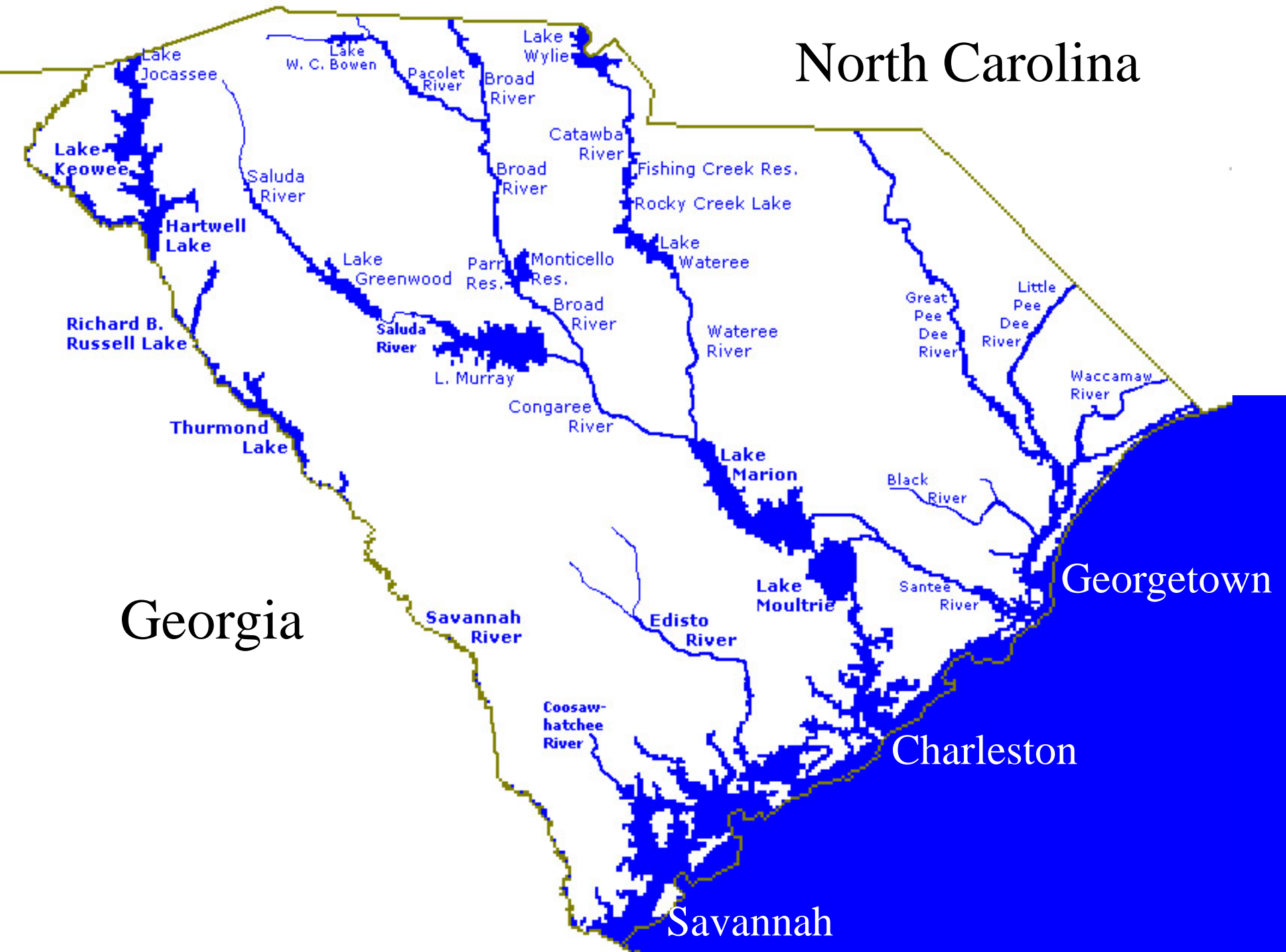


North Carolina





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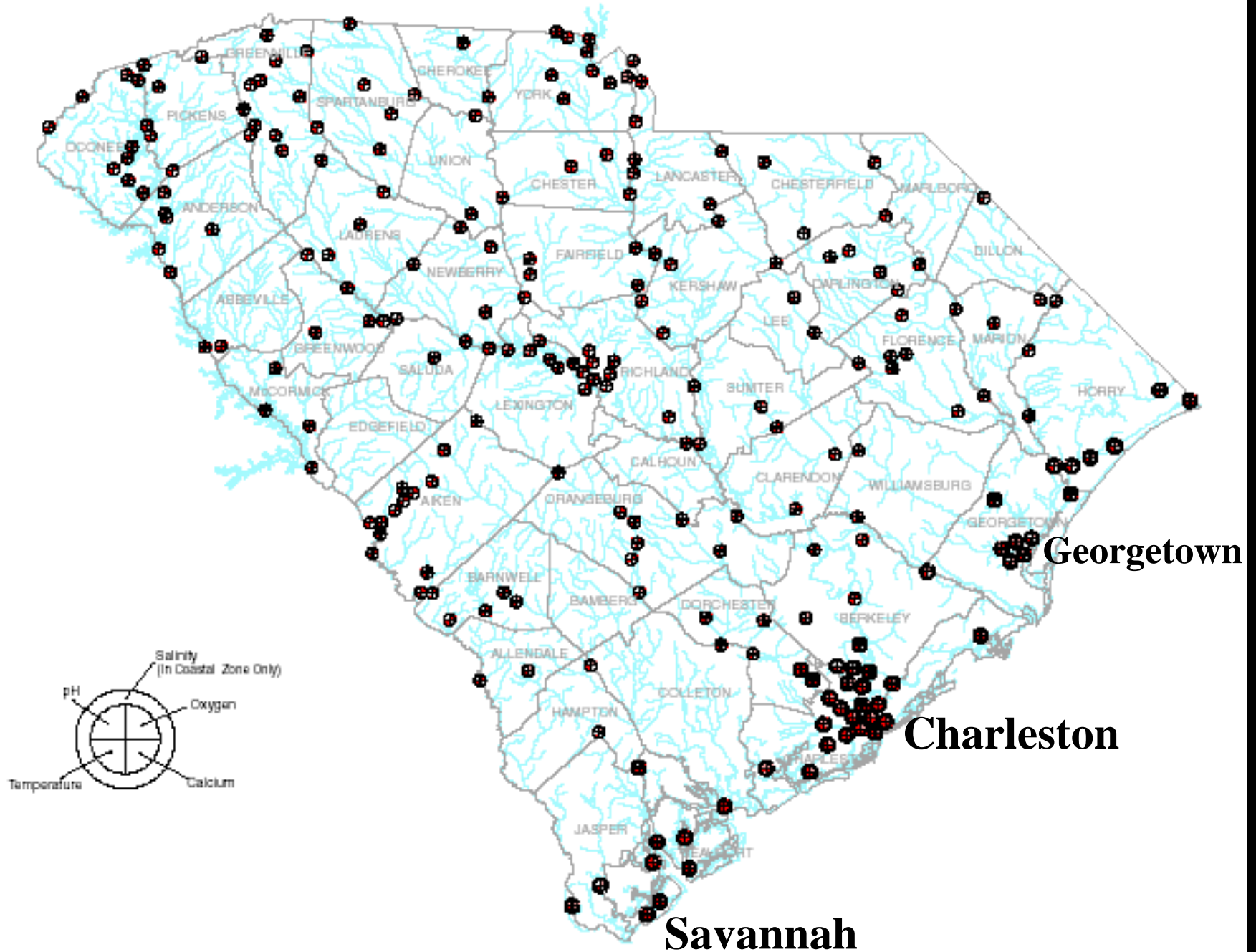




Zebra Mussels



Zebra Mussel Colonization Risk



Marine Species

- Rapana whelk
- Green mussel
- Aquarium pets (Lion fish)
- Fish, shellfish, and shrimp diseases
- Invasive aquaculture species
 - Oysters and shrimp

Pathways



State Legislation

- State Noxious Weed Act (Title 46, Chapter 23)
- State Crop Pest Act (Title 46, Chapter 9)
- **Aquatic Plant Management Act** (Title 49, Chapter 6)
- 50-13-1415 Importation, possession, or placing of hydrilla and water hyacinth.
- 50-13-1630 Importation, possessing or selling certain fish is unlawful.

Aquatic Plant Management Act

- APM Program
 - Prevent, investigate, monitor, manage aquatic plant problems in public waters
 - Identifies lead agency
- APM Council
 - Multiagency board
 - Coordinates activities, approves plans
- APM Trust Fund
 - Provides funding flexibility

Illegal Aquatic Plants

- Alligatorweed
- Brazilian elodea
- Common reed
- Eurasian watermilfoil
- Hydrilla
- Slender naiad
- Water chestnut
- Water hyacinth
- African oxygen weed
- Lymnophila
- Giant salvinia
- Water lettuce
- Purple loosestrife
- Water spinach
- Water primrose
- Exotic bur reed

Illegal Freshwater Fishes

- Freshwater electric eel
- Candiru catfish
- Diploid grass carp
- Walking catfish
- Piranha
- Stickleback
- Mexican banded tetra
- Sea lamprey
- Rudd
- Norther Snakehead

State Agencies with ANS Interests

- S.C. Department of Natural Resources
- S.C. Aquatic Plant Management Council
- S.C. Department of Agriculture
- Clemson Univ. Dept. of Plant Industry
- Clemson Univ. Extension Program
- S.C. Sea Grant Consortium

South Carolina Aquatic Nuisance Species Communications Project

S.C. Department of Natural Resources



Objectives

- Reduce the spread of ANS caused by:
 - Recreational boating, fishing, and hunting
 - Seafood consumers and industry
- Achieve contact with 25% of the target audience by June 2006
- Test the effectiveness of direct and indirect contact with key audiences.

Target Audience

- Freshwater – Recreational boaters, anglers, and waterfowl hunters.
- Marine – Seafood consumers and industry.

Freshwater Strategies

- Enhance and test delivery of information through a combination of sport shows and agency web sites.
 - Conduct surveys before and after education
- Enhance and track ANS outreach.
 - Add SAH logo to DNR material, share web links
 - Put message in new sites e.g. TV show, Rules and Regs, magazine

Marine Strategies

- Expand existing outreach to encourage shell recycling.
 - Oyster shell recycling
 - Proper disposal of shrimp parts
- Develop voluntary partnerships with the seafood industry.

Statewide Strategies

- Increase institutional capacity.
 - Formalize multi-agency ANS Task Force
 - Pursue partnerships with industry and NGO
 - Develop and implement SC ANS Mgt. Plan

**STOP AQUATIC
HITCHHIKERS!**

Protect Your Waters

[Hitchhikers](#) [Impacts](#) [Prevention](#) [Resources](#) [News](#) [Activities](#) [About Us](#)[Contact Us](#)
[FAQ](#)

Protect South Carolina Waters and Stop Aquatic Hitchhikers

Keep South Carolina aquatic resources working for you, naturally!

South Carolina boasts some of the best fishing, shelling, boating and beaches in the country. However, without the help of everyone who visits our lakes, rivers, estuaries and oceans, South Carolina's natural resources will be threatened by unassuming creatures that hitchhike with us from one source of water to another. These hitchhikers can cause economic damages to the state; for example - in South Carolina, sportfishing generates \$659 million in retail sales annually, and supports 13,600 jobs. The state has spent over \$14 million since 1985 to control nuisance aquatic weeds in public waters.

YOU CAN STOP AQUATIC HITCHHIKERS:

Freshwater



Don't Give Water
Weeds A Free Ride



Don't Transfer Fish
Between Water Bodies



Dispose of Bait
Properly

Marine



Dispose of Shrimp
Parts Properly



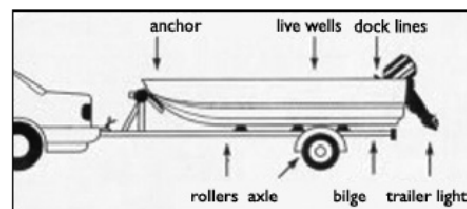
[Recycle Used
Oyster Shells](#)



Don't Release
Aquarium Animals

Recommended Boat, Motor, and Trailer Cleaning Procedure

Regular cleaning of your boat, motor, and trailer before and after using all South Carolina waters can greatly reduce the spread of aquatic nuisance species. It takes just a minute to protect our waterways.



Where to look for aquatic hitchhikers on boats.

Aquatic Nuisance Species of Primary Concern

- Aquatic Plants: Hydrilla, water hyacinth, water lettuce, Giant Salvinia, Phragmites
- Invertebrates: Green Mussels, Zebra Mussels (Not here yet, but...)
- Fish, flathead catfish, spotted bass, Asian carp, lionfish

Aquatic Nuisance Species Introduction Concerns

- Aquarium pets
- Ornamental pond plants
- Invasive bait fish and crayfish
- Invasive aquaculture species



Preventing the occurrence and spread of aquatic weed infestations in South Carolina waters can save millions of public and private dollars each year in avoided control costs.



South Carolina Noxious Weed List

| | |
|---------------------------|--|
| Alligatorweed | <i>Alternanthera philoxeroides</i> |
| Brazilian elodea | <i>Egeria densa</i> |
| Common reed | <i>Phragmites australis</i> |
| Eurasian watermilfoil | <i>Myriophyllum spicatum</i> |
| Hydrilla * | <i>Hydrilla verticillata</i> |
| Purple loosestrife | <i>Lythrum salicaria</i> |
| Slender naiad | <i>Najas minor</i> |
| Water chestnut | <i>Trapa natans</i> |
| Water hyacinth | <i>Eichhornia crassipes</i> |
| Water lettuce | <i>Pistia stratiotes</i> |
| Water primrose | <i>Ludwigia hexapetala</i> |
| African oxygen weed * | <i>Lagarosiphon major</i> |
| Ambulia * | <i>Limnophila sessiliflora</i> |
| Arrowhead * | <i>Sagittaria sagittifolia</i> |
| Arrow-leaved monochoria * | <i>Monochoria hastata</i> |
| Duck-lettuce * | <i>Ottelia alismoides</i> |
| Exotic bur reed * | <i>Sparganium erectum</i> |
| Giant salvinia * | <i>Salvinia molesta</i> S. biloba, S. herzogii, S. auriculata |
| Mediterranean caulerpa * | <i>Caulerpa taxifolia</i> |
| Melaleuca * | <i>Melaleuca quinquenervia</i> |
| Miramar weed * | <i>Hygrophila polysperma</i> |
| Pickrel weed * | <i>Monochoria vaginalis</i> |
| Mosquito fern * | <i>Azolla pinnata</i> |
| Rooted water hyacinth * | <i>Eichhornia azurea</i> |
| Water spinach * | <i>Ipomoea aquatica</i> |
| Wetland nightshade * | <i>Solanum torreyense</i> |

* Also on the Federal Noxious Weed List

Aquatic Plant Management



In South Carolina Waters

IF YOU HAVE ANY QUESTIONS OR JUST NEED MORE INFORMATION CONTACT US AT THE FOLLOWING:

www.dnr.state.sc.us/water/envaff/aquatic/index.html
E-mail: page@dnr.state.sc.us



Aquatic Nuisance Species Program
1528 Fish Hatchery Road
West Columbia, SC 29172
Phone (803)755-2836



STOP AQUATIC HITCHHIKERS
Prevent the transport of nuisance species.
Clean all equipment regularly.



Aquatic Nuisance Species Program
South Carolina Department of Natural Resources
1528 Fish Hatchery Road
West Columbia, SC 29172
Phone (803)755-2836

South Carolina

Rules & Regulations

for Hunting, Fishing & Wildlife Management Areas
July 1, 2004 - August 14, 2005

Subscribe to
South Carolina Wildlife
for the ultimate outdoor adventure!
See page 58 for details.

Stop Natural Resource Violations
Call Operation Game Thief

1-800-922-5431

(Call toll-free from your cellular phone
for reporting violations only)
*OGT (SprintCom network)
*OGT (Verizon network)



visit DNR at www.dnr.state.sc.us

Licenses now available on-line
and by phone and 24 hours a day

1-888-434-7472

\$3.95 processing fee

Not for Sale

Nuisance Aquatic Plants and Animals

Placement or introduction of some aquatic plants and animals into waters of South Carolina is environmentally unsafe and may be unlawful.

Preventing the introduction and spread of non-native, or non-indigenous, species is the responsibility of all outdoor enthusiasts. Residents and visitors should be familiar with state and federal laws and regulations on possession, movement, and introduction of non-native plants and wildlife before introducing any living material into waters of South Carolina. An intentional or unintentional introduction may be a violation.

Other than for research under permit it is not lawful to possess, sell, or place into any waters many water plants including alligatorweed, water chestnut, water hyacinth, hydrilla, or any plant on the

State or Federal Noxious Weed List.

Without a permit it is unlawful to introduce, import, possess, or transport for release any species of marine or freshwater fish or invertebrate not already found in the wild or not native to South Carolina. Exemptions are allowed for possession for exhibition purposes only by municipal zoos or parks, circuses, and public museums, scientific, or educational institutions.

The Department will not grant a permit unless it finds that the aquatic species was taken lawfully in the jurisdiction of origin and that the importation, release, or possession of the wildlife is not reasonably expected to adversely impact the natural resources or wildlife populations of South Carolina.

The Department may issue special import permits to qualified persons for research and education for specific types of non-indigenous freshwater fish, otherwise they are prohibited for possession or sale.



Examples are certain catfish, electric eel, walking catfish, piranha, stickleback, Mexican banded tetra, sea lamprey, and snakehead. Stocking and removal of non-reproducing white amur or grass carp

hybrids are lawful, but only when approved by the Department. The importation of tropical fishes, reptiles, or amphibians for sale as pets generally does not require a permit; however, the import or possession of a species otherwise protected or regulated by law may still be prohibited or allowed only under permit.

Because of the likelihood of shellfish disease introduction, it is unlawful to place oysters, clams, or mussels brought from other states into the saltwaters. Even open shells may have non-native animals attached or harbor diseases that will affect native shellfish. Shellfish growers may be permitted to import shellfish from safe waters.

Further information about nuisance aquatic plants and animals can be found on the Department's website at <http://water.dnr.state.sc.us/water/envsaff/aquatic/index.html> and by calling:

| | |
|----------------|----------------|
| Aquatic Plants | (803)755-2836 |
| Freshwaters | (803)734-3935 |
| Saltwaters | (843) 953-9390 |

Buy it. Wear it. Zip it.



- An 8 1/2 x 11 "plot" of the property. This could be any type of illustration to give the officer an overview of your property.
- A letter which states that you intend to prosecute trespassers.
- A current list of members or persons with permission to utilize your property.
- A copy of the lease agreement or a letter signed by the landowner giving approval for the Property Watch Program, if the applicant is not the landowner.

IMPORTANT: Read the statement below and sign in the provided area.

I, _____ am applying to the DNR to enroll the above property into the Property Watch Program. The DNR is not contracting with me for additional services, only to provide assistance in enforcement of natural resource and other outdoor related laws and to provide guidance on the deterrent of trespassing. I agree to hold harmless the DNR or any of its agents in the course of this agreement. I agree to post the enrolled property with the recommended signs and issue cards to all persons using the property and actively prosecute all property right violations.

Applicant Signature _____ Date _____

Landowner Signature _____ Date _____

Property Watch
PROGRAM
SC Department of Natural Resources

Official use only:

PWP Number: _____

Date Enrolled: _____

Plat: _____

LOI: _____

LOM: _____

Signs: _____

Cards: _____

Check #: _____

District: _____