

2015 TREATMENT OF HYDRILLA

PROPOSED TREATMENT SCHEDULE: Initial whole-lake treatment is tentatively scheduled for February 26th, 2015, and is dependent on creation of the MSBU and environmental conditions in February. The hydrilla treatment can take upwards of 90 days for full treatment. It is important to have your email address on file in order to receive timely communications and treatment updates. Since treatment is dependent on water chemistry, plant biology, and weather, we will be testing the herbicide concentrations at the suggested schedule below and following up accordingly with you on the results

- Day 1 – Apply herbicide and begin monitoring concentration.
- Day 10 – Lake Survey taking 5 water samples to measure concentration of product in water (called FasTest); plan 2nd treatment according to test results.
- Day 21 to 30 days – Apply 2nd treatment according to test results (Called “bump” treatment).
- Day 10 following 2nd treatment – Lake Survey taking 5 water samples to measure concentration of product in water (called FasTest).
- Day 42 or 21 days following 2nd treatment – Apply 3rd treatment according to test results (bump treatment).
- Day 90 – Final lake survey as determined by tests/progress of treatment.

TREATMENT ADVISORY: A community message will be distributed to owners of lakefront property via post cards one week before treatment is to begin; and a reverse 911 (r911) calling system will send a phone message update the day prior to initiating treatment. The Lake Management Program will provide important updates via email throughout the course of the treatment.

HERBICIDE: The herbicide to be used during the February treatment is Sonar. This is a systemic herbicide that requires introduction into the lake at specific concentration levels for a specific time period. Sonar is a highly effective aquatic herbicide used to selectively manage undesirable aquatic vegetation, such as Hydrilla in freshwater lakes. Sonar is absorbed through the leaves, shoots, and roots of susceptible plants, and destroys the plant by interfering with its ability to make and use food.

IRRIGATION ADVISORY (*applicable only to properties that use lake water for irrigation*): Use of Sonar requires a precautionary irrigation advisory when targeted concentration is above 10 parts per billion (ppb). The precautionary advisory is based upon studies demonstrating that Sonar can damage turf grass if using treated lake water for irrigation purposes above concentration levels of 10ppb which will be the case. There is a potential that the irrigation advisory would be in effect throughout this duration. Seminole County Lake Management Program will issue a r911 call and email update once the levels are at or under 10ppb. The irrigation advisory is specific to only those who use Lake Howell lake water for irrigation purposes.

ALGAE BLOOM: As previously advised, with the extensive biomass of hydrilla present, there may be a significant algal bloom associated with the treatment; much like what was experienced during the summer months, if not worse. Some areas are already experiencing this from cold weather effects on the plant. However, given cooler temperatures yielding higher dissolved oxygen levels, a fish kill is less likely than in spring or summer temperatures. **Photos:** Examples of algal blooms associated with hydrilla decay/treatments.



TRIPLOID GRASS CARP FISH: The stocking of additional grass carp fish will be evaluated in cooperative efforts with Florida Fish and Wildlife Conservation Commission and Seminole County and repairs to the required grass carp fish barrier by the Friends of Lake Howell.

FUTURE UPDATES

As we progress through the treatment, the Lake Management Program will send email updates on observations, test results, and clearance of the precautionary irrigation advisory. Be sure to register your email (via MSBUProgram@seminolecountyfl.gov) if you want to receive treatment updates and other future updates specific to Lake Howell MSBU activities. Thank you!

Hydrilla

(*Hydrilla verticillata*)

Hydrilla is a submersed, much-branched, perennial herb, usually rooted but frequently with fragments seen drifting in the water. Stems can be more than 35 feet long. Hydrilla once was used as an aquarium plant, and has become a weed of economic importance.



This submersed plant native to Africa and Southeast Asia is a major aquatic weed throughout most of the world's warmer climates. Hydrilla was introduced into Florida in the early 1950s and by the early 1990s occupied more than 140,000 acres of public lakes and rivers. Intensive interagency management has reduced the above ground portions of hydrilla. However, once established, hydrilla produces reproductive tubers numbering in the millions per acre in the soils of Florida waterways. These tubers still impact nearly 140,000 acres and represent hydrilla re-growth potential, if not continually managed immediately after sprouting. Researchers have not discovered methods to prevent or minimize tuber formation.

Hydrilla can grow an inch or more per day and can be found in water only a few inches deep to the deepest parts of Florida's lakes and rivers. In Florida, hydrilla produces dense canopies covering entire surfaces of waterbodies within one or two years after it becomes established. Hydrilla disperses quickly throughout a waterway by stem fragments, buds, runners and tubers.

Why Treat Hydrilla?

Hydrilla blocks waterways and limits boat traffic, recreation, flood control and wildlife use. Almost 80 percent of hydrilla biomass is in the upper 2 feet of the water column producing a dense canopy near the water surface. This exotic pest plant shades out native submersed plant species, reduces oxygen levels and degrades water quality.

Environmental damage caused by Hydrilla:

- Hydrilla canopies lower dissolved oxygen concentrations, reducing aquatic life
- Hydrilla decay doubles the amount of sediments that accumulate in a water body.
- Dense hydrilla infestations can restrict water flow resulting in flooding along rivers and canals.
- Hydrilla canopies produce ideal breeding environments for mosquitoes.
- Dense hydrilla canopies shade out native submerged vegetation lowering biodiversity.
- Hydrilla infestations restrict recreational activities such as boating, swimming and fishing.

Hydrilla identification features:

- Submersed leaves in whorls of 4 to 8
- Saw teeth on leaf margins
- Leaf underside usually with one or more bumps on midrib
- Tubers