

May Summary

Bottom Line: Monitoring occurred in the CAWS and upper Illinois Waterway downstream of the Electric Dispersal Barrier in May. **NO BIGHEAD CARP OR SILVER CARP were any found in new locations downstream of the Electric Dispersal Barrier.**

Fixed and Random Site Sampling Downstream of the Dispersal Barrier

Site A: Lockport Pool – Lockport Lock and Dam to Electric Barrier

Site B: Brandon Road Pool – Brandon Road Lock and Dam to Lockport Lock and Dam

Site C: Dresden Island Pool – I-55 Bridge to Brandon Road Lock and Dam

Site D: Marseilles Pool – Rt. 47 Bridge (Morris) to Dresden Lock and Dam

Electrofishing:

- Crews from IDNR, USFWS, and U.S. Army Corps of Engineers (USACE) completed 32 electrofishing runs at fixed locations (8 hours total) and 64 runs at randomly selected locations (16 hours total) in the Lockport, Brandon Road, Dresden Island, and Marseilles pools downstream of the Barrier during the weeks of April 28 and May 12.
- Crews collected 2695 fish of 48 species and 2 hybrid groups during electrofishing.
- No Bighead or Silver Carp were reported captured or seen during electrofishing in the Lockport, Brandon Road, Dresden Island. 53 Silver Carp (42 on 4/29-5/1, 11 on 5/13) and 2 Grass Carp were collected during sampling at fixed and random sites in the Marseilles Pool. Additionally about 41 Silver Carp were observed but not captured during electrofishing runs on 4/29-5/1, and >200 were observed on 5/13.
- On 5/13 an IDNR electrofishing crew observed numerous Silver Carp (>200) in or immediately adjacent to heavy current directly downstream of the Dresden Island Dam (in the Marseilles Pool). Silver Carp are usually not observed or captured in this area outside of spawning season. Most were upstream of the railroad bridge (less than 1 mile downstream of dam), however Silver Carp (<30) were also observed jumping in the main channel behind the boat from the railroad bridge downstream to Sugar Island (about 10 miles downstream of Dam). Water temperature was about 20.5 degrees Celsius and flow was high. Most Silver Carp captured on 5/13 were estimated to be stage 4-5 males. Only one female was captured and was estimated to be stage 4.

Netting:

- Two contracted commercial fishing crews and assisting IDNR biologists set 3.40 miles of net (30 sets) at fixed sites and 12.27 miles of net (108 sets) at random and additional sites within the four pools downstream of the Barrier during the weeks of April 29 and May 13.
- No Bighead or Silver Carp were reported captured or seen during commercial netting in the Lockport, and Brandon Road Pools.
- Three Silver Carp, 2 Bighead Carp, and 1 Grass Carp were collected at fixed and random sites in the Dresden Island Pool. All were downstream of I-55 except one Silver Carp near Rock Run Rookery and one Bighead Carp at fixed site 4 (Mobil Bay – just upstream of I-55).
- Thirty-four Silver Carp, 30 Bighead Carp, and 4 Grass Carp were collected at fixed and additional sites (Peacock Slough) in the Marseilles pool near Morris.
- Rock Run Rookery was not fished during the weeks of April 29 and May 13.

Hoop and Mini Fyke Netting:

- Crews from IDNR set and pulled hoop nets (6' diameter) in Lockport, Brandon Road, Dresden Island, and Marseilles pools downstream of the barrier during the week of May 19. One Silver Carp was captured in hoop net 1 in the Marseilles Pool (Just downstream of Dresden Island Dam). No Bighead Carp were captured.
- IDNR crews set and pulled mini fyke nets in Lockport, Brandon Road, Dresden Island, and Marseilles pools downstream of the barrier during the week of May 19. No Bighead or Silver Carp were captured in mini fyke nets.

Barrier Defense Asian Carp Removal Project

In May, barrier defense occurred the weeks of the 5th and 19th. Modified from previous years, barrier defense specifically takes place in the Marseilles and Starved Rock Pools. Also in 2014, contracted commercial fisherman are deploying and fishing modified 6 foot diameter hoop nets in the main channel border and side channel habitats. These habitats have been difficult to fish with gill and trammel nets. Below is a summary of the barrier defense activities including hoop netting totals for 2014.

QUICK SUMMARY:		
Number of Days Fished	20	days
Number of Net Crews	112	crew-days
Yards of Net Fished	188750	Yards
Miles of Nets Fished	107.2	Miles
Number of Hoop Net Sets	68.0	Sets
Number of Bighead Carp	3504	Fish
Number of Silver Carp	22320	Fish
Number of Grass Carp	340	Fish
Number of Asian Carp (AC)	26164	Fish
Tons of AC Harvested	131.3	Tons

Understanding Surrogate Fish Movement with Barriers

Currently a total of 803 surrogate fish have been captured and floy tagged while monitoring in the Lockport, Brandon Road and Dresden Pools downstream of the Electric Dispersal Barrier. A species list of floy tagged fish; 427 Common Carp, 341 Smallmouth Buffalo, 20 Bigmouth Buffalo, 10 Black Buffalo, 1 Channel Catfish. To date, six recaptures have occurred. Two fish were recaptured in Dresden Pool one of those being in Rock Run Rookery Lake. Two recaptures occurred in Brandon Road pool, one recapture in Lockport pool. With these recaptures no movement has occurred between barriers.

Telemetry Monitoring Project

USACE continues to download data from VR4's. Analysis of data is ongoing.

Larval Fish and Productivity Monitoring

INHS sampling for larval fish occurred during the weeks of April 28 – May 2, May 12 - 16, and May 26 – 30. Sampling was conducted at 14 sites located throughout the Illinois Waterway, with 4 samples taken at each site. Samples from the weeks of April 28 and May 12 have been processed. Approximately 840 larval fish were collected during these two weeks. Sample processing from the week of May 26 is ongoing and results will be reported once available.

Optimal Harvest Strategies to Minimize Asian Carp Propagule Pressure on the Electric Dispersal Barrier

Hydroacoustics and Side-Scan Sonar Surveys

During two periods in May (the weeks of May 5th and May 19th) researchers from SIUC conducted hydroacoustic and side-scan sonar surveys for Asian carp, pre-and post-commercial contracted fishing efforts. Surveys occurred in the East and West pits of the Hanson Material Services property near Morris, IL. Surveys were completed before removal efforts began, and then areas were re-surveyed after removal efforts were completed. Additionally, SIU researchers sub-sampled Asian carp and native fish (bycatch) lengths and weights from the commercial catch to better inform the hydroacoustics analysis. Detailed analysis is ongoing, but preliminary indications of high fish densities were conveyed to the IDNR observers, to assist the commercial removal effort.

Also during the week of May 19th, SIUC coordinated with USGS to conduct several hydroacoustic and side-scan sonar surveys in the Brandon Road Lock and Dam area, in support of their water gun study.

Acoustic Receivers, Transmitters, and Active Tracking

During the week of May 19th, SIUC researchers worked in conjunction with contracted commercial fishermen to mark 14 Asian carp (13 silver carp, 1 bighead carp) with jaw tags and surgically implanted acoustic transmitters in Morris, IL. Two fish were detected in the main channel (Marseilles pool) during VR100 active tracking on May 21st. One fish was detected near IL river mile 266 and one fish was detected near Peacock Sloughs.

Alternate Pathway Surveillance in Illinois – Law Enforcement

The Invasive Species Unit (ISU) inspected a wholesale aquatic life dealer in Chinatown which had the current license and was in compliance. The manager provided info on two retail businesses that purchase live fish from the business. One of those markets in Mundelein was inspected later that day. The market's live tank contained Tilapia purchased from the wholesaler, two small Bluegill, and an approximately 3 inch Largemouth Bass. The owner claimed the Bluegill and bass came from a local lake and were given to him by a frequent customer. The business was operating without an aquatic life dealer's license. The owner and business were each issued 2 citations. The second market purchasing fish from the wholesaler had already been inspected by the ISU and brought into compliance in early May. No live or dead Asian Carp were located at any of the markets.

ISU inspected 10 additional retail fish markets in Northern Illinois. 9 were operating without retail aquatic life dealer's licenses. No live Asian carp were observed in any of the markets. Four stores of the stores had sold (dead) Asian carp in the past. One of the 10 stores inquired about the legality of selling Asian carp and was provided information. One of the 10 markets had a wholesale and retail aquatic life dealer's license and was driving to the Mississippi River to purchase directly from the

commercial fishermen. ISU reviewed the dealer's purchase receipts and will ensure the commercial fishermen are legally selling the fish. Proper enforcement action was taken on all markets, ISU provided information to bring the markets into compliance, and all contacts were documented for future investigations.

Water Gun Development and Testing

Water gun testing was completed at BRLD the week of 19 May. Testing was limited to water gun operation within the two-walled approach channel.

Very few fish were observed in either mobile hydroacoustic or stationary hydroacoustic monitoring completed during the trials. Fish were only observed to respond to the water gun on a couple of occasions on 5/22 when the water gun was operated at 2000 PSI. Thorough surveys were conducted from the lock chamber doors downstream past the 1-wall approach. During the surveys a total of 2 fish were observed, a dead catfish (5/21) found near the confluence of the approach channel and the main channel that had obvious signs of necrosis and decay (from discoloration and necrotic tissues was likely dead >48 h) and a bluegill found between the water gun operating area and the lock chamber doors. The bluegill was not recovered because when we went back to retrieve it we couldn't find it (we had to adjust the hydrophone array for pressure monitoring). No other moribund or dead fish were observed during the three day trial. No fish were observed either on Friday when equipment was retrieved from the test site.

Monitoring for Asian Carp in the Upper Des Plaines River and Upper Des Plaines River Overflow

USFWS completed 13 net sets covering 2300 yards capturing 113 fish representing 5 species and 1 hybrid group. No bighead or silver carp were captured or observed. Two grass carp were captured near Lemont. Whitney Genetics Laboratory conducted ploidy analysis, determining both fish to be triploid.

Also 5.69 hours of electrofishing was conducted and collected 391 fish representing 30 species. No bighead or silver carp were captured or observed.

Strategy for eDNA Monitoring in the CAWS

USFWS collected eDNA samples from Brandon Road (25 samples), Marseilles (25 samples), and La Grange pools (25 sites). Each sample was divided into three centrifuge samples and 3 filtration samples. Analysis will be completed by three independent labs as part of a filtration vs. centrifugation study from low, medium, and high density Asian carp populations.

Ontario Ministry of Natural Resources (MNR) – Asian Carp Surveillance

Great Lakes Surveillance

The Lake Erie Management Unit's May sampling programs include

- Commercial fishery monitoring using full Port Observer presence and commercial catch sampling program
- Trawling in the central basin
- Gillnetting in the central and western basins
- Water collection for eDNA analysis in the Thames River, Sydenham River, and additional tributaries of Lake St. Clair.

The Upper Great Lakes Management Unit's May sampling programs in Lake Huron include

- On-board commercial catch sampling in the southern basin, North Channel, and Georgian Bay.
- Gill net program sampling inshore areas of Nottawasaga Bay
- Trap netting in Eastern Georgian Bay.
- Index netting in the main basin.

No Asian carp have been detected through these activities to date.