

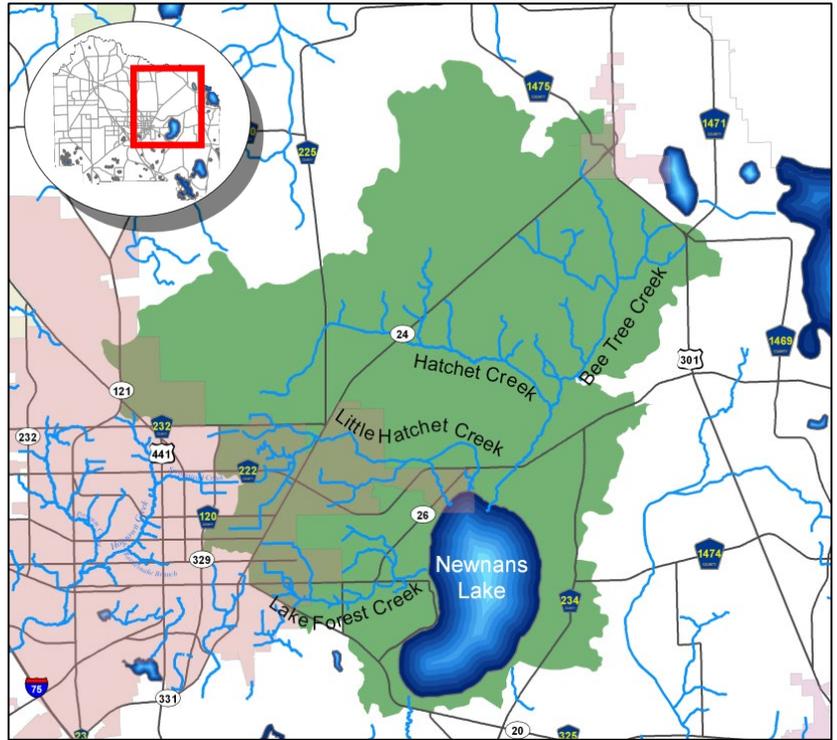


# Newnans Lake

## Fact Sheet

### The Watershed

- The lake is approximately 6,609 acres and is considered a shallow basin lake.
- The acreage varies drastically depending on rainfall.
- In 2000, multiple archeological canoes were unearthed - the oldest was dated 5,000 years. The lake was placed on the National Register of Historic Places under its Seminole name, Lake Pithlachoco, "place of long boats."



Map of Newnans Lake watershed (green).

### Potential Pollution

- Tributaries to the lake contribute much of the pollution. Erosion within the stream channel can potentially contribute additional phosphorus from soils in the Hawthorn group.
- Much of the pollution is from non-point sources such as fertilizers, leaky sanitary sewer lines, and faulty septic tanks.
- Internal nutrient cycling within the lake is also problematic.



Newnans Lake.

### Biology

Newnans Lake is an FWC designated Fish Management Area. Sparse areas of emergent grasses, bulrush, and spatterdock are found around the shoreline of Newnans Lake. The most common fish in Newnans Lake are catfish and bream.

# Water Quality

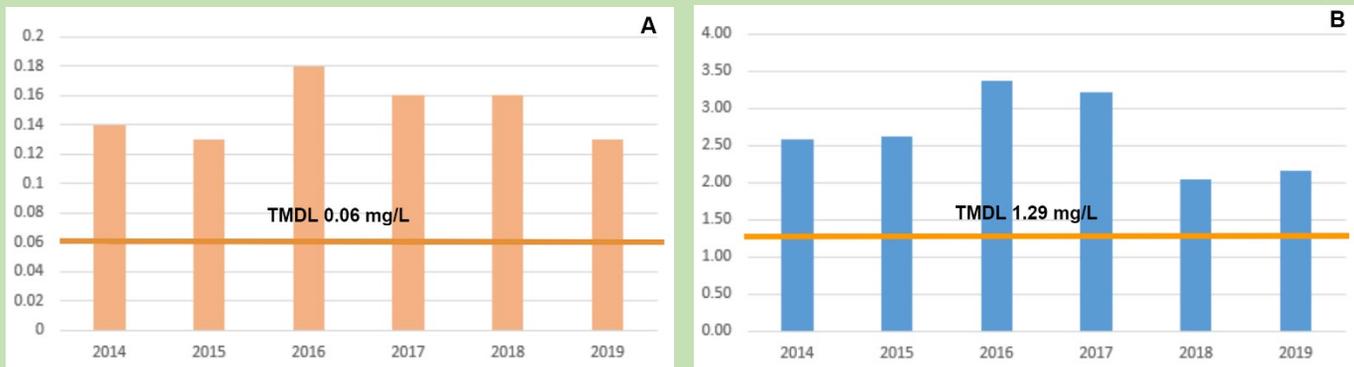


Figure 1. Annual Geometric Mean of A) total phosphorus (TP) and B) total nitrogen (TN), with the target TMDL concentration marked by orange line.

**Nutrients:** A total Maximum Daily Load (TMDL) was adopted in 2003 to address the nutrient pollution in Newnans Lake. TMDLs were determined for both phosphorus (59% TP reduction) and nitrogen (74% TN reduction) to reduce abundance of algae. This lake was included in the Orange Creek Basin Management Action Plan (BMAP) in 2007, which describes nutrient reduction efforts within the lake's watershed. Major sources of phosphorus and nitrogen pollution are fertilizers in stormwater runoff from residential and agricultural activities. Sources of phosphorus also include naturally occurring phosphatic minerals of the Hawthorn Group, which are near the land surface and have been excavated, increasing pollution to the lake.

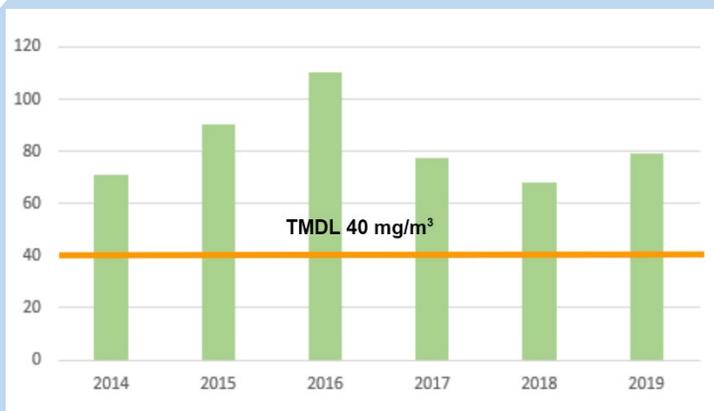


Figure 2. Annual Geometric Mean Chlorophyll-α with target TMDL concentration marked by orange line.

## Chlorophyll-α:

Algal abundance is commonly measured in the amount of chlorophyll a in water. The high nutrient concentrations have led to elevated chlorophyll-α. Although chlorophyll-α concentrations have decreased, they still are above the TMDL goal for chlorophyll-α. The lake is naturally eutrophic as a result of its location in the region where the geologically phosphorus rich Hawthorn Group formations occur.

## Current Human Impacts

- The state has awarded ACEPD funding to study the biogeochemistry of Newnans Lake and phosphatic inputs. The Newnans Lake Improvement Initiative is a two-part plan to reduce phosphorus loading and levels in the area.
- Positive impacts on water quality result from preservation within the watershed by the 6,504 acre Newnans Lake Conservation Area, which includes land surrounding Hatchet Creek and Little Hatchet Creek.



Newnans Lake, at Alachua County's Earl Powers Park.