



US Army Corps
of Engineers
Rock Island District

Upper Mississippi River - Illinois Waterway System Navigation and Ecosystem Sustainability Program (NESP)

Point of Contact:

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Location:

Upper Midwest - Iowa, Illinois, Minnesota, Missouri, and Wisconsin

Description:

NESP is a long-term program of ecosystem restoration and navigation improvements for the Upper Mississippi River System (UMRS). NESP will improve system capacity and reduce commercial traffic delays through construction of seven new 1,200-foot locks, mooring cells, and switchboat implementation.

The UMRS transports more than 60 percent of America's corn and soybeans, is home to 25 percent of North America's fish species, and is a globally important flyway for 40 percent of North America's migratory waterfowl and shorebirds. The UMRS ecosystem consists of 2.7 million acres of bottomland forest, islands, backwaters, side channels and wetlands, all of which support more than 300 bird species, 57 mammal species, 45 amphibian and reptile species, 150 fish species, and nearly 50 mussel species. The diversity and abundance of native aquatic plants and animals are being impacted by degradation, loss of habitat and the arrival of several exotic species.

The program area comprises the Upper Mississippi River System (UMRS), as defined by Congress in the Water Resources Development Act of 1986 (WRDA 1986), which includes the Upper Mississippi River from Minneapolis, Minnesota, to Cairo, Illinois; the Illinois Waterway from Chicago to Grafton, Illinois; and navigable portions of the Minnesota, St. Croix, Black, and Kaskaskia Rivers. This multi-use resource supports an extensive navigation system (made up of 1200 miles of 9-foot channel and 37 lock and dam sites), a diverse ecosystem (2.7 million acres of habitat supporting hundreds of fish and wildlife species), floodplain agriculture, recreation, and tourism. Based on the recommendation of the UMR-IWW System Navigation Feasibility Study that examined system needs over the next 50 years, the Navigation and Ecosystem Sustainability Program (NESP) was implemented to achieve the dual purposes of UMRS ecosystem restoration and navigation improvements.

The existing locks and dams were constructed in the 1930's and experience significant delays due to the single 600-foot lock chambers, which require the 1,200-foot tows to "double lock". On the UMRS, there is only one lock chamber at 35 of 37 sites. The new 1,200-foot locks will increase system reliability and would dramatically decrease lockage times. Additionally, the new 1,200-foot locks will eliminate the single point of failure of having only one lock. If a major lock component breaks, it has the potential to cause a lock closure and stop all inland navigation traffic. The 1,200-foot lock will also eliminate double lockage's and provide an additional chamber to ensure navigation traffic can continue to flow even during major repairs.

The construction new start and construction appropriations ensure that the goals of the program - increasing the capacity and improving the reliability of the inland navigation system while restoring, protecting, and enhancing the environment through implementation of an integrated, dual-purpose plan can be implemented to ensure the long-term economic and environmental sustainability of the Upper Mississippi River System. The combination of ecosystem and navigation in a single USACE program required many years of coordination with both the navigation and ecosystem partners and it will alter the future of the Upper Mississippi River System (UMRS) to ensure it remains the vital transportation and ecosystem corridor for the next 100+ years.

Lock 25 1200' Lock:

Lock 25 is one of seven 1200' lock chambers authorized by the program and the first to be funded for construction. Lock 25 received \$732M to fund the project and additional funding will be needed to complete the project. The project scope includes





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a new 1200' lock chamber adjacent to the existing 600' chamber and upstream/downstream approach walls. The new lock will improve efficiency, reliability, and safety for Navigation traffic transiting the facility along with adding operational redundancy at Lock 25. When complete, benefits will be realized by the entire Nation, as Lock 25 provides an important link to exporting greater than 60% of the nation's corn and soybean products to world markets. The new 1200' lock will accommodate the largest tow configurations on the Upper Mississippi River thereby reducing lockage times for those vessels from two and a half hours or more to approximately 45 minutes. Upcoming project milestones include: 1) Early Contractor Involvement-Integrated Design and Construction (ECI-IDaC) Preconstruction Services Award in March 2024, 2) ECI-IDaC Construction Option Award in June 2026, and ECI-IDaC construction complete in October 2034.

LaGrange 1200' Lock:

LaGrange is one of seven 1200' lock chambers authorized by the program and has been funded for design. LaGrange has received a total of \$69.3M to complete the project design. Project features include construction of new 1200-foot rock-founded lock located landward of the existing 600-foot chamber, associated lock support buildings, approach walls, and approach channels. The existing 600-foot lock will remain in place and become an auxiliary lock chamber. The project also includes associated channel work, relocations/alterations, and site-specific environmental mitigation. The new lock will improve efficiency, reliability, and safety for Navigation traffic transiting the facility along with adding operational redundancy at LaGrange. When complete, benefits will be realized by the entire Nation, as LaGrange provides an important link to exporting greater than 60% of the nation's corn and soybean products to world markets. The new 1200' lock will accommodate the largest tow configurations on the Illinois Waterway thereby reducing lockage times for those vessels from two and a half hours or more to approximately 45 minutes. Upcoming project milestones include: 1) Design task order award in FY23 – the task order scope of work includes completion of design, 2) Award of the initial construction contract in FY24 (pending appropriations).

Lock 22 Fish Passage:

Lock and Dam 22 is one of five fish passage locations on the Mississippi River authorized by the program and the first to be funded for construction. Lock 22 fish passage received \$97.1M to fund design and initiate construction of the project. The project scope includes construction of a 200'-wide rock ramp fishway, an ice/debris barrier, bridge, and stoplogs. In addition, the project includes pre and post project monitoring activities to optimize the structure during design and after the project is completed. When complete, the project will provide the means for fish access to upstream mainstem river and tributary habitats resulting in an increase of size and distribution of native migratory fish populations, returning the river to pre-lock and dam conditions from a fish habitat standpoint. Upcoming project milestones include: 1) Design completion in March 2024, 2) Construction contract award by September 2024.

Congressional Support:

NESP has strong Bipartisan support, receiving \$829.1M from the FY22 Bi-Partisan Infrastructure Law and \$94.4M total from Congressionally Directed spending in FY22 and FY23.

Key Takeaways:

- The construction new start received in FY22 allowed NESP to award construction and design contracts for the priority projects. The continued funding in FY23 allowed NESP to award additional construction projects and continue design efforts on multiple ecosystem and navigation projects – see attached map.
- NESP continues to efficiently execute the BIL funding and annual appropriations, with projects in construction, design, and planning throughout the Upper Mississippi River basin. Continued annual appropriations allows the program to implement all authorized program features to ensure comparable progress for navigation and ecosystem projects.
- Cultural resources projects can be funded under NESP. Specifically, NESP can construct projects for cultural site protection without any other project feature required. This allows the program to meet the Administration's priority Environmental Justice goals to include actively engaging 55 Tribal Nations and socioeconomically depressed areas.



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- The combination of ecosystem and navigation in a single USACE program required many years of coordination with both the navigation and ecosystem partners and it will alter the future of the Upper Mississippi River System (UMRS) to ensure it remains the vital transportation and ecosystem corridor for the next 100+ years.

Status:

FY 2022:

- \$829.1M received from BIL – Lock 25 New 1200' Lock (\$732M) and Lock 22 Fish Passage (\$97.1M).
- \$45.1M received from Congressionally Directed Spending – projects include navigation and ecosystem.
- \$12.179M received from FY22 USACE Work Plan – projects include systemic mitigation.

FY 2023:

- \$49.3M received from Congressional Directed Spending for the new 1200' Lock at LaGrange.
- \$18.379M received from the USACE FY23 Work Plan for Lock 22 Fish Passage and other ecosystem projects.

Additional Information

Congressional Interest

Senators: Charles Grassley (IA), Joni Ernst (IA), Richard Durbin (IL), Tammy Duckworth (IL), Tina Smith (MN), Amy Klobuchar (MN), Eric Schmitt (MO), Joshua Hawley (MO), Tammy Baldwin (WI), Ron Johnson (WI)

Representatives: IA-2 (Ashley Hinson), IA-3 (Zach Nunn), IA-4 (Randy Feenstra), IL-11(Bill Foster), IL-13 (Nikki Budzinski), IL-16 (Darin LaHood), IL-17 (Eric Sorensen), IL-3 (Delia Ramirez), MN-1 (Brad Finstad), MO-6 (Sam Graves), WI-3 (Derrick Van Orden)

Authority:

CG – Construction - Title VIII of Water Resources Development Act (WRDA) 2007, P.L. 110-114 and WRDA 2022, P.L. 117-263.

Summarized Project Costs

Estimated Federal Cost	\$7,509,519,000
Estimated Non-Federal Cost	\$232,288,000
Estimated Total Project Cost	\$7,741,807,000
Allocations Prior to FY 2023	\$886,379,000
FY 2023 Allocation	\$67,679,000
FY 2024 Allocation	\$ TBD
FY 2024 President's Budget	\$0
FY 2024 Total Capability	\$120,000,000

Major Work Item Prior Fiscal Year

FY2023: The Program moved forward with the following:

Navigation:

- Lock 25 1200' Lock
 - Design, acquisition, contract solicitation, and industry coordination.
 - Solicitation of the ECI-IDaC contract
 - Construction of Phase 1, preparation of the existing lock wall for the new 1200' lock.
- LaGrange New 1200' Lock
 - Initial design and physical modeling.
 - A/E task order award for final design.
- Mooring Facilities



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- Design and preparation of plans and specifications for 7 new mooring facilities.
- Lock 14 Mooring Cell
 - Project construction
- Mitigation
 - Moore's Towhead project construction
 - Implementation plan for systemic mitigation

Ecosystem:

- Lock and Dam 22 Fish Passage
 - Project design and construction contractor industry engagement.
 - Pre-project fish monitoring with USGS and USFWS.
- Twin Island, Alton Pool, Starved Rock, Pool 2 Ecosystem Projects
 - Project construction contract awards, with Pool 2 construction complete.
- Partner consultation (USGS, USFWS, States of Iowa, Illinois, Minnesota, Missouri, Wisconsin, UMRBA)
 - Funding provided for NESP involvement.
- Project Planning
 - Continued planning efforts for the projects initiated in FY22, to include one high-priority cultural site protection project at Effigy Mounds National Monument.
 - Six new ecosystem projects at multiple locations in the Upper Mississippi River basin.
 - Large-scale data collection to support expediency of ongoing ecosystem project efforts.

Major Work Items Current Fiscal Year

FY 2024: The Program will proceed with the following:

- Lock 25 1200' Lock
 - Design and ECI-IDaC contract award.
 - Completion of Phase 1, preparation of the existing lock wall for the new 1200' lock.
- LaGrange New 1200' Lock
 - Project design and finalization of physical modeling.
 - Construction contract award for machinery fabrication (pending appropriations).
- Mooring Facilities
 - Construction of 7 new mooring facilities (pending appropriations).
- Lock 14 Mooring Cell
 - Project completion
- Mitigation
 - Moore's Towhead project completion
 - Pool 4 project completion

Ecosystem:

- Lock and Dam 22 Fish Passage
 - Project construction contract award (pending appropriations)
 - Fish monitoring with USGS and USFWS.
- Twin Island, Alton Pool, Starved Rock
 - Project completion.
- Partner consultation (USGS, USFWS, States of Iowa, Illinois, Minnesota, Missouri, Wisconsin, UMRBA)
 - Funding would be provided for partner involvement in the program.
- Project Planning
 - Continued planning and design efforts for the projects initiated in FY22 and FY23, to include one high-priority cultural site protection project at Effigy Mounds National Monument.
 - Six new ecosystem projects at multiple locations in the Upper Mississippi River basin.