

Lake Weeks EcoSummary



Lake Weeks is a small, shallow, 11-acre, tannic lake located in southeastern Leon County.

Approximately 41% of land use in the Lake Weeks 150-acre watershed is urban and residential (as shown in **Figure 1**). Increases in stormwater runoff and waterbody nutrient loads can often be attributed to these types of land uses.

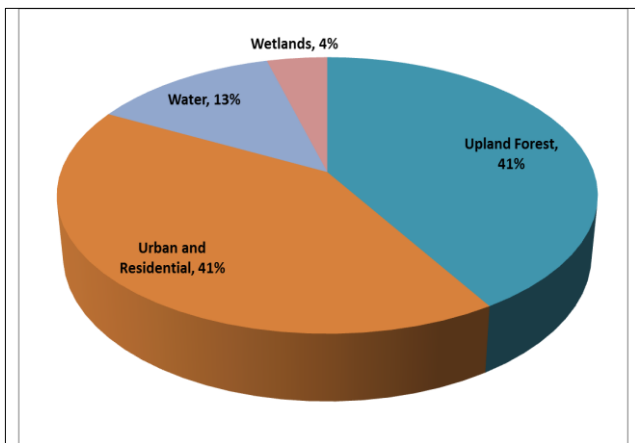


Figure 1. Lake Weeks watershed land use.

Background

Healthy, well-balanced lake communities may stay that way 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. Stressors can also include 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.

Sinkholes

In late February 2015, Lake Weeks developed two sinkholes that quickly drained the lake to levels that prevented sampling (< 1.2 feet by March 2nd) for the first two quarters of 2015. Lake levels rose to high enough levels that staff were able to resume sampling in the third quarter of 2015.

Methods

Surface water samples are collected quarterly (as field conditions allow). This information is used to determine the health of Leon County waterbodies and meets the requirements of the Florida Department of Environmental Protection (FDEP).

Results

Nutrients

The State of Florida uses Numeric Nutrient Criteria (NNC) to evaluate nutrients in waterbodies. NNC thresholds are set based on waterbody-specific characteristics and are used to determine if a waterbody meets water quality standards. The results of the four quarterly samples from a single year are used to calculate the annual geometric mean. According to FDEP

requirements, the NNC threshold cannot be exceeded more than once in a three-year period.

Water quality results and thresholds are found in **Table 1**. Low water levels in 2012, along with a relatively constant source of nutrients, substantially concentrated the nutrients in the lake, exceeding the NNC in 2012. Since 2012, there have been no exceedances in the in NNC.

Table 1. NNC thresholds and sample results for Lake Weeks. Results in bold signify exceedances of the State criteria.

Colored Lake	Chlorophyll-a 20.0 µg/L	TN Threshold 1.27-2.23 mg/L	TP Threshold 0.05-0.16 mg/L
2004	3.3	0.33	0.01
2005	1.7	0.42	0.01
2006	3.5	0.58	0.03
2007	4.9	1.00	0.02
2008	13.9	0.80	0.04
2009	2.6	0.32	0.01
2010	5.3	0.59	0.01
2011	14.2	0.79	0.03
2012	47.5	1.49	0.07
2013	19.7	0.87	-
2014	2.5	0.71	0.01
2015*	-	-	-
2016	10.3	0.72	0.02
2017	2.9	0.60	0.01
2018	2.5	0.55	0.01
2019	4.7	0.44	0.02
2020	3.8	0.61	0.03
2021	1.9	0.49	0.02
2022	5.3	0.50	0.02
2023	4.5	0.72	0.04

* Due to low water levels staff could not determine the NNC for 2015.

Chlorophyll-a

Water quality samples collected by Leon County are analyzed by Pace Analytical Services –

Ormond Beach (Pace), with the analysis results provided back to the County for submission to FDEP. In June 2022, FDEP conducted a routine audit of the chlorophyll-a data. This audit revealed that from October 2014 through December 2020, the chlorophyll-a data was reported as “uncorrected chlorophyll-a” and not “corrected chlorophyll-a”, as it should have been. Pace has since rectified this error and beginning in January 2021, the chlorophyll-a data were properly reported as “corrected chlorophyll-a”. The laboratory provided Leon County with the “correct chlorophyll-a” data from the affected dates and the information in **Table 1** of this year’s Report has been changed to reflect this. This has resulted in chlorophyll-a numbers that are lower than past Reports, which in turn has led to changes to the current Report’s narrative.

Other Parameters

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

Conclusions

Based on ongoing sampling, Lake Weeks met the nutrient thresholds for the Big Bend Bioregion. Other water quality parameters appear 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 2023.](#)

[Click here for a map of the watershed – Sample Site LW1.](#)

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