Lake Greenwood Continuous Monitoring Study Periodic Report

June 03, 2021 - July 21, 2021

This study funded through a joint effort consisting of Greenwood County Lake Management (GCLM), Laurens County Water and Sewer Commission (LCWSC), City of Greenville, and Renewable Water Resources (ReWa).
Continuous Monitoring Report
Lake Greenwood at Reedy Arm
June 3, 2021 -- July 21, 2021

**MONITORING LOCATION CHARACTERISTICS**

<table>
<thead>
<tr>
<th>Station Location Name</th>
<th>Reedy Arm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Latitude</td>
<td>34.347141 °N</td>
</tr>
<tr>
<td>Longitude</td>
<td>82.109702 °W</td>
</tr>
<tr>
<td>Approximate Drainage Area</td>
<td>260 square miles</td>
</tr>
</tbody>
</table>

**RAINFALL CHARACTERISTICS**

- Number of Storms Over 0.1 in*: 14
- Max Storm Rainfall: 1.97 in
- Total Rainfall for Period (Length of deployment: 7 weeks): 7.81 in

**CONTINUOUS WATER QUALITY PARAMETERS:**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>MIN</th>
<th>MAX</th>
<th>MEDIAN</th>
<th>MEAN</th>
<th>ST. DEV.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turbidity (NTU)</td>
<td>4</td>
<td>38</td>
<td>7</td>
<td>9</td>
<td>5</td>
</tr>
<tr>
<td>Sp. Conductivity (uS/cm)</td>
<td>80</td>
<td>136</td>
<td>111</td>
<td>108</td>
<td>14</td>
</tr>
<tr>
<td>Dissolved Oxygen (mg/L)</td>
<td>5.5</td>
<td>11.7</td>
<td>8.4</td>
<td>8.4</td>
<td>1.1</td>
</tr>
<tr>
<td>pH</td>
<td>7.0</td>
<td>9.0</td>
<td>7.9</td>
<td>7.9</td>
<td>0.5</td>
</tr>
<tr>
<td>Chlorophyll* (ug/L)</td>
<td>0.05</td>
<td>19</td>
<td>4</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Temperature (°F)</td>
<td>77</td>
<td>89</td>
<td>83</td>
<td>83</td>
<td>3</td>
</tr>
</tbody>
</table>

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*Sensor value data should be interpreted cautiously without laboratory verification. Sensor measures fluorescence response from chlorophyll-a, -b, and -c pigments.
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Explanation of Statistics:

<table>
<thead>
<tr>
<th>MIN</th>
<th>MAX</th>
<th>MEDIAN</th>
<th>MEAN</th>
<th>ST. DEV.</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIN</td>
<td>MAX</td>
<td>MEDIAN</td>
<td>MEAN</td>
<td>ST. DEV.</td>
</tr>
<tr>
<td>TSS</td>
<td>mg/L</td>
<td>TDW</td>
<td>3.02</td>
<td>2.0</td>
</tr>
<tr>
<td>TN</td>
<td>mg/L</td>
<td>TDW</td>
<td>3.02</td>
<td>1.0</td>
</tr>
<tr>
<td>TKN</td>
<td>mg/L</td>
<td>TDW</td>
<td>3.02</td>
<td>0.5</td>
</tr>
<tr>
<td>NO3+NO2</td>
<td>mg/L</td>
<td>TDW</td>
<td>3.02</td>
<td>0.1</td>
</tr>
<tr>
<td>TP</td>
<td>mg/L</td>
<td>TDW</td>
<td>3.02</td>
<td>0.0</td>
</tr>
<tr>
<td>Chl-a</td>
<td>ug/L</td>
<td>TDW</td>
<td>3.02</td>
<td>0.0</td>
</tr>
</tbody>
</table>

Samples collected by Greenwood Commissioners of Public Works (CPW) are analyzed for TN, TP, and Chl-a only.

* Error at laboratory resulting in no Chl-a values.

These samples are collected in order to provide information on parameters which cannot be reliably measured in-situ. These sample results may be used in the future to develop statistical relationships with continuously monitored parameters in an effort to estimate continuous concentrations of these parameters. A sufficient sample size for regression analysis is typically 20 samples or more collected across a range of weather conditions.

Definitions

<table>
<thead>
<tr>
<th>Chl-a</th>
<th>Chlorophyll-a</th>
</tr>
</thead>
<tbody>
<tr>
<td>ND</td>
<td>Non Detected at the Reporting Limit</td>
</tr>
<tr>
<td>NO3+NO2</td>
<td>Nitrate + Nitrite as Nitrogen</td>
</tr>
<tr>
<td>TKN</td>
<td>Total Kjeldahl Nitrogen</td>
</tr>
<tr>
<td>TN</td>
<td>Total Nitrogen</td>
</tr>
<tr>
<td>TP</td>
<td>Total Phosphorus</td>
</tr>
<tr>
<td>TSS</td>
<td>Total Suspended Solids</td>
</tr>
</tbody>
</table>

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