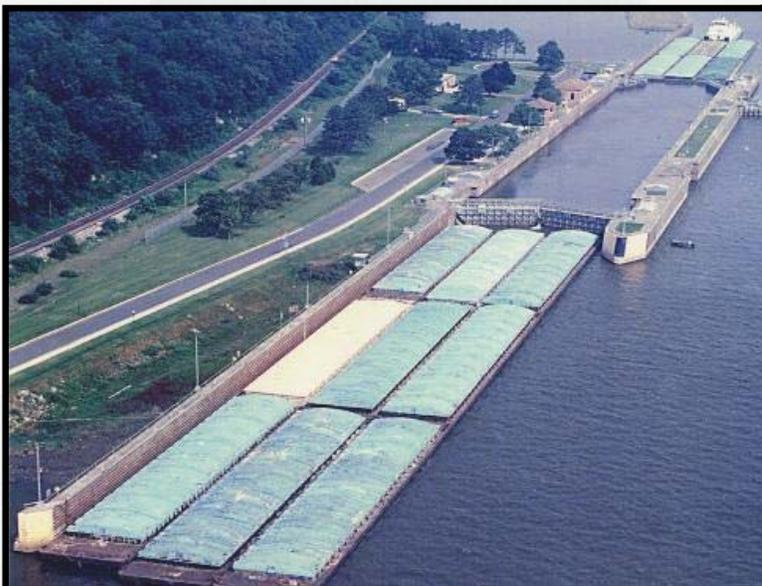


UMR-IWW NAVIGATION AND ECOSYSTEM SUSTAINABILITY PROGRAM

*Efficient Funding for
FY11 Construction Start*

NAVIGATION EFFICIENCY



ECOSYSTEM RESTORATION



26 February 2010



BUILDING STRONG®

Project Factsheet for:

Upper Mississippi River System Navigation and Ecosystem Sustainability Program (formerly UMR-IWW Sys. Navigation Feas. Study)

Date Last Updated: 02/18/2010 15:18

Project Location Information

Location: Upper Midwest - IA, IL, MN, MO and WI

River Basin(s): Illinois, Mississippi

State(s): WI, IA, IL, MN, MO

Congressional District(s): IA-1, IA-2, IA-3, IA-4, IA-5, IL-11, IL-12, IL-16, IL-17, IL-18, IL-19, MN-1, MN-2, MN-8, WI-3, MO-1, MO-2, MO-3, MO-8, MO-9 ;

Status

Program implementation has continued for past five years under "congressional add" General Investigation funding for Preconstruction Engineering and Design (PED) on some 30 navigation efficiency and ecosystem restoration projects. From FY 1988-2004 a total of \$76 million GI funds were spent on the Feasibility and Environmental Impact Studies, from FY 2005-10 a total of \$62 million of GI funds have been spent on the formulation and design of some 30 site specific projects. At present, approximately \$54 million worth of "shovel ready" small-scale navigation and ecosystem construction projects have been prepared for immediate implementation. However, despite the 2007 WRDA authorization, the Corps has yet to receive Construction General (CG) funding for this program. The 75+ year old navigation system continues to experience some of the longest lockage delays in the country due to a combination of the one-way nature of undersized 600' lock chambers and recurrent downtime for repair of aged gates and machinery. Modernization to provide increased efficiency and reliability of the UMR-IWW locks and dams is desperately needed to reduce outages and delays which would ensure the competitiveness and timely delivery of bulk commodities to and from the global marketplace. The diversity and abundance of native aquatic plants and animals are seriously threatened by degradation, loss of habitat and the recent onslaught of several exotic species. Proven and innovative ecosystem restoration endeavors have had positive localized influence on species diversity, abundance and their ability to cope with new exotic invaders. However, the adaptive systemic approach authorized for this program would finally begin to address these issues in a manner and on a scale necessary to ensure long-term ecological health and sustainability. The study team has carefully developed several implementation strategies that would allow meaningful construction starts for both small scale and large scale navigation efficiency and ecosystem restoration projects under a wider range of possible funding levels. This program has significant long-term job creation potential as a result of direct investment (3000 jobs for every \$100 million spent through the long-term implementation process and many more through the economic, environmental, and social benefits that will generate from a healthy ecology and vibrant navigation industry.

Description

This multi-use resource supports an extensive navigation system (made up of 1,200 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. The Upper Mississippi River-Illinois Waterway System Navigation Study was completed in Sept 2004 after more than 14 years of intensive study and evaluation of the navigation improvement and ecological restoration needs for the UMR-IWW system for the years 2000-2050. The system is a vital part of our national economy and a valuable ecological resource. The 1,200 miles of 9-foot channel created by the 37 lock and dam sites allow waterway traffic to move from one pool to another providing an integral regional, national, and international transportation network. The system is significant for certain key exports and the Nation's balance of trade. For example, in 2000, the Upper Mississippi River System carried approximately 60 percent of the Nation's corn and 45 percent of the Nation's soybean exports. 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 species of birds, 57 species of mammals, 45 species of amphibians and reptiles, 150 species of fish, and nearly 50 species of mussels. More than 40 percent of North America's migratory waterfowl and shorebirds depend on the food resources and other life requisites (shelter, nesting habitats, etc.) that the system provides. It also provides boating, camping, hunting, trapping and other recreational opportunities. The resulting study final recommendation includes a program of incremental implementation and comprehensive adaptive management to achieve the dual



purposes of ensuring a sustainable natural ecosystem and navigation system. With congressional appropriations for Preconstruction, Engineering and Design (PED) beginning in February 2005, the study team adopted a working title of UMRS Navigation and Ecosystem Sustainability Program (NESP) to distinguish PED efforts from the Feasibility Study.

Summarized Financial Data

	PED	Construction 1/
Federal Cost	\$76,169,000	\$4,207,000,000
Non-Federal Cost	\$0	\$163,605,000
Total Cost	\$76,169,000	\$4,370,605,000
Federal Allocations through FY 2009	\$54,914,584	\$54,914,584
FY 10 Appropriation	\$6,276,000	\$6,276,000
Budget Request for FY 2011	0	0
Balance to Complete after FY 2011	\$14,978,416	\$4,145,809,416

1/ Included PED

Major Work Item (This Fiscal Year)

FY 2010: From past several year of GI PED funding, more than a dozen small scale navigation efficiency and ecosystem restoration projects are currently poised for immediate construction starts. The congressional add appropriation of \$6.276 million for FY10 has allowed continued planning and design for remaining small scale and large scale projects that were started in 2005. Study team has proven to be very innovative, flexible and productive with the modest and fluctuating GI - PED funding received over past 5 years.

Major Work Item (Next Fiscal Year)

FY 2011: Currently Unknown since funding yet to be determined by congressional appropriation action. Study team and stakeholders have developed a near-term "*Blueprint for Action*" that identifies and describes continued project planning/design in conjunction with a series of "shovel ready" small scale navigation efficiency and ecosystem restoration construction projects that could be initiated and largely completed in FY11 given a modest (\$10-20 million) Construction General (CG) investment. Please see the following attachments to better understand this programs construction readiness capability: (a) location (map) of potential FY11 construction projects, (b) FY10 Project Milestones providing for construction readiness (c) estimated project investment levels and job creation estimates under six possible funding scenarios, (d) visual images and descriptive details for construction ready projects.

Study team has also prepared a detailed and innovative three-phased implementation strategy that depicts the levels of investment along with economic and ecological return associated with the continued planning, design and construction of the Title VIII authorization of \$4.2 billion in NESP Navigation Efficiency and Ecosystem Restoration projects spread over the next 15-20 years.

Project Manager Information

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KEY TALKING POINTS

UPPER MISSISSIPPI RIVER – ILLINOIS WATERWAY SYSTEM NAVIGATION AND ECOSYSTEM SUSTAINABILITY PROGRAM (NESP)

- Greater investment in restoration and management of UMR-IWW ecosystem is required to achieve and sustain the ecological potential of this nationally significant ecosystem for the benefit of humanity. The last three decades of collaborative in-depth research and planning have produced a definitive “*Blueprint for Action*” that seeks to effectively and efficiently reverse adverse economic, social and ecological conditions or trends necessary to ensure long-term sustainability.
- More than a dozen navigation and ecosystem restoration projects are ready for immediate construction as part of the “*Blueprint for Action*”. Several modest FY11 NESP funding scenarios in the \$10-20M range were developed and characterized to allow stakeholders and decision makers a better appreciation of the job creation and other economic, social and ecological these project offer.\
- The UMR-IWW is a key component in the movement of grain worldwide and the largest riverine ecosystem in North America (3rd largest in the world).
- The UMR-IWW is a 2.6-million acre large river floodplain laboratory. It is a “system of systems” for us to use, understand and appreciate. It is a place for this and future generations to learn how to restore and maintain a “living river” in the face of a global human population that will grow by another 1 billion people in the next decade.
- Meeting America’s transportation needs for the future will require a multi-modal approach, which preserves what has been built to date, improves system performance, and adds substantial capacity in highways, railroads, airports, inland waterways, ports and border crossings.
- Over half of the 30 million residents of the watershed rely on water from the UMR and its tributaries for municipal and industrial water supplies.
- Since the 1980s, the UMR-IWW has experienced increasing traffic congestion and delays related to its aging infrastructure and limited lock capacity. Unplanned closures due to aging infrastructure have increased, thus reducing the number of days annually that locks are open to traffic.
- The UMR-IWW provides for over \$6.6 billion dollars in revenue annually from some 12,000,000 visitor-days of use by people that hunt, fish, boat, sightsee or otherwise visit the river, its magnificent bluffs and communities.
- UMR-IWW system has over half (19 of 36) of the most delayed lock sites in the country’s system of inland waterways. Current system delays can add 2-3 days to the transit time for imported or exported commodities moving through the Lock portions of the UMR-IWW
- Recreation and tourism employ 143,000 people in the corridor
- It is a globally important flyway for 40% of all North American Waterfowl, home to 25% of all the fish species in North America, and critical habitat for 286 state-listed or candidate species and 36 Federal-listed or candidate species of rare, threatened, or endangered plants and animals endemic to the UMR basin.
- In 2005, the UMR moved just over 109 million tons of commercial cargo. This tonnage was worth almost \$19 billion. Of the almost 84.2 million tons leaving the river, two-thirds was destined for the Lower Mississippi River. Another 10 percent moved to the Ohio River and its tributaries. Comparatively, in 2005 the IWW moved 51.6 million tons of commercial cargo worth \$9.5 billion. The waterway’s traffic is dominated by grain, corn and soybeans. Corn and soybeans are shipped via the waterway at roughly 60 to 70 percent of the cost of shipping over the same distance by rail.



FY10 PROJECT MILESTONES

Project Implementation Reports (PIR) – decision document

- Wing Dam/Dike Alteration – Pool 2
- Forest Management - Reno Bottoms
- Fish Passage – L&D 22
- Pool Water Level Mgmt – Pool 18
- Backwater Restoration – Upper Peoria Pool
- Side Channel Restoration – Buffalo Island
- Side Channel Restoration – Schenimann Chute
- Wing Dam/Dike Alteration – Herculaneum
- Island Shoreline Protection – Twin Islands (Ill River)

Alternative Formulation Briefings – HQ approval

- Wing Dam/Dike Alteration – Pool 2
- Fish Passage – L&D 22
- Pool Water Level Mgmt – Pool 18
- Wing Dam/Dike Alteration - Herculaneum
- Side Channel Restoration – Buffalo Island
- Side Channel Restoration – Schenimann Chute
- Island Shoreline Protection – Twin Islands (Ill River)

Public Review and Comment – Public Acceptability

- Fish Passage – L&D 22
- Pool Water Level Mgmt – Pool 18

Completed Design Plans and Specs – Ready for Construction

- Wing Dam/Dike Alteration – Pool 2
- Mooring Cell L&D 14
- Mooring Cell LaGrange
- Wing Dam/Dike Alteration - Herculaneum
- Island Shoreline Protection – Twin Islands (Ill River)



NESP OVERVIEW

Scenarios for Construction Start and Job Creation

EFFICIENT FUNDING SCENARIOS

NESP Component	FY11 Efficient Funding Scenarios (\$x1000s)					
	Continued PED		Construction Start			
	GI \$10M	GI \$15M	CG \$10M	CG \$15M	CG \$20M	CG FULL
NAV PED SUBTOTALS	\$5,000	\$7,500	\$3,340	\$3,145	\$3,685	\$33,410
NAV CONST. SUBTOTALS	\$0	\$0	\$1,660	\$4,355	\$6,315	\$31,400
NAV SUBTOTALS	\$5,000	\$7,500	\$5,000	\$7,500	\$10,000	\$64,810
ECOS PED SUBTOTALS	\$5,000	\$7,500	\$3,070	\$3,040	\$2,840	\$10,768
ECOS CONST SUBTOTALS	\$0	\$0	\$1,930	\$4,460	\$7,160	\$22,400
ECOS SUBTOTALS	\$5,000	\$7,500	\$5,000	\$7,500	\$10,000	\$33,168
NESP FY11 PED SUBTOTALS	\$10,000	\$15,000	\$6,410	\$6,185	\$6,525	\$44,178
NESP FY11 CONST. SUBTOTALS	\$0	\$0	\$3,590	\$8,815	\$13,475	\$53,800
FY TOTALS	\$10,000	\$15,000	\$10,000	\$15,000	\$20,000	\$97,978

ASSOCIATED JOB CREATION ESTIMATES

NESP Component	Job Creation Estimates					
	Continued PED		Construction Start			
	GI \$10M	GI \$15M	CG \$10M	CG \$15M	CG \$20M	CG FULL
NAV PED SUBTOTALS	150	225	100	94	111	1,002
NAV CONST. SUBTOTALS	0	0	50	131	189	942
NAV SUBTOTALS	150	225	150	225	300	1,944
ECOS PED SUBTOTALS	143	214	87	87	81	307
ECOS CONST SUBTOTALS	0	0	55	127	204	638
ECOS SUBTOTALS	143	214	143	214	285	945
NESP FY11 PED SUBTOTALS	293	439	188	181	191	1,309
NESP FY11 CONST. SUBTOTALS	0	0	105	258	394	1,580
FY TOTALS	293	439	293	439	585	2,890



NAVIGATION EFFICIENCY

Scenarios for Construction Start and Job Creation

NESP Component/Project	FY11 Efficient Funding Scenarios (\$x1000s)					
	Continued PED		Construction Start			
	GI \$10M	GI \$15M	CG \$10M	CG \$15M	CG \$20M	CG FULL
NAVIGATION Engineering and Design						
Sm Scale - Switchboats	\$35	\$35	\$35	\$50	\$50	\$150
Sm Scale - Moorings	\$250	\$500	\$200	\$300	\$400	\$800
Sm Scale - Traffic Mgmt	\$50	\$75	\$50	\$50	\$50	\$175
Mitigation Project Designs - Fish & SAV	\$350	\$650	\$150	\$200	\$300	\$1,800
Lg Scale - L&D 22 Guidewall Final Design	\$250	\$450	\$250	\$250	\$250	\$1,500
Lg Scale - L&D 22 New 1200' Lock Designs	\$4,065	\$5,790	\$2,655	\$2,295	\$2,635	\$28,985
Lg Scale - L&D 25 New 1200' Lock Designs						
Lg Scale - LaGrange New 1200' Lock Designs						
NAV PED SUBTOTALS	\$5,000	\$7,500	\$3,340	\$3,145	\$3,685	\$33,410
NAVIGATION Construction						
Mooring Cell L&D 14, IL/IA	\$0	\$0	\$1,460	\$1,460	\$1,460	\$1,460
Mooring Cell LaGrange L&D, IL	\$0	\$0	\$0	\$1,435	\$1,435	\$1,435
Mooring Cell L&D 24, MO/IL	\$0	\$0	\$0	\$0	\$1,570	\$1,570
Mooring Cells L&D 15, IA/IL	\$0	\$0	\$0	\$0	\$0	\$1,485
Mooring Cells L&D 11, IA/WI/IL	\$0	\$0	\$0	\$0	\$0	\$1,450
Switchboats at L&D 25 and 22, IL/MO	\$0	\$0	\$0	\$1,010	\$1,100	\$2,500
Lock 22 Downstream Guidewall, IL/MO	\$0	\$0	\$0	\$0	\$0	\$18,800
Mitigation Project Construction, IL/IA/MO	\$0	\$0	\$200	\$450	\$750	\$2,700
NAV Const. SUBTOTALS	\$0	\$0	\$1,660	\$4,355	\$6,315	\$31,400
NAV SUBTOTALS	\$5,000	\$7,500	\$5,000	\$7,500	\$10,000	\$64,810

NESP Component/Project	Job Creation Estimates					
	Continued PED		Construction Start			
	GI \$10M	GI \$15M	CG \$10M	CG \$15M	CG \$20M	CG FULL
NAVIGATION Engineering and Design						
Sm Scale - Switchboats	1	1	1	2	2	5
Sm Scale - Moorings	8	15	6	9	12	24
Sm Scale - Traffic Mgmt	2	2	2	2	2	5
Mitigation Project Designs - Fish & SAV	11	20	5	6	9	54
Lg Scale - L&D 22 Guidewall Final Design	8	14	8	8	8	45
Lg Scale - L&D 22 New 1200' Lock Designs	122	174	80	69	79	870
Lg Scale - L&D 25 New 1200' Lock Designs						
Lg Scale - LaGrange New 1200' Lock Designs						
NAV PED SUBTOTALS	150	225	100	94	111	1,002
NAVIGATION Construction						
Mooring Cell L&D 14, IL/IA	0	0	44	44	44	44
Mooring Cell LaGrange L&D, IL	0	0	0	43	43	43
Mooring Cell L&D 24, MO/IL	0	0	0	0	47	47
Mooring Cells L&D 15, IA/IL	0	0	0	0	0	45
Mooring Cells L&D 11, IA/WI/IL	0	0	0	0	0	44
Switchboats at L&D 25 and 22, IL/MO	0	0	0	30	33	75
Lock 22 Downstream Guidewall, IL/MO	0	0	0	0	0	564
Mitigation Project Construction, IL/IA/MO	0	0	6	14	23	81
NAV Const. SUBTOTALS	0	0	50	131	189	942
NAV SUBTOTALS	150	225	150	225	300	1,944



ECOSYSTEM RESTORATION

Scenarios for Construction Start and Job Creation

NESP Component/Project	FY11 Efficient Funding Scenarios (\$x1000s)					
	Continued PED		Construction Start			
	GI \$10M	GI \$15M	CG \$10M	CG \$15M	CG \$20M	CG FULL
ECOSYSTEM Planning and Design						
Adaptive Mgmt	\$1,200	\$1,500	\$800	\$800	\$800	\$2,793
Side Channels	\$450	\$650	\$380	\$150	\$100	\$450
Island Protection	\$185	\$250	\$185	\$125	\$90	\$375
Forest Mgmt	\$400	\$550	\$220	\$275	\$200	\$850
Cultural Stewardship	\$315	\$500	\$100	\$100	\$80	\$450
Fish Passage	\$1,300	\$2,251	\$650	\$750	\$750	\$2,850
Wing Dam/Dike Alteration	\$150	\$300	\$85	\$100	\$100	\$425
Floodplain Restoration	\$500	\$750	\$375	\$470	\$485	\$1,600
Water Level Mgmt	\$250	\$350	\$150	\$150	\$150	\$525
Backwaters	\$250	\$399	\$125	\$120	\$85	\$450
Ecos PED SUBTOTALS	\$5,000	\$7,500	\$3,070	\$3,040	\$2,840	\$10,768
ECOSYSTEM Construction						
Wing Dam/Dike Alteration - Pool 2, MN/WI	\$0	\$0	\$350	\$350	\$350	\$500
Island Shoreline Protection - Twin Isl, IL	\$0	\$0	\$0	\$1,500	\$1,500	\$1,800
Cultural Site Protection, IL/MN/IA/WI	\$0	\$0	\$0	\$0	\$600	\$1,200
Wing Dam/Dike Alteration - Herculaneum, IL/MO	\$0	\$0	\$1,580	\$2,610	\$2,610	\$5,000
Side Channel - Buffalo Is IL/MO	\$0	\$0	\$0	\$0	\$0	\$3,000
Backwaters - Upper Peoria Pool, IL	\$0	\$0	\$0	\$0	\$600	\$2,500
Forest Mgmt - Reno Bottoms, (MN/WI)	\$0	\$0	\$0	\$0	\$0	\$400
Pool Water Level Mgmt - Pool 18, IA/IL	\$0	\$0	\$0	\$0	\$1,500	\$3,000
Side Channel - Schenimann IL/MO	\$0	\$0	\$0	\$0	\$0	\$5,000
Ecos Const SUBTOTALS	\$0	\$0	\$1,930	\$4,460	\$7,160	\$22,400
ECOS SUBTOTALS	\$5,000	\$7,500	\$5,000	\$7,500	\$10,000	\$33,168

NESP Component/Project	Job Creation Estimates					
	Continued PED		Construction Start			
	GI \$10M	GI \$15M	CG \$10M	CG \$15M	CG \$20M	CG FULL
ECOSYSTEM Planning and Design						
Adaptive Mgmt	34	43	23	23	23	80
Side Channels	13	19	11	4	3	13
Island Protection	5	7	5	4	3	11
Forest Mgmt	11	16	6	8	6	24
Cultural Stewardship	9	14	3	3	2	13
Fish Passage	37	64	19	21	21	81
Wing Dam/Dike Alteration	4	9	2	3	3	12
Floodplain Restoration	14	21	11	13	14	46
Water Level Mgmt	7	10	4	4	4	15
Backwaters	7	11	4	3	2	13
Ecos PED SUBTOTALS	143	214	87	87	81	307
ECOSYSTEM Construction						
Wing Dam/Dike Alteration - Pool 2, MN/WI	0	0	10	10	10	14
Island Shoreline Protection - Twin Isl, IL	0	0	0	43	43	51
Cultural Site Protection, IL/MN/IA/WI	0	0	0	0	17	34
Wing Dam/Dike Alteration - Herculaneum, IL/MO	0	0	45	74	74	143
Side Channel - Buffalo Is IL/MO	0	0	0	0	0	86
Backwaters - Upper Peoria Pool, IL	0	0	0	0	17	71
Forest Mgmt - Reno Bottoms, (MN/WI)	0	0	0	0	0	11
Pool Water Level Mgmt - Pool 18, IA/IL	0	0	0	0	43	86
Side Channel - Schenimann IL/MO	0	0	0	0	0	143
Ecos Const SUBTOTALS	0	0	55	127	204	638
ECOS SUBTOTALS	143	214	143	214	285	945



NESP NEAR TERM CONSTRUCTION PROJECTS



NESP ECOSYSTEM CONSTRUCTION PROJECTS



Wing Dam/Dike Alteration – Herculaneum (MO)

Jobs: 143 Cost Estimate: \$5.0 M Start: July 2011

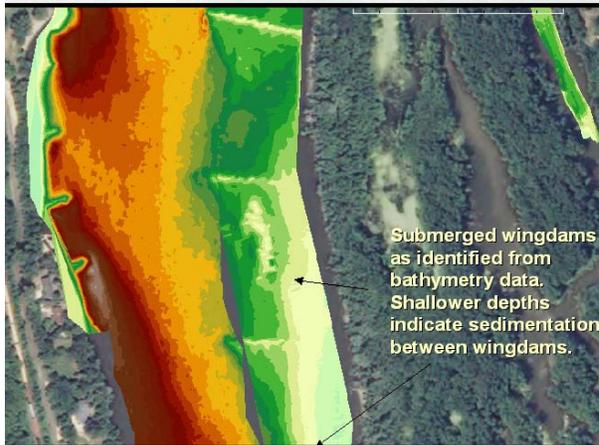
This project is located on the UMRS between river miles 156.5 and 149.5. Existing stone dikes in the Herculaneum Reach will be altered to allow the river’s flow to create a more diverse depositional pattern, including the expected formation of a new side channel and a new island. New river training structures (e.g., chevron dikes) will be constructed to direct the flows and help create side channels and islands. This project will directly benefit the recovery efforts of the federally endangered Pallid Sturgeon.



Cultural Site Protection – Pools 10-13 (IA/WI/IL)

Jobs: 34 Cost Estimate: \$1.2 M Start: Jun 2011

Proposing two bankline protection construction projects of NRHP eligible sites in FY11 (1 site in MVR UMR Pool 13 Congressional District 16 and either one site in MVR UMR Pool 12 Congressional District 16 or a combination of 3 sites located close to one another in MVP UMR Pool 10, Congressional District 3). The abundant and rich archeological sites along the UMR-IWW have contributed significantly to our understanding of early civilizations and the rich riverine ecosystems that sustained their populations for several thousand years. Many of these sites are at risk of loss by erosion.



Wing Dam/Dike Alteration – Pool 2 (MN)

Jobs: 14 Cost Estimate: \$500 K Start: Oct 2010

Approximately 215 channel training structures have significantly modified hydraulic conditions in Pool 2, resulting in degraded main channel border and secondary channel habitat. Notching winged dams is intended to improve aquatic habitat by increasing bathymetric, current velocity, and substrate diversity, and by increasing flow in secondary channels where applicable. This project will “notch” 30 wing and closing dams , resulting in improvement of adjacent main and secondary channel habitat.



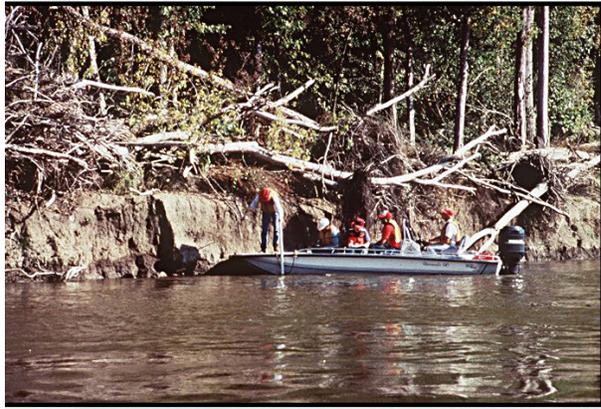
Backwater Restoration – Peoria Pool, Stage Ia (IL)

Jobs: 71 Cost Estimate: \$2.5 M Start: July 2011

This project is focused on the reach of the Illinois River from Chillicothe, IL (RM 190) upstream to Lacon, IL (RM 182). Sedimentation rates between 1903 and 2001 for these backwaters ranged from 0.18 inches/year to 0.37 inches/year and the percentage reduction in storage capacity varied from 77.2% to 97.0% . Backwater restoration activities will increase critical spawning, nursery, and overwintering areas for fish, habitat for diving ducks and aquatic species, and backwater aquatic plant communities. Improvements in water quality, temperature, and dissolved oxygen are also anticipated



NESP ECOSYSTEM CONSTRUCTION PROJECTS



Island Shoreline Protection – Twin Island, IWW (IL)

Jobs: 43 **Cost Estimate: \$1.5 million** **Start: Mar 2011**

Natural resource managers have identified numerous locations where island and bank erosion is threatening critical resources. Highly valuable forest stands such as heron and egret nesting colonies, eagle roosting trees, or rare bottomland hardwoods are targets for protection of terrestrial resources. Erosion of natural levees or islands is undesirable in locations where introduction of sediment laden river flow, bed load, or currents may degrade backwater habitat.



Side Channel Restoration - Buffalo Is. (MO/IL)

Jobs: 86 **Cost Estimate: \$3.0 million** **Start: Jul 2012**

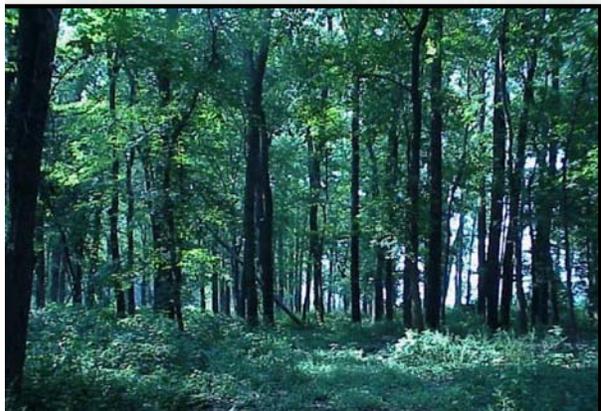
Project location is the Middle Mississippi River, river miles 26.5 to 24.5, in Scott and Mississippi Counties, Missouri. Project is a side channel restoration effort looking at notching existing dikes and placement of new training structures to improve connection to the river. Expected benefits include improved water quality, increased over-wintering and rearing habitat for fish, and increased habitat diversity within the side channel.



Pool Water Level Management - Pool 18 (IL/IA)

Jobs: 43 **Cost Estimate: \$1.5 M** **Start: Jun 2011**

A reduction in the navigation pool level (drawdown) during the summer growing season would result in the exposure, compaction and oxidation of sediments and extend light penetration to increase the production, extent, and diversity of aquatic plants. An increase in the abundance of emergent and submersed aquatic plants would improve habitat conditions and provide a valuable source of food for a variety of organisms including young-of-year and small fish, migratory birds, wading birds, furbearers, reptiles, and amphibians. Photo shows exposed substrate during recent Pool 8 pool drawdown.



Forest Management – Reno Bottoms (MN/IA/WI)

Jobs: 11 **Cost Estimate: \$400 K** **Start: Apr 2011**

The forest and grassland components of the UMR and IWW floodplain are very important habitat for migratory and nesting birds as well as other wildlife. These habitats have been significantly affected by man's use and manmade modifications of the rivers and their floodplains. While the existing forests and grasslands may appear to casual observers to be natural and pristine, some of the important processes that determine their growth and survival have become artificial and are much harsher than pre-settlement conditions.



NESP NAVIGATION CONSTRUCTION PROJECTS



Mooring Cell – L&D 14 (IL/IA)

Jobs: 44 Cost Estimate: \$1.460 M Start: Dec 2010

Construct a mooring cell both above and below L&D 14 at carefully selected locations designed to improve navigation efficiency. These structures provide waiting areas closer to the locks where they can wait clear of an exiting tow. Navigation efficiency is improved by reduced entrance and exit times, estimated time savings of 10 min/lockage. Additionally, the mooring structures can provide environmental benefits. The new mooring structures would reduce tows pushing into the riverbank or shallow offshore areas, which causes damage to shore line vegetation mussel beds and increases near-shore turbidity.



Switchboat – L&D 25 (IL/MO)

Jobs: 33 Cost Estimate: \$1.100 M Start: Mar 2011

Switchboats are full-size towboats (2400 HP) that would be stationed at a lock to provide direct assistance during the double-cut lockage of an 1100 ft barge. The first cut could be removed from the 600 ft lock chamber to a nearby re-make location, thereby allowing the second-cut to completely exit the lock chamber and move to remake location and allow next barge to access the lock.. Time estimate savings for switchboat assisted lockage is approx 8 min/lockage. Initial plans are to contract for one switchboat and monitor performance at locks 22 or 25 under variety of operating conditions.



Mitigation –Shoreline Protection Moore's Is. (IL)

Jobs: 23 Cost Estimate: \$750 K Start: Jul 2011

Moore's Island is located at river mile 76.0 along the right descending bank of the lower Illinois River. It is located in Brown County, IL, approximately 4.5 miles north of Meredosia and approximately 11.0 miles southwest of Beardstown. Moore's Island and its significant resources were identified as at high risk from navigation induced bank erosion. A bank erosion stabilization project is proposed for Moore's Island to stabilize current erosion and mitigate for any potential increase in erosion due to an incremental increase in navigation traffic.



Mooring Cell – L&D 24 (IL/MO)

Jobs: 47 Cost Estimate: \$1.570 M Start: Dec 2011

Construct a mooring cell both above and below L&D 24 at carefully selected locations designed to improve navigation efficiency. These structures provide waiting areas closer to the locks where they can wait clear of an exiting tow. Navigation efficiency is improved by reduced entrance and exit times, estimated time savings of 10 min/lockage. Additionally, the mooring structures can provide environmental benefits. The new mooring structures would reduce tows pushing into the riverbank or shallow offshore areas, which causes damage to shore line vegetation mussel beds and increases near-shore turbidity.



NESP NAVIGATION FY11 CONSTRUCTION PROJECTS



Mooring Cell – LaGrange (IL)

Jobs: 43 Cost Estimate: \$1.435 M Start: Dec 2010

Construct mooring cell above and below LaGrange L&D at carefully selected locations designed to improve navigation efficiency. These structures provide waiting areas closer to the locks where they can wait clear of an exiting tow. Navigation efficiency is improved by reduced entrance and exit times, estimated time savings of 10 min/lockage . Additionally, the mooring structures can provide environmental benefits. The new mooring structures would reduce tows pushing into the riverbank or shallow offshore areas, which causes damage to shore line vegetation mussel beds and increases near-shore turbidity.



Lock 22 Downstream Guidewall – (MO/IL)

Jobs: 609 Cost Estimate: \$20.3 M Start: Dec 2012

Construct downstream guidewall extension at Lock 22. This is a required element of new lock construction that will provide direct benefit to lock entry due to hazardous approach conditions and remake of barge after double lockage. This feature must be in place prior to initiation of major lock construction as it will help minimize impact to navigation during construction.

