



Lake Tillery

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Progress Energy, state agencies, work to control hydrilla growth in Lake Tillery

Editor's Note: Lakewide surveys conducted in 2008-2009 indicate that hydrilla, a non-native aquatic plant, has increased in Lake Tillery. Progress Energy is working with state natural resource agencies and NC State University to address the hydrilla infestation in Lake Tillery. This article is an update to a previous article provided in the last newsletter edition.

What is hydrilla?

Listed as a federal noxious weed, hydrilla is considered to be a major aquatic weed throughout the world's warmer climates. The plant forms stems reaching up to 35 feet in length and dense mats that surround lake shorelines. From its introduction to the U.S. through the aquarium trade in the early 1950s, the weed had spread by the 1990s to 21 states, including North Carolina and South Carolina. It is able to quickly dominate freshwater ecosystems mainly by regrowth of stem



Close-up picture of hydrilla taken from the Swift Island boating access area.

fragments, and also reproduces by growth of axillary buds (turions) and subterranean tubers, which can remain viable for more than four years. Hydrilla can tolerate a wide range of environmental conditions, including low light levels, high or low nutrient waters, and freezing temperatures.

The dense mats formed by hydrilla can potentially clog water intakes and make recreational boating difficult. Once hydrilla becomes established in a water body, it is very difficult to eradicate owing to the plant's tuber root system.

It can be controlled by various methods including sterile grass carp, insects, approved aquatic herbicides and mechanical harvesting. However, most of these methods are very expensive and/or time consuming.

Hydrilla's history in Lake Tillery

Hydrilla was discovered in the Swift Island boating access arm of Lake Tillery during the summer of 2006. Progress Energy worked with the N.C. Division of Water Resources, the N.C. Wildlife Resources Commission and NC State University in an attempt to control this infestation, using chemical applications from 2006 through 2008. However, the chemical treatments failed to stop the spread of this invasive aquatic weed in the lake. The 2008-2009 surveys found that the aquatic weed has spread in several areas throughout the lake, totaling about 153 acres.

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Lake level details

*Hydro information on lake levels at Lake Tillery and Blewett Falls Lake can be obtained by calling **1.800.899.4435**. The message also provides information on planned water releases for the Pigeon River site of the Walters Plant, west of Asheville.*

Tree removal

From time to time, Progress Energy Shoreline Management receives requests from lessees to remove trees from Progress Energy property. As stated in Section 6.1-3 of the [Guidelines for the Use of Leased Properties at Lake Tillery](#), prior written approval is required for the removal of any trees. No tree larger than three inches in diameter shall be removed unless the tree is dead, dying or poses a safety hazard. To request a tree removal, please provide the following information to Progress Energy Shoreline Management:

- [Written request, stating the reason for removal](#)
- [Drawing of lease area showing property lines, allocation lines, boat house, shoreline and location of tree the lessee is requesting to be removed](#)
- [Pictures of tree the lessee is requesting to be removed \(helps expedite the process\)](#)
- [Letter signed by a certified arborist stating the reason the tree should be removed \(not required but will expedite the process\)](#)

Upon receipt of this information, a shoreline management representative will visit the site if necessary to determine the extent of damage to the tree. If it is determined the tree can be removed, a letter will be mailed to the lessee granting permission to remove it.

Any tree removed from Progress Energy property must be replaced with one that is native to the area. To find a list of native species, please see the document at www.ces.ncsu.edu/forestry/pdf/ag/ag636_03.pdf. ■



Can grass carp help stop the spread of hydrilla in Lake Tillery?

With the carp's voracious appetite and ability to efficiently remove aquatic weeds, that's the hope, and the plan. In fact, the grass carp is the star of Lake Tillery's Hydrilla Management Plan (see the article about hydrilla). An initial stocking of the species was made to the lake in the fall of 2009 and another stocking is scheduled this year.

Grass carp serve two purposes: The fish controls nuisance aquatic vegetation and is a food fish. It was first brought to the U.S. in the early 1960s for aquatic plant control studies. Many scientists believed the grass carp would be an effective biological control method for aquatic weeds. But, fears of establishing reproducing populations and reports of environmental damage prompted most states to outlaw their use. In 1981, researchers discovered a way to make sterile, nonreproducing grass carp by exposing fertilized eggs to heat shock. The method results in male and female fish having three groups of chromosomes, or triploid, instead of the normal two groups of chromosomes. Sterile fish made by this process are referred to as "triploid grass carp."

These sterile fish have effectively removed the threat of establishing reproducing populations and in some cases have made them a cheaper, safer alternative to chemical and mechanical control methods.

The grass carp is a member of the minnow family but can weigh up to 110 pounds and range as long as three feet. It has an oblong slender body and a wide scaleless head with a very short



snout. It's dark gray, silver to olive, with lighter sides and clear to gray-brown fins.

Grass carp feed on a wide range of aquatic vegetation, and are capable of consuming 40 percent to 300 percent of their body mass per day of plant material depending on their age and size. Active feeding occurs at 7-8°C (45-46°F) and intensive

feeding requires 20°C (68°F). The species prefers softer, low-fiber plants and effectively controls such aquatic weeds as Eurasian watermilfoil, hydrilla, pondweed, fanwort, water hyacinth, musk grass elodea, Brazilian elodea, southern naiad, coastal arrowhead, eastern bladderwort, watermeal and duckweeds.



When it comes to angling, there have been reports of beneficial effects of grass carp on ecosystems from some locations. The species has been used in Germany and the Netherlands for its positive effects on sport-fish productivity, growth and survival. Triploid grass carp help remove the excessive biomass of weeds, resulting in faster organic breakdown and decreased retention of nutrients by the plants, and more aerated, sunlit waters bearing more habitable space.

Peak aquatic weed consumption and triploid grass carp growth occurs during late spring through summer at water temperatures from 68°F to 90°F. Triploid grass carp are usually good at controlling aquatic weeds for seven to eight years and can weigh as much as 25 pounds or more.

References

Pierce, A. Barry. 1983. Grass carp status in the United States: A review. *Environmental Management*. Volume 7, Number 2, March.

Cudmore, B., and N.E. Mandrak. 2004. Biological synopsis of grass carp (*Ctenopharyngodon idella*). *Can. MS Rpt. Fish. Aquat. Sci.* 2705: v + 44p.

Fishbase. 2008. *Ctenopharyngodon idella*, Grass carp.

Guidelines for open burning and trash, leaf and grass disposal

Open burning on Progress Energy property is prohibited, as are leaving trash on company property and disposing of grass and leaves in lake waters. When it is determined that these actions have taken place on leased property, the lessee involved will be assessed a penalty fee and/or have their lease cancelled. You can be fined up to \$10,000 for illegal open burning.

Please read the tips below from the N.C. Division of Air Quality regarding what cannot be burned:

- Garbage, paper and cardboard
- Tires and other rubber products
- Building materials, including lumber
- Wire, plastics and synthetic material
- Asphalt shingles and heavy oils
- Paints, household chemicals and agricultural products

Homeowners can burn yard trimmings – excluding logs and stumps – if it's allowed under local ordinances, no public pickup is available and it doesn't cause a public nuisance.

Other allowable burning includes campfires, outdoor barbecues and bonfires for festive occasions. Landowners also can open burn vegetation to clear land for rights of way, provided that:

- Prevailing winds are away from built-up areas and roads
- Fires are at least 1,000 feet away from occupied buildings
- Burning is done between 8 a.m. and 6 p.m.

Remember, burn permits issued by the N.C. Division of Forest Resources, its agents or any local government do not excuse a person from following these state air quality rules. ■

Hydrilla update, continued from page 1

The hydrilla infestation is the first reported for Lake Tillery as well as the Yadkin-Pee Dee chain of lakes. Hydrilla occurs in the nearby river basins – Catawba and Cape Fear – so its introduction route into Lake Tillery likely came unintentionally from a boat trailer or bait live well. Because hydrilla is listed as a federal noxious weed, it cannot be legally transported for purposeful introduction into lakes. Public education signs regarding non-native aquatic plants and ways to minimize their spread have been posted by the N.C. Wildlife Resources Commission at all public access areas.

Plan of action

In 2009, as a result of the continuing spread of hydrilla in the lake, state agencies and NC State once again partnered with Progress Energy to develop the Lake Tillery Hydrilla Management Plan. The plan outlines specific recommendations for controlling the aquatic weed, including the use of sterile grass carp as a primary control method. Grass carp are herbivorous fish native to Asia that have proven to control hydrilla and other noxious aquatic weeds (see accompanying newsletter article on grass carp). An initial stocking of grass carp in the lake occurred in the fall of 2009, with a follow-up stocking slated for 2010. Future stockings will depend upon the level of hydrilla control achieved with the current stockings. Because grass carp eat aquatic plants, there are no expected negative effects on the existing fish population in Lake Tillery.

Help stop the spread of hydrilla

What can you do to help prevent the spread of hydrilla? Please check your boat and trailer for vegetation fragments and remove any plant fragments. If you suspect hydrilla has become established in lake areas other than those already noted, please contact Progress Energy Shoreline Management personnel at

1.877.893.0001. ■

New law targets younger boaters

A new boating law goes into effect on May 1, 2010, in North Carolina.

The law will require boaters under the age of 26 who operate vessels powered by a motor of 10 horsepower or greater on a public waterway to meet the requirements for boating safety education as set by *General Statute 75A-16.2*.

“Those boaters must take and pass a National Association of State Boating Law Administrators-approved course before taking the helm, or otherwise be in compliance,” said Capt. Chris Huebner, the state boating safety coordinator.

All vessel operators may be asked by law enforcement officers to present a certification card or proof of compliance.

The N.C. Wildlife Resources Commission administers free boating safety education



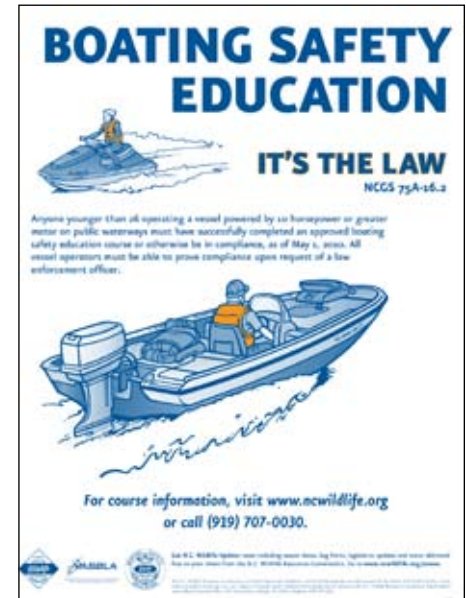
courses that fulfill requirements of the new law. To check course availability, go to www.ncwildlife.org or call **919.707.0030**.

The U.S. Coast Guard Auxiliary, U.S. Power Squadron and other organizations, including Internet providers, also offer approved courses (which can include a fee).

About N.C. Wildlife Resources Commission

Since 1947, the North Carolina Wildlife Resources Commission has been dedicated to the conservation and sustainability of the state's fish and wildlife resources through research, scientific management, wise use and public input. The Commission is the state regulatory agency responsible for the enforcement of fishing, hunting, trapping and boating laws and provides programs and opportunities for wildlife-related educational, recreational and sporting activities. To learn more, visit www.ncwildlife.org.

Get N.C. Wildlife Update – news including season dates, bag limits, legislative updates and more – delivered free to your inbox from the N.C. Wildlife Resources Commission. Go to www.ncwildlife.org/enews.



Frequently asked questions

I'm selling my property. How do I cancel my lease with Progress Energy?

If you have sold your property at Lake Tillery, we ask that you let us know the date your property was sold, the new owner's name and your telephone number in the event we have follow-up questions. We will update our records and contact the new owners regarding their new lease agreement.

My address has changed. Whom do I contact?

You can contact Progress Energy by phone, e-mail or in writing with your new address and telephone number. Please be sure to include your lease number, which can be found on the lease tag attached to your facility or on the top right-hand corner of your lease or lease invoice.

How do I contact Progress Energy Lake Management?

You may contact us by any of the following ways:

Phone: Toll-free, **1.877.893.0001**

E-mail: lake.management@pgnmail.com

Mail: Progress Energy
Lake Management
P.O. Box 1551 – PEB 3A
Raleigh, NC 27602

Toll-free lake management number

In order to serve the residents of Lake Tillery, our toll-free number is available to address lake management issues or questions: **1.877.893.0001**. Please do not hesitate to call with any questions. Remember to listen to all menu options in order to better direct your call.

For more information go to progress-energy.com/community/realestate/tillery.asp.