Stop Aquatic Hitchhikers!™ Clean Boats Crew

Guidelines for the Illinois and Indiana Aquatic Invasive Species Volunteer Program

2012 Edition

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STOP AQUATIC HITCHHIKERS!™

Welcome to the Clean Boats Crew!

Some of Illinois and Indiana's greatest natural assets include Lake Michigan and the many freshwater lakes and rivers found inland. Illinois has 3,256 lakes (with more than 6 acres in surface area) and 87,000 ponds. Indiana possesses more than 300,000 acres of lake habitat: 500 natural (glacial) lakes, 25 public reservoirs, and more than 10,000 artificial ponds. In addition, both Illinois and Indiana are home to many rivers and streams, including some of the largest in the United States, the Ohio River in Indiana and the Mississippi River in Illinois. These waters are home to hundreds of species of fish, invertebrates, waterfowl, and plants. The Stop Aquatic Hitchhikers!™ Clean Boats Crew aquatic invasive species volunteer program is for people who care about these richly diverse waterways and who have a vision for their future.

Invasive species are non-native plants, animals, or pathogens that may cause environmental or economic harm. In their native habitats, species such as Eurasian watermilfoil, zebra mussels, and silver carp have predators and competitors that keep their populations in check. However, when these species are introduced to a new environment, important limiting factors may not be present. The invasive species may outcompete native species by growing faster and reproducing more quickly and in larger numbers. This affects the diversity and abundance of native plants and animals, changes ecosystems and food webs, and impacts recreation and industry.

Aquatic invasive species have long been recognized as a serious threat to the United States. According to Cornell University research, introduced species of animals, plants, and microbes cost the U.S. economy at least $148 billion a year in control efforts and lost revenues. Invasive aquatic plants and animals jeopardize the future of Illinois and Indiana waters.

The Clean Boats Crew program is an opportunity for volunteers to help stop the spread of aquatic invasive species across each state. Through this program, volunteers are trained to organize and conduct a watercraft inspection demonstration and education program in their community.

The mission of this program is to promote water resource stewardship by actively involving individuals in preventing the spread of harmful aquatic invasive species. To accomplish this goal, the program sponsors training workshops and has developed resource handbooks, tool kits, and educational information.

Volunteers are the key to reaching hundreds of people recreating on Illinois and Indiana waters. Volunteers who instruct boaters on how to perform watercraft inspections can help prevent new invasions and help to maintain Illinois and Indiana’s valuable water resources. Thank you for taking the time to learn, act, and protect Illinois and Indiana’s waters from aquatic invasive species.

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STOP AQUATIC HITCHHIKERS!™

Section 1:

What is the program all about?

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Prevention and Control of Aquatic Invasive Species in Illinois and Indiana

Illinois and Indiana's water resources are at great risk from invasion by nonindigenous species of plants and animals. Most of each state's rivers and streams, ponds and lakes, shorelines and wetlands provide hospitable habitat for native and invasive species alike. They are attractive and accessible for many human uses, making it all too easy for people to introduce an invasive species inadvertently as they enjoy the recreational opportunities of each state's waters.

Invasive species can disrupt food webs, foul infrastructure and recreational equipment, spoil tourism and recreational experiences, devalue waterfront property, create public health hazards and wreak havoc for water-based businesses. The now infamous *Hydrilla* is an example; it has invaded Lake Manitou in Indiana and control and eradication efforts continue after six years and 1.5 million dollars. Lakefront property values have decreased and recreational use of the lake is infrequently permitted.

The round goby was introduced via ballast water into the St. Clair River near Detroit in 1990 and has spread into all five of the Great Lakes. It is a very aggressive fish and feeds voraciously upon the eggs of bottom dwelling fishes (e.g., sculpin, darters and log perch), as well as on snails, mussels, and aquatic insects. The Great Lakes fisheries, particularly those in lakes Michigan and Erie, are threatened by this aquatic nuisance species due to its broad environmental tolerance and ability to displace native species from prime habitat and spawning areas.

Prevention is Key

The best defense for Illinois and Indiana's aquatic ecosystems is a good preventive offense. Taking steps to protect these ecosystems will also protect people's valuable property, whether it is an expensive watercraft or a waterfront home with a spectacular view.

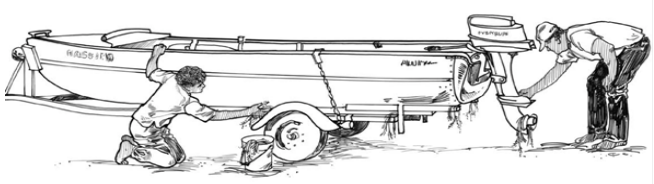
Preventing the introduction of invasive species may seem overwhelming, even impossible, because of the multitudes of potentially invasive plants and animals and the vast array of potentially affected resources. However, as political philosopher Edmund Burke is credited with saying, "No one could make a greater mistake than he who did nothing because he could only do a little," and most people can do a little. In this situation, the consequences of one careless action can be enormously destructive, and the consequences of one preventive action can be enormously constructive.

What can prevent new introductions of invasive species?

Fortunately, some of the best preventive, protective measures are simple, inexpensive, and involve just a little time, energy, readily available materials, and elbow grease. For example, if every boater spent a few minutes inspecting critical components of a watercraft and trailer and a little effort cleaning and drying the boat, that pathway of introduction would be significantly reduced.

Fortunately, research indicates that most of the owners of Illinois and Indiana's registered boats have some awareness of invasive species. The study also suggests that most boaters want to take the appropriate action, but may not do so because they're uncertain about what to do and how to do it.

So the obvious solution is to educate boaters about the steps they can take to prevent damage to the ecosystem and to their valuable equipment. That's the purpose of Clean Boats Crew – to educate boaters about the steps they can take to prevent the introduction of invasive species and to protect their boats.



The Stop Aquatic Hitchhikers!™ Clean Boats Crew
Aquatic Invasive Species Volunteer Program Vision

The Clean Boats Crew aquatic invasive species volunteer program promotes healthy ecosystems and a healthy economy by actively involving individuals in preventing the spread of harmful aquatic invasive species that threaten Illinois and Indiana's ecosystems. Volunteers will serve to inform and educate the public about how people can help prevent the spread of invasive species by inspecting their watercraft and removing aquatic plants and animals from their boats and equipment before leaving an access site.

To accomplish these objectives, the volunteer program supports:

- Watercraft inspection demonstrations for aquatic invasive species.
- Communication with the public about the laws and issues surrounding the existence, spread, and effects of invasive species on Illinois and Indiana's waters.
- Distribution of printed materials such as watercraft checkpoint cards and Stop Aquatic Hitchhiker™ stickers.
- Collection of data to evaluate the potential spread of invasive species, public awareness of invasive species issues, and the effectiveness of the invasive species program.
- Response to technical inquiries from the public concerning invasive species.

Four Reasons to Care about Aquatic Invasive Species:

1. **Economics** – The costs of controlling invasive species in the United States increase every year. A typical consumer absorbs these costs through higher water and electric bills. A Cornell University study reports that invasive species on land and water already cost the United States $148 billion annually. The Great Lakes sport and commercial fishing industry, valued at almost $4.5 billion annually, is at risk due to the growing numbers of invaders such as the zebra mussel, spiny water flea, sea lamprey, ruffe, and round goby that prey on invertebrates of all sizes, top predator fish, as well as fish eggs and small fish. The estimated cost of controlling zebra mussels in the Great Lakes now ranges from $100 to $400 million per year, according to NOAA Great Lakes Environmental Research Laboratory Director Dr. Stephen Brandt.

2. **Health** – Some invasive species may cause significant health problems. For example, in 1991 a South American strain of human cholera bacteria was found in ballast water tanks of ships in the port of Mobile, Alabama. Cholera strains also were found in oyster and fin/fish samples in Mobile Bay, resulting in a public health advisory to avoid handling or eating raw oysters or seafood. Temporary bans on commercial harvest may be put into effect when health concerns exist.

3. **Ecological** – The rapid spread of zebra mussels in the Great Lakes shows how profoundly an invasive species can alter the aquatic environment. These tiny mussels reproduce rapidly. Coupled with consumption of microscopic plants and animals, zebra mussels affect the aquatic food web, decimate native mussel/clam populations, and place valuable ecological communities' resources at risk.

4. **Recreational** – Invading species such as the sea lamprey, ruffe, and round goby can harm native fish such as lake trout, walleye, yellow perch, and catfish. They threaten a national sport and commercial fishing industry that supports 81,000 jobs in the Great Lakes. Aquatic invasive plant species such as purple loosestrife and Eurasian watermilfoil quickly established themselves and have, in some cases, replaced native plants. The proliferation of these invasive plants impairs boating, swimming and fishing, navigation and flood control, and degrades water quality, as well as fish and wildlife habitat.

(List adapted from the Aquatic Nuisance Species Task Force and the Great Lakes Panel on Aquatic Nuisance Species.)

Section 2:

Who are the people involved?

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Section 3:

What do volunteers need to know about aquatic invasive species management in Illinois and Indiana?

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Illinois and Indiana Aquatic Invasive Species

The species in the following tables are either present in Illinois and Indiana waters or not present but of concern and are considered invasive.

Plants

Common Name	Scientific Name
African elodea, oxygen weed	*Lagarosiphon major*
Blue-green algae	*Cylindrospermopsis spp.*
Brazilian elodea, common waterweed	*Egeria densa*
Cabomba, Carolina fanwort	*Cabomba caroliniana*
Common frogbit	*Hydrocharis morsus-ranae*
Common reed, giant reed	*Phragmites australis*
Curly pondweed, curled-leaf pondweed	*Potamogeton crispus*
Eurasian watermilfoil	*Myriophyllum spicatum*
Flowering rush	*Butomus umbellatus*
Giant salvinia, aquarium watermoss, kariba weed	*Salvinia molesta*
Hydrilla, water thyme	*Hydrilla verticillata*
Pale yellow iris	*Iris pseudacorus*
Parrot feather, Brazilian parrot's feather	*Myriophyllum aquaticum*
Purple loosestrife	*Lythrum salicaria*
Reed canary grass	*Phalaris arundinacea*
Water chestnut	*Trapa natans*
Water hyacinth	*Eichhornia crassipes*
Water lettuce	*Pistia stratiotes*
Water spinach	*Ipomoea aquatica*
Yellow floating heart	*Nymphoides peltata*

Animals

Common Name	Scientific Name (or Family)
Alewife	*Alosa pseudoharengus*
Asian clam	*Corbicula fluminea*
Bighead carp	*Hypophthalmichthys nobilis*
Black carp	*Mylopharyngodon piceus*
Bloody red shrimp	*Hemimysis anomala*
Chinese mystery snail	*Cipangopaludina spp.*
Common Carp	*Cyprinus carpio*
Eurasian ruffe, ruffe	*Gymnocephalus cernuus*
Fishhook waterflea	*Cercopagis pengoi*
Four spine stickleback	*Apeltes quadracus*
Goldfish	*Carassius auratus auratus*
Grass carp	*Ctenopharyngodon idella*
Inland silverside	*Menidia beryllina*
Northern snakehead	*Channa argus*
Quagga mussel	*Dreissena bugensis*
Rainbow smelt	*Osmerus mordax*
Round goby	*Neogobius melanostomus*
Rudd	*Scardinius erythropthalmus*
Rusty crayfish	*Orconectes rusticus*
Sea lamprey	*Petromyzon marinus*
Silver carp	*Hypophthalmichthys molitrix*
Spiny waterflea	*Bythotrephes cederstoemi*
Three spine stickleback	*Gasterosteus aculeatus*
Tubenose goby	*Proterorhinus marmoratus*
White perch	*Morone americana*
Yellow perch parasite	*Heterosporis sp.*
Zebra mussel	*Dreissena polymorpha*
Viral hemorrhagic septicemia, VHS	*Novirhabdovirus sp.*
New Zealand mudsnail	*Potamopyrgus antipodarum*
Red swamp crayfish	*Procambarus clarkii*
Didymo, rock snot	*Didymosphenia geminata*
Chinese mitten crab	*Eriocheir sinensis*

PREVENTION AND CONTROL IN ILLINOIS AND INDIANA WATERS

Illinois Aquatic Nuisance Species Management Plan

In 1999, Illinois adopted the Illinois State Comprehensive Management Plan for Aquatic Nuisance Species (http://www.iiseagrant.org/il-ans/media/ilansplan.pdf) which focuses on natural resources management. An additional plan was created for industrial and municipal water users.

This plan addresses the impacts of nuisance nonindigenous aquatic species in Illinois waters. and applies to the State of Illinois and the boundary waters under its jurisdiction, including the Mississippi, Ohio and Wabash Rivers, and the Illinois portion of Lake Michigan.

Nonindigenous species are plants and animals found beyond their natural ranges. An invasive species is "a species that is 1) non-native (or alien) to the ecosystem under consideration and 2) whose introduction causes or is likely to cause economic or environmental harm or harm to human health (Executive Order 13112)."

As mentioned, the model for this document was developed by the Great Lakes Commission and approved by the Great Lakes Panel on Aquatic Nuisance Species (ANS). Other state management plans (Michigan, New York, and Ohio) provided a great deal of valuable information for its development. The three goals on which this plan is based are as follows:

Goal I: Preventing new introductions of nonindigenous aquatic nuisance species into the Great Lakes and Mississippi Basin waters of Illinois.

Goal II: Limiting the spread of established populations of nonindigenous aquatic nuisance species into uninfested waters of the state.

Goal III: Abating harmful ecological, economic, social, and public health impacts resulting from infestations of nonindigenous aquatic nuisance species.

The plan focuses on prevention as the key strategy for limiting the impacts of aquatic invasive species by controlling the initial introduction and subsequent transfer from one water body to another. However, prevention techniques alone are inadequate for limiting the negative impacts caused by aquatic invasive plants and animals. It also suggests that early detection, rapid response, control, mitigation, or eradication strategies must be considered. It incorporates information and education/outreach activities, research needs and policy and legislative initiatives as key components of the overall program. Prevention strategies rely heavily on information, education, and communication. Therefore, this plan includes the full range of those activities in order to implement an effective prevention program.

“The plan recommends that the State identify pathways that disperse ANS and inform these groups on practices that limit the spread. This outreach program should focus on changing the behavior of user groups to limit the spread of targeted ANS populations in the waters of Illinois…Ensure that where appropriate, public access points such as harbors, boat ramps and marinas have interpretive displays that include information about ANS ... Establish monitoring/tracking programs to evaluate the effectiveness of information/education efforts.” (Task 2-4b,d,e)

Indiana Aquatic Nuisance Species Management Plan

Indiana completed its Aquatic Nuisance Species Management Plan in 2004 (http://www.in.gov/dnr/4627.htm). The Indiana Aquatic Nuisance Species (ANS) Management Plan outlines cost-effective management practices and measures for state and local programs to prevent and control ANS infestations.

The goals of this state management plan are designed to address different stages of ANS invasion:

Goal I. Preventing the introduction of new nonindigenous species transported from water bodies in other parts of the continent or world;

Goal II. Limiting the spread of established, reproducing ANS populations to other water bodies in Indiana and other states; and

Goal III. Mitigating the harmful ecological, economic, social, and public health impacts of established ANS populations.

Participation in the Clean Boats Crew Program helps Indiana to meet the requirements for Objective V.E. Inform and educate the public on control programs: Strategy V.E.3. Implement educational programs to reduce the transfer of invasive species. Action V.E.3.h. Participate in or adapt materials from national education campaigns.

As Illinois and Indiana move ahead with implementation of actions to prevent and control aquatic invasive species, extra care to prevent new introductions is necessary. With a more robust global economy, it is anticipated that, without a new prevention program, new introductions are highly likely. For that reason, prevention actions at the national and regional level, as well as at the individual jurisdictional level, are critical. The growth potential of certain species in a new place, uninhibited by natural predation or disease, can be explosive and cause changes in Illinois and Indiana's waters that are quick, permanent, and seriously detrimental to human, ecological, or economic health.

The highest prevention priority is the control of ballast water discharges. Ships practicing good ballast water management can greatly reduce the number of species traveling in ballast water from world ports. Barriers placed in tributaries can make it difficult for invasive species to enter the Great Lakes via natural dispersal. Actions such as checking and cleaning boats and fishing equipment can dramatically reduce the likelihood of lake-to-lake transfer of invasive species.

Several other potential transport mechanisms could also result in releases of AIS into the Great Lakes and inland state waters. Some of these vectors are: the transportation and rearing systems related to the aquaculture industry and commercial barge traffic; inter-Great Lake boating associated with research or management activities; scuba diving; the sale and distribution of fishing bait; the transfer and disposal of nonindigenous pets; plant nurseries; fish stocking activities and individual releases by anglers. Taking action at all levels to stop the introduction and spread of invasive species by all potential pathways will ultimately protect Illinois and Indiana waters from further economic and environmental degradation.

Aquatic Invasive Species Laws – Federal Legislation

One important piece of national aquatic invasive species legislation is the **National Invasive Species Act (NISA)**. For a summary of NISA, visit http://www.necis.net/intro-to-invasive-species/invasive-species-solutions/federal/naisa/. A great deal of national and international focus has been placed on ballast water because of its implication in numerous aquatic invasive species introductions worldwide. The U.S. Coast Guard is responsible for regulating ballast water management under NISA. Visit the Coast Guard Office of Operating and Environmental Standards website at http://www.uscg.mil/hq/cg5/cg522/cg5224/bwm.asp for information on regulations and links to specific ballast water programs.

Also important are the federal noxious weed regulations that define noxious weeds and establish rules restricting their movement. The Federal Noxious Weed list includes aquatic species such as hydrilla, as well as a number of terrestrial species, but does not include the well-known Illinois invaders Eurasian water-milfoil, Brazilian elodea, and purple loosestrife. Listed species cannot be moved into or through the United States without a permit. To view the complete list and associated regulations, visit the Animal and Plant Health Inspection Service (APHIS) Web site at: http://www.aphis.usda.gov/plant_health/plant_pest_info/weeds/.

The Lacey Act of 1990, later amended in 1998, prohibits importation of a list of designated species and other vertebrates, mollusks, and crustacea that are “injurious to human beings, to the interests of agriculture, horticulture, forestry, or to wildlife or the wildlife resources of the United States. The act declares importation or transportation of any live wildlife as injurious and prohibited, except as provided under the act. The zebra mussel is listed under this act. To view the act, visit: http://www.aphis.usda.gov/plant_health/lacey_act.

The Federal Injurious Wildlife Act and List

The injurious wildlife provisions of the Lacey Act prohibit introductions of particular invasive species. Under the Lacey Act, importation and interstate transport of animal species determined to be injurious may be regulated by the Secretary of the Interior. Species are added to the list of injurious wildlife to prevent their introduction or establishment through human movement in the United States to protect the health and welfare of humans, the interests of agriculture, horticulture or forestry, and the welfare and survival of wildlife resources from potential and actual negative impacts.

Learn more about the Injurious Wildlife provisions of the Lacey Act here: http://www.fws.gov/fisheries/ans/pdf_files/InjuriousWildlifeFactSheet2010.pdf

Fish, Mollusks, Crustaceans considered injurious-

- Walking catfish, family Clariidae (13 genera, ~100 species)
- Mitten crabs (genus *Eriocheir* - 3 species)
- Zebra mussel (*Dreissena polymorpha*)
- Snakehead (family Channidae; 2 genera (*Channa* and *Parachanna*) totaling 28 known species)
- Silver carp (*Hypophthalmichthys molitrix*)
- Largescale silver carp (*Hypophthalmichthys harmandi*)
- Black carp (*Mylopharyngodon piceus*)
- Salmonids: live or dead whole fish, live fertilized eggs, or gametes, unless with health certificate

The Federal Noxious Weed Act and List

The following aquatic plants, seeds, or other parts capable of propagation are within the definition of a "noxious weed" under the Federal Noxious Weed Act of 1974 (7 USC 2802(c)). Listed noxious weeds may be moved into or through the U.S. only under permit from the USDA Plant Protection and Quarantine programs, and under conditions that would not involve a danger of disseminating the weeds. The aquatic invasive plants on this list include:

- Mosquito Fern, Water Velvet (*Azolla pinnata*)
- Killer Algae (*Caulerpa taxifolia*) Mediterranean strain
- Anchored Water Hyacinth, Rooted Water Hyacinth (*Eichhornia azurea*)

- Hydrilla, Water Thyme (*Hydrilla verticillata*)
- Miramar weed, East Indian Swampweed (*Hygrophila polysperma*)
- Water Spinach, Swamp Morning Glory (*Ipomoea aquatic*)
- Oxygen Weed (*Lagarosiphon major*)
- Ambulia, Asian Marshweed (*Limnophila sessiliflora*)
- Broadleaf Paper Bark, Punktree (*Melaleuca quinquenervia*)
- Arrowleaf Falsepickerelweed (*Monochoria hastate*)
- Heartshape False Pickerelweed (*Monochoria vaginalis*)
- Duck Lettuce, Water Plantain (*Ottelia alismoides*)
- Arrowhead (*Sagittaria sagittifolia*)
- Giant Salvi*nia (Salvinia auriculata*)
- Giant Salvinia (*Salvinia biloba*)
- Giant Salvinia (*Salvinia herzogii*)
- Giant Salvinia (*Salvinia molesta*)
- Wetland Nightshade (*Solanum tampicense*)
- Exotic bur-reed (*Sparganium erectum*)

Viral Hemorrhagic Septicemia Interim Rule

On September 9, 2008, the U.S. Department of Agriculture's (USDA) Animal and Plant Health Inspection Service (APHIS) published an interim rule to establish interstate movement and import requirements for certain fish species that originate from States and Canadian Provinces regulated for viral hemorrhagic septicemia (VHS). This document provides guidance concerning the interstate and international movement of fish species covered under the interim rule, which became effective on November 10, 2008. More information about the interim rule can be found at: http://www.aphis.usda.gov/publications/animal_health/content/printable_version/faq_vhs_interim_rule.pdf.

VHS virus is an extremely serious pathogen of fresh and saltwater fish that has been found in the waters of Lake St. Clair, Lake Erie, Lake Ontario, Lake Michigan, the St. Lawrence River, and an Ohio reservoir south of Lake Erie. In the United States and Canada, recent outbreaks of this emerging disease are responsible for die-offs in many freshwater species in the Great Lakes watershed.

As of the publication of the VHS interim rule, the regulated U.S. States are Illinois, Indiana, Michigan, Minnesota, New York, Pennsylvania, Ohio, and Wisconsin. The regulated Canadian Provinces are Ontario and Quebec. The current list of VHS-regulated species and areas can be found at: http://www.aphis.usda.gov/animal_health/animal_dis_spec/aquaculture/downloads/vhs_regulated_spp.pdf.

Administrative Rule 870 was developed under the authority of the Fish and Aquatic Life Code, [515 ILCS 5] by the Department of Natural Resources. It includes a comprehensive list of species, developed with input from all the stakeholders, which will be considered approved for aquaculture, transportation, stocking, importation and/or possession in the State of Illinois. An aquaculture permit is granted to qualifying persons wishing to raise species on the list. This list includes amphibians, reptiles, crustaceans, mollusks, gastropods, fish, and plants. If a species does not appear on this list, it is illegal to import/possess, unless the person has an aquaculture permit granted by the DNR and a separate letter of authorization to import/possess for each species not on the list.

The letter of authorization is granted on a case by case basis by the IDNR Aquaculture Coordinator. The Aquaculture Advisory Committee (AAC) is established by administrative rule 870. It consists of representatives of the DNR Divisions of Fisheries (Chair), Wildlife Resources, Natural Heritage, Natural History Survey, Law Enforcement, the President of the Illinois Aquaculture Industry Association, the Aquaculture Coordinator of the Department of Agriculture, the Director of Southern Illinois University Fisheries Research Laboratory, and the Chief of the Division of Food, Drugs and Dairies of the Department of Public Health. The committee finds by majority vote, advising the Chief of Fisheries on the acceptability of the risk of a given species for aquaculture. The committee establishes recommendations for criteria for siting of aquaculture facilities, operational rules and their water management in the case of species not on the list.

Illinois Administrative Code Part 805 Injurious Species Section 805.20
(http://www.ilga.gov/commission/jcar/admincode/017/01700805sections.html)

The sale, purchase, transport, possession or release of the following aquatic species is prohibited without a permit (issued for limited educational, scientific, medical purposes):

- snakehead (including, but not limited to all fishes of the genera Channa and Parachanna and others of the family Channidae)
- fish or viable eggs of the walking catfish, Clariidae family
- mollusks, veligers or viable eggs of zebra mussel (genus *Dresseina*)
- crustaceans or viable eggs of Chinese mitten crabs (genus *Eriocheir*)
- river ruffe (*Gymnocephalus cernuus*)
- black carp (*Mylopharyngodon piceus*)
- gobies (round and tubenose) (*Neogobius melanostomus* and *Proterorhinus marmoratus*)
- rusty crayfish (*Orconectes rusticus*)
- rudd (*Scardinius erythrophthalmus*)

Aquaculture Development Act was passed by the legislature and signed into law by Governor Thompson in September, 1987. By the end of 1988, **Administrative Rule 870** was fully developed, and the first aquaculture licenses were issued. These laws and rules addressed those aspects of potential ANS introduction that could be brought under control with regulations, available resources and manpower. These regulations have been well received by the aquaculture, bait industry, and others who see them as useful, and reasonable.

Administrative Rule 870 also establishes a restricted species transportation permit for the movement of grass carp and a salmonid import permit requiring disease certification before the permit may be issued to the importing hatchery. IL Aquatic Life Approved Species List (Administrative Rule 870)
(http://www.ncrac.org/Info/StateImportRegs/illinois_approvedspecies.htm)

To reinforce Administrative Rule 870 additional prohibitions for use of ANS species as bait appear in 17 Ill. ADM. Code 810 (Administrative Rule 810) which governs sport fishing and in 17 III ADM. Code 805 (Administrative Rule 805) which governs injurious species in general.

Illinois 17 Administrative Code Part 875 Section 875.50 Viral Hemorrhagic Septicimia (VHS)
http://www.dnr.illinois.gov/adrules/documents/17-875.pdf

Administrative Code Part 875 makes it unlawful to remove any watercraft, boat, boat trailer or other equipment from waters of the State without emptying and draining any bait bucket, livewell, baitwell, bilge, etc., or any other compartment capable of holding natural waters; and use wild-trapped fishes as bait within the State of Illinois, other than in the waters where they were legally taken.

The Illinois Exotic Weed Act, designated 525 ILCS Sec. 10/1-5 says any person, corporation, political subdivision, agency or department of the State that buys, sells, offers for sale, distributes or plants seeds, plants or plant parts of exotic weeds without a permit issued by the IL Department of Natural Resources will be fined. Permits are only issued for experiments involving controlling and eradicating exotic weeds or for research to demonstrate that a variety of a species listed in this Act is not an exotic weed. Aquatic/wetland species on the list are –

- Purple loosestrife (*Lythrum salicaria)*
- Common buckthorn (*Rhamnus cathartica*)
- Glossy buckthorn (*Rhamnus frangula*)

Illinois Noxious Weed Law

No aquatic or wetland plants are currently found on the Noxious Weed list.

City of Chicago Ordinance

According to this ordinance anyone importing, selling, transporting, owning, keeping or otherwise possessing any live or viable regulated animal species or plant species (or plant material) within the city would be subject to fine as would a person or organization that released or introduced such species into the environment anywhere within the city. More information can be found at: http://www.cityofchicago.org/city/en/depts/bacp/supp_info/invasive_species.html. The regulated species are as follows:

Animals

- Snakehead, any from the family Chanidae
- *Black carp, *Mylopharyngodon piceus*
- Bighead carp, *Hypophthalmichthys nobilis*
- Silver carp, *Hypophthalmichthys molitrix*
- Grass carp/white amur, *Ctenopharyngodon idella*
- Monkey goby, *Neogobius fluviatilis fluviatilis*
- European perch, *Perca fluviatilis flavescens*
- Eurasian minnow, *Phoxinus phoxinus*
- Asian clam, *Anodonta woodiana*
- African clawed frog, *Xenopus laevis*
- Chinese mystery snail, *Cipangopaludina chinensis*
- Oriental weatherloach, *Misgurnus anguillicaudatus*
- *Rusty crayfish, *Orconectes rusticus*

*species that can be transported live, but not sold live

Plants

- Water chestnut, *Trapa natans*
- Brazilian elodea, *Egeria densa*
- Greater spearwort, *Ranunculus lingua*
- Chameleon, *Houttuynia cordata*
- Parrot feather watermilfoil, *Myriophyllum aquaticum*
- Hydrilla or water thyme, *Hydrilla verticillata*
- Water hyacinth, *Eichhornia crassipes*
- Water spinach, *Ipomoea aquatica*
- Purple loosestrife, *Lythrum salicaria*
- Pale yellow iris, *Iris pseudacorus*
- Eurasian watermilfoil, *Myriophyllum spicatum*
- European frog-bit, *Hydrocharis morsus-ranae*
- Flowering rush, *Butomus umbellatus*

Local weed ordinances may also exist in Illinois. Contact your local municipality or government to find out more information for your area.

Aquatic Invasive Species Laws – Indiana Legislation

In Indiana invasive plants and animals are managed and regulated by the Indiana Department of Natural Resources (INDNR), and managed by Indiana Department of Transportation (InDOT), Natural Resource Conservation Service (NRCS), Indiana State Department of Health (ISDH), and Indiana Department of Environmental Management (IDEM). Several regulations regarding invasive species exist in Indiana.

IC 14-24-12 Purple Loosestrife and Multiflora Roses: A person may not sell, offer for sale, give away, plant or otherwise distribute seeds, roots, or plants of any species of *Lythrum* in Indiana unless the person has a permit issued by the division director authorizing the planting or distribution of *Lythrum*.

312 IAC 9-6-7 Exotic fish: Prohibits sale and possession of particular fish species throughout Indiana (focus on aquarium trade):

- Exotic catfish (*Astronotus ocellatus*, *Arius jordani*, *Hipostomus multiradiatus*, *Liosomodarus onicinus*, *Pseudopimelodus raninus*, *Pimelodus ornatus*, and *Pimelodus pictus*)
- Bighead carp (*Hypophthalmichthys nobilis*)
- Black carp (*Mylopharyngodon piceus*)
- Silver carp (*Hypophthalmichthys molitrix*)
- White perch (*Morone americana*)
- Snakehead (28 species of *Channa*)
- Rudd (*Scardinius erythropthalmus*)
- Ruffe (*Gymnocephalus cernuus*)
- Tubenose goby (*Proterorhinus marmoratus*)
- Round goby (*Neogobius melanostomus*)
- A hybrid or genetically altered fish of any of these species

A person who takes a fish on this list is not in violation if the fish is killed upon capture.

312 IAC 9-9-3 Mussels: Prohibits sale and possession of mussels throughout Indiana

- Zebra mussel (*Dreissena polymorpha*)
- Quagga mussel (*Dreissena rostriformis*)
- Asiatic clam (*Corbicula fluminea*)

Anyone who takes a mussel on this list is not in violation if the mussel if killed upon capture.

Invasive plants are regulated by Indiana Department of Natural Resources or Law Enforcement Agencies. These plants are under control programs, and/or are prohibited or restricted from sale or distribution in Indiana.

- Purple loosestrife *Lythrum* (all species, varieties, and cultivars)
- Brazilian Elodea (*Egeria densa*)
- Hydrilla (*Hydrilla verticillata*)

Indiana Watch List

Some aquatic nuisance species are on the watch list (not yet detected in Indiana waters) along with ANS species detected in parts of the state but not distributed statewide. The common and scientific names are given, along with the primary paths of introduction. For watch list species, the standard abbreviation for the nearest state, province or region known to have the species is provided. (ONT = Lake Ontario; EA = Eurasia). This information is current as of October 2003.

- Black carp (*Mylopharyngodon piceus*) aquaculture (IL, AR)
- Black sea silverside (*Atherina boyeri*) ballast water (EA)
- Eurasian minnow (*Phoxinus phoxinus*) ballast water (EA)
- European perch (*Perca fluviatilis*) ballast water, aquaculture (EA)
- Eurasian ruffe (*Gymnocephalus cernuus*) ballast, fish transfer (MI, WI)
- European frogbit (*Hydrocharis morsus-ranae*) bait bucket, trailer (MI)
- Fourspine Stickleback (*Apeltes quadracus*) bait bucket, fish transfer (PA)
- Heterosporis parasite (*Heterosporis* sp.) fish transfer, bait bucket (WI)
- Hydrilla (*Hydrilla verticillata*) aquarium, bait bucket (IN, PA, TN)
- Giant cladoceran (Daphnia lumholtzi) ballast water, bait bucket (IL)

Indiana Watch List (continued)

- Giant salvinia (*Salvinia auriculata*) complex aquarium, bait bucket (TX, GA)
- Monkey goby, Sand goby (*Neogobius fluviatilis*) ballast water (EA)
- New Zealand mudsnail (*Potamopyrgus antipodarum*) bait bucket, trailer (ONT, ID, UT)
- Roach (*Rutilus rutilus*) ballast water (EA)
- Snakehead fish (Channidae) fish transfer, food (AR, FL, NC)
- Spring viremia of carp (*Rhabdovirus carpio*) fish transfer, bait bucket (WI)
- Tyulka, Kilka shad (*Clupeonella cultriventris*) ballast water (EA)
- Walking catfish (*Clarias batrachus*) fish transfer (CT, FL, GA, MA)
- Whirling disease in salmon (*Myxobolus cerebralis*) mud on waders, fish transfer (MI)
- Zander (*Stizostedion lucioperca*) ballast water, aquaculture (NY)

STOP AQUATIC HITCHHIKERS!™

Section 4:

Where are the invasives?

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Distribution of Selected AIS in Indiana

Plants	Location
Hydrilla (*Hydrilla verticillata*)	Lake Manitou (Fulton County); Ohio River, New Albany
Starry Stonewort (Nitellopsis obtuse)	Lake Wawasee (Kosciusko County); Lake George (Steuben County); Wall Lake (Lagrange County)
Animals	**Location**
White Perch	Lake Michigan; Wolf Lake (Lake County); Fancher Lake (Lake County), Cedar Lake (Lake County, and Round Lake (Starke County)
Zebra Mussels	See table below

Indiana Zebra Mussel Sightings (Revised: 9/27/10)

Body of Water	County	Year	Life Stage
Lake Michigan	3 Counties	1990	Adult
Ohio River	13 Counties	1992	Adult
Wolf Lake	Lake	1991	Adult
Syracuse Lake	Kosciusko	1991	Adult
Lake Wawasee	Kosciusko	1991	Adult
Lake Tippecanoe	Kosciusko	1994	Adult
Dewart Lake	Kosciusko	1995	Adult
Kuhn Lake	Kosciusko	1995	Adult
Lake James	Steuben	1995	Adult
Snow Lake	Steuben	1998	Adult
Lake Maxinkuckee	Marshall	1995	Adult
Jimmerson Lake	Steuben	1996	Adult
St. Joseph River	Elkhart/St. Joseph	1996	Adult
Lake Freeman	White	1996	Adult
Waubee Lake	Kosciusko	1996	Adult
Lake Gage	Steuben	1998	Adult
Lake George	Steuben	1998	Adult
Big Chapman Lake	Kosciusko	1997	Adult
Little Chapman Lake	Kosciusko	1997	Adult
Pine Lake	LaPorte	1997	Adult
Stone Lake	LaPorte	1997	Adult
Pike Lake	Kosciusko	1997	Adult
Tippecanoe River	Kosciusko and downstream	1998	Adult
Big Barbee Lake	Kosciusko	1998	Adult
Little Barbee Lake	Kosciusko	1998	Adult
Sechrist Lake	Kosciusko	1998	Adult
Banning Lake	Kosciusko	1998	Adult
Irish Lake	Kosciusko	1998	Adult
James Lake	Kosciusko	1998	Adult

Body of Water	County	Year	Life Stage
Oswego Lake	Kosciusko	1998	Adult
Webster Lake	Kosciusko	1998	Adult
Clear Lake	Steuben	1998	Adult
Lake Shafer	White	1998	Adult
Cedar Lake	Lake	1998	Adult
Hovey Lake	Posey	1998	Adult
Deep River	Lake	1998	Adult
Wabash River	Huntington and downstream	1998	Adult
Lime Lake	Steuben	1999	Adult
Simonton Lake	Elkhart	1999	Adult
Flint Lake	Porter	2000	
Winona Lake	Kosciusko	2000	
Lake Pleasant	Steuben	2001	Adult
Big Long Lake	Lagrange	2001	Adult
Adams Lake	Lagrange	2001	Adult
Lake Manitou	Fulton	2001	Adult
Brookville Reservoir	Franklin/Union	2001	Adult
Phillips Quarry	Delaware	2001	Adult
Marsh Lake	Steuben	2004	Adult
Pretty Lake	Lagrange	2004	Adult
Little Turkey Lake	Lagrange	2004	Adult
Blue Lake	Whitley	2004	Adult
Hudson Lake	LaPorte	2004	Adult
Cedar Lake	Lagrange	2005	Adult
Big Cedar Lake	Whitley	2005	Adult
*Little Cedar Lake	Whitley	2005	
*Round Lake	Whitley	2005	
Crooked Lake	Steuben	2005	Adult
Hamilton Lake	Steuben	2005	Adult
Cass Lake	Lagrange	2005	Adult
Fish Lake (shared w/ MI)	Lagrange	2008	Adult
Sylvan Lake	Noble	2009	Adult
St. Joseph River	Allen	2009	Adult
Fish Creek	Steuben/DeKalb	2009	Adult
Lake of the Woods	Marshall	2009	Adult
Oliver Lake	Lagrange	2009	Adult
Summit Lake	Henry	2009	Adult
Cedarville Reservoir	Allen	2009	Adult
Geist Reservoir	Hamilton/Marion	2010	Adult
Robison Lake	Lake	2010	Adult
Diamond Lake	Noble	2010	Adult

*Verification pending

For more information contact:
Doug Keller, Indiana Department of Natural Resources

Section 5:

How can volunteers organize an AIS watercraft education program?

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Organizing a Stop Aquatic Hitchhikers!™ Clean Boats Crew Volunteer Program

Recreational boating can be a significant corridor for the spread of invasive species between bodies of water because of the more than half a million registered boaters moving around Illinois and Indiana's thousands of lakes, ponds, and reservoirs. Watercraft inspection demonstrations at boat landings are designed to increase public awareness about aquatic invasive species and to assist boaters in taking preventive steps to avoid further spreading of troublesome species and damage to their equipment.

The Stop Aquatic Hitchhikers!™ Clean Boats Crew program is an opportunity for volunteers to assist in the management and control of invasive species. Volunteers are trained to organize and conduct watercraft inspection demonstrations, and can then educate boaters about how and where invasive species are most likely to hitch a ride into bodies of water and cause damage to their equipment. Volunteers can make a difference in helping prevent the spread of invasive species and damage to recreational equipment.

Attending a Clean Boats Crew training workshop provides you with all the tools you need to start such a volunteer program in your community. Developing an effective program requires patience, time, and an eye for organizing a working schedule. A group that consists of a volunteer coordinator and a committee of several people is the best way to distribute the tasks equally and prevent volunteer burnout.

When planning a volunteer watercraft program, consider these five Ws:

WHOM **will you recruit for the Clean Boats Crew volunteer team?**

Adult and youth volunteers can be recruited through lake association newsletters, local schools, 4-H, or scouting groups. Many service organizations are looking for community involvement opportunities. We recommend at least two people at the landing. Ideally, an adult should work with a youth volunteer.

WHAT **are the duties of a Clean Boats Crew member?**

Before you organize a team, decide what skills and tasks volunteers need for effective interaction with the public at boat landings. Generally, educators perform three duties:

1. demonstrate how to visually check boats and recreational equipment for any hitchhiking plants or animals;
2. demonstrate where and how to clean recreational equipment and other prevention steps boaters need to take every time they leave the water;
3. distribute educational materials.

Here are some specific skills to consider. A Clean Boats Crew member is…

- caring – wants people to enjoy water recreation and wants Illinois and Indiana waters to be free of invasive species;
- congenial – interested in meeting new people and helping them;
- informed – understands the problems caused by aquatic invasive species;
- a good communicator – able to explain the problem and demonstrate inspection and cleaning techniques;
- flexible – willing to volunteer on some weekends and holidays;
- capable – physically able to inspect watercraft and trailers;
- reliable – ready, willing and able to make and keep a commitment to the program during boating season;
- accurate – able to record information for program organizers.

To identify the watercraft education team at a boat landing, all volunteers should wear Clean Boats Crew vests. Volunteers need to wear this vest to signify that they are working on a specific program-Clean Boats Crew-and not harassing boaters at the landings. Two vests are included in each of the resource kits.

WHEN **is the best time to volunteer at a boat landing?**

When recruiting volunteers, be specific about the amount of time you want them to work. A

volunteer is more likely to agree to a three-hour shift once or twice a month rather than an open invitation to volunteer all summer on weekends and holidays. Volunteers will readily step up if they know the expectations and how much time is realistically needed.

To get the most "bang for your buck," become acquainted with the activity on your lake and when the lake is the busiest. Are the weekends a flurry of activity from Friday night at 4 p.m. until 8 p.m. Sunday? Or is Saturday morning from 6 a.m. until 10 a.m. the active time at the landings? Usually, holiday weekends during the summer are the busiest times at launch sites. Anglers are usually up and on the lake by dawn during fishing season. Recreational boaters usually use the lake in the afternoon, and sunny, warm days draw lots of people to the lake! Become aware of fishing tournaments and special lake events that draw many boats to the landings. Remember, the boat landing is often the first place an aquatic invasive species enters the system.

WHERE will the watercraft inspection demos take place?

It is important to find out who owns the boat landing before you begin to schedule work shifts for your volunteers. The landing may be owned and maintained by one of several entities: the federal government, state, township, lake association, or a private business or individual. To check ownership, you might need to contact several organizations. Be sure to make the owners and managers aware of what you would like to do and when.

Indiana public boat ramps are listed by the Department of Natural Resources (DNR) in Indiana (http://www.in.gov/dnr/fishwild/files/fw-Where_To_Fish_Guide.pdf) and Illinois (http://www.ifishillinois.org/) Many of these sites are owned and leased by Illinois and Indiana. County zoning offices, township, and city halls are other potential sources.

You will not need to obtain a permit for activities at a public boat launch as long as no sale of items is occurring. If you are thinking about installing signage or posting material, find out what the owner requires. If you have limited volunteer resources and many public landings, determine which landings receive the most boat traffic. Think about which landing is most likely to be the first place a hitchhiking invasive will appear.

WHY is this volunteer program necessary?

Be prepared to answer this question. Often lake owners are frustrated with the public trust doctrine that mandates public use of all waters in Illinois and Indiana. Lake owners feel it is unfair that they bear the brunt of the cost of managing aquatic invasive species. However, any proactive steps in preventing an infestation are more cost-effective than waiting for an infestation to occur.

Many lakefront property owners have been or are investing in control options at their own expense. Educating boaters can help to prevent the reintroduction of invasive species such as Eurasian water-milfoil into the lake. Preventing aquatic invasive species is a better management option than the expensive alternatives. For example, treating Eurasian watermilfoil infestations with chemicals costs an average of $325 to $450 per acre per treatment. Eurasian watermilfoil can grow two inches per day and can fragment into hundreds of new plants within hours, so it would not take long for Eurasian watermilfoil to cover hundreds of acres. If this does not impress you contact members of a lake organization struggling with an invasive species. They can tell you firsthand the tremendous impact that one invasive species caused in their community. Remember, a little prevention is worth a lot of cure.

Materials

Developing a Clean Boats Crew volunteer watercraft education program does not require a lot of money. By attending a training workshop, you will receive all that you need to start: educational materials, data collection forms, and vests. Boat landings can be very busy during the summer, and you may need more materials. Please refer to the Aquatic Invasive Species Publication List in Section 7 of this handbook. This list explains what publications are available, how to order more publications, and how to print some information from Web site links.

Resource Kit Contents

- (1) Clean Boats Crew manual
- (2) Clean Boats Crew vests
- (100) Stop Aquatic Hitchhikers!™ brochures
- (100) Stop Aquatic Hitchhikers!™ stickers

- (100) Eurasian Watermilfoil cards
- (50) Round Goby cards
- (100) Zebra Mussel cards
- (50) Spiny and Fishhook Waterflea cards
- (50) Ruffe cards
- (50) Rusty Crayfish cards
- (50) *Hydrilla* and Brazilian Elodea Watch cards
- (50) The Facts on Eurasian Water-milfoil fact sheets
- Business cards with coordinator contact information

You don't need to take all your materials to the boat landing. It's better to sort through the materials and decide what educational information is best suited for your area. The Clean Boats Crew program provides one plastic container in which to store all the educational materials in the resource kit. We recommend one resource kit for every landing you are monitoring. By using multiple plastic resource kits, each volunteer team can have all the materials they need and have them protected from the weather.

Key items to distribute to all boaters are the Stop Aquatic Hitchhikers!™ stickers and brochures. These will guide you and the boater in inspecting the appropriate places and describe the prevention steps that boaters need to take every time they leave the water.

Select other materials to take to the boat launch based on which aquatic invasive is most threatening in your area. Perhaps Eurasian water-milfoil is really a pressing issue for your lake; then it makes sense to give boaters *The Facts on Eurasian Watermilfoil* fact sheet and an identification card.

Resist the temptation to give the boater one of every card in the resource kit, because boaters will often discard them. It's best to start by handing out a little information and have additional material available if the boaters want to learn more about a particular invasive species.

Additional items to consider:

- Clipboard and pencil.
- Watercraft Check Points illustration (see page 34).
- Digital Camera
- Cell phone and local contact phone numbers for emergencies.

Watercraft Inspection Demonstration Tips

An effective volunteer watercraft team is prepared to raise boater awareness and to encourage and demonstrate the steps necessary to avoid spreading invasive species and damage to recreational equipment. On very rare occasions, you may be uncomfortable about a situation or person. **Always** back away from a potentially dangerous or violent situation. **Never** encourage confrontation, no matter how strongly you might feel about the subject. Remember, volunteers are not enforcers of rules and should never jeopardize their own safety. If you are suspicious of someone (for example, a loiterer or someone who is not intending to go boating), do not hesitate to leave the launch site. You are better to be safe than sorry. If you feel that a boat launch site is unsafe in any way, please notify the organization you are working for.

Use the following DO and DON'T lists to prepare your boat landing message.

The DO List

- Wear the Clean Boats Crew vest to promote the message. This message gives credibility to the program and to the efforts that volunteers are making across the state.
- Always introduce yourself and mention the organization you are working for and why you are at the landing.
- Approach boat owners only before they are on the ramp.
- Always ask if the boater would mind answering a few questions.
- Be polite and courteous to all boaters you encounter.
- Listen to a boater's concerns. Remember that you are encouraging boaters to become interested in invasive species.
- Make sure boaters know that they can make a difference!

The DON'T List

- Don't begin asking questions upon approaching boaters, because they might be confused about who you are and why they should give you their time.
- Don't delay boaters or cause a backup.
- Never preach to a boater; your mission is to educate, not alienate.
- If the boater is reluctant to cooperate, hand out educational materials and record whatever information you can.

Boat Landing Message

Getting out and speaking to the public can be intimidating. Volunteers can feel a little anxious and nervous. The following prepared script will help volunteers practice and role-play before their first boater shows up at the landing. Practicing with other folks will give volunteers the confidence it takes to greet a boater. If volunteers really want to watch a "pro," they just need to ask a few kids to get involved. Are kids intimidated? Usually not!

The following prepared script is only one sample of the many methods of addressing boaters at landings and performing watercraft inspection demonstrations. Each volunteer should develop his or her own style and learn how to adapt in a variety of boat landing experiences. Approach boaters only before they are on the ramp. At times you may have only 30 seconds to talk to the boater; other times, long lines at landings may provide you with lots of time to talk. Remember, if the boater is not interested, just hand out a checkpoint card and/or brochure, and sticker and record whatever information you can.

No matter what style you use to approach boaters, any watercraft inspection demonstration process should include these points:

1. Tell them who you are, who you represent, and why you are there.
2. Consult the script for the brief description of program and information to provide as people are heading out on the water. We are not selling anything-just providing information.
3. Answer questions about aquatic invasive species if the person would like to know more. If boaters are coming off the water ask if s/he would like you to demonstrate how to perform a watercraft inspection to demonstrate where aquatic invasive species can hitchhike.
4. Talk while inspecting, and point out watercraft checkpoints. If they do not want to assist you in the inspection, continue to talk about invasive species as you inspect.
5. Give your final message, the Stop Aquatic Hitchhiker!™ prevention steps:
    - Inspect and remove any visible mud, plants, fish, or animals before transporting equipment.
    - Drain water from equipment before transporting.
    - Dispose of unwanted bait in the trash, not in the water.
    - Spray, rinse, or dry equipment to remove or kill invasive species.
    - Give them a Stop Aquatic Hitchhikers!™ brochure and sticker and other appropriate educational materials.
    - Thank them for their time and cooperation.

SAMPLE SCRIPT OF THE BOAT LANDING MESSAGE

As the vehicle approaches, write down the state the vehicle is from and type of watercraft.

Introduce yourself:

> Good Morning/Afternoon. I'm from the Stop Aquatic Hitchhikers!™ Clean Boats Crew. We are working with state agencies and local groups to talk with boaters and anglers about aquatic invasive species.
>
> Are you aware that there are invasive species in this lake that you could transport to other lakes on your equipment? We are trying to keep Eurasian watermilfoil, zebra mussels and other harmful aquatic invasive species from spreading from lake to lake. We also want to help boaters prevent damage that invasive species can cause their recreational equipment.
>
> I have a few quick questions I would like to ask you, and then I would like to walk around your watercraft with you and point out a few places where these species can attach to boats and trailers.
>
> This brochure provides further information about aquatic invasive species and this sticker provides tips for maintaining equipment to in a way that will prevent the spread of these species.

If the boater or angler is interested and would like to learn more, we have additional factsheets and watch cards available.

Perform a watercraft check (using checkpoint illustration) only with boater's permission and if there is time:

> If you would walk around your boat with me, I can show you some areas to look for invasive hitchhikers.

Make sure you talk aloud as you inspect; it helps reinforce the Clean Boats Crew behavior. Talk to boaters about inspecting and cleaning their watercraft and about draining the water from their boat — such as the bilge, bait buckets and live wells — before they leave the access.

> Water is another way invasives can move from lake to lake so it is always a good idea to drain your equipment. It is a good idea to drain water from the motor, live well, bait well, bait bucket, bilge, and transom wells.
>
> Vegetation can be found on motor boats, the motor/prop, anchors, bunks, rollers, the trailer axle, lights/wiring; for jet skis, it can be found in the intake grate and propeller; and for sailboats, it can be found in the centerboards. Check your anchor and anchor line to see if any plants are clinging to it.
>
> Some aquatic invasives, such as zebra mussels, are also found on the motor/prop, on the sides and bottom of boat below the waterline, on the anchor, and clinging to vegetation. Always inspect the hull and sides of your boat for aquatic invasives; if it feels gritty or sandy, it may be that new zebra mussels are attached.
>
> An extra precaution that you can take to eliminate other aquatic invasives is to wash your boat with warm tap water or take your boat through a car wash or dry your boat and equipment in the sun for five days before entering another lake.

If a wash station is present at your outreach site you can conduct a demonstration for individual boats and offer to help clean boats with the owner's permission.

Leave boaters with a final message to help us Stop Aquatic Hitchhikers!™, and remind them to make it a habit to:

Give boaters the Stop Aquatic Hitchhikers!™ sticker and help them place it on the handle side of the trailer winch post. Remind boaters to follow the precautions listed on the Stop Aquatic Hitchhikers™ sticker every time they leave a body of water.

Always remember to thank the boaters for their time and cooperation!

Potential Scenarios and Questions

"Why are you out here wasting resources when the plant is going to come anyway?"

Even the most educated people will ask this question. Just be prepared mentally for such viewpoints and think about why you are out there and what you will say in reply. Expect the unexpected.

Here are some suggested responses:

> "Even if we cannot keep the plants out completely, we can prevent a lot of widespread damage. Prevention also gives us time to adopt new control methods as they are developed in the future. The longer we keep invasives out of a lake, the longer we put off the enormous costs of management and property devaluation.
>
> If lakefront property owners are investing tens of thousands of dollars or more for control, boater education can help keep invasive plants and animals from being re-introduced into the lake.
>
> Prevention can still make a difference and there are only benefits to raising public awareness-including increased vigilance about species, but also support for policies that allow for regulating waterways and transport."

"Aren't all plants bad anyway?"

It is important to clear up this misconception!

This is what you can say:

> "Native plants provide habitat for young fish and many aquatic invertebrates; they are also a source of food. Invasive plants outcompete native plants and take their place, but native animals can always use these plants."

"I don't have time for this… I know all about it already!"

This remark is fairly common. If boaters do not wish to help you with the survey, you must respect their rights and let them be. In such a situation, the suggested action would be to offer them a sticker, brochure, and checkpoint card and wish them a nice day.

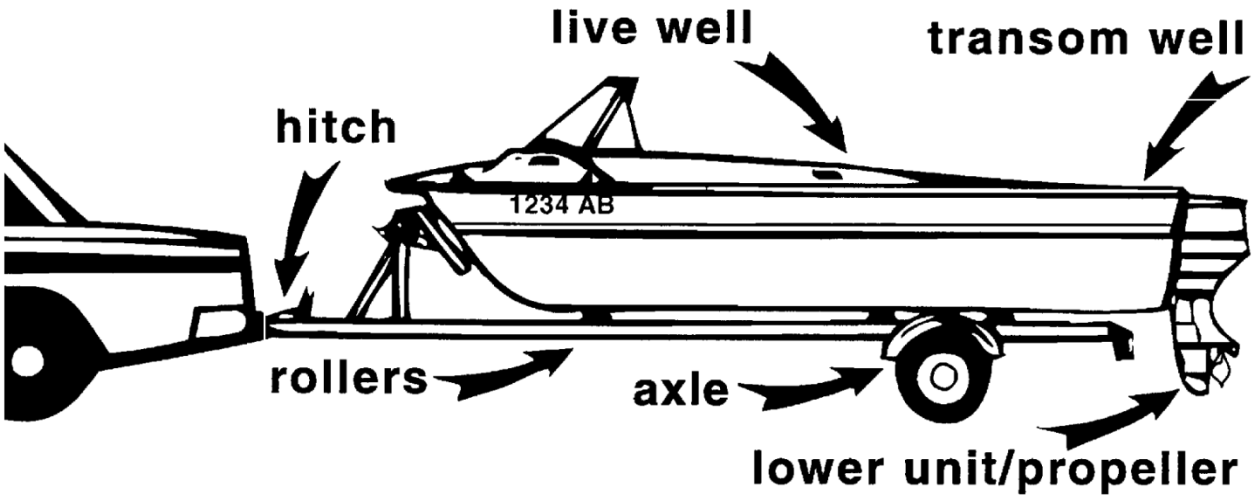
"Why did it take Illinois and Indiana so long to do something about invasive species?"

There is no good answer to this question because it's a very good point.

Here is how you can respond:

> "In the past, environmental problems have often become established and have sometimes reached a crisis before we did anything about them. In this case, we have learned from other states and are trying to take action before these species spread to more of our sensitive environments. Instead of focusing on what could have been done, we are trying to focus energies on the present and future. We have also become aware of species such as *Hydrilla* that could invade Illinois and have invaded Indiana waterways and are very damaging to the ecology and economy of both states. We're trying to prevent their introduction in Illinois and control the populations in Indiana."

Watercraft Check Points



- ☐ Anchor
- ☐ Axle
- ☐ Bait bucket
- ☐ Bunks
- ☐ Bow line
- ☐ Fishing line
- ☐ Floor
- ☐ Hull
- ☐ Intake pipe
- ☐ Ladder
- ☐ Landing net
- ☐ License plate
- ☐ Motor
- ☐ Wheels
- ☐ Live well
- ☐ Lights/wiring
- ☐ Rollers
- ☐ Prop
- ☐ Spare tire
- ☐ Tackle
- ☐ Tow rope
- ☐ Trailer
- ☐ Transducer
- ☐ Transom well
- ☐ Trolling motor

Section 6:

How can volunteers take care of boat landings and share their information?

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Boat Landing Inventory

Volunteer watercraft education teams may wonder why it's important to keep track of the boaters who visit boat landings. Some teams may feel that their presence is all that is needed to assist boaters in checking their recreational equipment for invasive species.

The Stop Aquatic Hitchhikers!™ Clean Boats Crew program strongly encourages teams to use the reporting form in this section to record the following information:

- Date
- Location Name, County, Township
- Type of Information Display
- AIS signs present?
- Overall facility condition
- Number of people you talked with on (an hourly basis)
- Number of brochures and stickers given out

Sharing Information and Networking Opportunities

Everyone who attends a Clean Boats Crew training workshop is entered into a volunteer database. Each participant's name, address, and contact information is collected during the workshop and used to facilitate future communication from program leaders to participants and among participants. Contact information provided will only be used for this program and will not be otherwise distributed.

After you have inventoried the site, decide which efforts are most needed at that location, and discuss them with the landing's owner. You should always get permission before making any changes at the landing site.

How can we share the findings from our inventory?

Contact the landing's owner and ask for some time to explain the Clean Boats Crew program and get the necessary permission to use the launch site for your team's work. At that time, you can also discuss your findings and any ideas you have for improvements/changes. Also, please send a copy of the inventory to the Clean Boats Crew coordinator, along with the results of your discussion with the site's owner.

Boat Landing Ownership and Maintenance

Whoever owns or operates a boat landing is responsible for its maintenance.

It is important to know who owns the landing and who to contact. Ownership of boat landings can be determined through a variety of methods. Plat maps are one useful source, as are searches at the register of deeds office for the county in which the landing is located.

County, village, and cities that own parks with boat landings usually operate such parks and boat landings under local ordinances or have agreements with the State of Illinois or Indiana for operational standards.

BOAT LANDING SIGNS		
Illinois Version	**Indiana Version**	**Illinois-Indiana Sea Grant has developed these signs about aquatic invasive species for use at boat launches and boat ramps. If you find one of these at the site you will be using, please make a note of it on your inventory form. If you find another type of sign there, also note that in the appropriate place on the inventory.** **If the boat landing has no sign about invasive species, you can request one of these signs by contacting Illinois-Indiana Sea Grant (Sarah Zack, 847-242-6440; szack@illinois.edu).**

Displaying and Distributing Information

If the landing has a message board or kiosk, volunteers may be able to display and/or distribute information about invasive species and contact numbers to use if a questionable plant or animal is found. The boat landing may be the first opportunity for volunteers to educate boaters. The Clean Boats Crew team cannot be there for every boater, but it can often offer educational information at any time.

Launch Regulations

The Illinois and Indiana Departments of Natural Resources encourages free boat launching as part of its responsibility for public access to the state's waters.

The Public Trust Doctrine

The Illinois and Indiana Constitutions established a state-administered public trust for navigable waters of the state. Under the public trust doctrine, the state holds the water of navigable bodies of water in trust for all its citizens and has an obligation to protect public rights in navigable waters.

The public trust doctrine plays a substantial role in any decision relating to the public's access to and use of public waterways. The doctrine provides that the government holds all navigable waters in trust for the benefit of, and unrestricted use by, the public as a whole. This doctrine essentially creates a property right for the public as a whole in the navigable waters of Illinois and Indiana.

BOAT LANDING INVENTORY **Date:** _____

Site Leaders: _____

Water Body Name: _____

Boat Landing Name: _____

Location: _____

Is there an Information Display? __Yes __No

__Kiosk __Other __Information Center (glass-enclosed) __None

Is there a place to leave brochures? __Yes __No

Is an Aquatic Invasive Species sign posted and visible from the landing? __Yes __No

__ Green and white __ Yellow and black __ Other (describe) _____

Sign's distance from landing: _____

Overall facility condition: _____

Hour	# of People Talked With	# of SAH Stickers given out	# of SAH Brochures Given Out	Additional Brochures Distributed (Name and #) Record additional information on the back of this sheet (if necessary)
09:00 AM - 10:00 AM				
10:00 AM - 11:00 AM				
11:00 AM - Noon				
Noon - 1:00 PM				
1:00PM - 2:00PM				
2:00PM - 3:00PM				
3:00PM - 4:00PM				
Total				

Use this side of the page for any additional notes, and to keep track of additional publications handed out.

Section 7:

Where can volunteers get more information and materials?

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Aquatic Invasive Species Website Links

Aquatic Nuisance Species Task Force (ANSTF)
http://www.anstaskforce.gov

Aquatic Plant Management Society (APMS)
http://www.apms.org

Center for Invasive and Aquatic Plants, University of Florida
http://plants.ifas.ufl.edu/

City of Chicago Ordinance
http://www.cityofchicago.org/city/en/depts/bacp/supp_info/invasive_species.html

Cornell University Department of Natural Resources: Biological Control of Non Indigenous Plant Species
http://www.invasiveplants.net

Federal Interagency Committee for the Management of Noxious and Exotic Weeds (FICMNEW)
http://www.fs.fed.us/ficmnew/index.shtml

Great Lakes Indiana Fish and Wildlife Commission's (GLIFWC) Exotic Plant Information Center
http://www.glifwc.org/invasives

Illinois-Indiana Sea Grant
http://iiseagrant.org/topic_ais.html

Illinois Department of Natural Resources
http://www.dnr.illinois.gov/Pages/default.aspx

Illinois Lake Management Association
http://www.ilma-lakes.org

Illinois Volunteer Lake Monitoring Program
http://www.epa.state.il.us/water/vlmp/index.html

Indiana Department of Natural Resources
http://www.in.gov/dnr/3123.htm

Indiana Lake Management Society
http://www.indianalakes.org/

Invasive Plant Association of Wisconsin
http://www.ipaw.org

Michigan Department of Environmental Quality
www.michigan.gov/deqaquaticinvasives

Michigan Department of Natural Resources
www.michigan.gov/dnr/

Michigan Invasive Plant Council
http://invasiveplantsmi.org/

Michigan Sea Grant
http://www.miseagrant.umich.edu/ais/index.html

Midwest Invasive Plant Network
http://www.mipn.org

Minnesota Department of Natural Resources
http://www.dnr.state.mn.us/invasives

Minnesota Sea Grant
http://www.seagrant.umn.edu/ais/index

The Nature Conservancy Global Invasive Species Team
http://tncinvasives.ucdavis.edu/

Northeast Illinois Invasive Plant Partnership
http://www.niipp.net

Plant Conservation Alliance's Alien Plant Working Group
http://www.nps.gov/plants/alien

PLANTS Database Natural Resources Conservation Service, USDA
http://www.plants.usda.gov

USDA National Invasive Species Information Center, Aquatic Species
http://www.invasivespeciesinfo.gov/aquatics/main.shtml

USGS Water Resources
http://water.usgs.gov

WDNR Invasive Species
http://dnr.wi.gov/topic/Invasives/

Wisconsin Sea Grant
http://www.seagrant.wisc.edu/home/Topics/InvasiveSpecies.aspx

Aquatic Invasive Species Publications

When pdf files are indicated, feel free to download and print your own copy of the publications. Many of the following publications are available from Web sites; links are provided below.

Watch Cards

Various species available at:
http://www.iiseagrant.org/catalog/products_ais.html

General Aquatic Invasive Species Information

Stop Ballast Water Invasions
http://www.iiseagrant.org/catalog/downlds_09/stop_bllst.pdf

A Field Guide to Fish Invaders of the Great Lakes Region
http://www.iiseagrant.org/catalog/ais/fldgdgl.htm

Aquatic Invasive Plants

Eurasian Water-milfoil Factsheet
http://www.miseagrant.umich.edu/downloads/ais/fs_EWM-milfoil.pdf

Heading Off Hydrilla
http://www.miseagrant.umich.edu/downloads/ais/hydrillafactsheet.pdf

Invasive Aquatic Plants: What Every Plant Enthusiast Needs to Know
http://iiseagrant.org/catalog/downlds_09/iap.pdf

Purple Loosestrife: What You Should Know, What You Can Do
http://iiseagrant.org/catalog/ais/plwhat.htm

Zebra Mussels

Zebra Mussels in North America: The Invasion and Its Implications
http://iiseagrant.org/catalog/downlds_09/zmna_real.pdf

Boaters: Take Action against Zebra Mussels
http://www.nps.gov/isro/planyourvisit/upload/ZMBoaters.pdf

Zebra Mussels: Questions and Answers for Inland Lake Managers
http://iiseagrant.org/catalog/downlds_09/zmqas.pdf

Other Invasive Aquatic Animals

Round Gobies Invade North America
http://iiseagrant.org/catalog/downlds_09/mars_jude_rg.pdf

Spiny Water Flea, *Bythotrephes cederstroemi:* Another Unwelcome Newcomer to the Great Lakes
http://ohioseagrant.osu.edu/_documents/publications/FS/FS-049%202004%20Spiny%20Water%20Flea,%20Bythotrephes%20cederstroemi.pdf

***Daphnia lumholtzi:* The Next Great Lakes Exotic?**
http://iiseagrant.org/catalog/downlds_09/daph.pdf

Fend off Flying Fish
http://iiseagrant.org/catalog/downlds_09/Fend%20off%20Flying%20Fish%20final.pdf