VOLUNTARY GUIDELINES TO PREVENT THE SPREAD OF AQUATIC INVASIVE SPECIES THROUGH RECREATIONAL ACTIVITIES

Aquatic Nuisance Species Task Force
November 2012

In July 2011, the Aquatic Nuisance Species Task Force (ANSTF) re-established the Recreational Guidelines Ad-hoc Committee (Committee) composed of 55 Federal and State agency, non-profit and industry representatives. The Committee's mission is to update the 2000 ANSTF *Recommended Voluntary Guidelines for Preventing the Spread of Aquatic Nuisance Species Associated with Recreational Activities* (Federal Register/ Vol. 65, No. 76/ Thursday, April 13, 2000/ Notices, Pg. 19953). Those guidelines were revised taking into account new aquatic invasive species (AIS), and new recreational activities and equipment. Guidelines were revised for six recreational activities: anglers, motor boaters, non-motorized boaters, scuba divers and snorkelers, seaplane operators, and waterfowl hunters.

The purposes of these guidelines are to:

- Provide a consistent, practical, and effective document to inform outreach efforts geared toward public recreationalists to prevent the spread of AIS,
- Take into account the specific pathways, vectors, and life histories of *all* AIS, including fish, aquatic plants, invertebrates, and pathogens, and
- Promote voluntary actions to support the national *Stop Aquatic Hitchhikers!* campaign, as well as statewide efforts such as *Clean Boats, Clean Waters*.

Organizations conducting AIS outreach are encouraged to promote and use these guidelines in their communication and outreach efforts. Common to all activities is the basic "Clean, Drain Dry" message. Users of this document should consider using this brief message in media where short concise messages are allowed (e.g., billboards, stickers, newsletter sidebars, and other small size media). Guidelines specific for each recreational activity should be used for educational media (e.g., brochures, fact sheets) in their entirety, when possible. When not possible, the guidelines can be scaled down to fit needs of the media and the intended audience. These guidelines are also meant to compliment local, state or tribal laws concerning possession or transport of AIS. They do not override and should not be confused with AIS decontamination and quarantine laws that are in effect in various locations across the nation.

Chemical Treatments:
The Committee does not recommend wide use of chemical prophylactics or disinfectants for treating watercraft and recreational equipment. Reasons are that chemicals: 1) may damage equipment or components; 2) pose risks for environmental damage and human health, if not

properly used; and 3) have varying levels of effectiveness. Therefore, promotion of chemical treatment should be limited to situations in which guidelines can only be partially conducted or are not practical (such as when drying times are limited and known AIS are present). If a chemical treatment is promoted, it should be the most effective *and* the most environmentally benign (e.g., a salt-water solution for certain AIS). A list of common and consistent AIS control treatments is included in Appendix A to be used as a supplement when developing outreach materials.

Recreational Equipment Decontamination:
A key concept for recreational equipment decontamination is that the effectiveness of the treatment depends on the activity and the type of AIS.

Bottom line: Hot water ***kills*** AIS, while rinsing, flushing or high pressure washing ***removes*** them.

If aquatic recreational equipment has been left in the water for less than a day, key actions to prevent the spread of all AIS are:

- ***Inspect*** and clean off any aquatic plants, animals, and mud from all equipment *before leaving water access.*
- ***Drain*** motor, bilge, livewell, and other water containing devices.
- ***Dispose*** of unwanted bait, worms, and fish parts in the trash. When keeping live bait, drain bait container and replace with spring or dechlorinated tap water.
- ***Never*** dump live fish or other organisms from one water body into another.

The intent of these actions is to clean off any visible large-bodied organisms attached to or in watercraft or recreational equipment. Draining can also remove small organisms such as zebra mussel veligers, however, additional steps are needed to remove small-bodied organisms from other parts of the equipment. Those can be easily rinsed off or die out of water in a short period of time. To this end, added precautions that improve treatment effectiveness are to:

- ***Spray/rinse*** recreational equipment with high pressure hot water to clean off mud and kill aquatic invasive species,
- ***Flush*** motor according to owner's manual, AND/OR
- ***Dry*** everything for at least five days before reuse or ***wipe*** with a towel *before reuse.*

Notes: Young mussels can survive in standing water for 24 days at 50^{o}F, 8.5 days at 59^{o}F, or 4.5 days at 86^{o}F. It is recommended that even a simple hull rinsing with a garden hose and running water through the live well system can be effective. Rinsing of recreational equipment is an effective way to clean off species not visible to the naked eye.

If aquatic recreational equipment has been left in the water for more than a day, the following decontamination methods are recommended:

- Spray/rinse hull and other external areas or recreational equipment with high pressure (2,500 psi) hot water (140^{o}F for 10 sec).
- Rinse/flush motors with hot water (120^{o}F) for 2 minutes.
- Rinse/flush interior compartments with hot water (120^{o}F)

Notes: All equipment surfaces exposed to surface water, especially if left in the water for more than a day on invasive mussel infested waters should be decontaminated.
Young invasive mussel settlers are difficult to see with the unaided eye, but on smooth surfaces they feel like sandpaper.
Treatment using 140^{o}F water will also kill Eurasian watermilfoil, New Zealand mudsnails, and spiny waterfleas at various exposure times. Treatments are more effective with longer drying times and hotter water.
After removal of aquatic plants and animals*,* follow these steps:

- Spray/rinse recreational equipment either at home or at a car wash unless state, tribal or local regulations prohibit leaving the site without washing.
- Inspect, clean and rinse first, while higher temperature and pressure will speed up treatment and improve efficacy. Basically, rinsing is good, but using hot water is better.

Notes: Generally, residential hot water heaters are set at 120^{o}F. However, temperatures at the nozzle will be lower because of the water's heat loss to pipes, hoses, ambient temperature, etc. Commercial car washes typically use water pressure of no more than 1,500 psi and car washes rarely have water hotter than 100^{o} F.

If recreational equipment is fouled, certified or professional decontamination services are highly recommended and may be required based on local, state, or tribal regulations.

Summary: Recommended actions for day users are: inspect, clean off, drain, rinse (with low pressure, hot as possible) and dry for more than five days. For recreational equipment left in zebra mussel infested waters for more than a day, do all of the above, except use high pressure, hot water for exterior surfaces, and low pressure hot water for interior components.

Environmental Stewardship and Compliance:
To promote environmental stewardship and compliance with regulations, guidelines for each pathway should include the following statements:

Know the rules! Specimens are needed to confirm sightings, but some jurisdictions prohibit possession and transport of invasive aquatic plants and animals. Contact your local natural resource management agency for instructions, see

http://www.invasivespeciesinfo.gov/laws/statelaws.shtml. Unauthorized introduction of plants, fish, or invertebrates into the wild is illegal in most states. Protect your property and our waters.

Report new sightings. Note exact location; take a photo; if possible and legal, place specimens in a sealed plastic bag; and call a federal or state authority.

Recreational Activity:

Anglers

Clean

Inspect and ***clean off*** plants, animals, and mud from gear and equipment including waders, footwear, ropes, anchors, bait traps, dip nets, downrigger cables, fishing lines, and field gear *before leaving water access.*

Scrub any visible material on footwear with a stiff brush.

Anglers using boats should refer to boat inspection and decontamination guidelines.

Drain

water from boat, motor, bilge, bladder tanks, livewell and portable bait containers *away from ramp*. When keeping live bait, drain bait container and replace it with spring or dechlorinated tap water. Don't add other live fish or water to the bait container.

Dry

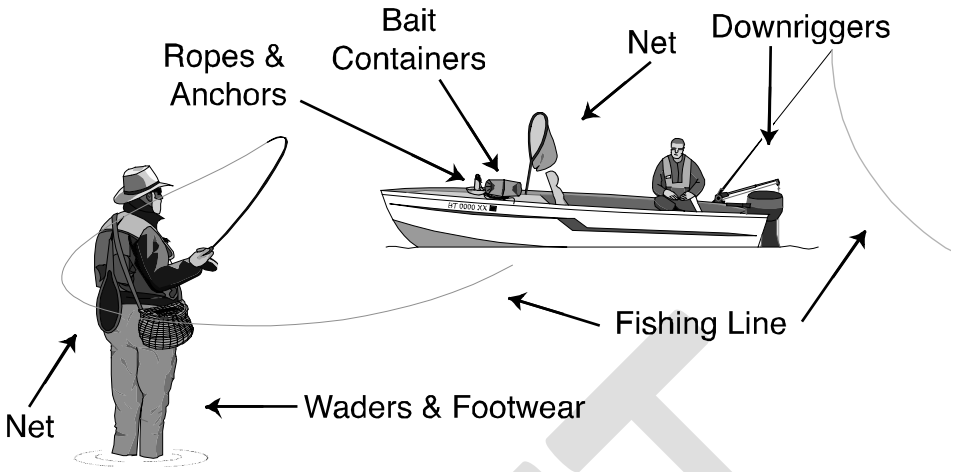
everything at least ***five days***, unless otherwise required by local or state laws, when moving between waters to kill small species not easily seen **OR** wipe with a towel *before reuse.*

Other

Use non-felt soled boots instead of felt-soled footwear to further reduce the risk of spreading AIS.

Dispose of unwanted bait, fish parts, worms, and packing materials, in the trash; do not dump them in the water or on land.

Never dump live fish or other organisms from one water body into another. Fish caught for eating or taxidermy should be cleaned away from the water and placed on ice.



Motor Boaters

Clean

Inspect and ***clean off*** visible aquatic plants, animals, and mud from boat; motor, including the gimble area; trailer, including axles and bunkers and rollers; anchors, dock lines, and equipment *before leaving water access*.

Scrub hull of watercraft using a stiff brush.

Rinse boat, trailer, and equipment with high pressure hot water.

Flush motor according to owner's manual.

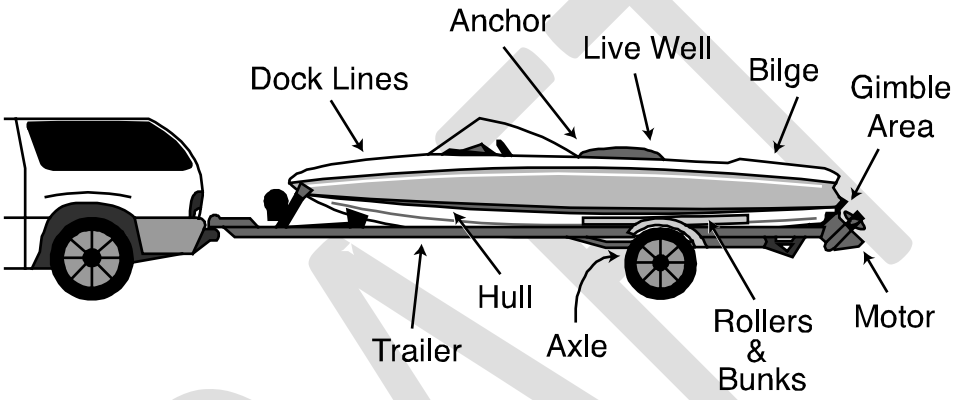
Jet boats and Personal Watercraft (PWCs) users should also:
Inspect and ***clean off*** aquatic plants and animals from hull, trailer, intake grate and steering nozzle, etc.

Run engine 5-10 seconds to blow out excess water and vegetation from internal drive *before leaving water access*.

Sailors should also:
Inspect and ***clean off*** visible aquatic plants, animals, and mud from the centerboard, bilge board wells, rudderpost, trailer and other equipment *before leaving water access*.

Drain water from boat, motor, bilge, bladder tanks, livewell, and portable bait containers *before leaving water access*. When keeping live bait, drain bait container and replace it with spring or dechlorinated tap water. Don't add other live fish to the bait container.

Dry everything for at least ***five days***, unless otherwise required by local or state laws, when moving between waters to kill small species not easily seen **OR** wipe with a towel *before reuse.*



Non-Motorized Boaters

For canoes, boards, rafts, kayaks, rowboats, paddleboats, inflatables, sculls, and other non-motorized recreational watercraft:

Clean ***Inspect*** and ***clean off*** any visible aquatic plants, animals, and mud from watercraft, straps, gear, paddles, floats, ropes, anchors, dip nets, and trailer *before leaving water access*.

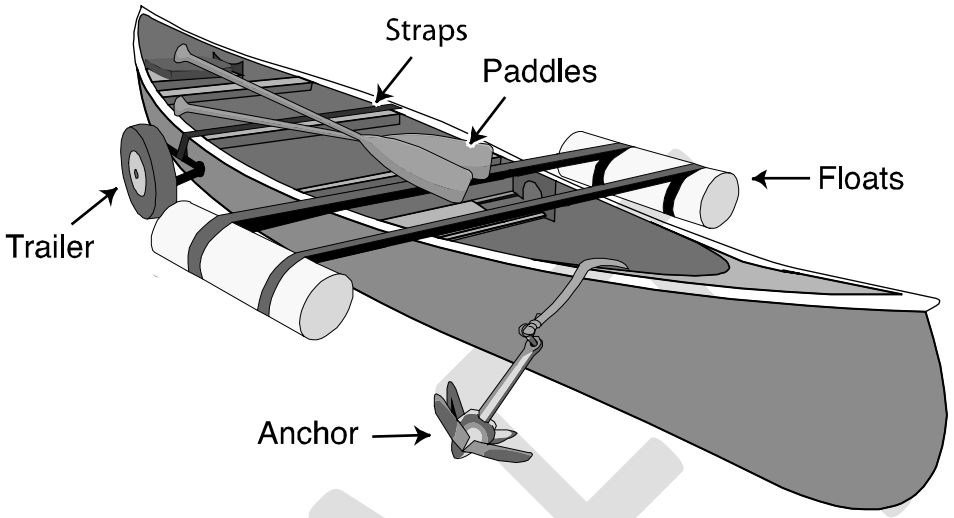
Scrub exterior surface of watercraft using a stiff brush.

Rinse exterior of boat, trailer, and motor with high pressure hot water.

Drain water from watercraft, sponges, bailers, and water containing devices.

Dry everything at least ***five days***, unless otherwise required by local or state laws, when moving between waters to kill small species not easily seen **OR** wipe with a towel *before reuse.*
Completely dry inflatables and other recreational watercraft *before storing*.

Wear quick-dry footwear or bring a second pair of footwear with you when portaging between waterbodies.



Scuba Divers and Snorkelers

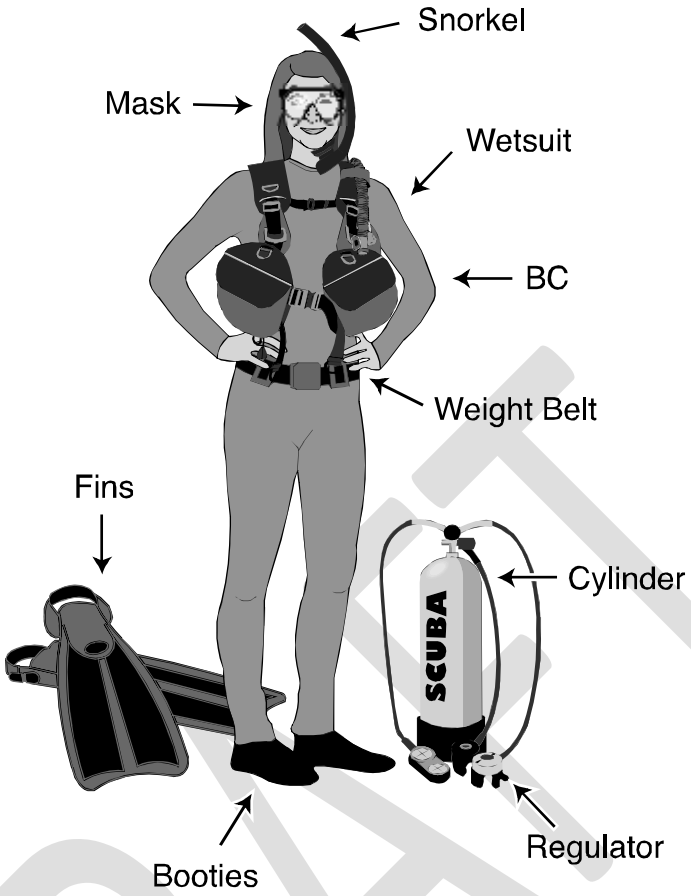
Clean ***Inspect*** and ***clean off*** visible plants, animals and mud from wetsuit, dry suit, booties, mask, snorkel, fins, buoyancy compensator (BC), regulator, cylinder, weight belt, boat, motor, and trailer *before leaving water access*.

Soak gear used in saltwater dives in 5% dishwashing liquid solution (1 cup/gallon)[1] ;or gear used in freshwater dives in 3.5% (½ salt solution (½ cup/gallon))[2] for 30 minutes,

Rinse inside and outside of gear with hot water.

Drain water from BC, regulator, cylinder boot, boat, motor, and any water containing devices before leaving water access.

Dry everything at least ***five days***, unless otherwise required by local or state laws, when moving between waters to kill small species not easily seen **OR** wipe with a towel *before reuse.*



Seaplane Operators

Clean

Inspect and ***clean off*** any visible aquatic plants, animals, and mud from pontoons, cross members, steps, transom, rudders, chine, wheel wells, mooring ropes, wires, or cables.

Scrub any visible material on floats with a stiff brush.

Rinse landing gear with high pressure hot water, when possible.

Land your plane in marine waters if moving between known infested freshwater as this can be an effective method of killing freshwater aquatic invasive species.

At water take-off:

- Avoid taxiing through aquatic plants.
- Raise and lower water rudders several times to clear off plants.

After water take-off:

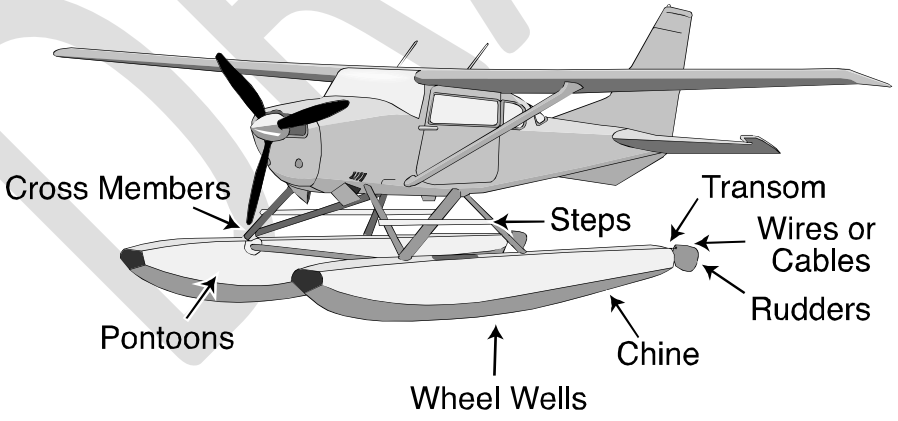
- Raise and lower water rudders several times to dislodge aquatic plant fragments while flying over the waters you left or over land.
- If aquatic plants remain visible on the aircraft, return to the same water body and clean them off.

Drain ***Pump*** water from floats *before take-off from every waterbody*.

Dry everything at least ***five days***, unless otherwise required by local or state laws, when moving between waters to kill small species not easily seen **OR** wipe with a towel *before reuse.*
Runway land (if so equipped) or haul out and clean aircraft previously used in known invasive species infested waters as soon as possible after arrival at the destination.

Wipe briskly with a quick dry towel if thorough air drying is not possible *before reuse.*

Store aircraft on land when possible. Hot summer temperatures and flights during dry weather will help kill aquatic invasive plants and animals that may be on floats.



Waterfowl Hunters

Clean ***Inspect and clean off*** visible plants, animals and mud from waders, hip boots, boat, motor, trailer, ATV's, push poles, decoys, decoy lines and anchors (use elliptical and bulb-shaped anchors to help avoid snagging aquatic plants).

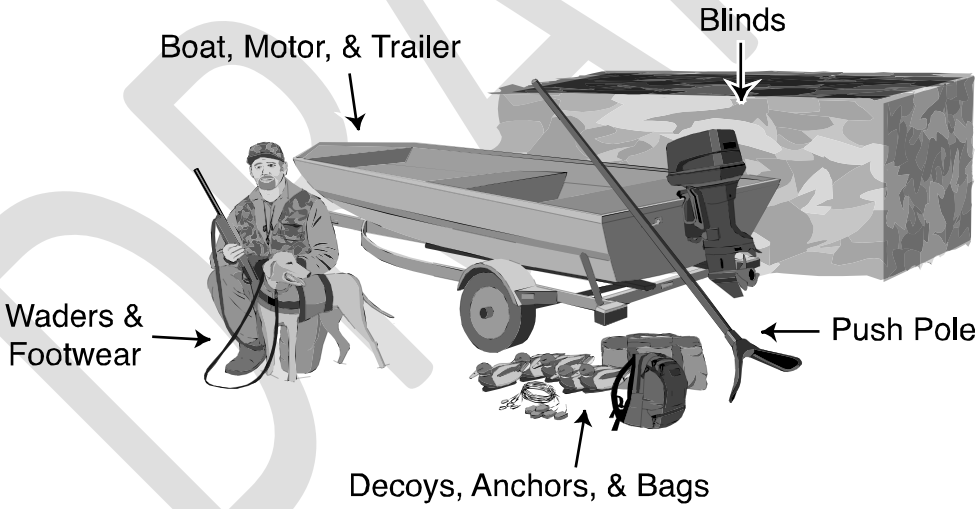
Brush hunting dogs and rinse kennels with tap water.

Drain water from boat, motor, bilge and other water containing devices before leaving water access.

Dry everything at least ***five days***, unless otherwise required by local or state laws, when moving between waters to kill small species not easily seen **OR** wipe with a towel *before reuse.*

Other ***Cut*** emergent vegetation above waterline for blinds or camouflage in accordance with regulations.

Waterfowl hunters using boats should refer to specific watercraft guidelines.



[1]http://www.lakegeorgeassociation.org/what-we-do/Invasive-Species/documents/cleanwetsuitscleanwaterlowrescard.pdf

[2]http://www.usbr.gov/mussels/prevention/docs/EquipmentInspectionandCleaningManual2010.pdf

Appendix A

Common and Consistent AIS Control Treatments
Compiled by Jay Rendall, Minnesota Department of Natural Resources

Appendix B

Committee Members

NAME	AGENCY
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Pat Conzemius	Wildlife Forever
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David Dickerson	Personal Watercraft Industry Association
Joe DiVittorio	Bureau of Reclamation
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Alyssa Hausman	American Sportfishing Association
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Doug Jensen	University of Minnesota Sea Grant Program and RAC Co-Chair
Doug Keller	Indiana Department of Natural Resources
Verne Lehmberg	Federation of Fly Fishers
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Karen McDowell	San Francisco Estuary Project
Jim McManus	Seaplane Pilots Association
Marshall Meyers	Pet Industry Joint Advisory Council
Meg Modley	Lake Champlain Basin Program
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	Species, RAC Co-Chair
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Susan Pasko	National Oceanic and Atmospheric Administration
George Peterson	Monterey Bay Aquarium
Jay Rendall	Minnesota Department of Natural Resources
Mark Riechers	Mercury Marine
Gordon Robertson	American Sportfishing Association
Eileen Ryce	Montana Fish, Wildlife and Parks
Patty Seery	Divers Alert Network
Susan Shingledecker	Boat U.S. Foundation
Brad Smith	Professional Association of Diving Instructors
Cindy Squires	National Marine Manufacturers Association
Reese Teasley	Recreational Boating & Fishing Foundation
Keith Weaver	Georgia Wildlife Resources Division, Fisheries Section
Sarah Whitney	Pennsylvania Sea Grant
Bob Wiltshire	Invasive Species Action Network
John Wullschleger	National Park Service
Libby Yranski	American Sportfishing Association
Sarah Zack	Illinois-Indiana Sea Grant
Joe Zarzynski	Bateaux Below, Inc.