



US Army Corps  
of Engineers ®



## St. Marys River, MI

### Harbor Features

- One of Great Lakes connecting channels; flowing southeast between the State of Michigan and the Province of Ontario, Canada from the eastern end of Lake Superior into the northern end of Lake Huron
- Authorization: Rivers & Harbors Acts of 11 Jul 1870, 5 Aug 1886, 12 Jul 1892, 13 Jun 1902, 3 Mar 1905, 2 Mar 1907, 3 Mar 1909, 25 Jul 1912, 4 Mar 1915, 22 Sep 1922, 21 Jan 1927, 3 Jul 1930, 26 Jun 1934, 30 Aug 1935, 7 Mar 1942, 15 Jun 1943, 2 Mar 1945, 24 Jul 1946, 9 Mar 1956, 9 Jul 1956
- Deep draft commercial channel
- Project depths varying from 27.5 to 30.0 feet in the St. Marys River, Lake Superior, and Lake Huron approaches
- Total of 75 miles of federally maintained deep draft channels
- Vital Great Lakes connecting channel with 72.5M tons of commerce passing through in 2019 (ranked 1<sup>st</sup> among Great Lakes Waterways)
- Project includes two active locks and two canals which historically handle over 80M tons of cargo annually and a hydropower plant of 20 megawatt capacity
- Major stakeholders: U.S. Coast Guard, Algoma Steel, Gardiner Marine Ltd., Great Lakes Power, Kemp Coal Dock, MCM Marine, Purvis Marine Ltd., and nearly all Great Lakes shipping interests

### Project Requirements

- Approximately 55,000 to 85,000 cubic yards of material must be dredged on a 4 to 6 year cycle.
- The river was last dredged in 2015 (Courses 5 and 6).



- Obstruction removal by the government floating plant is required in hard bottom channels of the St. Marys River on an annual basis.
- USACE has developed a multi-year asset renewal plan to modernize the existing infrastructure of the locks to provide reliable and resilient infrastructure. The purpose is to improve the efficiency of lock operations and reduce the risks of downtime and vessel delays. This effort will focus on the Poe and MacArthur Locks, but other infrastructure at the facility is also included in the plan. Major items in the plan include repairs to Poe Lock Gate 1 and ultimately fabrication and replacement of Gate 1, construction of an emergency closure system, and many miscellaneous improvements and upgrades.
- The guidewalls along the West Neebish Island navigation channel (rock cut) were failing at various locations. Government plant completed repairs of the walls in fall 2017.
- Repairs were completed on the concrete sills of Poe Gates 1 & 3, which exhibited significant deterioration.

### **Consequences of Not Maintaining the Project**

- The 2018 New Soo Lock Economic Validation Study updated the economic consequences of a prolonged outage of the Poe Lock and the economic validity of constructing a second Poe-sized lock.
- If the channel were closed to commercial traffic, commodities would have to be transported by rail or truck. This would increase annual emissions rates by over 565.3B lbs of harmful particulate matter (PM-10) and increase costs by \$105.3M due to increased railroad related accidents, or by \$170.3M due to increased trucking related accidents.
- Light loading; loss of between 1 and 2 feet of channel depth results in increased transportation costs of between \$14.8M and \$42.6M annually
- Key component of the Great Lakes and St. Lawrence Seaway navigation system
- Disruption of service would have catastrophic maritime and economic impacts.

### **Transportation Importance**

- Only connecting channel between Lake Superior and the lower Great Lakes and the St. Lawrence Seaway
- St. Marys Falls Canal provide for vessel passage around the 21-foot drop of the river over the falls at Sault Ste. Marie, MI.
- This canal serves both domestic and foreign flag vessels transiting the Great Lakes.
- Commodities transported through these channels include iron ore, coal, limestone, petroleum and petroleum products, chemicals and related products, primary manufactured goods, food and farm products, manufactured equipment, machinery, and machine products.
- The U.S. Coast Guard Sector Sault Ste. Marie is located along the banks of the St. Marys River. This sector is responsible for all Coast Guard missions on Lake Superior, Northern Lakes Michigan and Huron and the surrounding navigable waterways, including: search and rescue, law enforcement, aids to navigation, marine safety, and homeland security. Aiding in these operations, from their home port in Sault Ste. Marie, MI, are the U.S. Coast Guard Cutters Katmai Bay and Buckthorn.

**U.S. Army Corps of Engineers Fiscal Year (FY) 2019, 2020, and 2021  
St. Marys River, MI - Project Requirements and President's Budget (\$1,000)**

<b>Work Package</b>	<b>FY19 Requirement</b>	<b>FY19 Appropriation</b>	<b>FY20 Requirement</b>	<b>FY20 Appropriation</b>	<b>FY21 Requirement</b>	<b>FY21 Appropriation</b>
Lock Operations & Maintenance	14,750	14,750	15,014	15,014	15,640	15,640
Project Condition Surveys	2,490	2,490	2,396	2,396	2,461	2,461
Strike Removal	3,390	3,390	3,460	3,460	3,780	3,780
Dam Safety Inspections	50	50	70	70	70	70
Dam Instrumentation, Data Collection, & Analysis	0	0	210	210	200	200
Winter Dewatering Equip and Support	1,300	1,300	0	0	2,500	2,500
Waterway Safety Signs	365	365	790	790	0	0
Sediment Sampling	200	200	0	0	0	0
Dredged Material Management / Preliminary Assessment	0	0	150	0	300	0
Dredged Material Management/ Placement Preparation	0	0	500	500	200	0
Dredged Material Management/ Physical Placement Site	0	0	0	0	2,000	0
Environmental Compliance (ERGO)	0	0	20	20	30	30
Industrial Hygiene Assessment	0	0	100	0	0	0
Real Estate Management	0	0	242	153	279	190
Cultural Resources Management (Env. Stewardship) for Nav	0	0	0	0	203	59
Operation/Maint. of Visitor Center for Nav	0	0	0	0	96	96
Grounds/Security in support of Nav	2,100	2,100	2,675	2,675	2,804	2,804
Soo Locks Historical Facility Assessment Plan	0	0	0	0	200	0
Machine Shop Fabrication Equipment Upgrade	0	0	0	0	980	0
Facility Lighting Modernization – Phase 1	0	0	0	0	1,000	0
<b>Soo Locks Asset Renewal</b>						
Steamplant Rehabilitation	5,800	5,800	0	0	0	0
E&D Facility Sewer System	0	0	0	0	1,000	1,000
Poe Lock Gate 1 Repairs	2,000	2,000	2,600	2,600	6,500	6,500
Mac Lock Ship Arrestor Design	375	375	0	0	0	0
Center Dike Repairs E&D	500	500	0	0	0	0
Center Dike Repairs	0	0	1,000	1,000	4,400	0
Soo Locks Davis Building & Boat House Roof Replacement	0	0	665	665	0	0
Poe Lock Gates 1&3 Sill Repair	0	0	500	500	0	0
Aquadigger Barge/Crane	0	0	8,000	8,000	0	0
Initial OLM-0033 Aquadigger Outfitting for Strike Removal	0	0	0	0	1,250	1,250
New Crane for Harvey	0	0	4,400	4,400	0	0
Soo Locks Maint. Supp. Building Electrical System	0	0	0	0	420	0
Poe Lock Gate 4 Repairs - E&D	400	200	200	0	0	0

Heavy Lift Crane for Stoplogs and Gates	6,500	6,500	0	0	0	0
Bunyan Barge Drydock Disposal to Support New Crawler Crane	0	0	350	0	350	0
E&D for an Emergency Open Flow Control System	0	0	0	0	1,000	0
Arc Flash Study for Mac and Poe Locks	0	0	0	0	400	0
Removal of Red Tagged Stiff Leg Derrick Cranes	0	0	250	250	0	0
Construction of raceway for lock power feeders	0	0	0	0	6,500	6,500
Env & Real Estate Coordination for Rock Cut Stone Storage	0	0	0	0	50	0
Mac Lock Gate 5 Sill Repair	0	0	0	0	500	0
Medium ABS Ice Class C0 Tugboat - St Marys River Strike	0	0	0	0	14,250	14,250
Pier Timber Fender Equipment Maintenance System	0	0	0	0	950	0
Repair and Replace Miter Gate Anchorage Components for the	0	0	0	0	2,500	2,500
Repair and Replace Miter Gate Anchorage Components for Mac	0	0	0	0	1,500	0
In-house Repairs to Dewatering Gate 4	0	0	0	0	500	0
Poe Lock Ship Arrestor Rehabilitation	0	0	0	0	12,000	0
<b>Other Business Lines</b>						
Recreation: Visitors Center	986	375	1,031	297	1,760	245
Hydropower:						
– Hydropower Operations	1,008	1,008	1,059	1,059	898	898
– Hydropower Maintenance	1,400	1,400	1,488	1,488	1,691	1,691
– Hydropower Repairs & Upgrades	4,776	180	5,385	5,385	7,675	0
– Facility Physical/Cyber Security Maintenance and Replacement for Hydropower	0	0	0	0	150	104
– 13.8kV Air Circuit Breaker Replacement and Partial E&D	0	0	0	0	4,250	0
– Gantry Crane Replacement	0	0	0	0	1,800	0
– Power Feeder & Duct Bank Replacement	0	0	0	0	5,600	0
– Replace Main Powerhouse Generating Floor Overhead Bridge Crane Rails	0	0	0	0	700	700
Environmental Stewardship	192	56	199	58	500	0
Update Soo Area Office Master Plan	55	55	0	0	0	0
Grounds/Security in support of Hydropower	236	236	301	301	315	315
Ground/Security in support of Rec	24	24	30	30	31	31
CIPR Security Requirements (Joint)	2,496	536	1,150	0	1,150	0
<b>TOTAL</b>	<b>51,393</b>	<b>43,890</b>	<b>54,235</b>	<b>51,321</b>	<b>113,363</b>	<b>63,814</b>

### **Congressional Interests**

- Representative Jack Bergman R-MI-1
- Senator Gary Peters D-MI
- Senator Debbie Stabenow D-MI
- Numerous other representatives and senators throughout the Great Lakes with interests in ports that share interconnectivity with the St. Marys River.