

## THE LONG SLOG: WHAT LIES AHEAD FOR THE FINANCING OF OUR NATION'S INLAND WATERWAYS INFRASTRUCTURE

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### HOW DID WE GET HERE?

America's locks, dams, and inland waterways are old. The system was designed and built for the last century and funding to support federal reinvestment for major rehabilitation has steadily decreased. In 2009, the American Society of Civil Engineers (ASCE) estimated that over the next five years the funding shortfall for inland waterways would exceed \$20 billion (ASCE, 2009). The ASCE further estimated that the underinvestment in America's inland waterways cost U.S. businesses some \$33 billion in 2010 (ASCE, 2012).

Expenditures by U.S. Army Corps of Engineers Civil Works to address infrastructure have averaged about \$1.5 to \$2 billion per year for the last decade (USACE, 2012). These funds have only served to minimally maintain the serviceability of the most crucial inland and coastal navigation infrastructure projects. To accommodate the expected increase in agricultural exports through the Gulf of Mexico, the nation's current inland waterways must be repaired, in some cases upgraded, with adequate assurances that improvements will be maintained.

Over the past five years, total expenditures for lock and dam improvements and for operations and maintenance of inland waterway navigation structures and channels have remained flat (USACE, 2011, 2012). A growing concern exists regarding how best to secure and efficiently spend funds to ensure the viability of this national maritime system while protecting past and future investments.

The Inland Waterways Trust Fund, established as part of the Inland Waterway Revenue Act of 1978, and intended to support a cost-shared approach to the financing of construction and major rehabilitation on the nation's inland waterways, continues to experience significant funding shortfalls (Senate Report, 2012). Cost overruns at ongoing cost-shared construction sites are exacerbating the inability of the trust fund to keep up with a growing backlog of deferred maintenance.

In the 2007 Water Resources Development Act, Congress approved a long-term program of navigation improvements and ecological restoration for the Upper Mississippi River System, a vast and critically important component of our nation's inland waterway system [(H.R. 1495 (110th), Water Resources Development Act of 2007, 2007)]. This program, the Navigation and Ecosystem Sustainability Program (NESP), was scheduled to be implemented in increments over a 15-year period. It is a planned for approach, critically needed, conceived of years ago, deliberated and debated at great length, authorized over seven years ago, and yet still unfunded by Congress. Authorization without appropriation means no action.

As a result, a growing funding gap exists to finance major rehabilitation, let alone expansion of aging infrastructure along our nation's inland waterways. Recognizing the critical importance of continued navigation along inland waterways by producers, commodity groups, shippers, regional economic development interests, and other beneficiaries, innovative and timely recapitalization strategies and operational efficiencies must be considered to address the continued serviceability of this system. In doing so, leveraged public-private reinvestment, efficiencies in construction and contracting practices, and work prioritization will all be critical factors to ensuring performance and reliability across key waterway reaches.

Key principles, subject matter experts, and a diverse array of stakeholders supported by a number of studies have indicated that an emerging, innovative financing model structured to leverage public-private resources and expertise may provide the necessary means for a cost-effective financing option. Innovative public-private partnerships (P3s) could provide first-of-its-kind access to private capital for successful recapitalization and improved governance of our nation's inland waterway system, or at least the system's most important regional segments.

### WHERE ARE WE HEADED?

The need to smartly advance waterway modernization in light of post-Panama Canal market access is overdue. The looming maintenance backlog to critical inland waterway infrastructure drives the need to test old assumptions regarding existing approaches to the operation, maintenance, and upgrading of the United States (U.S.) inland waterway system. New and more efficient approaches that smartly leverage private participation and encourage private investment with some assurance of private return on investment is warranted. Government and stakeholder funded reports and studies have advocated change. The attitude that the problem will disappear by throwing a bare minimum of federal dollars at it is no longer tolerable.

Looking at new approaches to the governance, operation, and financing of projects to repair, sustain, and in some cases expand capacity will require the identification and discussion of relevant issues and realistic options. A critical issue, given the current fiscal climate in the U.S., focuses on funding sources. Therefore, conducting a thorough and relevant case-by-case analysis of alternative funding strategies, including P3s, is not only appropriate but also necessary.

Experts, deciding officials and stakeholders have indicated the need to evaluate an array of solutions to the financing challenge. Analyzing models, including P3 approaches, to address viable new approaches for repairing/improving, operating/maintaining, and reinvesting in navigational infrastructure along segments of the inland waterway system is key, and many would recognize the matter as urgent. Assessing P3 delivery mechanisms, among other arrangements, to facilitate repair, replacement, and ensure sustainability of critical navigation infrastructure would compliment any modernization strategy and advance any overall national multi-modal transportation strategy.

A modernization strategy and navigational improvements will undoubtedly generate a robust discussion of associated environmental impacts that must be accounted for and avoided or mitigated. But this can be accompanied by the same requisite commitment to achieving optimum efficiency and reliability to contain costs and ensure confidence and trust. Inland navigation modernization also presents an opportunity to demonstrate an adaptive management approach to stewarding important regional aquatic ecosystems, building on recent compliance driven ecosystem restoration efforts, and thus protecting and sustaining important natural capital including U.S. water resources.

Regardless of the federal government's current role and the current cost-sharing role of users and user-funded financing mechanisms, such as the Inland Waterway Trust Fund, new strategies demand consideration as old assumptions face up to fact-based testing. If private participation represents part of the solution, any new approach must first be vetted and demonstrated before broader application and acceptance can drive further public and investor confidence. Accordingly, identifying strong candidates for early and valid demonstrations of workable approaches will be advantageous and the basis for expanded, scaled-up solutions that will likely successfully bundle projects across regional system segments.

**WHEN WILL WE HAVE ARRIVED?**

An effective process within Congress and the Office of Management and Budget must be established to effectively prioritize federal investment in rehabilitation projects based on need, rather than political self-interest. The looming funding gap will only be bridged when effective mechanisms are put in place to permit and encourage leveraging of private financing towards such projects, when cost containment strategies drive down the cost of sustaining improvements, when federal budget formulation encourages best business practices, and when new efficiencies drive down costs of operations, maintenance and repair. It will take time, but it is a problem that can no longer be kicked down the road for someone else to sort out and solve. Eventually, the realization will set in across the board that the federal government is no longer able to provide the financing needed to properly maintain this infrastructure. And, when it does, it will be the first real step towards a solution.

**REFERENCES**

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