

SUCCESS STORY New Large Lock at the Soo

o connect the resources, such as iron ore, along Lake Superior with the cities and industries, like the steel mills, in the lower lakes, a vessel must transit the St. Marys River linking lakes Superior and Huron. But at Sault Ste. Marie, Michigan (the "Soo"), there is a 21-foot drop over a mostly shallow, rocky set of rapids. Modern ships, and even the smaller ships of the 19th Century, cannot navigate this drop. So a navigational lock linking the two Great Lakes was built in 1850. Over the years other locks have been built as the demand for the products and resources of Lake Superior grew and the need for larger ships grew as well. This culminated in constructing the largest lock at the Soo opening in 1969, the Poe Lock. At 1,200 feet long and 110 feet wide, it ushered in a new era of Great Lakes shipbuilding and efficiency, the 1,000-foot long lakers known as "footers." Thirteen of these footers were constructed, each able to carry about 70,000 tons per trip and more than 47 million tons as a fleet each season. Understanding the national economic security concerns that any disruption in this trade could cause due to a lack of redundancy in the locks – having no backup plan – in 1986, Congress authorized the construction of a new large lock at the Soo to match the dimensions and capabilities of the Poe.

13 Footers Constructed EACH ABLE TO CARRY ABOUT 70,000 TONS PER TRIP AND MORE 47 MILLION TONS AS A FLEET EACH SEASON

Typically, these major construction projects require a 65 percent federal/35 percent non-federal funding formula. But Congress did not appropriate funds for the federal share. A little more than a decade later Great Lakes states and other regional organizations, including GLMTF, worked to make the non-federal match happen, hoping to force the federal government, through the U.S. Army Corps of Engineers, to fund their end of the bargain. A number of Great Lakes states promised to contribute to the project based on a formula that was built on a cost and benefit share of their economic activity reliant on the Soo Locks. This received the attention of the Corps who then began the process



of developing a cost-benefit analysis to determine if the economic impact of the new lock was justified. But it was seriously flawed...

The Corps determined that the economic return (the "benefit") of building a new lock was less than the cost to design and construct. In fact, that number was 0.7; for every

GREAT LAKES MARITIME TASK FORCE



dollar spent to build it, the return to the economy would only be 70 cents. In developing the parameters for inclusion in the calculation, the Corps assumed that there was no lock capable of handling the footers and other vessels that are "Poe-constrained." This means they have no other option but to use the Poe since they are too big for the other lock, the MacArthur built during World War II for much smaller ships. All shipments of iron ore and other cargoes loaded on Lake Superior ports like grain, would simply switch to truck and rail. Never mind the environmental impacts of a modal shift away from ships to trucks and trains; the lack of any feasible railroad access to the mines, mills, or tracks to get them there; the congestion and safety issues around putting an extra 4.8 million truck trips on highways and local roads through cities like Minneapolis/St. Paul, Milwaukee, Chicago, Detroit, and Cleveland. The Corps decided to ignore about \$6 to \$9 billion in unmet infrastructure needs to shift from water to land. All this for a project that was expected to cost \$350 million in 1986. That benefit-cost ratio would have been over 17! But the Corps demurred.

In the late 2000s, Congress provided some funds that seemed to kickstart the new lock. These funds built cofferdams to hold back the waters for the footprint of the new large lock. A groundbreaking ceremony was held that included GLMTF members who'd been pushing for this moment since it was founded in 1992. But then the project again languished with the cofferdams in place and no additional funding to go any further.

In 2015 the Department of Homeland Security's (DHS's) National Protection and Programs Directorate Office of Cyber and Infrastructure Analysis published the study "The Perils of Efficiency: An Analysis of an Unexpected Closure of the Poe Lock and Its Impact." In this study the DHS determined that a closure of the Poe for six months, a real possibility given its age, would have significant impacts to the nation including 11 million U.S. jobs lost, 5 million more in Canada and Mexico, steel manufacturing and auto production would stop within weeks, and \$1.1 trillion would evaporate from the economy. This was a call to action in Congress, with Governors and state legislators, and industry composed of GLMTF, and its shippers, labor unions, manufacturers, port operators, energy production concerns, farmers, and miners taking the lead. Infrastructure projects like road and bridge building would be ensnared in this, too. Virtually every sector of the North American economy would be impacted. With all this, the Corps went back to the drawing board.

This time the Corps invited in the broad range of interests that relied on the locks at the Soo. GLMTF and its members became a key component and voice for the new lock benefit-cost calculation. Working together with compromise and thoughtful consideration a new benefit-cost ratio was calculated 2.46. This allowed the design and construction to resume in earnest.

GLMTF and its Members BECAME A KEY COMPONENT AND VOICE FOR THE NEW LOCK BENEFIT-COST CALCULATION

Construction began in 2020. And now GLMTF, its members, legislators, and others are working for full federal funding each year in an efficient manner that maximizes the Corps' in-house and contracting capabilities to design and construct the components of the new large lock: approach channels, walls, and the chamber itself. With this efficient funding, the new lock could be ready by 2028.

EFFICIENT FUNDING THE NEW LOCK Could be Ready by 2028