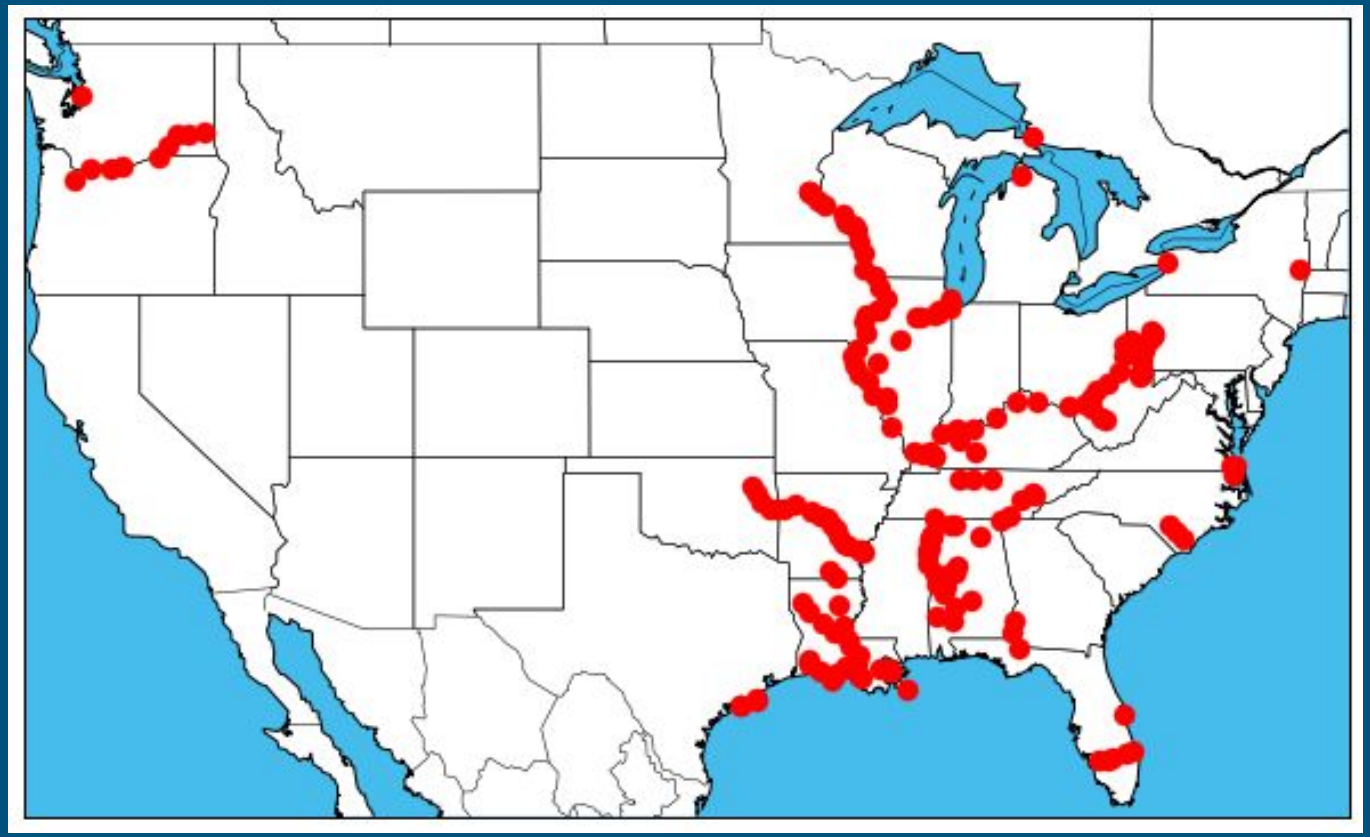
Predicting Vessel Delays at Army Corps of Engineers Locks

A Machine Learning Classification Study

Lock and Dam 1, Minneapolis. Photo by Patrick Loch.
http://www.mvp.usace.army.mil/Media/Images/igphoto/2001935893/

Cargo vessel traffic on US waterways and through US Army Corps of Engineers-managed locks plays an important role in the transport of foreign and domestic goods into and out of the United States.



Locations of 196 locks owned or managed by the US Army Corps of Engineers and monitored with the Lock Performance Monitoring System (LPMS).

Goal: to determine what factors predict extended vessel delays at locks.

US Army Corps of Engineers

IWR: Institute of Water Resources

NDC: Navigation and Civil Works Decision Support Center

LPMS: Lock Performance Management System

Maintain Data for:

- Waterborne commerce
- Vessel Characteristics
- Navigation locks data
- Commodity and Transport data

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LPMS Analysis Request:

- Deeper analysis of the national network of waterway locks
- Explore relationships relevant to budgeting, maintenance, scheduling.
- Identify factors causing delays at locks.