

Prairie Lake Survey 2009-2010

On **10 December 2009**, Seminole County Lake Management Program personnel Gloria Eby, Dean G Barber, Thomas Calhoun, lake association president Bill Hemphill, FWC biologist Ryan Hamm and City of Altamonte Springs Danielle Marshall surveyed the aquatic plants in Prairie Lake. Hydrilla was observed sparsely in few small populations in the inshore area, mostly around docks and access areas on the south side of the lake. Hydrilla was present to a depth of 12 ft., but not as plentiful as observed on previous surveys. Native submersed aquatic vegetation (SAV) continues to dominate the bottom from shallow water to 14 ft. The most abundant SAV was the macro-algae stonewort, which was observed in both the small and large stonewort. Both stonewort and southern naiad were observed to 14 ft. Other SAV included: lemon bacopa, coontail, muskgrass, road grass, badytears, pondweed, bladderwort, and eelgrass. All of these native SAV are well established, especially the southern naiad, stonewort, bladderwort and eelgrass, and with the triploid grass carp fish, are a key factor in checking the spread of hydrilla.

The dominant emergent aquatic plant continues to be the invasive torpedo grass, which is present on most resident's waterfront. Unless managed it will continue to expand impacting native aquatic plants, especially the maidencane grass and lake rush (*Fuirena scirpoidea*), which are excellent fish habitats. The June 20, 2009 Prairie Lake plantings are continuing to expand with some loss to wave action. These sites do require maintenance, especially to prevent torpedo grass from taking over the site again. However, as these native plants expand and establish dominance, they will require less maintenance. Secchi (water clarity) was 10.2 ft. in 20 ft., continued improvement from the 1 October 2009 reading of 8 ft. The historic average from the county's watershed atlas (<http://www.seminole.wateratlas.usf.edu/>) is 8.33 feet.

Bill discussed a Prairie Lake General Meeting possibly in march and the next planting event for Prairie Lake will be Saturday, September 11th, 2010.

Happy New Year (burr!!)

On **26 January 2010**, Seminole County Lake Management Program personnel Gloria Eby, Dean G Barber, Thomas Calhoun, lake association president Bill Hemphill and FWC biologist Ryan Hamm surveyed the aquatic plants in Prairie and Pearl Lakes. Hydrilla was observed sparsely in a few small populations in the inshore area, mostly around docks and access areas on the south side of the lake. Hydrilla was present to a depth of 15 ft., but not as plentiful as observed on previous surveys. Native submersed aquatic vegetation (SAV) continues to dominate the bottom from shallow water to 10 ft. The most abundant SAV was the macro-algae stonewort (*Nitella spp*), which was observed in both the small and large stonewort. Stonewort (*Nitella spp*), bladderwort (*Utricularia radiata*), Eel Grass (*Vallisneria Americana*) and southern naiad (*Najas guadalupensis*) were all observed to 10 ft. Other SAV included: coontail (*Ceratophyllum demersum*), road grass (*Eleocharis baldwini*) and pondweed (*Potamogeton illinoensis*). All of

these native SAV are well established, especially the southern naiad, stonewort, bladderwort and eelgrass, and with the triploid grass carp fish, are a key factor in checking the spread of hydrilla.

The dominant emergent aquatic plant continues to be the invasive torpedo grass (*Panicum repens*), which is present on most resident's waterfront. Unless managed it will continue to expand impacting native aquatic plants, especially the maidencane grass and lake rush (*Fuirena scirpoidea*), which are excellent fish habitats. The June 20, 2009 Prairie Lake plantings are continuing to expand with some loss to wave action. These sites do require maintenance, especially to prevent torpedo grass from taking over the site again. However, as these native plants expand and establish dominance, they will require less maintenance. Secchi (water clarity) was 15 ft. in 20 ft. The historic average from the county's watershed atlas (<http://www.seminole.wateratlas.usf.edu/>) is 8.33 feet.

In Pearl Lake Hydrilla was found to a depth of 12.5 feet. However the dominant SAV found was stonewort. Stonewort (*Nitella spp*) as well as, bladderwort (*Utricularia radiata*), Eel Grass (*Vallisneria Americana*) and southern naiad (*Najas guadalupensis*) were all observed to 11 ft. The secchi reading at the time of inspection was 12 feet.

On **25 March 2010**, Seminole County Lake Management Program personnel Gloria Eby, Dean G Barber (consultant), Thomas Calhoun (Assistant Biologist), and Bill Hemphill (Prairie and Pearl Lake Association President) surveyed the aquatic plants in Prairie and Pearl Lakes. **Prairie Lake's** hydrilla was observed in few/sparse populations in the inshore area and also sparse in water depths of 14 feet. In both cases, the hydrilla plant was short, less than 4-8 inches, winter stressed, with small growth buds. Overall, hydrilla was reduced as noted in previous surveys, because of recent aquatic herbicide treatments, and impact from both the triploid grass carp fish and the winter plant die back. Native submersed aquatic vegetation (SAV) continues to be dominant from the inshore shallow water to 12-14 feet. The most abundant SAV were the macro-algae stonewort, which is thickly covering the bottom, showing strong spring growth, expanding southern naiad, bladderwort (*Utricularia radiata*) and eel grass. Other SAV observed included: coontail, road grass, babytears, another bladderwort (*Utricularia inflata*) and pondweed (*Potamogeton illinoensis*). Most of these native SAV were expanding with their new spring growth. Hopefully these healthy native SAV will greatly assist the grass carp in checking the spring hydrilla growth.

The dominant emergent aquatic plant continues to be the invasive torpedo grass (*Panicum repens*), which is present on most resident's waterfront. Native emergent aquatic plants, including maidencane grass, lake rush, and pickerelweed are already showing spring growth and should be expanding along several waterfronts. More lakefront owners are leaving more vegetation across their waterfront. This is GREAT! Most June 20, 2009 Prairie Lake plantings are looking good with the planted aquatic plants establishing and expanding. All these sites do need maintenance, especially to prevent torpedo grass from establishing and expanding. Several

will be included in the next planting event, scheduled for 11 September 2010. Secchi (water clarity) was 13 ft. in 14.7 ft.

In **Pearl Lake** hydrilla was found at 16 feet, however the plant was sparse throughout the lake showing impact from the previous Aquathol liquid treatment. The dominant SAV continues to be stonewort. Stonewort, bladderwort (*Utricularia radiata*), and southern naiad were all observed to 11.5 ft, with eelgrass to 7 ft. Like in Prairie Lake, hopefully the native SAV, recent treatment and triploid grass carp will check any hydrilla spring expansion. Filamentous algae was thickly covering the bottom to a depth of 3 ft, especially adjacent to the eastern shore. The algal bloom is more likely from the inflow of nutrients from the recent rainfall events. The canal between the two lakes which was previously reported as having dense mats of hydrilla, was recently treated successfully by Mr. Hemphill. Secchi was 11.8 ft in 16.8 ft.

On May 26, 2010, Gloria Eby (Seminole County [SC] Senior Environmental Scientist), Marianne Pluchino (SC Senior Environmental Scientist), Dean G Barber (SC Consultant), Thomas Calhoun (Assistant Scientist), David Scharr (FDEP) and Day McClanahan (FDEP) surveyed the aquatic plants and conducted a Lake Vegetation Index (LVI) of the lake. The LVI was created by the Florida Department of Environmental Protection as a rapid screening tool for ecological condition; it determines how closely a lake's flora (aquatic vegetation) resembles that of an undisturbed lake.

We will be surveying Pearl lake in the next coming weeks and update you on this as well.

Thanks and hope to see you on September 11th!

On **2 July 2010**, Seminole County Lake Management Program personnel Gloria Eby, Dean G Barber (consultant), Thomas Calhoun (Assistant Biologist), and Bill Hemphill (Prairie and Pearl Lake Association President) surveyed the aquatic plants in Pearl Lakes. In Pearl Lake hydrilla was found to 16 feet. The dominant SAV was southern naiad (*Najas Guadalupeensis*) found to a depth of 7.6 feet. Stonewort (*Nitella spp*), bladderwort (*Utricularia radiata*) were observed to 8 ft, with eelgrass to 3 ft. Secchi was 11.8 ft in 16.8 ft. The native SAV continues to expand and out compete hydrilla on the shallow side of the lake. Also found during the inspection was pondweed (*Potamogeton illinoensis*). Pondweed is an indicator of good water quality, it likes clear water and is an important waterfowl food. Some of the shoreline plants found include; torpedo grass (*Panicum repens*), maidencane (*Panicum hemitomon*), cattails (*Typha spp.*), fire flag (*Thalia geniculata*) and bulrush (*Scirpus californicus*). Seechi (water clarity) reading at the time inspection was 11.5 feet in 16.8 feet of water.

On **June 17, 2010**, Seminole County Lake Management Program personnel Gloria Eby, Thomas Calhoun (Assistant Biologist), Jim Dipple, and Bill Hemphill (Prairie and Pearl Lake Association President) surveyed the aquatic plants in Prairie Lake. **Prairie Lake's** hydrilla is expanding in the inshore area in a depth of 1 to 4 feet. Hydrilla was also found to a depth of 10 feet but only sparse. Native submersed aquatic vegetation (SAV) continues to be dominant from the inshore

shallow water to 15 feet. Bill Hemphill will be coordinating treatment in the inshore area for hydrilla. No additional grass carp were suggested at this time.

The most abundant SAV were the macro-algae stonewort (*Nitella sp.*), southern naiad (*Najas guadalupensis*), eelgrass (*Valeisenaria Americana*), bladderwort (*Utricularia radiata*), coontail (*Ceratophyllum demersum*), road grass (*Eleocharis baldwinii*), baby's tears (*Micranthemum glomeratum*), and pondweed (*Potamogeton illinoensis*). Worth noting is the recent expansion of the native SAV pondweed (*Potamogeton illinoensis*). Pondweed is a water quality sensitive plant and currently only found in a few lakes around Seminole County. The dominant emergent aquatic plant continues to be the invasive torpedo grass (*Panicum repens*), which is present on most resident's waterfront. Native emergent aquatic plants found include: maidencane grass (*Panicum hemitomon*), lake rush (*Fuirena scirpoida*), duck potato (*Sagittaria lancifolia*) and pickerelweed (*Pontederia cordata*).

Most of the June 20, 2009 Prairie Lake plantings are looking good with the planted aquatic plants establishing and expanding. All these sites do need maintenance, especially to prevent torpedo grass from establishing and expanding. Several will be included in the next planting event, scheduled for 11 September 2010. Secchi (water clarity) was 15.1 ft. in 24.5 ft.