

Submission Date (<i>select from calendar</i>): 12/17/2025
Lead Recipient/Grant Number : University of Arkansas / 69A3552348331
Principal Investigator Institution (<i>select drop down</i>): Texas A&M Transportation Institute
Center Name : Maritime Transportation Research and Education Center
Research Priority : Preserving the Existing Transportation System
Principal Investigator(s) with ORCID(s) and Contact Information : Vicente Mantero; 1747 Pennsylvania Ave. Suite 400; Washington, DC 20006; T: 979-317-2560 M: 917-374-7267; E: V-Mantero@tti.tamu.edu
Project Partners : <i>Provide full name of any partner organization(s) who will actively engage in the project.</i> Project partners include the American Waterways Operators (AWO), the National Waterways Foundation (NWF), Ingram Barge Company, Kirby Inland Marine, the Port of Baton Rouge, the Port of Little Rock, and America's Central Port. Additional technical and institutional insight will be sought from the Arkansas Waterways Commission and district-level U.S. Army Corps of Engineers (USACE) personnel, who may participate in interviews or validation discussions to ensure accuracy and completeness in documenting physical, operational, and governance factors that shape waterway reliability.
Project Type (<i>select drop down</i>): Applied Research
Project Research Topic Type (<i>select drop down</i>): Maritime and Multimodal Supply Chain Management
Transportation Modes Involved (<i>check all that apply</i>): ☒ Waterway ☒ Road ☐ Rail ☐ Pipeline ☐ Other
Total Funding Requested (\$) : Total \$ 160,000 Federal Funding Requested (\$) : Federal \$ 107,365.60
% of Total for Tech Transfer (%) : % for TT 5% Non-Federal Match Requested (\$) : Match \$ 52,634.40
Project Start and End Dates (<i>month/day/year to month/day/year</i>): 3/15/2026 to 3/14/2027
Project Title : Federal–Industry Waterway Governance Mapping
Project Abstract (Brief Description) : This project will produce the first comprehensive governance map of the U.S. inland waterway system, documenting how federal agencies, waterway commissions, port authorities, operators, industry associations, and advisory bodies exercise authority, coordinate responsibilities, and influence decisions across planning, operations, maintenance, and emergency response. While the inland waterway system depends on a complex interplay of federal ownership, federally authorized navigation channels, industry-operated vessels, federally maintained locks and dams, state commissions, port authorities, cooperative working groups, and advisory committees, there is currently no resource that synthesizes this institutional architecture into a clear, accessible structure. The research will analyze agency documentation, statutory authorities, standing committee structures, and operational guidance, complemented by targeted interviews with practitioners, to clarify how decisions flow through the system and how organizations interact across routine and non-routine conditions. The final product will provide a governance map and a narrative analysis that identifies gaps, redundancies, and friction points in the institutional landscape. This work will support planners, policymakers, and operators and offer a foundational understanding of how governance arrangements shape reliability, resilience, and system performance.
USDOT Priorities : Section left blank until USDOT's new priorities and RD&T strategic goals are available in Spring 2026
Outputs (results of the work performed) : <i>Describe what new research, technology, or process this research project is expected to produce or has produced. The outputs could include processes and methods; data, hardware, software and databases; invention disclosures, patent filings, inventions, etc.</i>

Also describe any new partnerships outside of the UTC consortium that may be established or have been established through the project. The project will generate a consolidated Federal–Industry Waterway Governance Map that synthesizes the institutional relationships shaping inland waterway management. The primary output will be a narrative and visual representation of governance structures, identifying how agencies and industry entities distribute responsibilities across channel maintenance, lock operations, navigation management, dredging prioritization, emergency response, communication protocols, long-range planning, and user-group coordination. The study will produce a synthesized overview of the statutory and policy authorities underpinning the roles of organizations such as USACE, Coast Guard, NOAA, state commissions, and multi-state river authorities. Through document review and structured interviews, the research will provide a narrative description of decision pathways and formal or informal coordination venues, including Waterway Action Plans, River Industry Executive Task Force (RIETF) processes, and district-level navigation meetings. The project will also develop a set of cross-river-reach comparative findings illustrating how governance structures vary across different basins. The final output will be a reference-quality report suitable for use by researchers, agencies, and operators. New partnerships may be established with ports, associations, or user groups who contribute to the governance mapping and validation.

Outcomes/Impacts: *Describe the application of the output and any changes this output has or will make to the transportation system, or its regulatory, legislative, or policy framework, including a description of products or patents, or a change in practice, or instances of research results informing policy decisions. Discuss how this research output will positively impact the transportation system in terms of safety, reliability, durability, costs, etc.* The project will increase national understanding of how institutional structures shape inland waterway reliability, communication, and operational decision-making. Consolidating governance relationships into an accessible structure will help planners, policymakers, and operators more effectively understand how authority is distributed, how decisions are made, and how coordination occurs across federal, state, and industry entities. The study will support improved system performance by highlighting gaps or redundancies that contribute to delays, misalignment, or inefficiencies in dredging, maintenance, navigation management, or emergency response. Clarifying institutional interactions will help agencies and operators strengthen communication protocols, identify opportunities for improved coordination, and reduce uncertainty during disruptive events. This project will also provide foundational knowledge for future research on resilience, system behavior, and reliability modeling. Although this phase does not produce new operational tools, the project contributes directly to USDOT’s goal of preserving the existing transportation system by improving understanding of the decision structures that govern its performance.

Technology Transfer Activities: *Describe planned activities that will make research results available to potential users in a form that can be implemented, utilized, commercialized or otherwise applied. Must be 5% or more of overall budget.* Technology transfer will focus on ensuring the governance map and its accompanying narrative are accessible to practitioners and researchers. Activities will include a recorded webinar hosted through MarTREC summarizing governance structures, institutional roles, and key findings; a short synthesis brief prepared for ports, MPOs, waterway commissions, and operators; and a presentation deck suitable for TRB, IRPT, AWO or NWC briefings. Findings will also be shared with interviewed partners and participating organizations to support broader awareness across the inland navigation community. No software or visualization tools are proposed in this phase.

Final Research Report: Upon completion of the project, provide a URL link to final report will be provided

Project Deliverables: ☒ PI agrees to submit all deliverables within 4 weeks of the project end date.

Data Management Plan (DMP): ☒ PI has reviewed and agrees to adhere to MarTREC DMP. Proposed project DMP must be submitted with this form.

USDOT Approval Date: 5/1/2026