



U.S. Fish & Wildlife Service

Region 3 Fish Passage Program

Reconnecting Great Lakes and Big Rivers Aquatic Habitats

Accomplishments 1999 - 2006

Aquatic habitats in the United States are fragmented by millions of dams, culverts, dikes, water diversions, and other human constructed barriers. Many of these barriers have a negative impact on fish and other aquatic organisms such as crayfish, freshwater mussels, and insects because they interrupt or alter biological and physical processes that are important for key aspects of aquatic life. Aquatic organisms of all types in the U.S. are highly imperiled, in part, due to habitat fragmentation from barriers.



-Minnesota Department of Natural Resources

Removal of the Dutton Locks dam and installation of step pools on the Pelican River in the Red River Valley of Minnesota. This project reconnected 10 miles of stream in support of lake sturgeon restoration efforts.

What is the Fish Passage Program?

The U.S. Fish and Wildlife Service's National Fish Passage Program is a voluntary, non-regulatory program that provides federal funds and technical assistance to remove or by-pass human constructed barriers to allow for passage by fish and other aquatic organisms. The goal of the program is to restore native fish and other aquatic species to self-sustaining levels by reconnecting habitats that have been fragmented by artificial barriers, where such reconnection results in a positive ecological effect. Since 1999, the Service has worked with a variety of partners to remove barriers and reconnect important aquatic habitats under this program.



Before Fish Passage Improvement
Johnson's Crossing culvert replacement in Michigan. This project reduced sediment loading and enhanced fish passage for brook trout.



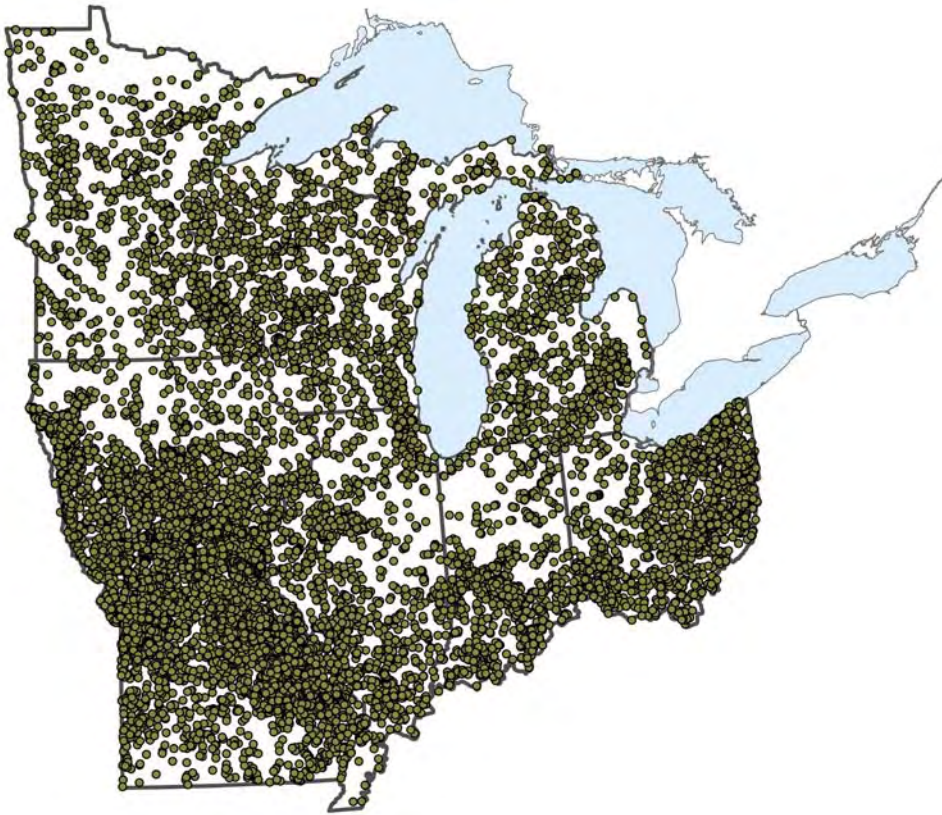
After Fish Passage Improvement
-USFWS photos

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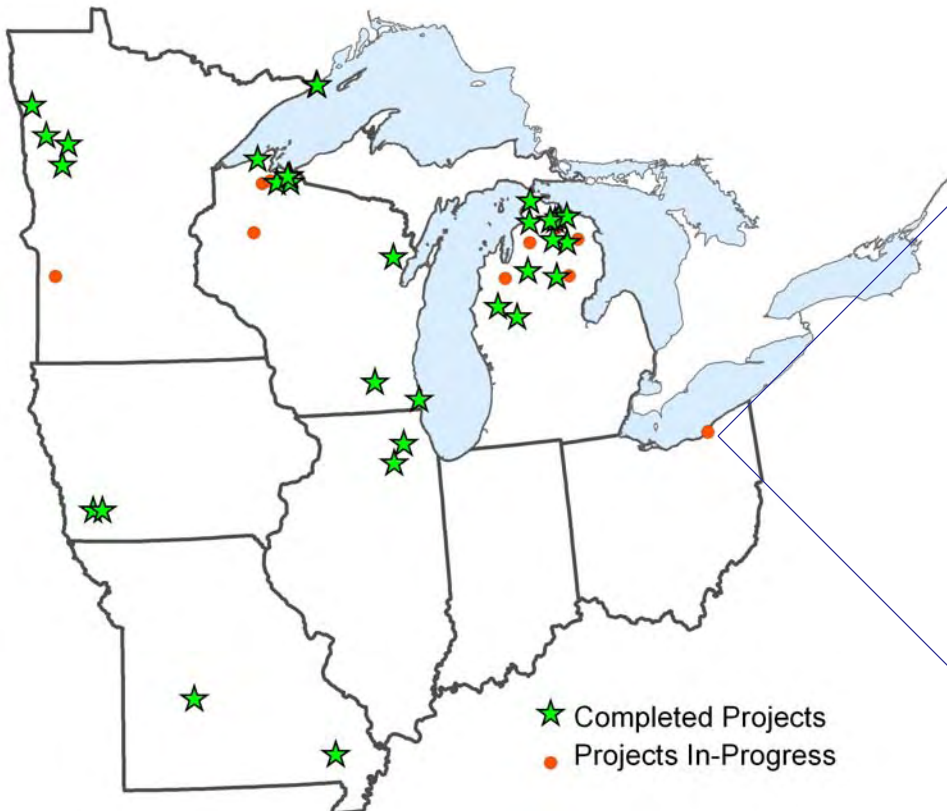
Great Lakes / Big Rivers Region

Region 3, the Great Lakes / Big Rivers Region of the Service, encompasses the states of Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Ohio, and Wisconsin. The Region is home to 60 million people who live and work in close proximity to some of North America's greatest freshwater resources: the Great Lakes and the Upper Mississippi, Missouri and Ohio Rivers.

Region 3 - Fish Passage Program



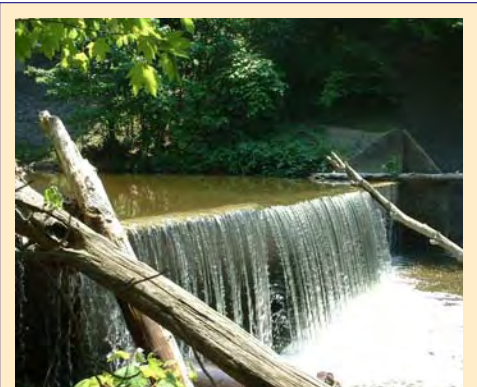
Fish passage barriers over 6 feet high in Region 3. There are approximately 15,300 dams over 6 feet high and hundreds of thousands of other smaller barriers to fish passage, such as culverts and road crossings in the Region. This map does not highlight those smaller barriers.
 Source: U.S. Army Corps of Engineers. 2005. *National Inventory of Dams*.



Completed and in-progress Fish Passage Program projects in Region 3 (1999-2006). Projects include culvert renovations, dam removals, installations of fish passage structures or natural by-passes, and stream grade control structures modifications.

Status of Aquatic Resources

While the Great Lakes and Big Rivers ecosystems support tremendous aquatic biodiversity and numerous recreational and commercial fishing opportunities, the health of these systems and the abundance of many organisms is declining. For example, within the Region, 57% of native fish, 67% of crayfish and 64% of freshwater mussels are either imperiled locally or imperiled range-wide, while 3% of fish and 11% of freshwater mussels are possibly extinct. Some of these organisms have declined because of habitat fragmentation resulting from barriers. There are approximately 15,300 dams over 6 feet high and hundreds of thousands of other smaller barriers to fish passage, such as culverts and road crossings in the Region.



-USFWS
 Removal of dam on Euclid Creek in Ohio will reconnect 10 miles of stream and provide increased recreational fishing opportunities. This project will also benefit the restoration of native species, such as the rainbow darter (below).



-Ohio Department of Natural Resources

Region 3 - Fish Passage Program

Accomplishments

Since 1999, the Service has initiated 56 projects in Region 3, representing an investment of \$1,918,971 in Fish Passage Program funds and \$6,109,010 in matching partner support. These projects have involved culvert renovations, dam removals, installation of fish passage structures or natural by-passes, modification of stream grade control structures, and barrier inventory/assessments. To date, 83 barriers have been removed and 646 stream miles reconnected; while projects currently in progress will remove 17 barriers and reconnect an additional 161 stream miles.

These projects have contributed to restoring the natural flow regime in Midwest rivers and streams and have benefited aquatic organisms by making additional habitat available for spawning, rearing and feeding. Many projects have also reduced sediment runoff and in-stream water temperatures. In addition to resource benefits, some projects have improved recreational fishing opportunities and improved public safety by removing unsafe dams.



Before Fish Passage Improvement



During Fish Passage Improvement

Removal of a dam and construction of step pools on the Pike River in Wisconsin reconnected 25 miles of habitat for salmonids and native warm water fish.



Installation of this step-pool fishway structure at Grand Portage Creek in Minnesota reconnected 3.5 miles of spawning and nursery habitat for coaster brook trout.



This culvert replacement at Mingo National Wildlife Refuge in Missouri reconnected 2.5 miles of stream habitat and approximately 1,500 acres of wetland habitat to benefit various species of gar, bass, sunfish, and darters.

-USFWS photos

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Summary Table of USFWS Region 3 Fish Passage Program Accomplishments 1999 - 2006

	# of Projects	# of Barriers Removed	# of Stream Miles Reconnected	Fish Passage Program Funding	Partner Matching Funds and In-Kind Support	Total Project Costs	Number of Partners
Iowa	3	9	72.1	\$118,727	\$255,000	\$373,727	7
Illinois	2	4	79	\$128,576	\$818,442	\$947,018	27
Michigan	22	22	137.6	\$647,900	\$1,463,730	\$2,111,630	39
Minnesota	7	7	292	\$339,000	\$2,413,000	\$2,752,000	14
Missouri	5	4	42.5	\$213,010	\$349,690	\$562,700	12
Ohio	2	2	32	\$131,900	\$112,900	\$244,800	8
Wisconsin	15	52	151.8	\$339,858	\$696,248	\$1,036,106	30
Totals	56	100	807	\$1,918,971	\$6,109,010	\$8,027,981	137

Region 3 - Fish Passage Program

Building Partnerships

The Fish Passage Program has become one of the Service's most popular initiatives and is a model for cooperative aquatic habitat restoration. The program embraces partners from every level of government and a wide range of private and civic conservation groups, most of which add significant matching funds that help stretch taxpayer dollars. From 1999 to 2006, the Region 3 Fish Passage program has worked with over 137 partners that have contributed \$3.14 in funding and in-kind support for every \$1 contributed by the Fish Passage Program.

The Region 3 Fish Passage Program has worked with over 139 partners. In total, partners have contributed \$3.14 for every \$1 in Fish Passage Program funding.

A New Watershed-Based Approach

In 2006, the Region 3 Fish Passage Program initiated an effort to focus Fish Passage Program funding on projects that are part of larger watershed restoration efforts. By focusing our resources in priority watersheds that are in-line with Service priorities and the priorities of our partners, we hope to have a greater positive cumulative impact on aquatic habitats in Region 3 and the aquatic species and human communities which depend on them.



Before Fish Passage Improvement



During Construction



After Fish Passage Improvement

Dam removal and ramp installation on the White Earth River in Minnesota reconnected 40 miles of stream habitat important for walleye and lake sturgeon.



Before Fish Passage Improvement



During Construction



After Fish Passage Improvement

The Turkey Creek grade control structure modification project in Iowa removed a total of 2 barriers and reconnected 8 miles of stream habitat to benefit channel catfish, flathead catfish, flathead chub, paddlefish, sauger, and topeka shiner.

-USFWS photos

For more information please contact:
Tim Patronski
U. S. Fish & Wildlife Service
Fisheries Program
Bishop Henry Whipple Federal Bldg.
1 Federal Drive
Ft. Snelling, MN 55111
612/713-5168
Tim_Patronski@fws.gov

Alpena FRO 989/356-3052
Ashland FRO 715/682-6185
Carterville FRO 618/997-6869
Columbia FRO 573/234-2132
Green Bay FRO 920/866-1717
La Crosse FRO 608/783-8431

*FRO (Fishery Resources Office)

Additional Resources:

Region 3 Fisheries Program at: <http://www.fws.gov/midwest/Fisheries>
Region 3 Fisheries Program - Fish Friendly Stream Crossings at: <http://www.fws.gov/midwest/Fisheries/StreamCrossings>
National Fish Passage Program at: <http://www.fws.gov/fisheries/FWSMA/fishpassage>
Fish Passage Decision Support System at: <http://fpdss.fws.gov>

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