

2018 October Summary

Bottom Line: Multiple agencies participated in monitoring Asian Carp in the upper Illinois Waterway downstream of the Electric Dispersal Barrier during October. **NO LIVE BIGHEAD CARP, BLACK CARP, GRASS CARP, or SILVER CARP were found in any new locations immediately downstream of the Electric Dispersal Barrier.**

Fixed, Random, and Targeted Site Sampling Downstream of the Electric Dispersal Barrier

Commercial Netting:

- Contracted commercial fishers along with assisting Illinois Department of Natural Resources (IDNR) biologists set 22.7 miles of gill net at fixed and targeted sites in the Lockport, Brandon Rd and Dresden Island Pools (including Rock Run Rookery) in October.
- Crews collected 958 individual fish representing 17 species during October.
- Fifty-six Bighead Carp and 180 Silver Carp were collected in Dresden Island Pool, downstream of I-55 during October.
- No Bighead Carp, Black Carp, Grass Carp or Silver Carp were collected above I-55 in Dresden Island during commercial netting during October.
- One Bighead Carp and 7 Silver Carp were collected in Rock Run during commercial netting during October.
- **No Bighead Carp, Black Carp, Grass Carp or Silver Carp were captured or observed in Lockport or Brandon Road Pools during October.**

Electrofishing:

- Crews from IDNR, United States Fish and Wildlife Service (USFWS) and United States Army Corps of Engineers (USACE) completed 42 electrofishing runs at fixed and random sites (10.5 hours total) in Lockport Pool, Brandon Road Pool, Dresden Island Pool, and Marseilles Pool during October.
- They collected 3,066 individual fish representing 46 species and 2 hybrid group.
- **One Bighead Carp and 1 Silver Carp were captured in the Dresden Island Pool below I-55 bridge during electrofishing.**
- **No Bighead Carp, Black Carp, Grass Carp or Silver Carp were captured in the Marseilles pool during electrofishing.**

Hoop and Mini Fyke Netting:

- Crews from IDNR set and pulled 16 hoop nets and 16 mini fykes from fixed sites in Lockport, Brandon Road, Dresden Island, and Marseilles Pools in October.
- Crews collected 17 individual fish representing 6 species during hoop net sampling and 442 individual fish representing 21 species during mini fyke sampling.
- **No Bighead Carp, Black Carp, Grass Carp or Silver Carp were reported, captured, or observed during hoop net sampling in the Lockport, Brandon Road, Dresden Island, or Marseilles Pools during October.**
- **No Bighead Carp, Black Carp, Grass Carp or Silver Carp were captured, reported, or observed during mini fyke sampling in Lockport, Brandon Road, Dresden Island, or Marseilles Pools during October.**

Sampling results by pool below the electric dispersal barrier through October 2018, along with the same time period in 2016 and 2017 for comparison:

Lockport Pool

	2016	2017	2018
Yards of Net Fished	89,375	75,600	72,300
Miles of Net Fished	50.8	43.0	41.1
Hoop Net Nights	53.2	46.6	48.8
Mini Fyke Net Nights	26.0	25.2	24.9
Electrofishing Runs	103	118	157
Electrofishing Time (hrs)	25.8	29.5	6.8
Total Asian Carp (AC)	0	0	0
Tons of AC Harvested	0	0	0

Brandon Road Pool

	2016	2017	2018
Yards of Net Fished	81,825	88,600	70,400
Miles of Net Fished	32850.0	50.3	40.0
Hoop Net Nights	53.5	50.3	47.1
Mini Fyke Net Nights	26.1	27.1	22.7
Electrofishing Runs	104	117	144
Electrofishing Time (hrs)	26.0	29.3	6.0
Total Asian Carp (AC)	0	0	0
Tons of AC Harvested	0	0	0

Dresden Island Pool

	2016	2017	2018
Yards of Net Fished	77,625	119,000	182,500
Miles of Net Fished	44.1	67.6	103.7
Hoop Net Nights	53.7	343.3	44.3
Mini Fyke Net Nights	27.8	30.9	23.7
Electrofishing Runs	199	172	189
Electrofishing Time (hrs)	49.8	43.0	28.8
Asian Carp (AC) upstream I-55	13	28	7
AC downstream I-55	287	563	1,435
Total AC	300	591	1,442
Tons of AC Harvested	2.0	4.9	11.9
AC/1000 yds of gill net	3.4	5.5	7.9

Rock Run Rookery

	2016	2017	2018
Yards of Net Fished	47,525	36,800	34,000
Miles of Net Fished	27.0	20.9	19.3
Pound Net nights	0	4	8
Bighead Carp	131	176	60
Silver Carp	34	49	58
Total Asian Carp (AC)	165	225	118
Tons of AC Harvested	2.6	3.6	1.6
AC/1000 yds of gill net	3.5	6.0	3.2

Unified Fishing Method (UFM) – Dresden Island Pool

During the week of October 15th, 2018 a Unified Fishing Method event was completed in the Dresden Island Pool. Multiple agencies and contracted commercial fishing crews fished the entire navigation pool beginning 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., complex noise, banging, revving motors), in conjunction with multiple capture methods (e.g., electrofishing, gill and trammel nets, paupier, 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 along with assisting IDNR biologists set 17.8 miles of gill/trammel net during the Dresden Island Pool UFM (including Rock Run Rookery and the Kankakee River).
- Crews collected 1,621 individual fish representing 19 species.
- **Three Silver Carp were collected upstream of I-55 (~0.5 miles downstream of the casino).**
- **One Bighead Carp and 4 Silver Carp were collected in Rock Run Rookery.**
- **Fifteen Bighead Carp, 182 Silver Carp and 4 Grass Carp were collected downstream of I-55.**
- **Fourteen Bighead Carp, 67 Silver Carp and 3 Grass Carp were collected in the Kankakee River.**

Pound Net:

- Contracted commercial fishers with an assisting IDNR biologist set a pound net in the chute that connects Rock Run Rookery and the Dresden Island Pool (the throat of the net faced towards the main channel) for 4 net nights.
- The crew collected 276 individual fish representing 16 species.
- **No Bighead Carp or Silver Carp were collected with the pound net during the UFM.**

Paupier:

- The U.S. Fish and Wildlife Service – Columbia Fish and Wildlife Conservation Office used a paupier boat to serve as a “sweep” boat to target areas identified as having concentrations of fish after contracted commercial fisher gill nets fished an area in addition to herding fish into contracted commercial fisher gill nets.
- The paupier fished a total of 5.5 hours pedal time covering approximately 17 miles of water.
- Efforts captured 128 individual fish representing 18 species (Table 1).
- **One Silver Carp was collected with the paupier in the Kankakee River during the UFM.**

Table 1. Species, number of fish, and size ranges of fish captured with the paupier on October 16-18, 2018 as part of the Unified Fishing Event in the Dresden Island Pool.

Species	Minimum length, mm	Maximum length, mm	Number of Fish Captured
Black Crappie	302		1
Bigmouth Buffalo	556	735	2
Bowfin	550		1
Common Carp	496	515	2
Freshwater Drum	312	676	4
Golden Redhorse	355	550	37
Golden Shiner	193		1
Gizzard Shad	210	398	34
Largemouth Bass	165	382	6
Longnose Gar	393	1030	2
River Carpsucker	460		1
Shorthead Redhorse	405	449	3
Smallmouth Buffalo	328	847	28
Smallmouth Bass	400		1
Silver Carp	854		1
Silver Redhorse	464		1
Walleye	426	495	2
White Crappie	286		1

Electrofishing:

- The USACE used an electrofishing boat to assist in herding fish into contracted commercial fishers gill nets.
- No effort or catch was recorded.

Shallow Drive boats

- The Illinois Natural History Survey - Illinois River Biological Station used one shallow drive boat and one air boat to assist in herding fish from shallow water areas into contracted commercial fishers gill nets and downstream.
- These gears were not used to capture individuals thus no effort was recorded.

Shallow Drive boats

- The United States Geological Survey- Columbia Environmental Center used two boats equipped with complex noise speakers to herd fish into contracted commercial fisher gill nets and prevent fish from moving back up stream.

Asian Carp Removal Project

Removal takes place specifically in the Marseilles and Starved Rock Pools. Below is a summary of all IDNR Barrier Defense activities through October 2018, along with the same time period in 2016 and 2017 for comparison:

Overall

	2016	2017	2018
Number of Days Fished	88	77	79
Number of Net Crew Days	622	595	525
Yards of Net Fished	457,825	399,185	345,500
Miles of Nets Fished	260.1	226.8	196.3
Number of Pound Net Nights	67	74	22
Number of Hoop Net Nights	768.7	953.8	1628.8
Number of Bighead Carp	7,626	2,564	2,980
Number of Silver Carp	118,603	121,410	108,094
Number of Grass Carp	579	848	1032
Number of Asian Carp (AC)	126,808	124,822	112,106
Tons of AC Harvested	441.8	427.3	426.4
AC/1000 yds of gill net	245.8	276.1	308.0

Marseilles Pool

	2016	2017	2018
Yards of Net Fished	318,975	235,435	144,800
Miles of Nets Fished	181.2	133.8	82.3
Pound Net nights	67	74	22
Hoop Net nights	136.5	98.0	271.4
Mini Fyke Net Nights	25.5	28.0	23.7
Electrofishing Runs	132	121	144

Electrofishing Time (hrs)	33.0	30.3	27.0
Bighead Carp	5,669	1,479	1,371
Silver Carp	53,475	37,161	31,489
Grass Carp	94	68	42
Total Asian Carp	59,238	38,708	32,902
Tons of AC Harvested	256.4	171.3	157.5
AC/1000 yds of gill net	155.5	156.9	217.7

Starved Rock Pool

	2016	2017	2018
Yards of Net Fished	138,850	163,750	200,700
Miles of Nets Fished	78.9	93.0	114.0
Hoop Net nights	683.1	905.1	1403.7
Bighead Carp	1,977	1,093	1,611
Silver Carp	66,054	84,694	76,682
Grass Carp	516	799	998
Total Asian Carp	68,547	86,586	79,291
Tons of AC Harvested	189.3	262.5	269.3
AC/1000 yds of gill net	453.3	447.4	373.2

Ecosystem Response to Asian Carp Barrier Defense and Removal

Illinois Natural History Survey collected zooplankton and water chemistry samples at 15 main channel and backwater sites located in the Brandon Road, Dresden Island, Marseilles, Starved Rock, Peoria, LaGrange, and Alton Pools during the week of October 1. This concludes sampling for the Ecosystem Responses project for 2018. The collected data will be compared to previous years' data from the same locations and will be used to assess changes in zooplankton densities and community composition in response to changing Asian carp densities.

Evaluation of Gear Efficiency

Illinois Natural History Survey sampled for juvenile Asian carp using several gear types (mini-fyke nets, beach seines, pulsed-DC electrofishing, dozer trawl) at four sites in the LaGrange Pool during the week of October 8, 2018. A total of 5,754 fish were captured during these efforts, including 77 age-0 Silver Carp (24-140 mm TL). Mini-fyke nets captured the highest numbers of total fish (n = 3,703) and the majority of age-0 Silver Carp (n = 71). Of the remaining gears, total numbers of fish declined from beach seines (n = 1,149) to pulsed-DC electrofishing (n = 621) to dozer trawls (n = 281). Beach seines captured 6 age-0 Silver Carp, but electrofishing and dozer trawls did not capture any juveniles Silver Carp. Catches of age-0 Silver Carp during this week were considerably lower than that of identical sampling efforts during July (n = 51,558). A similar pattern was observed during 2017, although higher numbers of juvenile Silver Carp were captured

during the fall sampling period than during summer in 2015 and 2016. The broad and multimodal length distribution that was observed among captured Silver Carp suggests the presence of multiple age-0 cohorts in the Illinois River at this time. Additional analyses of length distributions, comparisons to earlier egg, larval, and juvenile densities, and examination of relationships between environmental variables and age-0 Silver Carp abundances are ongoing and will be reported once available.

Larval Fish Monitoring

The Illinois Natural History Survey conducted ichthyoplankton sampling at 12 main channel and backwater sites located in the Brandon Road, Dresden Island, Marseilles, Starved Rock, Peoria, and LaGrange Pools during the week of October 1. 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. Processing and analysis of all samples is ongoing, and more detailed results will be reported once available. October is the final month for ichthyoplankton sampling in the Illinois Waterway for 2018.