

Calendar year 2012 Aquatic Plant Management Plan for Lake Seminole

This report will list the target plant and any planned activities associated with management operations.

I. SUBMERSED

The Record of Decision for the Lake Seminole Hydrilla Action Plan GA-FL dated June 1998 is the controlling document for management activities associated with hydrilla. This document and the associated Final Supplement to the Master Plan and Final Supplement to the Environmental Impact Statement define a general plan for hydrilla management activities on Lake Seminole. All hydrilla control activities for 2012 will be within the guidelines of this document. The Final Supplement to the Master Plan and Final Supplement to the Environmental Impact Statement (EIS) did not address other nuisance aquatic plant management activities, e.g., water hyacinths, giant cutgrass, Asian marshweed, common reed, American lotus, fanwort, etc, other than in general terms of acceptable percent coverage for the four management compartments on the lake. Management of these types of invasive aquatic plants was addressed in two earlier EISs – 1) Lake Seminole and Jim Woodruff Lock and Dam, AL-FL, and GA, Operation and Maintenance Final Environmental Impact Statement, 1976, and 2) Aquatic Plant Control Program, Mobile District, Final Environmental Impact Statement, 1978.

Two primary methods of control will continue to be used to manage the submersed vegetation levels (chemical and biological). In the chemical arena, the primary herbicides used will be endothall, diquat dibromide, fluridone, penoxsulam, flumioxazin and copper compounds. In the biological arena there will be continued vigilance on monitoring the past releases of triploid grass carp, hydrilla flies, and hydrilla weevils. Alligator weed flea beetle continues to keep alligator weed under a maintenance level in most areas. No additional triploid grass carp will be released into the Fish Pond Drain or Cypress Pond confinement area in 2012. The hydrilla fly appeared to have sporadic impacts on the hydrilla population over the past few years.

The following actions will be undertaken to help manage aquatic vegetation levels on Lake Seminole. Maps of submersed vegetation treatment areas have been included. The maps indicate general areas for herbicide treatments; the specific areas and treatments may change based on conditions at the time of application.

a. CHEMICAL:

A table with the areas listed including acreage, timing, herbicide to be used, and map plate number can be located at the end of this section and a complete set of maps including this year's treatment plans and past areas identified for treatment is located at the end of the report.

- 1. Endothall:** Plans are to treat a total of 231 acres of hydrilla with endothall.

2. **Diquat / Flumioxazin Combination:** Plans are to treat approximately 47 acres of hydrilla with a combination of diquat and flumioxazin.
3. **Diquat:** Plans are to treat a total of 483 acres of submersed vegetation with using diquat. The target plants being hydrilla and/or Asian marshweed.
4. **Triclopyr / 2, 4-D Combination:** Plans are to treat 36 acres of watermilfoil and Asian marshweed with a mix of triclopyr and 2,4-D.
5. **Endothall / Diquat Combination:** Plans are to treat approximately 94 acres of hydrilla with mix of endothall and diquat.
6. **Endothall / Fluridone Combination:** Plans are to treat a total of 24 acres of hydrilla with endothall and fluridone.
7. **Endothall / Penoxsulam Combination:** Plans are to treat a total of 79 acres of hydrilla with endothall and penoxsulam.
8. **Endothall / Flumioxazin Combination:** Plans are to treat a total of 6 acres of hydrilla with endothall and flumioxazin.

Table containing list of areas for treatment in 2012. The map plate number refers to the attached set of map plates.

Area Name	Acreage	Map Plate	Target Plant	Comments
Brockett's Slough	48	23&24	Hydrilla	Recreation, channel access
Buena Vista Upper	25	46&55	Hydrilla	Recreation, fisheries habitat
Buena Vista West	16	46	Hydrilla	Recreation, fishery habitat
Bully Arnold North Lower	11	29	Hydrilla	Recreation, boat ramp access to river
Bully Arnold North Upper	9	29	Hydrilla	Recreation, boat ramp access to river
Bully Arnold Ramp	3	29	Hydrilla, Cabomba	Recreation, boat ramp

Area Name	Acres	Map Plate	Herbicide	Comments
Bully Arnold River	11	29	Hydrilla, Limnophila	Boat ramp access to river, fisheries habitat
Chattahoochee Park Basin	3	12	Watermilfoil, Algae	Recreation, bank fishing
Corps Boat Basin	3	3	Hydrilla	Operations, Corps boat house
Corps Boat Basin Channel	2	3	Hydrilla	Operations, Boat Basin access
Cypress Pond	35	21	Watermilfoil, Limnophila	Channel, fisheries habitat
Cypress Pond Barrier	4	21	Hydrilla, Cabomba, Limnophila, pondweed	Operations, electric barrier
Desser	2	47	Hydrilla, Cabomba, Limnophila	Recreation, boat ramp
Desser Lower Westside	24	47	Hydrilla	Fisheries habitat
Desser Upper	20	47	Hydrilla	Fisheries habitat
Eastbank Campground	6	3	Hydrilla, watermilfoil	Recreation, access to Eastbank Campground
Eastbank Canal	0.5	3	Cabomba, Coontail	Recreation, Eastbank Campground
Eastbank Ramp	10	3	Hydrilla, watermilfoil	Recreation, Ramp, Campground
Faceville Landing			Hydrilla	Recreation, Ramp, Campground, Fisheries habitat
Fairchild's Ramp	13	29	Hydrilla	Recreation, fisheries habitat, boat ramp
Fairchild's Slough	41	29	Hydrilla	Recreation, fisheries habitat
Fireman's Cut	26	22&23	Hydrilla, Cabomba	Recreation, channel access from Flint river to Spring Creek

Area Name	Acres	Map Plate	Herbicide	Comments
FPD Barrier	5	30	Hydrilla, Limnophila	Operations, electric barrier, Limnophila
FPD Lower Section 1	11	21	Hydrilla	Recreation, Fish Pond Drain channel Access to main lake body
FPD Lower Section 2	11	21	Hydrilla	Recreation, Fish Pond Drain channel Access to main lake body
FPD Lower Section 3	13	21	Hydrilla	Recreation, Fish Pond Drain channel access to main lake body
FPD Lower Section 4	11	21	Hydrilla	Recreation, Fish Pond Drain channel Access to main lake body
FPD Lower Section 5	11	21	Hydrilla	Recreation, Fish Pond Drain channel Access to main lake body
FPD Lower Section 6	21	21	Hydrilla	Recreation, Fish Pond Drain channel Access to main lake body
FPD Upper Section 1	6	30	Hydrilla	Recreation, channel access from Rays Lake to State Park
FPD Upper Section 2	27	21&30	Hydrilla	Recreation, channel access from Rays Lake to State Park
FPD Channel	18	27	Hydrilla	Recreation, Fish Pond Drain channel Access to main lake body
Frog Pond Channel	6	21	Limnophila	Recreation, Fisheries Habitat
Hickory Pond	6	21	Limnophila	Recreation, Fisheries Habitat
Hickory Pond Barrier	6	22	Hydrilla	Operations, electric barrier

Area Name	Acres	Map Plate	Herbicide	Comments
Holly Isles Canal	10	21	Limnophila	Limnophila, channel access
Hwy 271	5	11	Hydrilla	Recreation, bank fishing
Kelly's Slough	12	23	Cabomba	Subdivision, fisheries
Lewis Pond	275	30	Limnophila	Channel, recreation, fisheries habitat
Little Dothan	3	38	Hydrilla	Channel, access to subdivision
Parramore Run	9	38	Hydrilla	Recreation, boat ramp access
Parramore Landing	9	38	Hydrilla	Recreation, boat ramp access
Pear Orchard Head	14	10	Hydrilla	Recreation, fisheries habitat
Pear Orchard Lower	11	11	Hydrilla	Recreation, fisheries habitat, subdivision access
Pear Orchard Middle	10	11	Hydrilla, Cabomba	Recreation, fisheries habitat, subdivision access
Pear Orchard Upper	8	11	Hydrilla, Cabomba, Naiad	Recreation, fisheries habitat, subdivision access
Pickle Slough	23	30	Limnophila	Fisheries habitat, access to Lewis Pond
Ranger Station Inner	4	20	Hydrilla	Operations, access to Ranger Station
Ranger Station Outer	5	20	Hydrilla	Operations, access to Ranger Station
River Junction Ramp	5	12	Hydrilla	Recreation, boat ramp
Sealy Ramp	2	21	Hydrilla	Recreation, channel to boat ramp

Area Name	Acres	Map Plate	Herbicide	Comments
Sealy Run	8	12&21	Hydrilla	Recreation, channel for River to Sealy Ramp
Seminole Lodge Channel	9	11	Hydrilla	Recreation, marina, boat ramp, channel
Seminole State Park	25	21&30	Hydrilla, Limnophila	Seminole State Park
Sneads Park	22	11	Hydrilla	Recreation, swimming, bank fishing
Spring Creek Park Channel	6	22&31	Hydrilla, Cabomba	Recreation, marina
Spring Creek Park East	6	31	Hydrilla, Cabomba	Recreation, marina
Spring Creek Park Marina	4	31	Hydrilla, Cabomba	Recreation, marina
Spring Creek Park West	8	31	Hydrilla	Recreation, marina
Ten Mile Still	6	23	Hydrilla	Recreation, ramp, GA DNR shed
Three River Campground	7	11	Hydrilla	Recreation, campground
Trails End Marina	8	20	Hydrilla, Cabomba, Limnophila	Recreation, marina
Turkey Pond	21	21	Limnophila	Recreation, fisheries habitat
Turkey Pond Drain	34	21	Limnophila	Recreation, channel
Van Zandt	27	23	Cabomba	Fisheries, subdivision
Wingate's Marina	20	23	Hydrilla, Cabomba	Recreation, marina, channel
Windmill Cut	3	21	Hydrilla, Cabomba	Channel, access from Spring Creek to Cypress Pond and Fish Pond Drain

b. BIOLOGICAL:

1. Triploid Grass Carp (*Ctenopharyngodon idella*):

The triploid grass carp are confined within two areas, known as Fish Pond Drain and Turkey Pond Drain with low voltage electric barriers. Monitoring of the submersed vegetation within the confinement areas will continue. Hydrilla within the Fish Pond Drain area has been reduced dramatically. Asian marshweed has expanded and herbicide treatments will occur inside both barriers for this plant. Native vegetation within the Cypress Pond area has not been reduced as significantly as in the Fish Pond Drain area. The electronics for the low voltage electric barriers are inspected once a year by Smith-Root, Inc., usually during February. Personnel at the resource manager's office telephonically check the barriers each morning to ensure normal operations. In addition, if there is a problem during any off time, the barriers will notify a list of individuals to alert them of the problem. There are no current plans to release triploid grass carp this year.

2. Hydrilla Leaf-mining Fly (*Hydreillia pakistanae*):

There will be no anticipated new releases of the Indian hydrilla fly within the confines of Lake Seminole in 2012. We do expect the existing hydrilla fly population to have some impact on the hydrilla in the release areas.

c. MECHANICAL: At the present time, there are no plans to utilize mechanical harvesters.

II. FLOATING

a. WATER HYACINTH (*Eichhornia crassipes*):

The Corps anticipates treating approximately 1500 acres of water hyacinths during 2012 with glyphosate and 2,4-D. Water hyacinth treatments will start in early April. This early treatment should reduce the amount of herbicide needed for control in late summer. In previous years when the American lotus "dropped out" in October, the water hyacinths would float free and pack behind the dam. Early season treatments of American lotus reduce this phenomenon. American lotus will again be targeted early in the year for treatment to help manage the water hyacinth population.

III. EMERGENT

a. GIANT CUTGRASS (*Zizaniopsis miliacea*):

We expect to treat approximately 1000 acres of giant cutgrass using glyphosate. A large portion of the treatments will be in the Chattahoochee River arm of the lake.

The treatments will consist of treating the outer edges of the cutgrass beds; this will be a continuing program attempting to reduce the surface acreage of giant cutgrass to the shoreline. In an effort to reduce the biomass, prescribed fire may be used where appropriate.

b. **COMMON REED** (*Phragmites australis*):

Approximately 25 acres of phragmites are scheduled for treatment. These areas will be treated twice, once in the spring and again in mid-summer using glyphosate. Phragmites continues to expand with small isolated pockets becoming established in the Chattahoochee River arm of Lake Seminole from Fairchild's to Three Rivers. In an effort to reduce the biomass, prescribed fire may be used where appropriate.

c. **GIANT CANE** (*Arundo donax*):

The populations have steadily increased along the Chattahoochee River arm of the lake. The giant cane typically is growing behind the cutgrass at the water/land transition making it difficult to reach with standard equipment.

d. **AMERICAN LOTUS** (*Nelumbo lutea*):

The American lotus populations have steadily expanded and are causing recreational navigation problems in parts of the lake. The Chattahoochee River arm of the lake has the highest infestation. Early summer treatments of American lotus have been successful. If the American lotus is prevalent again this year, treatments will start in early summer, probably during June. Treatments will start near Parramore's and extend down the Chattahoochee River to include the Howells Landing area. The anticipated treatment area will be approximately 200 acres.

IV. **GENERAL**:

An index map for Lake Seminole aerial photography and the associated plate maps with general treatment areas are attached.