RESEARCH
PROJECT CAPSULE [20-1SS]
April 2020
TECHNOLOGY TRANSFER PROGRAM

The Future of the Louisiana Waterways Transportation System: A System Analysis and Plan to Move Commerce by Water

PROBLEM

Waterborne commerce is a critical component of Louisiana's transportation system. In order to best plan for future development and investment, the Office of Multimodal Commerce (OMC) within the state's Department of Transportation and Development (DOTD) is in need of developing a comprehensive, statewide waterways transportation system plan. In order to develop this plan, it is necessary to analyze and document the impact and importance of waterborne commerce for Louisiana and its transportation system.

OBJECTIVE

The objectives of this research are to (1) identify the types and value of waterborne commerce; (2) analyze and document the impact and importance of waterborne commerce; (3) identify the improvements needed to achieve greater utilization of state waterways; (4) identify opportunities for relieving multimodal bottlenecks relative to waterways; and (5) develop a draft waterways transportation plan (WTP) that can be included in Louisiana's statewide transportation plan.

METHODOLOGY

The type and value of waterborne commerce will be documented using domestic freight flows of imports and exports from the Freight Analysis Framework maintained by the U.S. DOT's Bureau of Transportation Statistics and FHWA. This data contains trade flows between U.S. locations, including four zones within Louisiana.

To further disaggregate the data to smaller geographies aligned with each state port, data from the Quarterly Census of Employment and Wages and from the County Business Patterns will be used. This process will determine the distribution of activity based on the concentration of water transportation within each zone, paying particular attention to estimates of tonnage handled by individual ports, with 10- and 25-year projections into the future.

While identifying industries and port terminals that depend on Louisiana's navigable waterways, a detailed assessment of the state's waterborne commerce by commodity and company name at a parish level can be developed. The impact and importance of waterborne commerce can be measured based on the economic output (jobs, salaries, and tax revenue) of industries that rely on the waterway system.

JUST THE FACTS:

Start Date:
January 21, 2020

Duration:
15 months

End Date:
April 20, 2021

Funding:
Office of Multimodal Commerce

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POINTS OF INTEREST:

Problem Addressed / Objective of Research / Methodology Used / Implementation Potential

Based on data collected regarding potential bottlenecks for the movement of goods along the network of navigable waterways, improvements that are needed to achieve more efficient and greater utilization of state waterways will be identified and developed. The impact of each improvement will be quantified based on the required engineering input and its effect on Louisiana's economy.

The draft WTP will promote a robust intermodal system with emphasis on maximizing the potential of the state's waterways. Integration of the waterways into the state's overall transportation system is critical, as it offers alternatives to the increasingly congested rail and highway networks. Such integration also positions the state to best compete for available transportation funds.

IMPLEMENTATION POTENTIAL

Potential advances in other modes of transportation mean that waterborne commerce must continually work to stay competitive as technology lowers operating costs for truck, rail, and air transportation.

This project will develop new data sources to identify businesses that rely heavily on waterborne commerce. It will also integrate a range of data on the types and value of waterborne commerce and multimodal connectivity, as well as identify potential bottlenecks within Louisiana's waterway system and opportunities to improve that system.