Asian Carp Sampling Summary

A sampling summary for the week of July 23, 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, nor were any found in new locations downstream of the Barrier.

eDNA Monitoring Project

A crew from the IDNR obtained 60 water samples for eDNA analysis from Lake Calumet and 60 samples from the Calumet/Little Calumet River downstream of O'Brien Lock on Monday, July 23. 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
Site 2: Little Calumet River
Site 3: Chicago Sanitary and Ship Canal near Western Ave. and South Branch Chicago River
Site 4: North Branch Chicago River and North Shore Channel
Site 5: North Shore Channel

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

Two crews from the IDNR completed 30 15-minute electrofishing runs at five fixed sites (7.5 hours total) and 10 15-minutes 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 0.8 miles of net (7 sets) at random sites upstream of the Barrier. No bighead or silver carp were reported captured or seen above the Barrier.

Fixed Sites 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

Contracted commercial fishers and assisting IDNR biologists set 1.8 miles of net (16 sets) at the four fixed sites downstream of the Barrier. No bighead or silver carp were captured at Sites A and B, nor were any captured at new locations at Sites C and D. Downstream fixed sites were sampled with electrofishing gear during the week of July 16.

Additional Netting Downstream of the Dispersal Barrier

Two contracted commercial fishing crews and assisting IDNR biologists set 0.9 miles of net in Marseilles Pool >25 miles downstream from the Dispersal Barrier. No Asian carp were captured or observed in new locations during this sampling.

Fish Behavior Study at the Barrier

With assistance from USACE, crews from USFWS-Carterville Fish and Wildlife Conservation Office recorded behavior data for gizzard shad, common carp, freshwater drum and largemouth bass held in a cage adjacent to a boat passing through the Barrier alongside a steel hulled barge and alongside a fiberglass boat. A total of 13 trials were run through the barrier with the barge and 12 trials were completed with the fiberglass boat.

Distribution of Small Asian Carp Study

A crew from the USFWS-Carterville FWCO sampled for young Asian carp with mini-fyke nets and trap nets in the Starved Rock Pool of the Illinois River. Mini-fykes were fished for a total of 19 net-nights and trap nets were fished for a total of 3 net-nights. This week concludes the first round of sampling for the small Asian carp study. No small Asian carp <12 inches long have been captured to date.

Monitoring Asian Carp Population Metrics and Control Efforts

Crews from SIUC focused on boat and equipment maintenance this week in preparation for upcoming Asian carp population monitoring with hydroacoustics and conventional sampling gears. Mounting brackets for new 70 kHz hydroacoustics transducers and mechanical rotators were constructed for the Shovelnose and other survey boats. Surveys with 70 kHz transducers will be affected less by air bubble interference than the 200 kHz units used in previous surveys. The new transducers will provide enhanced target detection near the barrier arrays and for other applications where bubbles limit detection.

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		

Gear Evaluation Study

Crews from INHS sampled with multiple gears in the CAWS at the Little Calumet River downstream of T. J. O'Brien Lock and Dam and in the CSSC near Western Ave. In addition to the standard gears, 6-foot diameter hoop nets (set for two net nights) and surface to bottom gill nets (two sets) were evaluated at the Western Avenue site. 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		

Gear Evaluation (continued)

Crews from INHS completed the summer trial for the large pound (trap) net evaluation at a private Illinois River backwater near Morris, Illinois and at the entrance to Lake Calumet. The nets were checked and emptied at regular intervals (2-3 times per week for about 2 weeks) and captured fish were measured and weighed. A preliminary data summary for the summer trial is being prepared and additional trials will occur this fall and again next spring.

The two pound nets set near Morris were pulled on July 23. However, in light of continued positive detections of silver carp eDNA, the MRRWG has determined that the two nets in Lake Calumet will remain in place for an extended period of time to increase the chance of capturing any Asian carp that may be present in the area in very low numbers. As in the past, these nets will be checked and emptied at regular intervals and all captured fish, except bighead, silver, and grass carp will be measured, weighed and released in the direction that they were traveling (i.e., into or out of the lake). Captured Asian carp will be removed from the system.

Telemetry Monitoring Project

Crews from USACE successfully downloaded data from VR4 receivers located around Barrier 2B in the CSSC near Romeoville.