WELCOME

to the Western Native Trout Challenge

This short presentation will help anglers learn about the threat aquatic invasive species pose to water bodies. Familiarizing yourself with this information will help you reduce the risk of moving Aquatic Invasive Species by learning how you can **Clean, Drain, Dry** clothing, equipment, vehicles and boats. After reading through these slides, you will be given a link to complete your registration to begin your Western Native Trout Challenge.





New Zealand mudsnails can be transported by anglers if waders, boots, and other personal gear is not Clean, Drain, Dry before moving from one water to another. Washington Department of Fish and Wildlife Ringold Hatchery, Franklin County.

Photo credit: WDFW Jesse Schultz

Aquatic invasive species (AIS) are nonnative species whose introduction causes harm, or is likely to cause harm to ecosystems, the economy, and human health. There are many types of aquatic invasive species, including algae, plants, zooplankton, macroinvertebrates, fish, reptiles, amphibians, mollusks, and crustaceans. Invasive species are called "hitchhikers" because the primary way they spread is by hitching a ride on gear and equipment. Once established, invasive species cause numerous problems, including outcompeting native species for food and habitat, reducing ecosystem diversity and function, and reducing recreational opportunities. Anglers moving from one water to another can pick up hitchhikers on boots, waders, car tires, bilge water from boats, nets, and other equipment.

Steps you can take to lessen the introduction and spread of Aquatic Invasive Species (AIS).



Clean, Drain, Dry all equipment and gear. After you're done recreating or fishing in a water body, completely remove all plants, animals, mud, and standing water from your vessel and equipment. Inspect your boat, trailer, and all gear. Pay close attention to crevices and hidden areas. Clean your fishing nets and waders. Many AIS can't be seen and are microscopic. It's important to clean your gear even if it doesn't appear to have anything on it. Any pockets of pooled water should be emptied and dried.



Inspect and Clean the boat:

- Anchor and line
- Motor lower unit
- Hull
- Trailer hitch, rollers, lights and axle
- Life jackets
- Swimming floats
- Clean your personal clothing and equipment:
- Shoes or boots
- Clothing remove seeds and vegetation
- Fishing vests and waders
- Fishing rod, reel and line
- Hooks and lures
- Tackle boxes

Clean your vehicle:

 Thoroughly inspect and remove all plants, dirt, and mud, and any other visible debris like seeds, shoots, animals, and eggs from vehicles. Drain water from all equipment before leaving the area you are visiting. Some species may live for months in water that has not been removed. Drain or remove water from your boat, bilge, live-wells, engine, internal compartments, and bait buckets by removing drain plugs before leaving the water. Keep in mind that some organisms are microscopic for at least part of their developing lives. Standing water is particularly worrisome. Replace with spring or dechlorinated tap water when keeping live bait before leaving water access.



Always remove the drain plug before transporting a boat.

Photo credit: Utah Division of Wildlife Resources.

Drain:

- Motors
- Jet drives
- Live wells
- Compartments
- Boat hulls
- Bilge

Dry:

- Shoes, boots and waders
- Bait buckets
- Life jackets
- Swimming floats, water skis, wakeboards or tubes



Thoroughly dry your waders and other equipment to ensure it is disinfected. Photo credit: Lisa DeBruyckere

Dry everything before entering new waters. Thoroughly drying is the best method for disinfecting clothing and equipment. Boots and nets should be hung-up to dry. Some nonnative species can survive for as many as 15 days in damp conditions and up to 2 days in dry conditions, so the drying process must be thorough. Aquatic invaders can only survive in water and wet areas. Drying your watercraft and waders thoroughly, if given enough time, will kill AIS and preserve the health of lakes and rivers. Putting waders in a freezer for at least 3 days can also kill any lingering AIS. When moving between waters, dry everything five days or more, unless otherwise required by local or state laws, when moving between waters.

Use clothing and equipment that is less likely to transport invasive species, such as one-piece rubber waders, which deprive aquatic hitchhikers of seams to hide in, and rubber-soled boots, which are more easily cleaned, compared to felt soles, which can trap water and create welcome places for New Zealand mudsnails, rock snot, and plant seeds.



Felt-soled waders can harbor aquatic invasive species. Choose rubber-soled waders to lessen the spread of aquatic invasive species. And remember, always check the regulations, because several states have felt-sole wader bans.

Photo credit: Tight Line Media

Unused bait and invasive plants and animals hitchhiking in bait buckets can ruin your fishing.



ALWAYS:

DRAIN BAIT BUCKET WATER ON LAND DISPOSE OF UNWANTED BAIT IN THE TRASH

www.protectyourwaters.net



Developed by Illinois-Indiana Sea Grant & Illinois Natural History Survey, Prairie Research Institute with funding from the Great Lakes Restoration Initiative © 2012 The Board of Trustees of the University of Illinois. IISG-12-31 The use of live bait by anglers can transport both aquatic and terrestrial invasive species. Check regulations for any restrictions on the use of live bait including species allowed in the water you're fishing. Dispose of unwanted bait, fish parts, and packing materials in the trash and away from water sources; do not dump them in the water or on land.

Release fish where you catch them!

Do not move any fish above or below a natural (for instance, a waterfall) or man made barrier – you may be undoing years of conservation work.



Willow Creek fish barrier, Catron County, New Mexico protects the resident Gila Trout population from encroachment of non-native trout. Photo credit: New Mexico Department

Photo credit: New Mexico Department of Game and Fish

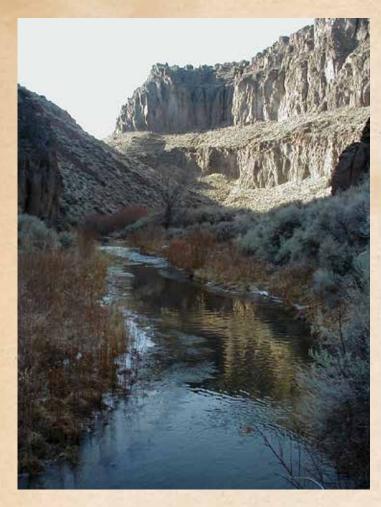


Lake Winnipeg, Canada mussel-fouled shoreline. Aquatic invasive species hitch-hiking on a boat were the likely cause of introduction of invasive mussels to this water body.

Photo credit: Cindy Sawchuk

Other actions you can take to lessen the spread and introduction of aquatic invasive species when fishing:

- Learn what invasive species occur in the places where you will be fishing.
- Fish caught for eating or taxidermy should be cleaned at designated fish cleaning stations or placed on ice.
- Learn to recognize invasive plants to avoid passing through them and unintentionally spreading them or their seed.
- Report any invasive pest sightings to the local land manager or a local APHIS office. You can click on the "Report a Pest or Disease" link at www.aphis.usda.gov.
- Buy your bait from licensed dealers.
- Do not transport any potential hitchhiker, even back to your home. Remove and leave them at the site you visited.



Lahtinen Trail in Idaho, home to the Interior Redband Trout.
Photo credit: Idaho Fish and Game Department

YOU can make a difference

Do your part to lessen the spread and introduction of aquatic invasive species.

Inspect, Clean, Drain, and Dry, and protect our aquatic ecosystems and the native fish and wildlife that call these places home.

References

Alaska Department of Fish and Game. Invasive Species Methods of Introduction. Accessed online at http://www.adfg.alaska.gov/index.cfm?adfg=invasive.pathways on 10 October 2018.

Great Britain Non-Native Species Secretariat. Biosecurity for Anglers. Accessed online 10 October 2018 at: http://www.nonnativespecies.org/checkcleandry/index.cfm.

Kilian, J.V., R.J. Klauda, S. Widman, M. Kashiwagi, R. Bourquin, S. Weglein, and J. Schuster. 2012. An assessment of a bait industry and angler behavior as a vector of invasive species. Biological Invasions 14(7):1469–1481.

Lake Superios Binational Program. 2014. Lake Superior Aquatic Invasive Species Complete Prevention Plan. Accessed online 10 October 2018 at: Available at http://www.epa.gov/glnpo/lakesuperior/index.html.

Lindgren, C.J. 2006. Angler awareness of aquatic invasive species in Manitoba. J. Aquat. Plant Manage 44:103–108. Montana Department of Fish, Wildlife, and Parks. 2018. Anglers Can Help Prevent AIS. Accessed online 10 October 2018 at: http://cleandraindry.mt.gov/News/anglers-can-help-prevent-ais

Pennsylvania Fish & Boat Commission. Clean Your Gear:
Help Reduce the Spread of Aquatic Invasive Species.
Accessed online 10 October 2018 at: https://www.
fishandboat.com/Resource/AquaticInvasiveSpecies/Pages/CleanYourGear.aspx

Strayer, D.L., and S.E.G. Findlay. 2010. Ecology of freshwater shore zones. Aquatic Sciences 72:127–163.

US Fish and Wildlife Service. Stop Aquatic Hitchhiker's website: http://stopaquatichitchhikers.org/prevention/#anglers

Wasson, A. An analysis of the recreational angler vector and associated pathways to aid in the prevention of invasive species introductions in mid-Atlantic waterways. A PPT presentation online accessed 10 October 2018 at: https://www.morgan.edu/Documents/ADMINISTRATION/pearl/Summer%20Internship%20Program/Alexis%20Wasson.pdf

For more information, visit: westernais.org stopaquatichitchhikers.org/prevention/#anglers

Thank you for taking the time to learn about Aquatic Invasive Species and what you can do to help protect our aquatic ecosystems and the native fish and wildlife that call these places home.

CLICK HERE

to register for the Western Native Trout Challenge



