



PINELLAS COUNTY UTILITIES LABORATORY  
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**CERTIFICATE OF ANALYSIS  
SUBMISSION SUMMARY**

**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: 1801009**

EPA Lab#: FL00123

**Profile: Environmental Mgmt - Ambient**

**Line Item: EMD - Land Run**

| SAMPLE SITE  | SAMPLE NO. | COLLECTED DATE/TIME | RECEIVED DATE/TIME |
|--------------|------------|---------------------|--------------------|
| 27-09 18-06  | 180100901  | 09/13/2018 13:38    | 09/13/2018 16:24   |
| 27-11 18-06  | 180100902  | 09/13/2018 14:03    | 09/13/2018 16:24   |
| LR7-FB 18-06 | 180100903  | 09/13/2018 14:15    | 09/13/2018 16:24   |
| 27-08 18-06  | 180100904  | 09/13/2018 14:51    | 09/13/2018 16:24   |
| 27-10 18-06  | 180100905  | 09/13/2018 15:53    | 09/13/2018 16:24   |

**THIS REPORT MEETS NELAC 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 NELAC 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 analyte or that the certified method has been sufficiently modified to accommodate the customer requirements that it no longer qualifies as certified. Results reported from methods referencing other laboratories are reported under their respective certification. Methods designated as "FIELD" are not certified results and are provided from the Chain of Custody for informational purposes only.

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Pinellas County Utilities Laboratory  
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*Terri Grimes*

09/21/2018

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

Date



## ANALYTICAL RESULTS

Workorder: 1801009

Lab ID: **180100901**  
Sample ID: **27-09 18-06**

Date Received: 9/13/2018 16:24 Matrix: Surface Water  
Date Collected: 9/13/2018 13:38

| Parameters                                          | Results Units | DF | LOD  | LOQ  | Analyzed        | By  | Qualifiers | QC Batch ID |
|-----------------------------------------------------|---------------|----|------|------|-----------------|-----|------------|-------------|
| <b>Inorganics</b>                                   |               |    |      |      |                 |     |            |             |
| Analytical Method: SM 2130B                         |               |    |      |      |                 |     |            |             |
| Turbidity                                           | 1.2 NTU       | 1  | 0.1  |      | 9/14/2018 09:38 | RRM |            | CHEM/1590   |
| Analytical Method: SM 2540D                         |               |    |      |      |                 |     |            |             |
| Total Suspended Solids                              | 3 mg/L        | 1  | 1    |      | 9/14/2018 14:45 | AJH |            | CHEM/1596   |
| I - Final dried residue < 2.5 mg as req'd by method |               |    |      |      |                 |     |            |             |
| Analytical Method: SM 10200H                        |               |    |      |      |                 |     |            |             |
| Chlorophyll a (Corrected)                           | 3.3 mg/m3     | 1  | 0.5  |      | 9/18/2018 13:40 | QAC |            | CHEM/1592   |
| Chlorophyll a (Uncorrected)                         | 3.8 mg/m3     | 1  | 0.5  |      | 9/18/2018 13:40 | QAC |            | CHEM/1592   |
| Chlorophyll b                                       | 0.5 U mg/m3   | 1  | 0.5  |      | 9/18/2018 13:40 | QAC |            | CHEM/1592   |
| Chlorophyll c                                       | 0.5 U mg/m3   | 1  | 0.5  |      | 9/18/2018 13:40 | QAC |            | CHEM/1592   |
| Pheophytin                                          | 0.8 mg/m3     | 1  | 0.5  |      | 9/18/2018 13:40 | QAC |            | CHEM/1592   |
| Analytical Method: SM 5210B                         |               |    |      |      |                 |     |            |             |
| Biochemical Oxygen Demand                           | 0.5 U mg/L    | 1  | 0.5  | 2.0  | 9/14/2018 10:00 | TMT |            | CHEM/1591   |
| <b>Microbiology</b>                                 |               |    |      |      |                 |     |            |             |
| Analytical Method: SM 9223B                         |               |    |      |      |                 |     |            |             |
| E. coli                                             | 252 MPN/100mL | 4  | 4    |      | 9/13/2018 16:27 | KDP |            | MIC/1479    |
| <b>Nutrients</b>                                    |               |    |      |      |                 |     |            |             |
| Analytical Method: ASTM D3590-02B                   |               |    |      |      |                 |     |            |             |
| Total Kjeldahl Nitrogen                             | 0.72 mg/L     | 1  | 0.10 | 0.40 | 9/17/2018 15:44 | AMC |            | NUTR/1481   |
| Analytical Method: EPA 365.1                        |               |    |      |      |                 |     |            |             |
| Total Phosphorus                                    | 0.05 mg/L     | 1  | 0.01 | 0.04 | 9/18/2018 13:27 | AMC |            | NUTR/1483   |
| Analytical Method: SM 4500PF                        |               |    |      |      |                 |     |            |             |
| Orthophosphate as P(Dissolved)                      | 0.03 I mg/L   | 1  | 0.01 | 0.04 | 9/14/2018 12:21 | ISP |            | NUTR/1477   |
| Analytical Method: SM 4500NH3H                      |               |    |      |      |                 |     |            |             |
| Ammonia                                             | 0.01 U mg/L   | 1  | 0.01 | 0.04 | 9/14/2018 10:14 | AJH |            | NUTR/1476   |
| Analytical Method: SM 4500NO3F                      |               |    |      |      |                 |     |            |             |
| Nitrate+Nitrite (N)                                 | 0.07 mg/L     | 1  | 0.02 | 0.04 | 9/14/2018 10:14 | AJH |            | NUTR/1475   |

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## ANALYTICAL RESULTS

Workorder: 1801009

Lab ID: **180100902**  
Sample ID: **27-11 18-06**

Date Received: 9/13/2018 16:24 Matrix: Surface Water  
Date Collected: 9/13/2018 14:03

| Parameters                                          | Results Units | DF | LOD  | LOQ  | Analyzed        | By  | Qualifiers | QC Batch ID |
|-----------------------------------------------------|---------------|----|------|------|-----------------|-----|------------|-------------|
| <b>Inorganics</b>                                   |               |    |      |      |                 |     |            |             |
| Analytical Method: SM 2130B                         |               |    |      |      |                 |     |            |             |
| Turbidity                                           | 1.2 NTU       | 1  | 0.1  |      | 9/14/2018 09:38 | RRM |            | CHEM/1590   |
| Analytical Method: SM 2540D                         |               |    |      |      |                 |     |            |             |
| Total Suspended Solids                              | 2 mg/L        | 1  | 1    |      | 9/17/2018 15:23 | AJH |            | CHEM/1602   |
| I - Final dried residue < 2.5 mg as req'd by method |               |    |      |      |                 |     |            |             |
| Analytical Method: SM 10200H                        |               |    |      |      |                 |     |            |             |
| Chlorophyll a (Corrected)                           | 2.4 mg/m3     | 1  | 0.5  |      | 9/18/2018 13:40 | QAC |            | CHEM/1592   |
| Chlorophyll a (Uncorrected)                         | 2.9 mg/m3     | 1  | 0.5  |      | 9/18/2018 13:40 | QAC |            | CHEM/1592   |
| Chlorophyll b                                       | 0.5 U mg/m3   | 1  | 0.5  |      | 9/18/2018 13:40 | QAC |            | CHEM/1592   |
| Chlorophyll c                                       | 0.5 U mg/m3   | 1  | 0.5  |      | 9/18/2018 13:40 | QAC |            | CHEM/1592   |
| Pheophytin                                          | 0.7 mg/m3     | 1  | 0.5  |      | 9/18/2018 13:40 | QAC |            | CHEM/1592   |
| Analytical Method: SM 5210B                         |               |    |      |      |                 |     |            |             |
| Biochemical Oxygen Demand                           | 0.5 U mg/L    | 1  | 0.5  | 2.0  | 9/14/2018 10:00 | TMT |            | CHEM/1591   |
| <b>Microbiology</b>                                 |               |    |      |      |                 |     |            |             |
| Analytical Method: SM 9223B                         |               |    |      |      |                 |     |            |             |
| E. coli                                             | 260 MPN/100mL | 4  | 4    |      | 9/13/2018 16:27 | KDP |            | MIC/1479    |
| <b>Nutrients</b>                                    |               |    |      |      |                 |     |            |             |
| Analytical Method: ASTM D3590-02B                   |               |    |      |      |                 |     |            |             |
| Total Kjeldahl Nitrogen                             | 0.71 mg/L     | 1  | 0.10 | 0.40 | 9/17/2018 15:45 | AMC |            | NUTR/1481   |
| Analytical Method: EPA 365.1                        |               |    |      |      |                 |     |            |             |
| Total Phosphorus                                    | 0.06 mg/L     | 1  | 0.01 | 0.04 | 9/18/2018 13:29 | AMC |            | NUTR/1483   |
| Analytical Method: SM 4500PF                        |               |    |      |      |                 |     |            |             |
| Orthophosphate as P(Dissolved)                      | 0.04 I mg/L   | 1  | 0.01 | 0.04 | 9/14/2018 12:22 | ISP |            | NUTR/1477   |
| Analytical Method: SM 4500NH3H                      |               |    |      |      |                 |     |            |             |
| Ammonia                                             | 0.01 U mg/L   | 1  | 0.01 | 0.04 | 9/14/2018 10:15 | AJH |            | NUTR/1476   |
| Analytical Method: SM 4500NO3F                      |               |    |      |      |                 |     |            |             |
| Nitrate+Nitrite (N)                                 | 0.08 mg/L     | 1  | 0.02 | 0.04 | 9/14/2018 10:15 | AJH |            | NUTR/1475   |

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## ANALYTICAL RESULTS

Workorder: 1801009

Lab ID: **180100903**  
Sample ID: **LR7-FB 18-06**

Date Received: 9/13/2018 16:24      Matrix: Surface Water  
Date Collected: 9/13/2018 14:15

| Parameters                        | Results | Units  | DF | LOD  | LOQ  | Analyzed        | By  | Qualifiers | QC Batch ID |
|-----------------------------------|---------|--------|----|------|------|-----------------|-----|------------|-------------|
| <b>Nutrients</b>                  |         |        |    |      |      |                 |     |            |             |
| Analytical Method: ASTM D3590-02B |         |        |    |      |      |                 |     |            |             |
| Total Kjeldahl Nitrogen           | 0.10    | U mg/L | 1  | 0.10 | 0.40 | 9/17/2018 15:46 | AMC |            | NUTR/1481   |
| Analytical Method: EPA 365.1      |         |        |    |      |      |                 |     |            |             |
| Total Phosphorus                  | 0.01    | U mg/L | 1  | 0.01 | 0.04 | 9/18/2018 13:30 | AMC |            | NUTR/1483   |
| Analytical Method: SM 4500PF      |         |        |    |      |      |                 |     |            |             |
| Orthophosphate as P(Dissolved)    | 0.01    | U mg/L | 1  | 0.01 | 0.04 | 9/14/2018 12:23 | ISP |            | NUTR/1477   |
| Analytical Method: SM 4500NH3H    |         |        |    |      |      |                 |     |            |             |
| Ammonia                           | 0.01    | U mg/L | 1  | 0.01 | 0.04 | 9/14/2018 10:16 | AJH |            | NUTR/1476   |
| Analytical Method: SM 4500NO3F    |         |        |    |      |      |                 |     |            |             |
| Nitrate+Nitrite (N)               | 0.02    | U mg/L | 1  | 0.02 | 0.04 | 9/14/2018 10:16 | AJH |            | NUTR/1475   |

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## ANALYTICAL RESULTS

Workorder: 1801009

Lab ID: **180100904**  
Sample ID: **27-08 18-06**

Date Received: 9/13/2018 16:24 Matrix: Surface Water  
Date Collected: 9/13/2018 14:51

| Parameters                        | Results | Units     | DF | LOD  | LOQ  | Analyzed        | By  | Qualifiers | QC Batch ID |
|-----------------------------------|---------|-----------|----|------|------|-----------------|-----|------------|-------------|
| <b>Inorganics</b>                 |         |           |    |      |      |                 |     |            |             |
| Analytical Method: SM 2130B       |         |           |    |      |      |                 |     |            |             |
| Turbidity                         | 10      | NTU       | 1  | 0.1  |      | 9/14/2018 09:38 | RRM |            | CHEM/1590   |
| Analytical Method: SM 2540D       |         |           |    |      |      |                 |     |            |             |
| Total Suspended Solids            | 13      | mg/L      | 1  | 1    |      | 9/17/2018 15:23 | AJH |            | CHEM/1602   |
| Analytical Method: SM 10200H      |         |           |    |      |      |                 |     |            |             |
| Chlorophyll a (Corrected)         | 8.0     | mg/m3     | 1  | 0.5  |      | 9/18/2018 13:40 | QAC |            | CHEM/1592   |
| Chlorophyll a (Uncorrected)       | 11.8    | mg/m3     | 1  | 0.5  |      | 9/18/2018 13:40 | QAC |            | CHEM/1592   |
| Chlorophyll b                     | 0.8     | mg/m3     | 1  | 0.5  |      | 9/18/2018 13:40 | QAC |            | CHEM/1592   |
| Chlorophyll c                     | 0.5     | mg/m3     | 1  | 0.5  |      | 9/18/2018 13:40 | QAC |            | CHEM/1592   |
| Pheophytin                        | 5.8     | mg/m3     | 1  | 0.5  |      | 9/18/2018 13:40 | QAC |            | CHEM/1592   |
| Analytical Method: SM 5210B       |         |           |    |      |      |                 |     |            |             |
| Biochemical Oxygen Demand         | 1.1     | mg/L      | 1  | 0.5  | 2.0  | 9/14/2018 10:00 | TMT |            | CHEM/1591   |
| <b>Microbiology</b>               |         |           |    |      |      |                 |     |            |             |
| Analytical Method: SM 9223B       |         |           |    |      |      |                 |     |            |             |
| E. coli                           | 2910    | MPN/100mL | 4  | 4    |      | 9/13/2018 16:27 | KDP |            | MIC/1479    |
| <b>Nutrients</b>                  |         |           |    |      |      |                 |     |            |             |
| Analytical Method: ASTM D3590-02B |         |           |    |      |      |                 |     |            |             |
| Total Kjeldahl Nitrogen           | 1.09    | mg/L      | 1  | 0.10 | 0.40 | 9/17/2018 15:47 | AMC |            | NUTR/1481   |
| Analytical Method: EPA 365.1      |         |           |    |      |      |                 |     |            |             |
| Total Phosphorus                  | 0.13    | mg/L      | 1  | 0.01 | 0.04 | 9/18/2018 13:31 | AMC |            | NUTR/1483   |
| Analytical Method: SM 4500PF      |         |           |    |      |      |                 |     |            |             |
| Orthophosphate as P(Dissolved)    | 0.04    | mg/L      | 1  | 0.01 | 0.04 | 9/14/2018 12:23 | ISP |            | NUTR/1477   |
| Analytical Method: SM 4500NH3H    |         |           |    |      |      |                 |     |            |             |
| Ammonia                           | 0.06    | mg/L      | 1  | 0.01 | 0.04 | 9/14/2018 10:18 | AJH |            | NUTR/1476   |
| Analytical Method: SM 4500NO3F    |         |           |    |      |      |                 |     |            |             |
| Nitrate+Nitrite (N)               | 0.78    | mg/L      | 1  | 0.02 | 0.04 | 9/14/2018 10:18 | AJH |            | NUTR/1475   |

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## ANALYTICAL RESULTS

Workorder: 1801009

Lab ID: **180100905**  
Sample ID: **27-10 18-06**

Date Received: 9/13/2018 16:24 Matrix: Surface Water  
Date Collected: 9/13/2018 15:53

| Parameters                        | Results Units | DF | LOD  | LOQ  | Analyzed        | By  | Qualifiers | QC Batch ID |
|-----------------------------------|---------------|----|------|------|-----------------|-----|------------|-------------|
| <b>Inorganics</b>                 |               |    |      |      |                 |     |            |             |
| Analytical Method: SM 2130B       |               |    |      |      |                 |     |            |             |
| Turbidity                         | 0.6 NTU       | 1  | 0.1  |      | 9/14/2018 09:38 | RRM |            | CHEM/1590   |
| Analytical Method: SM 2540D       |               |    |      |      |                 |     |            |             |
| Total Suspended Solids            | 1 U mg/L      | 1  | 1    |      | 9/17/2018 15:23 | AJH |            | CHEM/1602   |
| Analytical Method: SM 10200H      |               |    |      |      |                 |     |            |             |
| Chlorophyll a (Corrected)         | 4.6 mg/m3     | 1  | 0.5  |      | 9/18/2018 13:40 | QAC |            | CHEM/1592   |
| Chlorophyll a (Uncorrected)       | 4.9 mg/m3     | 1  | 0.5  |      | 9/18/2018 13:40 | QAC |            | CHEM/1592   |
| Chlorophyll b                     | 0.5 U mg/m3   | 1  | 0.5  |      | 9/18/2018 13:40 | QAC |            | CHEM/1592   |
| Chlorophyll c                     | 0.5 U mg/m3   | 1  | 0.5  |      | 9/18/2018 13:40 | QAC |            | CHEM/1592   |
| Pheophytin                        | 0.5 U mg/m3   | 1  | 0.5  |      | 9/18/2018 13:40 | QAC |            | CHEM/1592   |
| Analytical Method: SM 5210B       |               |    |      |      |                 |     |            |             |
| Biochemical Oxygen Demand         | 0.6 l mg/L    | 1  | 0.5  | 2.0  | 9/14/2018 10:00 | TMT |            | CHEM/1591   |
| <b>Microbiology</b>               |               |    |      |      |                 |     |            |             |
| Analytical Method: SM 9223B       |               |    |      |      |                 |     |            |             |
| E. coli                           | 4 MPN/100mL   | 2  | 2    |      | 9/13/2018 16:27 | KDP |            | MIC/1479    |
| <b>Nutrients</b>                  |               |    |      |      |                 |     |            |             |
| Analytical Method: ASTM D3590-02B |               |    |      |      |                 |     |            |             |
| Total Kjeldahl Nitrogen           | 0.62 mg/L     | 1  | 0.10 | 0.40 | 9/17/2018 15:48 | AMC |            | NUTR/1481   |
| Analytical Method: EPA 365.1      |               |    |      |      |                 |     |            |             |
| Total Phosphorus                  | 0.01 l mg/L   | 1  | 0.01 | 0.04 | 9/18/2018 13:32 | AMC |            | NUTR/1483   |
| Analytical Method: SM 4500PF      |               |    |      |      |                 |     |            |             |
| Orthophosphate as P(Dissolved)    | 0.01 U mg/L   | 1  | 0.01 | 0.04 | 9/14/2018 12:24 | ISP |            | NUTR/1477   |
| Analytical Method: SM 4500NH3H    |               |    |      |      |                 |     |            |             |
| Ammonia                           | 0.01 U mg/L   | 1  | 0.01 | 0.04 | 9/14/2018 10:38 | AJH |            | NUTR/1476   |
| Analytical Method: SM 4500NO3F    |               |    |      |      |                 |     |            |             |
| Nitrate+Nitrite (N)               | 0.02 U mg/L   | 1  | 0.02 | 0.04 | 9/14/2018 10:38 | AJH |            | NUTR/1475   |

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