Upper Mississippi River Restoration Program

Implementation Snapshot
2025 - 2027

Upper Mississippi River Restoration

Long Term Resource Monitoring
of the Upper Mississippi River System

The Upper Mississippi River System is changing for a variety of reasons, mostly because of **changing hydrology** and **invasive species**. Changing hydrology affects habitat quality and food sources for fish and wildlife.

We know these changes are occurring because of the **Long Term Resource Monitoring** (LTRM) in the Upper Mississippi River Restoration Program. The data collected for 35 years at six field stations has **produced many insights that would be otherwise unobtainable.**

The six field stations collect data on **water quality, forests, aquatic vegetation, fish,** and other variables to measure the river's health. The six study reaches have different habitats, threats, and conditions.

Lake City Field Station
Monitored by the state of Minnesota. This station's findings illuminate how investing in nutrient reduction leads to a healthier ecosystem.

La Crosse Field Station
Monitored by the state of Wisconsin. Findings from this field station show the value of UMRR's habitat projects, particularly island and backwater restoration.

Bellevue Field Station
Monitored by the stateof Iowa. This station found that the Maquoketa River, which flows into Pool 13, contributes the most sediment out of the tributaries studied. This has led to a decline in aquatic plant diversity and abundance.

Havana Field Station
Monitored by the state of Illinois. The establishment of invasive carp in the La Grange Reach has led to a decrease in recreationally valued native fish populations at this field station .

Great Rivers Field Station
Monitored by the state of Illinois. Water levels at Pool 26 have been managed to expand the areas where native emergent plants can grow. The plants then help to limit sediment movement and enhance water clarity.

Open River Field Station
Monitored by the state of Missouri. In contrast to the Havana field station, recreationally valued native fish populations are stable in the Open River Reach despite the presence of invasive carp.

MINNESOTA

Upper Impounded Floodplain Reach

Pool 4

WISCONSIN

MINNESOTA RIVER

ST CROIX RIVER

BLACK RIVER

Pool 8

WISCONSIN RIVER

Lower Impounded Floodplain Reach

IOWA

MISSISSIPPI RIVER

DES MOINES RIVER

Pool 13

Illinois Floodplain Reach

La Grange Pool

ILLINOIS

ILLINOIS RIVER

MISSOURI

Pool 26

KASKASKIA RIVER

Open River Floodplain Reach

Open River Reach

♦ LTRM monitoring stations

— Dark blue indicates long-term study areas within each floodplain reach

Long Term Resource Monitoring
of the Upper Mississippi River System

For 35 years, UMRR's Long Term Resource Monitoring (LTRM) captures trends in nutrient concentrations, plant community changes, forest loss across the system, and the impacts from invasive carp expansion to the abundance and diversity of native fishes.

LTRM informs our understanding of the river's ecology and focuses investments for the greatest benefit of the river and the public .

What Does LTRM Tell Us?

There is **more water in the river more of the time**. High flows are lasting longer and occurring more frequently throughout the system. This is important because water flow is the primary driver affecting the quality and quantity of habitat.

Floodplain forest loss has occurred in nearly all study areas except south of the locked portion of the river. The forests may be responding to changes like increased flood inundation and invasive species.

In most of the river system, **water in main channel has become clearer** and **aquatic plants have become more abundant,** improving habitat for some fish and wildlife. Increased water clarity in the river allows sunlight to reach deeper into the water and promotes plant growth. These plants slow water flow and anchor the sediment, which further improves water clarity and triggers more plant growth.

Concentration of nutrients, notably nitrogen and phosphorus, remain high, exceeding U.S. Environmental Protection Agency benchmarks. However, total phosphorus concentrations have declined in many of the studied reach areas.

The river continues to support diverse and abundant fishes. Recreational fishes have increased in parts of the system. However, there have been substantial declines in forage fish, an important food source for larger fishes and animals, throughout the river network. Invasive carps have substantially affected the river ecosystem where they have become common.

How Does LTRM Benefit People Along the River?

In the 1980s, there was a massive collapse of vegetation on the Upper Mississippi River that increased sedimentation of the navigation channel, negatively impacting the river's ability to support navigation. The collapse was likely caused by poor water quality. Monitoring vegetation, sediment and water quality is important to maintaining reliable transportation of commerce.

UMRR long term monitoring of nutrients provides the agricultural community with long term information about trends, informing the success of past investments in nutrient management and informing decisions about future investments in conservation practices.

The Upper Mississippi River System is a treasured ecosystem abundant with fish and wildlife and a multi-billion-dollar economic engine. It plays a major role in local, regional, state, and national economies. LTRM works towards a healthier and more resilient ecosystem that supports these systems.
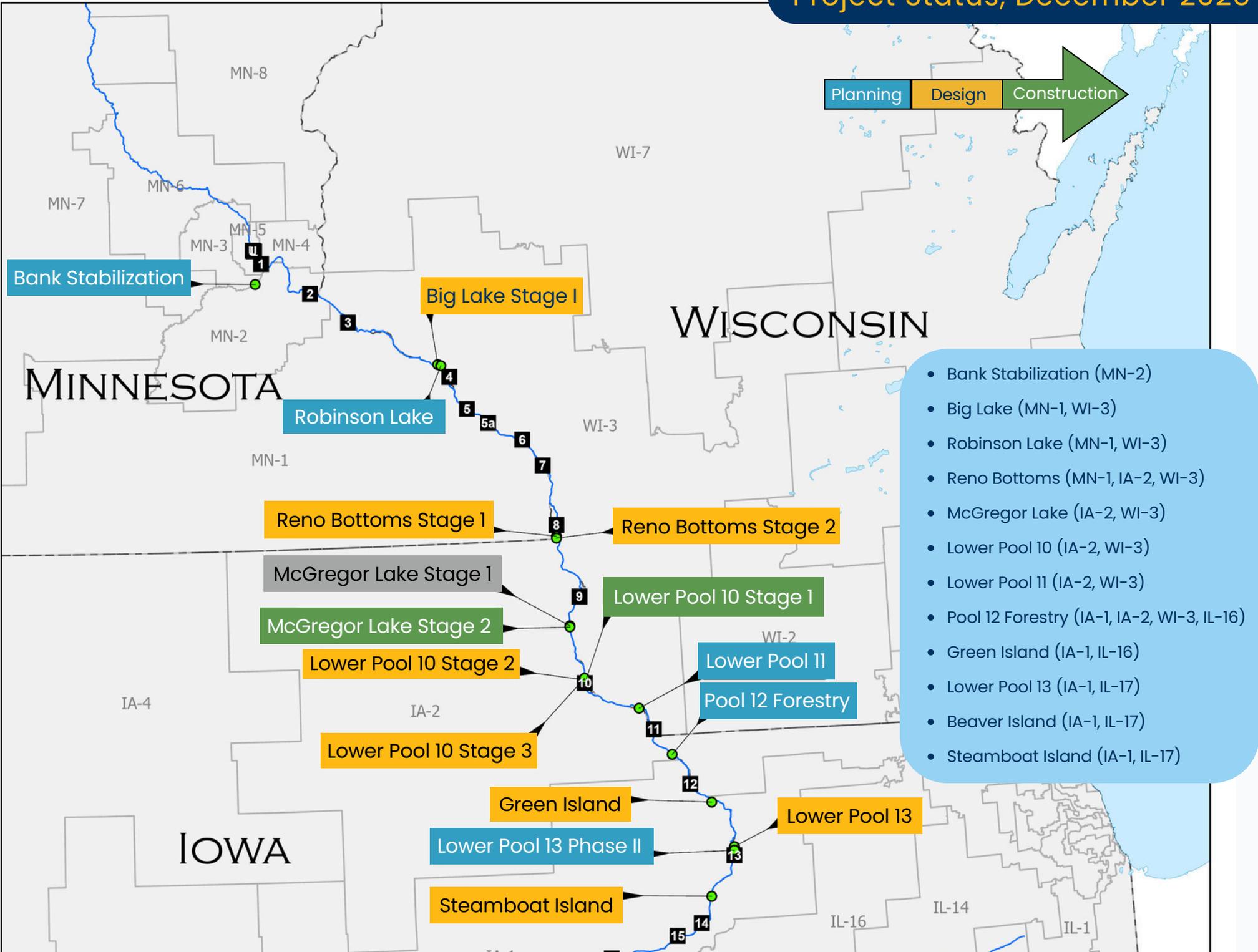

This information is available in greater detail in the following scientific publications:

2022 Ecological Status and Trends of the Upper Mississippi and Illinois Rivers

2018 UMRR Habitat Needs Assessment II

Project Status, December 2025

Planning | Design | Construction

Bank Stabilization

Big Lake Stage I

Robinson Lake

Reno Bottoms Stage 1 | Reno Bottoms Stage 2

McGregor Lake Stage 1 | Lower Pool 10 Stage 1

McGregor Lake Stage 2

Lower Pool 10 Stage 2

Lower Pool 11

Pool 12 Forestry

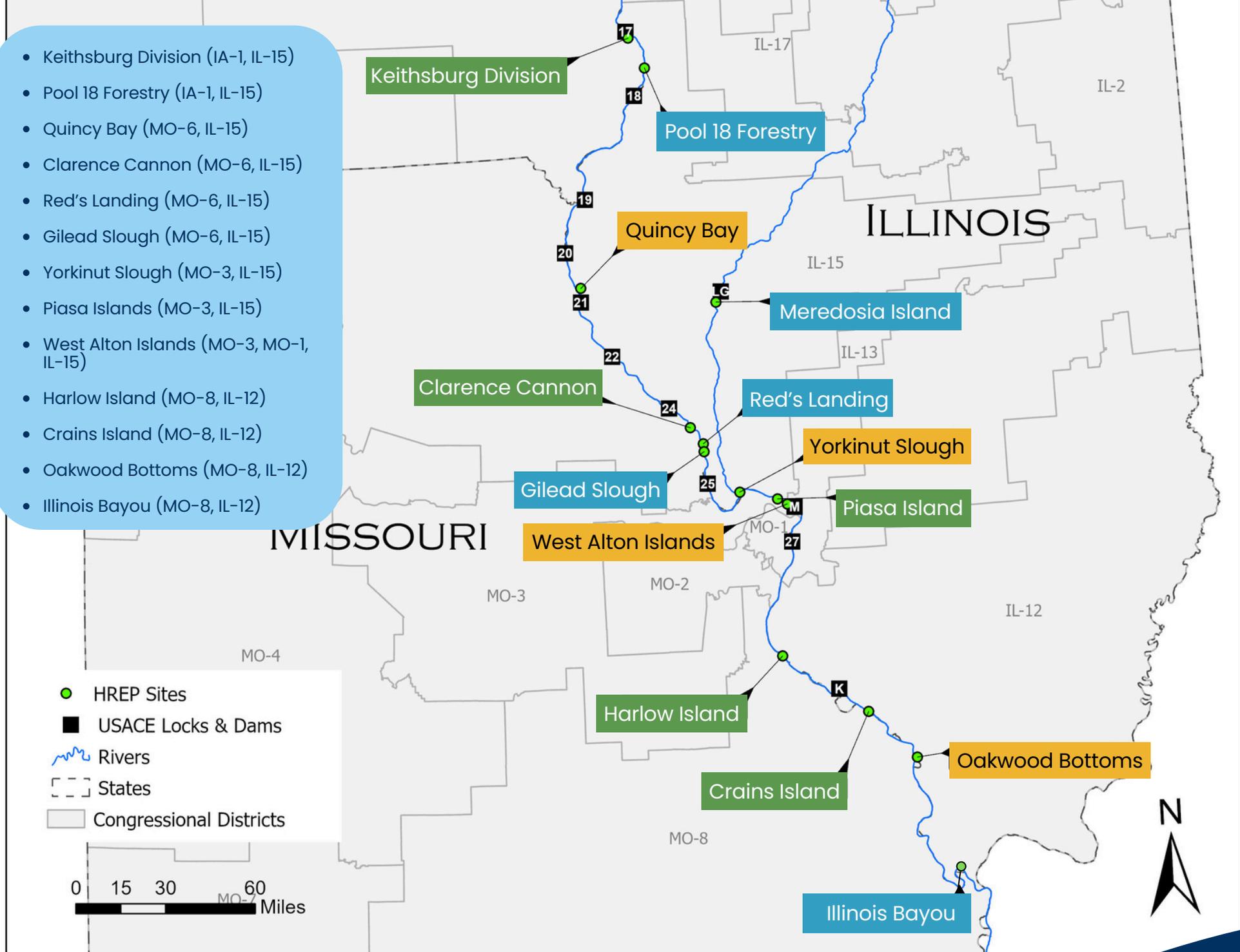Lower Pool 10 Stage 3

Green Island

Lower Pool 13 Phase II

Lower Pool 13

Steamboat Island

- Bank Stabilization (MN-2)
- Big Lake (MN-1, WI-3)
- Robinson Lake (MN-1, WI-3)
- Reno Bottoms (MN-1, IA-2, WI-3)
- McGregor Lake (IA-2, WI-3)
- Lower Pool 10 (IA-2, WI-3)
- Lower Pool 11 (IA-2, WI-3)
- Pool 12 Forestry (IA-1, IA-2, WI-3, IL-16)
- Green Island (IA-1, IL-16)
- Lower Pool 13 (IA-1, IL-17)
- Beaver Island (IA-1, IL-17)
- Steamboat Island (IA-1, IL-17)

- Keithsburg Division (IA-1, IL-15)
- Pool 18 Forestry (IA-1, IL-15)
- Quincy Bay (MO-6, IL-15)
- Clarence Cannon (MO-6, IL-15)
- Red's Landing (MO-6, IL-15)
- Gilead Slough (MO-6, IL-15)
- Yorkinut Slough (MO-3, IL-15)
- Piasa Islands (MO-3, IL-15)
- West Alton Islands (MO-3, MO-1, IL-15)
- Harlow Island (MO-8, IL-12)
- Crains Island (MO-8, IL-12)
- Oakwood Bottoms (MO-8, IL-12)
- Illinois Bayou (MO-8, IL-12)

ILLINOIS

MISSOURI

Keithsburg Division
Pool 18 Forestry
Quincy Bay
Meredosia Island
Clarence Cannon
Red's Landing
Yorkinut Slough
Gilead Slough
Piasa Island
West Alton Islands
Harlow Island
Crains Island
Oakwood Bottoms
Illinois Bayou

HREP Sites
USACE Locks & Dams
Rivers
States
Congressional Districts

0   15   30   60
                    Miles

N

Restoring Complexes of Habitat:
Portfolio of Projects in 2025 - 2027

Successful Implementation in FY 2025

- Initiate construction of Lower Pool 10 Islands in Iowa
- Completed feasibility plans for Pool 12 Forestry in Illinois
- Initiate planning for Bank stabilization, Minnesota River in Minnesota
- Continued construction of 7 projects, design of 9 projects, and planning of 6 projects

Ongoing Work in FY 2026

- Complete construction on McGregor Lake in Wisconsin
- Initiate construction of Reno Bottoms in Minnesota and Iowa
- Finish design of Swan Lake flood damage rehabilitation in Illinois
- Initiate design for Lower Pool 4, Robinson Lake in Minnesota
- Complete feasibility plans for
    - Lower Pool 13 Phase II in Iowa
    - Gilead Slough in Illinois
    - Reds Landing in Illinois
- Initiate planning for
    - Meredosia Island in Illinois
    - Illinois Bayou in Illinois
    - two new projects
- Continue construction of 7 projects, design of 8 projects, and planning of 3 projects

Planned Implementation for FY 2027

- Complete construction of Piasa and Eagles Nest, Illinois
- Initiate construction
    - Lower Pool 4, Big Lake in Wisconsin
    - Swan Lake flood damage rehabilitation in Illinois
- Finish design of
    - Oakwood Bottoms in Illinois
    - Yorkinut Slough in Illinois
    - Lower Pool 13 in Iowa
    - Quincy Bay in Illinois
- Initiate design of
    - Robinson Lake in Minnesota
    - Gleads Slough in Illinois
    - Reds Landing in Illinois
    - West Alton Islands in Missouri
- Completed feasibility plans for
    - Bank stabilization in Minnesota
    - Pool 18 Forestry in Iowa
- Initiate planning for Lower Pool 13 Phase II in Iowa
- Ongoing construction of 8 projects, design of 4 projects, and planning of 5 projects

McGregor Lake HREP (IA-2, WI-3)

Partnership Efforts 2025 - 2027

USACE, USFWS, USGS, state of Illinois, Iowa, Minnesota, Missouri, and Wisconsin, the Upper Mississippi River Basin Association along with Tribal governments, conservation and navigation interests, and the public work collaboratively to achieve the goals and objectives of the 2025-2035 UMRR Strategic Plan.

The collective vision for UMRR is to rehabilitate the Upper Mississippi River System toward a healthier and more resilient state that supports the river's multiple uses.

Partnership Goals for the
Upper Mississippi River Restoration Program

- Improve the understanding of the structure and function of the Upper Mississippi River for better management.

- Restore at least 60,000 acres of habitat within the river ecosystem.

- Support efficient, effective, and innovative habitat restoration through strengthened collaboration between restoration practitioners and scientists.

- Foster strong relationships among UMRR partners and stakeholders.

US Army Corps of Engineers ® | ILLINOIS DEPARTMENT OF NATURAL RESOURCES | CONSERVATION MISSOURI | IOWA DNR | USGS science for a changing world | MINNESOTA DEPARTMENT OF NATURAL RESOURCES | U.S. FISH & WILDLIFE SERVICE | UMRBA Upper Mississippi River Basin Association | WISCONSIN DEPT. OF NATURAL RESOURCES