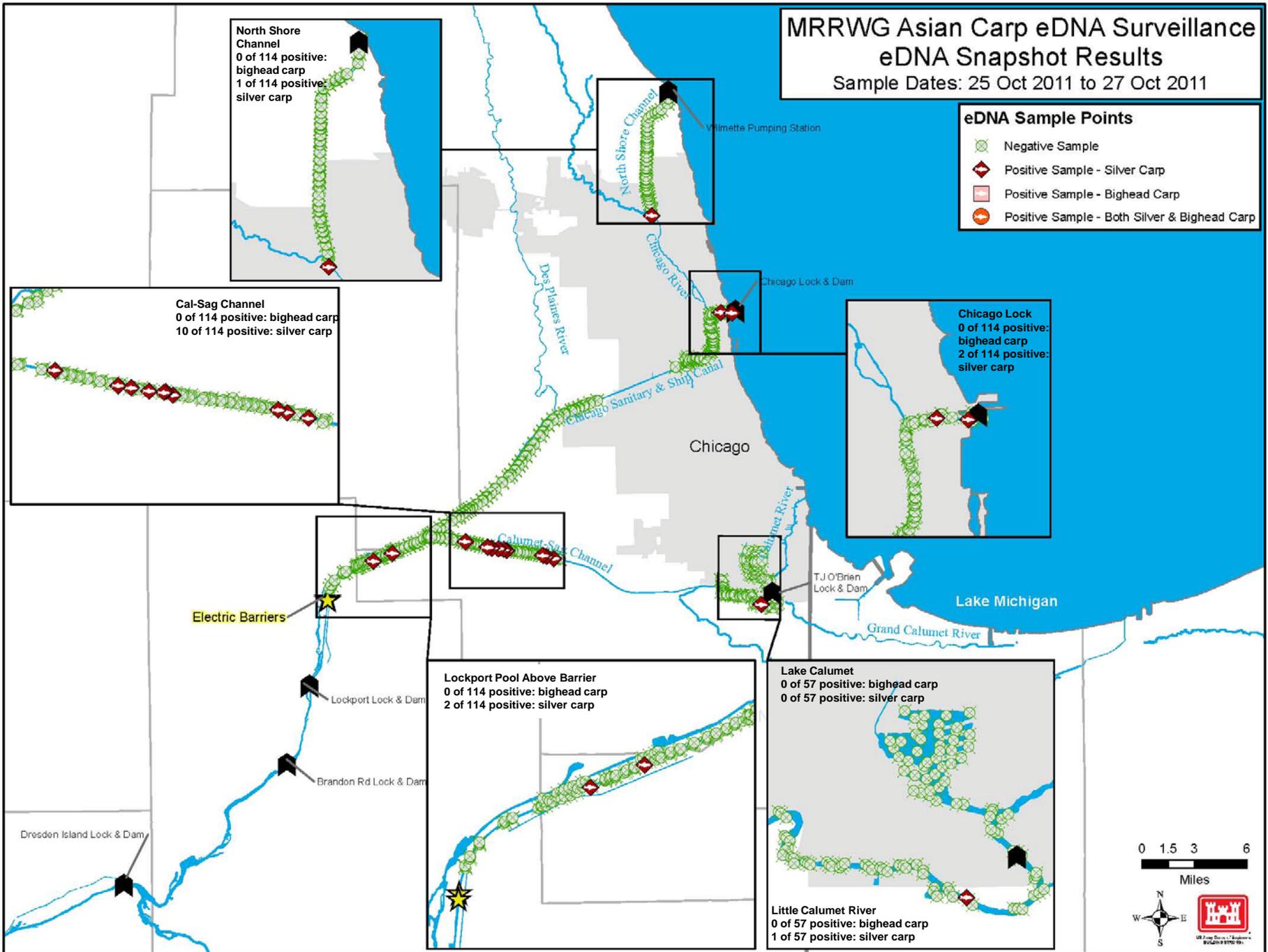


MRRWG Asian Carp eDNA Surveillance eDNA Snapshot Results

Sample Dates: 25 Oct 2011 to 27 Oct 2011

eDNA Sample Points

-  Negative Sample
-  Positive Sample - Silver Carp
-  Positive Sample - Bighead Carp
-  Positive Sample - Both Silver & Bighead Carp



0 1.5 3 6
Miles



MRRWG Asian Carp eDNA Snapshot Results (2011)

Location	Samples Collected	Silver Carp		Bighead Carp		Need to Process	
		Neg	Pos	Neg	Pos	Silver	Bighead
LPA Lockport Pool Above Barrier (RM 296.2 to RM 300.6)	114	112	2	114	0	0	0
Chicago Sanitary & Ship Canal (RM 300.6 to RM 304)	114	114	0	114	0	0	0
Chicago Lock to Bubbly Creek (Chicago Lock to RM 321.8)	114	111	2	114	0	0	0
Cal-Sag Above Confluence (RM 304 to RM 315)	114	104	10	114	0	0	0
O'Brien Lock to Acme Bend on Little Calumet North Leg (O'Brien Lock to RM 320.0)	57	56	1	57	0	0	0
Lake Calumet	57	57	0	57	0	0	0
Wilmette Controlling Works to North Branch Chicago River (Wilmette Pump to RM 333.4)	114	113	1	114	0	0	0
TOTAL	684	668	16	684	0	0	0

As of 31 January 2012

ACRCC Monitoring Workgroup eDNA Snapshot

The Monitoring and Rapid Response Workgroup (MRRWG) conducted an environmental DNA (eDNA) sampling event at the end of October 2011 called the "eDNA Snapshot" to obtain a comprehensive system-wide view of Asian carp DNA distribution in the Chicago Area Waterway System (CAWS) at one time.

During the eDNA Snapshot, monitoring agencies (USFWS and USACE) sampled the weekly monitoring stations, (North Shore Channel, Chicago Lock, Little Calumet River, Lake Calumet) as well as three additional sites (Lockport Pool above barrier, Cal-Sag Channel and the Chicago Sanitary and Ship Canal (CSSC) above the confluence), collecting 720 samples from seven sites over three days.

The difference between the number of samples collected (720) and the number of samples processed (684) is to account for "cooler blanks," which is a quality assurance/control measure taken to ensure no contamination is occurring within the storage cooler of field samples. For example, each sampling batch of 120 samples will have six blanks, so the total number of actual samples collected and processed from the river is 114.

The Snapshot results indicate that, over a short period of time, silver carp DNA was distributed at several locations throughout the CAWS, but was not detected in Lake Calumet or the CSSC above the confluence of the Cal-Sag Channel. Asian carp eDNA has previously been detected at all locations that yielded a positive result in the Snapshot. Consistent with 2011 eDNA results, only silver carp DNA was detected (no bighead carp DNA was detected during this snapshot).

The snapshot sampling event was not designed to identify the specific sources of DNA in the CAWS. Potential examples of sources include multiple fish (live or dead), input from storm sewer discharge/combined sewer outfalls, fish-eating birds, and recreational/commercial vessels transporting fish or DNA. Additionally, what remains unknown is how the number of positive samples correlates to the strength of the DNA source. For example, 10 of 114 samples returned positive hits for silver carp DNA in the Cal-Sag Channel above the confluence of the CSSC, but at this point in time, the MRRWG is still working to understand the relationship between the number of hits and the DNA source (fish or other source).

The current Monitoring and Rapid Response protocol identifies the need for the results from one site to return one or more positive hits in three consecutive sampling trips to trigger a response action. The MRRWG puts more value on the repetition of positive hits at a site than the number of positive hits returned during one monitoring event. Response actions are triggered by a consistent pattern of DNA over several sampling occasions, indicating a potential affinity to the site by Asian carp or Asian carp DNA over time, and not in a single instant.

For more information on the Monitoring and Rapid Response Workgroup and to view the current Monitoring and Rapid Response Plan, visit www.asiancarp.us/monitoring.htm.