

# Lake Assessment Report

## DEFOREST LAKE

### 7/30/2004

---

---

Lake assessments are being conducted to contribute physical and ecological data to the Atlas as a collaborative effort between project partners. The goal is to rapidly assess many of the lakes in the county and thus provide stakeholders a better understanding of the character of the lake, its shore, and the aquatic plants present there. These data are intended to assist in the future management of the lake and its watershed.

The first section of the report provides the results of the bottom mapping effort: a contour (bathymetric) map of the lake, area, volume and depth statistics, and the water level at the time of assessment (if available).

The second section provides the results of the ecological (vegetation) assessment conducted on the lake. These results can be used to better manage vegetation in the lake. A list is provided with the different plant species found at various sites around the lake. Potentially invasive, exotic (non-native) species are identified in a plant list and the percent of exotics is presented in a summary table. The results of this study are compared with other lakes in the watershed.

The intent of the assessment is to provide a starting point from which to track changes in the lake. These data can provide the information needed to determine changes and to monitor trends in physical condition and ecological health of the lake.

### ***I. Physical Data – Area, Depth, Volume, & Bottom Contours***

The bottom of the lake was mapped using a Global Positioning System (GPS) to determine the boat's position, and a depth-finder to provide depth associated with that measured position. The result is an estimate of the lake's area, mean and maximum depths, and volume (Table 1) and the creation of a bottom contour map. *NOTE: This map is for recreational purposes only.*

**Table 1: Physical Characteristics of the Lake**

Surface Area (acres):	<u>11.83</u>
Mean Depth (feet):	<u>4.80</u>
Maximum Depth (feet):	<u>18.00</u>
Volume (gallons):	<u>17,556,396</u>




*The lake assessments are created in partnership with Seminole County and the Florida Center for Community Design and Research at USF. If you have any questions, please use the "Contact Us" form on the Seminole Atlas Website ([www.seminole.wateratlas.org](http://www.seminole.wateratlas.org))*



# Deforest Lake

Section Township Range  
03-20-30

 Contour Lines Expressed  
in 2 Foot Intervals

 Estimated Lake  
Perimeter

## EXPLANATION:

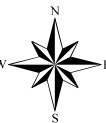
Assessment Date: July 30, 2004

Lake water level was 39.8 ft above sea level when the lake was assessed.

Contours are expressed in absolute depth below this level and may not exclude the presence of submerged aquatic vegetation.

## DATA SOURCES

Seminole County 1999 Color aerials provided by Seminole County Public Works. All contours generated by Florida Center For Community Design and Research based on GPS/Sonar data provided by Seminole County Stormwater Division.



0 100 200 300 Feet



## II. Ecological Data - Aquatic Plant Survey

Approximately equispaced sites (typically ten or more) are mapped around the lake and the aquatic plants at each site are surveyed. The total number of species from all sites is used to approximate the total diversity of aquatic plants and the percent of invasive-exotic plants on the lake and in the watershed (Table 2). Many of these plants are considered ecologically harmful, as they tend to out-compete beneficial native species. Such “nuisance” plants can also make boating and other recreational activities difficult or impossible. The common and scientific names of plant species found on your lake are listed in Table 3.

**Table 2: Comparison of species diversity between the lake and other assessed lakes located within the same watershed**

	<u>Lake</u> DEFOREST LAKE (Average)	<u>Watershed</u> Lake Monroe (L-S Canal)
Number of Taxa:	37	32
Percent Exotic Plants:	27%	18%

**Table 3: Botanical and common names of the most commonly found plants on the lake. Percent frequency (of occurrence), habit (location where found), status (native or exotic), and EPPC status are provided**

Common Name	Scientific Name	Frequency	Habit	Status	EPPC
Fanwort	Cabomba caroliniana	100%	Submersed	Native	NL
Maidencane	Panicum hemitomon	89%	Emergent	Native	NL
Torpedo Grass	Panicum repens	89%	Emergent	Exotic	I
Hornwort, Coontail	Ceratophyllum demersum	67%	Submersed	Native	NL
Peruvian Primrosewillow	Ludwigia peruviana	67%	Emergent	Exotic	NL
Chinese Tallow Tree	Sapium sebiferum	67%	Emergent	Exotic	I
Manyflower Marshpennywort, Water Pennywort	Hydrocotyl umbellata	56%	Emergent	Native	NL
Southern Naiad	Najas guadelupensis	56%	Submersed	Native	NL
American White Water Lily, Fragrant Water Lily	Nymphaea odorata	56%	Floating	Native	NL



<b>Common Name</b>	<b>Scientific Name</b>	<b>Frequency</b>	<b>Habit</b>	<b>Status</b>	<b>EPPC</b>
Alligator Weed	<i>Alternanthera philoxeroides</i>	44%	Emergent	Exotic	II
Buttonbush	<i>Cephalanthus occidentalis</i>	44%	Emergent	Native	NL
Algal Mats, Floating	Algal spp.	33%	Floating	Unknown	Unknown
Fragrant Flatsedge	<i>Cyperus odoratus</i>	33%	Emergent	Native	NL
Spatterdock, Yellow Pondlily	<i>Nuphar lutea</i>	33%	Floating	Native	NL
Pine Tree	<i>Pinus</i> spp.	33%	Emergent	Native	NL
Pickereel Weed	<i>Pontederia cordata</i>	33%	Emergent	Native	NL
Carolina Willow	<i>Salix caroliniana</i>	33%	Emergent	Native	NL
Water Spangles, Water Fern	<i>Salvinia minima</i>	33%	Floating	Native	NL
Burhead Sedge, Cuban Scirpus	<i>Scirpus cubensis</i>	33%	Emergent	Native	NL
Para Grass	<i>Urochloa mutica</i>	33%	Emergent	Exotic	I
Hydrilla, waterthyme	<i>Hydrilla verticillata</i>	22%	Submersed	Exotic	I
Sweetbay Magnolia	<i>Magnolia virginiana</i>	22%	Emergent	Native	NL
Creeping Oxeye	<i>Wedelia trilobata</i>	22%	Emergent	Exotic	II
Camphor-tree	<i>Cinnamomum camphora</i>	11%	Emergent	Native	I
Wild Taro	<i>Colocasia esculenta</i>	11%	Emergent	Exotic	I
Umbrella Flat Sedge	<i>Cyperus alternifolius</i>	11%	Emergent	Exotic	II
Yerba De Tajo	<i>Eclipta alba</i>	11%	Emergent	Native	NL
East Indian Hygrophila, Indian Swampweed	<i>Hygrophila polysperma</i>	11%	Unknown	Exotic	I
Carolina Redroot	<i>Lachnanthes caroliniana</i>	11%	Emergent	Native	NL
Mexican Primrosewillow, Long-stalked Ludwigia	<i>Ludwigia octovalvis</i>	11%	Emergent	Native	NL
Creeping Primrosewillow, Red Ludwigia	<i>Ludwigia repens</i>	11%	Emergent	Native	NL
Wax Myrtle	<i>Myrica cerifera</i>	11%	Emergent	Native	NL
Common Reed	<i>Phragmites australis</i>	11%	Emergent	Native	NL
Wapato, Common Arrowhead, Duck Potato	<i>Sagittaria latifolia</i>	11%	Emergent	Native	NL

<b>Common Name</b>	<b>Scientific Name</b>	<b>Frequency</b>	<b>Habit</b>	<b>Status</b>	<b>EPPC</b>
Sedge	Scirpus spp.	11%	Emergent	Unknown	NL
Bald Cypress	Taxodium distichum	11%	Emergent	Native	NL
Cattails	Typha spp.	11%	Emergent	Native	NL