PROTECT MANITOBA'S WATERS AND RESOURCES

STOP AQUATIC INVASIVE SPECIES

Prevention is our best defense!

Managing the on-going, negative impact of zebra mussels in Manitoba is economically, socially and ecologically costly.

Manitoba

STOP the spread

Aquatic invasive species (AIS), such as zebra mussels, can be introduced to new water bodies in two main ways:

1. the natural movement of water downstream
2. spread by humans. AIS can hitchhike from one water body to another by watercraft and water-related equipment, such as trailers, swim inflatables, anchors and bait buckets, that are not properly cleaned, drained and dried.

Fortunately, **the spread of AIS by humans is preventable.**

Before using a water body in Manitoba, items must be free of:

- aquatic invasive species
- aquatic plants (e.g., “weeds”)
- mud
- standing water

The risk of humans spreading AIS to other areas is much greater after being in an AIS invaded area.

The **Clean, Drain, Dry, and Decontaminate (CDDD)** actions are **sequential steps** that each add layers of protection against the spread of AIS by humans.

These steps are required year-round whenever items come in contact with surface water from a lake, river, wetland, or any other water body.

When leaving a water body, you must CLEAN, DRAIN AND DRY all items:

1. **CLEAN:** that is, **remove visible AIS, debris, animals, mud, and plants (i.e., weeds) including algae.**
2. **DRAIN:** means **removal of standing or residual water.**

To facilitate draining of watercraft:

- remove watercraft drain plugs and keep them out when transporting watercraft overland.
- raise, lower and move the outboard motor from side to side.

3. **DRY:** thoroughly. That is, **eliminate any residual wetness or dampness** missed in the cleaning and draining steps.

The level of risk of spreading AIS is greatly reduced when items that have come into contact with a water body are cleaned, drained and dried properly.

If items were last used in an AIS-invaded or potentially invaded water body, in addition to Clean, Drain and Dry, you must:

4. **DECONTAMINATE:** This procedure aims to kill any difficult to find AIS on items used in an invaded water body before they are used in a different water body.

Together, Clean, Drain, Dry and Decontaminate are legally required additive steps to become free of AIS. They target various stages and types of AIS to offset the level of risk human behaviours pose for spreading AIS to new areas.

In Manitoba, possession, importation, transportation and release of an aquatic invasive species is illegal under provincial and federal law.

Dedicated equipment

To prevent transporting AIS from one water body to another, use dedicated equipment; that is, use separate items for each water body.

For example,

- **rent or use locally supplied watercraft and equipment rather than transporting and using your own.**
- **use specific equipment, like angling gear and nets in an invaded area and use a different set of equipment for non-invaded areas.**
- **suggest to visiting friends and family that they use your locally kept and used items rather than bringing and using their own.**

Draining a watercraft
Credit: Minnesota Department of Natural Resources.

Zebra Mussel Facts

Larval zebra mussels:

- called veligers, are microscopic and invisible to the naked eye.
- don't have a shell and can't survive out of water.

Draining all water and drying items thoroughly will lead to veligers dying.

Adult zebra mussels:

- can be as little as a grain of sand; growing usually 0.1 to 3 centimetres (0.04 to 1.2 inches) long.
- have triangular, or "D"- shaped shells.
- have strong hair-like filaments, called byssal threads, that allow for firm attachment to underwater surfaces.
- can be difficult to see but easier to feel (e.g., submerged items which feel like sandpaper may be covered in zebra mussels).
- grow in clusters containing numerous individuals.
- can close their shells tightly surviving out of water for up to 30 days (depending on temperature and humidity).

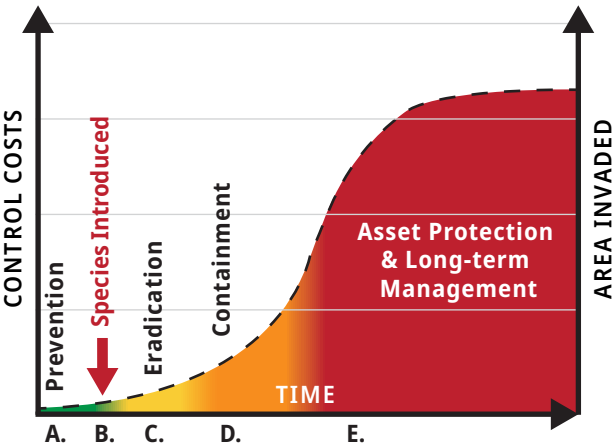
Zebra mussels can:

- invade new areas aggressively.
- deteriorate aquatic ecosystems and negatively impact fish and wildlife.
- increase toxic algal blooms.
- foul water-based infrastructure, including watercraft motors, hydro dam facilities.
- clog water intakes for industry, communities, farms, homes and cottages.
- litter beaches and shorelines with sharp shells and rotting debris.
- reduce water-front property values.

Prevention is key

Investing in aquatic invasive species prevention efforts provides economic returns up to 100x higher than trying to manage an established species.

INVASIVE SPECIES AND STAGES OF MANAGEMENT



A. Species absent
B. Species introduced
C. Small number of localized populations
D. Rapid increase in abundance and distribution
E. Species widespread

ECONOMIC RETURNS

Source: Invasive Species Regulatory Improvement Study, Victorian Competition and Efficiency Commission, Australia, 2015.

The invasion curve shows the stages of invasive species management from pre-arrival (prevention) to long-term control. After a species is introduced, management costs increase and likelihood of eradication decreases as time passes.

For more information,
or to report an AIS sighting visit:

Manitoba.ca/StopAIS

email:
AIS@gov.mb.ca

or call (toll free):
1-87-STOP AIS-0
(1-877-867-2470)

To assist with identification, note the exact location where the species was found and take several pictures at different angles: preferably close-up and further away. If possible, provide GPS co-ordinates.

Send pictures to AIS@gov.mb.ca

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