

Decon: 101

Purpose

A decon refers to the decontamination of equipment to prevent the spread of species (especially invasive) from one location to another unintentionally.

Several aquatic and terrestrial species, both native and invasive, have the potential to drastically alter the environment they are introduced to. In trying to protect our native environments and keep them pristine, we aim to keep new introductions minimal through decontaminations.

Terrestrial Decontaminations

Terrestrial means anything on land. These can be especially difficult because people are always transporting materials and driving on land. However, we are still trying to prevent the spread of terrestrial invasive species, so follow these best management practices:

-Carry brushes and water bottles with you at all times so you can do a quick spray of gear as you are moving from one location to another.

-If you are leaving a known infested area, be sure to clean off your shoes, clothing, vehicle tires, and any other equipment with a bristly brush to leave seeds and other materials in the area they are currently in. As soon as possible, spray down your equipment with hot water until there are no signs of dirt or debris seen on yourself and your equipment.

-When you are hiking, biking, ATV'ing, etc. on a trail, try to use a brush to clean off yourself and your equipment before moving to a new location.

-If you have been in a particularly back woods area with your vehicle, try to scrub it off with a brush before leaving the area, and get a car wash as soon as possible to wash off and/ or kill any residual seeds and debris accidentally carried with you.

-If you are using a mower over long distances, try to keep the mower first to non-infested areas. If you must mow in an infested area, decontaminate the mower thoroughly before moving to a new area. One of the quickest way to spread invasive species is by mowing and not cleaning off the mower.

-Be sure to not transport anything that is not certified to be transported, especially things like firewood, hay, and gravel.

-Follow advice from the PlayCleanGo campaign here: <https://www.playcleango.org/>

REMOVE plants, animals and mud from boots, gear, pets and vehicles

CLEAN your gear before entering and leaving a recreation site

USE CERTIFIED or local firewood and hay

Aquatic Decontaminations

Aquatic is referring to anything in the water, in a wetland, or on a shoreline. Aquatic movement is slightly easier to recognize because it is easier to acknowledge when you have entered and/ or left a waterbody. However, there is a lot of opportunity for movement of aquatic species due to the difficulty of cleaning aquatic equipment, or the appearance of it being clean while microscopic organisms and plants can still be transported. Follow these best management practices to prevent the spread of aquatic invasive species:

-Anytime you are leaving waterbody follow the rules of <http://stopaquatichitchhikers.org/>
CLEAN your equipment to get rid of any vegetation or animals
DRAIN your boat and other equipment of any residual water, including lowering the motor and completely emptying the live wells
DRY your boat and other equipment for a minimum of 5 days. Also dry your boat with a towel to expedite this process

-Use the MN DNR website to find a decontamination location near you:
https://webapps15.dnr.state.mn.us/ais_decon_sites

-If you cannot dry your equipment for five days before entering a new waterbody, decontaminate your equipment using either hot water and high pressure, or a virkon solution.

-At an absolute minimum spray down your equipment and brush/ wipe it off before moving from one waterbody to the next, even if the lake is listed as invasive free. It could just be no one has surveyed that area, or invasive species aren't recorded yet.

-Always keep track of where your equipment was last. If it was in a known infested area, be sure to perform or receive a decontamination before moving to the next area.

-Never transport water from one area to another. This includes moving water that bait is kept in. Many invasive species, start out microscopic or very tiny and are easily transported by humans moving water.

-If you are moving to multiple aquatic locations in a day start with known invasive free waters, and less risky waters and end with infested and high risk waters. You can use the MN DNR lake finder website to check which waters are known to be infested: <https://www.dnr.state.mn.us/lakefind/index.html>

When to do a decontamination on aquatic equipment:

1. If you visibly see any sort of vegetation or animals on equipment
2. If you have been in a known infested waterbody or wetland area in the past five days
3. If your equipment is not completely dry (even if it has been out for five days)
4. If there is any standing water in any area of the equipment
5. If it is requested
6. If there is unverifiable (not knowing if from an infested waterbody or not) anywhere on/ in equipment
7. If you have time and means to decontaminate before moving to another location

Performing a Decon

Hot Water and High Pressure

The easiest way and most effective way to decontaminate equipment is to use hot water and high pressure. This is very effective for almost every type of invasive species if done correctly.

Steps:

1. Thoroughly inspect equipment. Physically remove any plants, animals, debris, mud.
2. Have water temp from 120 degrees Fahrenheit to 140 degrees Fahrenheit.
*if doing sensitive equipment like a boat motor set at 90-100.
3. Slowly spray high pressured hot water around all of the equipment. You should be a minimum of 12 inches away from the surface you are spraying.
4. If you need to soak equipment, soak for about 10 minutes in hot water. The hot water will eliminate most residual animals/ eggs, and the high pressure should remove any fragments of vegetation, debris, and mud remaining as well as stuck on animals. If you are spraying a boat move slowly enough to ensure any animals stuck on would be removed by this action (should take 15-20 minutes to decon a boat, including the live wells and interior).
5. Be sure to double check hard to reach areas such as bunks/ trailers and wheels.
6. If possible leave in a dry, sunny area until next use.

For more detailed information and instructions for specific equipment you can visit:

<http://files.dnr.state.mn.us/rlp/permits/lsp/decon-manual.pdf>

Virkon Aquatic Solution Soak

This technique involves the use of chemical cleaning agents and is helpful for decontaminating equipment such as nets when the use of hot water and high pressure may not be readily available or accessible.

Virkon is a fairly safe chemical, with small amounts being ok to be discarded in the environment. Do not inhale the powder deeply, and try to avoid prolonged contact on skin. The MSDS for Virkon is available here: <https://syndel.com/wp-content/uploads/2019/01/VirkonTM-Aquatic-USA.pdf> Remember when using any type of herbicide or chemical, the label is the law.

Things you will need:

1. Virkon aquatic cleaning agent (powder form): mixed at 2% or 2 scoops per gallon of water
2. Known amount of water container (i.e. 5 gallon bucket) to ensure correct amount of solution made
3. Clean water for rinsing equipment (typically at least 3 x the amount of solution being made)
4. Eye protection
5. Thick rubber gloves
6. Dust mask
6. Protective footwear (rubber boots)

Steps (assuming use of a five gallon bucket):

1. Fill bucket up 4/5 of the way full (leaving room to place equipment without flow).
2. Put on eye protection, rubber gloves, dust mask, protective footwear
3. Add eight scoops (2 scoops per gallon= 2%) of virkon aquatic solution
4. With gloved hand(s) gently mix solution into water

5. Place equipment in solution for 20 mins.
6. Triple rinse equipment until no residual virkon is present
7. Place equipment if possible in dry, sunny area to dry
8. Place lid on virkon aquatic solution and store for use again for up to seven days
9. Small amounts can be disposed of in a woody area, at least 150 feet away from a shoreline
10. Larger amounts can be disposed of at waste disposal areas. Solution can be disposed of down sinks in relatively small amounts. We have also used gravel pit areas as dumping grounds.
11. A 20 minute soak will kill 98% of some invasive snails, zebra mussels, and spiny water fleas, it has unknown effects on vegetation.

*Do not dispose of virkon aquatic solution directly in or nearby clean water or natural water sources!!!

Virkon aquatic solution is made to oxidize with chemicals used in treating water once it has been flushed. It has the potential to contaminate clean water sources if done in close proximity and at large amounts.

This is not a restricted use chemical product, so no license is necessary to use virkon aquatic.