The lake assessments are created in partnership with Hillsborough County and the Florida Center for Community Design and Research

LAKE ASSESSMENT DOCUMENT

Osceola Lake 9/26/97 Watershed: Anclote

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 your 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 your 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 sophisticated 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 your lake's area, mean and maximum depths, and volume (Table 1) and the creation of a bottom contour map.

Table 1. Physical Characteristics of Your Lake.

Surface Area (acres):	56
Mean Depth (feet):	5.4
Maximum Depth (feet):	22.0
Volume (gallons):	99,443,501

Lake Osceola

Section-Township-Range
03-27-17

Contour Lines Expressed in 2- Foot Intervals

Lake Perimeter ground level

EXPLANATION:
Survey date September 24, 1997.

Explanation:
Lake water level was 43.7 ft above Mean Sea Level when the lake was surveyed. Contours are expressed in absolute depth below this level.

DATA SOURCES:
Digital orthophotos by United States Geological Survey. All contours generated by Florida Center for Community Design and Research based on survey data provided by the Hillsborough County Lake Management Program.

50 0 50 100 Meters

Hillsborough County

University of South Florida
USF

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II. Ecological Data

Aquatic Plant Survey

Approximately equispaced sites are haphazardly 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 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 your lake and other assessed lakes located within your watershed.

	Osceola Lake	Anclote (Average)
Number of Taxa:	23	29
Percent Exotic Plants:	22%	18%

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

Common Name	Plant Species	Frequency	Habit	Status	EPPC
Swamp Fern	Blechnum serrulatum		Emergent	Native	NL
Canna	Canna spp.		Emergent	Exotic	NL
Coontail	Ceratophyllum demersum		Submersed	Native	NL
Wild Taro, Dasheen, Coco Yam	Colocasia esculenta		Emergent	Exotic	I
Sedge	Cyperus spp.		Emergent	Unknown	NL
Manyflower Marshpennywort, Water Penny	Hydrocotyl umbellata		Emergent	Native	NL
Soft Rush	Juncus effusus var solutus		Emergent	Native	NL
Water Primroses, Primrosewillow	Ludwigia spp.		Emergent	Unknown	NL
Punk Tree, Melaleuca	Melaleuca quinquenervia		Emergent	Exotic	I
Southern Waternymph	Najas guadelupensis		Submersed	Native	NL
Lotus Lily, American Lotus	Nelumbo lutea		Floating	Native	NL
Stonewort	Nitella spp.		Submersed	Native	NL
Spatterdock, Yellow Pondlily	Nuphar lutea var. advena		Floating	Native	NL
American White Water Lily, Fragrant Water	Nymphaea odorata		Floating	Native	NL
Banana Lily, Big Floatingheart	Nymphoides aquatica		Floating	Native	NL
Torpedo Grass	Panicum repens		Emergent	Exotic	I

Common Reed	Phragmites australis	Emergent	Exotic	NL
Pickerel Weed	Pontederia cordata	Emergent	Native	NL
Willow	Salix spp.	Emergent	Native	NL
Burhead Sedge,Cuban Scirpus	Scirpus cubensis	Emergent	Native	NL
Cypress	Taxodium spp.	Emergent	Native	NL
Cattails	Typha spp.	Emergent	Native	NL
Tapegrass	Vallisneria americana	Submersed	Native	NL

Standing Crop

In addition to an overall survey of the types of plants on a lake, an estimate of the standing crop (biomass) of the lake has been obtained for many lakes. This was done by calculating the average weight of the vegetation within a quarter-meter square quadrat tossed haphazardly into three zones (see Figure) at each sampling site around the lake: (1) the emergent zone, (2) the floating zone and (3) the submersed zone. The average weight of the plants (Table 4) from all sampling sites and the dominant type of vegetation (Table 5) are provided. If data tables are not shown, no standing crop estimates were obtained for this lake.

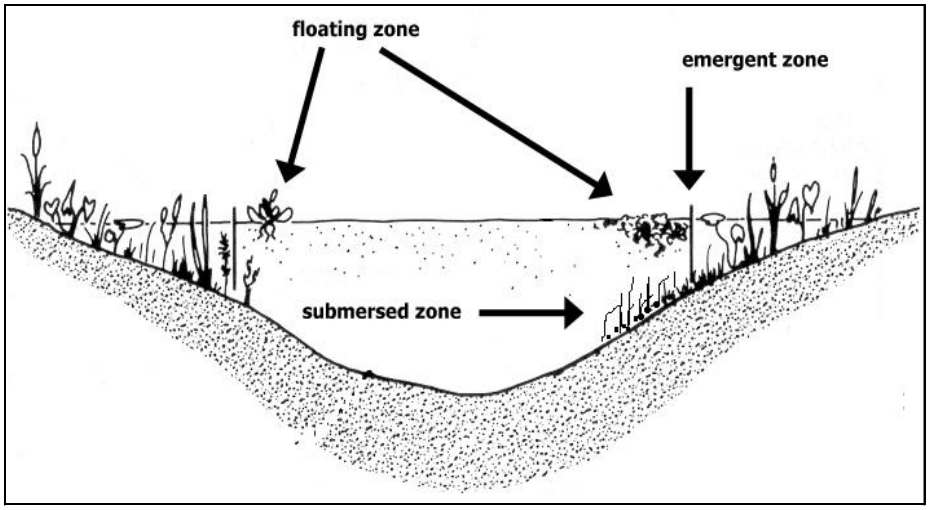

Table 4. Comparison between the average biomass from three zones within your lake and among all lakes assessed within your watershed.

	Osceola Lake	Anclote (Average)
Emergent Zone:	4.96	3.69
Floating Zone:	1.03	0.61
Submersed Zone:	2.30	1.21

Number of lakes sampled in your watershed: 2

Note: All biomass measurements are shown in kilograms per square meter.

Table 5. Dominant taxa from three zones within your lake.

Zone	Dominant Plant	Status
Emergent Zone:		
Floating Zone:		
Submersed Zone:		