



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

Lake Gass      8/26/99      Watershed: Curiosity 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>5.4</u>
Maximum Depth (feet):	<u>14.3</u>
Volume (gallons):	<u>42,342,582</u>

# Gass Lake

Section - Township - Range  
25 - 27 - 18

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

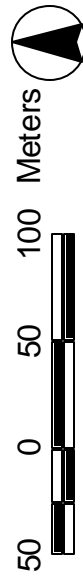
### EXPLANATION:

Survey Date: May 13, 1999

Lake water level was 46.08 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>Lake Gass</u>	<u>Curiosity Creek</u> (Average)
Number of Taxa:	63	42
Percent Exotic Plants:	14%	15%

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>
American White Water Lily, Fragrant Water	<i>Nymphaea odorata</i>	100%	Floating	Native	NL
Bladderwort	<i>Utricularia</i> spp.	100%	Submersed	Native	NL
Stonewort	<i>Nitella</i> spp.	90%	Submersed	Native	NL
Maidencane	<i>Panicum hemitomon</i>	90%	Emergent	Native	NL
Water Primroses, Primrosewillow	<i>Ludwigia</i> spp.	80%	Emergent	Unknown	NL
Torpedo Grass	<i>Panicum repens</i>	80%	Emergent	Exotic	I
Cattails	<i>Typha</i> spp.	80%	Emergent	Native	NL
Lemon Bacopa	<i>Bacopa caroliniana</i>	70%	Submersed	Native	NL
Rush Fuirena	<i>Fuirena</i> spp.	70%	Emergent	Native	NL
Manyflower Marshpennywort, Water Penny	<i>Hydrocotyl umbellata</i>	70%	Emergent	Native	NL
Punk Tree, Melaleuca	<i>Melaleuca quinquenervia</i>	70%	Emergent	Exotic	I
Climbing Hempvine	<i>Mikania scandens</i>	60%	Emergent	Native	NL
Banana Lily, Big Floatingheart	<i>Nymphoides aquatica</i>	60%	Floating	Native	NL
Laurel Oak; Diamond Oak	<i>Quercus laurifolia</i>	60%	Emergent	Native	NL
Filamentous Algae, Algal Mats	Algae, Filamentous	50%	Floating	Native	NL
Common Buttonbush	<i>Cephalanthus occidentalis</i>	50%	Emergent	Native	NL

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Sedge	Cyperus spp.	50%	Emergent	Unknown	NL
Tracy's Beaksedge	Rhynchospora tracyi	50%	Emergent	Native	NL
Asian Pennywort, Coinwort, Spadeleaf	Centella asiatica	40%	Emergent	Native	NL
Fragrant Flatsedge	Cyperus odoratus	40%	Emergent	Native	NL
Wax Myrtle	Myrica cerifera	40%	Emergent	Native	NL
Smartweed, Knotweed	Polygonum spp.	40%	Emergent	Native	NL
Bulltongue Arrowhead, Duck Potato	Sagittaria lancifolia	40%	Emergent	Native	NL
Willow	Salix spp.	40%	Emergent	Native	NL
Yellow-eyed Grass	Xyris spp.	40%	Emergent	Native	NL
Common Bacopa, Herb-Of-Grace	Bacopa monnieri	30%	Submersed	Native	NL
Creeping Primrosewillow, Red Ludwigia	Ludwigia repens	30%	Emergent	Native	NL
Popcorn Tree, Chinese Tallow Tree	Sapium sebiferum	30%	Emergent	Exotic	I
Southern Red Maple	Acer rubrum var. trilobum	20%	Emergent	Native	NL
Pigweed, Water Hemp	Amaranthus australis	20%	Emergent	Native	NL
Swamp Fern	Blechnum serrulatum	20%	Emergent	Native	NL
Camphor-tree	Cinnamomum camphora	20%	Emergent	Native	I
Buttonweed	Diodia virginiana	20%	Emergent	Native	NL
Carolina Redroot	Lachnanthes caroliniana	20%	Emergent	Native	NL
Shade Mudflower, Baby's Tears	Micranthemum umbrosum	20%	Submersed	Native	NL
Spatterdock, Yellow Pondlily	Nuphar lutea var. advena	20%	Floating	Native	NL
Marsh Fleabane, Camphorweed	Pluchea spp.	20%	Emergent	Native	NL
Pickereel Weed	Pontederia cordata	20%	Emergent	Native	NL
Pond Weed	Potamogeton spp.	20%	Submersed	Unknown	NL
Horned Beak Rush	Rhynchospora cornulata	20%	Emergent	Native	NL
Brazilian Pepper	Schinus terebinthifolius	20%	Emergent	Exotic	I
Burhead Sedge, Cuban Scirpus	Scirpus cubensis	20%	Emergent	Native	NL
Creeping Oxeye	Sphagneticola (Wedelia) trilobata	20%	Emergent	Exotic	II
Algal Mats, Floating	Algal spp.	10%	Floating	Unknown	Unknow
Alligator Weed	Alternanthera philoxeroides	10%	Emergent	Exotic	II
White Beggar-ticks, Romerillo	Bidens alba	10%	Terrestrial	Native	NL
Hickory	Carya spp.	10%	Emergent	Native	NL
Wild Taro, Dasheen, Coco Yam	Colocasia esculenta	10%	Emergent	Exotic	I
Pink Sundew	Drosera capillaris	10%	Emergent	Native	NL
False Daisy, Yerba De Tajo	Eclipta alba (prostrata)	10%	Emergent	Native	NL
Baldwin's Spikerush, Roadgrass	Eleocharis baldwinii	10%	Submersed	Native	NL
Hatpins, Pipeworts	Eriocaulon spp.	10%	Emergent	Native	NL
Swamp Rosemallow, Swamp Hibiscus	Hibiscus grandiflorus	10%	Emergent	Native	NL
Hydrilla, waterthyme	Hydrilla verticillata	10%	Submersed	Exotic	I
Fourpetal St. John's-Wort	Hypericum tetrapetalum	10%	Emergent	Native	NL
Bighead Rush	Juncus megacephalus	10%	Emergent	Native	NL
Rush	Juncus spp.	10%	Emergent	Native	NL
Sweetbay Magnolia	Magnolia virginiana	10%	Emergent	Native	NL
Pond Weed	Potamogeton illinoensis	10%	Submersed	Native	NL

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Arrowhead	Sagittaria ssp.	10%	Emergent	Native	NL
Catbriar, Greenbriar	Smilax spp.	10%	Emergent	Native	NL
Poison Ivy	Toxicodendron radicans	10%	Emergent	Native	NL
Caesar's-weed	Urena lobata	10%	Emergent	Exotic	II

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.

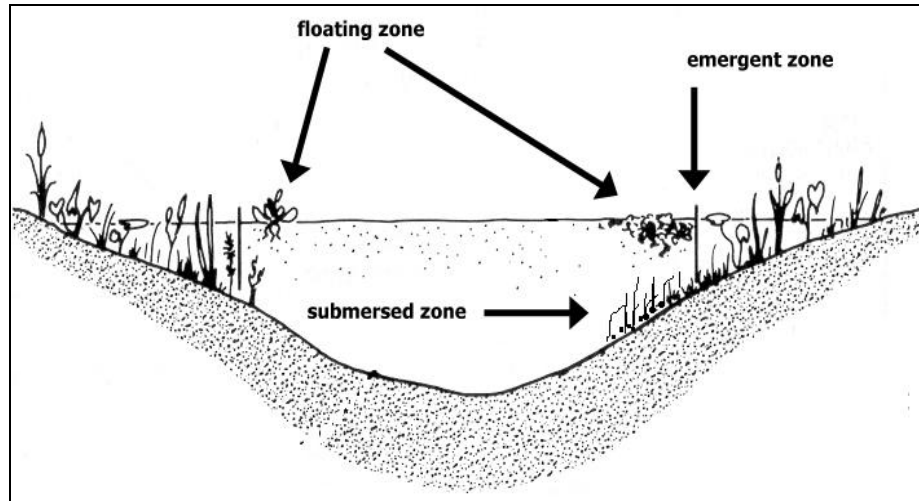


Table 4. Comparison between the average biomass from three zones within your lake and among all lakes assessed within your watershed.

	<u>Lake Gass</u>	<u>Curiosity Creek</u> (Average)
Emergent Zone:	3.83	1.21
Floating Zone:	1.55	0.70
Submersed Zone:	5.68	1.66

Number of lakes sampled in your watershed: 7

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:	Maidencane	Native
Floating Zone:	American White Water Lily, Fragrant	Native
Submersed Zone:	Stonewort	Native