



**Florida Lake Management Society
28th Annual Technical Symposium**

**June 6-9, 2017
Captiva Island, Florida**

Program Theme: Balancing Water Resources for the Future

WORKSHOP AGENDA

(Subject to change)

BALANCING WATER RESOURCES FOR THE FUTURE

June 6-9, 2017

Welcome!

TUESDAY - JUNE 6, 2017 – WORKSHOPS

Summaries are listed following the agenda

8:00 am – 5:00 pm **Check-In and Registration**

8:15 am – 12:15 pm **Workshop 1: Advanced Erosion Control with Innovative Technologies.** Eddie Snell, Applied Polymer Systems, Inc.

8:15 am – 12:15 pm **Workshop 2: Aquatic Plant Identification for Florida Lakes and Flowing Waters, The Basics.** Nia Wellendorf, Florida Department of Environmental Protection and Gloria Eby, Seminole County, Kristine Campbell, Florida Fish and Wildlife Conservation Commission. Plant material provided by Lee County Hyacinth District

9:00 am – 4:00 pm **Workshop 3: Citizen Science, A Stormwater Pond Management Workshop – Part I (CEUs available for community association managers).** Monty Montgomery, Allstate Resource Management, Inc. and Ernesto Lasso de la Vega, Lee County Hyacinth Control District

10:00 – 10:15 am **MORNING BREAK**

12:15 – 1:00 pm **LUNCH** (*provided with full-day Workshop registration*)

2:45 – 3:00 pm **AFTERNOON BREAK**

1:00 – 5:00 pm **Workshop 4: Aquatic Plant Identification for Florida Lakes and Flowing Waters, Advanced (morning workshop is NOT a prerequisite).** Nia Wellendorf, Florida Department of Environmental Protection and Gloria Eby, Seminole County, Kristine Campbell, Florida Fish and Wildlife Conservation Commission. Plant material provided by Lee County Hyacinth District

1:00 – 5:00 pm **Workshop 5: Collection, Compilation, Analysis and Interpretation of Environmental Data.** Harvey H. Harper, Ph.D., P.E. - President Environmental Research & Design, Inc.

Workshop 1
8:15 am – 12:15 pm
Advanced Erosion Control with Innovative Technologies
Eddie Snell, Applied Polymer Systems, Inc.

Learn how to utilize Polymer Enhanced Best Management Practices (PEBMPs) to protect construction and restoration projects from large and extreme rain events. Anionic Polyacrylamide (PAM) has been used as a soil stabilization and water clarification tool for decades. This workshop will show students the basics of polymer soil/water testing for maximum efficiency and lowest amount of PAM needed for each application. PAM is a very adaptable tool that can be integrated into the existing footprint of existing projects to enhance soil stabilization and turbidity control.

Existing project BMPs, such as perimeter silt fence, check dams, and inlet protection, can be augmented with PEBMPs to increase water infiltration, reduce sediment smothering, and keep soil from site discharge. Stormwater and MS4 managers can quickly create a nutrient mitigation treatment system within existing ditches and canal systems to manage particulate associated nutrients. These systems allow for short-term protection of critical habitat during infrastructure construction and maintenance operations that far exceed existing erosion, sediment, and turbidity BMPs currently in use.

The first half of the workshop will be indoor presentations covering the basics of polymer dosing, soil/water testing, use of PAM blend BMPs with case histories. After the break, part two will be an outdoor display and demonstration of most of these polymer enhanced treatment trains including a live turbidity treatment system. Contractors, project managers, NPDES/MS4 managers, and public works personnel will benefit most from this workshop.

Workshop 2
8:15 am – 12:15 pm
Aquatic Plant Identification for Florida Lakes and Flowing Waters, The Basics.
Nia Wellendorf, Florida Department of Environmental Protection, Gloria Eby, Seminole County,
Kristine Campbell, Florida Fish & Wildlife Conservation Commission
Plant material provided by Lee County Hyacinth District

Who should come? This workshop is for those who have an interest in identifying Florida aquatic plants, particularly those who do Lake Vegetation Index (LVI) sampling or other field work in Florida lakes or flowing waters.

What will be covered? This workshop will include an overview of common aquatic plants in Florida, including hands-on experience and tips on plant identification. The workshop will also cover some challenging groups and confusing look-alikes. Bring your plant identification books/materials!

Morning session

1. Overview--cover most common LVI plants by growth form –emergent, submersed, floating
2. Basic plant ID terminology and using a taxonomic key
3. Common invasive exotics

Workshop 3

9:00 am – 4:00 pm

Citizen Science, A Stormwater Pond Management Workshop

(CEUs available for community association managers)

Monty Montgomery, Allstate Resource Management, Inc. &

Ernesto Lasso de la Vega, Lee County Hyacinth Control District

Allstate Resource Management - Provider Number: 0004645 - License Number: PVD148

[\(Click here for full descriptions of CAM courses\)](#)

Understanding Waterway Management

#9625544 / 2 CEU – (9am – 11am)

Aquatic Plants for Lake Quality and Florida Friendly Landscapes

#9625825 / 1 CEU (11am – 12pm)

Stormwater Systems - Components and Maintenance

#9625824 / 1 CEU (1pm – 2pm)

Lake Maintenance: Controlling Weeds, Algae and Aquatic Pests

#9625875 / 1 CEU (2pm – 3pm)

Water Quality, Fountains and Aeration

#9625823 / 1 CEU (3pm – 4pm)

Workshop 4

1:00 –5:00 pm

Aquatic Plant Identification for Florida Lakes and Flowing Waters, Advanced.

Nia Wellendorf, Florida Department of Environmental Protection and Gloria Eby, Seminole County,

Kristine Campbell, Florida Fish & Wildlife Conservation Commission

Plant material provided by Lee County Hyacinth District

(Morning Workshop #2 is NOT required for this workshop.)

Who should come? This workshop is for those who have an interest in identifying Florida aquatic plants, particularly those who do Lake Vegetation Index (LVI) sampling or other field work in Florida lakes or flowing waters.

What will be covered? This workshop will include an overview of common aquatic plants in Florida, including hands-on experience and tips on plant identification. The workshop will also cover some challenging groups and confusing look-alikes. Bring your plant identification books/materials!

Afternoon session

1. *Ludwigias* in Florida (special attention to “new” exotics)
2. Grasses/Sedges/Rushes
3. Distinguishing tricky submersed taxa OR identifying *Utricularias* OR other topic based on interest or availability of specimens

Workshop 5

1:00 –5:00 pm

**Collection, Compilation, Analysis and Interpretation of Environmental Data
Harvey H. Harper, Ph.D., P.E. - President Environmental Research & Design, Inc.**

This workshop will provide a detailed discussion of techniques for collection, compilation, and analysis of environmental data such as a lake monitoring program. Techniques, methods, and reasons for collection of field data, water samples, light attenuation, and sediments will be discussed, along with recommendations for parameters to be analyzed and requirements for analytical laboratories. Recommendations will be made for methods to compile data in the most useful formats, and sources for historical environmental data will also be addressed. Data presentation and analysis will be discussed in formats such as tables, graphs, box and whisker plots, scatter diagrams, and combinations of different formats. Probability distributions for environmental data will be discussed, and methods of estimating central tendency of data sets will be addressed, along with the pros and cons of various methods. Examples of actual data will be used to illustrate how data can estimate trophic status and identify water quality issues and sources of pollutant loadings. Nutrient limitation will be discussed, along with the differences between nutrient limitation and nutrient reduction methods to decrease algal productivity. Common theoretical and procedural errors in using and calculating trophic state and nutrient limitation will be discussed. The workshop will include a discussion of internal recycling and methods to identify and quantify this internal source which is often ignored in lake studies and TMDL evaluations. This workshop is intended for persons responsible for lake monitoring programs and those who use the data to make informed decisions regarding lake conditions and selection of restoration efforts.