



Newnans Lake



The Lake can be viewed and enjoyed at Newnans Lake Conservation Area covering 5,700 acres and includes 3 miles of the shoreline on the northeast side. There are 2 Alachua County parks and boat ramps, Earl P. Powers and Owens-Illinois Parks. Palm point is a City of Gainesville Park on the western side of the lake. There are also several tracts of land that comprise the Newnans Lake Conservation area owned by St. Johns River Water Management District (SJRWMD) which offer a variety of recreation opportunities.

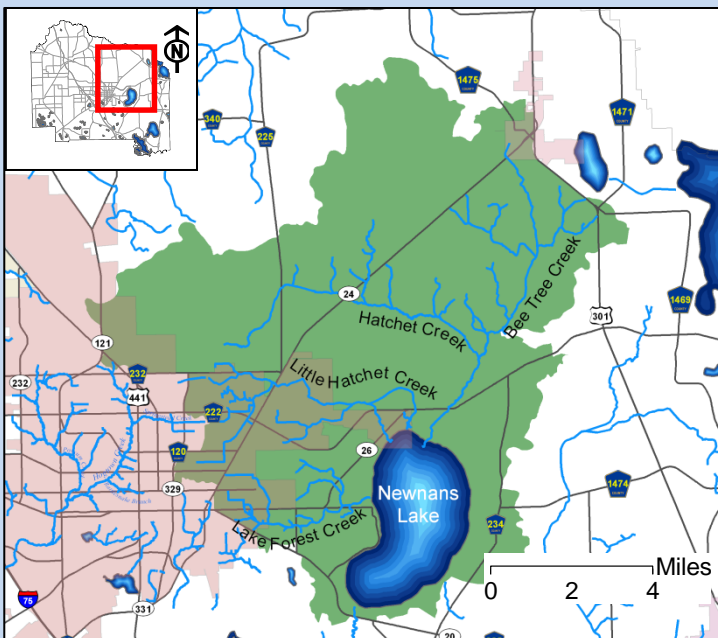


Figure 2. Map of Newnans Lake watershed (green), Gainesville urban center (beige).

Fun Facts

- The surface area of the lake is approximately 7,200 acres depending on rain fall.
- Its depth averages 5 feet to a maximum of 12 feet.
- Hatchet and Little Hatchet Creeks supply the majority of water to lake, with contributions from smaller tributaries including Lake Forest Creek.
- The lake drains on the south through Prairie Creek to Paynes Prairie and then via Camps canal to River Styx into Orange Lake.
- The lake's watershed is 85% forest and wetlands.
- In 2000, the largest archeological canoe find placed this lake on the National Register of Historic Places under its Seminole name, Lake Pithlachoco, "place of long boats." Radiocarbon analysis of the oldest canoes dates them as 5,000 yrs old. The Florida Museum of Natural History has an exhibit on these canoes.
- Fishing information can be found at Florida Fish and Wildlife Conservation Commission's website.

Ways you can help!

- Dispose of oils and chemicals properly at the Hazardous Waste Collection Center.
- Properly maintain your septic system.
- Scoop, bag, and trash pet waste.
- Use fertilizers and pesticides sparingly, or not at all.
- Keep grass clippings out of storm drains, swales, and ditches put it back on the lawn or bag it.
- Report illicit discharges or dumping to 246-6800.

Water Quality

Lake Level: Lake level of Newnans Lake is monitored by the SJRWMD. The graph to the right is the recorded stage (water level) from March 1960 to Feb 2012. Lake levels decrease during periods of extended drought especially during the 1999-2001 and during the recent drought.

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 and nitrogen 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 which will sufficiently reduce pollution to the lake. Major sources of phosphorus and nitrogen pollution include 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 ditched or excavated, increasing pollution to the lake.

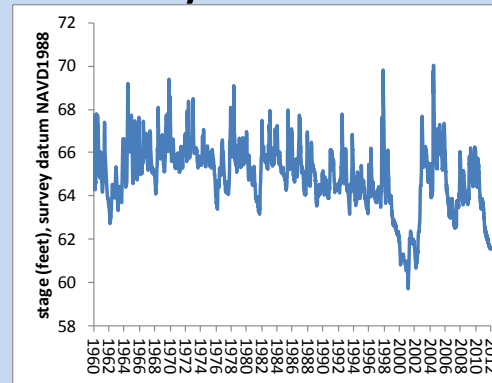


Figure 4. Graph of stage in Newnans Lake (1960-2012) data collected by SJRWMD.

Chlorophyll α : A TMDL Newnans Lake measures algae by the amount of Chlorophyll α in the water and sets a goal of 40 $\mu\text{g/L}$ which is consistently exceeded. Algal abundance has greatly exceeded this goal for many years and reflects nutrient pollution reaching the lake.

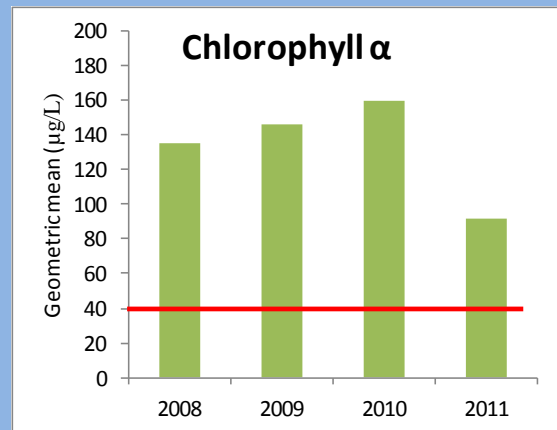
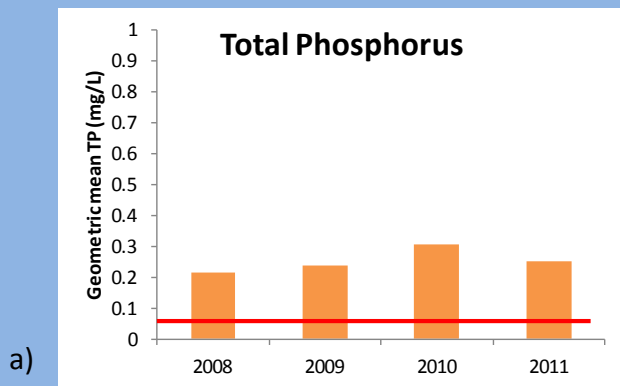


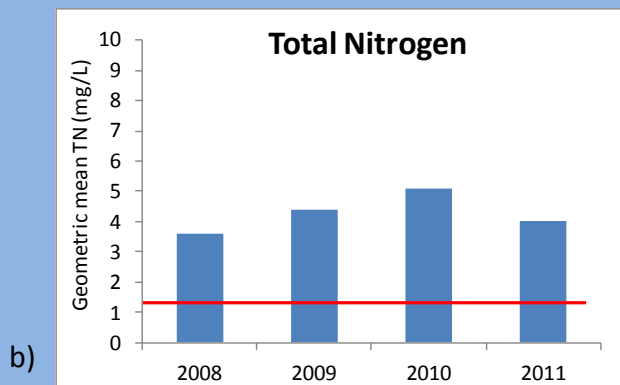
Figure 5. Graph of annual geometric mean of Chlorophyll α collected by SJRWMD. TMDL goal chlorophyll α concentration is represented by the red line 40 $\mu\text{g/L}$.

Current Human Impacts

- Historical agriculture is suspected to be a source of nutrients.
- Much of the pollution entering Newnans Lake enters from the creeks that discharge into it. One small wastewater treatment facility also discharges into Little Hatchet Creek.
- Little Hatchet Creek also passes by the airport industrial park and has potential to pick up additional phosphorus from exposed phosphatic Hawthorne group which was exposed by the area's large drainage ditches.
- The majority of pollution is from nonpoint sources such as fertilizers, leaky sanitary sewer lines, and faulty septic tanks.
- Internal nutrient cycling within the lake is also problematic.
- Newnans Lake is included in Florida's fish consumption advisories.



a)



b)

Figure 3. Graph of annual geometric mean of a) total phosphorus (TP) data and b) total nitrogen data (TN) collected by SJRWMD. TMDL goals are represented by the red line a) TP of 0.06 mg/L and b) TN of 1.29 mg/L.

To learn more:

- Read Newnans Lake TMDL http://www.dep.state.fl.us/water/tmdl/docs/tmdls/final/gp1/newnans_lake_nut_tmdl.pdf or Orange Creek BMAP <http://www.dep.state.fl.us/water/watersheds/bmap.htm>
- For fish consumption advisories visit <http://www.doh.state.fl.us/floridafishadvice/>
- Visit the St. Johns River Water Management District website at <http://www.sjrwmd.com/orangecreek/>
- For fishing information visit <http://myfwc.com/fishing/freshwater/>