

Please find survey results for Lakes Monroe, Jesup and Harney and LVI summary for these lakes. Most change was observed in Lake Jesup with large stands of beneficial aquatic/wetland plants establishing on the north shore as well as hydrilla infestation. Photos are attached of this area.

On **November 18, 2009**, Seminole County Lake Management Gloria Eby and Dean G Barber surveyed the aquatic plants in Lake's Monroe, & Jesup:

Lake Monroe

Most of the hydrilla observed was on southwestern and west side of the lake to a depth of 4.5 ft. Hydrilla was inter-dispersed with eelgrass, which was to a depth of 5 ft. In these populations, hydrilla was more abundant and more prevalent on the surface than the eelgrass, but not dense enough to shade out the eelgrass. Very little hydrilla or eelgrass was noted on the north and east side of the lake, were in previous years there were dense populations. In fact, little other SAV was seen, except for small populations and fragments of coontail and southern naiad. Cattail populations are still sparse, still showing signs of impact from T.S. Fay. Although the previous survey noted expansion of bulrush populations, the plant is still reduced from pre Fay levels. Over 70 acres of water hyacinth were present with 130 acres of water lettuce. FWC AHRE planting at Wayside Park are excellent, especially since cordgrass and several trees have been fenced so people accessing the shore have a clear path around the plants. Secchi was 2 ft.



Lake Jesup

A new population of hydrilla was observed from the highway 417 bridge east 0.3 miles. The population was dense with about 40% occurrence along the shore to a depth of 1 foot. Some coontail was observed within the hydrilla. Hydrilla was also observed at and west of Black Hammock Fish Camp and adjacent to a small residential creek in the SE corner of the lake. Hydrilla has been previously reported at the latter two sites. The AHRE site 1 treated common reed continues to die, however, there is regrowth of this plant, para grass and cattails that needs to be treated in preparation for the 2010 AHRE spring planting. Also east of the Hwy 417 bridge, from the tree line to the waters edge, this habitat is full of native wetland and aquatic plants including: frogs fruit (*Phyla nodiflora*) cordgrass, pickerelweed, jointed flatsedge (*Cyperus articulatus*), fireflag, and bulrush. A beautiful sight to behold. Eight acres of water hyacinth

were present and 4 acres of water lettuce. Much more acres of both were in the adjacent marsh. Secchi was 1.4 ft in 2.5 ft.



Harney:

On **November 20, 2009** Seminole County Lake Management Gloria Eby and Thomas Calhoun surveyed Lake Harney:

Emergent aquatic plants that were found include; knot grass (*Paspalidium geminatum*), three square (*Scirpus americanus/pungens*), pickerel weed (*Pontaderia chordata*) and bulrush (*Scirpus californicus*). Invasive emergent plants found include; torpedo grass (*Panicum repens*), cattails (*Typha*) and common reed (*Phragmites australis*).

The invasive aquatic plant, hydrilla (*Hydrilla verticillata*), which historically has been competing for submersed space with the native submersed aquatic vegetation (SAV), primarily eelgrass (*Vallisneria americana*) and road grass (*Eleocharis baldwinii*) was not observed. The dominant SAV was eelgrass with thick biomass, healthy and mostly just under the surface out to a depth of 3 feet. However this plant is restricted to the western shoreline. Recovery of the plant in the north (excluding river confluence), south and eastern shoreline since TS FAY has not been observed. Hydrilla was not observed on the deep side of the eelgrass and no tubers were seen.

Less than 0.3 combined acres of water hyacinth (*Eichhornia crassipes*) and water lettuce (*Pistia stratiotes*) were observed.

Secchi reading during this survey was 2 feet out 3.3 feet. Water elevation at Harney was 2.1 feet at the USGS monitoring station.

Lake Vegetation Index (LVI)

On **July 8, 2009**, Seminole County Lake Management Program (Marianne Pluchino, Dean G Barber and Marie Lackey), FDEP (David Scharr) and FWC (Kelli Gladding) surveyed the aquatic plants in Lakes Monroe and Jesup and on **August 11, 2009** surveyed Lake Harney (Gloria Eby, Marianne Pluchino, Dean G Barber) conducting the Lake Vegetation Index (LVI).

A LVI is used to assess a water body's health by documenting the aquatic and wetland plants in 4

of 12 randomly chosen lake sectors. During Monroe and Jesup assessments, two boats were used with 2 sectors surveyed by each vessel. All 4 sectors are represented in this summary.

On July 8, 2009, Lake Monroe received a score of 45 in the “Healthy” range but this is down from August 13, 2008 score of 56. A list of the exotic invasive plants include; alligator weed (*Alternanthera philoxeroides*), water hyacinth (*Eichhornia crassipes*), hydrilla (*Hydrilla verticillata*), common reed (*Phragmites australis*), water lettuce (*Pistia stratioides*) and cattail (*Thypha sp.*). Some of the beneficial natives include; eelgrass (*Vallisneria Americana*), coontail (*Ceratophyllum demersom*), sawgrass (*Cladium jamaicense*) and lemon bacopa (*Bacopa caroliniana*). The secchi (water clarity) at the time of assessment was 2.47 feet at a depth of 5 feet.

On July 8, 2009, Lake Jesup received a score of 51 in the “Healthy” range but this was down from July 23, 2008 score of 57. A list of the exotic invasive plants include; alligator weed (*Alternanthera philoxeroides*), water hyacinth (*Eichhornia crassipes*), common reed (*Phragmites australis*) and water lettuce (*Pistia stratioides*). The Secchi (water clarity) at the time of inspection was 1.68 feet at a depth of 5 feet.

On 11 August 2009, Lake Harney received a score of 61 in the “Healthy” range but this was down from the July 23, 2008 score of 75. A list of the exotic invasive plants include; alligator weed (*Alternanthera philoxeroides*), water hyacinth (*Eichhornia crassipes*), hydrilla (*Hydrilla verticillata*), common reed (*Phragmites australis*), water lettuce (*Pistia stratioides*) and cattails (*Thypha sp.*). Some of the beneficial natives include; eelgrass (*Vallisneria Americana*), lemon bacopa (*Bacopa caroliniana*), jointed flat sedge (*Cyperus articulates*), knot grass (*Paspalidium geminatum*), pickerel weed (*Pontaderia chordata*) and three square (*Scirpus americanus*).