

**LAKESHORE VILLAGE**  
**Water Quality Results for Egret Lake and Cormorant Lake**  
**Multiple Samples taken: December 11, 2017 – December 5, 2018**

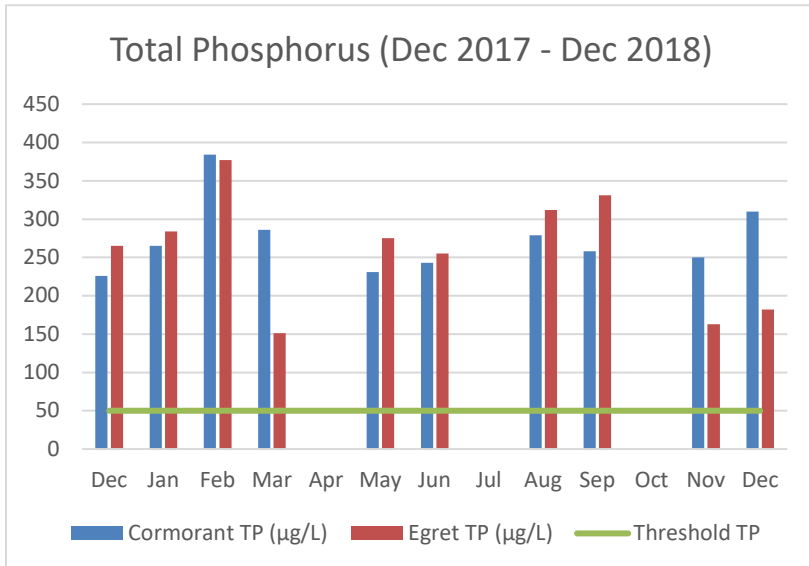


As we strive to improve the water quality of our lakes at Lakeshore Village, we are taking monthly water samples in two of our lakes for Florida LAKEWATCH. Presented here are our water quality data, which emphasize results for phosphorus, nitrogen, chlorophyll, and water clarity. These four parameters are regarded as the best suite of indicators of overall water quality.

Our lakes are in the Southwest Florida Flatlands Region, which are typically eutrophic (*rich in organic and mineral nutrients*) and having dark colored water. Florida LAKEWATCH compares our results to regional lakes with similar physiography, geology, soils, hydrology, water chemistry and vegetative climate.

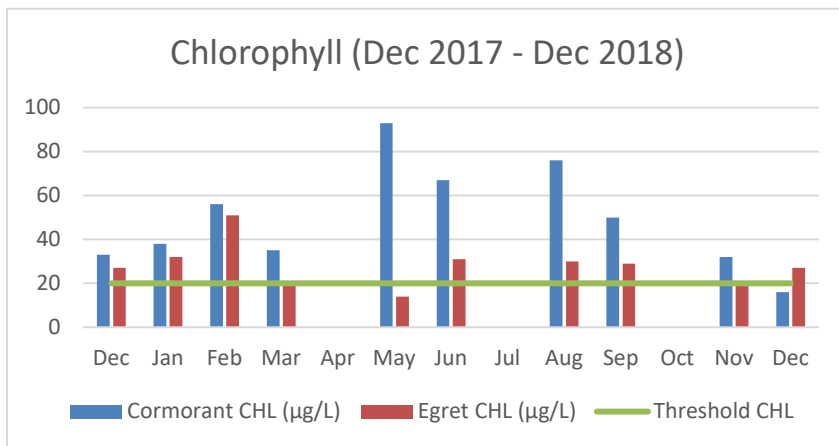
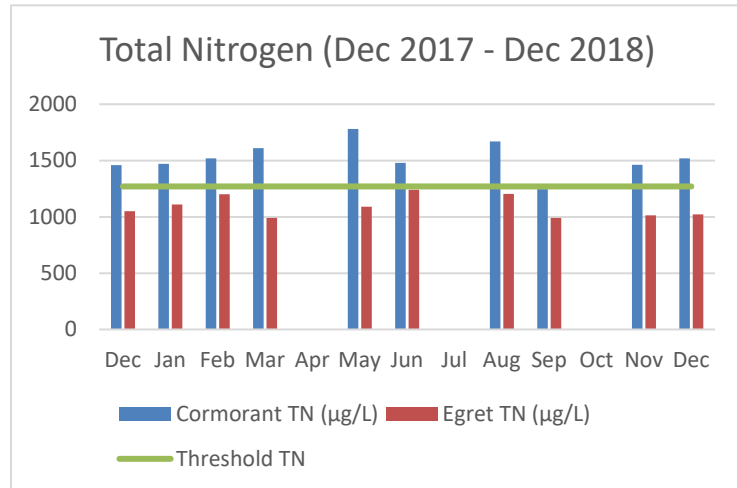
As representatives of our four lakes, only Egret Lake and Cormorant Lake are being sampled. Interpretation of the data are made to the Florida Department of Environmental Protection’s (FDEP) Nutrient Criteria for lakes. Applicable interpretations for Total Phosphorus and Total Nitrogen are used to assess impairment based on the nutrient criteria. The table below summarizes the average value from December 2017 through December 2018.

Lake:	Egret		Cormorant	
Phosphorus	250 µg/L	Exceeds Criteria	250 µg/L	Exceeds Criteria
Nitrogen	1049 µg/L	Below Criteria	1481 µg/L	Exceeds Criteria
Chlorophyll	27 µg/L	Exceeds Criteria	39 µg/L	Exceeds Criteria
Water Clarity	2.5 ft	Less than Desired	2.2 ft	Less than Desired



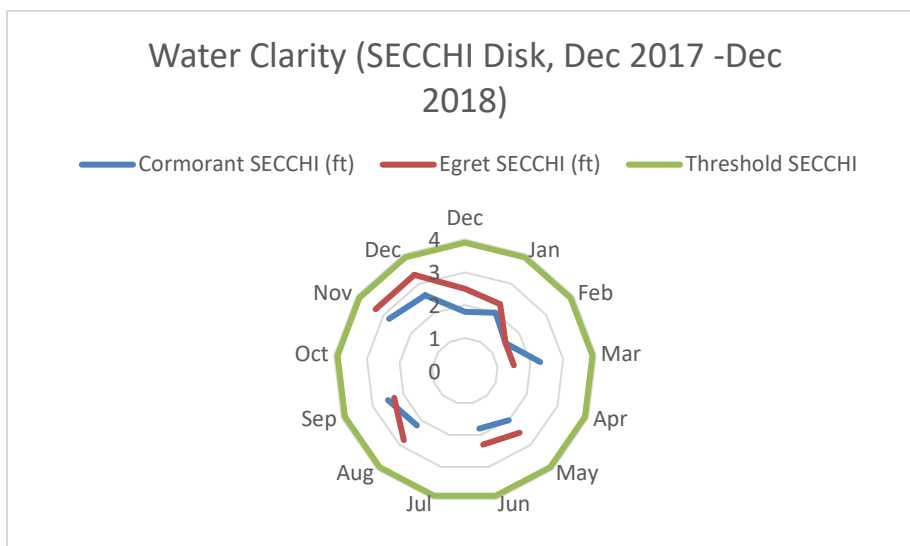
Elevated levels of **phosphorus** can cause shifts in water quality balance and is the most common cause of undesirable growth of aquatic weeds and algae. Lawn and landscape fertilizer runoff are another major source of phosphorus in lakes. Both Cormorant and Egret Lakes exceed the nutrient criteria.

**Nitrogen** can promote plant and algae growth when combined with phosphorus. Nitrogen levels should remain in the low range to maintain a healthy lake system. While Cormorant exceeds the criteria, Egret is below but approaches the threshold.



**Chlorophyll a** is measured to estimate the level of eutrophication in lakes, evident by the amount of phytoplankton present. Chlorophyll a, one of the green pigments involved in photosynthesis, is indicative of algal concentrations and of nutrient enrichment. Excessive phytoplankton concentrations, as indicated by high levels of Chlorophyll

a, cause adverse impacts on dissolved oxygen levels due to biological oxygen demand as plant life decays. Both lakes have high levels of Chlorophyll, but more so in Cormorant Lake.



Secchi depth is a mechanical test to judge the **depth of clarity** of a body of water. Generally, nutrient rich lakes tend to have Secchi depths less than 8 feet and highly enriched sites less than 3 feet. However, many lakes are exceptions to this rule based on other parameters, and Secchi in isolation cannot

always diagnose a lake's overall health. Cormorant and Egret Lakes have water clarity less than desired.

### **Explanation of Nutrient Criteria in Relation to Lake Classification:**

The numeric nutrient criteria for Florida require that lakes must first be grouped into three groups based on color and alkalinity or specific conductance. They are (1) Colored Lakes, (2) Clear Hard Water Lakes, and (3) Clear Soft Water Lakes. The lakes in Lakeshore Village are classified as Colored Lakes. The specific criteria or thresholds for Colored Lakes and to which the water quality data from Cormorant and Egret Lakes are compared are as follows:

- Total Phosphorus = 50 µg/L
- Total Nitrogen = 1270 µg/L
- Chlorophyll = 20 µg/L
- Water Clarity = >3.9 ft

The table presents the values obtained from a geometric mean of all values (used to offset skewed values such as a storm event) of each lake over the full time period. The graphs provide the monthly data to observe trends over time.