

Since the vast majority of commodities transported on the IWS are shipped on the Upper Mississippi River (UMR), Illinois River, Ohio River and/or Lower Mississippi River, I will limit all detailed discussions on those four rivers. Table 1 below compares barge traffic volumes, appropriations and estimated Inland Waterways Trust Fund receipts for 2014 on those segments of the IWS. This table allows us to dig deeper into the cost and use of each of these segments of the IWS so that we can better evaluate the use of taxpayer dollars and weigh the benefits to society of the IWS, the industries it serves, and the materials it transports.

River	2014				IWTF Annual Receipts (Estimated Average thru 2014)
	Barge Tons Transported	IWS Construction Appropriation & Major Rehabilitation	IWS O&M and Regulatory Appropriation ²	Environmental Restoration Appropriation	
Upper Mississippi Total (57%*)	114,563,000	\$49,690,000	\$183,375,000	\$31,968,000	\$15,000,000
Grain & Oilseeds (65.9%*)	33,788,000				
Crude materials, inedible except fuels (43.3%*)	20,376,000				
Coal (18.1%*)	17,399,000				
Illinois Total	35,310,000	\$11,800,000	\$42,335,000	See Note 3	\$5,000,000
Grain & Oilseeds	10,987,000				
Petroleum and petroleum products	6,546,000				
Chemicals and related products	5,425,000				
Ohio Total (42%**)	220,835,000	\$164,960,000	\$115,358,000	\$0	\$20,000,000
Coal (56.8%**)	112,877,000				
Crude materials, inedible except fuels (41.7%**)	51,594,000				
Grain & Oilseeds	19,293,000				
Lower Mississippi Total	200,123,000		\$84,074,000	\$0	\$33,000,000
Grain & Oilseeds	71,603,000				
Crude materials, inedible except fuels	35,477,000				
Petroleum and petroleum products	25,081,000				
Mississippi River & Tributaries System Total (excluding Ohio)		\$58,015,000	\$76,978,000		
Totals		\$284,465,000	\$502,120,000	\$31,968,000	\$73,000,000

* Percentage above St. Louis
 ** Intra traffic - does not leave system
 1. Does not include any of the \$81,500,000 appropriated in a separate line item for the IWS
 2. Does not include any of the \$42,000,000 appropriated in a separate line item for the IWS
 3. UMRS includes restoration for Illinois River
 4. Appropriations data from *Energy and Water Development and Related Agencies Appropriations Act*, 2014, Division D
 5. IWTF Annual Receipts Estimate from *Corps of Engineers Water Resources Infrastructure Deterioration, Investment, or Divestment*, NRC-NAS, 11-12
 6. Barge Traffic Volume Source: *Waterborne Commerce - Waterways, Harbors, Gulf Coast, Mississippi River System*, USACE, 2014

Table 1: River barge traffic volume, Congressional appropriations and IWTF Receipts for 2014

There are several interesting observations that one can make from the table's information, though we will discuss only a few of them here.

Although our IWS expenditures are justified in part by the claim that they help with US exports, in fact nearly half of the IWS traffic on some major segments is not exported at all. About 42 percent of all traffic on the Ohio River system, equivalent to about 92.75 million tons, remains within the system.

IWS expenditures are also justified by the claim that the materials transported by barge are benefitting the nation. Unfortunately, the materials shipped on the IWS are problematic at best. At least 130 million tons of that is coal. Instead of discouraging carbon use by increasing the cost, we are actually making coal cheaper by passing the cost of transport on to the taxpayers via the highly subsidized IWS.



If we look at a breakdown of where the high costs of the IWS are coming from, the UMR and Illinois River segments receive much more funding per ton transported. The largest portion of the Operation and Maintenance costs were incurred on these segments during 2014 at over \$235 million. The Ohio River received nearly \$165 million in construction appropriation with nearly all of that funneled to the new \$3 billion Olmsted Locks & Dam project. Although both the Ohio River and the Lower Mississippi River segments have considerably more barge traffic than the combined volumes of the UMR and Illinois River segments, the UMR and Illinois River typically receive considerably more funding. These details raise many questions: What is the true value of each segment? Is it really worth all this taxpayer money to maintain the most expensive segments when other segments cost a lot less yet haul a lot more? Are the most expensive projects (like the Melvin Price Locks on the UMR) worth the cost?

In fact, when the true price of locks and dams is contrasted with the traffic and tonnage that actually uses the locks and dams, it becomes clear that a good portion of upstream traffic isn't even using the locks and dams. It is also important to note that about 43 percent, or about 49 million tons, of the 114.5 million tons of Upper Mississippi River system barge traffic enters at the open river area near and below St. Louis, which is below the last set of locks on the UMR, Locks 27. Typical upstream annual traffic through Locks 27 near St. Louis has been about 20 million tons in 2014 and 2015. Therefore, about 29 million tons (49 million – 20 million) of the UMR barge traffic does not go through locks, so a traffic comparison between segments should consider that adjustment.

Finally, in 2014 these four IWS segments received about \$786.5 million in construction, rehabilitation, and Operation & Maintenance appropriations related to the barge channel. All that was spent on environmental restoration of these significantly degraded rivers was slightly under \$32 million, and only for the UMR Restoration (UMRR) program on the Upper Mississippi River and Illinois River segments. (The Ohio and the Lower Mississippi River do not receive any money for restoration.) Sadly, that \$32 million received in 2014 was an unusually high appropriation for the UMRR program. The UMRR typically receives only about \$20 million per year.

After the completion of the construction of the series of locks and dams on the UMR and Illinois River segments in the 1940s subsequently, the major new construction on the UMR was the construction of the Melvin Price Locks & Dam in the 1980s to replace the existing Locks & Dam 26 located adjacent to Alton, Illinois. The history of the Melvin Price Locks & Dam was outlined in our article [The Dam That Was Too Big to Hide](#).

The article describes the arduous political and legal battle that ensued when the Corps attempted to build the new locks and dam without adequately complying with National Environmental Policy Act (NEPA) that was signed into law on New Year's Day 1970. Many concessions and several new directions in the Corps management of our rivers, especially the Upper Mississippi River and Illinois River, were mandated in the Water Resources Development Act (WRDA) of 1986. These included the construction of a second 600-foot lock at the new Melvin Price Dam to supplement the previously authorized 1,200-foot lock. The new ecosystem restoration program called the Environmental Management Program (later to become the UMRR program) was also authorized to begin the task of restoring the highly degraded UMR and Illinois River.

Next we will examine the one other major item that Congress included in the 1986 WRDA, and the first committee in our comparison, which is the Inland Waterways Users Board.

The Inland Waterways Users Board

Besides the additional 600-foot lock at Melvin Price Dam, the barge industry also received a huge gift with the establishment of the new Inland Waterways Users Board in Section 302 of the original WRDA 1986:

There is hereby established an Inland Waterway Users Board (hereinafter in this section referred to as the "Users Board") composed of the eleven members selected by the Secretary, one of whom shall be designated by the Secretary as Chairman. The members shall be selected so as to represent various regions of the country and a spectrum of the primary users and shippers utilizing the inland and intracoastal waterways for commercial purposes. (emphasis added)

The primary duties of the Users Board were:

(to) meet at least semi-annually to develop and make recommendations to the Secretary regarding construction and rehabilitation priorities and spending levels on the commercial navigational features and components of the inland waterways and inland harbors of the United States for the following fiscal years. Any advice or recommendation made by the Users Board to the Secretary shall reflect the independent judgment of the Users Board.

Because the Users Board was to be subject to Federal Advisory Committee Act (83 Stat. 770; 5 U.S.C. App.) they were granted, with approval of the head of the agency, the ability to “*use the facilities and services of any Federal agency*” and they could “*be allowed travel expenses, including per diem in lieu of subsistence.*” (emphasis added)

The Users Board's detailed duties were significantly expanded in the 2014 Water Resources & Reform Development Act as shown [here](#). Additional annual “advice and recommendations” requirements to the Assistant Secretary of the Army (ASA) prior to the preparation of the President budget regarding barge navigation priorities and to Congress and others on four other barge navigation related issues. Also, “a representative of the Users Board” will be appointed by the Users Board's Chair “to serve as an advisor to the project development team for a qualifying project or the study or design of a commercial navigation feature or component of the inland waterways and inland harbors of the United States.”

The depth of the Corps' dedication to the Users Board is outlined on the Institute for Water Resources [webpage](#):

***The U.S. Army Corps of Engineers** is the proponent for the (Users) Board. The Deputy Commanding General for Civil Works and Emergency Operations is the Executive Director. The Corps Headquarters also provides the Executive Secretary to the (Users) Board. The Corps' Institute for Water Resources in Alexandria, Virginia provides the Executive Assistant and other subject matter specialists that support the authorized activities of the (Users) Board.*

Other [Federal Agencies](#) are also designated as observers at the meetings including National Oceanic and Atmospheric Administration, Maritime Administration, U.S. Department of Agriculture (USDA) and the Office of the Assistant Secretary of the Army for Civil Works.

The Users Board meetings are well attended by the military portion of the Corps with one major General who serves as the Users Board's Executive Director and several other lower level officers including at least one Colonel present. Presentations are provided to the Users Board primarily by Corp navigation specialists.



Figure 2: The Users Board Meeting in St. Charles, Missouri, in December 2015

This Users Board has many advantages for the barge industry and its proponents.

1. It covers the entire IWS with just 11 members.
2. The members are appointed by the ASA. No special requirements other than to be a representative of the "spectrum of the primary users and shippers utilizing the inland and intracoastal waterways for commercial purposes" are required.
3. The government pays travel and per diem for the Users Board members meeting's cost. In Fiscal Year 2014 \$860,000 was appropriated for Users Board costs. This funding is provided through any established navigation project from the IWTF. It is a direct Treasury expense. This appropriation does not cover most of the Corps costs associated with the User's Board, which are covered in other appropriations.
4. Federal agencies, other than the Corps are designated as "observers" and have no formal or legislatively required obligations or input into the Users Board's advice and recommendations to the ASA/Corps Headquarters or Congress.
5. There are no other stakeholders participating.
6. There are no formalized outside opinions provided to the Users Board members at meetings other than public statements, typically limited to about five minutes.
7. There are no guidelines on how the Users Board makes decisions.
8. The Users Board has direct input by providing advice on the development of new Corps navigation projects.
9. The Users Board's Executive Director and Executive Secretary are provided by the Corps.

The 2016 member listing of Users Board is shown in Table 2 and can be also found [here](#).

	Company	Position	Rver Segment Represented	Products Shipped
1	American Commercial Barge Line LLC	Chair	LMRS/UMRS	Coal, petroleum, grain, fertilizer, chemicals, etc. transport
2	Kirby Corporation	Vice-Chair	Gulf Intracoastal - West	
3	Bruce Oakley, Inc		LMRS	Grain and fertilizer distribution and storage facilities and barge transport
4	Parker Towing Company, Inc.		Gulf Intracoastal - East	
5	LafargeHolcim		UMRS	Cement and asphalt construction and oil and gas development products
6	American Electric Power (AEP), River Transportation Division		ORS	Electrical generation and coal transporting
7	CGB Enterprises, Inc.		UMRS	Agriculture related distribution, inputs, processing and transporting (barges and containers)
8	Amherst Madison, Inc.		ORS	Barge transporting and marine construction
9	Ingram Barge Company		LMRS	Transport coal, petroleum products, grains, construction materials and recycled metals
10	Tidewater Barge Lines, Inc.		Columbia/Snake River	
11	Murray American Transportation Company		ORS	Mines and transports coal

Table 2: 2016 members of the Users Board, which river segments they represent, and what they transport

The primary beneficiaries of the Users Board are clearly the navigation industry and their clients – which are primarily industrial agriculture, the coal industry, and the petroleum industry.

Although it is likely that there are other boards or committees that have strong parallels or comparisons to the Users Board such as a strong narrow economic focus and significant autonomy, you might wonder if are there any comparable federally established boards or committees that are focused upon the environment.

The Missouri River Recovery & Implementation Committee (MRRIC)

I am familiar with one comparable example of a stakeholder organization that was established by Congress to provide the Corps guidance in their congressionally-mandated efforts to recover and restore the Missouri River. This group is the Missouri River Recovery & Implementation Committee or MRRIC, which I served on from 2012 into 2015.

MRRIC was established by Congress in the WRDA 2007 and the following extract (Section 5018 (a) from that legislation outlines the scope of the guidance that MRRIC was to provide the Corps regarding the Missouri River (emphasis added):

(1) IN GENERAL.—The Secretary, in consultation with the Missouri River Recovery Implementation Committee to be established under subsection (b)(1), shall conduct a study of the Missouri River and its tributaries to determine actions required—

(A) to mitigate losses of aquatic and terrestrial habitat;

(B) to recover federally listed species under the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.); and

(C) to restore the ecosystem to prevent further declines among other native species.

MRRIC was clearly to provide guidance regarding mitigation, recovery and restoration of both the degraded river and floodplain environment, and the species that had been lost or endangered within them. This is strictly an ecological emphasis; there are no expressed caveats within the legislation for protecting existing economic development or limitations upon compliance with existing environmental laws.

Congress listed within the WRDA 2007 who should participate with MRRIC and who should be represented as stakeholders:

(2) MEMBERSHIP.—The Committee shall include representatives from—

(A) Federal agencies;

(B) States located near the Missouri River basin; and

(C) other appropriate entities, as determined by the Secretary, including—

(i) Indian tribes located near the Missouri River basin; and

(iii) nongovernmental stakeholders, which may include—

(I) navigation interests;

(II) irrigation interests;

(III) flood control interests;

(IV) fish, wildlife, and conservation organizations;

(V) recreation interests; and

(VI) power supply interests.

Through the addition of several nongovernment stakeholders categories during the drafting of the MRRIC Charter by a small group of special interests representatives, along with other subsequent additions, the nongovernment stakeholders categories has swelled from six to sixteen and currently there are a total of 29 individual voting nongovernment stakeholders.

The duties of MRRIC were also laid out by Congress within WRDA 2007:

(3) DUTIES.—The Committee shall—

(A) with respect to the study to be conducted under subsection (a)(1), provide guidance to the Secretary and any affected Federal agency, State agency, or Indian tribe; and

(B) provide guidance to the Secretary with respect to the Missouri River recovery and mitigation plan in existence on the date of enactment of this Act, including recommendations relating to— [seven items are detailed within the legislation from adjusting implementation strategy due to using adaptive management to the annual preparation of a work plan and budget requests related to the work plan]

Further, the committee formation anticipated the need to provide a venue for differing opinions regarding the recommendation and guidance provided to the Corps.

(4) RECOMMENDATIONS AND GUIDANCE.—In providing recommendations and guidance from the Committee, the members of the Committee may include dissenting opinions.

WRDA 2007 excluded MRRIC from being classified as a Federal Advisory Committee Act and expressly stated that no travel costs or expenses would be allowed for stakeholders. However, in the Water Resources & Reform Development Act of 2014, travel compensation for stakeholders could be paid. But the funding would come from MRRP funding, not the treasury, thus reducing the funding for actual recovery program activities.

(5) COMPENSATION; TRAVEL EXPENSES.—

(A) COMPENSATION.—Members of the Committee shall not receive compensation from the Secretary in carrying out the duties of the Committee under this section.

(B) TRAVEL EXPENSES.—Travel expenses incurred by a member of the Committee in carrying out the duties of the Committee under this section shall not be eligible for Federal reimbursement.



Figure 3: MRRIC Stakeholders, 2015 (Photo Credit: USACE)

Numerous Corps and considerably fewer US Fish & Wildlife Service (USFWS) representatives participate at the MRRIC meetings but most, if not all, of them are otherwise performing work on MRRP and provide input on MRRP at MRRIC meetings. Occasionally a Corps District Commander (colonel) or the Division Commander (general) will attend parts of the meeting. The quarterly meetings are also attended by a Charter established management level staff person from the Corps and USFWS. Several Native American tribes also participate. Other federal

agencies attend including US Geological Survey, Natural Resources Conservation Service–USDA, National Park Service, Bureau of Reclamation, Western Area Power Administration, and US Forest Service (USDA). Representatives from State agencies from eight states, facilitation support personnel, and science & technical support professionals attend. A typical meeting will have at least 100 people attending.

As a group created to provide recommendations and guidance to the Corps regarding MRRP, it can be assumed that it is the public that would benefit from the efforts of MRRIC. This would manifest through the eventual restoration of the river and its floodplain and all of the ecological and economic benefits that would flow from the improvements to the river's health and functionality.

Comparisons between the Users Board and the MRRIC

Both the Users Board and MRRIC were created by Congress within WRDAs to perform specific activities relating to one or more of what are designated navigable rivers. Both entities provide guidance to the Corps/ASA regarding the activities they are tasked with. That essentially covers all of the major similarities between the two entities.

It is the contrasts between the two entities that are more interesting:

Diversity of Stakeholders:

While the 29 stakeholders and the tribes participating in MRRIC represent a very diverse cross-section of the country in their backgrounds and interests, the eleven members of the Users Board are stark in their near total lack of diversity. This like-mindedness is actually a strong advantage for promoting the goals of the Users Board. The diversity of MRRIC plays out negatively in another way. Many of its stakeholders are lacking in organization support and funding, as well as training and knowledge in the vast array of issues that are discussed in meetings. Because of this many members are constantly playing catch-up, trying to keep up with the deluge of information. Each of the Users Board's members is fully supported financially and technically by the company that they represent. What is most obvious is the contrast in the level of power in the meetings of the two groups. The Users Board reeks of power and influence and this power can be measured by the subservient actions and dress of the Corps and their staff; who clearly know that the Users Board is their major client. There is no power center within MRRIC meetings, other than the Corps since they are the entity responsible for MRRP.

Process Constraints:

The more efficient the process is the more effective an organization will be. The Users Board process is very efficient. The Corps manages the Users Board on a daily basis at the highest level – the Deputy Commanding General for Civil Works and Emergency Operations. The Users Board meetings are chaired by one of their own selected by the ASA. From what I have witnessed at the two meetings I have attended, a major decision can be rendered in minutes by a majority vote of its well-informed and equally devoted members.

In contrast MRRIC is an inefficient organization because of its number of stakeholders and the broad and conflicting goals of those stakeholders. The Chair is an outsider selected not only for their experience but for their required neutrality regarding the goals of MRRIC's members. But what is most inefficient about MRRIC is its decision-making process. Special interests managed to write a Charter that requires unanimous consent of all significant decision, at two consecutive

quarterly meetings. This not only delays a decision by at least three months, it actually eliminates the possibility of ever passing anything controversial.

Reasons That Each Group Exists:

Users Board deals only with their narrow goal of expanding the barge capacity and efficiency of the highly subsidized IWS and has no other interest to consider or satisfy in making its recommendations. In contrast, MRRIC exists to provide broadly agreed upon guidance to restore the severe damage caused by the transformation of the Missouri River into a barge canal.

In a nutshell, one could say that the Users Board exists to expand river navigation without considering the detriment the projects cause to the health of our rivers, whereas MRRIC exists to try to fix the damage done to one of those rivers by past river navigation projects.

Conclusion and Recommendations

MRRIC and the Users Board essentially represent extremes:

MRRIC: Too many stakeholders and an overly onerous process

Users Board: Too few stakeholders and an extremely streamlined process

A more centrist model for each needs to be developed in order to serve the public's best interests, which neither group is currently doing.

I discussed MRRIC in detail in a previous article titled [“MRRIC” – A lesson on how not to restore a river](#) and concluded that MRRIC was ineffective. The article also briefly mentioned the Users Board as a potential alternative model for improving river restoration recommendations. This article has dug deeper into this premise of an alternate model for entities like MRRIC.

In summary, the models need to be reversed and modified because it should be much more difficult to damage our rivers and much easier to restore them. Unfortunately, we continue to live with misunderstood and erroneous river economics. By discounting, or more accurately not counting, the value of ecosystem services provided to us by healthy and functioning rivers and floodplains, while concurrently overestimating the value of subsidized river transportation, poor and costly decisions are inevitable and continue to be made regarding our rivers.

For river restoration, the group must be tasked to provide recommendations on the best and most effective methods or projects to restore the river. Therefore, their focus must be first and foremost on the health of the river system and its dependent species. A much leaner and narrowly focused group of stakeholders comprised primarily of environmental and conservation organizations would better fulfill this requirement and should encompass the voting members. Participation by other interests should be allowed and limited to providing input into the group's discussions, but those other interests should have no voting rights. This exclusiveness is reasonable because the group is providing recommendations to the Corps, who will make decisions based upon the legally mandated Environmental Impact Statement process and other legally mandated authorities.

For river navigation, the stakeholders within the existing Users Board must be expanded beyond the current narrow industry make-up. The current narrow focus of the Users Board is not representative of the public and it is the public's money that provides at least half of the funding for each new or rehabilitated project and all of the funding for Operation & Maintenance of the

navigation infrastructure and river restoration. The public needs a direct and equal voting voice on the Users Board to ensure that navigation projects better serve the public. The intent should be to eliminate the future need of other committees like MRRIC by proactively minimizing the projects harmful effects on our rivers.

For both groups, a requirement for 100 percent consensus on significant decisions is unnecessary and actually detrimental to their ability to function. What level of majority required for significant decisions should be carefully considered and should take into account the ultimate stakeholder make-up of each group so that no specific stakeholder group can control the recommendation process.

MCE Recommendations for Committee Structure:

Missouri River Recovery Implementation Committee	Inland Waterways Users Board
<ul style="list-style-type: none"> • Smaller number of stakeholders 	<ul style="list-style-type: none"> • More participants from more diverse stakeholder groups
<ul style="list-style-type: none"> • All voting stakeholders from environmental and conservation organizations • Other stakeholders provide input to the committee only 	<ul style="list-style-type: none"> • Voting members from broader spectrum of stakeholders
<ul style="list-style-type: none"> • No requirement for 100% consensus 	<ul style="list-style-type: none"> • No requirement for 100% consensus

<http://moenvironment.org/environment-blog/2017/02/09/the-troubling-double-standards-on-our-rivers/>

