

Soo Locks



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Topics

- Location and history
- Current locks
- Waterborne traffic
- Issues
- Homeland Security study
- Proposed new lock
- Coordination within/among states



Soo Locks Location



- Located on St. Marys River, which connects Lake Huron and Lake Superior
- On international border
- Locks raise/lower vessels ~21'

History

- 1798 – Northwest Fur Co. built first lock
- 1855 – State of Michigan constructed State Lock
- 1881 – State Lock transferred to U. S. Army
Corps of Engineers
- 1881-1943 – series of replacement locks
constructed
- 1968 – Poe Lock (newest, largest) opened
- 1986 – Second large lock authorized by
Congress

Current Locks

- Two operational locks
 - MacArthur (1943)
 - Poe (1968)
- Two World War I-era locks (Davis & Sabin) are permanently closed and not maintained
- One small Canadian lock for recreational boats only



Waterborne Traffic

- 67 million tons in 2014
- U.S., Canadian, and overseas traffic
- Major commodities: iron ore (taconite), coal, stone, grain, cement
- Cargoes originate/terminate throughout Great Lakes/St. Lawrence/Midwest region
- 3,596 cargo vessel passages (2014)
- Shipping season: March 25 to January 15

Issues

- Infrastructure is aging and deteriorating
- 70% of traffic uses Poe Lock because of vessel size – no redundancy
- Corps of Engineers has developed Asset Renewal Plan to improve operational reliability
 - critical rehabilitation of Poe and MacArthur
 - many components have exceeded design life
- A full upgrade to Poe Lock would require total closure for 6-12 months

Issues – continued

- The need for a second large lock was identified by extensive studies in the 1970s-80s and subsequent studies
- Huge regional/national economic impact if the Poe Lock is out of service
- The U.S. Department of Homeland Security completed an analysis of the impact of an unexpected closure of the Poe Lock in 2015...

Department of Homeland Security Study

- Analyzed impact of six month closure of Poe Lock
- Complete shutdown of Great Lakes steel production
- 75% of U.S. integrated steel production would cease
- 80% of iron ore mining would cease
- Nearly 100% of North American appliance, auto, construction equipment, farm equipment, mining equipment, and railcar manufacturing would cease
- 11 million job losses in U.S. + more in Canada & Mexico
- Widespread bankruptcies and recession likely
- \$1.1 *trillion* decrease in gross domestic product

DHS Study – Conclusion

“In terms of an impact to the North American economy, it is hard to conceive of a single asset more consequential than the Poe Lock.”

– Source: DHS report

DHS Study – Conclusion

“The Soo Locks is not a Michigan problem, or a Michigan-Ontario problem, or a regional problem; the implications would be felt throughout Canada, Mexico, and the United States, and given that the supply chains of the impacted industries are international, there could be global ramifications.”

– Source: DHS presentation

Proposed New Soo Lock

- Most important maritime project in Great Lakes
- Same dimensions as Poe Lock
- Will provide redundancy and security
- May take up to 10 years to construct
- Estimated cost: \$580 million



Status of New Lock

- Authorized by Congress in 1986, but remains largely unfunded
- Preliminary construction began in 2009-2010
- Administrative and political delays
 - benefit/cost ratio issues
 - lack of federal administrative support
- Economic Reevaluation Report in preparation
 - scheduled for completion in December 2017

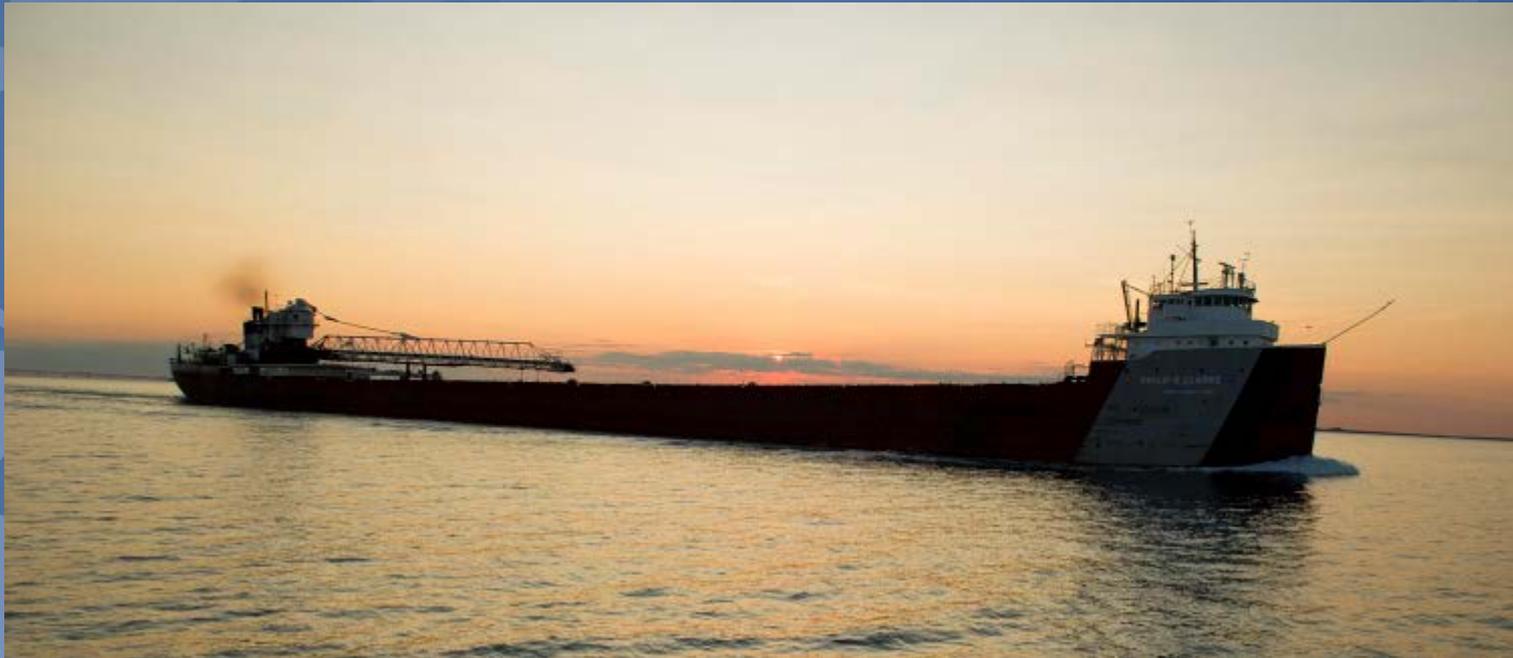
Coordination Within/Among States

- Project Planning – MI partnership with USACE
 - Involvement by MDOT, MDNR, MDEQ
 - Excavated material disposal sites
- Non-federal cost sharing (no longer required)
 - GLC's Soo Locks funding task force
 - Eight Great Lakes states
- Political support
 - Conference of Great Lakes and St. Lawrence Governors and Premiers
 - Individual governors, legislatures, industry

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Questions?



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