Invasive and Nuisance Species: Prevention and Control Options

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A species that is **not native** and whose introduction causes, or is likely to cause, **harm** to the environment, economy, or human health.
“They aren’t evil in and of themselves. They just don’t play so well with others, and proliferate ostentatiously. Many aren’t even meant to be part of the habitats they now maraud across, but thanks to human meddling, they ended up there, then got bossy about it.”

~Frank Bruni

NY Times 4/22/2013
Nuisance Species

A species that is native and can cause harm. In most cases, they are just bothersome.
Overview

- Zebra mussels
- Rusty crayfish
- Mute swans
- Canada geese
- Muskrats
- Beavers
Zebra Mussels

- Attach to docks, boats, rocks, and other mussels
- Impact fish populations by altering the food web
Characteristics

- Triangular shells with a flat ventral side
- Up to one inch in length
- Striped
Prevention

Michigan Restricted Species

It is illegal to possess, introduce, import, sell, or offer live zebra mussels.
Prevention

CLEAN. DRAIN. DRY.
Control

Manual removal
Anti-fouling paints
Chemicals
Rusty Crayfish *Invasive
Rusty Crayfish

- Faster growth than native crayfish
- Reach higher densities
- Compete for food and shelter
  - Native crayfish
  - Larval fish
  - Sunfish
- Accelerate spread of EWM
Rusty Crayfish Identification

Claws:
- Larger than native crayfish
- Black bands at the tips
- Gaps when closed

Dark, rusty spots on the carapace
Prevention

Michigan Restricted Species

It is illegal to possess, introduce, import, sell, or offer live rusty crayfish.
Prevention

Especially important for disease transfer, but other AIS can be moved through bait.
Rusty Crayfish: Control

Trap them!

No size restrictions
No limit
No season

You must possess a valid Michigan fishing license
Mute Swans

*Invasive
Originally from Europe, mute swans were brought to the U.S. in the 1800s.

Fun Fact of the Day: Michigan’s mute swans are from a pair brought to Charlevoix County in 1919!
But they’re so pretty!
But they’re so pretty!

First: They are mean.
• Aggressive towards other waterfowl, even chasing native loons, swans, and ducks from their nests.
• Attack humans.

Second: They destroy habitat.
• Eat 4-8 pounds of plants a DAY!
Populations are increasing

In 2000, there were 5,700 mute swans in Michigan.
In 2010, there were 15,500!

This is due to:

• Long life spans (19 years)
• Five offspring per year per pair
• High survival and overwintering rates
Pop Quiz!

A
Trumpeter Swan

B
Mute Swan

C
Tundra Swan
Mute Swan Control

• Work with your local wildlife biologist.

• Hunting is not allowed, but the DNR issues permits to remove mute swans and/or their nest and eggs.
  – Petition signed by 70% of lakeshore owners or 70% of shoreline ownership OR
  – Resolution from local government

These actions are supported by the National Audubon Society, Ducks Unlimited, and the American Bird Conservancy.
Canada Geese  *Nuisance
Canada Geese

• Once, they were facing extinction:
  – In 1970, there were 9,000 geese in Michigan
  – There are over 300,000 today!

• Geese have benefitted from human changes to habitat
  – Food
  – Protection
Conflicts with Geese

- Droppings
- Nesting near buildings and parking lots
- Damage to agricultural fields
Prevention

NATURAL SHORELINES!!!
Goose Control

- Do NOT feed.
- Hunting is legal
- Harassment tools:
  - Streamers
  - Dogs
  - Motion detector sprinklers
  - Scare decoys
Hunting

Various seasons, depending on the zone

Daily bag limits range from 3-5, with possession limits from 9-15

Hunters must have a valid license
If all else fails….

The DNR issues permits for nest destruction and goose round up programs.

Contact your local wildlife biologist for more information.
Muskrats

*Nuisance*
Muskrats

- Favor marshes, but have been known to make burrowing tunnels on lakeshores
- The tunnels can be extensive and create cave-ins or other property damage
Characteristics

- Adults are about a foot long with 9-inch tails
- Thick fur hides their ears
- Short legs but big feet
- Live in groups
- Emit “musky” scents
Muskrat Control: Trapping

- No bag limits
- Different seasons based on zoning (end of October – March)
- Trappers must have a valid base license and fur harvester license through the DNR
Beavers

*Nuisance*
Beavers

- Live in lodges, which gradually get bigger as years go by and repairs are made
- Conflict with humans because of dams and destruction of trees
Characteristics

- Hind legs are longer than their front legs, so they walk with their rear raised

- Tails are broad, flat, and covered in black scales
• Protect individual trees using woven wire around them
Beaver Control: Trapping

- No bag limits
- Different seasons based on units (end of October – April)
- Trappers must have a valid base license and fur harvester license through the DNR
Your Homework

- Identification is key! Know what you are attempting to control.
- Research the laws and regulations for your area.
- When in doubt, contact the DNR.
Resources

www.michigan.gov/invasives
Resources

www.michigan.gov/dnr
(search for “wildlife biologist”)
Questions?

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