



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

Saddleback Lake 8/10/99 Watershed: Rocky/ Brushy 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):	<u>33</u>
Mean Depth (feet):	<u>5.5</u>
Maximum Depth (feet):	<u>21.7</u>
Volume (gallons):	<u>59,721,854</u>

Saddleback Lake

Section - Township - Range
22-27-18

-  Contour Lines Expressed in 2-Foot Intervals
-  Lake Perimeter Ground Level

EXPLANATION:

Survey Date August 10, 1999

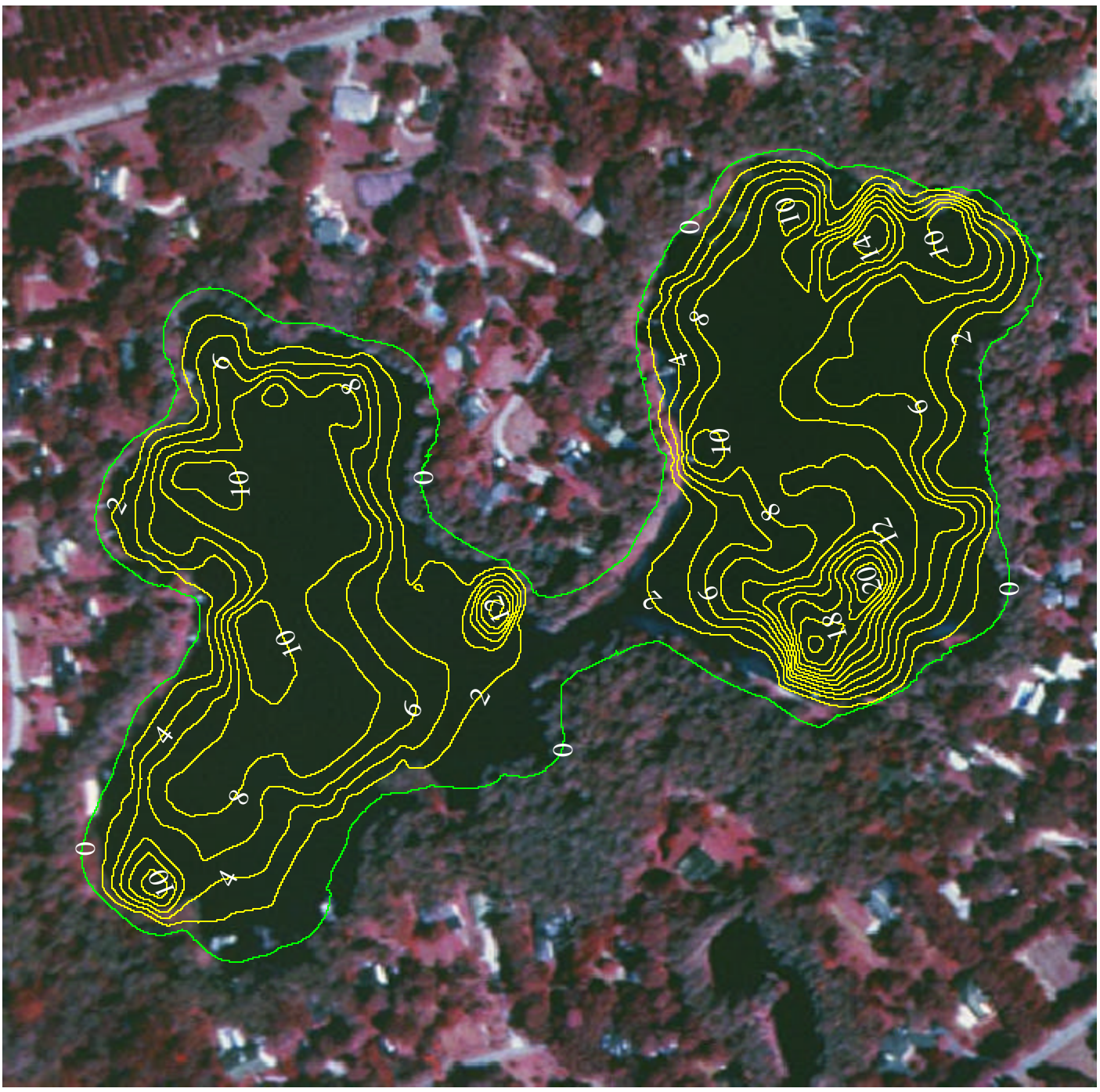
Lake water level was 52.80 ft above sea level when the lake was surveyed. Contours are expressed in absolute depth below this level.

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.



Hillsborough County



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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.

	<u>Saddleback Lake</u>	<u>Rocky/ Brushy Creek</u> (Average)
Number of Taxa:	54	35
Percent Exotic Plants:	17%	18%

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

<u>Common Name</u>	<u>Plant Species</u>	<u>Frequency</u>	<u>Habit</u>	<u>Status</u>	<u>EPPC</u>
Southern Waterlily	<i>Najas guadelupensis</i>	100%	Submersed	Native	NL
Cypress	<i>Taxodium</i> spp.	100%	Emergent	Native	NL
Maidencane	<i>Panicum hemitomon</i>	82%	Emergent	Native	NL
Torpedo Grass	<i>Panicum repens</i>	82%	Emergent	Exotic	I
Water Primroses, Primrosewillow	<i>Ludwigia</i> spp.	73%	Emergent	Unknown	NL
Wild Taro, Dasheen, Coco Yam	<i>Colocasia esculenta</i>	64%	Emergent	Exotic	I
Climbing Hempvine	<i>Mikania scandens</i>	64%	Emergent	Native	NL
Southern Red Maple	<i>Acer rubrum</i> var. <i>trilobum</i>	45%	Emergent	Native	NL
Pigweed, Water Hemp	<i>Amaranthus australis</i>	45%	Emergent	Native	NL
Common Bacopa, Herb-Of-Grace	<i>Bacopa monnieri</i>	45%	Submersed	Native	NL
Swamp Fern	<i>Blechnum serrulatum</i>	45%	Emergent	Native	NL
Dayflower	<i>Commelina diffusa</i>	45%	Emergent	Exotic	NL
Manyflower Marshpennywort, Water Penny	<i>Hydrocotyl umbellata</i>	45%	Emergent	Native	NL
Lotus Lily, American Lotus	<i>Nelumbo lutea</i>	45%	Floating	Native	NL
Algae	Periphyton spp.	45%	Submersed	Native	NL
Frog-fruit, Carpetweed, Turkey Tangle Fog	<i>Phyla nodiflora</i>	45%	Emergent	Native	NL

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Algal Mats, Floating	Algal spp.	36%	Floating	Unknown	Unknow
Sedge	Cyperus spp.	36%	Emergent	Unknown	NL
Baldwin's Spikerush, Roadgrass	Eleocharis baldwinii	36%	Submersed	Native	NL
Pickereel Weed	Pontederia cordata	36%	Emergent	Native	NL
Laurel Oak; Diamond Oak	Quercus laurifolia	36%	Emergent	Native	NL
Willow	Salix spp.	36%	Emergent	Native	NL
Asian Pennywort, Coinwort, Spadeleaf	Centella asiatica	27%	Emergent	Native	NL
Camphor-tree	Cinnamomum camphora	27%	Emergent	Native	I
Buttonweed	Diodia virginiana	27%	Emergent	Native	NL
Lake Hygrophila, Gulf Swampweed	Hygrophila costata	27%	Emergent	Native	NL
Sweetbay Magnolia	Magnolia virginiana	27%	Emergent	Native	NL
Manatee Mudflower, Baby's Tears	Micranthemum glomeratum	27%	Submersed	Native	NL
Common Buttonbush	Cephalanthus occidentalis	18%	Emergent	Native	NL
Swamp lily	Crinum americanum	18%	Emergent	Native	NL
Fragrant Flatsedge	Cyperus odoratus	18%	Emergent	Native	NL
Loblolly Bay	Gordonia lasianthus	18%	Emergent	Native	NL
Fourpetal St. John's-Wort	Hypericum tetrapetalum	18%	Emergent	Native	NL
Creeping Primrosewillow, Red Ludwigia	Ludwigia repens	18%	Emergent	Native	NL
Wax Myrtle	Myrica cerifera	18%	Emergent	Native	NL
Marsh Fleabane,Camphorweed	Pluchea spp.	18%	Emergent	Native	NL
Popcorn Tree, Chinese Tallow Tree	Sapium sebiferum	18%	Emergent	Exotic	I
Brazilian Pepper	Schinus terebinthifolius	18%	Emergent	Exotic	I
Catbriar, Greenbriar	Smilax spp.	18%	Emergent	Native	NL
Cattails	Typha spp.	18%	Emergent	Native	NL
Para Grass	Urochloa (Brachiaria) mutica	18%	Emergent	Exotic	I
Alligator Weed	Alternanthera philoxeroides	9%	Emergent	Exotic	II
White Beggar-ticks, Romerillo	Bidens alba	9%	Terrestrial	Native	NL
Southern Wood Fern	Dryopteris ludoviciana	9%	Emergent	Native	NL
False Daisy, Yerba De Tajo	Eclipta alba (prostrata)	9%	Emergent	Native	NL
Swamp Rosemallow, Swamp Hibiscus	Hibiscus grandiflorus	9%	Emergent	Native	NL
Hydrilla, waterhyme	Hydrilla verticillata	9%	Submersed	Exotic	I
Punk Tree, Melaleuca	Melaleuca quinquenervia	9%	Emergent	Exotic	I
Spatterdock, Yellow Pondlily	Nuphar lutea var. advena	9%	Floating	Native	NL
Cinnamon Fern	Osmunda cinnamomea	9%	Emergent	Native	NL
Royal Fern	Osmunda regalis	9%	Emergent	Native	NL
Arrowhead	Sagittaria ssp.	9%	Emergent	Native	NL
Elderberry	Sambucus canadensis	9%	Emergent	Native	NL
Bladderwort	Utricularia spp.	9%	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.

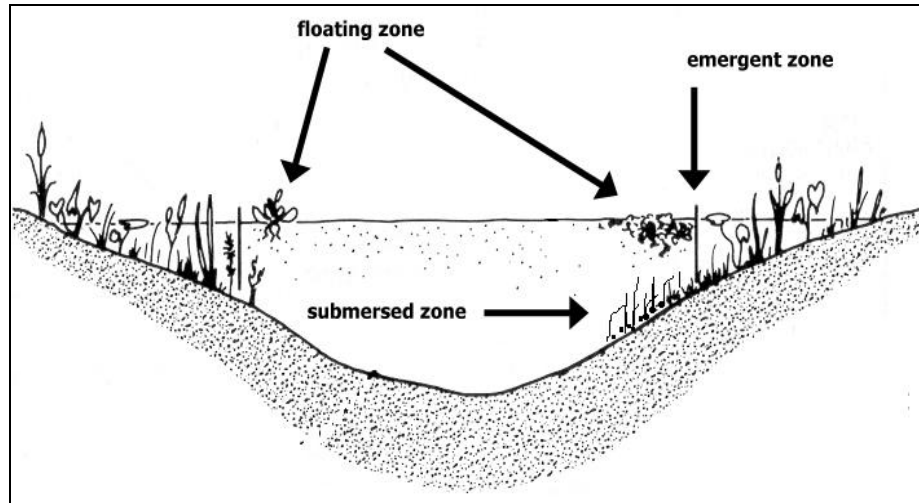


Table 4. Comparison between the average biomass from three zones within your lake and among all lakes assessed within your watershed.

	<u>Saddleback Lake</u>	<u>Rocky/ Brushy Creek</u> (Average)
Emergent Zone:	7.47	4.74
Floating Zone:	0.55	0.69
Submersed Zone:	10.13	1.54

Number of lakes sampled in your watershed: 29

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

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

<u>Zone</u>	<u>Dominant Plant</u>	<u>Status</u>
Emergent Zone:	Torpedo Grass	Exotic
Floating Zone:	Lotus Lily, American Lotus	Native
Submersed Zone:	Southern Waternymph	Native