



# Inland Waterways: Recent Proposals and Issues For Congress

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## Summary

Inland waterways are a significant part of the nation's transportation system. Because of the national economic benefits of maritime transport, the federal government has invested in navigation infrastructure for two centuries. As a result, barge shipping has received significant support through federal funding for operational costs, capital expenditures, and major rehabilitation on inland waterways. Since the 1980s, expenditures for construction and major rehabilitation projects on inland waterways have been cost-shared on a 50/50 basis between the federal government and users through the Inland Waterway Trust Fund (IWTF).

Future financing for the inland waterway system is uncertain. The IWTF is currently supported by a \$0.20 per gallon tax on barge fuel, but the trust fund's balance has declined significantly in recent years. Without major changes to recent investment levels or to the federal/non-federal cost-share requirements for construction, it may soon become insolvent.

Previously the Bush and Obama Administrations had submitted legislative proposals to replace the fuel tax with a lock user fee that would have increased revenues and tied user fees to IWTF balances, but Congress and industry interests rebuffed these proposals. The Inland Waterways Users Board (IWUB) recently endorsed an alternative proposal that is supported by many barge industry interests. It would increase the fuel surcharge that funds the IWTF and increase funding for inland waterways as a whole, and would also make several other significant changes to the current system. Among these changes are significant increases for the federal share of inland waterway construction of dams and major rehabilitation costs, which would now be a 100% federal responsibility. Additionally, the IWUB proposes a greater overall investment on inland waterways, including an overall increase in spending on inland waterway projects. Users are also proposing other changes to the current project selection process that aim to codify prioritization criteria and increase user participation in project formulation.

The user industry (including the barge industry and agricultural groups) argues that these changes are necessary to shore up the trust fund, improve the deteriorating state of inland waterway infrastructure, and distribute cost responsibilities more equitably among those who benefit from the system (i.e., more funding by federal taxpayers). The Obama Administration agrees that the trust fund needs increased revenues to meet new infrastructure needs, but argues that these revenues should continue to be shared equally between the IWTF and the federal government. Some have also argued that any tax or user fee levied on the industry should be tied to the balance of the IWTF, which might serve as a disincentive for unnecessary investments, and could prevent future funding shortfalls. Taxpayer and environmental advocacy groups have argued against additional federal support for the IWTF. These groups disagree with many of the justifications for increased investment in inland waterways, and note that the barge industry already benefits from generous federal support.

Major issues for Congress include whether to increase inland waterway funding in the future (and by what amount); the appropriate type of revenue stream (e.g., fuel taxes or lockage fees) for the user-required portion of these projects; division of the cost-share responsibilities between the federal government and commercial users (e.g., 50/50 or some other division); and whether to initiate process-based recommendations that some argue will improve the delivery and efficiency of Corps-led IWTF projects.

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## **Introduction to U.S. Inland Waterways**

Inland waterways are a significant component of the nation's marine transportation system.<sup>1</sup> These waterways carry approximately one-sixth of the national volume of intercity cargo on 25,000 miles of commercially active inland and intracoastal waterways.<sup>2</sup> Included in this total are approximately 12,000 miles of fuel-taxed federal waterways known as the Inland Waterway System (IWS), which are managed by the U.S. Army Corps of Engineers (Corps). These waterways cover 38 states and handle approximately half of all inland waterway freight (or one-twelfth of all national freight).<sup>3</sup> The Corps develops, operates, and maintains the infrastructure of these commercial waterways (e.g., navigation channels, harbors, locks and dams), and also maintains and regulates the channel depths through dredging and water management.

Costs for maintenance and construction on inland waterways are funded by the Corps (through appropriations) and the commercial user industry (through user fees paid to the federal government). The Corps pays for 100% of the cost for studies and for operations and maintenance on the IWS, while the cost for new construction or major rehabilitation (defined as any upgrade in excess of \$8 million) is shared equally between the Corps and the commercial industry.

Congress is faced with competing proposals relating to future financing for inland waterway system investments, including who will finance what investments, and at what level. The current revenue source, a set tax on fuel agreed to in the mid-1980s, is insufficient to cover the nonfederal costs of major capital expenditures on inland waterways. This has resulted in federal taxpayers recently covering more than half of these costs. The ongoing shortfall has also led to delays in the completion of some new construction projects.

Recent proposals highlight a number of issues associated with inland waterways. These proposals have focused on potential changes to the structure of the user-financed portion of inland waterway investments. The executive branch has proposed to phase out the fuel tax in favor of a lock usage fee, while the user industry favors a combination of increases to the existing fuel tax and more investments being funded solely by the federal government.

## **Rationale and Statistics**

The Inland Waterway System predates the founding of the nation itself. Before the onset of rail and highway transport, inland waterways were a primary means of transporting bulk goods. Through the early 1800s, inland waterway development was left to the states, until the Supreme Court gave the United States authority over interstate commerce in 1824.<sup>4</sup> Shortly thereafter, the

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<sup>1</sup> While harbors maintained by the Corps are a significant part of the U.S. transportation system, the focus of this report is the inland waterway system. For more information on harbors and the Harbor Maintenance Trust Fund, see CRS Report R41042, *Harbor Maintenance Trust Fund Expenditures*, by John Frittelli.

<sup>2</sup> Unless noted otherwise, this report uses "inland waterways" as a shorthand for all inland and intracoastal waterways in the United States (including inland, coastal, and lakewise domestic traffic).

<sup>3</sup> CRS analysis based on data derived from the Army Corps of Engineers, *Final Waterborne Commerce Statistics for Calendar Year 2008* (available at <http://www.ndc.iwr.usace.army.mil/wcsc/pdf/finaltotal08.pdf>), and the Department of Transportation's Commodity Flow Survey for 2007 (available at [http://www.bts.gov/publications/commodity\\_flow\\_survey/final\\_tables\\_december\\_2009/html/table\\_01a.html](http://www.bts.gov/publications/commodity_flow_survey/final_tables_december_2009/html/table_01a.html)).

<sup>4</sup> *Gibbons v. Ogden*, 22 U.S. 1 (1824).

federal government began to provide funding and support to these waterways to improve interstate and international commerce. Improvements in other forms of transportation, including rail and highway, have decreased reliance on inland waterways as a means of commercial freight transportation, but these waterways remain a significant component in the nation's transportation mix for many bulk commodities.

Today, inland, intracoastal, and lakewise waterway traffic accounts for around 8% of domestic annual freight tonnage in the United States.<sup>5</sup> Tonnage on the federal IWS is a subset of this freight traffic. Freight traffic on the federal fuel-taxed IWS accounted for approximately 550 million tons (or approximately 4%) of all domestic freight shipped in 2007. While in terms of tonnage, inland waterways are a relatively small part of the nation's overall freight transportation network, these waterways remain an important transportation route in some regions of the country, especially those that rely on movement of bulk goods over long distances. Along with freight rail, inland waterways are a primary means of transport for the nation's grain and oilseed exports, and also for raw materials and liquid and bulk products such as coal, petroleum, chemicals, processed metals, cement, sand, and gravel.

The system of fuel-taxed inland and intracoastal waterways is displayed in **Figure 1**. Inland waterway tonnage relative to other modes of freight transit is shown in color in **Figure 2**. As **Figure 2** indicates, almost all of the tonnage (approximately 90%) transported on inland waterways comes through the Mississippi and Ohio River System, primarily through bulk shipping on barges.

Although previous estimates by the Corps and others have projected that inland waterway traffic would increase over time, actual traffic on inland waterways has for the most part remained flat in recent years.<sup>6</sup> At the same time, overall freight tonnage for all modes of domestic freight shipping increased at an average annual rate of 1.2% from 1997 to 2007, and is expected to continue to increase.<sup>7</sup> The Department of Transportation projects that freight tonnage will double over the next 25 years, with inland waterway traffic projected to increase at a rate significantly less than that projected for rail and highway shipping.<sup>8</sup>

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<sup>5</sup> CRS analysis based on 2007 data from U.S. Army Corps of Engineers, Waterborne Commerce Statistics Center, *Waterborne Commerce of the United States, Calendar Year 2008*, and the U.S. Department of Transportation's Commodity Flow Survey for 2007.

<sup>6</sup> For detailed statistics by year for 1999-2008, see U.S. Army Corps of Engineers, Waterborne Commerce Statistics Center, *Waterborne Commerce of the United States, Calendar Year 2008*, p. 5.

<sup>7</sup> CRS analysis based on U.S. Department of Transportation, p. 5-22, and U.S. Army Corps of Engineers, Waterborne Commerce Statistics Center, *Waterborne Commerce of the United States, Calendar Year 2008*, p. 5, at <http://www.iwr.usace.army.mil/ndc/wcsc/pdf/wcusnatl08.pdf>. Does not include multiple modes of shipping, which are not broken out individually by DOT.

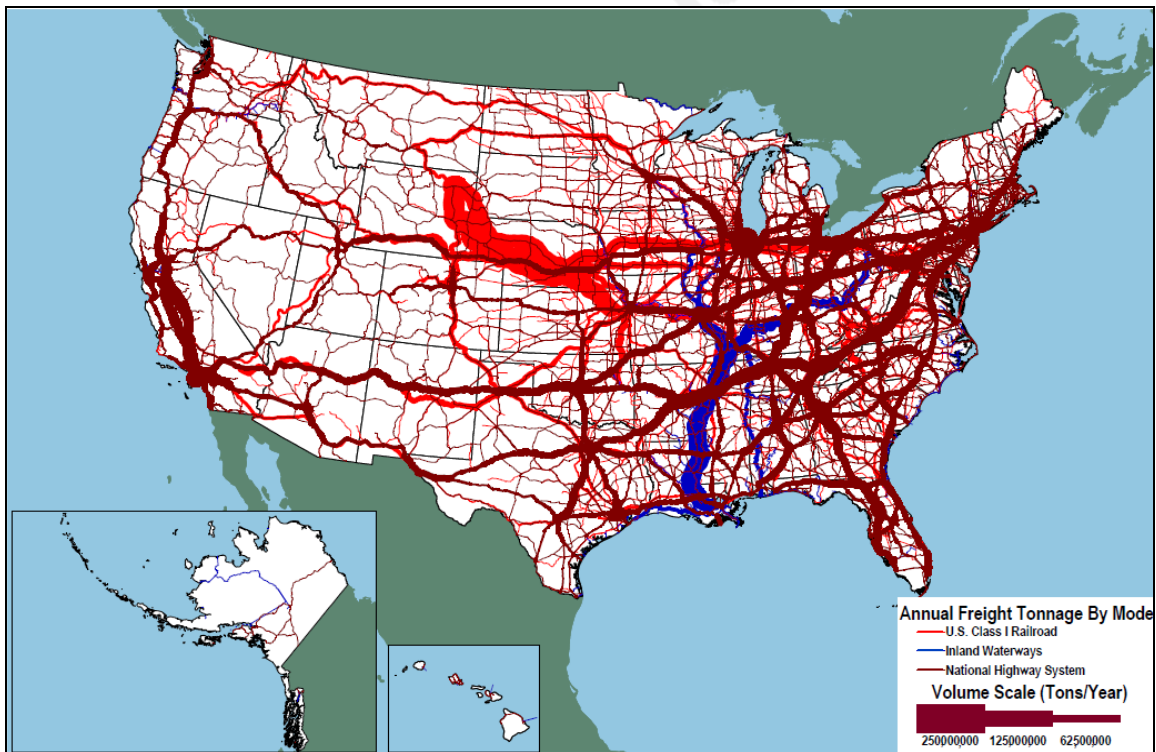
<sup>8</sup> U.S. Department of Transportation, *Freight Analysis Framework: Freight Facts and Figures*, 2009, [http://ops.fhwa.dot.gov/freight/freight\\_analysis/nat\\_freight\\_stats/docs/09factsfigures/table2\\_1.htm](http://ops.fhwa.dot.gov/freight/freight_analysis/nat_freight_stats/docs/09factsfigures/table2_1.htm).

Figure 1. Fuel-Taxed Inland Waterway System



Source: Inland Marine Transportation System, Capital Projects Business Model, April 13, 2010.

Figure 2. Relative Tonnage on Highways, Railroads, and Inland Waterways, 2002



Source: U.S. Department of Transportation, Freight Facts and Figures, 2008.

## Financing Inland Waterways

The federal government invests in inland waterways because of the value of these waterways to the nation. The federal government first began to invest in inland waterways in the early 1800s. Over time, this gave way to a significant federal investment (including funding for most construction, and operations and maintenance) in the form of full funding for investigations, operations and maintenance, and construction costs funded through the U.S. Army Corps of Engineers. However, legislation in the 1970s and 1980s changed this system and created user cost-share requirements.

### Previous Legislation: 1978 and 1986

Two pieces of legislation transformed inland waterway financing and created the framework for the current system: the Inland Waterways Revenue Act of 1978 (P.L. 95-502, 26 U.S.C. § 9506) and the Water Resources Development Act (WRDA) of 1986, as amended (P.L. 99-662, 26 U.S.C. § 4042). These two laws underpin the current financing system for Corps inland waterway projects. Prior to these laws, investments had been almost totally funded by the federal government as a result of established policies (see box below). Together, the acts of 1978 and 1986 established a fuel tax on commercial barges, cost-share requirements for inland waterway projects, and a trust fund to hold these revenues and fund their investments. The overall effect of these changes was a greater financial and decision-making responsibility for commercial operators on the inland waterway system.

#### **Inland Waterways Revenue Act of 1978**

The Inland Waterways Revenue Act of 1978 was the original law establishing user fee requirements for commercial waterway shipping, and much of the debate leading up to that bill's passage is still relevant today.<sup>9</sup> For 40 years prior to passage of this law, successive administrations and congressional sponsors had tried and failed to institute user fees on barge traffic to increase equity among transportation modes and across various regions of the country. These efforts failed primarily because over time, Congress had developed a strict policy of no user fees on inland waterways.<sup>10</sup>

The 1978 bill was revised significantly from earlier versions in the House and Senate. The barge industry initially opposed any form of tax or user fee on the aforementioned policy basis. Advocates for a user fee, including the bill's sponsors, had initially proposed a much higher fee on lock usage (enough to raise approximately \$350 million a year in non-federal revenues). The sponsors also proposed an internal capital recovery mechanism, which would have tied user fees to overall expenditures (i.e., user fees would go up automatically when expenditures went up).<sup>11</sup>

In the final compromise bill, the waterway industry agreed to support the legislation if it utilized a fuel tax instead of a lockage usage fee. For their part, the bill's sponsors agreed to a lower tax that would be phased in over time (instead of \$350 million, it was expected to generate less than \$100 million annually). The bill's sponsors also agreed to drop the capital recovery mechanism, replacing it with an indirect tie between revenues and overall expenditures in the form of the Inland Waterway Trust Fund. While the trust fund would hold user revenues for the explicit purpose of inland waterway investments, the fuel tax itself was not tied to expenditures out of the trust fund.

<sup>9</sup> Efforts to secure passage of this legislation were the primary subject of series of articles in *The Washington Post*, as well as a book on the issue. See T. R. Reid, *Congressional Odyssey: The Saga of a Senate Bill* (San Francisco, CA: W.H. Freeman and Company, 1980).

<sup>10</sup> This policy dated to the Northwest Ordinance of 1787, in which Congress declared that certain inland waterways "shall be common highways and forever free ... without any tax, impost, or duty therefore."

<sup>11</sup> For more information on this argument, see the "Funding for Proposed Investments" section of this report.

The federal policy of taxing fuel on commercial barge traffic was codified in the Inland Waterways Revenue Act of 1978.<sup>12</sup> The act of 1978 also established the IWTF, which was initially funded by this fuel tax (\$0.04 per gallon, beginning in FY1980, gradually increasing to \$0.10 per gallon in FY1986), and established those waterways that are subject to the tax.<sup>13</sup> (For more information on the original act, see box above.) However, no appropriations were authorized from the IWTF until later, in WRDA 1986.

WRDA 1986 authorized additional increases to the 1978 act's fuel tax, which eventually rose to the current level of \$0.20 per gallon beginning in 1994.<sup>14</sup> (See **Table 1** for the full schedule of tax increases.) Similar to the initial tax under the 1978 act, the tax was not indexed for inflation. Significantly, WRDA 1986 also stipulated for the first time that IWTF projects would be funded on a 50/50 basis, with 50% of the funds required for construction coming from the IWTF.<sup>15</sup> The remaining 50% in costs for these investments is funded by the Treasury's General Revenue (GR) fund. WRDA 1986 also explicitly stated that other authorized expenditures on inland waterways, including operations and maintenance, are a 100% federal responsibility.<sup>16</sup>

Under WRDA 1986, expenditures from the IWTF for any project are not automatic, and must be authorized by Congress and then funded in annual discretionary appropriations. WRDA 1986 authorized an initial round of projects to be funded by the IWTF, and subsequent Water Resources Development Acts passed by Congress have authorized additional projects. Pursuant to the WRDA requirements, appropriations to these projects have been made annually by Congress (see next section, "Inland Waterways Trust Fund: Trends and Issues Since 1986," for additional information on funding trends).

WRDA 1986 also established the Inland Waterways Users Board (IWUB), a federal advisory committee subject to the Federal Advisory Committees Act.<sup>17</sup> The board was established to give commercial users an opportunity to inform the priorities for federal decision-making on IWTF projects, and meets regularly three times a year to develop and make recommendations to the Secretary of the Army and Congress regarding these investments.<sup>18</sup> Section 302 of WRDA 1986 stipulates that the board be made up of 11 members representing shipping interests on the primary geographical areas served by inland waterways, with due consideration given to tonnage shipped on the respective waterways.<sup>19</sup>

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<sup>12</sup> While the IWTF first received revenues in 1980, Congress did not authorize appropriations from the fund before WRDA 1986. The fund initially had a balance of \$260 million before any other appropriations were made.

<sup>13</sup> See 33 U.S.C. § 1804 for the waterways that are subject to the fuel tax.

<sup>14</sup> 33 U.S.C. § 201. The tax was gradually increased from \$0.10 per gallon in FY1986 to \$0.20 cents per gallon after 1994. This tax has stayed at \$0.20 cents per gallon since 1994, and is not indexed for inflation.

<sup>15</sup> 26 U.S.C. § 9506 (C)(2).

<sup>16</sup> The amount of federal dollars spent on operations and maintenance (O&M) generally exceeds the amount spent on construction and major rehabilitation. For instance, according to the FY2011 budget justifications for the Army Corps of Engineers, O&M was \$550 million.

<sup>17</sup> 5 U.S.C., Appendix § 2.

<sup>18</sup> The board is composed of 11 members selected by the Secretary of the Army, and typically meets three times a year to develop and make recommendations to the Secretary regarding construction and rehabilitation priorities and spending levels. Recommendations by the IWUB are transmitted to Congress in an annual report.

<sup>19</sup> P.L. 99-662, § 302. A map of geographical areas and additional information about current representatives is available at <http://waterwaysusers.us/BoardMembers.htm>.



**Table I. Fuel Taxes on Inland Waterways**  
(taxes under 1978 and 1986 acts)

Date <sup>a</sup>	Tax per Gallon
October 1, 1980-September 30, 1981	\$0.04
October 1, 1981-September 30, 1983	\$0.06
October 1, 1983-September 30, 1985	\$0.08
October 1, 1985-December 31, 1989	\$0.10
1990	\$0.11
1991	\$0.13
1992	\$0.15
1993	\$0.17
1994	\$0.19
After 1994	\$0.20

**Source:** Inland Waterways Revenue Act of 1978 (P.L. 95-502) and WRDA 1986 (P.L. 99-662).

- a. Tax levels preceding 1990 were set in P.L. 95-502 and were adjusted based on fiscal years, while post-1990 levels were set in P.L. 99-662 and were based on calendar years.

## Inland Waterways Trust Fund: Trends and Issues Since 1986

Between 1986 and 2010, the IWTF balance has varied considerably. Beginning in 1992, balances increased, reaching their highest level, \$413 million, in 2002. On multiple occasions, the executive branch (through the Clinton Administration in 1996 and the Bush Administration in 2004) proposed to further increase fees on the user industry and require the IWTF to also fund some portion of operations and maintenance expenditures (in addition to the construction and major rehabilitation requirements). These proposals were not enacted by Congress.

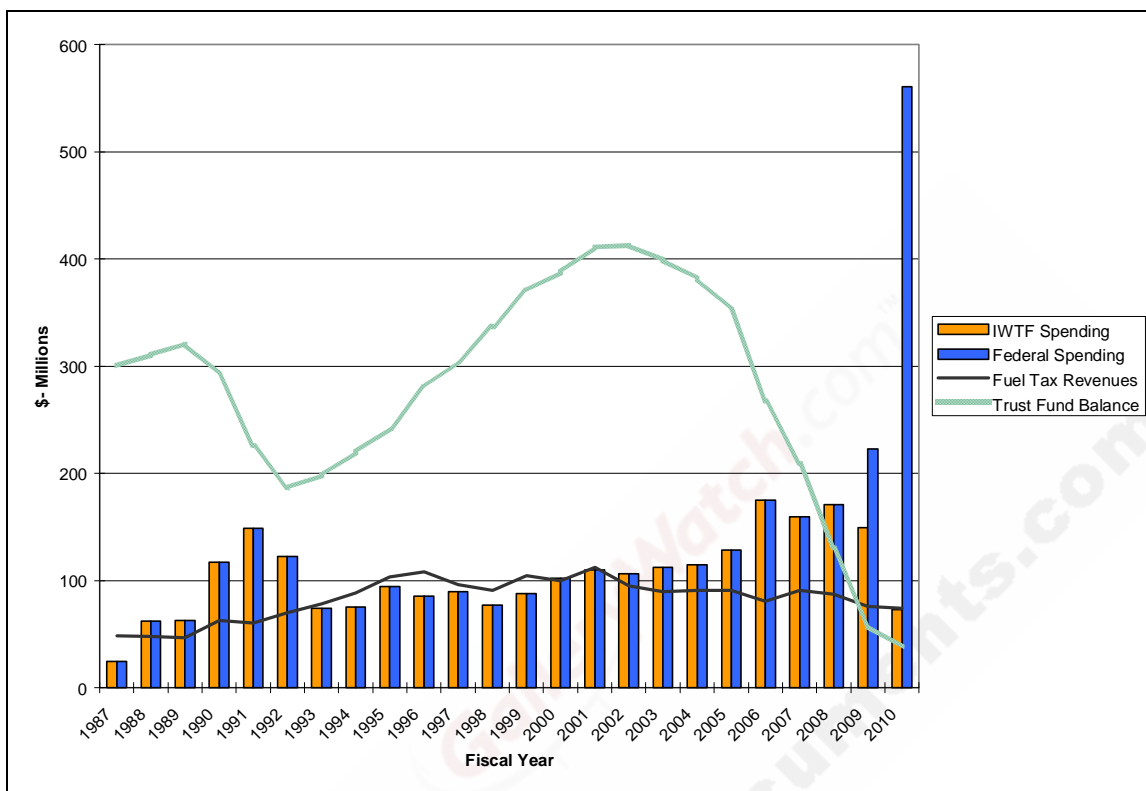
Beginning in FY2005, appropriations from the IWTF increased significantly as the Bush Administration requested and Congress appropriated greater investments in IWTF-funded projects. These increasing expenditures significantly exceeded annual fuel tax collections going into the IWTF and interest on the IWTF balance.<sup>20</sup> (See **Figure 3**.) Additionally, some projects significantly exceeded their original cost estimates, further stressing the trust fund.<sup>21</sup> As a result, balances fell sharply from 2007 to 2010. As of the end of FY2010, the IWTF balance available for new obligations was \$38.2 million.<sup>22</sup> A summary of these trends is provided in **Figure 3**.

<sup>20</sup> For instance, in FY2007 \$171 million was spent from the IWTF, while only \$88 million in tax revenues were received. Notably, the increased investment in these inland waterway projects was endorsed by the IWUB.

<sup>21</sup> A recent Corps report studied this issue at several locations. See U.S. Army Corps of Engineers, Great Lakes and Ohio River Division, *Inland Navigation Construction, Selected Case Studies*, U.S. Army Corps of Engineers, White Paper, July 17, 2008.

<sup>22</sup> Inland Waterways Trust Fund Status Report. October 20, 2010. Available at [http://www.waterwaysusers.us/IWTF\\_Status\\_64.pdf](http://www.waterwaysusers.us/IWTF_Status_64.pdf).

**Figure 3. Federal Inland Waterway Projects: Financing Trends, 1987-2010**



**Source:** Army Corps of Engineers Data, adapted by CRS.

**Notes:** Funding amounts are in nominal dollars. Funding for O&M and Investigations (\$500-\$600 million in recent years) is not included in the Federal spending data. Federal spending for FY2009 and FY2010 reflects congressional stopgap measures and supplemental funding under ARRA (P.L. 111-5).

In an effort to reduce stress on the IWTF and prevent the balance from falling to unsustainable levels, Congress has in recent years taken “stopgap” measures. Specifically, Congress exempted major rehabilitation projects from their usual cost-sharing requirements in the Continuing Resolution for Fiscal Year 2009 (P.L. 110-329) and in regular appropriations for FY2009 (P.L. 111-8). Congress also provided inland waterway projects with more than \$400 million in construction funding under the American Recovery and Reinvestment Act (ARRA, P.L. 111-5), with no corresponding IWTF cost-share requirement. These measures had the effect of limiting the costs to the IWTF for ongoing projects, while also allowing for the completion of these projects. Together with provisions in the FY2009 and FY2010 (P.L. 111-85) enacted appropriations bills that prohibited the Corps from entering into new contracts requiring IWTF funding, near-term demand on the IWTF has fallen and, barring major new appropriations, the trust fund balance is not expected to be exhausted in the near future.<sup>23</sup>

Due to the aforementioned stopgap measures and increased federal spending, the trust fund balance is expected to stabilize in FY2011. Without reforms to IWTF financing, the trust fund may require more stopgap measures in the future. These may include suspension of some or all of

<sup>23</sup> This assumes that the Administration and Congress will not appropriate funding for new projects beyond that available in current year fuel tax receipts. (This was the case for the Administration’s FY2011 budget request.)

the current IWTF cost-share requirements (such as was provided in FY2009 and in ARRA) or limiting available funding to projected fuel tax revenues (as was provided in FY2010 appropriations).<sup>24</sup> In the latter case, significantly fewer projects would be undertaken by the Corps, and current project backlogs would be exacerbated. Long-term options to prevent a shortfall, including recent proposals, are discussed in the “Issues for Congress” section of this report.

## **Other Concerns with IWTF Planning**

In addition to concerns related to the balance of the IWTF, fuel-tax payers (represented by the IWUB) have registered complaints related to structural inefficiencies and inequities in the Corps project planning process for inland waterways investments. Many users note that in the past, issues over which only the Corps has control have led to inefficient project implementation (specifically in the form of cost escalations and schedule delays on some IWTF projects). As a partial response to these concerns, in FY2006 the Corps implemented several reforms to its project delivery process, including implementation of risk-based cost estimates and prioritized funding for projects with a high risk of cost overruns. While the IWUB generally recognizes these changes as improvements, it continues to advocate for additional structural reforms to the planning process.<sup>25</sup>

A separate concern, commonly raised by fuel taxpayers on low traffic and coastal waterways, is the equity of IWTF investments. Some have argued that the current subset of investments disproportionately benefits high commercial traffic areas requiring structures for navigation, such as the Mississippi River system. Users in lower commercial traffic areas argue that their fuel taxes are subsidizing the needs of these other waterways, and that they should be exempt from fuel taxes if the Corps is not directing tax revenues toward their waterways that are proportionate to what they pay into the trust fund.

## **Inland Waterway Financing Proposals**

Concerns related to the solvency of the IWTF and the equity of the financing system for fuel-taxed inland waterways has led to a number of recent proposals, first by the Bush Administration in 2008, then by the Obama Administration in 2009 and 2010. The user industry, represented by the IWUB, recently adopted its own proposal, which differs significantly from the Administration’s proposal. While the executive branch proposals under both the Bush and Obama Administrations were similar and proposed a lock usage fee to replace the fuel tax, the user proposal would implement an increase to the current fuel tax, and would require increased federal funding for some inland waterway investments.

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<sup>24</sup> Based on recent years, the Administration projected approximately \$85 million in fuel tax revenues in the FY2011 budget.

<sup>25</sup> IWUB Report, p. 19.

## Executive Branch Proposals: Lock Usage Fee

In response to concerns regarding a potential IWTF shortfall, the Bush Administration submitted a legislative proposal to Congress in 2008 that would have instituted a lock usage fee to replace the fuel tax and generate additional revenue for the IWTF.<sup>26</sup> The fee proposed to phase in charges to commercial barges of \$50-\$80 per lockage through the end of calendar year 2012 for lock chambers greater than 600 feet in length, and \$30-\$48 for chambers less than 600 feet. (See **Table 2.**) Additionally, it proposed to tie IWTF balances to this user fee after the end of 2012 by raising lockage fees when the IWTF balance fell below \$25 million, and lowering fees when the balance rose above \$75 million. Such a mechanism, which would directly tie user fees to the trust fund balance (and IWTF expenditures), is commonly known as “capital recovery.”

**Table 2. Lock User Fee Proposal**

Date	Fee for Locks Greater than 600 Feet in Length	Fee for Locks Less than 600 Feet in Length
Oct 1 2008-Sept 30 2009	\$50 per barge	\$30 per barge
Oct 1 2009-Sept 30 2010	\$60 per barge	\$36 per barge
Oct 1 2010-Sept 30 2011	\$70 per barge	\$42 per barge
Oct 1 2011 Dec 31, 2012	\$80 per barge	\$48 per barge
After Dec 31, 2012	As provided for in legislation <sup>a</sup>	As provided for in legislation <sup>a</sup>

**Source:** Legislative proposal by the Department of the Army, Office of the Assistant Secretary for Civil Works, April 4, 2008.

- a. Pursuant to subsection 2(b) of the proposed legislation, if the balance of the IWTF fell below \$25 million, then the fee for lockages would have automatically increased from the 2012 levels (\$10 more per lockage for large locks, \$6 more per lockage for small locks). Similarly, if the balance of the IWTF rose above \$75 million, then fees would have automatically decreased by these same amounts.

The Bush Administration argued that its approach would allow for the necessary new investments on inland waterways while maintaining the 50/50 federal-industry cost-share arrangement and ensuring long-term solvency of the trust fund. It also argued that an approach which focused additional taxes on lock users would improve equity in waterborne commerce investments, since locks account for most IWS capital expenditures. Both the House and Senate Appropriations Committees rejected this approach, arguing that a lock fee would pose an unacceptable burden on lock users, who would pay considerably more under the Bush proposal than they currently pay.<sup>27</sup> Congress instead provided temporary relief through the General Revenue fund (as previously mentioned) and requested that the executive branch revisit its approach.

The Obama Administration’s FY2010 budget included a similar proposal to the Bush Administration lockage fee proposal, with the only major change being an option for the Secretary to increase congestion fees at individual locks (potentially reducing traffic and increasing revenues). In contrast to the Bush Administration, the Obama Administration did not assume the revenues associated with this proposal. In FY2010, Congress again ignored the

<sup>26</sup> The FY2009 budget requests assumed additional revenue based that would have resulted from an enacted bill.

<sup>27</sup> U.S. Congress, House Committee on Appropriations, *Omnibus Appropriations Act, 2009 (P.L. 111-8)*, Committee Print, 111<sup>th</sup> Cong., 1<sup>st</sup> sess., March 2009 (unnumbered) (Washington: GPO, 2009), pp. 591-592.

proposal, stating in appropriations language that it had no intention of enacting the fee. Instead it chose to again insert bill language that limited the projects for which the Corps could use IWTF funds.<sup>28</sup>

The Obama Administration's FY2011 request once again proposes a usage fee to replace the fuel tax, but again does not assume the revenue from this usage fee and requests an appropriation level based only on current year expected fuel tax revenues (\$85 million). To date, the Administration has not formally stated whether it will continue to support the lock usage fee or whether it will consider other alternatives (such as the user proposal for a fuel tax increase discussed below). In the FY2011 Senate Appropriations Committee report, the committee reiterated its intention to ignore the lock user fee proposal. The committee noted that if the authorizing committees do not advance a satisfactory solution soon, then it may be forced to act.<sup>29</sup>

## **Inland Waterways Users Board Proposal**

In April 2010, the Inland Waterways Users Board (IWUB) officially adopted and transmitted to Congress a proposal of its own. The final report of its Inland Marine Transportation Systems Capital Investment Strategy Team, *Inland Marine Transportation Systems Capital Projects Business Model* (hereafter referred to as the IWUB report, or the user proposal), has come to represent the preferred alternative of much of the inland waterway user industry.<sup>30</sup> This report was prepared at the request of the IWUB, and the authors note that it has not been endorsed by the Administration. However, its authors credit participation by the Corps, the IWUB, and members of the inland waterway user community. In hearings and other public forums, the report has been endorsed by the IWUB and other commercial waterway users, but it has not been endorsed by the Corps or the White House.<sup>31</sup>

Based on its own research and analysis, the IWUB Report recommends a new financing system and a number of other proposed changes for inland waterways. The report's recommendations can generally be divided into three categories:

- **Revenue recommendations:** Increase the existing IWTF fuel tax by \$0.06-\$0.09 per gallon (30% to 45% above the current tax of \$0.20 per gallon). The exact increase would depend on future fuel tax revenues.
- **Cost-share recommendations:** Modifications to the subset of inland waterway investments subject to IWTF cost-share requirements (see **Table 3**) and a corresponding overall shift to a larger portion of IWTF projects being funded solely by the General Revenue Fund.

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<sup>28</sup> U.S. Congress, House Committee on Appropriations, *P.L. 111-85*, H.Rept. 111-278, 111<sup>th</sup> Cong., 2<sup>nd</sup> sess., October 28, 2009 (Washington: GPO, 2009), Title I, p. 58.

<sup>29</sup> U.S. Congress, Senate Committee on Appropriations, report to accompany S. 3635, 111<sup>th</sup> Cong., 2<sup>nd</sup> sess., 2010, S.Rept. 111-228 (Washington: GPO, 2010).

<sup>30</sup> While members of the IWUB did not author the report itself, the board commissioned the report and has since has since adopted its contents.

<sup>31</sup> See <http://www.waterwayscouncil.org/index/capitalplansupport.pdf> for a list of endorsements. Users also endorsed the report at a hearing before the Senate Environment and Public Works Committee on May 6, 2010. See [http://epw.senate.gov/public/index.cfm?FuseAction=Hearings.Hearing&Hearing\\_ID=4b8b8d4c-802a-23ad-44e6-1b546f908652](http://epw.senate.gov/public/index.cfm?FuseAction=Hearings.Hearing&Hearing_ID=4b8b8d4c-802a-23ad-44e6-1b546f908652).

- **Other recommendations:** Increase IWUB involvement in project planning and construction, as well as other recommendations, including the promulgation of regulations that would formally adopt the report’s prioritization criteria.

### Revenue Recommendations

The most prominent component of the IWUB report is a proposed increase to the inland waterway fuel tax rate (currently \$0.20 per gallon) of between \$0.06-\$0.09 per gallon. The increase would depend on actual fuel tax collections over the next several years (i.e., if collections are below recent averages, the tax would be higher). Overall, the report projects that the new tax level would generate approximately \$112 million per year in fuel tax revenues for the IWTF, an increase over revenues from the last 10 years (approximately \$85 million annually). Despite this increase, most of the new revenue would not be spent until future years, which would allow the IWTF to replenish its balances. As was the case with the original tax of \$0.20 per gallon, the proposed increase to the fuel tax would not be indexed for inflation and would not include a capital recovery mechanism linking future taxes to expenditures.

**Table 3. Existing and Proposed Cost-Shares for Inland Waterway Construction**

	Source for Construction Funding	
	Current and Administration-Proposed Lock Fee <sup>a</sup>	IWUB Proposed
New Lock Construction	50% IWTF; 50% GR	50% IWTF; 50% GR
Lock Rehabilitation <sup>b</sup>		
Less than \$8 million	100% GR	100% GR
\$8 million-\$99 million	50% IWTF; 50% GR	100% GR
\$100 million or more	50% IWTF; 50% GR	50% IWTF; 50% GR
Dams	50% IWTF; 50% GR	100% GR
All Cost Overruns	50% IWTF; 50% GR	100% GR

**Source:** *Inland Marine Transportation Systems Capital Projects Business Model, Final Report*. April 2010.

**Notes:** GR: General Revenue Fund, IWTF: Inland Waterway Trust Fund.

- The Administration’s lockage fee proposal would continue current cost-shares with the IWTF (as previously noted, the significant change would be to the means through which IWTF revenue is raised, not the cost-share itself).
- The IWUB proposes to change the definition of what constitutes “major rehabilitation.” Under the current system, major rehabilitation (i.e., projects subject to cost-sharing) is any rehabilitation project in excess of \$8 million. The IWUB proposes to revise this definition to only include projects of \$100 million or more.

### Cost-Share Recommendations

The IWUB report also proposes to shift more of the cost for inland waterway projects toward the federal government by increasing the number of investments on inland waterways that are funded solely by the federal government and decreasing the projects that are subject to 50/50 cost-sharing. Under the report’s recommendations, all dam-related expenses (construction and rehabilitation), as well as rehabilitation projects on locks with costs less than \$100 million, would

be exempt from WRDA 1986 cost-sharing requirements.<sup>32</sup> The IWUB report also proposes to establish a “cap” on the use of IWTF funds at authorized levels to discourage construction cost overruns. Critics point out that this is an additional hidden cost, as currently all cost overruns are funded equally between the federal government and the IWTF.<sup>33</sup> Cumulatively, these changes would affect the overall cost-share for IWTF projects. The subset of projects no longer requiring cost sharing under the proposal would in effect increase the overall federal share for new and major rehabilitation investments over the next 25 years from current levels (50%) to approximately 70% for the same subset of projects.<sup>34</sup> Differences between the current arrangement and the report’s proposals are outlined by project type in **Table 3**. Proposed funding requirements under the report’s proposals over the next 25 years are divided into five-year increments in **Table 4**.

### **Other Recommendations**

The report also proposes several reforms for improving cost-effectiveness of IWTF projects overseen by the Corps.<sup>35</sup> These recommendations would increase the involvement of the IWUB in the Corps project delivery process for IWTF investments, thereby expanding the board’s current roles and responsibilities. The report recommends appointing IWUB representatives to the project design teams for individual projects, where they would oversee planning for IWTF investments and report back to the IWUB. The report also recommends obtaining sign-off from the IWUB on plans for projects funded by the IWTF, as well as providing the IWUB with status updates on all relevant project planning documents. The IWUB seeks these changes as representatives of the nonfederal cost-sharers. However, the degree of involvement by nonfederal entities in development of studies by a federal agency could raise concerns related to conflicts of interest and whether the federal government may lose control of the planning process.

Notably, the report also proposes a portfolio of specific IWTF projects over the next 20 years, including projects and funding levels for both the IWTF and federal government. Projects recommended in the IWUB report were prioritized for selection based on a number of factors, such as asset condition, likelihood of diminished performance, consequence of diminished performance, and the degree to which new projects would improve system performance.<sup>36</sup> As proposed in the IWUB report, full funding for this suite of investments requires that annual expenditures (from the GR fund and the IWTF) average approximately \$380 million per year, a significant increase over historical averages.<sup>37</sup> This would necessitate an increase above average total expenditures since 1994, which have been approximately \$234 million annually.

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<sup>32</sup> As noted previously, the current definition for “minor” lock rehabilitation (i.e., 100% federal lock funding) is any rehabilitation project less than \$8 million.

<sup>33</sup> See final paragraph of this section for more information on efforts to address cost overruns.

<sup>34</sup> Based on CRS analysis of Corps documents. The IWUB report outlines a general program of \$380 million per year for investments, including \$270 million in federal contributions and \$110 million in IWTF contributions (in effect a 71/29 cost share compared to current requirements). However, according to the Corps, the actual cost to implement the proposed portfolio would result in less cost overall and a slightly different cost share compared to current levels (68/32 cost share compared to current requirements).

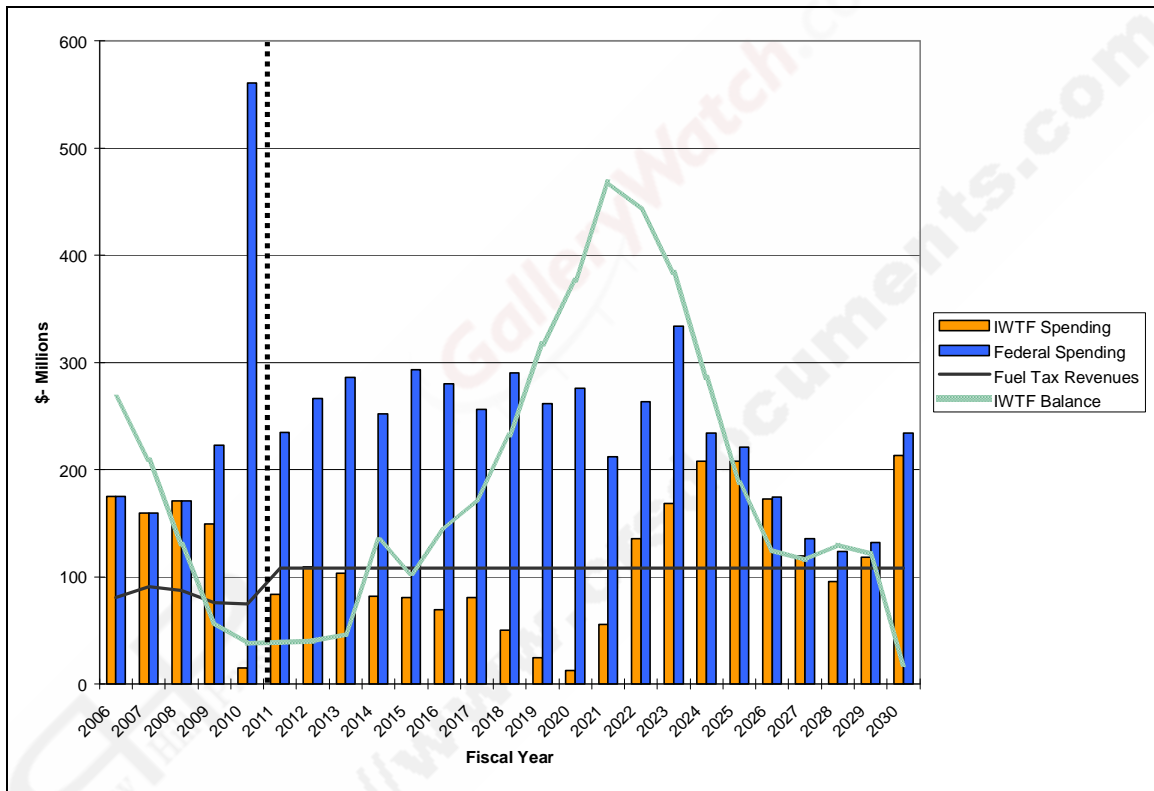
<sup>35</sup> The full list of 21 project-based recommendations (including those already being implemented) can be found on pp. xiii-xv.

<sup>36</sup> IWUB report, p. viii.

<sup>37</sup> The estimated total requirement of \$380 million is the amount cited in the IWUB proposal. See IWUB report, p. xiii.

In the immediate future, most of the increase needed to fund the proposed portfolio of \$380 million per year would be derived from the GR fund (in order to allow the trust fund balance to rebuild). For instance, to meet the IWUB proposal’s requirements over the first five years, federal funding would need to be \$1.33 billion, or 74% of the total funding required for the portfolio of projects over this time period. Around 2020, the proportion of funds derived from the trust fund would gradually increase, although federal requirements would still exceed 50% of the required investments. Although the report calls for an increased investment from both sources, on the whole, more new funding would be required from the federal government (through the GR fund) than the IWTF. Expected trends under the user proposal are shown in **Figure 4**. The revised effective cost-shares that are required under the proposal are shown in **Table 4**.

**Figure 4. Inland Waterway Projects: Projected Funding Trends under IWUB Proposal**



**Source:** Corps projections, as proposed in the 2010 Inland Marine Transportation Systems Capital Projects Business Model. Data have been adapted by CRS to reflect recent balances.

**Notes:** 2011 line separates actual values to date from projections under the IWUB proposal. Projections for federal spending do not include any potential cost-overruns, which would be funded as a 100% federal expense under the proposal. Fuel tax revenues based on CPBM projections \$112 million/year. CRS projections for future IWTF balances under the proposal are calculated by adding the balance at the end of FY2010 to projected balances under the CPBM.

**Table 4. Share of Total Costs Under IWUB Proposal**  
(dollars in millions)

	2011-2015	2016-2020	2021-2025	2026-2030
<b>Federal Government</b>	\$1,333 (74%)	\$1,365 (85%)	\$1,265 (62%)	\$800 (53%)



	2011-2015	2016-2020	2021-2025	2026-2030
<b>Inland Waterway Trust Fund</b>	\$460 (26%)	\$239 (15%)	\$776 (38%)	\$719 (47%)

**Source:** CRS analysis based on project funding requirements provided by the Corps of Engineers.

## Issues for Congress

The aforementioned proposals by the executive branch and the IWUB differ in important ways and bring up a number of issues for Congress. Both proposals claim to resolve ongoing issues associated with the IWTF by proposing new investment levels and revenue sources that would fundamentally depart from the current financing system. In addition to new financing sources, both proposals would also alter the balance of cost-sharing between various classes of commercial users on the IWUB and general taxpayers.

An overarching question for Congress is what level of new and ongoing investment is warranted for federal inland waterways. Once such an investment level is defined, Congress may also need to decide whether changes to the current user fee (either changing the amount of the fuel tax or moving to a different kind of fee entirely) are warranted to achieve this level investment. A related question is whether the current cost-share arrangement (set under WRDA 1986) is acceptable, or whether any changes to it (e.g., increases to the federal share of some costs) are necessary. New legislation would be required to address these issues.

## Overall Level of Investment on the Inland Waterway System

### Competing Views on Inland Waterway Navigation Investments

A central issue for Congress is the level and urgency of infrastructure investments on federal waterways. Commercial users, including shippers and some agricultural interests, have argued that additional investment is justified because of aging infrastructure, the need for expanded capacity, and positive environmental externalities associated with inland waterway shipping compared to other forms of shipping. These users argue that the benefits of inland waterways are widespread. Their claims are countered by a number of other groups, including taxpayer and environmental advocacy groups, who argue against increased federal funding for inland waterways. These groups note that the shipping industry often misrepresents or overstates the benefits of these investments and that major funding increases for inland waterway projects are not warranted.<sup>38</sup>

### *Aging Infrastructure and Urgency of New Investments*

The condition of Corps inland waterway facilities has been a primary driver behind the call for increased investment on inland waterways. The Institute for Water Resources (part of the Corps of Engineers) notes that the majority of locks in the United States are now past their intended

<sup>38</sup> "Conservation and Watchdog Groups Oppose Barge Industry's Plan to Shift Costs to Taxpayers," press release, June 21, 2010, <http://www.moenviron.org/pdf/NIC%20IWTF%20Proposed%20Changes%20Press%20Release.pdf>.

design age of 50 years.<sup>39</sup> The Corps has connected this aging infrastructure to an overall decline in efficiency of its assets on inland waterways, noting that overall lock unavailability (both scheduled and unscheduled) has increased in recent years.<sup>40</sup> The user industry often favors new lock construction and expanded capacity over ongoing maintenance to address these issues.<sup>41</sup>

Other groups argue against significant new investments for inland waterway projects. In arguing against new locks on the Upper Mississippi River, a coalition of environmental groups recently noted that while the design life of new investments is usually only 50 years, regular maintenance can extend the life of existing locks for an additional 50 years at a considerably lesser cost than that for new construction.<sup>42</sup> These groups generally argue that the costs of new lock construction greatly exceed the benefits of reduced waiting time and lock unavailability, and point out that issues associated with most aging inland waterways infrastructure can be overcome by improved small-scale and non-structural improvements.<sup>43</sup>

### ***Waterway Traffic Projections***

The Corps has in the past noted that the justification for most new navigation alternatives depends greatly on traffic forecasts from future trade scenarios, which can itself be difficult to predict. These forecasts often depend on a number of inter-related variables, such as commodity prices, the overall price sensitivity of shippers, and outside factors such as increases or decreases in the efficiency of other modes of freight transit.

The Corps has noted that total domestic freight traffic is expected to increase by approximately 70% by 2020, but recently has avoided projections specific to inland waterway freight traffic.<sup>44</sup> The Department of Transportation projects that the majority of this increase in freight traffic will be on freight rail and highway traffic, with annual waterway traffic projected to increase slightly between 2010 and 2035.<sup>45</sup> Shipping interests point out that an overall increase in the efficiency of inland waterways could lessen anticipated pressure on highway and rail shipments, or at least maintain viability of inland waterways compared to these other forms of freight shipping. Future

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<sup>39</sup> David Grier, *The Declining Reliability of the U.S. Inland Waterway System*, Institute for Water Resources, Army Corps of Engineers, Alexandria, VA, 2009, <http://onlinepubs.trb.org/onlinepubs/archive/Conferences/MTS/4A%20GrierPaper.pdf> (hereafter referred to as Grier).

<sup>40</sup> Grier, p. 3.

<sup>41</sup> Expanded lock capacity can in some cases decrease the amount of time required for lockage of large barge tows, which may be required to split into multiple tows in order to pass through smaller locks. The question of whether new capacity was preferable to prioritized maintenance was a primary issue of debate in the case of recently proposed Corps investments on the Upper Mississippi River-Illinois Waterway (UMM-IWW). See CRS Report RL32630, *Upper Mississippi River System: Proposals to Restore an Inland Waterway's Ecosystem*, by Kyna Powers and Nicole T. Carter by Nicole Carter.

<sup>42</sup> Brad Walker, *Big Price, Little Benefit: Proposed Locks on the Upper Mississippi and Illinois River Are Not Economically Viable*, The Nicollet Island Coalition, February 2010, p. 10, <http://www.iwla.org/index.php?ht=a/GetDocumentAction/i/2079>.

<sup>43</sup> This was one conclusion of a 2001 National Research Council study. See National Research Council, *Inland Navigation System Planning: The Upper Mississippi River-Illinois Waterway*, Washington, D.C., 2001. p. 4.

<sup>44</sup> Grier, p. 2.

<sup>45</sup> According to the Department of Transportation's Freight Analysis framework, waterway traffic (including harbor and non-fuel taxed waterway traffic) is expected to increase by approximately 2% per year from 2010-2035. See U.S. Department of Transportation, Office of Freight Management and Operations, *Freight Facts and Figures, 2009*, p. 5. Available at [http://www.ops.fhwa.dot.gov/freight/freight\\_analysis/nat\\_freight\\_stats/docs/09factsfigures/pdfs/fff2009\\_highres.pdf](http://www.ops.fhwa.dot.gov/freight/freight_analysis/nat_freight_stats/docs/09factsfigures/pdfs/fff2009_highres.pdf).

lock upgrades or new construction would likely increase demand for inland waterways. However, the extent to which these upgrades would have an effect on demand would likely also depend on a number of other external factors.

Some groups have countered industry requests for new lock construction based on traffic projections by noting that traffic has been flat or decreasing at some individual locks on high-traffic portions of the inland waterway system.<sup>46</sup> Observers, including former Corps employees, have also criticized previous projections of traffic increases by the Corps and as overly optimistic.<sup>47</sup> Although the Corps has not used projected future traffic increases as a basis for changes to the overall level of investments on inland waterways, it did make this argument recently for new lock construction on inland waterways.

### *Environmental Impacts of Inland Waterways*

Shipping interests also argue for increased investment on inland waterways because of the overall value of inland waterways compared to other modes of shipping. They point to studies that have concluded that barge shipping in particular constitutes a transportation alternative that is more efficient and environmentally friendly than other forms of shipping, such as highway and rail. For example, previous industry studies have calculated that railroads are 28.3% less fuel efficient than inland waterways.<sup>48</sup> Additionally, they argue that inland waterways contribute significantly less greenhouse gas emissions per mile than other forms of freight transportation.<sup>49</sup> Studies have also noted other benefits, including reduced highway congestion and noise reduction.

Taxpayer and environmental groups have questioned studies citing environmental benefits as a basis for new investments in barge shipping. For instance, groups have disagreed with industry fuel efficiency calculations, noting that many industry studies have not taken into account technical factors such as the directional constraints of river flow, or “circuitry.”<sup>50</sup> They argue that the use of a conversion factor to account for circuitry creates a more accurate picture of fuel efficiency among various modes. They have also noted that using the fuel efficiency for unit grain trains instead of an average for all rail shipping would allow for a more accurate comparison of fuel efficiency between barge and rail shipping.<sup>51</sup>

Environmental groups also note that inland waterway projects can negatively affect riparian habitat and species by altering natural flows.<sup>52</sup> Structural changes to rivers such as locks and

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<sup>46</sup> See comments by the Institute for Agriculture and Trade Policy at <http://www.moenviron.org/pdf/NIC%20IWTF%20Proposed%20Changes%20Press%20Release.pdf>. Accessed August 19, 2010.

<sup>47</sup> Donald C. Sweeny, *A Critique of “Final Re-Evaluation of the Recommended Plan: UMR-IWW System Navigation Study: Interim Study,”* Nicollet Island Coalition, September 2009, p. 9.

<sup>48</sup> These studies generally define “fuel efficiency” as ton-miles per gallon. See for example, C. James Kruse, Annie Protopapas, and Leslie Olson, et al., *A Modal Comparison of Domestic Freight Transportation Effects on the General Public*, Texas Transportation Institute, Texas A&M University, Final Report, College Station, TX, December 2007, p. 41. [http://www.americanwaterways.com/press\\_room/news\\_releases/NWFSTudy.pdf](http://www.americanwaterways.com/press_room/news_releases/NWFSTudy.pdf).

<sup>49</sup> Texas Transportation Institute,

<sup>50</sup> “Circuitry” refers to the fact that rivers and similar bodies of water are constrained by their natural course, which may be longer than the distance traveled between destinations on highway or rail. Some groups note that failing to account for circuitry skews fuel efficiency calculations in favor of barge tows. (Generally barge tows use less fuel per mile than highway or rail shippers, but also have to travel a longer distance than these shippers to get to the same locations.)

<sup>51</sup> Walker, pp. 15-16.

<sup>52</sup> Walker, pp. 1-2.

dams (which can create sedimentation, increase turbidity, and lead to other reservoir-like effects) and levees (which separate rivers from flood plains) effect the natural state of these bodies of water. Additionally waterway traffic may also cause bank erosion through wave action.

## **Funding for Proposed Investments**

### **IWTF Fuel Taxes and Other User Fee Proposals**

In addition to deciding whether additional investment is appropriate at this time, Congress may also consider making changes to the system that finances these investments. Since the fuel tax under WRDA 1986 was capped at \$0.20 per gallon and inland waterway infrastructure needs seem to be increasing, many stakeholders note that there is a need for changes to the existing revenue stream. Congress may consider some or all of the two primary options for new revenue which were most recently proposed (the Administration's lock user fee and the user board's proposed increase to the fuel tax), or selected components of these proposals (such as an increase in the fuel tax that is not tied to an increased federal investment). Other policies may also be considered, such as automatic inflation adjustments or a capital recovery mechanism.

The lock usage fee proposed by the Obama Administration would address the issue of inadequate revenues by eliminating the fuel tax and replacing it with new fees on lock users.<sup>53</sup> The Administration argues that since lock repairs account for most capital construction and major rehabilitation costs, user fees should come from those that benefit the most from these projects. The IWUB and Congress have generally criticized this proposal as unrealistic. The IWUB argued that targeting lock users runs counter to the original idea of the inland waterways as a whole "system" whose interconnectivity benefits the nation.<sup>54</sup> Additionally, they note that it could significantly effect the behavior of some shippers operating within the system. CRS was unable to locate any formal economic analysis of the expected effects of the lockage fee proposal on shippers.

The IWUB report proposes its own revenue alternative to restore the IWTF and provide increased funding for IWTF projects. It proposes an increase to the existing fuel tax from \$0.20 to \$0.26-\$0.28 per gallon. This would build on the current system (with no major changes in the revenue collection process) while also providing an increase in fuel tax revenues of about \$27 million per year. Combined with increased federal responsibility for some inland waterway costs, the IWUB argues that this proposal would rebuild the trust fund balance and also fund new investments. (See IWTF balances in **Figure 4**.) While taxpayer and environmental interest groups have not opposed the idea of an increase to the tax, they have opposed the "package" deal of a tax increase along with significant increases to the federal share of inland waterway costs. (See "IWTF Cost-Sharing" section below.)

Other options to increase revenues or prevent a potential shortfall include a capital recovery mechanism (i.e., linking user fees to IWTF balance/expenditures). As previously mentioned, this linkage was a key component of the original user fee proposal in 1978. Such a fee could have potentially prevented the current shortfall in the trust fund by requiring automatic increases in

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<sup>53</sup> This was the original proposal in the earlier versions of the 1978 Bill.

<sup>54</sup> Summary Minutes, Inland Waterways Users Board Meeting, 8/11/2009. Available at <http://waterwaysusers.us/Summary%20Minutes%2061.pdf>.

user fees to match increases in overall spending from the trust fund.<sup>55</sup> The lock user fees proposed by the Bush and Obama administrations also included such a link. It proposed to increase lockage fees by \$6 or \$10 per lockage when IWTF balances drop below \$25 million. (See **Table 2.**) During debate on previous bills, advocates for capital recovery also noted such a mechanism could provide an incentive for users to pursue only the most vital of authorizations.<sup>56</sup> Users have previously argued against capital recovery, noting that it is difficult to plan for a tax that is constantly changing. It would also take the decision on the proper level of taxation on inland waterways out of the hands of Congress.

Congress may also consider additional means to generate revenue for inland waterways. In addition to its proposed lockage fee, the Obama Administration proposed in the FY2010 budget that the Secretary of the Army be provided with authority to further increase lockage fees at some individual congested locks (there was no limit to these proposed increases in the Administration's legislative proposal). An adjustment for inflation is another item that has been discussed, and could be incorporated into either a fuel tax increase or a new lockage fee. An inflation adjustment could provide additional future revenues and increase the real purchasing power of IWTF funds, but some argue that such an automatic adjustment amounts to hidden (and therefore unacceptable) tax increases in the future. (See box below.)

#### **Indexing Excise Taxes to Inflation**

Automatic inflation adjustments for excise taxes such as the IWTF fuel tax are an item of debate among policymakers. Some argue that since construction expenditures tend to increase along with prices and wages, an inflation adjustment of some type (for example, tied to the Consumer Price Index or Construction Price Index) should be factored into taxes that fund these investments. In the case of the IWTF, the lack of an automatic inflation adjustment in the fuel tax rates set in WRDA 1986 means that the overall purchasing power of IWTF revenues has decreased since the tax was set at its current level in 1994.<sup>57</sup> If the original tax had included an annual inflation adjustment based on CPI, CRS calculates that it would be approximately \$0.29 cents per gallon today, and would have resulted in approximately \$300 million in additional revenues since 1994, plus interest on the investment and federal matching funds.<sup>58</sup>

Some excise taxes with similar characteristics to the IWTF fuel tax are indexed for inflation, while others are not. A tax on aviation users was established in 1970 and is authorized to expend its funds on items such as airport planning and construction, safety measures, and related departmental expenditures.<sup>59</sup> Since 2003, this aviation user tax has been indexed to inflation. Alternatively, the Federal Highway Trust Fund funds construction and operations and maintenance on federal highways through a fuel tax of \$18.4 cents per gallon, and is not indexed to inflation. As a result, it has experienced a decrease in real purchasing power (similar to the IWTF). Some states, such as Maine, Wisconsin, and Florida, index their state highway fuel taxes to CPI or some other measure of inflation, while other states have recently considered this option but rejected it.

<sup>55</sup> As previously noted, the IWTF itself and the 50/50 cost-share requirements were set up as a compromise in lieu of capital recovery. However, the recent increase in spending, with no corresponding increase in revenues, has demonstrated one area in which the IWTF itself is unable to automatically adjust.

<sup>56</sup> Reid, p. 124.

<sup>57</sup> Based on the Consumer Price Index, the current tax of \$0.20 cents per gallon is equivalent to approximately \$0.14 cents in 1994 (a decrease of approximately 30%).

<sup>58</sup> This assumes that like most other excise taxes, an inflation adjustment for the IWTF fuel tax would be based on CPI. Some argue that another index, such as the construction cost index, might be a more appropriate basis for this adjustment.

<sup>59</sup> Joseph J. Cordes et al., "Airport and Airway Trust Fund," in *Encyclopedia of Taxation and Tax Policy*, 2<sup>nd</sup> ed. (Washington, DC: The Urban Institute Press, 2007), pp. 4-5.

If no long-term solution is enacted to address the IWTF revenue shortfall, Congress may again be forced to take measures to ensure the solvency of the trust fund. Previously, some of these options have included capping IWTF withdrawals at the level of current year fuel tax revenues or putting a temporary hold on all new contracts and focusing on ongoing work.<sup>60</sup> Both of these options would curtail investments on the inland waterway system to some extent. Congress might also stipulate that some or all of the subset of IWTF investments be exempted from WRDA 1986 cost-sharing requirements (similar to the exemption provided by Congress in FY2009 enacted appropriations). However, an exemption such as this would have an additional cost to taxpayers in the form of funds from the GR account.

## **IWTF Cost-Sharing**

A related question before Congress is whether the current cost-share arrangement for inland waterway projects is adequately balanced. As previously mentioned, WRDA 1986 established cost-sharing requirements for construction and major lock rehabilitation projects. Under WRDA 1986, construction and major rehabilitation were cost-shared, while “routine” operations and maintenance was a 100% federal cost. Several years later, WRDA 1992 (P.L. 102-580) established that “major rehabilitation” should be defined as any upgrade requiring more than \$8 million in total funding (among other requirements).<sup>61</sup>

While the Administration’s lock user fee would not alter the current cost-share, the IWUB proposal would significantly modify this arrangement. As previously mentioned, it would change the existing cost-share arrangement to exclude dams and minor rehabilitation from cost-share requirements, shifting funding for these types of projects to 100% federal funding from the General Revenue stream. Notably, the IWUB reasons that costs for dams should be a federal responsibility because significant segments of the U.S. population benefit from these structures.<sup>62</sup> The IWUB also proposes a new threshold for what it considers to be major lock rehabilitation, specifying \$100 million as the new cut-off between routine operations and maintenance and major rehabilitation.<sup>63</sup> In short, the IWUB proposes to redefine the \$8 million threshold established for projects in WRDA 1992, and replace it with a threshold of \$100 million. This would in effect greatly increase the number of maintenance and rehabilitation projects that are federally funded. Additionally, the report proposes to make all cost overruns for IWTF construction projects a 100% federal responsibility. While some note that this provides project managers within the Corps an added incentive to keep projects within budget, critics note that the change represents an additional hidden cost to the federal government that is not reflected in IWUB report’s estimates.

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<sup>60</sup> The FY2011 budget, as well as the Senate Appropriations Committee markup, have chosen to limit trust fund withdrawals to current year revenues.

<sup>61</sup> Like the original fuel tax, this amount was not indexed for inflation.

<sup>62</sup> IMTS Capital Investment Strategy Team, p. 69. An important point regarding this proposed change is that it includes the dam portion of lock and dam projects. Thus, for future proposed upgrades or new construction of lock and dam projects, the report proposes to divide up these costs (which are currently cost-shared). This may prove controversial, since many argue that lock users benefit significantly from these systems.

<sup>63</sup> WRDA 1992 (P.L. 102-580, §205) established a statutory definition for “rehabilitation” of Inland Waterways projects. Generally rehabilitation projects are subject to the IWTF cost-share arrangement, while routine operations are a 100% federal responsibility.

The overall effect of the IWUB's proposed changes would be to shift the overall costs for inland waterway projects toward the federal government. Assuming the proposed project list in the IWUB report, CRS calculates that the cost-share arrangement for IWTF construction projects would shift from the current 50/50 arrangement to approximately 68% federal, 32% non-federal (see **Table 4**).<sup>64</sup> While commercial waterway users and the IWUB favor this shift in order to distribute the cost-share burden, taxpayer and environmental groups note that the IWTF already benefits from significant federal support in the form of 100% federal funding for investigations (studies) and operations and maintenance. In recent years, this support has represented an additional \$500-\$650 million annually of federal expenses with no cost-sharing requirements.<sup>65</sup> Assuming existing funding trends for other Corps work supporting inland waterways (e.g., operations & maintenance and investigations), CRS calculates that federal costs for inland waterways under the proposal could rise to more than 90% of the total costs for the system. Currently, the federal government is responsible for about 80%-85% of these costs annually, with some variation.

Some have previously argued for a shift in cost-sharing in the other direction. These groups, including the aforementioned environmental and taxpayer interest groups, have argued that waterway users should not only pay for 50% of construction and major rehabilitation costs, but also pay for some portion of routine operations and maintenance costs. In its FY2004 budget request (when trust fund balances were still relatively high), the Bush Administration proposed to have the trust fund pay not only for construction, but also for a portion of operations and maintenance expenses.<sup>66</sup> Congress has in the past rejected these proposals, but it may once again come up in the context of debate over cost-sharing responsibilities.

## **Other Issues with Inland Waterway Planning**

Finally, users may ask Congress to weigh in on other suggested reforms to Corps IWTF planning processes. Among other things, the IWUB proposed a number of reforms to increase its involvement and improve project prioritization. Industry users argue that many of these reforms will decrease the likelihood of cost overruns, which have in the past been a problem for IWTF projects. A previous study by the Corps concluded that in several cases, a number of factors contributed to cost overruns, including inaccurate construction schedules and costs, general cost escalation, and non-optimal funding. However, the degree of involvement by a non-federal entity in the planning and decision-making process could raise concerns related to conflicts of interest.

The method of prioritization for all inland waterway projects may be an additional item that gains congressional attention. As noted in the IWUB report, IWTF investments to date have usually been considered in isolation, that is there is no formal set of criteria used to make decisions among investments competing for IWTF funds. Instead these decisions are largely left to the Corps and the Administration (in the annual budget formulation process) and Congress (in the appropriations process). The IWUB proposes to alter this practice by adopting a priority ranking

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<sup>64</sup> Several additional factors could potentially increase the federal share beyond the 68% level. For instance, this estimated ratio does not account for cost-overruns that are currently cost-shared but would be a federal responsibility under the IWUB proposal. Additionally, it assumes the annual funding for the IWUB recommended project list instead of the overall IWUB program recommendation of \$380 million per year (the latter results in a ratio of 72% federal, 28% non-federal).

<sup>65</sup> CRS calculation based on Corps of Engineers Data as of September 2010.

<sup>66</sup> See FY2004 budget justifications for the U.S. Army Corps of Engineers.

system, which is described in detail in the IWUB report.<sup>67</sup> Significantly, the IWUB report recommends that this system be promulgated as a regulation. This could fundamentally affect the role of Congress in the project selection and funding process.<sup>68</sup> Currently, Congress decides which projects to authorize, which feeds the need for appropriations on specific projects. If the system for prioritizing investments in the IWUB report is promulgated as a regulation, the Corps would utilize these criteria to select projects for funding, and the role of Congress could potentially be limited to providing project authorizations and overall appropriations levels for the IWTF.

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<sup>67</sup> IMTS Capital Investment Strategy, pp. 23-66.

<sup>68</sup> See IMTS Capital Investment Strategy, p. xv.