

## Asian Carp Sampling Summary

A sampling summary for the week of May 7, 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.

### Fixed and Random Site Sampling Upstream of the Dispersal Barrier

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

A crew from the USFWS - Carterville Fish and Wildlife Conservation Office completed 30 15-minute electrofishing runs at five fixed sites and 10 15-minute runs at randomly selected locations in the four random site areas upstream of the Dispersal Barrier. 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 2.1 miles of net (18 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.

### 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 8.6 miles of net in the Starved Rock and Marseilles pools of the upper Illinois Waterway and removed 616 bighead carp, 1,725 silver carp, and 60 grass carp. A cumulative summary of the removal effort to date is shown in the table below.

<b>QUICK SUMMARY THROUGH: 11 May 2012</b>		
<b>Number of Days Fished</b>	20	days
<b>Number of Net Crews</b>	100	crew-days
<b>Miles of Nets Fished</b>	85.3	miles
<b>Number of Bighead Carp</b>	6,594	fish
<b>Number of Silver Carp</b>	9,595	fish
<b>Number of Grass Carp</b>	94	fish
<b>Number of Asian Carp (AC)</b>	16,283	fish
<b>Tons of AC Harvested</b>	105.2	tons
<b>CPUE (N/1,000 Yards of Net)</b>	108	fish

### **Remote Sensing Transects at the Barrier**

On May 4 and 7, the MWRDGC initiated two draw downs of the waterway in response to local thunder storms. The USGS Water Science Center provided data indicating that the draw downs created velocities at Lemont >2.5 – 3.0 feet per second for several hours. A crew from SIUC with assistance from the USACE and IDNR conducted two remote sensing surveys between the high-field electric array of Barrier 2A and Barrier 1 on May 9. Results indicated at least 7 fish >12 inches long between Barrier 1 and Barrier 2A, an increase of three fish compared to the previous survey after the barrier outage. Although a meeting of MRRWG action agencies determined there is a low probability that these fish were Asian carp, the workgroup recommended a water gun clearing operation to remove fish from the between-barrier area because four fish of unknown variety (and possibly an Asian carp) may have entered the area from downstream during the May 2 barrier outage.

### **Water Gun Fish Clearing Action at the Barrier**

A clearing event with water guns (one boat with two S80 guns (120-cubic inch guns) took place between Barrier 1 and 2A on May 13. Participating agencies included USGS, IDNR, USFWS, USACE, SIUC, and Western Illinois University. An initial sonar survey (two surveys with side scan and hydroacoustics) was conducted in the morning by SIUC. A minimum of 8 fish >12 inches long were identified. The water guns were operated for 2.0 hours in the target area from 2:00-4:00 p.m. A single survey was conducted after the clearing and at least four fish >12 inches long were identified in the target area. About 20 additional minutes of water gun operation took place in the area where fish were located (northeast corner of the target area) in an effort to kill surviving fish. Additional remote sensing surveys were planned for the week of May 21.

### **Water Gun Development and Testing Project**

Monday-Saturday, May 7-12

Crews from USGS, IDNR, UIUC, and SIUC prepared for experiments to examine the effects of water guns on behavior of Asian carp in a private Illinois River backwater near Morris, Illinois. Equipment was mobilized and preparation was ongoing. Flooding in the Marseilles Pool from extensive rains on May 6 prevented equipment transport to the backwater and preparation of the experimental mesocosm and telemetry and hydroacoustics monitoring stations.

### **Telemetry Monitoring Project**

Monday-Thursday, May 7-10

A crew from USACE completed mobile tracking from Bubbly Creek to Marseilles Lock and Dam and downloaded VR2 receivers from the telemetry fixed-station receiver network. Preliminary analysis indicated that no tagged fish crossed the Dispersal Barrier and none moved through upper Illinois Waterway locks.

### **Gear Evaluation Study**

Crews from INHS sampled with multiple gears in the CAWS in 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 and surface to bottom gill nets 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.

<b>Gear/Method</b>	<b>Effort</b>	<b>Gear/Method</b>	<b>Effort</b>
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		

### **Larval Fish, Zooplankton, and Productivity Monitoring**

In response to water temperature >60 degrees F and a rising hydrograph from extensive rains during the previous weekend, crews from INHS completed sampling for fish eggs and larvae in the LaGrange, Peoria, Starved Rock and Marseilles pools of the Illinois River. Effort included four 5-minute tows for fish eggs and larvae with a 0.5 meter diameter ichthyoplankton push net. Samples are currently being processed and analyzed.