



Florida Department of Environmental Protection

LVI SOP Refresh and Proficiency Information

May 17, 2017





Lake Vegetation Index (LVI)

- *The LVI is a multi-metric index that assesses the biological integrity of Florida lakes based on the macrophyte community structure and function*
- Terms to know
 - **Metric:** quantitative measure of a biological attribute
 - **Biological Index:** multiple metrics within a community are combined



LVI Metrics

- 1) % Natives (can include genus-level, if genus is native)
- 2) % Sensitives (C of $C \geq 7$)
- 3) % Invasive Exotics (FLEPPC Cat 1)
- 4) C of C of Dominant/Co-dominant Taxa



LVI Thresholds

LVI is included in Chapters 62-302 and 62-303, F.A.C., as indicator of biological health

62-303.330

Lake placed on planning list if 1 of 2 most recent LVI scores < 43 , or if historic maximum score > 78 and recent score 20 points lower.

62-303.430

Lake placed on verified list if average of 2 most recent scores < 43 , or if historic maximum score > 78 and average of 2 most recent scores is 20 points lower.

62-302.800 Site Specific Alternative Criteria (SSAC)

If average LVI ≥ 43 , then LVI can be used to support lake SSAC



LVI Sampling Reminders

1. Selecting 1 dominant or 2 codominant plants should be the default approach for every lake section, UNLESS there are just so few plants that nothing is abundant (*e.g.* armored shoreline), or there are 3 or more taxa that are really abundant, and equally so
2. Dominance is by AREAL extent. Don't forget the submersed when determining dominance
3. Photograph or collect dominant/codominant taxa. Photograph if they're easily identified; collect if they require ID in the lab or expert verification.



LVI Sampling Reminders

4. You may send unknowns to AEQAS (Nia or Ashley), or to a local expert. We also have outside experts in Tallahassee.
 - Fresh or dried specimens
 - Field photos, lab photos, scope photos

5. Identify plants to SPECIES level, EXCEPT for plants that are designated as GENUS-level IDs per the Primer:
 - Plants with CC scores assigned at the genus level (*e.g.*, *Typha*, *Taxodium*, *Hydrocotyle*)
 - Plants that are extremely difficult to ID AND don't yield critical information for the index (*e.g.*, *Xyris*)



LVI Sampling Reminders

6. Enter the *species* name of a plant you may commonly refer to or record by just the genus. For example, we see *Nyssa* entered, throughout the state, in places where *Nyssa sylvatica biflora* is the only species that occurs.

7. Include vines only if they are rooted in wetland soil and part of the lake plant community. INCLUDE if they are:

- creeping out on to the water
- growing intermixed with the emergent vegetation
- covering shoreline shrubs and trees that are included in the assessment

8. Only include plants with WETLAND status. Should be OBL, FACW, or FAC, or if it is a plant with no state status, but has federal wetland status, that is OK



LVI Sampling Reminders

9. Include only the footprint of the lake in your assessment—up to seasonal high water level (use hydrologic indicators carefully). One exception: low gradient lakes with extensive fringing marsh or swamp. Do not go to seasonal high water, include only what you can observe from the boat.

10. Read the SOP and the PRIMER!!!



Team LVI Proficiency testing

- June 1-30, 2017
- Test at the lake in your region
 - Carr Lake, Leon County
 - Wildcat Lake, Lake County
 - Little Red Water Lake, Highlands County
- Each team must have at least one person in pass status for the online plant test (email Ashley)
- DEP staff: sample and enter data in SBIO2 per standard practice
- External organizations: send names of organization, and samplers performing the exercise, sampling date, final LVI score (calculated per LVI 2200), and taxa lists for each sampling section
- Information and sampling maps posted on our training webpage

<http://www.dep.state.fl.us/water/bioassess/training.htm>