

**INLAND WATERWAYS USERS BOARD  
20<sup>TH</sup> ANNUAL REPORT  
TO THE  
SECRETARY OF THE ARMY  
AND THE  
UNITED STATES CONGRESS  
WITH APPENDICES  
March 2006**



January 2006



January 2005

Progress at McAlpine Lock and Dam Construction

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# **INLAND WATERWAYS USERS BOARD**

## **20<sup>th</sup> ANNUAL REPORT**

### **March 2006**

#### **EXECUTIVE SUMMARY**

The Inland Waterways Users Board, created by the Water Resources Development Act of 1986, once again reports, with grave concern, that inland waterways are one of our most underappreciated national assets. Underappreciated because they are largely invisible to most of the American people. Stealth barges ply the nearly 12,000 miles of commercially active inland and intracoastal waterways, touching 38 states, quietly moving over 600 million tons of cargo annually (18% of intercity freight by ton-miles), with less fuel consumption, less air pollution, less urban congestion, and minimal community impacts as compared to alternative modes.

In addition, our waterways are much more than transportation routes. They are living resources, providing many other benefits in the form of flood control, hydroelectric power, local water supply, recreational opportunities, and habitat for fish and wildlife.

The Inland Waterways Users Board is extremely concerned and again reports to you that this invaluable system is exhibiting signs of serious neglect. Delays and slippage in completion schedules of a number of Inland Waterways Trust Fund-financed projects have compounded the maintenance budget crisis as aging facilities, in the process of being replaced, are forced to remain in service for extended periods. In 2005 the American Society of Civil Engineers gave the inland navigation system a near failing grade of D minus. Over the past 10 years the Board has witnessed a 110% increase in unscheduled lock outage hours, while at the same time the maintenance backlog for navigation facilities has grown to over \$600 million. Because of this continuing deterioration in navigation infrastructure, shippers are questioning the reliability and viability of barge transportation on the inland waterways. Unless this situation of unfunded lock and dam maintenance backlog is addressed, the number of unscheduled lock outages will grow exponentially in the coming years.

In last year's annual report we spent considerable attention discussing the emergency outages of several locks largely due to lack of maintenance. This condition has not improved and has, in fact, gotten worse. The following is a list of emergency outages occurring in 2005:

1. Mississippi River Lock and Dam No. 22 – Emergency repairs to miter gates and gate anchorages, January 2005.
2. Mississippi River Lock and Dam No. 22 – Emergency repairs to emergency bulkhead slot embedded metal April 2005.
3. Ohio River Lock and Dam 52 – Emergency repairs to miter gates, September 2005.
4. Ohio River Lock and Dam 52 – Emergency repairs to hydraulic system, October 2005.
5. Ohio River Hannibal Lock and Dam – Emergency repairs to miter gates, November

2005.

6. Ohio River Lock and Dam 52 – Emergency repairs to sheet pile cells, December 2005.

The Board wishes to underscore the urgent need for replacement locks on the Upper Mississippi River and Illinois Waterway, and will be carefully monitoring progress as the navigation improvements move further along in the PED phase. It is not prudent to expend more and more funds to maintain the existing facilities that will be replaced while we delay the construction of replacement infrastructure. The delay in the completion of the Olmsted Locks and Dam due to the lack of a full and efficient funding stream will cause the Corps to spend considerably more funds for maintain to keep the Ohio River Locks and Dams 52 and 53 viable. The same is true for the Upper Mississippi River and Illinois Waterway locks and dams.

The Board notes that funding to continue work on this critical segment of the inland waterways system is omitted from the Administration's FY 2007 Budget Request and urges the Congress to appropriate funds for this effort. The Board wonders how locks and dams are expected to last 50 years more, as one agency has stated, if they are not adequately funded for maintenance, major rehabilitation or replacement.

The Board continues to call for immediate congressional action to upgrade and improve our crucial inland waterway system. Without a reliable system, agricultural exports will be in peril, power costs will drastically increase, manufacturing costs for consumer durables and non-durables using chemicals and petrochemicals will increase dramatically and the environment will suffer increased pollutants, noise, and congestion. The commercial navigation community is the only user who directly funds these multi-use projects with the twenty-cent per gallon fuel users tax.

The Inland Waterways Users Board recognizes that the FY 2006 Congressional appropriations level for Inland Waterways Trust Fund projects was the highest amount ever, and that the Administration's FY 2007 Budget Request again proposes an elevated spending level. The Board anticipates the Congress and the Administration will use this report to craft appropriate legislation and fund projects at full efficient funding.

In order to continue serving our Nation, the inland waterway system needs urgent attention. Specifically, in this 20<sup>th</sup> Annual Report, the Board makes the following recommendations:

**1. The Board strongly urges the Administration and Congress to support completion of the following top priority Capstone Activities.** The Board considers these Capstone Activities to be of equal importance and recommends that all be funded at the Full Efficient Funding level for FY 2007, as outlined in Table 1.

- **Lock and Dam No. 19**, Mississippi River, *Iowa* (Major Rehabilitation)
- **Locks and Dam No. 27**, Mississippi River, *Illinois* (Major Rehabilitation)

- **McAlpine Locks and Dam**, *Kentucky and Indiana* (Construction)
- **Olmsted Locks and Dam**, *Illinois and Kentucky* (Construction)
- **Lock and Dam No. 3**, Mississippi River, *Minnesota* (Major Rehabilitation)

2. **Congress must continue to fund authorized projects at a full efficient funding level in order to stop the waste of taxpayer dollars.** This includes the Board's High Priority Construction and Major Rehabilitation projects, which are listed below and in Table 1. The Board attaches equal priority to all of these high priority projects.

- **Inner Harbor Navigation Canal Lock**, *Louisiana* (Construction)
- **Monongahela River Locks and Dams 2, 3, and 4**, *Pennsylvania* (Construction)
- **Marmet Locks and Dam**, *West Virginia* (Construction)
- **Kentucky Locks and Dam**, *Kentucky* (Construction)
- **Lock and Dam No. 11**, Mississippi River, *Iowa and Wisconsin* (Major Rehabilitation)
- **Chickamauga Lock and Dam**, Tennessee River, *Tennessee* (Construction)
- **John T. Myers Locks and Dam**, Ohio River, *Indiana and Kentucky* (Construction)

3. Congress must fund the priority Preconstruction Engineering and Design or PED projects and studies at the full efficient funding level. The PED projects and studies have been identified and ranked in Table 1.

4. The Board has also identified a project which is near completion, **Lock and Dam No. 24**, Mississippi River, *Illinois and Missouri* (Major Rehabilitation). **This project should be funded so as to get the job done.** Lock and Dam 24 is currently scheduled for completion in 2007.

5. Missouri River Flows. The flows from the Missouri River are over 60% of the water in the middle Mississippi River (between St. Louis, Missouri and Cairo, Illinois) during late summer/early fall (the major agricultural export season). Maintaining a safe and adequate channel is essential to protect our agricultural export market. With every 1-inch loss of water, each barge is unable to move 17 tons (about  $\frac{3}{4}$  of a semi truck) and a regular 30-barge tow leaving St. Louis will decrease the total tonnage by 510 tons or about 22 semi-trucks. If flows from the Missouri River become unreliable, either 1) agricultural just-in-time markets will evaporate or 2) more traffic will move by truck or rail, increasing air and noise pollution and negatively impacting society's quality-of-life. **Congress must mandate that flows from the Missouri River will adequately ensure that the Mississippi River is reliably navigable under all but the most severe conditions.**

6. Operations and Maintenance. The Board continues to adamantly oppose any use of the Inland Waterways Trust Fund for Operations and Maintenance (O&M). Shippers are now questioning the reliability of the system due to frequent outages and an apparent lack of commitment to O&M. The resultant decay leads to the need for major rehabilitation which robs the trust fund of monies that should be spent on projects for which the fund was intended. **Congress, if it intends to keep middle America's economic engine running, must increase O&M for inland navigation by at least \$100 million and then ensure that future budgets, at**

**a minimum, are increased at the rate of inflation. Further, it is imperative that the funds actually be spent on inland navigation specific needs.**

7. Funding for Navigation Major Rehabilitations. The Board would like to vigorously express their objection with the Administration's FY 2007 Budget Request attempt to move the critical inland navigation Major Rehabilitation projects from the Construction account to the O&M account. The addition of these projects to the O&M account, as well as the Columbia River and Missouri River mitigation items, and other "mitigation" activities would lead one to believe that O&M funding has been substantially increased for FY 2007. **However, actual O&M funding is \$63 million LOWER in the Administration's FY 2007 Budget Request than the FY 2006 appropriation if these additional activities totaling more than \$330 million are excluded from the total. Any attempt to cost share work with the O&M account is deemed to be an effort to circumvent the spirit of cost sharing agreed to by our predecessors.**

8. "Low-Use" Rivers. The notion that "low-use" rivers do not need the same type of O&M as "high-use" rivers is an ill-conceived concept generated by individuals who are uninformed about the navigation system as a transportation mode. Corps data indicates that over 50% of all inland waterway traffic either originates or terminates on a tributary waterway. No reasonable transportation expert would recommend the closure of all non-hub airports. As with the feeder airports, feeder rivers increase the economic and environmental efficiency of the entire system. Without reliability on all parts of the system, the system fails. **Congress must protect these "low-use", tributary rivers with appropriate O&M funding.**

9. Catastrophic Failure. The inland waterway system is experiencing an alarming trend with significant amounts of unscheduled downtime at the locks and dams (46,647 hours in 2005). **The Board requests that the U.S. Army Corps of Engineers prepare a prioritization of potential major catastrophic failures of inland waterway infrastructure within the next year. Furthermore, the Board recommends that common criteria for evaluating all infrastructure condition information among districts be implemented.**

10. Funding for Environmental Mitigation. The Board notes that the FY 2007 Administration Budget Request includes \$95 million for Columbia River Fish Mitigation on that portion of the inland waterway system as well as \$85 million for the Missouri River Fish and Wildlife Mitigation. Although the Corps should consider environmental impacts of projects, the **Board encourages Congress to appropriate funds for these projects from the responsible agencies, namely the U.S. Fish and Wildlife Service, the Environmental Protection Agency, and state conservation or natural resource departments.**

In conclusion, waterborne transportation is vital to the U.S. economy. It is the most economically efficient mode of freight transportation, thus saving shippers and consumers more than \$7.8 billion annually compared to alternate transportation modes. Essential bulk commodities valued at more than \$100 billion are transported annually on the inland navigation system. Further, our inland waterways generate benefits for all Americans because they deliver goods in an environmentally sustainable manner and form an essential link in the intermodal



distribution system. And finally, the nation's workforce benefits by the jobs directly tied to the inland waterways and indirectly by the industries utilizing the inland waterways. We must take care of this precious resource.



IWUB Field Tour of the John Day Lock and Dam, Columbia River, October 2005

**Table 1. Inland Waterways Users Board Priority Projects**

<b>Name</b>	<b>Full Efficient Funding FY 2007 (\$million)</b>	<b>States Directly Impacted</b>	<b>Economic Impact To Each State</b>
<b>CAPSTONE ACTIVITIES</b>			
Lock and Dam No. 19, Mississippi River, IA (Major Rehab)	\$9.02	LA, IA, IL, MN, WI, MO, KY, AL, TN, AR, PA, TX, OH, MS, OK, WV, AR	36 million tons, at least 16 states
Locks and Dam No. 27, Mississippi River, Illinois (Major Rehab)	\$6.2	LA, MO, IL, IA, MN, WI, KY, AL, TN, TX, WV, IN, PA, OH, MS, AR, OK, KS, NE	85 million tons, at least 19 states
McAlpine Locks and Dam, Kentucky and Indiana (Const)	\$87.0	LA, KY, OH, WV, IL, IN, PA, TN, MO, AR, TX, MS, AL, FL, IA, OK, MN, WI	55 million tons, valued at \$12 billion serving 18 states
Olmsted Locks and Dam, Illinois and Kentucky (Const)	\$110.0	LA, KY, OH, WV, IL, IN, PA, TN, MO, AR, TX, MS, AL, FL, IA, OK, MN, WI, KS, NE	97 million tons, valued at \$20 billion serving 20 states
Lock and Dam No. 3, Mississippi River, Minnesota (Major Rehab)	\$5.3	MN, LA, IL, WI, TN, MO, IA, KY, WV, TX, IN, MS, AR, AL	11.5 million tons, at least 14 states
<b>HIGH PRIORITY CONSTRUCTION AND MAJOR REHABILITATION PROJECTS</b>			
Inner Harbor Navigation Canal Lock, Louisiana (Const)	\$26.0	LA, MS, AL, FL, TX, AR, TN, MO, KY, IL, IN, OH, WV, PA, IA, MN	17 million tons valued over \$6.6 billion for 16 states
Monongahela River Locks and Dams 2, 3, and 4, Pennsylvania (Const)	\$62.8	PA, WV, OH, KY, IN, IL, MO, TN, LA, AR, MS, AL, TX, OK, IA	22 million tons valued at \$1.6 billion serving 15 states
Marmet Locks and Dam, West Virginia (Const)	\$50.8	WV, OH, KY, LA, PA, IN, IL, TN, MO, IA, MN, OK, AL, FL	17 million tons valued over \$800 million serving 14 states
Kentucky Locks and Dam, Kentucky (Const)	\$49.5	TN, KY, IL, LA, WV, PA, IN, OH, MO, AL, MS, AR, IA, TX, MN, WI, OK, FL, NE, KS	35 million tons valued at \$6.2 billion serving 20 states
Lock and Dam No. 11, Mississippi River, Iowa and Wisconsin (Major Rehab)	\$21.7	MN, LA, IL, WI, TN, MO, IA, KY, WV, TX, IN, MS, AR, AL	22.5 million tons, at least 14 states



Name	Full Efficient Funding FY 2007 (\$million)	States Directly Impacted	Economic Impact To Each State
Chickamauga Lock and Dam, Tennessee River, Tennessee (Constr)	\$35.0	TN, KY, AL, IN, WV, PA, LA, AR, TX, MO, IL, OK	2 million tons valued at \$562 million serving 12 states
John T. Myers Locks and Dam, Ohio River, Indiana and Kentucky (Constr)	\$6.5 (for CG)	TN, KY, IL, LA, WV, PA, IN, OH, MO, AL, MS, AR, IA, TX, MN, WI, OK, FL	70 million tons valued at \$14 billion serving 18 states
<b>PRIORITY</b>	<b>PRIORITY PED PROJECTS AND STUDIES</b>		
1	Upper Mississippi River and Illinois Waterway Navigation, Illinois, Iowa, Minnesota, Missouri, and Wisconsin (PED)	\$24.0 (PED)	LA, MO, IL, IA, MN, WI, KY, AL, TN, TX, WV, IN, PA, OH, MS, AR, KS, NE
2	Greenup Locks and Dam, Ohio River, Kentucky and Ohio (PED)	\$4.0 (PED) (\$9.3 if CG New Start)	TN, KY, IL, LA, WV, PA, IN, OH, MO, AL, MS, AR, IA, TX, MN, WI, OK, FL
3	Bayou Sorrel Lock, Intracoastal Waterway (PED)	\$1.5	TX, LA, MS, AR, OK, TN, KY, MO, IL, IN, OH, WV, PA, IA, MN
4	Calcasieu Lock, Intracoastal Waterway, Louisiana (Study)	\$0.6	TX, LA, MS, AL, FL, AR, OK, TN, KY, MO, IL, IN, OH, WV, PA, IA, MN
5	Gulf Intracoastal Waterway (GIWW), Texas (PED)	\$0.9	TX, LA, MS, AL, FL, AR, OK, TN, KY, MO, IL, IN, OH, WV, PA, IA, MN
6	Lower Monumental Lock Study, Lower Snake River, Washington (Study)	\$0.5	WA, OR, ID, MT, ND
<b>COMPLETE EXPEDITIOUSLY</b>			
Lock and Dam No. 24, Mississippi River, Illinois and Iowa (Major Rehab)	\$3.9	LA, IA, IL, MN, WI, IN, MO, KY, AL, TN, AR, PA, TX, OH, MS, OK, WV, NE	39 million tons, at least 18 states
<b>Total</b>	<b>\$505.22</b>		

**INLAND WATERWAYS USERS BOARD**  
**20<sup>th</sup> ANNUAL REPORT**  
**March 2006**

**ANNUAL RECOMMENDATIONS AND PRIORITIES**

**Introduction**

The Inland Waterways Users Board, created by the Water Resources Development Act of 1986, once again reports, with grave concern, that inland waterways are one of our most underappreciated national assets. Underappreciated because they are largely invisible to most of the American people. Stealth barges ply the nearly 12,000 miles of commercially active inland and intracoastal waterways, touching 38 states, quietly moving over 600 million tons of cargo annually (18% of intercity freight by ton-miles), with less fuel consumption, less air pollution, less urban congestion, and almost no negative community impacts as compared to alternative modes.

In addition, our waterways are much more than transportation routes. They are living resources, providing many other benefits in the form of flood control, hydroelectric power, local water supply, recreational opportunities, and habitat for fish and wildlife.

The Inland Waterways Users Board is extremely concerned and again reports to you that this invaluable system is exhibiting signs of serious neglect. Delays and slippage in completion schedules of a number of Inland Waterways Trust Fund-financed projects have compounded the maintenance budget crisis as aging facilities, in the process of being replaced, are forced to remain in service. We have been deferring timely maintenance for so many years that we are now experiencing serious structural failures. In 2005, there were 46,647 unscheduled lock outage hours, significantly hindering and disrupting navigation. At the same time the maintenance backlog for navigation facilities has grown to over \$600 million. Because of this continuing deterioration in navigation infrastructure, shippers are questioning the reliability and viability of barge transportation on the inland waterways. Unless this situation of unfunded lock and dam maintenance backlog needs is addressed the number of unscheduled lock outages will grow exponentially in the coming years.

In last year's annual report we spent considerable attention discussing the emergency outages of several locks largely due to lack of maintenance. This condition has not improved and has, in fact, gotten worse. The following is a list of emergency outages occurring in 2005:

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slot embedded metal, April 2005.

3. Ohio River Lock and Dam 52 – Emergency repairs to miter gates, September 2005.
4. Ohio River Lock and Dam 52 – Emergency repairs to hydraulic system, October 2005.
5. Ohio River Hannibal Lock and Dam – Emergency repairs to miter gates, November 2005.
6. Ohio River Lock & Dam 52 – Emergency repairs to sheet pile cells, December 2005.

## **Background**

The Inland Waterways Users Board (the “Board”) is composed of 11 members that represent different geographical sections of the nation and diverse commodities such as farm products, coal, cement, petroleum products and petrochemicals. The Board traditionally meets three times each year to develop and make recommendations to the Secretary of the Army and the Congress regarding construction and major rehabilitation investments, and spending levels on the commercial navigation features of the inland waterways system. **Inland Waterways Users Board Meeting No. 49** was held in St. Paul, Minnesota, on July 27, 2005; **Inland Waterways Users Board Meeting No. 50** was held in Vancouver, Washington on October 13, 2005; and **Inland Waterways Users Board Meeting No. 51** was held in Alexandria, Virginia on February 22, 2006.

In exercising its authorized mandate, the Board must carefully balance fuel tax revenues flowing into the Inland Waterways Trust Fund against the inland navigation project construction and major rehabilitation expenditures proposed and advocated by waterways users, exporters, the Administration, Congress, and others. Under the provisions of the Water Resources Development Act of 1986 (“WRDA ‘86”), the commercial users currently pay a \$0.20 per gallon fuel tax that is deposited in the Inland Waterways Trust Fund. They also pay a \$.043 per gallon fuel tax to the General Treasury for deficit reduction, however this tax will be eliminated entirely January 1, 2007. It should be noted that the commercial users are the *only* beneficiaries of the inland waterways system who pay a user fee or fuel tax. Those beneficiaries who receive flood control, water supply, recreational and other benefits do not contribute to the construction or maintenance of the system providing these benefits. The revenues deposited into the Inland Waterways Trust Fund pay 50% of the cost of new and replacement construction and major rehabilitation projects with the Federal General Treasury revenues paying the other 50%. Distinct from project construction and major rehabilitation, the ongoing maintenance of the existing fuel-taxed system is and has always been a 100% Federal responsibility.

As the Board issues its 20<sup>th</sup> Annual Report to the Secretary of the Army and Congress, the inland waterways continue to face a critical challenge in achieving adequate funding levels for the projects to proceed on an efficient construction timetable. The commercial users of the inland waterways have paid more than \$1.5 billion in fuel taxes since the fuel tax was enacted. However, the monies deposited in the Inland Waterways Trust Fund have not been fully utilized for the intended purpose of navigation infrastructure improvements. While the Congress has traditionally supported the inland navigation system, at this time adequate Federal funding is not being made available to start new projects or to complete ongoing construction projects in a cost

efficient manner, let alone on time or on budget. Failure to adequately fund the projects that are already under construction is an extraordinarily expensive short-term budget solution that creates infrastructure problems of much greater magnitude, importance and cost. The Board firmly believes that future balanced budgets and our future economic competitiveness will be built upon a solid national infrastructure, of which the inland waterway system is a key component. Thus, the Board strongly endorses an appropriation and allocation process that will allow optimum efficient use of the Inland Waterways Trust Fund and allow construction projects to proceed at full funding levels.

The Board is convinced that funds spent to maintain and improve our waterway infrastructure yield a very high benefit-to-cost ratio that will have a positive impact upon this nation's economy for decades and generations to come. The United States' ability to compete and grow in the global economy is contingent upon our ability to efficiently transport raw goods, commodities, and finished products throughout the U.S. and for export. We have the best, most efficient waterways system in the world; one that is studied and emulated around the globe. However, 52 percent of all lock chambers on this system have now exceeded their design life of 50 years. One agency has indicated that the Upper Mississippi locks can last another 50 years. How can this occur if adequate funds for maintenance, major rehabilitations and replacements are not appropriated? The United States cannot afford to let this world-class system fall into disrepair and obsolescence, particularly when there is a surplus in the funds contributed by the users.

### **The Board's Perspective on Infrastructure Investment**

The Board supports a balanced program including new and replacement construction, major rehabilitation and small-scale improvements of inland navigation facilities without the imposition of additional fuel taxes. The Board is unequivocally opposed to any increase in user fees be they fuel taxes, lockage or congestion fees, harbor maintenance fees, or ton-mile fees. The Board strongly believes maintenance of the existing system is a 100% Federal responsibility and hopes several measures aimed towards project construction and operating cost reductions will preclude any other proposals for fuel tax increases. The Board agrees with the Tax Foundation's conclusion regarding user fees which states, *"Therefore the imposition of the Inland Waterways tax simply leads to a reduction in the demand for waterborne transportation services and either reduces interstate trade and commerce, or moves that trade to truck and rail modes. This leads to unintended consequences such as increased air pollution, higher energy use, and more traffic accidents. With matching federal funds, the primary goal must be to manage costs and spending before entertaining the question of raising taxes."*<sup>1</sup>

The Board strongly supports inland navigation construction and rehabilitation projects

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<sup>1</sup> The Tax Foundation is a nonpartisan educational organization which, through research and analysis, informs and educates Americans on tax policy and the total tax burden. In its six decades, the Tax Foundation has earned a reputation for its independence in gathering data and publishing information on the public sector in an objective, unbiased fashion. For more information, see <http://www.taxfoundation.org>

that are affordable within the existing fuel tax income of the Inland Waterways Trust Fund and matching Federal funds. The Board is convinced that project costs can be reduced through innovative design and construction techniques. It is also a much better bargain to build the projects under and awaiting construction in a timely and cost efficient manner by funding them at the full and efficient funding levels. Continued underfunding of projects costs both the Trust Fund and the government more in the long run.

The Board continues to believe that appropriately timed use of Inland Waterways Trust Fund monies for major rehabilitation of projects is a fiscally sound and wise investment of limited resources. The inland navigation industry agreed to compromise on funding such projects despite the lack of statutory support. The use of these funds for rehabilitation will delay the spending of far larger sums on capital replacement projects.

The Board vigorously objects to the Administration's FY 2007 Budget Request attempt to move the critical inland navigation major rehabilitation projects from the Construction account to the O&M account. Any attempt to cost share work with the O&M account is deemed to be an effort to circumvent the spirit of cost sharing agreed to by our predecessors for major rehabilitations.

As part of the Water Resources Development Act of 1992, the Inland Waterways Trust Fund pays 50% of the cost of major rehabilitations, which is work designed to extend the life of a project without having to completely replace it. Over the next few decades there will be roughly \$40 million a year in major rehabilitation capability requirements, half of which will be paid from the Inland Waterways Trust Fund. This will constitute a major future obligation for the inland navigation industry. Many parts of the system are in need of major repairs, and the magnitude of expenditures required, plus the number of eligible projects, means that major rehabilitation is equivalent to about two replacement construction project starts every decade.

The major rehabilitation projects currently underway or expected soon for the Upper Mississippi River are needed to ensure continued operation of that waterway segment because construction of necessary replacement facilities cannot be advanced in the proper time frame. This is of major concern to the Board because these major rehabilitation projects do not address the significant capacity constraints on the Upper Mississippi River.

A critical element of assessing the condition of the Nation's navigation infrastructure is the backlog of maintenance for U.S. Army Corps of Engineers projects. The Board strongly believes that additional Federal General Treasury revenues should be appropriated for the Civil Works program over the next several years to reduce the large maintenance backlog. However, in taking this position, the Board is not in any way suggesting that the Inland Waterways Trust Fund should be used for this purpose.

The value of the high priority maintenance backlog by the end of FY 2005 is estimated to be approximately \$1.8 billion, a significant increase from the previous year. The navigation share is about 60 percent or \$660 million, of which approximately \$400 million is for the fuel

taxed inland waterways system. This is an indication of the deteriorating condition of our aging navigation infrastructure. At this time, 52 percent of the locks and dams operated by the U.S. Army Corps of Engineers are over 50 years old. Delaying the performance of necessary maintenance materially and adversely affects the service provided by these navigation projects. It also leads to further deterioration and accelerates the need for major rehabilitation work sooner than would be required and often at higher costs. If unchecked for an extended period, it could ultimately lead to the need for replacement projects years before otherwise needed. The Board encourages the U.S. Army Corps of Engineers to continue the efforts at reducing the maintenance backlog. Currently, there are no uniform criteria to evaluate critical backlog maintenance items. The Board feels these criteria need to be developed so that the limited O&M resources can be applied to the most critical maintenance items from a risk and reliability standpoint.

In 2005 the American Society of Civil Engineers (ASCE) gave the inland waterways navigation system a near failing grade of D minus. They added that of the 257 locks on the system, nearly 50% are functionally obsolete. By 2020, that number will increase to 80%

Every dollar in the Inland Waterways Trust Fund is needed to fund critical waterway improvement projects. The priority projects in this report that are already under construction will require \$3.1 billion to complete, of which \$1.5 billion will have to be funded by the Inland Waterways Trust Fund. The current surplus of \$372 million plus the next six years of revenue to be deposited in the Inland Waterways Trust Fund are already committed to projects under construction.



Board Chairman Gerry Brown speaks during IWUB Meeting No. 50 in October 2005, as Executive Director Major General Don T. Riley looks on.

### Update on the Upper Mississippi River – Illinois Waterway Efforts

The Board wishes to underscore the urgent need for replacement locks on the Upper Mississippi River and Illinois Waterway, and will be carefully monitoring progress as the navigation improvements move further along in the PED phase. The Board notes that funding to continue work on this critical segment of the inland waterways system is omitted from the Administration's FY 2007 Budget Request and urges the Congress to appropriate funds for this effort.

### Responses to Previous Board Recommendations

One way to gauge the impact of the Board's recommendations is to compare the President's Budget Request, the funds actually appropriated to the projects, and the full efficient (capability) funding level for all of the Board's priority projects. The figure below shows this information graphically for last year's Capstone Projects and High Priority Projects. The Board was pleased to see that Lock and Dam 19, McAlpine, Mon 2,3, and 4, Marmet, and Lock and Dam 11, all received both budget requests and appropriations either close to or equal to the full



efficient funding level. Olmsted received funding equal to the President's Budget, but still significantly less than the full efficient level. Appropriations for the Upper Mississippi (PED) projects, Inner Harbor Navigation Canal, and Kentucky fell short of the full efficient level, but these were not included at all in the President's Budget. Chickamauga was not included in the President's Budget, but was appropriated funding at the full efficient level. The only project not to receive any funding was Lock 27.

**Funding of Priority Inland Waterways Projects in FY 2006**

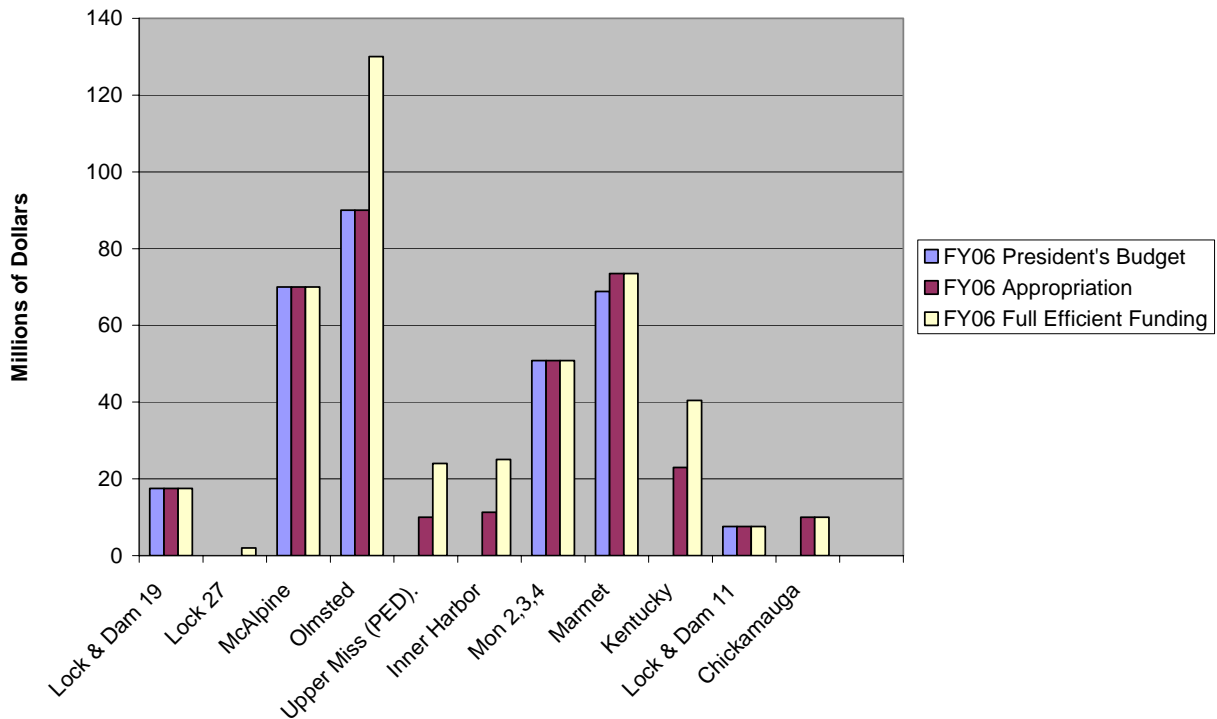
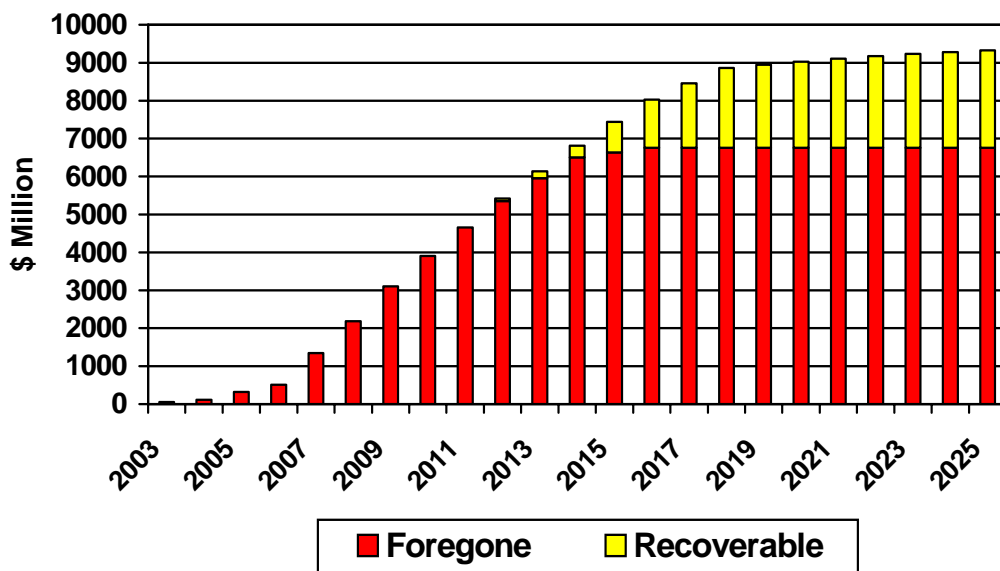


Figure 1. Funding of Inland Waterways Projects in FY 2006

## Benefits Foregone

Delays in completing ongoing construction and major rehabilitation projects result in postponing the realization of economic benefits that provided project justification. Inefficient funding levels have also resulted in significant construction cost increases. An analysis of funding levels proposed in the Administration's FY 2007 Budget Request indicates further delays in project completion dates compared with an efficient funding stream. Projects under construction have slipped a combined total of 43 years from their initial optimum schedules, resulting in economic benefits foregone of \$6.7 billion that can no longer be recovered (see Figure 2). If these projects are now funded through completion at a fully efficient level it could save as much as a combined 110 years of construction across all projects and allow the realization of economic benefits of \$2.8 billion that will otherwise be foregone under constrained funding schedules.



**Figure 2. Cumulative Economic Benefits of Projects Foregone from Delays**

## **RECOMMENDATIONS AND PRIORITIES**

The Inland Waterways Users Board recognizes that the FY 2006 Congressional appropriations level for Inland Waterways Trust Fund projects was the highest amount ever, and that the Administration's FY 2007 Budget Request proposes a spending level as high. The Board anticipates the Congress and the Administration will use this report to craft appropriate legislation and fund projects at full efficient funding.

**In order to continue serving our nation, the inland waterway system needs urgent attention. Specifically, in this 20<sup>th</sup> Annual Report, the Board makes the following recommendations.**

### **Capstone Activities**

The Board strongly urges the Administration and Congress to support completion of the following top priority Capstone Activities. The Board considers these Capstone Activities to be of equal importance and recommends that all be funded at the Full Efficient Funding level for FY 2007, as outlined in Table 1 (on page 6).

#### **Lock and Dam No. 19, Mississippi River, Iowa (Major Rehabilitation)**

Lock and Dam No. 19 is located on the Mississippi River 364 river miles above the mouth of the Ohio at Keokuk, Iowa.

Total Estimated Project Cost:	\$ 29.5 million
FY 2007 Administration Request:	\$ 5.45 million
Balance after FY 2007 needed to complete:	\$ 3.6 million
FY 2007 Estimated Full Capability Funding:	\$ 9.02 million

#### **Locks and Dam No. 27, Mississippi River, Illinois (Major Rehabilitation)**

Locks and Dam No. 27 move more cargo than any other navigation structure on the Mississippi River. The main lock is 110 by 1200 feet and the auxiliary lock is 110 by 600 feet. They are located at Mississippi River mile 185.5 near Granite City, Illinois, and went into operation in 1953.

Total Estimated Project Cost:	\$ 40.8 million
FY 2007 Administration Request:	\$ 3.4 million
Balance after FY 2007 needed to complete:	\$ 37.4 million
FY 2007 Estimated Full Capability Funding:	\$ 6.2 million

### McAlpine Locks and Dam, Kentucky and Indiana (Construction)

The project is located in Louisville, Kentucky, on the Lower Ohio River. Congestion, navigation complexities and obsolescence of this facility cause major delays and a significant bottleneck on the Ohio River. Funds to initiate construction were appropriated in FY 1996. The project was authorized in 1990 and consists of a new 1200-foot chamber to be constructed to replace the old 600-foot auxiliary chamber using innovative design and construction methods, and the construction of a new bridge to access Shippingport Island. During construction of the new lock chamber, only one chamber, the 1200-foot main chamber, is available. In 2004 the main chamber had to be shut down for emergency repairs, thus halting traffic completely on the Ohio River for two weeks. The Board is therefore very concerned that Full Capability Funding be made available for this project so that the construction of the new lock can proceed as quickly as possible.

Total Estimated Project Cost:	\$ 395.0 million
FY 2007 Administration Request:	\$ 70.0 million
Balance after FY 2007 needed to complete:	\$ 28.3 million
FY 2007 Estimated Full Capability Funding:	\$ 87.0 million

### Olmsted Locks and Dam, Illinois and Kentucky (Construction)

The Olmsted Locks and Dam project is located in a strategic reach of the Ohio River that provides a connection between the Ohio, Tennessee, Cumberland, and Mississippi Rivers. The area has been described as the “hub” of the Ohio and Mississippi rivers waterway system. More tonnage passes this point than any other place in America’s inland navigation system, which makes this project absolutely critical from a commercial navigation perspective. Innovative in-the-wet construction techniques are being used at the Olmsted project.

Olmsted, authorized in the Water Resources Development Act of 1988, will replace the Ohio River Locks and Dams 52 and 53 and is located in Pulaski County, Illinois and Ballard County, Kentucky on the Ohio River near Olmsted, Illinois. It will consist of twin 110 by 1200-foot locks and a dam comprised of a 2,200-foot navigable pass and a fixed weir. Temporary 110 by 1200-foot locks were completed at Locks and Dams 52 and 53 in 1969 and 1980, respectively, to permit transit of 15-barge tows with one lockage. Benefits foregone and not recoverable now exceed \$3.3 billion due to the six-year delay from the initial optimum schedule. Inefficient funding could add another five years to this critical project.



Leaking Miter Gates at Lock and Dam 52 on the Ohio River  
Olmsted Lock and Dam will replace this facility.

Total Estimated Project Cost:	\$ 1,450.0 million
FY 2007 Administration Request:	\$ 110.0 million
Balance after FY 2007 needed to complete:	\$ 559.4 million
FY 2007 Estimated Full Capability Funding:	\$ 110.0 million

### Lock and Dam No. 3, Mississippi River, Minnesota (Major Rehabilitation)

The project is located on the Mississippi River 56 miles downstream from Minneapolis and six miles upstream of Red Wing, Minnesota. The facility has a main embankment that is subject to overtopping and severe damage during major flood events, and an extensive system of spot dikes that are deteriorating at an accelerated rate. Major rehabilitation work includes repairs and modifications of the system of spot dikes and the main embankment to protect the dikes and prevent probable failure of the embankment system and loss of pool, which would curtail navigation if left in the current condition.

Total Estimated Project Cost:	\$ 57.2 million
FY 2007 Administration Request:	\$ 0.0 million
Balance after FY 2007 needed to complete:	\$ 50.8 million
FY 2007 Estimated Full Capability Funding:	\$ 5.3 million

## **High Priority Projects**

Congress must continue to fund authorized projects at a full efficient funding level in order to stop the waste of taxpayer dollars. This includes the Board's High Priority Projects, which are discussed below and listed in Table 1 (on page 6). The Board attaches equal priority to all of these high priority projects.

### **Inner Harbor Navigation Canal (IHNC) Lock, Louisiana (Construction)**

The Inner Harbor Navigation Canal Lock is a part of a Mississippi River project for a deep draft seaway canal extending from New Orleans to the Gulf of Mexico, east of the Mississippi River. One of the project's four basic items is a new lock with connecting channels at the IHNC. Construction of a replacement lock was authorized in 1956. The existing lock was completed in 1923 by non-federal interests and ultimately ended up being purchased by the U.S. Army Corps of Engineers in 1986. The existing facility is a vital link between the Mississippi River and the Gulf Intracoastal Waterway (GIWW), and is a connecting link for ship traffic between the MRGO and the Mississippi River at New Orleans. The IHNC Lock is now 83 years old and is one of the most congested locks on the system. Based on Congressional guidance, an open planning process has been adopted in an attempt to build consensus among the major stakeholders. Also, the Water Resources Development Act of 1996 authorized a comprehensive community impact mitigation plan to be implemented in conjunction with the lock project. The Board recommends that construction proceed at the U.S. Army Corps of Engineers full capability. Innovative construction methods are being utilized to achieve significant cost savings, such as cellular, pre-cast and float-in construction.

Total Estimated Project Cost:	\$ 785.0 million (incl \$69 million non-Fed)
FY 2007 Administration Request:	\$ 0.0 million
Balance after FY 2007 needed to complete:	\$ 597.9 million
FY 2007 Estimated Full Capability Funding:	\$ 26.0 million

### **Monongahela River Locks and Dams 2, 3 and 4, Pennsylvania (Construction)**

The project is located on the lower portion of the Monongahela River near Pittsburgh, Pennsylvania, and was authorized by the Water Resources Development Act of 1992. These three facilities are the last of the old and undersized locks on the Monongahela River and some features have been in service for over 100 years. These facilities are dangerously near the end of not just their design life, but their practical life as well. They will be replaced with two new facilities. The dam at Lock and Dam 2 and the locks and dam at Lock and Dam 3 are badly deteriorated and subject to failure. The condition and size of these locks are a major impediment to low cost water transportation on the Monongahela River and the Upper Ohio River. Construction was initiated in 1995. The project consists of a new gated dam to be installed at Lock and Dam 2, and new twin 84 by 720-foot chambers at Locks and Dam 4, which will

provide adequate capacity to meet the needs of navigation on the Lower Monongahela River for the next 50 years.

Monongahela L&D 3: Concrete deterioration may require rehabilitation to extend life. It will be demolished when the new upstream Charleroi Locks allow the pool to be raised, but that project is behind schedule due to insufficient funding.



Crumbling Lock Wall on Lower Mon 3, opened in 1907

Total Estimated Project Cost:	\$ 750.0 million
FY 2007 Administration Request:	\$ 62.8 million
Balance after FY 2007 needed to complete:	\$ 343.3 million
FY 2007 Estimated Full Capability Funding:	\$ 62.8 million

### Marmet Locks and Dam, Kanawha River, West Virginia (Construction)

The project is located in Kanawha County near Belle, West Virginia, on the Kanawha River about 68 miles above the confluence with the Ohio River. Funds to initiate construction were appropriated in FY 1998. The project was authorized in the Water Resources Development Act of 1996 and calls for the addition of a 110 by 800-foot lock on the landward side of the existing chambers. With the new lock now operational at Winfield, this facility is the busiest



lock in the inland navigation system due to its small twin 56 by 360-foot chambers, which can only process one modern 35 by 195-foot barge at a time, and excessive navigation delays have increased significantly causing serious congestion problems. The Marmet and Winfield locks must be viewed as an integrated system and the Board strongly believes this project should have been integral to the Winfield project and constructed concurrently.

Total Estimated Project Cost:	\$ 359.3 million
FY 2007 Administration Request:	\$ 50.8 million
Balance after FY 2007 needed to complete:	\$ 6.5 million
FY 2007 Estimated Full Capability Funding:	\$ 50.8 million

### Kentucky Locks and Dam, Kentucky (Construction)

The Kentucky Lock Addition project is located in Livingston County, Kentucky on the Tennessee River, 22.4 miles above the confluence with the Ohio River. The project was authorized for construction in the Water Resources Development Act of 1996, and calls for an additional lock measuring 110 by 1200-foot landward of the existing lock. Funds to initiate construction were appropriated in FY 1998. The single existing 110 by 600 foot chamber is insufficient to handle increasing tonnage. Also, the lack of an auxiliary chamber forces tows to use Barkley Lock during periods of extended delays and closures.

Total Estimated Project Cost:	\$ 641.8 million
FY 2007 Administration Request:	\$ 0.0 million
Balance after FY 2007 needed to complete:	\$ 456.3 million
FY 2007 Estimated Full Capability Funding:	\$ 49.5 million

### Lock and Dam No. 11, Mississippi River, Iowa and Wisconsin (Major Rehabilitation)

The project is located at Mississippi River Mile 583.0, at Dubuque, Iowa. Lock and Dam No. 11 became operational in 1937 and has been in service for 68 years. As the structures and equipment approach the end of their projected lives, breakdowns and failure of mechanical and electrical equipment become more frequent and expensive, resulting in delays and loss of revenue to commercial waterway users. The annual transportation benefits for traffic utilizing the Upper Mississippi River (above Lock 25) are approximately \$500 million, of which 50 percent depends on traffic transiting Lock 11. The major rehabilitation work includes replacement of miter gate electrical systems, miter gate and tainter valve machinery, miter gate anchor bar and dam tainter gate chain; culvert valve rehabilitation; and additional scour protection above and below the dam.

Total Estimated Project Cost:	\$ 40.76 million
FY 2007 Administration Request:	\$ 20.32 million
Balance after FY 2007 needed to complete:	\$ 8.9 million

FY 2007 Estimated Full Capability Funding: \$ 21.7 million

### Chickamauga Lock and Dam, Tennessee River, Tennessee (Construction)

Chickamauga Lock and Dam is located at mile 471 of the Tennessee River at Chattanooga, Tennessee. The Tennessee Valley Authority (TVA) built the project in the 1930's. The lock was placed in temporary operation in 1938 and was completed in 1940. The lock chamber measures 60 x 360 feet.

The lock and dam at Chickamauga are badly deteriorating from adverse reactions of the aggregate used to build the facility. Despite the many efforts of the TVA and the U.S. Army Corps of Engineers to offset the effects of the deterioration, the facility will permanently shut down in several years due to its condition. The Board recognizes a critical need for immediate action to be undertaken at Chickamauga Lock and Dam and fully supports the design and construction of a replacement facility at this location before the facility is forced to close. If this navigation facility were to be closed, hundreds of miles of navigable waterways on the upper reaches of the Tennessee River would be eliminated. The recommendation from the Feasibility report for this facility is the construction of a replacement chamber to replace the existing 360-foot chamber. The estimated construction costs are \$315 million for a 110x600-foot chamber, authorized by Congress in 2003.

Total Estimated Project Cost:	\$ 319.0 million
FY 2007 Administration Request:	\$ 27.0 million
Balance after FY 2007 needed to complete:	\$ 259.9 million
FY 2007 Estimated Full Capability Funding:	\$ 35.0 million

### John T. Myers Locks and Dam, Ohio River, Indiana and Kentucky (Construction)

John T. Myers Locks and Dam is located at Ohio River Mile 846, about 3 miles below Uniontown, KY. Congress authorized extension of the existing 110 by 600-foot auxiliary chamber into a 110 by 1200-foot lock chamber in WRDA 2000. This effort will give the J.T. Myers project twin 1200 foot locks, and will enable the J.T. Myers facility to manage tow traffic during planned and unscheduled main lock closures without significant delays to inland navigation. The estimated construction cost for this project is \$225 million.

Total Estimated Study Cost:	\$ 225.0 million
FY 2007 Administration Request:	\$ 0.0 million
Balance after FY 2007 needed to complete:	\$ 217.0 million
FY 2007 Estimated Full Capability Funding:	\$ 6.5 million

## **Priority Studies and PED Projects**

The Board has ranked the priority studies and PED projects as indicated below.

### **Priority No. 1: Upper Mississippi River and Illinois Waterway Navigation (PED)**

The Upper Mississippi River and Illinois Waterway System Navigation Feasibility Study was completed in September 2004 after more than 14 years of intensive study and evaluation. The resulting study final recommendation includes a program of incremental implementation and comprehensive adaptive management to achieve the dual purposes of ecosystem restoration and navigation improvements. The Chief's Report was signed on 15 December 2004. The Chief's Report recommended a \$5.7 billion first cost long-term framework for ecosystem restoration, and a \$2.6 billion first cost long-term framework for navigation efficiency improvements. The plan, if approved, will be implemented in a phased manner with future checkpoints for the Administration and the Congress. The initial increment of the plan recommended for authorization includes: (a) an initial 15-year increment of ecosystem restoration actions with continuous analysis and review to shape the increment which follows at an estimated cost of \$1.58 billion; (b) immediate implementation of non-structural and small-scale structural navigation measures, together with monitoring and reporting of traffic and economic conditions, at an estimated cost of \$235 million and (c) pre-construction engineering and design of seven new locks, together with further analysis, with initiation of construction subject to congressional review at an estimated cost of \$1.79 billion. The report is with the Office of the Assistant Secretary of the Army for Civil Works for Administration review and submission to the Congress.

The Fiscal Year 2006 appropriation for the Upper Mississippi River and Illinois Waterway Project included \$10.0 million for Preconstruction Engineering and Design (PED). The PED funding is being used for broad based preparation for implementation, including: initiating design for small scale navigation improvements – mooring cells and switchboats; initiating design for two new 1200 foot locks at Lock and Dam No. 25 and Lock and Dam No. 22 on the Mississippi River and a limited design start at La Grange Lock on the Illinois Waterway; conducting mitigation studies; supporting research into non-structural improvements and demand forecasting tools; developing plans for ecosystem restoration adaptive management; initiating design of fish passage projects; initiating planning for dam point control at Lock and Dam No. 25; and initiation of design for several habitat restoration and floodplain restoration projects.

Total Estimated PED Cost:	\$ 59.8 million
FY 2007 Administration Request:	\$ 0.0 million
Balance after FY 2007 needed to complete:	\$ 36.5 million
FY 2007 Estimated Full Capability PED Funding:	\$ 24.0 million
(FY 2007 Construction Capability Funding is \$16.2 million)	

## Priority No. 2: Greenup Locks and Dam, Ohio River, Kentucky and Ohio (PED)

This project is located on the Ohio River, 341 miles below Pittsburgh, PA, and 5 miles below Greenup, KY. Congress authorized extension of the existing 600-foot auxiliary chamber into a second 1200-foot lock in WRDA 2000.

Total Estimated PED Cost:	\$ 12.2 million
FY 2007 Administration Request:	\$ 0.0 million
Balance after FY 2007 needed to complete:	\$ 4.1 million
FY 2007 Estimated Full Capability PED Funding:	\$ 4.0 million
(FY 2007 Construction Full Capability Funding is	\$ 9.3 million)

## Priority No. 3: Bayou Sorrel Lock, Intracoastal Waterway, Louisiana (PED)

A comprehensive system analysis of seven (7) Gulf Intracoastal Waterway (GIWW) locks in southern Louisiana, between the Mississippi River and the Sabine River was conducted to determine if the seven GIWW locks should be replaced or if additional locks should be constructed. Results of the Reconnaissance phase indicated that there were immediate needs for capacity increases at Bayou Sorrel and Calcasieu locks and determined that all the locks are structurally sound, but experience significant delays due to restrictive dimensions. The Feasibility phase began in June 1995, but was limited to addressing capacity needs at Bayou Sorrel only. Bayou Sorrel was expedited because it has the most immediate need for additional capacity and must be replaced for flood control purposes as well. The Board recognizes the replacement of Bayou Sorrel Lock represents a near-term opportunity for cost-effectively addressing both flood damage reduction and navigation needs.

Total Estimated Study Cost:	\$ 5.1 million
FY 2007 Administration Request:	\$ 1.5 million
Balance after FY 2007 needed to complete:	\$ 1.4 million
FY 2007 Estimated Full Capability Funding:	\$ 1.5 million

## Priority No. 4: Calcasieu Lock, Intracoastal Waterway, Louisiana (Study)

Initial results of a study of seven (7) Intracoastal Waterway Locks in southern Louisiana indicate that there are immediate needs for capacity increases at Calcasieu Lock. The preliminary study determined that all the locks are structurally sound, but experience significant delays due to restrictive dimensions. As a result, this Feasibility effort is specifically addressing capacity needs at Calcasieu Lock only. The Board recognizes that Calcasieu Lock represents a near-term opportunity to address navigation needs.

Total Estimated Study Cost:	\$ 4.4 million
FY 2007 Administration Request:	\$ 0.0 million
Balance after FY 2007 needed to complete:	\$ 2.6 million

FY 2007 Estimated Full Capability Funding: \$ 0.6 million

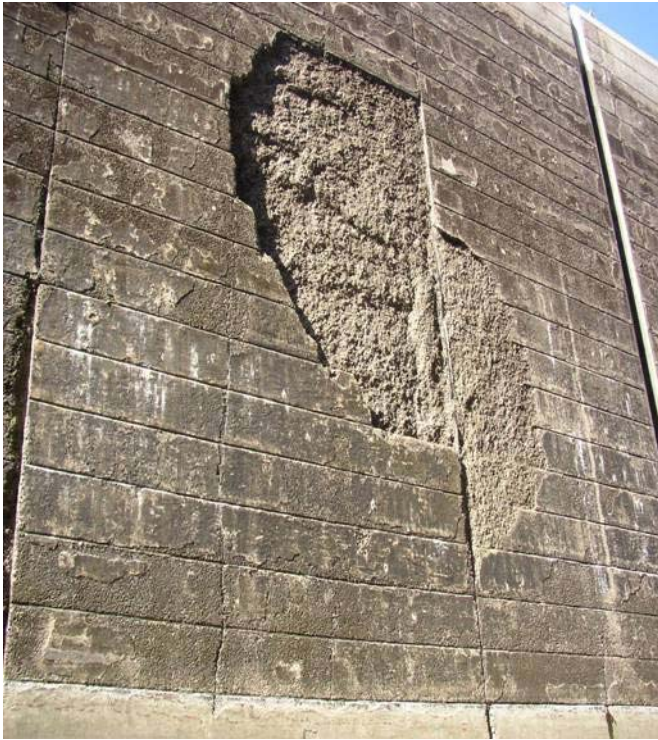
Priority No. 5: Gulf Intracoastal Waterway (GIWW), Texas (PED)

There are currently several unique studies underway on the Gulf Intracoastal Waterway (GIWW) along the Texas coast, including High Island to Brazos River and Matagorda Bay PED activities. The Board is concerned about both the cost and time consumed for these PED activities and recommends that they be fully funded to complete PED. Also, the Board recommends that the Feasibility studies for other segments of the GIWW be prioritized by risk and reliability and the top two studies be expedited to complete.

Total Estimated PED Cost:	\$ 29.1 million
FY 2007 Administration Request:	\$ 0.0 million
Balance after FY 2007 needed to complete:	\$ 0.9 million
FY 2007 Estimated Full Capability Funding:	\$ 0.9 million

Priority No. 6. Lower Monumental Lock, Lower Snake River, Washington (Study)

Lower Monumental Lock and Dam is located on the lower Snake River, 42 miles upstream of the confluence of the Snake and Columbia Rivers. It is one of eight locks and dams forming the Columbia-Snake River water transportation system. The downstream lock gate has experienced severe cracking in recent years. The study addresses the structural deterioration of the downstream lock gate as well as all other significant features of the lock. A Major Rehabilitation Report is being prepared and scheduled to be forwarded for review to the U.S. Army Corps of Engineers Headquarters in 2006. It will address the structural deterioration of the downstream lock gate as well as all other significant features of the lock.



Lower Monumental Lock Wall

Total Estimated Study Cost	\$ 27.5 million
FY 2007 Administration Request	\$ 0.0 million
Balance after FY 2007 needed to complete	\$ 27.5 million
FY 2007 Estimated Full Capability Funding	\$ 0.5 million

### **Complete Expenditiously**

The Board has also identified a major rehabilitation project which is near completion, Lock and Dam No. 24 on the Mississippi River. The Board recommends that this project be funded for completion.

### **Lock and Dam No. 24, Mississippi River, Illinois and Iowa (Major Rehabilitation)**

This project is located at Mississippi River Mile 273.5 above the mouth of the Ohio River, in the vicinity of Clarksville, Missouri. The Board supports completion of the rehabilitation work for this facility to ensure adequate lock serviceability until the construction of a new 1200-foot lock. Rehabilitation work includes the replacement of miter gates and miter gate machinery, the auxiliary lock closure structure, power distribution system, lock motors and controllers, and control system; addition of a protection cell, bendway weirs, and debris openings in the dam guardwall; and repairs to the dam bridge columns. Additional major rehabilitation work will be performed on the existing lock landwall, intermediate wall, upstream and

downstream guidewalls, and the Illinois Abutment.

Total Estimated Project Cost:	\$ 86.4 million
FY 2007 Administration Request:	\$ 3.9 million
Balance after FY 2007 needed to complete:	\$ 14.6 million
FY 2007 Estimated Full Capability Funding:	\$ 3.9 million

### **Authorized Navigation Channels**

The Board has observed that Congressional intent continues to be thwarted with the use of regulations and laws that go far beyond their intent by both Federal and state government agencies. The Board would like to applaud the agreement reached by the U.S Army Corps of Engineers that has allowed routine and necessary dredging to proceed on the Snake River for the first time in several years to maintain the Congressionally-authorized 14-foot channel. Other major arteries, including the Mississippi, Illinois, and Missouri Rivers, have faced or could face similar fates if this issue is not addressed by Congress immediately. **To ensure that Congressional will and intent is preserved, legislative language should be modified from “authorized” to “mandated” when referring to navigation project channel depths.**

### **Missouri River Flows**

The flows from the Missouri River comprise over 60% of the water in the middle Mississippi River (between St. Louis, Missouri and Cairo, Illinois) during late summer/early fall (the major agricultural export season). Maintaining a safe and adequate channel is essential to protect our agricultural export market. With every 1-inch loss of water, each barge is unable to move 17 tons (about  $\frac{3}{4}$  of a semi truck) and a regular 30-barge tow leaving St. Louis will decrease the total tonnage by 510 tons or about 22 semi-trucks. If flows from the Missouri River become unreliable, either 1) agricultural just-in-time markets will evaporate or 2) more traffic will move by truck/train, increasing air and noise pollution and negatively impacting society’s quality-of-life. **Congress must mandate that flows from the Missouri River will adequately ensure that the Mississippi River is reliably navigable under all but the most severe conditions.**

### **Operations and Maintenance**

The Board continues to adamantly oppose any use of the Inland Waterways Trust Fund for Operations and Maintenance (O&M). The Board counsels Congress to adequately fund the national navigation maintenance backlog that, if not addressed, will eventually result in a catastrophic failure, crippling the nation’s infrastructure. Many shippers are now questioning the reliability of the system due to frequent outages and an apparent lack of commitment to O&M. The lack of proper O&M funding leads to a decay that ultimately causes the need for a major rehabilitation. This robs the Trust Fund of monies that should be spent on projects for which the fund was intended. Figure 3 on the next page shows the upward trend in navigation lock



unavailability due to scheduled and unscheduled outages for the period 1991 to 2005. **Congress, if it intends to keep middle America’s economic engine running, must increase the O&M by at least \$100 million and then ensure that future budgets, at a minimum, are increased at the rate of inflation. Further, it is imperative that the funds actually be spent on inland navigation specific needs, i.e., channel maintenance, lock and dam repair, etc.**

The Board would like to point out that the increase in the Administration’s FY 2007 Budget Request for Operations and Maintenance is an illusion. Although the total funding for O&M appears to be higher, it is actually \$63 million LESS than the FY 2006 appropriation. This illusion is the result of moving items from the Construction account to the O&M account, such as the critical inland navigation Major Rehabilitation projects as well as the Columbia River and Missouri River mitigation items, and other “mitigation” activities equaling more than \$330 million.

### **Catastrophic Failure**

The inland waterway system is experiencing an alarming trend with significant amounts of unscheduled downtime on the lock and dam system. Figure 3 depicts the trend over the last decade. In 2005, unscheduled downtime was 46,647 hours. **The Board requests that the U.S. Army Corps of Engineers prepare a prioritization of potential major catastrophic failures of inland waterway infrastructure within the next year. Furthermore, the Board recommends that a common criteria for evaluating all infrastructure condition information among districts be implemented. While some progress has been made toward developing common criteria, it still does not exist throughout the system.**

Emsworth Lock and Dam on the Ohio River in Pennsylvania is a prime example of this problem. A 2001 reliability analysis conducted by the U.S. Army Corps of Engineers reported a high risk of dam gate failure (only 24% reliability due to excessive corrosion) and a high risk of stilling basin failure (only 50% reliability). A failure of either of these components could cause pier failure and result in loss of pool. In addition, 65% of the channel stone protection is in a failed state, two gates are currently out of service, and there have been 12 failures since 1998 of the vertical lift gates end trucks on the dam piers. The Emsworth project is now undergoing a major rehabilitation.

The Board agrees this work should be performed expeditiously to avoid a failure at this location. Yet, the Board does not feel this project should be cost shared with the Inland Waterways Trust Fund as it appears to be the accumulated impacts resulting from deferred maintenance and that is a 100% Federal responsibility.

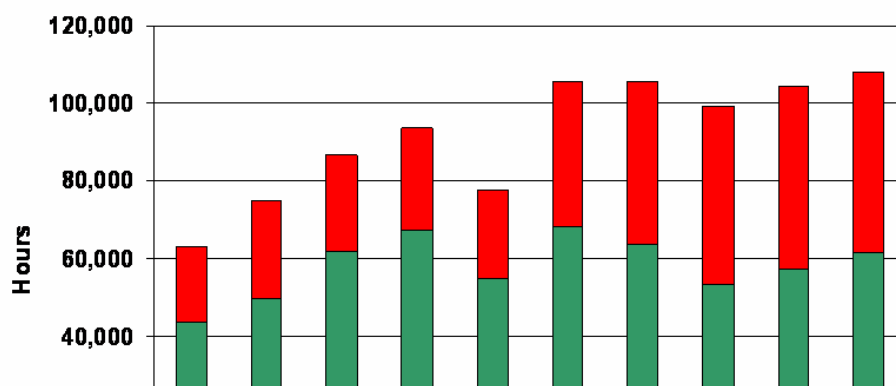


Figure 3. Navigation Lock Unavailability 1996 – 2005.

### **“Low-Use” Rivers**

The notion that “low-use” rivers do not need the same type of O&M as “high-use” rivers is an ill-conceived concept proposed by individuals who are uninformed about the navigation system as a transportation mode. Corps data indicates that over 50% of all inland waterway traffic either originates or terminates on a tributary waterway. No reasonable transportation expert would recommend the closure of all non-hub airports. As with the feeder airports, feeder rivers increase the economic and environmental efficiency of the entire system. Without reliability on all parts of the system, the system fails. **Congress must protect these “low-use”, tributary rivers with appropriate O&M funding.**

### **Funding for Environmental Mitigation**

The Board notes that the FY 2006 appropriations includes \$85 million and the Administration’s FY 2007 Budget Request includes \$95 million for Columbia River Fish Mitigation on that portion of the inland waterway system as well as \$54.5 million in FY 2006 appropriations and \$85 million in the Administration’s FY 2007 Budget Request for the Missouri River Fish and Wildlife Mitigation. Although the Corps should consider environmental impacts of projects, the **Board encourages Congress to appropriate funds for these projects from the responsible agencies, namely the U.S. Fish and Wildlife Service, the Environmental Protection Agency, and state conservation or natural resource departments.**

### **Conclusion**

In conclusion, waterborne transportation is vital to the U.S. economy. It is the most economically efficient mode of freight transportation, thus saving shippers and consumers more than \$7.8 billion annually compared to alternate transportation modes. Essential bulk

commodities valued at more than \$78 billion are transported annually on the inland navigation system. Further, our inland waterways generate benefits for all Americans because they deliver goods in an environmentally sustainable manner and form an essential link in the intermodal distribution system. And finally, the nation's workforce benefits by the jobs directly tied to the inland waterways and indirectly by the industries utilizing the inland waterways. We must take care of this precious resource.



Board Vice Chairman Norb Whitlock speaks at IWUB Meeting No. 50 in Vancouver, Washington

## **Acknowledgements**

The Inland Waterways Users Board wishes to express its sincere appreciation to Major General Don T. Riley, the U.S. Army Corps of Engineers Director of Civil Works and Executive Director to the Board, Messrs. Norman T. Edwards and Mark R. Pointon from the Corps Directorate of Civil Works, the previous and current Executive Secretaries to the Board, and Ms. Anne Sudar and Mr. David V. Grier from the Corps Institute for Water Resources for all the support they provide. Also, the Corps' division and district staffs and the staffs at Corps Headquarters and the Institute for Water Resources have provided thorough and timely information for the Board's use and have always tried to best answer the Board's tough questions.



## **APPENDIX A**

### **History**

The Inland Waterways Fuel Tax was established to support inland waterway infrastructure development and rehabilitation. Commercial users are required to pay this tax on fuel consumed in inland waterway transportation. Revenues from the tax are deposited in the Inland Waterways Trust Fund and fund 50% of the cost of inland navigation projects each year as authorized. The amount of tax paid by commercial users in 2005 is \$.20 per gallon of fuel. This tax rate generates approximately \$100 million in contributions annually to the Inland Waterways Trust Fund. They also pay a \$.043 per gallon fuel tax to the General Treasury for deficit reduction, however this tax will be eliminated entirely January 1, 2007.

Reflecting the concept of “Users Pay, Users Say”, the Water Resources Development Act of 1986 (Public Law 99-662) (“WRDA ‘86”) established the Inland Waterways Users Board (the “Board”), a federal advisory committee, to give commercial users a strong voice in the investment decision-making they were supporting with their cost-sharing tax payments. The principal responsibility of the Board is to recommend to the Congress, the Secretary of the Army and the U.S. Army Corps of Engineers the prioritization of new and replacement inland navigation construction and major rehabilitation projects.

**INLAND WATERWAYS USERS BOARD MEMBERS  
(As of March 2006)**

**Board Chairman**

Mr. Gerald W. Brown  
Cargill Marine and Terminal, Inc.  
Minneapolis, Minnesota

**Board Vice Chairman**

Mr. W. Norbert Whitlock  
President and COO  
American Commercial Barge Line Company  
Jeffersonville, Indiana

**Board Members**

Mr. Mark R. Buese  
Senior Vice President  
Kirby Corporation  
Houston, Texas

Mr. Jerry Grossnickle  
Chief Financial Officer  
Bernert Barge Lines  
Portland, Oregon

Mr. Charles A. Haun  
Executive Vice President  
Parker Towing Company, Inc.  
Tuscaloosa, Alabama

Mr. Gerald Jenkins  
General Manager  
Ursa Farmers Cooperative  
Ursa, Illinois

Mr. Mark K. Knoy  
President  
AEP MEMCO LLC.  
Chesterfield, Missouri

Mr. W. Scott Noble  
Senior Vice President  
Ingram Barge Company  
Nashville, Tennessee

Mr. W. Deane Orr  
Vice President, River and Dock Operations  
CONSOL Energy, Inc  
Elizabeth, Pennsylvania

Mr. Looman F. Stingo  
Senior Vice President of Logistics  
Holcim (US), Inc.  
Dundee, Michigan

Mr. Royce C. Wilken  
President  
American River Transportation Company  
Decatur, Illinois



## **APPENDIX B**

### **LIST OF THE FUEL TAXED INLAND AND INTRACOASTAL WATERWAYS AND SYSTEM MAP**

Statutory Definitions of Inland and Intracoastal Fuel Taxed Waterways of the United States

SOURCES: Public Law 95-502, October 21, 1978, and Public Law 99-662, November 17, 1986.

1. Alabama-Coosa Rivers: From junction with the Tombigbee River at river mile (hereinafter referred to as RM) 0 to junction with Coosa River at RM 314.
2. Allegheny River: From confluence with the Monongahela River to form the Ohio River at RM 0 to the head of the existing project at East Brady, Pennsylvania, RM 72.
3. Apalachicola-Chattahoochee and Flint Rivers (ACF): Apalachicola River from mouth at Apalachicola Bay (intersection with the Gulf Intracoastal Waterway) RM 0 to junction with Chattahoochee and Flint Rivers at RM 107.8. Chattahoochee River from junction with Apalachicola and Flint Rivers at RM 0 to Columbus, Georgia at RM 155 and Flint River, from junction with Apalachicola and Chattahoochee Rivers at RM 0 to Bainbridge, Georgia, at RM 28.
4. Arkansas River (McClellan-Kerr Arkansas River Navigation System): From junction with Mississippi River at RM 0 to Port of Catoosa, Oklahoma, at RM 448.2.
5. Atchafalaya River: From RM 0 at its intersection with the Gulf Intracoastal Waterway at Morgan City, Louisiana, upstream to junction with Red River at RM 116.8.
6. Atlantic Intracoastal Waterway: Two inland waterway routes approximately paralleling the Atlantic coast between Norfolk, Virginia, and Miami, Florida, for 1,192 miles via both the Albemarle and Chesapeake Canal and Great Dismal Swamp Canal routes.
7. Black Warrior-Tombigbee-Mobile Rivers: Black Warrior River System from RM 2.9, Mobile River (at Chickasaw Creek) to confluence with Tombigbee River at RM 45. Tombigbee River (to Demopolis at RM 215.4) to port of Birmingham, RM's 374-411 and upstream to head of navigation on Mulberry Fork (RM 429.6), Locust Fork (RM 407.8), and Sipsey Fork (RM 430.4).
8. Columbia River (Columbia-Snake Rivers Inland Waterways): From the Dalles at RM 191.5 to Pasco, Washington (McNary Pool), at RM 330, Snake River from RM 0 at the mouth to RM 231.5 at Johnson Bar Landing, Idaho.
9. Cumberland River: Junction with Ohio River at RM 0 to head of navigation, upstream to Carthage, Tennessee, at RM 313.5.
10. Green and Barren Rivers: Green River from junction with the Ohio River at RM 0 to head of navigation at RM 149.1.

11. Gulf Intracoastal Waterway: From St. Mark's River, Florida, to Brownsville, Texas, 1,134.5 miles.
12. Illinois Waterway (Calumet-Sag Channel): From the junction of the Illinois River with the Mississippi River RM 0 to Chicago Harbor at Lake Michigan, approximately RM 350.
13. Kanawha River: From junction with Ohio River at RM 0 to RM 90.6 at Deepwater, West Virginia.
14. Kaskaskia River: From junction with Mississippi River at RM 0 to RM 36.2 at Fayetteville, Illinois.
15. Kentucky River: From junction with Ohio River at RM 0 to confluence of Middle and North Forks at RM 258.6.
16. Lower Mississippi River: From Baton Rouge, Louisiana, RM 233.9 to Cairo, Illinois, RM 953.8.
17. Upper Mississippi River: From Cairo, Illinois, RM 953.8 to Minneapolis, Minnesota, RM 1,811.4.
18. Missouri River: From junction with Mississippi River at RM 0 to Sioux City, Iowa, at RM 734.8.
19. Monongahela River: From junction with Allegheny River to form the Ohio River at RM 0 to junction of the Tygart and West Fork Rivers, Fairmont, West Virginia, at RM 128.7.
20. Ohio River: From junction with the Mississippi River at RM 0 to junction of the Allegheny and Monongahela Rivers at Pittsburgh, Pennsylvania, at RM 981.
21. Ouachita-Black Rivers: From the mouth of the Black River at its junction with the Red River at RM 0 to RM 351 at Camden, Arkansas.
22. Pearl River: From junction of West Pearl River with the Rigolets at RM 0 to Bogalusa, Louisiana, RM 58.
23. Red River: From RM 0 to the mouth of Cypress Bayou at RM 236.
24. Tennessee River: From junction with Ohio River at RM 0 to confluence with Holstein and French Rivers at RM 652.
25. White River: From RM 9.8 to RM 255 at Newport, Arkansas.
26. Willamette River: From RM 21 upstream of Portland, Oregon, to Harrisburg, Oregon, at RM 194.
27. Tennessee-Tombigbee Waterway: From its confluence with the Tennessee River to the Warrior River at Demopolis, Tennessee.

# The Fuel-Taxed Inland and Intracoastal Waterway System

