

# 2025 Lakes Monitoring Annual Report

## Tom Brown Park (Lake Leon)

*Lake Leon is within Tom Brown Park located off Easterwood Drive in eastern Tallahassee within the City of Tallahassee limits.*

- Publicly Accessible: Yes
- Recreation: No
- Surface Area: 6 acres
- Drainage Area: 180 acres
- Trophic Classification: [Eutrophic](#)
- Drainage Basin: Lake Lafayette
- Maximum Depth: 11 feet
- Average Depth: 6 feet



### Lake Leon Summary

Lake Leon is a small, 6-acre pond located within Tom Brown Park. Historical aerial imagery suggests Lake Leon is a former borrow pit constructed between 1954 and 1966. A control structure was later added sometime in the 1970's to early 1980's, which discharges water to a small tributary of Upper Lake Lafayette. The original purpose of the pond is unknown, but today Lake Leon serves as a passive park amenity providing for the attenuation of stormwater runoff from the surrounding area, which includes the Federal Correctional Institution, Florida Department of Agriculture and Consumer Services and surrounding park land.

As Lake Leon resides within a city park, where there is a community interest in understanding the quality of water within the pond. As such, annual water quality data is available for Lake Leon dating back to 1992. Data collected are used to determine relative trends over the preceding fourteen years and the trophic state of the individual water body. The following tables and charts provide water chemistry (annual geometric means) covering the period of 2011-2024. **Figure 1** and **Table 1** display the water quality monitoring location and the water quality data respectively within Lake Leon.

**Figure 1. Water Quality Monitoring Location**

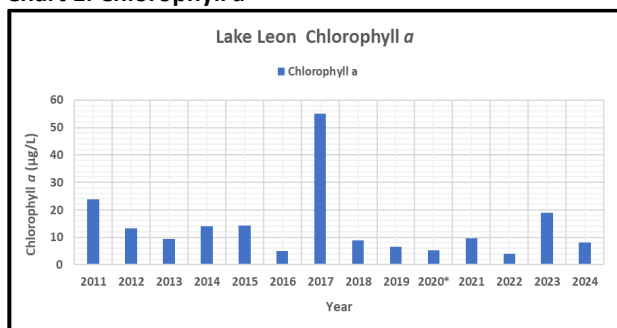


**Table 1. Water Quality Annual Geomeans**

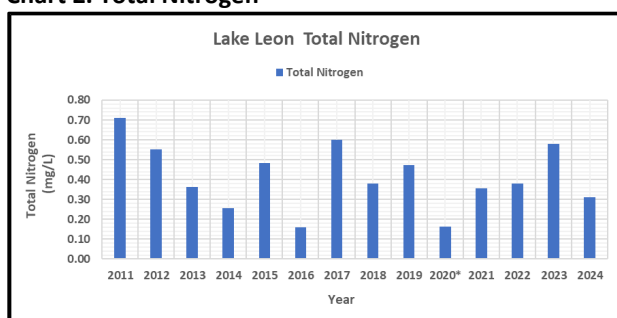
Yearly Geomeans of FLDEP Nutrient Criterion Parameters "Lake Leon" in Tom Brown Park					
Year	Chlorophyll*	Color	Alkalinity	TN*	TP*
2011	24	10	33	0.71	0.028
2012	13	14	41	0.55	0.046
2013	9	16	36	0.36	0.032
2014	14	18	34	0.26	0.038
2015	14	30	24	0.48	0.034
2016	5	14	23	0.16	0.015
2017	55	14	31	0.60	0.067
2018	9	15	26	0.38	0.046
2019	7	11	21	0.47	0.026
2020*	5	9	21	0.16	0.005
2021	10	8	30	0.36	0.031
2022	4	10	22	0.38	0.037
2023	19	11	21	0.58	0.050
2024	8	9	21	0.31	0.039

Year 2020\* had two sampling collections (January and October) due to infestation of vegetation that limited sampling abilities.

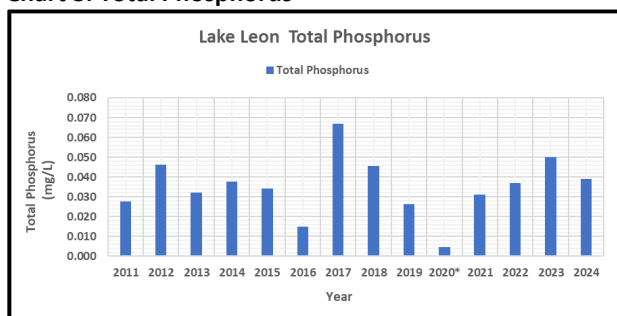
**Chart 1. Chlorophyll *a***



**Chart 2. Total Nitrogen**



**Chart 3. Total Phosphorus**



### Data Discussion

The data within the above charts and tables is used to determine the trophic state and to assess whether any data trends exist. The City's Lakes Monitoring Program is using the Mann-Kendall Statistical Trend Analysis to determine if apparent trends are statistically significant. Based on the data, Lake Leon is a eutrophic water body characterized by a mean

Chlorophyll-*a* concentration of 11 ug/L, Total Nitrogen concentration of 0.38 mg/L and Total Phosphorus concentration of 0.031 mg/L, respectively. No statistically significant trends exist for these evaluated parameters.

### Aquatic Macrophytes

In 2021 Lake Leon's vegetation community was inundated with the invasive "Water Hyacinth" (*Eichornia crassipes*). This plant has dominated the lake's surface for the past decade. The invasion of hyacinth began after several years of low water levels due to below average rainfall. Lakes Monitoring staff assisted the City Parks Department by contracting with an aquatic plant harvester to remove most of the Water Hyacinth from Lake Leon. Performing this task removes a potential nutrient source to the pond as well as downstream water of the state. Post mechanical removal, City Park staff have maintained an herbicide treatment program to spot control this invasive species. It should however be noted that its presence continues to increase.

**Photo 1. Water Hyacinth infestation within Lake Leon early Spring 2021.**





**Photos 2 & 3. Aquatic plant harvesting contractor removing the Water Hyacinth in 2021.**



**Photo 4. Lake Leon in September 2023, relatively Water Hyacinth free.**



Thank you for your interest in maintaining the water quality of City of Tallahassee area lakes. Visit the web-links below for more information on City of Tallahassee and State of Florida water resources.

City of Tallahassee Think About Personal Pollution (TAPP) Program  
<https://tappwater.org/>

City of Tallahassee Stormwater Management  
<https://www.talgov.com/you/stormwater>

City of Tallahassee Parks & Recreation  
<https://www.talgov.com/parks/ParksHome>

Leon County Water Resources  
<https://cms.leoncountyfl.gov/waterresource>

Best Management Practices for Protection for Water Resources  
[https://ffl.ifas.ufl.edu/media/fflifasufledu/docs/GIB\\_MP\\_Manual\\_Web\\_English.pdf](https://ffl.ifas.ufl.edu/media/fflifasufledu/docs/GIB_MP_Manual_Web_English.pdf)

FWCC Aquatic Plant Management:  
<http://myfwc.com/wildlifehabitats/habitat/invasive-plants/aquatic-plant/>

Freshwater Algal Bloom information:  
<https://floridadep.gov/AlgalBloom>

Florida Invasive Exotics, please click on the Florida Exotic Pest Control Council  
<https://www.floridainvasives.org/>