

Permitting Process - Stocking Sterile Grass Carp for Hydrilla Management in Public Waters Managed by a Public Body (Governmental Entity or Public Utility)

The N.C. Division of Water Resources' (DWR) [Aquatic Weed Control Program](#) assists North Carolina citizens, local governments, public utilities, and other government agencies in the control of aquatic weed infestations, including [hydrilla](#), a non-native aquatic nuisance species. DWR employs a variety of management methods for hydrilla control, one of which is stocking the affected water body with sterile grass carp. Sterile grass carp are herbivores that consume aquatic vegetation including hydrilla. DWR has successfully controlled aquatic nuisance plants by using sterile grass carp in Lake Gaston, Lake James, Lookout Shoals Lake, Mountain Island Lake, Lake Norman, Tuckertown Lake, Badin Lake, and Lake Tillery.

N.C. Administrative Code [15A NCAC 10C .0211 POSSESSION OF CERTAIN FISHES](#) allows certified sterile grass carp to be bought, possessed and stocked locally for control of aquatic vegetation under a permit issued by the [N.C. Wildlife Resources Commission](#) (Commission). DWR applies for sterile grass carp stocking permits from the Commission when implementing a vegetation control plan. The Commission does not approve permits for individual landowners wanting to stock sterile grass carp in reservoirs owned or managed by a public body, government entity or public utility. Stocking excess sterile grass carp can impact important native vegetation within the waters stocked as well as adjacent waters if the sterile grass carp escape. Native aquatic vegetation provides valuable habitat to game and nongame fishes that serves as nursery and foraging habitat and to waterfowl and other wildlife. Eliminating this habitat can alter the ecological balance of a water body. DWR applies to the Commission for a sterile grass carp stocking permit annually for each reservoir in which they are managing hydrilla.

Process for Grass Carp Permitting for Hydrilla Management

1. DWR identifies the need to use sterile grass carp and contacts the Commission to discuss the proposed stocking. DWR also collaborates with a variety of stakeholders, such as the lake manager, private organizations, marine commissions and utility providers (e.g., Duke Energy, Dominion Energy).
2. A submerged aquatic vegetation survey is conducted to determine the extent of the hydrilla infestation.
3. DWR applies to the Commission for a sterile grass carp stocking permit.
4. Upon receiving DWR's permit application, Commission fisheries personnel review the proposed request and its potential impacts to the existing fish community, other aquatic organisms, and aquatic habitat in the water body to be stocked as well as potential downstream impacts.
5. A standard analysis is used to calculate the number of sterile grass carp needed per acre to ensure the requested stocking will be conducted using a sound science-based approach. The analysis is based on the acreage of the hydrilla infestation, the acreage of hydrilla tuber bank, and the estimated number of grass carp currently in the water body. In most waters, maintaining rate of 10-20 sterile grass carp per vegetated acre will result in control of unwanted vegetation.
6. Once the permit is approved by the Commission, DWR stocks the water body with the permitted number of sterile grass carp. Sterile grass carp are used so they cannot reproduce, and the population can be controlled and adjusted based on scientific need.
7. Sterile grass carp spend the first-year acclimating to their new habitat. Control begins during the second year when fish have acclimated to the reservoir and begin consuming vegetation.
8. Annual submerged vegetation surveys are conducted to assess the amount of hydrilla remaining in the reservoir. That survey will inform how many grass carp will be stocked the subsequent year.
9. Sterile grass carp stockings by permit and submerged vegetation surveys will be conducted annually until hydrilla has been eradicated from the reservoir.

Visit the [Sterile Grass Carp Stocking Permits](#) frequently asked questions webpage or contact the Commission's Aquatic Habitat Coordinator [Mark Fowlkes](#) at 336-527-1547.