

Inland Marine Transportation System Capital Investment Strategy *USACE Overview*

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for

TRB Marine Board

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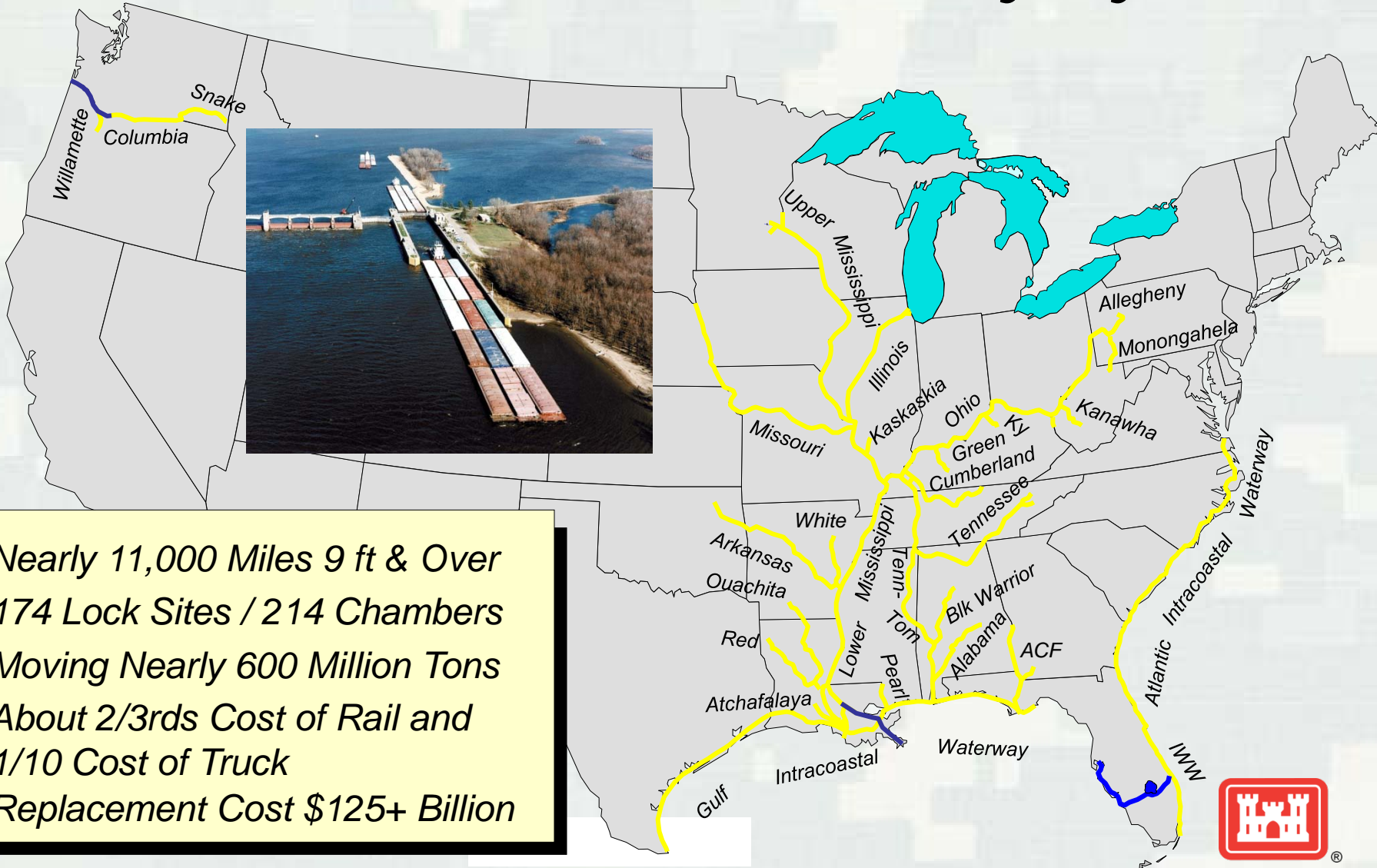


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US Army Corps of Engineers
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Fuel-Taxed Inland Waterway System



- Nearly 11,000 Miles 9 ft & Over
- 174 Lock Sites / 214 Chambers
- Moving Nearly 600 Million Tons
- About 2/3rds Cost of Rail and 1/10 Cost of Truck
- Replacement Cost \$125+ Billion



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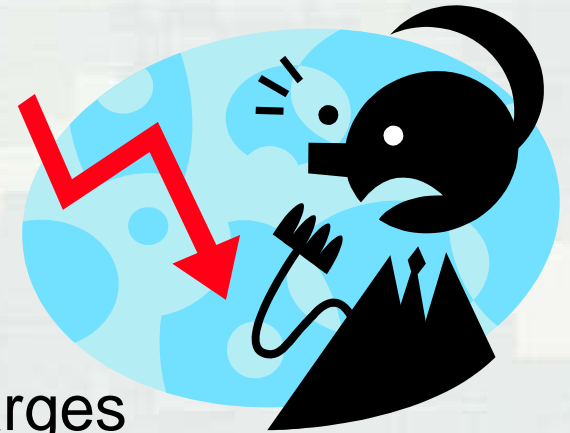
Background

- **Water Resources Development Act '86: Authorized Use of Inland Waterways Trust Fund (IWTF)**
- **Funds New Construction and Major Rehabilitations**
- **Fuel Tax: \$0.20 per gal used on Inland Waterways**
- **50/50 IWTF and General Treasury funds**
- **Created the Inland Waterways Users Board (IWUB)**
 - ▶ **Inland Navigation Stakeholders**
 - ▶ **11 members, meet 3 times per year**
 - ▶ **Advisory capacity to the Secretary of the Army / Congress**
 - ▶ **Annual Report issued with recommendations on IWTF**



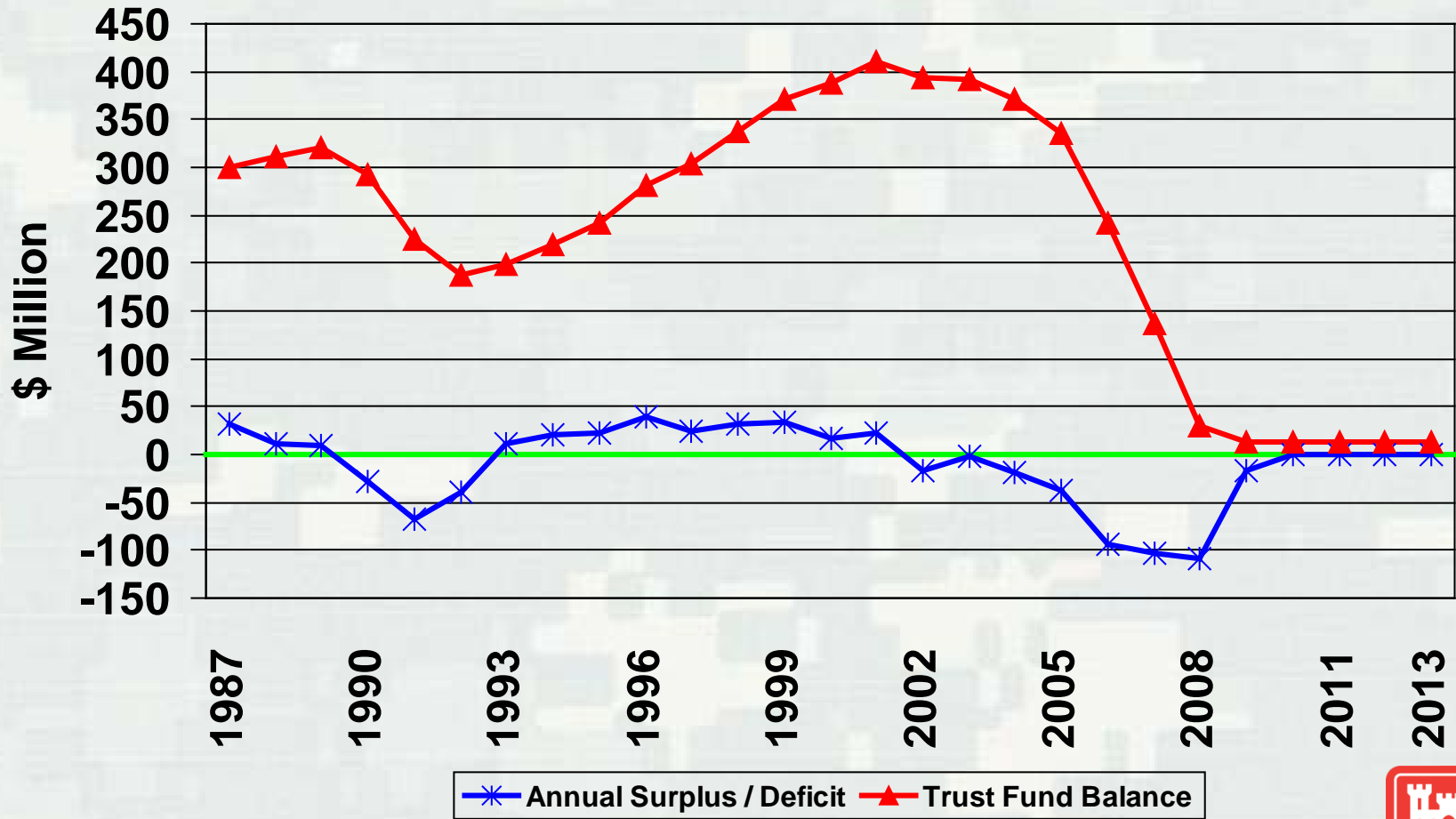
Challenge: Declining Revenues

- Trust Fund revenues have been flat or declining since 2001
 - ▶ Industry consolidation
 - ▶ Less long-haul grain traffic
 - ▶ More efficient technology
 - ▶ Fewer empty moves, deeper-draft barges
- Trust Fund “purchasing power” declining since tax peaked at 20 cents in 1995
 - ▶ Revenues tied only to fuel consumption
 - ▶ Buying power goes down over time with inflation
 - ▶ To have 1995 purchasing power today would be a tax around 29-31 cents.



Background

IWTF History / Projection
FY 1987 - 2013

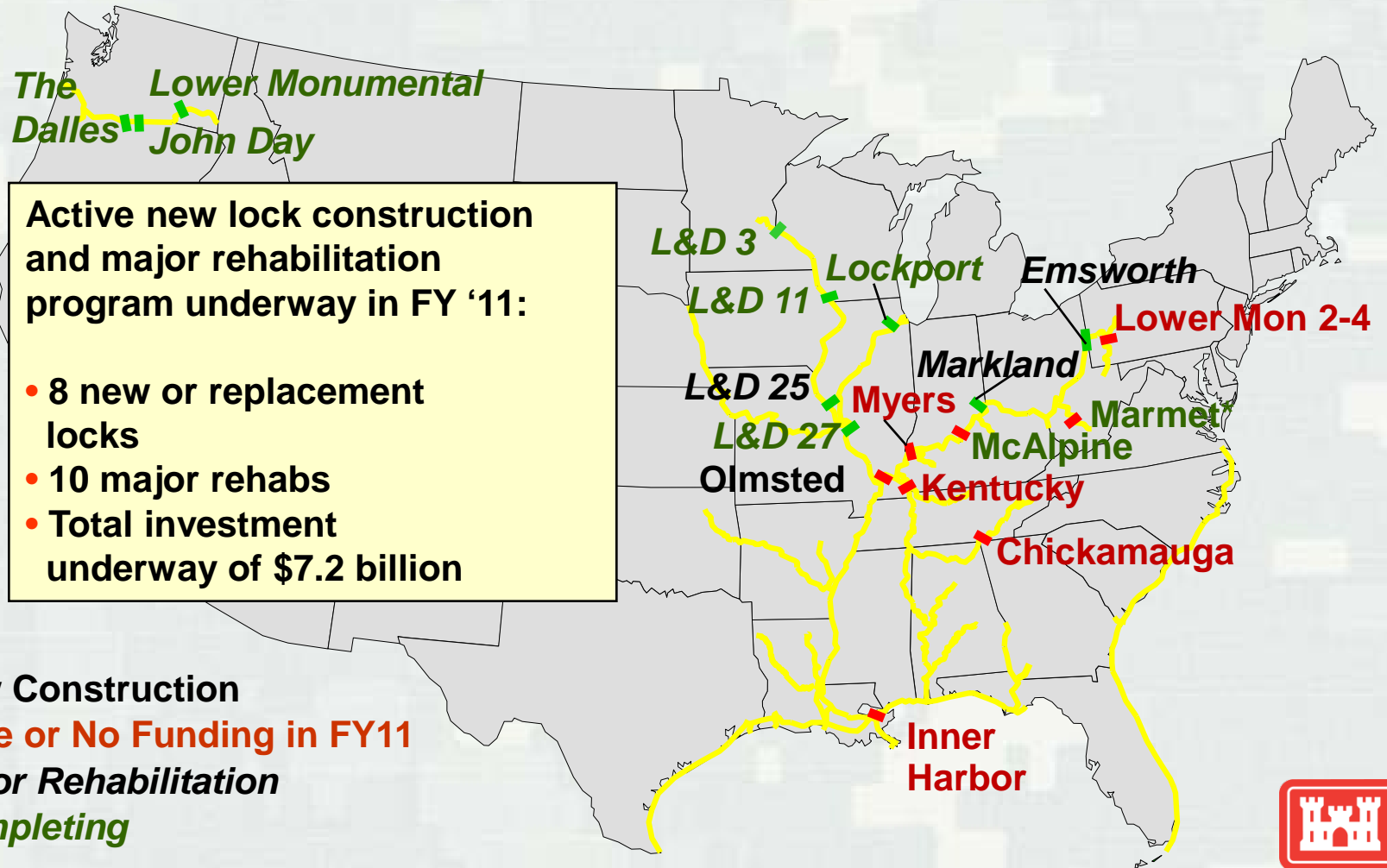


Status of Inland Waterways Trust Fund

- FY10 Cash Flow: (\$ Million) (Peak Year)
 - Begin Balance: \$57.7 2003: \$412.6
 - Fuel Tax Revenue: \$73.9 2001: \$112.7
 - Interest: \$0.129 1990: \$ 26.2
 - Transfers to Corps: \$73.3 2006: \$175.1
 - End Balance 30 Sep 2010: \$58.5
 - ❖ Of which \$20.3 million is set aside as Transfer Authority for current obligations, leaving **\$38.2 million** as effective unobligated balance.
- USACE IWTF Projections for Budget Planning:
 - Based on Historical data and assessment of inland traffic
 - ❖ Unilateral Treasury adjustment in Sep 2009
 - FY10 revenues lower than FY09, which were lower than FY08
 - FY11 Estimate \$65M - Conservative
 - ❖ Low balance in the Trust Fund
 - ❖ Reflect downward trend of deposits



The Challenge: Major Navigation Projects Underway, as of 2011



Active new lock construction and major rehabilitation program underway in FY '11:

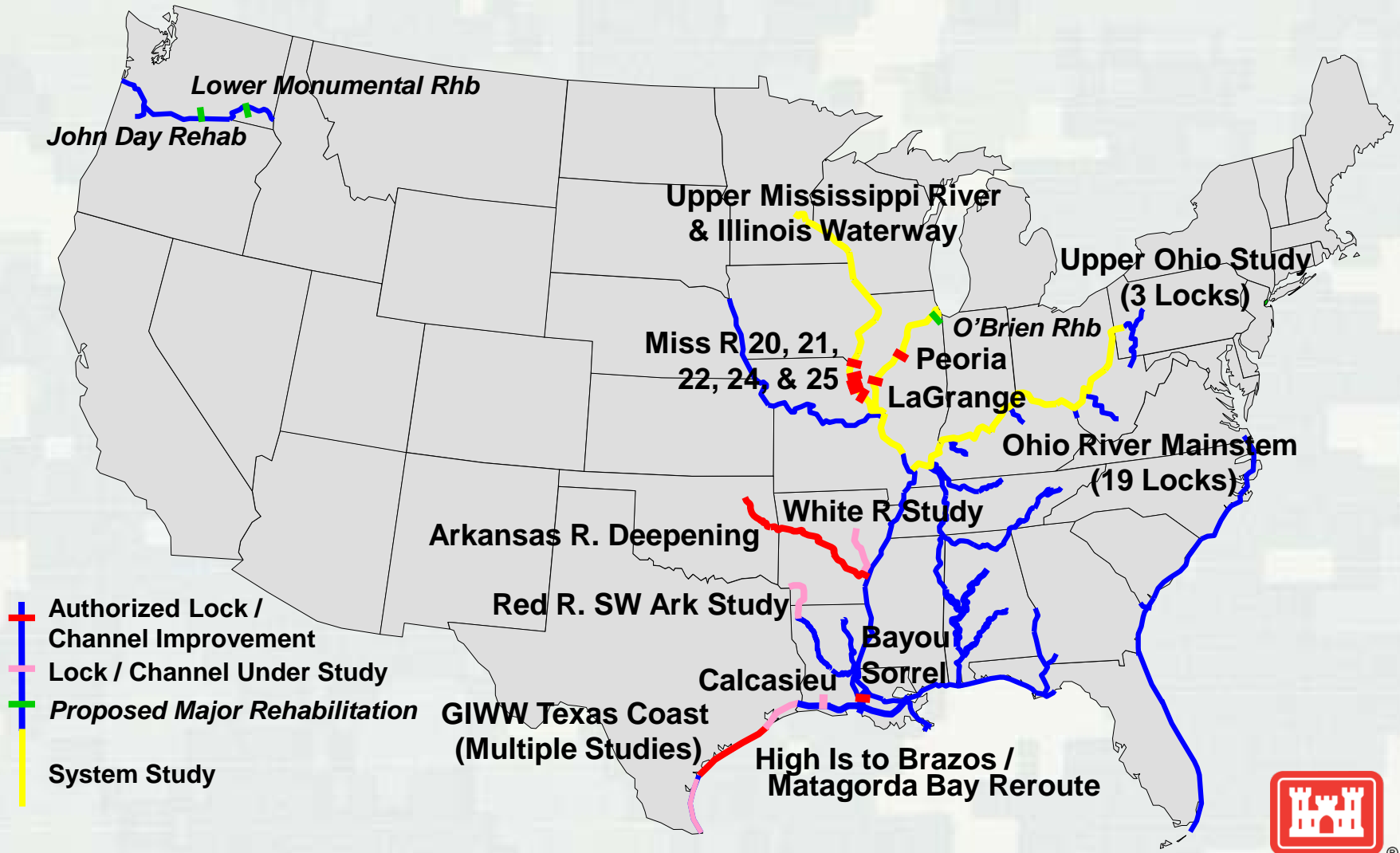
- 8 new or replacement locks
- 10 major rehabs
- Total investment underway of \$7.2 billion

- New Construction
- Little or No Funding in FY11
- Major Rehabilitation
- Completing



Major Future Inland Navigation Projects

Authorized or Under Study, to be Cost-Shared from IWTF



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Short-Term Options



- Can't change tax without legislation
- Continue funding most urgent major rehabilitations (High-Risk, High-Consequence)
- Focus on locks nearing completion
- Stop most major construction projects
- Seek long-term strategy for lock modernization
- Form a Team: Joint government and industry:
IMTS Capital Investment Strategy Team



Example IMTS Capital Investment Strategy Future Program with Current Revenues

Current Program \$170M/YR - Projects completed with efficient schedule

Project	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	
OLMSTED LOCKS AND DAM, OHIO RIVER, IL & KY																														
EMSWORTH LOCKS AND DAM, OHIO RIVER, PA (Dam Safety)																														
MARKLAND LOCKS AND DAM, KY & IN (MAJOR REHAB)																														
TOTAL Efficient Funding	136	145	136	148	145	134	67	50	28	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Current Program \$170M/YR - Projects completed with constrained schedule

LOCKS AND DAMS 2, 3 AND 4 - MONONGAHELA RIVER, PA																														
CHICKAMAUGA LOCK, TN																														
KENTUCKY LOCK ADDITION, TN RIVER, KY																														
INNER HARBOR NAVIGATION CANAL LOCK, LA																														
TOTAL Constrained Funding	8	25	33	21	24	34	102	118	140	166	170	167	169	136	142	147	112	145	95	110	170	170	170	170	170	170	170	170	170	
TOTAL Program	144	170	169	169	169	168	169	168	168	166	170	167	169	136	142	147	112	145	95	110	170	170	170	170	170	170	170	170	170	

NO NEW STARTS!!



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IMTS Capital Investment Strategy Program Development

- Collaborative Team – US Army Corps of Engineers and Waterways Industry (recommendations reflect those of the team, not necessarily those of the Inland Waterways Users Board, the U.S. Army Corps of Engineers or the Administration)
- Premise
 - ▶ Projects are funded efficiently
 - ▶ Emphasis on finishing projects
 - ▶ System evaluation
- Prioritized list used to establish program
- Total IMTS Capital Investment Program Target - \$380M/year
 - ▶ New construction - \$320M/year
 - ▶ Major rehab - \$60M/year
 - ▶ \$380M Program includes management reserve of \$30M
 - ▶ Additional out-year capacity available



IMTS Capital Investment Strategy

New Construction Program

PROPOSED NEW CONSTRUCTION PROGRAM																				
Project	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
OLMSTED LOCKS AND DAM, OHIO RIVER, IL & KY																				
LOCKS AND DAMS 2, 3 AND 4, MONONGAHELA RIVER, PA																				
CHICKAMAUGA LOCK, TN																				
KENTUCKY LOCK ADDITION, TN RIVER, KY																				
LD 25 UPPER MISSISSIPPI																				
GIWW, HIGH ISLAND TO BRAZOS RIVER, TX																				
LAGRANGE - ILLINOIS WATERWAY																				
INNER HARBOR NAVIGATION CANAL LOCK, LA																				
GREENUP LOCKS AND DAM, OHIO RIVER, KY & OH																				
LD 22 UPPER MISSISSIPPI																				
LD 24 UPPER MISSISSIPPI																				



Continuing construction



Construction new start



IMTS Capital Investment Strategy

Major Rehabilitation Program

PROPOSED MAJOR REHABILITATION PROGRAM																				
Project	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
EMSWORTH LOCKS AND DAM, OHIO RIVER, PA (Dam Safety)	█	█	█																	
MARKLAND LOCKS AND DAM, KY & IN (MAJOR REHAB)	█																			
LOCK AND DAM 25, MISSISSIPPI RIVER, IL & MO		█	█	█																
LAGRANGE LOCK & DAM, IL*																				
LOWER MONUMENTAL LOCK AND DAM, WA	█	█	█																	
ILL WW THOMAS O'BRIEN LOCK & DAM			█	█	█	█	█	█	█											
GREENUP DAM, OHIO RIVER, KY & OH			█	█	█	█	█	█	█	█										
JOHN T. MYERS DAM MAJOR REHAB				█	█	█	█	█	█											
GREENUP LOCKS, OHIO RIVER, KY & OH*																				
MELDAHL DAM, OHIO RIVER, OH & KY					█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
MONTGOMERY DAM SAFETY PROJECT (MAJOR REHAB)					█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
UM Mel Price													█	█						
UM LD25*																				
UM LD24*																				
NO. 2 LOCK, AR														█	█	█	█	█	█	█
JOE HARDIN LOCK, AR														█	█	█	█	█	█	█
WILLOW ISLAND LOCKS AND DAM, OHIO RIVER, OH & WV															█	█	█	█	█	█
MARMET LOCKS AND DAM, KANAWHA RIVER, WV																█	█	█	█	█
UM LD22																				█

 Continuing construction
 Construction new start



Cost Sharing and Revenue Plan

- Cost share recommendation
 - ▶ Lock New Construction and Major Rehab above \$100M: 50% Federal / 50% IWTF
 - ▶ Lock Major Rehab less than \$100M and Dams: 100% Federal
 - ▶ \$270M/Year Federal
 - ▶ \$110M/Year IWTF
 - Requires 30% – 45% increase in fuel tax (\$0.06 – \$0.09 per gal)
- Cost sharing cap
- Revenue Plan – increase in current industry funding mechanism

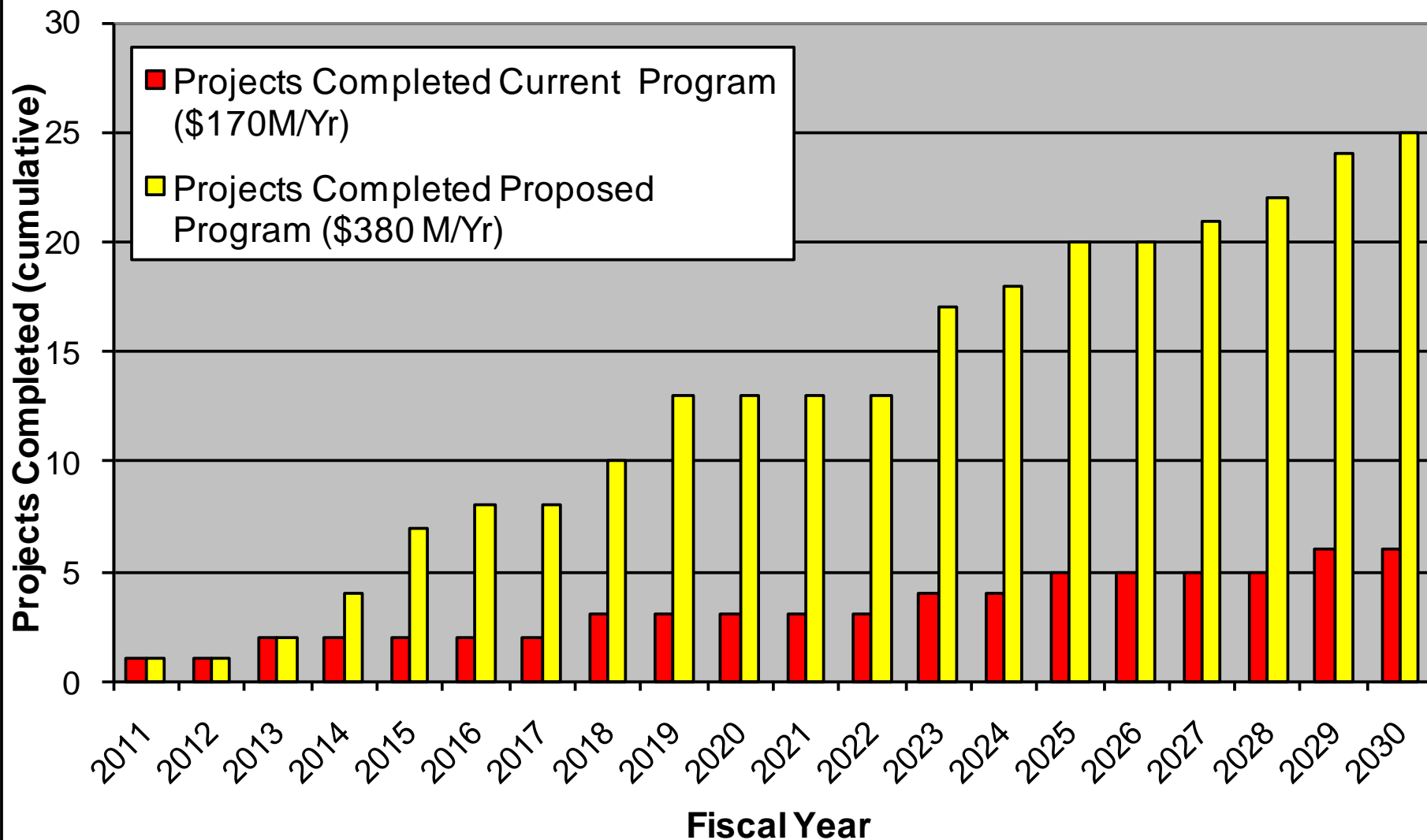


IMTS Capital Investment Strategy Project Delivery Process Recommendations

- Implemented Recommendations
 - ▶ Risk-based cost estimates
 - ▶ Independent External Peer Reviews
 - ▶ Project Management Certification
- Proposed Improvements
 - ▶ IMTS Capital Investment Program Regulation
 - ▶ IWUB representative PDT members
 - ▶ Project Management Plan – IWUB Chairman and representative as signatories
 - ▶ Adopt applicable concepts of Milcon Model
 - ▶ Acquisition – Early Contractor Involvement
 - ▶ IWUB concurrence on new starts
 - ▶ IWUB status briefings
 - ▶ Measure and monitor results of recommended process improvements
- Recommendations forwarded for consideration
 - ▶ Design/Review Center(s) of Expertise
 - ▶ Standardized Designs
 - ▶ Continuing Contracts Clause
 - ▶ Emphasis on reduced O&M expenditures



Comparison of Completed Projects



Benefits of Proposed IMTS Capital Investment Program

- Cost efficiencies - \$0.5 - \$2.1B in avoided cost growth on navigation projects
- Avoiding more than \$2.8B additional benefits foregone
 - ▶ Looking only at projects that could be completed under the current scenario (reference slide 3)
 - ▶ Benefits foregone to date at Olmsted and Lower Mon alone are \$5.2B
- Improved reliability and efficiency of IMTS
 - ▶ 5 - DSAC 1 dams
 - ▶ 3 – DSAC 2 dams
 - ▶ 1 – lock rated as an F condition
 - ▶ 6 – locks rated as a D condition
- Additional benefits of achieving IMTS improvements over shorter timeframe
 - ▶ Environmental
 - ▶ Societal benefits
 - ▶ Safety
 - ▶ Energy



Status

- ▶ Report approved by the IWUB 15 April 2010
- ▶ Congress requested Administration position on the proposal July 2010
- ▶ Assistant Secretary of the Army (Civil Works) replied December 2010
- ▶ The Administration did not support the overall proposals
- ▶ Continue discussion with new Congress and Waterway Users



What Is Underway: Improving Project Delivery Process

- Develop Risk Based Cost Estimates
- Capital Projects for External Peer Reviews
- Apply Lessons Learned to new Capital Projects
- Evaluate use of Early Contractor Involvement in upcoming capital projects
- Implement applicable principles of Military Construction program to Capital Projects
- Create Design/Review Centers of Expertise
- Develop a portfolio of standardized designs
- Develop reliability data



Questions

