

**PROJECT: NEW RIVER ALGAE BLOOM MONITORING**

<b>1. DESCRIPTION:</b> Cyanobacteria Harmful Algal Bloom Monitoring
<b>2. PURPOSE/GOALS:</b> This in-house (EMD) project aims to determine environmental drivers that promote harmful cyanobacteria algal bloom in Las Olas/ Fort Lauderdale area.
<b>3. HISTORICAL UPDATE:</b> Monitoring began in 2018
<b>4. USE OF DATA:</b> EMD and Broward County EPCRD
<b>5. RELEVANCE:</b> The information generated will be available to policymakers to help them formulate policies on how to mitigate algal bloom occurrences in susceptible areas within the county.
<b>6. EFFECTIVENESS:</b> The collected samples and data generated by this project will meet FDEP/EPA water quality requirements.
<b>7. SAMPLE SITES:</b> 10 sites in New River near Las Olas (Fort Lauderdale) area <b>SAMPLING CONSIDERATIONS:</b> Sampling may be adversely affected by inclement weather such as rain. <b>PARAMETERS:</b> The Broward County Environmental Monitoring Lab monitors cyanobacteria using a YSI ProDSS Total Algae-Phycocyanin (freshwater) sensor. This sensor measures the blue-green algae in real-time through the <i>in vivo</i> fluorometry technique. This method directly detects the fluorescence of a specific pigment in living algal cells and determines relative algal biomass. The fluorescence intensity is validated with microscopy to determine the cell density (i.e., via cell count) in an algal bloom event. The lab can also identify cyanobacterial species that commonly bloom (i.e., <i>Microcystis aeruginosa</i> ) in Broward County canals/inlets.
<b>8. FREQUENCY/DURATION/SCHEDULE:</b> Monthly
<b>9. DELIVERABLES:</b> Field Sheets, Chain of Custody and Final Laboratory Reports.
<b>10. SPECIAL EQUIPMENT/SUPPLIES CONSIDERATIONS:</b> All samples are collected at the sub-surface (approximately 0.5 meters). Sampling is performed with Niskin samplers on land runs. A YSI datasonde is used for field parameters and pre- and post- calibrations are performed on the day the sampling run is performed.
<b>11. UNIQUE QA/QC REQUIREMENTS:</b> Field duplicate necessary for each run as well as a Field Clean Equipment Blank. In addition, chlorophyll a and orthophosphate require one additional replicate per run.
<b>12. FUNDING/REVENUE:</b> Broward County General Fund