Asian Carp Sampling Summary

A sampling summary for the week of May 21, 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. In other sampling, two large bighead carp were captured and removed from Garfield Park Lagoon, a Chicago area urban fishing pond with no hydrologic connection to the CAWS or Lake Michigan.

eDNA Monitoring Project

One IDNR boat and crew 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 Tuesday, May 22. 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. Electrofishing samples at downstream fixed sites were taken the week of May 14.

Additional Netting Downstream of the Dispersal Barrier

Two contracted commercial fishing crews and assisting IDNR biologists set 0.6 miles of net in Marseilles Pool >25 miles downstream from the Dispersal Barrier. No Asian carp were captured or observed during this netting operation.

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 9.8 miles of net in the Starved Rock and Marseilles pools of the upper Illinois Waterway and removed 1,369 bighead carp, 348 silver carp, and 3 grass carp. A cumulative summary of the removal effort to date is shown in the table below.

QUICK SUMMARY THROUGH: 31 May 2012		
Number of Days Fished	24	days
Number of Net Crews	115	crew-days
Miles of Nets Fished	95.1	miles
Number of Bighead Carp	7,963	fish
Number of Silver Carp	9,943	fish
Number of Grass Carp	97	fish
Number of Asian Carp (AC)	18,003	fish
Tons of AC Harvested	118.0	tons
CPUE (*N*/1,000 Yards of Net)	108	fish

Water Gun Development and Testing Project
Crews from USGS, IDNR, UIUC, and SIUC successfully completed a second trial of an experiment to evaluate the effects of water guns on behavior of bighead and silver carp. Work was completed this week and staff, equipment and supplies were demobilized. Results are currently being analyzed and will be highlighted in a future summary report.

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.

Remote Sensing Transects at the Barrier
A boat and crew from SIUC with assistance from the IDNR and USFWS conducted a total of two remote sensing surveys between Barrier 2A and Barrier 1 on 22 May 2012. Surveys were conducted using the typical methodology (i.e., three passes during each survey with a combination of side-scan sonar and split-beam hydroacoustics). From the side-scan sonar, a total of seven fish targets were identified from each survey. The fish ranged between 47 and 83 cm TL (18.5 and 32.7 inches) and they were located immediately adjacent to the walls of the CSSC (4 on the West side, located between Barrier 1 and Barrier 2B; 3 on the East side). Interestingly, no fish were identified with the split-beam acoustics this time, likely due to the close proximity of the fish to the side walls of the CSSC. These data indicated that the single-boat water gun clearing operation that occurred on 12 May was successful in clearing only one fish from the target area. Additional fish clearing operations are being planned by the MRRWG for June and July 2012.

Monitoring Asian Carp Population Metrics and Control Efforts
Two crews from SIUC with assistance from IDNR and contracted commercial fishermen captured and implanted Vemco acoustic transmitters into 50 adult bighead and silver carp near Sheehan Island in the Starved Rock Pool and 27 adult bighead and silver carp in the Marseilles Pool. All fish were externally marked with $50 reward tags to provide incentives to fishermen not contracted by the IDNR to return transmitters. IDNR contracted fishermen have been instructed to return healthy fish back to the water as soon after capture as possible. In addition, two VR2 receivers were retrieved from the Lock Master at Starved Rock Lock and Dam and they will be redeployed as soon as possible.

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).. 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		

Asian Carp Monitoring in Urban Fishing Ponds

Two IDNR boats and crews completed 3.6 hours of DC electrofishing in the east and west sides of Garfield Park Lagoon. In addition, 200 yards of large mesh (3.0-3.5 inches) tied-down gill net were deployed. Fish were driven to the nets by electrofishing, pounding on boats, and revving tilted motors. Two large bighead carp were captured in the gill nets and removed from the lagoon. One fish was a female measuring 46.25 inches long and weighing 53 pounds. The second one was a male that was 45.5 inches long and weighed 46 pounds. Sampling was completed in an effort to remove any bighead carp that may have been unintentionally stocked in the pond as contaminants in shipments of channel catfish during the late 1990s and early 2000s. Sampling will occur at additional urban fishing ponds in the Chicago area periodically throughout summer and fall 2012.