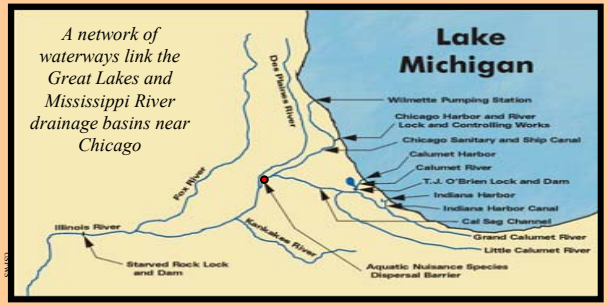
U.S. Fish & Wildlife Service

Preventing Movements of Invasive Fish Between the Mississippi River and Great Lakes Basins

Aquatic Species Conservation

A series of man-made waterways near Chicago help link the Great Lakes and Mississippi River drainage basins. These navigable channels were built a century ago to flush sewage away from Lake Michigan, the source of drinking water for the city. Now however, these canals also act as portals for invasive aquatic species

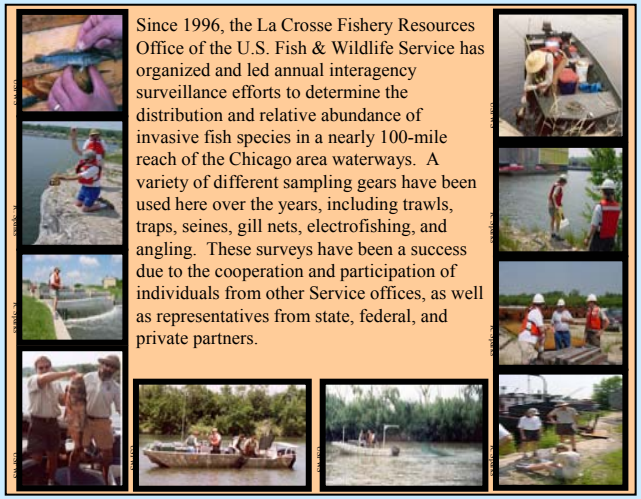


A network of waterways link the Great Lakes and Mississippi River drainage basins near Chicago

to move between two of the largest drainage basins in North America. The ability of invasive fish to disperse from one basin to another here threatens the functional integrity of these vast aquatic ecosystems, the survival of certain native fishes, and regional fishing economies in both the United States and Canada.

Invasive asian carps, like this plankton feeding bighead carp, were introduced to the U.S. decades ago for use in the aquaculture industry. These fast growing fish have since entered the Mississippi River where they have proliferated and expanded their range far upstream in tributaries like the Illinois River. In 2002, survey teams captured this species in the Des Plaines River at a site only 52 miles from Lake Michigan. Dispersal of asian carp into Lake Michigan poses a serious threat to the Great Lakes fish community and the economically important international fishing industry it supports.

Round goby are native to the Ponto-Caspian region of Eurasia and were introduced to the Great Lakes in the 1990's. These small, pugnacious fish have proliferated near Chicago and have moved more than 50 miles inland toward the Mississippi River where they threaten native benthic fishes.



Since 1996, the La Crosse Fishery Resources Office of the U.S. Fish & Wildlife Service has organized and led annual interagency surveillance efforts to determine the distribution and relative abundance of invasive fish species in a nearly 100-mile reach of the Chicago area waterways. A variety of different sampling gears have been used here over the years, including trawls, traps, seines, gill nets, electrofishing, and angling. These surveys have been a success due to the cooperation and participation of individuals from other Service offices, as well as representatives from state, federal, and private partners.

Barrier site

Carp at barrier

Barrier construction

Barrier conceptual view

Staff from the La Crosse Fishery Resources Office are members of an advisory panel that urged the U.S. Army Corps of Engineers to install an electrical barrier in the the Chicago Sanitary & Ship Canal to stop interbasin fish movements. An initial barrier was built at a site 30 miles downstream of Lake Michigan and supplied with power in 2002. Additional barriers and continued surveillance are also needed to help prevent interbasin movements of invasive fish here.

Electrodes

ILLINOIS NATURAL HISTORY SURVEY

Sea Grant ILLINOIS-INDIANA

US Army Corps of Engineers

USGS Biological Resources

Contact:
Pam Thiel
La Crosse Fishery Resources Office
608-783-8434
pam_thiel@fws.gov