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## Upper Mississippi River

**State:** Iowa, Illinois, Missouri

**Threat:** Illegal levee development

**At Risk:** Public safety

### Summary

The Upper Mississippi River is vital to the nation's economy and is a globally significant ecosystem. However, this iconic river is threatened by illegal raises to the levee system that cut the river off from more than 170,000 acres of floodplain, increasing flood risk for communities and degrading vital fish and wildlife habitat. In order to safeguard communities and restore river health, state and federal agencies must enforce laws that prohibit reckless raising of levees and prioritize use of natural and nature-based flood protection solutions.



PHOTO: ANDREW DOBSON

UPPER MISSISSIPPI RIVER, ILLINOIS

### The River

The Mississippi River has been the lifeblood of many cultures throughout history and has served as the inspiration for a rich heritage of American music, art and literature. The Mississippi is also a globally-significant flyway used by hundreds of species of birds and provides unique habitat for fish, mussels, reptiles, amphibians and mammals. This significant ecosystem supports commercial and recreational fishing, hunting and boating, which contribute \$24.6 billion to the region's economy and an estimated 421,000 jobs.

Floodplain loss on the Upper Mississippi River is a major contributor to the decline of numerous federally-protected species, including the pallid sturgeon, Indiana bat, decurrent false aster and several types of mussels that rely on the complex aquatic habitat provided in natural floodplains.

### The Threat

The Upper Mississippi River is threatened by levees that are being raised (i.e., made taller) without required permits and approvals. Several agricultural levee and drainage districts on the Upper Mississippi have acted outside of the law by increasing the heights of their levees. This is to the detriment of neighboring communities and the environment. Some communities lack resources to handle increasingly damaging floods, especially when they are unaware of the risks because the neighboring levee districts have acted outside of the required public review and regulatory process.

Eighty miles of levees between Muscatine, Iowa, and Hamburg, Illinois, have been raised without obtaining the required state or federal approvals or complying with state and federal laws designed to protect people and the environment. As a result, these levee raises perpetuate a century of habitat degradation on the Upper Mississippi River. Failure to come into compliance disregards clear requirements to study, identify and start to reverse the ongoing damages to the Upper Mississippi River ecosystem that have been caused by floodplain disconnection.

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### Take Action:

[www.AmericanRivers.org/  
UpperMississippi2019](http://www.AmericanRivers.org/UpperMississippi2019)

The threats posed by these unlawful changes are real and getting worse as climate change is leading to more frequent floods and intense storms in the Upper Mississippi River Basin and across the country. The three highest-volume rain storms ever recorded in the U.S. have occurred in the last three years, in line with climate scientists' projections that extreme downpours in the U.S. could increase by 400 percent by the end of this century. Munoz et al. (2018) determined that the magnitude of 100-year flood events in the Mississippi Basin have increased by 20 percent over the past 500 years, with much of that increase being caused by the combination of river engineering and climate change. The increased risk of flooding is the reason some levee districts have pursued higher levees, but their actions are intensifying the impacts of flooding for their neighbors. For example, during the most extreme flood events, communities in and around Hannibal, Missouri, are projected to experience an additional foot or more of floodwaters because their neighbors have raised levees.

Though they have been aware of the problem for years, state and federal agencies have failed to stop the illegal activity. Only the U.S. Army Corps of Engineers has taken some action by removing some of the levee districts from a beneficial program that helps pay for damages to levees following a disaster. Unfortunately, the Army Corps' actions have had little effect.

The Federal Emergency Management Agency (FEMA) has repeatedly looked the other way, extending temporary approvals of heightened levees despite the lack of the necessary permits. In Illinois, instead of pursuing enforcement action, former Governor Rauner proposed to dramatically roll back oversight of levees and retroactively permit the unlawful levee raises.

## What Must Be Done

The Army Corps, FEMA and the states of Illinois, Iowa and Missouri need to take corrective action to stop and resolve these levee violations. Violators also must be held accountable for their illegal activities. Furthermore, state and federal agencies must work with all stakeholders to develop effective flood risk management strategies for urban and rural communities that avoid the environmental damage and increased risks created by levees and floodwalls. The decision cannot be made by a single group, especially since the actions of these levee districts are placing people and wildlife at risk.

The Upper Mississippi region needs to move beyond an early 20th Century vision of flood control that foolishly relies on bigger and higher levees and floodwalls. Instead, the Upper Mississippi River needs a flood risk management plan that incorporates natural and nature-based solutions to deliver the flood and habitat protection needed for both healthy communities and healthy rivers. This becomes even more urgent as the effects of climate change and the danger of increasingly intense rain events take hold. Federal and state agencies should advance natural and nature-based solutions, such as wetland and floodplain restoration and levee setbacks, to protect vulnerable communities from flooding and deliver a wide range of benefits, including improved water quality, fish and wildlife habitat and recreation, fishing and hunting opportunities.