Alien Invaders

Battling Invasive Species in Michigan and Beyond

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What is The Nature Conservancy?

- Our mission is “to **preserve** the plants, animals and natural communities that represent the **diversity** of life on Earth by protecting the **lands** and **waters** they need to **survive**.”

- Since 1951, we've been working with communities, businesses and people like you to protect more than **117 million acres** around the world.

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What are alien and invasive species?

- **Alien species** means, with respect to a particular ecosystem, **any species**—including its seeds, eggs, spores, or other biological material capable of propagating that species—**that is not native to that ecosystem**.

- **Invasive species** are **alien species** that **spread and cause,** or are likely to cause, **economic or environmental harm** or harm to human health. Some native species can also become problems when their natural "controls" are eliminated and they spread into areas where they aren’t wanted.

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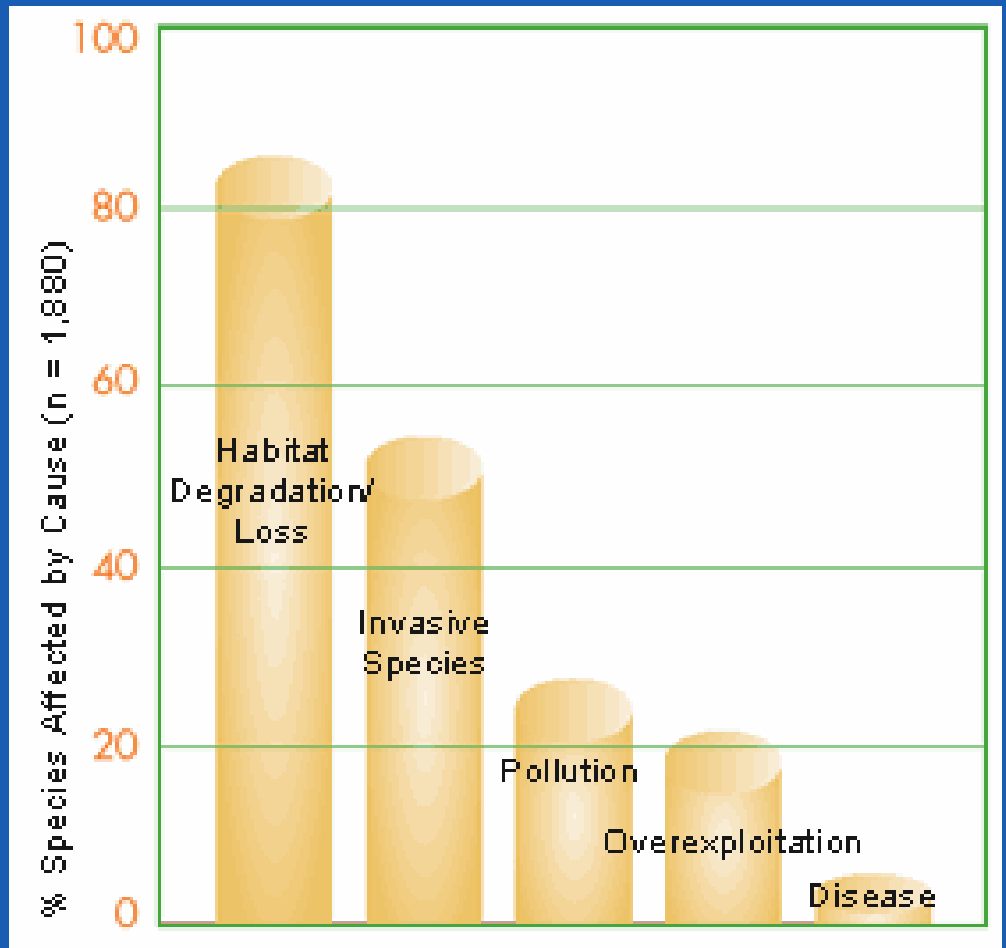
Why should you care about invasives?



Threats to Biodiversity

Source: *Precious Heritage: The Status of Biodiversity in the United States* © The Nature Conservancy and NatureServe

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Categories of Invasive Species

- Plants
- Aquatic animals
- Pests and pathogens of plants
- Animals
- Diseases of animals

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Plants: Kudzu

http://spectrum.troyst.edu/~greipsso/Pictures

www.dybala.com/d/trace/ dlogs/dl/d6

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What are the worst threats in Michigan?

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Garlic Mustard (Alliaria petiolata)

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Garlic Mustard (Alliaria

© Matthew Bohan

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Glossy Buckthorn (Rhamnus frangula)

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Spotted Knapweed (Centaurea maculosa)

© Ted Carland

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Spotted Knapweed (Centaurea maculosa)

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Purple Loosestrife (Lythrum salicaria)

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Eurasian water-milfoil and Hydrilla

Photo Credit: USGS, Colette Jacono

Hydrilla infestation
Withlacoochee River, Florida
Photo by Brian Nelson
Copyright 1997 Southwest Florida Water Management District

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Common Reed (Phragmites australis)

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What are we doing about invasives?

- Assessment and Risk Analysis
- Prevention
- Early Detection and Rapid Response
- Control and

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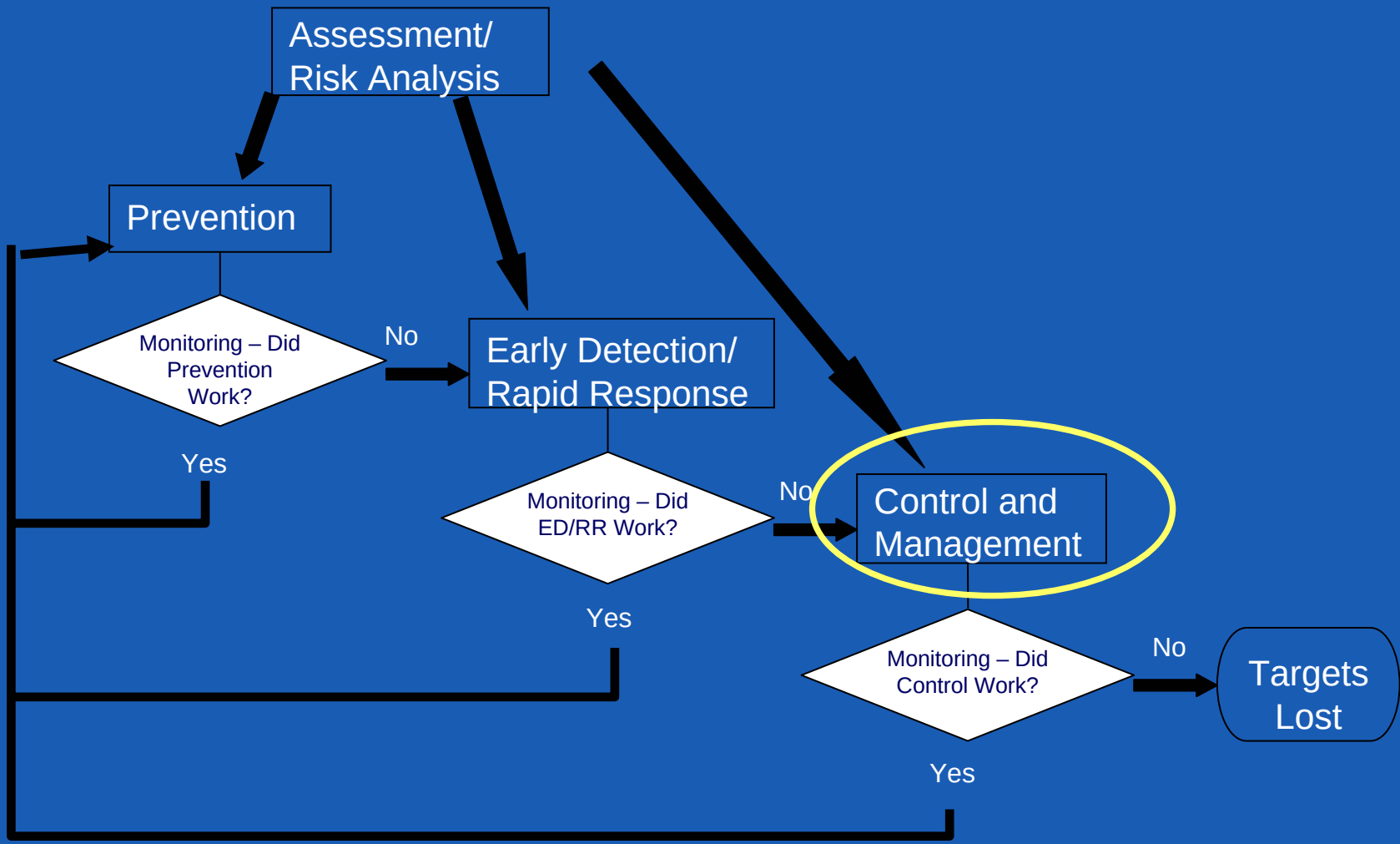

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Control and Management: Glossy Buckthorn

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Control and Management: Phragmites

•Helicopter spraying of glyphosate
•Flooding

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Phragmites at Erie Marsh

Prescribed fire

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More information

- *nature.org/michigan*
- *TNC Invasive Species Initiative tncweeds.ucdavis.edu*
- *dpearsall@tnc.org*