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

LAKE ASSESSMENT DOCUMENT

Lake Carroll 10/31/01 Watershed: Sweetwater Creek

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.

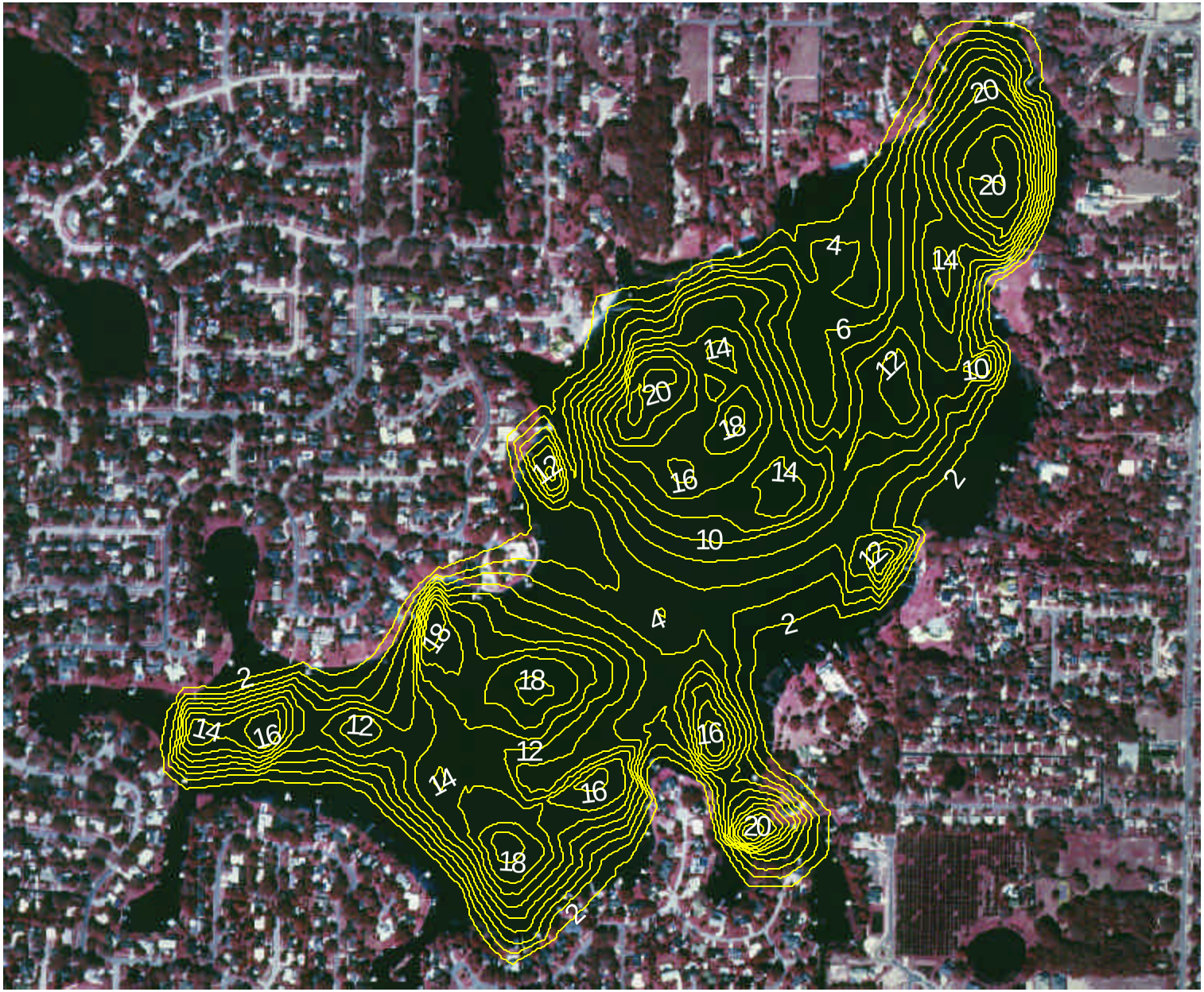
I. Physical Data – Area, Depth, Volume, & Bottom Contours

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):	215
Mean Depth (feet):	7.7
Maximum Depth (feet):	21.3
Volume (gallons):	540,032,133

Lake Carroll



Section-Township-Range
10, 11, 14, 15-28-18

Contour Lines Expressed in 2- Foot Intervals

Lake Perimeter ground level

EXPLANATION:
Survey date August 26, 1998.

Explanation:

Lake water level above mean sea level is pending.

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.

60 0 60 120 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.

	Lake Carroll	Sweetwater Creek (Average)
Number of Taxa:	21	30
Percent Exotic Plants:	14%	15%

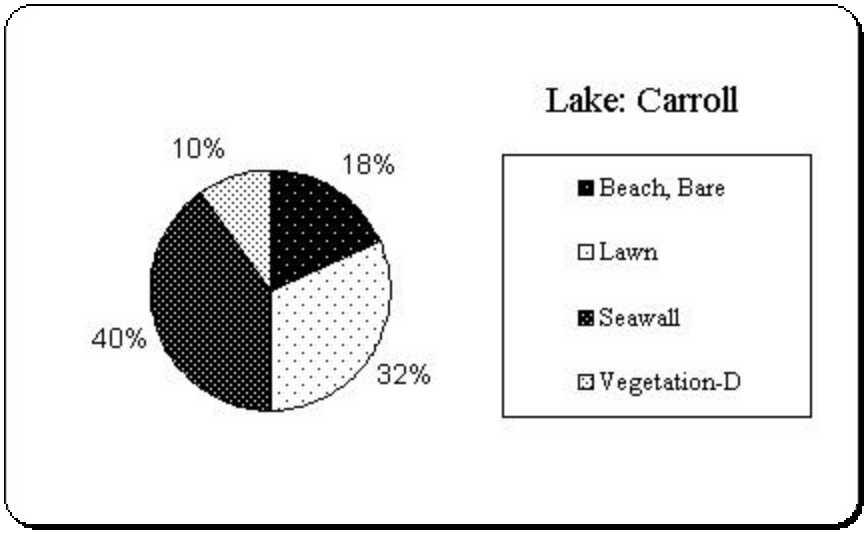
Table 3. Botanical and common names of the most commonly found plants on your lake. Percent frequency (of occurence), habit (location where found), status (native or exotic), and EPPC status are provided.

Common Name	Plant Species	Frequency	Habit	Status	EPPC
Lemon Bacopa	Bacopa caroliniana	100%	Submersed	Native	NL
Tapegrass	Vallisneria americana	100%	Submersed	Native	NL
Sedge	Cyperus spp.	73%	Emergent	Unknown	NL
Rush Fuirena	Fuirena spp.	73%	Emergent	Native	NL
Manyflower Marshpennywort, Water Penny	Hydrocotyl umbellata	73%	Emergent	Native	NL
Torpedo Grass	Panicum repens	73%	Emergent	Exotic	I
Water Primroses, Primrosewillow	Ludwigia spp.	55%	Emergent	Unknown	NL
American White Water Lily, Fragrant Water	Nymphaea odorata	55%	Floating	Native	NL
Punk Tree, Melaleuca	Melaleuca quinquenervia	36%	Emergent	Exotic	I
Willow	Salix spp.	27%	Emergent	Native	NL
Algal Mats, Floating	Algal spp.	18%	Floating	Unknown	Unknow
Baldwin's Spikerush, Roadgrass	Eleocharis baldwinii	18%	Submersed	Native	NL
Wax Myrtle	Myrica cerifera	18%	Emergent	Native	NL
Southern Red Maple	Acer rubrum var. trilobum	9%	Emergent	Native	NL
Alligator Weed	Alternanthera philoxeroides	9%	Emergent	Exotic	II
Camphor-tree	Cinnamomum camphora	9%	Emergent	Native	I

Manatee Mudflower, Baby's Tears	Micranthemum glomeratum	9%	Submersed	Native	NL
Smartweed, Knotweed	Polygonum spp.	9%	Emergent	Native	NL
Elderberry	Sambucus canadensis	9%	Emergent	Native	NL
Soft-stem Bulrush	Scirpus validus	9%	Emergent	Native	NL
Cattails	Typha spp.	9%	Emergent	Native	NL

Habitat Quality

The shoreline is mapped by navigating the circumference of the lake and characterizing the adjacent shore using sophisticated GPS. Categories for characterization include: 1) Lawn 2) Seawall 3) Beach, Bare Soil 4) Undisturbed Vegetation (*Vegetation-U*) 5) Disturbed Vegetation (*Vegetation-D*) 6) Impervious Surface and 7) Ornamentals, etc. The result is an estimate of the percent of each type of shoreline per lake. This information assists in the interpretation of the aquatic plant survey as an indicator of relative habitat quality.



Percent of lake shore types