



Lake Vegetation Index (LVI) Calculator

Version 1.0

Curtis Musson
Division of Environment Assessment
and Restoration
June 20, 2022

DEP-SOP-003/11, LVI 1000. Lake Vegetation Index Determination. Effective date 4/16/2018

DEP-SAS-002/11, Sampling and Use of the Lake Vegetation Index (LVI) for Assessing Lake Plant Communities in Florida: A Primer. 10/24/2011

[illegible]



Lake Habitat Assessment Field Sheet

FD 9000-6

DEP Form FD 9000-6: Lake Habitat Assessment Field Sheet																			
STORET STATION NUMBER:		DATE (M/D/Y)		LAKE NAME										FIELD ID / NAME:					
ECO-REGION:		COUNTY:		SAMPLING LOCATION/DESCRIPTION:										LAKE SIZE:					
PARAMETER		No surface inflow or outflow present, very long water residence time, groundwater seepage dominates		Surface water inflow present, but flow is rare, moderate to long water residence time					Surface water inflow and outflow present (or outflow only), sometimes with visible flow, short water residence time					Impounded, hydrology of system artificially controlled					
HYDROLOGY		☐		☐					☐					☐					
Color		Very clear, uncolored water (benthic sampling appropriate) ☐		Water somewhat tannin stained (benthic sampling appropriate) ☐					Dark, discolored water (water color 20 PCU or higher) ☐					Visibility extremely reduced due to high color ☐					
		Optimal		Suboptimal					Marginal					Poor					
Secchi ☐		Secchi >3 m		3	2.6	2.2	1.8	1.4	1.0	0.9	0.8	0.7	0.6	0.5	0.4	0.3	0.2	0.1	
		Or VOB		20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	
Vegetation Quality ☐		Diverse, expected native vegetation (emergent or submersed), less than 5% nuisance taxa		Mostly expected native plants, but moderate growths (6%-20% of lake) of nuisance macrophytes, or more than 50% of lake covered with plants					Large masses (21%-40%) of nuisance macrophytes (e.g., Hydrilla, hyacinth, cattail, etc.) or algal mats					Lake choked (>40%) with nuisance macrophytes (duckweed, hyacinth, etc.) or algal mats, or few plants present at all (e.g., plants removed)					
		20		19	18	17	16	15	14	13	12	11	10	9	8	7	6		
Stormwater Inputs ☐		Stormwater enters system via sheet flow over non-cultivated and/or natural vegetation		Some direct stormwater inputs (ditches, pipes, cultivated vegetation < 10%) but good BMPs in place					Moderate direct inputs of stormwater (ditches, pipes, cultivated vegetation 11%-50%) but few BMPs in place					Much direct input of stormwater (ditches, pipes, cultivated vegetation > 51%) and no or ineffective BMPs in place					
		20		19	18	17	16	15	14	13	12	11	10	9	8	7	6		
Bottom Substrate Quality ☐		Diverse mixture of sand, detritus, with small amounts of CPOM/mud/muck. SAV may be present		Mixture of sand or clay and detritus with higher % CPOM/mud/muck content. SAV may be present					Moderate layer of CPOM/mud/muck, or hardpacked sand only, or moderate algal growth (mats or Chara) on bottom					Thick deposits of CPOM, or fine detritus and anaerobic muck/mud/silt, or algal growth or nuisance plants (Hydrilla) cover bottom					
		20		19	18	17	16	15	14	13	12	11	10	9	8	7	6		
Lakeside Adverse Human Alterations ☐		Very few man-made structures, roads, or other disturbance adjacent to lake (<10%)		Moderate disturbance visible (structures, roads or other), 10%-49% lakeside affected					Many structures, roads or other human disturbance visible (50%-70%) lakeside affected					Highly developed or disturbed (>70% of lakeside affected)					
		20		19	18	17	16	15	14	13	12	11	10	9	8	7	6		
Upland Buffer Zone ☐		Expected native vegetation between uplands and littoral zone, greater than 90% of shore with >18 m buffer		89%-51% of shoreline with >18m buffer or >75% with 10m to 18m buffer					50%-30% of shoreline with >18m buffer or 50%-74% with 10m to 18m buffer					< 29% of shoreline with >18m buffer					
		20		19	18	17	16	15	14	13	12	11	10	9	8	7	6		
Adverse Watershed Land Use ☐		Score the potential effects from adverse human land uses, based on a continuum of amount and type, with least to most adverse as follows: Native vegetation, Silviculture, Pasture or Citrus, Low Density Residential, Row Crops, Commercial, High Density Residential, Urban, Industrial																	
		20		19	18	17	16	15	14	13	12	11	10	9	8	7	6		
TOTAL SCORE		COMMENTS:																	
ANALYSIS DATE:		ANALYST:										SIGNATURE:							



Lake Observation Field Sheet

FD 9000-31

DEP FORM FD 9000-31: LAKE OBSERVATION FIELD SHEET													
SAMPLE ID: _____		MACROPHYTE ID: _____		LATITUDE: _____									
COUNTY: _____		STORET #: _____		LONGITUDE: _____									
DATE: _____		TIME: _____		SAMPLING AGENCY: _____									
SITE NAME: _____		WBID: _____		LAKE SIZE: _____ RQ: _____									
FIELD ID/NAME: _____													
WATERSHED / LAKESIDE FEATURES													
PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category – from GIS) :										LANDSCAPE DEVELOPMENT INTENSITY (100 m buffer)			
Forest/Natural _____ Silviculture _____ Field/Pasture _____ Agricultural _____ Residential _____ Commercial _____ Industrial _____ Other (Specify) _____										LDI: _____			
Local Watershed Erosion (select one) : ☐ None ☐ Slight ☐ Moderate ☐ Heavy										Artificially Impounded ☐ Yes ☐ No			
Local Watershed NPS Pollution : ☐ No evidence ☐ Slight ☐ Moderate ☐ Heavy										Land Use Source & Year: _____			
STORMWATER INPUTS		Stormwater enters system via sheet flow over non-cultivated and/or natural vegetation			Some direct stormwater inputs (ditches, pipes, cultivated vegetation < 10%) but good BMPs in place			Moderate direct inputs of stormwater (ditches, pipes, cultivated vegetation 11%-50%) but few BMPs in place			Much direct input of stormwater (ditches, pipes, cultivated vegetation > 51%) and no or ineffective BMPs in place		
		20 19 18 17 16			15 14 13 12 11			10 9 8 7 6			5 4 3 2 1		
LAKESIDE ALTERATIONS		Very few man-made structures, roads, or other disturbance adjacent to lake (<10% lakeside affected)			Moderate disturbance visible - structures, roads or other (10%-49% lakeside affected)			Many structures, roads or other human disturbance visible (50%-70% lakeside affected)			Highly developed or disturbed (>70% of lakeside affected)		
		20 19 18 17 16			15 14 13 12 11			10 9 8 7 6			5 4 3 2 1		
BUFFER ZONE		Expected native vegetation between uplands and littoral zone, greater than 90% of shore with >18 m buffer			89%-51% of shoreline with >18m buffer or >75% with 10m to 18m buffer			50%-30% of shoreline with >18m buffer or 50%-74% with 10m to 18m buffer			< 29% of shoreline with >18m buffer		
		20 19 18 17 16			15 14 13 12 11			10 9 8 7 6			5 4 3 2 1		
WATER / SUBSTRATE / BIOLOGICAL: SAMPLES AND OBSERVATIONS													
Water:						Water Odors: ☐ Normal							
Nutrient Sample Taken? ☐ Yes ☐ No Preserved? ☐ Yes ☐ No pH<2 ☐ No						☐ Sewage ☐ Petroleum ☐ Other _____							
Color Sample Taken? ☐ Yes ☐ No Lot # _____ Exp. Date: _____						Water Surface Oils: ☐ None							
Alkalinity Sample Taken? ☐ Yes ☐ No						☐ Sheen/Slick ☐ Glob ☐ Other _____							
Water Level ☐ Low ☐ Normal ☐ High													
Meter		Depth (M)	Temp. (°C)	pH (SU)	D.O. Sat. (MG/L)	Cond. (UMHO/CM)	Salinity (PPT)	Clarity: ☐ Clear		Color: ☐ Clear			
Readings:								☐ Opaque ☐ Turbid		☐ Tannic ☐ Green			
Top:								☐ Slightly Turbid					
Mid-Depth:													
Bottom:													
Meter ID: _____													
Sediment Type: (may check more than one)						Sample Taken? ☐ Yes ☐ No			Sediment Odors: ☐ Normal ☐ Other (Specify): _____				
☐ Sandy ☐ Organic fibrous (peaty, CPOM) ☐ Vegetated									☐ Anaerobic				
☐ Sand/Silt ☐ Organic smooth (muck) ☐ Other (Specify): _____													
Biological Communities:						Abundance: Absent Rare Common Abundant			Additional Notes:				
LVI Conducted? ☐ Yes ☐ No						Periphyton ☐ ☐ ☐ ☐							
Phytoplankton Sample Taken? ☐ Yes ☐ No						Nuisance Plants ☐ ☐ ☐ ☐							
Sample Preserved? ☐ Yes ☐ No						Submersed Plants ☐ ☐ ☐ ☐							
Lot #: _____ Exp Date: _____						Exotic Apple Snails ☐ ☐ ☐ ☐							
Algal Bloom/Algal ID Sample Taken? Yes No													
Active Vegetation Mgmt? ☐ Yes ☐ No ☐ Don't Know													
Weather Conditions :													
SAMPLING TEAM: _____						SIGNATURE: _____			DATE: _____				

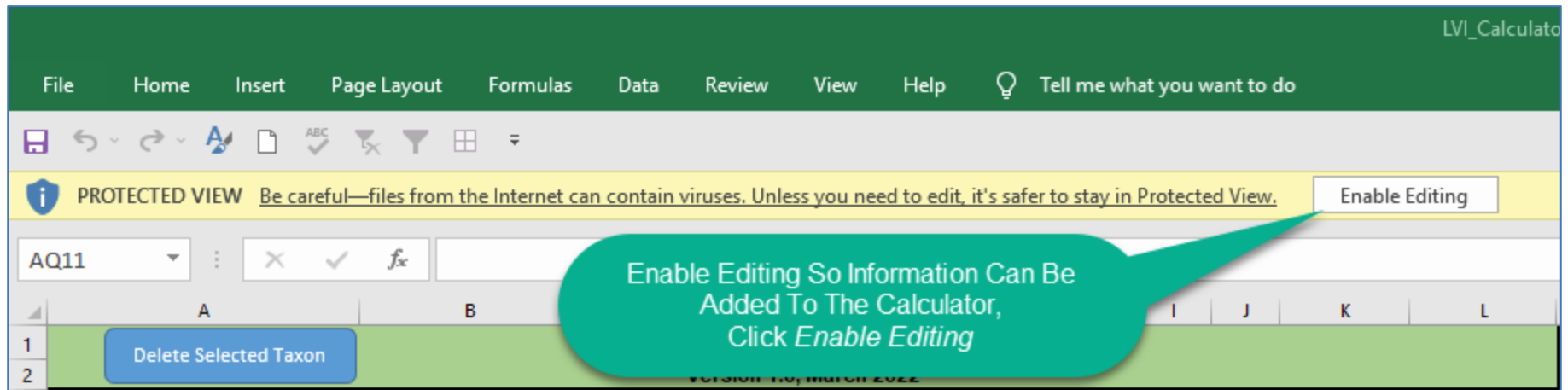


Open The Calculator



Security Warning

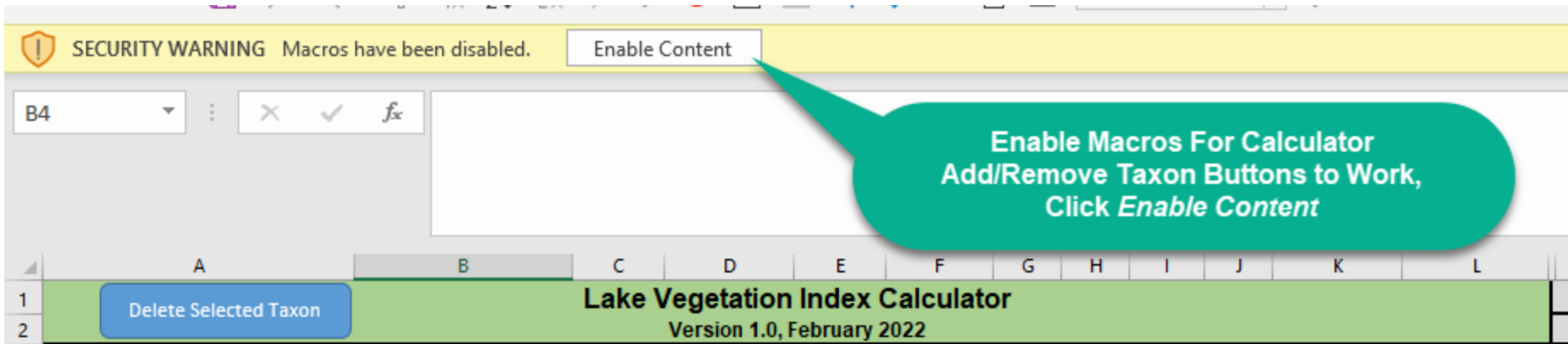
Enable Editing





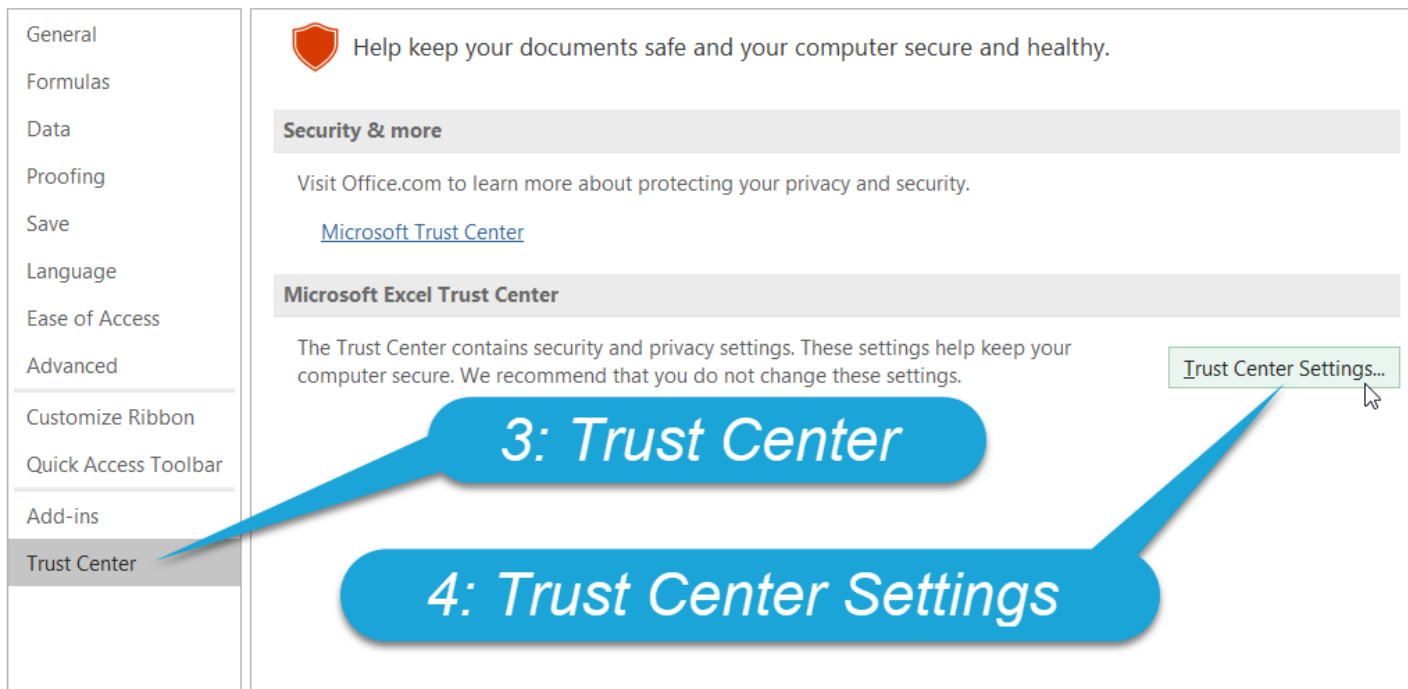
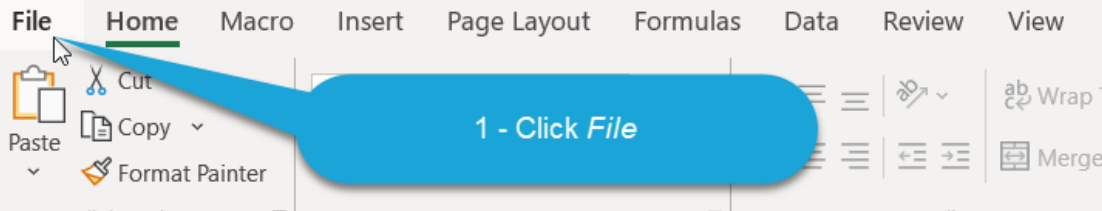
Security Warning

Enable Macros





Adjusting Macro Setting



Home

New

Open

Info

Save

Save As

Save as Adobe PDF

Print

Share

Export

Publish

Close

2: Options

Account

Feedback

Options



Adjusting Macro Setting Cont.

Trust Center

Trusted Publishers
Trusted Locations
Trusted Documents
Trusted Add-in Catalogs
Add-ins
ActiveX Settings
Macro Settings
Protected View
Message Bar
External Content
File Block Settings
Privacy Options

Macro Settings

- ☐ Disable all macros without notification
- ☒ Disable all macros with notification
- ☐ Disable all macros except digitally signed macros
- ☐ Enable all macros (not recommended; potentially dangerous code can run)

Developer Macro Settings

- ☒ Trust access to the VBA project object model

Click Macro Settings
Then choose the "Disable all macros with notification" radio button and check "Trust access to VBA project object model"



Introduction to the Calculator Worksheets



Site Info, Worksheet 1

Sampling Entity	
WIN Organization ID	
Sampler 1 Name	
Sampler 2 Name	
List All Samplers Proficient in the LVI Method	
Sample Date	
Lake Name	
WIN Sampling Location Description	
WIN Station ID	
Field ID	
Latitude (Decimal Degrees)	
Longitude (Decimal Degrees)	
Lake Size (area)	
Lake Size (units)	
Level III Eco Region Name	-
Level IV Eco Region Number	-
Level IV Eco Region Name	-

[Link to USEPA Eco Region Map](#)

The values entered in this worksheet will be used to populate the same values in the LVI Calculator and the Lake Habitat Assessment worksheets.



LVI Calculator, Worksheet 2

Lake Vegetation Index Calculator Version 1.0, March 2022												
Delete Selected Taxon												
Waterbody:											Sample Date:	
WIN/STORET ID:											Analyst:	
County (Dropdown):	Required			Latitude:							Longitude:	
LVI Region: (County and Latitude Required to Calculate the Region)	-	Lake Sections: (Dropdown)		Required		Use "P" to denote taxa <u>P</u> resent, Use "D" to denote <u>D</u> ominate taxa, Use "C" to denote <u>C</u> o-dominant taxa.						
Taxon	Synonym(s)	CofC Score	FLEPPC Status	Wetland Status	Nativity	-	-	-	-	Occurrence	Occurrence of LVI Taxo	Quality Check (QC) Performed By
<i>Acer rubrum</i>	-	4.65	-	FACW	Native	-	-	-	-	0	0	
<i>Alternanthera philoxeroides</i>	-	0	Category 2	OBL	Exotic	-	-	-	-	0	0	
<i>Andropogon</i>	-	-	-	-	Native	-	p	p	-	2	2	
<i>Azolla caroliniana</i>	-	1.81	-	OBL	Native	p	p	-	p	3	3	
<i>Bacopa caroliniana</i>	-	4.50	-	OBL	Native	p	p	-	-	2	2	
<i>Bacopa monnieri</i>	-	3.50	-	OBL	Native	p	p	p	p	4	4	
<i>Bidens alba</i>	-	1.00	-	FAC	Native	p	p	-	p	3	3	
<i>Bidens laevis</i>	-	5.50	-	OBL	Native	p	p	p	-	3	3	
<i>Bidens mitis</i>	-	4.50	-	OBL	Native	d	d	d	d	4	4	
<i>Blechnum serrulatum</i>	-	5.50	-	FACW	Native	-	-	-	-	0	0	

The user will enter taxon observations from the LVI Field Sheet FD 9000-27 into this worksheet. The LVI metrics for each section and the final LVI score are automatically calculated.



LVI Taxa, Worksheet 3

Add Taxon		To Add Taxons to Calculator: Select taxon under column A on THIS Sheet, Then click Add Taxon Button			
Taxon	Synonym(s)	CofC Score	FLEPPC Status	Wetland Status	Nativity
<i>Abildgaardia</i>	-	-	-	-	-
<i>Abildgaardia ovata</i>	-	-	-	FACW	Native
<i>Acer</i>	-	-	-	-	Native
<i>Acer barbatum</i>	-	7.7	-	-	Native
<i>Acer rubrum</i>	-	4.65	-	FACW	Native
<i>Acer saccharinum</i>	-	6.89	-	OBL	Native
<i>Acmella</i>	-	-	-	-	-
<i>Acmella oppositifolia</i>	<i>Spilanthes americana</i>	2.83	-	FACW	Native
<i>Acrostichum</i>	-	-	-	-	-
<i>Acrostichum danaeifolium</i>	-	5.79	-	OBL	Native
<i>Aeschynomene</i>	-	-	-	-	-
<i>Aeschynomene americana</i>	-	2.47	-	-	Native
<i>Aeschynomene fluitans</i>	-	-	-	OBL	Exotic
<i>Aeschynomene indica</i>	-	.49	-	FACW	Exotic

Taxa not on the LVI Calculator worksheet can be added from this list.

This is the same taxa list as the taxa table in the Departments Statewide Biological Database (SBIO2).



Lake Habitat Assessment Worksheet 4

Lake Habitat Assessment																					
WIN Station ID:	Date					Lake Name										Field ID					
-	-					-										-					
Eco-Region:	County:	Brevard				Sampling Location/Description:					-					Lake Size:					
Hydrology	No surface inflow or outflow present, very long water residence time, groundwater seepage dominates ☐					Surface water inflow present, but flow is rare, moderate to long water residence time ☐					Surface water inflow and outflow present (or outflow only), sometimes with visible flow, short water residence time ☐					Impounded, hydrology of system artificially controlled ☐					
Color	Very clear, uncolored water (benthic sampling appropriate) ☐					Water somewhat tannin stained (benthic sampling appropriate) ☐					Dark, discolored water (water color 20 PCU or higher) ☐					Visibility extremely reduced due to high color ☐					
	Optimal					Suboptimal					Marginal					Poor					
Secchi	Secchi >3 m Secchi(m)					3	2.6	2.2	1.8	1.4	1	0.9	0.8	0.7	0.6	0.5	0.4	0.3	0.2	0.1	
	Or VOB	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
Vegetation Quality	Diverse, expected native vegetation (emergent or submersed), less than 5% nuisance taxa					Mostly expected native plants, but moderate growths (6%-20% of lake) of nuisance macrophytes, or more than 50% of lake covered with plants					Large masses (21%-40%) of nuisance macrophytes (e.g., Hydrilla, hyacinth, cattail, etc.) or algal mats					Lake choked (>40%) with nuisance macrophytes (duck-weed, hyacinth, etc.) or algal mats, or few plants present at all (e.g., plants removed)					
Stormwater Inputs	Stormwater enters system via sheet flow over non-cultivated and/or natural vegetation					Some direct stormwater inputs (ditches, pipes, cultivated vegetation < 10%) but good BMPs in place					Moderate direct inputs of stormwater (ditches, pipes, cultivated vegetation 11%-50%) but few BMPs in place					Much direct input of stormwater (ditches, pipes, cultivated vegetation > 51%) and no or ineffective BMPs in place					
	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	



Lake Observation Worksheet 5

Lake Observations From DEP Form FD 9000-31: Lake Observation Field Sheet																					
COUNTY: _____ - _____					WIN STATION ID: _____ - _____					LATITUDE: _____ - _____											
DATE: _____ - _____					TIME:					LONGITUDE: _____ - _____											
SITE NAME: _____										LAKE SIZE: _____											
SAMPLING AGENCY: _____										FIELD ID: _____ - _____											
WATERSHED / LAKESIDE FEATURES										Other Land-Use:											
PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category – from GIS) :															LANDSCAPE DEVELOPMENT INTENSITY (100 m buffer) LDI:						
Forest/Natural		Silviculture		Field/Pasture		Agricultural		Residential		Commercial		Industrial		Other (Specify Above)							
																Land Use Source & Year:					
Local Watershed Erosion (select one) : ☐ None ☐ Slight ☐ Moderate ☐ Heavy										Artificially Impounded ☐ Yes ☐ No											
Local Watershed NPS Pollution : ☐ No evidence ☐ Slight ☐ Moderate ☐ Heavy																					
STORMWATER INPUTS 		Stormwater enters system via sheet flow over non-cultivated and/or natural vegetation					Some direct stormwater inputs (ditches, pipes, cultivated vegetation < 10%) but good BMPs in place					Moderate direct inputs of stormwater (ditches, pipes, cultivated vegetation 11%-50%) but few BMPs in place					Much direct input of stormwater (ditches, pipes, cultivated vegetation > 51%) and no or ineffective BMPs in place				
		20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
LAKESIDE ALTERATIONS 		Very few man-made structures, roads, or other disturbance adjacent to lake (<10% lakeside affected)					Moderate disturbance visible - structures, roads or other (10%-49% lakeside affected)					Many structures, roads or other human disturbance visible (50%-70% lakeside affected)					Highly developed or disturbed (>70% of lakeside affected)				
		20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
BUFFER ZONE 		Expected native vegetation between uplands and littoral zone, greater than 90% of shore with >18 m buffer					89%-51% of shoreline with >18m buffer or >75% with 10m to 18m buffer					50%-30% of shoreline with >18m buffer or 50%-74% with 10m to 18m buffer					< 29% of shoreline with >18m buffer				
		20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
WATER / SUBSTRATE / BIOLOGICAL: SAMPLES AND OBSERVATIONS																					



Dominant Taxa Photos

Worksheet 6

Section	Dominant/Co-dominant Taxa	Co-dominant Taxa
2	#N/A	NA
5	#N/A	NA

FDEP SOP LVI 1100 3.2.8 3.2.8 Take photos of dominant and co-dominant taxa which are easily identified and frequently encountered (e.g. *Taxodium* spp., *Nymphaea odorata*) and verify the ID; specimens of codominant or dominant taxa only need to be collected when they are unknown in the field.



External Bio Format, Worksheet 7

WIN ORGANIZATION ID	WIN STATION NUMBER	STATION NAME	STATION DESCRIPTION	PRIMARY TYPE	WATERBODY NAME	LATITUDE E	LONGITUDE E	SAMPLE DATE	METRIC	RESULT	FIELD COMMENT	COLLECTOR	METRIC PROFICIENCY	SAMPLING ENTITY	LAB NAME
0	0	0	0	Lake	0	0	0	1/0/1900	Habitat Assessment Score	75		0	N	0	na
0	0	0	0	Lake	0	0	0	1/0/1900	LVI_2012_Avg	lect. Count	0	0	na	0	na

↑ Values above are referencing values in the other worksheets.

These cells are auto populate so they do not need to be filled out manually.

Submitting Bioassessment Data

Data providers who would like to submit LVI data to help support the Department's Impaired Waters assessment can copy the auto calculated values in this worksheet into the Watershed Assessment Sections Bioassessment Data Template.

The department is requesting external data providers who would like to submit applicable bioassessment data to help support the department's Impaired Waters assessment. Please download and complete the **Bioassessment Data Template**, available as a Microsoft Excel worksheet (.xlsx). Once the template has been completed with the required information, please submit the worksheet and any supporting documentation (field sheets, photos, etc.) by email to **Kevin O'Donnell**.

Entities submitting data to DEP must meet the applicable bioassessment proficiency demonstrations set forth on the **Bioassessment Training, Evaluation and Quality Assurance Web Page**, follow the department's Quality Assurance requirements for field activities as codified in Chapter 62-160, Florida Administrative Code (F.A.C.), and the incorporated DEP Standard Operating Procedures. For external bioassessment data to be considered as part of the assessment, data providers must be in the applicable Active status for LVI, BioRecon, SCI and/or Habitat Assessment certification at the time of sample collection. While the online RPS and LVS tests are not required, because there are currently no certifications for these methods, taking the online tests are highly recommended to show proficiency.

Bioassessment Data Template

http://publicfiles.dep.state.fl.us/DEAR/DEARweb/WAS/Bio_Data_Template.xlsx

Kevin O'Donnell

Kevin.O'Donnell@dep.state.fl.us

Bioassessment Training, Evaluation and Quality Assurance Web Page:

<https://floridadep.gov/dear/bioassessment/content/bioassessment-training-evaluation-and-quality-assurance>

Data providers who would like to submit LVI data to help support the Department's Impaired Waters assessment can copy the auto calculated values in this worksheet into the Watershed Assessment Sections Bioassessment Data Template.



Using the Calculator



Adding Information To The Calculator

Note: Cells With **Blue** Fill
Color Are Editable.



Site Info Worksheet

Organization and Personnel

Sampling Entity	Jefferson County Stormwater Division
WIN Organization ID	21FLJEFF
Sampler 1 Name	Curtis Smith
Sampler 2 Name	Judy Brown
List All Samples Proficient in the LVI Method	Curtis Smith, Judy Brown

The user will enter the organization and personnel information for the sampler(s) that conducted the LVI and Habitat Assessment if it to was also conducted .

Customize the Calculator: Save a copy with the sampling entity and WIN Organization ID information populated with your organization information.

Note: All the information in the Site Info worksheet will be used to auto-populate values in the other three worksheets.



Site Info Worksheet

Location and Lake Attributes

Sample Date	3/19/2022
Lake Name	Lake Miccosukee
WIN Sampling Location Description	Lake Miccosukee Center
WIN Station ID	MICC127
Field ID	MICC127031922
Latitude (Decimal Degrees)	30.563198
Longitude (Decimal Degrees)	-83.96936
Lake Size (area)	2554
Lake Size (units)	hectares
Level III Eco Region Name	65-Southeastern Plains
Level IV Eco Region Number	65o
Level IV Eco Region Name	Tallahasee Hills/Valdosta Limesink

[Link to USEPA Eco Region Map](#)

The hyperlink in row 18 is for EPA's map of Eco Regions. Find the region the lake is in then enter it in with dropdown menus

Note: All the information in the Site Info worksheet will be used to auto-populate values in the other three worksheets.



Site Info Worksheet

Latitude and Longitude (Decimal Degrees)

The coordinates must be entered in decimal degrees format. The formula for the LVI Region on the LVI Calculator worksheet references the latitude.

Latitude (Decimal Degrees)	30.563198
Longitude (Decimal Degrees)	-83.969362

Coordinates recorded in Degrees Minutes Second on the field sheet(s) can be converted to decimal degrees by the user with the Geographic Coordinate Converter. Enter the degrees, minutes and seconds and the decimal degree will be calculated.

Geographic Coordinate Converter				
x/y	Degrees	Minutes	Seconds	Decimal Degrees
LATITUDE	30	33	47.5128	30.563198
LONGITUDE	-83	58	9.7032	-83.969362



LVI Calculator

Top Section: County and Lake Sections

The user selects, from the dropdown list, the county the lake is in. The formula for the LVI region references the **county** and the **latitude**.

Lake Vegetation Index Calculator Version 1.0, March 2022												
Delete Selected Taxon		Lake Miccosukee Center MICC127				Sample Date: 3/19/2022						
Waterbody:						Analyst: Curtis Smith						
WIN/STORE ID:						Longitude: -83.96936						
County (Dropdown):		Required		Latitude: 30.5632								
LVI Region: (County and Latitude Required to Calculate the Region)		Hillsborough Holmes Indian River Jackson Jefferson Lafayette Lake Lee		Sections: Down		Required		Use "P" to denote taxa Present, Use "D" to denote Dominate taxa, Use "C" to denote Co-dominant taxa.				
Taxon				FLEPPC Status		Wetland Status		Nativity		Occurrence		Quality Check (QC) Preformed By

The user selects, from the dropdown list, the 4 sample sections from the lake.

Lake Vegetation Index Calculator Version 1.0, March 2022												
Delete Selected Taxon		Lake Miccosukee Center MICC127				Sample Date: 3/19/2022						
Waterbody:						Analyst: Curtis Smith						
WIN/STORE ID:						Longitude: -83.96936						
County (Dropdown):		Jefferson		Latitude: 30.5632								
LVI Region: (County and Latitude Required to Calculate the Region)		Lake Sections: (Dropdown)		Required				Use "P" to denote taxa Present, Use "D" to denote Dominate taxa, Use "C" to denote Co-dominant taxa.				
Taxon		Synonym(s)		CofC Score		FLEPPC Status		Nativity		Occurrence		Quality Check (QC) Preformed By

The Delete Selected Taxon
Will be Covered Later

Note: The LVI scores will not be calculated if the county and lake section fields are not selected.



LVI Calculator

Adding Taxa Observations

Taxon	Synonym(s)	CofC Score	FLEPPC Status	Wetland Status	Nativity	2	5	8	11
<i>Acer rubrum</i>	-	4.65	-	FACW	Native	P	P	P	P
<i>Alternanthera philoxeroides</i>	-	-	-	-	-	P	C	P	P
						-	-	P	-
						P	C	P	C
						D	P	P	-
						P	-	P	-
<i>Blechnum serrulatum</i>						-	-	-	P
<i>Boehmeria cylindrica</i>						P	P	P	P
<i>Brasenia schreberi</i>	-	8.79	-	OBL	Native	P	P	D	-
<i>Cabomba caroliniana</i>	-	5.50	-	OBL	Native	P	P	P	C
<i>Eclipta prostrata</i>	<i>Eclipta alba</i>	2.00	-	FACW	Native	P	P	P	-
<i>Luziola fluitans</i>	<i>Hydrochloa caroliniensis</i>	4.00	-	OBL	Native	P	P	P	P

In the Corresponding Row
 Use "P" to denote the taxon Presence,
 Use "D" to denote the taxon if it was Dominant,
 Use "C" to denote the taxon if it was Co-dominant
For each of the 4 lake sections

**Find the Taxon in Column A
 or its Synonym in Column B**

Note: The attributes CofC Score, FLEPPC Status, Wetland Status, Nativity, associated with each taxon are provided for informational purposes.



LVI Calculator

Taxa Occurrence

Taxon	Synonym(s)	CofC Score	FLEPPC Status	Wetland Status	Nativity	3	6	9	12	Occurrence	Occurrence of LVI Taxon
<i>Acer rubrum</i>	-	4.65	-	FACW	Native	D	C	P	P	4	4
<i>Alternanthera philoxeroides</i>	-	0	Category 2	OBL	Exotic	P	C	-	-	2	2
<i>Ostrya virginiana</i>	<i>Ostrya virginica</i>	5.91	-	UPL	Native	P	P	P	-	3	0
<i>Ricinus communis</i>	-	0	Category 2	UPL	Exotic	P	-	-	-	1	0

Note: All taxa denoted with a “P”, “C” or “D” will be tallied in the “**Occurrence**” Column. Only taxa used in the LVI metric calculation will be tallied in the “**Occurrence of LVI Taxon**” column. In the example above *Ostrya virginiana* and *Ricinus communis* are not tallied in the “**Occurrence of LVI Taxon**” column because they are wetland status UPL.

Per LVI 2200 3.3 Only plant taxa with wetland status of OBL, FAC, or FACW in FAC, shall be included in the calculation. For LVI purpose *Pinus elliottii* that are growing in the water or saturated soils and are functioning as part of the lake plant community is also included.

Taxa not used in the LVI metric calculation were included in the LVI Taxa list of this calculator because these taxa are in the FDEP Statewide Biological Database (SBIO).



Removing Taxa from the Calculator

The **Delete Selected Taxon** Button

The user can remove taxa rows from the LVI Calculator by selecting a taxon row and then clicking the *Delete Selected Taxon* button.

Delete Selected Taxon

Lake Vegetation Index Calculator
Version 1.0, March 2022

Waterbody: Lake Miccosukee
WIN/STORET ID: MICC
County (Dropdown): Jefferson Latitude: 25.7611
LVI Region: North Lake Section (Dropdown):
(County and Latitude Required to Calculate the Region)

The Selected Row Will Be Grayed Out

Taxon	Synonym(s)	CofC Score	FL	Occurrence	Occurrence of LVI Taxo
<i>Cyperus articulatus</i>	-	6.64	-	0	0
<i>Cyperus haspan</i>	-	-	-	0	0
<i>Cyperus lecontei</i>	-	2.33	-	0	0
<i>Cyperus odoratus</i>	-	3.00	-	0	0
<i>Cyperus polystachyos</i>	-	1.56	-	0	0

Legend:
P denote taxa Present,
D denote Dominate taxa,
C denote Co-dominant taxa.

Note: Taxa without observations ("P", "D", "C") **do not** need to be removed for the LVI score to be calculated. Removing taxa rows is for visual or customization purposes only.



Removing Multiple Taxa from the Calculator

The **Delete Selected Taxon** Button

The user can remove **more than one** taxa row from the LVI Calculator by selecting multiple taxon rows and then clicking the *Delete Selected Taxon* button.

Taxon	Synonym(s)	CofC	FLEPPC	Wetland	Native	5	8	11	Occurrence	Occurrence of LVI Taxo	Quality Check (QC) Preformed By
<i>Cyperus articulatus</i>	-						-	-	0	0	
<i>Cyperus haspan</i>	-						-	-	0	0	
<i>Cyperus lecontei</i>	-						-	-	0	0	
<i>Cyperus polystachyos</i>	-						-	-	0	0	
<i>Cyperus surinamensis</i>	-						-	-	0	0	
<i>Cyrilla racemiflora</i>	-						-	-	0	0	
<i>Decodon verticillatus</i>	-						-	-	0	0	
<i>Diodia virginiana</i>	-						-	-	0	0	
<i>Echinochloa crusgalli</i>	-						-	-	0	0	
<i>Echinochloa muricata</i>	-						-	-	0	0	
<i>Echinochloa walteri</i>	-	2.50	-	FACW	Native	-	-	-	0	0	

Selected Rows Will Be Grayed Out

Customize the Calculator: Remove the taxa unlikely to be found in your area and save a copy of the calculator.



Adding Taxa: Step 1

Adding Taxa to the LVI Calculator

The screenshot shows the LVI Calculator spreadsheet. The 'Add Taxon' button is highlighted in blue. The 'LVI_TAXA' worksheet tab is circled in red. A red arrow points from the 'LVI_TAXA' tab to the 'Add Taxon' button.

To Add Taxons to Calculator:
Select taxon under column A on THIS Sheet,
Then click Add Taxon Button

Taxon	Synonym(s)	CofC Score	FLEPPC Status	Wetland Status
Xyris elliottii	-	6.69	-	OBL
Xyris fimbriata	-	5	-	OBL
Xyris flabelliformis	-	5	-	OBL
Xyris isoetifolia	-	9.75	-	OBL
Xyris jupical	-	3.51	-	FACV
Xyris laxifolia	-	5	-	OBL
Xyris laxifolia iridifolia	Xyris iridifolia	5	-	OBL
Xyris platylepis	-	5.32	-	OBL
Xyris serotina	-	4	-	OBL
Xyris smalliana	-	7.8	-	OBL
Zanthoxylum	-	-	-	-
Zingiber	-	0	-	-
Zizania	-	-	-	-
Zizania aquatica	-	7.5	-	OBL
Zizaniopsis	-	-	-	-
Zizaniopsis miliacea	-	6.21	-	OBL

Click the "LVI_TAXA" worksheet tab to reveal all the taxa from which to select.

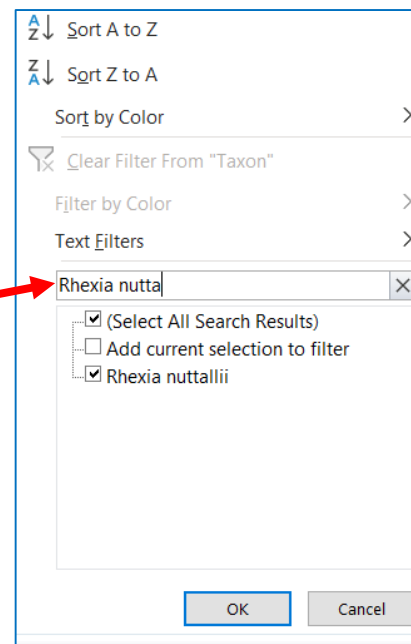


Adding Taxa: Step 2

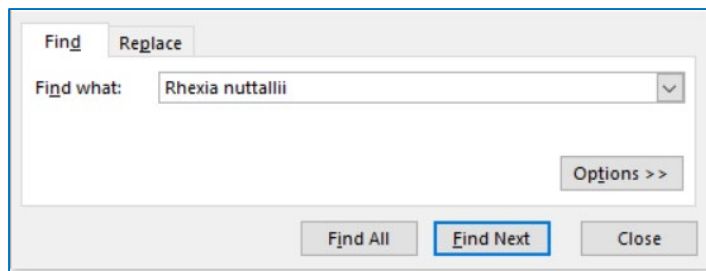
Find The Desired Taxon

Taxa are listed in Column "A". The desired taxon can be found 3 ways:

1. Searching Column "A" (Taxon) and "B" (Synonym(s)) with the data filter search function.



2. Use Excel's Find function, Ctrl+F. Type the name in the search bar and click *Find Next*.



3. By scrolling through the list.
 - Not recommended because there are over 1000 taxa.



Adding Taxa: Step 3

Select Desired Taxon and Add

A885							Rhexia nuttallii
	A	B	C	D	E	F	AQ
1	Add Taxon		To Add Taxons to Calculator: Select taxon under column A on THIS Sheet, Then click Add Taxon Button				
2							
3							
4							
	Taxon	Synonym(s)	CofC Score	FLEPPC Status	Wetland Status	Nativity	
5							
881	<i>Rhexia alifanus</i>	-	4.6	-	FACW	Native	
882	<i>Rhexia cubensis</i>	-	7.22	-	FACW	Native	
883	<i>Rhexia mariana</i>	-	4	-	FACW	Native	
884	<i>Rhexia nashii</i>	-	7.8	-	FACW	Native	
885	<i>Rhexia nuttallii</i>	-	7.93	-	FACW	Native	
886	<i>Rhexia petiolata</i>	-	7.9	-	FACW	Native	
887	<i>Rhexia salicifolia</i>	-	7.14	-	OBL	Native	

Select the Row or Cell with the desired taxon.

In this example Row 885 or Cell A885.

Click the *Add Taxon* Button

The new taxon will be inserted alphabetically in the calculator. The new taxon row will be selected to make it easier to find.

Taxon	Synonym(s)	CofC Score	FLEPPC Status	Wetland Status	Nativity	2	5	8	11
<i>Polygonum punctatum</i>	-	3.00	-	OBL	Native	-	-	-	-
<i>Pontederia cordata</i>	-	5.38	-	OBL	Native	-	-	-	-
<i>Potamogeton diversifolius</i>	-	6.00	-	OBL	Native	-	-	-	-
<i>Potamogeton illinoensis</i>	-	6.64	-	OBL	Native	-	-	-	-
<i>Potamogeton pectinatus</i>	-	7.80	-	OBL	Native	-	-	-	-
<i>Potamogeton pusillus</i>	-	7.80	-	OBL	Native	-	-	-	-
<i>Proserpinaca pectinata</i>	-	5.50	-	OBL	Native	-	-	-	-
<i>Rhexia nuttallii</i>	-	7.93	-	FACW	Native	-	-	-	-
<i>Rhynchospora corniculata</i>	-	4.00	-	OBL	Native	-	-	-	-
<i>Rhynchospora inundata</i>	-	4.00	-	OBL	Native	-	-	-	-



LVI Calculator

Data Entry Continued

The user will transcribe any notes from the LVI field sheet into the designated “Notes:” cell of the calculator.

The user will add their name and the data entry date to the applicable cell of the calculator.

Xyris	-	-	-	OBL	Native	-	-	-	-	0	0	
Zizania aquatica	-	7.50	-	OBL	Native	-	-	-	-	0	0	
Zizaniopsis miliacea	-	6.21	-	OBL	Native	-	-	-	-	0	0	
Notes:	Utricularia purpurea Blooming											
Data Entered By:	Curtis Smith										Date Data Entered:	3/20/2022
Data Reviewer Name:											Date Data Reviewed:	



Data Entry Quality Assurance Review

After the data entry is completed a second person should review calculator and verify the records were transcribed correctly.

Taxon	Synonym(s)	CofC Score	FLEPPC Status	Wetland Status	Nativity	2	5	8	11	Occurrence	Occurrence of LVI Taxo	Quality Assurance Reviewer Initials
<i>Acer rubrum</i>	-	4.65	-	FACW	Native	P	P	P	P	4	4	JB
<i>Alternanthera philoxeroides</i>	-	0	Category 2	OBL	Exotic	P	C	P	P	4	4	JB
<i>Andropogon</i>	-	-	-	-	Native	-	-	P	-	1	1	JB
<i>Azolla caroliniana</i>	-	1.81	-	OBL	Native	P	C	P	C	4	4	JB
<i>Bacopa caroliniana</i>	-	4.50	-	OBL	Native	D	P	P	-	3	3	JB
<i>Bidens laevis</i>	-	5.50	-	OBL	Native	P	-	P	-	2	2	JB
<i>Blechnum serrulatum</i>	-	5.50	-	FACW	Native	-	-	-	P	1	1	JB
<i>Boehmeria cylindrica</i>	-	5.00	-	OBL	Native	P	P	P	P	4	4	JB
<i>Brasenia schreberi</i>	-	8.79	-	OBL	Native	P	P	D	-	3	3	JB
<i>Cabomba caroliniana</i>	-	5.50	-	OBL	Native	P	P	P	C	4	4	JB
<i>Eclipta prostrata</i>	<i>Eclipta alba</i>	2.00	-	FACW	Native	P	P	P	-	3	3	JB
<i>Luziola fluitans</i>	<i>Hydrochloa caroliniensis</i>	4.00	-	OBL	Native	P	P	P	P	4	4	JB

The reviewer can use the data filters to only view the taxa with observations ("P", "D", "C") in the calculator. Open the data filter for the "Occurrence" column, Column "K", and uncheck the box next to the number 0. Then click the OK button.



Data Entry Quality Assurance Review Continued

After the data entry is completed a second person should review calculator and verify the records were transcribed correctly.

Taxon	Synonym(s)	CofC Score	FLEPPC Status	Wetland Status	Nativity	2	5	8	11	Occurrence	Occurrence of LVI Taxo	Quality Assurance Reviewer Initials
<i>Acer rubrum</i>	-	4.65	-	FACW	Native	P	P	P	P	4	4	JB
<i>Alternanthera philoxeroides</i>	-	0	Category 2	OBL	Exotic	P	C	P	P	4	4	JB
<i>Andropogon</i>	-	-	-	-	Native	-	-	P	-	1	1	JB
<i>Azolla caroliniana</i>	-	1.81	-	OBL	Native	P	C	P	C	4	4	JB
<i>Bacopa caroliniana</i>	-	4.50	-	OBL	Native	D	P	P	-	3	3	JB
<i>Bidens laevis</i>	-	5.50	-	OBL	Native	P	-	P	-	2	2	JB
<i>Blechnum serrulatum</i>	-	5.50	-	FACW	Native	-	-	-	P	1	1	JB
<i>Boehmeria cylindrica</i>	-	5.00	-	OBL	Native	P	P	P	P	4	4	JB
<i>Brasenia schreberi</i>	-	8.79	-	OBL	Native	P	P	D	-	3	3	JB
<i>Cabomba caroliniana</i>	-	5.50	-	OBL	Native	P	P	P	C	4	4	JB
<i>Eclipta prostrata</i>	<i>Eclipta alba</i>	2.00	-	FACW	Native	P	P	P	-	3	3	JB
<i>Luziola fluitans</i>	<i>Hydrochloa carolinensis</i>	4.00	-	OBL	Native	P	P	P	P	4	4	JB

The reviewer will initial each row after they have verified the data entry for the taxon in that row is correct. The reviewer will add their name and the data review date to the applicable cells near the bottom of the calculator.

Notes:	Utricularia purpurea blooming		
Data Entered By:	Curtis Smith	Date Data Entered:	3/20/2022
Data Reviewer Name:	Judy Brown	Date Data Reviewed:	3/22/2022



LVI Calculations

The LVI region, metrics results for each lake section, and the overall LVI score are calculated and displayed at the bottom of the calculator.

LVI Sample Result: 63				
Region	North			
Metric / Section	2	5	8	11
Total # Taxa	10	9	11	7
% Native Taxa	90%	89%	91%	86%
% FLEPPC 1 Taxa	0%	0%	0%	0%
% Sensitive Taxa	10%	11%	9%	0%
Dom Taxa Count	1	2	1	2
CofC Dom Taxa	4.50	0.91	8.79	3.66
Section LVI	67	55	77	52



Lake Habitat Assessment

Lake Habitat Assessment						
WIN Station ID:	Date		Lake Name		Field ID	
MICC127	3/19/2022		Lake Miccosukee		MICC127031922	
Eco-Region:	County:	Jefferson	Sampling Location/Description:	Lake Miccosukee Center	Lake Size:	2554 hectares
Tallahassee Hills/Valdosta Limesink	No surface inflow or outflow present, very long water residence time, groundwater seepage dominates		Surface water inflow present, but flow is rare, moderate to long water residence time	Surface water inflow and outflow present (or outflow only), sometimes with visible flow, short water residence time	Impounded, hydrology of system artificially controlled	
Hydrology	☐		☒	☐	☐	
Color	Very clear, uncolored water (benthic sampling appropriate)		Water somewhat tannin stained (benthic sampling appropriate)	Dark, discolored water (water color 20 PCU or higher)	Visibility extremely reduced due to high color	
	☐		☐	☐	☒	

The lake and sample information (name, date, Eco Region etc..) are auto-populated using the values entered in the Site Info worksheet tab.

The user will use the check boxes to record the hydrology and color categories documented on the Lake Habitat Assessment Field sheet.

This form is optional. The Lake Habitat Assessment is not required to conduct the LVI method.



Lake Habitat Assessment Continued

	Optimal					Suboptimal					Marginal					Poor					
Secchi	Secchi >3 m Secchi(m)					3	2.6	2.2	1.8	1.4	1	0.9	0.8	0.7	0.6	0.5	0.4	0.3	0.2	0.1	
3	Or VOB	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
Vegetation Quality	Diverse, expected native vegetation (emergent or submersed), less than 5% nuisance taxa					Mostly expected native plants, but moderate growths (6%-20% of lake) of nuisance macrophytes, or more than 50% of lake covered with plants					Large masses (21%- 40%) of nuisance macrophytes (e.g., Hydrilla, hyacinth, cattail, etc.) or algal mats					Lake choked (>40%) with nuisance macrophytes (duck-weed, hyacinth, etc.) or algal mats, or few plants present at all (e.g., plants removed)					
11		20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
Stormwater Inputs	Stormwater enters system via sheet flow over non-cultivated and/or natural vegetation					Some direct stormwater inputs (ditches, pipes, cultivated vegetation < 10%) but good BMPs in place					Moderate direct inputs of stormwater (ditches, pipes, cultivated vegetation 11%-50%) but few BMPs in place					Much direct input of stormwater (ditches, pipes, cultivated vegetation > 51%) and no or ineffective BMPs in place					
15		20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
Bottom Substrate Quality	Diverse mixture of sand, detritus, with small amounts of CPOM/mud/muck. SAV may be present					Mixture of sand or clay and detritus with higher % CPOM/mud/muck content. SAV may be present					Moderate layer of CPOM/mud/muck, or hardpacked sand only, or moderate algal growth (mats or Chara) on bottom					Thick deposits of CPOM, or fine detritus and anaerobic muck/mud/silt, or algal growth or nuisance plants (Hydrilla) cover bottom					
12		20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
Lakeside Adverse Human Alternations	Very few man-made structures, roads, or other disturbance adjacent to lake (<10%)					Moderate disturbance visible (structures, roads or other), 10%-49% lakeside affected					Many structures, roads or other human disturbance visible (50%-70%) lakeside affected)					Highly developed or disturbed (>70% of lakeside affected)					
20		20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
Upland Buffer Zone	Expected native vegetation between uplands and littoral zone, greater than 90% of shore with >18 m buffer					89%-51% of shoreline with >18m buffer or >75% with 10m to 18m buffer					50%-30% of shoreline with >18m buffer or 50%-74% with 10m to 18m buffer					< 29% of shoreline with >18m buffer					
20		20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
Adverse Watershed Land Use	Score the potential effects from adverse human land uses, based on a continuum of amount and type, with least to most adverse as follows: Native vegetation, Silviculture, Pasture or Citrus, Low Density Residential, Row Crops, Commercial, High Density Residential, Urban, Industrial																				
12		20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1

The user will enter the values from the lake habitat assessment field sheet into the corresponding fields.

The habitat assessment score will be calculated at the bottom.

TOTAL SCORE	93
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Lake Observation Field Sheet

Lake Observations From DEP Form FD 9000-31: Lake Observation Field Sheet																					
COUNTY: _____					WIN STATION ID: _____					LATITUDE: _____											
DATE: _____					TIME: _____					LONGITUDE: _____											
SITE NAME: _____										LAKE SIZE: _____											
SAMPLING AGENCY: _____										FIELD ID: _____											
WATERSHED / LAKESIDE FEATURES										Other Land-Use: _____											
PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category – from GIS) : Forest/Natural Silviculture Field/Pasture Agricultural Residential Commercial Industrial Other (Specify Above)															LANDSCAPE DEVELOPMENT INTENSITY (100 m buffer) LDI:						
Local Watershed Erosion (select one) : ☐ None ☐ Slight ☐ Moderate ☐ Heavy										Artificially Impounded ☐ Yes ☐ No					Land Use Source & Year:						
Local Watershed NPS Pollution : ☐ No evidence ☐ Slight ☐ Moderate ☐ Heavy																					
STORMWATER INPUTS 		Stormwater enters system via sheet flow over non-cultivated and/or natural vegetation					Some direct stormwater inputs (ditches, pipes, cultivated vegetation < 10%) but good BMPs in place					Moderate direct inputs of stormwater (ditches, pipes, cultivated vegetation 11%-50%) but few BMPs in place					Much direct input of stormwater (ditches, pipes, cultivated vegetation > 51%) and no or ineffective BMPs in place				
		20 19 18 17 16					15 14 13 12 11					10 9 8 7 6					5 4 3 2 1				
LAKESIDE ALTERATIONS 		Very few man-made structures, roads, or other disturbance adjacent to lake (<10% lakeside affected)					Moderate disturbance visible - structures, roads or other (10%-49% lakeside affected)					Many structures, roads or other human disturbance visible (50%-70% lakeside affected)					Highly developed or disturbed (>70% of lakeside affected)				
		20 19 18 17 16					15 14 13 12 11					10 9 8 7 6					5 4 3 2 1				
BUFFER ZONE 		Expected native vegetation between uplands and littoral zone, greater than 90% of shore with >18 m buffer					89%-51% of shoreline with >18m buffer or >75% with 10m to 18m buffer					50%-30% of shoreline with >18m buffer or 50%-74% with 10m to 18m buffer					< 29% of shoreline with >18m buffer				
		20 19 18 17 16					15 14 13 12 11					10 9 8 7 6					5 4 3 2 1				

The lake and sample information (county, date, latitude etc..) are auto-populated using the values entered in the Site Info worksheet tab.

The user will transcribe the entries on the Lake Observation Field Sheet into the fields with blue fill color.



Lake Observation Field Sheet

Continued

WATER / SUBSTRATE / BIOLOGICAL: SAMPLES AND OBSERVATIONS

Water:

Nutrient Sample Taken? ☐ Yes ☐ No Preserved? ☐ Yes ☐ No
 Color Sample Taken? ☐ Yes ☐ No Lot# pH<2 ☐
 Alkalinity Sample Taken? ☐ Yes ☐ No Exp. Date:
 Water Level ☐ Low ☐ Normal ☐ High

Water Odors:

☐ Normal ☐ Petroleum Other:

Water Surface Oils:

☐ Normal ☐ Sheen/Slick ☐ Glob Other:

Meter Readings:	Depth (M)	Temp (°C)	pH (SU)	D.O (MG/L)	D.O Sat. (%)	Cond. MHO/C	Salinity (PPT)
Top:							
Mid-Depth:							
Bottom:							

Clarity:

☐ Clear ☐ Opaque ☐ Turbid
☐ Slightly Turbid

Color:

☐ Clear ☐ Tannic ☐ Green

Meter ID:

SECCHI (M)

Total Station Depth (M)

VOB ☐

Sediment Type: (may check more than one)

☐ Sandy ☐ Organic fibrous (peaty, CPOM) ☐ Vegetated
☐ Sandy/Silt ☐ Organic smooth (muck) Other (Specify):

Sample Taken? ☐ Yes ☐ No

Sediment Odors:

☐ Normal ☐ Other (Specify):
☐ Anaerobic

Biological Communities:

LVI Conducted? ☐ Yes ☐ No
 Phytoplankton Sample Taken? ☐ Yes ☐ No
 Sampled Preserved? ☐ Yes ☐ No
 Lot#: Exp Date:
 Algal Bloom/Algal ID Sample Taken? ☐ Yes ☐ No
 Active Vegetation Mgmt? ☐ Yes ☐ No ☐ Don't Know

Abundance

	Absent	Rare	Common	Abundant
Periphyton	☐	☐	☐	☐
Nuisance Plants	☐	☐	☐	☐
Submersed Plants	☐	☐	☐	☐
Exotic Apple Snails	☐	☐	☐	☐

Additional Notes:



Photo Documentation of Dominant and Co-dominant Taxa

The LVI Primer, DEP-SAS-002/11 3.4.2, states samplers should take photographs of dominant or codominant taxa for verification by other LVI samplers.

If available, the user can copy and paste pictures (.jpg, .tiff, etc..) of the dominant taxa in this worksheet.

The lake section numbers and, dominant and co-dominant taxa are auto-populated from the LVI Calculator worksheet.

Section	Dominant/Co-dominant Taxa	Co-dominant Taxa
2	Alternanthera philoxeroides	NA
5	Alternanthera philoxeroides	Andropogon



Submitting Results

For Impaired Waters Assessment

Data providers who would like to submit the bioassessment results in the calculator to the Department to support Impaired Waters assessment can do so by copying rows 2 and 3 of the External Bio Format worksheet into the Department's Bioassessment Data template. All values in this table are auto-populated from information in the previous worksheets.

WIN ORGANIZATION ID	WIN STATION NUMBER	STATION NAME	STATION DESCRIPTION	PRIMARY TYPE	WATERBODY NAME	LATITUDE	LONGITUDE	SAMPLE DATE	METRIC	RESULT	FIELD COMMENT	COLLECTOR	METRIC PROFICIENCY	SAMPLING ENTITY
21FLJEFF	MICC127	MICC127031922	Lake Miccosukee Center	Lake	Lake Miccosukee	30.563198	-83.969362	3/19/2022	Habitat Assessment Score (Lake)	93		Curtis Smith	Y	Jefferson County Stormwater Division
21FLJEFF	MICC127	MICC127031922	Lake Miccosukee Center	Lake	Lake Miccosukee	30.563198	-83.969362	3/19/2022	LVI_2012_Avg	63	Julia purpurea bloom	Curtis Smith	na	Jefferson County Stormwater Division

Copy row 2 and row 3

Open the Bioassessment Data Template

Email Kevin O'Donnell the documentation specified in the template

Bioassessment Data Template

http://publicfiles.dep.state.fl.us/DEAR/DEARweb/WAS/Bio_Data_Template.xlsx

Kevin O'Donnell

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Bioassessment Data

Data providers who would like to submit applicable bioassessment data to help the Department download and complete the Bioassessment Data Template, the template has been completed with the required information, including field sheets, photos, etc.) by email to Kevin O'Donnell. Bioassessment proficiency demonstrations set forth on the Department Web Page, follow the department's Quality Assurance Manual, Florida Administrative Code (F.A.C.), and the incorporated assessment data to be considered as part of the assessment, data from the SC1 and/or Habitat Assessment certification at the time not required, because there are currently no certifications for bioassessment highly recommended to show proficiency.