

Navigation modernization and ecosystem restoration can start immediately. There are \$54 million in small-scale projects ready for construction within a year and a subsequent \$164 million in projects ready in two to three years that could be accomplished under Phase 1. Full implementation through Phase 3 requires an assured funding stream that will support sustained, system-wide implementation over 15-20 years.

NESP Near-term Construction Projects



FY2011 Efficient Funding for Modest Construction Start (\$20M* Construction Scenario—Creating 600 New Jobs)

Nav Efficiency Projects	Cost
Sm & Lg Scale Project Designs	\$3.685M
Mooring Cells @ 14, 24 and LGR	\$4.465M
Switchboat @ L&D 25	\$1.100M
Environmental Mitigation	\$0.750M
TOTALS	\$10.0M

Ecos Restoration Projects	Cost
Planning and Design	\$2.840M
WD/WD alteration - Pool 2	\$0.350M
Island Shoreline Protect - Twin Island	\$1.500M
Cultural Site Protect (2)	\$0.600M
WD/WD Alteration - Herculaneum	\$2.610M
Backwater - Upper Peoria Pool	\$0.600M
Pool WLM - Pool 18	\$1.500M
TOTALS	\$10.0M

*This \$20 million program scenario, which would create 600 new jobs, is but one of several modest construction funding options that draws from the \$54 million in projects that have been readied for immediate construction. After nearly fifteen years of in-depth study and evaluation, Congress created the WRDA Title VIII NESP authorization in November 2007 as the first-of-its-kind, dual-purpose integrated program with an estimated \$4.2 billion price tag. The collaborative development, design and implementation of this program has created unprecedented support from a diverse and active array of citizens concerned with the long-term sustainability of this important River System. NESP seeks to provide a cost effective and efficient UMR-IWW navigation system for the lowest carbon footprint transportation mode by modernizing some of the system's thirty-seven 80+-year-old locks and dams. Projects also seek to restore natural river form and function on more than 100,000 acres of aquatic habitat throughout the system.



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Blueprint for Action

“Congress recognized the economic and ecological importance of what truly is America’s River by giving the U.S. Army Corps of Engineers a new, dual-purpose authority to integrate management of the river’s habitats and navigation system in an unprecedented way... Now is the time to invest in jobs and build on the promise of the new authority.”

—The Nature Conservancy; Waterways Council Inc; Audubon; Upper Mississippi River Basin Association; River Resource Alliance



NAVIGATION AND ECOSYSTEM SUSTAINABILITY PROGRAM (NESP)

NESP IN A NUTSHELL>> NESP is a pivotal mechanism for restoring and sustaining the nation’s largest river system through navigation improvements, ecosystem restoration, and dual-purpose operation at a system-wide scale. Improvements to antiquated infrastructure and a degraded habitat are designed to ensure the multiple human uses of the iconic river and the river ecology both thrive. The widely supported \$4.2 billion program includes small-scale navigation improvements, new 1,200-foot lock chambers at seven existing lock sites on the Upper Mississippi River and Illinois Waterway, and restoration of natural river processes and wildlife habitat throughout the 1,200-mile system.





CHALLENGE>> Man-made and natural changes in the 1,200-mile long Upper Mississippi River system have seriously altered an ecosystem that boasts 2.7 million acres of bottomland forests, islands, backwaters, side channels and wetlands. Those changes have led to reduced water quality and have threatened species diversity and abundance by shrinking habitat used by 300 species of birds, 57 of mammals, 150 of fish and other wildlife. It's led to a related decline in human access to the system, reducing recreational opportunities for boaters, hunters, trappers, campers, bird watchers and others. The problem is both social and economic; the system supplies fresh water to 30 million residents and tens of thousands of industries. It also generates \$6.6 billion dollars in revenue annually from visitors who hunt, fish and recreate on the river and jobs for the more than 100,000 people employed in recreation and tourism within the corridor.

SOLUTION>> Projects ready now will reconnect side channels to the main river and restore rearing and winter habitat for many native fish species, boosting their abundance in the river system. Other ecosystem restoration projects in the works will mimic the natural process of flooding and drying to help vegetation thrive and provide food and shelter for fish and other wildlife, enhance the relative health of native fish populations at the expense of exotics, restore native forests, protect shoreline and historic sites from further erosion and continue to boost recreational opportunities and sustain a thriving sports fishery.

READY FOR ACTION>>

PHOTOS, FROM TOP

Wing Dam and Dike Alterations and Side Channel Restoration projects are among those ready for implementation. Existing dikes and other structures at Pool 2, Herculaneum (open river), and Buffalo Island would be modified and new structures added to change river flow, all to create side channels and islands that boost habitat for wildlife including the federally endangered species.

Water Level Management By mimicking the natural process of flooding and drying with planned

growing season drawdowns starting with Pool 18, measures like water level management help native vegetation to again grow and thrive, providing food and shelter for fish and wildlife.

Forest Restoration will begin at Reno Bottoms in Pool 9, where reestablishment of seed- and nut-producing trees is a goal to restore the original diversity of the riverbank forest and providing more food and habitat for migratory and nesting birds and other wildlife.

“Funding NESP and EMP will provide immediate economic stimulation and new jobs, while improving habitat for this corridor that is so critical to the economy of our nation.”

—Audubon



CHALLENGE>> The Upper Mississippi River system is critical to the efficient movement of bulk materials including corn, soybeans, coal and other products to and from the country's interior. But most of the system's 37 locks are today too small to efficiently accommodate the size of today's multi-barge tows, increasing costs, safety risks and lost market opportunities. Since the 1980s, the UMR-IWW has experienced traffic congestion and delays related to its aging infrastructure and limited lock capacity.

SOLUTION>> Mooring cells, guidewalls and changes in traffic management protocol—measures which require relatively small construction costs—can start immediately, reducing delays on the river system and improving safety conditions until new locks are funded for construction. Mooring cells for waiting vessels are ready for construction at Locks 14, LaGrange and Lock 24. Several other locations can be constructed soon. The moorings in particular will speed the double lockage process by allowing tows to wait closer to the lock.

READY FOR ACTION>>

PHOTOS, FROM TOP

Undersized lock chambers, like this one, too small to contain a typical current-day tow boat and all of its barges, are one of the major reasons for delays averaging five hours per lockage. It takes two hours on average for a tow to complete the process when it must break apart its barges, push half into the lock chamber, lock that part through, then enter the remaining barges without the towboat. The Upper Mississippi River system has more than half (19) of the most delayed lock sites in the country's inland waterway system. New lock chambers will cut lockage time in half, greatly reducing lockage delays. Mooring cells and switchboats also shorten lockage time, but to a much lesser extent.

Navigation Mooring Cells like this one allow tows to wait closer to locks, speeding entrance and exit times by about 10 minutes and cumulatively reducing system delays. Priority locations are Lock 14 on the Upper Mississippi and LaGrange on the Illinois River.

A Guidewall extension is a portion of new lock projects that could be completed in advance of full lock construction. It will reduce delays and make the upbound lock approach safer. Lock 22, pictured here, is about nine miles downstream from Hannibal, Missouri, and was completed in 1938.

This barge carries containers, a waterway market expected to grow with the widening of the Panama Canal, scheduled for completion in 2014. The country's multi-modal approach to transportation seeks to efficiently use existing capacity on roads, rail and waterways.

“Never has it been more important to remove barriers to our economy, to reduce our dependency on oil, and mitigate harmful pollutants in the environment. Expanding America's marine highway can help advance each of these objectives while creating high-paying, long-term American jobs.”

—U.S. Secretary of Transportation Ray LaHood

PHASE 1	READY FOR IMMEDIATE CONSTRUCTION
	Traffic management Switchboats (Locks 20-25) Moorings for waiting vessels (5 sites) A lock guidewall System mitigation Preservation of historic sites Forest restoration Water level management (1 site) Side channel restoration (2 sites) Dike modifications (2 sites) Shoreline erosion protection
	READY IN 2-3 YEARS
PHASE 2	Switchboats (continuation) Moorings for waiting vessels (additional sites) Fish passage Floodplain restoration Backwater restoration Embankment lowering
PHASE 3	First of seven locks initiated (assumes funding commitment through lock completion) Comparable progress on ecosystem restoration
	Remaining locks and ecosystem restoration implemented through systems approach (assumes long-term funding commitment)

URGENCY>> Social and economic value of the UMR-IWW system will increase as the nation addresses growing freight demand in environmentally acceptable ways and meets the growing demand for use of our natural environment.

Time to act is now. It will take at least 15 years of efficient funding to implement NESP and ensure the ecological integrity of the UMR-IWW System and its role as part of the “marine highway” envisioned by the U.S. Department of Transportation.

Investment will create long-term jobs that will help ensure this nationally significant river system can remain a living and working river in the face of increasing demands of a growing human population.