RESEARCH
PROJECT CAPSULE [17-4SS]
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TECHNOLOGY TRANSFER PROGRAM

Dredging Louisiana's Navigable Waterways: a Statewide Systematic Approach to Meeting Dredging Needs

JUST THE FACTS:

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15 months

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TT-Fed/TT-Reg

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POINTS OF INTEREST:

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

PROBLEM

The U.S. Army Corps of Engineers (USACE) is responsible for maintaining authorized dimensions for Louisiana's navigation channels. For the past several years, the USACE has not had the budgetary resources to adequately accomplish this mission. The resultant lack of dredging has threatened the commercial viability of Louisiana waterways and has led to a decrease in commercial tonnage moving along the waterways.

Clogged channels have forced ports to limit the weight of entering vessels. Reduced tonnage adversely affects business for the ports and nearby industry. Since funding appropriations for maintenance of navigable channels are based on port revenues, the lack of maintenance due to reduction in revenues becomes a vicious cycle.

Often, waterborne commerce has been halted and transferred to highway and rail. Anecdotal evidence suggests that reduced dredging affects highway traffic conditions and infrastructure as the result of an increased number of commercial trucks on the highway.

The need for a systematic approach to quantify economic impacts due to reduced dredging is evident. Concurrently, there is a need to investigate and recommend alternatives to dwindling and inconsistent federal maintenance funding.

OBJECTIVE

The objectives of this research are to investigate the impact of insufficient dredging on Louisiana commerce and identify potential alternatives to traditional dredging activity and funding.

METHODOLOGY

After conducting a thorough review of published information on recent trends in dredging technologies and maintenance funding opportunities, the research team will establish a comprehensive inventory of Louisiana waterways and features in order to quantify statewide dredging needs.

Using a GIS platform, all ports and related navigable waterways with historic dredging activity will be identified and mapped. A tabulation of dredge volumes and costs can be developed and used for evaluation of current and near-future needs.

The use of dredge material in support of the Coastal Protection and Restoration Authority's (CPRA's) coastal master plan is an example of a funding alternative using shared resources. In this case, funds available for protection and restoration can be paired with dredging needs for combined cost savings.

To determine potential economic impacts resulting from the lack of channel maintenance along authorized navigation channels, two basic case studies will be

prepared: the Ouachita – Black Rivers navigation project and the Houma Navigation Canal. Socioeconomic data relative to each region will be incorporated in the evaluation of impacts.

IMPLEMENTATION POTENTIAL

The research team will submit a plan to implement the study recommendations, including alternative dredging methods, funding options, and policy incentives.

Figure 1
A dredge near Morgan City in November 2015 with the cutter head exposed