

Protecting the Great Lakes from Asian Carp: 2020 Asian Carp Action Plan



Mike Weimer
U.S. Fish and Wildlife Service
ACRCC Co-chair



ACRCC Partnership Overview

Mission:

Prevent the introduction and establishment of Asian carp in the Great Lakes

- Bi-national partnership: 28 U.S. and Canadian Federal, Tribal, State, and Provincial agencies/organizations
- 2010: Increasing threat to the Great Lakes from upstream advance of Asian carp from Mississippi River basin



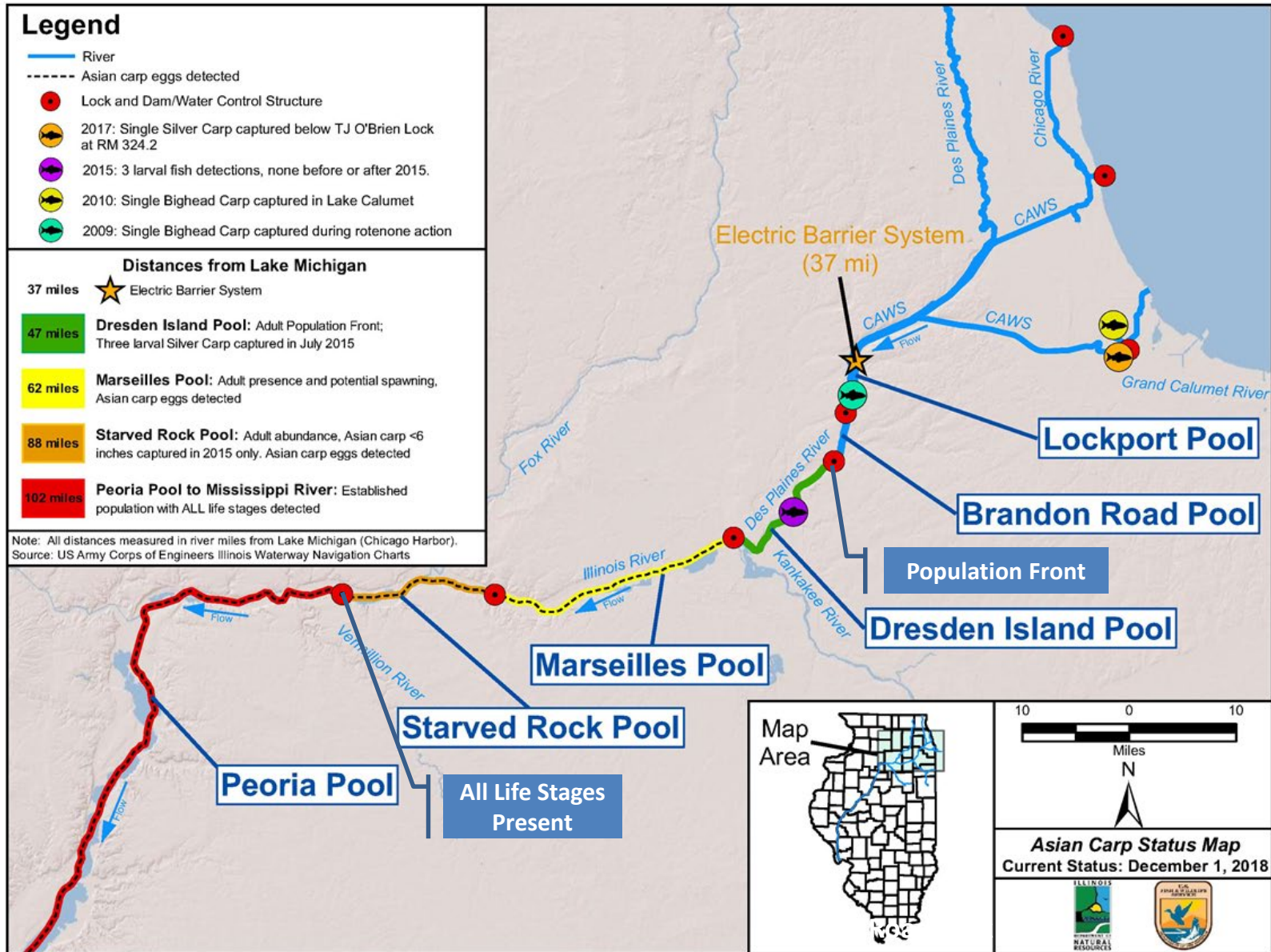
Legend

- River
- - - - - Asian carp eggs detected
- Lock and Dam/Water Control Structure
- 🐟 2017: Single Silver Carp captured below TJ O'Brien Lock at RM 324.2
- 🐟 2015: 3 larval fish detections, none before or after 2015.
- 🐟 2010: Single Bighead Carp captured in Lake Calumet
- 🐟 2009: Single Bighead Carp captured during rotenone action

Distances from Lake Michigan

- ★ 37 miles Electric Barrier System
- 47 miles **Dresden Island Pool:** Adult Population Front; Three larval Silver Carp captured in July 2015
- 62 miles **Marseilles Pool:** Adult presence and potential spawning, Asian carp eggs detected
- 88 miles **Starved Rock Pool:** Adult abundance, Asian carp <6 inches captured in 2015 only. Asian carp eggs detected
- 102 miles **Peoria Pool to Mississippi River:** Established population with ALL life stages detected

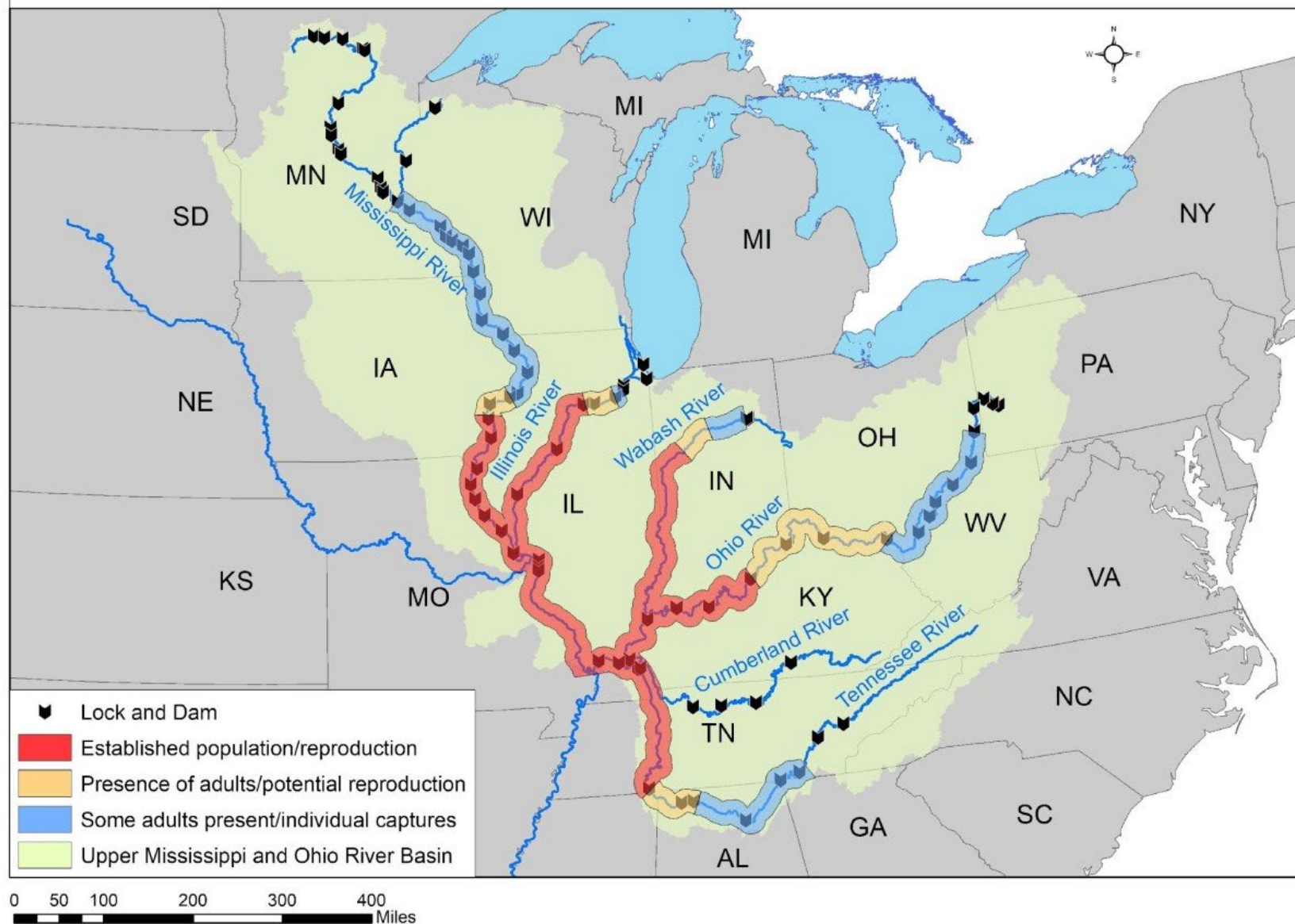
Note: All distances measured in river miles from Lake Michigan (Chicago Harbor).
Source: US Army Corps of Engineers Illinois Waterway Navigation Charts



Date Saved: 12/14/2018

Projection: Transverse Mercator Datum: North American 1983 Units: Foot US

Bighead Carp and Silver Carp: Characterization of Relative Abundance in the Upper Mississippi River, Ohio River, and Tennessee River Basin



2020 Partnership Planning

Asian Carp Action Plan

Complementary projects (54) to support:

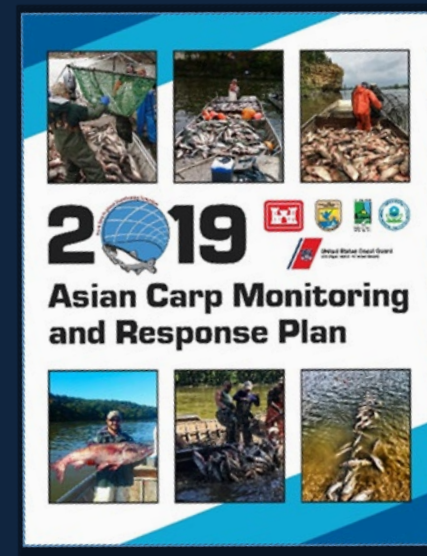
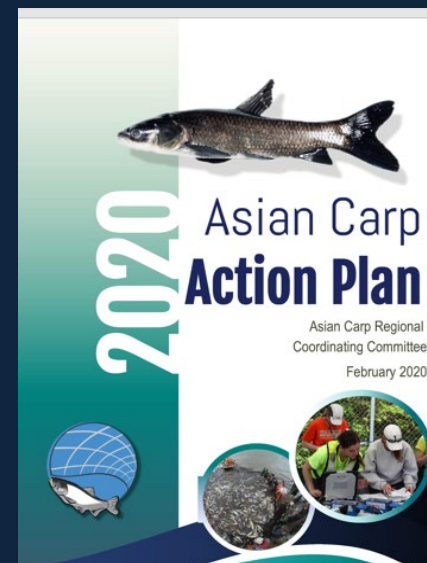
- Asian carp monitoring (IWW, Great Lakes)
- Strategic population reduction (targeted intensive harvest)
- Existing prevention efforts (e.g. Electric Dispersal Barrier)
- New technology development (e.g. deterrent barriers)
- GLMRIS Secondary Pathway closures
- Contingency (rapid) response
- Stakeholder communications

Monitoring and Response Plan

“Tactical plan” (what, where, when), focus on IWW/CAWS (includes Contingency Response)

FY20 Action Plan Funding:

- Great Lakes Restoration Initiative - \$21.0 M
- Agency base - \$24.8 M



2020 Key Initiatives

Asian Carp Monitoring / Early Detection

Great Lakes

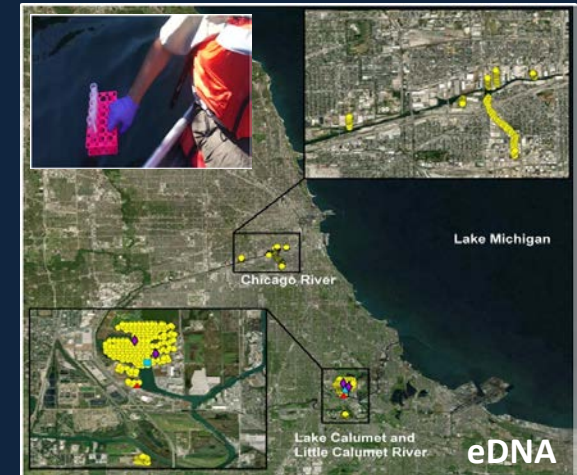
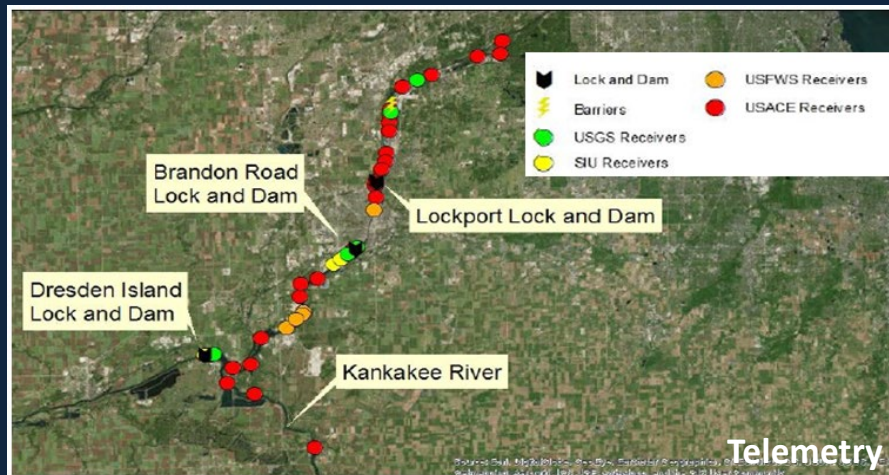
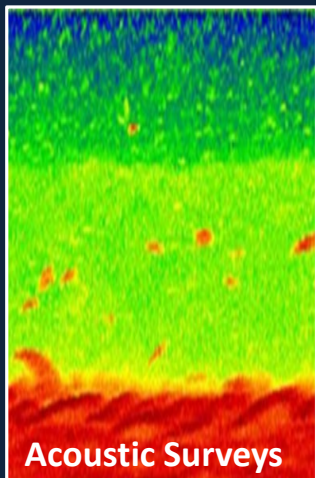
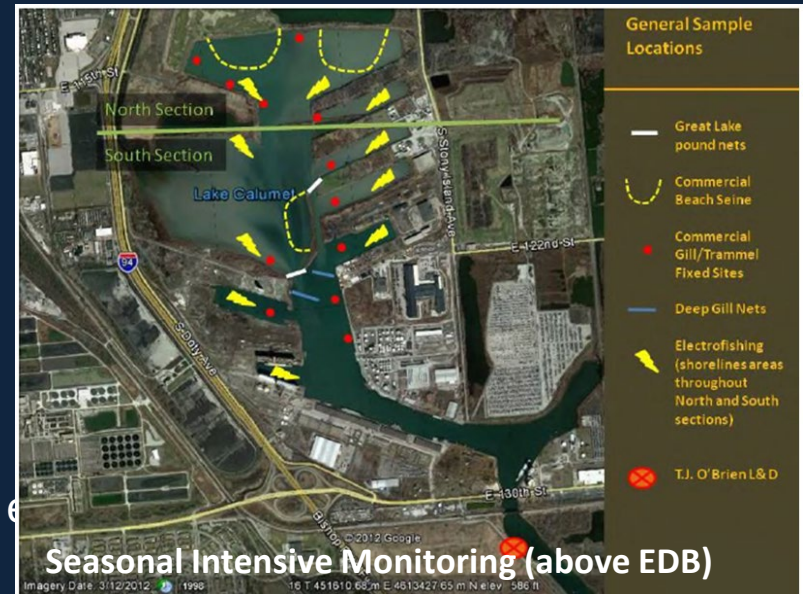
- AIS early detection (select sites)

Illinois Waterway/CAWS

- Seasonal Intensive Monitoring
- Fixed site monitoring

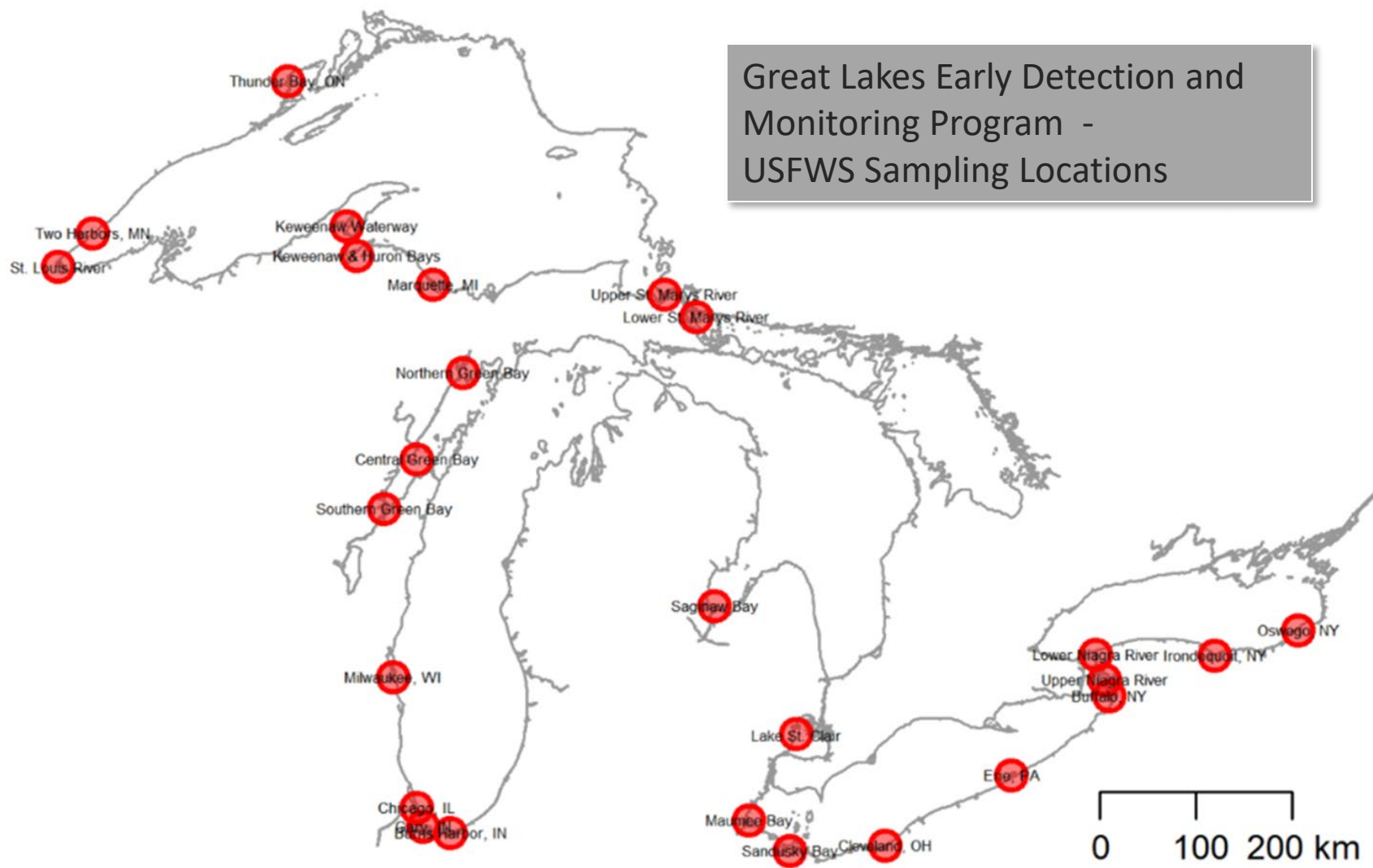
Multiple gears/strategies

- Standard fishery gears and eDNA
- Telemetry tracking and hydroacoustics



2020 Key Initiatives

Great Lakes Early Detection and
Monitoring Program -
USFWS Sampling Locations



2020 Key Initiatives

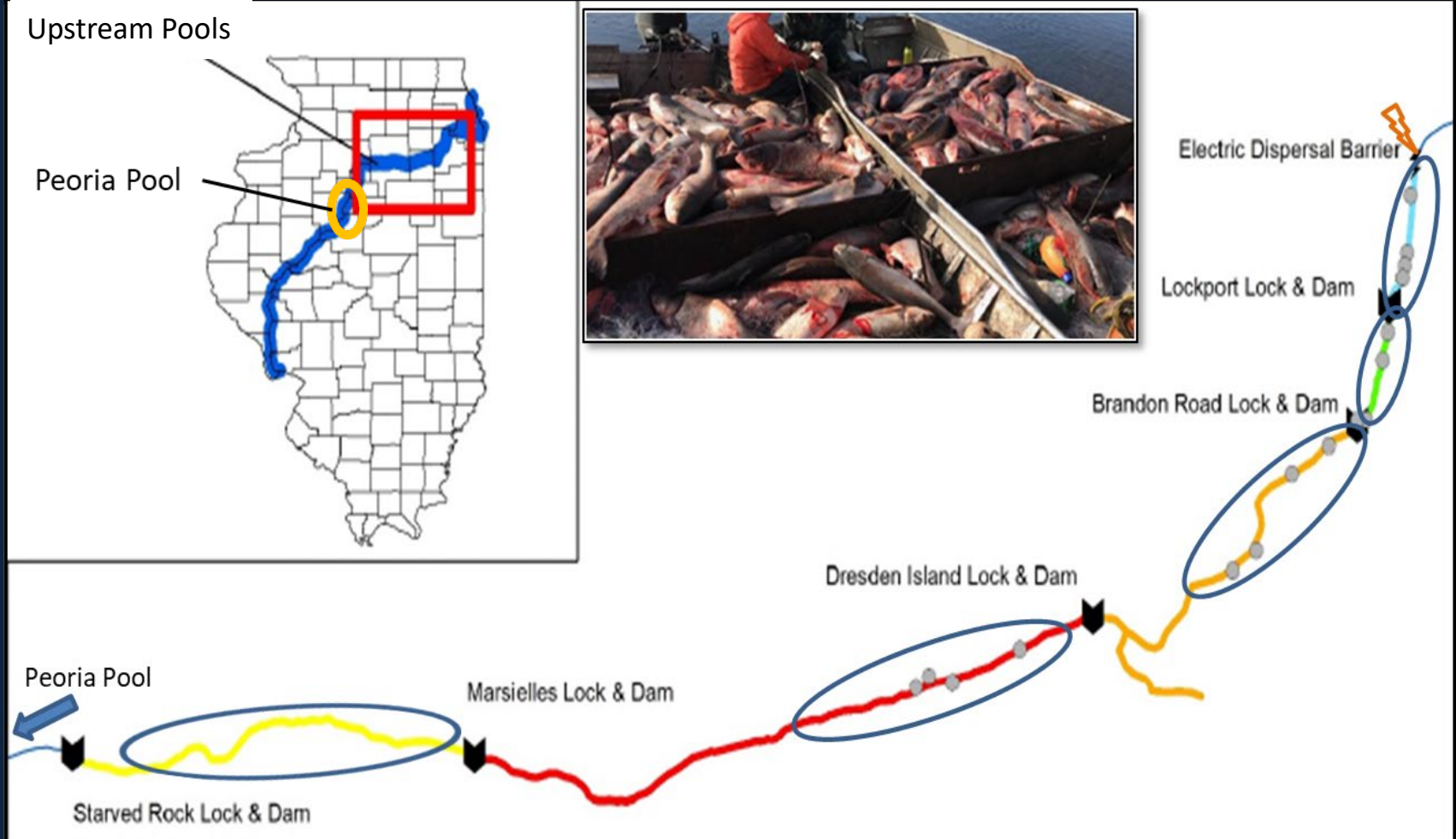
Asian Carp Population Reduction

Targeted intensive harvest in the IWW

- Removal of adult Asian carp from upstream pools in the IWW (below EDB)
- Enhanced commercial harvest targeting Asian carp in the Peoria Pool
- Informed by monitoring and modelling
- Reduces risk of upstream expansion and fish challenging the EDB



Targeted Removal in the Upper IWW – 2020



- Contract Commercial Fishing >> From EDB (~37 miles from Lake Michigan) downstream to Starved Rock L/D (Lockport, Brandon Road, Dresden, Marseilles, and Starved Rock Pools)
- Enhanced Commercial Fishing >> Peoria Pool (~ 103 miles from Lake Michigan)

2020 Key Initiatives

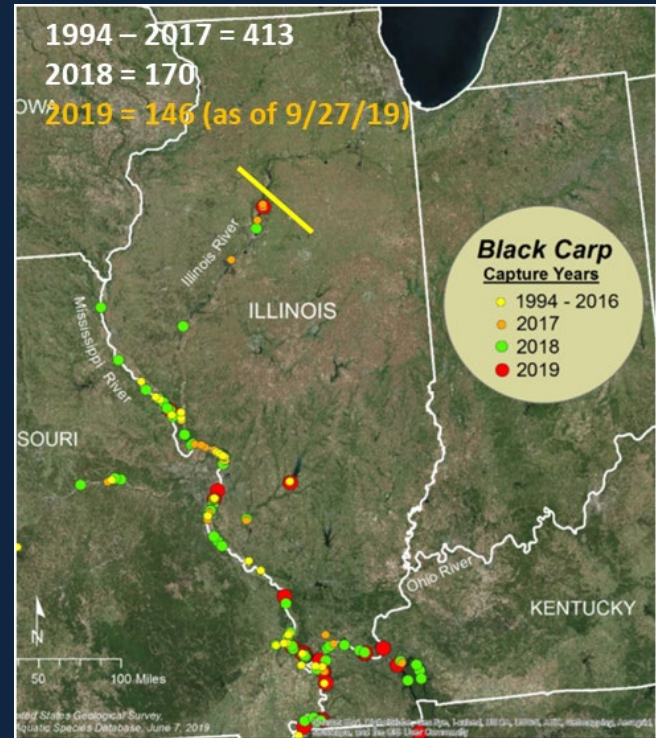
Emerging Threats – Black Carp

- New genetic markers
- Continued use of bounty program
- Diet and habitat/telemetry
- Evaluation of potential controls



Emerging Threats – Grass Carp

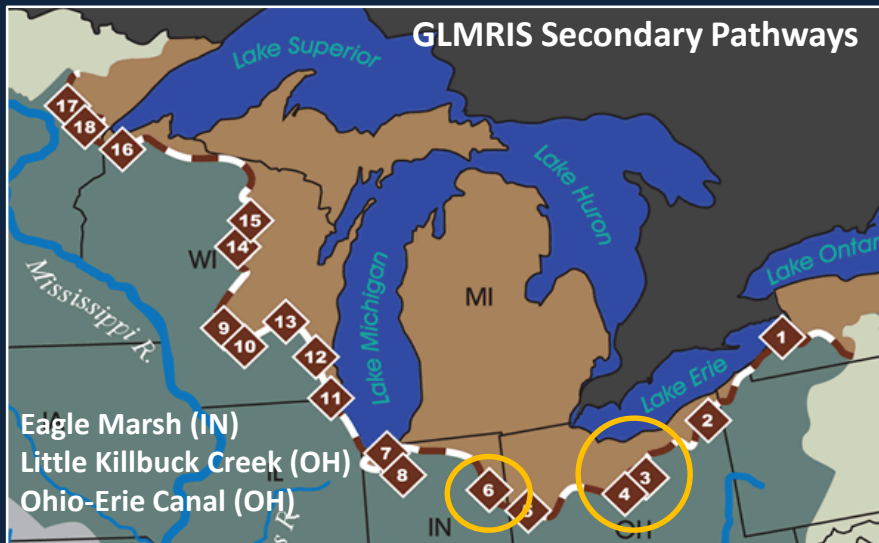
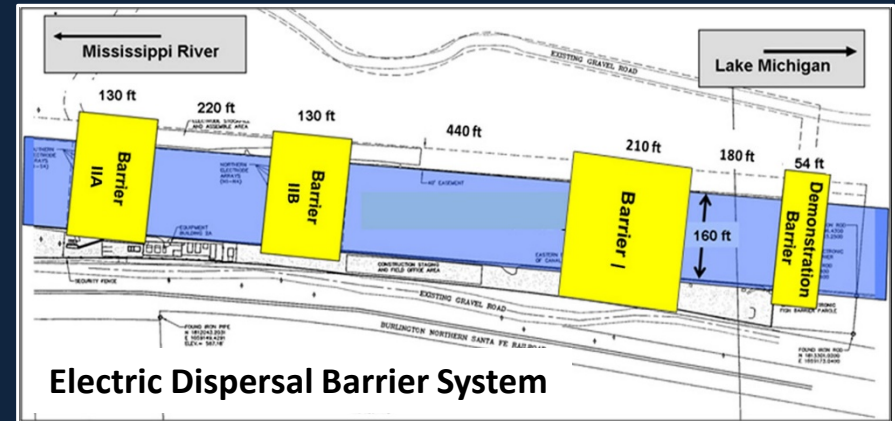
- Support for Great Lakes State-led detection/control (Lake Erie focus)



2020 Key Initiatives

Prevention: Barriers and Pathway Mitigation

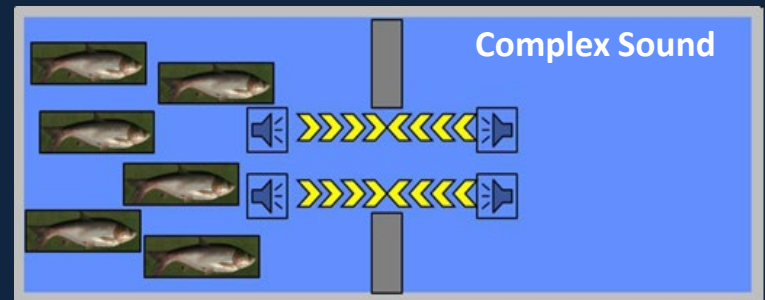
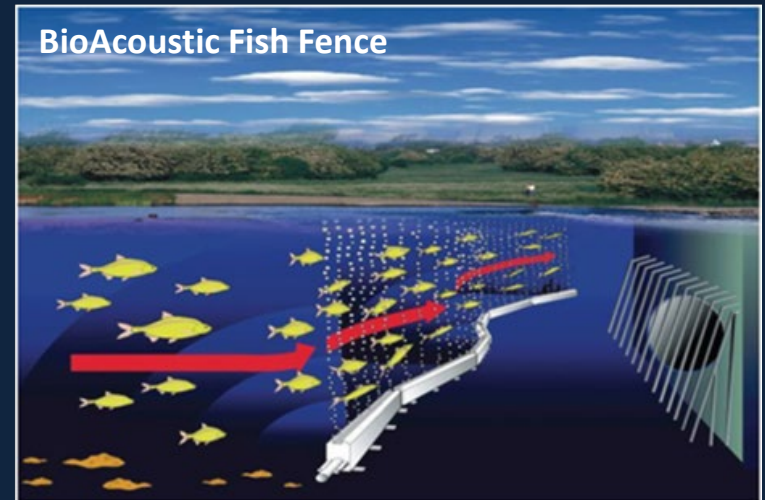
- Electric Dispersal Barrier System
- GLMRIS Secondary Pathways
 - ✓ Eagle Marsh (IN) – 2017
 - ✓ Ohio-Erie Canal (OH) - 2020
 - Little Killbuck Creek (OH)
- Barge Entrainment Mitigation
 - Sill Bubble Curtain evaluation



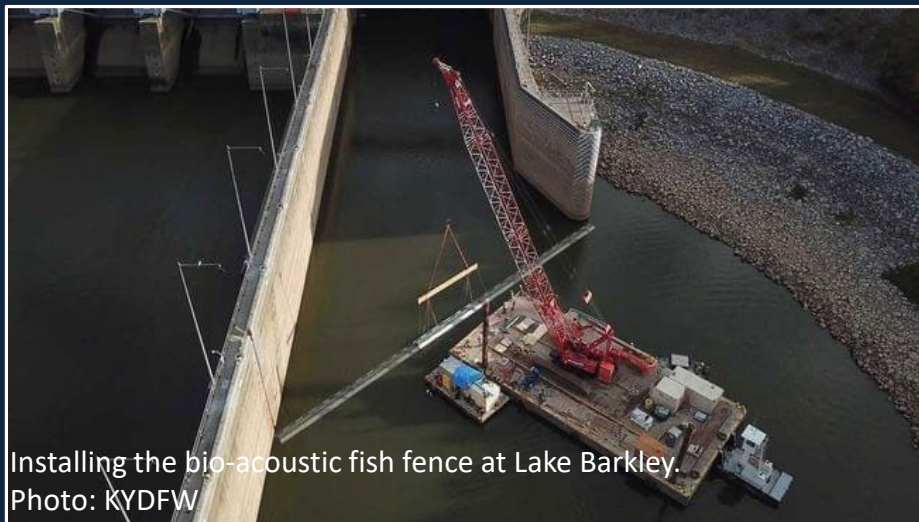
2020 Key Initiatives

Prevention: New Deterrent Technologies

- Development/Evaluation of Asian Carp Barriers and Deterrents
 - Deployable at lock structures - “pinch point” locations of potential Asian carp passage
 - CO2 – Kaukauna Lock #2, Fox River (WI)
 - BioAcoustic Fish Fence – Barkley Dam (KY)
 - Complex Sound – Lock and Dam 19 (IA/IL)



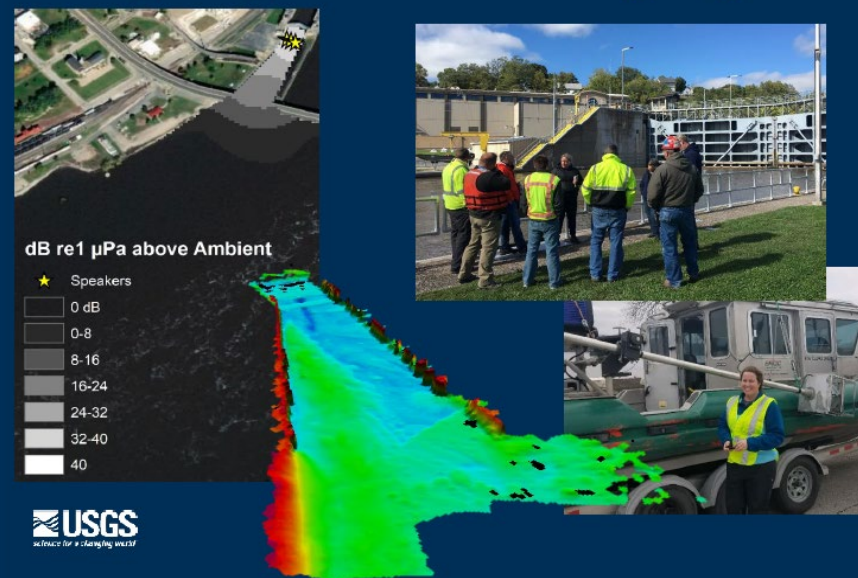
Barkley Dam



Lock and Dam 19



Bathymetry and Acoustic Mapping



2020 Challenges

[Asian Carp Problem](#) [Newsroom](#) [Who We Are](#) [Resource Materials](#)

A message from the co-chairs of the ACRCC

May 5, 2020

Dear Reader,

As the COVID-19 emergency continues, the health and safety of ACRCC partners and the citizens we serve remains our highest priority. The member agencies of the ACRCC continue to follow the most current guidance from the Center for Disease Control and public health authorities at the federal, tribal, provincial, state and local levels.

We remain fully committed to our mission of preventing the movement of Asian carp into the Great Lakes. ACRCC partners continue to work together to assess our ability to safely conduct monitoring and control actions across the Great Lakes region. We want to assure you that the defenses and response protocols we have built throughout the past decade continue to be operational.

During the current COVID-19 emergency, the U.S. Army Corps of Engineers will continue to operate the electric dispersal barriers in Romeoville, Illinois within the constraints of maintaining a safe working environment. Scheduled maintenance at Barrier IIA is planned for May 4 through May 11. Once Barrier IIA maintenance is complete, the Demonstration Barrier will be turned off for minor maintenance on May 11 and re-energized on May 13. These actions will be sequenced to ensure that at least two barriers are active at all times. These maintenance actions are being completed as soon as possible because fish activity is expected to increase as water temperatures increase with warming weather.

The Illinois Department of Natural Resources has also developed modified operating protocols in accordance with Illinois Department of Public Health and the Center for Disease Control guidelines to enable priority Asian carp work during the month of May. Beginning on May 5, limited contracted fishing operations for Asian carp will resume. These efforts will (1) inform the ACRCC of Asian carp population densities and occurrences in each of the navigation pools below the electric dispersal barriers and (2) continue harvest efforts to further reduce Asian carp population numbers in the Dresden Island and Marseilles pools of the Illinois Waterway. Should a situation arise in any areas of the waterway, the Illinois Department of Natural Resources, in cooperation with the ACRCC, have response plans in place and will be ready to act accordingly.



For more information, please visit www.AsianCarp.us

BRANDON ROAD PROJECT

Date: October 22, 2020



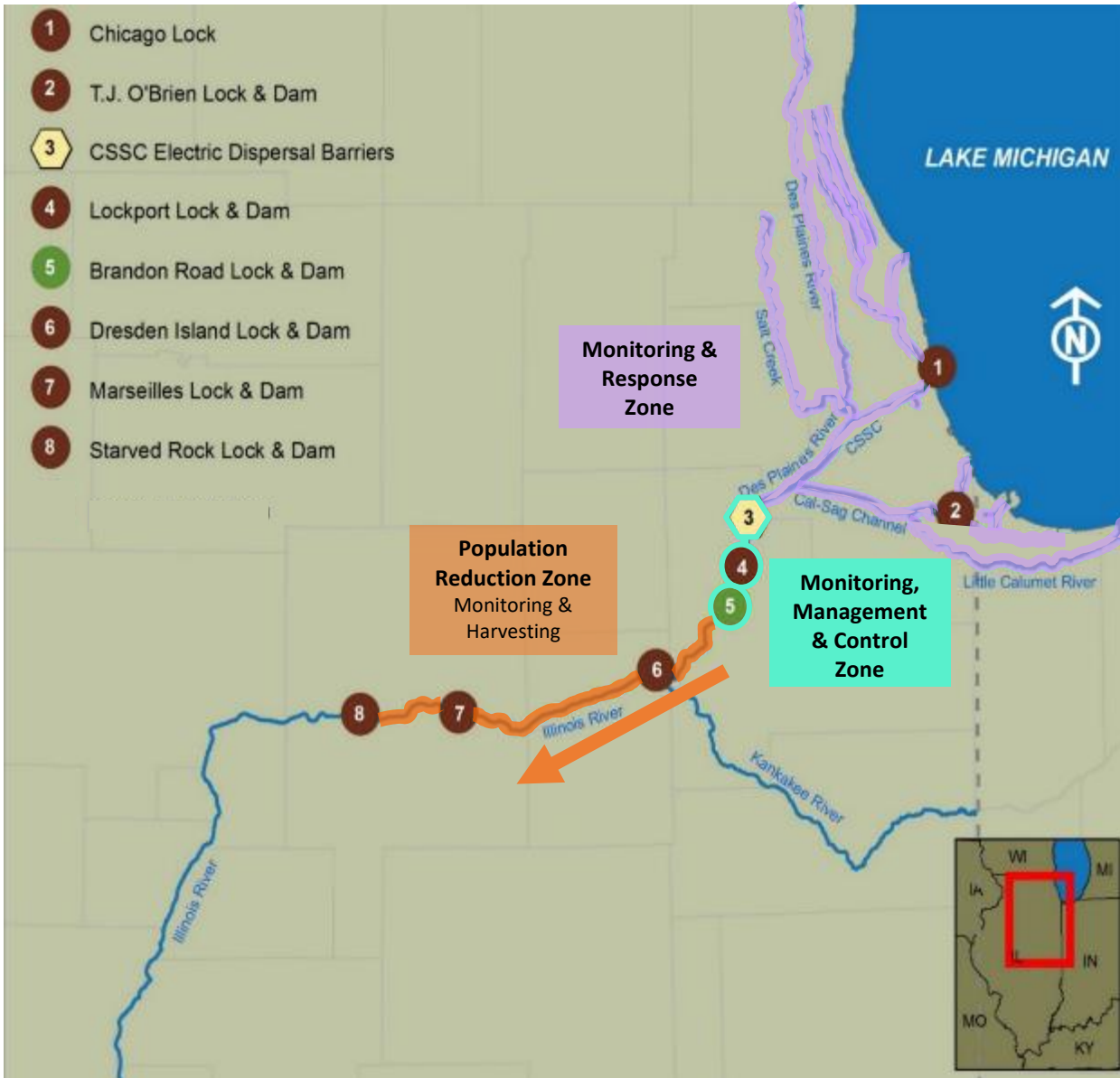
US Army Corps
of Engineers®



BRANDON ROAD OVERVIEW

FEDERAL RISK MANAGEMENT PLAN

2



- The Chief's Report recommended a National Ecosystem Restoration (NER) Plan which is a federal risk management plan including a layered system of structural controls and non-structural measures.
- The NER plan includes managing the waterway below Brandon Road as 'population reduction zone' where monitoring and overfishing would occur and be implemented primarily by other federal agencies including USFWS & USGS.
- The Corps structural plan includes a new control point at Brandon Road Lock and Dam in addition to the control point that is already provided at the existing electric dispersal barrier.
- The structural plan includes acoustic fish deterrent, bubble curtain, engineered channel, electric barrier, and flushing lock.
- Total Estimated cost is \$830,784,000 cost shared 65/35, OMRR&R is cost shared 80/20 Fed/Non-fed.



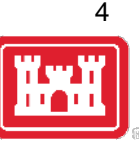
BRANDON ROAD STUDY RECOMMENDED STRUCTURAL PLAN

3





BRANDON ROAD CURRENT STATUS



- Design can begin when the Design Agreement is signed and funds received.
- The Corps is working with state of Illinois to negotiate the design agreement.
- Illinois is coordinating an Intergovernmental Agreement with Michigan to cost share and collaborate the non-federal portion of the design prior to construction.
- Potential to sign a cost share agreement with Illinois in the 1st Qtr. of FY21 pending completion of an Intergovernmental Agreement with Michigan.
- Awaiting approval of Accelerated Funding which would allow the use of non-federal funds prior to receipt of federal funds.
- Anticipate that federal funding for design could come in the FY21 Workplan.
- Design is estimated to take three to four years to complete due to the conceptual nature of the current design, subject to the availability of funds.
- HTRW, physical model, design of multiple conceptual components and their interaction critical at the beginning of design.
- Construction is expected to take 6 to 8 years to complete. Timeline for structural implementation will be further developed in the design phase.
- WRDA Bill development, House and Senate have draft mark-ups for Brandon Road including cost share changes.



NEXT STEPS



- Execute design agreement with non-federal sponsor.
- Upon receipt of funds begin design.
- Implement non-structural measures upon receipt of appropriations.
- Continue collaboration forums during PED phase.

Illinois Local Sponsor Update – October 2020





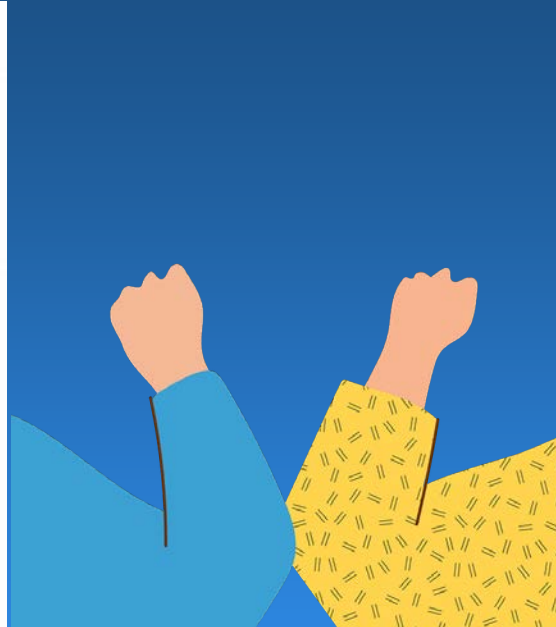
State of Illinois & IDNR Goals as Non-Federal Sponsor:

- * Public Safety
- * AIS Risk Reduction
- * Sound Floodplain Management
- * Avoid / Minimize Ecosystem Impacts
- * Sound Public Water Management
- * Maintain / Improve Navigation
- * Minimize Taxpayer Costs
- * Maximize Taxpayer Benefits

Project Partners



\$2.5 Million



← \$8 Million

AGREEMENTS:

- **INTERGOVERNMENTAL** – IL & MI
- **ESCROW** – Illinois & Michigan
- **PRECONSTRUCTION ENGINEERING & DESIGN (PED)** - Non Federal Sponsor and US Army Corps of Engineers
- **ACCELERATED FUNDS PROVISION**



Next - Brandon Road Team Project Management Plan:

- Yet to be finalized
- Sets schedules
- Non Federal Sponsor In-kind Services (perhaps in Coordination with Others)
- Public Water Law
- Cost Estimate Updates

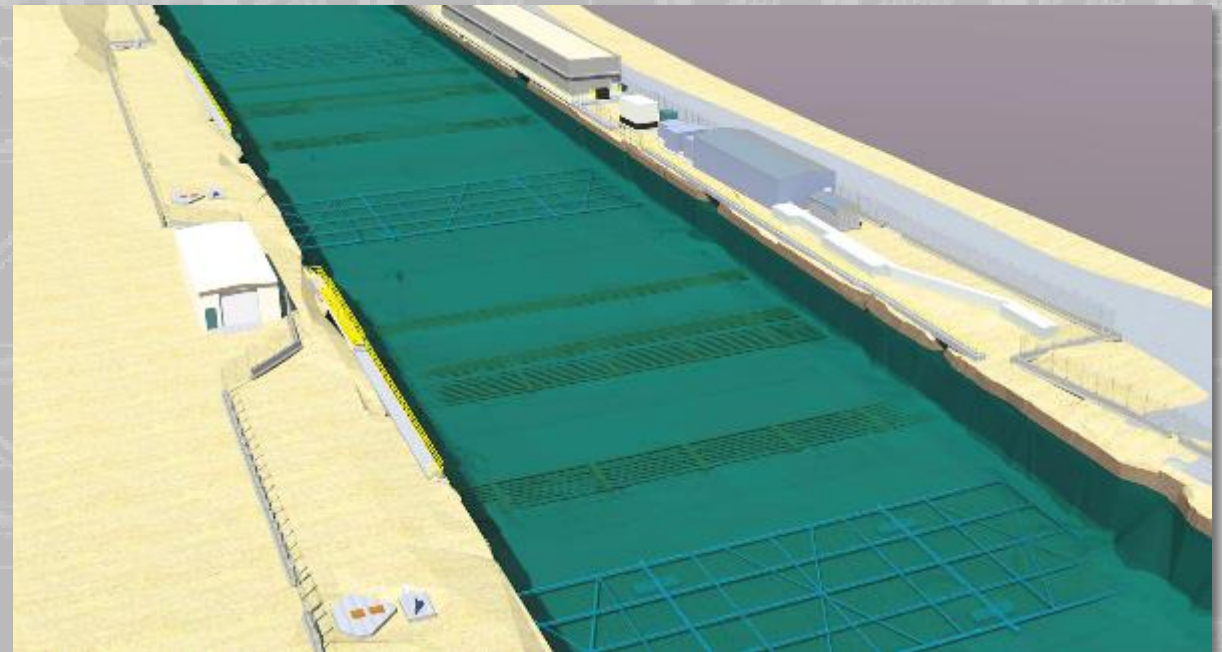


Thank you



CHICAGO SANITARY & SHIP CANAL DISPERSAL BARRIERS UPDATE

Chuck Shea
Project Manager
22 October 2020

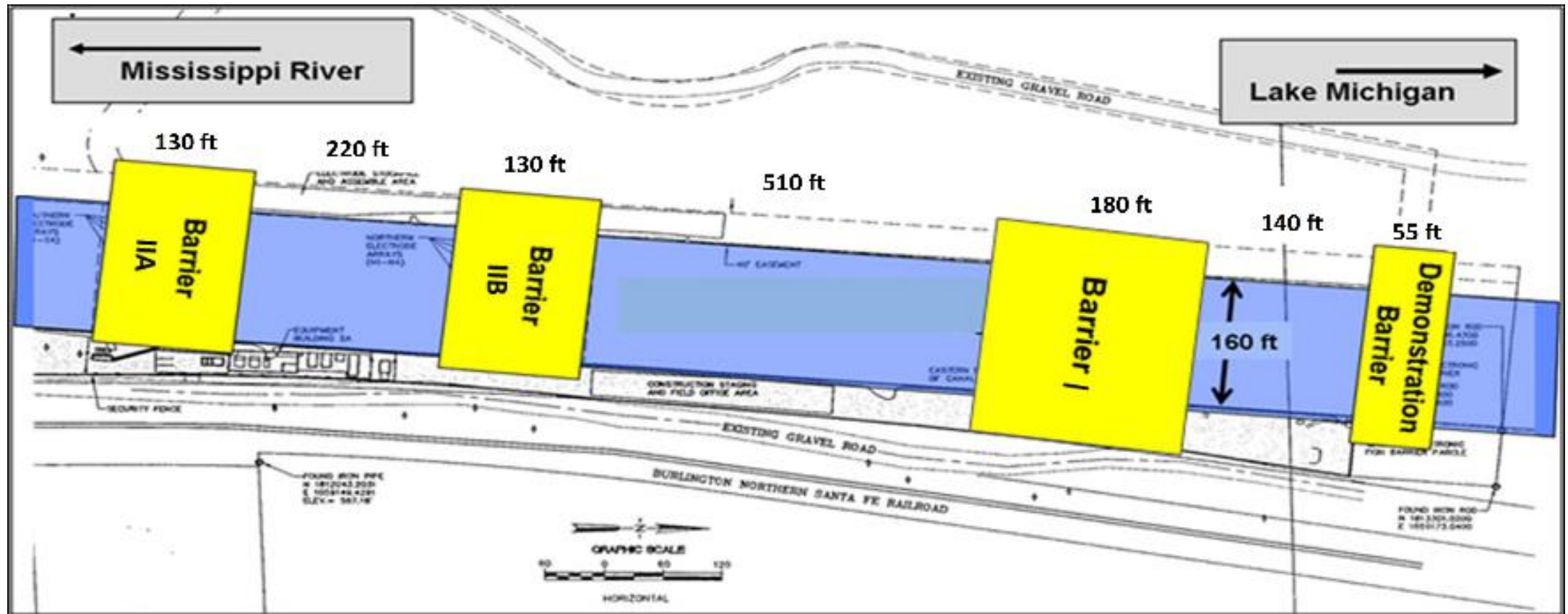


US Army Corps
of Engineers®



BARRIERS OPERATION & MAINTENANCE

- IIA, IIB, Demo Barriers all currently operational
- Continuous power to water from at least one barrier has been maintained at all times



PERMANENT BARRIER I

- Capacity for two high power arrays; only one (north) funded
- Demo Barrier remains as low power array
- Increased power capacity – up to ~3X Greater than A or B
- Schedule
 - Oct 2020 – safety testing
 - 2021 - activation following review of safety testing results

