



Decontamination

101



Invasive Species Management

Stopping pathways of spread for terrestrial and aquatic invasive species



How many New Zealand mudsnails do you think were found on these boots?

INVASIVE SPECIES ARE...

- PLANTS, ANIMALS, INSECTS, AND DISEASES
- NOT NATIVE TO AN AREA (EXCLUDES LIVESTOCK, INTENTIONAL CROPS, AND HARMLESS EXOTICS)
- OFTEN INTRODUCED BY PEOPLE
- ABLE TO NEGATIVELY IMPACT THE ENVIRONMENT, HEALTH AND ECONOMY
- CAPABLE OF SPREADING OUTSIDE OF HUMAN CONTROL

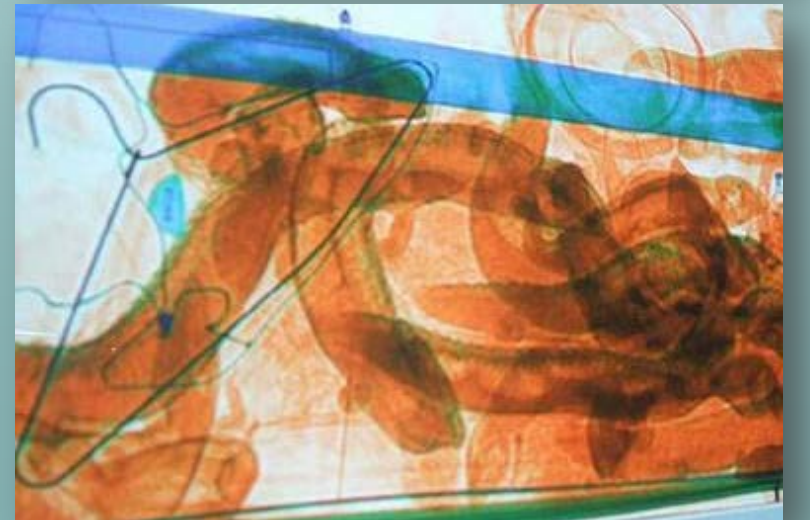


Scotchbroom



Feral Swine

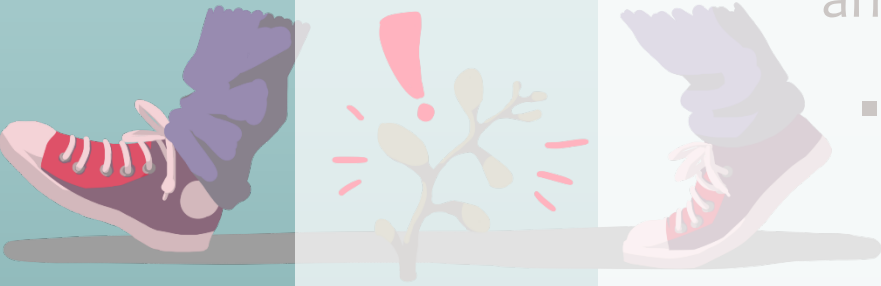
HOW DO THEY SPREAD?





BASIC INVASIVE SPECIES MANAGEMENT TIPS

- Know before you go
- Regularly inspect and clean gear, especially before going to a new location
 - Minimize contact with vegetation and sediment
 - If you know an invasive species is present, use dedicated gear for that site or water body
- Choose equipment that can be effectively decontaminated
- Bring backups



CONSIDERATIONS FOR CONSTRUCTION AND RESOTRATION PROJECTS



- Use weed-free materials
 - WWHAM program (WSDA)
- Assess your site for existing invasive species
- Minimize disturbing vegetation
- Train project team





DECONTAMINATION

- Two levels of decontamination
- Level 1: Remove
 - Reduces risk of spreading majority of invasive species
- Level 2: Eradicate
 - Kill all remaining invasive species after Level 1 removal

DECONTAMINATION: LEVEL 1

- Clean
 - Remove all sediment, organisms, or debris from equipment
- Drain (aquatic situations)
 - Remove all water collected in equipment from that site
- Rinse
 - Wash off your equipment using clean water



DECONTAMINATION: LEVEL 1

- Basic equipment
 - Stiff boot brush with a mud pick
 - Rinse water
 - Tote
 - Dog brush





DECONTAMINATION: LEVEL 1, CONT.

Tip: Make a boot-buddy



Photo: Erin Haley, King County Noxious Weed Program

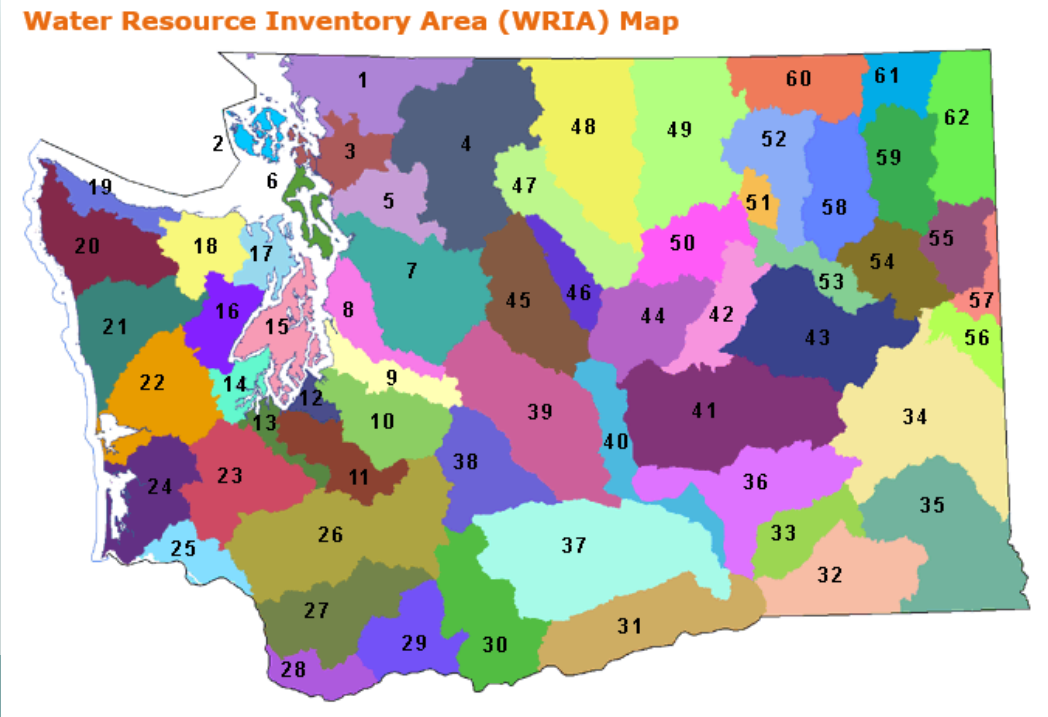


DECONTAMINATION: LEVEL 2

- Conduct AFTER Decontamination Level 1
- Objective: Eradicate

- Kill all remaining invasive species after Level 1 removal

- Conduct Decontamination Level 2...
 - After working in infested water
 - Before sensitive areas
 - Between WRIA/geographic basins



Treatment	Concentration or Temperature	Exposure Time	Comments
Virkon Aquatic	2%	20 minutes, then rinse with clean water	Dispose of rinse water according to label directions
Hot Water Wash or Soak	60°C (140°F)	5 minutes for felt-soled boots and nets; 10 seconds for all other equipment	Ensure all parts of the equipment reach temperature for the full exposure time
Cold/Freezing	-4°C	4 hours minimum	Time starts after the equipment reaches -4°C.
Drying	Low humidity, in sunlight is best	48 hours, on average	Time starts AFTER the equipment is thoroughly dry.
Formula 409 (must contain quaternary ammonia)*	100% (full strength)	10 minutes	Follow proper procedures for storage and handling.
Quat 128	4.6%	10 minutes	Follow proper procedures for storage and handling.
Hydrogen Peroxide	3% (30,000 ppm)	15 minutes	Spray until soaked, then keep damp for contact time (cover or place gear in a dry bag)

Decontamination protocols developed by the Washington Department of Ecology, Environmental Assessment Program

Wash and rinse water must NOT drain to surface water, and all chemicals must be disposed of according to applicable regulations. ALWAYS wear personal protection equipment.

*Not recommended by the WA Dept. of Fish and Wildlife; Formula 409 left chemical slicks on the surface of water bodies

Decontamination Level 2 Option: Hot Water



- 140°F / 60°C at 15 seconds or 5 minutes
 - Environmentally friendly

Decontamination Level 2 Option: Virkon Aquatic



- 2% for 20 minutes bath
- Equipment must be rinsed with potable water
- Rinse water must be captured and properly disposed according to the label
- Vendor Western Chemical @ 1-800-283-5292



BOATERS

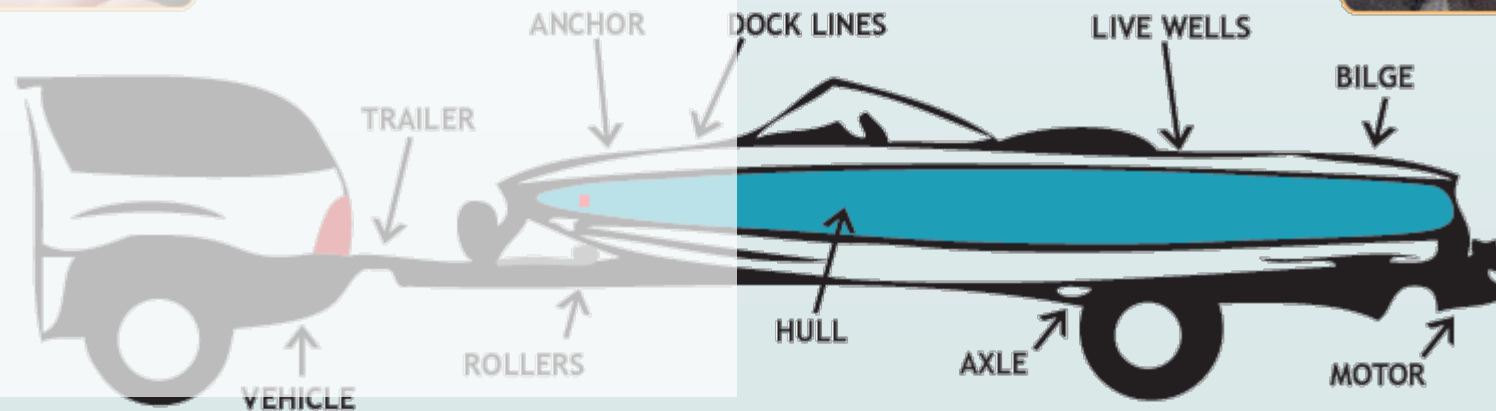
CLEAN, DRAIN, AND DRY YOUR BOAT

- One extra step: DRY
- Minimum of 30 days recommended for drying boats from infested waters, varies by temperature and humidity



LOOK FOR MUSSELS HERE

YOU CAN PREVENT THE SPREAD OF QUAGGA AND ZEBRA MUSSELS.
CHECK YOUR WATERCRAFT BEFORE ENTERING A WATERWAY!



Credit: Sonoma County Water Agency

DECONTAMINATION STATIONS

- Stations at Ephrata and Spokane





STOP AT MANDATORY CHECK STATIONS

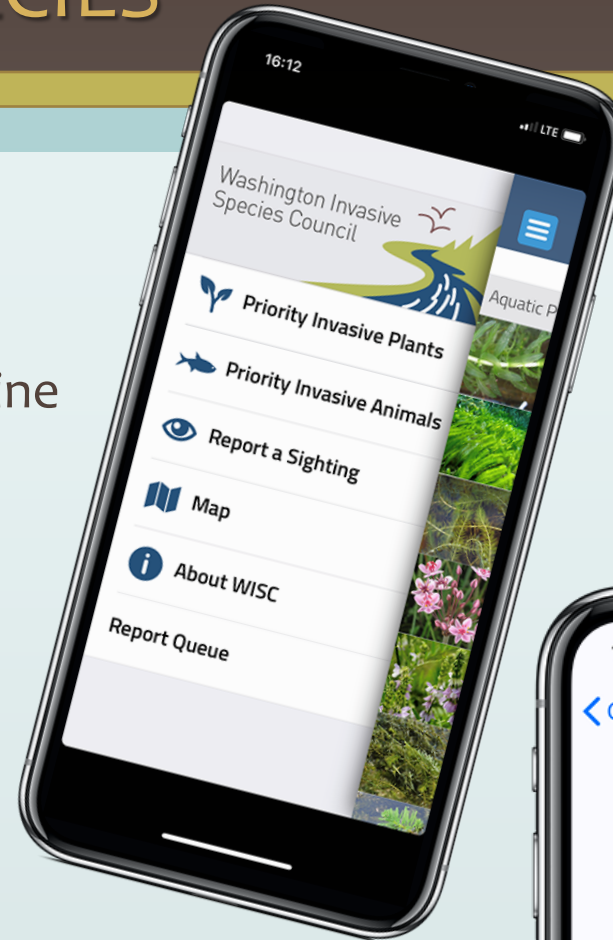
- Designed to be outreach and educational
- Only takes a few minutes
- You are immune from aquatic invasive species citations at check stations if all department directives are followed
- Spokane and Plymouth Locations, along with some roving stations





REPORTING AN INVASIVE SPECIES

- See it? Say something!
- **1) Phone**
 - Emergency Aquatic Invasive Species Hotline
 - **1-888-WDFW-AIS**
 - WA/OR/ID Feral Swine Hotline
 - **1-888-268-9219**
- **2) Mobile app**
 - WA Invasives for iOS and Android
- **3) Website**
 - <http://www.invasivespecies.wa.gov/report.shtml>



LEARN MORE...



- Free Webinar
- April 12, 2019
- 10:30-11:30 AM
- Register at:
 - ✓ invasivespecies.wa.gov
 - ✓ Washington Invasive Species Council Facebook page

Tree Threats: *Xylella fastidiosa* and the Basics of Borer Damage

FREE Webinar | April 12, 2019 | 10:30AM-11:30AM



This is your maple...



Protect your trees.
Register today.

*This is your maple with
Bacterial Leaf Scorch*

Image: John Hartman; Bugwood.org



LEARN MORE...

- Free Webinar
- April 17, 2019
- 10:00-11:00 AM
- Register at:
 - ✓ invasivespecies.wa.gov
 - ✓ Washington Invasive Species Council Facebook page

The poster features a close-up photograph of a bright orange and yellow flower, likely a Mimulus, against a background of green foliage. Overlaid on the image are several text boxes and circles. At the top, a red rounded rectangle contains the title "NOXIOUS WEEDS OF THE PAST 5 YEARS" in white. On the right side, a red circle says "FREE WEBINAR", a white circle contains the date and time "WEDNESDAY, APRIL 17 10:00-11:00AM", and a pink circle says "REGISTER TODAY!". At the bottom left, a red rounded rectangle lists the topics: "Topics include: -Noxious weeds listed since 2014 -Identification -Noxious weed locations And more!".

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And more!

QUESTIONS?



InvasiveSpecies.wa.gov

