



*Florida Department of
Environmental Protection*

Lake Vegetation Index: Ocklawaha Basin

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Lake Vegetation Index: summary

- LVI – definition and rule criteria
- The method
- LVI results for lakes within Ocklawaha basin





Lake Vegetation Index: definitions

- Lake Vegetation Index (LVI) shall mean a Biological Health Assessment that measures lake biological health in predominantly freshwaters using aquatic and wetland plants, performed and calculated using the Standard Operating Procedures for the LVI in the document titled *LVI 1000: Lake Vegetation Index Methods* (DEP-SOP-003/11 LVI 1000) and the methodology in *Sampling and Use of the Lake Vegetation Index (LVI) for Assessing Lake Plant Communities in Florida: A Primer* (DEP-SAS-002/11), which are incorporated by reference. (62-302.200(17))
- Lake Vegetation Index (LVI) assesses how closely the plant community of a lake resembles a native undisturbed community.



Lake Vegetation Index: rule criteria

- 62-302.800(3) Site Specific Alternative Criteria;
 - ii. At least two temporally independent LVIs, with an average score of 43 or above.
- 62-303.330 Identification of Impaired Surface Waters; Part II, Planning List;
 - One of the two most recent LVI scores is <43; or
 - The historic maximum value of LVI is above 78 and a 20 point reduction occurred.
- 62-303.430 Part IV, The Verified List; the lake shall be determined to be biologically impaired if:
 - The average of the two most recent LVI scores is <43; or
 - The historic maximum value of LVI is above 78 and the average of the two most recent independent scores is 20 or more points below.





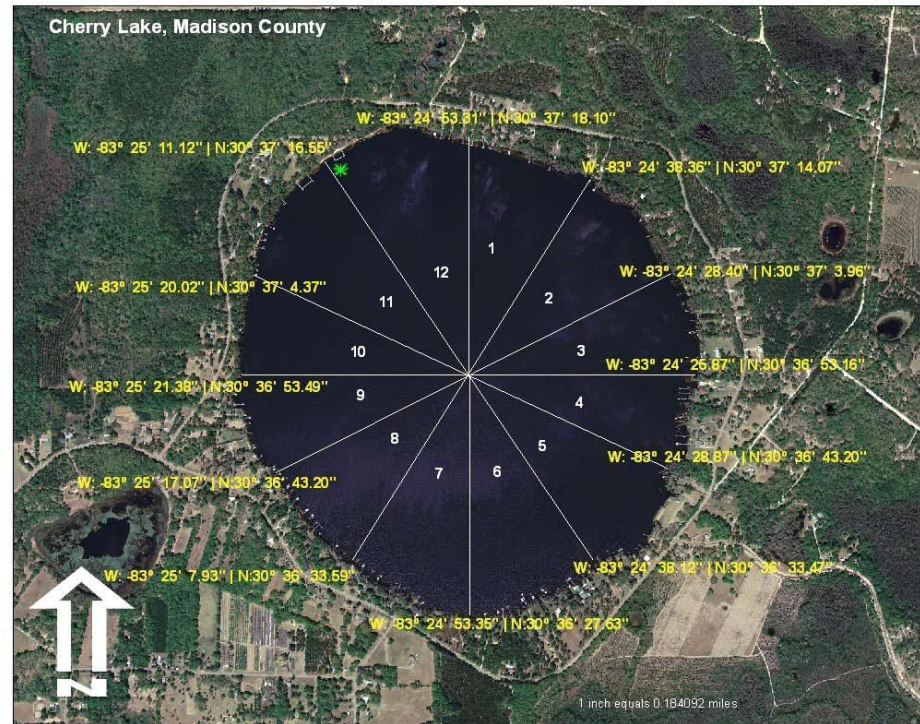
Lake Vegetation Index: metrics

- Four metrics comprise the index:
 - %native taxa
 - %invasive exotics taxa listed as Category 1 by Florida Exotic Pest Plant Council (FLEPPC)
 - Coefficient of conservatism (C of C) of the dominant taxon or co-dominant taxa
 - % sensitive taxa ($C\ of\ C \geq 7$)



Lake Vegetation Index: method

- Sampling index period
 - April 1 to November 30 - South region
 - May 1 to October 31 – North region
- The lake is divided into 12 sections with approximately equal length of shoreline.
 - Four sections are sampled
 - 1,4,7,10 or
 - 2,5,8,11 or
 - 3,6,9,12





Lake Vegetation Index: results

Upper Ocklawaha Lake Vegetation Index (LVI) Data					
	2010	2011	2012	2013	2014
Apopka	41	36		43	
Beauclair	39	39	46	54	
Carlton	43	26	41	52	
Dora	48		48		
Eustis	46	34	48		
Griffin	56	54	45	60	63
Harris	60	48	55	59	56
Little Lake Harris	59				
Louisa		65			
Minnehaha	47/41			59	
Trout	27	27	33	16	
Umatilla	40	41			





Lake Vegetation Index: results

2014 LVI Data			
Lake	LVI score	Dominant/co-dominant	Invasive
Wauburg	67	Panicum hemitomon, Paspalidium geminatum, Cephalanthus occidentalis	Pistia stratioides (in just one section)
Orange	42	Limnobium spongia, Panicum hemitomon, Polygonum glabrum	Alternanthera philoxeroides, Colocasia esculenta, Hydrilla verticillata, Panicum repens, Salvinia minima
Newnans	57	Polygonum glabrum, Taxodium sp.	Alternanthera philoxeroides, Landoltia punctata, Pistia stratioides,
Lochloosa	41	Nelumbo lutea, Nuphar sp., Polygonum glabrum, Hydrilla verticillata	Hydrilla verticillata, Alternanthera philoxeroides, Colocasia esculenta, Pistia stratioides



Questions?

