Lake Seminole

The Pinellas County Department of Public Works, Division of Environmental Management (DEM) monitors County waterbodies to determine if waters are “fishable and swimmable” or are in need of improvement. If a waterbody does not meet the State standards indicative of a healthy system, it is considered impaired, and actions are required to improve water quality. Pinellas County implements a number of educational programs, structural stormwater projects, and county ordinances that result in pollution reductions. Additionally, the County partners with municipalities and other public agencies to research sources of pollution in the watershed and to implement proper management practices to improve water quality.

This flyer gives a brief summary of the assessment results for Lake Seminole based on monitoring since 2003. The data collected has been distilled into a few key components which are indicative of general, overall water quality health, shown on the next page.

Lake Seminole was created in the 1940s when a dam was installed as part of the construction of Park Boulevard. It is the second largest lake in the County. As part of the Pinellas County ambient monitoring program, four sites within each of the North and South lobes of the lake are selected randomly for sampling every 40 days from June through September (wet season) and every 51 days for the rest of the year (dry season). This results in a total of eight sampling events at 32 sites per year per lobe.

Some water quality parameters are measured in the field: pH, dissolved oxygen, temperature, conductivity, salinity, and flow. Other parameters are analyzed at the County lab from collected water samples: total phosphorus, ortho-phosphate, nitrate-nitrite, ammonia, total Kjeldahl nitrogen, chlorophylls a, b, and c, phaeophytin, total suspended solids, turbidity, five-day biological oxygen demand, color, aluminum, alkalinity, and bacteria.

The vegetative community in the lake is assessed annually, which includes documenting native plant species, invasive vegetation, and sensitive species, and assessing the overall plant community composition.
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Currently, Lake Seminole is attaining some of its designated uses.

- Dissolved oxygen is at a healthy level in the lake, and the vegetation in the lake indicates a good plant community. Fecal indicator bacteria is at acceptable levels.

- Lake Seminole is currently impaired for total nitrogen, total phosphorus, and chlorophyll-a.

Data trends since 2003

The maps below show improving trends of water quality parameters in the north and south lobes of Lake Seminole. Long-term statistical analysis of data since 2003 indicates significantly decreasing levels of total nitrogen, total phosphorus, chlorophyll-a, and total suspended solids.