

Economic impact of inland waterway disruptions: Potentially billions

November 2 2016, by Tina M. Johnson



UT Institute of Agriculture researchers estimate billions of dollars at stake should a lengthy disruption to the Upper Mississippi River and Illinois Waterway occur. Credit: USDA.

What would happen if a lengthy disruption befell the major mode of transportation of U.S. corn and soybeans? What ramifications would that have on U.S. producers and the national economy? How would that affect U.S. competitiveness in world grain markets?

While hypothetical, these concerns are very real as the barge corridor in question contains a total of 36 locks and dams that have long since surpassed their designed lifespan. This corridor is the Upper Mississippi River and Illinois Waterway (UMR-IWW) that serves as the primary corridor for the movement of bulk commodities in the U.S. Corn and soybeans comprise nearly 90 percent of food and farm products on these waterways.

Barge transportation is of great importance to U.S. agriculture because of its comparatively low transport costs as compared to overland modes. However, the inefficiencies of the locks are currently creating additional fuel and labor costs to barge operators, ultimately increasing transportation costs of grain and oilseeds, which means less profit for producers, higher costs for consumers and a handicap when competing in the world market.

U.S. grain and oilseed producers have frequently expressed concerns about navigational inefficiencies of these aging and constrained waterways. Congress authorized the Navigation and Ecosystem Sustainability Program (NESP) in 2007 to address the capacity constraints on the most congested segments on these waterways; however, implementation of NESP has been delayed due to a lack of appropriations from Congress.

USDA's Agricultural Marketing Service asked Edward Yu, associate professor at the University of Tennessee Institute of Agriculture Department of Agricultural and Resource Economics (AREC), to lead an economic analysis of the navigability on the UMR-IWW, which is

crucial and timely to the U.S. agricultural sector and could help evaluate the need for NESF appropriations. Yu was selected due to his considerable experience and expertise in agricultural transportation economics. Professor Burton C. English and Jamey Menard, research leader, assisted Yu by estimating the [economic impacts](#) that would occur as a result of lock closures.

Estimated economic impacts from the study include:

- Aggregate economic activity related to grain barge transportation reduces by \$933 million (or 40 percent decrease) if Lock 25 on the upper Mississippi River is closed from September to November during the 2024/25 marketing year. The reduction reaches to nearly \$2 billion if the lock is unavailable for the marketing year.
- Decline in economic surplus in the corn and soybean sector due to Lock 25 closure could cause a decrease of more than 7,000 jobs, \$1.3 billion in labor income and about \$2.4 billion of economic activity (total industry output) annually.
- While similar consequences are anticipated if LaGrange Lock on the Illinois River is closed for a period of time, the degree of magnitude is less.

"Resulting study recommendations stress how crucial it is to maintain the navigability of the UMR-IWW system for U.S. food and farm products and the risk of delaying infrastructure improvements," said Yu.

The full report of this study can be found at tiny.utk.edu/9nhrs

Provided by University of Tennessee at Knoxville

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