



**NATIONAL WATERWAYS
FOUNDATION**



WATERWAYS: *National Economic Return on Investment*

*Our waterways keep commodities and exports
on the move and American jobs on the rise.*

*From "Inland Navigation in the United States: An Evaluation of
Economic Impacts and the Potential Effects of Infrastructure Investment,"
University of Tennessee and University of Kentucky (November 2014).*

Keeping our Inland Waterways Systems Thriving:

Will Protect Over 541,000 American Jobs

The Economic Impact Study Examines the Value of the Waterways System and the Benefits of an Accelerated Program of Waterways System Improvements

The joint University of Kentucky-University of Tennessee study provided an evaluation of five waterways segments:

- Gulf Intracoastal
- Ohio River
- Upper Mississippi
- Lower Mississippi
- Pacific Northwest

Entitled "Inland Navigation in the United States: An Evaluation of Economic Impacts and the Potential Effects of Infrastructure Investment" (November 2014), the study was prepared using Regional Economic Models, Inc. (REM1) simulation software, which is capable of modeling the likely response of industries that would be affected in the event of total waterways navigation loss.



Investing in America's Inland Waterways Keeps the Economy – and Jobs – Afloat

In 2010, the Inland Waterways Users Board approved and adopted a report prepared by a Corps of Engineers-industry team of experts titled, "Inland Marine Transportation System (IMTS) Capital Projects Business Model Report" that proposed a series of navigation system investments over a 20-year period. For the purposes of the university study, these 21 lock and dam projects were examined, but on an accelerated 10-year completion basis.

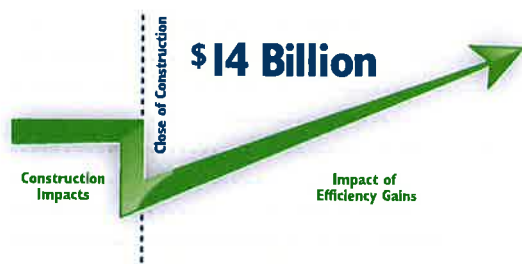
Completing Priority Navigation Projects Could Generate Over

\$1 Billion

in New Job Income Annually



Expected Economic Outcomes from Improved Navigation



Planning for a Decade and Beyond

The enactment of water resources legislation (WRRDA 2014) allows more federal funding of the Olmsted Locks and Dam replacement project between Illinois and Kentucky, currently under way. Increased Inland Waterways Trust Fund monies designated for this project will be freed up as a result, enabling a larger number of additional navigation projects to be completed more efficiently.

This study showed that both the construction work and resulting improvements would bring about significant new economic activity. With investment in navigation infrastructure, the study projected nearly 350,000 job-years of new, full-time employment with a present value of more than \$14 billion over the 10-year period examined.

Accelerated Investments:

Produce Economic Output of \$3.3 Billion

New Jobs in a Healthy Economy

If new investment could be made to the inland navigation system on an accelerated, 10-year modernization plan, **10,000 to 15,000 new jobs** with an **annual economic value of about \$800 million** could become available.



In the second decade, the completed navigation improvements could result in **10,000 new jobs throughout the economy each year**, with a total income of **\$740 million** in the first year (navigation effects) to over **\$1 billion** by year 20.

Output Gains* Resulting from Investment (in millions)

Region	First Year Construction Effects	Final Year Construction Effects	First Year Navigation Effects	Year-10 Navigation Effects	Year-20 Navigation Effects
Ohio River	\$590.0	\$487.3	\$323.4	\$1,352.8	\$1,609.5
Upper Mississippi	\$565.3	\$455.8	\$365.3	\$1,112	\$1,410.5
Lower Mississippi	\$31.5	\$19.3	\$70.4	\$167.5	\$199.8
Gulf Intracoastal	\$350.4	\$282.3	\$177.8	\$496	\$583.5
Pacific Northwest	\$11.7	\$2.9	\$10.6	\$7.5	\$6.3
Rest of Nation	\$670.0	\$238.0	\$754.0	\$212.0	\$96.0
Total	\$2,218.9	\$1,485.6	\$1,701.5	\$3,347.8	\$3,905.6

*Output gains are economy wide increases in the volume of available goods and services.

While it is not expected that such a construction program will be implemented, the study illustrates the results that might be attained.

Investing in badly needed improvements to our aging waterways infrastructure would lead to the creation of tens of thousands of high-quality permanent jobs and add billions of dollars to America's economy.



LOSS OF WATERWAYS EQUALS ECONOMIC DAMAGE

Whether measured in output, employment or income, putting an end to commercial navigation on our inland waterways would have an immediate and crippling impact. In the event of a waterways system shut down, the devastating economic consequences would be a total 10-year loss of **\$1.063 trillion**, when discounted to reflect that some of the loss is still several years away. The country would lose about **541,000 jobs** worth **\$29 billion**, nearly one-third of which would not be located near rivers. Additionally, the industry would be faced with increased annual shipping costs of about **\$12.5 billion**, which would be passed onto American consumers in the form of higher costs for goods.

Price of Electricity Would Rise for Half of Americans



7.8%

Roughly Three Times the Normally Expected Annual Increase!

Estimated Diversion of Shipping Traffic with Loss of Waterways



Gulf Region Shipping Concerns

Hardest hit by a total waterways system closure would be the Gulf and Lower Mississippi Regions, where petrochemical products dominate industrial production and alternative transportation in the region is limited.



The Trouble with Aging

The 12,000 miles of our navigable inland waterways system touch 38 states and carry approximately 565 million tons of freight annually. The 242 locks and dams are maintained and operated by the U.S. Army Corps of Engineers. The oldest of these, the Elizabeth Lock and Dam (L/D#3) in Pittsburgh, opened to traffic in 1906, but most were built in the 1930s and '40s. The aging infrastructure as a whole is in critical need of modernization, without which the inland waterways system will cease to provide reliable freight transportation capacity.

Economic Output Value for Existing Waterways Regions (in billions)

Region	Year-1	Year-10
Ohio River	\$10.724	\$16.755
Upper Mississippi	\$12.180	\$18.571
Lower Mississippi	\$19.909	\$25.427
Gulf Intracoastal	\$48.775	\$63.080
Pacific Northwest	\$0.935	\$1.525
Rest of Nation	\$31.629	\$6.600
Total	\$124.152	\$131.958
10-Year Present Value	\$1.063 Trillion	

TOTAL SHUTDOWN?

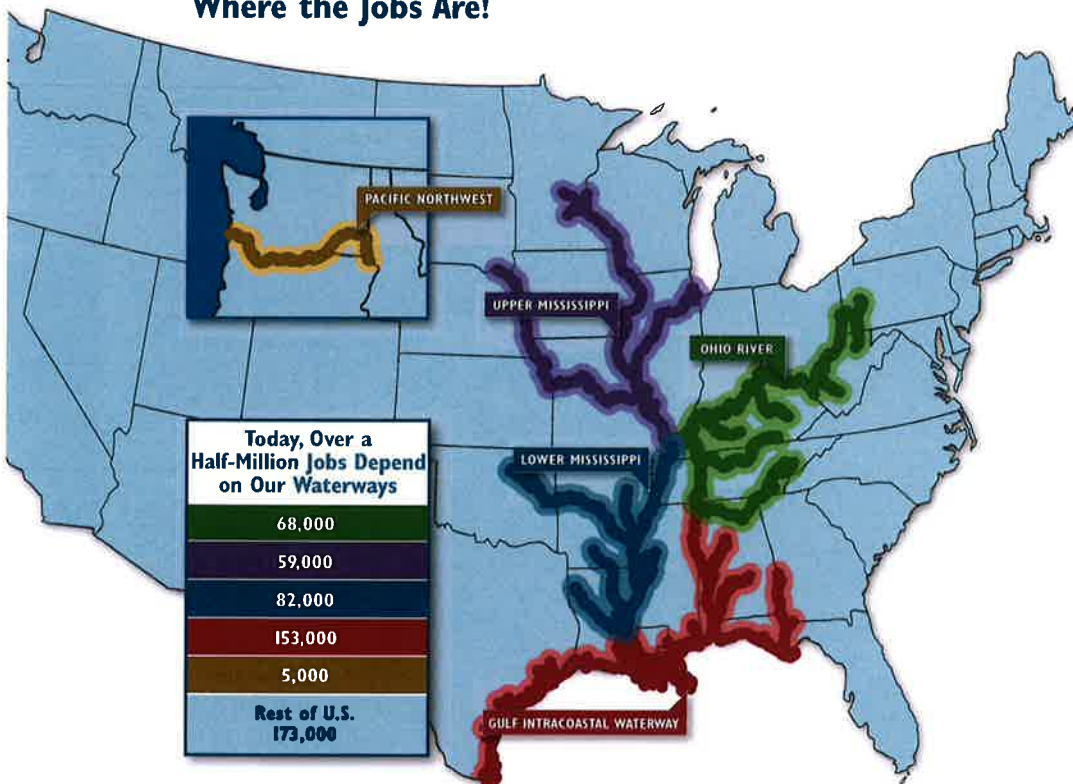
What would happen if America's inland waterways were suddenly closed to all commercial shipping?

- Shipper savings losses incurred (*increased production costs*) would equal **\$12.5 billion**
- Electricity prices for affected customers would see an increase of **7.8%**
- Up to **75%** of waterways traffic would be diverted to rail or truck with **25% lost** to decreased production
- The U.S. energy renaissance of crude oil, shale and natural gas, ethanol and petroleum products would be severely impacted

Improving our inland navigation system would result in direct, positive impacts on the nation's economy

This study shows that we could generate tens of thousands of new jobs nationwide and add billions of dollars to America's economy year after year if we accelerate the investments recommended in the IMTS report.

Where the Jobs Are!



Waterways Infrastructure Investment Assures Good-Paying American Jobs and Improved Economic Conditions Across America.

To view the full study, "Inland Navigation in the United States: An Evaluation of Economic Impacts and the Potential Effects of Infrastructure Investment," visit our website: www.nationalwaterwaysfoundation.org



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The mission of the National Waterways Foundation is to develop the intellectual and factual arguments for an efficient, well-funded and secure inland waterways system.

The Foundation needs your support. To find out how to get involved, learn how your organization can benefit from the Foundation's research, or to make a tax-deductible donation, please call or visit our website.

