

**Addendum to the  
U.S. Army Corps of Engineers Environmental Assessment Entitled:  
EMERGENCY MEASURES ASSOCIATED WITH THE MAINTENANCE OF THE  
CSSC FISH DISPERSAL BARRIERS**

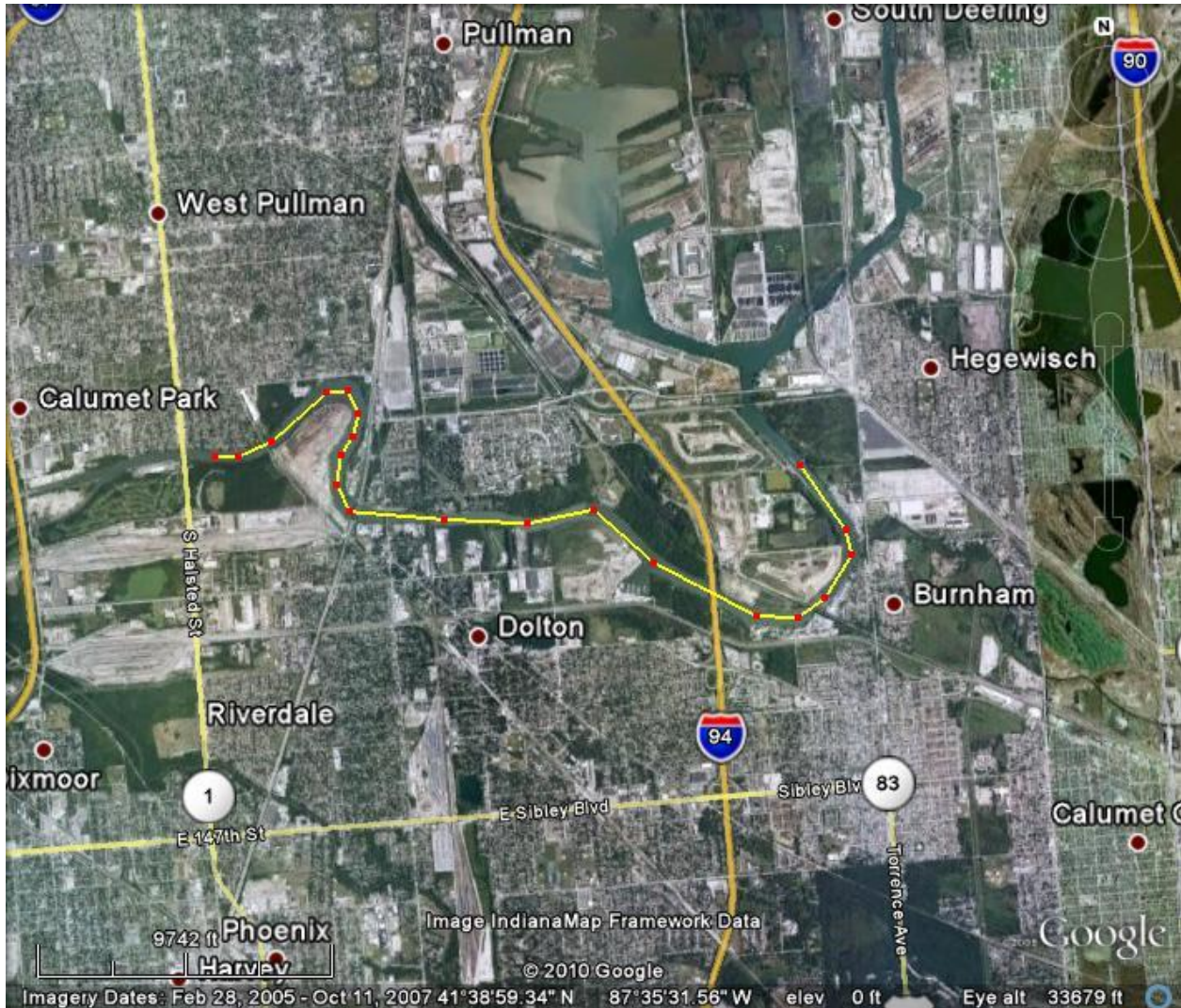
**Purpose and Need:** The purpose of this Addendum is to clarify actions that will be taken to prevent Asian carps from becoming established in the Great Lakes via the Cal-Sag Channel (CSC), Cook County, Illinois. These activities will be conducted using funding in Fiscal Year 2010 through appropriations to the Environmental Protection Agency under the Great Lakes Restoration Initiative (GLRI) and transferred to the U.S. Fish and Wildlife Service (FWS). FWS distributed funds ultimately to the State of Illinois to support efforts to control aquatic invasive species including Asian carps. Actions previously funded to support this goal were provided by the U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, and U.S. Fish and Wildlife Service's Office of Federal Assistance. Actions covered by those operations included: 1) conducting monitoring and assessment in the Chicago Sanitary and Ship Canal, and 2) applying rotenone, during December 1-9, 2009, to eradicate fishes in the 5.5-mile area Chicago Sanitary and Ship Canal (from above the electrical barrier system to Lockport Lock and Dam).

This Addendum expands the area of consideration for the proposed action to the 6-mile area (hereafter, Focus Area) of the Cal-Sag Channel below T.J. O'Brien Lock and Dam. The selected alternative for actions in the Focus Area include: 1) supporting commercial fishing operations, 2) conducting biological monitoring and assessment using nets, electrofishing and water sampling, and 3) applying rotenone, during May 20-27, 2010. These actions will provide information on, and reduce, abundance and distribution of bighead and silver carps. Findings of No Significant Impact were signed by the U.S. Army Corps of Engineers and U.S. Fish and Wildlife Service for actions executed in December 2009, so proposed actions are interpreted, by the U.S. Fish and Wildlife Service, as being covered by an identical Finding of No Significant Impact. These documents can be accessed at [www.asiancarp.org](http://www.asiancarp.org).

**Background:** Bighead and silver carps (hereafter, Asian carps) invaded the Illinois River in the 1990s, and the invasion has since progressed upstream. Monitoring of the invasion has been occurring through standard routine sampling via the U.S. Fish and Wildlife Service's annual Carp Corral & Goby Roundup, and more recently through a monitoring plan established from the U.S. Army Corps of Engineers to monitor Asian carp downstream of the Electrical Barrier System (barriers designed to repel fish using an electric field to prevent fish movement between the Great Lakes and Mississippi River basins) (Figure). These monitoring efforts, and the December 2009 rotenone action resulted in: collection of bighead carps in Lockport Pool directly below the Electrical Barrier System, bighead carp collection in Dresden Island Pool, and a silver carp sighting in Brandon Road Pool. Environmental DNA (hereafter, eDNA) is a new and emerging technique that is used to test for the genetic presence of bighead and silver carps in water. Positive confirmation of Asian carp DNA has been documented in areas above the

Electrical Barrier System prompting action, including further monitoring, assessment, and rotenone treatment actions above the Electrical Barriers.

Figure. Map of 6-mile area of the Cal-Sag Channel where various Asian carp management actions will be conducted.



**Preferred Alternative:**

A number of alternatives were considered, in the U.S. Army Corps of Engineers Environmental Assessment (Appendix [www.asiancarp.org]), for removing Asian carps from the vicinity of the Electrical Barrier System during December 2009. The alternatives considered included physical methods such as nets, chemical and biological alternatives, no action, and change in barrier operation. The recommended alternative that was executed included the application of a 5% emulsifiable concentrate of rotenone at 5 locations in the Lockport Pool, and the application of potassium permanganate to neutralize the rotenone at the Lockport Powerhouse. Potassium

permanganate was used to detoxify the rotenone below Lockport Lock and Dam. All dead or moribund fish were removed, where possible, from the Chicago Sanitary and Ship Canal and disposed of in approved landfills.

### **Clarified and Detailed Description of Proposed Action:**

The actions covered under this Addendum include: commercial fishing, water sampling (for eDNA), biological assessment netting and electrofishing, and rotenone treatment. These actions are collectively proposed for the 6-mile area immediately below the T. J. O'Brien Lock and Dam in the Cal-Sag Channel. Rotenone treatment will be executed on approximately a 2-mile stretch near the T. J. O'Brien Lock and Dam, and potassium permanganate will be used to detoxify the rotenone. Rotenone and permanganate will be applied under near zero discharge below the 2-mile treatment zone. Fish collected after this treatment will be disposed of in an approved landfill.

### **Affected Environment:**

Cal-Sag Channel (CSC), historically referred to as the Little Calumet River North Leg, is located south of Chicago near the cities of Dolton and Burnham. The area in which all management activities will be conducted starts at T. J. O'Brien Lock and Dam and ends about 6 miles downstream. The upper limit of the proposed 2-mile rotenone treatment zone starts downstream from the T.J. O'Brien Lock & Dam at the R.R. Bridge (River Mile 325.3) and runs just upstream of Pier 11 Marina (River Mile 323.3). The CSC treatment zone is characterized as a deep draft navigation channel with an average width of 480 ft., maximum depth of 20.6 ft., and average depth of 8.9 ft. The surface area of the treatment zone is approximately 116 acres. Land use immediately adjacent to the treatment zone consists primarily of industrial, with some commercial and open space forested areas.

The fish population within the proposed 2.0 mile treatment zone consists predominantly of rough or commercial species such as common carp, bigmouth buffalo, quillback carpsucker, and freshwater drum. Sport fish species such as largemouth bass, bluegill, channel catfish, and yellow perch also occur at relatively low abundances. Forage or non-game species include gizzard shad, alewife, and emerald shiners. Due to the relatively close proximity and connection to Lake Michigan, coho salmon, chinook salmon, and rainbow trout can be periodically found. There are no other significant aquatic resources known to occur in the treatment zone.

### **Environmental Consequences:**

The overwhelming majority of fishes, in the 6-mile area of the Cal-Sag Channel below T. J. O'Brien Lock and Dam, are non-native and non-sport fishes including a potential population of Asian carps. It is concluded that: 1) the use of nets, electrofishing, and rotenone on these non-native fishes will not result in significant adverse effect on the quality of the human environment, and 2) this project will have only beneficial impacts upon the ecological, biological, social,

cultural, and physical resources of the Great Lakes ecosystem by managing and controlling populations of Asian carps in the Cal-Sag Channel.

**References:**

Copies of the Environmental Assessment developed by the U.S. Army Corps of Engineers (USACE), the Environmental Assessment Addendum, FONSI and Public Notice for these actions can be found at <http://www.asiancarp.org>.

## **FINDING OF NO SIGNIFICANT IMPACT**

For Reasons briefly presented below and based on an evaluation of the information contained in the Supporting References listed below, I have determined that:

- Funding Illinois Department of Natural Resources to:
  - Conduct a rotenone treatment of the 2-mile stretch of the Cal-Sag Channel (CSC) below T. J. O'Brien Lock and Dam during May 20-27, 2010
  - Support commercial fishing activities in up to a 6-mile stretch of the CSC below T. J. O'Brien Lock and Dam
  - Conduct assessment electrofishing, netting, and water sampling in up to a 6-mile stretch of the CSC below T. J. O'Brien Lock and Dam

are not collectively a major Federal action that would significantly affect the quality of the human environment within the meaning of Section 102(2)(c) of the National Environmental Policy Act of 1969. An Environmental Impact Statement will, accordingly, not be prepared.

Reasons:

- The actions are covered under an Addendum (Attachment 1) to the U.S. Army Corps of Engineers-Chicago District (COE), for which the COE has developed and Environmental Assessment (Attachment 2), issued a Finding of No Significant Impact (Attachment 3), and completed a 7-day Public Notice (Attachment 4).
- The majority of fishes in the treatment area are rough fish and invasive fishes, probably including Asian carps.
- The use of rotenone in the CSC would not cause significant adverse effects on the quality of the human environment, and would benefit the Great Lakes ecosystem by reducing the risk of Asian carps becoming established there.

### Supporting References:

Copies of the Environmental Assessment developed by the U.S. Army Corps of Engineers (USACE), the Environmental Assessment Addendum, FONSI and Public Notice for these actions can be found at <http://www.asiancarp.org>.

COE's Environmental Assessment, FONSI, and Public Notice (Attachment 2-4)  
Addendum to the COE's Environmental Assessment (Attachment 1)

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Regional Director, FWS, Region 3

Date:

UNITED STATES FISH AND WILDLIFE SERVICE

**ENVIRONMENTAL ACTION STATEMENT**

Within the spirit and intent of the Council of Environmental Quality's regulations for implementing the National Environmental Policy Act (NEPA) and other statutes, orders, and policies that protect fish and wildlife resources, I have established the following administrative record and have determined that the action of:

- Funding Illinois Department of Natural Resources to:
  - Conduct a rotenone treatment of the 2-mile stretch of the Cal-Sag Channel (CSC) below T. J. O'Brien Lock and Dam during May 20-27, 2010
  - Support commercial fishing activities in up to a 6-mile stretch of the CSC below T. J. O'Brien Lock and Dam
  - Conduct assessment electrofishing, netting, and water sampling in up to a 6-mile stretch of the CSC below T. J. O'Brien Lock and Dam

is found not to have significant environmental effects as determined by the attached Environmental Assessment and Finding of No Significant Impact (FONSI).

Supporting documents are:

- U.S. Fish and Wildlife Service FONSI
- U.S. Army Corps of Engineers Environmental Assessment
- U.S. Army Corps of Engineers FONSI
- U.S. Army Corps of Engineers 7-Day Public Notice

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(1) Initiator    Date

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(2) ARD – Fisheries    Date

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(3) Regional Director    Date