2026 INVASIVE CARP

Monitoring and Response Plan for the Illinois Waterway

U.S. FISH & WILDLIFE SERVICE

ILLINOIS DEPARTMENT OF NATURAL RESOURCES

USGS science for a changing world

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Acronym List

Acronym	Definition
AIS	Aquatic Invasive Species
Cal-Sag	Calumet-Saganashkee
CarpDAT	Catalog for invasive carp data
CAWS	Chicago Area Waterway System
CRP	Contingency Response Plan
CSSC	Chicago Sanitary and Ship Canal
DNR	Department of Natural Resources
EDBS	Electric Dispersal Barrier System
eDNA	Environmental Deoxyribonucleic Acid
FWCO	Fish and Wildlife Conservation Office
FY	Fiscal Year
GLFC	Great Lakes Fishery Commission
ICRCC	Invasive Carp Regional Coordinating Committee
ILDNR	Illinois Department of Natural Resources
INHS	Illinois Natural History Survey
ISR	Interim Status Report
IWW	Illinois Waterway
LTRM	Long-Term Response Monitoring
MAM	Multi-Agency Monitoring
MRP	Monitoring Response Plan
MRWG	Monitoring and Response Work Group
QA/QC	Quality Assurance/Quality Control
QAPP	Quality Assurance Project Plan
RAFT	Riverine Acoustic Fish Tracking
SCAA	Statistical Catch-at-Age
SEICarP	Spatially Explicit Invasive Carp Population
SIM	Seasonal Intensive Monitoring
SIU	Southern Illinois University
U of I	University of Illinois
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
U.S.	United States
USGS	U.S. Geological Survey

EXECUTIVE SUMMARY

> *Note: In this document, "invasive carp" refers to four species of carp:* Bighead Carp, Silver Carp, Grass Carp, and Black Carp.

This 2026 Invasive Carp Monitoring Response Plan (MRP) presents up-to-date information on this year's set of 27 large-scale projects dedicated to preventing invasive carp from establishing populations in the Chicago Area Waterway System (CAWS) and Lake Michigan. The MRP is developed by the Monitoring and Response Work Group (MRWG), co-chaired by the Illinois Department of Natural Resources and the Great Lakes Fishery Commission. This plan describes how these projects will be coordinated and implemented through the nine work groups established under the MRWG. The current work groups include the following: Contingency Response, Detection, Monitoring, Hydroacoustics, Telemetry, Removal, Modeling, Behavioral Deterrents, and Black Carp.

The MRWG has been implementing invasive carp activities in the Illinois Waterway (IWW)—including both the Illinois River and the CAWS—since 2010. Through the efforts of the MRWG member agencies during this time, the presence and reproductive fronts of invasive Silver Carp and Bighead Carp have not advanced.

This year's set of projects fulfills three main objectives, consistent with the MRWG Strategic Vision: 2023 – 2027:

- **Detection:** Determine the distribution and abundance of invasive carp to guide response and control actions.
- **Management and Control:** Prevent the upstream passage of invasive carp toward Lake Michigan via use of barriers, mass removal, and understanding best methods for preventing passage.
- **Response:** Establish comprehensive procedures for responding to changes in invasive carp population status, test these procedures through exercises, and implement if necessary.

In 2026, MRWG member agencies will continue actions designed to prevent the upstream movement of invasive carp and, secondarily, other aquatic nuisance species into the Great Lakes from the IWW, including spring and fall seasonal intensive monitoring within the CAWS, environmental deoxyribonucleic acid sampling above the electric dispersal barrier, assessments of reproduction within the IWW, strategic removal through contract and commercial fishing, as well as population monitoring, modeling, and telemetry work. These non-structural measures will complement the Brandon Road Interbasin Project as construction continues since the Project Partnership Agreement between the U.S. Army Corps of Engineers and the states of Illinois and Michigan was signed on July 1, 2024.

The activities in this MRP build on considerable work completed in previous years. A detailed accounting of the results and findings of previously completed work can be found at Action Plans and Reports | Invasive Carp Regional Coordinating Committee.

INTRODUCTION AND STRATEGY

This 2026 Invasive Carp MRP presents up-to-date information on this year's set of 27 large-scale projects dedicated to preventing invasive carp from establishing populations in the CAWS and Lake Michigan. The MRP is developed by the MRWG, co-chaired by the ILDNR and the GLFC. This plan describes how these projects will be coordinated and implemented through the nine workgroups established under the MRWG. The current work groups include the following: Contingency Response, Detection, Monitoring, Hydroacoustics, Telemetry, Removal, Modeling, Behavioral Deterrents, and Black Carp.

Note: In this document, "invasive carp" refers to four species of carp: Bighead Carp, Silver Carp, Grass Carp, and Black Carp.

The MRWG has implemented invasive carp activities in the IWW—including both the Illinois River and the CAWS—since 2010. The work of the MRWG is focused on Bighead Carp and Silver Carp in the IWW. Through the efforts of the MRWG member agencies utilizing a variety of gear types, including electrofishing, netting, and telemetry, the leading edge of the Bighead Carp and Silver Carp populations remains around river mile 281 (north of I-55 Bridge within the Dresden Island Pool near the Rock Run Rookery), approximately 55 miles from Lake Michigan. Populations of Silver Carp and Bighead Carp have not advanced any further upstream toward Lake Michigan and have declined in abundance near the edges of their invasion fronts since the onset of management and control efforts.

This year's set of projects fulfills three main objectives, consistent with the MRWG Strategic Vision: 2023 – 2027 (Attachment 1):

- **Detection:** Determine the distribution and abundance of invasive carp to guide response and control actions.
- **Management and Control:** Prevent the upstream passage of invasive carp toward Lake Michigan via use of barriers, mass removal, and understanding best methods for preventing passage.
- **Response:** Establish comprehensive procedures for responding to changes in invasive carp population status, test these procedures through exercises, and implement if necessary.

In 2026, MRWG member agencies will continue actions focused on these three main objectives, including spring and fall SIM within the CAWS, eDNA sampling above the electric dispersal barrier, assessments of reproduction within the IWW, strategic removal through contract and commercial fishing, as well as population monitoring, modeling, and telemetry work. These non-structural measures will complement the Brandon Road Interbasin Project as construction continues since the Project Partnership Agreement between the USACE and the states of Illinois and Michigan was signed on July 1, 2024.

The MRWG prepared this 2026 Invasive Carp MRP, which was released by the ICRCC. It acts as an update to previous MRPs and presents up-to-date information and operational plans for a host of projects dedicated to preventing invasive carp from establishing populations in the CAWS and Lake

Michigan. Specifically, this document is a compilation of 27 individual project plans, each of which plays an important role in preventing the expansion of the range of invasive carp and furthering the understanding of invasive carp location, population dynamics, behavior, and the efficacy of control and capture methods.

This document outlines actions planned for the 2026 field season. The actions and activities in this MRP continue to build on the considerable work completed since 2010. A detailed accounting of the results and findings of previously completed work can be found at: Action Plans and Reports | Invasive Carp Regional Coordinating Committee. A summary of activities anticipated to be completed in 2026 is provided and grouped by MRWG work groups. Two or more work groups collaborate on many of the activities.

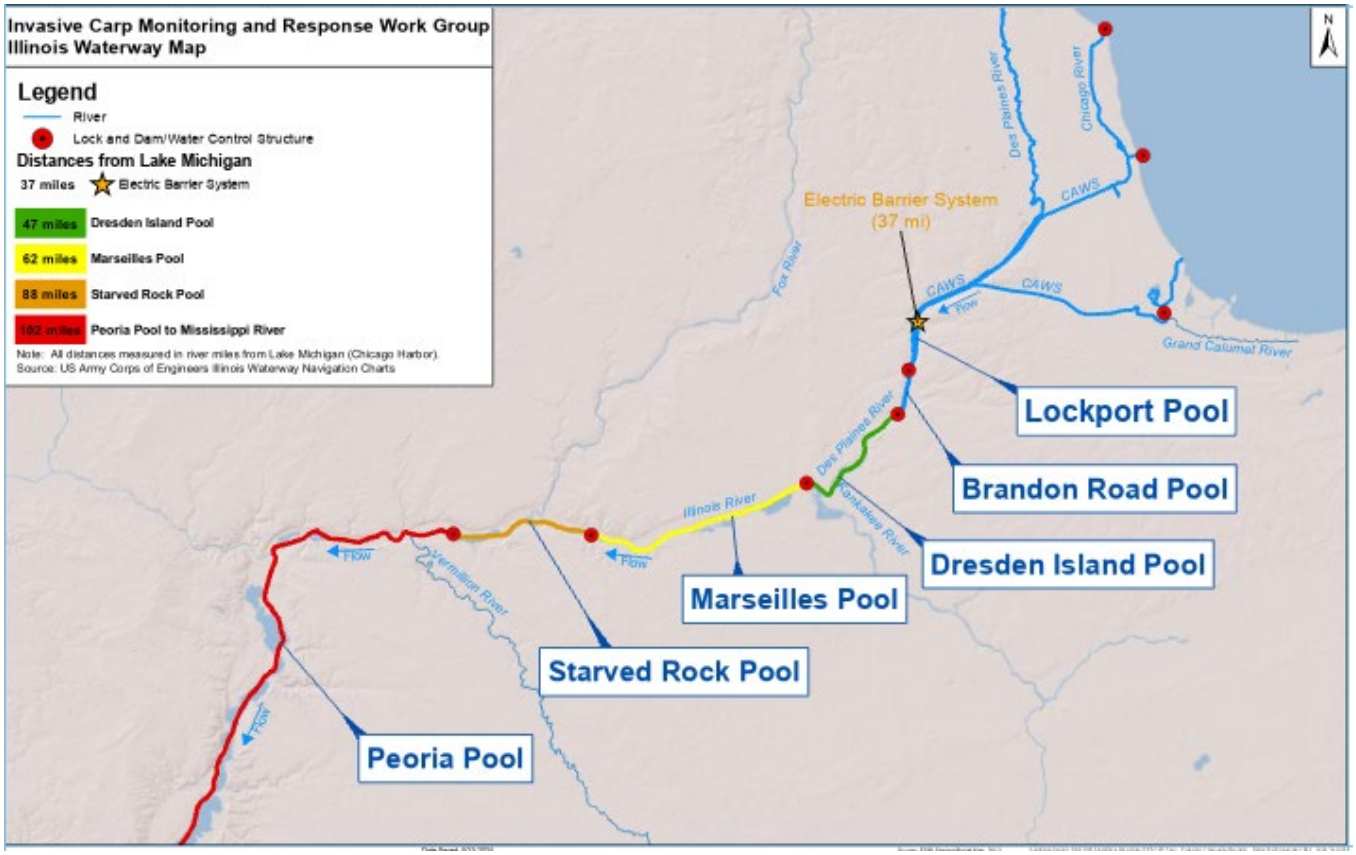
All MRPs to date, including the 2026 MRP, have benefited from the review of technical experts and MRWG members, including, but not limited to, Great Lakes states' natural resource agencies and non-governmental organizations. Contributions to this document have been made by several state and federal agencies.

This 2026 MRP provides information about project activities, incorporating new information, technologies, and methods as they have been discovered, field-tested, and implemented. The MRWG is also completing a companion document, the 2025 Invasive Carp ISR, which summarizes each project's activities, results, findings, and recommendations for future actions. Collectively, the 2026 MRP and 2025 ISR present a comprehensive accounting of the activities and projects conducted to prevent the establishment of invasive carp in the CAWS and Lake Michigan. Through these documents, the reader can obtain a thorough understanding of the most current project results and findings, as well as how these findings will be used to guide future activities.

This MRP provides operational direction regarding IWW-related projects described in the ICRCC Action Plans. The ICRCC is convened by the USFWS and the U.S. Environmental Protection Agency to assist ICRCC member agencies in implementing their authorities to reduce and eliminate the threats to the Great Lakes posed by invasive carp. The ICRCC membership includes 26 U.S. and Canadian federal, state, provincial, tribal, regional, and local agencies.

This MRP is a natural extension of the Illinois State Comprehensive Management Plan for Aquatic Nuisance Species and further builds upon the Management and Control Plan for Bighead, Black, Grass, and Silver Carps in the United States. Figure 1 depicts the six pools, CAWS, and the EDBS in the IWW and their distances from Lake Michigan.

Figure 1 – MRWG IWW Map



Map of the Illinois Waterway identifying the six pools and distances from Lake Michigan

MRWG Work Groups

Discipline-specific work groups assist in developing the most informed MRPs. Work groups may also help focus expertise for further evaluation, assisting in decision-making, or otherwise providing MRWG Co-chairs, agencies, and the ICRCC with insights as technical experts on a range of subjects. Expected work groups for 2026 are listed below, with leads identified to assist in communication and structure. Co-leads may also be identified to assist with managing these work groups as appropriate and helpful. Work groups may be added or deleted to serve MRWG and ICRCC needs. Table 1 lists the work groups and their corresponding leads and co-leads.

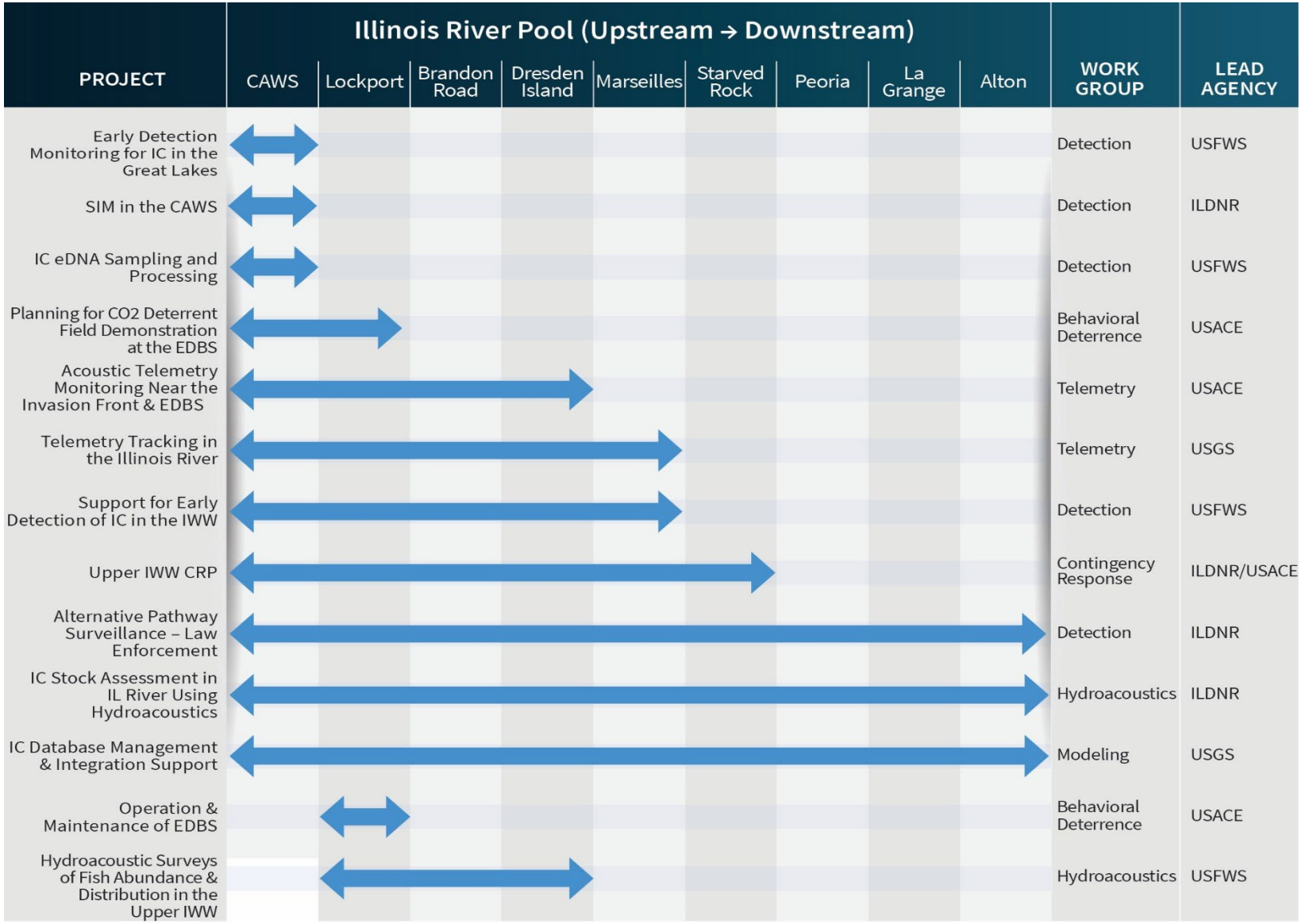
Table 1. MRWG Work Group Leads

2026 Work Group	Lead	Agency	Co-Lead	Agency
Contingency Response	Nick Barkowski	USACE	Alex Catalano Mindy Barnett	USACE ILDNR
Detection	Steve Butler	INHS	Jen-Luc Abeln Joe Parkos	USFWS INHS
Monitoring	Jim Lamer	INHS	Eli Lampo	ILDNR
Hydroacoustics	Jim Garvey	SIU	Elizabeth Harrell	USFWS
Telemetry	Marybeth Brey	USGS	Alex Catalano	USACE
Removal	Allie Lenaerts	ILDNR	Justin Widloe	ILDNR
Modeling	Richie Erickson	USGS	Benjamin Marcek	USFWS
Behavioral Deterrents	Marybeth Brey	USGS	Christa Woodley Nick Barkowski	USACE USACE
Black Carp	Rob Simmonds	USFWS	-	-

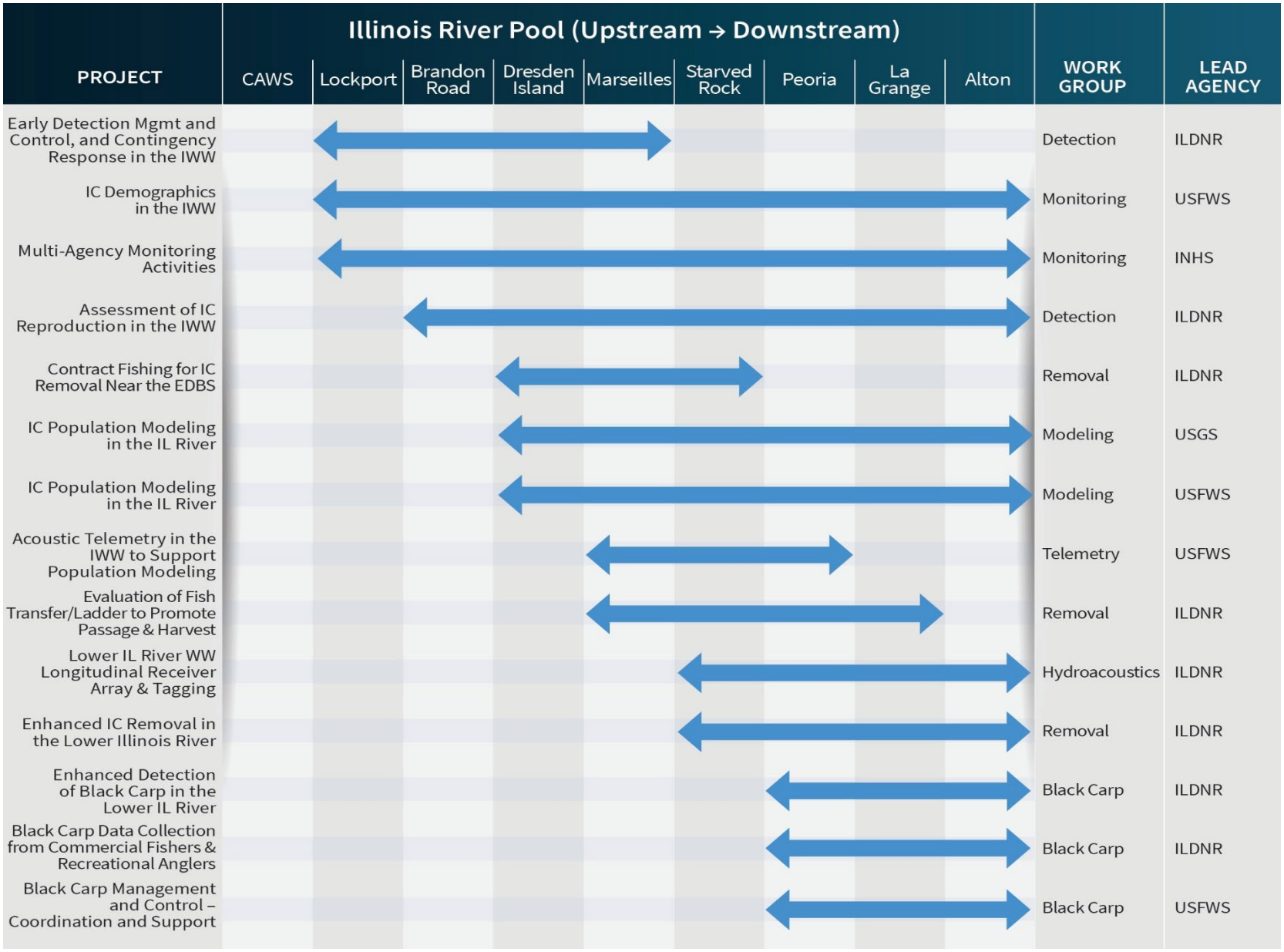
Project Crosswalk

The MRWG has prepared a project location crosswalk to clearly depict the geospatial scale and focus of projects by work groups included in the MRP (Figure 2). This crosswalk tool allows readers to understand where a specific work group focuses its efforts and quickly discern all projects operating in a specific portion of the IWW and CAWS.

Figure 2 – Project Crosswalk



MRP actions are still subject to final FY 2026 budgeting. The inclusion of an activity in this draft document does not necessarily reflect final funding decisions by the ICRCC.



MRP actions are still subject to final FY 2026 budgeting. The inclusion of an activity in this draft document does not necessarily reflect final funding decisions by the ICRCC.

WORK GROUP DESCRIPTIONS

A brief description of the mission or purpose of each work group is provided to give the reader an understanding of each work group's top priorities and main focuses.

CONTINGENCY RESPONSE WORK GROUP

The Contingency Response Work Group maintains and updates the CRP. The CRP outlines the process and procedures the MRWG and ICRCC member agencies will follow in response to detected changes in invasive carp distribution or abundances of life stages in any given pool of the Upper IWW.

DETECTION WORK GROUP

The Detection Work Group ensures thorough surveillance for the presence of invasive carp in each of the pools upstream of Starved Rock Lock and Dam and in the Des Plaines and Kankakee rivers to enable an effective response to any detection before invaders challenge the EDBS, CAWS, or further threaten the Great Lakes.

MONITORING WORK GROUP

The Monitoring Work Group supports the MRWG in maintaining a portfolio of projects throughout the IWW that assist in developing, evaluating, and monitoring management actions that prevent Bighead Carp, Black Carp, Grass Carp, and Silver Carp from establishing in Lake Michigan.

HYDROACOUSTICS WORK GROUP

The Hydroacoustics Work Group provides information on trends in invasive carp abundance, size distributions, and habitat use through space and time in the IWW to inform and assess management actions.

TELEMETRY WORK GROUP

The Telemetry Work Group's purpose is to ensure the multi-agency telemetry efforts are coordinated to efficiently and effectively meet the MRWG goals of detection, management and control, and response. The objectives of the work group are to measure movement and distribution to inform management through 1) modeling efforts, 2) barrier evaluations, and 3) contingency and response efforts.

REMOVAL WORK GROUP

The Removal Work Group's primary objective is to capture and remove invasive carp in the Upper Illinois River via contracted commercial fishing efforts to reduce the risk of upstream migration and minimize propagule pressure on the EDBS. This data will help refine population models to inform future removal efforts.

MODELING WORK GROUP

The Modeling Work Group provides quantitative support and guidance for bigheaded carp monitoring and removal in the Illinois River.

BEHAVIORAL DETERRENTS WORK GROUP

The goal of the Behavioral Deterrents Work Group is to advance invasive carp management by providing the MRWG with comprehensive, science-driven insights on the design, deployment, operation, maintenance, and evaluation of non-structural deterrents, including behavioral (e.g., bubble curtains and acoustics) and physiological (e.g., electrical barriers) technologies, informed by physics-based modeling.

BLACK CARP WORK GROUP

The Black Carp Work Group works within the Illinois River and many other parts of the Mississippi River basin to better understand the biology, distribution, and abundance of Black Carp in the U.S. The Black Carp Work Group identifies management actions, monitoring, and research that help limit the distribution and abundance of Black Carp, prevent their spread into the Great Lakes, and minimize their effect on native mollusks.

PROJECT FOCUS IN 2026

The below sections summarize the MRWG projects planned for the 2026 field year.

Early Detection Management and Control, and Contingency Response in the Illinois Waterway

Work Group: Detection ***Lead Agency: ILDNR***

This project has several components, including three projects described in more detail below: Upper Illinois Waterway Contingency Response, Seasonal Intensive Monitoring, and Multi-Agency Monitoring Activities, which will implement monitoring and early detection in the Upper IWW, including monitoring for invasive carp above the EDBS, monitoring invasive carp population changes within the pools above Starved Rock, and agency support for contract commercial fishing in these same areas to suppress populations and prevent invasive carp from becoming established in the Great Lakes. Intensive monitoring will occur in the spring and fall using eDNA monitoring in the CAWS above the EDBS. Monitoring and removing invasive carp will be conducted below the EDBS where adult invasive carp are present utilizing the semi-annual unified method approach and deploying contract commercial fishers in conjunction with agency staff. Electrofishing, hoop nets, and mini-fykes will be deployed weekly to monitor the presence of small invasive carp above the reproductive front (i.e., upstream of Starved Rock Lock and Dam).

Upper Illinois Waterway Contingency Response

Work Group: Contingency Response ***Lead Agency: ILDNR/USACE***

This project has established a protocol for determining whether detection results merit a direct response action and a framework for taking response actions, including steps for coordinating between agencies and communicating with the public. Contingency planning allows for heightened and more coordinated agency responses. In 2026, relevant agencies will continue to develop and refine the CRP to make it more concise and straightforward and identify any improvements for the plan. An Incident Command System Field Day prior to the Spring SIM will be conducted. The

Contingency Response Work Group will also update and manage contingency response efforts around Brandon Road Lock and Dam during the Brandon Road Interbasin Project construction.

Deliverables

Deliverable Title	Deliverable Due Date	Deliverable Recipient(s)
Tabletop	To be determined	MRWG

Seasonal Intensive Monitoring in the CAWS

Work Group: Detection ***Lead Agency: ILDNR***

SIM is a planned intensive surveillance of the CAWS upstream of the EDBS conducted twice annually in conjunction with agency partners. These 2026 events are planned for the spring season (May 11 to 22) and the fall season (September 28 to October 9). The SIM deploys fixed and random site monitoring. This project includes standardized monitoring with pulsed-direct-current boat electrofishing gear and contracted commercial fishers. Along with maintaining the spatial coverage upstream of the EDBS, each SIM event will provide extra sampling focus on a unique location in the CAWS. SIM provides a spatially and temporally robust assessment of the potential presence of invasive carp in the CAWS upstream of the EDBS. The 2026 SIM events will replicate the 2025 sampling effort per reach and continue Grass Carp ploidy testing and otolith removal.

Deliverables

Deliverable Title	Deliverable Due Date	Deliverable Recipient(s)
Spring 2026 SIM summary	June 2026	MRWG Communications Work Group
Fall 2026 SIM summary	November 2026	MRWG Communications Work Group
2026 SIM ISR	March 2027	MRWG Co-chairs

Multi-Agency Monitoring Activities

Work Group: Monitoring ***Lead Agency: INHS***

The MAM program for monitoring invasive carp is built on and leverages existing long-term fisheries monitoring on the waterway, including the Upper Mississippi River Restoration Program's LTRM element (La Grange Pool) and the Long-Term Survey and Assessment of Large-River Fishes in Illinois program (Dresen Island downstream through Alton Pool). MAM employs the same sampling protocol as the LTRM fish sampling framework – a statistically robust, multi-habitat (main channel, side channel, and backwater), multi-gear, random (probabilistic selection of sites) sampling approach – that can detect shifts in fish abundance and community composition. Together, the MAM program includes consistent and standardized monitoring on all pools of the IWW using mini fyke nets, standard fyke nets, direct-current boat electrofishing, small and large hoop nets, and electrified dozer trawls from June 15 to October 31 each year (sampling effort is replicated during

each 6-week sampling period). A complete database of all physical, chemical, and biological data collections is quality-assured and updated annually.

The MAM program results in weekly sampling by agency staff to monitor the presence of small invasive carp and changes in adult invasive carp relative abundance and demographics. The MAM program provides live reports of the spatial distribution of young-of-year bigheaded carp detections and provides daily updates on sampling efforts for program leadership. Weekly and monthly summary reports are also delivered to leadership throughout the sampling period. The detection of bigheaded carp in Dresden Island, Marselles, Starved Rock, Peoria, La Grange, and Alton pools is used to assess the effects of incentivized and contracted commercial fishing on populations of bigheaded carp and the existing native fish communities. This MAM effort will help guide management efforts necessary to prevent bigheaded carp from becoming established in the Great Lakes. Specifically, this will be done by increasing our knowledge on the efficacy of targeted removal efforts to better allow managers to focus those removal efforts on specific pools for maximum removal to minimize pressure by bigheaded carp on the electric barrier near Romeoville, Illinois. Having both detection of bigheaded carp and data on existing fish communities helps evaluate the efficacy of removal efforts and their effects on fisheries communities.

Deliverables

Deliverable Title	Deliverable Due Date	Deliverable Recipient(s)
Weekly reports	June 19 – October 31, 2026	MRWG Co-chairs
Monthly reports	July – November 2026	MRWG
Live MAM sampling tracker	June 15 – October 31, 2026	Field crews and MRWG partnership
2026 ISR	March 2026	MRWG
QA'D MAM dataset (2019-2025 data)	November 1, 2026	MRWG Work Groups

Support for Early Detection of Invasive Carp in the Upper Illinois Waterway

Work Group: Detection ***Lead Agency: USFWS***

This project will detect upstream changes in the presence of large (over 153 millimeters in total length) or small (less than or equal to 153 millimeters in total length) invasive carp by implementing monthly sampling (March through November) throughout the Upper IWW (i.e., above Marseilles Lock and Dam in the Illinois River, the Chicago River, and the Illinois waters of the Kankakee and Des Plaines rivers). Multiple gears will be used to target both large and small invasive carp, including boat electrofishing, electrified dozer trawl, mini fyke nets, fyke nets, and gill nets. These early detection efforts inform decisions under the Upper IWW CRP, which determines if a coordinated response to an invasive carp detection in the Upper IWW is required.

Early detection sampling in the Upper IWW will be conducted via a combination of fixed and random site selection. Targeted sites may be added based on sightings of large fish or the need to survey new areas. In the downstream portions of the IWW, site selection will be focused on habitat types within which invasive carp are known to congregate. The project will also support SIM activities, monitoring any flooding events in the upper Des Plaines River, and contingency response efforts.

Deliverables

Deliverable Title	Deliverable Due Date	Deliverable Recipient(s)
End of month summary reporting	March – November, depending on weather	MRWG
Presentation of summary of work at MRWG annual meeting	February 2027	MRWG
2026 ISR	March 2027	MRWG
Excel export of data for SIM and contingency response efforts	May (Spring SIM) and October (Fall SIM) 2026 and as needed for response efforts	ILDNR SIM Lead or Incident Command System Response Lead

Assessment of Invasive Carp Reproduction in the Illinois Waterway

Work Group: Detection ***Lead Agency: ILDNR***

This project will monitor invasive carp reproduction in the IWW and select tributaries. This project will result in rapid detection of any invasive carp reproduction in the upper IWW, early detection of Black Carp reproduction in the IWW, an evaluation of the spatial and temporal extent and magnitude of invasive carp reproduction in the IWW, and quantified relationships between adult invasive carp densities, reproductive productivity, juvenile invasive carp abundance, and subsequent recruitment to inform invasive carp removal efforts. This project will help prevent invasive carp from becoming established in the Great Lakes through rapid detection of invasive carp spawning, potentially guiding management actions toward identified spawning areas, and assessing levels of harvest effort that will diminish invasive carp reproductive productivity, thereby slowing expansion of the invasion front toward the Great Lakes.

Deliverables

Deliverable Title	Deliverable Due Date	Deliverable Recipient(s)
Monthly summary reports	April – October 2026	MRWG
MRWG 2026 ISR	March 2027	MRWG
Quarterly project reports	April, July, October 2026; January, April 2027	ILDNR
Final project report	August 2027	ILDNR

Invasive Carp eDNA Sampling and Processing

Work Group: Detection ***Lead Agency: USFWS***

eDNA provides a valuable surveillance tool to track the presence and range of invasive species. This project will continue sampling for Bighead Carp and Silver Carp eDNA in the Great Lakes, Upper Mississippi River, and Ohio River basins. Semi-annual sampling will continue in Lake Calumet, Calumet Harbor, the Grand Calumet River, and Powderhorn Lake. One sampling event will be conducted prior to the late-spring SIM event, and the second will be conducted just before the fall SIM event. Monitoring for eDNA in Lake Calumet and the Little Calumet Marina will continue in 2026.

Water samples from Great Lakes tributaries will be collected in collaboration with state and tribal partners and analyzed for the presence of Bighead Carp and Silver Carp DNA to help provide an early warning of invasive carp populations that pose a threat to the Great Lakes. This funding will produce results for up to 10,000 collected and analyzed water samples.

Deliverables

Deliverable Title	Deliverable Due Date	Deliverable Recipient(s)
Results maps and raw data (map document and spreadsheet)	May – November 2026	Jurisdiction where collection occurred
eDNA dashboard	Continuous	Public
Bighead and Silver Carp eDNA QAPP	March 2026	Public

Early Detection Monitoring for Invasive Carp in the Great Lakes

Work Group: Detection ***Lead Agency: USFWS***

This project will implement a comprehensive early detection surveillance program for invasive carp species in the Great Lakes at high-risk locations in southern Lake Michigan tributaries and western Lake Erie. An array of fishery sampling gears targeting all life stages of invasive carp will be used to maximize detection probability if invasive carp species are present. USFWS will continue to implement a comprehensive early detection surveillance program for Bighead Carp, Silver Carp, Grass Carp, and Black Carp in and near select locations in the U.S. waters of the Great Lakes. This program complements the invasive carp eDNA and early detection monitoring programs currently implemented by the USFWS and partners in the Great Lakes basin. This project will be conducted in close coordination with the Great Lakes fishery management agencies of the respective jurisdictions where sampling is being conducted.

Deliverables

Deliverable Title	Deliverable Due Date	Deliverable Recipient(s)
Annual report	February 2027	Great Lakes Jurisdictions

Deliverable Title	Deliverable Due Date	Deliverable Recipient(s)
AIS detection report (specimen in hand)	April – November 2026	Jurisdiction where collection occurred
Metabarcoding sampling reports	April – November 2026	Jurisdiction where collection occurred
Invasive carp sampling reports	April – November 2026	Jurisdiction where collection occurred

Alternative Pathway Surveillance in Illinois – Law Enforcement

Work Group: Detection ***Lead Agency: ILDNR***

This project enhanced the robustness and effectiveness of the ILDNR invasive species program's enforcement component by increasing education and enforcement activities at bait shops, bait and sportfish production/distribution facilities, fish processors, fish markets, or other food establishments known to prefer live fish for release or food preparation. Two projects are scheduled for 2026, including the implementation of enforcement operations concentrating on detecting and intercepting illegal transactions involving AIS. The second project will initiate focused commercial inspections for businesses with the greatest likelihood of possessing or trading AIS.

Deliverables

Deliverable Title	Deliverable Due Date	Deliverable Recipient(s)
AIS enforcement operation report	September 2026	ILDNR Office of Law Enforcement
Commercial inspection reports	September 2026	ILDNR Office of Law Enforcement

Invasive Carp Demographics in the Illinois Waterway

Work Group: Monitoring ***Lead Agency: USFWS***

Detection and monitoring of invasive carp populations in the Illinois River are critical for achieving management goals. To address this important information need, natural resource agencies collaborate to implement a standardized multiple-gear sampling approach. This project will provide additional fisheries monitoring capacity for an existing standardized interagency sampling effort utilized by MRWG in the Illinois River and support the collection of key demographic data (e.g., total length, weight, age, sex, and maturity) for invasive carp captured in the lower six pools of the river. This project provides an additional sampling technique (the electrified dozer trawl) within the existing MAM program and supports the acquisition of fishery population information for conducting statistically robust analyses of Silver Carp in the Illinois River. Community data collected from 633 standardized samples will be integrated into the MAM program database, as well as age and growth data derived from approximately 1,600 invasive carp individuals. Data will be provided to the MRWG Modeling Work Group to inform invasive carp population models that evaluate and

inform harvest efforts in the Illinois River. Such models will be used to evaluate the relative importance of fishing mortality, fish movement, and natural mortality to observed changes in Silver Carp abundance.

Deliverables

Deliverable Title	Deliverable Due Date	Deliverable Recipient(s)
Monthly reporting	July – November 2026	MRWG
Live MAM sampling tracker	June – October 2026	Field Crews and MRWG partnership
Fish sampling data from electrified dozer trawl	February 2027	MAM, MRWG-Monitoring Work Group
Comprehensive age and growth data set and summary statistics	March 2027	MRWG, Monitoring Work Group, Modeling Work Group
2026 ISR	April 2027	MRWG Co-chairs

Invasive Carp Stock Assessment in the Illinois River Using Hydroacoustics

Work Group: Hydroacoustics ***Lead Agency: ILDNR***

This project continues standardized monitoring conducted by SIU to quantify the movement and density of invasive carp in the Illinois River. A combination of hydroacoustic and associated sampling surveys in the fall will continue to yield information on 14-year trends in density, biomass, and population information of invasive carp, such as size structure, catch per unit effort, stock-recruits, and length-weight relationships of invasive carp in the Illinois River. These surveys provide valuable long-term trends that demonstrate the effects of harvest on population demographics. The response of native fish through size structure and density changes to harvest and other management is also quantified with this methodology. Recent research shows that these size structure changes are sensitive indicators of river responses to control of invasive carp.

Deliverables

Deliverable Title	Deliverable Due Date	Deliverable Recipient(s)
SIU Illinois River acoustic survey (conducted between September and November 2025; Alton to Dresden Island pools) of the Illinois River (data product, available online)	Fall 2026	MRWG partners, including state, federal, and university researchers

Deliverable Title	Deliverable Due Date	Deliverable Recipient(s)
Fall electrofishing survey to calibrate acoustic data (data product, available online)	Fall 2026	MRWG partners, including state, federal, and university researchers
Post processing and analysis of 2025 survey data (written report to MRWG)	Fall 2026	MRWG partners, including state, federal, and university researchers and river resource managers

Hydroacoustic Surveys of Fish Abundance and Distribution in the Upper Illinois Waterway

Work Group: Hydroacoustics ***Lead Agency: USFWS***

Since 2016, hydroacoustic surveys have been conducted to gain greater temporal resolution on fish abundance and distribution dynamics in the Upper IWW and near the EDBS. The data collected for this project will aid managers in understanding what actions may be necessary to prevent invasive carp from becoming established in the Great Lakes by ensuring that abundances of large fish upstream of the invasion front in the Dresden Island Pool are monitored. Additionally, the operation of the EDBS will be informed by understanding the current fish presence near the EDBS. This funding will produce monthly reports about large fish abundance and distribution near the EDBS and in the three upper pools of the Illinois River (Dresden Island, Brandon Road, and Lockport pools).

The pool scans allow commercial fishers to target areas with high abundances of large fish targets to aid in invasive carp removal efforts. The barrier surveys aid in assessing the potential risk of large fish, potentially Bighead Carp or Silver Carp, passing through the EDBS during operational changes or maintenance to the EDBS. Having a greater understanding of the temporally varying abundances and spatial distributions of fish near the EDBS is important to barrier management as it allows operational and maintenance decisions to be made while considering potential risk factors.

Barrier surveys are conducted as requested. Up to four pool scans can be conducted at the request of resource managers to aid in invasive carp removal efforts.

Deliverables

Deliverable Title	Deliverable Due Date	Deliverable Recipient(s)
Reports of large fish observed near the EDBS	January – December 2026	Partners at USFWS, USACE, USGS, SIU, and ILDNR
Heatmaps providing the location of large fish observed in the Upper IWW	As requested in 2026	ILDNR
2026 ISR	March 2027	MRWG

Lower Illinois River Waterway Longitudinal Receiver Array and Tagging

Work Group: Telemetry ***Lead Agency: SIU***

This project assists agencies with detecting patterns in the longitudinal movement of invasive carp within the Illinois River and contributes to the number of active transmitters for real-time receiver detections. In 2026, SIU plans to maintain the receiver array, replace five lost receivers, and tag approximately 200 invasive carp in the Alton and La Grange pools during the spring and fall. SIU will also range test receivers concurrently with data downloads. SIU's contribution to continued model support will include maintaining the Illinois River stationary telemetry array to document inter-pool movements and deploying additional acoustic telemetry tags in Bighead Carp and Silver Carp.

Deliverables

Deliverable Title	Deliverable Due Date	Deliverable Recipient(s)
Upload QA/QC 2025-2026 telemetry data to RAFT	June and November 2026	USGS and MRWG
Report summarizing receiver range testing	November 2026	MRWG Telemetry Work Group
Presentation on invasive carp movement	August 2026	American Fisheries Society Meeting

Telemetry Tracking in the Illinois River

Work Group: Telemetry ***Lead Agency: USGS***

This project uses invasive carp acoustic telemetry and movement data to inform or evaluate management actions to control the abundance of invasive carp in the IWW. Acoustic telemetry data from the Telemetry Work Group's longitudinal telemetry array and tagged fish from the inter-agency partnership support modeling efforts to estimate fish movement probabilities between river pools and parameterize supplemental population models used to evaluate alternative management actions, such as contract fishing or use of behavioral deterrents. In 2026, telemetry data will also be used to estimate invasive carp immigration and emigration rates between the Mississippi and Illinois rivers. A supplemental Silver Carp external tagging/marking study will also be initiated to estimate the current fishing mortality and population size in the Starved Rock Pool. USGS will continue to maintain real-time telemetry receivers deployed at strategic locations in main channel and off-channel areas in the upper Illinois and Des Plaines rivers and within the CAWS. USGS will continue to work with partners via the MRWG Telemetry and the Contingency Response work groups to inform decisions on contingency actions for bigheaded carp by operating this network of real-time acoustic telemetry receivers. Specific products include a continuously maintained real-time acoustic receiver network (seven receivers) with remote data serving, detection alerts, and detection summary options. In FY 2026, we will continue to replace out-of-date receivers with newer models that can detect the newest transmitter types.

Deliverables

Deliverable Title	Deliverable Due Date	Deliverable Recipient(s)
Draft data release for 2012-2025 telemetry data (to initiate updated transition probability model runs)	September 2026	Public data release via ScienceBase
Summary presentation of preliminary immigration/ emigration results (2022-2025)	August 2026	MRWG (Quarterly Meeting)
Presentation to MRWG on preliminary results from tag-return study in the Starved Rock Pool	November 2026	MRWG
Real-time receiver summaries and alerts for each receiver	Daily (real-time alerts), weekly (weekly emailed reports), with each hydroacoustic survey in the EDBS, and as requested	MRWG – USACE, USFWS, ILDNR, USGS, SIU, INHS, ICRCC, and anyone signed up for real-time email alerts

Acoustic Telemetry Monitoring Near the Invasion Front and EDBS

Work Group: Telemetry ***Lead Agency: USACE***

Acoustic telemetry receivers are deployed at strategic locations from Dresden Island upstream through the CAWS near the confluence of the Cal-Sag Channel and the CSSC to determine locations of acoustically tagged invasive carp in Dresden Island and associated surrogate fish species (common carp) in Brandon Road and Lockport pools. This project will 1) determine if the upstream passage through the EDBS by tagged fish has occurred to assess the risk of invasive carp presence, 2) identify lock operations and vessel characteristics that may contribute to the passage of invasive carp and surrogate species through the navigational locks in the Upper IWW, and 3) evaluate temporal and spatial patterns of habitat use at the leading edge of the invasive carp invasion front. This project will also support additional work groups, such as removal, monitoring, and modeling.

Deliverables

Deliverable Title	Deliverable Due Date	Deliverable Recipient(s)
Presentation of preliminary model design and data summary for 2016-2026 Dresden Island telemetry data	September 2026	Telemetry Work Group

Deliverable Title	Deliverable Due Date	Deliverable Recipient(s)
Presentation to MRWG of results of fish passage through upper IWW Locks and EDBS (if applicable)	February 2027	MRWG

Acoustic Telemetry in the Illinois Waterway to Support Population Modeling

Work Group: Telemetry ***Lead Agency: USFWS***

This project uses invasive carp acoustic telemetry and movement data to inform management actions to control the abundance of invasive carp in the IWW. Acoustic telemetry data from the Telemetry Work Group's longitudinal telemetry array and tagged fish from the inter-agency partnership support modeling efforts to estimate fish movement probabilities between river pools and parameterize supplemental population models used to evaluate alternative management actions, such as contract fishing or use of behavioral deterrents. In 2026, telemetry data will be collected to support the SCAA model. This data will help the model assess the connectivity of fish populations in the upper and lower pools of the IWW.

Deliverables

Deliverable Title	Deliverable Due Date	Deliverable Recipient(s)
Receiver placements indicated in ArcGIS maps and receiver log spreadsheets	March 2026	MRWG
Telemetry data and updated receiver log spreadsheets uploaded to the USGS RAFT database	March – December 2026	MRWG and other interested parties who might make queries to the RAFT database
Tag implantations uploaded to the RAFT database and included in the end of month summary reports	April 2026	MRWG and other interested parties who might make queries to the RAFT database
Monthly summary reports	March – December 2026	MRWG
Document summarizing receiver detection ranges from 2025	September 2026	MRWG Telemetry Work Group
End of the year presentation	February 2027	Annual MRWG Meeting
2026 ISR	March 2027	MRWG and ICRCC

Contract Fishing for Invasive Carp Removal Near the EDBS

Work Group: Removal ***Lead Agency: ILDNR***

Contracted commercial fishing below the EDBS uses contracted commercial fishers to reduce invasive carp numbers and monitor for their expansion in the Upper Illinois River and Lower Des Plaines River downstream of the EDBS. The project aims to decrease invasive carp numbers, resulting in the anticipated reduction of migration pressure toward the barrier and lessening the chances of invasive carp gaining access to upstream waters in the CAWS and Lake Michigan. In 2026, the goal is to remove approximately 1.3 million pounds of invasive carp from the Upper IWW, especially targeting Starved Rock and Marseilles pools. Twenty-four weeks of contracted removal in these pools are scheduled annually and begin in the spring following ice-out and continue to mid-summer, when temperatures become too warm to harvest fish effectively. Effort resumes in September until freeze-up. Monitoring for upstream expansion of invasive carp should help identify changes in the leading edge, distribution, and relative abundance of invasive carp in the IWW. The contracted fishers are also available as rapid responders and can be called to participate in a coordinated contingency effort if information indicates further investigation is warranted or if additional harvest is needed.

Deliverables

Deliverable Title	Deliverable Due Date	Deliverable Recipient(s)
ISR 2026	March 2027	MRWG Co-chairs
Reporting to CAWS Interjurisdictional Harvest Dashboard	Monthly	MRWG or interested parties
Monthly summaries	Monthly	MRWG

Enhanced Invasive Carp Removal in the Lower Illinois River

Work Group: Removal ***Lead Agency: ILDNR***

This project reduces the abundance of invasive carp in Peoria, LaGrange, and Alton pools through controlled and contracted fishing efforts. This program issues fishing contracts to commercial fishers willing to target invasive carp in these three pools and fulfill contractual obligations of selling, reporting, transporting, and fishing in the identified area. This project also provides critical information about population densities of invasive carp through time in the lower three pools of the Illinois River to guide management efforts. This project works to identify and employ mechanisms for using harvested fish by private industry, including human consumption. A cooperative relationship between agencies, fishers, markets, and end users will provide advice and support to further inform fishers on the quality and quantity of fish in demand. FY 2026 plans include subcontracting 40 to 50 commercial fishers to remove an aggregate average total of approximately 530,000 pounds of invasive carp per month. Fish processors who pick up invasive carp or have

facilities or buying stations within 10 miles of the river in the Alton, LaGrange, and Peoria pools will also be contracted.

Deliverables

Deliverable Title	Deliverable Due Date	Deliverable Recipient(s)
Catch total spreadsheet	Monthly	MRWG Co-chairs

Evaluation of Fish Transfer System/Ladder to Promote Passage and Harvest

Work Group: Removal ***Lead Agency: ILDNR***

This project will evaluate invasive carp attraction to and the use of a mobile fish movement system/ladder with associated technology to support fish scanning and sorting capabilities in the Illinois River and adjacent waterways. A mobile pilot fish passage system that supports fish passage while facilitating invasive carp harvest will be implemented. A floating mobile platform to support the fish ladder will allow the unit to be evaluated in multiple locations, as needed, help determine optimum height and angle and overcome the limitations of a fixed design and mobility. Prior work has shown that Silver Carp and Grass Carp will climb a fish ladder, but native fish outperformed the invasive ones in the pilot study. The more flexible design will allow the attempt to optimize the fish ladder for invasive carp movement while also assessing the conditions necessary to selectively pass natives. A series of experiments controlling for multiple variables will be conducted, including the angle of the steeppass, the flow rate and depth of water in the steeppass, the flow rate and depth of water in the flow box, the elevation of the steeppass distal end to or in the water's surface, invasive carp attractants, and environmental conditions conducive to invasive carp movement.

Deliverables

Deliverable Title	Deliverable Due Date	Deliverable Recipient(s)
Quarterly Reports	December 2027 – October 2028	MRWG

Invasive Carp Database Management and Integration Support

Work Group: Not Applicable ***Lead Agency: USGS***

This project will provide invasive carp data management and decision support tools for the Illinois River with extensions to the entire Mississippi River Basin. This project will help prevent invasive carp from becoming established in the Great Lakes by providing partners access to data and tools to analyze, visualize, model, and understand invasive carp movements and life history. The databases are used for data compilation and analysis to inform ongoing management and control actions. Specific objectives for 2026 include: 1) transitioning RAFT to the cloud by working with the USGS Cloud Hosting Solutions group to launch the database to Amazon Web Services, containerizing RAFT, installing the RAFT web application to Amazon Web Services, importing data, and connecting Ocean Tracking Network nodebooks; 2) continuing RAFT feature development and maintenance by adding administrative tools for project owners, investigating efficiencies for data download and delivery,

responding to user feedback for minor improvements, and adding data for additional projects; 3) continuing RAFT integration with Ocean Tracking Network to leverage development expertise and broadly share data; and 4) working with USFWS to develop and deploy the CarpDAT data system and ensure invasive carp information is findable, accessible, interoperable, and reusable.

Deliverables

Deliverable Title	Deliverable Due Date	Deliverable Recipient(s)
Matched detection records sent to partners from RAFT	Twice annually (spring/fall)	RAFT project owners – USFWS, USGS, USACE, INHS, SIU, U of I
Administrative tools updates for the RAFT Network deployed on website	May 2026	RAFT project owners – USFWS, USGS, USACE, INHS, SIU, U of I
New data visualization tools released on the RAFT website	July 2026	RAFT users - All
Publication of existing RAFT Network data and/or code as ScienceBase release	September 2026	Research community, general public, MRWG
Deployment of RAFT Network to cloud hosting on Amazon Web Services	October 2026	RAFT users - All
Initial deployment of CarpDAT pilot project with USFWS data	July 2026	MRWG partners, USFWS, USGS

Invasive Carp Population Modeling in the Illinois River

Work Group: Modeling ***Lead Agency: USGS***

This project will develop objective, data-driven tools to inform management decisions concerning bigheaded carp control efforts in the Illinois River, which will result in population status estimates and identify management recommendations to reduce the risk of the establishment of bigheaded carp populations in the Great Lakes. Specifically, the Modeling Work Group is using catch statistics, age and growth data, and telemetry-based movement data (e.g., data received from the Removal, Monitoring, and Telemetry Work Groups and the Enhanced Contract Harvest Program) to begin developing an SCAA model to estimate the population status of bigheaded carp in the Illinois River. The Modeling Work Group will also begin a broader synthesis of existing data in collaboration with other work groups. Through guiding the magnitude and location of harvest efforts and sampling for monitoring efforts, this project will help guide efforts to prevent the establishment of bigheaded carp in the Great Lakes.

Deliverables

Deliverable Title	Deliverable Due Date	Deliverable Recipient(s)
Early detection and monitoring of bigheaded carp in the Upper Illinois River (sampling guidelines using occupancy models)	Manuscript under review. Resubmission target end of March 2026.	North American Journal of Fisheries Management, MRWG Co-chairs
Modeling the Silver Carp metapopulation connection between the Mississippi and Illinois rivers (SEICarP with connection to Mississippi River)	Manuscript under review. Currently with USGS Bureau Approving Official. Target submission to journal end of March 2026 North American Journal of Fisheries Management, MRWG Co-chairs	Target journal: PLOS Ecosystems, MRWG Co-chairs (co-chairs also co-authors on product)
Presentation of updated population metrics estimated using the length-based Bayesian method	February 2026	MRWG
Presentation of guidance for USFWS monitoring of bigheaded carp in the Upper Illinois River via species accumulation curves	February 2026	MRWG, USFWS Carterville FWCO – Wilmington Substation
Presentation of invasive carp removal recommendations based on ecosystem modeling results, providing scientific justifications for the removal targets of 1.3 million pounds in the Upper Illinois River and 8 million pounds in the Lower Illinois River	February 2026	MRWG, ILDNR, GLFC, Removal Work Group
Recommendations for ILDNR monitoring of bigheaded carp presence in the CAWS via species accumulation curves	June 2026	MRWG, USFWS Carterville FWCO – Wilmington Substation, ILDNR

Invasive Carp Population Modeling in the Illinois River

Work Group: Modeling ***Lead Agency: USFWS***

This project will develop objective, data-driven tools to inform management decisions concerning bigheaded carp control efforts in the Illinois River. These tools will result in population status estimates and will identify management recommendations to reduce the risk of the establishment

of bigheaded carp populations in the Great Lakes. FY 2026 funding will produce sampling guidance for invasive carp monitoring in the Upper Illinois River and begin efforts at a broader data synthesis in collaboration with other work groups. Through guiding the magnitude and location of harvest efforts and sampling for monitoring efforts, this project will help guide efforts to prevent the establishment of bigheaded carp in the Great Lakes.

Deliverables

Deliverable Title	Deliverable Due Date	Deliverable Recipient(s)
Early detection and monitoring of bigheaded carp in the Upper Illinois River (sampling guidelines using occupancy models)	Manuscript under review. Resubmission target end of March 2026.	North American Journal of Fisheries Management, MRWG Co-chairs
Modeling the Silver Carp metapopulation connection between the Mississippi and Illinois rivers (SEICarP with connection to Mississippi River)	Manuscript under review. Currently with USGS Bureau Approving Official. Target submission to journal end of March 2026 North American Journal of Fisheries Management, MRWG Co-chairs	Target journal: PLOS Ecosystems, MRWG Co-chairs (co-chairs also co-authors on product)
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Presentation of guidance for USFWS monitoring of bigheaded carp in the Upper Illinois River via species accumulation curves	February 2026	MRWG, USFWS Carterville FWCO – Wilmington Substation
Presentation of invasive carp removal recommendations based on ecosystem modeling results, providing scientific justifications for the removal targets of 1.3 million pounds in the Upper Illinois River and 8 million pounds in the Lower Illinois River	February 2026	MRWG, ILDNR, GLFC, Removal Work Group
Recommendations for ILDNR monitoring of bigheaded carp presence in the CAWS via species accumulation curves	June 2026	MRWG, USFWS Carterville FWCO – Wilmington Substation, ILDNR

Operation and Maintenance of the Electric Dispersal Barrier System

Work Group: Behavioral Deterrents ***Lead Agency: USACE***

The USACE operates three electric dispersal barriers (Barrier I, Barrier IIA, and Barrier IIB) in the CSSC, collectively referred to as the EDBS, to deter the upstream migration of invasive carp and other AIS. The USACE has operated electric barriers in the CSSC since 2002, implementing numerous operational and procedural improvements over the years to enhance effectiveness and ensure uninterrupted electrical fields in the water while maintaining safety for navigation and personnel. In 2026, USACE plans to activate new components of Barrier I for full-time operation, while continuing to operate and maintain the existing barriers. Additional efforts in 2026 include completing ongoing minor construction and real estate acquisition. USACE conducts biweekly 15-minute boat electrofishing at eight fixed sites (four in Lockport Pool, four in Brandon Road Pool) to monitor invasive carp presence in carp-likely habitat. Electrofishing typically occurs from March through November.

Deliverables

Deliverable Title	Deliverable Due Date	Deliverable Recipient(s)
Email informing of changes to EDBS operations	As needed	Barrier Ops Email List-serv
Table of EDBS outages from 2026 and planned maintenance for 2027	February 2027	MRWG

Planning for Carbon Dioxide Deterrent Field Demonstration at the at the EDBS

Work Group: Behavioral Deterrents ***Lead Agency: USACE***

This project represents the next step in planning for the implementation of a carbon dioxide-carp injection system in the CAWS as a redundant backup deterrent to the EDBS. The project will assess the feasibility of using carbon dioxide-carp to prevent invasive carp from moving into and becoming established in the Great Lakes by clearing them from the EDBS area during or after electrical outages (e.g., planned or unplanned maintenance). If proven effective, carbon dioxide-carp could enhance operational safety by eliminating the need for agency fishing boats and crews to enter the electrified field for manual fish removal. Project activities include coordinating with regulatory authorities to identify, fulfill, and acquire all necessary compliance requirements and permits for field testing; validating fluid dynamic models; identifying locations and specifications for structural modifications (e.g., notching canal walls) to enable safe installation of deterrents without interfering with vessel traffic; and developing contract documents to support field testing.

Deliverables

Deliverable Title	Deliverable Due Date	Deliverable Recipient(s)
Hydraulic model will cover entire new approach channel; several operational conditions will be included (static, emptying, barge present)	October 2026	Appropriate stakeholders
Carbon dioxide model will be run for each operational condition producing concentration estimates that can be related back to fish behavior	May 2027	Appropriate stakeholders

Enhanced Detection of Black Carp in the Lower Illinois River

Work Group: Black Carp ***Lead Agency: ILDNR***

This project will monitor Black Carp in the Alton Reach of the Illinois River. This project determines the annual change in Black Carp abundance and helps prevent invasive carp from becoming established in the Great Lakes by assessing and guiding management activities in the Lower Illinois River. This funding will produce estimates of the population growth and expansion of Black Carp and will support telemetry-informed rapid response removal efforts in the Illinois River as necessary.

Deliverables

Deliverable Title	Deliverable Due Date	Deliverable Recipient(s)
LTRM-style monitoring for Black Carp in lower Illinois River, documenting number removed and relative abundance	June – October 2026	ILDNR, Black Carp Work Group

Black Carp Data Collection from Commercial Fishers and Recreational Anglers

Work Group: Black Carp ***Lead Agency: ILDNR***

This project will fund incentive payments to commercial fishers and recreational anglers who submit Black Carp captured in the Illinois River from Peoria to Alton for agency analysis. The project will also focus on Black Carp populations in the Mississippi River Basin that could impact expansion into the Illinois River. This project will result in valuable information regarding the range expansion of Black Carp and prevent invasive carp from becoming established in the Great Lakes by functioning as an early detection and monitoring tool. This funding will support the collection and evaluation of up to 350 specimens.

Deliverables

Deliverable Title	Deliverable Due Date	Deliverable Recipient(s)
Up to 350 incentive payments to sport and commercial anglers who submit Black Carp for analysis	Annual report FY 2026	ILDNR, Black Carp Work Group
Black Carp capture shared real-time with USGS Nonindigenous Aquatic Species database to monitor Black Carp population status and inform risks to Great Lakes	Periodically upon receipt	USGS, ILDNR

Black Carp Management and Control – Coordination and Support

Work Group: Black Carp ***Lead Agency: USFWS***

This project will coordinate with the Black Carp Work Group, gather and manage data associated with Black Carp purchased by ILDNR via incentive payments (including aging fish), and continue development of electrified sampling gears to improve agency captures of Black Carp. These efforts will result in better coordination and identification of management actions, research, and monitoring needs that advance the protection of the Great Lakes from Black Carp. They include hosting coordination meetings, testing a prototype electrified trawl sampling approach to address the limitations identified with current gears, and coordinating receipt of age structures to provide age assignments of captured Black Carp from across the range, prioritizing Illinois River captured fish.

Deliverables

Deliverable Title	Deliverable Due Date	Deliverable Recipient(s)
Black Carp Work Group meeting notes	Bimonthly throughout FY 2026	Black Carp Work Group
Report of gear assessment	March 1, 2027	MRWG
Revise Black Carp bounty materials	January 1, 2026	State contacts for Bounty Program
Finalize Black Carp website linkage	February 2026	ICRCC
Bounty Program monthly report of captures	Within 3 weeks following the reported month	Black Carp Work Group and NAS Database
Bounty Program annual report: demographics, distribution, and age	March 1, 2027	MRWG and Black Carp Work Group

ATTACHMENT 1

MRWG Strategic Vision: 2023 - 2027

MRWG Strategic Vision: 2023 - 2027

The Monitoring and Response Work Group (MRWG) is the action arm of the Invasive Carp Regional Coordination Committee (ICRCC) working to monitor the Upper Illinois Waterway (IWW) and the Chicago Area Waterway System (CAWS) for invasive carp to manage invasive carp populations (Bighead Carp, Silver Carp, Grass Carp, and Black Carp) and to respond to any changes in the status of invasive carp in the Upper IWW.

The projects undertaken by the MRWG are designed to address three primary objectives for preventing the spread of invasive carp to Lake Michigan. These objectives are:

- **Detection:** Determine the distribution and abundance of invasive carp to guide response and control actions.
- **Management and Control:** Prevent the upstream passage of invasive carp upstream of Brandon Road Lock and Dam toward Lake Michigan using barriers and mass removal and understanding the best methods for preventing passage.
- **Response:** Establish comprehensive procedures for responding to changes in invasive carp population status, test these procedures through exercises, and implement if necessary.

The short-term strategic vision laid out below is dependent on continued funding at levels consistent with previous years to sustain aggressive removal efforts that reduce the risk of range expansion, as well as to continue focused surveillance to ensure that management agencies have an accurate understanding of changes to invasive carp range, population dynamics, and behavior.

Purpose

This strategic vision is intended to provide foundational guidance for detection, management, control, and response activities in the annual Monitoring and Response Plan (MRP) for 2023 to 2027. The overarching purpose of this strategic vision is the prevention of expansion of invasive carp populations within the Illinois Waterway system and the protection of the Great Lakes from invasion by Bighead, Silver, Grass, and Black Carp. It reflects the collective input of the MRWG agency leads and MRWG Co-chairs.

Detection

Determine the distribution and abundance of invasive carp to guide response and control actions.

- Maintain a comprehensive and complementary suite of detection activities (physical detection, telemetry, eDNA, etc.) that efficiently and effectively informs ongoing adaptive management and control or response needs.
    - Ensure sufficient detection effort is deployed through standardized multi-agency monitoring throughout Upper IWW, Des Plaines, and Kankakee rivers to maintain ICRCC and MRWG leadership confidence that invasive carp are not present, including:

        - Detection for invasive carp upstream of the Electric Dispersal Barrier System (EDBS) in Romeoville, Illinois, through bi-annual eDNA and Seasonal Intensive Monitoring.
        - Annual assessment and status of adult fish, small fish, larvae, and eggs, as outlined in the Monitoring and Response Plan for each pool between Starved Rock Lock and Dam and the EDBS.
    - Adapt actions as appropriate to guide decisions and response planning through annual work group communication and coordination via the annual MRWG meetings.
    - Evaluate the amount and types of effort needed to most effectively characterize the risk of invasive carp upstream of Brandon Road Lock and Dam.
- Maintain alternative pathway surveillance.
    - Conduct invasive carp surveillance in Chicago area ponds using trammel nets and electrofishing every 5 years or when a verifiable invasive carp record is received.
    - Coordinate, train, and support law enforcement staff in intelligence gathering, commercial inspections, and enforcement actions related to invasive carp.

Management and Control

Prevent the upstream passage of invasive carp toward Lake Michigan using barriers and mass removal and understanding the best methods for preventing passage.

- Support the development, testing, and/or operation of behavioral deterrents aimed at reducing or eliminating upstream movement of invasive carp.
    - Support optimal operation and maintenance of a state-of-the-art EDBS in the CAWS with ongoing effectiveness evaluation.
    - Support the design, installation, and evaluation of an effective carbon dioxide (CO2) deterrent system to function as a clearing mechanism in support of the EDBS.
    - Support the design, installation, or evaluation needs of the multi-deterrent system to be installed at Brandon Road Lock and Dam.
- Remove invasive carp from between Starved Rock Lock and Dam and Brandon Road Lock and Dam to reduce upstream propagule pressure at the leading edge of the population. This work will complement efforts further downstream to reduce invasive carp biomass.
    - Conduct annual contract fishing to suppress invasive carp to reduce densities to 2015 levels or lower.
        - Target: Reduce the estimated biomass of invasive carp in the Dresden Island Pool by an additional 25 percent from the biomass observed in 2020.
        - Target: Reduce the estimated biomass of invasive carp in the Marseilles Pool by an additional 25 percent from the biomass observed in 2020.
        - Target: Reduce the estimated biomass of invasive carp in the Starved Rock Pool by an additional 25 percent from the biomass observed in 2020.
    - Maintain or increase annual removal of 1.1 million pounds of invasive carp between Starved Rock Lock and Dam and Brandon Road Lock and Dam.
- Evaluate attractant, deterrent, and repellent technologies in combination with contracted fishing to increase harvest.

- Enhance existing commercial fishing downstream of Starved Rock Lock and Dam to increase harvest of invasive carp in source areas of the IWW.
  - Implement branding and marketing strategy to support commercial utilization.
  - Expand commercial fishing incentives downstream of Peoria Pool.
  - Increase removal/harvest in this part of the river to 20 million pounds annually by 2027.
- Evaluate and adaptively improve effectiveness/efficiency of all ongoing management and control actions.
  - Refine survey techniques to provide reliable estimates of invasive carp biomass per unit area in the IWW downstream of the Brandon Road Lock and Dam.
  - Improve the Spatially Explicit Invasive Carp Population (SEICarP) model predictions through integration of telemetry results and revised population vital rates to evaluate effectiveness of removal efforts.
  - Develop additional population and movement models to assist MRWG and ICRCC leadership with resource allocation decisions.
  - Adaptively refine removal strategies based on lessons learned and new technologies identified to continually improve efficiency and effectiveness.
  - Integrate effective technologies to enhance control activities to herd or attract carp, such as modular electric barriers, algal attractants, acoustic deterrents and attractants, and use of CO_2.
- Leverage MRWG experience and expertise to support the development of invasive carp management and control strategies in other waterways, as requested.

Response

Establish procedures for responding to changes in invasive carp population status, test these procedures through exercises, and implement if necessary.

- Maintain effective response capability within 48 hours or less of detected population changes deemed actionable per the Contingency Response Plan.
  - Develop appropriate tabletop exercises annually and incorporate lessons learned into the Contingency Response Plan.
    - Recommend training when agency personnel change to maintain operational familiarity with Incident Command System structures and principles.
    - Identify, evaluate, and integrate potential new technologies for use in responses.
  - By 2023, evaluate the population status metrics for each pool and the suite of available response tools available for use within the Contingency Response Plan for future years.
- Review barrier operations and operational changes in close collaboration with U.S. Army Corps of Engineers and MRWG members during the annual MRWG meeting to ensure effectiveness at preventing upstream movement of carp.