



Project Summary

Texas Department of Transportation

0-5937: Development of Potential Policies and Incentives to Encourage Movement of Containerized Freight on Texas Inland Waterways

Background

This study builds on the results achieved by project 0-5695, “Short Sea Shipping Initiatives and the Impacts on the Texas Transportation System.” This project identifies policies and incentives that could be implemented in order to improve the operating climate for waterborne freight movement within the state.

Developing water alternatives for freight will:

- enhance the state’s and the nation’s total transportation capacity,
- relieve congestion in highway and rail corridors that are at or over capacity,
- improve the energy efficiency of freight transportation, and
- make the freight network less vulnerable to labor and energy shortages.

Population growth and increased reliance on international trade have created significant demand for port facilities to process containerized consumer goods and move cargo between manufacturing centers along the coast. Almost all of the containerized cargo in Texas is currently cleared from the port area by trucks, placing a growing burden on the Texas road network.

What the Researchers Did

The researchers investigated government programs instituted in Europe and Canada to help increase waterborne commerce. The final detailed analysis focused only on those that appeared to have relevance to Texas. Additionally, the researchers investigated programs instituted by the other gulf states. As part of the initial data-gathering process, the researchers also documented the advantages that would accrue from utilizing marine transportation assets more intensively—advantages that primarily derive from diverting truck traffic to marine transportation.

In order to be certain that there was sufficient capacity on the system to absorb a significant increase in traffic, the researchers analyzed the capacity and efficiency of the Gulf Intracoastal Waterway (GIWW).

The researchers also met with industry and port professionals after the initial assessment was complete to acquire their input and observations. Based on the research and stakeholder input, the researchers assessed mechanisms to assist and encourage waterborne freight in Texas.

Research Performed by:

Texas Transportation Institute (TTI),
The Texas A&M University System
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The researchers provided six examples of what Texas ports are doing to help increase coastwise waterborne freight activity and documented several examples of private-sector initiatives to develop short sea shipping activity in Texas. They also conducted a case study of a project by the Port of Richmond, Virginia, to provide an innovative approach to developing intrastate waterborne shipping, which could also be used in Texas.

What They Found

The GIWW is currently at approximately 40 percent of practical capacity. Utilizing just 25 percent of the unused capacity would reduce truck traffic along the Texas coast by more than 580,000 truck trips each year.

There are several relatively short-term measures that can be undertaken to address the needs of waterborne freight in Texas and encourage its growth but none of these measures would be expected to directly change transportation logistic decisions:

- Prevent encroachment on the GIWW by actively discouraging any development that would decrease capacity or increase operating costs unnecessarily.
- Assist in marketing the system by funding research that will identify the origin and final destination of cargo that originates in Texas or is imported into the state. It should also analyze traffic flows between the state's ports and the Mexican border.
- Designate overweight freight corridors, working with Texas port authorities to identify potential corridors that would enable shippers to take advantage of the load capacities that water offers without damaging the state's highways.
- Offer air quality credits. Air quality concerns in the United States have typically focused on NO_x and particulate matter in nonattainment areas. This has the practical effect of discouraging investment in marine equipment to improve air quality since credit is typically only given for reductions that occur within a nonattainment area. Instituting an approach focused on CO₂ in the United States (or at least in Texas) would allow all modes and types of equipment to compete on an equal footing for funding or emission credits and would reduce the overall environmental burden caused by freight movements.
- Seek greater cost recovery from large trucks. Studies show that only the very lightest combination trucks pay their share of highway cost responsibility. Requiring a higher percentage of cost recovery from the larger trucks will have the practical effect of inserting the true cost to the public into the mode-selection process of shippers. This will also probably result in more waterborne shipments.

What This Means

The state's marine transportation system has significant unused capacity, and some benefits from marine transportation are being lost by not using this capacity.

Barring major changes in the overall transportation business environment, significant diversions of highway freight to waterborne freight will probably not occur in the short term.

For More Information:

0-5937-1 Potential Policies and Incentives to Encourage Movement of Containerized Freight on Texas Inland Waterways

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