



US Army Corps
of Engineers®



Black Rock Lock and Tonawanda Harbor, NY

Harbor Features

- Located on the Niagara River in the City of Buffalo, Erie County, NY
- Authorization: Rivers & Harbor Acts of 1888, 1919, 1922, 1925, 1935, 1945, and Flood Control Act of 1954
- Deep draft commercial project
- Project depths are 21 feet in the Niagara River Channel and 16 feet in Tonawanda Harbor channels.
- The Black Rock Lock and Channel permit pleasure craft and commercial vessels to travel between Buffalo Harbor and Tonawanda Harbor.
- The Black Rock Lock can accommodate pleasure craft and commercial vessels up to 625 feet long with drafts up to 21 feet.
- 97K tons of material shipped and received in 2019
- The Bird Island Pier is approximately 2 miles long and forms the west side of the Black Rock Channel.
- Project includes 4.1-mile federal channel connecting Buffalo Outer Harbor and Black Rock Lock, a 3.4-mile federal channel downstream of the Black Rock Lock, and a 2.5-mile federal channel and turning basin around Tonawanda Island approximately 8.1-miles downstream of the Black Rock Lock.
- Major stakeholders: U.S. Coast Guard, Suit-Kote, NOCO Energy Corp., and United Refining Co.

Project Requirements

- In addition to routine operation and maintenance (O&M), critical requirements include repairs to the lower west guide wall, upper east guide wall, Bird Island Pier, motor control center, main power cabling, hydraulic cylinders and power units, and fabrication and installation of new miter gates.



- Maintenance dredging is conducted infrequently to maintain the navigation channel. The channel was last dredged in 2015.
- New upper and lower miter gates are needed. The current gates are original to the project (1914) and are well beyond fatigue life. Engineering and design of new miter gates was completed in FY20. Fabrication of the lower miter gates was initiated in in FY21 and is scheduled to be completed in early FY22. Installation of the lower gates is planned for FY22. Fabrication of the upper gates is also planned to start in FY22.
- Rehab of the existing upper and lower gates and anchorages is currently ongoing. Work is focused on addressing the worst areas to ensure continued safe operation until design, fabrication and installation of the new gates is completed.

Project Requirements (Cont'd)

- Emergency repairs to the lower east primary anchorage were completed in FY18 following the sudden failure of the component.
- Work completed in FY19 focused on the anchorages and lower gates and included: replacement lower west primary anchorage, downstream secondary gate anchorages, upper primary anchorages, lower miter gate diagonals, pintle balls and bushings, lower gudgeon arms, lower ram arm connection, and all timber components (quoin, miter, and fender). In order to complete the work, lock dewatering and removal of the lower gates was also required.
- Work completed in FY20 included: replacement of the upstream secondary gate anchorages, upper miter gate diagonals, upper gudgeon arms and pins, pintle balls and bushings, ram arm connections, culvert trash screens, and all timber components (quoin, miter, and fender).
- Work planned for FY21 includes: replacement of the hydraulic power unit pump, culvert butterfly valve cylinders, and motor control centers.

Consequences of Not Maintaining the Project

- Failure to adequately fund routine O&M could result in closure of the lock.
- Elimination of the U.S. connection to the Intercoastal Waterway from Lake Erie
- Inability for commercial and recreational vessels to reach destinations on the upper Niagara River

Transportation Importance

- Asphalt is the primary commodity shipped or received through the lock.
- With 1,318 lockages in 2020, the lock provided safe passage for 2,332 vessels (138 commercial and 2,194 recreational).
- The lock provides the only means for deep draft commercial vessels to reach delivery ports on the upper Niagara River, including fuel storage facilities and refinery.

**U.S. Army Corps of Engineers Fiscal Year (FY) 2020, 2021, and 2022
Black Rock Lock and Tonawanda Harbor, NY
Project Requirements and President's Budget (\$1,000)**

Work Package	FY20 Requirement	FY20 Appropriation	FY21 Requirement	FY21 Appropriation	FY22 Requirement	FY22 President's Budget
Operation of Lock	1,249	1,249	1,255	1,255	1,302	1,302
Operational Routine Maintenance of Lock	646	646	659	659	687	687
Real Estate Management	35	0	34	34	34	34
Project Condition Surveys	31	31	32	32	33	33
Facility Security Maintenance	61	61	62	62	64	64
Motor Control Center Repair	550	0	0	0	0	0
Operational Condition Assessment	0	0	0	0	0	0
Replacement of Pintles	0	0	0	0	0	0
Lower Operating Gate Diagonal Replacement	2,000	2,000	0	0	0	0
Design Miter Gates	0	0	0	0	0	0
Fabrication Lower Miter Gates	4,500	0	4,500	4,500	0	0
Fabrication Upper Miter Gates	0	0	0	0	4,500	4,500
Installation Upper Miter Gates	0	0	0	0	3,000	0
Environmental Compliance Management	25	25	0	0	5	5
Periodic Inspection	60	60	0	0	0	0
Engineering & Design, Construction Bird Island Pier Repair	250	0	250	0	6,000	250
Structure Repair - Bird Island Pier	0	0	0	0	0	0
Engineering & Design, Construction Lower West Guide Wall Repair	0	0	100	0	5,100	100
Engineering & Design, Construction Upper East Guide Wall Repair	0	0	300	0	5,300	300
Engineering & Design, Construction New Dewatering Bulkheads	0	0	100	0	2,000	100
Engineering and Design, Construction - Main Power Cabling Renewal	0	0	50	0	300	100
Rehab Hydraulic Cylinders and Hydraulic Power Units	0	0	220	0	220	220
Installation of Lower Miter Gates	0	0	0	0	3,000	3,000
Other Business Lines						
Environmental Stewardship	5	5	5	5	5	5
TOTAL	9,412	4,077	7,567	6,547	31,550	10,700

Congressional Interests

- Representative Brian Higgins D-NY-26
- Senator Charles Schumer D-NY
- Senator Kirsten Gillibrand D-NY