

Asian Carp Sampling Summary

A sampling summary for the week of July 9, 2012 is included below. All data presented in this summary are preliminary and subject to revision.

Bottom Line: Monitoring occurred in the CAWS and upper Illinois Waterway upstream and downstream of the Dispersal Barrier. NO BIGHEAD OR SILVER CARP were reported captured or observed upstream of the Barrier (including during a Lake Calumet Level 1 response action), nor were any found in new locations downstream of the Barrier.

eDNA Monitoring Project

A crew from USFWS – La Crosse Fish and Wildlife Conservation Office obtained 60 water samples for eDNA analysis from the North Shore Channel and another 60 samples from the Chicago Lock-Bubbly Creek station on Tuesday, July 10. Samples were filtered at the USEPA lab in Chicago and forwarded to ERDC in Vicksburg, MS for analysis. Results of eDNA analysis will be reported on the USACE web site listed below as they become available.

<http://www.lrc.usace.army.mil/AsianCarp/eDNA.htm>

Fixed and Random Site Sampling Upstream of the Dispersal Barrier

Site 1: Lake Calumet	Area 1: Lake Calumet Connecting Channel and Calumet River above O'Brien Lock
Site 2: Little Calumet River	Area 2: Calumet-Sag Channel
Site 3: Chicago Sanitary and Ship Canal near Western Ave. and South Branch Chicago River	Area 3: Chicago Sanitary and Ship Canal, Western Ave. to Dispersal Barrier
Site 4: North Branch Chicago River and North Shore Channel	Area 4: North Shore Channel, North Branch Chicago River and Chicago River
Site 5: North Shore Channel	

Crews from USFWS – Columbia FWCO completed 30 15-minute electrofishing runs at five fixed sites (7.5 hours total) and 10 15-minute runs at randomly selected locations in the four random site areas upstream of the Dispersal Barrier (2.5 hours total). In addition, two contracted commercial fishing crews and assisting IDNR biologists set 3.1 miles of net (27 sets) at the five fixed sites and 2.2 miles of net (19 sets) at random sites upstream of the Barrier. No bighead or silver carp were reported captured or seen above the Barrier.

Additional Netting Downstream of the Dispersal Barrier

Two contracted commercial fishing crews and assisting IDNR biologists set 1.0 miles of net (9 sets) in Dresden Island Pool. No Asian carp were captured in new locations downstream of the Barrier.

Lake Calumet Level 1 Response

Two contracted commercial fishing crews with assisting IDNR biologists and crews from IDNR, USFWS, USACE and INHS completed a Level 1 conventional gear response in Lake Calumet this week. The response followed the 2012 MRRP and occurred after three consecutive sets of eDNA samples from the lake were found to have positive detections for silver carp. Sampling included electrofishing, gill nets, trammel nets, tandem trap nets, a 0.5 mile long commercial seine and three new gears developed by the MRRWG multiagency Gear Development Workgroup. The new gears were surface-to-bottom gill nets, 6-foot diameter hoop nets and large pound (trap) nets. The pound nets were set across the lake entrance on Tuesday, effectively isolating it from the Connecting Channel and blocking or catching any fish entering or leaving the lake. Sampling for eDNA occurred first thing Wednesday morning, after which crews began sampling with other nets, seines and electrofishing gear. Sampling continued through Friday. A total of 6,395 fish representing over 30 species were caught during the 3-day event. No bighead or silver carp were captured or observed. One 30+ pound grass carp was sampled and removed for ploidy analysis.

Lake Calumet (continued)

A preliminary summary of effort and catch for each gear type is included below.

- Commercial seine: 800 yards x 3 sets; 13.75 hours - 4,524 fish
- Surface-to-bottom gill nets: 100 yards x 4 sets; 8.25 hours - 15 fish
- Gill nets: 46 sets, 6.2 miles of net deployed; 13.32 hours - 341 fish
- Electrofishing: 46 runs for a total of 11.5 hours (~10 miles of shoreline) - 1,224 fish
- Large pound nets: 2 nets raised each day (3 times); ~144 net-days - 168 fish
- Tandem traps: 2 tandem nets x 24 hours; 8 net-days - 113 fish
- 6-foot hoop nets: 10 nets x 2 days; 20 net days - 10 fish

Barrier Defense Asian Carp Removal Project

Dresden Island Pool: 10-24 miles downstream from Dispersal Barrier

Marseilles Pool: 24-51 miles downstream from Dispersal Barrier

Starved Rock Pool: 51-65 miles downstream from Dispersal Barrier.

Contracted commercial fishers and assisting IDNR biologists set 18.8 miles of net in the Starved Rock and Marseilles pools of the upper Illinois River and removed 1,409 bighead carp, 594 silver carp, and 1 grass carp. A cumulative summary of the removal effort to date is shown in the table below.

QUICK SUMMARY THROUGH: 30 June 2012		
Number of Days Fished	36	days
Number of Net Crews	175	crew-days
Miles of Nets Fished	144.2	miles
Number of Bighead Carp	13,047	fish
Number of Silver Carp	12,335	fish
Number of Grass Carp	106	fish
Number of Asian Carp (AC)	25,488	fish
Tons of AC Harvested	172.6	tons
CPUE (N/1,000 Yards of Net)	100	fish

Fish Behavior Study at the Barrier

Crews from the USFWS completed DIDSON surveys at 80 sites in the CSSC within and near the Barrier for a total of 800 minutes (13.3 hours) of DIDSON footage.

Distribution of Small Asian Carp Study

A crew from the USFWS Carterville FWCO completed 13 15-minute electrofishing runs (3.25 hours total) in the lower Peoria Pool of the Illinois River. No small Asian carp <12 inches long were reported captured during this sampling.

Monitoring Asian Carp Population Metrics and Control Efforts

A crew from SIUC conducted ADCP (acoustic doppler current profiler) surveys in the Mississippi River just below the Illinois River confluence, in the Illinois River just above the confluence, and in the Illinois River near Starved Rock. Another crew from SIUC sampled Asian carp from the Big Muddy River near Murphysboro, IL and completed hydroacoustics target strength assessments at an on campus facility.

Gear Evaluation Study

Crews from INHS sampled with multiple gears in the Dresden Island Pool near I-55/Treats Island (RM 277-279.5) and in the Marseilles Pool near Morris, including a private Illinois River backwater (RM 262-265). In addition, surface-to-bottom gill nets (2 x 4 hour sets) and 6-foot diameter hoop nets (2 net-nights) were evaluated in the Marseilles Pool backwater.

Gear Evaluation (Continued)

Gears and effort are shown in the table below. Results will be forthcoming after data have been entered into a database, checked for accuracy and analyzed.

Gear/Method	Effort	Gear/Method	Effort
DC electrofishing	6 x 15-min. runs	Mini-fyke net	8 net-nights
Trammel net w/ pounding	4 sets	Small mesh purse seine	4 hauls
Small mesh gill net -sinking	4 x 4-hr. sets	Large mesh purse seine	4 hauls
Small mesh gill net -floating	4 x 4-hr. sets	Beach seine	4 hauls
Large mesh gill net -sinking	4 x 4-hr. sets	Cast Net	4 throws
Small mesh hoop net	8 net-nights	Midwater trawl	4 x 5 min. tows
Large mesh hoop net	8 net-nights	Hydroacoustics	15 min. runs
Trap net	8 net-nights		

Crews from INHS also began the summer trial for the large pound (trap) net evaluation. Two large pound nets were deployed in a private Illinois River backwater near Morris, Illinois and two were set at the entrance to Lake Calumet. The nets were checked and emptied at regular intervals (minimum of three times per week) and captured fish were measured and weighed. The nets will be fished for approximately two weeks before being pulled. Additional trials will occur this fall and again next spring.

Larval Fish, Zooplankton, and Productivity Monitoring

Crews from INHS and Western Illinois University completed sampling for fish eggs and larvae, zooplankton, and phytoplankton productivity at the stations listed in the table below. Effort included four 5-minute tows for fish eggs and larvae with a 0.5-meter diameter ichthyoplankton push net, filtering 100 L of water for zooplankton, and taking water samples with an integrated tube sampler for productivity estimates. Samples are currently being processed.

Pool and Station	River Mile	Pool and Station	River Mile
CAWS		Peoria Pool	
Lake Calumet	327	Hennepin	~207-208
Little Calumet River	322	Henry/Lacon	189-197
Western Avenue	~320-321	Chillicothe	~178-180
Calumet-Sag Channel	~319	Upper Peoria Lake	~170-175
Worth Street	~311	LaGrange Pool	
Brandon Road Pool		Peoria Dam Tailwater	155-157.7
Lockport Tailwater	~289-291	Havana	119-122
Des Plaines River/CSSC confluence	~290	Bath Chute	107-113
Dresden Island Pool		Fredrick Main Channel	~97-98
Treats Island/I-55	277-279.5	Treadway Lake Backwater	~93.5
Marseilles Pool		Lilly Lake Backwater	83-84
Morris	262-265	Lilly Lake Main Channel	83-84
Starved Rock			
Ottawa	239.5-241.5		