

Monitoring and Response Workgroup (MRWG) Monthly Activities

2021 September Summary

Bottom Line: A set of safety protocols developed during the COVID pandemic to ensure safe operations were carried over into the start of the 2021 field sampling. A large number of small (<6") Grass Carp, and Silver Carp are being collected in the Peoria Reach on down. 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 September 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 true effort and catch could be higher. Check 2021 interim summary, published at the end of the year, for complete results

Lockport Pool

Effort	2019	2020	2021
Yards of Net Fished	45,000	42,800	73,000
Miles of Net Fished	25.6	24.3	41.5
Hoop Net Nights	139.7	105.1	136.7
Mini Fyke Net Nights	22.2	13.8	19.1
Electrofishing Runs	53	53	118
Electrofishing Time (hrs)	13.3	13.3	29.5
Dozer Trawl Runs	0	0	87
Dozer Trawl (hrs)	0.0	0.0	7.3
Total Asian Carp (AC)	0	0	0
Tons of AC Harvested	0	0	0

Brandon Road Pool

Effort	2019	2020	2021
Yards of Net Fished	34,800	47,400	79,000
Miles of Net Fished	19.8	26.9	44.9
Hoop Net Nights	103.0	133.3	136.1
Mini Fyke Net Nights	26.0	15.9	19.0
Electrofishing Runs	48	44	141
Electrofishing Time (hrs)	12.0	11.0	7.8
Dozer Trawl Runs	0.0	0.0	82
Dozer Trawl (hrs)	0	0	6.8
Total Asian Carp (AC)	0	0	0
Tons of AC Harvested	0	0	0

Dresden Island Pool (Including Rock Run Rookery)

Effort	2019	2020	2021
Yards of Net Fished	103,000	71,100	126,900
Miles of Net Fished	58.5	40.4	72.1
Hoop Net Nights	92.3	108.8	135.6
Mini Fyke Net Nights	42.2	46.3	130.3
Pound net night	0	0	3
Electrofishing Runs	50	61	264
Electrofishing Time (hrs)	12.5	15.3	17.1
Dozer Trawl Runs	91	0	193.0
Dozer Trawl (hrs)	7.22	0.0	16.1
Bighead Carp	30	7	18
Grass Carp	3	1	3
Silver Carp	145	114	83
Total AC	178	122	104
Asian Carp (AC) from Rock Run Rookery Lake (RR)	38	10	27
AC upstream I-55 (not in RR)	4*	2*	5
AC downstream I-55	136	110	66
Tons of AC Harvested	1.4	8.0	0.7
AC/1000 yds of gill net	1.7	1.7	0.8

^{*}indicates Grass Carp

Marseilles Pool

_ Effort	2019	2020	2021
Yards of Net Fished	160,300	161,570	149,550
Miles of Nets Fished	91.1	91.8	85.0
Pound Net nights	26	0	0
Hoop Net nights	99.7	131.9	110
Mini Fyke Net Nights	44.3	51.5	52.0
Electrofishing Runs	68	68	46
Electrofishing Time (hrs)	17.0	17.0	11.5
Dozer Trawl Runs	98	0	50
Dozer Trawl (hrs)	8.2	0	4.2
Bighead Carp	911	1,317	1,949
Grass Carp	41	26	37
Silver Carp	31,252	29,933	16,691
Total Asian Carp	32,204	31,276	18,674
Tons of AC Harvested	178.6	169.6	117.1
AC/1000 yds of gill net	197.2	193.3	124.5

Starved Rock Pool

Effort	2019	2020	2021
Yards of Net Fished	288,265	165,380	235,650
Miles of Nets Fished	163.8	94.0	133.9
Pound Net nights	0	0	0
Hoop Net nights	104.3	168.7	98.0
Mini Fyke Net Nights	61.7	68.6	72.0
Electrofishing Runs	99	80	65
Electrofishing Time (hrs)	24.8	20.0	16.3
Dozer Trawl Runs	102	0	29
Dozer Trawl (hrs)	8.51	0	2.4
Bighead Carp	2,049	2,096	701
Grass Carp	2,537	463	677
Silver Carp	128,309	66,521	95,297
Total Asian Carp	132,895	69,080	96,554
Tons of AC Harvested	458.2	199.4	266.4
AC/1000 yds of gill net	455.1	414.9	328.6

Contracted Fishing Below the Electric Dispersal Barrier

- Contracted fishing took place in Lockport, Brandon Road, and Dresden Island Pools of the Illinois River Waterway
- Contracted fishers set and pulled 139,300 yards of gill/trammel net
- 18,143 fish representing 22 species were captured during contracted commercial netting
- 178 Bighead Carp, 55 Grass Carp, and 15,505 Silver Carp were removed
- 106,373 pounds of Bighead, Grass and Silver Carp were removed

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

<u>Effort</u>	2019	2020	2021
Number of Days Fished	114	79	97
Number of Net Crew Days	511	420	520
Yards of Net Fished	631,365	488,250	664,100
Miles of Nets Fished	358.7	277.4	377.3
Number of Pound Net Nights	26	0	3
Number of Hoop Net Nights	0.0	0	0.0
Number of Bighead Carp	2,985	3,420	2,667
Number of Grass Carp	2,558	470	710
Number of Silver Carp	157,842	96,088	111,677
Number of Carp	163,385	99,978	115,054
Tons of AC Harvested	638.3	369.9	384.2
AC/1000 yds of gill net	258.1	204.8	144.8

Multiple Agency Monitoring

- Lockport, Brandon, Dresden, Marseilles, Starved Rock, and Peoria pools of the Illinois River Waterway were monitored by the United States Army Corps of Engineers (USACE), IDNR, and Illinois Natural History Survey (INHS).
- All assigned samples were collaboratively collected within each pool by each gear type during period two (Table 1).
- 15,853 individual fish representing 61 species and 5 hybrid groups have been identified
 - Many samples still being processed (Figure 1).
- 3,605 Bighead Carp, Grass Carp, and Silver Carp were detected (Figure 2)
 - 3,256 small (< 6 inches)
 - Thousands more small individuals jugged to be processed later
 - 290 large (> 6 inches)
- Furthest upriver large Bighead Carp, Grass Carp, or Silver Carp were detected was in Rock Run Rookery
 - o River mile 282 (41.46715, -88.16922)
- Furthest upriver small Bighead Carp, Grass Carp, or Silver Carp were detected was in Peoria Pool
 - o River mile 210 (41.2924, -89.3435)

Table 1. Number of samples collected by gear type and pool during the second monitoring period.

Gear	Lockport	Brandon	Dresden	Marseilles	Starved Rock	Peoria
Electrofishing	15	12	24	31	35	45
Large Hoop	14	14	14	14	14	14
Small Hoop	14	14	14	14	14	14
Fyke Net	0	0	5	5	5	10
Minnow Fyke	8	8	24	24	24	24



Figure 1. Catch from a single minnow fyke packed full with fish.

USACE

Traditional Monitoring – During the month of September, USACE biologists conducted twenty-seven 15-minute electrofishing runs downstream of the barrier. Ten sites were in Lockport Pool, eleven sites were in Brandon Road Pool, and six sites were in Dresden Island Pool. Within the Lockport Pool, 1052 individuals were captured across 12 species. Within the Lockport Pool the five most abundant species captured were emerald shiner (43.5%), gizzard shad under 6 inches (37.2%), bluntnose minnow (8.75%), gizzard shad over 6 inches (5.89%), and spotfin shiner (1.24%). Within the Brandon Road Pool, 1067 individuals were captured across 23 species. The five most abundant species found were gizzard shad over 6 inches (42.5%), gizzard shad under 6 inches (23%), emerald shiner (20%), common carp (3.28%), and smallmouth bass (3.09%). In Dresden Island Pool, 1008 individuals were caught across 30 species. The five most abundant species captured were gizzard shad under 6 inches (60.8%), emerald shiner (13.2%), gizzard shad over 6 inches (6.25%), bluegill sunfish (5.65%), and largemouth bass (1.79%). No invasive carp were captured during the month of September.

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, 30 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 2,450,451 pounds have been caught for a total of 5,851,301 pounds. Of these total catches, 6.16% are Bighead, 70.15% are Silver and 23.69% are Grass carp. **No Black carp have been reported.**

Table 2. Table of Enhanced Contract Fishing – Peoria Pool from inception, September 2019 through September 2021. By receipt date, not catch date

YEAR	Total Lbs.**	Bighead	Silver	Grass
2019 *	518,132	24,813	310,297	183,022
2020	2,882,725	176,195	1,978,501	728,029
2021 (Jan thru September)	2,450,451	159,540	1,816,048	474,863
GRAND TOTALS	5,851,308	360,548	4,104,846	1,385,914

^{*} September 2019 program inception.

Monitoring of Asian carp Reproductive Productivity

INHS collected ichthyoplankton samples at 7 main channel sites located from the Brandon Road to LaGrange navigation pools during the weeks of September 6 and September 20. A minimum of four larval fish samples were collected at each site. Additional samples were collected in Illinois River tributaries to evaluate the potential for Asian carp spawning in these rivers. As the period when Asian carp are most likely to spawn has passed, sampling will be conducted every two weeks until October, unless any change in environmental conditions that might trigger Asian carp spawning (i.e. substantial increase in discharge) occurs. Quantitative PCR (qPCR) screening of ichthyoplankton samples will also not occur for the remainder of the year unless conditions indicate that it may be necessary to rapidly identify samples that may contain Asian carp eggs or larvae.

Illinois Waterway water temperatures were above 21°C during the entire month of September, exceeding the threshold that allows for Asian carp spawning. However, water levels were generally low and stable throughout September. Initial inspection of samples collected in September did not indicate the occurrence of any mass spawning events, but accurate assessment of any Asian carp reproductive output will require full processing of all samples. Sample processing and identification of larval fish and eggs is ongoing. Any additional occurrences of Asian carp eggs or larvae, particularly upstream of Starved Rock L&D, will be reported as soon as this information is available.

Zooplankton as Dynamic Assessment Targets for Asian carp Removal

INHS collected zooplankton and water chemistry samples at 11 main channel and backwater sites located in the Brandon Road to LaGrange navigation pools during the weeks of September 6 and September 20. The collected data will be combined with historical and recent data on Illinois Waterway zooplankton communities to inform management agencies of the ecosystem responses to Asian carp removals and develop dynamic targets for diminishing the ecological impacts of Asian carp.

Monitoring Bigheaded Carp Movement and Density in the Illinois River

Fish communities were sampled in Alton, LaGrange, and Peoria pools using gillnets and electrofishing to inform fall hydroacoustic analyses. Telemetry data were also downloaded from stationary acoustic telemetry receivers in Starved Rock, Marseilles, and Dresden Island pools. Data are being processed for QA/QC before being submitted to the FishTracks database.

^{**} No Black carp reported.

Hydroacoustic Fish Surveys at the Electric Fish Dispersal Barrier System, Romeoville, IL

The U.S. Fish and Wildlife Service conducted one mobile hydroacoustic fish survey this month at the Electric Dispersal Barrier System (EDBS) on September 13, 2021. A second survey scheduled for September 27, 2021 was cancelled due to a scheduling conflict with another survey. The survey was conducted to monitor for the presence and distribution of fishes greater than 12" (30.5 cm) total length in the vicinity of the EDBS to aide in assessing the risk of large fish—and potentially Bighead or Silver Carp—passing through the EDBS during barrier operational changes and/or maintenance. However, it is important to note that hydroacoustic technology does not distinguish or identify fish species, and therefore fish detected should not be assumed to be a particular species. Hydroacoustic surveys covered the area between Hanson Material Services Corporation docking slip, approximately 1.3 km below the Romeo Road Bridge, to the upstream side of the Demonstration Barrier (0.6 km above Romeo Road Bridge). For reporting purposes, Romeo Road Bridge is treated as the dividing line between the areas referred to as "within the EDBS" and "downstream of the EDBS."

Preliminary Results:

Sept 13, 2021:

Two large fish ≥ -28.7 dB were detected within the EDBS on September 13, 2021, one between Barrier IIA and IIB during Replicate Survey #2, and one between Barrier IIB and Barrier I during Replicate Survey #3. Three large fish ≥ -28.7 dB were detected downstream of the EDBS in a similar area, two of which were detected in during Replicate Survey #1 and one during Replicate Survey #3, making it likely that one of these fish was detected twice. As a note, hydroacoustic data collected during all three replicate surveys contained considerable levels of interference (potentially due to debris in the water column), resulting in substantial portions of data being removed during processing.

<u>Hydroacoustic Fish Surveys of the upper Illinois Waterway: Dresden Island, Brandon Road, and Lockport Pools</u>

The U.S. Fish and Wildlife Service conducted mobile hydroacoustic fish surveys in Dresden Island, Brandon Road, and Lockport pools from September 1-3, 2021. These pool surveys were designed to monitor for the abundance of large fishes—potentially Bighead or Silver Carp— with target strength (TS) greater than -28.7 dB (theoretical side-aspect TS of a 12" (30.5 cm) total length fish) within the upper Illinois Waterway. The hydroacoustic survey in Lockport Pool covered the area between the Romeo Road Bridge and Lockport Lock & Dam (6.5 km). The hydroacoustic survey in Brandon Road Pool covered the area between Lockport Lock & Dam and Brandon Road Lock & Dam (7.2 km). Lastly, the hydroacoustic survey in Dresden Island Pool covered the area between Brandon Road Lock & Dam and Dresden Island Lock & Dam (23 km). In all pools, surveys were conducted with paired 200-kHz, side-facing transducers and consisted of one continuous transect along each shoreline with the boat following the contour of the main channel edge and the transducers pointed outwards towards the main channel.

Preliminary Results:

Lockport Pool:

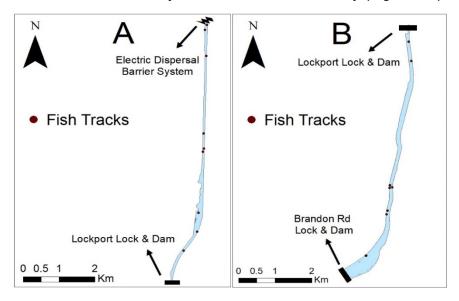
Nine (9) fish tracks corresponding to fish > 12" were detected in Lockport Pool in 1,646,535 m³ of water on September 2, 2021. Mean TS of fish tracks was -24.7 dB (SE = 0.75). Fish tracks were similarly grouped throughout the pool, with three tracks located in the downstream third, three in the middle third, and three in the upstream third approaching the electric barriers (Figure 2A).

Brandon Road Pool:

Eleven (11) fish tracks corresponding to fish > 12" were detected in Brandon Road Pool during the survey in 862,726 m³ of water on September 3, 2021. Mean TS of fish tracks was -24.8 dB (SE = 1.31). Nine of the eleven fish tracks detected were located in the downstream half of the pool (Figure 2B)

Dresden Island Pool:

One hundred eighty-seven (187) fish tracks corresponding to fish > 12" were detected in Dresden Island Pool in 2,447,038 m^3 of water on September 1, 2021. Mean TS of fish tracks was - 25.4 dB (SE = 0.18). Areas of greatest fish abundance were upstream of the confluence with the Kankakee River and adjacent to Rock Run Rookery (Figure 2C).



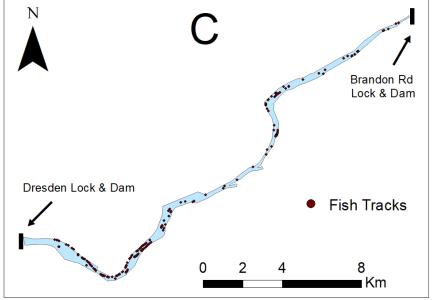


Figure 2: Locations of fish tracks detected from hydroacoustic surveys in Lockport (A), Brandon Road (B), and Dresden Island (C) pools of the Upper Illinois Waterway during September 2021. Note: In Brandon Road, eleven fish tracks were detected, but only eight are visible on the map due to overlap with other tracks.

Invasive Bigheaded Carp Early Detection Monitoring Surveys in the Upper Illinois Waterway: Lockport, Brandon Road, and Dresden Island Pools, and the Lower Kankakee River

U.S. Fish and Wildlife Service (USFWS) conducted invasive carp (Bighead Carp. Hypophthalmichthys nobilis; Silver Carp, H. molitrix; Black Carp, Mylopharyngodon piceus; Grass Carp, Ctenopharyngodon idella) early detection monitoring (EDM) surveys in Lockport Pool, Brandon Road Pool, Dresden Island Pool, and the lower Kankakee River during September 2021. These surveys were designed to monitor for the presence of invasive carps in novel areas of the upper Illinois Waterway below the Electric Dispersal Barrier System (EDBS). The Lockport Pool surveys were completed on 23 September 2021 and covered the area between the EDBS and Lockport Lock and Dam (~5 river miles). The Brandon Road Pool surveys were completed on 7 September 2021 and covered the area between Lockport Lock and Dam and Brandon Road Lock and Dam (~4.25 river miles). The Dresden Island Pool surveys were completed on 17 September 2021 and covered the area between Brandon Road Lock and Dam and Dresden Island Lock and Dam (~13.5 river miles). The Kankakee River surveys were completed on 28 September 2021 and covered the area between the first rail bridge above Kankakee Conservation Area Boat Launch and the Kankakee's confluence with the Illinois Waterway (~4.25 river miles). Where possible, EDM surveys consisted of traditional boat electrofishing, electrified dozer trawling, and mini-fyke net sets 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 two crewmates collecting fishes with a handheld dip net. Dozer trawling was conducted in 5-minute sampling periods consisting of s-shaped passes parallel to shore, and with fishes collected by a net supported by a rigid frame at the boat's bow. Wisconsin-type mini-fyke nets with 24' leads and 1/8" mesh were staked against the shoreline and fished overnight.

Highlighted results:

- No small-bodied (< 153 mm total length; TL) invasive carp were captured by USFWS in September 2021.
- No large-bodied (≥ 154 mm TL) invasive carp were captured outside their known range by USFWS in September 2021.
- One Grass Carp (982 mm TL) was captured in Brandon Road Pool.

Table 3. Summary of USFWS invasive carp early detection monitoring preliminary results from September 2021. "Location" refers to the section of river sampled. "Electrofishing effort" reports completed hours of two-person traditional boat electrofishing and n_e is the number of surveys completed. "Dozer effort" reports completed hours of electrified dozer trawling and n_d is the number of surveys completed. "Mini-fyke effort" reports the number of overnight net sets completed and n_n is net nights. "Small carp captured" is the number of invasive carp with total length (TL) < 153 mm captured. "Large carp captured" refers to the number of invasive carp with total length ≥ 154 mm captured. "Total fish captured" refers the total number (N) of individual fishes (all species) captured. "Species richness" refers to the count of species captured. "Most abundant species" refers to the common name of the fish species that was the largest proportion of total fish captured and n_i is the number of individuals of that species captured.

Location	Electrofishing Effort (h; n _e)	Dozer Effort (h; n _d)	Mini-fyke Effort (n _n)	Small carp captured	Large carp captured	Total fish captured (N)	Species richness	Most abundant species
Lockport	5.5 h; n _e = 22	0 h; n _d = 0	0	0	0	1311	23	Gizzard shad (n _i = 966)
Brandon Road	5.0 h; n _e = 20	0 h; n _d = 0	0	0	1 Grass Carp (982 mm TL)	1531	24	Gizzard shad (n _i = 1244)
Dresden Island	7.5 h; $n_e = 30$	0 h; n _d = 0	$n_n = 20$	0	0	3723	42	Gizzard shad $(n_i = 1542)$
Kankakee	6.75 h; n _e = 27	$0 h;$ $n_d = 0$	$n_{\rm n} = 10$	0	0	2598	50	Gizzard shad (n _i = 1345)

Invasive Carp Demographics

In September 2021, the U.S. Fish and Wildlife Service – Columbia Fish and Wildlife Conservation Office continued the fourth year of a fisheries-independent, standardized protocol to collect Invasive carp biological data for purposes of monitoring and population assessment. Data collections include Silver Carp length and sex structure, maturity status, and relative abundance during spring and fall in six pools of the Illinois River: Alton, LaGrange, Peoria, Starved Rock, Marseilles, and Dresden Island. During the weeks of September 6th, 13th, 20th, and 27th, electrified dozer trawl crews deployed to the Alton, LaGrange, Peoria, Starved Rock, Marseilles, and Dresden Island pools. A total of 1,538 Silver Carp were captured in in these six pools, and sizes ranged from 75mm-920mm in the six pools sampled in September (Table 4). Sex and maturity were evaluated on all Silver Carp captured and lapilli otolith age structures were collected from 800 Silver Carp. Age and growth data are pending laboratory ageing.

Pool	Total Silver Carp Captured	•	Mean CPUE (Silver Carp /5 min trawl)	Standard Error	Silver Carp Size Range (mm)
Alton	406	24	8.2771	0.872286	75-760
LaGrange	338	27	16.64876	2.707201	360-790
Peoria	552	30	14.20356	2.46789	85-740
Starved Rock	194	29	6.964257	0.932998	555-751
Marseilles	48	50	0.951961	0.285355	300-920
Dresden Island	0	50	0	NA	NA

Telemetry

USACE

USACE biologists downloaded the network of telemetry receivers in September. Post download analysis of the 28 receivers in the network indicated that no fish transited between any of the navigation pools that USACE monitors. There was also no indication that any Bighead or Silver carp approached Brandon Road Lock or transited upstream of it. The next download of the full receiver network will be in November. This will also be the time when the network of receivers is reduced to a skeleton network for the winter. Only those receivers deemed critical will continued to be deployed during the winter, primarily those around locks and dams and the electric dispersal barrier.

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

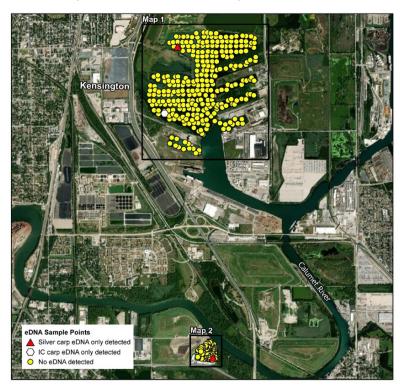
During September 2021, a Wilmington Fish and Wildlife Service crew conducted a total of two days of effort for the SEACarP telemetry project. Efforts focused on maintaining and downloading data from stationary telemetry equipment. All receivers were recovered, downloaded, and redeployed in the same locations.

Table 5. Detections of fish at each receiver location in the Peoria Pool. Receiver = serial number, Station name = combination of river mile (RM) and geographic/visual location information, # Fish = number of unique tagged individuals, # Detections = number of recorded detections by a receiver.

Receiver	Station Name	# Fish	# Detections
VR2W-129785	RM166.6 Peoria Lake Narrows	0	0
VR2W-129781	RM182.4 US Chilli Bridge_Peninsula	0	0
VR2W-129779	RM188.1 DS Lacon_MC Sawyer Slough	10	19166
VR2W-129787	RM194.8 US Upper Henry Island	4	13646
VR2W-137063	RM202.7 Lower Twin Sisters Island	1	160
VR2W-137065	RM216 US of Clark Island	2	191
Totals		16	33163

Strategy for eDNA monitoring in the CAWS

During the week of September 27, USFWS collected 400 eDNA water samples (440 including field blanks) above the electric dispersal barrier, specifically in Lake Calumet and the Marine Services marina on the Little Calumet River. Of the 300 samples collected in Lake Calumet, one sample was positive for Invasive carp DNA (bigheaded carp detection but not specific to species) and one was positive for Silver carp DNA. That is 0.6% positive detections, which is a slight increase from the Spring 2021 and Fall 2019 which had zero detections, however it is lower than the 2.2% positive detections observed in Spring 2019. In the Marine Services Marina on the Little Calumet River, one sample was positive for Silver Carp DNA, which was 1% of the samples collected from that site. This is a slight increase from previous samplings in that area which have all had zero positive detections. Although this is the first time that we have detected DNA in the marina, the site does harbor boats with ballast water compartments and is also next to "trash mountain" which hosts thousands of gulls. Seasonal intensive monitoring was conducted in both areas the two weeks following our eDNA sampling, during which no live bighead or silver carp were captured or observed. Given this information, there is a higher likelihood that the positivity resulted from secondary vector contributions to the system.



Barrier Operational and Maintenance Status

In the month of September, barrier IIB was off for cooling system upgrades and periodic outages were experienced at the other barriers, but at no time was there not at least one barrier providing power to the water.

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 (ID) 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)

September 29/30 – Barrier 1N experienced an outage between 11:48 on September 29th through 15:00 on September 30th. At the time of the outage barriers 2A and 1D were operating as normal.

September 30 – Barrier 1N experienced a series of outages as listed: between 16:13 and 17:00, 20:34 and 21:31, and 22:25 and 05:15 (October 1). Barriers 2A and 1D were operational at all times during this series of outages.

<u> Alternate Pathway Surveillance in Illinois - Law Enforcement</u>

ISU cited an Asian food market in Chicago for the unlawful possession of a live non-approved species, Asian swamp eels. The store did not have the required aquatic life dealer's license to sell aquatic life in Illinois and previously sold a large amount of live aquatic life that was illegally released into Illinois waters during a cultural release ceremony. Sales invoices obtained during the investigation identified the New York company importing the live Asian swamp eels into Illinois. ISU provided the store manager IDNR aquatic life regulations and licensing requirements. ISU received credible information of the illegal importation of live injurious species into Illinois for food purposes. One individual interviewed by ISU admitted ordering the injurious species and provided information on the out of state supplier. The investigation is ongoing.