



**Monitoring and Response Workgroup (MRWG)**  
**Monthly Activities**  
2021 April Summary

**Bottom Line:** A set of safety protocols developed during the COVID pandemic to ensure safe operations and were carried over into the start of the 2021 field sampling. **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.**

**Overall Summary**

**Pool specific results through April 2021 from all effort within the Upper Illinois Waterway. The same time period in 2019 and 2020 for comparison.** Additional effort may not be reported due to data processing and actual effort and catch could be higher. Check 2021 interim summary, published at the end of the year, for complete results.

*Lockport Pool*

<b>Effort</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
Yards of Net Fished	5,200	0	19,200
Miles of Net Fished	3.0	0.0	10.9
Hoop Net Nights	0.0	0.0	0.0
Mini Fyke Net Nights	0.0	0.0	0.0
Electrofishing Runs	0	0	9
Electrofishing Time (hrs)	0.0	0.0	2.25
Electrified Dozer Trawl Runs	0	0	9
Electrified Dozer Trawl Time (hrs)	0	0	0.75
Total Asian Carp (AC)	0	0	0
Tons of AC Harvested	0	0	0

*Brandon Road Pool*

<b>Effort</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
Yards of Net Fished	4,200	0	24,200
Miles of Net Fished	2.4	0.0	13.7
Hoop Net Nights	0.0	0.0	0.0
Mini Fyke Net Nights	0.0	0.0	0.0
Electrofishing Runs	0	0	19
Electrofishing Time (hrs)	0.0	0.0	4.75
Electrified Dozer Trawl Runs	0	0	15
Electrified Dozer Trawl Time (hrs)	0	0	1.18
Total Asian Carp (AC)	0	0	0
Tons of AC Harvested	0	0	0

*Dresden Island Pool (Including Rock Run Rookery)*

<b>Effort</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
Yards of Net Fished	9,750	0	59,500
Miles of Net Fished	5.5	0.0	33.8
Hoop Net Nights	0.0	0.0	0.0
Mini Fyke Net Nights	0.0	0.0	0.0
Pound net night	0	0	3
Electrofishing Runs	0	0	74
Electrofishing Time (hrs)	0.0	0.0	2.8
Bighead Carp	4	0	17
Grass Carp	0	0	3
Silver Carp	45	0	66
Total AC	49	0	86
Asian Carp (AC) from Rock Run Rookery Lake (RR)	44	0	16
AC upstream I-55 (not in RR)	0	0	4
AC downstream I-55	45	0	66
Tons of AC Harvested	0.4	0.0	0.6
AC/1000 yds of gill net	5.0	0.0	1.3

*Marseilles Pool*

<b>Effort</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
Yards of Net Fished	96,950	37,750	11,650
Miles of Nets Fished	55.1	21.4	6.6
Pound Net nights	0	0	0
Hoop Net nights	0.0	0.0	0.0
Mini Fyke Net Nights	0.0	0.0	0.0
Electrofishing Runs	0	0	0
Electrofishing Time (hrs)	0.0	0.0	0.0
Bighead Carp	323	301	28
Grass Carp	29	0	0
Silver Carp	25,842	15,265	879
Total Asian Carp	26,194	15,566	907
Tons of AC Harvested	140.9	75.0	4.8
AC/1000 yds of gill net	266.0	412.3	77.9

*Starved Rock Pool*

<b>Effort</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
Yards of Net Fished	86,490	11,400	128,650
Miles of Nets Fished	49.1	6.5	73.1
Pound Net nights	0	0	0
Hoop Net nights	0.0	0.0	0.0
Mini Fyke Net Nights	0.0	0.0	0.0
Electrofishing Runs	0	0	1
Electrofishing Time (hrs)	0.0	0.0	1.1
Bighead Carp	147	3	353
Grass Carp	905	94	447
Silver Carp	37,897	8,882	71,414
Total Asian Carp	38,949	8,979	72,214
Tons of AC Harvested	118.6	27.6	194.5
AC/1000 yds of gill net	450.3	787.6	414.3

### **Contracted Fishing Below the Electric Dispersal Barrier**

- Contract fishing took place in Dresden Island, Marseilles, and Starved Rock Pools of the Illinois River Waterway
- Contracted fishers set and pulled 95,300 yards of gill/trammel net
- 29,004 fish representing 28 species and 2 hybrid groups were captured during contracted commercial netting
- 148 Bighead Carp, 241 Grass Carp, and 24,472 Silver Carp were removed
- 99,829 pounds of Asian Carp were removed

Below is a summary of all Illinois Department of Natural Resources (IDNR) contracted fishing activities through April 2021. *For comparison purposes, data from the same time period in 2019 and 2020 are included.*

<b>Effort</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
Number of Days Fished	35	8	34
Number of Net Crew Days	184	48	189
Yards of Net Fished	202,590	49,150	243,200
Miles of Nets Fished	115.1	27.9	138.2
Number of Pound Net Nights	26	0	3
Number of Hoop Net Nights	0.0	0	0.0
Number of Bighead Carp	474	304	398
Number of Silver Carp	63,784	24,147	72,359
Number of Grass Carp	934	94	450
Number of Asian Carp (AC)	64,718	24,545	73,207
Tons of AC Harvested	259.9	102.0	200.0
AC/1000 yds of gill net	319.8	499.4	223.3

### **Dresden Unified Fishing**

During the week of April 26<sup>th</sup>, 2020, a Unified Fishing event was completed in Dresden Island Pool. Multiple agencies and contracted commercial fishing crews fished the entire navigation pool starting at Brandon Road Lock and Dam tail waters to the approach channel downstream of the Dresden Island Lock and Dam. Sampling area also included Rock Run Rookery Lake and the downstream end of the Kankakee River. Crews used several fish driving methods (e.g., banging, revving motors), in conjunction with multiple capture methods (e.g., electrofishing, gill and trammel nets, and a pound net) to capture and remove Asian Carp. Below is a summary of effort and catch during the UFM.

#### *Commercial Netting*

- Contracted commercial fishers with assisting IDNR biologist set 35,600 yards of gill or trammel net
- 1,679 individual fish representing 13 species were captured
- 11 Bighead Carp, 3 Grass Carp and 53 Silver Carp were removed
  - No Asian Carp were captured within the main channel above the I-55 Bridge
  - 60 Asian Carp were removed below the I-55 Bridge
  - 8 Asian Carp were removed from Rock Run Rookery
- 825 pounds of Asian Carp were removed

### *Pound Net*

- Contracted commercial fishers with assisting IDNR biologist set a pound net in the chute connecting Rock Run Rookery and the Dresden Island Pool (throat of the net facing the main channel) for 3 net nights
- The net was regularly tampered with by the general public
- No fish were captured

### *Electrofishing*

- The USFWS and IDNR electrofishing boats to assist in herding fish into contracted commercial fishers gill nets.
- This gear was used to herd fish into nets with 169 minutes of pedal time.
- 1 Silver Carp was observed during driving

### *Shallow Drive Boats*

- The IDNR used one shallow drive boat to herd fish from shallow water areas into contracted commercial fishers gill nets and downstream.
- This gear was used to herd fish into nets and no effort was recorded
- 1 Silver Carp was observed during driving

## **Enhanced Contract Fishing**

In September 2019, the Enhanced Contract Fishing Program was initiated in the Peoria Pool. The program offers Illinois-licensed commercial fishermen \$.10 per pound for Asian carp caught in the Peoria Pool and sold to fish processors or other buyers for at least \$.07 per pound. To date, 31 fishermen have entered into contracts to catch Asian carp from this pool. From inception through the remainder of calendar year 2019, 518,132 pounds of Asian carp were caught in the Peoria Pool, throughout the year 2020 a total of 2,882,725 pound were caught, and to date in 2021 an additional 1,058,259 pounds have been caught for a total of 4,459,115 pounds. Of these total catches, 5.32% are Bighead, 69.33% are Silver and 25.36% are Grass carp. **No Black carp have been reported.**

*Figure 1. Table of Enhanced Contract Fishing – Peoria Pool from inception, September 2019 through April 2021, by receipt date, not catch date.*

<b>YEAR</b>	<b>Total Lbs.</b>	<b>Bighead Carp</b>	<b>Silver Carp</b>	<b>Grass Carp<sup>1</sup></b>
<b>2019<sup>2</sup></b>	518,132	24,813	310,297	183,022
<b>2020</b>	2,882,725	176,195	1,978,501	728,029
<b>2021 (Jan thru April)</b>	1,058,259	36,010	802,666	219,583
<b>GRAND TOTALS</b>	4,459,115	237,017	3,091,464	1,130,634

## **Monitoring Bigheaded Carp Movement and Density in the Illinois River**

SIU assisted USFWS (Wilmington) by implanting 50 acoustic telemetry transmitters into Asian carp (USFWS transmitters) in Alton Pool. SIU also conducted hydroacoustic sampling in Dresden Island Pool before the April Unified Method and in Marseilles Pool. The resulting density heatmaps

<sup>1</sup> No black carp reported.

<sup>2</sup> September 2019 program inception.

depicting Asian carp spatial distributions were shared with MRWG harvest crews to maintain removal efficiency.

**Invasive Bigheaded Carp Early Detection Monitoring Surveys in the Upper Illinois**

**Waterway: Lockport and Brandon Road Pools**

U.S. Fish and Wildlife Service (USFWS) conducted invasive bigheaded carp (Bighead Carp, *Hypophthalmichthys nobilis*; Silver Carp, *H. molitrix*) early detection monitoring (EDM) surveys in Lockport Pool and Brandon Road Pool April 2021. These surveys were designed to monitor for the presence of invasive bigheaded carp in novel areas of the upper Illinois Waterway below the Electric Dispersal Barrier System (EDBS). The Lockport Pool survey was completed on 21 Apr 2021 and covered the area between the EDBS and Lockport Lock and Dam; about 5 river miles. The Brandon Road Pool survey was completed on 22 Apr 2021 and covered the area between Lockport Lock and Dam and Brandon Road Lock and Dam; about 4.25 river miles. All EDM surveys consisted of traditional boat electrofishing and electrified dozer trawling in a combination of main-channel, side-channel, and backwater habitats. Electrofishing was performed in 15-minute sampling periods consisting of repeated passes perpendicular to and toward shore, with one crewmate collecting fish with a handheld dip net. Dozer trawling was conducted in 5-minute sampling periods consisting of s-shaped passes parallel to shore, and with fish collected by a net supported by a rigid frame at the boat’s bow.

*Highlighted results*

- No invasive bigheaded carp were captured by USFWS in April 2021.

**Table 1. Summary of USFWS invasive bigheaded carp early detection monitoring preliminary results from March 2021.** Location is the section of river sampled. Electrofishing effort reports completed hours of two-person traditional boat electrofishing and n is the number of surveys completed. Dozer effort reports completed hours of electrified dozer trawling and n is the number of surveys completed. Small carp captured is the number of bigheaded carp with total length (TL) < 350 mm captured. Large carp captured is the number of bigheaded carp with total length ≥ 350 mm captured. Total fish captured is the total number (N) of fish (all species) captured. Species richness is the count of species captured. Most abundant species is the common name of the fish species that was the largest proportion of total fish captured and n is the number of individuals of that species caught.

Location	Electrofishing Effort (h; n)	Dozer Effort (h; n)	Small carp captured	Large carp captured	Total fish captured (N)	Species richness	Most abundant species
Lockport	2.25 (n = 9)	0.75 (n = 9)	0	0	21	10	Bluntnose minnow (n = 6)
Brandon Road	4.75 (n = 19)	1.18 (n = 15)	0	0	87	13	Smallmouth bass (n = 39)

**Telemetry Support for the Spatially Explicit Asian Carp Population Model (SEACarP)**

During April 2021, Wilmington Fish and Wildlife Service crews conducted a total of one week of effort for the SEACarP telemetry project. Efforts focused on capturing and tagging Silver Carp and implanting with Vemco 69 KHz telemetry tags. Fishing was conducted using an electrified push trawl (dozer trawl) on a shallow drive equipped vessel in Peoria Pool, Illinois River between Peoria Lock and Dam and Staved Rock Lock and Dam. Telemetry tags were successfully implanted in 100 adult Silver Carp (>350 mm total length). An additional 50 telemetry tags were transferred to Southern Illinois University for tagging in Alton Pool, Illinois River as directed by the MRWG Telemetry Workgroup. USFWS plans to maintain stationary telemetry equipment on a monthly basis until hydrophones are pulled for winter in December 2021.

### **Telemetry**

USACE biologists tagged two Common Carp in the Brandon Road Pool and tagged seven Silver Carp and one Bighead Carp in the Dresden Island Pool during the month of April.

### **Barrier Operational and Maintenance Status**

In the month of April, barrier IIB was off for cooling system upgrades. Barriers IIA, and Demo (1D) were operational at this time under their normal operating parameters. Barrier 1 North (1N) successfully completed testing and was integrated into normal barrier operations.

When barriers were operational, they were operating at the following parameters:

- IIA – Narrow (34 Hz, 2.3 ms, 1800 V = 1.7 V/in) & wide (34 Hz, 2.3 ms, 800 V = ~1.0 V/in) arrays operational
- IIB – Not operational, cooling system upgrade
- Barrier 1 Demo (1D) – Full water (5 Hz, 4 ms, 400 V = 1.0 V/in) & benthic (5 Hz, 4 ms, 100V) operational
- Barrier 1 North (1N) – Operational (34 Hz, 2.3 ms, 1700 V = 2.3 V/in)

### **Alternate Pathway Surveillance in Illinois - Law Enforcement**

The Invasive Species Unit assisted Wisconsin DNR and Michigan DNR with cases involving Illinois aquatic life dealers illegally importing live crayfish into their jurisdictions. ISU assisted the USFWS with an injurious species case. ISU identified an Illinois bait dealer who was illegally purchasing wild caught Gizzard shad from a local fisherman and selling them as cut bait. The investigation also revealed the bait dealer was operating without a valid retail aquatic life dealer's license or minnow dealer's license. ISU issued a warning to an Illinois aquaculture facility for operating with an expired permit.