

# the MIGHTY MISSISSIPPI

Protect and Restore  
America's Great River



# Executive Summary

For as long as people have lived along the Mighty Mississippi, it has provided an incredible natural bounty: an abundance of birds, fish, and wildlife; water to drink; and incredible scenic beauty. In the 200 years since the Louisiana Purchase and the explorations of Lewis and Clark and Zebulon Pike opened the entire 2,336 miles of the River to European settlement, it has become home to many millions. Today, nearly 11 million people live in the 123 counties that border the river.

While the River is of profound importance to those who live along it, the Mississippi is important to us all. Draining 40 % of the United States and providing a 30 million acre floodplain, the River provides an ecological lifeline for all of North America. The Mississippi provides a vital migration corridor and is home to many hundreds of species of fish and wildlife. The River is also an important economic engine since it serves as a source of water for industry, provides a major transportation route for grain and cargo, creates a recreational destination for boaters, hunters, fisherman, and birders, and provides the nutrients that makes gulf coast fisheries thrive.

Tragically, we have not taken proper care of this national treasure. To the contrary, human activities have pushed the Mississippi River into a dramatic decline – monitoring shows that the ecological health of the River is severely degraded and is getting worse. Today 90% of the Mississippi River natural floodplain is cut off from the river by levees. The 10% that remains has been so altered by dikes, dams, and dredging that it is incapable of supporting anywhere near historic levels of birds, fish, and wildlife populations.

It is far past time to turn the nation's attention to restoring and protecting the health of the Mississippi River. The benefits to all of us will be well worth the challenges. Restoring the Mississippi will revitalize and protect communities all along the River, and will bring environmental, human health, and economic benefits to the entire nation.

We urge you to join us and become a steward of the Mississippi River – be you a birdwatcher, farmer, fisherman, hiker, conservationist, river scientist, towboat pilot, community member, county commissioner, mayor or council member of a riverfront community, or a state or federal elected or appointed official.

This brochure provides guidance on how you can help:

- Improve the Health of the Mississippi River,
- Build Community Connections to the River, and
- Generate National Support for a National Resource.



# Mississippi River Facts

**Watershed Area:** The Mississippi River drains 41% of the continental United States. Thirty-one states and 2 Canadian provinces are included in the watershed. The total area drained by the watershed is between 1.2 and 1.8 million square miles.

**Length:** The Mississippi River runs through ten states. The U.S. EPA says it is 2,320 miles long, and the Mississippi National River and Recreation Area (National Park Service) maintains its length at 2,350 miles.

**Elevation and Depth:** The elevation of the Mississippi River at its headwaters is 1,475 feet above sea level. It drops to sea level at the Gulf of Mexico. More than half of that drop in elevation occurs within the state of Minnesota. At its headwaters, the Mississippi is less than 3 feet deep. The River's deepest section is between Governor Nicholls Wharf and Algiers Point in New Orleans where it is 200 feet deep.

**Speed and Volume:** At the headwaters of the Mississippi River, the average surface speed of the water is near 1.2 miles per hour - roughly one-third as fast as people walk. At New Orleans the speed of the River is approximately 3 miles per hour. At Lake Itasca, the average flow rate is 6 cubic feet per second. At New Orleans, the average flow rate is 600,000 cubic feet per second.

**Water supply:** More than 18 million people in 50 communities up and down the river use the Mississippi to obtain fresh water and to discharge their industrial and municipal waste.

**Sediment Load:** The Mississippi River carries an average of 436,000 tons of sediment each day. Over the course of a year, it moves an average of 159 million tons of sediment. Averages have ranged from 1,576,000 tons per day in 1951 to 219,000 in 1988.

**Wildlife:** The Mississippi River is host to at least 260 species of fishes, 25% of all fish species in North America; 40% of the nation's migratory waterfowl use the River corridor during their Spring and Fall migrations; 60% of all North American birds (326 species) use the Mississippi River Basin as their migratory flyway; from Cairo, Il, upstream to Lake Itasca, there are 38 documented species of mussels. On the Lower Mississippi, there may be as many as 60 separate species of mussels; The Mississippi is host to more than 50 species of mammals and at least 145 species of amphibians and reptiles inhabit the Upper Mississippi River environs.

**Tourism and Economy:** International visitors spend an estimated \$2.6 billion each year throughout the 10 River states, generating more than 53,000 jobs. Waterfowl hunting in the flyway is valued at \$58 million per year and sport fishing is valued at over \$100 million annually. The Mississippi River Valley generates over \$7 billion in agricultural and forest products and \$29 million in manufacturing goods each year.

*Sources: National Park Service and the U.S. Geological Survey*

# Restoring the Health of the River

## Facts

Nearly 300 species of birds – and some 40% of North America's duck, goose, swan, and eagle populations – migrate through the River valley in spring and fall.

Locks and dams maintained by the US Army Corps of Engineers allow for navigation, but have significantly harmed the health of the River. Below St. Louis, the Mississippi River is naturally deep enough so that dams are not needed for navigation.

## The Issue:

The Mississippi River provides a diverse array of open-water, wetland, and floodplain habitats.

It includes several national wildlife refuges and supports the largest continuous system of wetlands in North America.

This habitat is home to 300 bird species, 260 fish species, 50 mammal species, and 45 amphibian and reptile species. The River is also a vital migratory flyway for 40% of all North American waterfowl.

Long term monitoring shows that the ecological health of the River has been severely degraded and is getting worse. Construction of dikes and dams, annual dredging of the River to maintain a deep channel, and changes in the watershed have damaged millions of acres of habitat and resulted in significant declines in nearly all bird, fish and wildlife species along the River.

Ninety percent of the River's natural floodplain is now cut off from the River by levees built over the last century in an attempt to reduce flood damages, and by 29 dams built mostly in the 1930s to maintain a nine-foot deep navigation channel in the Upper River. Ongoing dredging and manipulation of water levels, also designed to maintain a nine-foot deep navigation channel, have added significantly to the River's decline. Over-engineering of the Mississippi River is also a major cause of the loss of Louisiana's coastal wetlands.

The 10 % of the Mississippi River floodplain that remains connected to the river has been so altered by dikes, dams, and dredging that it is incapable of supporting anywhere near historic levels of birds, fish, and wildlife populations.

In addition, much of the Mississippi River watershed is now intensively cultivated. Runoff from the land carries sediment, nutrients and pesticides into the River's tributaries, then to the main stem, and ultimately to the Gulf of Mexico. Excess nutrient run off (particularly nitrogen and phosphorus) flowing from the Mississippi River has been the largest contributor to a 7,000 square mile seasonal dead zone in the Gulf. This has significantly depleted aquatic life.



## Actions We Can Take:

The most effective and truly sustainable actions we can take to reverse the tide of degradation in the watershed, on the River, and in our communities will address both ecological and economic needs together.

We must provide solutions that make our working landscape and communities more healthy, livable, and economically viable.



## Get involved by supporting legislation and programs that:

- Reduce sediment, nutrients, pesticides and herbicide runoff into tributary streams, the Mississippi River and the Gulf of Mexico while improving the economic viability and diversity of farming operations in the region.
- Protect and restore natural River processes and the ecological diversity of nationally significant River floodplain, riparian areas, the adjacent blufflands, coastal Louisiana, and the Gulf of Mexico, while maintaining the nationally significant commercial navigation system.
- Help river valley communities protect and restore the natural resources of their riverfronts on parallel tracks with planning and design programs that support energy-efficient, sustainable economic development.

# Restoring Community Connections to the River

## The Issue:

Every community along the Mississippi River is tied to the river; from the headwaters near Bemidji, Minnesota to Venice, Louisiana on the Gulf Coast. In fact, there are nearly 11 million people who live in the 123 counties that border the River. Many of them receive their drinking water from the River, use it for recreation, and are employed by businesses that depend upon the River. Yet most people feel that they have very limited influence on how the River is managed in their own communities, counties, parishes, states, or by federal agencies.

There are 53 members of Congress who have districts directly bordering the River. There are 20 United States Senators that represent the ten states bordering the River. While the Mississippi River is, indeed, a national treasure, for the people who live, work, and play along this river, it is the local places they know best that they care about. Conservation is ultimately about people taking care of the places they love. People need to find ways to connect their care of the River to action on behalf of the River. Even people from other places love this River, but those national and international visitors, too, gain information about and access to the River via local institutions.

For example, the roads and highways along both sides of the River have been designated as "The Great River Road." Because of this designation, the attendant Mississippi River Parkway Commission is working with local units of government and has mapped most of the interpretive centers along the River. To date there are 153 interpretive facilities where people can go to learn about the cultural and natural history and life along the Mississippi.



## Actions we can take:

The simple fact is that people will take action to protect and restore what they love about the Mississippi River in their own communities. People who understand the importance and magnificence of the River are the ones who will love it. People gain understanding through knowledge; knowing specifically what this river means locally, to the state, to the nation, and as an internationally significant resource for birds, fish, wildlife, and people.



## Get involved:

- The River in your own community. What kinds of habitat are there? Who owns the land? Is there a local nature center, museum or interpretive center that is connected to the River? Take action by supporting them and getting involved as a volunteer.
- Who makes the decisions that affect the health of the River, and what is happening along your riverfront. Who are your community and county or parish elected officials? What are their views about the River? Is there a land use plan for your community that shows what is happening along the riverfront? Take action by letting your appointed and elected local officials know that you care about the River, and help educate them about this magnificent resource.
- The federal agencies and programs that affect your River locally. Many of the decisions that affect the River locally are made far away. Each year millions of dollars worth of projects for navigation, flood control, and ecosystem restoration are approved or denied at the state House or in Washington, D.C. Take action by learning about the issues and then communicating to your state and federal officials that you care about the River. Let your views be known. Also take action by joining an organization that can help you make a difference through the collective efforts of a larger group of people. To find an organization in your area, visit the National Directory of River and Watershed Conversation Groups at <http://www.rivernetwork.org>.

# Creating National Support for a National Treasure

## The Issue:

The Mississippi River is well known around the world because of its place in our nation's history and its prominence in the writings of Mark Twain. Mention the Mississippi River to many people and an image of a bright red paddle-driver steamboat comes to mind, blowing black smoke from its stacks as it works its way among sandbars and islands or docked at a lively riverfront of yesteryear.

When it comes to bringing everyone together to support restoring the ecological health and economic vitality of the River, this mighty resource succumbs to partisan and parochial bickering.

It is critical that we restore a modern and accurate identity to the Mississippi River as an ecosystem of interdependent parts – headwaters, delta, and Gulf of Mexico. Like any system, the health of the whole is dependent on the health of all the parts.

The River itself is an interconnected ecosystem and navigation system. It depends greatly on the support of the United States Congress to provide the necessary authorizations and appropriations to support the many parts in a coordinated way. Sound public policy is needed that recognizes this as one of the world's major river systems in size, habitat diversity, and biological productivity and as a major contributor to our economic well-being.

Millions of people annually recreate on and along the Mississippi's waters. Here they take advantage of fishing, hiking, bird watching, swimming, camping, canoeing, biking, wildlife photography, and many other activities the River provides. These types of activities are a proven way to educate people about important environmental issues such as loss of fish and wildlife habitat. According to the 2001 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation, 15.9 million people

participated in eco-tourism in the 10 states along the Mississippi River, generating \$9 billion dollars in economic output in one year.

River recreation is dependent on an ecologically healthy river. Poor water quality jeopardizes local economies dependent on river tourism and recreation. Many of the 90 communities along the Mississippi River, from the headwaters to the Gulf, are revitalizing their riverfronts to increase opportunities for recreation and tourism. Low-impact businesses such as bed-and-breakfasts, restaurants, and recreation-based retail can boost positive economic activity, while encouraging conservation-based tourist opportunities.

In the past, state and federal river management policies have severely compromised the health of this River and our river communities. There are three reasons this has happened. As a nation, we have:

- Focused too narrowly on specific issues or specific places in developing and implementing federal policy. We have managed the River independent of its watershed and have disregarded the impacts our actions have had on coastal Louisiana and the Gulf of Mexico.
- Not recognized the national significance of the entire river-delta-gulf complex. We must give the Mississippi River a singular identity as a "problem to be solved" and as "an opportunity for renewing our heartland."
- Not recognized that river restoration and community revitalization from headwaters to gulf is accomplished by systemic leadership and support, as well as local support. We will continue to think of the River in "parts" as long as leadership is only local.

## Actions we can take:

At the national level there is a dire need for leadership, big thinking, and commitment to restoring this big River, working in its watershed, and bringing ecological and economic life back to river communities, the Coast of Louisiana, and the Gulf of Mexico. There is ample knowledge about how to do this important work, what is lacking is the collective will to do it.



## Get involved by:

- Urging and energizing members of the United States Congress with districts along the River to work together on this major resource. Give the program a name and an identity and work vigorously for restoration of the River's health and revitalization of the region's economy as a high-priority, connected, and powerful national goal.
- Encouraging the President and the heads of key federal agencies to commit to the Mississippi River, the Coast of Louisiana, and the Gulf of Mexico as a national priority for ecological restoration and economic revitalization.
- Advocating to the Governors of the states of Arkansas, Illinois, Iowa, Kentucky, Louisiana, Minnesota, Mississippi, Missouri, Tennessee, and Wisconsin to create a "Mississippi River Compact" to work together for the common good to restore the ecological health and economic vitality of the ten states along this river and on the Gulf.

### Fact

The Mississippi is the longest river system in the United States, measuring more than 2,350 miles. It is the fourth longest river in the world.

# Glossary:

**Dead zone:** Also known as hypoxia, an area in the ocean where oxygen levels are so low that life cannot be supported. The Gulf of Mexico suffers a dead zone of as much as 8,500 square miles due to pollution (particularly nitrogen and phosphorus) flowing from the Mississippi River. One of the primary causes is runoff from farms in the Mississippi River Basin.

**Dredge:** to remove dirt, silt, and other sediment to deepen a waterway. On the Mississippi River, dredging is done to deepen the River for barge traffic.

**Floodplain:** any normally dry land area that is susceptible to being inundated by water from any natural source. This area is usually lowland adjacent to a stream or lake.

**Lock:** a navigation lock is a device that lifts or lowers boats, barges, or other vessels from one water level to another. Locks are used on rivers in connection with dams since there is generally a difference in water level between the upstream side of a dam and the downstream side.

**Sediment:** topsoil, sand, and minerals washed from the land into water. Sediments collecting in rivers, reservoirs, and harbors can destroy fish and wildlife habitat and cloud the water so that sunlight cannot reach aquatic plants. Loss of topsoil from farming, mining, or building activities can be sharply reduced through a variety of erosion-control techniques. The Mississippi carries an average of 436,000 tons of sediment each day.

**Watershed:** also known as a river basin; an area of land that drains into a particular body of water. The watershed for a major river may encompass a number of smaller watersheds that ultimately combine at a common point. The Mississippi River watershed contains thousands of smaller watersheds. Over 60 percent of the basin is cropland or pasture.

**Wetland:** areas inundated by surface or ground water with a frequency sufficient to support, and under normal circumstances do or would support a prevalence of vegetation or aquatic life that requires saturated soil conditions for growth and reproduction. Wetlands generally include swamps, marshes, bogs and similar areas such as sloughs, potholes, wet meadows, river overflows, mud flats and natural ponds.



*This report is the product of a collaborative effort by many individuals and organizations. We represent hundreds of years of collective skill and experience on the River and in the greater conservation community. We bring to this report a sound understanding of the River and its importance in our lives and a deep passion for its protection and restoration as home and habitat for many forms of life, including birds, fish, wildlife, and people.*

# River Resources:

## American Rivers

1101 4th Street N.W. Suite 1400 Washington, DC 20005  
202-347-7550 [www.americanrivers.org](http://www.americanrivers.org)

## Audubon

2357 Ventura Drive Suite 106 Woodbury, MN 55125  
651-739-9332 [www.audubon.org](http://www.audubon.org)

## Delta Land Trust

P.O. Box 1638 Madison, MS 39130  
601-981-3865 [www.deltalandtrust.org](http://www.deltalandtrust.org)

## Earth Share of Missouri

1915 Alfred Avenue St. Louis, MO 63110  
314-771-6668 x103 [www.earthsharemo.org](http://www.earthsharemo.org)

## Friends of the Minnesota Valley

3815 American Boulevard East Bloomington, MN 55425-1659  
952-858-0706

## Friends of the Mississippi River

360 North Robert Saint Paul, MN 55101  
651-222-2193 [www.fmr.org](http://www.fmr.org)

## Friends of the Upper Mississippi River Refuges

51 East Fourth Street, Room 101 Winona, MN 55987  
[www.friendsofuppermiss.org](http://www.friendsofuppermiss.org)

## Grace Hill AmeriCorps Trail Ranger Project

2600 Hadley Street St. Louis, MO 63106

## Great River Greening

35 West Water Street Suite 201 Saint Paul, MN 55107-2016  
651-665-9500 · [www.greatrivergreening.org](http://www.greatrivergreening.org)

## Institute for Agriculture and Trade Policy

2105 First Avenue South Minneapolis, MN 55404  
612-870-0453 · [www.iatp.org](http://www.iatp.org)

## Izaak Walton League of America - Midwest Office

1619 Dayton Avenue #202 St. Paul, MN 55104  
651-649-1446 · [www.iwla.org](http://www.iwla.org)

## Louisiana Democracy Project

4070 Fairwoods Drive Suite A Baton Rouge, LA 70805  
225-357-7425

## Lower Mississippi River Conservation Committee Coordinator

2524 S. Frontage Road Suite C Vicksburg, MS 39180-5269  
601-629-6602 · [www.lmrcc.org](http://www.lmrcc.org)

## The Minnesota Project

1885 University Avenue W. #315 St. Paul, Minnesota 55104  
651-645-6159 · [www.mnproject.org](http://www.mnproject.org)

## Mississippi Corridor Neighborhood Coalition

P.O. Box 18748 Minneapolis, MN 55418  
612-331-4738 · [www.mncn-mpls.org](http://www.mncn-mpls.org)

## Mississippi River Basin Alliance

708 N. 1st Street #238 Minneapolis, MN 55401  
612-334-9460 · [www.mrba.org](http://www.mrba.org)

## Mississippi River Revival

51 E 4th Street Suite 305 Winona, MN 55987  
1-800-957-4837 · [www.cleanriver.org](http://www.cleanriver.org)

## Missouri Coalition for the Environment

6267 Delmar Boulevard Suite 2E St. Louis, MO 63130  
314-727-0600 · [www.moenviron.org](http://www.moenviron.org)

## Missouri River Communities Network

200 Old 63 South Suite 203 Columbia, MO 65201-6081  
573-256-2602 · [www.moriver.org](http://www.moriver.org)

## National Mississippi River Museum & Aquarium

350 East 3rd Street Dubuque, IA 52001  
1-800-226-3369 · [www.rivermuseum.com](http://www.rivermuseum.com)

## Natural Resources Defense Council

1200 New York Avenue N.W. Suite 400 Washington, DC 20005  
202-289-6868 · [www.nrdc.org](http://www.nrdc.org)

## The Nature Conservancy

301 SW Adams Street Suite 1007 Peoria, IL 61602  
309-636-3300 · [www.nature.org/wherewework/greatrivers/](http://www.nature.org/wherewework/greatrivers/)

## Prairie Rivers Network

809 S. Fifth Street Champaign, IL 61820  
217-344-2371 · [www.prairierivers.org](http://www.prairierivers.org)

## Quapaw Canoe Company on the Lower Mississippi River

291 Sunflower Avenue Clarksdale, MS 38614  
662-627-4070 or 662-902-7841 · [www.island63.com](http://www.island63.com)

## River Network

520 SW 6th Avenue Suite 1130 Portland, OR 97204  
503-241-3506 · [www.rivernetwork.org](http://www.rivernetwork.org)

## Rivers Project

Southern Illinois University Edwardsville, IL 62026  
616-656-2154 · [www.siue.edu/OSME/river](http://www.siue.edu/OSME/river)

## Sierra Club - Midwest Region

214 N. Henry 2nd Floor Madison, WI 53703  
608-257-4994 · [www.sierraclub.org](http://www.sierraclub.org)

## Sustain

920 N. Franklin Street Suite 301 Chicago, IL 60610  
312-951-8999 · [www.sustainusa.org](http://www.sustainusa.org)

## Upper Mississippi River Conservation Committee

4469 48th Avenue Court Rock Island, IL 61201  
309-793-5800 x207 · [www.mississippi-river.com/umrcc/](http://www.mississippi-river.com/umrcc/)

## The Wetlands Initiative

53 W. Jackson Boulevard #1015 Chicago, IL 60604  
312-922-0777 · [www.wetlands-initiative.org](http://www.wetlands-initiative.org)

## Woodlands Trail and Park

Our Lady of Holy Cross College  
4123 Woodland Drive New Orleans, LA 70131  
504-433-4000 · [www.woodlandtrail.com](http://www.woodlandtrail.com)

Written by Dan McGuiness

Financial support for publication was provided by the  
McKnight Foundation

Designed by

