

Illinois Needs Heroes: Aquatic Invader Prevention Programs

Greg Hitzroth

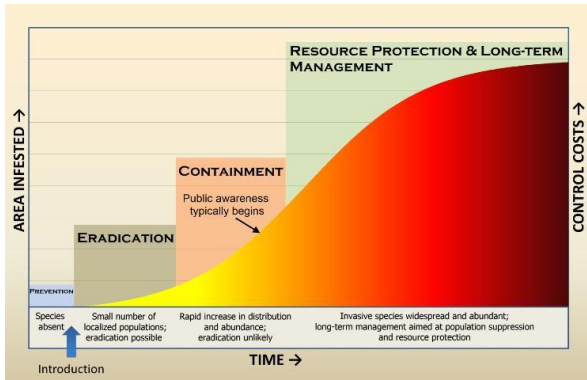
Illinois Lake Management Association Conference 2018

Bloomington Illinois



Rambling Presentation Directory

- Background
- Aquatic Pet Take Back Events and Network
- Aquatic Invader Boat Decontamination Zones
- Invasive Crayfish Collaborative
- Some up and Coming Potential Invasives





PURDUE
UNIVERSITY

Combines research, education and outreach to empower southern Lake Michigan communities to secure a healthy environment and economy.



ILLINOIS NATURAL
HISTORY SURVEY
PRAIRIE RESEARCH INSTITUTE



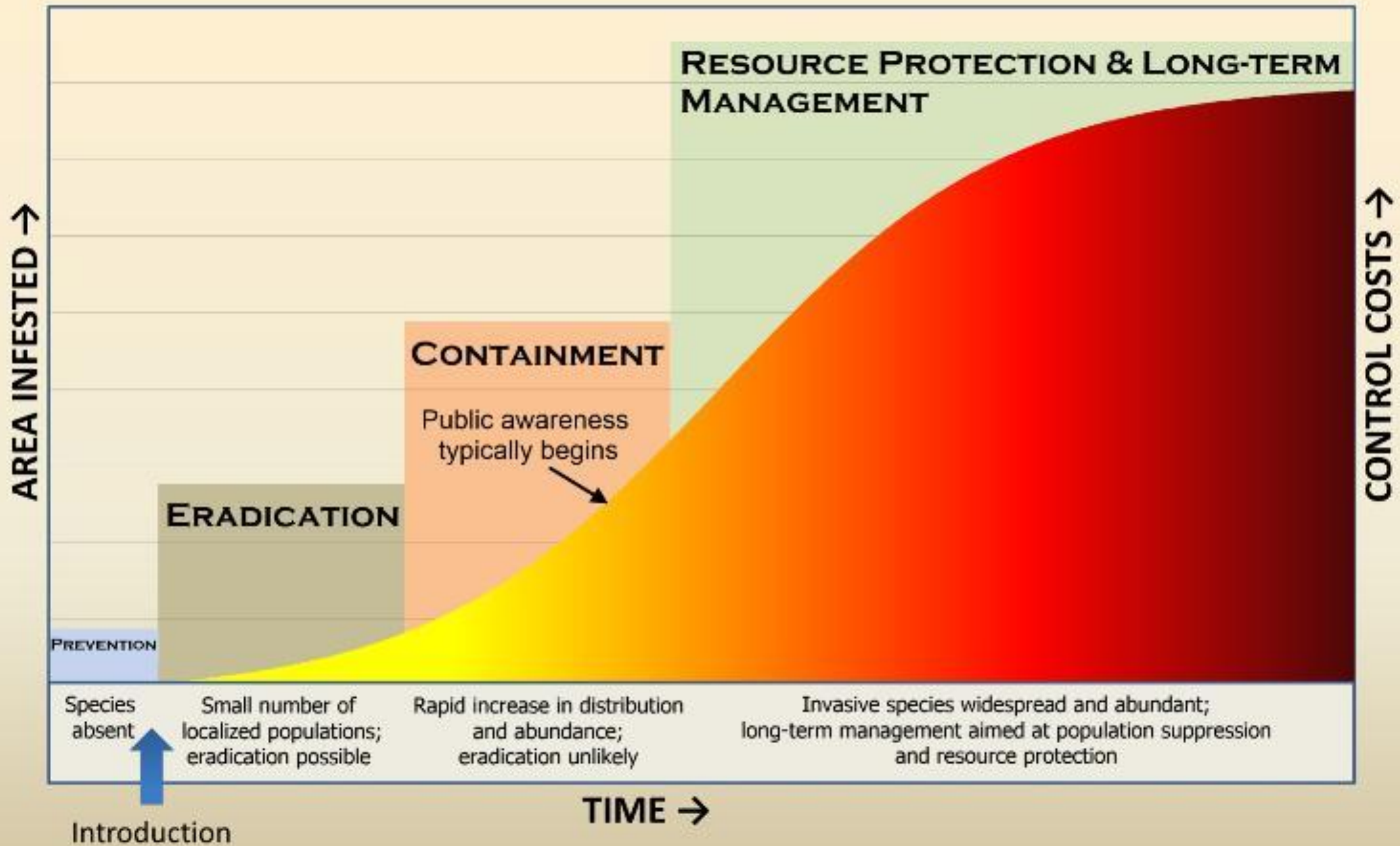
Guardian and recorder of Illinois biological resources. Foster an understanding and appreciation of our natural heritage through outreach.



Transport -> Introduce -> Establish -> Spread -> Impact

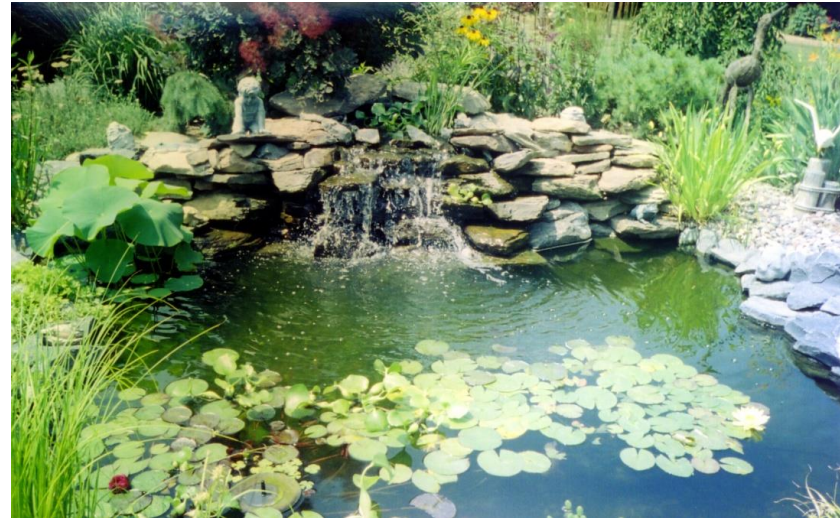
Kolar and Lodge 2001





Aquatic Pets and Aquatic Invaders

Commercial activity involving organisms in trade is one of the principal ways in which non-native organisms have been introduced into the Laurentian Great Lakes Keller and Lodge 2007



Organisms in Trade Pathway

- Species have been established in the Great Lakes through aquarium release(17), planted (23) and bait release (9) (GLANSIS search Oct 6th, 2016)
- 9 million households with ornamental fish (Chapman et al 1997)
- 7% - 25% hobbyists release ornamentals (Gertzen et al 2008, Seekamp et al 2016)





FIGHT THE SPREAD OF AQUATIC INVADERS

PLANTS

BAG AND PLACE IN THE TRASH.

ANIMALS

FIND A NEW OWNER OR SEEK ADVICE ON
HUMANE DISPOSAL.

WATER

DISINFECT OR REPURPOSE.

RELEASEZERO.ORG



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RELEASEZERO.ORG

ISSG-15-031

| | | | | | | | | | | | |
|----|----|----|----|----|----|----|----|----|----|----|----|
| °C | 17 | 19 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 |
| °F | | | | 74 | 76 | 78 | 80 | 82 | | | |



FIGHT THE SPREAD OF AQUATIC INVADERS

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RELEASEZERO.ORG

Many plants and animals for sale can invade and cause harm to our natural areas. They can cost millions to control and are almost always impossible to eliminate.



Hydrilla verticillata

Never release plants, animals, or their water into natural areas, waterways, storm drains or retention ponds.



Hypophthalmichthys molitrix

For more information on alternatives to release, lists of non-invasive species in trade, and state and federal regulations visit:

TakeAIM.org



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 Photo Credits: Hydrilla verticillata by Vic Koenig, University of Toronto; Peltandra heterophylla by The Nature Conservancy

AQUATIC INVADERS IN THE MARKETPLACE

MANY OF THE PLANTS AND ANIMALS FOR SALE CAN INVADE AND CAUSE HARM TO OUR NATURAL AREAS.



Hydrilla verticillata

THEY CAN COST MILLIONS TO CONTROL AND ARE ALMOST ALWAYS IMPOSSIBLE TO ELIMINATE.



Hypophthalmichthys molitrix




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PURCHASE ONLY NON INVADERS

SUCH AS

- Blue Flag Iris (*Iris sibirica*)
- Winged Weirless Goby (*Stenogobius genivittatus*)
- Blue Gourami (*Trichoglossus trichopterus*)
- Wine Minnow (*Phoxinotus phoxinotus*)
- Golden Shiner (*Notropis heterodon*)
- Bluegill (*Lepomis macrochirus*)
- Spotted Water Lily (*Najas sp.*)
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RELEASEZERO.ORG

Pet Surrender Events



petco



PIJAC

PET INDUSTRY JOINT ADVISORY COUNCIL





Illinois Organizations and People

IISG/INHS

University of Illinois Legal

Illinois Department of Natural Resources

Conservation Police

Biologists

Regulatory

IL Department of Agriculture

Animal welfare/State Veterinarian

US Fish and Wildlife

Animal Control

Aquarium Fish Sanctuary

Chicago Herpetological Society

Green Bay Aquarium Society

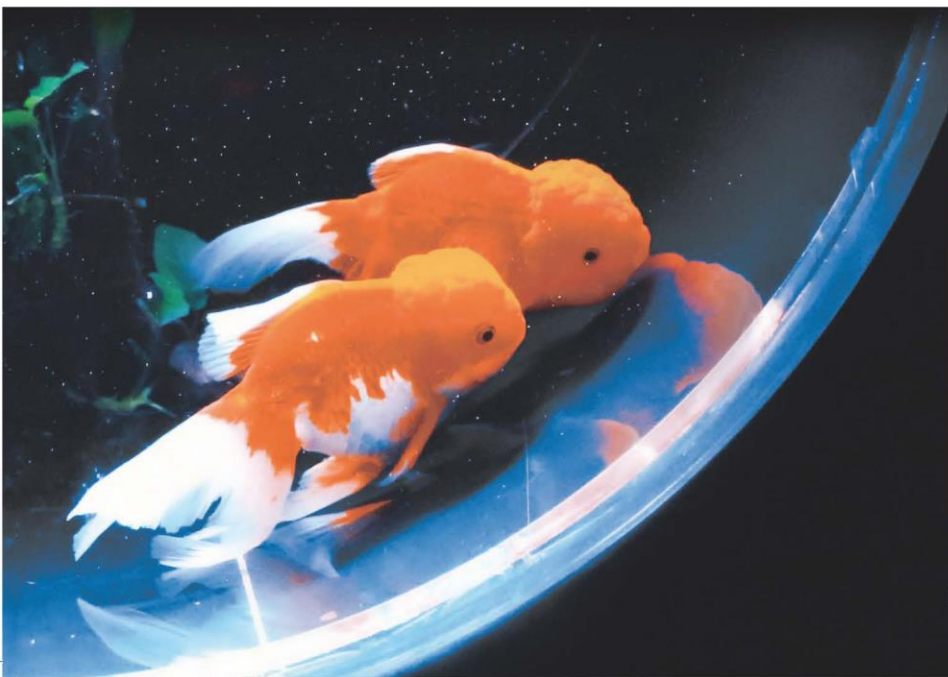


Can't keep your aquatic pet?

Releasing aquarium and water garden pets can hurt them and the environment. Bring them to us instead!



- ❗ Only fish and aquatic invertebrates will be accepted. (e.g., crayfish, snails)
- ❗ Space is limited! Email us to ensure space for your pet at **BeAHeroReleaseZero@gmail.com.**
- ✅ No penalties for turning in regulated species.



SATURDAY
August 26th
10AM - Noon

William W. Powers State
Recreation Area
Visitor Center
12949 Avenue O
Chicago IL 60633

More information available at ReleaseZero.org.

Facebook and Twitter (144,207 impressions; 15,277 interactions)

Online

Magazines

Newspapers (40,000 impressions)

Print

Flyers/Posters

Newspapers (59,823 impressions)

Radio

National Public Radio WBEZ Chicago.

244,480+ impressions over three events.



NEVER

RELEASE AQUATIC PETS.



GO TO

RELEASEZERO.ORG

FIND A NEW OWNER

SEEK CARE ADVICE



RELEASEZERO.ORG
/RE-HOME



RELEASEZERO.ORG
/AQUATIC-VETS

Produced by Illinois-Indiana Sea Grant & Illinois Natural History Survey, Prairie Research Institute with funding from the Great Lakes Restoration Initiative to the Illinois Department of Natural Resources ©2017 The Board of Trustees of the University of Illinois. IISG-17-#

Recreational Water Users





FIGHT THE SPREAD OF AQUATIC INVADERS

REMOVE

PLANTS, ANIMALS AND MUD FROM
ALL EQUIPMENT.

DRAIN

ALL WATER FROM YOUR BOAT AND GEAR.

DRY

EVERYTHING THOROUGHLY WITH A TOWEL.

TRANSPORTZERO.ORG

ILLINOIS



DEPARTMENT OF
NATURAL
RESOURCES



FIGHT THE SPREAD OF AQUATIC INVADERS

- REMOVE** PLANTS, ANIMALS AND MUD FROM ALL EQUIPMENT.
- DRAIN** ALL WATER FROM YOUR BOAT AND GEAR.
- DRY** EVERYTHING THOROUGHLY WITH A TOWEL.

TRANSPORTZERO.ORG



FIGHT THE SPREAD OF AQUATIC INVADERS

- REMOVE** PLANTS, ANIMALS AND MUD FROM ALL EQUIPMENT.
- DRAIN** ALL WATER FROM YOUR BOAT AND GEAR.
- DRY** EVERYTHING THOROUGHLY WITH A TOWEL.

TRANSPORTZERO.ORG

95% OF BOATERS AND ANGLERS* ARE ALREADY FIGHTING THE SPREAD OF AQUATIC INVADERS—HITCHHIKING PLANTS AND ANIMALS THAT CAN HARM ILLINOIS WATERS AND RUIN YOUR BOATING AND FISHING.

KNOW THE LAW:

IT IS ILLEGAL TO ENTER OR LEAVE A WATERBODY WITH AQUATIC PLANTS AND ANIMALS ATTACHED TO YOUR BOAT OR TRAILER. TRAVEL ON ILLINOIS HIGHWAYS WITH AQUATIC PLANTS OR ANIMALS ATTACHED IS ALSO PROHIBITED.



DON'T DUMP BAIT

- REMOVE • NON-BAIT FISH AND OTHER HITCHHIKERS FROM YOUR BAIT BUCKET BEFORE FISHING.
- DISPOSE • OF ALL UNWANTED BAIT AND HITCHHIKERS IN THE TRASH.
- NEVER RELEASE • ORGANISMS CAUGHT IN ONE BODY OF WATER INTO ANOTHER.



JOIN THE FIGHT!

HELP PROTECT ILLINOIS WATERS

As someone who cares about our lakes, rivers, and wetlands, I pledge to protect them from aquatic invaders. To help stop their spread:

- I will remove, drain, and dry before I leave a water access.
- I will follow AIS laws and regulations.
- I will learn to recognize AIS.
- I will dispose of all unwanted bait and fish parts in the trash.
- I will share this information with other boaters/anglers.

Boating, fishing, hunting, and wildlife watching are traditions that we want to preserve for future generations.

What are AIS?

Aquatic invasive species (AIS), such as zebra mussels, hydrilla, stonewort, and milfoil, are plants and animals that do not naturally occur in our waters. Once established in a new body of water, they can do lasting damage to our environment, outdoor recreation, and family enjoyment, which all rely on healthy water resources.

How do they spread?

Often easily overlooked, the main way that these aquatic invaders spread is by hitching rides on boats, trailers, and gear used by anglers, boaters, and other recreationists. If you leave a water access site without taking precautions, you may be transporting these harmful organisms from one body of water to another.

What can you do?

The good news is that many of Illinois' lakes, rivers, and wetlands are not yet infested with invasive species. With a few simple but effective steps, you can help protect our valuable waters.

By working together and taking responsibility, we can help protect our waters!



86% Remove



92% Drain



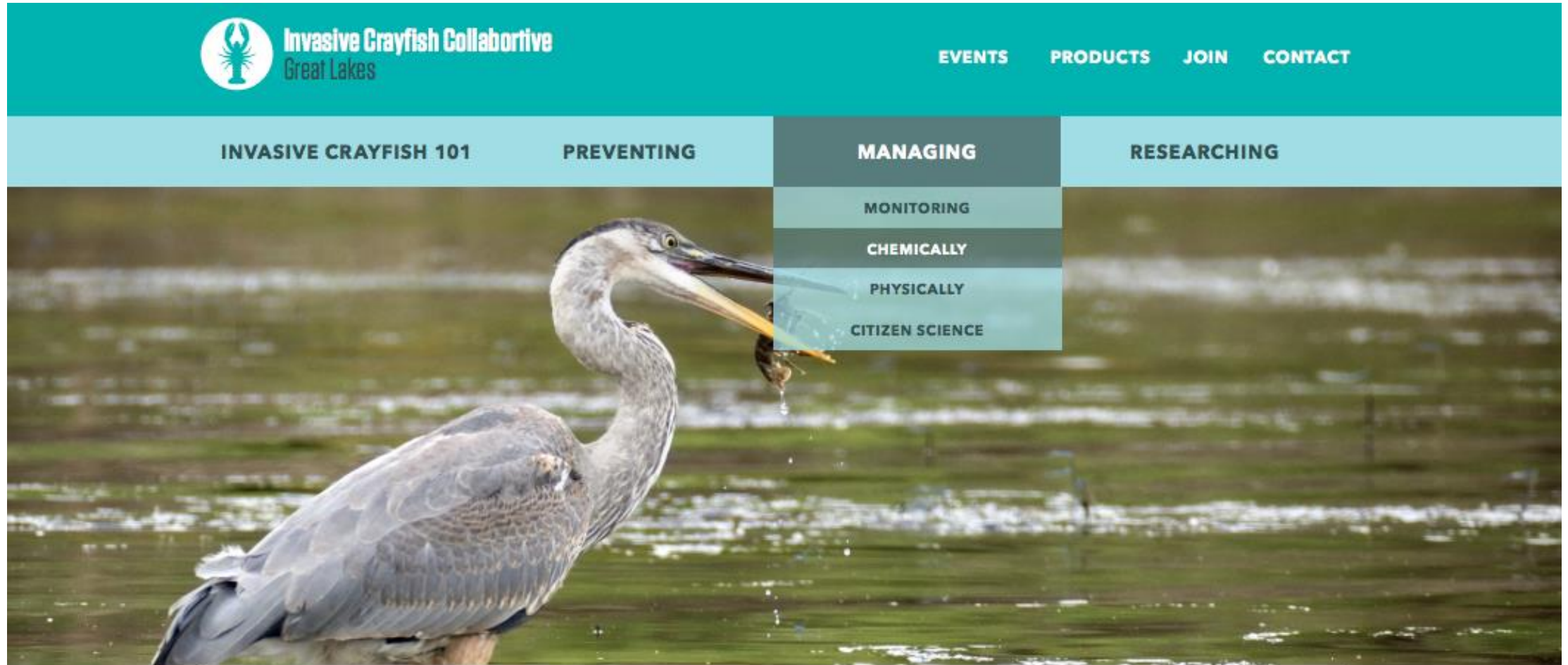
81% Dry

Aquatic Invader Decontamination Zones



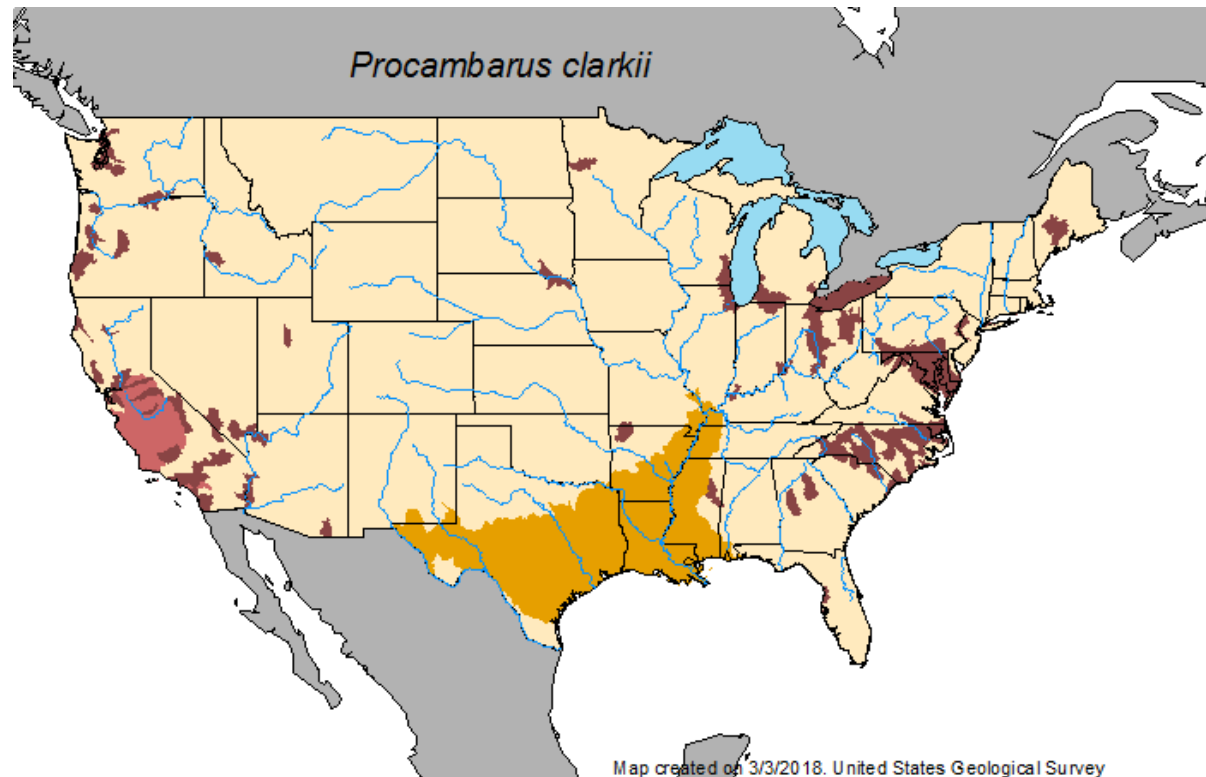
Waukegan & North Point

Invasive Crayfish Collaborative



Red Swamp Crayfish

- *Procambarus clarkii*



Marbled Crayfish

- *Procambarus fallax* forma *virginalis*
- Parthenogenic
- All female
- Found in pet trade only
- No known North American populations



Common Yabby

- *Cherax destructor*
- Australia
- Prohibited in Illinois



Australian Red Claw Crayfish

- *Cherax quadricarinatus*



Thank you!

Aquatic Pet Surrender Network

Or

Aquatic Invader Removal Areas

Hitzroth@Illinois.edu

Invasive Crayfish Collaborative

lkim@Illinois.edu