

**Jesup 11/16/2013**

On **November 16<sup>th</sup>, 2013**, Seminole County Lake Management Program (SCLMP) personnel (Gloria Eby and Thomas Calhoun) surveyed the aquatic plants in **Lake Jesup**.

Submersed aquatic vegetation (SAV) found during the inspection included coontail, hydrilla, and eelgrass. Coontail and eelgrass was present at the Lake Jesup Park boat ramp. Hydrilla was found in the Overlook Park area.

**Photo: Eelgrass at Lake Jesup Park boat ramp.**



FWC-AHRES and Seminole County Cooperative Restoration Project that spans over 14,500 linear feet of shoreline continues to expand very well. Bulrush, pickerelweed, and thalia are growing exceptionally well in this area. American lotus was newly observed in the restoration area east of the boat ramp.

**Photos: FWC-AHRES and Seminole County Cooperative Restoration Project Area.**



SCLMP was recently awarded funding for shoreline activities through the Florida Lake Management Society's "Love Your Lake" Program. This supplemental funding allowed SCLMP to conduct a restoration along the boat ramp of Lake Jesup Park. The restoration at Lake Jesup Park is expanding very nicely providing an aesthetically pleasing view to the lake patrons of Seminole County.

**Photo: Recent restoration conducted from Lake Jesup Park east to original project line.**



**Photo: Recent restoration conducted on Lake Jesup Park: before restoration (left); after (right).**



**Photo: American lotus established east of Lake Jesup Park.**



Secchi reading was 1.1 feet in 6.2 feet of water. The water elevation at the time of inspection was 1.48 feet below sea level.

#### **Jesup 2-19-2014**

On **February 19<sup>th</sup>, 2014**, SCLMP personnel (Gloria Eby, Thomas Calhoun, and Joey Cordell) surveyed the aquatic plants in **Lake Jesup**.

The SAV found during inspection included hydrilla and eelgrass. Both SAVs were present at the Lake Jesup Park boat ramp.

Invasive emergent vegetation found included: alligatorweed, para grass, wild taro, water hyacinth, and water lettuce. Water lettuce and water hyacinth was found along the perimeter of the lake but with less biomass than the previous inspection. The entrance to Soldiers Creek has been treated and is now open and navigable. The phragmites previously established in the area of Soldiers Creek was also treated. This was prompted by concerns communicated by SCLMP to FWC about this native invasive plant creating a tussock within the area.

**Photo: Lake Jesup Park boat ramp.**



**Photo: Soldiers Creek: previous inspection (left); current condition (right), open and navigable.**



Secchi was not recorded during this inspection. The water elevation at the time of inspection was 0.55 above sea level. Cyanobacteria bloom was present during the inspection.

#### **Jesup 4-5-2014: Lake Jesup Restoration Event Day**

The Lake Jesup Restoration Event held on **April 5<sup>th</sup>, 2014** was a huge success in which 92+ volunteers helped us plant approximately 20,000 eelgrass plants in a 1-acre plot enclosure and rebuild another 1-acre enclosure located on the north shore of Lake Jesup. Assistance and transportation of the SERV volunteers via large multi-passenger airboats to the planting location was provided once again by Black Hammock Adventures. These restoration events could not be accomplished without their ongoing help and dedication.

**Photo: Harvesting Suwannee narrow eelgrass biotype from SCLMP nursery tubs.**



**Photo: Black Hammock Adventures transporting volunteers to planting site.**



**Photo: Volunteers planting eelgrass.**



### **Jesup 5-20-2014**

On **May 20<sup>th</sup>, 2014**, SCLMP personnel (Gloria Eby and Thomas Calhoun) and County staff member (Steve Fussell) surveyed the aquatic plants in **Lake Jesup**.

FWC-AHRES and Seminole County Cooperative Restoration Project continues to be very successful. Bulrush, pickerelweed and *Thalia* are expanding remarkably well in this area. Approximately 80% of the eelgrass planted during the April 7<sup>th</sup> restoration event was surviving and beginning to establish.

Invasive emergent vegetation found in the lake included: alligatorweed, para grass, wild taro, water hyacinth, and water lettuce. Again, less water lettuce and water hyacinth were found along the perimeter of the lake than during the previous inspection.

The SAV found during the inspection included hydrilla and eelgrass. Hydrilla was present at Overlook Park located on the south shore. Eelgrass was present at the Lake Jesup Park boat ramp and in the north shore restoration area. American lotus was observed in full bloom east of Lake Jesup Park ramp.

**Photo: Lake Jesup Park boat ramp restoration area.**



**Photo: Cooperative Project restoration area.**



**Photo: American lotus blooming.**



The exclusion cages containing eelgrass and fencing was inspected to see if repairs were needed. All fencing panels were found in good condition and the recently installed fence reinforcement design was performing well.

**Photo: Reinforcements holding fencing material in place.**



The Secchi reading was 1.0 feet in a total depth of 3.5 feet. The water elevation at the time of inspection was 0.55 above sea level. Cyanobacteria bloom was present during the inspection.

## Jesup 8/5/2014

On **August 5<sup>th</sup>, 2014**, SCLMP personnel (Thomas Calhoun, Gloria Eby, and Marianne Pluchino) joined with FWC Invasive Plant Management, Kelli Gladding, and Florida Department of Environmental Protection (Kalina Warren and Kathryn Williams) conducted an LVI in **Lake Jesup**.

Current LVI score for 2014 is **43 in the healthy range**. The dominant vegetation found was phragmites in 3 of 4 sections and thalia in 1 section. Invasive vegetation found during the inspection included: water hyacinth, water lettuce, alligatorweed, para grass, and hydrilla. Hydrilla was found at the Lake Jesup Park boat ramp. The Secchi reading was 1.9 feet in a total depth of 5.7 feet.

7/25/2007	35	Impaired
7/18/2008	34	Impaired
5/27/2009	34	Impaired
6/2/2010	47	Healthy
8/25/2011	47	Healthy
5/30/2012	44	Healthy
9/11/2013	41	Impaired
8/5/2014	43	Healthy

LVI Range:

78-100 Exceptional

**43-77 Healthy**

0-42 Impaired

## Monroe 11-7-2013

On **November 7<sup>th</sup>, 2013**, SCLMP personnel (Thomas Calhoun and Marie Lackey) surveyed the aquatic plants in **Lake Monroe**.

Hydrilla was observed to be more abundant than in the previous inspection and was found to a depth of 3.5 feet. Approximately 35 acres were found topped out mostly in the eastern region of the lake; however, hydrilla was found in all areas of the lake.

The native SAV observed included: coontail to 3 feet, eelgrass to a 4 feet, southern naiad to 3 feet, and bladderwort (*Utricularia foliosa*) to a depth of 3 feet. Eelgrass and bladderwort were both expanding lake wide.

Invasive floating vegetation (water hyacinth and water lettuce) was found expanding along the eastern shoreline.

**Photo: Topped out hydrilla along the east side of the lake.**



**Photo: Water hyacinth and water lettuce found along the eastern shoreline.**



The Secchi reading was 2.6 feet in 14.5 feet of water.

## **Monroe 4-2-2014**

On **April 2<sup>nd</sup>, 2014**, SCLMP personnel (Thomas Calhoun and Joey Cordell) surveyed the aquatic plants in **Lake Monroe**.

Hydrilla was found to a depth of 3 feet. Approximately 70 acres of hydrilla were found during the inspection. The native SAV observed included coontail to a depth of 2 feet and eelgrass to a depth of 2.5 feet. No SAV was found in depths greater than 3 feet.

Invasive vegetation found during the inspection included: alligatorweed, para grass, wild taro, salvinia, water hyacinth, and water lettuce.

Native vegetation species that were noted to be expanding included: banana lily, bulrush, and knot grass.

**Photo: Native banana lily expanding along southern shore.**



The Secchi reading was 2.5 feet in 5.5 feet of water.

## Monroe 5-20-2014

On **May 20<sup>th</sup>, 2014**, SCLMP personnel (Gloria Eby, Thomas Calhoun, and Sofia Pengra) surveyed the aquatic plants in **Lake Monroe**.

Hydrilla was found to a depth of 3.5 feet. The acreage has increased since the previous inspection, especially along the **southern east (southeastern?)** corner of the lake. Approximately 100 acres of hydrilla were found during the inspection.

The native SAV observed included: coontail to a depth of 2 feet, eelgrass to a depth of 3 feet and southern naiad to a depth of 2 feet. Eelgrass has expanded since the previous inspection. No SAV was found at depths greater than 3.5 feet.

The two species of invasive floating vegetation, water hyacinth and water lettuce, were found expanding along the eastern shore. Additionally, a *Ludwigia spp.* was found along the northwest corner of the lake similar to that of Lake Harney's *Ludwigia peploides*; however, this specific species has not yet been verified in Lake Monroe.

**Photo: Eelgrass and hydrilla topped out along the eastern shore.**



**Photo: *Ludwigia* spp. found in northwest corner of lake.**



The Secchi reading was 1.7 feet in 5.5 feet of water.

#### **Monroe 8/5/2014**

On **August 5<sup>th</sup>, 2014**, SCLMP personnel (Thomas Calhoun, Gloria Eby, and Marianne Pluchino) joined with FWC Invasive Plant Management, Kelli Gladding, and Florida Department of Environmental Protection (Kalina Warren and Kathryn Williams) conducted an LVI in **Lake Monroe**.

Current LVI score for 2014 is **23**, which is in the impaired range. The dominant vegetation found was hydrilla in 2 of 4 sections, and hydrilla co-dominant with eelgrass in the other 2 sections. In 2013, the dominant vegetation was eelgrass in 2 of the 4 sections, and eelgrass co-dominant with hydrilla in the other 2 sections. Both species were found to a depth of 3 feet and no SAV was found at depths greater than 4.5 feet. Water hyacinth and water lettuce were found in 2 sections of the assessment. The Secchi reading was 2.6 feet in 4.5 feet of water.

8/12/2008	35	Impaired
7/8/2009	36	Impaired
6/9/2010	30	Impaired
6/7/2011	42	Impaired
5/9/2012	39	Impaired
7/23/2013	44	Healthy
8/5/2014	23	Impaired

#### LVI Range:

78-100	Exceptional
43-77	Healthy
0-42	Impaired

## Harney 11-7-2013

On November 7<sup>th</sup>, 2012, SCLMP personnel (Thomas Calhoun and Gloria Eby) surveyed the aquatic plants in Lake Harney.

The SAV observed included: eelgrass to 3 feet, coontail to 2 feet, southern naiad to 2 feet, bladderwort to 1 foot, and hydrilla to 1 foot. Eelgrass was the dominant SAV and has expanded around the entire perimeter of the lake with the leaf blades topped out in 2 feet of water. Hydrilla was found sparse and intermixed within the eelgrass around the lake.

Emergent aquatic plants that were found included: bulrush, knot grass, pickerelweed, and spike rush. Spike rush and banana lily were found expanding along the northern shore of the lake.

Invasive plants found include: torpedo grass, alligator weed, water hyacinth, and salvinia. Additionally, *Ludwigia peploides* was found along the southern shore of the lake, east of the river mouth.

**Photo: Spike rush expanding along the northern shore.**



**Photo: *Ludwigia peploides* (identified by John Tobe) found along the southern shoreline.**



Secchi reading was 3.2 feet in 5.7 feet of water.

#### **Harney 4-2-2014**

On **April 2<sup>nd</sup>, 2014**, SCLMP personnel Thomas Calhoun and Joey Cordell surveyed the aquatic plants in **Lake Harney**.

The native SAV observed included: eelgrass to 3 feet, coontail to 2 feet, southern naiad to 3 feet, bladderwort to 1 foot, road grass to 1 foot and hydrilla to 1 foot. Eelgrass was the dominant SAV found. Southern naiad was found expanding and intermixed within the eelgrass. Hydrilla was found sparse and in less amounts than the previous inspection. Approximately 20 acres of hydrilla was found.

Native emergent aquatic vegetation found included: bulrush, knot grass, pickerelweed, duck potato, smartweed, cord grass, and spike rush. All native emergent aquatic vegetation was healthy and expanding.

Invasive plants found include: torpedo grass, alligatorweed, water hyacinth, water lettuce, and salvinia. *Ludwigia peploides* was found along the southern shore of the lake and in the river mouth.

**Photo: Southern naiad intermixed with eelgrass.**



**Photo: Northern shoreline of Lake Harney.**



The Secchi reading was 3.7 feet in 4.2 feet of water.

## Harney 5-20-2014

On **May 20<sup>th</sup>, 2014**, S CLMP personnel (Gloria Eby and Thomas Calhoun) and County staff member (Steve Fussell) surveyed the aquatic plants in **Lake Harney**.

The SAV observed during this inspection included: eelgrass to 2.5 feet, coontail to 2 feet, southern naiad to 2 feet, bladderwort to 1 foot, road grass to 1 foot, and hydrilla to 1 foot. Eelgrass was the dominant SAV found. Southern naiad was found expanding and intermixed within the eelgrass. Hydrilla was found sparse and in less amounts than the previous inspection. Approximately 15 acres of hydrilla were found.

Native emergent aquatic vegetation found included: bulrush, knot grass, pickerelweed, duck potato, smartweed, cord grass, and spike rush. All native emergent aquatic vegetation was healthy and expanding.

Invasive plants found included: torpedo grass, alligatorweed, water hyacinth, water lettuce, and salvinia.

*Ludwigia peploides* was present along the southern shore of the lake and is also now present along the northern shore entering the St. John's River.

**Photo: *Ludwigia peploides* found along the northern shoreline.**



The Secchi reading was 2.9 feet in 4.1 feet of water.

## Harney 8/5/2014

On **August 5<sup>th</sup>, 2014**, SCLMP personnel (Thomas Calhoun, Gloria Eby, and Marianne Pluchino) conducted an LVI in **Lake Monroe**.

Current LVI score for 2014 is **47** in the Healthy range. The dominant vegetation found was eelgrass in all 4 sections of the survey. Exotic vegetation water hyacinth, water lettuce, salvinia and hydrilla were also found in all 4 sections. The Secchi reading at the time of inspection was 1.3 feet in 4.9 feet of water.

7/24/2007	60	Healthy
7/23/2008	63	Healthy
8/11/2009	48	Healthy
6/9/2010	46	Healthy
6/8/2011	80	Healthy
5/11/2012	65	Healthy
7/24/2013	56	Healthy
8/5/2014	47	Healthy

### LVI Range:

78-100	Exceptional
43-77	Healthy
0-42	Impaired