

Lake Bradford Lake Vegetation Index Results

(8-19-2015)

The Lake Vegetation Index (LVI) is a multi-metric index that evaluates how closely a lake’s plant community resembles one that would be expected in a condition of minimal human disturbance. It is based on a rapid field assessment of aquatic and wetland plants as indicators of various effects of human disturbance over time. Plants respond to physical disturbances such as introduction

of exotic species or lakeshore alterations, and chemical disturbance such as introduction of excess nutrients, particulates, or herbicides from the surrounding land uses.

The LVI method is performed from a boat, and involves dividing a lake into 12 units and identifying plants in 4 of the 12 units (Figure 1). Plants are identified in the selected unit by a visual boat “drive by” and also via a transect approach. The resulting data is used to calculate the LVI and is evaluated according to the scoring system in Table 1.

TABLE 1. Category names, ranges of values for LVI, and example descriptions of biological conditions typically found for that category.

<i>Aquatic life use category</i>	<i>LVI Range</i>	<i>Description</i>
Exceptional	78–100	Nearly every plant present is a species native to Florida, invasive taxa typically not found. About 30% of taxa present are identified as sensitive to disturbance.
Healthy	43–77	About 85% of plant taxa are native to Florida; invasive taxa present. Sensitive taxa have declined to about 15%.
Impaired	0–42	About 70% of plant taxa are native to Florida. Invasive taxa may represent up to 1/3 of total taxa. Less than 10% of the taxa are sensitive.

The Lake Vegetation Index score for Lake Bradford was 65, placing the lake’s vegetative community in the healthy category.

Thirty-three plant species were found during the survey. The native species, pond cypress (*Taxodium ascendens*) and maidencane (*Panicum hemitomom*) were the most dominant species followed by the exotic torpedo grass (*Panicum repens*). Other species include red maple (*Acer rubrum*), needleleaf ludwigia (*Ludwigia arcuata*) and coastal plain willow (*Salix caroliniana*).

As mentioned before, torpedo grass (*Panicum repens*) which was considered a co-

dominant during this survey and Chinese tallow (*Sapium sebiferum*), are both listed as Category I Invasive Exotics by the Florida Exotic Pest Control Council <http://www.fleppc.org/> and are a concern in Lake Bradford. Alligator weed (*Alternanthera philoxeroides*), was the only Category II Invasive Exotic found in the lake. Additionally, the exotic water spangles (*Salvinia minima*) was also found in the littoral zone of the lake.

For a complete list of plants found during the LVI survey, please see Table 2.

TABLE 2. Scientific and common names of the plants identified during the Lake Bradford LVI survey (8-19-15). Names in bold are plants nonnative to Florida.

Scientific Name	Common Name
<i>Acer rubrum</i>	red maple
<i>Alternanthera philoxeroides(II)</i>	alligator weed
<i>Boehmeria cylindrica</i>	false nettle
<i>Campsis radicans</i>	trumpet vine
<i>Cephalanthus occidentalis</i>	buttonbush
<i>Cyrilla racemiflora</i>	swamp titi
<i>Diodia virginiana</i>	Virginia buttonweed
<i>Eleocharis baldwinii</i>	road-grass
<i>Eupatorium capillifolium</i>	dogfennel
<i>Hydrocotyle</i> sp.	water pennywort
<i>Hydrolea quadrivalvis</i>	waterpod
<i>Juncus repens</i>	lesser creeping rush
<i>Lemna minor</i>	common duckweed
<i>Leucothoe racemosa</i>	sweetbells
<i>Liquidamber styraciflua</i>	American sweetgum
<i>Ludwigia arcuata</i>	needleleaf ludwigia
<i>Ludwigia leptocarpa</i>	anglestem primrose willow
<i>Lycopus rubellus</i>	taperleaf water horehound
<i>Nymphaea odorata</i>	fragrant waterlily
<i>Nyssa sylvatica</i> var. <i>biflora</i>	swamp tupelo
<i>Panicum hemitomon</i>	maidencane
<i>Panicum repens(I)</i>	torpedo grass
<i>Polygonum punctatum</i>	dotted smartweed
<i>Pontederia cordata</i>	pickerelweed
<i>Rhexia mariana</i>	maryland meadowbeauty
<i>Sabal palmetto</i>	cabbage palm
<i>Salix carolina</i>	coastal plain willow
<i>Salvinia minima</i>	water spangles
<i>Sapium sebiferum(I)</i>	Chinese tallow tree
<i>Smilax auriculata</i>	earleaf greenbriar
<i>Taxodium ascendens</i>	pond cypress
<i>Toxicodendron radicans</i>	eastern poison ivy
<i>Triadenum virginicum</i>	marsh st. johnswort

I - Category I Invasive Exotics

II - Category II Invasive Exotics

For additional information about the LVI, please go to the Florida Department of Environmental Protection webpage http://www.dep.state.fl.us/water/sas/training/docs/lvi_primer.pdf. For additional infor-

mation about exotic Category I and II invasive exotic plants, please go to the Florida Exotic Pest Plant Council <http://www.fleppc.org/list/list.htm>.

FIGURE 1. Lake Bradford showing unit divisions. Circled unit numbers denote surveyed units.

