

Friends of Deep Creek Lake

Fact Sheet

HYDRILLA IN DCL



Hydrilla is a “noxious” aquatic weed according to the EPA. This classification indicates “it is more concerning than the fact that there is Eurasian Watermilfoil already in the lake. *Hydrilla* is faster growing than Eurasian Watermilfoil. It forms dense, impenetrable mats of grass,” reports Lee Karrh head of the DNR SAV research team. (*Cumberland Times* 10/11/13). ***Hydrilla*** spreads quickly and aggressively. Its presence in the lake will impact recreational enjoyment as well as lake property values, tourism, County and State tax revenues and possibly the operation of the hydro-electric dam.

Hydrilla found in DCL. During the fall 2013 the DNR SAV transect study, the dive team observed sprigs of *hydrilla* in two locations. “This is the first time *hydrilla* has been found in the lake “, according to Karrh. The SAV team conducted the first part of a lake-wide survey on October 4-6, finding *hydrilla* in 10 more sites. DNR will complete the survey during the week of October 21; additional sites may be found.

Not a surprise. Though *hydrilla* has only been in the U.S since the 1960’s, it has been in Maryland for a long time”, according to Karrh. It should be of no surprise that *hydrilla* has now come to the lake.

How did it get into DCL? According to Bruce Michael, Director of DNR Resource Assessment Services “**Hv [*hydrilla*] was likely introduced to DCL from plant fragments attached to boats lunched in DCL that were previously in water bodies containing Hv.**” DCL has no program to prevent importation of invasive and noxious species, a protection practice used increasingly by lake managers across the country.

DNR response. The agency has mobilized its Invasive Response Matrix Team, drawing in outside experts to assist the agency. DNR Deputy Secretary Dawson has made the following commitment: “**We hope to have potential management recommendations that can be vetted in the next 2 months with implementation available for the spring of 2014.**”

What is needed— a rapid response implementation of a comprehensive program. DNR must immediately move from the study phase to a three part program which includes 1) prevention of further importation of *hydrilla* into the lake requiring all off-lake boats to be cleaned prior to launching; 2) implementation of appropriate methods to control growth; and 3) public education and involvement campaign to ensure program support and compliance. The DNR has responded with high level of concern. Special recognition should be given to the hard working SAV dive team led by Lee Karrh. We urge stakeholders and lake users to cooperate and fully support with all DNR initiatives in the coming weeks and months.

Who’s in Charge? The Policy and Review Board. By state law, the PRB is tasked with oversight of all lake management. To address the *hydrilla* threat, the PRB must act with urgency to convene a meeting of all appropriate officials for the purpose of establishing a plan and timeline for implementation of the three part program of prevention, control and public education. Once a rapid response plan is in place, the PRB must continue to monitor progress on implementation, provide local assistance to ensure effective program roll out and support an aggressive, comprehensive community education and outreach effort.

HYDRILLA — The Plant, Distribution in the U.S and Maryland, Impacts on the Lake, components of a Management Program

The Plant. *Hydrilla* is a submersed, non-native freshwater perennial herb, growing in lakes, rivers, reservoirs, ponds, and even ditches. *Hydrilla* is a very fast growing and rapidly spreading plant quickly outcompeting other species. Like the invasive SAV Eurasian Watermilfoil already found in DCL, *hydrilla* roots in deeper waters than other SAVS, needs less light to grow and aggressively expands by tuber and root growth as well as plant fragmentation.

Hydrilla lower light tolerance, allows the plant to grow longer each day. It has the capacity to “absorb carbon from the water more efficiently than other plants, so can continue to thrive during the summer when carbon can become limiting. It can also store extra phosphorus, so when lack of this nutrient limits the growth of other plants, *hydrilla* can use what it has stored. It is tolerant of a wide range of water conditions, though water quality and sediment density can influence tuber production and growth.” (*Hydrilla in Lake Austin* by Casey Oliver and Eric Watters, undated.)

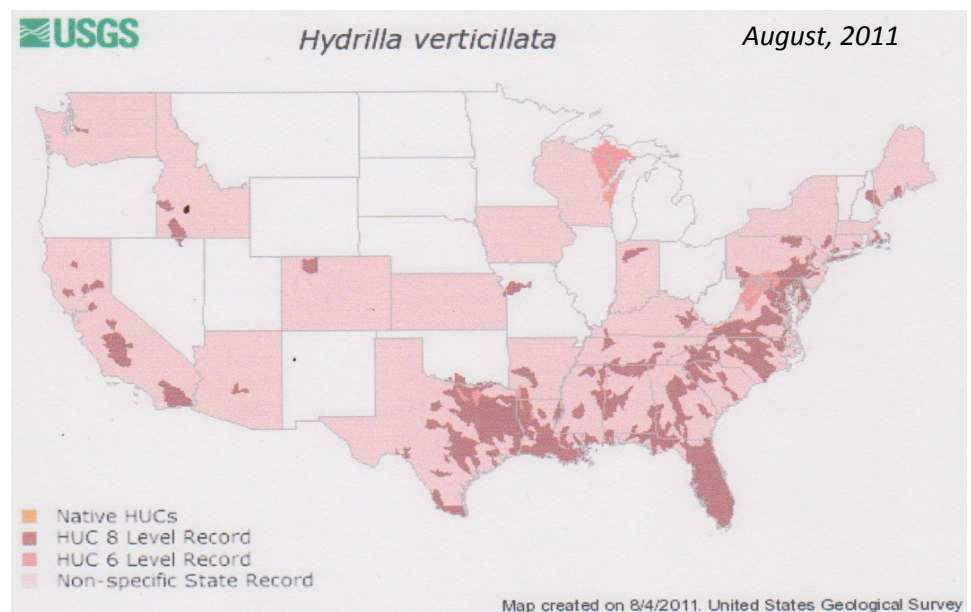
Plants can grow up to 25 feet in height, slowing once they near the lake surface. Once near the surface, the plant can become detached and form free floating mats. (*Aquarium and Pond Plants of the World.*)

Tubers may remain dormant yet viable for several years in the lake sediment. “It has been shown that one tuber can lead to the production of over 5,000 new tubers per square meter. The tubers can withstand ice cover, drying, ingestion and regurgitation by waterfowl, and herbicides. (*Hydrilla in Lake Austin* by Casey Oliver and Eric Watters, undated.)

Distribution in the U.S. and Maryland.

Hydrilla is imported into the US for use in aquariums and crossed into streams in Florida in the 1960s. It's now found across the country.

Hydrilla came to Maryland in 1982 with major infestation on the Potomac River and soon after *hydrilla* was found in the Upper Chesapeake Bay.



Maryland lakes have had *hydrilla* since 1993, when it was found in Centennial Lake in Howard County and in Piney Run Lake in Carroll County in 2002. Both of these are County owned lakes. (*various Baltimore Sun articles*)

In 2001, the Aquatic Nuisance Species Task Force of the US Fish and Wildlife Service released a map showing *hydrilla* in Garrett County (*Protect Your Waters and Stop Aquatic Hitchhikers, undated.*)

In June 2009 the Invasive Species of Concern in Maryland organization named *Hydrilla* as “Invader of the Month” and reported: “Many of the tributaries, reservoirs and lakes in Maryland have extensive populations of the submersed aquatic plant *Hydrilla*. ”

Even with all these observations of *hydrilla* in Maryland and even Garrett County coupled with findings of invasive species Eurasian Watermilfoil and Virile Crayfish in the lake, DNR has not implement a importation prevention program at Deep Creek Lake.

Impacts on lakes. Lists of negative impacts of *hydrilla* are found throughout the literature. Below are some of those which may surface at Deep Creek Lake:

- ◆ makes recreational activities such as swimming, boating, skiing, and sport fishing difficult and dangerous if not impossible and may ruin boat engines and jam steering equipment;
- ◆ degrades water quality due to dense vegetation decomposition;
- ◆ crowds out beneficial native vegetation and species with a dense vegetative canopy;
- ◆ clogging of permitted intake sources, such as the ones at WISP/ASCI and the Thousand Acres golf course;
- ◆ increases sedimentation through inhibiting water flow;
- ◆ harbors the vectors of human and animal diseases;
- ◆ blocks docks, marinas, and boat launching site.

(*WeedScience, North Carolina State University; Hydrilla in Lake Austin by Casey Oliver and Eric Watters, undated; Protect Your Waters, ANS Fact Sheet, undated.*)

Economic impacts to be expected. There will be the direct costs to the State for implementation of the 3 components of a *hydrilla* management program and for on-going control efforts.

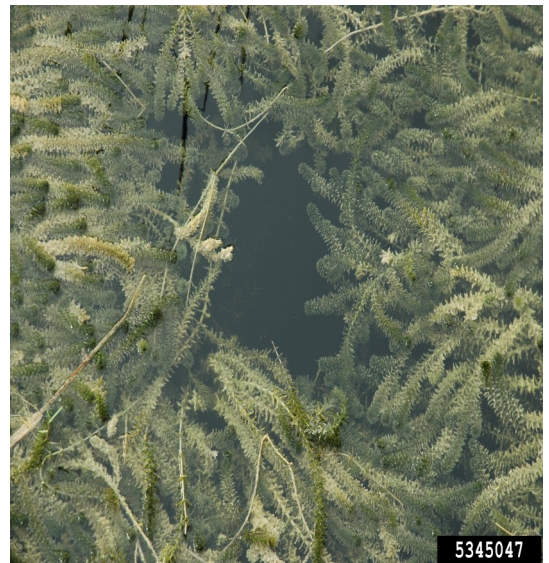
Locally the degradation of the lake waters and recreational uses will impact on lake-related residential and commercial property values, tourism-related businesses and tax revenues for both the County and the State.

These costs will be added onto the already established negative economic impacts in the 10 sediment impacted coves listed by DNR this summer. There is also a threat to the operation of the hydro-electric dam which may increased maintenance costs and potential clogging of water intake valves and loss of revenues.

***Hydrilla* Management Program.**

***Hydrilla* control has a whole range of special challenges.** Existence of *hydrilla* is seen by some states as a violation of the federal Clean Water Act, requiring immediate action. According to the Environmental Law Institute, such determination would call for Total Maximum Daily Load study to assessment extent of water quality impairment. (*The Role of Aquatic Invasive Species in State Listing of Impaired Waters and the TMDL Program: Seven Case Studies.*)

Though generally considered a state with strong environmental protection laws, Maryland has yet to adopt legislation requiring control of nuisance species in the state, Even In Texas, there is a two thousand dollar fine given to any person with *hydrilla* fragments attached to their boat



***Hydrilla* Management program components**

- 1. Prevention further importation of hydrilla as well as other invasive species.**
- 2. Application of appropriate control methods in an on-going program.**
- 3. Public engagement through education and compliance.**

Component 1: Importation prevention. Preventing further hydrilla from coming into DCL will be a huge undertaking requiring the cooperation of all who use the lake.

“All it takes for an invasion of the weed is a one-inch cutting” reports DNR SAV expert Lee Karrh (*Cumberland Times, 10/11/13*). A preventive approach uses the “clean boat” model, being implemented by lake managers across the county. Basically it prohibits launching of any off lake board until it is thoroughly cleaned.

Boat launching should be limited to approved sites with a cleaning stations and staff on site.

The boat, bilge, bait bucket and trailer must be thoroughly clean with a high pressure hose and collection and removal of runoff from the lake buffer strip.

Launching would be allowed only during those times when cleaning station is staffed.

The prevention program operation costs should would be covered by fees from the clean boat certification sticker. Boats which are only used on Deep Creek Lake would receive a local boat sticker.

Boats which will be trailed from DCL to other lakes should be cleaned prior to departure to prevention carrying DCL invasive species to other lakes. Lake boats should be thoroughly clean when pulled for storage.

Component 2: Control measures. There are three major methods of *hydrilla* control: biological, chemical, and mechanical.

Biological. The most effective biological method is the introduction of sterile grass carp. Grass carp's preferred food is *hydrilla*. Other methods include insects which eat different parts of the plant or introduction of native plants to stop the spread of *hydrilla*.

Chemical. EPA controls the chemicals which can be used for *hydrilla* in an attempt to discourage emergence of mutant strains. “There are three EPA-registered herbicides effective against hydrilla growth. These include; fluridone (Sonar®), endothal (Aquathal®), and copper compounds.” These herbicides do not affect hydrilla seeds and tubers so repeated application are necessary to control *hydrilla* regrowth.” Maryland Code prohibits use of herbicides in DCL so DNR would have to secure an exemption for their use.

Mechanical. Cutting/ harvesting machines have been used but appear to not be widely recommended. This is a labor intensive, expensive control option and studies show the *hydrilla* grows back quickly. (*Western Aquatic Plant Management Society*)

Component 3. Public engagement through education and compliance. Central to DNR implementation of an effective prevention and control program for *hydrilla* in DCL will be an extensive outreach. DNR will need to contact all lake stakeholders and users to provide education as to the importance and necessity of the *hydrilla* control management program. DNR must work with all sectors to ensure full compliance with the “clean boat” program .

DNR already has some materials which are appropriate. There is a wealth of materials from other states and organizations which are available to support their efforts.

Compliance mechanisms will also need to be developed, probably using Natural Resources Police for enforcement. . Additional NRP staff, paid out of the State budget, will be needed the first years of implementation.

Ultimately the *Hydrilla* Management Program will rely on the capacity of DNR and the PRB to reach out to all lake stakeholders and users, provide appropriate education and get everyone engaged in program implementation and compliance.



Hydrilla Fact Sheet produced by Friends of Deep Creek Lake

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