

Invasive Species Cooties... Don't Spread 'em!



HELP STOP AQUATIC HITCHHIKERS!



Avoid spreading aquatic invasive species.

Recommended Actions:

- ✓ **CLEAN** boats, trailers and equipment
- ✓ **DRAIN** live wells, bilges and all water
- ✓ **DRY** boats and equipment
- ✓ **DISPOSE** of unwanted bait in the trash

IT'S THE LAW

Violation of the law is a state civil infraction. Violators may be subject to fines.

Do not launch a watercraft or place a trailer in the water if aquatic plants are attached.

Do not release unused bait into the water.

Do not transport water over land in bilges and live wells.

www.mi.gov/InvasiveSpecies



Tom Alwin

**Michigan Department of Environmental Quality
Aquatic Invasive Species Program**



My Mission

A photograph of a pond densely populated with yellow water lilies and large green lily pads. The flowers are in various stages of bloom, and the lily pads are floating on the water's surface. The background is a soft-focus view of more lilies and greenery.

Raise awareness of...

- Invasive species
- Decontamination
- The policy

Message

- Don't be a vector
- ID is optional
- Not difficult

Introductions



Introductions



Quality of Life Departments



Invasive Species Program Steering Committee

Aquatic
Invasive Species
Core Team

Terrestrial
Invasive Species
Core Team

ALS Core Team

Est. 2010

- **Department of Environmental Quality**
 - Water Resources
 - Office of the Great Lakes
- **Department of Natural Resources**
 - Fisheries
 - Wildlife
 - Parks and Recreation
 - Law Enforcement
 - Forest Resources
 - Marketing and Outreach
- **Department of Agriculture and Rural Development**
 - Pesticide and Plant Pest Management
 - Animal Industry
- **Department of Transportation***



State Management Plan

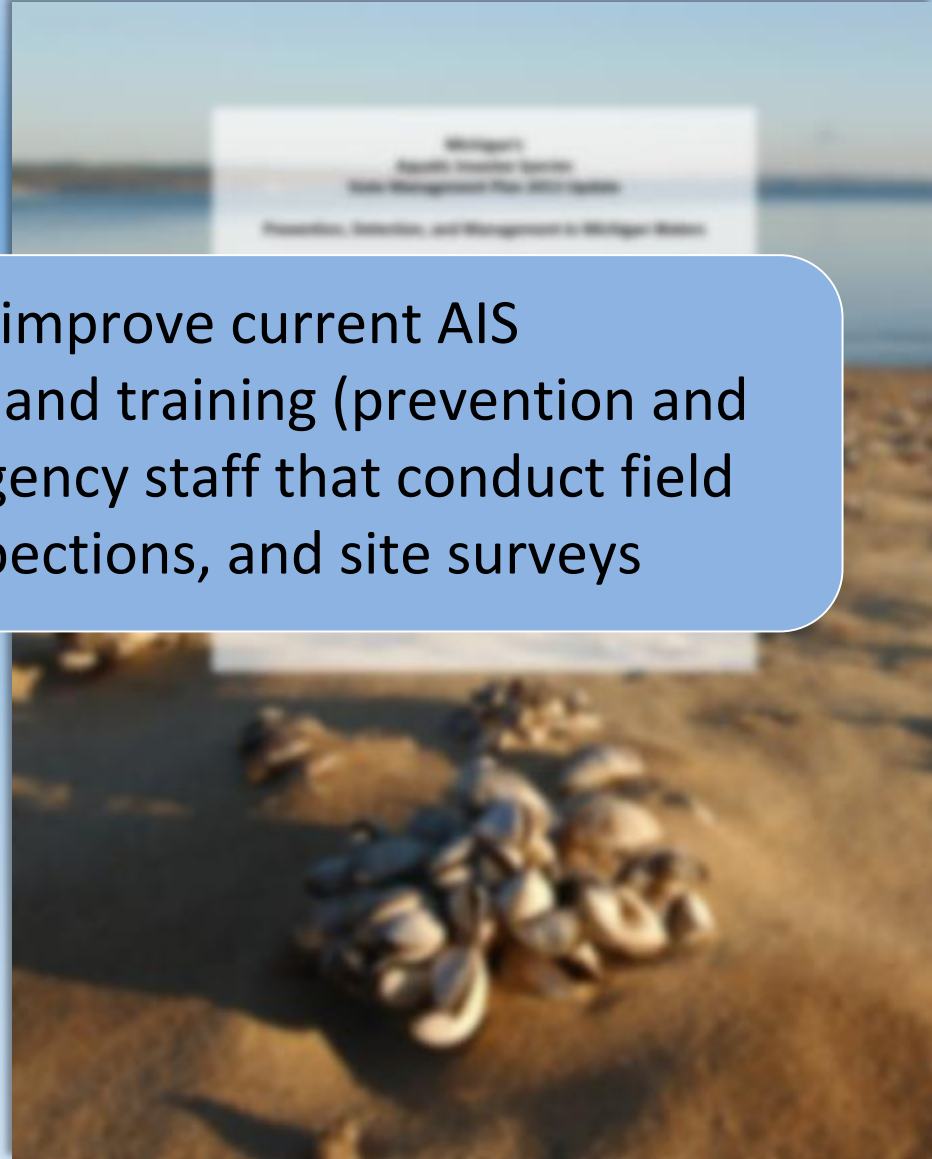
Goals

1. **Prevent** new introductions
2. **Limit the dispersal** of established species
3. Develop **early detection and response** program
4. **Manage and control** to lessen harmful impacts



Strategic Action

V.A.1. Evaluate, coordinate, and improve current AIS prevention policies, procedures, and training (prevention and species identification) of state agency staff that conduct field activities including research, inspections, and site surveys



The Policy

- All 3 Departments
- Effective: December, 2014
- Policy: 5 pages
- Guidance Document: 20 pages
- Second QOL-wide policy

http://www.michigan.gov/documents/deq/qol-wrd-policy-invasive-species-decontamination_476846_7.pdf



The Policy

“... will aim to perform basic decontamination steps for field equipment in order to minimize the risk of invasive species transfer between work locations.

Each division/office within each QOL department will develop decontamination steps that are practical and reasonable to perform by field staff to accomplish the goal of limiting the spread of invasive species.”



Guidance Document

More than just a policy

- Grant and contract language
- Outreach/education tool

INVASIVE SPECIES DECONTAMINATION FOR FIELD OPERATIONS IN MICHIGAN

A GUIDANCE DOCUMENT FOR THE
MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY,
MICHIGAN DEPARTMENT OF NATURAL RESOURCES,
AND
MICHIGAN DEPARTMENT OF AGRICULTURE AND RURAL DEVELOPMENT

NOVEMBER 2014

The Michigan Department of Environmental Quality (MDEQ), Michigan Department of Natural Resources (MDNR), and Michigan Department of Agriculture and Rural Development (MDARD) will aim to perform basic decontamination steps for field equipment in order to minimize the risk of invasive species transfer between work locations. Each division/office in each department will develop decontamination steps that are practical and reasonable to perform by field staff to accomplish the goal of limiting the spread of invasive species.

INTRODUCTION:

Preventing new introductions and limiting the dispersal of established invasive species is the most cost-effective approach to management. The purpose of this document is to assist employees of the MDEQ, MDNR, and MDARD in minimizing the risk of transferring invasive species while performing job activities in the field.

While this is a Quality of Life (QOL) guidance document, this can be used by other departments

Introductions



A show of hands...

Who's out monitoring Michigan's lakes or streams?



A show of hands...

Who's work gets them out on Michigan's lakes or streams?



A show of hands...

Who's gets out on Michigan's lakes or streams for pleasure?



A show of hands...

How many locations and how often?



Definitions & Concepts

A photograph of a pond densely populated with yellow water lilies and large green lily pads. The background shows a line of tall green reeds and trees under a clear sky.

Invasive Species

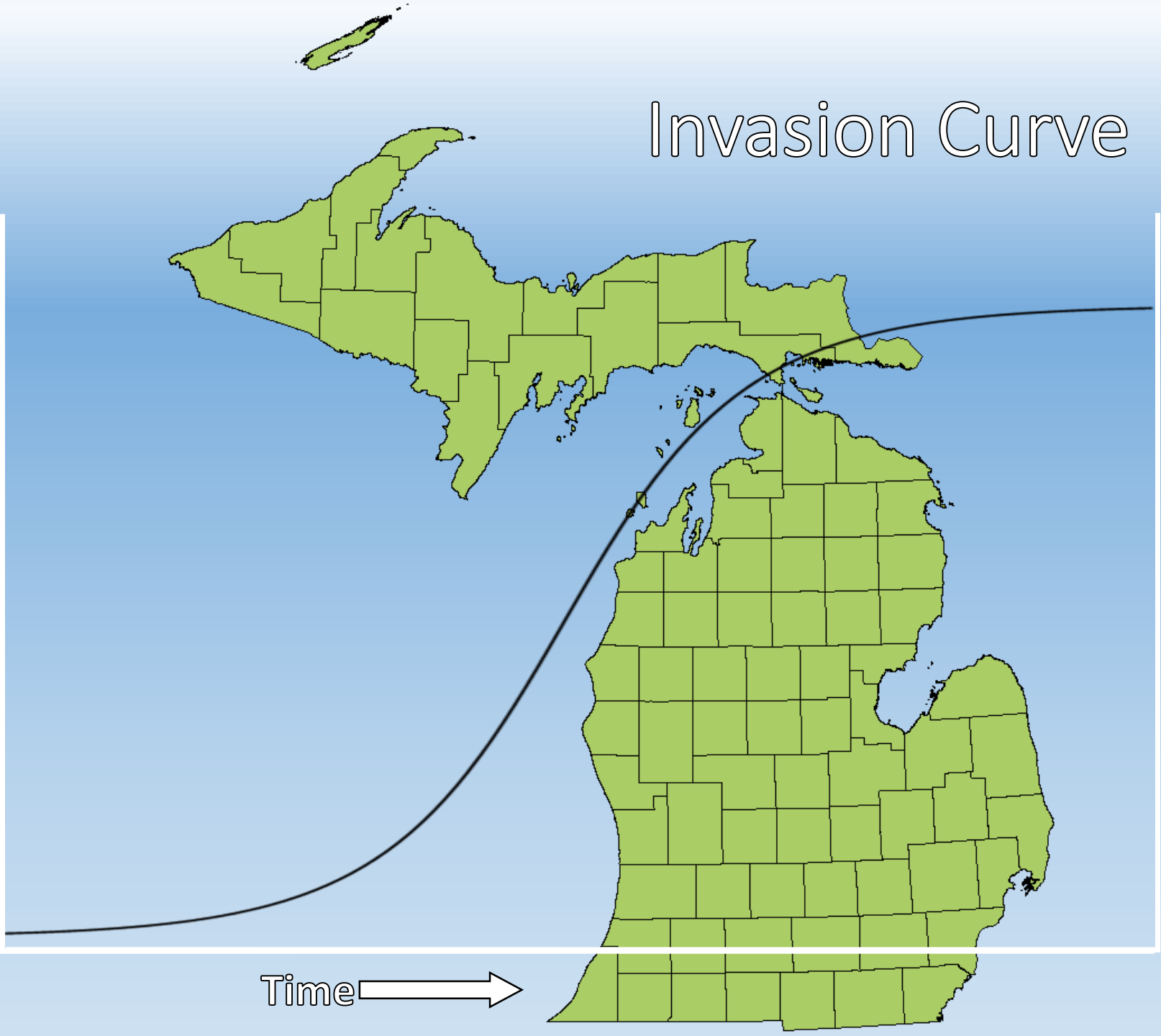
A species that is **not native** and whose introduction causes, or is likely to cause, economic or environmental **harm** or harm to human health.

Invasion Curve

Abundance ↑

Cost ↑

Time →



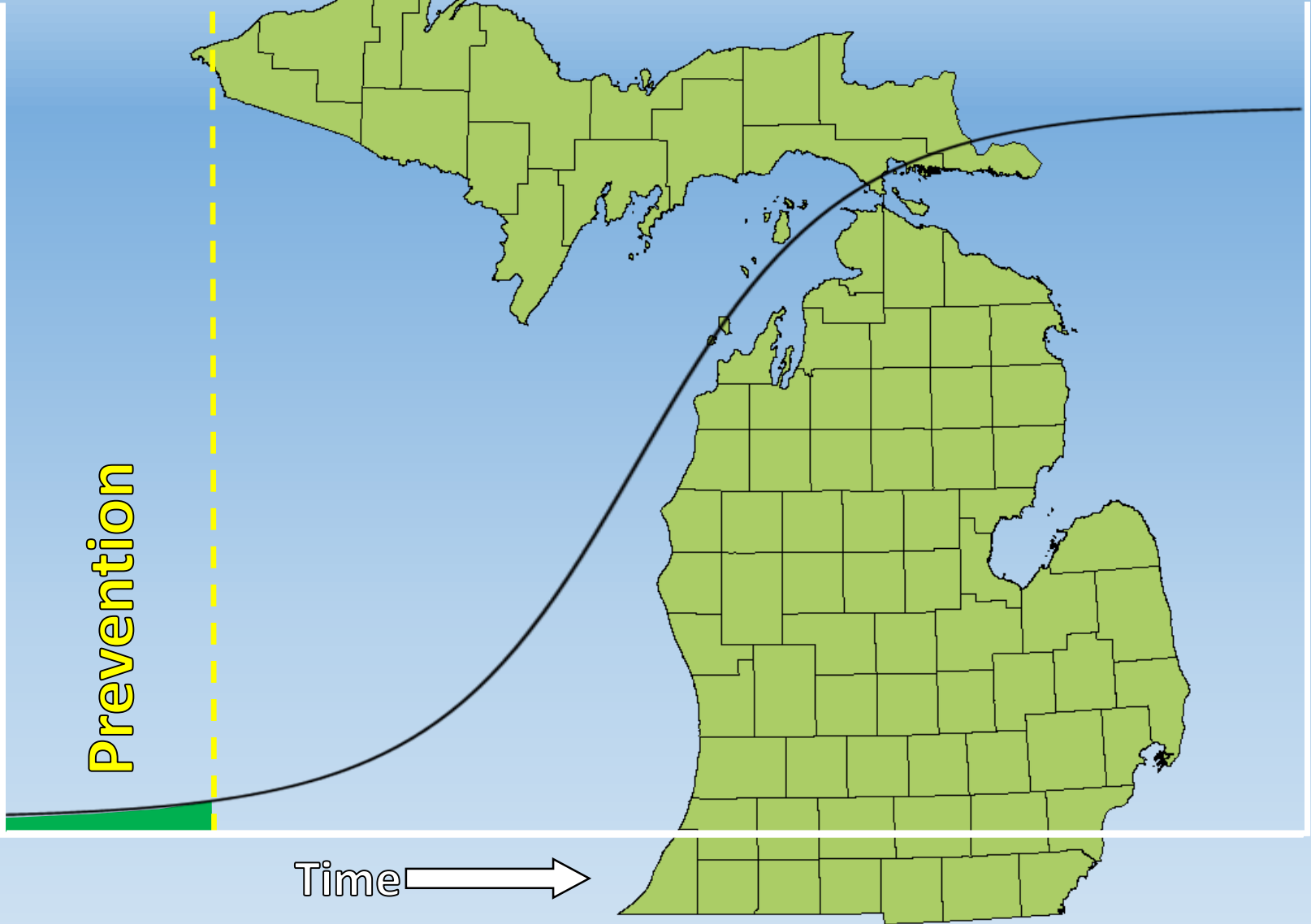
Invasion Curve

Abundance ↑

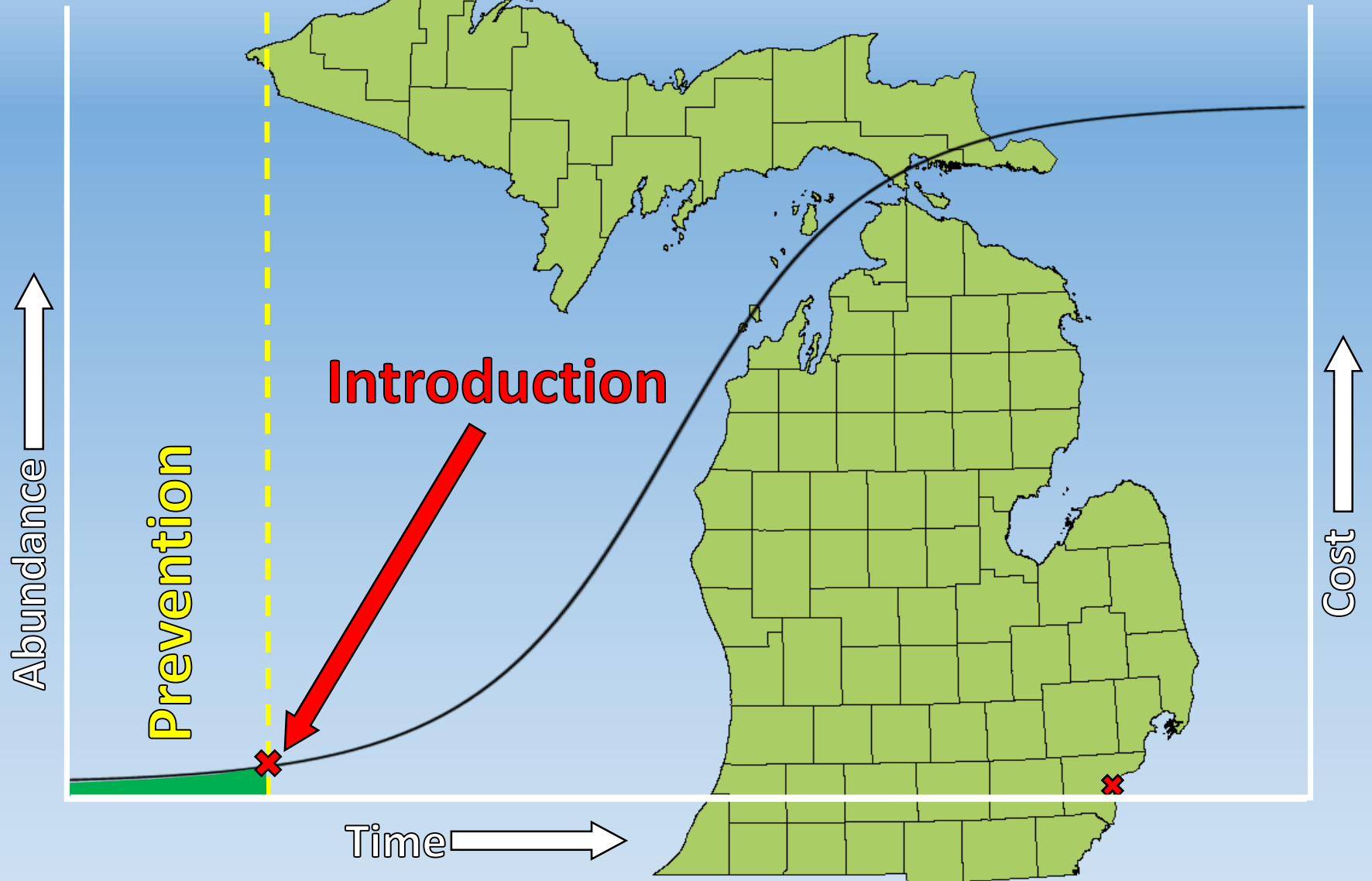
Prevention

Time →

Cost ↑



Invasion Curve



Invasion Curve

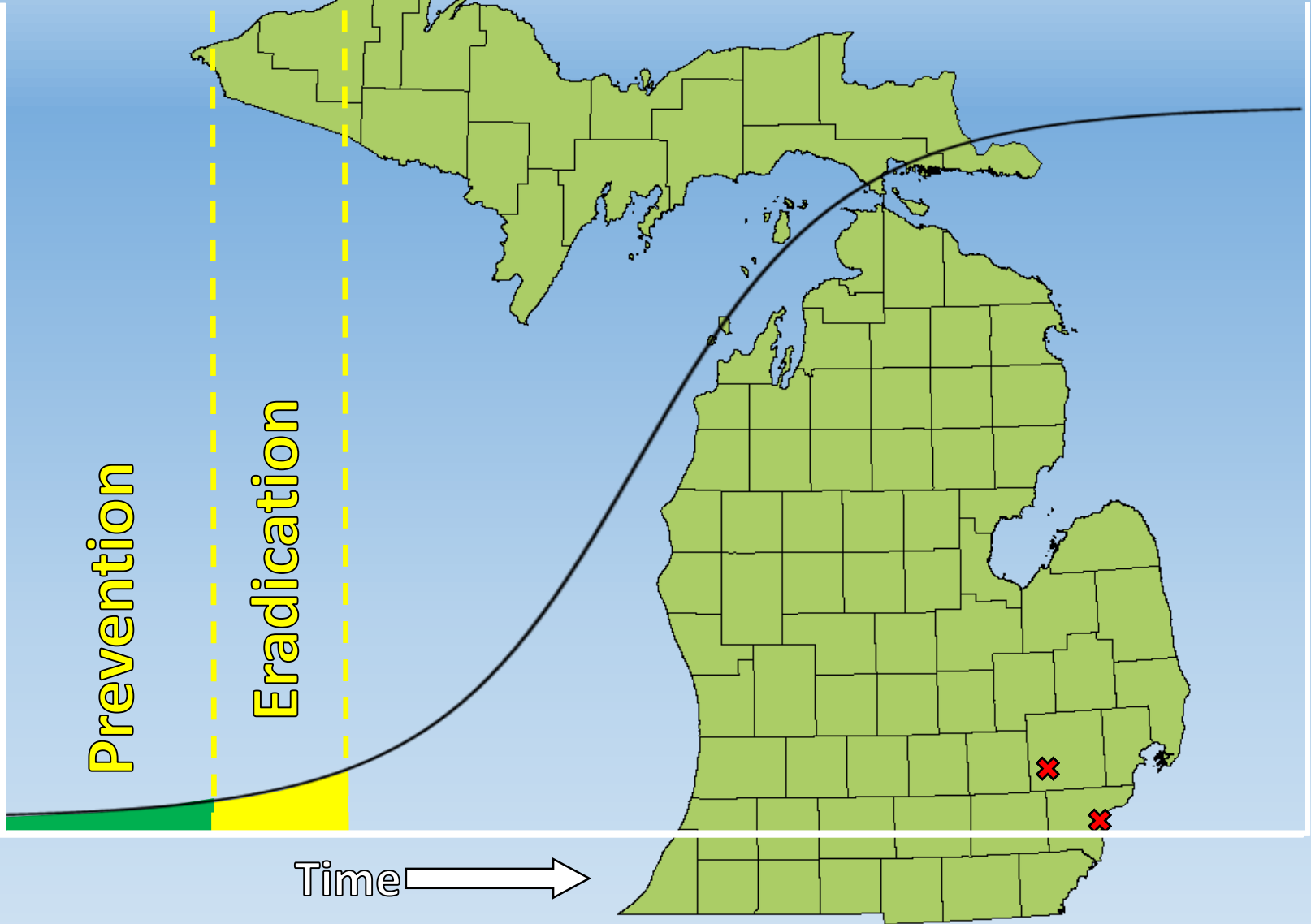
Abundance ↑

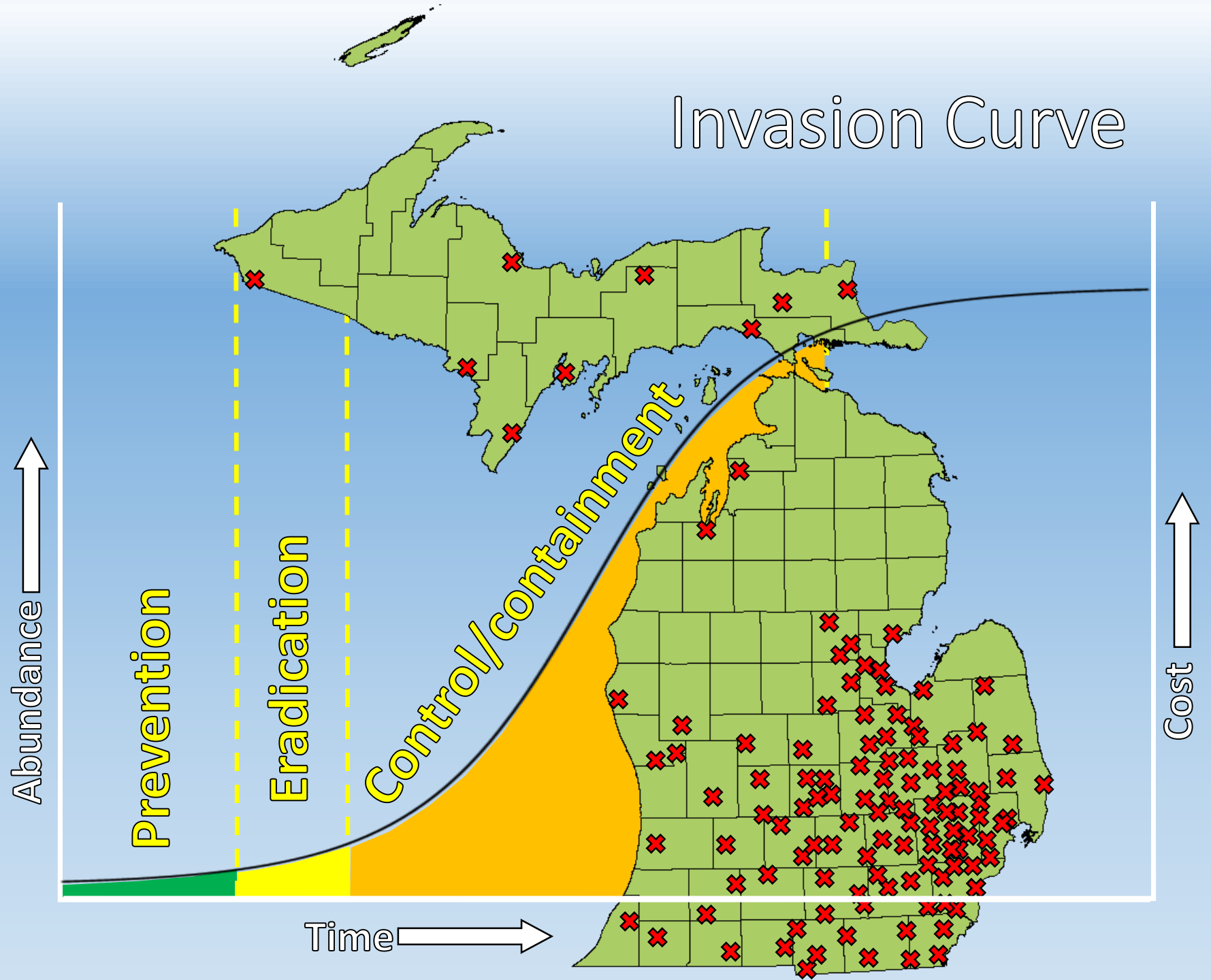
Prevention

Eradication

Time →

Cost ↑





Abundance 

Prevention

Eradication

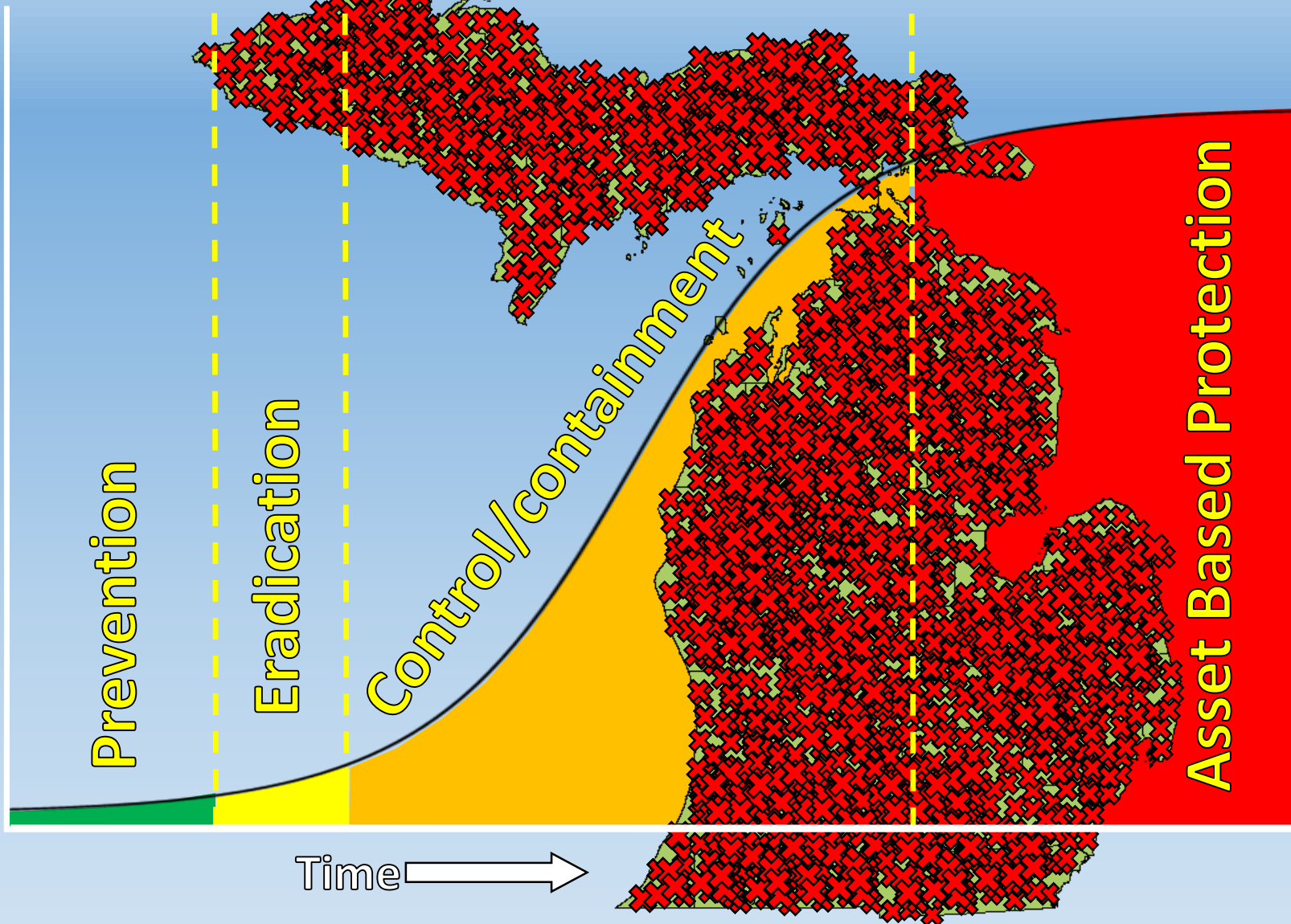
Control/containment

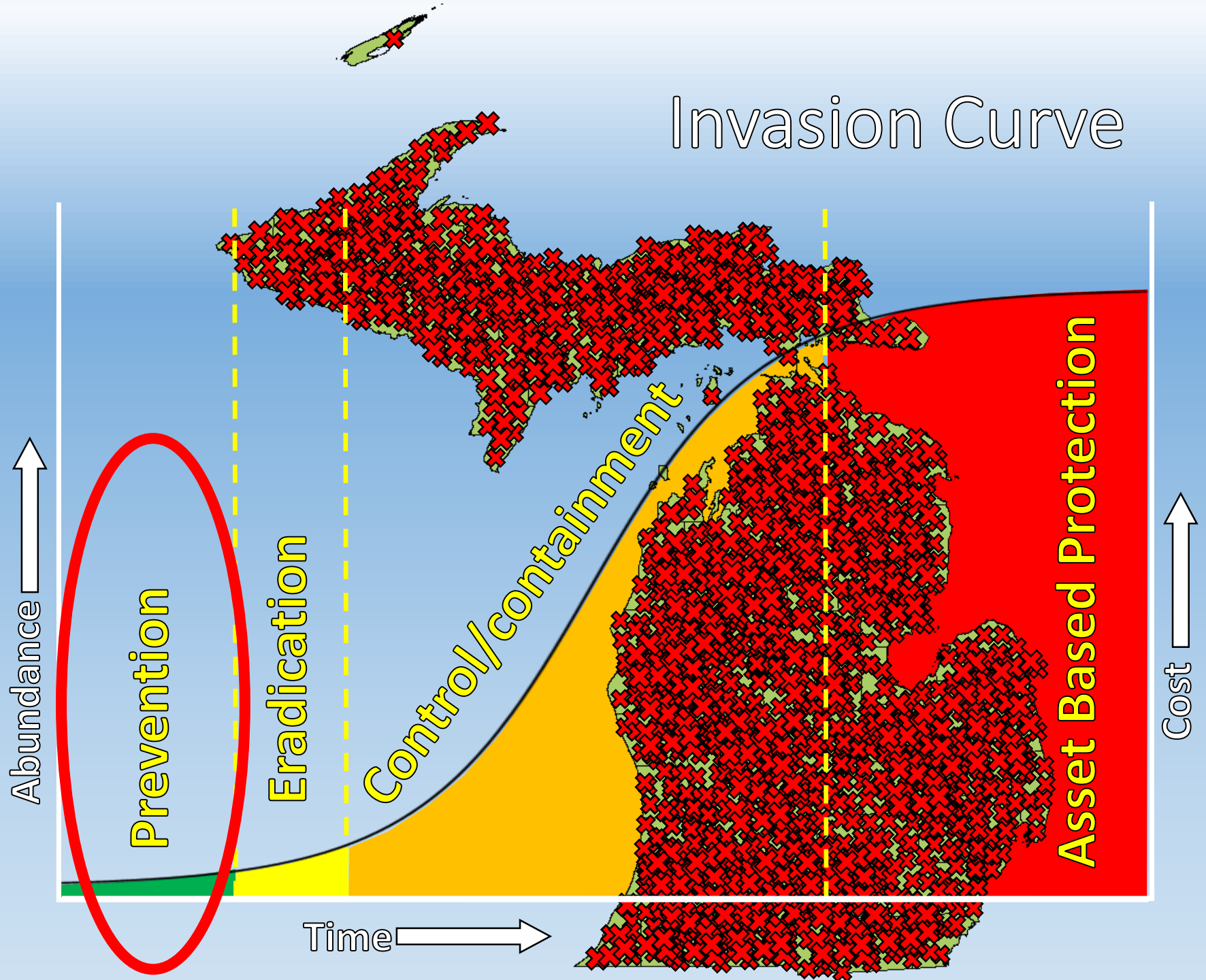
Asset Based Protection

Time 

Cost 

Invasion Curve





A good example...



<https://www.youtube.com/watch?v=xt5Xr6eteOY>



<https://www.youtube.com/watch?v=xt5Xr6eteOY>

Decontamination



A photograph of a decontamination process in a tiled room. Two figures are visible: one on the left is a mannequin-like figure covered in white foam, and another on the right is a person in a blue protective suit using a high-pressure hose to spray the first figure. A clock is visible on the wall in the background.

Decontamination Goals



Remove



Prevent

Decontamination Basics



Inspect



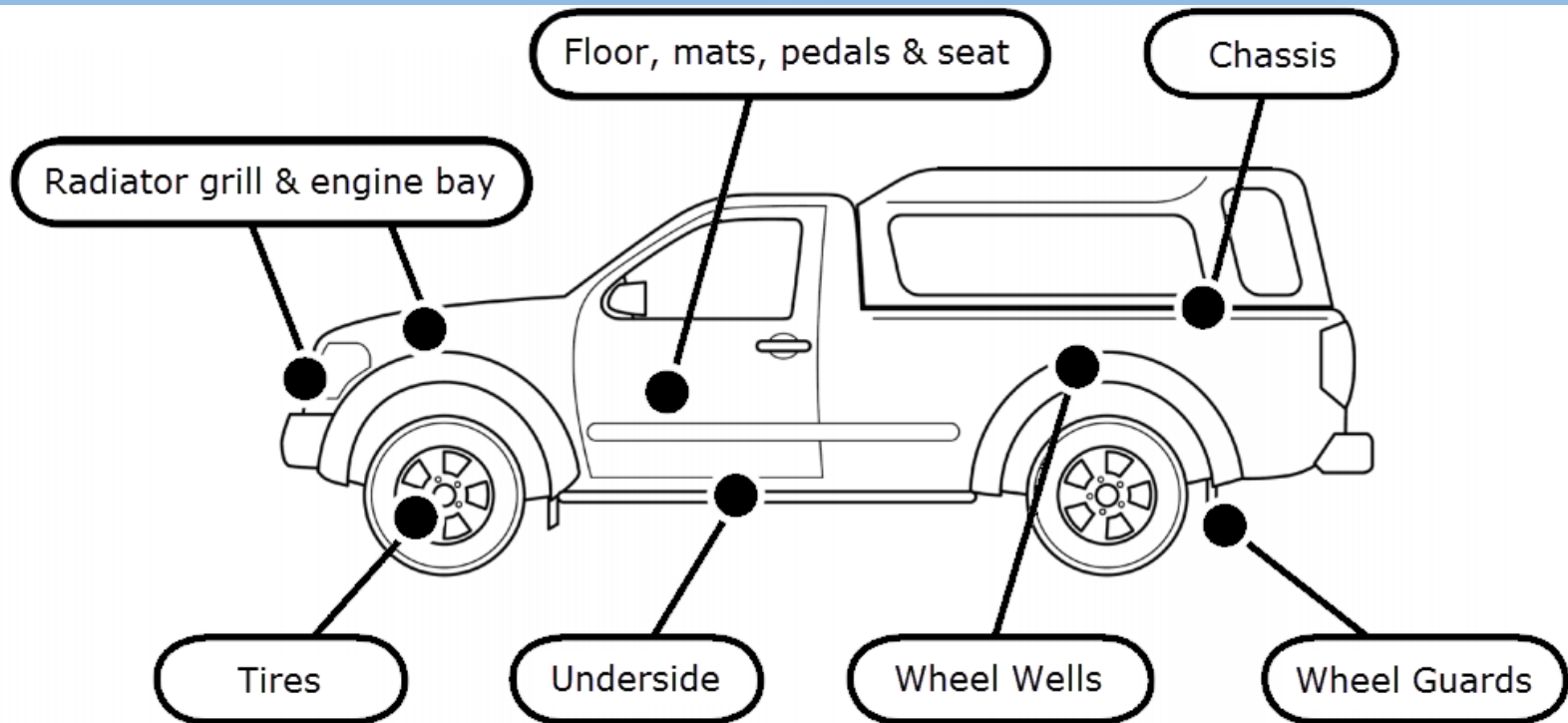
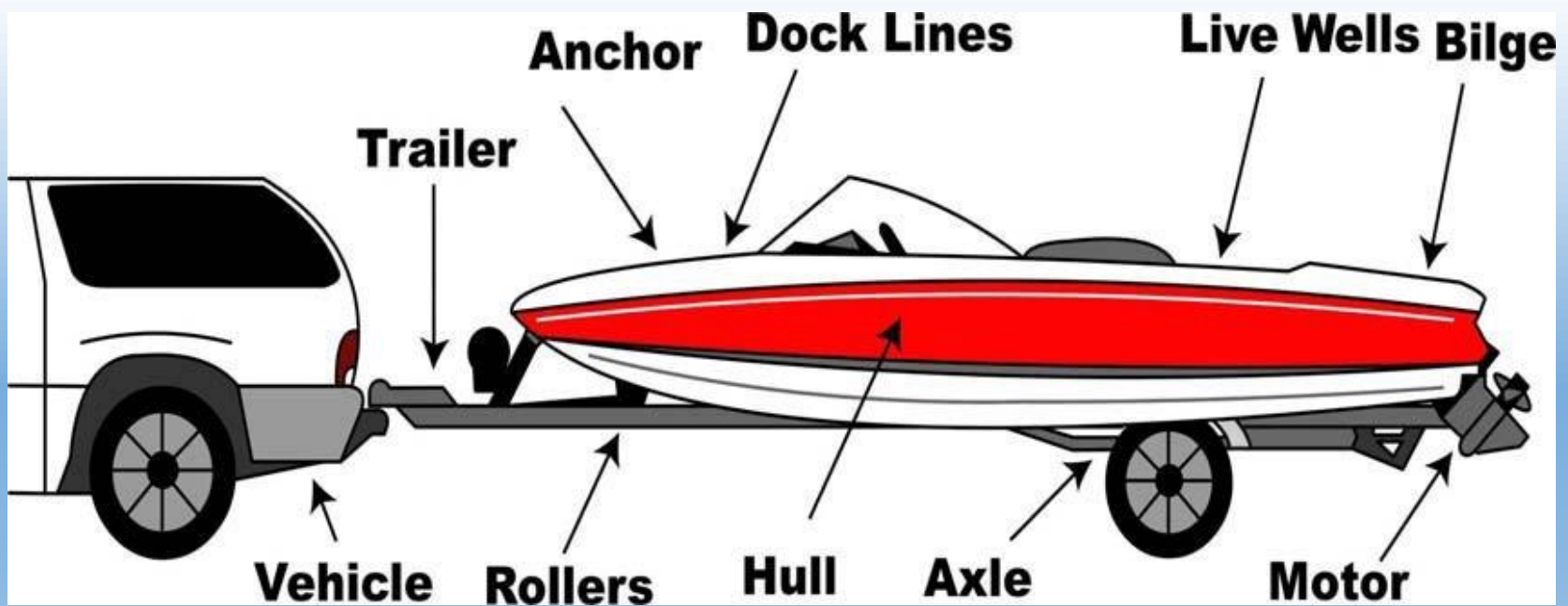






Credit: Huron River Watershed Council









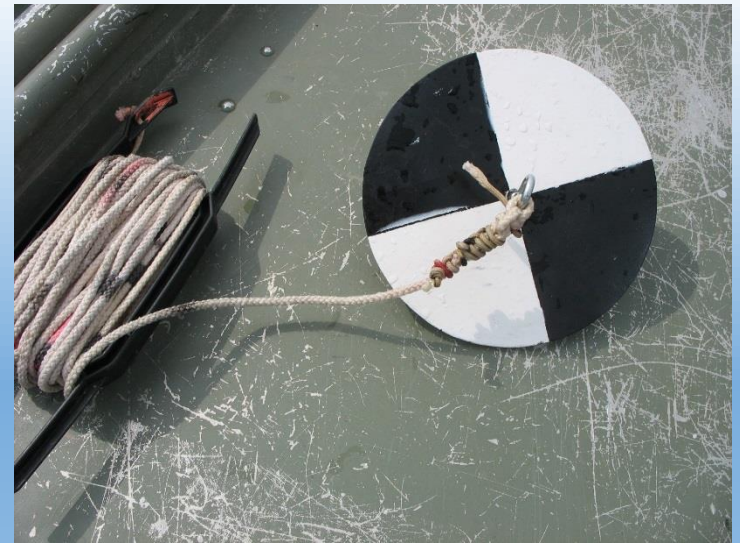
MERCURY
2XB

ACRAFT

2XB

0115823
PETALUMA, CA





Credit: Huron River Watershed Council



Disinfect

Actions Based on Risk

Risk is based on:

- **Contact**
- **# of sites visited**
- **Amount of time between visits**
- **Presence of invasive species**



Low Risk

Examples

- No known IS
- No contact
- 1 site/week



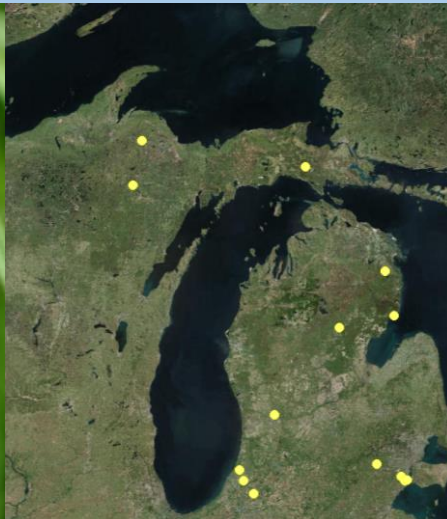
Action

- Inspect and Clean
- Drain, Rinse, and Dry

Higher Risk

Examples

- **>1 site/day**
- **Both invaded and non-invaded sites**
- **Contact with invasive species**
- **T&E communities**
- **Virulent invasive species present**



Higher Risk

Action

- Bleach solution
- Heated pressure wash
- Boat motor flush
- Dry for ≥ 5 days



Reduce Risk

- **Visit non-infested sites first**
- **Work from headwaters down stream**
- **Avoid contact with invasive species**
- **Dedicated gear**

Challenges

- Wide range of work
- Implementation
- Tools to succeed



Tools to Succeed



Tools to Succeed

Bleach

- 5.25% solution
 - 36.05 mL/gallon or
 - .15 cup/gallon
 - 1.22 oz./gallon.
- 8.25% solution
 - 22.94 mL/gallon
 - .097 cups/gallon
 - .78 oz./gallon
 - 3 mL to 16 oz.



Tools to Succeed

Heated Pressure Washers

- 140° water
- Car wash?



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- Decontamination
- The policy

Message

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- ID is optional
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Thank you!



MDEQ Aquatic Invasive Species Program

Tom Alwin alwint@mi.gov

Michigan.gov/invasives

Additional Resources

- SOM policy and guidance document
 - http://www.michigan.gov/documents/deq/go_l-wrd-policy-invasive-species-decontamination_476846_7.pdf?20150303164301
- Training module... coming soon!
- Identification
 - <http://www.misin.msu.edu/>
 - <http://www.michigan.gov/invasives>