Upper Mississippi River

Restoring natural river dynamics

Prairie Rivers Network is working toward the restoration of the Upper Mississippi River to promote healthier living and working relationships with our rivers that benefit people, fish, and wildlife.

Potters Marsh Restoration Area on the Upper Mississippi River

Prairie Rivers Network is Illinois' advocate for clean water and healthy rivers. The 120,000 miles of rivers and streams flowing through Illinois provide drinking water to our communities, homes for fish and wildlife, buffers for flood waters, and natural areas for hikers, canoeists, anglers, and families.

For rivers to remain healthy, citizens must stand up for them—for 45 years, Prairie Rivers Network and our members have done just that, protecting our rivers and streams for people, fish, and wildlife.

prairierivers network

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About the Upper Mississippi River

The Mississippi River Basin is the third largest river basin in the world, covering 31 states entirely or in part, and draining 41% of the contiguous United States. The northern section of the Mississippi, the Upper Mississippi River basin was declared by the U.S. Congress "a nationally significant ecosystem." Stretching for 1,300 miles from its headwaters in Minnesota to the confluence of the Ohio and Mississippi Rivers south of Cairo, Illinois, the Upper Mississippi River Basin is home for millions of people and an abundance of wildlife.

Originally, the Upper Mississippi River consisted of a fully-functioning, complex, large-river ecosystem, with habitats ranging from wetlands and marshes to forested floodplains and free-flowing open waters. Over time, increased human settlement resulted in "improvements" to the river which drastically altered the diversity of ecosystems and wildlife it can support.

Problems from Alterations to the Upper Mississippi River

Man's attempts to tame "Old Man River" began in the early 1800s when the U.S. Congress started a progression of projects designed by the U.S. Army Corps of Engineers (the Corps) to alter the river's flow for navigation. Early activities, such as snag removal and field levees, were smaller scale projects. With the growth of floodplain agriculture, farmers and newly-formed levee districts began constructing more extensive levee systems to separate the river from its floodplains. Today, 53% of floodplains between Rockford, Illinois and St. Louis, Missouri are behind levees; between St. Louis and Cairo, Illinois, an astounding 82% of natural floodplains are separated from the river.

Perhaps the most destructive human activity on the Upper Mississippi River began in the 1930s when the U.S. Army Corps of Engineers constructed 27 locks and dams for commercial barges to navigate the river. In addition to dams, creating a usable navigation channel required the Corps to do large scale dredging of the river bottom and build additional structures, such as wing dams, in and along the river.

As human use of the Upper Mississippi River grew, the river's natural systems and habitats deteriorated. Critical habitats such as marshes, wetlands, and forested floodplains were filled in or separated from their needed source of water. Dams created a series of pools which severely impacted open water and downstream habitats. Huge losses of river bank and floodplain habitat affect fish and other aquatic life's ability to maintain healthy populations.

Floodplain separation, repeated dredging, locks and dams, and other modifications to the Upper Mississippi River have disrupted and extensively damaged an ecosystem created over tens of thousands of years. We have lost the many benefits provided by a naturally functioning river, including water purification and vital flood control.

The Mississippi River will always have its own way;
no engineering skill can persuade it to do otherwise --Mark Twain

Upper Mississippi River Restoration

Photo credit: David Hale

Upper Mississippi River Quickfacts:

- Important drinking water source for approximately 2.8 million people.
- Diverse ecosystem supports 120 species of fish and 44 species of mussels.
- Varied habitats are home to 326 bird species (60% of all North American bird species!)
- Over half of the UMR's length forms the western border of Illinois.

* You can download an in-depth report on the economic and environmental weaknesses of NESP, "Big Price – Little Benefit" at www.prairierivers.org/downloads

For more information on Upper Mississippi River restoration and how you can help, please contact:

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From Destruction to Restoration

Upper Mississippi River Restoration - Environmental Management Program

In recognition of the devastating damage done by modifications to the Upper Mississippi River and the importance of wildlife and people living along the river, the U.S. Congress authorized the Upper Mississippi River Restoration Ecosystem Management Program in 1986. Directed by the Corps, the restoration program brings together federal and state science and technology experts to plan and test restoration methods for successful implementation on the Upper Mississippi River and also the Illinois River. By the end of 2012, the restoration program will have completed 50 projects and improved over 100,000 acres of fish and wildlife habitat.

Threats to Upper Mississippi River Restoration

Congress has continued to fund the Upper Mississippi River Restoration - Environmental Management Program since its inception, though at funding levels significantly less than authorized. However, since 2007, the restoration program existence has been threatened by the proposed Upper Mississippi Navigation and Ecosystem Sustainability Program (NESP). Heavily supported by the shipping industry, NESP is a navigation-expansion program with the objectives of adding seven new 1,200-foot locks, and extending five current locks from 600 to 1,200 feet. While supporters of NESP say it is a restoration program, the NESP proposal initially did not even include restoration components. Problems with NESP are many; primary reasons why Congress has not yet authorized the program are the questionable need for increased navigation structures and the failure of the proposed projects to meet the federal government's required benefit-cost ratio.*

Illinois Upper Mississippi River Restoration Success Stories

In Illinois there are eight completed Upper Mississippi River Restoration - Environmental Management Program projects, and another 14 under construction or in the planning process. Objectives for individual projects differ, but can include: 1) restoring more natural hydrologic (flow) patterns to mimic seasonal and other changes in river flow; 2) reconnecting habitats to support a greater diversity of aquatic and other river-dependent wildlife; 3) reducing riverbank erosion and sediment that builds up behind dams; and 4) restoring the capacity of floodplains to naturally store and distribute floodwaters to natural systems.

Illinois' Batchtown Wildlife Management Area

The Batchtown Wildlife Management Area is part of the Mark Twain National Wildlife Refuge Complex. This complex is a crucial link in a stretch of flyway along the Mississippi River used by more than 240 species of migratory birds. In its natural state, this area's maze of backwater wetlands, lakes, marshes and channels provided prime resting area for migratory waterfowl and other birds. Unfortunately, the construction of 27 dams and years of dredging the Upper Mississippi River to facilitate barge traffic degraded large areas of specialized habitat within the Mark Twain National Wildlife Refuge Complex. Bottom-dwelling plants and animals have been buried under years of silt, soil, and rocks behind dams. Sedimentation also filled in side channels, marshes and other habitat used by migratory birds and other aquatic life for food and shelter.

The rapid decline in critical habitat was a primary reason for selecting the Batchtown area as a restoration project. A primary objective was to restore conditions to mimic the natural changes in water levels that occur on a free-flowing river. This was done in part by creating controlled flooding during high water periods on the river, drawing off some water in historic wetland areas to allow plants to reestablish, and dredging excess sediment behind dams and in side channels. Completed almost ten years ago, the Batchtown Wildlife Management Area once again provides functioning and diverse habitats which benefit the fish and plants living in and next to the river, as well as the increasing number of birds who once again can rely on the refuge as a place for rest and food.