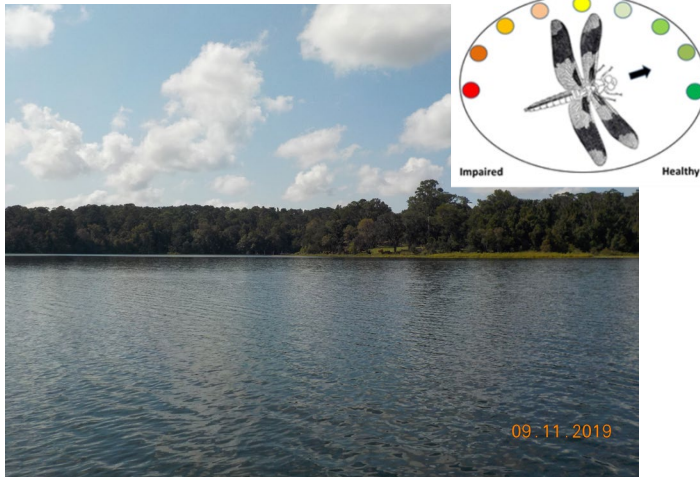


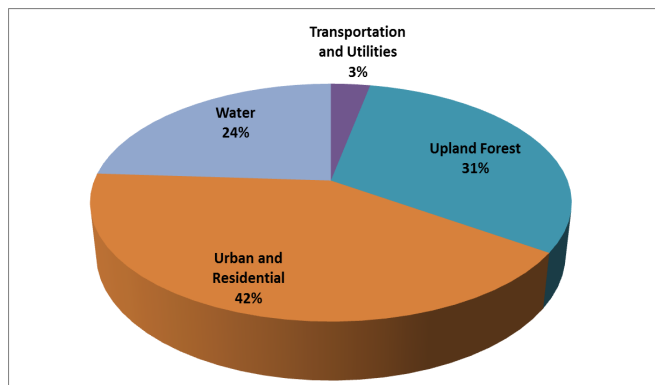
Waterbody: Lake Hall



Basin: Lake Jackson

Lake Hall is an approximately 182-acre lake located in northern Leon County, just north of Interstate 10 and slightly west of U.S. Highway 319. Lake Hall is part of the Alfred B. Maclay Gardens State Park, a state recreation area and botanical garden, and is an “Outstanding Florida Waters” by the Florida Department of Environmental Protection (FDEP).

As shown in the figure below, approximately 45% of land uses in the 773-acre Lake Hall watershed are transportation, utilities, urban and residential. Increases in stormwater runoff and waterbody nutrient loads can often be attributed to these types of land uses.



Background

Healthy, well-balanced lake communities may be maintained with some level of human activity, but excessive human disturbance may result in waterbody degradation. Human stressors may include increased inputs of nutrients, sediments, and/or other contaminants from watershed runoff, adverse hydrologic alterations, undesirable removal of habitat or riparian buffer vegetation, and introduction of exotic plants and animals. State water quality standards are designed to protect designated uses of the waters of the state (e.g., recreation, aquatic life, fish consumption), and exceedances of these standards are associated with interference of the designated use.

Methods

Surface water, sediment samples and a Lake Vegetation Index (LVI) survey was conducted to determine the health of Lake Hall and met the collection and analysis requirements of the FDEP.

Results

The nutrient thresholds and results are found in Table 1. According to FDEP requirements, Numeric Nutrient Criteria thresholds (expressed as an annual geometric mean) cannot be exceeded more than once in a three-year period. The State criteria were not exceeded during the period of record.

Other Parameters

Metals

Copper levels were elevated in Lake Hall during the 3rd quarter of 2019. While the source of copper is unknown, it is suspected that the copper exceedances are the result of the application of copper-based algaecides.

[Click here for more information on metal levels in Leon County waterbodies.](#)

Table1. FDEP’s chlorophyll-a, total nitrogen and phosphorus criteria for lakes applied to Lake Hall.

Clear Lake, Low Alkalinity	Chlorophyll-a 6.0 µg/L	Total Nitrogen Threshold 0.51-0.93 mg/L	Total Phosphorus Threshold 0.01-0.03 mg/L
2004	2.1	0.13	0.01
2005	1.4	0.22	0.01
2006	1.3	0.22	0.01
2007	1.5	0.42	0.01
2008	2.2	0.33	0.00
2009	1.8	0.43	0.00
2010	2.2	0.33	0.01
2011	1.3	0.41	0.01
2012	1.4	0.34	0.01
2013	3.0	0.15	0.01
2014	1.6	0.26	0.01
2015	3.3	0.26	0.02
2016	4.1	0.32	0.01
2017	2.9	0.32	0.01
2018	3.6	0.31	0.01
2019	3.2	0.26	0.01

Other water quality parameters appeared to be normal for the area and no impairments were noted.

Floral Assessment

The Lake Vegetation Index score for Lake Hall was 74, placing the lake’s vegetative community in the healthy category.

Forty-eight species were found during the survey. The native species, fanwort (*Cabomba caroliniana*), watershield (*Brasenia schreberi*), fragrant waterlily (*Nymphaea odorata*), and twoleaf watermilfoil (*Myriophyllum heterophyllum*) were the most dominant species in the lake. Other native shoreline vegetation included; red maple (*Acer rubrum*), buttonbush (*Cephalanthus occidentalis*) and swamp tupelo (*Nyssa sylvatica var. biflora*).

Unfortunately, torpedo grass (*Panicum repens*) and hydrilla (*Hydrilla verticillata*) are Category I Invasive

Exotics (Florida Exotic Pest Control Council <http://www.fleppc.org/>) and were found in Lake Hall. Alligator weed (*Alternanthera philoxeroides*) is a Category II Invasive Exotic also found in the lake.

[Click here for more information on the Lake Hall LVI.](#)

[Click here for more information on common exotic and invasive plants in Leon County wetlands and waterbodies.](#)

Conclusions

Based on ongoing sampling, Lake Hall met the nutrient thresholds for the Eastern Panhandle Region and the floral community is considered “healthy” by the LVI. Other water quality parameters appeared to be normal for the area and no impairments were noted.

Thank you for your interest in maintaining the quality of Leon County’s water resources. Please feel free to contact us if you have any questions.

Contact and resources for more information

www.LeonCountyWater.org

[Click here to access the results for all water quality stations sampled in 2019.](#)

[Click here for a map of the watershed – Sample Site H07.](#)

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