

## **Asian Carp Sampling Summary**

A sampling summary for the week of September 24, 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 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

Crews from the IDNR completed supplemental netting for juvenile and adult Asian carp at the fixed sites downstream of the barrier. Four mini-fyke nets and four 6-foot diameter hoop nets were deployed in each pool. The mini-fykes were set for 1 net-night per site (a total of 4 net-nights per pool) and the hoop nets were set for 2 net-nights per site (a total of 8 net-nights per pool). No juvenile or adult Asian carp were caught at any of the supplemental netting sites this month.

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

A crew from SIUC with assistance from IDNR completed two remote sensing surveys between Barrier 1 and the high-field electric array of Barrier 2A on September 26. Each survey consisted of three transects using a combination of side-looking split-beam hydroacoustics and side-scan sonar that covered an estimated 97.6% of the entire water column. Nine fish targets >12 inches long were detected during these surveys. The estimated lengths of the fish ranged between 12.4-28.9 inches and all but two fish were estimated to be <19 inches long. Because the identity and origin of the fish targets are unknown and to maintain vigilance in response to barrier maintenance and outages, a 1-day conventional gear fish clearing operation has been scheduled for Wednesday, November 14 to capture and remove any fish >12 inches long that are located in the between-barrier area. The clearing operation is considered necessary because there is a possibility that the fish may be Asian carp from the Lockport Pool downstream of the barrier, although the probability of live Asian carp in the Lockport Pool is thought to be low based on routine monitoring over the past 3 years.

### **Distribution of Small Asian Carp Study**

A crew from the USFWS-Carterville Fish and Wildlife Conservation Office 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 16 net-nights and trap nets were fished for a total of 6 net-nights. In addition, a crew from Carterville, Columbia and La Crosse FWCOs completed 46 transects at various sites across the Peoria, Starved Rock, Marseilles and Dresden Island pools with a boat mounted push trawl. No small Asian carp <12 inches long were reported captured or seen during this sampling effort.

### **Exploratory Gear Development Project**

A crew from the USFWS – Columbia FWCO continued evaluations of butterfly trawls (paupier nets) in the Illinois River at Meredosia, IL (near river mile 70). A boat and crew from Carterville – FWCO assisted with a DIDSON camera to examine fish behavior in response to the trawl. Three versions of the paupier nets were tested and at least one version was capable of catching good numbers of Asian carp adults ( $N = 200$ ) and juveniles (100% of those recorded during DIDSON observations). Adult Asian carp were observed swimming in and out of the trawl during operation suggesting a few minor modifications to the throat design of the inner fyke will be necessary to further improve capture efficiency. Additional experiments are planned for the Illinois River and backwater oxbows and tributaries of the Missouri River.

### **Monitoring Asian Carp Population Metrics and Control Efforts**

A crew from SIUC completed down- and side-looking hydroacoustics surveys within the main channel and associated backwaters in the Dresden Island and Marseilles Pools of the Illinois River, and began surveys in the Starved Rock Pool. Survey data will be used to quantify abundance, size distribution and biomass of Asian carp and other fishes in the river. A second crew from SIUC sampled Asian carp from Starved Rock and Dresden Island pools and implanted them with acoustic transmitters for the ongoing telemetry study.

### **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. 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		

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

With assistance from INHS, researchers from USGS and University of Minnesota measured and recorded underwater sounds that trigger silver carp to move and jump (e.g., accelerating power boats, revving topped up boat engines, pounding on boat hulls, and striking the water with plungers). Data were collected from the Illinois River near Havana and may prove useful in developing an acoustic detection technique for silver carp.