Watercraft Inspection and Decontamination (WID) Trainer's Manual

July 31, 2021

WESTERN REGIONAL PANEL
ON AQUATIC NUISANCE SPECIES

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Acknowledgments

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The inspection and decontamination protocols and procedures taught in this Trainer's Manual and documented in the *Watercraft Inspection and Decontamination (WID) Manual* are based on the *Uniform Minimum Protocols and Standards* (UMPS). The WID protocols were developed by the WRP's Decon Think Tank Committee and approved by the WRP Executive Committee.

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Chapter 1: Purpose

The purpose of this manual is to provide consistent guidance to Aquatic Invasive Species (AIS) instructors that are responsible for training individuals to perform watercraft inspection and decontamination (WID). It is of the highest importance that WID stations are implemented and operated in a consistent fashion to ensure the best possible resource protection and to provide optimal customer service to boaters. The foundation of the WID network begins with the consistent training of standardized field protocols and procedures. With millions of inspections being performed across the west, the continued need for standardized training and quality assurance is clear.

Legal Basis

The laws and regulations for WID vary by jurisdiction. However, the western states have been striving for more consistent legal provisions and guidance to effectively implement WID programs. Through the WRP's Building Consensus in the West Workgroup from 2012-2019, and with the support of the U.S. Fish and Wildlife Service, the National Sea Grant Law Center (NSGLC) and the Association of Fish and Wildlife Agencies provided technical legal guidance to western state AIS programs. Building Consensus included extensive facilitated dialogue among state AIS coordinators and the National Park Service to develop a model legal framework and science-based standards for implementing WID programs. This multifaceted partnership made tremendous progress, including the development and publication of operational program standards for early detection field monitoring and laboratory procedures, WID protocols and procedures, training, quality control, data sharing, and communications. *The Building Consensus in the West Workgroup: Final Activity Report 2011-2019* (WRP, 2019) details the operational standards produced by western states and partners during the project.

Multiple legal publications resulted from Building Consensus including the Model Legislative Provisions to Promote Reciprocity Among State WID Programs, Model Regulations for State WID Programs, Model Memorandum of Understanding for WID Programs, and Comparison of State WID Program. In addition, NSGLC developed a specific Comparative Analysis of WID Requirements along the Lower Colorado River and a Local Government AIS Toolkit in the years after Building Consensus. These legal pieces have been instrumental in gaining alliance between state programs. States and other jurisdictions responsible for managing WID are strongly encouraged to adopt the model legal provisions and harmonize requirements across jurisdictions to provide optimal resource protection, improve customer service, and strengthen programs and partnerships. To obtain the complete legal framework documents or more information, please visit NSGLC.

The regional WID training program administered by the Pacific States Marine Fisheries Commission (PSMFC) is taught to a variety of audiences at many locations around the nation. The trainer is responsible for customizing the legal basis portion of the introduction to the participating agencies. The trainer should insert the applicable legal authority, laws and regulations, and policies for their audience. Trainers might choose to be more general if their audience crosses jurisdictions.

Zebra mussels
(Dreissena polymorpha)

Quagga mussels
(Dreissena rostriformis bugensis)

Chapter 2: Training Description

This Level 3 training provides a standardized "Train the Trainer" network for WID courses. By providing a uniform instruction to trainers, including managers, supervisors, and other professionals tasked with certifying individuals to perform inspection and decontamination, we leverage the collective expertise and raise the shared capacity of WID programs. Standardized training maximizes resource protection, minimizes the biological risk of invasive species being introduced by watercraft, and strives to promote excellent customer service and education to recreationists. It is only through multi-jurisdictional collaboration and the implementation of standardized science-based protocols and procedures that the most efficient and cost-effective AIS programs will be realized.

Training Components

- *The Watercraft Inspection and Decontamination (WID) Manual*.
- The standard set of PowerPoint slideshows that accompany the WID Manual.
- A training agenda.
- Hands-on training of boat anatomy.
- Hands-on training of watercraft inspections where inspectors practice performing the step-by-step inspection procedures and recording data.
- Hands-on training of decontamination procedures including decontamination unit standard operating procedures, practicing using attachments, winterization (if applicable) and practical application of plant, standing water (engine flush, compartment flush, and ballast tank flush), bait, and full decontaminations.
- The standard exam.
- *Optional:* The *Don't Move a Mussel II* video

Courses

- **Inspector (Level 1)**—An individual that is being certified to perform watercraft inspections.
- **Inspector and Decontaminator (Level 2)**—An individual that is being certified to perform watercraft inspections and decontaminations.
- **Trainer (Level 3)**—An individual that is certified to train others to perform watercraft inspections and decontaminations.
- **Advanced Decontamination**—A specialized class focused on watercraft systems, components, and decontaminating very complex watercraft.

Level 1—Inspector

Inspectors should complete approximately 8 hours of training, in which they participate in practical inspections. All participants must receive a passing score of 80% or better on the final exam to pass the class. The training includes the five standard modules detailed in the WID Manual and slideshows:

1. Introduction
2. Biology of Zebra and Quagga Mussels and Other AIS
3. Watercraft 101
4. Inspection Procedures
5. A Basic Overview of Decontamination

Learning Objective for Level 1 Inspectors—Participants in the Level 1 Inspection Course should leave the training prepared to educate the public and perform watercraft inspection according to WRP standard WID procedures.

It is recommended that new inspectors shadow an experienced inspector to ensure competency and confidence to effectively inspect watercraft and educate boaters.

Level 2—Inspector and Decontaminator

Inspector and decontaminator course is approximately 14 hours of training over two days. It is recommended that participants be trained in both inspection and decontamination in the same course, and not in different classes on inspection and decontamination. In addition to inspection requirements, participants being trained in decontamination must participate in all decontamination sessions. All participants must receive a passing score of 80% or better on the final exam to pass the class. Participants must demonstrate their practical knowledge and proficiency by performing decontaminations as part of the class demonstrations and practice sessions.

The training should include everything from the Level 1 class plus more inspection and decontamination instruction and practice sessions. Additionally, the following items are taught in detail in a Level 2 class:

1. Standard Operating Procedures and General Maintenance of Decontamination Units
2. Step-By-Step Decontamination Procedures
3. Decontamination Practice and Demonstrated Knowledge
4. Working Knowledge of Boat Anatomy, Form and Function

Learning Objective for Level 2 Inspector and Decontaminator—Participants in the Level 2 Inspection and Decontamination Course should leave the training prepared to perform watercraft inspection, decontamination, and education according to WRP standard WID procedures.

It is recommended that newly trained individuals shadow experienced staff to ensure competency and confidence to effectively inspect watercraft, perform decontamination, and educate boaters.

Level 3—Trainer

Level 3 Trainers are certified to train individuals to be Level 1 or Level 2 watercraft inspectors and decontaminators. The Level 3 course is most appropriate for local, state, or federal AIS Coordinators, WID station supervisors, and concessionaires.

Requirements to become a WID Trainer include:

- Successful completion of a Level 2 watercraft inspection and decontamination course.
    - Performed at least 50 inspections according to the WID protocols.
    - Performed at least 5 full decontaminations.
    - Should have decontaminated at least 1 mussel infested boat or a surrogate.
- Successful completion of a Level 3 WID Trainer's course includes demonstrating:
    - a working knowledge of the *WID Manual*,
    - an excellent understanding of how to apply the WID protocols and procedures, and
    - the ability to effectively teach this course in both the classroom and practical hands-on sessions.
- *Optional:* If capacity exists for mentoring, it is recommended that newly certified trainers co-teach a minimum of two classes and that they be evaluated by an experienced trainer prior to teaching independently.
- *Optional:* It is recommended trainers attend an Advanced Decontamination course to be fully educated in systems and components on more complex watercrafts.

Lead Trainers are those individuals that are responsible for ensuring the preparation work is completed in advance of training and are responsible for ensuring a successful class. Lead trainers may employ helpers or assistants that do not formally teach but instead work behind the scenes to prep boats or equipment and provide supplies to keep the class progressing on time and smoothly.

Learning Objective for Level 3 WID Trainers—Participants in the Level 3 Trainer's Course should be prepared to teach watercraft inspection and decontamination according to the WRP standard WID procedures included in the *WID Manual*.

PSMFC reserves the right to refuse trainer certification to those that do not meet expectations.

All trainers must teach the current WRP approved procedures and not procedures from previous years. It is the responsibility of the trainer to obtain and use the most recent materials available at www.westernais.org and www.westernregionalpanel.org.

Advanced Decontamination

Advanced decontamination is a unique course offered to Level 3 Trainers and Level 2 WID professionals. This course is focused on safe and effective implementation of decontamination procedures for advanced systems, components, and very complex watercraft. This team-based course is grounded in boat anatomy, form, and function. The participants are required to work as a team to perform decontamination on very complex watercraft.

The training will cover the following topics:

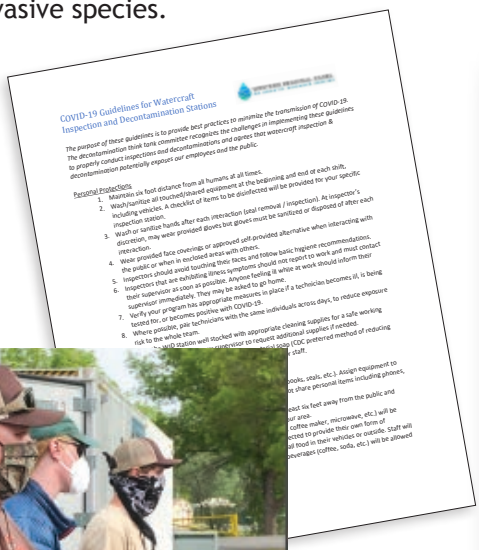
1. Reasons for Decontamination
2. Step-By-Step Decontamination Protocols and Procedures
3. Decontamination Practice and Demonstrated Knowledge of Boat Anatomy, Form, Function, and Decontamination
    a. Advanced knowledge of propulsion systems.
    b. Gained experience and knowledge of very complex watercraft systems and components.
    c. Practice and understanding on how to effectively flush systems and components, methodology, and connecting attachment tools.
4. Decontamination Units
    a. Recommended specifications for decontamination units.
    b. Routine maintenance and standard operating procedures.
    c. Trouble-shooting challenges during decontamination.
5. Decontamination of a very complex watercraft
    a. If available, a mussel-fouled watercraft may be included.

Learning Objective for Advanced Decontaminators—Participants in the Advanced Decontamination class should be prepared to demonstrate knowledge and understanding of complex watercraft systems and components form and function; and to perform a full decontamination according to the approved WRP decontamination procedures included in the *WID Manual*.

Several other texts will serve as reference material for this class and will be reviewed during the training including UMPS, the Colorado Boat Compendium, the Tahoe Boat Book, and the Advanced Decontamination Manual.

Chapter 3: Virtual WID Courses

In 2020, the COVID pandemic limited the ability to hold in-person classes as described in this *Trainer's Manual* and the *WID Manual*. However, most WID stations across the West remained open and operational, as outdoor recreation was promoted as a safe activity to engage in while social distancing and closures were enacted. A group of western AIS Coordinators met weekly during the early months of the pandemic to assist each other and brainstorm creative solutions to protect staff and the public from COVID while operating WID stations that protected natural resources and water infrastructure from invasive species. The WRP Decon Think Tank ultimately drafted the *COVID Guidance for WID Stations* that was approved by the WRP Executive Committee on June 3, 2020.


COVID-19 Guidelines for Watercraft Inspection and Decontamination Stations

The purpose of these guidelines is to provide best practices to minimize the transmission of COVID-19. The decontamination Issue Task committee recognizes the challenges in implementing these guidelines to properly conduct inspections and decontaminations and agrees that watercraft inspection & decontamination potentially exposes our employees and the public.

Personal Protections

1. Maintain six foot distance from all humans at all times.
2. Wash/sanitize all touched/shared equipment at the beginning and end of each shift, including vehicles. A checklist of items to be disinfected will be provided for your specific inspection station.
3. Wash or sanitize hands after each interaction (vital removal / inspection). At inspector's discretion, may wear provided gloves but gloves must be sanitized or disposed of after each interaction.
4. Wear provided face coverings or approved self-provided alternative when interacting with the public or when in enclosed areas with others.
5. Inspectors should avoid touching their faces and follow basic hygiene recommendations.
6. Inspectors that are exhibiting illness symptoms should not report to work and must contact their supervisor as soon as possible. Anyone feeling ill while at work should inform their supervisor immediately. They may be asked to go home.
7. Verify your program has appropriate measures in place if a technician becomes ill, is being tested for, or becomes positive with COVID-19.
8. Where possible, pair technicians with the same individuals across days, to reduce exposure risk to the whole team.

WID station well stocked with appropriate cleaning supplies for a safe working ... supervisor to request additional supplies if needed. ... (CDC preferred method of reducing ... staff.

... books, seats, etc.). Assign equipment to ... not share personal items including phones, ...

... ct six feet away from the public and ... ur area.

... coffee maker, microwave, etc.) will be ... ected to provide their own form of ... all food is their vehicles or outside. Staff will ... beverages (coffee, soda, etc.) will be allowed

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AIS Programs modified the delivery of WID courses and pivoted to a live virtual training environment. Depending on the organization, a variety of digital platforms have been used including Zoom, Google Meets, GoToMeeting, and Microsoft Teams. The requirements for courses do not change. Instead, the demonstrations are shown using videos, the slideshows and engagement activities are presented online by a Level 3 Trainer, and the hands-on portions of the training are delegated to site supervisors and managers to conduct at the WID station. Some agencies have implemented internal procedures to confirm that hands-on training does occur on-site prior to issuing certification of completion for WID courses. Sample agendas for virtual trainings are included in the appendix. It is expected that virtual trainings will remain in use in the future.


COVID-19 Notification

Attention Boaters

- Stay in your vehicle, unless asked to get out and assist the inspector.
- Show your seal receipt through a closed window.
- Stay six feet away from staff at all times.
- Wear a mask.

CLEAN. DRAIN. DRY. Every Time.

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Chapter 4: Quality Assurance and Quality Control

It is important that quality assurance (QA) or quality control (QC) be implemented at WID stations, and it is recommended that it be conducted by the managing agency. In some states, this is required in regulation. The primary purpose of QA/QC is to ensure that inspectors and decontaminators are present during operating hours, following WID procedures, operating efficiently, and providing good customer service.

Per Building Consensus, every WID program should have an element of QA/QC and "secret shoppers" should be a part of that evaluation. QA/QC provides an assessment of WID program implementation. Different aspects of WID programs can be assessed and compared. For example, an assessment could indicate if there is something that needs to change programmatically or instructionally to improve program implementation.

There are a few different ways that a QA/QC program could be used. A primary focus is related to evaluating the individual inspector's competencies in performing inspection and decontamination according to the protocols and procedures in place. As a result of the evaluation, management praises employees or provides on the job training and works with employees to attain the desired improvements and correct deficiencies. This process fosters communication, provides information to enhance understanding, and improves consistent implementation of standard protocols. This process could also result in disciplinary action if repeated poor performance is documented.

Another benefit of a QA/QC program is to improve the broader state or regional AIS program by identifying successes, gaps, and deficiencies; and enabling solution-based conversations for increased knowledge, understanding, and improved implementation.

Finally, the performance of inspectors across a specific WID stations or group of WID stations can be evaluated as a whole to identify areas where knowledge gaps exist among inspectors that need to be focused on, stressed, or explained better in training courses. QA/QC results should be considered when updating training materials and engaging in discussions to inform field implementation.

The goals of a QA/QC program for WID include the following:

- Protect aquatic natural resources
- Further legitimize AIS inspection programs
- Incentivize model inspector behaviors
- Implement consistent WID procedures
- Ensure that the public is treated with professionalism

The QA/QC program can be implemented in a variety of ways including the following:

- Third Party (secret shopper) Evaluations
- Announced Site Visits
- Unannounced Site Visits
- On the Job Training
- Customer Service Phone Evaluations
- Active Management by Site Supervisors
- Testing or Routine Quizzes
- Boater Surveys or Interviews

The most common method of QA/QC for WID stations is the secret shopper evaluation or unannounced, undercover site visit. The evaluations are based on the WID procedures. These are also used to evaluate exit inspections at both prevention and containment waters.

Evaluation objectives can vary, but primarily achieve the following:

- Verify that inspectors are on-site during publicly posted hours of operation.
- Verify that the WID procedures are being implemented consistently.
- Survey the area around the WID station for safety, traffic control, proper equipment, and signage.
- Ensure that WID stations are adequately supplied with educational materials.
- Provide post-evaluation feedback and on the job training to supervisors and inspectors.
- Contribute to programmatic improvements.

The minimum components of an inspection on an undocumented conveyance (no seal/receipt) inspection station QA/QC evaluation consist of:

- WID station location details (visibility, safety, signage, volume at time of visit)
- Initial contact (establishes authority, customer service elements, safety, program introduction)
- Interview (message consistency, history/use of conveyance, boater practices)
- Outreach (knowledge of Clean, Drain, Dry)
- Inspection elements (physical and visual inspection)
- Seal applied correctly and receipt filled out correctly (if applicable)
- Closeout (reinforce Clean, Drain Dry and drain plug transport rules)

Utilizing Quality Assurance Data to Improve Inspections and Decontaminations, and Trainings

The immediate benefit to quality assurance evaluations (primarily secret shopper and customer service) is that inspectors who perform good inspections can be rewarded and inspectors that perform poor inspections can be informed and improve. Another benefit to quality assurance is in relation to training. Understanding consistent or repeated strengths and weaknesses among inspectors, can be used to place emphasis in the classroom and hands-on training activities.

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Chapter 5: Preparing for Class

Preparing for the class ahead of time will ensure that the training goes smoothly. There are logistics and materials that need to be organized to have a successful training.

Date—Pick a date for the training and confirm the start and end time.

Location—Secure a location for training. Keep in mind you may need to reserve the training location several weeks ahead. The location should be in relatively close proximity to attendees. You may have to arrange travel and overnight accommodations for guests.

Advertise—Advertise the training and direct interested individuals to register. When participating in a PSMFC training, participants register at www.westernais.org and download all their course materials from this website.

Audio/Visual Technology—Consult with site staff to verify that they have a screen, projector, and speakers available for use. Keep in mind that most sites will charge you for the use of these devices, so it is generally best to bring them with you. If the room is large, you may need a microphone.

Boats—The location should have a large parking lot or other open area that boats can be accessed during the day and is secure for overnight storage. When reserving the space, be sure to consult with facility manager about boat placement and the safest area to host hands-on outdoor sessions.

It is recommended to have at least 1 boat per 3–6 participants. Arrange for boats to be delivered on the correct date and time. Confirm with the individuals bringing the boats in advance and remind them the day before the training. Try to get different types of boats (e.g., ballast boat, ski boat or sailboat).

Decontamination Units—The location must have a large, outdoor area suitable for decontamination. When reserving the space, explain what decontamination is and that you will be spraying and flushing boats in the parking lot. Work with the facility manager to find a safe location with available water for the hands-on outdoor sessions.

It is recommended to have at least 1 decontamination unit per 6 participants. Arrange for decontamination units to be delivered on the correct date and time. Confirm with the individuals bringing the decontamination units in advance and remind them the day before the training. Be clear that the units need to have fuel, keys, attachments, water, and be fully operational upon delivery.

Hosts—If a partner agency is hosting the training, provide them with the *Checklist for Host Organizations* in Appendix C. Review this document with the host in advance, including roles and responsibilities to ensure everything is ready the day of the class.

Training Room—The training room should be set up "classroom style" with tables and chairs. It is recommended to have one sign-in table with educational materials by the entrance door and one table near the front of the room for the presenter's materials.

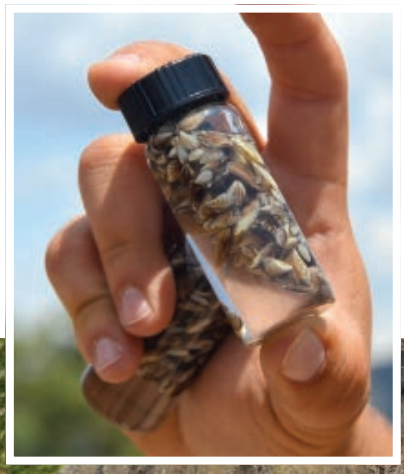
Chapter 6: Materials for In-Person Classes

Prepare one for each participant:

- Agenda
- WID Manual
  - Email electronic copy to participants 30 days prior to class, if possible.
  - Trainers may want to have few printed copies available.
- Quality Assurance Form
- Educational Items (e.g., brochures, rack cards, flyers, handouts, etc.)
- Final Exam

Prepare for the entire class:

- Flip Charts, Markers, and Easels
- Boats for field inspection and decontamination demos. (1 boat for every 3-6 people)
- Decontamination units (1 decon unit for every 6 people)
- Sign in sheet for each day
- Laptop
- Projector
- Screen
- Speakers
- Laser Pointer/Slide Advancer
- Extension Cords and Power Strip
- Standard Slideshows (be sure you have the latest version!)
- Training videos saved on laptop or jump drive
- Felt pads to "stage" boat with fake mussels—pistachio nuts and sunflower seeds also work well
- Inspection tools—magnifier, flashlight, mirror, clipboard with log, data collector, etc.
- Decontamination tools—wand, diffuser, muffs, garden hose, fake-a-lake, etc.
- Displays—Mussel-infested anchor or props (e.g., settler pipe and adult pipe)
- Other AIS Samples (e.g., Rusty crayfish or New Zealand mudsnails)
- Seal Receipt Books, Seals, and Wire
- Tablets or mobile data collection devices
- Clipboards for use during practice sessions
- Specimen collection materials
- Digital Camera
- *Optional:* Bait treatment supplies (2 five-gallon buckets, net, water, and plastic fish)
- *Optional:* Boat Models
- *Optional:* *Don't Move a Mussel II* DVD



Chapter 7: Presentation Tips

- **Practice!** Trainers need to know the slideshows, *WID Manual*, and this Trainer's Manual extremely well before teaching the class. This will help establish your credibility and improve the time and flow of your presentation. More importantly, a well-rehearsed presentation will increase the chance of graduating outstanding inspectors.
- You must be up to date with the WID procedures to ensure consistency. Get comfortable with the material.
- **Face the participants in the classroom when you are speaking, not the screen.**
- Do not read the slides or use the slideshow as your cue cards. Set the room up so you can see the slides on your computer screen. Some presenters are more comfortable with note cards to prompt them through the presentation.
- Make sure the presenter is the focus of the presentation, not the visuals. Visuals are meant to enhance your presentation, not be the focus.
- Be aware of non-verbal cues: body language, gestures, facial expressions, tone, and volume.
- Use the laser pointer appropriately to highlight important pictures or points.
- When writing on flipcharts or white boards, alternate colors for each line and write neatly using capital letters. Use colors that are visible anywhere in the room.
- **Be positive!** While many things can go wrong in the field, this training may be the participant's first exposure to their new job as a boat inspector. The training should be engaging and empowering. There are appropriate times in the training to discuss the challenges of the job.
- Avoid excessive story telling. It is often good to personalize the presentation by contributing your experiences. However, excessive story telling can throw the schedule off fast and cause you to skip important information.
- **Stick to the slide!** The training is set up in sequence. Speak about the current slide and avoid jumping ahead or getting off on tangents.
- Make sure people are comfortable (e.g., access to bathrooms, water, temperature, etc.).
- Time management: Be respectful of people's time and do not go over. Take regular breaks.

Chapter 8: WID Manual Instructional Guidance by Chapter

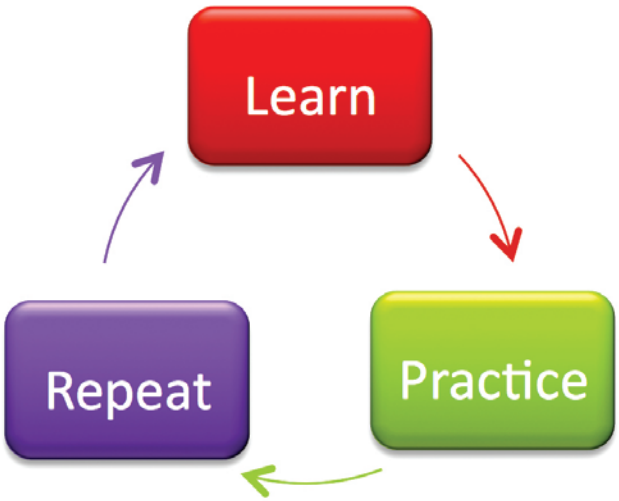
This chapter is the most important portion of the WID Trainer's Manual in tandem with the slideshows. Trainers should study these materials and commit to teaching them as they are written. Knowing this document and the *WID Manual* will increase the efficiencies of the training program and enable WID implementation to be done in a consistent fashion across jurisdictions. This is for the benefit of inspectors, boaters, and the most comprehensive natural resource protection.

The training philosophy is based on strategic repetition to help participants absorb and retain a tremendous amount of information in a very short period of time. Typically, information is presented three times with key points being stressed at each step:

1st *Introduced in a slideshow presentation.*

2nd *Practiced in a hands-on exercise.*

3rd *Reviewed visually and audibly as a class.*



The participants can hear the information, apply the information, and then repeat the information back to the trainer. **It is important to note that individuals learn in different ways and the course format is intended to address audio, visual and experiential learners for optimal learning.** The information is written down in their student books as a reference later. This training model has been tested and successfully produces prepared and knowledgeable inspectors! However, inspection and decontamination stations must be actively managed. Inspectors need practical training regularly from supervisors and crew leaders at WID stations.

Trainers should take the free online course *Effective Adult Learning: A Toolkit for Teaching Adults*. This two-hour course is available through the Northwest Center for Public Health Practiceat the University of Washington. Create a log in and password HERE to access the training and resource materials.

The *WID Manual* is structured with five modules (chapters with corresponding slideshows and activities) which are all detailed later in this chapter.

1. Introduction
2. Biology of Zebra and Quagga Mussels and Other AIS
3. Watercraft 101
4. Inspection
5. Decontamination

WID Course Overview

WID courses begin with a demonstration of an incoming or entrance inspection. The intent is to demonstrate to participants exactly what we want them to be able to do after the class is over. The course content training begins with a very broad perspective and narrows down further throughout the class into greater detail, building on the previous modules, and tying concepts together. Next, we teach mussel biology and provide an overview of the other AIS of concern. Third is Watercraft 101. Most new inspectors do not know boats well, so this is a very important part of class.

By the end of the first morning, participants should know mussel biology and boat anatomy, and therefore should be able to find a mussel on a boat.

The afternoon of day one is spent focused on learning inspection protocol and the step-by-step WID procedures. Ample time is given to practicing the inspection procedures and recording data. On the second day we review and practice what we learned on day one and teach decontamination in full.

All participants should take the standard exam to be certified. This is a closed book exam, which should be graded and reviewed with the participants before the class adjourns, if possible. The benefit to grading exams in class is that participants know what they got wrong and can learn the correct answers. In addition, if a participant fails, they can sign up to attend another class immediately and their supervisor can be alerted.

Slideshow and WID Manual Chapter 1—Introduction

For this training module, you need the following:

- One boat prepared and ready for the incoming inspection demonstration
  - Remove tarps, place the anchor, be sure you can lower the motor and activate any pumps
- WID tablet or data collector
- Flashlight, mirror, magnifier, and brochure
- Flipchart and markers for discussion after the inspection demonstration
- Introduction slideshow

The introduction module is divided into five activities in a strategic order. This module sets the tone for the rest of the training, so it is important to begin on time and be engaging, positive, and inviting.

1. The lead trainer welcomes participants to class.
2. The participants watch an outdoor demonstration of an inspection, followed by a facilitated discussion in the classroom.
3. The class provides introductions including name, WID station, and an ice breaker.
4. The trainer presents the module 1 introductory slideshow.
5. The class engages in a question-and-answer session.

Participants should learn the following in the Introduction module:

- What are aquatic invasive species?
- WID programs prevent zebra and quagga mussels and other AIS.
- The history of zebra and quagga mussels and WID in the Western USA.
- An understanding of sampling, monitoring, and listing standards with waterbody definitions.
  - The life cycle of mussels is introduced in terms of sampling methods for different life stages. This will be repeated in the biology section, and again in the inspection section. This is an important, yet difficult concept for inspectors to understand, so it is taught a bit differently across the course modules to reinforce this knowledge.
- An understanding of why watercraft inspection and decontamination is an important and effective management practice to stop the spread of zebra and quagga mussels and AIS.
- Awareness of the QA/QC program.
- A general understanding of the collective problem that AIS pose. It is important to convey that AIS is a western regional concern and that we are engaged in multi-jurisdictional network extends beyond individual waters or states.
- An understanding that boaters travel long distances and inspectors will see boaters from other states and get questions about other state's rules.
- Education is the most important thing! We train inspectors and inspectors train the boaters. It is important to get boaters to be advocates for resource protection, recreation, and boating.
- Safety is critical to communicate up front to ensure that participants in the hands-on outdoor sessions are safe and always maintain three points of contact with the watercraft.

Welcome

The lead trainer should welcome the participants to the classroom. Other trainers should be introduced at this time. Inform the participants that we will begin class outdoors with a demonstration.

Entrance Inspection Demonstration

Following the welcome, class begins with having all participants go outside. The participants do not need to bring anything with them—they just need to come outside and observe. Have everyone get up (and get bundled up if it's cold out) and direct them to the boat demonstration area. The trainers perform a mock inspection in which one person is the boat inspector and the other is the boater.

A volunteer from class or another co-worker can be used for the boater if there is only one trainer. The boater is friendly and cooperative. The boater is from all negative waters, has no live bait, no ballast, and the boat is clean and dry. **Be positive—Do not start class with an angry boater, a boater that changes his story mid-inspection, or a high risk inspection.** The mock inspector should perform a textbook inspection following the step-by-step procedures perfectly, without commentary, as if no one were watching.

The purpose of this is to begin the class by showing the inspectors what you want them to do after the class, and how the final product should look and sound.

Once back in the classroom, go around the room and have each student say one thing that they did or did not observe the inspector do. All participants should provide an answer. The trainer should facilitate the conversation so that each student feels safe participating. Do not allow participants to shout out answers, unless the class is very small. This first activity will set the stage for the participation for the rest of the course. This also helps the trainer get to know the participants and get a feel for how knowledgeable the participants are regarding AIS.

A second trainer or helper should write down every student's answer neatly on a flip chart or digital board. It is important to acknowledge participation to create a meaningful training atmosphere. When the discussion is complete, the flip charts should be posted on the wall or shared digitally. This will serve as an ongoing reference during the class.

Introductions

The demonstration and discussion activity allows the class to open up and dialogue, which enables a safe atmosphere for introductions. At this point, have each participant introduce themselves by saying their name, work location, if they are a new or experienced inspector/decontaminator, and an ice breaker item (e.g., silly thing about themselves, pets, hometown, etc.). Once everyone is done, thank them for being a part of the AIS network working to protect our waters.

Slideshow—Introduction

The introduction presentation includes the basic definitions of an invasive species, the importance of educating boaters and the public, regional AIS history and activities, and an overview of western programs.

The purpose is to give participants a basic understanding of the big picture and to convey their importance in the network of people working to protect our waters. It is also critical to convey that the WID system has been tested and is proven to work to prevent invasive species introductions when the procedures are followed. This is a solvable problem, and we can keep invasive species out!

The intent is to make them feel they are a part of something very important and instill pride for their role in the success of the program. We do not have mussels everywhere because inspectors do a really good job!

Slideshow and WID Manual Chapter 2—Biology

For this module, you will need:

- Biology slideshow
- AIS props to pass around in class at the appropriate time of the presentation
  - Zebra and quagga mussel adults
  - Zebra and quagga mussel settlers
  - Asian clams
  - Other AIS props (as desired)
- Boat(s) prepped for outdoor session
- Flip charts and markers

The purpose of this module is for participants to understand what they are looking for on watercraft and why it is important to keep invasive species from being introduced into our lakes and reservoirs. The biology module is divided into four activities in a strategic order.

1. Presentation on zebra and quagga mussel biology
2. Outdoor session—How many mussels can you find?
3. Presentation on other AIS biology
4. Group activity—Review

Participants should learn the following in the Biology module:

- Zebra and Quagga Mussels
  - What zebra and quagga mussels look like—smooth, striped shells with byssal threads
  - The three stage life cycle of mussels—veliger, settler, adult
  - Habitat preferences of mussels
  - Where mussels are from and how they have been introduced into new waters
  - The three main invasive characteristics—reproduction, byssal threads, filter feeders
  - The negative impacts of an infestation
  - There are almost no control methods in open waters and mussels are expensive to manage
  - We inspect boats because it has been proven to prevent introductions of mussels and unless they are already upstream, they can only be spread by boating.
- Other AIS
  - First mention of the motto—No plants, No mud, No water, No mussels or animals
  - ZQM is the poster child but WID protects waters from a lot of harmful invasive species
  - How to tell the difference between Asian clams and zebra/quagga mussels
  - Origin, identification, habitat, pathways of spread, impacts for highest priority species
- Main Points
  - It's important to prevent the introduction of zebra or quagga mussels and other AIS
  - AIS can be moved in water and it's important not to move water on boats
  - AIS can be plants and it's important not to move plants on boats
  - AIS can sometimes be bait and it's important not to dump bait

In this module, we reinforce the concept of life cycle and go into greater detail about mussels' habitat preference. It is not only important to understand how biology influences where mussels are likely to attach on a boat but also helps the participant begin understanding the importance of draining standing water and feeling the hull for bumps. Do not cover the triggers for standing water decontaminations in this module—this will be covered later in the agenda. The intention is for participants to understand when and why decontaminations are necessary when the decontamination module is covered later. This will make them more likely to perform decontaminations in the field when necessary.

Another important reason to teach this module and be sure that inspectors understand mussel biology is because a large part of their job is educating the public. Part of the inspection procedure includes education and inspectors will have to answer many questions. The better this module prepares the inspector, the better their contacts with boaters will be.

Finally, this module is the first chance that the participants have to get hands on a boat and start looking for mussels!

Slideshow—Zebra and Quagga Mussel Biology

This presentation goes through species identification, the three main characteristics that make them invasive (byssal threads, filter feeders, and prolific reproduction) and their negative impacts. This slideshow uses photos to show how severe mussel infestations can be and motivate them to do good inspections to keep mussels and other AIS out of our waters. We also want them to understand that mussels are bad for everyone—homeowners, municipalities, agriculture, energy, industry, recreation, fisheries—everyone!

Outdoor Session—How Many Mussels Can You Find?

The purpose is to demonstrate that it is not as easy as one might think to find mussels on watercraft, and that mussels come in many different sizes. The chaotic nature of having all the participants scour the watercraft looking for mussels will reinforce the reality that inspectors need to follow a systematic procedure to find mussels on boats. Later in the afternoon, we remind participants of this when teaching the importance of following the step-by-step inspection procedure and doing inspections the same way every time to be sure you are going to find the mussels.

This activity requires that a boat be prepped for participants to search for invasive mussels in advance. It is recommended that a co-trainer or helper prep the boats while the lead trainer is doing the presentation.

Trainers often use different materials for this activity. Felt sticky pads, pistachio nut shells, fake plastic fingernails, sunflower seeds and actual dead mussel and clam shells have all been used. Some trainers have also used 3M washable glue spray and sand or pepper to create an area on the underside of the hull that resembles settlers that won't rub off. Regardless of what is used, remember to put them in places where mussels are most likely to be (e.g., underside of boat, hidden in trailer, in live wells, on anchor, on bumper, on anchor rope, in through hull fittings, in bilge plug, in engine compartments, in prop, etc.).

Write down exactly where you hid your 'mussels' so after the activity you can show participants where the mussels are hiding and remove them.

When participants go outside for this activity, break them up into groups and assign them to the various boats. Have them bring their manual or paper and a pen or pencil to write down where on the boat they find 'mussels'. Watch the clock so you stay on time. When finished, have participants gather around and the instructor should show the students where the mussels are on the boat. They will 'grade' themselves.

Slideshow—Other AIS Biology

The other AIS slideshow should be adapted by the trainer for their specific audience. The species profiles provided in the WID Manual and in the slideshows are common invaders, but the class attendees may be interested in other species. This section provides an opportunity for the trainer to personalize the training for the participants.

The other AIS slideshow is much shorter than zebra and quagga mussels and goes over the basics of origin, identification, habitat, and impacts. It also stresses the cleaning recommendations for anglers and other recreationists.

Group Activity—Review

The biology module is concluded with an opportunity for participants to share what they have learned, and for trainers to evaluate if participants understand the important concepts. Engage the class in a brief facilitated session in which participants tell trainers one thing they learned about mussel biology and one thing they learned about other AIS. Write these down on separate flip charts and post them on the wall for the duration of the class. This time should also be used for questions and answers before moving onto the next module.

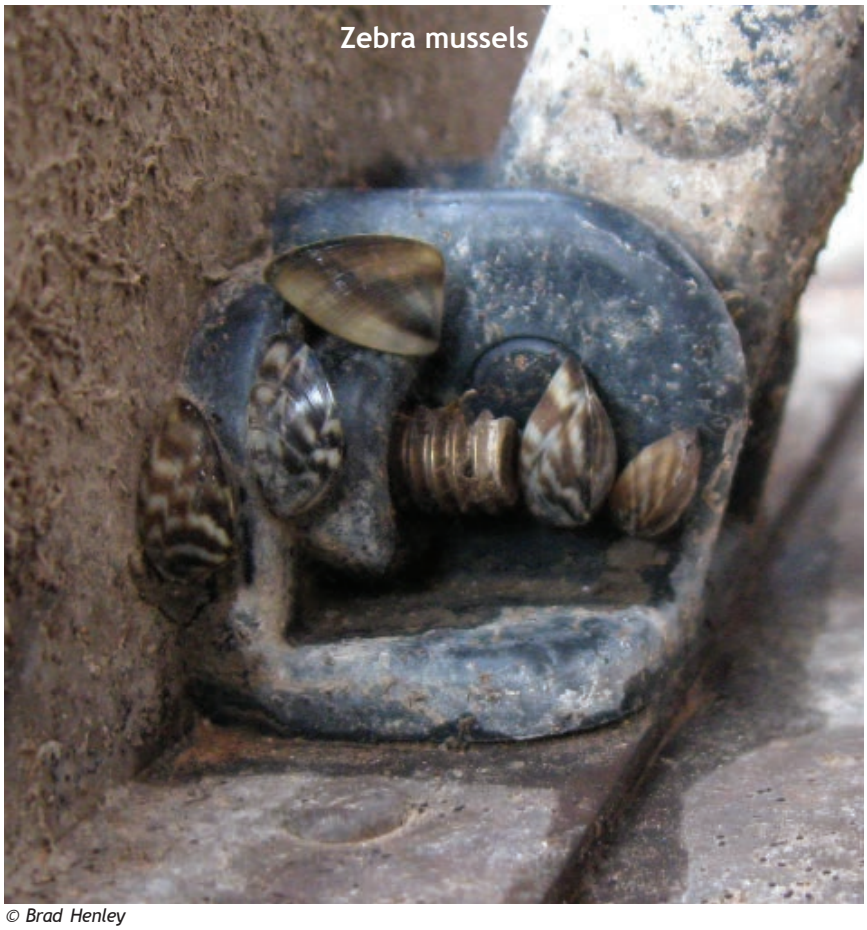
Quagga

© U.S. Geological Survey

Zebra

© Lauren Livo and Steve Wilcox

Zebra mussels



© Brad Henley

Quagga mussels

© Michael Porter, U.S. Army Corps of Engineers

Slideshow and WID Manual Chapter 3—Watercraft 101

For this module you will need:

- Watercraft 101 slideshow
- Boat models, if available
- Boat(s) ready for outdoor session
- Key to "Name That Boat Game"

The purpose of this module is to ensure inspectors know where to look on watercraft for AIS and are knowledgeable about boat terminology. This is important because most inspectors are not familiar with boats when they are hired. This module is also critical to set the participants up for success in the subsequent inspection module.

The watercraft module is divided into three activities:

1. Presentation on Watercraft
    a. Boat Terminology
    b. Marine Propulsion Systems
    c. Watercraft Risk
    d. Name that Boat Game
2. Outdoor session—boat anatomy
3. Group activity—Review

Participants should learn the following in the Watercraft 101 module:

- Boat Terminology and Anatomy
    - Identify the key parts of a boat by name; know their location and function.
    - Identify marine propulsion systems and understand how they can transport AIS.
- Watercraft Risk Assessment
    - Know what a hand-launched, non-motorized watercraft is.
    - Know the definition of a simple boat, a complex boat, and a very complex boat.
    - Understand why biological risk is related to watercraft complexity.
    - Identify different types of watercraft.

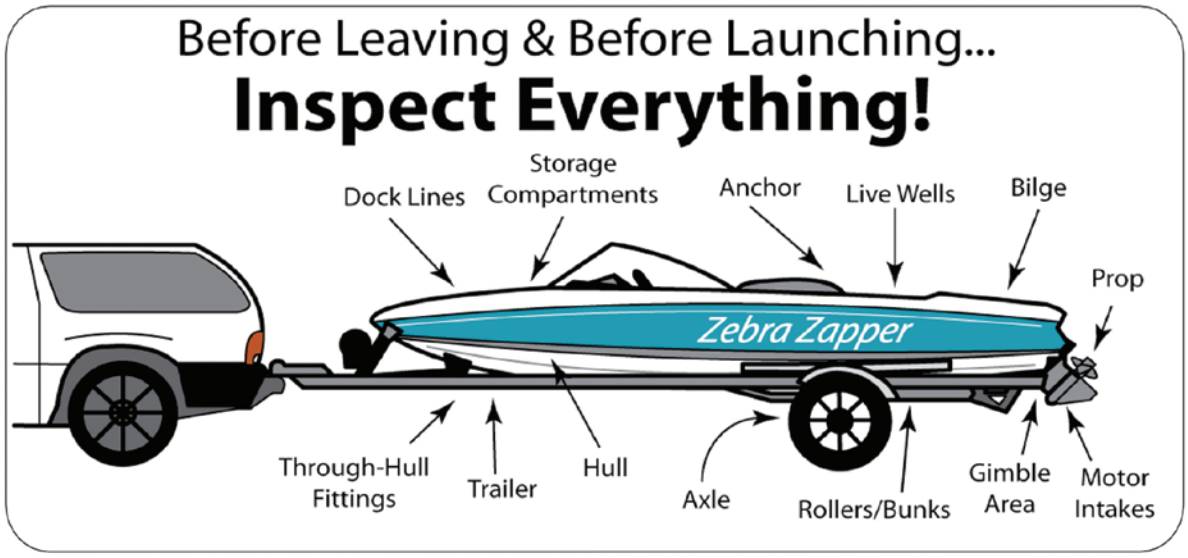
In this module, we focus on general boat anatomy and terminology. At the same time, we start to get into detail on watercraft risk. The presentation has several different portions that break up the information into smaller learnable segments. The presentation is reinforced with an outdoor session in which the concept of H.E.A.D. is introduced for the first time. The module is concluded with a group session in which the participants have an opportunity to demonstrate what they have learned and ask questions.

Slideshow—Watercraft 101

This presentation for this module is quite long and therefore time management is essential. The beginning of this slideshow introduces the participants to boats for the first time. The presentation begins with an overview of boat terminology focused on the places most likely to have mussel attachment or standing water. This is a great time to use boat models to show the class visually while presenting. Focus on the areas of the watercraft that can hold standing water and remind the participants what they learned in the biology module about veligers and other AIS being microscopic or small enough to be transported in standing water. Introduce the importance of the bilge plug and asking the boater to pull it during inspection, having the boater put it in before launch, and instructing the boater to leave it out during transport. There is time spent explaining the different marine propulsion systems. It is important that participants know the physical difference between trolling motors, outboards, inboard/outboard and inboard engines.

Next, the presentation reviews the watercraft risk assessment, defines hand-launched, simple, complex, and very complex boats. It is important that participants learn these differences by definition at this point so they can flow through the inspection procedure with greater understanding.

The last portion of the slideshow is the "Name That Boat Game". The purpose is to reinforce watercraft types, marine propulsion systems, and allow the participants to demonstrate their new knowledge. This is a fun way to engage the class and evaluate what they have learned. The trainer should flip through the slides with no commentary and allow



participants to write down answers in their manual. Once everyone is done, the trainer should go back and review the answers. Participants can grade themselves.

Outdoor Session—Boat Anatomy

The purpose is to reinforce the presentation by showing the participants the parts on a boat and allowing them to touch the boat, compare parts, look at boat compartments closely, and ask questions. The trainer should walk around the boat and point out the boat parts in the same way that they would do an inspection—H.E.A.D.—to get the participants accustomed to starting and stopping in the same place and moving around the boat in a systematic manner.

The group activity is one of the easiest and requires no preparation in advance. Take a group of participants to a boat outside and go through the anatomy pointing out the important parts of the watercraft. Begin at the bow with the hull and proceed through in the same order you would inspect a boat—port side of hull and trailer then starboard. Next, point out the transom, then engine…and so on. Use the correct terminology (e.g., port, not left). Be sure all participants see the boat and know what you are talking about (e.g., point and touch the part directly). Begin moving the participants around the watercraft in the order of the step-by-step inspection procedure. Repetition is crucial to reinforce new concepts.

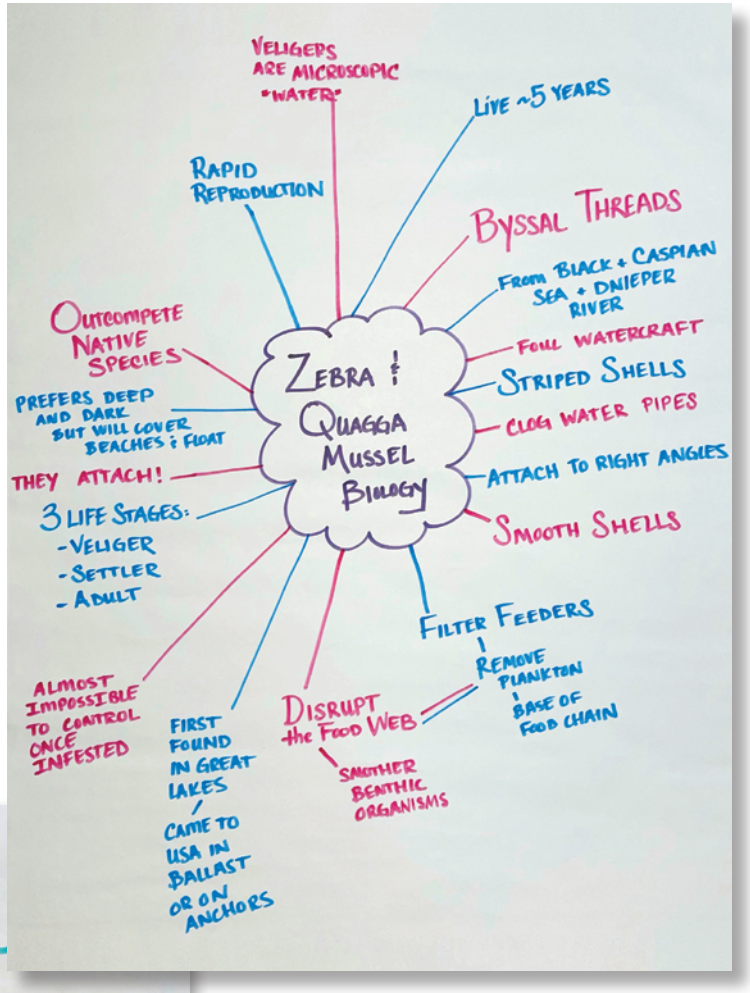
Trainer pointing out the bilge plug during the boat anatomy outdoor session.

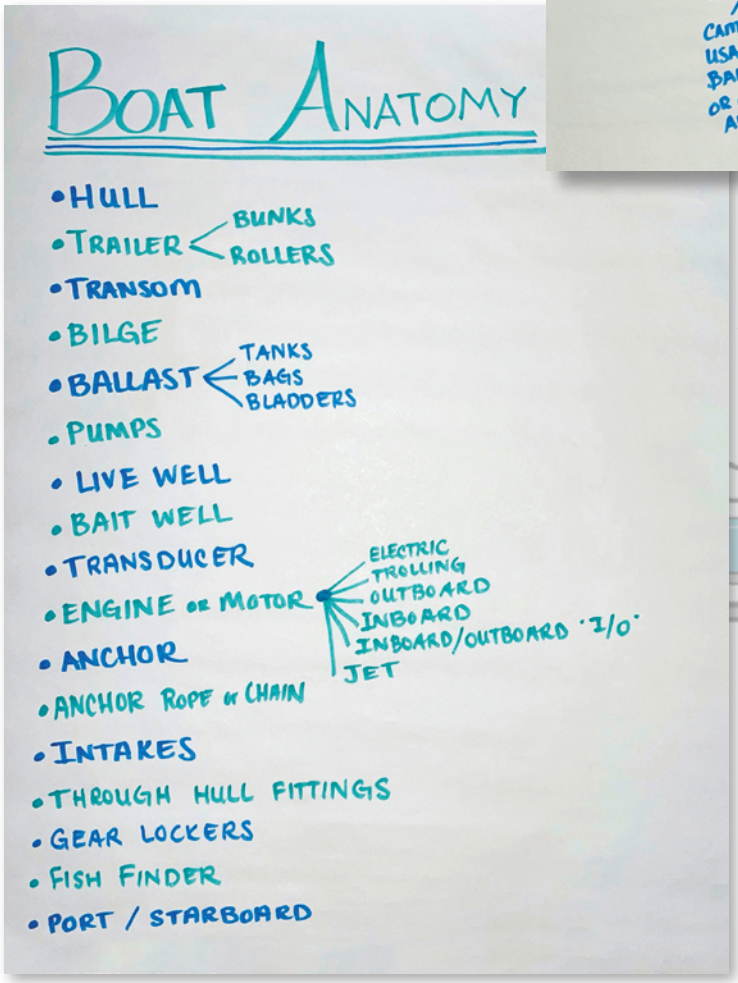
Do not get lost in the inspection procedure or triggers for decontamination in this activity. **Teachers should be saying "this is this" and "that is that" and no more.** Let the participants learn the anatomy of a boat, and the terminology at this point, without overloading them with the WID procedures yet to come.

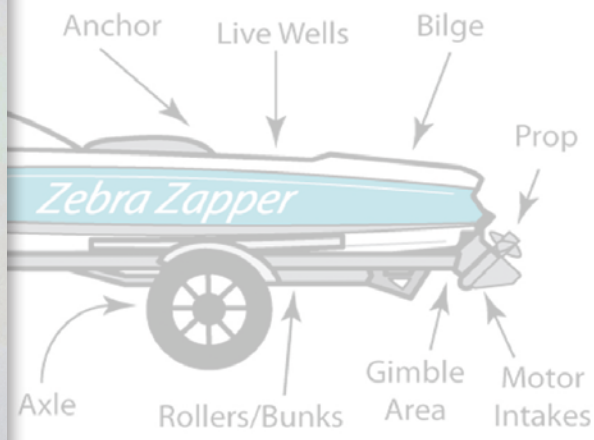
Group Activity—Review

The watercraft module is concluded with an opportunity for participants to share what they have learned, and for trainers to evaluate if participants understand the important concepts. Engage the class in a brief facilitated session in which participants tell trainers one place on a boat that they need to look for AIS. Write these down on a flip chart and post them on the wall for the duration of the class. This time should also be used for questions and answers before moving onto the next module.

Group activity examples:







Slideshow and WID Manual Chapter 4—Inspection

For this module, you will need:

- Inspection slideshow
- Flipchart and markers
- Tablets or data collectors
- Seals and seal receipt books, if applicable
- Equipment: flashlight, magnifier, mirror, wire cutters, digital camera, etc.
- Specimen collection materials
- Boat(s) ready for outdoor session
- Quality assurance form

The purpose of this module is to teach participants how to inspect watercraft for AIS and the standard procedures that they must follow as inspectors and decontaminators. This is the most important section of the entire training. Participants must understand, retain, and practice the details.

The inspection module is divided into five activities:

1. The Ideal Inspector Activity
2. Presentation on Inspection
3. Demonstration on data collection
4. Outdoor session—Inspection Practice
5. Group activity—Review

Participants should learn the following in the Inspection module:

- The expectations, roles, and responsibilities of inspectors and decontaminators
- Clean, Drain, Dry—No Mud, No Plants, No Water, No Mussels or Animals
- Priorities for Inspectors
- Types of Inspection
- Recommended Equipment
- Regional WID Data Sharing System
- Seal removal and application procedures (if applicable)
  - How to apply and remove a seal
  - How to write a seal receipt
  - How to read a seal receipt
- The Step-By-Step WID Procedures
  - Incoming Entrance and Off-Water Inspection
  - Outgoing Exit Inspection—Prevention (Negative) Waters
  - Outgoing Exit Inspection—Containment (Infested, Positive, or Suspect) Waters
- Know the standing water rules and reasons for decontamination
- Understand what bait is legal at their site and triggers for decontamination (optional)
- Obligations for reporting AIS
- What to do if they intercept a mussel boat

Ideal Inspector Activity

This module begins with a group activity "The Ideal Inspector". Engage the class in a brief facilitated session in which participants tell trainers one quality that an ideal inspector, employee or co-worker should have. Creative trainers can draw a person (stick figures work too!) and label it on a flip chart. Others may just make a list and write down the answers and post them on the wall for the duration of the class. Every inspector should strive to be the ideal inspector.

Examples of qualities include professional, timely, punctual, reliable, friendly, knowledgeable, helpful, thorough, detailed, awake, sober, clean, hygienic, in proper uniform, passionate, outgoing, agile, etc.

Slideshow—Inspection

The presentation begins with a discussion of the roles and responsibilities of an inspector and then goes into an overview of inspections including the goals for every boat, inspector's priorities, and equipment. There is also a brief description of the types of WID stations and the types of inspections.

The next section is about the wire seal and receipt. It is vital for participants to understand how this can work at a single site and across many jurisdictions.

The training promotes, demonstrates, and teaches data collection through the Regional WID Data Sharing System (System). The System is in use at more than 200 locations across the west. Colorado Parks and Wildlife developed the System and maintains ownership and oversight. There are 13 states, National Park Service, Lake Tahoe Regional Planning Agency, Solano County Water Agency, Mussel Dogs, and TiGE all using the System as their primary form of data collection and management.

The purpose of the System is to record information related to WID electronically and to share information in a timely manner across jurisdictions to aid collaborative efforts to prevent the spread of zebra and quagga mussels and other AIS. The System is used for data entry, viewing, editing, querying, and reporting. An included risk assessment tool shows where boats are moving after launching in mussel infested waters and sends an alert to the next known destination.

Data Collection Demonstration

Take a break from the slideshow to demonstrate the use of the System and its WID Mobile application. Trainers should connect and login to the WID Mobile website (https://watercraftinspection.org), click the "Mobile View" button at the bottom of the page, and proceed to demonstrate the data collection process for a typical inspection. It is incredibly important that trainers stress the importance of high-quality data and how it is used to make management decisions within the AIS program.

Resume the Inspection Slideshow

The next section is about seals and receipts which are becoming industry standard for WID stations to document boater compliance with inspections or decontaminations. Many inspections start with a seal removal upon entry and end with a seal application upon exit. Regionally, we want as many boats sealed as possible. Be sure participants know how to apply a seal, remove a seal, and fill out the receipt. Practice reading receipts with them. Bring old receipts if you have any to show—point out what is correct and what is incorrect. The section on seals and receipts should be personalized for the audience and may be reduced if the jurisdictions present are not using seals and receipts.

Outdoor Session—Inspection Practice, Quality Assurance, and Seal Application

Break from the slideshow after the seal section and go outside to allow time for participants to practice in a small group of three (boater, inspector, and observer). They will use the data collectors to guide inspections and the QA form to evaluate inspections at the boats.

- The boater will need to have a smart phone, tablet, or data collector. Use the paper WID Log if an alternate is needed.
- The observer will need to have the QA Form for Incoming Inspection, a pen, and a clipboard.
- The boater should have a pre-defined scenario or script.

Concurrently cycle participants through the seal application independently and be sure they know how to attach a seal, remove a seal, write a receipt, and read a receipt, if applicable.

The Step-by-Step Inspection Procedures are the single most important thing in the training for participants to practice and master.

Level 2 class participants are asked to memorize the procedures overnight. The *WID Manual* includes the WRP approved procedures, and the slideshow explains them in detail.

- Incoming Entrance and Off-Water Inspection Procedure
- Outgoing Exit Inspection—Prevention Waters
- Outgoing Exit Inspection—Containment Waters

The rules for standing water and corresponding procedures are detailed in both the presentation and WID Manual. It is important that the inspectors understand the triggers for decontamination and the reasons why. These may vary by jurisdiction.

Optional: An overview of live aquatic bait rules is included in the inspection presentation. The take home message is that they must know the rules for their site because bait rules vary greatly among states, federal properties, and local governments. Participants must know the triggers for decontamination or disallowing bait use at their site. Bait decontaminations are covered in the last chapter. The section on live aquatic bait should be personalized for the audience and may be reduced if the jurisdictions present are not allowing live aquatic bait or are not requiring bait decontamination.

A brief discussion of reporting requirements and what inspectors should do when they find a mussel boat is included. Inspectors should remain calm, notify a supervisor, and follow the procedure in the decontamination chapter.

Conclusion of Day 1

Day 1 concludes after the chapter 4 slideshow on inspection and practice. Trainers should answer questions before dismissing the class if time permits.

Participants that are attending for Level 1 certification should test out and will conclude their training after day 1.

Participants that are continuing for Level 2 certification are instructed to complete the chapter 1–4 review questions and memorize the step-by-step inspection procedures overnight. These participants will return for day 2.

Overview of Day 2

The focus of the second day is teaching and practicing decontamination and reinforcing what was learned the day before on biology, watercraft, and inspection.

Trainers will begin the day with a demonstration of an outgoing exit inspection. Trainers will then review the chapter 1–4 review questions and answers to make sure all participants learned what they needed to on day 1 and are ready for day 2.

Participants will then engage in practical hands-on inspection practice focused on outgoing exit inspections, seal applications, and data collection in groups of three. QA forms will be used the same as on the previous day.

The final chapter in the *WID Manual* is decontamination. Participants will learn the standard operating procedures and general maintenance of the decontamination unit, triggers for decontamination, and the step-by-step procedures for decontamination, including sample collection and reporting.

Trainers will answer questions from participants prior to administering the final exam. Participants should take the exam and grade it before leaving.

Slideshow and Manual Chapter 5—Decontamination

For this module, you will need:

- Decontamination slideshow
- Flipchart and markers
- Decon unit(s) fully operational with fuel, water, keys, and fluids.
- Decon attachments (garden hose, fake-a-lake, muffs, wand, diffuser, spray nozzles)
- Boat(s) prepped and ready for demonstration
- Personal protective equipment (including water and heat resistant gear)
- Extra safety glasses and gloves
- Contact thermometer
- Specimen collection materials
- 5 gallon buckets (2), bait net, and fake fish (or surrogate) for bait treatment demonstration

The purpose of the decontamination module is to prepare participants to perform decontamination. This module reinforces the triggers for decontamination, teaches the standard operating procedures for the decontamination unit, and empowers participants to follow the step-by-step decontamination procedures with confidence.

The decontamination module is divided into six activities:

1. Presentation on Decontamination
2. Outdoor session—Decontamination unit SOPs, attachments, and winterization
3. A detailed review of the decontamination procedures
4. Decontamination demonstration
5. Decontamination practice
6. Q&A session

Participants should learn the following in the Decontamination module:

- Know the reasons for decontamination.
- Know when decontamination is required (depending on the jurisdiction).
- Know the basic temperatures and pressures for each type of decontamination.
- Know the difference between the four types of decontamination and the step-by-step procedures for each.
- Know the standard operating procedures for the decontamination unit.
- Know how to hook up attachments.
- Know how to take samples and get them processed, if applicable.
- Know how to process a mussel boat with a full decontamination.
- Know how to fill out decontamination documentation.

Most important—Participants should feel comfortable using the *WID Manual* and following the WRP approved WID procedures to perform decontamination!

Slideshow—Decontamination

The presentation provides a brief overview of decontamination that follows along the WID Manual and provides highlights. It is not meant to be comprehensive. It is intended to be an introduction that will be reinforced through the outdoor hands-on sessions and the group activities.

Outdoor Session—Standard Operating Procedures, Winterization, and Attachments

Begin by showing the participants the parts of the decontamination unit and giving them a basic understanding of how it works. Next follow the standard operating procedure (SOP) manual (specific to the unit you are teaching participants to use) and perform the SOP while a participant reads it to you. Have each participant turn the unit on and off to see how that feels. Introduce the attachments—pass them around, name them, and tell inspectors which procedures they are used for.

Concurrent Indoor and Outdoor Sessions:

Note: *The next portion is intended for two concurrent small groups, unless the class size is less than 10.*

Step by Step Decontamination Procedures, and Decontamination Demonstration and Practice

The trainer will demonstrate each decontamination procedure. Participants will practice using the attachments and perform engine flushes, standing water decontaminations, and other decontamination procedures, as time and resources allow.

Decontamination Procedures

The trainer should arrange class, so participants and teachers are all sitting facing each other in a circle. The trainer should sit with their participants. This time is spent going through the decontamination chapter of the WID Manual page-by-page with the participants and talking through the step-by-step procedures for decontamination and answering questions.

- Standing Water Decontamination
  - Interior Compartments
  - Engine Flush—Outboard, I/O, Inboards
  - Ballast Tank Flush
- Plant Decontamination
- Bait Decontamination
- Full Decontamination: Mussel Boats

Outdoor—Decontamination Demonstration and Practice

This outdoor session is for participants to start and shut down the decontamination unit, put together attachments, spray the hull, flush an engine, flush a compartment, practice taking samples, etc.

If time and equipment allow, break the class into small groups and have each group perform a full decontamination (start to finish) on a boat including data collection. This will give them practice performing all procedures and exposure to compartments, equipment, engines, hull and trailer, sample collection, photos, and paperwork.

However, time often runs short for this during a two-day training. At a minimum, be sure each participant sprays the hull and switches between high and low pressure, and everyone sees an engine flush.

Participants must also know how to hook up the attachments and connect the engine muffs, fake-a-lake, garden hose, and diffuser attachments. This can be done inside in bad weather.

Chapter 9: The Exam

After the decontamination module is completed, the trainer should answer questions, as time allows. When the class is mostly ready, it is time to take the exam. This is a closed book test and participants are not allowed to use the WID Manual, smart phones, or other reference materials during the exam.

Exams are graded by dividing the number of correct answers by the total number of answers. Example: out of a 50 answer test, and the participant misses 3 (therefore 47 correct). 47 divided by 50 equals 0.94 or 94%. Each ANSWER on the test is 1 point, not each question.

All participants must receive a passing score of 80% or better on the final written exam to pass the Level 1 or Level 2 class. It is recommended to have participants trade papers and grade the tests in class prior to adjourning. This is dependent on available time.

There is no written exam for Level 3 Trainers and Advanced Decontamination courses. Participants are awarded a certificate of completion based on their ability to demonstrate knowledge, skills, and a positive attitude.

Chapter 10: After the Class

The regional training program operated by PSMFC offers a certificate of course completion that will be provided to participants after class. PSMFC also maintains records related to training and courses. Various jurisdictions offering WID training handle certification differently—some offer certificates, proof of course completion, identification cards, or unique inspector identification numbers. It is recommended that jurisdictions operating WID programs track certain data related to training including the inspector's contact information, WID station, course evaluation results, test scores, and certificates earned.

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Appendices

A. Links to Complementary Resources

B. Sample WID Course Agendas

1. Level 1 Watercraft Inspector Training (In-Person)
2. Level 1 Watercraft Inspector Training (Virtual)
3. Level 2 Watercraft Inspection and Decontamination Training (In-Person)
4. Level 2 Watercraft Inspection and Decontamination Training (Virtual Two Day)
5. Level 2 Watercraft Inspection and Decontamination Training (Virtual Three Day)
6. Level 3 WID Trainer Training (In-Person)
7. Level 3 WID Trainer Training (Virtual)
8. Advanced Decontamination Training (In-Person)

C. Checklist for Host Organizations

Appendix A: Links to Complementary Resources

Click on the document title to open the link to the full document.

AIS Program Management and Regional Coordination

- The Quagga Zebra Action Plan for Western U.S. Waters (WRP and ANS Task Force, 2010)
- The Quagga Zebra Action Plan for Western U.S. Waters: Status Update Report (WRP, 2019)
- Building Consensus in the West Workgroup: Final Activity Report 2011–2019 (WRP, 2019)
- The Updated Recommendations for the Quagga Zebra Action Plan for Western U.S. Waters (WRP, 2020)
- Summary of Western States' Aquatic Invasive Species Outreach Campaigns: Target Audiences, Messaging, Delivery, and Lessons Learned (WRP Education and Outreach Committee, 2021)

Early Detection

- Zebra and Quagga Mussel Field Sampling and Monitoring Protocol (WRP, 2020)
- Laboratory Standards for Zebra and Quagga Mussel Veliger Analysis (WRP, 2020)

Legal Documents

- Model Legal Framework for Watercraft Inspection and Decontamination Programs
  - Preventing the Spread of Aquatic Invasive Species by Recreational Boats: Model Legislative Provisions & Guidance to Promote Reciprocity among State Watercraft Inspection and Decontamination Programs (Otts and Nanjappa, eds. 2014)
  - Model Regulation for State Watercraft Inspection and Decontamination Programs (Otts and Nanjappa, eds 2016)
  - Model Memorandum of Understanding for Watercraft Inspection and Decontamination Programs (Otts, 2018)
  - From Theory to Practice: A Comparison of State Watercraft Inspection and Decontamination Programs to Model Legislative Provisions (Otts, 2018)
- State Clean Drain Dry Provisions and Related Requirements (NSGLC-17-04-03) (Otts, 2017)
- Comparative Analysis of Watercraft Inspection and Decontamination Requirements along the Lower Colorado River (Otts and Bowling, 2019)
- Role of Local Governments in Aquatic Invasive Species Prevention Efforts (Otts, S. and Debrukeyere, L., 2020)
- Local Government AIS Toolkit (Otts, S. and Debrukeyere, L., 2020)

Watercraft Inspection and Decontamination

- Western Regional Panel Approved WID Procedures
  - Decontamination Unit Minimum Standards (WRP, 2019)
  - Trailer Decontamination Unit Specifications (WRP, 2019)
  - COVID-19 Guidelines for Watercraft Inspection and Decontamination Stations (WRP, 2020)
  - Outgoing Exit Watercraft Inspection—Containment Waters (WRP, 2020)
  - Outgoing Exit Watercraft Inspection—Prevention Waters (WRP, 2020)
  - Incoming Entrance and Off-Water Inspection Procedure (WRP, 2020)
  - Standing Water Decontamination of Inboard Engines (WRP, 2020)
  - Standing Water Decontamination of Interior Compartments (Not Ballast) (WRP, 2020)
  - Standing Water Decontamination of Outboard Motors and Inboard/Outboard (I/O) Engines (WRP, 2020)
  - Advanced Watercraft Decontamination Manual (WRP, 2020)
  - Aquatic Nuisance Species Inspection Procedures for Amphibious Aircraft (WRP, 2020)

- T-32: Design and Construction in Consideration of Aquatic Invasive Species (ABYC, 2018)
- A Review of Chemical Use Associated with Watercraft Decontamination to Address Aquatic Invasive Species; a special supplement to UMPS (Phillips and Elwell, 2018)
- Guide to Preventing Aquatic Invasive Species Transport by Wildland Fire Operations (NWCG, 2017)
- Uniform Minimum Protocols and Standards for Watercraft Inspection and Decontamination Programs for Dreissenid Mussels in the Western United States III (Phillips and Elwell, 2016)
- The Student Training Curriculum for Watercraft Inspectors and Decontaminators to Prevent and Contain the Spread of Aquatic Invasive Species (Brown, 2016)
- The Voluntary Guidelines to Prevent the Introduction and Spread of Aquatic Invasive Species through Recreational Activities (ANS Task Force, 2013)
- Inspection and Cleaning Manual for Equipment and Vehicles to Prevent the Spread of Invasive Species (BOR, 2012)

Watercraft Inspection and Decontamination Training Videos

https://www.westernais.org/trainer-resources

- Video Links:
  - An Overview of Watercraft Inspection and Decontamination Programs
  - How to Perform a Boat Inspection
  - How to Perform a Full Decontamination
  - How to Collect an AIS Sample from Watercraft
  - How to Perform a Ballast Tank Decontamination
  - How to Perform a Bait Treatment
  - How to Perform a Inboard Engine Decontamination
  - How to Perform a Inboard/Outboard Engine Decontamination
  - How to Perform a Plant Decontamination
  - How to Perform a Seaplane Inspection and Decontamination
  - Pathways, Coordination, and Legislative Update for Aquatic Invasive Species Prevention and Management

Quagga Mussels at Lake Mead National Recreation Area

Appendix B-1: Sample WID Training Agenda Level 1—Watercraft Inspection Course (In-Person)

9:00 AM	Welcome!
9:05 AM	Boat Inspection Demonstration (outside)
9:15 AM	Boat Inspection Demonstration Review and Class Introductions
9:30 AM	Introduction
10:00 AM	Zebra and Quagga Mussel Biology
10:30 AM	How Many Mussels Can You Find? (outside)
10:45 AM	Other AIS Biology
11:15 AM	Watercraft 101
12:00 PM	Boat Anatomy (outside)
12:30 PM	**LUNCH**
1:00 PM	The IDEAL Inspector
1:15 PM	Inspection
2:30 PM	Inspection Practice (outside)
3:30 PM	When to Decontaminate: Decontamination Overview
4:00 PM	Review and Q&A
4:15 PM	Exam
5:00 PM	Adjourn

Appendix B-2: Sample WID Training Agenda Level 1—Watercraft Inspection Course (Virtual)

9:00 AM	Welcome and Introductions
9:15 AM	Introduction
9:45 AM	Zebra and Quagga Mussel Biology
10:15 AM	Review—Mussel Biology
10:25 AM	Other AIS Biology
10:50 AM	Review—AIS Biology
11:00 AM	Watercraft 101
11:45 AM	The IDEAL Inspector
12:00 PM	Inspection
1:00 PM	When to Decontaminate: Decontamination Overview
1:20 PM	Review—Inspection Procedures and Decontamination
1:30 PM	Exam
2:00 PM	Adjourn Virtual Training

It is STRONGLY RECOMMENDED that new inspectors shadow experienced inspectors.

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Appendix B-3: Sample WID Training Agenda Level 2—Watercraft Inspection and Decontamination Course (In-Person)

Day 1

9:00 AM	Welcome!
9:05 AM	Boat Inspection Demonstration (outside)
9:15 AM	Boat Inspection Demonstration Review and Class Introductions
9:30 AM	Introduction
10:00 AM	Zebra and Quagga Mussel Biology
10:30 AM	How Many Mussels Can You Find? (outside)
10:45 AM	Other AIS Biology
11:15 AM	Watercraft 101
12:00 PM	Watercraft Anatomy (outside)
12:30 PM	**LUNCH**
1:00 PM	The IDEAL Inspector
1:15 PM	Inspection
2:45 PM	Inspection Practice (outside)
4:15 PM	Review Day 1. Q&A.
5:00 pm	Adjourn

Homework: Memorize the Inspection Procedures and Answer Chapter Review Questions.

Day 2

9:00 AM	Welcome! Chapter Review Questions
9:30 AM	Exit Inspection Demonstration (outside) and Review
10:00 AM	Inspection Practice (outside)
10:30 AM	Decontamination Overview
11:00 AM	Decontamination Unit Standard Operating Procedures and Attachments
12:00 PM	**LUNCH**
1:00 PM	**Group 1**—Decontamination Procedures • When to Decontaminate • Standing Water Decontamination of Interior Compartments • Standing Water Decontamination of Outboard and I/O Engines • Standing Water Decontamination of Inboard Engines • Standing Water Decontamination of Ballast Tanks • Plant Decontamination • Bait Treatment • Full Decontamination **Group 2**—Outdoor Decontamination Practice • Standing Water Decontamination of Interior Compartments • Standing Water Decontamination of an Engine • Hull and Trailer Rinse and Spray
3:30 PM	Review Day 2. Q&A.
4:00 PM	Exam
5:00 PM	Adjourn

Appendix B-4: Sample WID Training Agenda Level 2—Watercraft Inspection and Decontamination Course (Virtual Two-Day Course)

Day 1

9:00 AM	Welcome and Introductions
9:15 AM	Introduction
9:45 AM	Zebra and Quagga Mussel Biology
10:15 AM	Review—Mussel Biology
10:25 AM	Other AIS Biology
10:50 AM	Review—AIS Biology
11:00 AM	Watercraft 101
11:45 AM	The IDEAL Inspector
12:00 PM	Inspection
1:30 PM	Review Day 1. Q&A.
2:00 PM	Adjourn Virtual Training

Day 2

9:00 AM	Welcome. Chapter Review Questions
9:30 AM	Review—Inspection
10:00 AM	Decontamination Overview
10:30 AM	Decontamination Unit Standard Operating Procedures and Attachments
11:00 AM	Decontamination Procedures

- When to Decontaminate
- Standing Water Decontamination of Interior Compartments
- Standing Water Decontamination of Outboard and I/O Engines
- Standing Water Decontamination of Inboard Engines
- Standing Water Decontamination of Ballast Tanks
- Plant Decontamination
- Bait Treatment
- Full Decontamination

1:00 PM	Review Day 2. Q&A.
1:30 PM	Exam
2:00 PM	Adjourn Virtual Training

It is STRONGLY RECOMMENDED that new inspectors shadow experienced inspectors.

Appendix B-5: Sample WID Training Agenda Level 2—Watercraft Inspection and Decontamination Course (Virtual Three-Day Course)

Day 1

9:00 AM	Welcome and Introductions
9:30 AM	Introduction
10:30 AM	Zebra and Quagga Mussel Biology
11:00 AM	Other AIS Biology
11:30 AM	Review—Biology
11:45 AM	Q&A
12:00 PM	Adjourn

Day 2

9:00 AM	Watercraft 101
9:30 AM	Name That Boat Game
10:00 AM	Review—Watercraft Anatomy Review
10:15 AM	Inspection
11:15 AM	Review—Inspection
11:30 AM	Break Out Rooms—Practice Inspection Dialogue
11:45 AM	Regional WID Data Sharing System and Mobile App
12:15 PM	Q&A
12:30 PM	Adjourn

Day 3

9:00 AM	Chapter Review Questions
9:30 AM	Decontamination
10:30 AM	Decontamination Unit Standard Operating Procedure and Attachments
10:45 AM	Safety
11:00 AM	Break Out Rooms—Review Decontamination Procedures, Data Entry, Reporting
11:30 AM	Q&A
11:45 AM	Exam
12:30 PM	Adjourn

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Appendix B-6: Sample WID Training Agenda Level 3—Watercraft Inspection and Decontamination Trainer's Course (In-Person)

Day 1

9:00 AM	Welcome and Introductions
9:15 AM	Western Regional Training Standards—Trainer's Manual Chapters 1-4
10:30 AM	Class Preparation—Trainer's Manual Chapter 5-7
12:00 PM	**LUNCH**
1:00 PM	Class Discussion—What Makes a Great Training and an Awful Training?
1:30 PM	Effective Adult Learning
2:00 PM	WID Manual Guidance—Trainer's Manual Chapter 8
4:00 PM	After the Class—Trainer's Manual Chapters 9-10
4:15 PM	Resources for Trainers—Trainer's Manual Appendices
4:30 PM	Review Day 1. Q&A.
5:00 PM	Adjourn

Homework: Practice and Prepare for Tomorrow's Presentations!

Day 2—Student Presentation Day!

8:30 AM	Classroom Set-Up
9:00 AM	Welcome!
9:05 AM	Boat Inspection Demonstration (outside)
9:15 AM	Boat Inspection Demonstration Review and Class Introductions
9:30 AM	Introduction
10:00 AM	Zebra and Quagga Mussel Biology
10:30 AM	Other AIS Biology
11:00 AM	Watercraft 101
11:45 AM	Boat Anatomy (outside)
12:15 PM	**LUNCH (on your own)**
1:00 PM	Inspection
2:00 PM	WID Mobile Demonstration
2:30 PM	Decontamination
3:00 PM	Decontamination Unit Standard Operating Procedures and Attachments (outside)
3:45 PM	Review. Q&A. Course Evaluation. Class Picture.
5:00 PM	Adjourn

Note for Trainers: *Depending on the number of students, Day 2 may be repeated on Day 3 to allow more participants to demonstrate their presentation knowledge and activity skills.*

Appendix B-7: Sample WID Training Agenda Level 3—Watercraft Inspection and Decontamination Trainer's Course (Virtual)

Day 1

9:00 AM	Welcome and Introductions
9:15 AM	Western Regional Training Standards—Trainer's Manual Chapters 1–4
10:30 AM	Class Preparation—Trainer's Manual Chapter 5–7
12:00 PM	**LUNCH**
1:00 PM	Class Discussion—What Makes a Great Training and an Awful Training?
1:30 PM	Effective Adult Learning
2:00 PM	WID Manual Guidance—Trainer's Manual Chapter 8
4:00 PM	After the Class—Trainer's Manual Chapters 9–10
4:15 PM	Resources for Trainers—Trainer's Manual Appendices
4:30 PM	Review Day 1. Q&A.
5:00 PM	Adjourn

Homework: Practice and Prepare for Tomorrow's Presentations!

Day 2—Students will present today!

8:30 AM	Set Up Virtual Learning Environment
9:00 AM	Introduction
10:00 AM	Zebra and Quagga Mussel Biology
10:30 AM	Other AIS Biology
11:00 AM	Watercraft 101
12:00 PM	**LUNCH**
1:00 PM	Inspection
2:00 PM	Decontamination
3:00 PM	Review Q&A.
3:30 PM	Adjourn

Note for Trainers: *Depending on the number of students, Day 2 may be repeated on Day 3 to allow more participants to demonstrate their presentation knowledge and activity skills.*

Appendix B-8: Sample WID Training Agenda Advanced Decontamination Course (In-Person)

Day 1

7:30 AM — Trainer's Set-Up

8:00 AM — Welcome—Opening Remarks and Introductions

8:15 AM — Host State AIS Program Overview

8:45 AM — Review Existing Decontamination Procedures

- UMPS
- WID Manual—Decontamination Protocols
- Colorado Boat Compendium
- Tahoe Boat Book

9:00 AM — Wakeboard Boats

9:15 AM — Decontamination Videos

- Ballast Tank Decontamination
- Inboard Engine Decontamination
- Inboard/Outboard Engine Decontamination
- Full Decontamination

9:45 AM — BREAK

10:00 AM — Regional WID Data Sharing System and Mobile Application

10:15 AM — Decontamination Units

- Attachment and Tools
- Safety, Maintenance and Operations
- Trouble Shooting and Winterization

11:30 AM — Outdoor Session Overview

11:45 AM — LUNCH

12:45 PM — Outdoor Session I—Full Decontamination Start to Finish **Maintain existing groups and rotate through the following boats:**

- Boat 1 — Group A
- Boat 2 — Group B
- Boat 3 — Group C
- Boat 4 — Group D

2:30 PM — BREAK

2:45 PM — Outdoor Session II—Full Decontamination Start to Finish **Maintain existing groups and rotate through the following boats:**

- Boat 1 — Group D
- Boat 2 — Group A
- Boat 3 — Group B
- Boat 4 — Group C

4:45 PM — Summarize Day

5:00 PM — Adjourn

Appendix B-8: Sample WID Training Agenda Advanced Decontamination Course (In-Person) *continued:*

Day 2

9:00 AM	The Unique or Unexpected Boat
9:15 AM	Mussel Encrusted Watercraft Interceptions
9:30 AM	Session Plan • Explain 4 Groups and Rotation • Roles and Responsibilities
9:45 AM	Outdoor Session III—Full Decontamination Start to Finish **Maintain existing groups and rotate through the following boats:** • Boat 1 Group C • Boat 2 Group D • Boat 3 Group A • Boat 4 Group B
11:45 AM	**LUNCH**
1:00 PM	Outdoor Session IV—Full Decontamination Start to Finish **Maintain existing groups and rotate through the following boats:** • Boat 1 Group B • Boat 2 Group C • Boat 3 Group D • Boat 4 Group A
3:00 PM	**BREAK**
3:15 PM	Student's Choice: • Pressure Washers • Attachment tools • Propulsion Systems • Components
3:45 PM	Exam
4:30 PM	Closing—Summarize Advanced Decontamination Training • Course Evaluations, Certificates, and Class Photo
5:00 PM	Adjourn

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Appendix C: Checklist for Host Organizations

Organizations that are hosting a watercraft inspection and decontamination class should follow this checklist:

Host Organization

- ❑ Advertise the training.
- ❑ Provide the following information to the lead trainer when scheduling the class:
  - Contact information for the point of contact for class coordination and planning.
  - Hotel recommendations in proximity of training location.
  - Restaurant locations for lunch and food options.
- ❑ Provide the following information to the lead trainer at least one week before the class:
  - Arrange "local perspective" speakers to present for 15–30 minutes at the beginning of the class.
  - The roster of attendees including the name, title, agency, and contact information.

Training Room Set-Up

- ❑ Available the afternoon before the training for set-up.
- ❑ Available from 8:00 am–6:00 pm the day of the training.
- ❑ Arranged in theater or classroom style with tables and chairs facing a single direction.
- ❑ Small table for registration near the entrance.
- ❑ Large table in the back of the room for display.
- ❑ Laptop computer, projector, and screen set-up.
- ❑ Screen viewing surface large enough to be seen from all seats.
- ❑ Speakers or sound system so that video sound can be heard from all seats.

Hands-on Inspection Activities

- ❑ One trailered watercraft for every 3–6 students adjacent to classroom.
  - Attempt to get a variety of watercraft types (e.g., fishing boat, wakeboard boat, ballast boat, personal watercraft, pontoon boat, etc.) with different types of propulsion systems.
- ❑ Be certain that you have permission and sufficient space to conduct watercraft activities.

Hands-on Decontamination Activities

- ❑ One decontamination unit for every 6 students paired with a boat and adjacent to classroom.
  - Attempt to get different types of decontamination units depending on what the students will be using on the job (e.g., trailered unit, skid unit, on-demand unit, etc.).
  - Be sure that the units have gas/diesel, keys, batteries, water, and accessories.
- ❑ Safety equipment for all persons participating in or performing decontaminations.
- ❑ Be certain that you have permission and sufficient space to conduct decontamination activities, including proper drainage for wastewater.

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