

# LAKE ASSESSMENT REPORT

## MINNIE, LAKE

8 /2 /2001

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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**

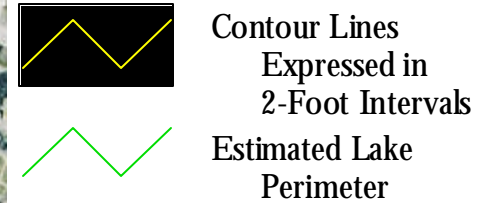
|                       |            |
|-----------------------|------------|
| Surface Area (acres): | 41         |
| Mean Depth (feet):    | 6.2        |
| Maximum Depth (feet): | 15.9       |
| Volume (gallons):     | 83,987,483 |



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

# Lake Minnie

Section - Township - Range  
14-20-30



## EXPLANATION:

Assessment Date: August 2 , 2001.

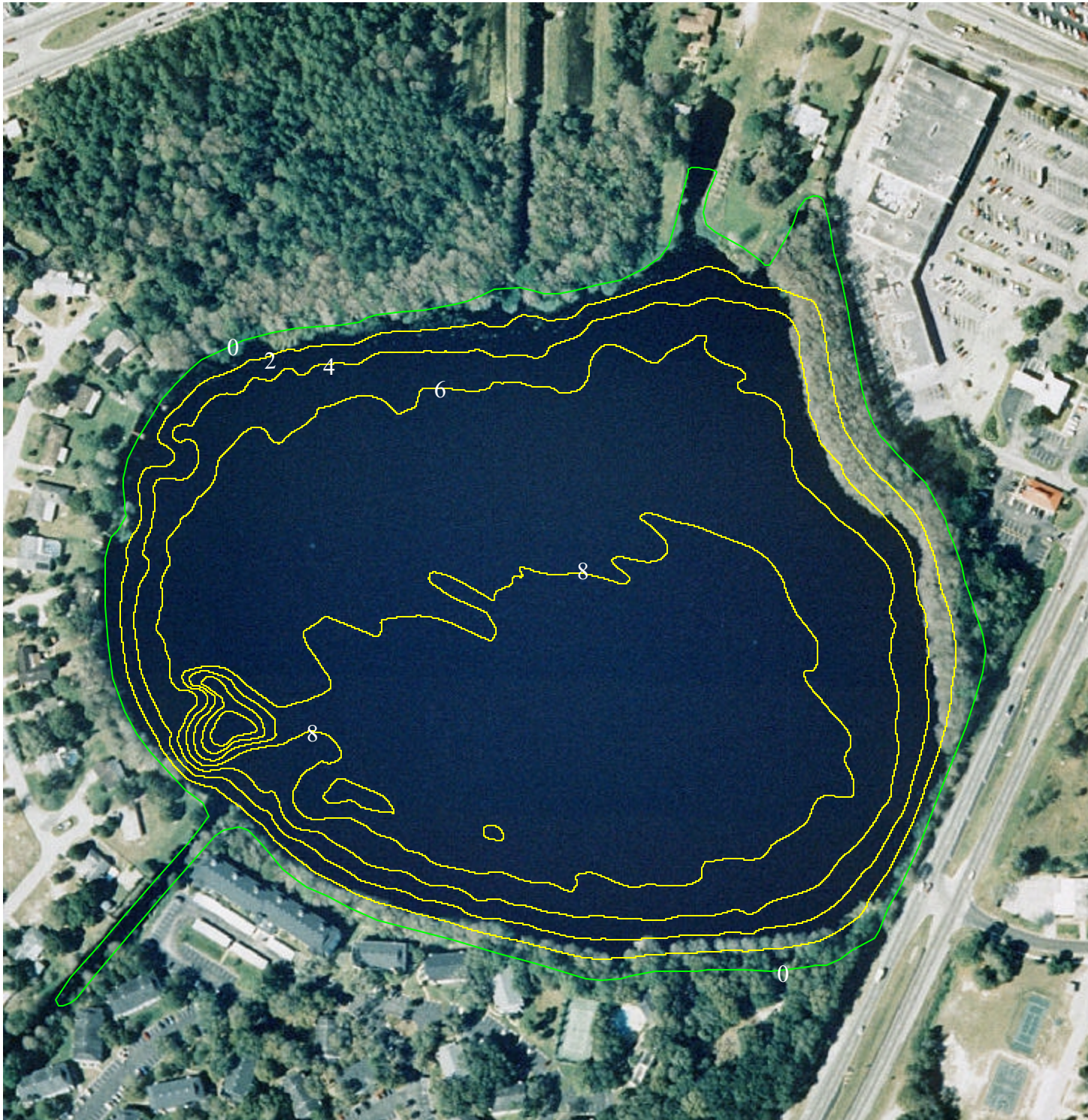
Lake water level was 34.25 ft.  
above sea level when the lake was  
assessed. Contours are expressed in  
absolute depth below this level.

## 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 the Seminole County  
Stormwater Division. Perimeter file was  
generated by extracting the SJRWMD  
1-foot contour line that was closest to  
the lake water level the day of assessment.



0 100 200 300 400 500 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><br>MINNIE, LAKE | <u>Watershed</u><br>Lake Jesup<br>(Average) |
|------------------------|-----------------------------|---|
| Number of Taxa:        | 34                          | 32  |
| Percent Exotic Plants: | 18%                         | 15%   |

**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   |
|--|------------------------------------|-----------|----------|---------|--------|
| Wild Taro                              | <i>Colocasia esculenta</i>         | 100%      | Emergent | Exotic  | I      |
| Peruvian Primrosewillow                | <i>Ludwigia peruviana</i>          | 100%      | Emergent | Exotic  | NL     |
| Spatterdock, Yellow Pondlily           | <i>Nuphar lutea</i>                | 100%      | Floating | Native  | NL     |
| Para Grass                             | <i>Urochloa mutica</i>             | 100%      | Emergent | Exotic  | I      |
| Bald Cypress                           | <i>Taxodium distichum</i>          | 80%       | Emergent | Native  | NL     |
| Water Spangles, Water Fern             | <i>Salvinia minima</i>             | 70%       | Floating | Native  | NL     |
| Southern Red Maple                     | <i>Acer rubrum</i>                 | 50%       | Emergent | Native  | NL     |
| Alligator Weed                         | <i>Alternanthera philoxeroides</i> | 50%       | Emergent | Exotic  | II     |
| Sedge                                  | <i>Carex</i> spp.                  | 50%       | Emergent | Unknown |        |
| Manyflower Marshpennywort, Water Penny | <i>Hydrocotyl umbellata</i>        | 50%       | Emergent | Native  | NL     |
| Climbing Hempvine                      | <i>Mikania scandens</i>            | 50%       | Emergent | Native  | NL     |
| Wax Myrtle                             | <i>Myrica cerifera</i>             | 50%       | Emergent | Native  | NL     |
| Cattails                               | <i>Typha</i> spp.                  | 50%       | Emergent | Native  | NL     |
| Buttonbush                             | <i>Cephalanthus occidentalis</i>   | 30%       | Emergent | Native  | NL     |
| Willow                                 | <i>Salix</i> spp.                  | 30%       | Emergent | Native  | NL     |
| Aster spp., Elliot's Aster             | <i>Aster</i> spp.                  | 20%       | Unknown  | Unknown | Unknow |
| Bog Hemp, False Nettle                 | <i>Boehmeria cylindrica</i>        | 20%       | Emergent | Native  | NL     |
| Dahoon Holly                           | <i>Ilex cassine</i>                | 20%       | Emergent | Native  | NL     |

|  |                         |     |          |         |    |
|--|-------------------------|-----|----------|---------|----|
| Sweetgum                                   | Liquidamber styraciflua | 20% | Emergent | Native  | NL |
| Chinese Tallow Tree                        | Sapium sebiferum        | 20% | Emergent | Exotic  | I  |
| Asian Pennywort, Coinwort                  | Centella asiatica       | 10% | Emergent | Native  | NL |
| Camphor-tree                               | Cinnamomum camphora     | 10% | Emergent | Native  | I  |
| Jamaica Swamp Saw Grass                    | Cladium jamaicense      | 10% | Emergent | Native  | NL |
| Fragrant Flatsedge                         | Cyperus odoratus        | 10% | Emergent | Native  | NL |
| Sedge                                      | Cyperus spp.            | 10% | Emergent | Unknown | NL |
| Rush                                       | Juncus spp.             | 10% | Emergent | Native  | NL |
| Mexican Primrosewillow, Long-stalked Lud   | Ludwigia octovalvis     | 10% | Emergent | Native  | NL |
| Royal Fern                                 | Osmunda regalis         | 10% | Emergent | Native  | NL |
| Maidencane                                 | Panicum hemitomon       | 10% | Emergent | Native  | NL |
| Torpedo Grass                              | Panicum repens          | 10% | Emergent | Exotic  | I  |
| Frog-fruit, Carpetweed, Turkey Tangle Fogf | Phyla nodiflorea        | 10% | Emergent | Native  | NL |
| Marsh Fleabane, Camphorweed                | Pluchea spp.            | 10% | Emergent | Native  | NL |
| Smartweed, Knotweed                        | Polygonum spp.          | 10% | Emergent | Native  | NL |
| Pond Cypress                               | Taxodium acendens       | 10% | Emergent | Native  | NL |