



PINELLAS COUNTY UTILITIES LABORATORY  
1620 Ridge Road Bldg B, Largo, FL 33778  
Phone: 727-582-2302  
Fax: 727-588-4834



## CERTIFICATE OF ANALYSIS

**Client:** Pinellas County - Environmental Management  
Division  
22211 US Hwy 19 N  
Clearwater, FL 33756

**Analyzed By:** Pinellas County Utilities Laboratory  
1620 Ridge Road Bldg B, Largo, FL 33778  
Ph: 727-582-2302

State of Florida Certification: E54357

**Workorder Number: 1900572**

EPA Lab#: FL00123

**Profile: Environmental Mgmt - Ambient**

**Line Item: EMD - Land Run**

| SAMPLE SITE  | SAMPLE NO. | COLLECTED DATE/TIME | RECEIVED DATE/TIME |
|--------------|------------|---------------------|--------------------|
| 19-10 19-02  | 190057201  | 03/20/2019 09:11    | 03/20/2019 15:07   |
| LR4-EB 19-02 | 190057202  | 03/20/2019 09:40    | 03/20/2019 15:07   |
| 19-02 19-02  | 190057203  | 03/20/2019 09:47    | 03/20/2019 15:07   |
| LR4-FB 19-02 | 190057204  | 03/20/2019 10:01    | 03/20/2019 15:07   |
| 19-08 19-02  | 190057205  | 03/20/2019 10:35    | 03/20/2019 15:07   |
| 19-12 19-02  | 190057206  | 03/20/2019 11:09    | 03/20/2019 15:07   |
| 19-13 19-02  | 190057207  | 03/20/2019 12:23    | 03/20/2019 15:07   |
| 14-07 19-02  | 190057208  | 03/20/2019 13:09    | 03/20/2019 15:07   |
| 14-10 19-02  | 190057209  | 03/20/2019 13:50    | 03/20/2019 15:07   |

### THIS REPORT MEETS TNi STANDARDS

All analytical data contained in this report were obtained using the specified methods and were verified by our laboratory quality system. All methods referenced in this report meet TNi requirements unless otherwise indicated by analytical data codes and/or remarks. Analytical results listed within this report pertain only to the specific samples listed. No other inferences can be made. All measurements are on a wet weight basis unless otherwise indicated by the units of measure. Uncertainty of Measurement for each analyte and the associated Quality Control data for these sample results will be provided upon request.

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### CERTIFICATION STATEMENT

An asterisk (\*) appearing next to an analyte indicates certification is not currently held for that test/analyte or that the certified test method has been sufficiently modified to accommodate the customer requirements that it no longer qualifies as certified.

**Please return or destroy this document if you are not the intended recipient and contact immediately:**

Pinellas County Utilities Laboratory  
Contact Person: Terri Grimes  
727-582-2322

*Terri Grimes*

04/01/2019

Terri Grimes  
Laboratory Project Coordinator/QA Manager  
tgrimes@pinellascounty.org

Date



## ANALYTICAL RESULTS

Workorder: 1900572

Lab ID: **190057201**  
Sample ID: **19-10 19-02**

Date Received: 3/20/2019 15:07  
Date Collected: 3/20/2019 09:11  
Matrix: Surface Water  
Type: Grab

| Parameters                        | Results | Units     | DF | LOD  | LOQ  | Analyzed        | By  | Qualifiers | QC Batch ID |
|-----------------------------------|---------|-----------|----|------|------|-----------------|-----|------------|-------------|
| <b>Inorganics</b>                 |         |           |    |      |      |                 |     |            |             |
| Analytical Method: SM 2130B       |         |           |    |      |      |                 |     |            |             |
| Turbidity                         | 4.7     | NTU       | 1  | 0.1  |      | 3/21/2019 13:57 | TMT |            | CHEM/2402   |
| Analytical Method: SM 2540D       |         |           |    |      |      |                 |     |            |             |
| Total Suspended Solids            | 2       | mg/L      | 1  | 1    |      | 3/22/2019 13:32 | KDP |            | CHEM/2415   |
| Analytical Method: SM 10200H      |         |           |    |      |      |                 |     |            |             |
| Chlorophyll a (Corrected)         | 0.5     | U mg/m3   | 1  | 0.5  |      | 3/22/2019 14:27 | KAV |            | CHEM/2403   |
| Chlorophyll a (Uncorrected)       | 0.7     | mg/m3     | 1  | 0.5  |      | 3/22/2019 14:27 | KAV |            | CHEM/2403   |
| Chlorophyll b                     | 0.5     | U mg/m3   | 1  | 0.5  |      | 3/22/2019 14:27 | KAV |            | CHEM/2403   |
| Chlorophyll c                     | 0.5     | U mg/m3   | 1  | 0.5  |      | 3/22/2019 14:27 | KAV |            | CHEM/2403   |
| Pheophytin                        | 0.5     | U mg/m3   | 1  | 0.5  |      | 3/22/2019 14:27 | KAV |            | CHEM/2403   |
| Analytical Method: SM 5210B       |         |           |    |      |      |                 |     |            |             |
| Biochemical Oxygen Demand         | 1.0     | I mg/L    | 1  | 0.5  | 2.0  | 3/21/2019 10:22 | RRM |            | CHEM/2405   |
| <b>Microbiology</b>               |         |           |    |      |      |                 |     |            |             |
| Analytical Method: SM 9223B       |         |           |    |      |      |                 |     |            |             |
| E. coli                           | 115     | MPN/100mL | 2  | 2    |      | 3/20/2019 15:47 | QAC |            | MIC/2095    |
| <b>Nutrients</b>                  |         |           |    |      |      |                 |     |            |             |
| Analytical Method: ASTM D3590-11B |         |           |    |      |      |                 |     |            |             |
| Total Kjeldahl Nitrogen           | 0.78    | mg/L      | 1  | 0.10 | 0.40 | 3/22/2019 14:23 | AMC |            | NUTR/2146   |
| Analytical Method: EPA 365.1      |         |           |    |      |      |                 |     |            |             |
| Total Phosphorus                  | 0.24    | mg/L      | 1  | 0.01 | 0.04 | 3/22/2019 16:00 | AMC |            | NUTR/2148   |
| Analytical Method: SM 4500PF      |         |           |    |      |      |                 |     |            |             |
| Orthophosphate as P(Dissolved)    | 0.09    | mg/L      | 1  | 0.01 | 0.04 | 3/21/2019 12:04 | ISP |            | NUTR/2151   |
| Analytical Method: SM 4500NH3H    |         |           |    |      |      |                 |     |            |             |
| Ammonia                           | 0.11    | mg/L      | 1  | 0.01 | 0.04 | 3/21/2019 11:10 | AJH |            | NUTR/2150   |
| Analytical Method: SM 4500NO3F    |         |           |    |      |      |                 |     |            |             |
| Nitrate+Nitrite (N)               | 0.14    | mg/L      | 1  | 0.01 | 0.04 | 3/21/2019 11:10 | AJH |            | NUTR/2149   |

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## ANALYTICAL RESULTS

Workorder: 1900572

Lab ID: **190057202**  
Sample ID: **LR4-EB 19-02**

Date Received: 3/20/2019 15:07  
Date Collected: 3/20/2019 09:40  
Matrix: Surface Water  
Type: Grab

| Parameters                        | Results | Units | DF | LOD  | LOQ  | Analyzed        | By  | Qualifiers | QC Batch ID |
|-----------------------------------|---------|-------|----|------|------|-----------------|-----|------------|-------------|
| <b>Nutrients</b>                  |         |       |    |      |      |                 |     |            |             |
| Analytical Method: ASTM D3590-11B |         |       |    |      |      |                 |     |            |             |
| Total Kjeldahl Nitrogen           | 0.10 U  | mg/L  | 1  | 0.10 | 0.40 | 3/22/2019 14:24 | AMC |            | NUTR/2146   |
| Analytical Method: EPA 365.1      |         |       |    |      |      |                 |     |            |             |
| Total Phosphorus                  | 0.01 U  | mg/L  | 1  | 0.01 | 0.04 | 3/27/2019 10:06 | AMC |            | NUTR/2164   |
| Analytical Method: SM 4500PF      |         |       |    |      |      |                 |     |            |             |
| Orthophosphate as P(Dissolved)    | 0.01 U  | mg/L  | 1  | 0.01 | 0.04 | 3/21/2019 12:05 | ISP |            | NUTR/2151   |
| Analytical Method: SM 4500NH3H    |         |       |    |      |      |                 |     |            |             |
| Ammonia                           | 0.01 U  | mg/L  | 1  | 0.01 | 0.04 | 3/21/2019 11:11 | AJH |            | NUTR/2150   |
| Analytical Method: SM 4500NO3F    |         |       |    |      |      |                 |     |            |             |
| Nitrate+Nitrite (N)               | 0.01 U  | mg/L  | 1  | 0.01 | 0.04 | 3/21/2019 11:11 | AJH |            | NUTR/2149   |

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## ANALYTICAL RESULTS

Workorder: 1900572

Lab ID: **190057203**  
Sample ID: **19-02 19-02**

Date Received: 3/20/2019 15:07  
Date Collected: 3/20/2019 09:47  
Matrix: Surface Water  
Type: Grab

| Parameters                        | Results | Units     | DF | LOD  | LOQ  | Analyzed        | By  | Qualifiers | QC Batch ID |
|-----------------------------------|---------|-----------|----|------|------|-----------------|-----|------------|-------------|
| <b>Inorganics</b>                 |         |           |    |      |      |                 |     |            |             |
| Analytical Method: SM 2130B       |         |           |    |      |      |                 |     |            |             |
| Turbidity                         | 2.1     | NTU       | 1  | 0.1  |      | 3/21/2019 13:57 | TMT |            | CHEM/2402   |
| Analytical Method: SM 2540D       |         |           |    |      |      |                 |     |            |             |
| Total Suspended Solids            | 8       | mg/L      | 1  | 1    |      | 3/22/2019 13:32 | KDP |            | CHEM/2415   |
| Analytical Method: SM 10200H      |         |           |    |      |      |                 |     |            |             |
| Chlorophyll a (Corrected)         | 8.0     | mg/m3     | 1  | 0.5  |      | 3/22/2019 14:27 | KAV |            | CHEM/2403   |
| Chlorophyll a (Uncorrected)       | 11.7    | mg/m3     | 1  | 0.5  |      | 3/22/2019 14:27 | KAV |            | CHEM/2403   |
| Chlorophyll b                     | 1.2     | mg/m3     | 1  | 0.5  |      | 3/22/2019 14:27 | KAV |            | CHEM/2403   |
| Chlorophyll c                     | 1.7     | mg/m3     | 1  | 0.5  |      | 3/22/2019 14:27 | KAV |            | CHEM/2403   |
| Pheophytin                        | 5.7     | mg/m3     | 1  | 0.5  |      | 3/22/2019 14:27 | KAV |            | CHEM/2403   |
| Analytical Method: SM 5210B       |         |           |    |      |      |                 |     |            |             |
| Biochemical Oxygen Demand         | 1.6 l   | mg/L      | 1  | 0.5  | 2.0  | 3/21/2019 10:22 | RRM |            | CHEM/2405   |
| <b>Microbiology</b>               |         |           |    |      |      |                 |     |            |             |
| Analytical Method: ASTM D6503-99  |         |           |    |      |      |                 |     |            |             |
| Enterococci                       | 74      | MPN/100mL | 10 | 10   |      | 3/20/2019 15:26 | QAC |            | MIC/2092    |
| <b>Nutrients</b>                  |         |           |    |      |      |                 |     |            |             |
| Analytical Method: ASTM D3590-11B |         |           |    |      |      |                 |     |            |             |
| Total Kjeldahl Nitrogen           | 0.71    | mg/L      | 1  | 0.10 | 0.40 | 3/22/2019 14:25 | AMC |            | NUTR/2146   |
| Analytical Method: EPA 365.1      |         |           |    |      |      |                 |     |            |             |
| Total Phosphorus                  | 0.18    | mg/L      | 1  | 0.01 | 0.04 | 3/22/2019 16:03 | AMC |            | NUTR/2148   |
| Analytical Method: SM 4500PF      |         |           |    |      |      |                 |     |            |             |
| Orthophosphate as P(Dissolved)    | 0.12    | mg/L      | 1  | 0.01 | 0.04 | 3/21/2019 12:06 | ISP |            | NUTR/2151   |
| Analytical Method: SM 4500NH3H    |         |           |    |      |      |                 |     |            |             |
| Ammonia                           | 0.10    | mg/L      | 1  | 0.01 | 0.04 | 3/21/2019 11:12 | AJH |            | NUTR/2150   |
| Analytical Method: SM 4500NO3F    |         |           |    |      |      |                 |     |            |             |
| Nitrate+Nitrite (N)               | 0.04 l  | mg/L      | 1  | 0.01 | 0.04 | 3/21/2019 11:12 | AJH |            | NUTR/2149   |

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## ANALYTICAL RESULTS

Workorder: 1900572

Lab ID: **190057204**  
Sample ID: **LR4-FB 19-02**

Date Received: 3/20/2019 15:07  
Date Collected: 3/20/2019 10:01  
Matrix: Surface Water  
Type: Grab

| Parameters                        | Results | Units | DF | LOD  | LOQ  | Analyzed        | By  | Qualifiers | QC Batch ID |
|-----------------------------------|---------|-------|----|------|------|-----------------|-----|------------|-------------|
| <b>Nutrients</b>                  |         |       |    |      |      |                 |     |            |             |
| Analytical Method: ASTM D3590-11B |         |       |    |      |      |                 |     |            |             |
| Total Kjeldahl Nitrogen           | 0.10 U  | mg/L  | 1  | 0.10 | 0.40 | 3/22/2019 14:27 | AMC |            | NUTR/2146   |
| Analytical Method: EPA 365.1      |         |       |    |      |      |                 |     |            |             |
| Total Phosphorus                  | 0.01 U  | mg/L  | 1  | 0.01 | 0.04 | 3/27/2019 10:08 | AMC |            | NUTR/2164   |
| Analytical Method: SM 4500PF      |         |       |    |      |      |                 |     |            |             |
| Orthophosphate as P(Dissolved)    | 0.01 U  | mg/L  | 1  | 0.01 | 0.04 | 3/21/2019 12:07 | ISP |            | NUTR/2151   |
| Analytical Method: SM 4500NH3H    |         |       |    |      |      |                 |     |            |             |
| Ammonia                           | 0.01 U  | mg/L  | 1  | 0.01 | 0.04 | 3/21/2019 11:13 | AJH |            | NUTR/2150   |
| Analytical Method: SM 4500NO3F    |         |       |    |      |      |                 |     |            |             |
| Nitrate+Nitrite (N)               | 0.01 U  | mg/L  | 1  | 0.01 | 0.04 | 3/21/2019 11:13 | AJH |            | NUTR/2149   |

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## ANALYTICAL RESULTS

Workorder: 1900572

Lab ID: 190057205  
Sample ID: 19-08 19-02

Date Received: 3/20/2019 15:07  
Date Collected: 3/20/2019 10:35  
Matrix: Surface Water  
Type: Grab

| Parameters                                     | Results | Units     | DF | LOD  | LOQ  | Analyzed        | By  | Qualifiers | QC Batch ID |
|------------------------------------------------|---------|-----------|----|------|------|-----------------|-----|------------|-------------|
| <b>Inorganics</b>                              |         |           |    |      |      |                 |     |            |             |
| Analytical Method: SM 2130B                    |         |           |    |      |      |                 |     |            |             |
| Turbidity                                      | 0.4     | NTU       | 1  | 0.1  |      | 3/21/2019 13:57 | TMT |            | CHEM/2402   |
| Analytical Method: SM 2540D                    |         |           |    |      |      |                 |     |            |             |
| Total Suspended Solids                         | 2       | mg/L      | 1  | 1    |      | 3/22/2019 13:32 | KDP |            | CHEM/2415   |
| Analytical Method: SM 10200H                   |         |           |    |      |      |                 |     |            |             |
| Chlorophyll a (Corrected)                      | 1.1     | mg/m3     | 1  | 0.5  |      | 3/22/2019 14:27 | KAV |            | CHEM/2403   |
| Chlorophyll a (Uncorrected)                    | 1.8     | mg/m3     | 1  | 0.5  |      | 3/22/2019 14:27 | KAV |            | CHEM/2403   |
| Chlorophyll b                                  | 0.5 U   | mg/m3     | 1  | 0.5  |      | 3/22/2019 14:27 | KAV |            | CHEM/2403   |
| Chlorophyll c                                  | 0.5 U   | mg/m3     | 1  | 0.5  |      | 3/22/2019 14:27 | KAV |            | CHEM/2403   |
| Pheophytin                                     | 1.2     | mg/m3     | 1  | 0.5  |      | 3/22/2019 14:27 | KAV |            | CHEM/2403   |
| Analytical Method: SM 5210B                    |         |           |    |      |      |                 |     |            |             |
| Biochemical Oxygen Demand                      | 0.7 l   | mg/L      | 1  | 0.5  | 2.0  | 3/21/2019 10:22 | RRM |            | CHEM/2405   |
| <b>Microbiology</b>                            |         |           |    |      |      |                 |     |            |             |
| Analytical Method: SM 9223B                    |         |           |    |      |      |                 |     |            |             |
| E. coli                                        | 1030    | MPN/100mL | 2  | 2    |      | 3/20/2019 15:47 | QAC |            | MIC/2095    |
| <b>Nutrients</b>                               |         |           |    |      |      |                 |     |            |             |
| Analytical Method: ASTM D3590-11B              |         |           |    |      |      |                 |     |            |             |
| Total Kjeldahl Nitrogen                        | 0.41    | mg/L      | 1  | 0.10 | 0.40 | 3/22/2019 14:28 | AMC |            | NUTR/2146   |
| Analytical Method: EPA 365.1                   |         |           |    |      |      |                 |     |            |             |
| Total Phosphorus                               | 0.16    | mg/L      | 1  | 0.01 | 0.04 | 3/27/2019 10:09 | AMC |            | NUTR/2164   |
| Analytical Method: SM 4500PF                   |         |           |    |      |      |                 |     |            |             |
| Orthophosphate as P(Dissolved)                 | 0.12    | mg/L      | 1  | 0.01 | 0.04 | 3/21/2019 12:08 | ISP |            | NUTR/2151   |
| Analytical Method: SM 4500NH3H                 |         |           |    |      |      |                 |     |            |             |
| Ammonia                                        | 0.04    | mg/L      | 1  | 0.01 | 0.04 | 3/21/2019 11:15 | AJH | F          | NUTR/2150   |
| F - Sample filtered to remove excessive debris |         |           |    |      |      |                 |     |            |             |
| Analytical Method: SM 4500NO3F                 |         |           |    |      |      |                 |     |            |             |
| Nitrate+Nitrite (N)                            | 0.80    | mg/L      | 1  | 0.01 | 0.04 | 3/21/2019 11:15 | AJH | F          | NUTR/2149   |
| F - Sample filtered to remove excessive debris |         |           |    |      |      |                 |     |            |             |

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## ANALYTICAL RESULTS

Workorder: 1900572

Lab ID: **190057206**  
Sample ID: **19-12 19-02**

Date Received: 3/20/2019 15:07  
Date Collected: 3/20/2019 11:09  
Matrix: Surface Water  
Type: Grab

| Parameters                                     | Results | Units     | DF | LOD  | LOQ  | Analyzed        | By  | Qualifiers | QC Batch ID |
|------------------------------------------------|---------|-----------|----|------|------|-----------------|-----|------------|-------------|
| <b>Inorganics</b>                              |         |           |    |      |      |                 |     |            |             |
| Analytical Method: SM 2130B                    |         |           |    |      |      |                 |     |            |             |
| Turbidity                                      | 0.8     | NTU       | 1  | 0.1  |      | 3/21/2019 13:57 | TMT |            | CHEM/2402   |
| Analytical Method: SM 2540D                    |         |           |    |      |      |                 |     |            |             |
| Total Suspended Solids                         | 2       | mg/L      | 1  | 1    |      | 3/22/2019 13:32 | KDP |            | CHEM/2415   |
| Analytical Method: SM 10200H                   |         |           |    |      |      |                 |     |            |             |
| Chlorophyll a (Corrected)                      | 1.5     | mg/m3     | 1  | 0.5  |      | 3/22/2019 14:27 | KAV |            | CHEM/2403   |
| Chlorophyll a (Uncorrected)                    | 2.7     | mg/m3     | 1  | 0.5  |      | 3/22/2019 14:27 | KAV |            | CHEM/2403   |
| Chlorophyll b                                  | 0.5 U   | mg/m3     | 1  | 0.5  |      | 3/22/2019 14:27 | KAV |            | CHEM/2403   |
| Chlorophyll c                                  | 0.5 U   | mg/m3     | 1  | 0.5  |      | 3/22/2019 14:27 | KAV |            | CHEM/2403   |
| Pheophytin                                     | 1.9     | mg/m3     | 1  | 0.5  |      | 3/22/2019 14:27 | KAV |            | CHEM/2403   |
| Analytical Method: SM 5210B                    |         |           |    |      |      |                 |     |            |             |
| Biochemical Oxygen Demand                      | 0.7 I   | mg/L      | 1  | 0.5  | 2.0  | 3/21/2019 10:22 | RRM |            | CHEM/2405   |
| <b>Microbiology</b>                            |         |           |    |      |      |                 |     |            |             |
| Analytical Method: SM 9223B                    |         |           |    |      |      |                 |     |            |             |
| E. coli                                        | 372     | MPN/100mL | 2  | 2    |      | 3/20/2019 15:47 | QAC |            | MIC/2095    |
| <b>Nutrients</b>                               |         |           |    |      |      |                 |     |            |             |
| Analytical Method: ASTM D3590-11B              |         |           |    |      |      |                 |     |            |             |
| Total Kjeldahl Nitrogen                        | 0.53    | mg/L      | 1  | 0.10 | 0.40 | 3/22/2019 14:29 | AMC |            | NUTR/2146   |
| Analytical Method: EPA 365.1                   |         |           |    |      |      |                 |     |            |             |
| Total Phosphorus                               | 0.17    | mg/L      | 1  | 0.01 | 0.04 | 3/27/2019 10:10 | AMC |            | NUTR/2164   |
| Analytical Method: SM 4500PF                   |         |           |    |      |      |                 |     |            |             |
| Orthophosphate as P(Dissolved)                 | 0.12    | mg/L      | 1  | 0.01 | 0.04 | 3/21/2019 12:09 | ISP |            | NUTR/2151   |
| Analytical Method: SM 4500NH3H                 |         |           |    |      |      |                 |     |            |             |
| Ammonia                                        | 0.03 I  | mg/L      | 1  | 0.01 | 0.04 | 3/21/2019 11:16 | AJH | F          | NUTR/2150   |
| F - Sample filtered to remove excessive debris |         |           |    |      |      |                 |     |            |             |
| Analytical Method: SM 4500NO3F                 |         |           |    |      |      |                 |     |            |             |
| Nitrate+Nitrite (N)                            | 0.23    | mg/L      | 1  | 0.01 | 0.04 | 3/21/2019 11:16 | AJH | F          | NUTR/2149   |
| F - Sample filtered to remove excessive debris |         |           |    |      |      |                 |     |            |             |

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## ANALYTICAL RESULTS

Workorder: 1900572

Lab ID: **190057207**  
Sample ID: **19-13 19-02**

Date Received: 3/20/2019 15:07  
Date Collected: 3/20/2019 12:23  
Matrix: Surface Water  
Type: Grab

| Parameters                                          | Results | Units     | DF | LOD  | LOQ  | Analyzed        | By  | Qualifiers | QC Batch ID |
|-----------------------------------------------------|---------|-----------|----|------|------|-----------------|-----|------------|-------------|
| <b>Inorganics</b>                                   |         |           |    |      |      |                 |     |            |             |
| Analytical Method: SM 2130B                         |         |           |    |      |      |                 |     |            |             |
| Turbidity                                           | 1.3     | NTU       | 1  | 0.1  |      | 3/21/2019 13:57 | TMT |            | CHEM/2402   |
| Analytical Method: SM 2540D                         |         |           |    |      |      |                 |     |            |             |
| Total Suspended Solids                              | 2       | mg/L      | 1  | 1    |      | 3/22/2019 13:32 | KDP |            | CHEM/2415   |
| I - Final dried residue < 2.5 mg as req'd by method |         |           |    |      |      |                 |     |            |             |
| Analytical Method: SM 10200H                        |         |           |    |      |      |                 |     |            |             |
| Chlorophyll a (Corrected)                           | 8.3     | mg/m3     | 1  | 0.5  |      | 3/22/2019 14:27 | KAV |            | CHEM/2403   |
| Chlorophyll a (Uncorrected)                         | 11.7    | mg/m3     | 1  | 0.5  |      | 3/22/2019 14:27 | KAV |            | CHEM/2403   |
| Chlorophyll b                                       | 0.8     | mg/m3     | 1  | 0.5  |      | 3/22/2019 14:27 | KAV |            | CHEM/2403   |
| Chlorophyll c                                       | 0.6     | mg/m3     | 1  | 0.5  |      | 3/22/2019 14:27 | KAV |            | CHEM/2403   |
| Pheophytin                                          | 5.2     | mg/m3     | 1  | 0.5  |      | 3/22/2019 14:27 | KAV |            | CHEM/2403   |
| Analytical Method: SM 5210B                         |         |           |    |      |      |                 |     |            |             |
| Biochemical Oxygen Demand                           | 1.4     | l mg/L    | 1  | 0.5  | 2.0  | 3/21/2019 10:22 | RRM |            | CHEM/2405   |
| <b>Microbiology</b>                                 |         |           |    |      |      |                 |     |            |             |
| Analytical Method: SM 9223B                         |         |           |    |      |      |                 |     |            |             |
| E. coli                                             | 2840    | MPN/100mL | 20 | 20   |      | 3/20/2019 15:47 | QAC |            | MIC/2095    |
| <b>Nutrients</b>                                    |         |           |    |      |      |                 |     |            |             |
| Analytical Method: ASTM D3590-11B                   |         |           |    |      |      |                 |     |            |             |
| Total Kjeldahl Nitrogen                             | 0.85    | mg/L      | 1  | 0.10 | 0.40 | 3/22/2019 14:30 | AMC |            | NUTR/2146   |
| Analytical Method: EPA 365.1                        |         |           |    |      |      |                 |     |            |             |
| Total Phosphorus                                    | 0.13    | mg/L      | 1  | 0.01 | 0.04 | 3/27/2019 10:11 | AMC |            | NUTR/2164   |
| Analytical Method: SM 4500PF                        |         |           |    |      |      |                 |     |            |             |
| Orthophosphate as P(Dissolved)                      | 0.08    | mg/L      | 1  | 0.01 | 0.04 | 3/21/2019 12:10 | ISP |            | NUTR/2151   |
| Analytical Method: SM 4500NH3H                      |         |           |    |      |      |                 |     |            |             |
| Ammonia                                             | 0.12    | mg/L      | 1  | 0.01 | 0.04 | 3/21/2019 11:17 | AJH | F          | NUTR/2150   |
| F - Sample filtered to remove excessive debris      |         |           |    |      |      |                 |     |            |             |
| Analytical Method: SM 4500NO3F                      |         |           |    |      |      |                 |     |            |             |
| Nitrate+Nitrite (N)                                 | 0.16    | mg/L      | 1  | 0.01 | 0.04 | 3/21/2019 11:17 | AJH | F          | NUTR/2149   |
| F - Sample filtered to remove excessive debris      |         |           |    |      |      |                 |     |            |             |

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## ANALYTICAL RESULTS

Workorder: 1900572

Lab ID: 190057208  
Sample ID: 14-07 19-02

Date Received: 3/20/2019 15:07  
Date Collected: 3/20/2019 13:09  
Matrix: Surface Water  
Type: Grab

| Parameters                        | Results | Units                     | DF | LOD  | LOQ  | Analyzed        | By  | Qualifiers | QC Batch ID |
|-----------------------------------|---------|---------------------------|----|------|------|-----------------|-----|------------|-------------|
| <b>Inorganics</b>                 |         |                           |    |      |      |                 |     |            |             |
| Analytical Method: SM 2120B       |         |                           |    |      |      |                 |     |            |             |
| Color                             | 32      | CU                        | 1  | 5    |      | 3/21/2019 11:19 | QAC |            | CHEM/2390   |
| Analytical Method: SM 2130B       |         |                           |    |      |      |                 |     |            |             |
| Turbidity                         | 1.9     | NTU                       | 1  | 0.1  |      | 3/21/2019 13:57 | TMT |            | CHEM/2402   |
| Analytical Method: SM 2540D       |         |                           |    |      |      |                 |     |            |             |
| Total Suspended Solids            | 5       | mg/L                      | 1  | 1    |      | 3/22/2019 13:32 | KDP |            | CHEM/2415   |
| Analytical Method: SM 2320B       |         |                           |    |      |      |                 |     |            |             |
| Total Alkalinity                  | 100     | mg/L as CaCO <sub>3</sub> | 1  | 1    | 4    | 3/21/2019 11:05 | AJH |            | CHEM/2404   |
| Phenolphthalein Alkalinity        | 0       | mg/L as CaCO <sub>3</sub> | 1  | 0    |      | 3/21/2019 11:05 | AJH |            | CHEM/2404   |
| Bicarbonate Alkalinity            | 100     | mg/L as CaCO <sub>3</sub> | 1  | 1    |      | 3/21/2019 11:05 | AJH |            | CHEM/2404   |
| Carbonate Alkalinity              | 0       | mg/L as CaCO <sub>3</sub> | 1  | 0    |      | 3/21/2019 11:05 | AJH |            | CHEM/2404   |
| Analytical Method: SM 10200H      |         |                           |    |      |      |                 |     |            |             |
| Chlorophyll a (Corrected)         | 27.0    | mg/m <sup>3</sup>         | 1  | 0.5  |      | 3/22/2019 14:27 | KAV |            | CHEM/2403   |
| Chlorophyll a (Uncorrected)       | 30.4    | mg/m <sup>3</sup>         | 1  | 0.5  |      | 3/22/2019 14:27 | KAV |            | CHEM/2403   |
| Chlorophyll b                     | 0.9     | mg/m <sup>3</sup>         | 1  | 0.5  |      | 3/22/2019 14:27 | KAV |            | CHEM/2403   |
| Chlorophyll c                     | 3.1     | mg/m <sup>3</sup>         | 1  | 0.5  |      | 3/22/2019 14:27 | KAV |            | CHEM/2403   |
| Pheophytin                        | 4.1     | mg/m <sup>3</sup>         | 1  | 0.5  |      | 3/22/2019 14:27 | KAV |            | CHEM/2403   |
| Analytical Method: SM 5210B       |         |                           |    |      |      |                 |     |            |             |
| Biochemical Oxygen Demand         | 3.3     | mg/L                      | 1  | 0.5  | 2.0  | 3/21/2019 10:22 | RRM |            | CHEM/2405   |
| <b>Microbiology</b>               |         |                           |    |      |      |                 |     |            |             |
| Analytical Method: SM 9223B       |         |                           |    |      |      |                 |     |            |             |
| E. coli                           | 36      | MPN/100mL                 | 1  | 1    |      | 3/20/2019 15:47 | QAC |            | MIC/2095    |
| <b>Nutrients</b>                  |         |                           |    |      |      |                 |     |            |             |
| Analytical Method: ASTM D3590-11B |         |                           |    |      |      |                 |     |            |             |
| Total Kjeldahl Nitrogen           | 0.77    | mg/L                      | 1  | 0.10 | 0.40 | 3/22/2019 14:31 | AMC |            | NUTR/2146   |
| Analytical Method: EPA 365.1      |         |                           |    |      |      |                 |     |            |             |
| Total Phosphorus                  | 0.17    | mg/L                      | 1  | 0.01 | 0.04 | 3/27/2019 10:12 | AMC |            | NUTR/2164   |
| Analytical Method: SM 4500PF      |         |                           |    |      |      |                 |     |            |             |
| Orthophosphate as P(Dissolved)    | 0.10    | mg/L                      | 1  | 0.01 | 0.04 | 3/21/2019 12:11 | ISP |            | NUTR/2151   |

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## ANALYTICAL RESULTS

Workorder: 1900572

Lab ID: **190057208**  
Sample ID: **14-07 19-02**

Date Received: 3/20/2019 15:07  
Date Collected: 3/20/2019 13:09  
Matrix: Surface Water  
Type: Grab

| Parameters                     | Results | Units | DF | LOD  | LOQ  | Analyzed        | By  | Qualifiers | QC Batch ID |
|--------------------------------|---------|-------|----|------|------|-----------------|-----|------------|-------------|
| Analytical Method: SM 4500NH3H |         |       |    |      |      |                 |     |            |             |
| Ammonia                        | 0.01 U  | mg/L  | 1  | 0.01 | 0.04 | 3/21/2019 11:18 | AJH |            | NUTR/2150   |
| Analytical Method: SM 4500NO3F |         |       |    |      |      |                 |     |            |             |
| Nitrate+Nitrite (N)            | 0.01 U  | mg/L  | 1  | 0.01 | 0.04 | 3/21/2019 11:18 | AJH |            | NUTR/2149   |

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## ANALYTICAL RESULTS

Workorder: 1900572

Lab ID: **190057209**  
Sample ID: **14-10 19-02**

Date Received: 3/20/2019 15:07  
Date Collected: 3/20/2019 13:50  
Matrix: Surface Water  
Type: Grab

| Parameters                                     | Results | Units     | DF | LOD  | LOQ  | Analyzed        | By  | Qualifiers | QC Batch ID |
|------------------------------------------------|---------|-----------|----|------|------|-----------------|-----|------------|-------------|
| <b>Inorganics</b>                              |         |           |    |      |      |                 |     |            |             |
| Analytical Method: SM 2130B                    |         |           |    |      |      |                 |     |            |             |
| Turbidity                                      | 1.4     | NTU       | 1  | 0.1  |      | 3/21/2019 13:57 | TMT |            | CHEM/2402   |
| Analytical Method: SM 2540D                    |         |           |    |      |      |                 |     |            |             |
| Total Suspended Solids                         | 2       | mg/L      | 1  | 1    |      | 3/22/2019 13:32 | KDP |            | CHEM/2415   |
| Analytical Method: SM 10200H                   |         |           |    |      |      |                 |     |            |             |
| Chlorophyll a (Corrected)                      | 3.7     | mg/m3     | 1  | 0.5  |      | 3/22/2019 14:27 | KAV |            | CHEM/2403   |
| Chlorophyll a (Uncorrected)                    | 5       | mg/m3     | 1  | 0.5  |      | 3/22/2019 14:27 | KAV |            | CHEM/2403   |
| Chlorophyll b                                  | 0.5 U   | mg/m3     | 1  | 0.5  |      | 3/22/2019 14:27 | KAV |            | CHEM/2403   |
| Chlorophyll c                                  | 0.7     | mg/m3     | 1  | 0.5  |      | 3/22/2019 14:27 | KAV |            | CHEM/2403   |
| Pheophytin                                     | 1.8     | mg/m3     | 1  | 0.5  |      | 3/22/2019 14:27 | KAV |            | CHEM/2403   |
| Analytical Method: SM 5210B                    |         |           |    |      |      |                 |     |            |             |
| Biochemical Oxygen Demand                      | 1.4 I   | mg/L      | 1  | 0.5  | 2.0  | 3/21/2019 10:22 | RRM |            | CHEM/2405   |
| <b>Microbiology</b>                            |         |           |    |      |      |                 |     |            |             |
| Analytical Method: SM 9223B                    |         |           |    |      |      |                 |     |            |             |
| E. coli                                        | 126     | MPN/100mL | 1  | 1    |      | 3/20/2019 15:47 | QAC |            | MIC/2095    |
| <b>Nutrients</b>                               |         |           |    |      |      |                 |     |            |             |
| Analytical Method: ASTM D3590-11B              |         |           |    |      |      |                 |     |            |             |
| Total Kjeldahl Nitrogen                        | 0.72    | mg/L      | 1  | 0.10 | 0.40 | 3/22/2019 14:33 | AMC |            | NUTR/2146   |
| Analytical Method: EPA 365.1                   |         |           |    |      |      |                 |     |            |             |
| Total Phosphorus                               | 0.11    | mg/L      | 1  | 0.01 | 0.04 | 3/27/2019 10:14 | AMC |            | NUTR/2164   |
| Analytical Method: SM 4500PF                   |         |           |    |      |      |                 |     |            |             |
| Orthophosphate as P(Dissolved)                 | 0.06    | mg/L      | 1  | 0.01 | 0.04 | 3/21/2019 12:11 | ISP |            | NUTR/2151   |
| Analytical Method: SM 4500NH3H                 |         |           |    |      |      |                 |     |            |             |
| Ammonia                                        | 0.08    | mg/L      | 1  | 0.01 | 0.04 | 3/21/2019 11:19 | AJH | F          | NUTR/2150   |
| F - Sample filtered to remove excessive debris |         |           |    |      |      |                 |     |            |             |
| Analytical Method: SM 4500NO3F                 |         |           |    |      |      |                 |     |            |             |
| Nitrate+Nitrite (N)                            | 0.04 I  | mg/L      | 1  | 0.01 | 0.04 | 3/21/2019 11:19 | AJH | F          | NUTR/2149   |
| F - Sample filtered to remove excessive debris |         |           |    |      |      |                 |     |            |             |

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