

## INTEGRATED FEASIBILITY REPORT

FINAL  
INTEGRATED FEASIBILITY REPORT AND  
PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT  
for the  
UMR-IWW System Navigation Feasibility Study  
24 September 2004

*"To seek long-term sustainability of the economic uses and ecological integrity of the Upper Mississippi River System"*

US Army Corps of Engineers

- Feasibility Study 1993-2004
- Restructured to include Ecosystem Restoration in 2001
- Dual Purpose Recommendation
- Chiefs Report signed Dec 04
- WRDA 2007

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## SCOPE OF STUDY

**Focus on authorized Federal navigation projects and the ecological and floodplain resources that are affected by these projects.**

**Original Study**  
(1993-2000)

**Restructured Study**  
(2001-2004)

- Relieve congestion.
- Relieve congestion.
- Achieve environmental sustainable system.
- Address ecosystem, floodplain mgmt needs related to navigation.

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## Upper Mississippi River System

- 37 Lock Sites
- 1,200 Miles of River
- Significant Ecosystem (2.7 million acres)
- Constructed 1930-45

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## 2.7 Million Acres

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## COLLABORATION

PUBLIC

NGO's

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## PROGRAM VISION

*"To seek long-term sustainability of the economic uses and ecological integrity of the Upper Mississippi River System"*

## Authorization & Appropriations

- ASA(CW) - No recommendation to OMB until completion of economic reevaluation
- WRDA 2007 – Passed 7 Nov 2007
- FY 2008 Appropriation \$8.856M
- FY 2009 Appropriations ??
  - House - \$3M
  - President - \$0
  - Senate - \$10M

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## WRDA 2007 (H.R. 1495)

### TITLE VIII--UPPER MISSISSIPPI RIVER AND ILLINOIS WATER-WAY SYSTEM

- Small Scale Navigation Improvements - \$256M**
  - ✓ Moorings, Switchboats, Traffic Mgmt.
- Large Scale Navigation Improvements - \$1,948B**
  - ✓ 7 UMR New 1200' Locks
  - ✓ 50/50 Cost Share with IWWTF
- Ecosystem Restoration - \$1.717B**

### Comparable Progress between Navigation and Ecosystem

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## Economic Reevaluation Interim Report

- ASA (CW) requested a Corps reexamine economics
- Reevaluation report submitted to ASA (CW) on 31 March 2008
- Conclusions and Recommendations
  - UMRS is a nationally significant ecosystem AND commercial waterway
  - Public expects sustainable balance
  - Investment in transportation needs to increase
- Risk of not implementing > risk of implementing**

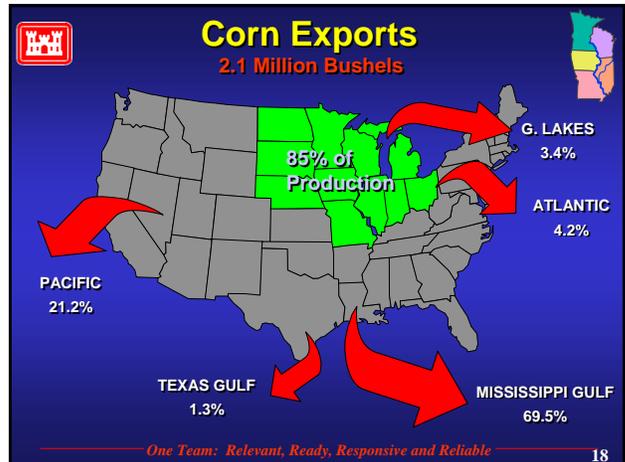
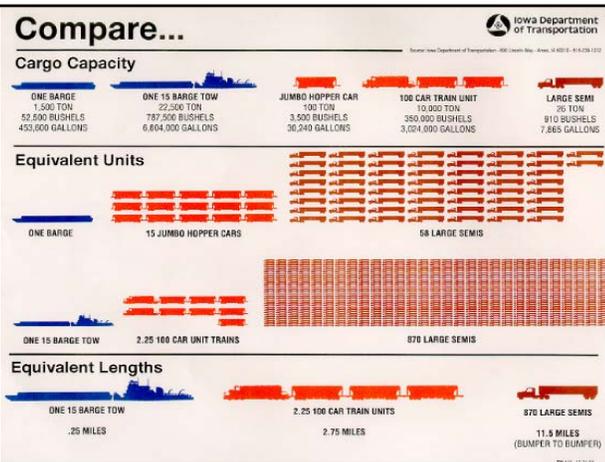
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## Regional Economic Development

### Recommended Navigation Efficiency Improvements (Scenario 3-TCM) (Avg./year, 2005-35)

State	Income	Employment
Minnesota	\$18.0M	275 jobs
Wisconsin	8.9M	184
Iowa	23.8M	514
Illinois	100.3M	1,581
Missouri	32.7M	595
Lower Miss. Region	5.2M	85
Rest of U.S.	-38.7M	-884
<b>Total Nation</b>	<b>\$150.2M</b>	<b>2,351 jobs</b>

(Page 219 of Final Integrated Feasibility Report and PEIS, Alternative 6)  
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## First Increment

**Ecosystem = \$1.717 billion (93/7 Cost Share)**  
(All Cost estimates, cost indexed to Oct 2008 values)

- Fish Passage @ Dams 4, 8, 22, and 26 (\$245M)
- Changes in Water Level Control @ Dams 25 and 16 (\$48M)
- Adaptive Implementation of 225 small projects of less than \$25 million each (\$1.097B)
- 35,000 Acres of Floodplain Restoration (\$325M)
- Implementation will be through an adaptive approach that allots approximately \$160M of the total for a Science Panel, system level learning and monitoring, and restoration project bio-response monitoring

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## “Small-Scale” Ecosystem Restoration Projects

- Island Building
- Water Level Management
- Backwater Restoration
- Side Channel Restoration
- Wing Dam/Dike Alteration
- Island/Shoreline Protection
- Adaptive Management



## “Large-Scale” Ecosystem Restoration Projects

- Fish Passage
- Water Level Management - Pool
- Dam-point Water Level Control
- Floodplain Restoration



## First Increment

**Navigation = \$2.21 billion (50/50 Cost Share)**  
(All Cost estimates, cost indexed to Oct 2008 values)

- Small scale structural and non-structural measures (\$256M)
  - Mooring facilities
  - Switchboats
  - Develop and test - appointment scheduling system.
- New 1200' locks at Locks 20 through 25, LGR, and PEO (\$1.95B of which \$235M is for mitigation)
- Implementation will be through an adaptive approach requiring continued evaluation and reporting to the Administration and Congress.

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## SMALL-SCALE MEASURES

Adjacent Moorings  
4-5 Minutes Average Savings





Switchboats  
8 Minutes Average Savings

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## UPPER MISSISSIPPI RIVER SYSTEM

### Lock 22 – New 1200 Foot Lock

## NAVIGATION AND ECOSYSTEM SUSTAINABILITY PROGRAM

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## Feasibility Study Review Why a new lock?



- The existing Lock 22 was designed & constructed in the 1930s, is 600 ft long by 110 ft wide.
- The existing lock was designed for 600 ft long tows, where most tows today are 1,200 ft.
- Current lock process for 1,200 ft tows through existing 600 ft lock is two-step process, which takes approximately 1.5 to 2 hours, causing significant delays to navigation
- In contrast, a 1,200 ft tow can lock through a 1,200-foot lock in approximately 0.5 to 1 hour. The new 1,200 ft long lock will significantly reduce lockage delays and increase overall safety for operating and towing personnel.

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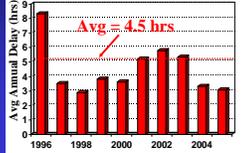
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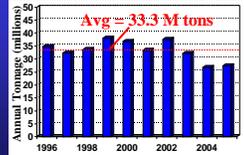
## Lock and Dam No. 22



### Lockage Delays



### Commercial Tonnage



#### Historical Info

Rivermile:	201.2
Opened:	1936
Last Rehab:	1990
Size:	600' x 110'
Lift:	10 ft

#### NEW 1200' Lock Info

Est. Cost:	\$210.3M
Start PED:	2009
Start Const:	2010
Complete:	2018

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## Lock 22 Project Funding



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## Lock 22 Current Lock Configuration



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## Lock 22 Recommended Plan



### New 1200' Lock in Location 3

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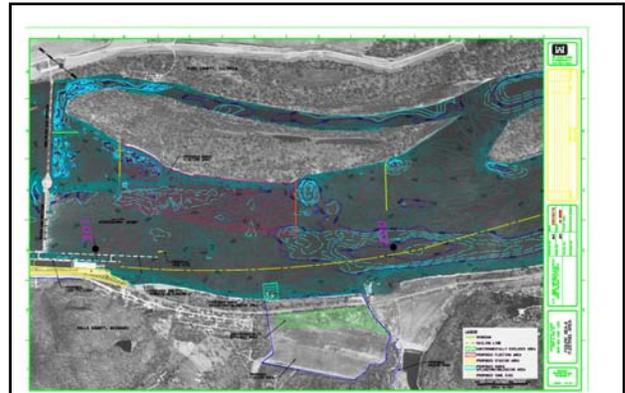
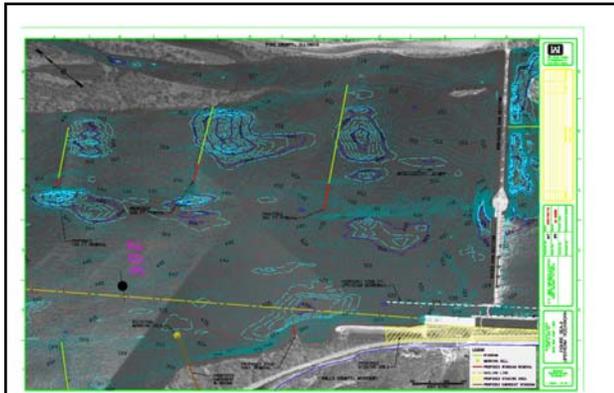
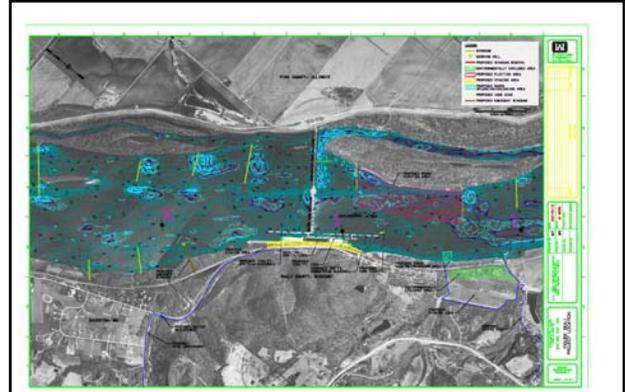
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## Current Status



- Authorized by Congress for construction in November 2007
- FY08 Fund challenges
  - Not enough \$ to maintain 'optimal' schedule
- Continuing preconstruction engineering and design (PED) phase started in 2005 – developing site-specific design
- Current design report should be finished in next year with sufficient funding.



## Lock 22 Potential Impacts



- Disposal sites for excavated materials will likely use existing Federal lands.
- Construction traffic & road modifications
- Contractor staging and assemble areas
  - NESP Lock 22 and District channel maintenance program are exploring joint use of a downstream site
- Permanent channel approach modifications to be made while providing access to the existing lock during construction of the new lock.
- Lock 22 public boat ramp service disruptions



## Lock 22 Public Boat Ramp



- The Lock 22 boat ramp will be closed during construction. The length of closure will be influenced by funding.
- At the May 2005 public meeting, the public expressed its concern about the status of the Lock 22 boat ramp.
- After the May 2005 meeting, the Corps searched for suitable locations for a temporary boat ramp closer than other existing ramps. We have not found a site at this time.
- The Corps will attempt to minimize the boat ramp closure.
- The Corps intends to reopen the boat ramp after construction.



QUESTIONS?

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UMRS NESP Website

<http://www2.mvr.usace.army.mil/nesp/>

NESP Lock 22 – New 1200 ft Lock Website

<http://www2.mvr.usace.army.mil/UMRS11/default.cfm>

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