

## June Summary

**Bottom Line:** Monitoring occurred in the CAWS and upper Illinois Waterway upstream and downstream of the Dispersal Barrier on 17 June 2013. 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.

## Barrier Clearing Event – 17 June 2013



A total of 90 minutes of electrofishing and 100 yards of 30 ft deep gill nets (fished approximately 30 min and across the width of the canal) were completed safely (June 17) between the Demonstration Barrier and Barrier IIB on the CSSC to evaluate and remove fishes greater than 12 inches in length. A total of 22 common carp ( $TL_{min}=472\text{mm}$ ,  $TL_{mean}=581\text{mm}$ ,  $TL_{max}=757\text{mm}$ ) were captured and removed from between the barriers. All fish (but one injured in netting) were floy tagged and released downstream of Romeo Road bridge, below the electric barrier array.

Two 15-minute electrofishing runs, one IDNR and one USACE boat in each run, captured 72% (16/22) of the total catch to begin the day. USFWS was able to begin sonar scans of the focus area following the initial effort. Split-beam hydroacoustics identified at least one remaining fish within the barriers (after further detailed analyses six fish were confirmed). Two additional electrofishing runs were completed which resulted in four additional common carp being removed. One hundred yards of deep set gill net were also deployed which captured two additional common carp. These equaled the identified fish from the initial sonar/hydro-acoustic scans. A final sonar scan was completed after all effort to remove carp. Post clearing sonar indicated three fish over 12 inches in TL along the west bank immediately below the demo barrier. Additional by-catch during these efforts included one oriental weatherfish, two bluegill, and two green sunfish.

The recommendation from the MRWG action agencies that after these efforts, we believe there is a low risk of Asian carp within the barrier that these efforts represent a successful clearing. Although a few fish targets remained, the overwhelming evidence from the collections and remote sensing evidence suggest these to be Common carp. These results are further supported by the established monitoring results from Lockport and Brandon Rd Pools of the Illinois Waterway since 2010 that also suggest the Asian carp abundances in this area to be low or non-existent.

Reason for clearing event [from the 2013 Monitoring and Response Plan](#),  
[www.asiancarp.us](http://www.asiancarp.us):

**Objectives:** The IDNR will work with federal and local partners to:

1. Assess the need for fish suppression actions at the electric barrier system through surveillance with split-beam hydroacoustics, side scan SONAR, and DIDSON imaging SONAR;
2. Eliminate fish from the electric barrier system prior to maintenance operations or after an unintentional shutdown of Barrier 2B by blocking off the canal with a surface to bottom gill net and driving fish to the net or from the area with pulsed-DC and deep-water AC electrofishing gears, flow in the canal will be decreased for optimal netting conditions, or if needed, a small-scale rotenone action; and
3. Conduct intensive sampling to assess abundance of Asian carp juveniles and adults in the CSSC between the electric barrier system and Lockport Lock and Power Station, when standard monitoring detects their presence in the Lockport Pool downstream of the electric barrier system.

## Lake Calumet – Planned Intensive Surveillance June 25-28, 2013



The 4-day Planned Intensive Surveillance Lake Calumet event concluded 28 June 2013. This event was a planned intensive surveillance activity as outlined by the Monitoring Response Plan for Asian Carp in the Upper Illinois River and Chicago Area Waterway System (May 2013). The event sampling logistics varied slightly from original plan, unlike past rapid responses that lasted 2 days, this event occurred over a four day period. Also this event utilized fewer boat than past responses, however, the event was held in conjunction with previous scheduled upstream fix site electrofishing sampling; this event was just as rigorous over a longer period and maintained equal effort as past rapid responses providing thorough coverage of the Lake Calumet and connecting channel area. Also as a modification to the original plan to provide further vigilance, all boats participating in this event underwent a decontamination procedure prior to entering the waterway to prevent the exposure of any additional Asian carp eDNA into the waterway. To date, intensive sampling during response actions triggered by detection of Asian carp eDNA has resulted in no Asian carp being observed or captured. At present, the detection of eDNA evidence cannot discern the source of the eDNA or the characteristics of the fish, verify whether live Asian carp are present, the number of Asian carp in an area, or whether a viable population of Asian carp exists.

As further calibration of the eDNA method is completed the MRWG has suspended the use of eDNA as a trigger for responses, instead using this information to establish planned intensive surveillance at key locations where Asian carp eDNA has been found to accumulate. This effort had the benefit of advanced planning, greater sampling intensity over a shorter time period than fixed site and random sampling, and will be in locations where the repeated detection of eDNA in previous years indicates the potential presence of Asian carp in the waterway. This planned surveillance activity followed a scheduled eDNA sampling event. This coordination of monitoring for Asian carp using eDNA and traditional fishery sampling techniques (electrofishing and netting) will enhance the eDNA Calibration Study (ECALS) which aims to reduce the uncertainty surrounding eDNA results. Information gained from such actions may also benefit monitoring protocols, research efforts, or Asian carp removal and control efforts. The goal of this operation was to fish the area extensively with electrofishing and commercial nettings to determine extent of possible Asian carps (bighead carp and silver carp) within this area.

Several agencies participated in this event utilizing man power and resources; IDNR, USCOE, USFWS, USCG, INHS and contracted commercial fisherman.

Summary and Totals for the Planned Intensive Surveillance:

- **No bighead carp or silver carp were observed or captured during this Planned Intensive Surveillance**
- All boats utilized during the event went through an outlined decontamination procedure prior to entering waterway June 25, 2013 7:30 am
- Two net boats and two electrofishing boats, approximately 408 person-hours of effort
- Seine : 3 hauls, 2400 yards (1.363 MILES), 7628 fish representing 15 species and 1 hybrid; Gizzard shad *Dorosoma cepedianum* over 6" comprised 72% of the seine hauls catch, while Freshwater drum *Aplodinotus grunniens* , Channel catfish *Ictalurus punctatus* and Common carp *Cyprinus carpio* composed 26% of the catch; 1 White perch *Morone americana* x Yellow bass *Morone mississippiensis* hybrid cross was captured by the seine (this hybrid represented the only species caught uniquely to this gear)
- Electrofishing : 57 runs, 14.25 hrs, 1989 fish representing 34 species and 1 hybrid; Gizzard shad *Dorosoma cepedianum* over 6" comprised 13% of the electrofishing catch, Banded Killifish *Fundulus diaphanous* also represented 12% of the catch, 19 species were unique to electrofishing these include Rainbow trout *Salmo gairdneri*, Coho salmon *Oncorhynchus kisutch* , Brown trout *Salmo trutta* and Bowfin *Amia calva*.
- Gill Netting : 33 sets, 8200 yards (4.66 MILES), 705 fish representing 8 species and 1 hybrid; Common carp comprised 87% of the net catch, 1 Common carp x

Goldfish *Carassius auratus* hybrid cross was captured by gill netting this hybrid represented the only species caught uniquely to this gear

- Experimental Deep Gill Netting : 12 sets, 1200 yards (0.68 MILES), 5.57 net days, 809 fish representing 8 species of the; Freshwater drum comprised 44% of the net catch while Gizzard shad , Common carp and Black buffalo *Ictiobus niger* composed 54% of the catch.
- Hoop Netting: 18 sets, 17.54 net days, 38 fish representing 7 species; Freshwater drum comprised 53% of the net catch.
- Tandem fyke nets: 9 sets. 8.77 net days, 53 fish representing 12 species; White perch, Freshwater drum, Common carp and Pumpkinseed *Lepomis gibbosus* comprised 58% of the net catch.
- Lake Michigan fyke/pond nets: two nets were in place blocking off the entrance to Lake Calumet prior to the response. These nets were retrieved from Lake Calumet June 26, 2013 due to collapse. Collapse was due to possible vandalism or possible extreme weather/seiche.
- Grand total for the week – a total of 11,222 fish representing 39 species and 3 hybrids were collected. Note: 242 banded killifish (state threatened species) were sampled and released; 6 non native species and their hybrids were collected during the event; Common carp, Goldfish, Common carp x Goldfish, White perch, White perch x Yellow bass and Round goby *Neogobius melanostomus*.
- Planned Intensive Surveillance Event was concluded at 1:00 p.m., Friday, 28 June 2013. All boats utilized during the event were decontaminated before departure from O'Brien Lock and Dam.
- All operations were completed safely, without any reported injuries.

#### **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

One crew from the USFWS completed 30 15-minute electrofishing runs at five fixed sites (7.5 hours total) and 16 15-minute runs at randomly selected locations in the four random site areas upstream of the Dispersal Barrier (4 hours total) during the week of June 24. During the week of May 20, two electrofishing runs were not completed due to equipment failure. The USFWS completed 2 15-minute electrofishing runs at Random Area 4 on June 7 to make up for sampling that was unable to be completed in May (0.5 hours total).

Two contracted commercial fishing crews and assisting IDNR biologists set 3.63 miles of net (32 sets) at the five fixed sites and 2.5 miles of net (22 sets) at random sites upstream of the Barrier during the week June 10. No Bighead or Silver Carp were reported captured or seen above the Barrier.

### **Fixed and Random Site Sampling 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 IDNR and USACE completed 16 15-minute electrofishing runs at fixed locations (4 hours total) and 16 15-minute runs at randomly selected locations (4 hours total) in the Lockport, Brandon Road, Dresden Island, and Marseilles pools downstream of the Barrier. No Bighead or Silver Carp were reported captured or seen in the Lockport, Brandon Road, or Dresden Island pools. During fixed site electrofishing during the month of June, 4 Silver Carp were captured in the Marseilles pool. No Bighead Carp were captured in the Marseilles pool while electrofishing.

Two contracted commercial fishing crews and assisting IDNR biologists set 1.81 miles of net (16 sets) at the four fixed sites and 1.81 miles of net (16 sets) at random sites within the four pools downstream of the barrier during the week of June 10. One Bighead Carp and one Silver Carp were captured in the Dresden Island pool at a fixed and random netting site, respectively. One Silver Carp was collected at a random site in the Marseilles pool. During fixed site netting in the Marseilles pool, 3 Silver Carp and 5 Bighead Carp were collected.

Crews from IDNR set and pulled hoop nets (6' diameter) in Lockport, Brandon Road, Dresden Island, and Marseilles pools downstream of the barrier during the weeks of June 24 and July 1. Hoop netting in the Lockport pool took place during the week of July 1 due to low water levels during the previous week. Four Hoop nets were fished for two net nights in the Lockport, Dresden Island, and Marseilles pools (24 total net nights). Four random hoop nets, in addition to the four fixed site nets, were deployed in the Brandon Road pool during the week of June 24 (16 total net nights). No Bighead or Silver Carp were captured in hoop nets in any of the four pools during the month of June.

IDNR crews set and pulled minnow fyke nets in Lockport, Brandon Road, Dresden Island, and Marseilles pools downstream of the barrier during the weeks of June 24 and July 1. Minnow fyke netting in the Lockport pool took place during the week of July 1 due to low water levels during the previous week. Minnow fyke nets were fished for one net night, totaling to 4 net nights per pool during the month of June (16 total net nights). No bighead or silver carp were captured in minnow fyke nets.

### **Rock Run Rookery Preserve Lake**

Contracted commercial fishing crews were allowed to fish the Rock Run Rookery Preserve Lake in Will County by the Will County Forest Preserve. The 84 acre lake is located on the west side of the Illinois River and just North of Interstate 55. The lake is

connected to the river with a shallow ditch. In the month of June contracted fisherman netted two days showing a general decline catches. Below is a quick summary of activities in the Preserve Lake since sampling was initiated in the lake.

<b>QUICK SUMMARY:</b>		
<b>Number of Net Sets</b>	72	Sets
<b>Yards of Net Fished</b>	44850	yards of net
<b>Person-Days</b>	94	days
<b>Miles of Nets Fished</b>	25.5	Miles
<b>Number of Bighead Carp</b>	859	Fish
<b>Number of Silver Carp</b>	60	Fish
<b>Number of Grass Carp</b>	3	Fish
<b>Number of Asian Carp (AC)</b>	922	Fish
<b>Tons of AC Harvested</b>	8.2	Tons
<b>CPUE: Number of Asian Carp/ 1,000 yards net</b>	13	Fish

### **Barrier Defense**

Barrier defense was conducted the weeks of the 3rd and 17<sup>th</sup> during the month of June. The 2013 Barrier Defense commercial fishing resumed the Week of March 11. Seventeen barrier defense weeks have been schedule for 2013. Below is a quick summary of the activities for 2013. The CPUE is lower than prior years to date.

<b>QUICK SUMMARY:</b>		
<b>Number of Days Fished</b>	28	days
<b>Number of Net Crews</b>	140	crew-days
<b>Miles of Nets Fished</b>	139.1	Miles
<b>Number of Bighead Carp</b>	6573	Fish
<b>Number of Silver Carp</b>	15021	Fish
<b>Number of Grass Carp</b>	144	Fish
<b>Number of Asian Carp (AC)</b>	21738	Fish
<b>Tons of AC Harvested</b>	129.3	Tons
<b>CPUE: Number of Asian Carp/ 1,000 yards net</b>	89	Fish

### **Fish Behavior Study at the Barrier**

June 4 USFWS performed three scans of the barrier system before a switch from Barrier IIB to IIA and three scans post switch. A scan of Lockport Pool was made during that sampling trip. On June 17 USFWS performed scans during and after the rapid response clearing event which is detailed in Summary of Barrier Clearing section. Also June 20, eight trials were performed in which tagged gizzard shad were released in front of a barge vessel in a series configuration also on June 12st one trial with tagged

gizzard shad was performed using a parallel barge configuration because of inclement weather.

USCOE recapture effort was completed through 2 hours of shocking upstream and 2 hours shocking downstream of the dispersal barriers with one 15 minute run completed between the barriers. Four minnow traps were also set for one night above and below the demonstration barrier. One recapture of a 85mm green sunfish occurred near its release point between the barriers. This fish was recaptured a minimum of 28 days after release.

### **Telemetry Monitoring Project**

On June 6, nine acoustic transmitters were surgically implanted in seven silver and two bighead carp near Sheehan Island in the Starved Rock pool. On June 7, one crew from SIU implanted acoustic transmitters in nine silver and eight bighead carp collected by commercial fishermen in the East Pits of the Marseilles pool. A second SIU crew conducted limited hydroacoustic surveys near Sheehan Island in the Starved Rock pool (June 6) and in the East Pit of the Marseilles pool (June 7). Active tracking of Asian carp was also conducted in both pools, where 18 fish were relocated (six in Starved Rock and 12 in Marseilles).

### **Gear Comparison and Larval fish and Productivity Sampling**

#### **Asian Carp Gear Evaluation**

*Morris/Material Services, June 24-26, 2013*

Silver Carp: 15

Bighead Carp: 7

Hybrids: 3

No age-0 or age-1 were captured or observed.

*I-55/Treat's Island, June 26-28, 2013*

No Asian Carp were captured or observed.

#### **Great Lakes Pound Nets**

*Morris/Material Services, June 19 – July 1, 2013*

Silver Carp: 144

Bighead Carp: 156

Hybrids: 107

No age-0 were captured or observed. Ten (10) Silver Carp were <500mm (range 474-499mm) making them potential age-1 or age-2.

*Lake Calumet, June 17-June 26, 2013*

June 18, West Channel Net was found vandalized, reset same day.

June 25, both East and West channel nets were found vandalized, not able to be reset.

June 26, both nets were pulled.

No Asian Carp were captured or observed in Lake Calumet.



## **Larval Fish Update**

*Lake Calumet: 5/1/13* – 1 sample, no Asian Carp larvae or eggs

*Lake Calumet: 5/13/13* – 3 samples, no Asian Carp larvae or eggs

*Morris: 5/24/13* – 4 samples, no Asian Carp larvae or eggs

*Henry: 5/24/13* – 4 samples, **2 Asian Carp larvae & 2 Asian Carp eggs**

*Havana: 6/5/13* – 4 samples, no Asian Carp larvae or eggs

The upstream location of the two larvae represented above equal existing records of small fish (< 6 inches) in the Illinois River.

## **Distribution and Movement of Small Asian Carp in the Illinois Waterway**

The week of June 10th USFWS-Carterville performed push-trawl sampling for small Asian carp in the Illinois Waterway. Sixty five trawls were made distributed among the Peoria, Starved Rock, Marseilles, and Dresden Island Pools. No young of year Asian carp were noted in the field. Many small fish were preserved and returned to the lab. Identification of preserved specimens is pending.

The week of 17 June USFWS-Carterville fished the Peoria pool for small Asian carp with mini-fyke and large frame fyke nets. Mini-fykes were fished for 20 net-nights and fykes for 12 net-nights. No young of year Asian carp were noted in the field. Many small fish were preserved and returned to the lab. Identification of preserved specimens is pending.

## **Ontario Ministry of Natural Resources – Asian Carp Surveillance Program**

### Great Lakes Surveillance

- The Lake Erie Management Unit's regular sampling programs are under way including
  - A full Port Officer presence in the commercial fishery
  - Commercial catch sampling program
  - Trawling programs in east and west basins of Lake Erie
  - Seining programs on Lake St. Clair
  - No Asian Carp have been detected through these activities to date.
- MNR eDNA surveillance in 19 tributaries to Lake St. Clair and Lake Erie (66 samples). Sites target suitable habitats in tributaries identified in the DFO Ecological Risk Assessment on Bigheaded Carps. Analysis to date has not detected Asian carp DNA and analysis of some samples is pending.
- MNR's surveillance activities are being conducted in coordination with the DFO.

### **Alternate Pathway Surveillance in Illinois - Law Enforcement**

- The Invasive Species Unit (ISU) attended the Association of Midwest Fish and Game Law Enforcement Officers conference in Traverse City, Michigan. The ISU gave a presentation on Illinois laws and enforcement efforts to prevent the illegal trafficking of invasive species including Asian Carp. The ISU participated in training and the Asian Carp Task Force meeting at the conference.
- The ISU investigated an individual illegally selling indigenous snakes without the required aquaculture permits and the falsification of documents to the IDNR. Several snakes and snake eggs were seized from the residence as evidence. Multiple charges were documented and the case is currently being reviewed by the Attorney General's Office for prosecution.
- ISU set up surveillance on a bait shop where previous intelligence indicated an out of state bait dealer was illegally selling bait without a non-resident aquatic life dealer's license or VHS importation permits. Suspect was approached by ISU after illegally selling and delivering bait. Documents and fish were seized as evidence. The fish were sent to the lab for VHS testing and the case is ongoing.
- ISU assisted with the surveillance and take down of an out of state fish dealer who was illegally selling and offering to stock an invasive aquatic species in Illinois. The case is ongoing and the specifics cannot be released at this time. Several items were seized as evidence.
- ISU attended training and an Asian Task Force meeting in Arkansas. ISU gave a presentation on Illinois regulations and enforcement efforts dealing with Asian Carp. Training included touring an Aquaculture farm, presentations from USFWS biologists, Arkansas biologists, law enforcement personnel from member states of the task force, including Canada.