# MONITORING AND RESPONSE WORKGROUP (MRWG)

# MONTHLY ACTIVITY UPDATES

OCTOBER 2024

# MONITORING AND RESPONSE WORKGROUP (MRWG)

October 2024

## Overview

No live Bighead Carp, Black Carp, Grass Carp, or Silver Carp were found or observed in any new locations immediately downstream or upstream of the Electric Dispersal Barrier. The table below summarizes pool-specific results during October 2024 from all effort within the Upper Illinois Waterway. Additional effort may not be reported due to data processing, and true effort and catch could be higher. For complete yearly results, refer to the 2023 Interim Summary Report.

| **Lockport** | **October 2024** |
|---|---|
| Yards of Net | 0 |
| Hoopnet Nights | 0 |
| MiniFyke Nights | 4 |
| Electrofishing Runs | 0 |
| Electrofishing Hours | 0 |
| Dozer Trawl Runs | 0 |
| Dozer Trawl Hours | 0 |
| Pound Net Night | 0 |
| Bighead Carp | 0 |
| Grass Carp | 0 |
| Silver Carp | 0 |
| Invasive Carp Caught | 0 |
| IC/1000 yards | 0 |
| Invasive Carp Pounds | 0 |

| Brandon Road | October 2024 |
|---|---|
| Yards of Net | 0 |
| Hoopnet Nights | 0 |
| MiniFyke Nights | 4 |
| Electrofishing Runs | 0 |
| Electrofishing Hours | 0 |
| Dozer Trawl Runs | 0 |
| Dozer Trawl Hours | 0 |
| Pound Net Night | 0 |
| Bighead Carp | 0 |
| Grass Carp | 0 |
| Silver Carp | 0 |
| Invasive Carp Caught | 0 |
| IC/1000 yards | 0 |
| Invasive Carp Pounds | 0 |

| Dresden Island | October 2024 |
|---|---|
| Yards of Net | 41,700 |
| Hoopnet Nights | 28 |
| MiniFyke Nights | 12 |
| Electrofishing Runs | 33 |
| Electrofishing Hours | 8.25 |
| Dozer Trawl Runs | 0 |
| Dozer Trawl Hours | 0 |
| Pound Net Night | 0 |
| Bighead Carp | 3 |
| Grass Carp | 0 |
| Silver Carp | 64 |
| Invasive Carp Caught | 67 |
| Invasive Carp Dresden Above I55 | 0 |
| Invasive Carp Dresden Below I55 | 39 |
| Invasive Carp Rock Run | 28 |
| IC/1000 yards | 1.6 |

| Dresden Island | October 2024 |
|---|---|
| Invasive Carp Pounds | 700 |

| Marseilles | October 2024 |
|---|---|
| Yards of Net | 16,700 |
| Hoopnet Nights | 0 |
| MiniFyke Nights | 0 |
| Electrofishing Runs | 4 |
| Electrofishing Hours | 1 |
| Pound Net Night | 0 |
| Bighead Carp | 13 |
| Grass Carp | 1 |
| Silver Carp | 1,441 |
| Invasive Carp Caught | 1,455 |
| IC/1000 yards | 87.1 |
| Invasive Carp Pounds | 17,123 |

| Starved Rock | October 2024 |
|---|---|
| Yards of net | 65,450 |
| Hoopnet Nights | 0 |
| MiniFyke Nights | 0 |
| Electrofishing Runs | 0 |
| Electrofishing Hours | 0 |
| Dozer Trawl Runs | 0 |
| Dozer Trawl Hours | 0 |
| Pound Net Night | 0 |
| Bighead Carp | 119 |
| Grass Carp | 178 |
| Silver Carp | 20,212 |
| Invasive Carp Caught | 20,509 |
| IC/1000 yards | 313.6 |
| Invasive Carp Pounds | 118,866 |

# CONTRACTED COMMERCIAL FISHING BELOW THE ELECTRIC DISPERSAL BARRIER

## Introduction

Contracted Commercial Fishing Below the EDBS uses contracted commercial fishers to reduce invasive carp abundance and monitor for changes in range in the Des Plaines River and upper Illinois River downstream of the EDBS. By decreasing invasive carp abundance, we anticipate reduced migration pressure towards the barrier, lessening the chances of invasive carp gaining access to upstream waters in the CAWS and Lake Michigan. 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 "leading edge" is the furthest upstream location where multiple Bighead Carp or Silver Carp have been captured with conventional sampling gears during a single trip or where individuals of either species have been caught in repeated sampling trips to a specific site. Trends in catch data over time may also contribute to understanding invasive carp population abundance and movement between and among pools of the IWW.

| **Dresden Island** | **October 2024** |
|---|---|
| Yards of Net | 41,700 |
| Bighead Carp | 3 |
| Grass Carp | 0 |
| Silver Carp | 64 |
| Invasive Carp Caught | 67 |
| Invasive Carp Dresden Above I55 | 0 |
| Invasive Carp Dresden Below I55 | 39 |
| Invasive Carp Rock Run | 28 |
| IC/1000 yards | 1.6 |
| Invasive Carp Pounds | 700 |

| **Marseilles** | **October 2024** |
|---|---|
| Yards of Net | 16,700 |
| Bighead Carp | 13 |
| Grass Carp | 1 |
| Silver Carp | 1,441 |
| Invasive Carp Caught | 1,455 |
| IC/1000 yards | 87.1 |
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| **Starved Rock** | **October 2024** |
|---|---|
| Yards of net | 65,450 |
| Bighead Carp | 119 |
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| Silver Carp | 20,212 |
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# MULTIPLE AGENCY MONITORING OF THE ILLINOIS RIVER FOR DECISION MAKING

IL DNR

## Introduction

The leading edge for Bighead Carp and Silver Carp in 2022 was within the Dresden Island Reach, for Grass Carp the CAWS, and for Black Carp the Peoria Reach. Utilizing a standardized, multiple-gear approach has been critical in determining the geographic expanse of invasive carp and monitoring their relative abundance. there is value in monitoring reaches downstream of the EDBS (Lockport through Alton reaches) using a standardized, multiple-gear sampling approach. Doing so will allow for an accurate, comparable, and representative understanding of invasive carp distribution and abundance in the Illinois River between the EDBS and the Alton Reach.

## October 2024 Highlights

| **Lockport** | **IL DNR** |
|---|---|
| Hoopnet Nights | 0 |
| MiniFyke Nights | 4 |
| Electrofishing Runs | 0 |
| Electrofishing Hours | 0 |
| Dozer Trawl Runs | 0 |
| Dozer Trawl Hours | 0 |

| Brandon | **IL DNR** |
|---|---|
| Hoopnet Nights | 0 |
| MiniFyke Nights | 4 |
| Electrofishing Runs | 0 |
| Electrofishing Hours | 0 |
| Dozer Trawl Runs | 0 |
| Dozer Trawl Hours | 0 |

| **Dresden Island** | **IL DNR** |
|---|---|
| Hoopnet Nights | 28 |
| MiniFyke Nights | 12 |
| Electrofishing Runs | 33 |

| Dresden Island | IL DNR |
|---|---|
| Electrofishing Hours | 8.25 |
| Dozer Trawl Runs | 0 |
| Dozer Trawl Hours | 0 |
| Bighead Carp | 0 |
| Grass Carp | 0 |
| Silver Carp | 0 |
| Invasive Carp Caught | 0 |
| Invasive Carp Dresden Above I55 | 0 |
| Invasive Carp Dresden Below I55 | 0 |
| Invasive Carp Rock Run | 0 |

| Marseilles | IL DNR |
|---|---|
| Hoopnet Nights | 0 |
| MiniFyke Nights | 0 |
| Electrofishing Runs | 4 |
| Electrofishing Hours | 1 |
| Bighead Carp | 0 |
| Grass Carp | 0 |
| Silver Carp | 0 |
| Invasive Carp Caught | 0 |

# SEASONAL INTENSIVE MONITORING IN THE CAWS

IL DNR

## Introduction

The SIM is a planned intensive surveillance of the CAWS upstream of the EDBS, conducted twice annually. These events are planned for the spring season (weeks of May 13th and 20th) and the fall season (Weeks of September 30th and October 7th). The SIM deploys fixed and random site monitoring. This project includes standardized monitoring with pulsed-DC 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 adequate assessment of the relative abundance and distribution of invasive carp in the CAWS upstream of the EDBS.

IDNR, INHS, USACE, USFWS, and contracted netters sampled the North Shore Channel, North and South Branches of the Chicago River, Chicago River, Chicago Sanitary and Ship Canal, Cal-Sag Channel, Little Calumet River, Calumet River, and Lake Calumet.

## October 2024 Highlights

*Overall:*

- A total of 11,484 fish representing 45 species and 1 hybrid groups were cumulatively collected across all capture gears.
- 0 Bighead Carp, 1 Grass Carp (observed not collected), and 0 Silver Carp were observed or collected

*Commercial gill netting:*

- Contracted fishers along with assisting agency biologists set 50 miles of gill net (440 sets) at fixed and random sites
- Crews collected 426 fish representing 12 species.

*Electrofishing:*

- Agency biologists completed 70 hours (280 transects) of electrofishing as fixed and random sties
- Crews collected 11,484 individual fish representing 45 species and 1 hybrid (does not include USACE and only week 1 of USFWS)

# BARRIER MAINTENANCE AND FISH SUPPRESSION

IL DNR, USACE

## Introduction

U.S. Army Corps of Engineers (USACE) operates three electric dispersal barriers (Barrier 1, Barrier IIA, and Barrier IIB) for aquatic invasive species in the Chicago Sanitary and Ship Canal (CSSC), collectively referred to as the EDBS. USACE has operated electric barriers in the CSSC since 2002. Over the years, several operational and procedural improvements have been implemented to improve the effectiveness and continuously deliver an uninterrupted flow of electricity to the water to deter fish.

## October 2024 Highlights

The barriers are currently operating at the following parameters (31 October 2024) but are subject to change:

Barrier I – 1D (Full water - 5 Hz, 4 ms, 100 V = ~1.0 V/in & benthic 5 Hz, 4 ms, 100V) Operational
1N- In Standby Mode
1S- (34 Hz, 2.3 ms, 1200 V = 2.5 V/in) Operational
IIA – Out of Service for roof construction
IIB – Narrow (34 Hz, 2.3 ms, 2000 V = 2.8 V/in) & wide (34 Hz, 2.3 ms, 800 V= ~1.0 V/in) arrays operational

The unscheduled outages that occurred in October of 2024 are as follows:
10/2/2024 – B1D array – 10 hours, and 18 minutes– System wide network glitching and intermittent loss of primary and secondary servers.

10/10/2024 – B1D array – 1 hour, 5 minutes – Shut down for server and network maintenance and troubleshooting.

10/31/2024 – B1D array – 35 minutes – ComEd working on utility pole for J8772 utility feed

## Traditional Monitoring

During the month of October, USACE biologists conducted sixteen 15-minute electrofishing runs downstream of the barrier. Eight sites were in Lockport Pool and eight sites were in Brandon Road Pool. In Lockport Pool, a total of 601 individuals across 16 species were captured with the top five most abundant fish being Emerald Shiner, Gizzard Shad (>6 inches), Gizzard Shad (<6 inches), Bluntnose Minnow, and Largemouth Bass. In Brandon Road Pool, a total of 429 individuals across 16 species were captured with the five most abundant fish being Emerald Shiner, Gizzard Shad (>6 inches), Gizzard Shad (<6 inches), Smallmouth Bass, and Bluegill. No live or dead invasive carp was caught or observed during the month of October.

# SUMMARY EVALUATION OF BIO-ACOUSTIC FISH FENCE DETERRENT

USFWS, USGS

## Introduction

This project will test the effectiveness of a Bio-Acoustic Fish Fence (BAFF) at deterring Silver Carp and Grass Carp from crossing the BAFF and from crossing through the Barkley Lock on the Cumberland River, KY. This sound, bubble, and light deterrent is designed to have a greater effect on invasive carp than on native species. This deterrent could be part of a multi-deterrent approach to prevent movement through a lock chamber where the lock is the only option for fish to move upstream (e.g., Brandon Road Lock and Dam) or in combination with a yet to be developed deterrent that slows passage through dam gates during open river while the BAFF deters fish from passing via the lock chamber (e.g., Starved Rock Lock and Dam).

## October 2024 Highlights

No report.

# INVASIVE CARP ENHANCED CONTRACT FISHING REMOVAL PROGRAM

ILDNR

## Introduction

In September 2019, the Enhanced Contract Fishing Program was initiated in the Peoria Pool of the Illinois River. In 2022, the area was expanded to include the LaGrange and Alton pools. The program offers Illinois-licensed commercial fishers $.10 per pound for invasive carp caught in any of these pools and sold to fish processors or other buyers for at least $.07 per pound. To date, a total of 61 fishers have entered into contracts to catch invasive carp from these pools, with 47 currently under contract. From inception through September 2024, 25,373,443 pounds of invasive carp have been caught among all three pools. Of these total catches, 3.05% are Bighead, 86.89% are Silver, and 10.06% are Grass carp. **No Black carp have been reported.**

## October 2024 Highlights

The table below summarizes the total pounds of invasive carp caught through enhanced contract fishing.

| YEAR | Total Lbs.** | Bighead | Silver | Grass |
|---|---|---|---|---|
| **2019 *** | 518,132 | 24,813 | 310,297 | 183,022 |
| **2020** | 2,882,724 | 176,195 | 1,980,175 | 726,355 |
| **2021** | 3,345,973 | 209,526 | 2,517,416 | 619,031 |
| **2022** | 5,249,161 | 200,396 | 4,615,097 | 433,669 |
| **2023** | 8,410,107 | 95,532 | 8,024,643 | 289,932 |
| **2024 Part Year** | - | - | - | - |
| ***January – March*** | 1,626,455 | 7,300 | 1,585,437 | 33,718 |
| ***April*** | 751,481 | 8,417 | 728,070 | 14,994 |
| ***May*** | 785,678 | 10,949 | 755,504 | 19,225 |
| ***June*** | 401,830 | 3,806 | 360,962 | 37,062 |
| ***July*** | 512,655 | 19,980 | 405,430 | 87,245 |
| ***August*** | 415,087 | 6,128 | 336,790 | 72,169 |
| ***September*** | 379,763 | 5,104 | 346,571 | 28,088 |
| ***Part Year Subtotal*** | 4,967,346 | 67,496 | 4,600,306 | 299,544 |
| **GRAND TOTALS** | **25,373,443** | **773,956** | **22,047,934** | **2,551,552** |

* September 2019 program inception.

** No Black carp reported.

# USFWS ILLINOIS WATERWAY HYDROACOUSTICS

USFWS

## Introduction

The purpose of USFWS hydroacoustic monitoring in the upper Illinois Waterway (IWW) is to enhance invasive carp management by reporting spatial and temporal patterns of fish abundance. Hydroacoustic data aids operation, maintenance, and response at the electric dispersal barrier system (EDBS). Density and distribution data enhance targeted harvesting efforts throughout navigational pools. Consistent hydroacoustic data collection allows managers to annually assess the risk of further upstream spread of invasive carp. Hydroacoustic estimates of length and depth of targets, along with corresponding telemetric data, allow managers to make inferences about possible fish species identified as targets. Targets detected across replicate surveys may identify the same target. USFWS hydroacoustic barrier surveys are conducted monthly, and pool scans are conducted annually in the fall. Additional barrier and pool scans can be conducted upon request. Further details regarding the methods of data collection and use of hydroacoustic data can be provided upon request.

## October 2024 Highlights

The results of the mobile hydroacoustic fish surveys are presented below:

- USFWS completed a scan at the EDBS on October 7$^{th}$, 2024, identifying a total of 27 targets (3 targets within the EDBS and 24 targets immediately below the barrier, see Figure 1). An average of 8.0± 3.6 targets were detected during the three replicate surveys, see Figure 2. The mean target length was 16.5 inches ± 4.5 inches; no outliers were observed (Figure 3).
- No hydroacoustic pool scans were completed in the month of October.

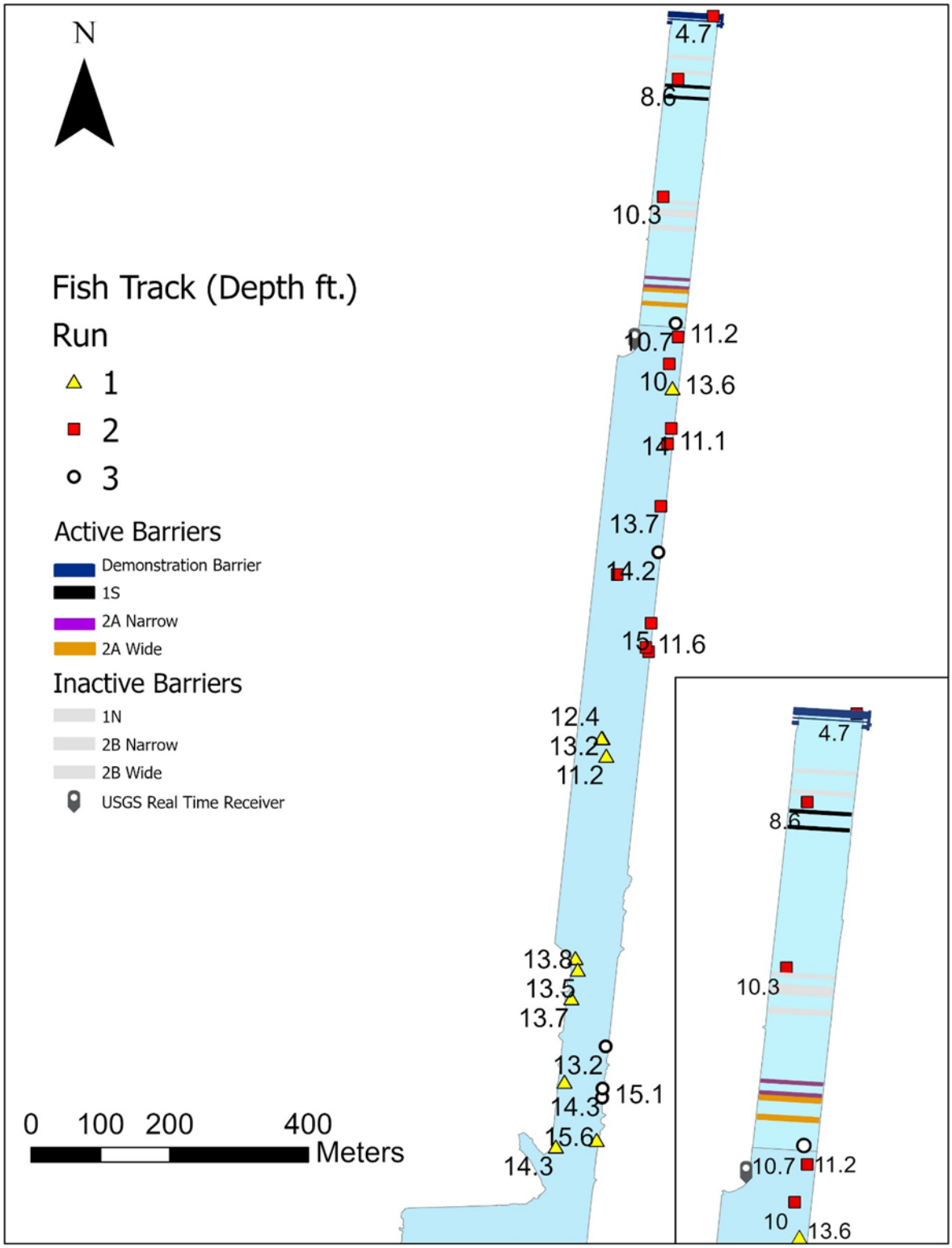


*Figure 1. Location of USGS real time receiver and targets ≥ 28.7 dB observed in the vicinity of the EDBS on October 7th, 2024.*

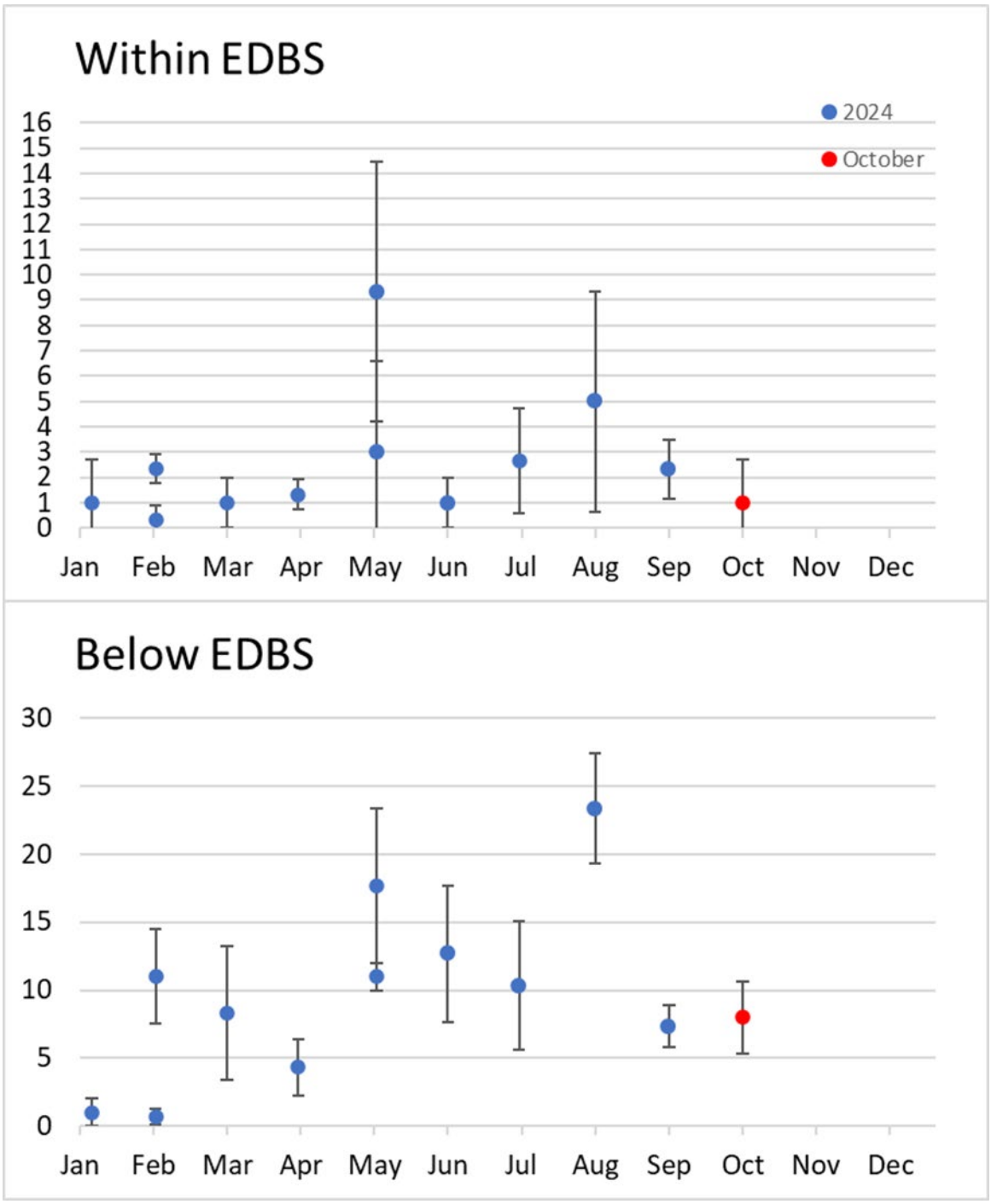


*Figure 2. Comparison of the mean and standard deviation for three replicate surveys from the current mobile surveys with previous surveys from 2024.*

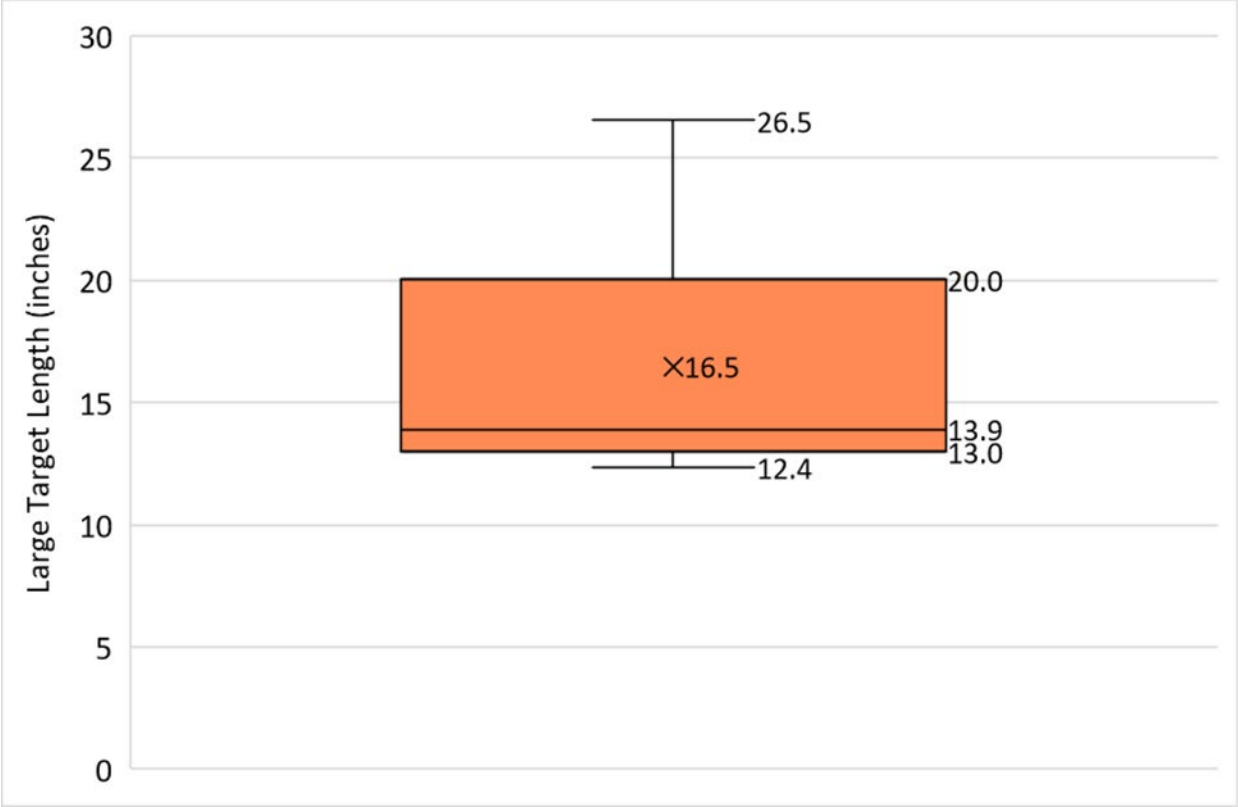


*Figure 3. Box-and-whisker plots of all targets ≥12 inches detected during the EDBS scan in October 2024. Outliers and their values are denoted by a point above the box-and-whisker plot.*

# EARLY DETECTION OF INVASIVE CARP IN THE UPPER ILLINOIS WATERWAY

USFWS Wilmington

## Introduction

The purpose of US Fish & Wildlife Service (USFWS) Wilmington Substation early detection monitoring (EDM) is to detect juvenile and adult invasive carp (Bighead, Silver, Black, and Grass Carp) at the invasion front. A combination of traditional boat electrofishing, electrified dozer trawling, mini-fyke netting, and gill netting are used in main-channel border, side-channel, and backwater habitats in the Marseilles, Dresden Island, Brandon Road, and Lockport pools of the upper Illinois Waterway (IWW), and in the lower Kankakee River. Rarefaction analysis is performed annually to ensure an extremely high probability that sampling efforts are detecting any changes in invasive carp population status. The application of fishing gears across pools and habitats, utilizing fixed and random sites, is assessed annually based on the results of this analysis. The USFWS Great Lakes EDM Program is an adaptive management tool focused on invasive species detection.

## October 2024 Highlights

- No invasive carps were captured or observed outside of their known range in October.
- Forty-six Silver Carp (590 mm – 952 mm total length [TL]) and one Grass Carp (1040 mm TL) were removed from the Marseilles Pool in October 2024.
- Two Silver carp (674 and 832 mm TL) were removed from Dresden Island Pool, and five Silver Carp (810 mm – 942 mm TL) were removed from the lower Kankakee River during October 2024.
- No small-bodied (< 153 mm TL) invasive carp were captured by EDM in October 2024.

Table one summarizes USFWS invasive carp EDM for each pool monitored in October 2024.

## Table 1. Summary of USFWS EDM effort during October 2024.

| - | Marseilles | Dresden Island | Kankakee | Brandon Road | Lockport |
|---|---|---|---|---|---|
| Electrofishing Effort (hours) | 5.03 | 3.75 | 3.75 | 2.50 | 2.25 |
| Electrofishing Sites | 20 | 15 | 15 | 10 | 9 |
| Dozer Trawl Effort (hours) | 1.68 | 0.92 | 1.25 | 0 | 0 |
| Dozer Trawl Sites | 20 | 11 | 15 | 0 | 0 |
| Mini-fyke Effort (net nights) | 19.19 | 19.03 | 14.51 | 0 | 0 |
| Gill Net Effort (yards) | 0 | 0 | 0 | 2000 | 1600 |
| Gill Net Sites | 0 | 0 | 0 | 10 | 8 |
| Small Carp Captured | 0 | 0 | 0 | 0 | 0 |
| Large Carp Captured | 46 | 2 | 5 | 0 | 0 |
| Species Richness | 48 | 39 | 48 | 12 | 8 |
| Total Catch | 4,999 | 2,585 | 6,865 | 82 | 401 |
| Most Abundant Species | Gizzard Shad | Gizzard Shad | Spotfin Shiner | Smallmouth Bass | Gizzard Shad |

# MONITORING INVASIVE CARP REPRODUCTION IN THE ILLINOIS WATERWAY

INHS

## Introduction

This project monitors for invasive carp reproduction in the IWW and major tributaries (Kankakee, Fox, Vermilion, Mackinaw, Spoon, and Sangamon rivers). Ichthyoplankton sampling is conducted to assess the extent, timing, and magnitude of invasive carp reproduction in the IWW, monitor for Black Carp reproduction, and quantify relationships between invasive carp adult abundance, reproductive output, and recruitment. Samples are collected from late April through October, with more frequent sampling effort during periods when temperature and flow conditions are considered optimal for invasive carp spawning.

## October 2024 Highlights

Monitoring for invasive carp reproduction in 2024 was completed with samples collected on October 1. No evidence of invasive carp reproduction has been observed upstream of the Marseilles Pool thus far in 2024. Full processing of ichthyoplankton samples and identification of fish larvae is ongoing. Any additional identification of invasive carp eggs or larvae, particularly from samples collected upstream of the Starved Rock Lock and Dam, will be reported as soon as this information is available. Updated analyses of factors affecting invasive carp reproductive output using data collected through 2022 found similar results to previous modelling efforts in that both adult invasive carp density and environmental conditions were found to influence spatiotemporal variation in the magnitude of invasive carp reproduction. Years with low reproductive output were also found to consistently result in low juvenile invasive carp abundance, whereas years with high reproductive output produced highly variable juvenile abundance.

# OCTOBER 2024 TELEMETRY SUMMARY

## Introduction

This project provides support for the inter-agency telemetry array deployed in the Illinois River basin. The 2024 plan of work for USFWS includes placing 150 acoustic transmitters in Silver Carp and Bighead Carp in the Peoria and Starved Rock pools, and operation and maintenance of the telemetry array in Peoria and Starved Rock pools. The data gained from the additional tagged fish will improve the accuracy of MRWG modeling work, allowing improved estimates of current levels of exploitation and bolstering estimates of large-scale pool-to-pool movement.

## September-October 2024 Highlights

- USFWS continued to maintain receivers and download the data collected from the receivers from the telemetry array in the Peoria and Starved Rock pools October 28th -31st. The data on receivers covered periods from August 26th, 2024, to the respective receiver's collection date. The data was added to the USFWS telemetry database and United States Geological Survey's FishTracks database on November 8th, 2024.
- One hundred two unique transmitters were detected; 76 were detected by a single receiver, two were a single detection on a single receiver.
- Movement across multiple receivers was observed for 26 transmitters. Movement only upstream was observed on six transmitters and downstream only movement was observed on four transmitters. Nine fish returned to their origin, two ended their detection period downstream of their origin, and two ended the detection period upstream of their origin. One fish ended transmission going upstream into the Fox River from downstream of the confluence (Hitt-Mayo Island). One fish ended its detection period moving downstream from upstream of the Fox River confluence (Bull's Island) and into the Fox River.
- Detection numbers are summarized in table 1 and receiver placements are shown in figure 1. Further details are available on request.

*Table 1. Receiver data from April 19 through June 26, 2024. "US" denotes "upstream" and "DS" denotes "downstream". "MC" denotes "main channel". Receiver number corresponds to the numbers shown in figure 1.*

| Receiver Number | Receiver ID | River Mile | Station Name | Unique Tags | Number of Detections |
|---|---|---|---|---|---|
| 1 | VR2Tx-489204 | 164.8 | Lower Peoria Lake Point, River Left | 9 | 15,449 |
| 2 | VR2Tx-489205 | 166.6 | Peoria Lake Narrows | 5 | 2,148 |
| 3 | VR2W-137065 | 173.0 | Upper Peoria Lake, River Right | 2 | 2,107 |
| 4 | VR2Tx-489207 | 173.0 | Upper Peoria Lake, River Left | 2 | 397 |
| 5 | VR2Tx-489206 | 182.4 | US Chillicothe Bridge Peninsula | 2 | 77,467 |
| 6 | VR2W-137064 | 188.1 | DS Lacon, MC Sawyer Slough | 16 | 8,744 |
| 7 | VR2Tx-489208 | 194.8 | US Upper Henry Island | 2 | 13,574 |
| 8 | VR2Tx-489209 | 199.1 | Senachwine Lake Peninsula | 6 | 790 |
| 9 | VR2Tx-489211 | 202.7 | Lower Twin Sisters Island | 4 | 5368 |
| 10 | VR2W-137066 | 211.0 | MC Near Depue Lake Channel | 5 | 12,034 |
| 11 | VR2Tx-489039 | 216.0 | US of Clark Island | 2 | 1,693 |
| 12 | VR2W-129785 | 219.8 | US Spring Valley River Left | 23 | 22,365 |
| 13 | VR2Tx-489037 | 223.0 | US Route 251 Bridge, Peru | 4 | 16,619 |
| 14 | VR2Tx-489212 | 233.9 | Lone Point Delbridge Side Channel | 8 | 41,359 |
| 15 | VR2Tx-490949 | 235.1 | MC Sheehan Island | 14 | 11,366 |
| 16 | VR2Tx-489040 | 238.5 | Hitt-Mayo Straight | 11 | 9,195 |
| 17 | VR2Tx-490950 | 241.0 | Bulls Island, MC Abandoned Harbor | 16 | 55,141 |
| 18 | VR2W-129787 | N/A | Fox River Island, US of Rt 6 Bridge | 6 | 1,623 |
| - | - | - | **Total** | **102** | **297,439** |

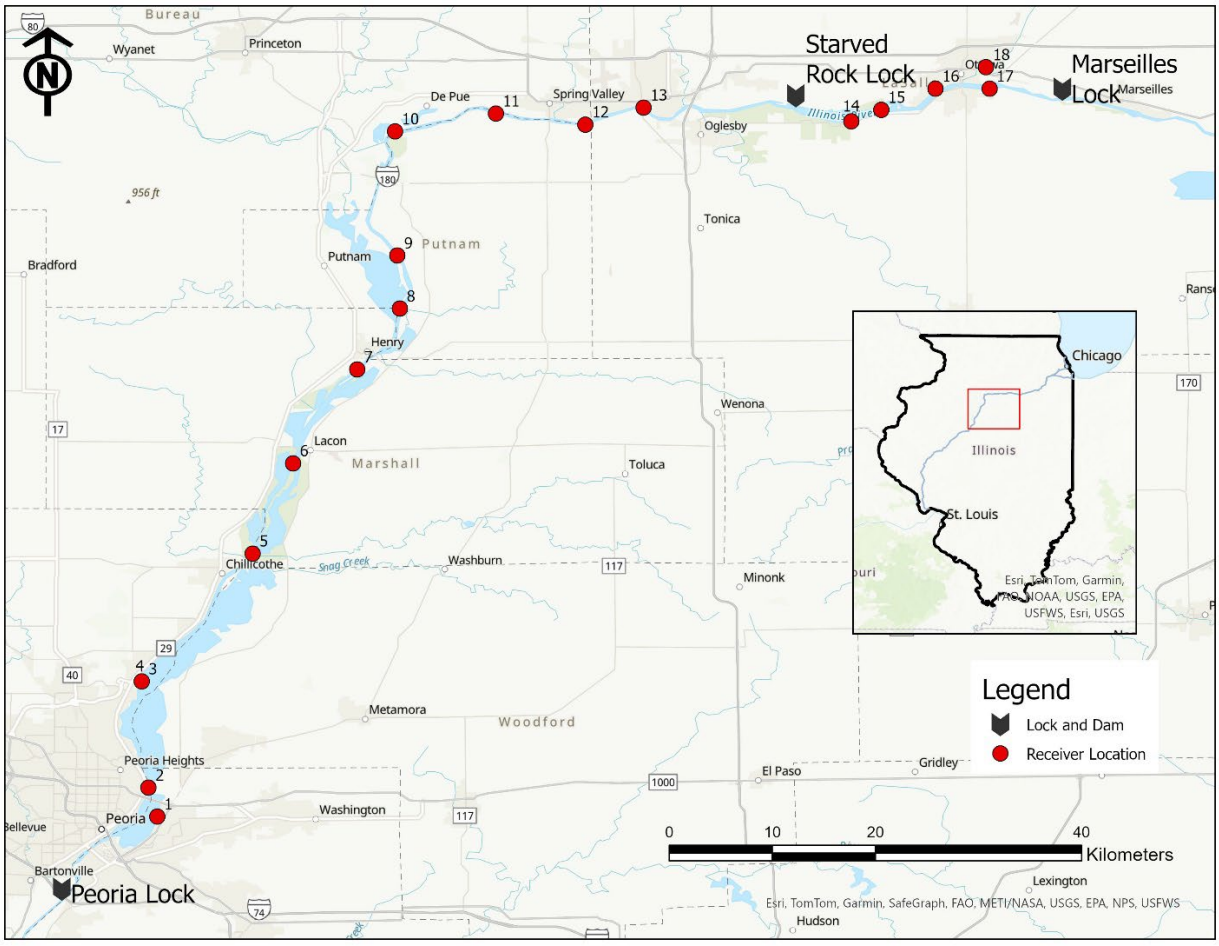


*Figure 1. Location of receivers in Peoria and Starved Rock Pools.*

# ALTERNATE PATHWAY SURVEILLANCE IN ILLINOIS – LAW ENFORCEMENT

IL DNR

## Introduction

This project provides enforcement of laws enacted to prevent the expansion and/or introduction of AIS within the waters of the State of Illinois and jurisdictions throughout the Great Lakes basin. The IL DNR Invasive Species Unit (ISU) specializes in more closely regulating water-related industries that are likely to be a source of future introductions or expansion of AIS into state waters. Industries include sport and commercial fishing, aquaculture, fish transportation, bait, pet, aquarium, fish stocking, and live food markets.

## October 2024 Highlights

ISU cited the owner of a fish hatchery in Ohio for unlawfully importing live viral hemorrhagic septicemia (VHS) susceptible species into Illinois without an Illinois Department of Natural Resources VHS Susceptible Species permit or a non-resident aquatic life dealer's license. The investigation was initiated after Ohio wildlife investigators discovered evidence of illegal shipments of fish into Illinois during a commercial aquaculture inspection. The joint-agency investigation prevented an illegal shipment of 2500 pounds of live fish scheduled to be stocked into a private fishing club lake in Northeast Illinois. The fish hatchery owner also received several citations from the Ohio Department of Natural Resources for aquaculture permit and fish transportation violations. ISU along with nine District 4 Conservation Police officers conducted inspections of 19 businesses in the Chicagoland area for compliance with the Illinois Fish and Aquatic Life Code and the Illinois Herptiles Act. The operation primarily focused on the illegal possession and sale of live injurious species. No live injurious species were located, but one citation and 5 written warnings were issued for permit violations.

# INVASIVE CARP POPULATION MODELING TO SUPPORT AN ADAPTIVE MANAGEMENT FRAMEWORK

USGS, USFWS

## Introduction

This project will develop objective, data-driven models to inform decisions concerning invasive carp control efforts in the Illinois River. This project supports ongoing modeling efforts to provide recommendations about the magnitude and spatial allocation of fishing effort and deterrent barriers to reduce the risk of Silver Carp and Bighead Carp introduction and establishment in the Great Lakes.

## October 2024 Highlights

The group involved with the project to expand the SEICarP model to include Pool 26 of the Mississippi River is in the process of reviewing a draft manuscript and determining the next steps for that project. The modeling work group also met with the MRWG co-chairs to discuss the results of these modeling efforts and to solicited feedback.

The modeling work group has also completed some preliminary modeling using the length-based Bayesian method to estimate fishing mortality in the upper Illinois River. Internal discussion will be scheduled to review those results and determine the next steps in that effort.

The modeling work group is also working with the Carterville FWCO, Wilmington Substation on two separate projects to help determine the level of effort necessary to detect invasive carps in the upper ILR. One of these projects is based on an occupancy framework and the other is more community focused. Both projects are underway using existing data.

# BLACK CARP BOUNTY PROGRAM

ILDNR

## Introduction

In 2015, the Black Carp Bounty Program was created to increase the number of black carp specimens made available for research to provide improved information on the status and characteristics of these carp in the Mississippi River and its tributaries. Knowledge of black carp geographic distribution, population characteristics, and diet are needed to inform development of management strategies to control black carp abundance, impacts, and further range expansion.

Nearly all black carp detected in the Mississippi River and tributaries are caught and reported by commercial fishers, largely due to the difficulty in sampling black carp in large rivers and limited agency and university sampling efforts focused on this species. The Black Carp Bounty Program was created to provide a reward of $100 per fish to provide incentive for commercial fishers to target black carp in the wild, report any black carp that they catch to agency biologists, and donate the fish for black carp research.

## October 2024 Highlights

The table below summarizes the total number of Black carps caught since transition of the program from Southern Illinois University to IDNR.

| Month | # of Fish |
|---|---|
| **2023 *** | 11 |
| **2024 Part Year** | - |
| ***January – March*** | 24 |
| ***April*** | 3 |
| ***May*** | 29 |
| ***June*** | 18 |
| ***July*** | 17 |
| ***August*** | 4 |
| ***September*** | 4 |
| **GRAND TOTALS** | 110 |

* Records start July 1, 2023.