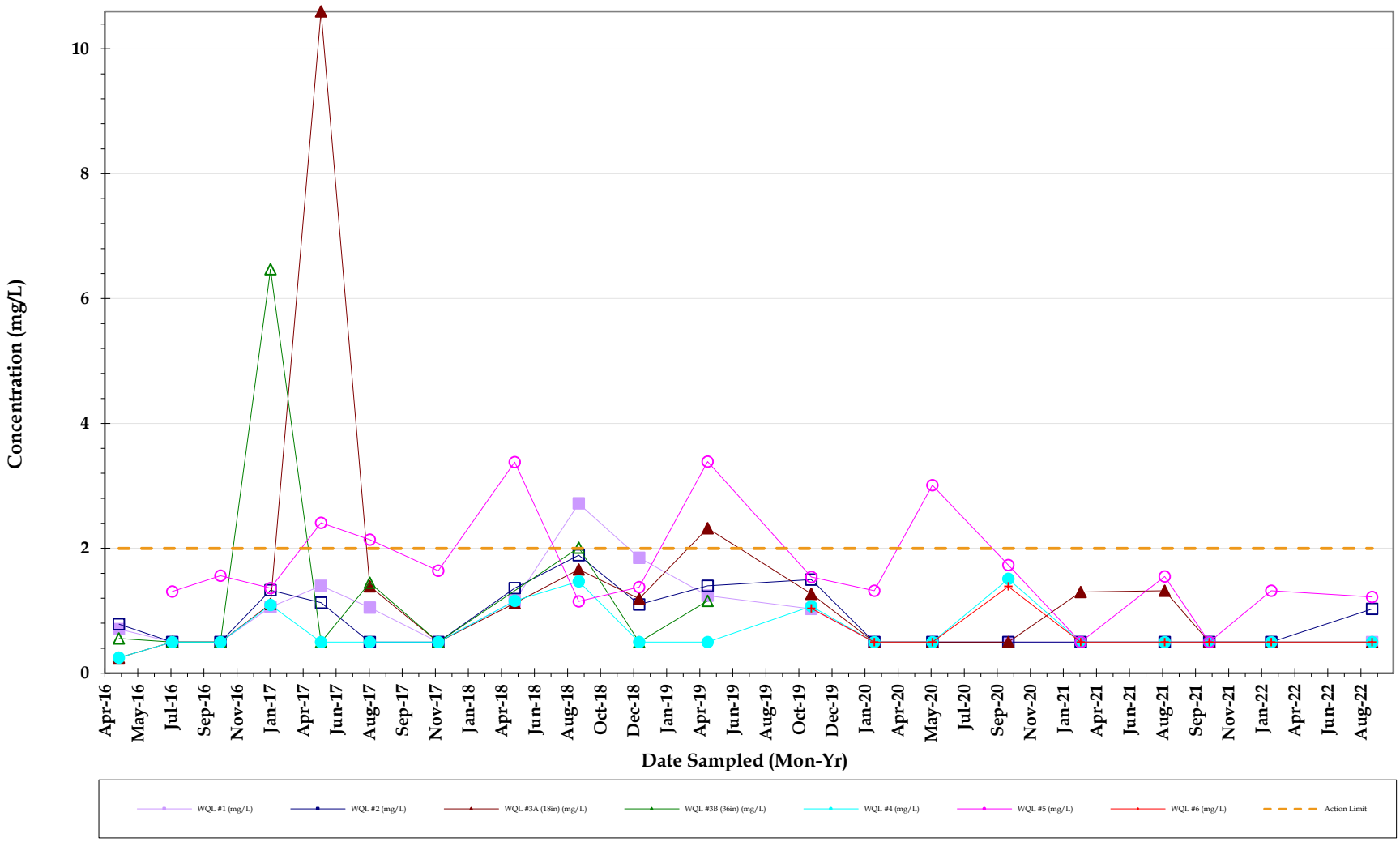
Water Quality Sampling Report – February 2020
Lakes 3 and 6 – Miromar Lakes
Fort Myers, Lee County, Florida

DESIGNED: JR	DRAWN: JR	PROJECT #: 11147356	DATE: Feb 2020
			CAD FILE:

SHEET TITLE:

Location Map

FIGURE: 1

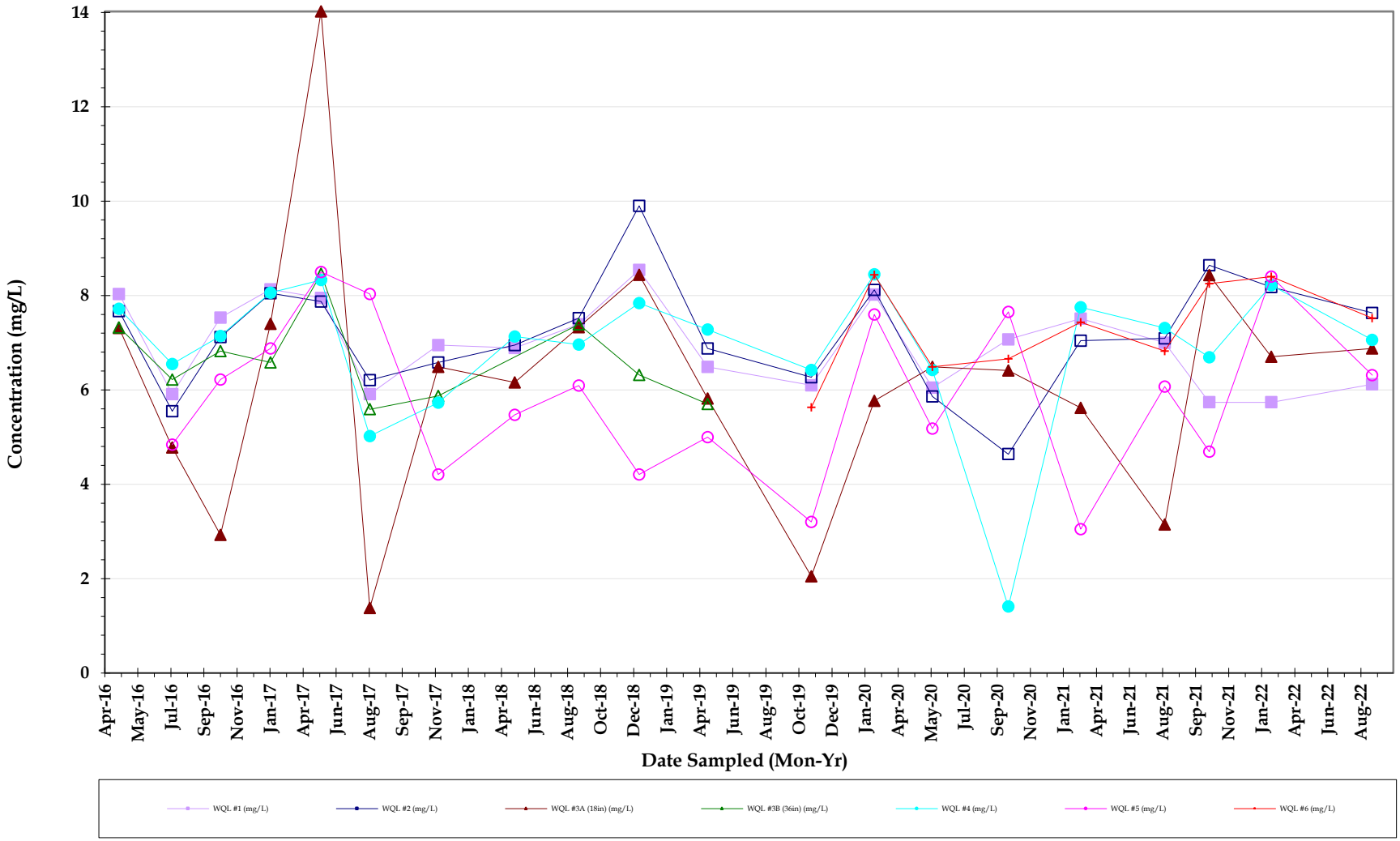


Biochemical Oxygen Demand

Miromar Lakes

Water Quality Surface Water Sample results

AUGUST 2022

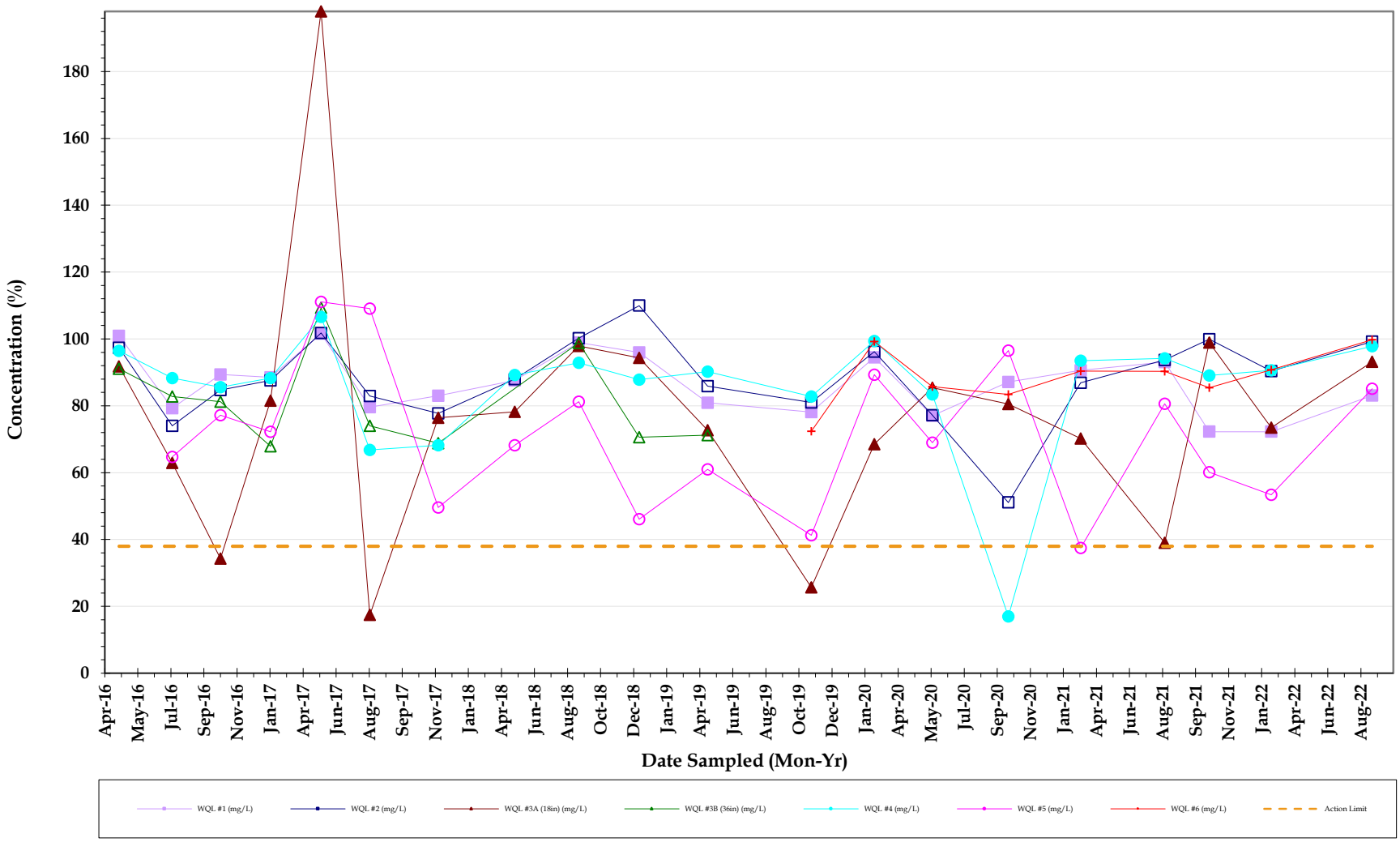


Dissolved Oxygen (mg/L)

Miromar Lakes

Water Quality Surface Water Sample results

AUGUST 2022

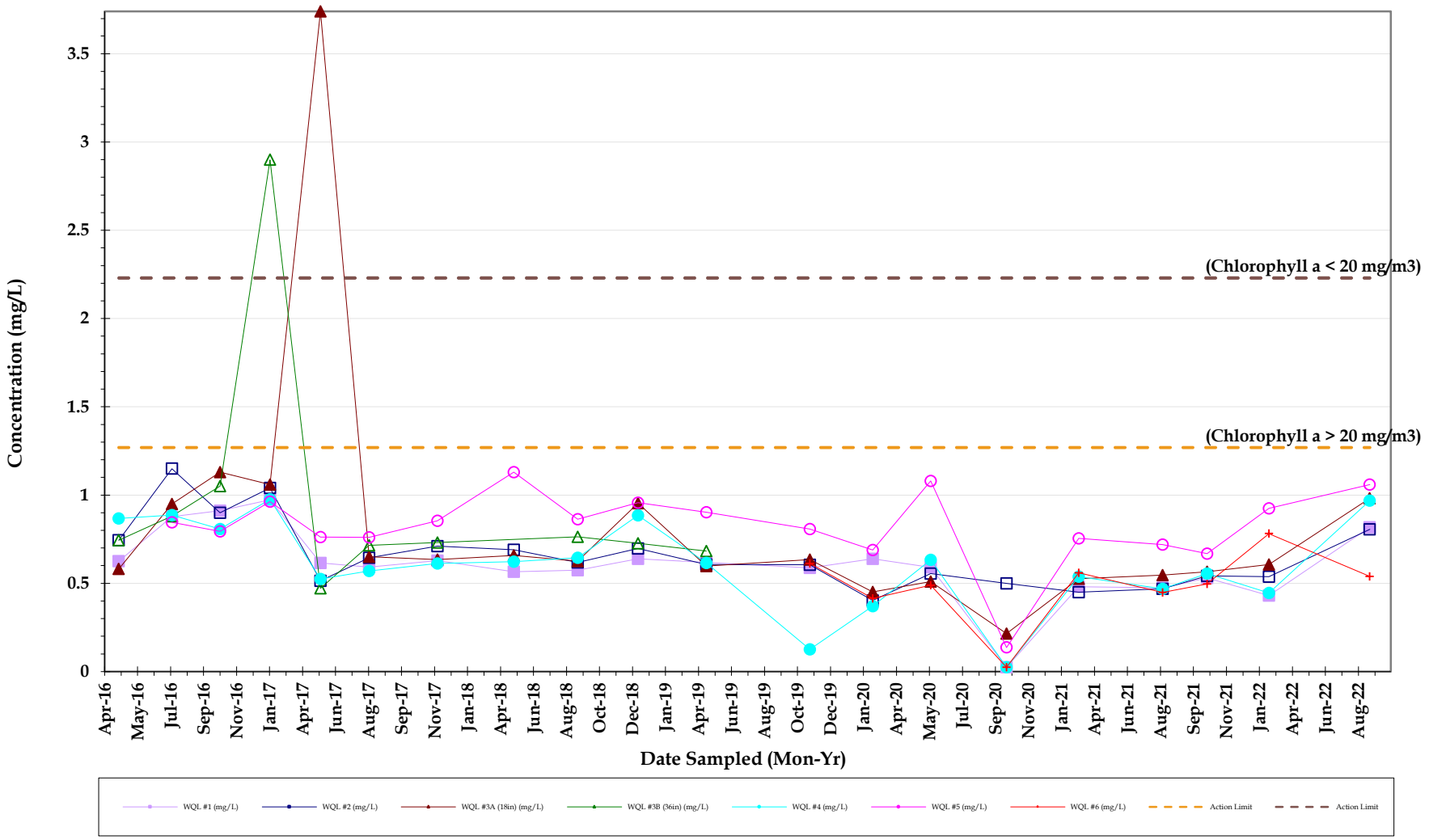


Dissolved Oxygen (%)

Miromar Lakes

Water Quality Surface Water Sample results

AUGUST 2022

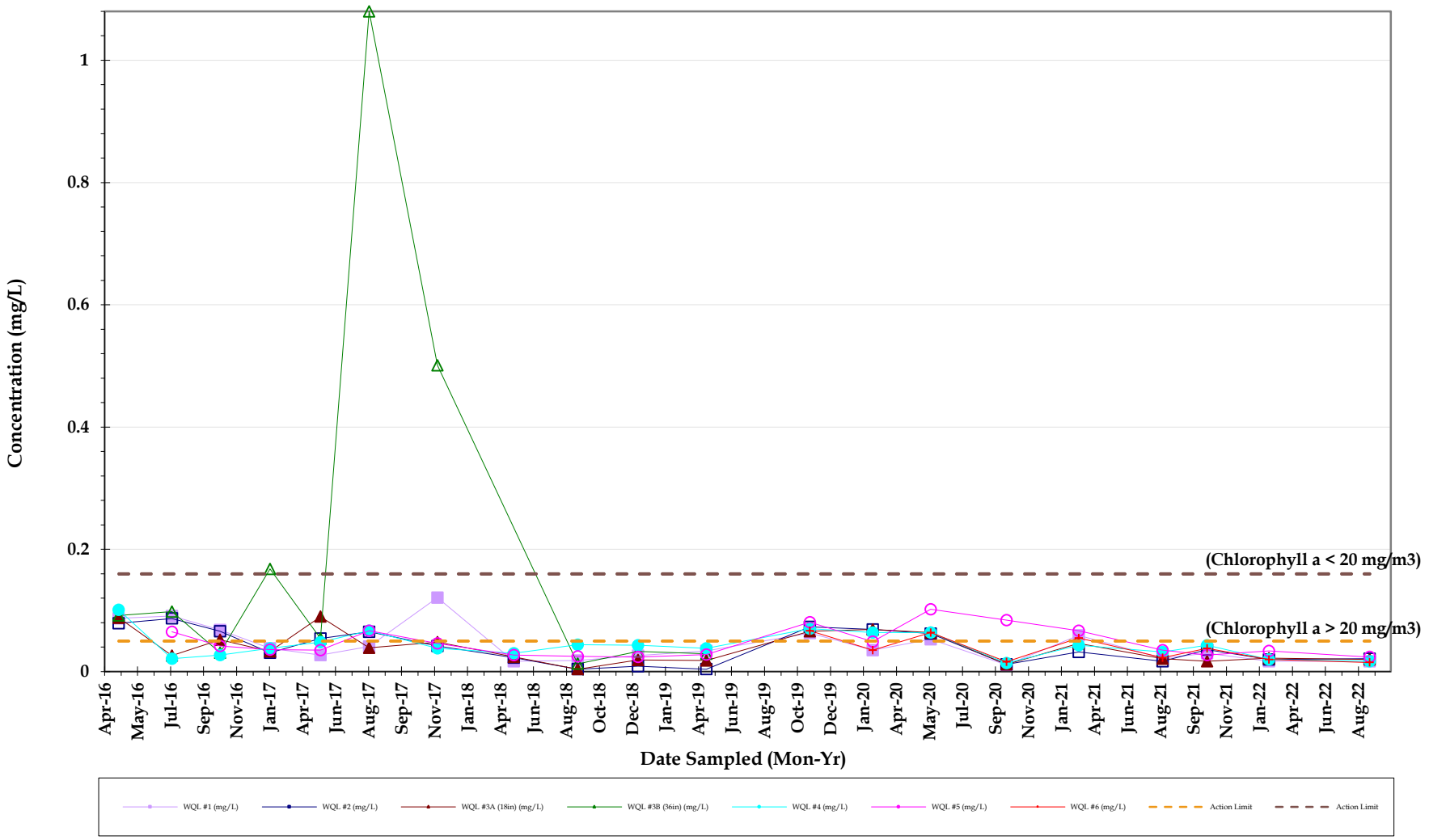


Total Nitrogen

Miromar Lakes

Water Quality Surface Water Sample results

AUGUST 2022

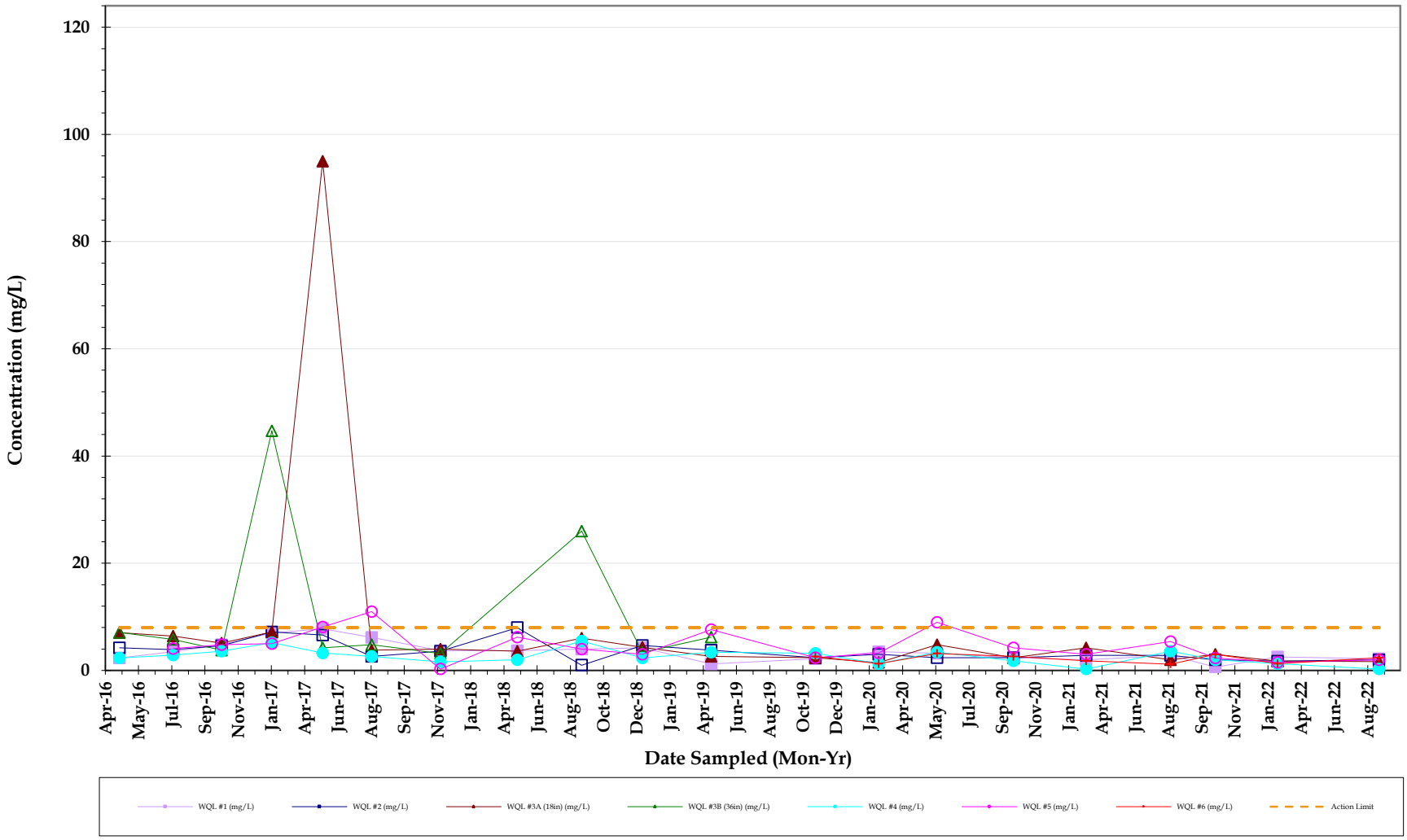


Total Phosphorus

Miromar Lakes

Water Quality Surface Water Sample results

AUGUST 2022

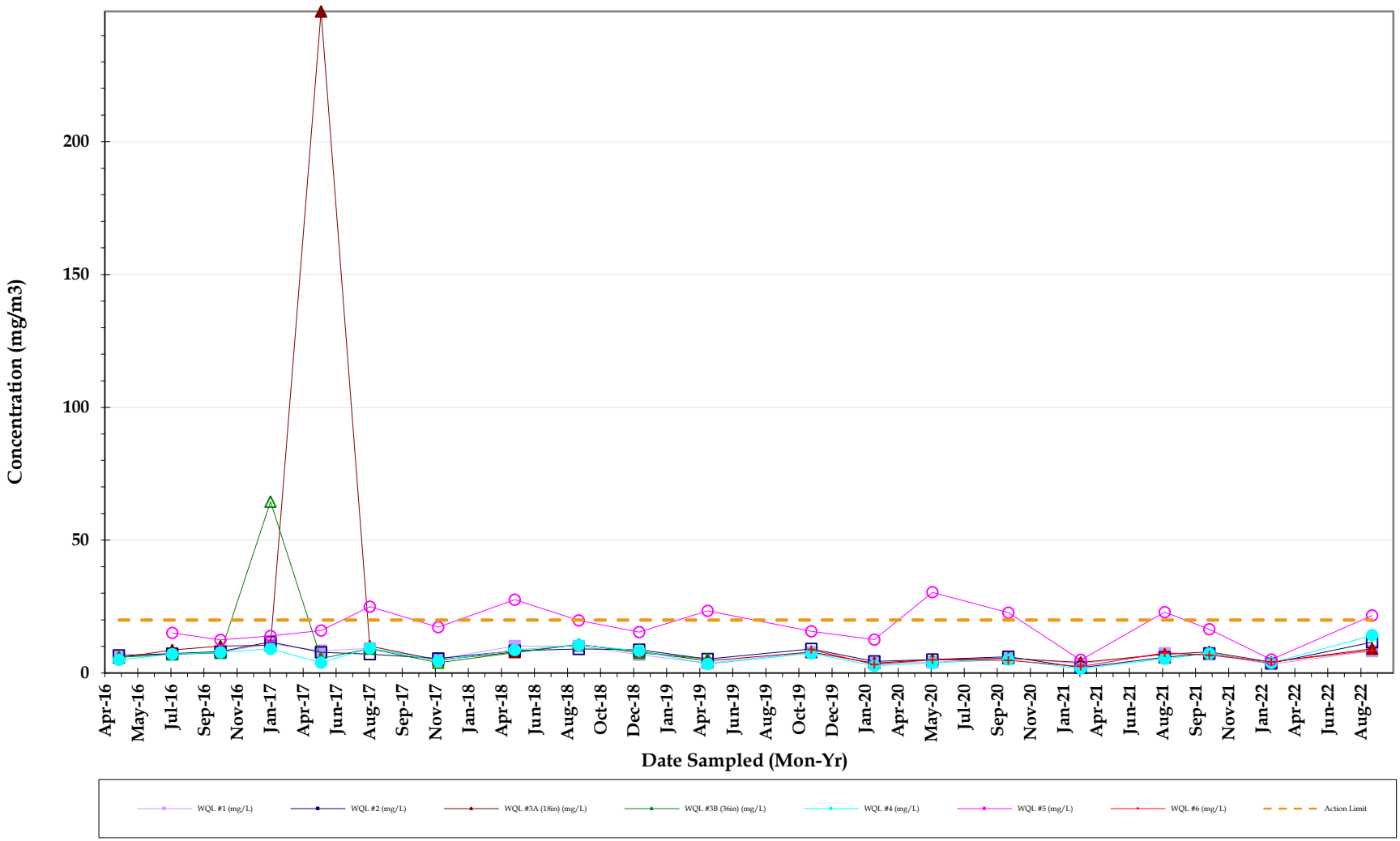


Total Suspended Solids

Miromar Lakes

Water Quality Surface Water Sample results

AUGUST 2022

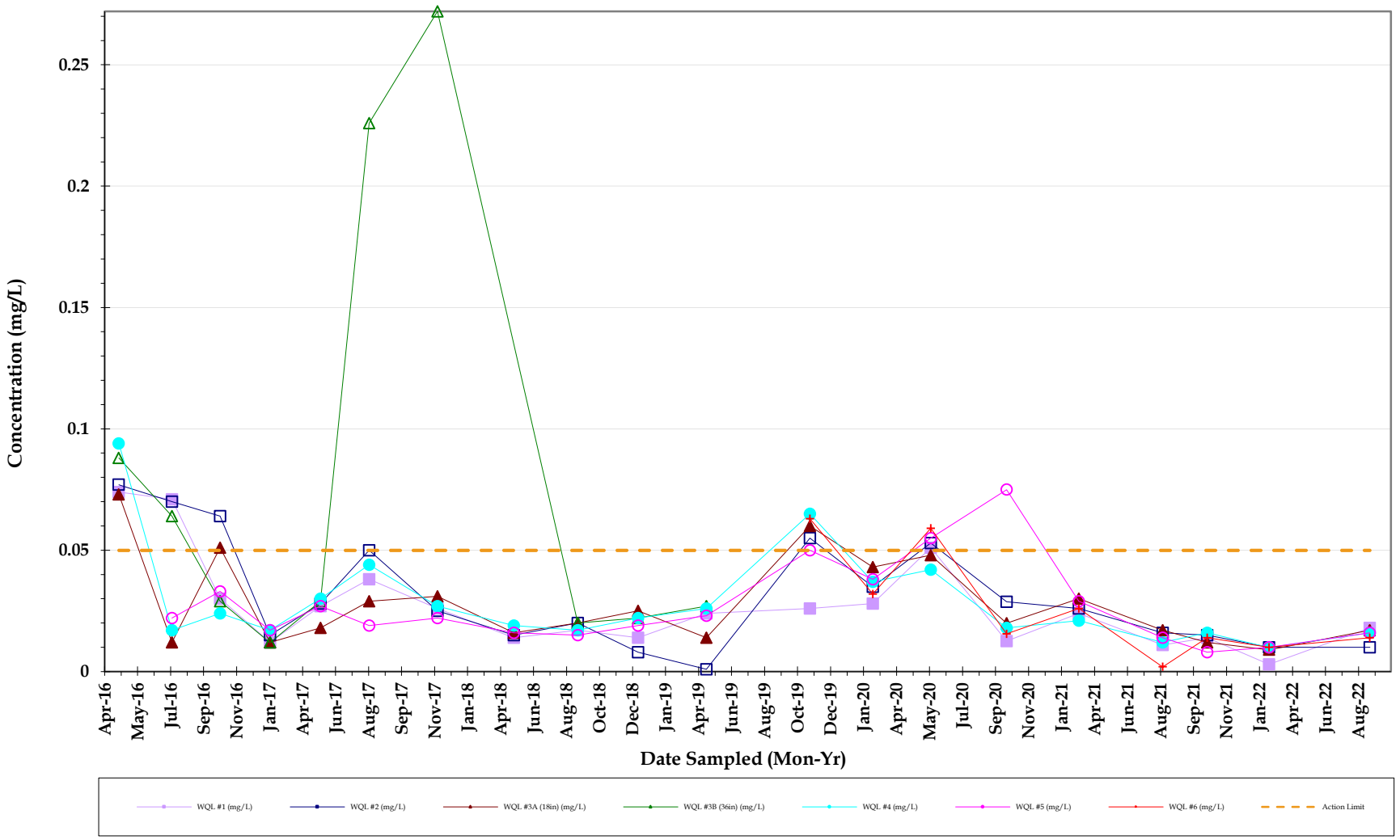


Chlorophyll *a*

Miromar Lakes

Water Quality Surface Water Sample results

AUGUST 2022

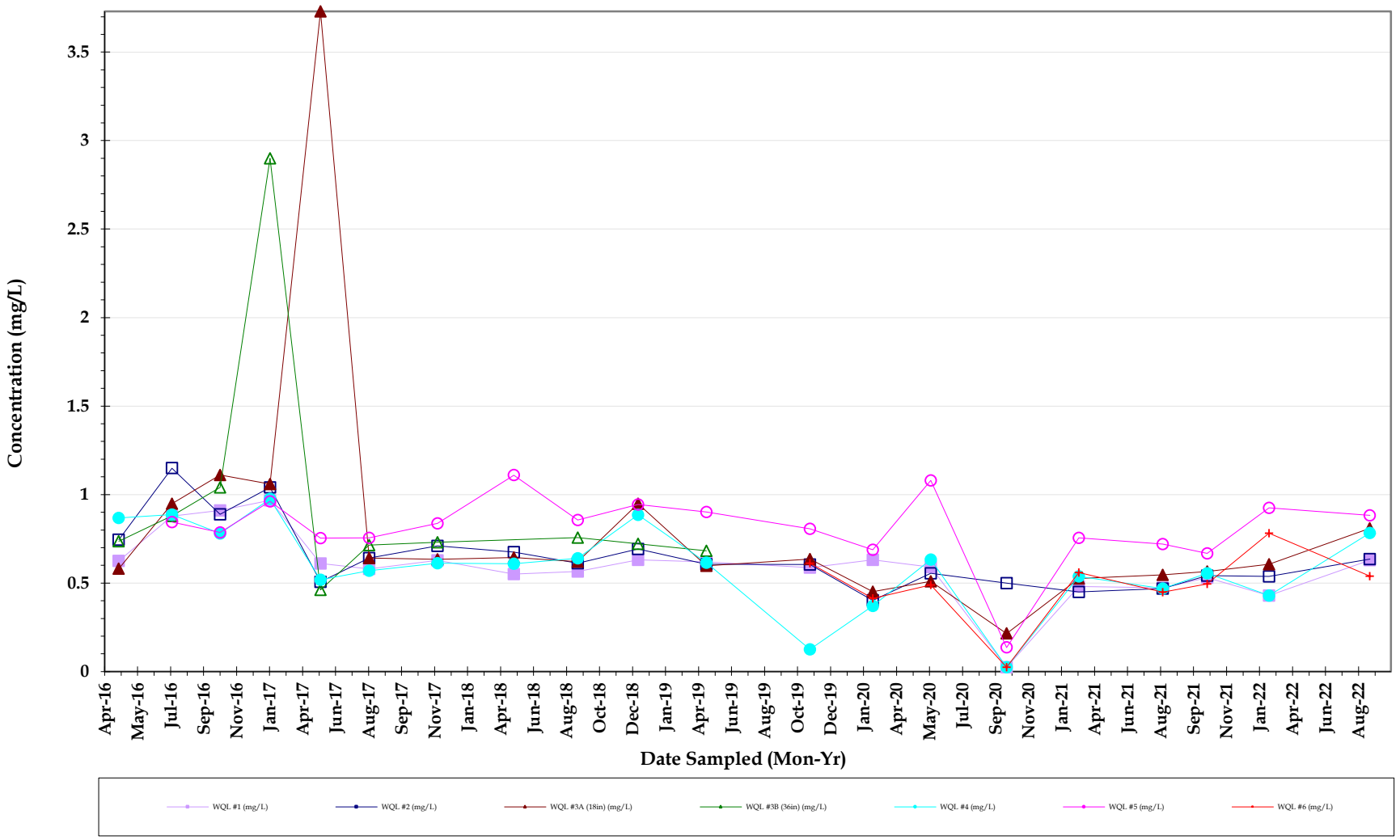


Orthophosphate

Miromar Lakes

Water Quality Surface Water Sample results

AUGUST 2022

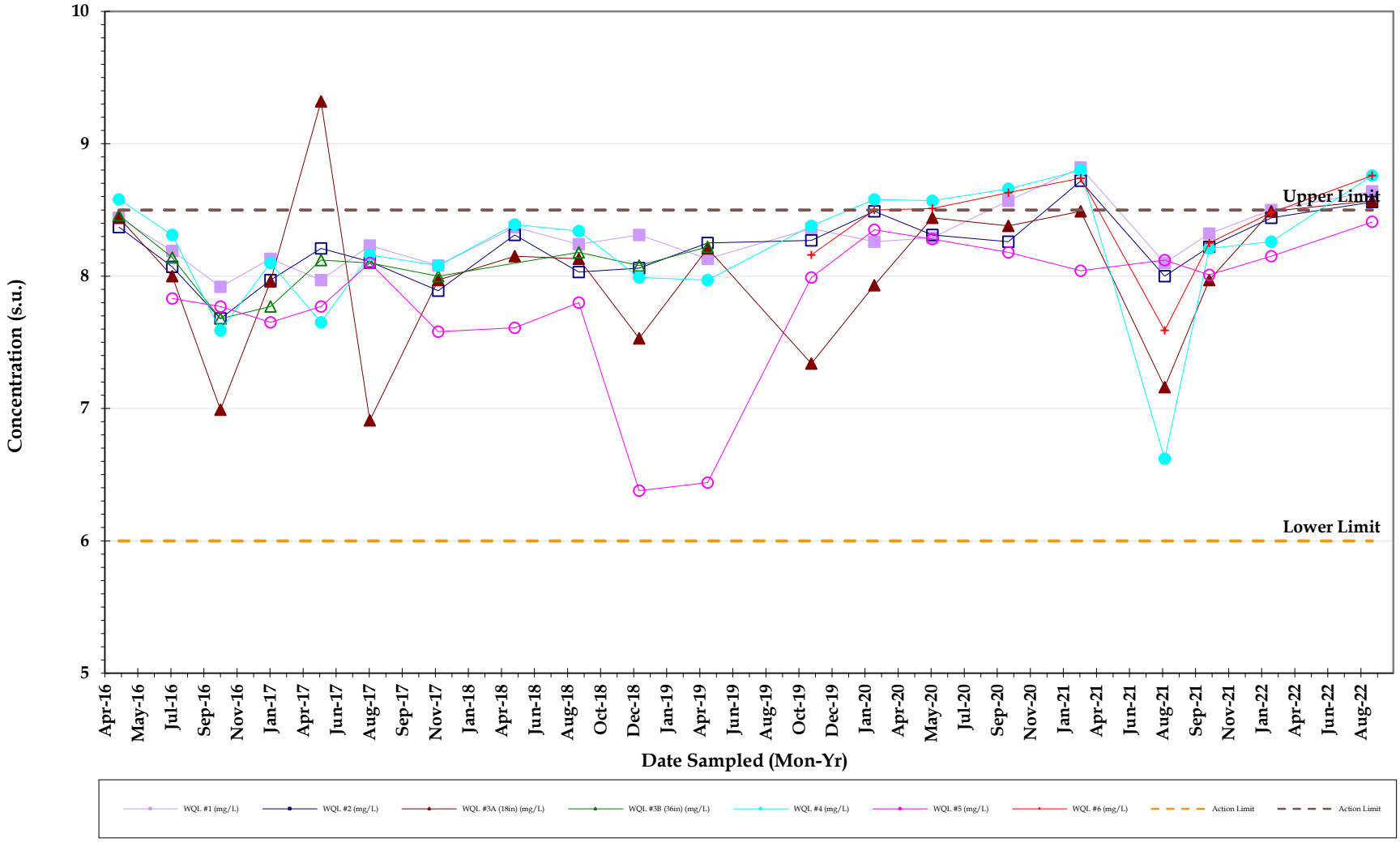


Total kjeldahl nitrogen (TKN)

Miromar Lakes

Water Quality Surface Water Sample results

AUGUST 2022

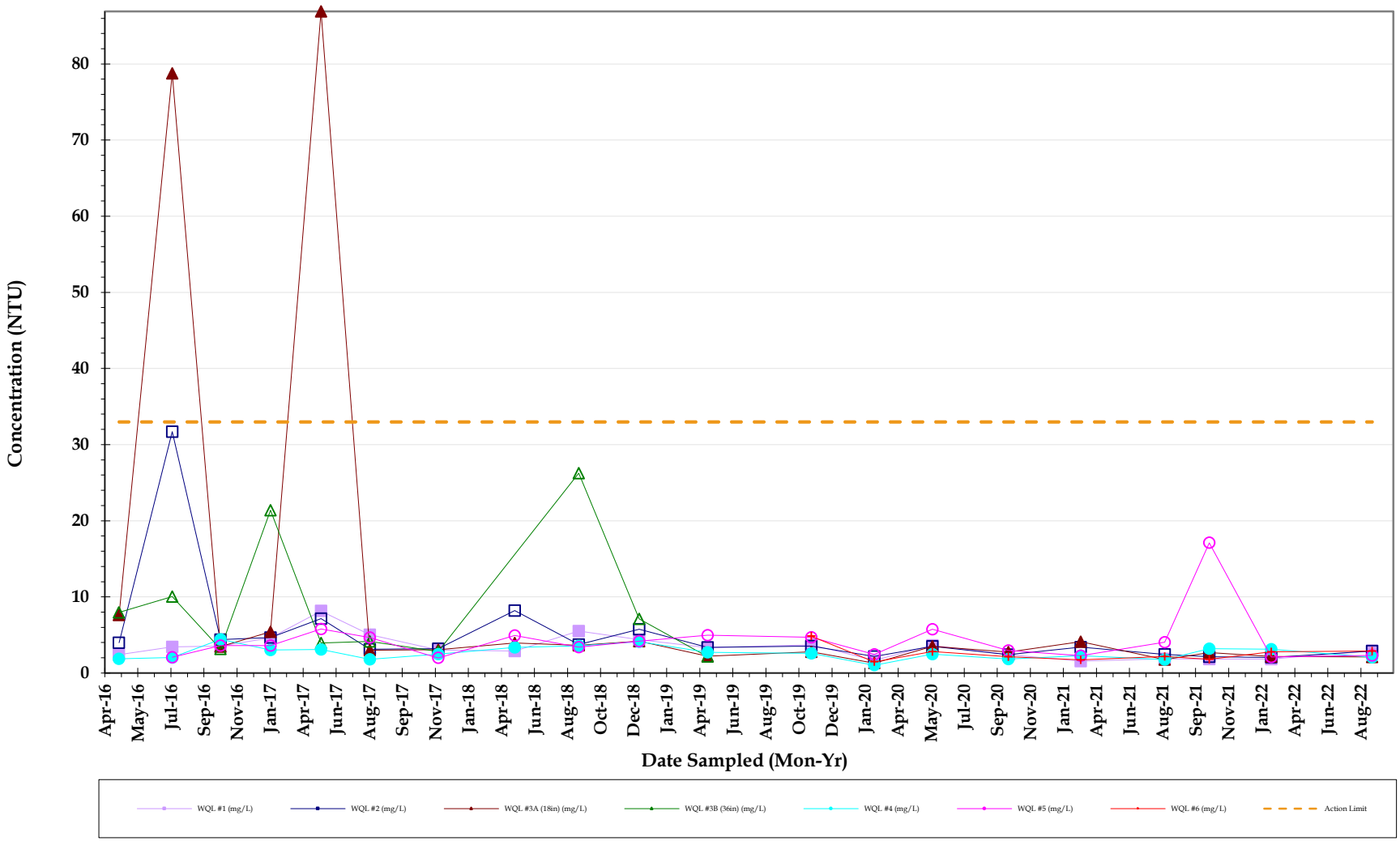


pH, Field

Miromar Lakes

Water Quality Surface Water Sample results

AUGUST 2022

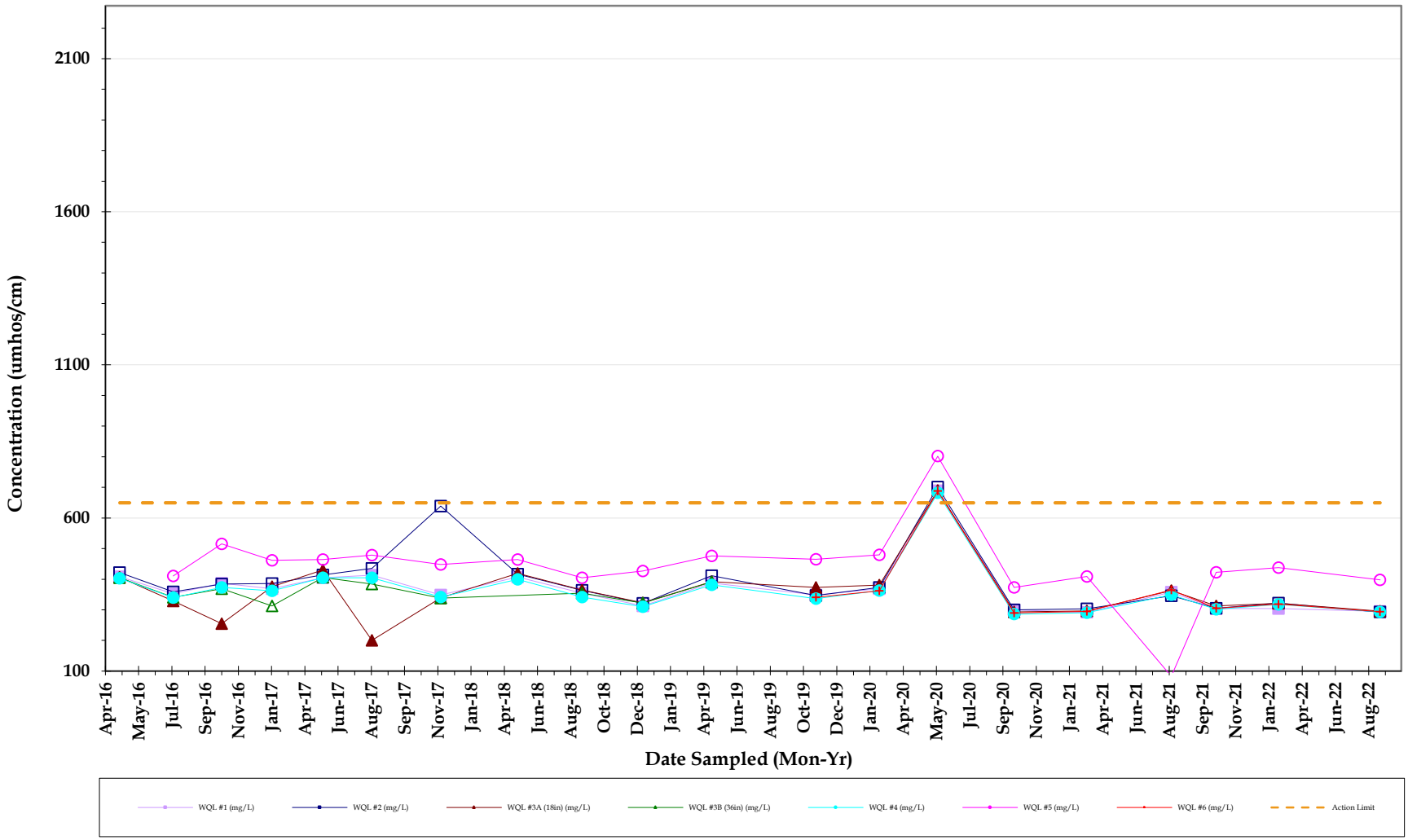


Turbidity

Miromar Lakes

Water Quality Surface Water Sample results

AUGUST 2022

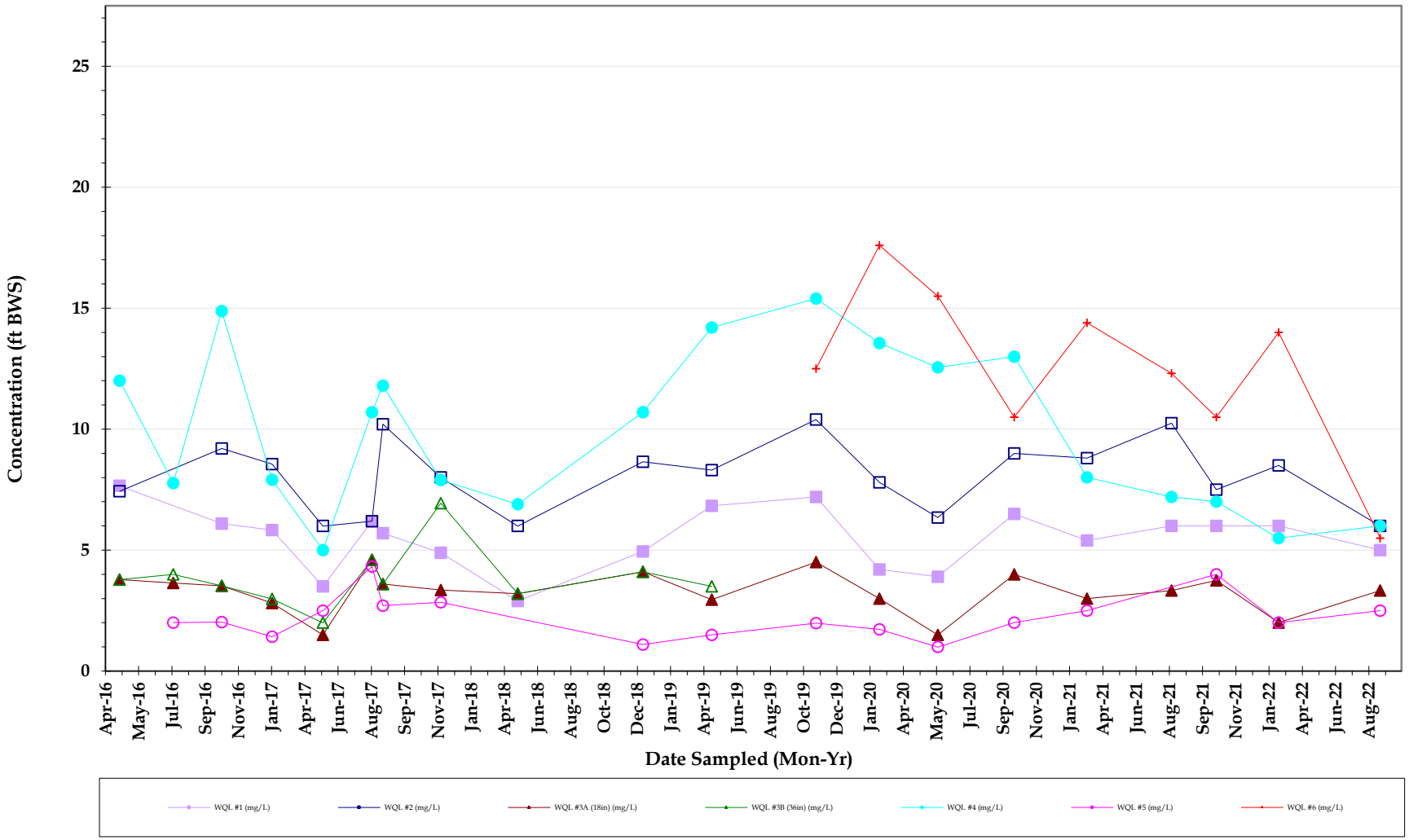


Conductivity

Miromar Lakes

Water Quality Surface Water Sample results

AUGUST 2022

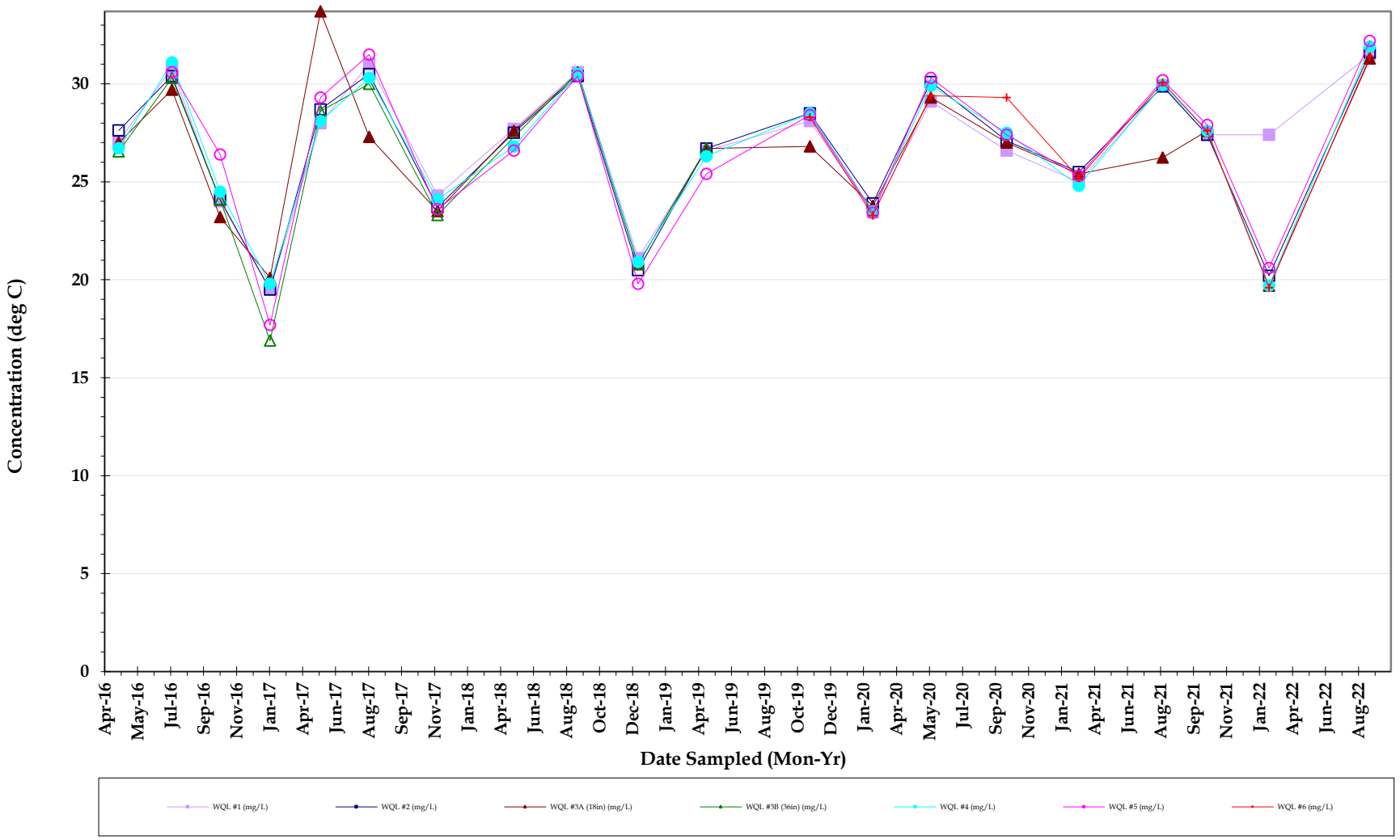


Water Depth

Miromar Lakes

Water Quality Surface Water Sample results

AUGUST 2022



Temperature, sample

Miromar Lakes

Water Quality Surface Water Sample results

AUGUST 2022

FDOH Certification #E84167

BENCHMARK *EnviroAnalytical, Inc.*

ANALYTICAL TEST REPORT

THESE RESULTS MEET NELAC STANDARDS

Submission Number : 22081375

G H D Services, Inc.
2675 Winkler Ave., Ste.180
Fort Myers, FL 33901

Project Name : MIROMAR LAKES WQM QTLY
Date Received : 08/23/2022
Time Received : 13:57
Project #: 11225022-04

Submission Number: 22081375
Sample Number: 001
Sample Description: WQL #1
Sample Date: 08/22/2022
Sample Time: 10:10
Sample Method: Grab

Parameter	Result	Units	MDL	PQL	Procedure	Analysis Date/Time	Analyst
AMMONIA NITROGEN	0.008 I	MG/L	0.008	0.032	350.1	09/08/2022 11:49	EO
TOTAL KJELDAHL NITROGEN	0.630	MG/L	0.05	0.20	351.2	09/01/2022 16:26	EO
ORTHO PHOSPHORUS AS P	0.018	MG/L	0.002	0.008	365.3	08/23/2022 17:50	YQ
TOTAL PHOSPHORUS AS P	0.017 I	MG/L	0.008	0.032	365.3	08/29/2022 14:30	YQ
CHLOROPHYLL A	8.28	MG/M3	0.25	1.00	445.0	09/19/2022 13:10	CH
TOTAL SUSPENDED SOLIDS	2.20 I	MG/L	0.570	2.280	SM2540D	08/24/2022 10:55	TG
BIOCHEMICAL OXYGEN DEMAND	1.0 U	MG/L	1.0	4.0	SM5210B	08/23/2022 14:37	LD/LD
NITRATE+NITRITE AS N	0.188	MG/L	0.006	0.024	SYSTEA EASY	09/04/2022 12:12	MV
TOTAL NITROGEN	0.818	MG/L	0.05	0.20	SYSTEA+351	09/04/2022 12:12	EO/MV

Submission Number: 22081375
Sample Number: 002
Sample Description: WQL #2
Sample Date: 08/22/2022
Sample Time: 10:00
Sample Method: Grab

Parameter	Result	Units	MDL	PQL	Procedure	Analysis Date/Time	Analyst
AMMONIA NITROGEN	0.008 U	MG/L	0.008	0.032	350.1	09/07/2022 11:42	MV
TOTAL KJELDAHL NITROGEN	0.635	MG/L	0.05	0.20	351.2	09/01/2022 16:27	EO
ORTHO PHOSPHORUS AS P	0.010	MG/L	0.002	0.008	365.3	08/23/2022 17:50	YQ
TOTAL PHOSPHORUS AS P	0.021 I	MG/L	0.008	0.032	365.3	08/29/2022 13:42	YQ
CHLOROPHYLL A	11.6	MG/M3	0.25	1.00	445.0	09/19/2022 13:10	CH
TOTAL SUSPENDED SOLIDS	2.00 I	MG/L	0.570	2.280	SM2540D	08/24/2022 10:55	TG
BIOCHEMICAL OXYGEN DEMAND	1.03	MG/L	1.0	4.0	SM5210B	08/23/2022 14:37	LD/LD
NITRATE+NITRITE AS N	0.171	MG/L	0.006	0.024	SYSTEA EASY	09/04/2022 14:11	MV
TOTAL NITROGEN	0.806	MG/L	0.05	0.20	SYSTEA+351	09/04/2022 14:11	EO/MV

Submission Number: 22081375 **Sample Date:** 08/22/2022
Sample Number: 003 **Sample Time:** 09:45
Sample Description: WQL #3 **Sample Method:** Grab

Parameter	Result	Units	MDL	PQL	Procedure	Analysis Date/Time	Analyst
AMMONIA NITROGEN	0.008 U	MG/L	0.008	0.032	350.1	09/11/2022 18:01	MV
TOTAL KJELDAHL NITROGEN	0.809	MG/L	0.05	0.20	351.2	09/01/2022 16:28	EO
ORTHO PHOSPHORUS AS P	0.017	MG/L	0.002	0.008	365.3	08/23/2022 17:50	YQ
TOTAL PHOSPHORUS AS P	0.020 I	MG/L	0.008	0.032	365.3	08/29/2022 13:43	YQ
CHLOROPHYLL A	9.16	MG/M3	0.25	1.00	445.0	09/19/2022 13:10	CH
TOTAL SUSPENDED SOLIDS	1.67 I	MG/L	0.570	2.280	SM2540D	08/24/2022 10:55	TG
BIOCHEMICAL OXYGEN DEMAND	1.0 U	MG/L	1.0	4.0	SM5210B	08/23/2022 14:37	LD/LD
NITRATE+NITRITE AS N	0.173	MG/L	0.006	0.024	SYSTEA EASY	09/03/2022 16:50	MV
TOTAL NITROGEN	0.982	MG/L	0.05	0.20	SYSTEA+351	09/03/2022 16:50	EO/MV

Submission Number: 22081375 **Sample Date:** 08/22/2022
Sample Number: 004 **Sample Time:** 09:00
Sample Description: WQL #4 **Sample Method:** Grab

Parameter	Result	Units	MDL	PQL	Procedure	Analysis Date/Time	Analyst
AMMONIA NITROGEN	0.071	MG/L	0.008	0.032	350.1	09/08/2022 12:12	EO
TOTAL KJELDAHL NITROGEN	0.784	MG/L	0.05	0.20	351.2	09/01/2022 16:30	EO
ORTHO PHOSPHORUS AS P	0.016	MG/L	0.002	0.008	365.3	08/23/2022 17:50	YQ
TOTAL PHOSPHORUS AS P	0.017 I	MG/L	0.008	0.032	365.3	08/29/2022 13:44	YQ
CHLOROPHYLL A	14.2	MG/M3	0.25	1.00	445.0	09/19/2022 13:10	CH
TOTAL SUSPENDED SOLIDS	0.570 U	MG/L	0.570	2.280	SM2540D	08/24/2022 10:55	TG
BIOCHEMICAL OXYGEN DEMAND	1.0 U	MG/L	1.0	4.0	SM5210B	08/23/2022 14:37	LD/LD
NITRATE+NITRITE AS N	0.185	MG/L	0.006	0.024	SYSTEA EASY	09/04/2022 14:00	MV
TOTAL NITROGEN	0.969	MG/L	0.05	0.20	SYSTEA+351	09/04/2022 14:00	EO/MV

Submission Number: 22081375 **Sample Date:** 08/22/2022
Sample Number: 005 **Sample Time:** 10:55
Sample Description: WQL #5 **Sample Method:** Grab

Parameter	Result	Units	MDL	PQL	Procedure	Analysis Date/Time	Analyst
AMMONIA NITROGEN	0.008 U	MG/L	0.008	0.032	350.1	09/11/2022 18:13	MV
TOTAL KJELDAHL NITROGEN	0.883	MG/L	0.05	0.20	351.2	09/01/2022 16:31	EO
ORTHO PHOSPHORUS AS P	0.016	MG/L	0.002	0.008	365.3	08/23/2022 17:50	YQ
TOTAL PHOSPHORUS AS P	0.024 I	MG/L	0.008	0.032	365.3	08/29/2022 13:45	YQ
CHLOROPHYLL A	21.7	MG/M3	0.25	1.00	445.0	09/19/2022 13:10	CH
TOTAL SUSPENDED SOLIDS	2.00 I	MG/L	0.570	2.280	SM2540D	08/24/2022 10:55	TG
BIOCHEMICAL OXYGEN DEMAND	1.22	MG/L	1.0	4.0	SM5210B	08/23/2022 14:37	LD/LD

NITRATE+NITRITE AS N	0.177	MG/L	0.006	0.024	SYSTEA EASY	09/03/2022 17:00	MV
TOTAL NITROGEN	1.06	MG/L	0.05	0.20	SYSTEA+351	09/03/2022 17:00	EO/MV

Submission Number: 22081375 **Sample Date:** 08/22/2022
Sample Number: 006 **Sample Time:** 09:40
Sample Description: WQL #6 **Sample Method:** Grab

Parameter	Result	Units	MDL	PQL	Procedure	Analysis Date/Time	Analyst
AMMONIA NITROGEN	0.008 U	MG/L	0.008	0.032	350.1	09/07/2022 14:57	MV
TOTAL KJELDAHL NITROGEN	0.539	MG/L	0.05	0.20	351.2	09/01/2022 16:38	EO
ORTHO PHOSPHORUS AS P	0.014	MG/L	0.002	0.008	365.3	08/23/2022 17:50	YQ
TOTAL PHOSPHORUS AS P	0.015 I	MG/L	0.008	0.032	365.3	08/29/2022 13:46	YQ
CHLOROPHYLL A	8.56	MG/M3	0.26	1.00	445.0	09/19/2022 13:10	CH
TOTAL SUSPENDED SOLIDS	2.40	MG/L	0.570	2.280	SM2540D	08/24/2022 10:55	TG
BIOCHEMICAL OXYGEN DEMAND	1.0 U	MG/L	1.0	4.0	SM5210B	08/23/2022 14:37	LD/LD
NITRATE+NITRITE AS N	0.006 U	MG/L	0.006	0.024	SYSTEA EASY	09/04/2022 12:29	MV
TOTAL NITROGEN	0.539	MG/L	0.05	0.20	SYSTEA+351	09/04/2022 12:29	EO/MV

Haley Rin 09/24/2022

Dale D. Dixon / Laboratory Director — Date

Tilay Tanrisever - Technical Director/QC Officer

Haley Richardson - QA Officer

DATA QUALIFIERS THAT MAY APPLY:

A = Value reported is an average of two or more determinations.
B = Results based upon colony counts outside the ideal range.
H = Value based on field kit determination. Results may not be accurate.
I = Reported value is between the laboratory MDL and the PQL.
J1 = Estimated value. Surrogate recovery limits exceeded.
J2 = Estimated value. No quality control criteria exists for component.
J3 = Estimated value. Quality control criteria for precision or accuracy not met.
J4 = Estimated value. Sample matrix interference suspected.
J5 = Estimated value. Data questionable due to improper lab or field protocols.
K = Off-scale low. Value is known to be < the value reported.
L = Off-scale high. Value is known to be > the value reported.
N = Presumptive evidence of presence of material.
O = Sampled, but analysis lost or not performed.
Q = Sample held beyond accepted hold time.
T = Value reported is < MDL. Reported for informational purposes only and shall not be used in statistical analysis.
U = Analyte analyzed but not detected at the value indicated.
V = Analyte detected in sample and method blank. Results for this analyte in associated samples may be biased high. Standard, Duplicate and Spike values are within control limits. Reported data are usable.
Y = Analysis performed on an improperly preserved sample. Data may be inaccurate.
Z = Too many colonies were present (TNTC). The numeric value represents the filtration volume.
! = Data deviate from historically established concentration ranges.
? = Data rejected and should not be used. Some or all of QC data were outside criteria, and the presence or absence of the analyte cannot be determined from the data.
* = Not reported due to interference.
Oil & Grease - If client does not send sufficient sample quantity for spike evaluation surface water samples are supplied by the laboratory.

NOTES:

MBAS calculated as LAS; molecular weight = 340.
PQL = 4xMDL.
ND = Not detected at or above the adjusted reporting limit.
G1 = Accuracy standard does not meet method control limits, but does meet lab control limits that are in agreement with USEPA generated data. USEPA letter available upon request.
G2 = Accuracy standard exceeds acceptable control limits. Duplicate and spike values are within control limits. Reported data are usable.

COMMENTS:

Chlorophyll A lab filtered at E65066 on 08/23/22 at 0827.

For questions or comments regarding these results, please contact us at (941) 723-9986.

Results relate only to the samples.

Benchmark EA South
1001 Corporate Avenue, Suite 102
North Port, FL 34289
(941) 625-3137 / (800) 736-9986
(941) 423-7336 fax
Sample Temperature checked upon receipt at BEAS with Temperature Gun ID #7

Benchmark EA, Inc.
1711 12th St. East
Palmetto, FL 34221
(941) 723-9986 / (800) 736-9986
(941) 723-6061-fax
Sample Temperature checked upon receipt at BEA with Temperature Gun ID #258

Client: **GHD Services, Inc.** (HSA ENG)
2675 Winkler Ave. Suite 180
Ft. Myers Fl 33901
Erik Isern (239) 215-3914 Shannon Tucker 239-210-8653
Email EDD Reports to: ~~Andrew.Wyatt@ghd.com~~ & Connor Haydon (Connor.Haydon@ghd.com)
2020 PO# 34043123 Isern.Lebianc@ghd.com

Kit Shipped to client via UPS Standard in 1 large cooler

Chain of Custody Form: ~~Florida CDD WQM~~ Miramar lakes
Project Number: 11225022-~~00~~ 04

Profile: 840, QC Report

Laboratory Submission #: J208375

Station ID	Sample Type[1]	Sample Matrix[2]	Parameters. Preservative[4]. Container Type[3] / Total # of Containers = 25					Laboratory Submission #
			Unique bottle ID 1A	Unique bottle ID 1B	Unique bottle ID 1C	Unique bottle ID 1D	Unique bottle ID 1E	
			NO_3-NO_2 (353.2) TKN (351.2) NH_3 (350.1) TP (365.3) T-N (Calc.)	BOD5 (SM5210B)	Ortho-Phos (Lab Filtered) (365.3)	TSS (SM2540D)	Chlorophyll a (445.0) Filtered @ BEAS 8/23/22 0827	
			1.1mL 1:4 H_2SO_4 pH<2 ☐ Lot # 22-02	Plain	Plain	Plain	Plain	
			1 x ½ Pint Plastic	1 x 1 Quart Plastic	1 x ½ Pint Plastic	1 x 1 Quart Plastic	1 x 500mL Opaque Plastic	
WQ Location # 1	Grab	SW	Date/Time: 8/22/22 1010					1
WQ Location # 2	Grab	SW	Date/Time: 1000					2
WQ Location # 3	Grab	SW	Date/Time: 945					3
WQ Location # 4	Grab	SW	Date/Time: 900					4
WQ Location # 5	Grab	SW	Date/Time: 1055					5
WQ Location #6					940			6

Notes:
1. "Sample Type" is used to indicate whether the sample was a grab (G) or whether it was a composite (C).
2. "Sample Matrix" is used to indicate whether the sample is being discharged to drinking water (DW), groundwater (GW), surface water (SW), fresh surface water (FSW), saline surface water (SSW), soil, sediment (SDMNT), or sludge (SLDG).
3. "Container Type" is used to indicate whether the container is plastic (P) or glass (G).
4. Samples must be refrigerated or stored in wet ice after collection. The temperature during storage should be less than or equal to 6°C (42.8°F).
5. Under "Preservative," list any preservatives that were added to the sample container. Lot Number of preservative used is specific to the bottles included in the kit. NaThio, H_2SO_4 and HNO_3 do not have expiration dates per the manufacturer. Micro bottles are pre-preserved at manufacturing stage. 40mL vials are pre-preserved at manufacturing stage.
6. 2 Quart plastic bottles are not certified.

Instructions:
1. Each bottle has a label identifying sample ID, premeasured preservative contained in the bottle, sample type, client ID, and parameters for analysis.
2. The following information should be added to each bottle label after collection with permanent black ink: date and time of collection, sampler's name or initials, and any field number or ID.
3. All bottles not containing preservative may be rinsed with appropriate sample prior to collection.
4. The client is responsible for documentation of the sampling event. Please note special sampling events on the sample custody form.
5. Sample kit has been created by BEA using new, certified bottles unless otherwise noted.

Laboratory Sample Acceptability:
pH <2 : ☑ BEA Temperature: 1.2°C
BEAS temp 1.6°C

		Date:	Time:		Date:	Time:
1	Collector & Affiliation: (Print & Sign)	8.22.22	1250	Received By & Affiliation: (Print & Sign) Brooke Kwatemick BEAS	8/22/22	1250
2	Relinquished By & Affiliation: (Print & Sign) Brooke Kwatemick BEAS	8/23/22	1140	Received By & Affiliation: (Print & Sign)	8/23/22	1140
3	Relinquished By & Affiliation: (Print & Sign)	8/23/22	1357	Received By & Affiliation: (Print & Sign) Nathan Hadsell	8-23-22	1357
4	Relinquished By & Affiliation: (Print & Sign)	Date:	Time:	Received By & Affiliation: (Print & Sign)	Date:	Time:
5	Relinquished By & Affiliation: (Print & Sign)	Date:	Time:	Received By & Affiliation: (Print & Sign)	Date:	Time:

BENCHMARK
EnviroAnalytical, Inc.

NELAP Certification #E84167

Submission Number: 22081375

Project Name: MIROMAR LAKES WQM QTLY

QC REPORT

SUBMISSION NUMBER	SAMPLE NUMBER	METHOD	ANALYTE	ANALYSIS DATE/TIME	QC FLAG	QC VALUE	SAMPLE RESULT	LR RESULT	LR %RSD	SPK RESULT	STD-SPK %REC
22080644 - 001	656085	350.1	AMMONIA NITROGEN	09/07/2022 12:33	LR		134.000	130.000	2.07		
		350.1	AMMONIA NITROGEN	09/11/2022 20:10	MB	0.00	0.000				
22081626 - 003	657900	350.1	AMMONIA NITROGEN	09/11/2022 19:48	SPK	1.00	0.965			1.040	108.0
		350.1	AMMONIA NITROGEN	09/07/2022 11:47	STD	1.00	0.979				97.9
22081292 - 003	657333	351.2	TOTAL KJELDAHL NITROGEN	09/01/2022 16:55	LR		19.800	19.000	3.13		
		351.2	TOTAL KJELDAHL NITROGEN	09/01/2022 11:40	MB	0.00	0.000				
22081486 - 001	657663	351.2	TOTAL KJELDAHL NITROGEN	09/01/2022 17:28	SPK	2.00	2.680			2.480	90.0
		351.2	TOTAL KJELDAHL NITROGEN	09/01/2022 11:43	STD	2.50	2.380				95.0
		351.2	TOTAL KJELDAHL NITROGEN	09/01/2022 11:45	STD	2.00	1.940				97.1
22070942 - 004		365.3	ORTHOPHOSPHORUS	08/26/2022 09:56	LR		0.148	0.151	1.47		
		365.3	ORTHOPHOSPHORUS	08/26/2022 11:33	MB	0.00	0.000				
22081497 - 002		365.3	ORTHOPHOSPHORUS	08/26/2022 17:31	SPK	0.20	0.006			0.193	93.5
		365.3	ORTHOPHOSPHORUS	08/26/2022 17:26	STD	0.20	0.181				
22081451 - 001	657615	365.3	TOTAL PHOSPHORUS AS P	08/29/2022 14:31	LR		8.180	7.940	2.10		
		365.3	TOTAL PHOSPHORUS AS P	08/29/2022 11:03	MB	0.00	0.000				
22081141 - 001	656999	365.3	TOTAL PHOSPHORUS AS P	08/29/2022 14:20	SPK	0.20	0.204			0.207	101.0
		365.3	TOTAL PHOSPHORUS AS P	08/29/2022 12:33	STD	0.20	0.193				96.5
22081557 - 001	657781	445.0	CHLOROPHYLL A	09/19/2022 13:10	LR		4.792	4.550	3.72		
22081298 - 001	657342	SM2540D	TOTAL SUSPENDED SOLIDS	08/24/2022 10:55	LR		488.000	444.000	6.68		
		SM2540D	TOTAL SUSPENDED SOLIDS	08/24/2022 10:55	MB	0.00	0.000				
		SM2540D	TOTAL SUSPENDED SOLIDS	08/24/2022 10:55	STD	951.00	1028.000				108.1
22081287 - 001	657319	SM5210B	BIOCHEMICAL OXYGEN DEMAND	08/23/2022 14:37	LR		0.601	0.611	1.17		
		SM5210B	BIOCHEMICAL OXYGEN DEMAND	08/23/2022 14:37	MB	0.00					
		SM5210B	BIOCHEMICAL OXYGEN DEMAND	08/23/2022 14:37	STD	198.00	186.050				94.0
22081551 - 001	657766	SYSTEA EASY	NITRATE+NITRITE AS N	09/04/2022 16:25	LR		0.181	0.178	0.95		

QC FLAGS: MB or BLK = METHOD BLANK LR = LAB REPLICATE MSD = MATRIX SPIKE DUPLICATE STD or LCS = STANDARD SPK or MS = MATRIX SPIKE

SUBMISSION NUMBER	SAMPLE NUMBER	METHOD	ANALYTE	ANALYSIS DATE/TIME	QC FLAG	QC VALUE	SAMPLE RESULT	LR RESULT	LR %RSD	SPK RESULT	STD-SPK %REC
		SYSTEA EASY	NITRATE+NITRITE AS N	09/03/2022 11:17	MB	0.00	0.000				
		SYSTEA EASY	NITRATE+NITRITE AS N	09/03/2022 12:11	PQL	0.01	0.011				110.0
22081375 - 001	657463	SYSTEA EASY	NITRATE+NITRITE AS N	09/04/2022 12:11	SPK	0.20	0.199			0.188	94.5
		SYSTEA EASY	NITRATE+NITRITE AS N	09/03/2022 14:25	STD	0.25	0.242				96.8

Comments:

SURFACE WATER FIELD SHEET
Station Information

STATION ID:	WQ Location #1
LOCATION:	under bridge
DATE/TIME:	8/22/22 1010
ALL TIMES ARE:	ETZ or CTZ (circle one)

WATERBODY TYPE: (Circle One)
- ~~Small Lake (>4 and <10HA) (collect samples in middle of open water)~~
- Large Lake (>10HA) (collect samples at selected location point)
- Small Stream (collect samples in representative area)
- Large River (collect samples in representative area)

Water Characteristics

TOTAL WATER DEPTH: 5.0 (feet) (Average of 2 measurements) Sample Depth: 1.5 (feet)

STREAM FLOW:	(Circle One if applicable)	No Flow	Flow within Banks	Flood Conditions	
WATER LEVEL:	(Circle One)	Low	Normal	High	
WATER SAMPLE COLLECTION DEVICE	(Circle One)	Van Dorn	Direct Grab with Sample Bottle	Dipper	Other

Field Measurements **Meter ID#** **Field Measurements Read By:** (initials)

Time (24 hr.)	Surface Depth Collected (feet)	pH* (SU)	D.O.(mg./L)	D.O. (%)	Temp (°C)	Conductivity (µmhos/cm)	Turbidity (NTU)
1010	1.5	8.64	6.12	83.1	31.5	295	2.93
Time (24 hr.)	Bottom Depth Collected (feet)	pH (SU)	D.O.(mg./L)	D.O. (%)	Temp (°C)	Conductivity (µmhos/cm)	Turbidity (NTU)

*pH of preserved sample: number of drops of sulfuric acid added in field to achieve pH of less than 2: NA

Samples immediately placed on ice? (Yes) No

WEATHER CONDITIONS: (circle) raining, (clear), partly cloudy, windy

PERSONNEL ON SITE: Connor Hayden, Bill McKinney, Josh Lebrane

REMARKS: Sample collected under bridge

SURFACE WATER FIELD SHEET
Station Information

STATION ID: WQ Location 2

LOCATION: corner of turn adjacent to buoy

DATE/TIME: 8/22/22 1000

ALL TIMES ARE: (ETZ) or CTZ (circle one)

WATERBODY TYPE (Circle One):
- Small Lake (>4 and <10HA) (collect samples in middle of open water)
- (Large Lake (>10HA) (collect samples at selected location point))
- Small Stream (collect samples in representative area)
- Large River (collect samples in representative area)

Water Characteristics

TOTAL WATER DEPTH: 6.0 (feet) (Average of 2 measurements) Sample Depth: 1.5 (feet)

STREAM FLOW: (Circle One if applicable) No Flow / (Flow within Banks) / Flood Conditions

WATER LEVEL: (Circle One) Low / (Normal) / High

WATER SAMPLE COLLECTION DEVICE (Circle One) Van Dorn / (Direct Grab with Sample Bottle) / Dipper / Other _____

Field Measurements Meter ID# **Field Measurements Read By:** (initials)

Time (24 hr.)	Surface Depth Collected (feet)	pH* (SU)	D.O.(mg./L)	D.O. (%)	Temp (°C)	Conductivity (µmhos/cm)	Turbidity (NTU)
1000	1.5	8.56	7.63	99.2	31.6	293	2.90
Time (24 hr.)	Bottom Depth Collected (feet)	pH (SU)	D.O.(mg./L)	D.O. (%)	Temp (°C)	Conductivity (µmhos/cm)	Turbidity (NTU)

*pH of preserved sample: number of drops of sulfuric acid added in field to achieve pH of less than 2: NA

Samples immediately placed on ice? (Yes) No

WEATHER CONDITIONS: (circle) raining, (clear,) partly cloudy, windy

PERSONNEL ON SITE: Connor Hayden, Bill McKinney, Justin Leblanc

REMARKS: Sample collected @ corner of bend in canal

SURFACE WATER FIELD SHEET
Station Information

STATION ID: WQ Location #3

LOCATION: adjacent to weir/grate

DATE/TIME: 8/22/22 945

ALL TIMES ARE: (ETZ) or CTZ (circle one)

WATERBODY TYPE: (Circle One)
- Small Lake (>4 and <10HA) (collect samples in middle of open water)
- (Large Lake (>10HA) (collect samples at selected location point))
- Small Stream (collect samples in representative area)
- Large River (collect samples in representative area)

Water Characteristics

TOTAL WATER DEPTH: 3.33 (feet) (Average of 2 measurements)

Sample Depth: 1.5 (feet)

STREAM FLOW: (Circle One if applicable) No Flow — (Flow within Banks) — Flood Conditions

WATER LEVEL: (Circle One) Low — (Normal) — High

WATER SAMPLE COLLECTION DEVICE (Circle One) Van Dorn — (Direct Grab with Sample Bottle) — Dipper — Other

Field Measurements — **Meter ID#** — **Field Measurements Read By:** (initials)

Time (24 hr.)	Surface Depth Collected (feet)	pH* (SU)	D.O.(mg./L)	D.O. (%)	Temp (°C)	Conductivity (µmhos/cm)	Turbidity (NTU)
945	1.5	8.57	6.88	93.2	31.3	296	2.11
Time (24 hr.)	Bottom Depth Collected (feet)	pH (SU)	D.O.(mg./L)	D.O. (%)	Temp (°C)	Conductivity (µmhos/cm)	Turbidity (NTU)

*pH of preserved sample: number of drops of sulfuric acid added in field to achieve pH of less than 2: NA

Samples immediately placed on ice? (Yes) No

WEATHER CONDITIONS: (circle) raining, (clear,) partly cloudy, windy

PERSONNEL ON SITE: Connor Hayden, Bin McKinney, Justin Leblanc

REMARKS: Sample collected adjacent to metal grate

SURFACE WATER FIELD SHEET
Station Information

STATION ID: WQ Location #4

LOCATION: 8/22/22 900

DATE/TIME: adjacent to buoy

ALL TIMES ARE: (ETZ) or CTZ (circle one)

WATERBODY TYPE: (Circle One)
- Small Lake (>4 and <10HA) (collect samples in middle of open water)
- (Large Lake (>10HA) (collect samples at selected location point))
- Small Stream (collect samples in representative area)
- Large River (collect samples in representative area)

Water Characteristics

TOTAL WATER DEPTH: 6.0 (feet) (Average of 2 measurements)

Sample Depth: 1.5 (feet)

STREAM FLOW: (Circle One if applicable) No Flow / (Flow within Banks) / Flood Conditions

WATER LEVEL: (Circle One) Low / (Normal) / High

WATER SAMPLE COLLECTION DEVICE (Circle One) Van Dorn / (Direct Grab with Sample Bottle) / Dipper / Other

Field Measurements — **Meter ID#** — **Field Measurements Read By:** (initials)

Time (24 hr.)	Surface Depth Collected (feet)	pH* (SU)	D.O.(mg./L)	D.O. (%)	Temp (°C)	Conductivity (µmhos/cm)	Turbidity (NTU)
900	1.5	8.76	2.06	92.6	31.9	293	2.07
Time (24 hr.)	Bottom Depth Collected (feet)	pH (SU)	D.O.(mg./L)	D.O. (%)	Temp (°C)	Conductivity (µmhos/cm)	Turbidity (NTU)

*pH of preserved sample: number of drops of sulfuric acid added in field to achieve pH of less than 2: NA

Samples immediately placed on ice? (Yes) No

WEATHER CONDITIONS: (circle) raining (clear,) partly cloudy, windy

PERSONNEL ON SITE: Connor Haydon, Bin McKinney, Justin Leykam

REMARKS: sample collected adjacent to buoy.

SURFACE WATER FIELD SHEET
Station Information

STATION ID:	WQ Location #5
LOCATION:	upstream of weir
DATE/TIME:	8/22/22 1055
ALL TIMES ARE:	(ETZ) or CTZ (circle one)

WATERBODY TYPE: (Circle One)

- (Small Lake (>4 and <10HA) (collect samples in middle of open water))
- Large Lake (>10HA) (collect samples at selected location point)
- Small Stream (collect samples in representative area)
- Large River (collect samples in representative area)

Water Characteristics

TOTAL WATER DEPTH: 2.5 (feet) (Average of 2 measurements)

Sample Depth: 1.5 (feet)

STREAM FLOW:	(Circle One if applicable)	(No Flow)	Flow within Banks	Flood Conditions	
WATER LEVEL:	(Circle One)	Low	(Normal)	High	
WATER SAMPLE COLLECTION DEVICE	(Circle One)	Van Dorn	(Direct Grab with Sample Bottle)	Dipper	Other _____

Field Measurements — **Meter ID#** — **Field Measurements Read By:** (initials)

Time (24 hr.)	Surface Depth Collected (feet)	pH* (SU)	D.O.(mg./L)	D.O. (%)	Temp (°C)	Conductivity (µmhos/cm)	Turbidity (NTU)
1055		8.41	6.31	85.1	32.2	397.6	2.30
Time (24 hr.)	Bottom Depth Collected (feet)	pH (SU)	D.O.(mg./L)	D.O. (%)	Temp (°C)	Conductivity (µmhos/cm)	Turbidity (NTU)

*pH of preserved sample: number of drops of sulfuric acid added in field to achieve pH of less than 2: NA

Samples immediately placed on ice? (Yes) No

WEATHER CONDITIONS: (circle) raining, (clear), partly cloudy, windy

PERSONNEL ON SITE: Connor Haydon, Justin LeBlanc

REMARKS: Water about 6 inches above weir

SURFACE WATER FIELD SHEET
Station Information

STATION ID: WQ Location #1

LOCATION: adjacent to buoy

DATE/TIME: 8/22/22 940

ALL TIMES ARE: (ETZ) or CTZ (circle one)

WATERBODY TYPE: (Circle One)
- Small Lake (>4 and <10HA) (collect samples in middle of open water)
- (Large Lake (>10HA) (collect samples at selected location point))
- Small Stream (collect samples in representative area)
- Large River (collect samples in representative area)

Water Characteristics

TOTAL WATER DEPTH: 5.5 (feet) (Average of 2 measurements) Sample Depth: 1.5 (feet)

STREAM FLOW: (Circle One if applicable) No Flow / (Flow within Banks) / Flood Conditions

WATER LEVEL: (Circle One) Low / ~~Normal~~ / High

WATER SAMPLE COLLECTION DEVICE (Circle One) Van Dorn / (Direct Grab with Sample Bottle) / Dipper / Other _____

Field Measurements — **Meter ID#** — **Field Measurements Read By:** (initials)

Time (24 hr.)	Surface Depth Collected (feet)	pH* (SU)	D.O.(mg./L)	D.O. (%)	Temp (°C)	Conductivity (µmhos/cm)	Turbidity (NTU)
940	1.5	8.76	7.52	99.8	31.4	294	2.89
Time (24 hr.)	Bottom Depth Collected (feet)	pH (SU)	D.O.(mg./L)	D.O. (%)	Temp (°C)	Conductivity (µmhos/cm)	Turbidity (NTU)

*pH of preserved sample: number of drops of sulfuric acid added in field to achieve pH of less than 2: NA

Samples immediately placed on ice? (Yes) / No

WEATHER CONDITIONS: (circle) raining, (clear) partly cloudy, windy

PERSONNEL ON SITE: Connor Haydon, Bill McKinney Justin LeBlanc

REMARKS: sample collected adjacent to buoy in middle of canal