Pennsylvania Watercraft Inspection Handbook

Anchor   Hull   Bunks   Axel

Hitch   Dock-lines   Trailer   Live Wells   Trailer Lights

Check These Areas!

Based on the New York AIS Watercraft Inspection Manual
Adapted by Pennsylvania Sea Grant
March 2019

Goals:
The goals of this handbook are to:
1) Provide a tool for organizations interested in starting new watercraft inspection programs
2) Suggest standard operating procedures for use statewide
3) Provide resources for stewards responsible for conducting watercraft inspections to help slow the spread of invasive species.

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Chapter 1: What is Watercraft Inspection?

Recreational boating is identified as a key pathway in the spread of aquatic invasive species (AIS) across the Great Lakes Basin including inland waterbodies (*Rothlisberger et al., 2010*). Indeed, waters everywhere are at risk of AIS influx via watercraft.

Organisms, such as the spiny water flea, Eurasian watermilfoil, and zebra and quagga mussels, can be transported on anything that comes in contact with the water, including boats, trailers, and other recreational equipment. Early life stages of many plant and animal species, as well as pathogens and bacteria, can be transported in spaces that hold water such as bilge water, livewells, and bait buckets.

Steward-demonstrated watercraft inspection is an effective way:
- to inform boaters about AIS issues and teach them how to intercept the potential introduction and establishment of AIS.
- to help reduce the spread of AIS between waters, and
- empower boaters to protect the natural resources they love.

Boaters can help prevent the spread of AIS from one body of water to another by checking boats, trailers, and equipment for aquatic hitchhikers and draining their boats and all other areas that can hold water before entering or leaving a waterbody.

Although more prevalent on motorized and/or trailered boats, AIS can be transported on or in any type of boat. Therefore, all boats should be inspected whenever possible. Specific examples include but are not limited to fishing boats, house boats, cabin cruisers, ski boats, sailboats, row boats, personal watercraft, canoes, kayaks, paddleboards, and inflatables.

What is Watercraft Inspection?
Watercraft inspection consists of visually inspecting all areas of boating and recreational equipment (i.e., boat, trailer, motor, livewell, anchor, swim fins, scuba gear, etc.) that come in contact with or hold water; removing all visible plants, animals, and mud; and draining water from all compartments and containers. These practices reduce the risk of movement of all organisms from one body of water to another.

The purpose of watercraft inspection is to:
- Reduce the impact of AIS on native aquatic organisms and ecosystems
- Limit or prevent the spread of AIS by containing infestations to current locations, and
- Increase boater awareness about ways they can help prevent the spread of AIS.

A watercraft inspection program is an outreach tool utilizing paid and/or volunteer stewards to engage and teach boaters how to inspect boats, trailers, and recreational gear for unwanted aquatic hitchhikers, and to properly remove and dispose of those hitchhikers.

The term watercraft inspection often brings to mind motorized boats, however, the inspection process also focuses on non-motorized vessels, including canoes, kayaks, and paddleboards; and on recreational equipment, such as scuba diving gear, which can also transport AIS.

Pennsylvania watercraft inspection programs have adopted the national Stop Aquatic Hitchhiker campaign and the Clean-Drain-Dry messaging.

To accomplish the above objectives, watercraft inspection programs:
- Teach boaters how to look for aquatic hitchhikers through the demonstration of

watercraft inspection
- Inform boaters about boating-related and other pertinent laws, AIS identification, common AIS spread vectors, and AIS prevention methods
- Develop and distribute watercraft inspection and AIS educational materials
- Collect data on boater usage patterns and the presence of aquatic organisms
- Respond to the boaters' AIS-related questions, and
- Encourage boaters to continue or adopt behaviors that support Clean-Drain-Dry practices with all boats, trailers, and other water recreation equipment.

Engaging the boating public in watercraft inspections helps reduce the threat and impact of AIS on native aquatic organisms and ecosystems by limiting infestations to waters where the AIS are already established, thus helping to keep AIS from becoming established in more pristine waters.

Preventing the spread of AIS reduces the growing costs associated with AIS control in Pennsylvania, and the negative impacts AIS have on native organisms, aquatic ecosystems, and local economies.

Chapter 2: Why should we care about aquatic invasive species?

What are Aquatic Invasive Species (AIS)?
The Pennsylvania Aquatic Invasive Species Management Plan defines AIS as aquatic organisms (plants, animals, and pathogens) that are not native to the aquatic ecosystem under consideration and whose introduction causes or is likely to cause economic or environmental harm or harm to human health.

The number of AIS in any specific waterbody in Pennsylvania varies. More than 180 nonnative and invasive aquatic species have been identified in the Great Lakes Basin alone. AIS are often well-adapted to spread throughout an ecosystem. They can limit food and habitat for, and compete with, and displace, native species. Annual AIS costs in environmental losses and economic damages for the United States are estimated at more than $100 billion; the Great Lakes region accounts for more than $100 million of the total *(Rosaen et al., 2012)*.

Reasons to Be Concerned About AIS
Economics: The federal, state, and local costs to manage AIS increase each year as AIS populations continue to grow and spread. Infestations of AIS that limit recreation, clog waterways, prevent boating, and obstruct water pipes may impact the value of public and privately-owned property.

Health: AIS can carry pathogens and parasites that are harmful to native species and potentially to human health. For example, Botulism (type E) is a bacterial disease that has caused die offs in fish (e.g., freshwater drum, smallmouth bass, lake sturgeon) and waterbirds (e.g., ring-billed gulls, common loons, long-tailed ducks) in Lake Erie. Since 1960 there are no reports of human poisoning from type E botulism, however, precautionary measures are recommended when handling animals affected by the toxin (U.S. Environmental Protection Agency Great Lakes National Office, 2013). Zebra and quagga mussels (AIS) likely play an important role in two transmittal pathways of botulism. Beds of zebra and quagga mussels change ecosystem conditions, creating suitable offshore habitat for the toxin and the mussels accumulate the toxin. Zebra and quagga mussels also create clearer water conditions, allowing light to better penetrate the water, causing prolific growth of the native Cladophora algae. The dense algal mats decay, creating anaerobic conditions that promote botulism bacteria accumulation in near shore habitats.

Ecology: AIS can out-compete and displace native species, disrupting food webs and altering native aquatic species population abundance and composition. These ecosystem changes may make once suitable habitat less favorable for native aquatic animals such as sport fish and macro invertebrates.

Recreation: With the ability to grow faster and reproduce more frequently than many native aquatic species, and lacking natural predators, AIS can overwhelm the natural habitats. Aquatic invasive plants can form dense mats of vegetation, making it difficult or impossible to boat, swim, or fish. Species such as spiny and fishhook waterfleas are a nuisance to anglers. These invasive waterfleas attach on fishing lines and nets forming cotton-like globs. Zebra mussels can cut the feet of swimmers and encrust historic shipwrecks.

What Can We Do to Limit the Spread of AIS?
- Develop watercraft inspection programs to intercept the introduction of AIS by teaching boaters how to look for, remove, and properly dispose of aquatic hitchhikers using watercraft inspection.
- Educate boaters on how they can help prevent the spread of AIS by regularly inspecting boats, trailers, and other recreational equipment for hitchhiking organisms and debris, and by draining all spaces that can hold water every time boats enter and leave a waterbody.

- Inspect and clean, drain, and dry all watercraft and related items; specific examples include, but are not limited to, fishing boats, houseboats, cabin cruisers, ski boats, sail boats, row boats, trailers, personal watercraft, canoes, kayaks, paddleboards, inflatables, and scuba gear.

Chapter 3: What do I need to know about AIS?

With more than 180 nonnative and invasive aquatic species with self-sustaining populations in the Great Lakes Basin alone, watercraft inspection program stewards cannot be expected to know all the aquatic invasive species (AIS) that exist or are at high risk to enter in Pennsylvania.

Listed below are some AIS known to exist in Pennsylvania, but not necessarily in all waters. Also listed below are AIS of concern – they may be in nearby states, or other parts of the country and could cause harm in Pennsylvania. Stewards should report observations of any invasive species not previously identified in their area.

AQUATIC INVASIVE PLANTS
Common Name Scientific Name
Curly-leaf pondweed *Potamogeton crispus*
Eurasian water-milfoil *Myriophyllum spicatum*
European frogbit *Hydrocharis morsus-ranae*
European water chestnut *Trapa natans*
Fanwort *Cabomba caroliniana*
Hydrilla/Water thyme *Hydrilla verticillata*

AQUATIC INVASIVE ANIMALS
Asian clam *Corbicula fluminea*
*Bighead carp *Hypophthalmichthys nobilis*
*Black carp *Mylopharyngodon piceus*
Northern snakehead *Channa argus*
Quagga mussel *Dreissena rostriformis bugensis*
Round goby *Neogobius melanostomus*
Rusty crayfish *Orconectes rusticus*
*Silver carp *Hypophthalmichthys molitrix*
Spiny waterflea *Bythotrephes longimanus*
Zebra mussel *Dreissena polymorpha*

*Not presently established in Pennsylvania (March 2019).

Pennsylvania Sea Grant has developed factsheets and informational material on these and other species, available for downloading and sharing.
http://seagrant.psu.edu/topics/invasive-species/aquatic-invasive-species/resources

AIS Regulations
It is the boater's responsibility before boating in any body of water to check and understand federal, state, and local AIS regulations. Federal regulations are overarching for all states. States may adopt additional laws. Mandates become increasingly specific through the state, county, municipal, and local levels. Examples follow.

Federal Invasive Species Regulations
The policies within the National Invasive Species Act of 1996 increased national and international focus on ballast water as a vector for AIS introduction. The US Environmental Protection Agency and the U.S. Coast Guard are responsible for regulating the concentration of living organisms in ballast water.

The Lacey Act, dating back to 1900, is one of the oldest wildlife-related laws in the U.S. It requires a permit for the import and transportation of live specimens of "'injurious species,' their offspring or eggs

for bona fide scientific, medical, educational, or zoological purposes." Find more information on the U.S. Fish and Wildlife service website and online at:

- Current List of Injurious Wildlife:
  http://www.fws.gov/injuriouswildlife/
- Injurious Wildlife Fact Sheet:
  www.fws.gov/fisheries/ans/pdf_files/InjuriousWildlifeFactSheet2010.pdf.

USDA Noxious Weed Program
The U.S. Department of Agriculture (USDA) Animal and Plant Inspection Service (APHIS) Federal Noxious Weed Program "is designed to prevent the introduction into the United States of nonindigenous invasive plants and to prevent the spread of newly introduced invasive plants within the United States. APHIS noxious weed activities include exclusion, permitting, eradication of incipient infestations, survey, data management, public education, and (in cooperation with other agencies and state agencies) integrated management of introduced weeds, including biological control." Find the Federal Noxious Weed List at:
www.aphis.usda.gov/plant_health/plant_pest_info/weeds/downloads/weedlist.pdf.

State-Level Invasive Species Regulations
The following aquatic species are banned in Pennsylvania (sale, barter, possession or transportation)

- Bighead carp (*Hypophtalmichtys nobilis*)
- Black carp (*Mylopharyngodon piceus*)
- European rudd (*Scardinius erythropthalmus)*
- Quagga mussel (*Dreissena bugensis*)
- Round goby (*Neogobius melanostomus*)
- Ruffe (*Gymnocephalus cernuus*)
- Rusty crayfish (*Orconectes rusticus*)
- Silver carp (*Hypophtalmichtys molitrix*)
- Snakehead (all species) (ID poster)
- Tubenose goby (*Proterothinus marmoratus*)
- Zebra mussel (*Dreissena polymorpha*)

Chapter 4: Getting Started: A Guide for Organizations Starting Watercraft Inspection Programs

The Commonwealth is home to over 2,500 lakes, 84,000 of streams, and shares five major watersheds with other states and Canada; and so the potential for AIS to be spread in Pennsylvania through recreational boating is of high concern. Being proactive with AIS education and implementing watercraft inspection can prevent AIS introduction and slow contamination.

Among the reasons to start a watercraft inspection program are to:
- Protect your waterbodies from the threats of AIS
- Encourage stewardship of Pennsylvania's natural resources
- Develop new and nurture existing partnerships, and
- Foster good public relations for your organization and partners.

The following steps for developing a new watercraft inspection steward program are an amalgamation of suggestions from the existing programs across New York and Wisconsin. Depending upon individual program factors, some steps may occur simultaneously and steps may occur in a different sequence.

Step 1: Identify a Program Coordinator
- Takes the lead on developing program components, and
- Typically supervises the daily activities of the stewards.
- See subsequent steps for additional duties.

Even with a dedicated coordinator, developing an effective and efficient watercraft inspection program takes time, patience, and the ability to reach out to partners.

Step 2: Develop Program Partners
- Partners help identify priorities and funding sources, and provide knowledge and expertise.
- Consider seeking partners with expertise in local, regional, statewide, and federal AIS issues and those with varying geographic coverage areas.
- Examples of potential partners include PA DCNR State Parks, universities, conservation districts, cooperative extension, lake/homeowner associations, and municipalities.

Step 3: Decide on Your Program Structure: Volunteers or Paid Staff?
Some watercraft inspection programs rely on only volunteers, some on only paid staff, and some are a combination of the two. When determining the structure of your program, consider funding availability and resources, recruitment pool, coverage area (one launch, one lake, one county, etc.), and the time/level of commitment of the program coordinator and of potential recruits.

Step 4: Develop a Budget
Expenses associated with the implementation of a watercraft inspection program include:
- Steward pay: hourly, per steward
- Program management: coordinator pay
- Paid staff fringe cost: rate is specific to your program; includes Social Security, Workman's Compensation, etc.
- In-direct costs: rate is specific to your organization; applies to all budget categories except fringe
- Steward supplies: uniform items, chair, table, training materials, clipboard, paper, first aid kit, pens, pencils, etc.
- Travel: program coordinator and/or steward(s)
- Program operating costs: storage containers, training fees (food, venue, etc.), registration fees

(steward professional development, events, etc.), program-related mailings, cellphone and service fees for coordinator, distributional materials, and technology upgrades (e.g., for hand-held devices for paperless data collection, computer-related, audio/visual equipment for outreach events, etc.).

There is typically more financial flexibility when designing a volunteer-based program. When using volunteers to implement your program, you will not have steward salary costs, but consider allocating funds for supplies, travel, and program/volunteer coordination. Allocating an estimate of volunteer work hours in the budget is necessary in terms of liability insurance and injury protection. Check with your organization and partners to confirm that no other required elements have been overlooked. For budget planning purposes, it may be advisable to calculate a per steward expense.

The sample budget table that follows can be modified to meet the specific needs and requirements of your program/organization/partners.

Sample Steward Program Budget:

Steward pay (per steward):	
Fringe (on salary):	
Steward supplies (per steward:	
Program Operating Costs:	
Indirect (on all categories):	
Volunteer Hours Estimate:	
Program management pay:	
Volunteer hours estimate:	
Travel:	
Subtotal:	
Total:	

Step 5: Define Watercraft Inspection Steward Duties
While some of the duties for watercraft inspection stewards vary among programs, the singular consistent duty is conducting watercraft inspections at boat launches with the following activities:
- Visually checking boats, trailers, and gear for hitchhiking organisms and debris
- Demonstrating watercraft inspection to teach boaters how to conduct inspections on their own
- Collecting and recording standardized data, and
- Providing AIS spread prevention information to boaters.

Examples of additional duties that some steward programs have included based on their organization's mission and goals are:
- Development of fact sheets, newspaper articles, blogs and videos
- Invasive species monitoring, and
- Development and delivery of organized educational programs.

Step 6: Determine How Your Steward/Inspectors Will Be Recognizable
- Your stewards must be clearly identifiable to boaters. When on duty your stewards should be easily identified by their uniforms: t-shirts, guide-style shirts, hats, jackets, sweatshirts, etc. Uniforms help maintain professionalism and indicate to boaters that the stewards/inspectors are there in a professional capacity.
- You may choose to use uniform items to distinguish between volunteer inspectors and paid inspectors, e.g., by hats of different colors, patches, or polo shirt vs. t-shirt.
- Some programs incorporate the Stop Aquatic Hitchhikers! (SAH) logo on uniforms.

- Some programs have chosen a specific color for uniform items, e.g., red because it consistent with SAH branding, is bright, and stands out from the surroundings.

Step 7: Determine Coverage Area and Secure Property Owner Permission

Early in your planning process, it is important to identify who owns and/or manages the launch sites where you are interested in placing stewards.

- Ask each launch property owner for any requirements and liability issues you need to address, for example, municipalities often require written permission to be presented before their monthly board meeting and proof of liability insurance.
- Ask agency-owned launch managers if they require a permit and a list of program participants.
- Plan to allow time for approvals to be granted; it may take four to six weeks for responses to permission requests.

Step 8: Determine Best Schedule

Funding levels may limit the number of paid staff you put in the field. Because it is typically not possible for every launch to receive steward coverage, it is recommended that watercraft inspection efforts be focused at high traffic launches. Prior to the onset of the boating season, learn about the usage patterns of the launches where your stewards could or will serve:

- Visit the launches on different days of the week and at different times.
- Ask property owners/operators and people doing research at the launch sites for usage data.

Once you have an idea about launch usage, you can better plan your coverage schedule to target the busiest times. Typically, launches are busiest on weekends and holidays. Most launches experience waves of activity:

- Early morning: anglers launching
- Late morning/early afternoon: recreational boaters launching
- Evenings: steady with boaters exiting the water, and
- Special event days, such as fishing tournaments.

Work with property owners and launch managers to stay aware of special events and to best identify the role of your watercraft inspection stewards during special events. Some launch property owners do not want stewards scheduled at sites during tournaments, while others work with tournament coordinators to build inspections into the tournament rules.

It can be more difficult to schedule volunteers since they are not being paid for their service. Things to consider when scheduling volunteers:

- Clarity: be clear about the hours for which you need coverage. Volunteers are more likely to participate if your expectations and the required time commitment are clear to them.
- Flexibility: it may be necessary to offer volunteers shorter shifts and shifts on a limited basis. For example, a volunteer may only have time to provide coverage for a four-hour shift twice each month.

Step 9: Develop Your Steward Training Program

Training for paid and volunteer steward staff is recommended. The goal of training is to provide your stewards with the necessary tools and information to confidently and accurately complete their duties. The length and breadth of training varies among existing steward programs responsible for watercraft inspections from one day to a week or longer. Some training is done in the classroom while other components such as watercraft inspection demonstration and role playing is done in the field at launch sites.

Typical training components include:

- Organizational orientation (specific to managing organization)
- Introduction to the region (including natural resources, partners/local contacts, relationship with law enforcement, and issues of concern)
- AIS identification and data collection protocol
- Boater engagement and interpretation techniques, and
- Launch site visits.

In addition to initial training, watercraft inspection staff may require additional training throughout the season. For example, follow-up AIS identification training in the field is recommended once aquatic plants are visible.

Step 10: Develop Data Collection Protocol
Data collection is a vital part of watercraft inspection. Analyses of watercraft inspection data help natural resource managers in AIS management and help leverage funds to continue and grow steward programs.

It is important that you clearly define what, how, and when your stewards will collect data. The following guidelines are recommended by those administering watercraft inspection steward programs across Pennsylvania.

- **Use Standardized Data Form** (See Appendix C: Watercraft Inspection Survey).
- **Establish Data Collection Systems:** hard copy paper forms, paperless collection with a hand-held device (smartphone/tablet), or a combination.
- **Determine Collection Frequency and Entry:** Ensure collected data is submitted in a timely manner (weekly? Biweekly? Monthly?). The data collected and entered is typically provided to program coordinators on a weekly basis for quality review. This helps to identify any shortcomings in the stewards' data collection and provide appropriate support/training before a problem escalates. In the absence of weekly data checks, data entry and quality review can become difficult to manage, particularly at busy launches. It is not uncommon for hundreds of boaters to launch/retrieve at select launches daily.
- **Identify And Define Any Additional Desired Data Attributes:** Some programs collect additional data based on needs, local issues and funding sources, for example:
  o Have you encountered a steward at a boat launch before?
  o Prior AIS awareness: Please describe your awareness about aquatic invasive species before this inspection. Answer options: very aware, moderately aware, somewhat aware, not at all aware. To what extent did this inspection raise your awareness of AIS? Answer options: large amount, moderate amount, small amount, not at all
  o Frequency of Preventative Methods: Before this inspection, how often did you take actions to prevent the spread of AIS? Answer options: I always took actions, very often, somewhat often, never
  o Expected post-inspection actions: Based on this inspection, how often will you take extra precautions to prevent the spread of AIS? Answer options: I will always take action, very often, somewhat often, never.

Step 11: Develop Training on Proper Identification of Aquatic Organisms
You will need to provide training on aquatic organism identification that should include common AIS and native look-alikes. To ensure accurate species identification, some programs require each steward to collect a specimen of each species they observe the first time they observe it.

Using the specimen collection protocol below, collected specimens are sent to an expert for confirmation or correction of the steward's species identification.

Step 12: Develop and Define AIS Specimen Collection Protocol
Provide your stewards with a clearly defined specimen collection protocol to follow should they encounter an unfamiliar/unidentifiable species that should be sent for exact identification.

Identify the supplies needed to collect and properly mark the specimen with the date and time of collection; collector's name and contact information, name of waterbody, name of launch site or, if the specimen is found aboard a boat, the boat name; and any ID numbering or lettering system your program will use. A ziplock bag and waterproof marker should be provided as part of your steward supplies.

Identify how the specimen should be delivered for identification. If the specimen will be held for any length of time at the steward location, identify a means for keeping the packaged specimen cool, e.g., in any on-site refrigerator or a cooler. You will also need to develop a protocol for updating your data records and updating or modifying database entries accordingly once identification results are received.

Step 13: Develop Your Quality Assurance Quality Control (QAQC) Plan
A quality assurance quality control (QAQC) plan ensures that the work being completed by stewards is consistent each year and between years; and helps maintain the highest level of credibility and consistency in the data collection protocol.

It is recommended that you build QAQC criteria for your watercraft inspection activities, particularly if multiple organizations are overseeing the program. Consider the following information to include in a QAQC Plan:
- Responsibilities of program coordinators and partners
- Responsibilities and required expectations of watercraft inspection stewards
- Reporting requirements of stewards
- Data collection and entry protocol including:
    - data nomenclature
    - procedures and expectations for entering, reviewing, and submitting data
    - definitions of attributes
    - quality control measures and how they are met
- Control measures to consider include:
    - how often data is to be collected and submitted by stewards
    - who is responsible for reviewing the data submitted by stewards
    - how often data will be reviewed
    - what percentage of the data collected and submitted by stewards is reviewed
    - how errors are to be corrected and how excessive errors are to be addressed to avoid mistakes in the future.

Some programs have a separate QAQC Plan document; others include QAQC information in the various sections of their training materials.

If your program includes activities in addition to watercraft inspection, consider developing a QAQC Plan for the comprehensive program.

Step 14: Recruit Steward Program Personnel
To recruit stewards, learn and apply the advertisement, recruitment, hiring, and human resource (HR) policies of your organization in collaboration with program partners and funders. Potential recruitment pools include lake association newsletters and websites, local schools and universities, and clubs, e.g., gardening clubs, scouts, 4-H, Rotary, etc. Steward programs may qualify as community service programs for some schools and groups interested in placing students/members in such programs.

When recruiting, be clear about the required application documents, e.g., cover letter, resume, list of references, etc., you expect steward candidates to submit and the process for submitting.

- Be clear about the position's starting and end dates in the job announcement.
- Be clear if your program requires that stewards will be responsible for their own travel to and from launch sites/work stations.
- Establish an application date that allows enough time for interviewing, hiring, and training before you want to have stewards active at launch sites.

Step 15: Hire and Train Steward Candidates
Most programs have an internal hiring process based on the HR policies of their organization. In general, when conducting interviews, it is best to include at least one other person to participate in the interview process. This protects you from potential HR issues and helps in the candidate review and selection process. Remove as many variables in your process as possible to assure a fair and equal process for all candidates. Using a standard set of interview questions helps frame and focus candidate evaluation. Likewise, use a standard set of questions to check candidates' references. When considering candidates, remember your stewards will directly represent your organization and your program.

See **Chapter 5: Watercraft Inspection Steward Training & Field Guide** for training information.

Step 16: Determine Steward Location at Launch Sites
Prior to the stewards' start date, work with launch owners/operators to identify the best location for stewards to setup their inspection stations. In general, stations should be located in an area in close proximity to the launch, but in a place that does not create launch congestion. It is preferred that inspections and the draining and removal of aquatic hitchhikers occur at the same location to prevent runoff return into the water, to limit unnecessary movement, and to enhance inspection and data collection efficiency.

The best place to situate stations is on semi-permeable dirt or gravel surface far enough away from the water, or launch ramp, so that drained water and removed debris cannot flow into the waterbody. Typically, watercraft inspection locations allow:

- High steward visibility: station and uniform
- Accessible approach
- Ease of watercraft inspection
- Ease of data collection: visual and boater survey data
- Educational material distribution, and
- Safe exit, including room for the steward to step clear of the boat/trailer/vehicle and be seen by the driver

Chapter 5: Watercraft Inspection Steward Training & Field Guide

The purpose of watercraft inspection stewardship programs is to protect the integrity of the Commonwealth's waters and prevent the spread of aquatic invasive species.

Watercraft inspection programs educate watercraft operators at launch sites to increase public awareness of aquatic invasive species (AIS) and how the boating public can help control the spread of AIS through proper watercraft inspection practices and care of recreation equipment. The goal of this training manual is to provide the tools and resources to help you be part of a professional and well-received watercraft inspection program.

A Professional Approach to Stewardship
By becoming a watercraft inspection steward, you are joining and strengthening an existing network of educators and people interested in natural resource protection. Your actions as a steward represent yourself, your program, the supervising organization and program partners, and watercraft inspection programs in Pennsylvania and elsewhere.

Prepare Yourself to Engage the Public
Your demeanor while conducting inspections impacts the effectiveness of your program as a public education tool and an AIS prevention method. Professional delivery of the watercraft inspection and the AIS messages encourages the public to take an interest in implementing best management practices to support the program's ultimate mission of protecting pristine waters and preventing the movement of AIS into and out of your region.

APPEARANCE:
Identifying Yourself Visually
Stewards should wear program-approved dress while on duty. Your uniform helps the public visually identify you as an official representative of the watercraft inspection program. It may draw people to you, creating educational opportunities.

When you approach boaters to offer an inspection, your uniform lets the boaters know that they are being approached by someone in a professional capacity for a legitimate reason. Most programs supply a uniform or uniform components: shirt, jackets, caps, etc. Your clothing should be clean and unwrinkled. Neat personal grooming is expected. Maintain good posture at all times; do not lounge or lay down on duty. Be alert at all times.

SAFETY: Maintaining Personal and Public Safety
Your safety and the safety of those around you is your top priority. Boat launches and ramps are typically active places with frequent movement of watercraft, people, vehicles, animals, children, etc. The boaters and visitors are there to relax and may be eager to launch their vessels or load watercraft to leave after a fun day on the water. You are there to work. To protect public and personal safety, follow these steps:

- When setting up your work area, assess the safety hazards and take all appropriate measures to eliminate risks.
- Ask boaters to turn off vehicle engines during inspection.
- Be alert to your surroundings and aware of where the boat owner and others are at all times, particularly those with moving watercraft.
- While checking around wheels, motors, trailers, etc., you will sometimes be out of the direct line of drivers' vision during inspections, so keep those around you alert to your location.
- Always plan for a personal exit path should a boat/vehicle start moving in your direction for any reason. Be especially aware of trailer wheels, propeller, and hitch.

- Have a charged cell phone and a key contact list that includes your program coordinator/immediate supervisor, launch manager, and local law enforcement.
- Avoid dangerous situations and confrontations with the public.

SAFETY: Special Risks and Circumstances
Special safety concerns may occur spontaneously. Stewards should be alert as you may be called upon to communicate your observations as a witness of an incident. Be a good observer and record as much detail about the occurrence as possible.

In Case of Emergency: Be Prepared & Equipped to Call 911
Stewards working in areas with limited cell phone access should know the locations of the nearest accessible landlines.

If you must leave your launch site for safety reasons, notify your designated supervisor/contact person immediately. Follow your program's specific protocol when dealing with the following risks and circumstances. In all circumstances, maintain your composure.

- **Storms/Lightning/High Winds:**
  Storms can approach quickly without warning when on/near water. Use your judgment to determine if you can seek shelter in your vehicle or a nearby building.

- **Rude/Threatening Public Behavior:**
  Do NOT confront people acting in a rude/threatening way. If your personal safety is threatened, retreat to your vehicle and lock the doors. Leave the site, record as much information about the individual and location as possible and relay that information to your supervisor or designated contact person immediately.

- **Fear for Personal Safety:**
  If you fear your safety is being jeopardized, enter your vehicle and/or leave the launch site. Contact your supervisor, and, if appropriate, law enforcement, immediately. Remember that you do not have law enforcement responsibilities or powers; your role is to educate the public.

- **Potentially Dangerous Facilities:**
  If your assigned launch is unsafe because facilities are in need of repair, potentially dangerous people or animals are frequenting the site, or similar site-related risks exist, notify your supervisor, and, when appropriate, the launch manager.

- **Nuisance/Potentially Dangerous Wildlife Encounter:**
  Do not approach or feed the animal. Make others aware of the animal and notify property manager. In extreme cases, calmly leave your site to enter your vehicle or a nearby building, contact Wildlife Control or appropriate local authority, and notify your supervisor.

INTERACTION with the PUBLIC and STAFF:
Communicate Professionally
Communicating effectively and efficiently with boat launch users, managers, program coordinator and fellow stewards increases the opportunity to actively engage the public in controlling the spread of AIS and protecting uninfested waters.
- Maintain a professional but pleasant manner appropriate to the working environment, i.e., a recreational setting for the public. Boaters are more willing to participate in activities when they feel comfortable.
- Be polite and respectful to all boaters and other people at launch sites.

- Stand up to address the public.
- Be respectful if a boater has misinformation or a different point of view. Do not challenge to "prove your point," rather offer to inform them of other details/resources.
- Be punctual for duty; this is especially important at launches where inspection hours are posted at launch facilities.
- If you are working with other stewards, treat one another as professional colleagues at all times.

Establishing Credibility

The most successful stewards are those that the public view as responsible, credible and helpful, and those with the ability to engage and make the public feel comfortable.

- **Identify yourself verbally**
  Always introduce yourself by name, identify the steward program for which you work, and why you are at the launch site.

  Boaters should be completely clear about why you are approaching them. For example, once you are close to the boater, calmly say:
  "Hi, my name is Sam. I work for the Paul Smith's College's Watershed Stewardship Program and am here to demonstrate ways to prevent the spread of aquatic invasive species between waterbodies. Do you mind answering a few questions and participating in a watercraft inspection?"

- **Use an upbeat approach**
  Maintain a respectful attitude in all situations. People are more likely to engage in conversations when you are polite, pleasant, and confident.

  Although rare, some conversations can become negative, especially if a boater arrives already irritated about something. It is vital in these situations that you are positive during and at the close of your conversation. Thank the boaters for helping to protect Pennsylvania's waters.

- **Be knowledgeable, honest, and realistic**
  One of the best ways to achieve credibility with boaters is to be knowledgeable, honest, and realistic when responding to their questions.

  Inevitably, you will be asked questions that you cannot answer or cannot answer correctly; in those instances, relay the questions to your supervisor with the boater's contact information for follow-up response.

Framing the Message to Inform Boaters

Each time you engage a boater in conversation about AIS, communicate the Clean-Drain-Dry message, why it is important to limit the spread of AIS, and the benefits to boaters of practicing watercraft inspection.

Because boaters typically want to protect their access to recreational opportunities, they are likely to listen and implement simple AIS spread prevention practices like watercraft inspection.
When provided with the appropriate educational messages, boaters will quickly understand that their actions, or inaction, can spread AIS and threaten their ability to boat, fish, or otherwise enjoy the water resource.

To maintain consistent educational messaging within your program and across the state, use the primary message: Clean-Drain-Dry.

- CLEAN: Remove and properly dispose of any visible mud, plants, fish or organisms from boats, trailers, equipment, clothing, dogs, etc.

- DRAIN: Before leaving the launch, empty all water from spaces (i.e., bilges, buckets, livewells, ballast tanks, etc.) that can hold water. Dump live bait at bait disposal sites or in an approved trash receptacle. For more information, see NYSDEC Baitfish Regulations: http://www.dec.ny.gov/outdoor/47282.html.

DRY: Dry boat, trailer, and anything that comes into contact with water. Drying time varies greatly with localized environmental conditions. The minimum recommended dry time before launching in new waters is no less than 5 days. The 100th Meridian website has a Drying Time Estimator (for zebra/quagga mussel contaminated boats) interactive map with average drying times based on air temperature and humidity by month and by state. (http://www.100thmeridian.org/emersion/

Conducting Inspections: Expectations of Stewards
During the course of each interaction with boat operators, stewards will teach boaters how to look for and remove aquatic hitchhikers and drain all water from the vessel and compartments; collect visual data; ask survey questions; and provide AIS information to the boaters.
Your responsibilities as a watercraft inspection steward include:
- Engaging boaters and demonstrating how to look for hitchhiking organisms/debris on boats, trailers, and other boating and water recreation equipment
- Informing boaters of the importance of draining water from all water containers, including bilge, bait buckets, livewells, motor, and other compartments
- Informing boaters on properly removing and disposing of any aquatic organisms and/or debris encountered
- Collecting inspection data from launch users, e.g., whether or not the boater takes any measures to prevent the spread of AIS, and the last body of water the vessel was in during the prior two weeks
- Delivering AIS spread prevention messages during inspection
- Distributing AIS educational materials, and
- Responding to boaters' AIS-related questions.

Emphasize the **Clean-Drain-Dry** educational message, and remind boaters why they should follow the easy-to-remember procedures every time they launch and retrieve their boats.

Conducting Inspections:
Setting Up Your Inspection Station
Your program coordinator has worked with property owners to determine the best location to set up your stations. Follow instructions for locating work station: table, chair, sign, display materials, etc. and inspection station.

In general, the inspection station should be located in an area in close proximity to the launch area, but in a place that does not create congestion on a semi-permeable dirt or gravel surface. Whenever possible, set up far enough away from the water and launch ramp that drained water and removed debris cannot flow back into the waterbody.

Removed debris, including plants, should be bagged and trashed, or placed in an approved AIS disposal station.

Boat inspections, bilge draining and removal of visible organisms and debris should all occur in one location. This helps limit unnecessary visitor movement and enhances your ability to inspect boats quickly and correctly.

Conducting Inspections: Steward Supplies
- Uniform items (shirt, hat, name tag, etc.)
- Steward on-duty sign (sandwich-board design works well)
- Fully-charged cell phone
- Emergency Contact Lists: Program-related emergency and law enforcement contacts
- Chair, and table, if not available at site
- Data sheets
- Clipboard and weatherproof (e.g. Rite in the Rain) notebook
- Pens/pencils
- AIS specimen sample collection materials: pruning shears, waterproof markers to label plant samples, zip-lock bags, cooler
- Flashlight, magnifying glass, mirrors on extendable wands
- 5-gallon bucket
- Plastic file box with distributional materials
- Paper towels and/or rags
- Hand sanitizer and sunscreen
- First aid kit
- Drinking water for yourself
- Optional: Rake to clear launch of aquatic plants, organisms and other debris.

Conducting Inspections: How to Conduct a Watercraft Inspection
This program strives to change the behavior of boaters through instructional demonstration of watercraft inspection designed to encourage boaters to self-inspect boats, trailers, and equipment in the absence of stewards.

Approach
- Approach boaters as they prepare to enter (launching) and exit (retrieving boat) the water.
- Identify your name, your organization, and why you are there.
- Initiate conversation with boaters on or near launch ramp. Ask if the boater has time to answer a few questions and participate in a short watercraft inspection. Inform the boater the inspection and associated questions will take only a few minutes.

Sample Steward Introduction Script
"Good morning, my name is Gretchen. I am a lake steward at _____. We are here to help prevent the spread of aquatic invasive species in Pennsylvania's waters. Aquatic invasive species spread from lake to lake by hitchhiking in water and attaching themselves to boats, gear, and trailers. Do you have a few minutes to answer some questions and participate in a quick inspection for hitchhiking organisms? Please join me and I will point out some common places where these organisms collect."

Delivery
- Traffic levels vary at most boat launches. Adapt the length of your message to the traffic level to minimize delays and boat ramp congestion.
- Invite boater to walk around the vessel with you during the inspection. Assisting you in the inspection process makes boaters more likely to conduct inspections on their own. Hands-on participation by the boat operator during the inspection provides stewards with the opportunity to ask valuable survey questions, helping to minimize inspection time.

- Point out the places aquatic hitchhikers are typically found.
- Collect visual and boater survey data.
- Ask if the boater has any questions.
- Thank the boater for his/her time and participation, and emphasize as your final prevention message: *"Remember to Clean-Drain-Dry to prevent the spread of aquatic invasive species."*

Conducting Inspections: Physically Inspecting a Boat
Although the duration of each inspection will vary depending on the size and type of the boat, conversation with the boater, the amount of hitchhiking debris present, and the level of launch traffic, most inspections generally take about three minutes.
- Do not board watercraft. To inspect interior compartments, ask the operator if they will assist you by boarding the boat and inspecting livewells and bilge compartments for standing water.
- If any aquatic materials or water are found, ask the operator to drain the water and remove and properly dispose of the materials. Offer to use your bucket to catch water draining from internal compartments. Ask that the operator move motors to vertical position. Place your bucket underneath to catch water draining from the lower unit of inboard/outboard motors.
- While moving through the inspection, refer to Inspection Checkpoint List (Figured 1 and Appendix B).
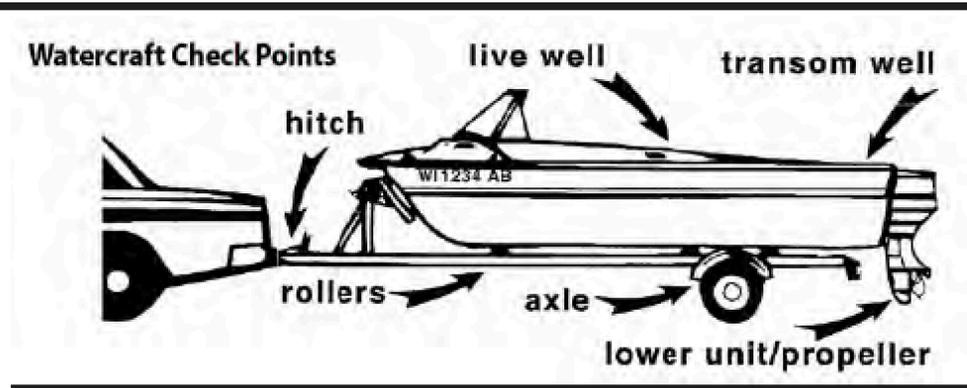
Conducting Inspections:
What to Do When Observing Water and Hitchhiking Organisms/Debris
- If in the course of an inspection you encounter water and non-AIS debris, dispose of water and aquatic debris as instructed.
- If you discover an aquatic species that you cannot identify or you suspect may be an invasive species, follow AIS identification and specimen collection protocols as designated by your program (see below) and refer the boater to additional **Clean-Drain-Dry** details on the ProtectYourWaters.net website.
- In general, a "bag and tag" specimen collection approach is followed:
    - Using the provided waterproof permanent marker, write the date; time; collector's name and contact information, name of waterbody, name of launch site or, if the specimen is found aboard a boat, the boat name; and any ID numbering/lettering system your program uses on a ziplock bag provided as part of your steward supplies.
- Follow your program instructions for placing and sealing specimen in bag for delivery for identification. Keep it cool per your program instructions.
- Follow your program's specimen delivery and reporting protocol developed for:
    - where the specimen goes
    - how the specimen gets there
    - who (contact information) will receive the specimen, and
    - how the expert notifies the program (steward, coordinator, both, etc.) of
    - specimen identification results.
- Update data records and iMapInvasives.org database when results are received.

Figure 1: Inspection Checkpoint List
(Credit: New York State Watercraft Inspection Steward Program Handbook)

Watercraft Check Points — live well — transom well — hitch — rollers — axle — lower unit/propeller

Inspection Checklist for Thoroughly Inspecting Boats, Watercraft, and Water Gear

BOATS
❏ Motor
  ❏ Prop
  ❏ Intake pipes
❏ Trailer
  ❏ License plate
  ❏ Taillights/wiring
  ❏ Wheels and axels
  ❏ Frame
  ❏ Rollers
❏ Boat
  ❏ Floor
  ❏ Hull
  ❏ Livewell
  ❏ Transom well
❏ Accessories
  ❏ Anchor
  ❏ Bow Line
  ❏ Ladder
  ❏ Life jackets
  ❏ Tow ropes
  ❏ Water skis, wake boards, tubes
❏ Recreational Gear
  ❏ Swim fins
  ❏ Scuba/snorkeling gear, including
    BCDs: buoyancy compensator devices

❏ Fishing Gear
  ❏ Bait bucket
  ❏ Landing net
  ❏ Tackle
  ❏ Fishing reel/rod
  ❏ Waders
  ❏ Boots

PERSONAL WATERCRAFT (PWC)
  ❏ Trailer (at left under BOATS)
  ❏ PWC body
  ❏ Intake
  ❏ Propulsion
  ❏ Life jacket

KAYAKS & CANOES
  ❏ Boat
  ❏ Paddles
  ❏ Life Jacket

DOCUMENTATION: Data Collection & Reporting
Data collection and reporting are crucial tasks. Data analyses are only as good as the data collected. The information gained from data surveys, reports, and analyses is useful to
natural resource managers for their AIS control activities. The information also supports requests for steward program funding.

Follow the reporting and data-related protocol provided by your coordinator. This includes meeting established deadlines for reporting and data entry, reviewing your data, and
correcting errors.

If your program uses paper survey forms, write legibly; properly completed hard copies of the field survey forms are imperative for quality assurance checks. If your program collects data electronically, enter data carefully. Record the GPS coordinates of your launch in decimal degrees. If you need a GPS unit, notify your program coordinator.

All watercraft inspection field survey form mandatory fields must be filled out completely. Lack of data entry is considered "no information was collected."

*Time
- Use military time format (midnight is 0000, noon is 1200; e.g., 1:30pm is 1330)
- This is the time when the boater approaches area (from road or boat launch) to launch or retrieve boat from the water and the steward begins collecting survey data.

Exiting the Inspection
Because boat launches can be hectic with the movement of people, vehicles, trailers,
pets, children, etc., make certain you and the boater acknowledge when the inspection is over and when you are safely away from all moving parts of the vehicle and tow equipment. One method is to call out "CLEAR" at the end of each inspection.

Conducting Inspections: When Boaters Don't Want to Participate
If the boater says no, ask if you could provide them with the Pennsylvania Sea Grant *Clean Your Gear* flyer and wish them a good day. Do not risk getting into an argument or confrontation. It is not worth your safety to convince someone that they should inspect their boat. Keep a daily tally of those who choose not to participate.

Summary: Key Points
- How you represent yourself as a steward reflects on you, your program, the supervising organization and program partners, and all watercraft inspection programs, and impacts how well your message is received. Know the proper watercraft inspection protocol from approach to exit.
- Make personal and public safety a priority at inspections sites.
- Maintain professional conduct and composure at all times.
- Stress the boater education message of Clean-Drain-Dry.

Watercraft Inspection Survey 2019

Inspector's Name*: _____

Inspection Date*: _____ Time* _____ Launch Name*: _____

Previous Contact with a Boat Launch Steward*:   Yes   No

Launch Direction*:   Launching   Retrieving

Group Size*: _____

Type of Boat*: □Motorboat   □Kayak   □Canoe   □PWC   □Sailboat   □Rowboat   □SUP
□Windsurfer   □Barge

Primary Activity*: □General Recreation □Recreational Fishing   □Commercial   □Governmental

Boat Registration: _____

Watercraft User Zip Code: _____

Were spread prevention measures taken?*

□Yes	□No	□Boater does not know
	□No – only goes in this waterbody	□Boater would not answer
	□First Launch of the year	□Not Asked

Is the boater aware of state [or provincial] regulations pertaining to AIS spread prevention?*

□Yes	□No	□Boater is Uncertain
		□Boater would not answer
		□Not Asked

Was the watercraft in the water in the past 2 weeks?*

□Yes, In same waterbody as connected to boat launch	□No	□Rented or Borrowed
□Yes, In different waterbody than connected		□Unknown
		□Not Asked

Where was the watercraft last in the water? _____

Where will the watercraft be launched next? _____

Did the watercraft user agree to an inspection?* □Yes   □No

Were any material/organisms found?* □Yes   □No

       If found, what species/material was detected? _____

       Photo and sample ID: _____

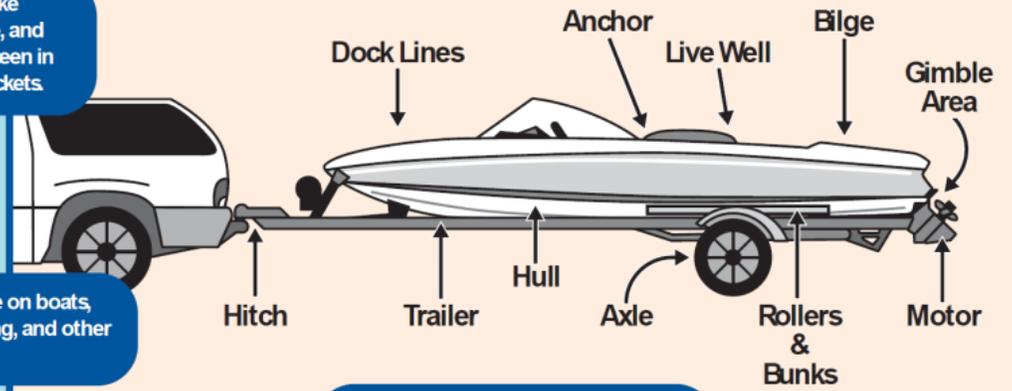Did the Watercraft user commit to independently using clean drain, and dry practices?
□Yes   □No   □Not Asked

CHECK THESE AREAS:

Microscopic organisms like zebra mussel veligers, algae, and pathogens, can hitchhike unseen in bilges, livewells, and bait buckets.

Aquatic plants entangle on boats, trailers, propellers, clothing, and other equipment.

Diagram courtesy of the Aquatic Nuisance Species Taskforce's Recreational User Guidelines.

AIS can cling to mud, debris, and vegetation stuck on boats, trailers, and equipment.

Dock Lines
Anchor
Live Well
Bilge
Gimble Area

Hitch
Trailer
Hull
Axle
Rollers & Bunks
Motor

References

2019 Pymatuning State Park Pilot Program: Invasive Species Courtesy Boat Inspection Stations Handbook for Inspection Stewards. 2019.

John D. Rothlisberger, W. Lindsay Chadderton, Joanna McNulty & David M. Lodge (2010) Aquatic Invasive Species Transport via Trailered Boats: What is Being Moved, Who is Moving it, and What Can Be Done, Fisheries, 35:3, 121-132, DOI: 10.1577/1548-8446-35.3.121

Rosaen, A. L., E. A. Grover, C. W. Spencer, with P. L. Anderson. 2012. The costs of aquatic invasive species to Great Lakes States. Report by the Anderson Economic Group, LLC, East Lansing, MI.

New York State Watercraft Inspection Steward Program Handbook. Developed by Mary Penney, New York Sea Grant, Cornell University, 2014.

The Volunteer Monitoring Guidelines for Aquatic Invasive Species 2005 Edition, Wisconsin Department of Natural Resources Water Division, Madison Wisconsin PUB-WT-780 2

Wisconsin Clean Boats Clean Waters Watercraft Inspection Handbook. Erin McFarlane, 2019.

Appendix A: Resources:

Stop Aquatic Hitchhikers
http://stopaquatichitchhikers.org/

Wildlife Forever – Clean, Drain, Dry Initiative
https://www.wildlifeforever.org/home/invasive-species/

Pennsylvania Sea Grant AIS resources – includes factsheets and outreach materials on a number of species and pathways
http://seagrant.psu.edu/topics/invasive-species/aquatic-invasive-species

Aquatic Nuisance Species Task Force – includes links to national resources such as outreach campaigns, experts database, and informational materials
https://www.anstaskforce.gov/default.php

Wisconsin Clean Boats, Clean Waters – includes training information and videos to help develop watercraft inspection programs
https://www.uwsp.edu/cnr-ap/UWEXLakes/Pages/programs/cbcw/default.aspx

Appendix B:

Figure 1: Inspection Checkpoint List
(Credit: New York State Watercraft Inspection Steward Program Handbook)

Watercraft Check Points

live well

transom well

hitch

WI1234 AB

rollers

axle

lower unit/propeller

Inspection Checklist for Thoroughly Inspecting Boats, Watercraft, and Water Gear

BOATS
- ❏ Motor
  - ❏ Prop
  - ❏ Intake pipes
- ❏ Trailer
  - ❏ License plate
  - ❏ Taillights/wiring
  - ❏ Wheels and axels
  - ❏ Frame
  - ❏ Rollers
- ❏ Boat
  - ❏ Floor
  - ❏ Hull
  - ❏ Livewell
  - ❏ Transom well
- ❏ Accessories
  - ❏ Anchor
  - ❏ Bow Line
  - ❏ Ladder
  - ❏ Life jackets
  - ❏ Tow ropes
  - ❏ Water skis, wake boards, tubes
- ❏ Recreational Gear
  - ❏ Swim fins
  - ❏ Scuba/snorkeling gear, including
    BCDs: buoyancy compensator devices

- ❏ Fishing Gear
  - ❏ Bait bucket
  - ❏ Landing net
  - ❏ Tackle
  - ❏ Fishing reel/rod
  - ❏ Waders
  - ❏ Boots

PERSONAL WATERCRAFT (PWC)
  - ❏ Trailer (at left under BOATS)
  - ❏ PWC body
  - ❏ Intake
  - ❏ Propulsion
  - ❏ Life jacket

KAYAKS & CANOES
  - ❏ Boat
  - ❏ Paddles
  - ❏ Life Jacket

Appendix C:

Watercraft Inspection Survey 2019

Inspector's Name*: _____

Inspection Date*: _____ Time* _____ Launch Name*: _____

Previous Contact with a Boat Launch Steward*:   Yes   No

Launch Direction*:   Launching   Retrieving

Group Size*: _____

Type of Boat*: □Motorboat   □Kayak   □Canoe   □PWC   □Sailboat   □Rowboat   □SUP
□Windsurfer   □Barge

Primary Activity*: □General Recreation □Recreational Fishing   □Commercial   □Governmental

Boat Registration: _____

Watercraft User Zip Code: _____

Were spread prevention measures taken?*

□Yes	□No	□Boater does not know
	□No – only goes in this waterbody	□Boater would not answer
	□First Launch of the year	□Not Asked

Is the boater aware of state [or provincial] regulations pertaining to AIS spread prevention?*

□Yes	□No	□Boater is Uncertain
		□Boater would not answer
		□Not Asked

Was the watercraft in the water in the past 2 weeks?*

□Yes, In same waterbody as connected to boat launch	□No	□Rented or Borrowed
□Yes, In different waterbody than connected		□Unknown
		□Not Asked

Where was the watercraft last in the water? _____

Where will the watercraft be launched next? _____
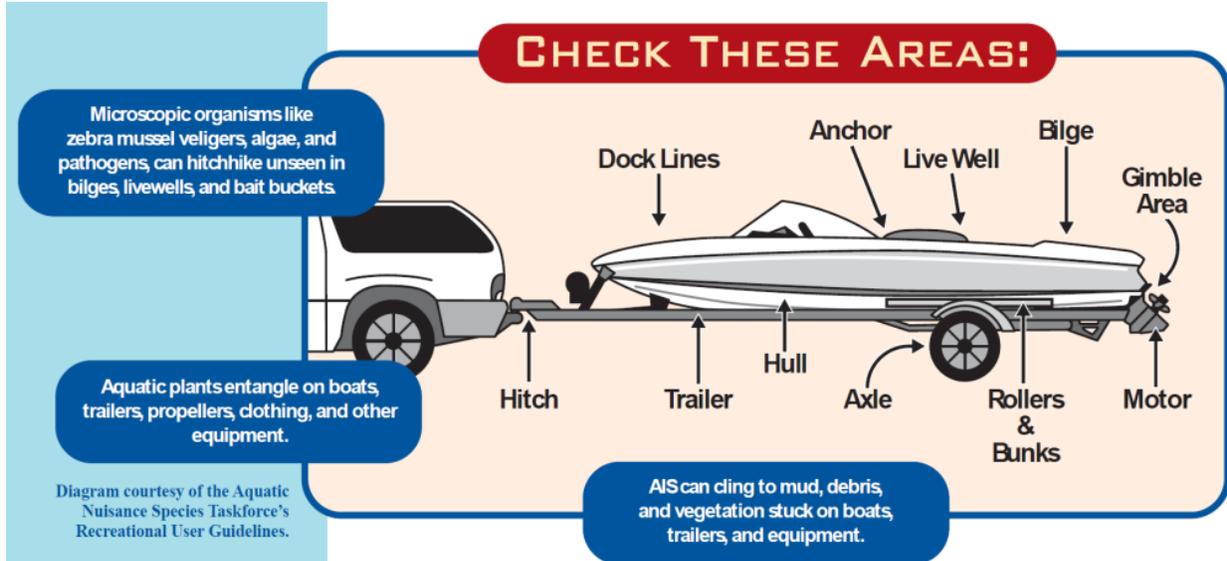
Did the watercraft user agree to an inspection?* □Yes   □No

Were any material/organisms found?* □Yes   □No

    If found, what species/material was detected? _____

    Photo and sample ID: _____

Did the Watercraft user commit to independently using clean drain, and dry practices?
□Yes   □No   □Not Asked

CHECK THESE AREAS:

Microscopic organisms like zebra mussel veligers, algae, and pathogens, can hitchhike unseen in bilges, livewells, and bait buckets.

Aquatic plants entangle on boats, trailers, propellers, clothing, and other equipment.

Diagram courtesy of the Aquatic Nuisance Species Taskforce's Recreational User Guidelines.

AIS can cling to mud, debris, and vegetation stuck on boats, trailers, and equipment.

Dock Lines   Anchor   Live Well   Bilge   Gimble Area

Hitch   Trailer   Hull   Axle   Rollers & Bunks   Motor

Appendix D: Dealing with Boater Questions and Myths

Boater Question #1: Is it reasonable to think that prevention and control efforts will eradicate well-established AIS?
The honest answer is probably not. Once invasive species become established, they are difficult and often impossible to eradicate. While complete eradication is often not likely, there are other options such as suppression and containment. It is reasonable to suggest that controlling populations will reduce the risk that they will spread to new bodies of water.

Boater Question #2: Why are you out here wasting public resources when the unwanted species is going to come anyway?
Even the most educated individuals will ask this question. Suggested responses:
- Even if we cannot keep the unwanted species out completely, we can prevent widespread damage by them.
- Management efforts provide some level of control of the range of an AIS and time to adopt new control methods for that AIS as they are developed.
- Prevention efforts to protect currently pristine waters help keep those waters pristine longer and help delay the costs of management and property devaluation after an unwanted species arrives.

Boater Question #3: Aren't all plants a problem anyway?
Actually, native plants are essential lifelines for an aquatic ecosystem, providing the basis for all life within. The problem lies with invasive plants that have no natural inhibitors and grow so much that they outcompete native plants and prevent the native plants from growing, lowering the water body's aquatic diversity.

Boater Question #4: I don't have time for this… I know all about it already!
This remark is fairly common. If the 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 educational materials and thank them for protecting Pennsylvania's waters.

Boater Question #5: Why has it taken so long to do something about aquatic invasive species?
Suggested response: Traditionally, environmental problems become established in an area before action responses are developed or implemented. Pennsylvania is now taking action to prevent the spread of AIS into too many of our sensitive environments, and you can help.

Adapted from The Volunteer Monitoring Guidelines for Aquatic Invasive Species 2005 Edition, Wisconsin Department of Natural Resources Water Division, Madison Wisconsin PUB-WT-780 2