

Lake Cascade Lake Vegetation Index Results (9-14-2015)

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 Cascade was 89, placing the lake's vegetative community in the exceptional category.

Thirty-nine plant species were found during the survey. The native species pond cypress (*Taxodium ascendens*) was the most dominant species of the lake. Other native shoreline vegetation included: red maple (*Acer rubrum*), buttonbush (*Cephalanthus occi-*

dentalis) and swamp tupelo (*Nyssa sylvatica var. biflora*).

Unfortunately, torpedo grass (*Panicum repens*) and Chinese tallow tree (*Sapium sebiferum*), both listed as a Category I Invasive Exotic by the Florida Exotic Pest Control Council <http://www.fleppc.org/>, were found at Lake Cascade.

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 Carr LVI survey (9-14-15).

Scientific Name	Common Name
<i>Acer rubrum</i>	red maple
<i>Andropogon virginicus</i>	broomsedge bluestem
<i>Bidens mitis</i>	smallfruit beggartick
<i>Boehmeria cylindrica</i>	false nettle
<i>Brasenia schreberi</i>	watershield
<i>Carex crus-corvi</i>	ravenfoot sedge
<i>Cephalanthus occidentalis</i>	buttonbush
<i>Cyrilla racemiflora</i>	swamp titi
<i>Eleocharis</i> sp.	eleocharis
<i>Eupatorium capillifolium</i>	dogfennel
<i>Hydrocotyle</i> sp.	water pennywort
<i>Ilex myrtifolia</i>	myrtle dahoon
<i>Leersia hexandra</i>	southern cutgrass
<i>Leucothoe racemosa</i>	sweetbells
<i>Liquidamber styraciflua</i>	American sweetgum
<i>Litsea aestivalis</i>	pond spice
<i>Ludwigia arcuata</i>	needleleaf ludwigia
<i>Ludwigia leptocarpa</i>	anglestem primrose willow
<i>Luziola fluitans</i>	southern watergrass
<i>Lycopus rubellus</i>	taperleaf water horehound
<i>Nymphaea odorata</i>	fragrant waterlily
<i>Nyssa sylvatica</i> var. <i>biflora</i>	swamp tupelo
<i>Oldenlandia uniflora</i>	clustered mille grains
<i>Panicum hemitomon</i>	maidencane
<i>Panicum repens</i>(I)	torpedo grass
<i>Paspalum repens</i>	water paspalum
<i>Phytolacca americana</i>	American pokeweed
<i>Pinus taeda</i>	loblolly pine
<i>Quercus nigra</i>	water oak
<i>Rhexia mariana</i>	maryland meadowbeauty
<i>Saccharum giganteum</i>	sugarcane plumegrass
<i>Sagittaria filiformis</i>	threadleaf arrowhead
<i>Sapium sebiferum</i>(I)	Chinese tallow tree
<i>Smilax auriculata</i>	earleaf greenbriar
<i>Smilax laurifolia</i>	laurelleaf greenbriar
<i>Sphagnum</i> sp.	sphagnum moss
<i>Taxodium ascendens</i>	pond cypress
<i>Triadenum virginicum</i>	marsh st. johnswort
<i>Woodwardia areolata</i>	netted chain fern

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

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

