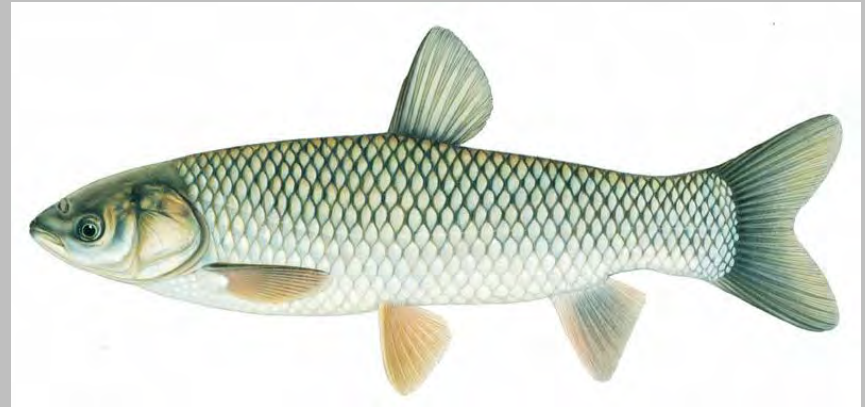


Ohio Grass Carp Response Strategy



**Midwest Association of Fish
& Wildlife Agencies
June 24, 2019**

*ODNR Division of Wildlife
John Navarro
AIS Program Administrator*

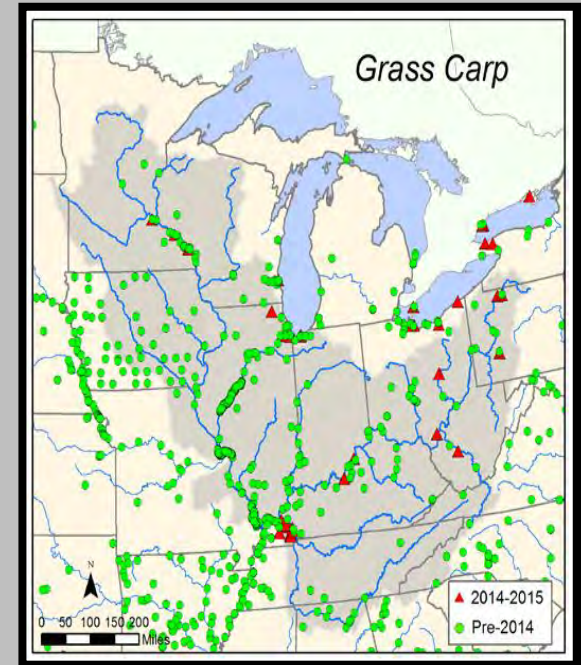


Invasive Carps






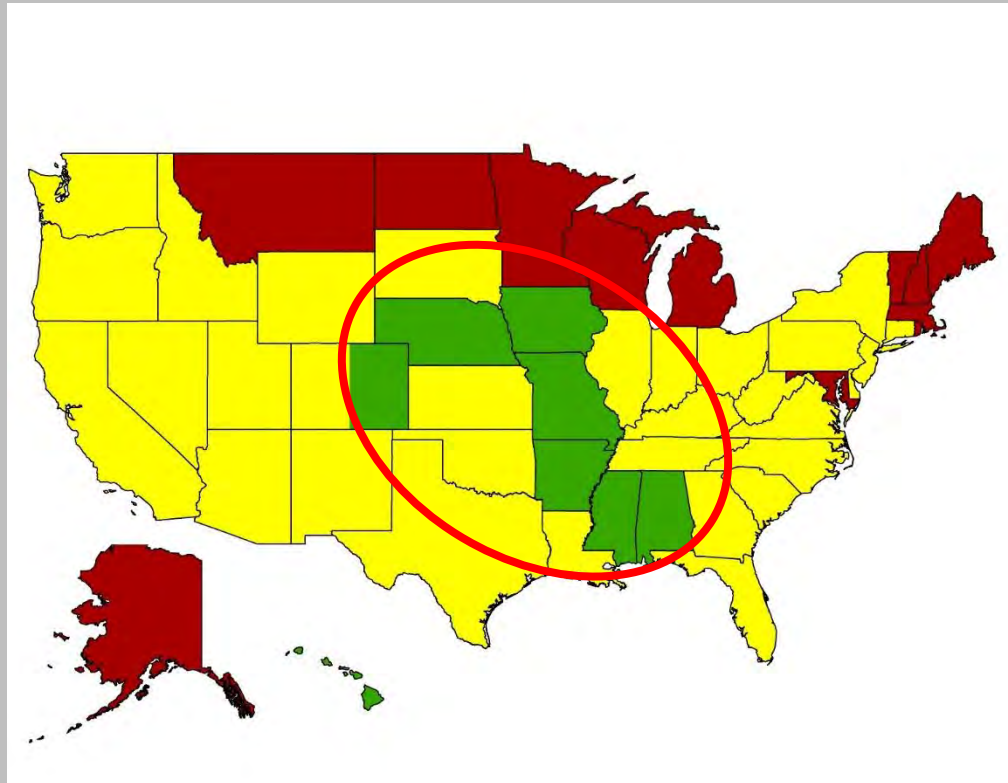
Grass Carp in the Great Lakes

- Brought to U.S. in 1963
- Sterile fish required in 1980's
- Detected in LE in 1980's
- Regulations/Enforcement
 1. State regulations
 2. Active enforcement
- Impact on habitat



Grass Carp Regulations in US

-  Grass carp prohibited
-  Diploid states
-  Triploid states

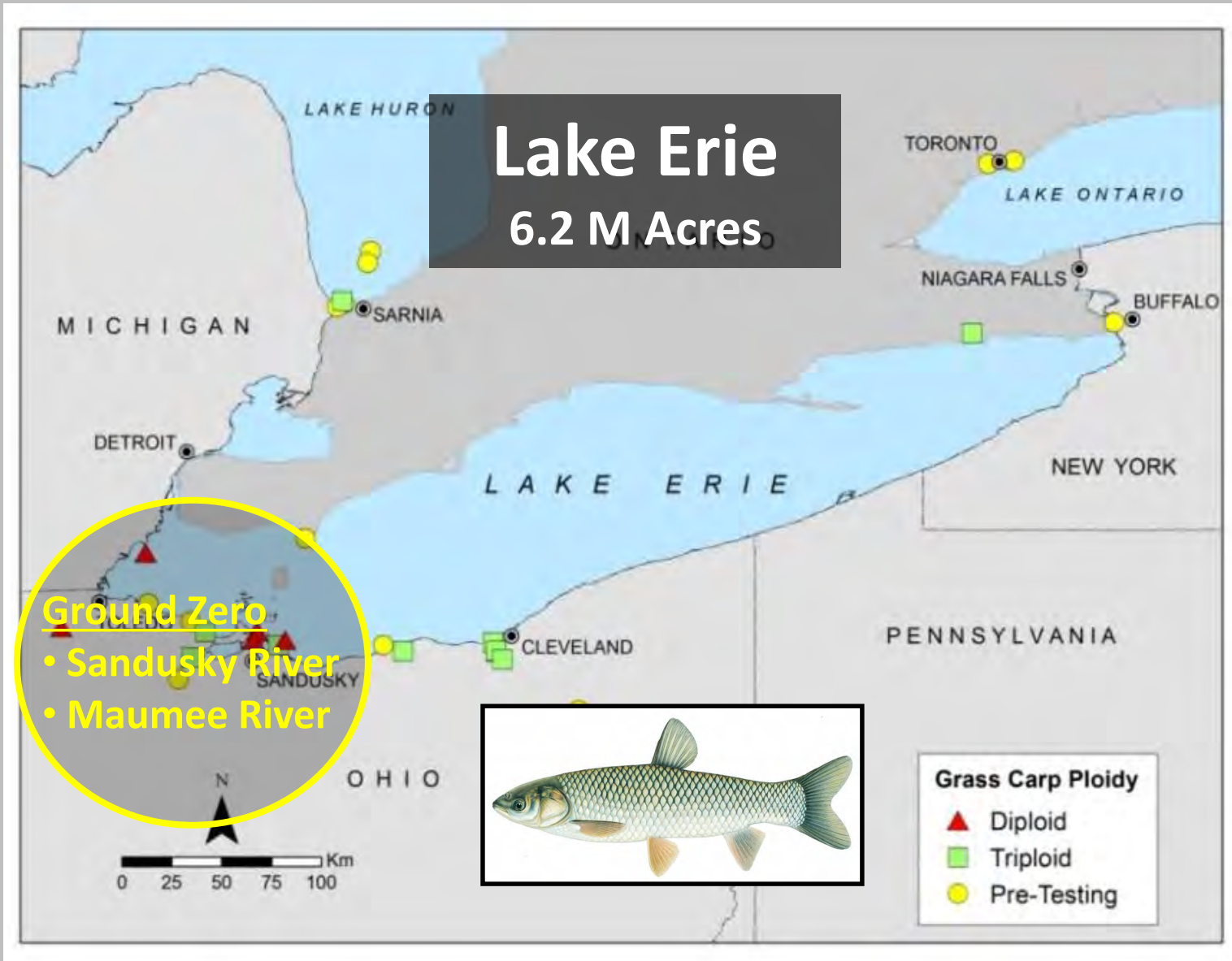


Our Line in the Sand

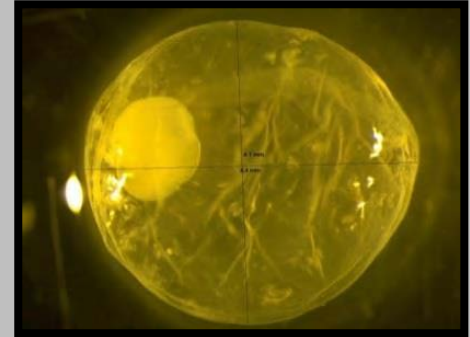


through MDNR efforts combined with Blair Fish Co. and a reimbursement plan into full effect in 2014 (S. Herbst, MDNR pers. comm.). This has resulted in a 90% reduction in Grass Carp captures in 2012, 2013, and 2014, respectively (ploidy not tested)

Western Basin of Lake Erie



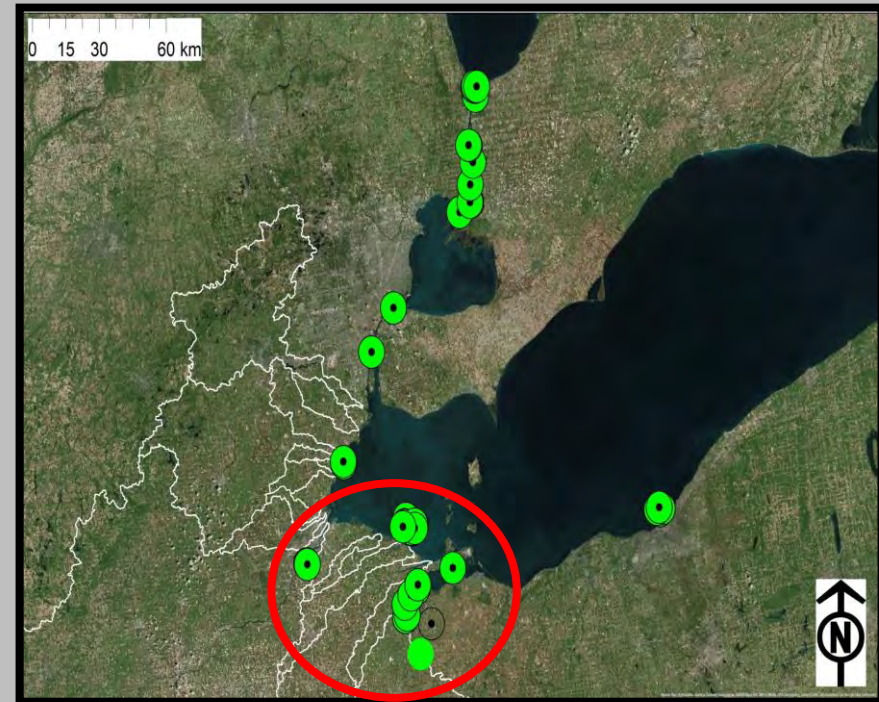
Addressing the Knowledge Gaps



- Ploidy analysis: fertile vs. sterile
- Commercial fishermen: removal
- Egg/Larvae sampling: early life history
- **Telemetry: seasonal movements**
- Modeling: spawning and hatching locations
- Vegetation mapping: food availability/impact

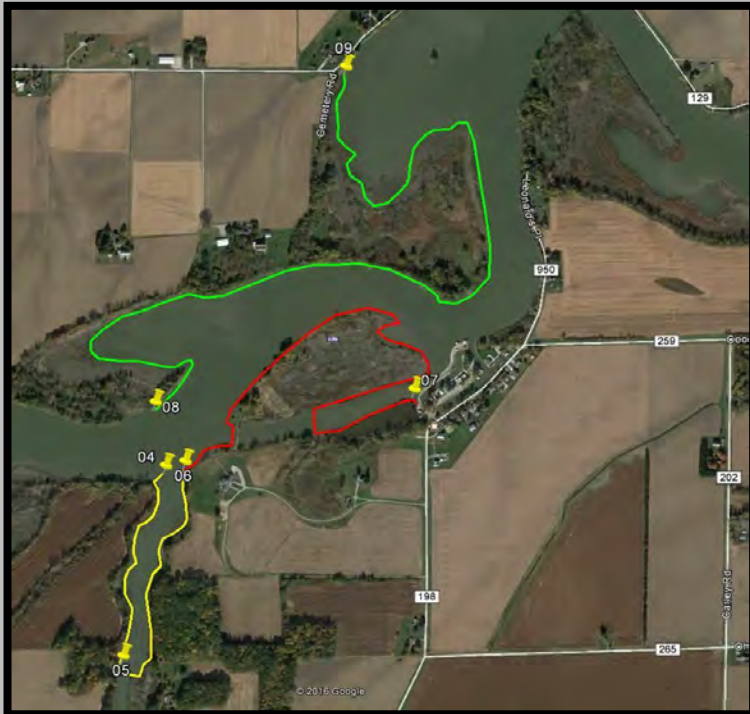
Grass Carp Detections

- Identify tributary use
- Aggregations
- Inter-basin movements



Planned Actions

Goal: Use a collaborative multi-agency approach in 2017, 2018, and 2019 to refine sampling methodologies



- Evaluate various gears
- Increase proficiency
- Work collaboratively
- Determine demographics.

Planning

- 1) State Management Plan
- 2) Rapid Response Plan
- 3) Asian Carp Tactical Plan
- 4) Asian Carp Response Guidelines
- 5) LE Grass Carp Response Strategy

"He who fails to plan is
planning to fail"

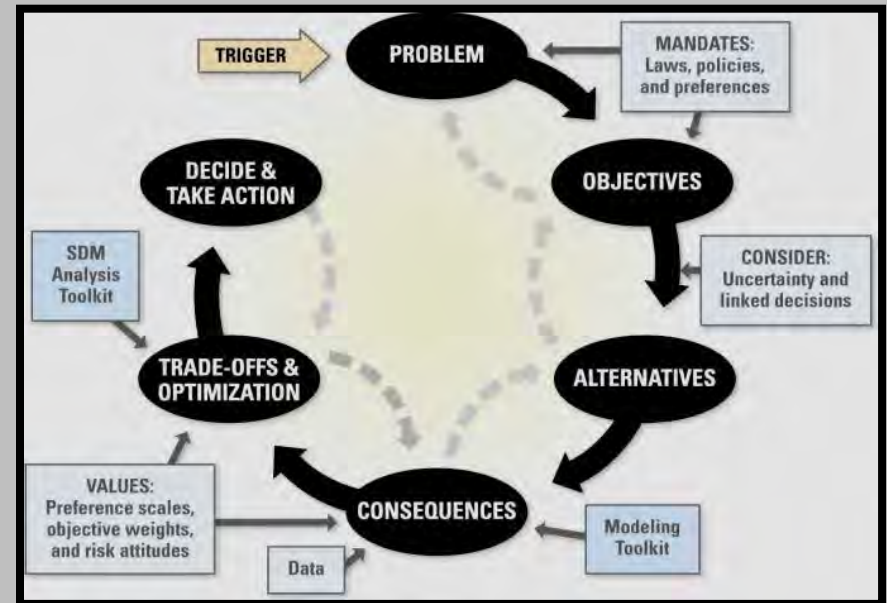
- Sir Winston Churchill



Structured Decision Making

Objective Way to Make Complex Decisions

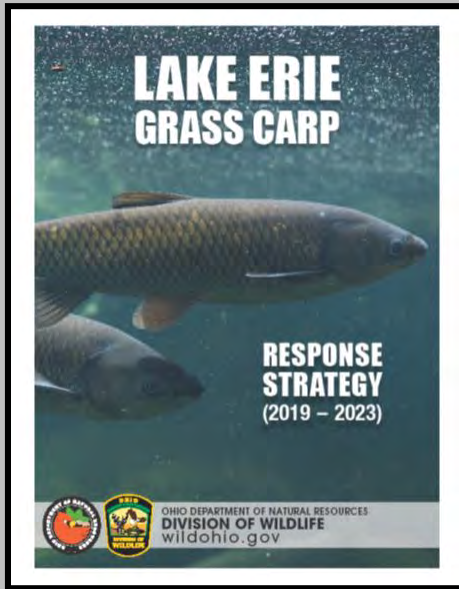
- Clear Objectives
- Explore Tradeoffs
- Deal with Uncertainty
- Transparent
- Integrate Public Values



Goals

Goal 1: Prevented Expansion Beyond Western Basin of Lake Erie

Goal 2: Prevent Population from reaching levels that compromise aquatic communities



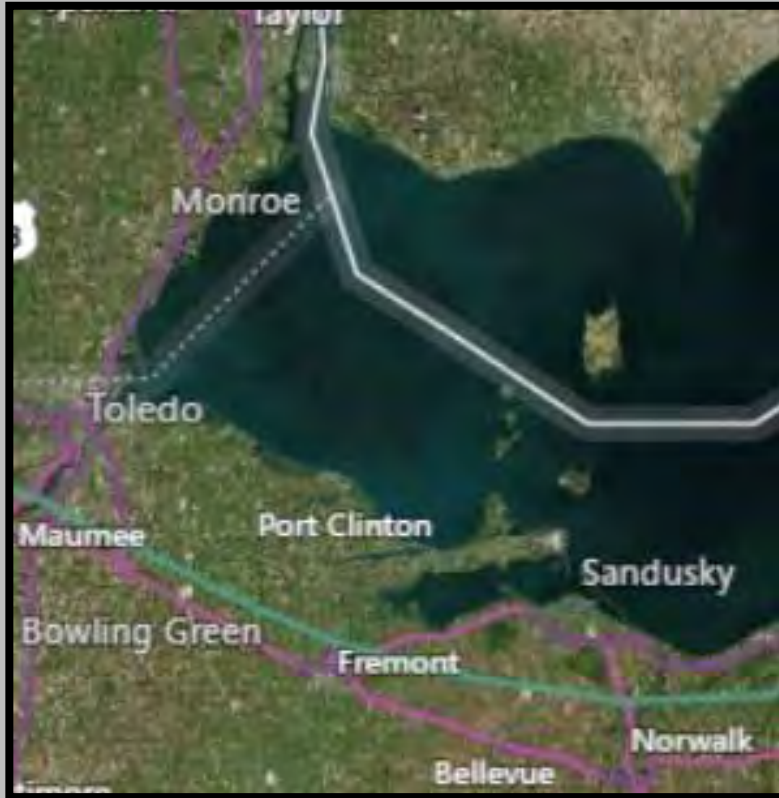
Lake Erie Grass Carp Adaptive Response Strategy
2019-2023



Photo source: J. Francis, Michigan Department of Natural Resources

Prevent grass carp from attaining densities that cause adverse impacts

Overarching Approach

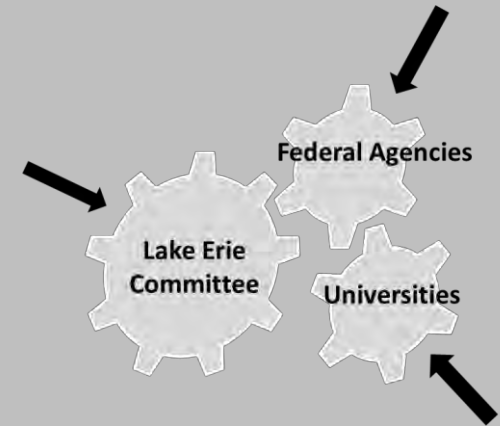


Integrate adaptive strategies to eradicate or limit populations to low densities in Western Lake Erie

- **Minimize risk**
- **Control costs**
- **Avoid collateral damage to ecosystems, stakeholders and agencies**

Moving Forward

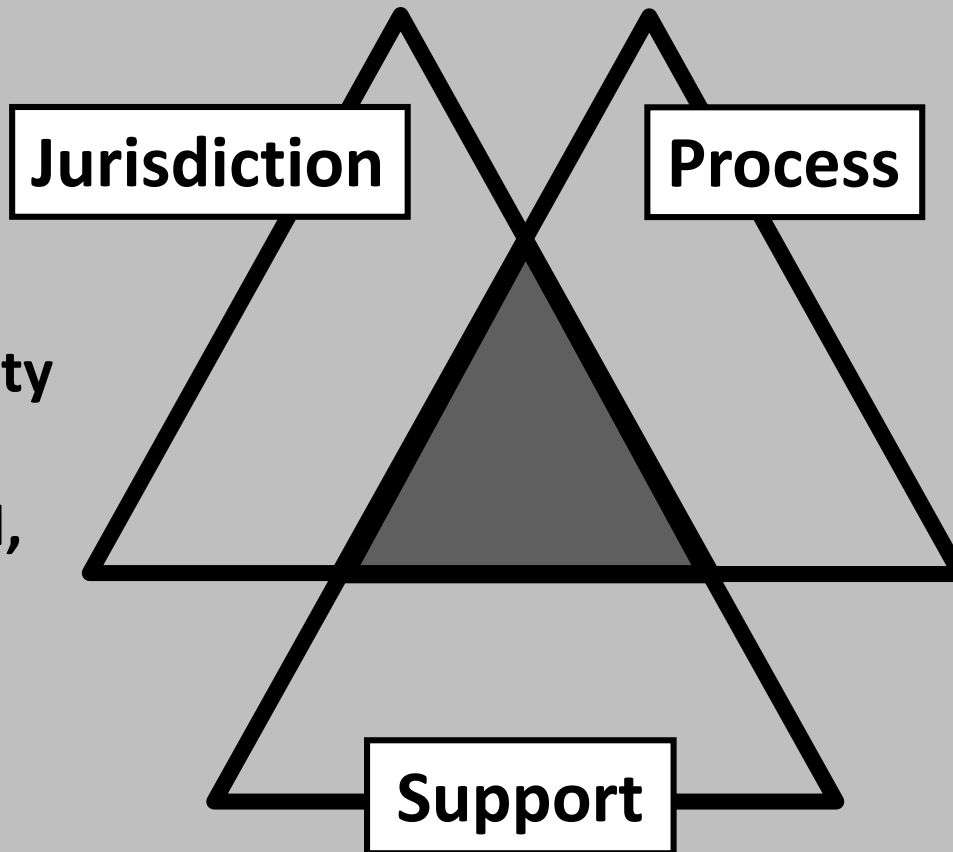
- Targeted Grass Carp Removal
- Real-time tracking key to success
- Barrier Feasibility Assessment



2019 Planned Action

- **Sandusky River Planned Event on June 4th – 6th**
- **Request by Quebec MFFP (Testing Capabilities)**
- **Invited Partners (41 people – 8 Agencies)**
- **Electrofishing, Trammel Nets, Dozer and Papier**
- **20 GC Captured (One Tagged – All Removed)**
- **Maumee R. Sampled on June 7th (1 Removed)**
- **Nets/Electrofishing Combination Worked Best**
- **Half were Triploid and half were Diploid**

Management Framework & Partnerships



**Responsibility
& Authority
(ON, OH, MI,
NY, PA)**

**Planning
& Coordination**



Research & Additional Resources

Research & Additional Resources

(ACRCC, USEPA, USFWS, USGS, USACE, universities)



Operation “Laundering”

Grass Carp Supply Chain



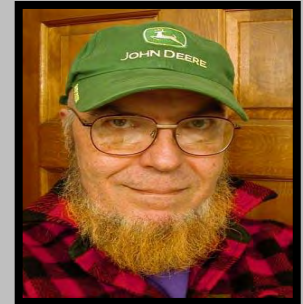
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Live Bait and Angling

Bait Shop Surveillance



Live Bait and Angling

Quick ID Guide for Bait

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF WILDLIFE

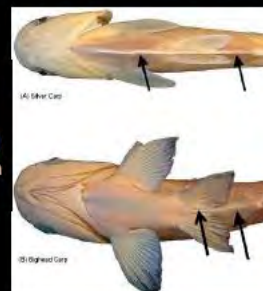
Quick ID Features for Baitfish

DEALER EDITION
PUB 5487-D



Silver Carp, Bighead Carp and Gizzard Shad

**Silver Carp
(Invasive)**
No scales on
keel.



**Gizzard Shad
(Native)**
Rounded snout,
conspicuous
dark spot
behind head,
keel with saw-
like scales



Keel with saw-like scales

John Lyons

Live Bait and Angling Outreach

WHY do WE hunt?



By Joe Martinez
Contributing Writer

After a nice evening out with the family, we took a short drive to a nearby lake. As we pulled into the parking lot, we saw a sign that read "No Hunting." We were disappointed, but we decided to go anyway. We had heard that the lake was a great place to hunt, and we were curious to see if it was true.

There it stood on the sign: "No Hunting." We were disappointed, but we decided to go anyway. We had heard that the lake was a great place to hunt, and we were curious to see if it was true.

People who do not hunt often ask us why we do, and the answer can sometimes be difficult. As hunters of two, there is just one right answer: we love it.

The reasons can vary as much as the individuals who hunt. But I believe that the overall answer is that hunting is a part of our culture, our heritage, and our way of life.

While most hunters today can hardly say that they need to hunt for sustenance, the fact remains that hunting has been a part of our lives since the beginning of time. It is a way of life that has shaped our culture and our way of thinking.

For sustenance and pleasure

DEALERS WANTED!

DOUBLE GRAVITY

RUGGED • DURABLE • MOUNTAIN READY
THEY'RE RACCOON WILDERNESS

Big Buck
Hours 350 (LBS.)

It's A Buck Mountain

Grasshopper
Hours 500 (LBS.)

Deer Mountain
Hours 1000 (LBS.)

8 FEEDER SIZES IN STOCK. IF WE DO

Ask About Our:
No Interest
Lowest Price &
Multi-Unit Discounts

407.620.1234

SO SATISFIED THEY ORDER

Jo R. or FL: Bought 2, Now Owns 19	Don P. or FL: Bought 1, Now Owns 15
Bobby B. or GA: Bought 2, Now Owns 8	Harold P. or FL: Bought 1, Now Owns 15
Charlie D. or LA: Bought 2, Now Owns 6	Kenneth P. or FL: Bought 1, Now Owns 15
Richard H. or OH: Bought 2, Now Owns 7	Roger P. or MS: Bought 2, Now Owns 10
Arthur L. or LA: Bought 1, Now Owns 5	Golden Ranch Farm or LA: Bought 20, Now Owns 20

TRASH UNUSED BAIT.



MINNOWS & WORMS STOP INVASIVE SPECIES

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LAMAR



TRASH UNUSED BAIT.

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Questions

