

On **25 September 2009**, Dean G Barber (Seminole County [SC] Consultant) & Thomas Calhoun (SC Assistant Biologist) surveyed Lake Myrtle's south pool, its middle marsh and its tributaries. In the south pool, the wildlife island's plantings are continuing to expand, doing well and well established over the islands. However, all except the NW site, which has had work crews on it several times, needs maintenance of the invasive plants, especially dog fennel (*Eupatorium capillofolium*) and primrose willow (*Ludwigia octovalvis* & *L. peruviana*). Less than 40% of the residential planted shoreline had established well. Southern naiad (*Najas quadalupensis*), a submersed native, was the dominant aquatic plant, established to a depth of 8 feet and covering most of this pool. The plant was at or near the surface, impeding navigation throughout the pool. The only other submersed aquatic vegetation (SAV) found in the south pool was road grass (*Eleocharis baldwinii*), which was seen only adjacent to the shore. North of the south pool at the crossroads leading into the large central marsh, hydrilla (*Hydrilla verticillata*) was established from this site throughout the marsh and its tributaries. In the adjacent deep NE pool, hydrilla is established to a depth of 7 feet covering 30% of the pool. This total expansion of hydrilla was a significant change for the worst, as hydrilla, an aggressive invasive plant, will continue to expand throughout the lake, becoming the dominant plant, impeding navigation and reducing aquatic plant diversity. Other native submersed aquatic vegetation (SAV) found included: musk grass (*Chara spp.*), bog moss (*Mayaca fluviatilis*), stonewort (*Nitella spp.*), and bladderwort (*Utricularia gibba*). Highland Drive canal was completely covered with frog's bit (*Limnobium spongia*). This plant looks a lot like water hyacinth (*Eichhornia crassipes*) also a floating plant. Not as invasive as water hyacinth, however, it has expanded significantly over the last several months covering 1/3 of the canal. The end of the Secchi (water clarity) was 3.1 ft in depth of 6 ft in the south pool and 6.8 ft in a depth of 13 ft in the NE deep pool.

Recommendations:

- 1) Stock the south and middle Myrtle Lake with triploid grass carp, recommend at least 3 carp/acre of lake. The carp will control the southern naiad in the south pool and hydrilla in the middle marsh and its tributaries. One concern is that if the carp remove most of the southern naiad in the south pool, hydrilla could expand into that location. Therefore, other native SAV needs to be introduced into this pool. Possible SAV could include: eelgrass (*Vallisneria americana*), chara, stonewort and/or bladderworts.
- 2) Hire a contractor to spray the frog's bit as soon as possible. This plant will continue to expand until it covers the entire Highland Drive canal.

On **December 17, 2008**, Gloria Eby (Seminole County[SC] Lake Manager) & Dean G Barber (SC Consultant) surveyed Myrtle Lake from the shore. The BioSphere plantings on the four wildlife island are doing very well. Over 90 percent of the re-vegetated species, mostly aquatic and wetland plants, are expanding. Jody, SC's herbicide contractor, Applied Aquatic was present. We reviewed aquatic plant spraying of the lake's vegetation with him, especially the BioSphere planted islands, which need particular attention of invasive plant species establishing within the vegetated areas, especially primrose willow (*Ludwigia octovalvis/peruviana*) and torpedo grass (*Panicum repens*).

One native submersed aquatic plant, hair grass (*eleocharis baldwinii*) has established independently and seems to be doing well throughout this area, especially adjacent to the lake's

shoreline. Hopefully this and other native submersed aquatic vegetation (SAV) will establish naturally. We have been reviewing possible introduction of other native SAV, possibly eelgrass (*Vallisneria americana*), and/or pondweed (*Potamogeton illinoensis*). During the previous November survey, the invasive exotic submersed aquatic plant, hydrilla (*Hydrilla verticillata*) was observed in two locations of greater Myrtle Lake. One site only 100 yards from the managed lobe of the lake. Established native SAV would help restrict the expansion of hydrilla into new locations. Additionally, the present population of hydrilla in the lake needs to be addressed from a management point. Native SAV previously observed in greater Myrtle Lake include: bladderwort (*Utricularia inflata*), and southern naiad (*Najas quadalupensis*).

Some organic sediment is floating to the surface. The amount that is coming up from the bottom is low, especially because the cookie cutter work was done in the fall and with the water temperature dropping in the winter months, less organic substrate has filled with gas and come to the surface. If the work had been done in the spring/summer, there would have been more sediment coming up from the bottom. This will continue to be monitored for review in later months.