



Regional Coordination Efforts for Aquatic Invasive Species (AIS)

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A topographic map of the Great Lakes region, showing the five Great Lakes (Superior, Michigan, Huron, Erie, and Ontario) in white. The surrounding land is depicted with brown and tan contour lines indicating elevation. The map is partially obscured by a green rectangular overlay on the right side, which contains the title and list.

Today's Presentation

- What makes landscape of governance for AIS so complicated?
- Examples of Regional Coordination?
- What conclusions can we draw from lessons learned to date?
- How can we work together to define the destiny for the region & elsewhere?



Landscape of AIS Management

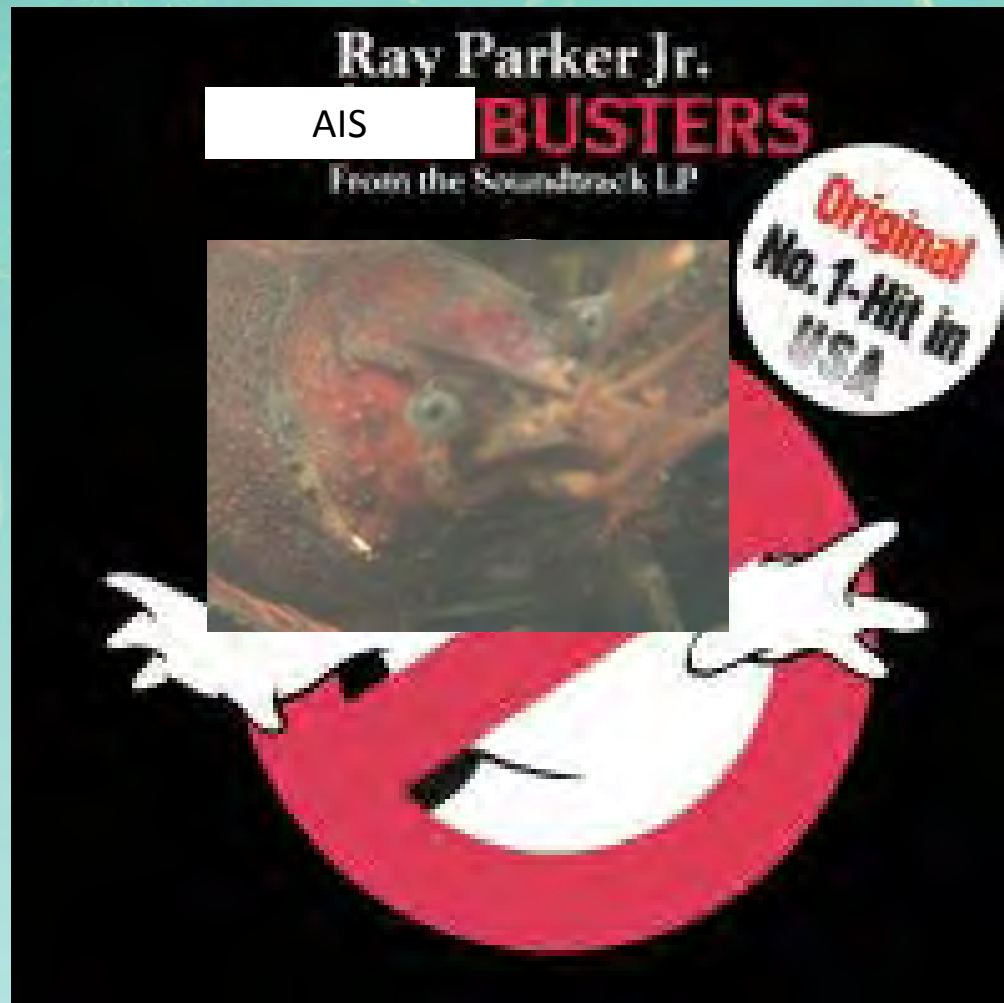
- Aquatic Nuisance Species Program (USFWS -national)
 - Army Corp of Engineers
 - Environmental Protection Agency
 - USFWS Region 3 and 5
-
- International Joint Commission
 - Great Lakes Commission
 - Great Lakes Fishery Commission
 - Great Lakes Water Quality Agreement
-
- State Agencies (multiple)
 - Council Great Lakes Governors AIS Task Force
 - Aquatic Nuisance Species Panels



Examples of Regional Coordination

- **Council of Great Lakes Governors AIS Task Force**
- **Monitoring and Sampling Plan for Asian Carp in Illinois River and Chicago Area Waterway System**
- **ANS Basin Panels – information sharing**

“Who You Gonna Call?”





*Council Great Lakes Governors
Aquatic Invasive Species Task Force*

**Mutual Aid Agreement for Combating
Aquatic Invasive Species Threats to
the Great Lakes and St. Lawrence
River Basin**

A topographic map of the Great Lakes region, showing the five lakes (Superior, Michigan, Huron, Erie, and Ontario) in white, surrounded by green and brown terrain representing land. The map is partially obscured by a green banner at the top right.

Task Force Members

IL: Kevin Irons, Vic Santucci

IN: Eric Fischer, Bill James, Doug Keller

MI: Tammy Newcomb, Roger Eberhardt, Sarah LeSage

MN: Elizabeth Gawrys, Ann Pierce, Jeff Stollenwerk

NY: Don Zelazny


OH: Rich Carter, John Navarro, Jeff Tyson, Scott Zody

ONT: Ala Boyd, Bill Carr, Ranissah Samah

PA: John Booser, James Grazio

QUE: Isabelle Desjardins, Eve Joseph, Louise Lapierre, Isabelle Simard

WI: Steve Galarneau, Phil Moy, Susan Sylvester, Bob Wakeman



Eight Steps to a Mutual Aid Agreement in < 12 Months

1. Governor's Summit 5/2013
2. Contract w/Great Lakes Fishery Commission 8/2013
3. Development of first draft 12/2013
4. Working review meeting 1/2014
5. Draft cleared for stakeholder review 2/2014
6. Continued revisions, legal review 3/2014
7. Translation; hiccups; final document 4/2014
8. Governor's Meeting 4/26/2014




Preamble and Purpose

Preamble

- Uncertainty does not equal inaction
- Expectations of risk reduction or elimination

Purpose

- Prevent introduction and spread of AIS
- Foster mutual aid
- Encourage further cooperation



Protocols for Requesting Aid

Requesting Party Responsibilities

- Detection, Action Determination & Implementation, Communication

Other Party Responsibilities

- Action Implementation



Cooperative Protocol for Information and Readiness

- Staff contacts & inventories, etc.
- Sharing of scientific research & expertise
- State & Province AIS Action plans
- Procedures for resource sharing
- Reporting



What it is not.....

- A strict prescription for everything
- A binding agreement
- A commitment of resources of any amount

A topographic map of the Great Lakes region, showing the five Great Lakes (Superior, Michigan, Huron, Erie, and Ontario) and the surrounding landmasses. The map is rendered in shades of blue and green, with the lakes in a lighter blue. The landmasses are shown in a darker green with topographic details. The map is positioned in the upper left corner of the slide.

Operationalization of Mutual Aid Agreement

CGLG AIS Task Force will:

- Monitor implementation of all measures
- Prepare standardized procedures or protocols
- Address permits and other licensing issues

First Actions

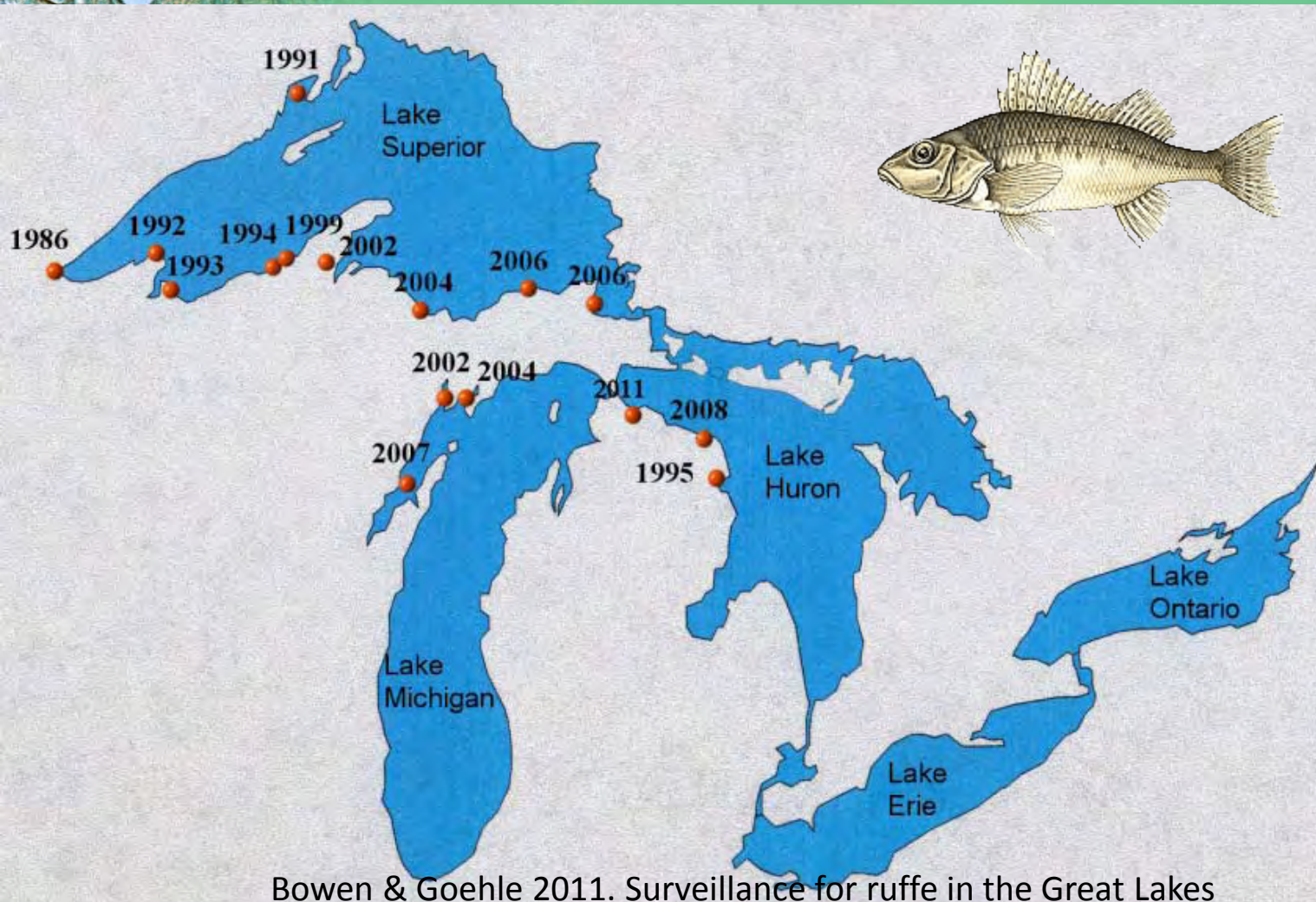
- Illinois first action in June
- Michigan/Ohio in fall



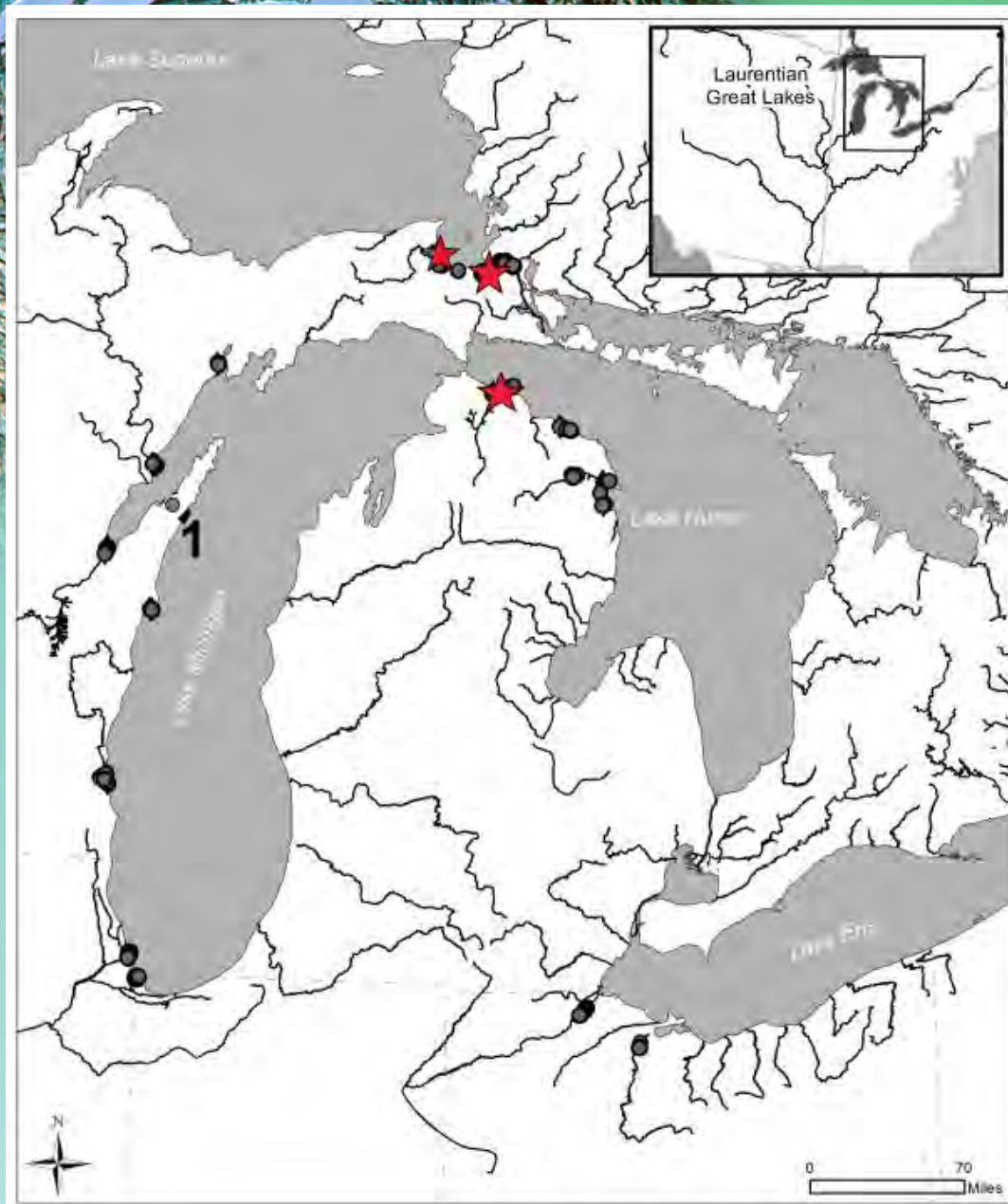
**The Mutual Aid Agreement can
be found at:**

www.cglg.org

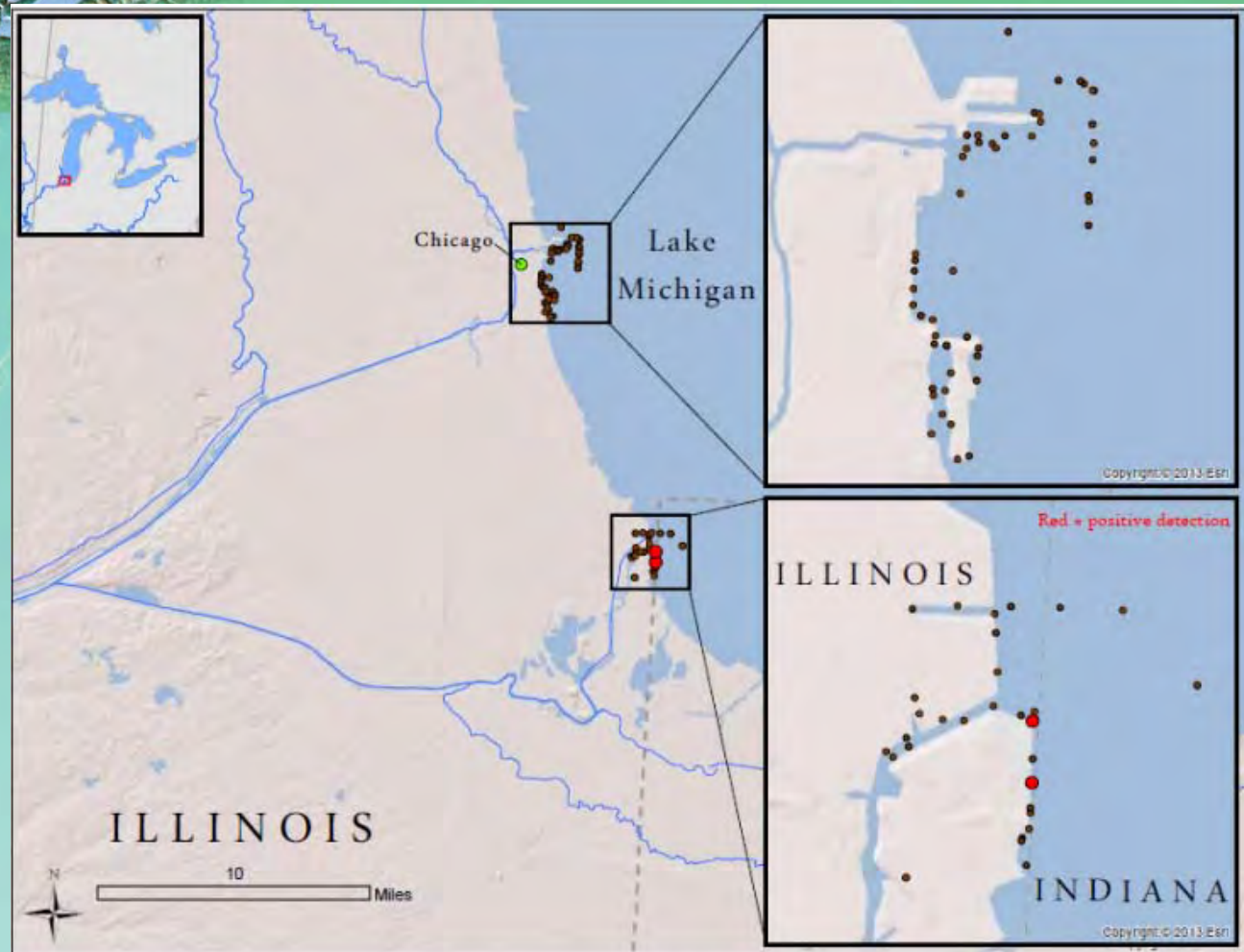
Eurasian Ruffe in Great Lakes



Bowen & Goehle 2011. Surveillance for ruffe in the Great Lakes



eDNA surveillance
Fall 2012-Spring 2013
N = 1500



Illinois/Indiana Asian Carp/Ruffe Response

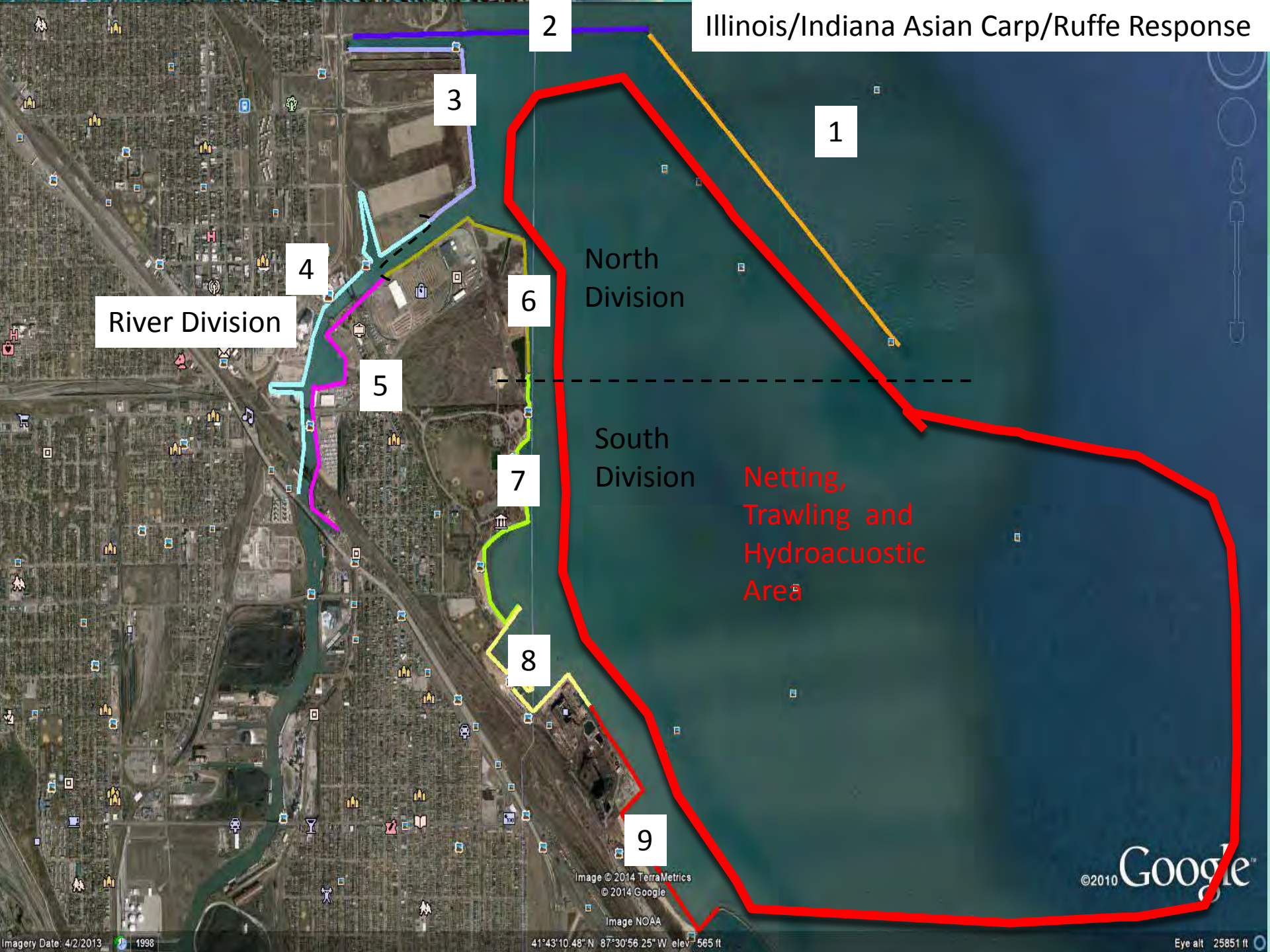


Image © 2014 TerraMetrics
© 2014 Google

Image NOAA

Resources arrived at Calumet Harbor,
were checked in



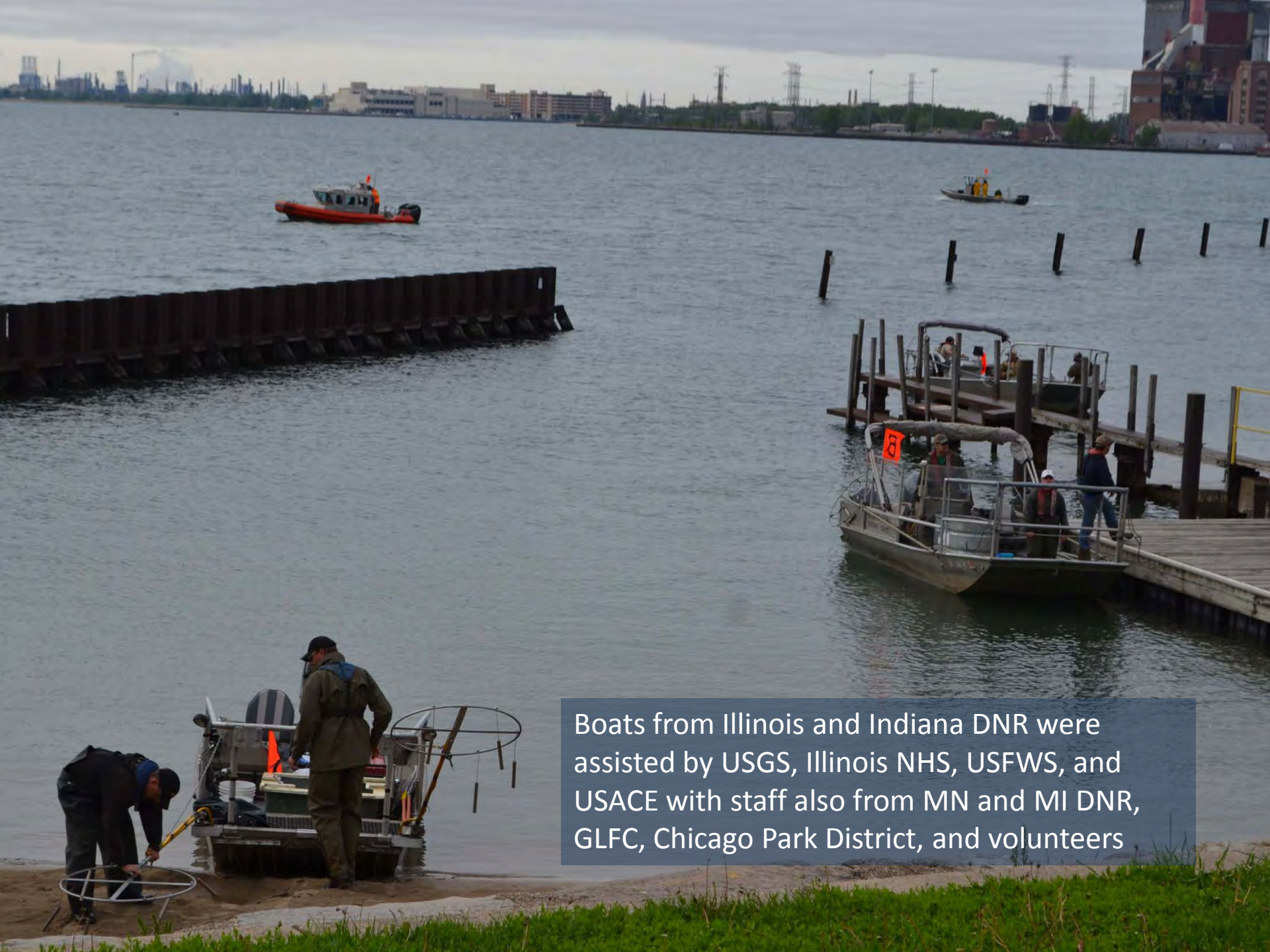
Boats were assigned numbers and given radios/flares as necessary



A heated power wash and chlorine was available for decontamination if necessary







Boats from Illinois and Indiana DNR were assisted by USGS, Illinois NHS, USFWS, and USACE with staff also from MN and MI DNR, GLFC, Chicago Park District, and volunteers



USGS hydro-acoustic boat to assist with trawling surveys



INHS Lake Michigan micro mesh gill netting crew



Incident Management team documenting,
documenting, documenting



IDNR Communication staff capturing moment



USACE electrofishing boat



Indiana DNR



USFWS Windermere traps





Safety boat with CPO and CMS communication team (Indiana IC accompanies). Chicago fire was present for other activities ;)



Indiana DNR finds large smallmouth bass
(many captured during event)







Round gobies were present, not surprising.

This is a large individual.

Coming in for lunch....







Fish ID





Media event



Calumet Harbor Carp Ruffe Event Summary

| Gear | Effort | Total Species | Total Fish |
|--------------------|-------------------------|---------------|------------|
| Day Electrofishing | 53 Runs (13.25 hrs.) | 23 | 665 |
| Gill Nets | 198 yards | 5 | 62 |
| Trawl | 1.2 hrs. | 1 | 116 |
| Minnow Traps | 3 sets | 1 | 17 |
| Windermere | 5 sets | 1 | 1 |

ASIAN CARP: Monitoring and Response Work Group



A topographic map of the Great Lakes region, showing the five Great Lakes (Superior, Michigan, Huron, Erie, and Ontario) in light blue. The surrounding land is depicted in shades of green and brown, indicating elevation and terrain. The map is oriented with North at the top.

Goal: *Prevent Asian carp from establishing self-sustaining populations in the CAWS and Lake Michigan*

Objectives:

- 1) Distribution and abundance**
- 2) Removal**
- 3) Identification, assessment, and reaction to any vulnerability in barriers**
- 4) Determination of the leading edge**
- 5) Improve understanding**

Characterizing Risk – Feb 2014

Distances from Lake Michigan

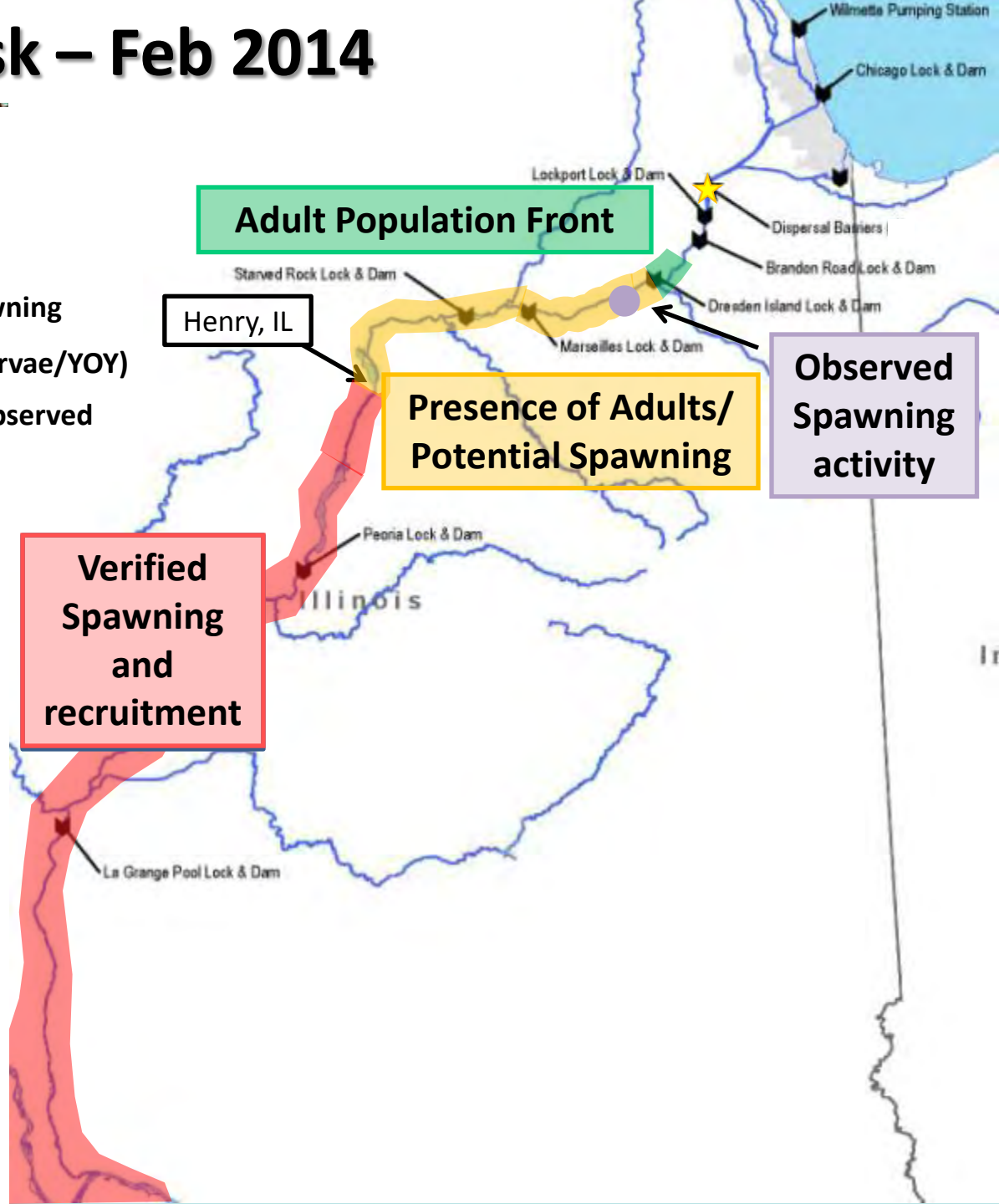
37 miles Dispersal barriers ★

55 miles Adult Population Front

62 miles Presence of Adults/Potential Spawning

64 miles Observed Spawning activity (no larvae/YOY)

143 miles Established population: Closest observed small Asian carp (Henry, IL in Peoria Pool)





- **Annual Plan**

**21 project plans, 75
project objectives**

**Guides monitoring,
removal operations,
research , and
protocols**

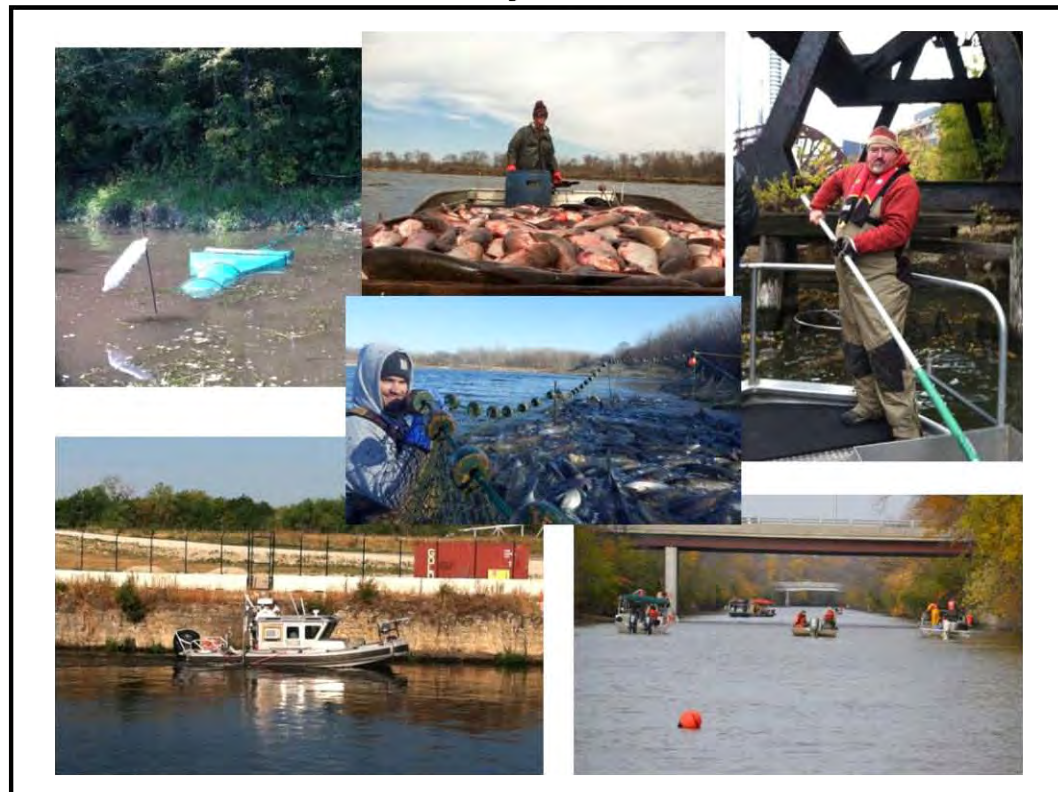


<http://asiancarp.us>

Asian Carp Regional Coordinating Committee
Monitoring and Response Workgroup

Monitoring and Response Plan for Asian Carp in the Upper Illinois River and Chicago Area Waterway System

May 2013





Projects

Monitoring Projects (6)

- Fixed and Random Site Monitoring Upstream of Barrier - Fixed and Random Site Monitoring Downstream of Barrier -Strategy for eDNA Monitoring in the CAWS -Larval Fish and Productivity Monitoring- Young-of Year and Juvenile Asian Carp Monitoring -Distribution and Movement of Juvenile Asian Carp in the Illinois Waterway

Removal Projects and Evaluations (5)

- Response Actions in the CAWS - Planned Intensive Surveillance in the CAWS - Barrier Maintenance and Fish Suppression -Barrier Defense Asian Carp Removal Project - Monitoring Asian Carp Population Metrics and Control Efforts

Barrier Effectiveness Evaluations (4)

- Telemetry Monitoring Plan -Monitoring Fish Abundance, Behavior and Fish-Barge Interactions at the barrier - Evaluating Asian Carp Detection Techniques with SONAR - Des Plaines River and Overflow Monitoring

Gear Effectiveness Evaluations and Development (4)

- Asian Carp Gear Efficiency and Detection Probability Study - Exploratory Gear Development Project - Unconventional Gear Development Project - Water Gun Development and Testing

Alternate Pathway Surveillance (2)

- Alternative Pathway Surveillance in Illinois – Law Enforcement; Urban Pond Monitoring

Asian Carp Biomass Removed

2,137,640 lbs

With more to come in 2014 (> 200k lbs so far)

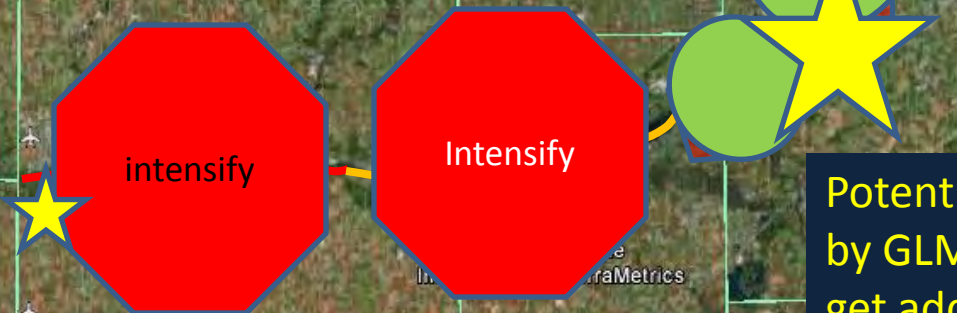


Recommendation Regarding Sampling Above and Below Barrier

2014 – Increased focus on leading edge and removal efforts.

Focus on immigration and bottlenecks for operational and technology applications recommendations

Spring and Fall sampling Above barrier - with focus areas



Potential bottlenecks as informed by GLMRIS and ongoing study will get additional attention

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2014 Monitoring and Response Plan

- **Concentrate efforts below barrier for detection and action (seasonal above barrier)**
- **Monitor CAWS – fixed and random sites**
- **Evaluate potential GLMRIS alternatives that can be implemented**
- **Integrated Pest Management Operations**

2014 Monitoring and Response Plan *(continued)*

- USACE telemetry near barrier/SIU downstream
- eDNA monitoring
- Focus on leading edge and small fish locations
- Gear development
- Focus on fish behavior near electric barrier



2014 Monitoring and Response Plan (*continued*)

- Community outreach and enforcement
- Long term plan but open to annual informed modifications
- Monthly updates via email and asiancarp.us



2014 Additional Efforts

- Illinois DNR will host Michigan DNR for training in field efforts
- Illinois AND Indiana DNR worked with USFWS and others to implement Mutual Aid Agreement for ruffe (May)
- GLWQA Annex 6 (Invasive Species)



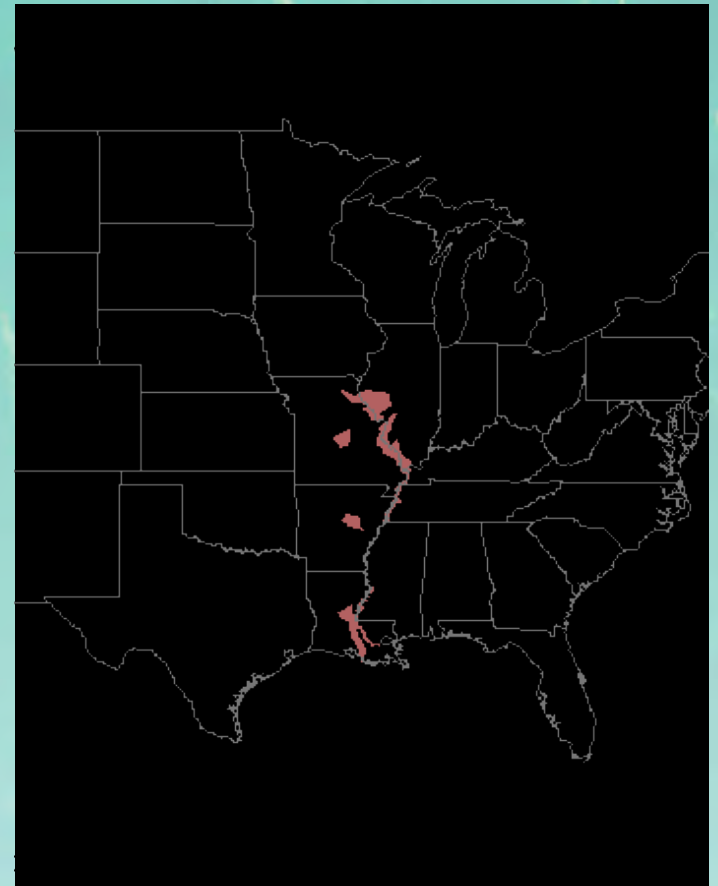
» MAA critical to future work





Moving New Threat: Black Carp

- Commercial fishers from TN to IL capturing more black carp
- 13 of 14 reports were diploid
- Sizes approaching maturity (> 70 lb)
- Several states allow use of diploids in aquaculture





Danny Brown

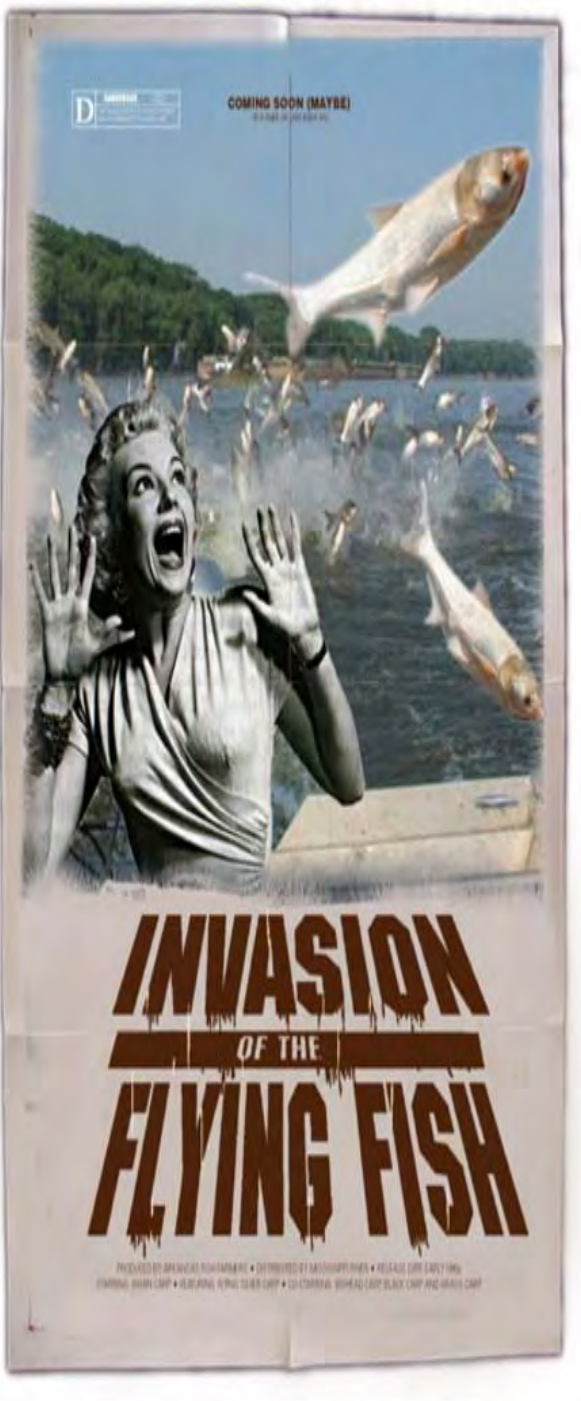


Photo
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Conclusions

- State leadership and authorities support, provide direction and bring resources to the table
- Federal partnerships are important to fulfill mission
- Need regional consistency in long term efforts
- Council of Great Lakes Governors' AIS Task force key to animated coordination
- Thanks to the directors and governors for united efforts in supporting this work



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Future Direction

How should we think about regional and national strategies and resources to continue the momentum?

- Is there a potential for a funding program similar to federal aid model?
- Must have ability to be flexible to adopt new approaches quickly, efficient
- Engagement models to inform and guide
- Effectiveness measures are important



**Are we doing all we can do to move
the needle on effectiveness for
invasive species management for our
future generations?**