



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 1st 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).



- Maintenance dredging will be required in FY23. 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, fabrication of emergency bulk heads, construction of an emergency closure system, and many miscellaneous improvements and upgrades. Repair of navigation structures around locks to include crib dam, northwest pier breakwater, north pier rubblemound, and rehabilitation of mooring facility. Facility rehabilitation to include wastewater sewage system, backup generator, and building repairs.

Project Requirements (cont'd)

- The guide walls along the West Neebish Island navigation channel (rock cut) were failing at various locations. Government plant completed repairs of the walls in fall 2017. Additional rehabilitation of the Rock Cut Lower Dam is required.
- Repairs were completed on the concrete sills of Poe Gates 1 and 3, which exhibited significant deterioration.
- Maintenance and upgrade to the hydroelectric power plant are required, including a major rehabilitation evaluation report, an overhaul of maintenance cranes, powerplant sluiceway rehabilitation, various safety improvements, unit rewinds, and building envelope repairs.

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 \$126.5M due to increased railroad related accidents, or by \$84.6M 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 \$14.4M and \$35.1M 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) 2020, 2021, and 2022
St. Marys River, MI - Project Requirements and President's Budget (\$1,000)**

Work Package	FY20 Requirement	FY20 Appropriation	FY21 Requirement	FY21 Appropriation	FY22 Requirement	FY22 President's Budget
Lock Operations & Maintenance	15,014	15,014	15,640	15,640	16,250	16,250
Project Condition Surveys	2,396	2,396	2,461	2,461	2,933	2,933
Strike Removal	3,460	3,460	3,780	3,780	3,800	3,800
Dam Safety Inspections	70	70	70	70	73	73
Dam Instrumentation, Data Collection, & Analysis	210	210	200	200	266	266
Winter Dewatering Equip and Support	0	0	2,500	2,500	1,700	1,700
Waterway Safety Signs	790	790	0	0	0	0
Dredged Material Management / Preliminary Assessment	150	0	300	0	0	0
Dredged Material Management/ Placement Preparation	500	500	200	0	0	0
Dredged Material Management/ Physical Placement Site	0	0	2,000	0	2,700	2,000
Environmental Compliance (ERGO)	20	20	30	30	32	32
Industrial Hygiene Assessment	100	0	0	0	0	0
Industrial Hygiene Services	0	0	0	0	75	75
Real Estate Management	242	153	279	190	269	197
Cultural Resources Management (Env. Stewardship) for Nav	0	0	203	59	62	62
Operation/Maint. of Visitor Center for Nav	0	0	96	96	100	100
Grounds/Security in support of Nav	2,675	2,675	2,804	2,804	2,907	2,907
Soo Locks Historical Facility Assessment Plan	0	0	200	0	0	0
Machine Shop Fabrication Equipment Upgrade	0	0	980	0	450	0
Material and Equipment Storage Facility	0	0	0	0	4,000	0
Bridge Routine Inspections	0	0	0	0	25	0
Water Quality and Control Assessment	0	0	0	0	250	0
Overhaul of Main Plant and Unit 10 Headgate and Maintenance Cranes	0	0	0	0	7,200	0
Maintenance for Recreation	0	0	0	0	125	125
Soo Locks Asset Renewal						
E&D Facility Sewer System	0	0	1,000	1,000	430	0
Poe Lock Gate 1 Repairs	2,600	2,600	6,500	6,500	0	0
Center Dike Repairs	1,000	1,000	4,400	0	0	0
Soo Locks Davis Building & Boat House Roof Replacement	665	665	0	0	0	0
Poe Lock Gates 1&3 Sill Repair	500	500	0	0	0	0
Aquadigger Barge/Crane Acquisition	8,000	8,000	0	0	0	0
Initial OLM-0033 Aquadigger Outfitting for Strike Removal	0	0	1,250	1,250	0	0

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Aquadigger Outfitting for Strike Removal – Final Phase	0	0	0	0	1,250	0
Breakwater at Northwest Pier	0	0	0	0	7,000	0
New Crane for Harvey	4,400	4,400	0	0	0	0
Reface Rubblemound on North Pier	0	0	0	0	15,000	0
Design and Construction of Structural Repairs to Crib Dam	0	0	0	0	12,000	0
Dam Safety Investigation and Monitoring	0	0	0	0	1,000	0
Fire, Smoke, Gas Detection Systems for Control Centers, Galleries and Deep Service Tunnel	0	0	0	0	2,500	0
Repairs to Pier Walking & Working Surfaces	0	0	0	0	1,500	0
Poe Lock Dewatering Emergency Bulkhead Design Integration, Storage and Fabrication	0	0	0	0	4,990	0
Rehabilitation of Mooring Facility	0	0	0	0	12,700	0
Rehabilitation of Rock Cut Lower Dam	0	0	0	0	2,050	0
Soo Locks Maint. Supp. Building Electrical System	0	0	420	0	420	420
Poe Lock Gate 4 Repairs - E&D	200	0	0	0	0	0
E&D for an Emergency Open Flow Control System	0	0	1,000	0	1,000	0
Arc Flash Study for Mac and Poe Locks	0	0	400	0	400	400
Removal of Red Tagged Stiff Leg Derrick Cranes	250	250	0	0	0	0
Construction of Raceway for Lock Power Feeders	0	0	6,500	6,500	0	0
Env & Real Estate Coordination for Rock Cut Stone Storage	0	0	50	0	100	0
Medium ABS Ice Class C0 Tugboat - St Marys River Strike Removal	0	0	14,250	14,250	0	0
Pier Timber Fender Equipment Maintenance System	0	0	950	0	950	0
Repair and Replace Miter Gate Anchorage Components for the Poe	0	0	2,500	2,500	0	0
Repair and Replace Miter Gate Anchorage Components for Mac	0	0	1,500	0	1,500	550
Poe Lock Upstream Ship Arrestor Rehabilitation (Fabrication and Installation)	0	0	12,000	0	14,000	0

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Poe Lock Filling and Emptying Valves Repairs	0	0	0	0	4,200	4,200
Cranebarge Harvey Replacement Phase 3 of 4	0	0	0	0	9,500	9,500
Cranebarge Harvey Replacement Phase 4 of 4	0	0	0	0	5,910	5,910
Facility Lighting Modernization – Phase 1	0	0	1,000	0	1,250	0
Mac and Poe Lock Structural Handrail Design and Installation	0	0	0	0	3,800	3,800
Mooring Facility Rehabilitation	0	0	0	0	1,200	0
Facility Service Access Road Rehabilitation	0	0	0	0	1,600	0
Engineering & Design – Poe Lock Gate 3 Replacement	0	0	0	0	350	0
Engineering & Design – Poe Lock Stop Log Recess Repairs	0	0	0	0	250	0
Lower Dam Mooring Structure Rehabilitation	0	0	0	0	1,500	0
Construction of Facility Wastewater Sewer System	0	0	0	0	4,400	0
Admin Building Comprehensive Sustainment Mgmt. System	0	0	0	0	500	0
Construction of Backup Generator Replacement	0	0	0	0	16,400	0
Facility Pier Comprehensive Annual Inspection and Assessment Plan	0	0	0	0	500	0
Maintenance Storage Building West Parking Lot Rehabilitation	0	0	0	0	1,150	0
Other Business Lines						
Recreation: Visitors Center	1,031	297	1,760	245	1,130	190
ADA Accessibility Improvements	0	0	0	0	1,000	0
Preservation Maintenance for Recreational Facilities	0	0	0	0	1,000	0
Electrical, Water, Sewer, and Communications Infrastructure Replacement	0	0	0	0	1,000	0
Hydropower:						
– Hydropower Operations	1,059	1,059	898	898	838	838
– Hydropower Maintenance	1,488	1,488	1,691	1,691	2,165	1,546
– Hydropower Repairs & Upgrades	5,385	5,385	7,675	0	6,655	0
– Facility Physical/Cyber Security Maintenance and Replacement for Hydropower	0	0	150	104	128	128
– Powerplant Sluiceway Rehabilitation	0	0	0	0	9,600	0

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Hydropower (cont'd):						
- 13.8kV Air Circuit Breaker Replacement and Partial E&D	0	0	4,250	0	4,500	0
- Hydropower Operations Safety Improvements	0	0	0	0	1,800	0
- Unit 10 Generator Rewind	0	0	0	0	3,000	0
- Main Plant Generator Rewind (4 Parts)	0	0	0	0	10,000	0
- Turbine Shaft Packing Gland Improvements	0	0	0	0	800	0
- Control and Relay HVAC Replacement for Stable Electronics Operation	0	0	0	0	825	0
- Main Plant Building Envelope and Architectural Repairs	0	0	0	0	3,000	0
- Unit 10 Building Envelope and Architectural Repairs	0	0	0	0	3,000	0
- St. Marys Hydropower Major Rehab Evaluation Report	0	0	0	0	1,250	0
- Replace Emergency and End-Use Electrical Infrastructure	0	0	0	0	750	0
- Gantry Crane Replacement	0	0	1,800	0	1,800	0
- Power Feeder & Duct Bank Replacement	0	0	5,600	0	5,800	0
- Replace Main Powerhouse Generating Floor Overhead Bridge Crane Rails	0	0	700	700	0	0
- Trash Rake Replacement	0	0	0	0	1,900	0
Environmental Stewardship	199	58	500	0	500	0
Grounds/Security in support of Hydropower	301	301	315	315	327	327
Ground/Security in support of Rec	30	30	31	31	33	33
CIPR Security Requirements (Joint)	1,150	0	1,150	0	910	0
TOTAL	53,885	51,321	111,983	63,814	238,228	58,361

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.