US Army Corps of Engineers

Great Lakes Navigation System

# Algoma Harbor, WI

## Harbor Features

- Located on the west shore of Lake Michigan, about 68 miles from Green Bay via Sturgeon Bay Harbor and the Lake Michigan Ship Canal and about 115 miles north of Milwaukee.
- Authorization: River & Harbor Act of 3 March 1871
- Harbor that currently serves primarily recreational boat traffic
- Project depth is 14 feet
- 1,102 foot long north pier and a 1,530 foot long south breakwater
- 2,000 feet of maintained channel
- Dredged material is placed in an upland site provided by locals on an as-needed basis.
- Major stakeholders include U.S. Coast Guard and Lafond Fisheries.

## Project Requirements

- The harbor channels are stable and require only infrequent dredging; the harbor was last dredged in 1993. The community performed minimal dredging in 2012, but harbor access is still constricted.
- Maintenance dredging is currently required.
- The harbor's breakwater requires repair.

## Consequences of Not Maintaining the Project

- Loss of jobs locally
- Loss of recreational navigation and 30-40 charter fishing operations in the area.
- Based on a recent UW Extension economic study, the harbor generates over $3M annually for the Algoma community.

## Transportation Importance

- This project serves primarily charter fishing and recreational navigation interests.
- Harbor of Refuge
- The local community has established a significant infrastructure around the harbor facilities that generates income from harbor users and visitors to the area.

April 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Algoma Harbor, WI Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | | | 25 | | 25 | |
| Maintenance Dredging – Primary Work Package | | | 480 | | 480 | |
| Breakwater Repairs – by Contract | 5,000 | | 5,000 | | 5,000 | |
| Engineering and Design – Breakwater Repairs | 400 | | 400 | | 400 | |
| | | | | | | |
| **TOTALS** | **5,400** | **0** | **5,905** | **0** | **5,905** | **0** |

## Congressional Interests

- Representative Reid Ribble R-WI-8
- Senator Ron Johnson R-WI
- Senator Tammy Baldwin D-WI

US Army Corps of Engineers

Great Lakes Navigation System

# Alpena Harbor, MI

## Harbor Features

- Located at the mouth of Thunder Bay River, which empties into Thunder Bay, Lake Huron.
- Authorization: River & Harbor Acts of 19 Sep 1890, 2 Mar 1919, 22 Sep 1922, 30 Aug 1935, 27 Oct 1965
- Deep draft commercial harbor
- Project depths – 25 feet from deep water in Thunder Bay to a point 300 feet lake-ward of the Alpena Light; then 24 feet to 700 feet upstream from the light; 23 feet to the Second Avenue Bridge; then 18.5 feet to the upper limit of the Federal project
- Five year average (2006-2010) tonnage is 2.9M tons of material shipped and received
- Ranked 25th among the Great Lakes Harbors based on five year average (2006-2010) tonnage
- 101st leading U.S. port in 2010
- Approximately 700 feet of breakwater structures
- Approximately 12,000 feet of maintained channel
- Dredged material is placed in upland placement sites as needed.
- Major stakeholders include U.S. Coast Guard, Lake Carriers' Association, Lafarge Corporation North America, Alpena Oil, Seaway Marine Transport, Decorative Panels International (DPI), and Everett Goodrich Trucking.

## Project Requirements

- Approximately 30,000 cubic yards of material must be dredged on a 5 to 10 year cycle; the harbor was last dredged in 2007.
- Maintenance dredging is currently required.
- Navigation structures are primarily maintained by Government floating plant.

## Consequences of Not Maintaining the Project

- Reduction of bulk commodities that pass through the harbor that generate $33M annually in direct revenue while supporting 2,200 direct, indirect, and induced jobs that produce over $145M per year in personal income.
- If the harbor was closed to commercial traffic, commodities would have to be transported by rail. This would increase annual emissions rates by 15,000 lbs of harmful particulate matter (PM-10) and increase costs by $49,000 due to increased railroad related accidents.
- Light loading; loss of between 1 and 2 feet of channel depth results in increased transportation costs of between $168,000 and $407,000 annually.

## Transportation Importance

- U.S. Coast Guard Station Alpena is located in the harbor.
- Regionally significant receiving and shipping port on the Great Lakes
- Harbor of Refuge
- Commodities include cement, coal and petroleum products, sand, gravel, salt and limestone. The harbor receives large shipments of salt to supply many local municipalities for road deicing.

April 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Alpena Harbor, MI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | 47 | | 50 | | 50 | |
| Breakwater Repair – by Gov. Floating Plant | 320 | | | | | |
| Maintenance Dredging – Primary Work Package | | | 800 | | 800 | |
| Maintenance Dredging – Backlog Work Package | 850 | | 900 | | 900 | |
| | | | | | | |
| **TOTALS** | **1,217** | **0** | **1,750** | **0** | **1,750** | **0** |

## Congressional Interests

- Representative Dan Benishek R-MI-1
- Senator Carl Levin D-MI
- Senator Debbie Stabenow D-MI

US Army Corps of Engineers

Great Lakes Navigation System

# Arcadia Harbor, MI

## Harbor Features

- Located on the east shore of Lake Michigan, 193 miles northeast of Chicago, IL and 15 miles north of Manistee, MI.
- Authorization: River & Harbor Act of 3 Mar 1905
- Shallow draft recreational harbor
- Project depth is 9 feet
- Approximately 1,100 feet of maintained Federal channel between Lake Michigan and Bar Lake.
- More than 2,400 feet of maintained piers
- Dredged material is placed along the beach as beach nourishment.
- Major stakeholders include Arcadia Township, County of Manistee, and several marinas and charter fishing interests.

## Project Requirements

- Requires annual maintenance dredging of approximately 5,000 cubic yards. Arcadia Harbor was last dredged in 2010 using MI regional dredging provision funding. Minimal dredging was completed by the community in 2012, but access to the harbor is still constricted.
- The harbor currently requires maintenance dredging.

## Consequences of Not Maintaining the Project

- Local economy would be devastated
- Loss of jobs locally
- Loss of destination for many transient boaters that fill the marinas
- Loss of recreational and charter fishing in the area
- Property values would plummet

## Transportation Importance

- This project serves as an important Harbor of Refuge and supports charter fishing and recreational navigation interests.
- The local community has established a significant infrastructure around the harbor facilities that generates income from harbor users and visitors to the area.
- Supports over 60 recreational boat slips

April 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Arcadia Harbor, MI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | 17 | | 18 | | 18 | |
| Maintenance Dredging – Primary Work Package | 170 | | 177 | | 177 | |
| | | | | | | |
| **TOTALS** | **187** | **0** | **195** | **0** | **195** | **0** |

## Congressional Interests

- Representative Dan Benishek R-MI-1
- Senator Carl Levin D-MI
- Senator Debbie Stabenow D-MI

US Army Corps of Engineers

Great Lakes Navigation System

# Ashland Harbor, WI

## Harbor Features

- Located at the head of Chequamegon Bay, on the south shore of Lake Superior, about 65 miles east of Duluth, MN.
- Authorization: River & Harbor Acts of 5 Aug 1886, 11 Aug 1888, 3 Mar 1899, 6 Jun 1900, 8 Aug 1917, 3 July 1930, 30 Aug 1935, 2 Mar 1945, 14 Jul 1960
- Deep draft commercial harbor
- Project depth of 25 to 27 feet in east basin and 20 to 21 feet in west channel.
- Five year average (2006-2010) tonnage is 49,000 tons of material shipped and received
- Nearly 8,000 feet of breakwater structure
- Over one mile of maintained channel
- Major stakeholders include U.S. Coast Guard, Lake Carriers' Association, C. Reis Coal, and Xcel Energy.

## Project Requirements

- Approximately 25,000 to 45,000 cubic yards of material must be dredged on a 10 to 20 year cycle; the harbor was last dredged in 1993.
- Maintenance dredging is currently required within the harbor, and significant backlog shoaling is present.
- Rubble mound breakwater requires repair to protect exposed cribbing and significant replenishment

## Consequences of Not Maintaining the Project

- Reduction of bulk commodities that pass through the harbor that generate over $500,000 annually in direct revenue while supporting 41 direct, indirect, and induced jobs that produce over $2.6M per year in personal income
- If the harbor was closed to commercial traffic, commodities would have to be transported by rail. This would increase annual emissions rates by 3,500 lbs of harmful particulate matter (PM-10) and increase costs by $12,500 due to increased railroad related accidents.
- Loss of Great Lakes tour boat industry

## Transportation Importance

- Locally significant receiving port on the Great Lakes
- Commodities received include coal and lignite
- Harbor of Refuge
- Significant tour boat industry located at this harbor

April 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Ashland Harbor, WI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | 15 | | 50 | | 50 | |
| Maintenance Dredging – Primary Work Package | | | 600 | | 600 | |
| Maintenance Dredging – Backlog Work Package | 1,000 | | 1,000 | | 1,000 | |
| Breakwater Repair | 305 | | 305 | | 305 | |
| | | | | | | |
| **TOTALS** | **1,320** | **0** | **1,955** | **0** | **1,955** | **0** |

## Congressional Interests

- Representative Sean Duffy R-WI-7
- Senator Ron Johnson R-WI
- Senator Tammy Baldwin D-WI

US Army Corps of Engineers
Buffalo District

Great Lakes Navigation System

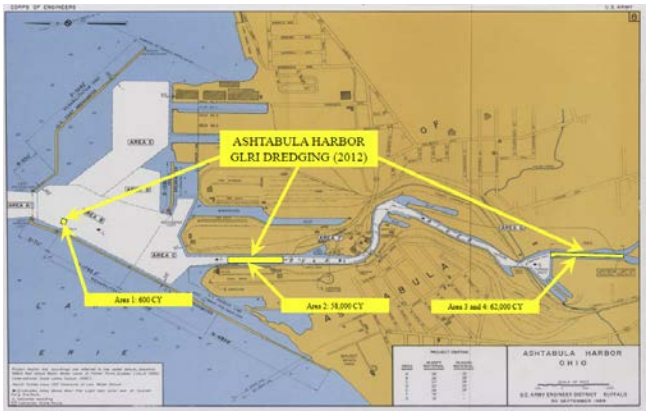
# Ashtabula Harbor, OH

## Harbor Features

- Located on Lake Erie in the city of Ashtabula, Ashtabula County, Ohio
- Authorization: River & Harbor Acts of 1896, 1905, 1910, 1919, 1935, 1937, 1945, 1960 and 1965
- Deep draft commercial harbor
- Authorized depths are 22-30 feet in the outer harbor and 16-18 feet in the river
- Five year average (2006-2010) tonnage of 5.8M tons of material shipped and received
- Ranked 14th among the Great Lakes Harbors based on five year average (2006-2010) tonnage
- 66th leading U.S. Port in 2010
- Over 2.5 miles of breakwater structures
- 185 acre outer harbor and 2.1 miles of Federal channel on the Ashtabula River
- Major stakeholders include the Norfolk Southern Ashtabula Coal Dock, Pinney Dock and Transport Company, U.S. Coast Guard, the Ashtabula Port Authority, and Sidley Stone Products

## Project Requirements

- Approximately 100,000 cubic yards (CY) of material must be dredged from the Lower River and outer harbor every 2-3 years. This area was last dredged in 2011 when approximately 111,000 CY of material was removed. Maintenance dredging is scheduled for 2013.
- Great Lakes Restoration Initiative (GLRI) funded dredging of the Ashtabula River and Outer Harbor is scheduled to be completed in September 2013 and will remove 120,600 CY of sediment that not suitable for open lake placement.
- The east and west arrowhead breakwaters are deteriorated and require repairs.




## Consequences of Not Maintaining the Project

- Reduction of bulk commodities that pass through the harbor and generate $433M annually in direct revenue while supporting 1,021 direct, indirect, and induced jobs that produce over $88M per year in personal income.
- If the harbor was closed to commercial traffic, commodities would have to be transported by rail and truck. This would increase annual emission rates by over 115,249 tons of harmful particulate matter (PM-10) and increase costs by $3,629,000 due to increased railroad related accidents, and $2,064,000 due to increased trucking related accidents.

March 2013

**Consequences of Not Maintaining the Project**

- Light loading; losses of between 1 and 2 feet of channel depth would result in increased transportation costs of between $382,000 and $1,283,000 annually.

**Transportation Importance**

- Major receiving and shipping port on the Great Lakes; and Harbor of Refuge.
- Commodities shipped or received include coal, iron ore, limestone, chemicals, ores and minerals.
- The port is a perennial leader on the Great Lakes for the shipment of coal.

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013, and 2014**
**Ashtabula Harbor, Ohio Project Requirements and President's Budget ($1,000)**

| Work Package | GLRI Funds | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|---|
| Project Conditions Survey | | 80 | | 80 | | | |
| Maintenance Dredging – Primary | | | | 954 | 954 | | |
| Maintenance Dredging – Backlog | 9540 | 1,465 | | | | | |
| Maintenance Dredging – Lower River & Outer Harbor | | 5,000 | | | | | |
| Dredged Material Management Plan (DMMP) | | 200 | | | | | |
| Sediment Sampling and Analysis | | | | | | 150 | |
| E&D Outer Harbor | 100 | | | | | | |
| Critical Maintenance of Navigation Structures and Obstruction Removal | | | | | | 1,030 | 1,030 |
| Structure Repair – E. Breakwater - Floating Plant | | | | 1,025 | 800 | | |
| Snagging & Clearing F/P | | | | 60 | 56 | | |
| **TOTALS** | **9640** | **6,745** | **0** | **2,119** | **1,810** | **1,180** | **1.030** |

**Congressional Interests**

- Representative David Joyce D-OH-14
- Senator Rob Portman R-OH
- Senator Sherrod Brown D-OH

US Army Corps of Engineers

Great Lakes Navigation System

# Au Sable Harbor, MI

## Harbor Features

- Located on the west shore of Lake Huron, 8 miles north of Au Sable Point on northeast side of Saginaw Bay.
- Authorization: River & Harbor Act of 2 Mar 1945
- Shallow draft recreational harbor
- Project depth of 12 feet in the entrance channel and 10 feet in the inner channel
- Approximately 3,000 feet of maintained Federal channel
- More than 2,000 feet of maintained piers
- Dredged material is placed along the beach as beach nourishment.
- Major stakeholders include Michigan DNR and Oscoda Fellow Marina.

## Project Requirements

- Approximately 20,000 to 40,000 cubic yards of material must be dredged on a three to seven year cycle; the harbor was last dredged in 2010 using MI regional dredging provision funding.
- Maintenance dredging is currently required within the harbor.

## Consequences of Not Maintaining the Project

- Loss of jobs locally
- Loss of recreational and charter fishing in the area

## Transportation Importance

- This project serves as an important Harbor of Refuge and supports charter fishing and recreational navigation interests.
- The local community has established a significant infrastructure around the harbor facilities that generates income from harbor users and visitors to the area.

April 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Au Sable Harbor, MI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | | | 20 | | 20 | |
| Maintenance Dredging – Primary Work Package | | | 400 | | 400 | |
| | | | | | | |
| **TOTALS** | **0** | **0** | **420** | **0** | **420** | **0** |

## Congressional Interests

- Representative Dan Kildee D-MI-5
- Senator Carl Levin D-MI
- Senator Debbie Stabenow D-MI

US Army Corps of Engineers
Buffalo District

Great Lakes Navigation System

# Barcelona Harbor, NY

## Harbor Features

- Located on Lake Erie in the Town of Westfield, Chautauqua County, New York
- Authorization: River & Harbor Act of 1945
- Shallow draft recreational harbor
- Authorized depths are 10 feet in the entrance channel and 8 feet in the harbor basin
- The harbor is protected by the East and West breakwaters with a total length of 1,730 feet
- Other features include public transient slips and launching facilities
- Major stakeholders include the Town of Westfield, one private marina, commercial and charter fishing interests, a charter diving operation and the recreational boating community

## Project Requirements

- The harbor typically requires dredging every five to ten years. It was last dredged in 1999 when 75,000 cubic yards (CY) of material was removed
- In order to maintain adequate channel depth for vessels, an estimated 50,000 CY of maintenance dredging will be required
- The current sediment backlog within the functional harbor areas is estimated at approximately 80,000 CY
- Maintenance dredging is the primary critical requirement

## Consequences of Not Maintaining the Project

- Failure to dredge will result in continued shoaling and reduced channel dimensions; resulting in unsafe navigation conditions
- Further shoaling will limit or cease recreational use
- Potential safety issues for recreational boating community
- Potential functional loss of Harbor of Refuge
- Negative economic impacts, locally and regionally

## Transportation Importance

- Harbor of Refuge
- Supports 9 charter fishing boats generating approximately $73,500 in net income annually. Also supports 2 licensed commercial fishing boats and a chartered diving operation

February 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Barcelona Harbor, New York - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Maintenance Dredging – Primary | 840 | | 875 | | 945 | 0 |
| **TOTALS** | **840** | **0** | **875** | **0** | **945** | **0** |

**Congressional Interests**

- Representative Tom Reed R-NY-23
- Senator Kirsten Gillibrand D-NY
- Senator Charles Schumer D-NY

US Army Corps of Engineers

Great Lakes Navigation System

# Bay Port Harbor, MI

## Harbor Features

- Located on Wild Fowl Bay on the east shore of Saginaw Bay, about 10 miles south of Caseville, MI.
- Authorization: River & Harbor Act of 20 May 1965
- Shallow draft recreational harbor
- Project depth is 6 feet
- Approximately 5,750 feet of maintained Federal channel
- The State of Michigan provides an upland placement site for dredged material on an as needed basis.
- Major stakeholders include the U.S. Coast Guard and Native American fishing interests.

## Project Requirements

- Requires periodic maintenance dredging on an 8 to 12 year cycle. This harbor was last dredged in 2011 with 2010 Michigan Regional dredging funds.

## Consequences of Not Maintaining the Project

- Loss of jobs locally
- Loss of recreational and charter fishing in the area
- Loss of recreational boating access to Great Lake
- Loss of safe harbor during storm events
- Potential safety issues for recreational boating community

## Transportation Importance

- This project serves as an important Harbor of Refuge and supports charter fishing and recreational navigation interests.
- The local community has established a significant infrastructure around the harbor facilities that generates income from harbor users and visitors to the area.

April 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Bay Port Harbor, MI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | | | | | | |
| Maintenance Dredging – Primary Work Package | | | | | | |
| | | | | | | |
| **TOTALS** | **0** | **0** | **0** | **0** | **0** | **0** |

## Congressional Interests

- Representative Candice S. Miller R-MI-10
- Senator Carl Levin D-MI
- Senator Debbie Stabenow D-MI

US Army Corps of Engineers

Great Lakes Navigation System

# Bayfield Harbor, WI

## Harbor Features

- Located on the south shore of Lake Superior, 85 miles east of Duluth, MN.
- Authorization: River & Harbor Act of 17 May 1950
- Shallow draft recreational harbor
- Federal small boat basin approximately 6 acres in area
- Project depth for the entire boat basin is 10 feet
- Federal breakwaters are extensions of city piers by approximately 103 feet and 139 feet with two foot high parapets.
- Major stakeholders include the City of Bayfield, U.S. Coast Guard, various marina owners, and two private ferry services to Madeline Island.

## Project Requirements

- Requires periodic maintenance dredging on an infrequent basis; the harbor was last dredged in 1973.

## Consequences of Not Maintaining the Project

- Loss of jobs locally
- Loss of recreational and charter fishing in the area
- Loss of only commercial transportation option to Madeline Island

## Transportation Importance

- The local community uses the local ferry service daily for commuting to Madeline Island.
- This project serves as an important Harbor of Refuge and supports charter fishing and recreational navigation interests.
- The local community has established a significant infrastructure around the harbor facilities that generates income from harbor users and visitors to the area.

April 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Bayfield Harbor, WI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | | | | | | |
| | | | | | | |
| **TOTALS** | **0** | **0** | **0** | **0** | **0** | **0** |

## Congressional Interests

- Representative Sean Duffy R-WI-7
- Senator Ron Johnson R-WI
- Senator Tammy Baldwin D-WI

US Army Corps of Engineers

Great Lakes Navigation System

# Big Bay Harbor, MI

## Harbor Features

- Located on the south shore of Lake Superior, 33 miles northwest of Marquette, MI and 38 miles east of the Portage entry to the Keweenaw Waterway.
- Authorization: 1945 River & Harbor Act
- Shallow draft recreational harbor
- Project depth is 12 feet in the entrance channel and 10 feet in the harbor basin.
- Approximately 500 feet of maintained Federal channel
- More than 1,250 feet of maintained piers.
- Dredged material is placed along the beach as beach nourishment.
- Major stakeholders include the Michigan DNR, Marquette County Sportsman's Club, and various marinas.

## Project Requirements

- Requires periodic maintenance dredging on a three to five year cycle of approximately 11,000 to 19,000 cubic yards; the harbor was last dredged in 2008.
- The harbor currently requires maintenance dredging.

## Consequences of Not Maintaining the Project

- Loss of jobs locally
- Loss of recreational and charter fishing in the area

## Transportation Importance

- This project serves as an important Harbor of Refuge and supports charter fishing and recreational navigation interests.
- The local community has established a significant infrastructure around the harbor facilities that generates income from harbor users and visitors to the area.

April 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Big Bay Harbor, MI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | 11 | | 10 | | 10 | |
| Maintenance Dredging – Primary Work Package | 210 | | 210 | | 210 | |
| | | | | | | |
| **TOTALS** | **221** | **0** | **220** | **0** | **220** | **0** |

## Congressional Interests

- Representative Dan Benishek R-MI-1
- Senator Carl Levin D-MI
- Senator Debbie Stabenow D-MI

US Army Corps of Engineers

Great Lakes Navigation System

# Big Suamico Harbor, WI

## Harbor Features

- Located off the Big Suamico River, which flows east into Green Bay, an arm of Lake Michigan.
- Authorized: River & Harbor Act of 1937
- Shallow draft recreational harbor
- Project depth is 8 feet
- Approximately 3,700 feet of maintained Federal channel
- Dredged material is placed along the beach as beach nourishment.
- Major stakeholders include Native American fishing interests and various marina owners.

## Project Requirements

- Requires periodic maintenance dredging on a five to seven year cycle of approximately 9,000 to 13,000 cubic yards; the harbor was last dredged in 2002.
- The harbor currently requires maintenance dredging.

## Consequences of Not Maintaining the Project

- Loss of jobs locally
- Loss of recreational and charter fishing in the area

## Transportation Importance

- This project serves as an important Harbor of Refuge and supports charter fishing and recreational navigation interests.
- The local community has established a significant infrastructure around the harbor facilities that generates income from harbor users and visitors to the area.

April 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Big Suamico Harbor, WI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | 30 | | 30 | | 30 | |
| Maintenance Dredging – Primary Work Package | 530 | | 540 | | 540 | |
| | | | | | | |
| **TOTALS** | **560** | **0** | **570** | **0** | **570** | **0** |

## Congressional Interests

- Representative Reid Ribble R-WI-8
- Senator Ron Johnson R-WI
- Senator Tammy Baldwin D-WI

US Army Corps of Engineers

Great Lakes Navigation System

# Black River, Port Huron, MI

## Project Features

- Flows southeast from Sanilac County into the St. Clair River at Port Huron
- Authorization: River and Harbor Acts of 19 Sep 1890, 13 Jul 1892, 22 Sep 1922, 3 Jul 1930, 30 Aug 1935, 3 Apr 1970
- Deep draft and shallow draft project
- Project depths of 20 feet in the main portion of the channel, 6 and 8 feet in the upper river channels.
- Approximately 12,000 feet of maintained channel
- Dredged material is placed in upland placement sites as needed.
- Major stakeholders include U.S. Coast Guard and Lake Carriers' Association.

## Project Requirements

- Periodic maintenance dredging on a five to ten year cycle of approximately 15,000 to 35,000 cubic yards; the river was last dredged in 2003.
- Maintenance dredging is currently required within the channel, and significant backlog shoaling is present.

## Consequences of Not Maintaining the Project

- Significant loss of jobs locally
- Light loading associated with inadequate maintenance dredging, increasing vessel transportation costs.

## Transportation Importance

- Locally significant receiving and shipping port on the Great Lakes
- Home port of U.S. Coast Guard's 225 foot long cutter Hollyhock. Hollyhock's primary missions include: Aids-to-Navigation, search and rescue, environmental protection, and ice breaking. The Hollyhock docks at the U.S. Coast Guard Station Port Huron.

April 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Black River, Port Huron, MI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | 90 | | 90 | | 90 | |
| Maintenance Dredging – Primary Work Package | 650 | | 700 | | 700 | |
| Maintenance Dredging – Backlog Work Package | 1,000 | | 1,000 | | 1,000 | |
| | | | | | | |
| **TOTALS** | **1,740** | **0** | **1,790** | **0** | **1,790** | **0** |

## Congressional Interests

- Representative Candice R. Miller R-MI-10
- Senator Carl Levin D-MI
- Senator Debbie Stabenow D-MI

US Army Corps of Engineers

Great Lakes Navigation System

# Black River Harbor, MI

## Harbor Features

- Located at the mouth of the Black River on the south shore of Lake Superior, 39 miles west of Ontonagon, MI and 47 miles east of Ashland, WI.
- Authorization: River & Harbor Act of 2 Mar 1945
- Shallow draft recreational harbor
- Project depths are 10 feet in the approach channel, 8 feet in the access channel and 6 feet in the river channel.
- Approximately 4,000 feet of maintained Federal channel
- Approximately 1,300 feet of rubble mound breakwaters
- Dredged material is placed along the beach as beach nourishment.
- Major stakeholders include US Forest Service, Michigan DNR, Gogebic County, US Coast Guard, Marina concessionaire, along with charter, recreational, and Native American fishing interests.

## Project Requirements

- Approximately 4,500 to 7,500 cubic yards of material must be dredged on a three to five year cycle; the harbor was last dredged in 2009.
- The harbor currently requires maintenance dredging.

## Consequences of Not Maintaining the Project

- Further shoaling will limit or cease recreational and transient boating
- Loss of jobs locally
- Loss of recreational and charter fishing in the area

## Transportation Importance

- This project serves as an important Harbor of Refuge in a remote area of Lake Superior and supports fishing and recreational navigation interests.
- The local community has established a significant infrastructure around the harbor facilities that generates income from harbor users and visitors to the area.

April 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Black River Harbor, MI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | | | 20 | | 20 | |
| Maintenance Dredging – Primary Work Package | | | 240 | | 240 | |
| | | | | | | |
| **TOTALS** | **0** | **0** | **260** | **0** | **260** | **0** |

## Congressional Interests

- Representative Dan Benishek R-MI-1
- Senator Carl Levin D-MI
- Senator Debbie Stabenow D-MI

US Army Corps of Engineers
Buffalo District

Great Lakes Navigation System

# Black Rock Lock and Tonawanda Harbor, NY

## Harbor Features

- Located on the Niagara River in the city of Buffalo, Erie County, New York
- Authorization: River & Harbor Acts of 1888, 1902, 1905, 1916, 1919, 1922, 1925, 1934, 1935, 1945 and 1954
- Deep draft commercial project
- 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
- The Bird Island Pier is approximately 2 miles long and forms the west side of the Black Rock Channel
- The Black Rock Channel is a 3.5 mile Federal channel connecting Buffalo Harbor and Black Rock Lock
- The Major stakeholders include U.S. Coast Guard, Marathon Ashland Petroleum, NOCO Energy Corp., United Refining Co., and NRG Huntley Power Plant

## Project Requirements

- In addition to routine operation and maintenance (O&M), critical requirements include the following: repair of lower west guide wall, removal of middle gates, chamber resurfacing and repair of the Bird Island Pier
- Maintenance dredging is conducted on a infrequent, as-needed basis. The Black Rock Channel was last dredged in 2009 when approximately 115,000 cubic yards (CY) of material was removed

## Consequences of Not Maintaining the Project

- Failure to adequately fund routine O&M could result in total or temporary closure of the lock
- Elimination of the US connection to the Intercoastal Waterway from Lake Erie
- Inability for commercial and recreational vessels to reach destinations on the Upper Niagara River
- Failure to repair the lower west guide wall, will result in continued degradation and eventual failure of the structures, and increased future maintenance costs
- Failure to repair the Bird Island Pier will result in continued degradation and eventual failure of the structure, increased future maintenance costs and unsafe navigation conditions in the channel. Structural degradation has also resulted in closure of a portion of the pedestrian walkway atop the pier

## Transportation Importance

- Asphalt is the primary commodity shipped or received through the lock
- With 1,402 lockages in 2012, the lock provided safe passage for 1,990 vessels (340 commercial and 1,650 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) 2012, 2013 and 2014**
**Black Rock Lock and Tonawanda Harbor, New York**
**Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Operation of Lock | 1,400 | 760 | 1,325 | 1,325 | 1,765 | 1,765 |
| Maintenance of Lock | | 431 | | | | |
| Lock Controls Replacement and Upgrade | 305 | | 200 | | | |
| Project Conditions Survey | 255 | 27 | 260 | | | |
| E & D, Construction, Removal of Middle Gate | 1,100 | | 1,100 | | 1,100 | |
| E & D, Construction, Gate Fendering Renewal | 300 | | 225 | | | |
| E & D, Bird Island Pier Reconstruction | 350 | | 350 | | 300 | |
| E & D, Constr., Lock Gate Anchorage/Upgrade Repairs | 400 | | 400 | | | |
| E&D Chamber Resurfacing | | | | | 200 | |
| Facility Security | | | 100 | | 100 | |
| Strategic Sustainability Performance Plan | | | 150 | | 150 | |
| Structure Repair – Bird Island Pier (F/P) | 600 | | 300 | | | |
| Snagging and Clearing | | 48 | | | | |
| E & D, Lower W. Guide Wall Repair | 300 | | 300 | | 300 | |
| Install Emergency Generators | 150 | | 150 | | 250 | |
| | | | | | | |
| **Other Business Lines:** | | | | | | |
| Recreation | 10 | 5 | 5 | 5 | | |
| Environmental Stewardship | 20 | 14 | 5 | 5 | 5 | 5 |
| **TOTALS** | **5,190** | **1,285** | **4,870** | **1,335** | **4,170** | **1,770** |

## Congressional Interests

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

US Army Corps of Engineers

Great Lakes Navigation System

# Bolles Harbor, MI

## Harbor Features

- Located on the west shore of Lake Erie at the mouth of La Plaisance Creek, 7 miles southwest of Monroe, MI.
- Authorization: River & Harbor Act of 6 Jul 1965
- Shallow draft recreational harbor
- Project depth is 8 feet at the downstream section of the project and 6 feet in the creek (upstream) section.
- Approximately 11,000 feet of maintained Federal channel
- More than 600 feet of maintained revetments
- Major stakeholders include the Monroe Boat Club, charter fishing interests, and the Michigan DNR.
- Confined Disposal Facility (CDF) currently has sufficient capacity for the next 15 years.

## Project Requirements

- Maintenance dredging of approximately 20,000 cubic yards on a three to five year cycle; the harbor was last dredged in 2010.
- The harbor currently requires maintenance dredging.
- Periodic maintenance of the CDF is required.

## Consequences of Not Maintaining the Project

- Loss of jobs locally
- Loss of recreational and charter fishing in the area
- Loss of recreational boating access to Great Lake
- Loss of safe harbor during storm events
- Potential safety issues for recreational boating community

## Transportation Importance

- This project serves as an important Harbor of Refuge and supports charter fishing and recreational navigation interests.
- The local community has established a significant infrastructure around the harbor facilities that generates income from harbor users and visitors to the area. There are multiple marinas located in the harbor that provide over 500 docks to recreational boaters.

April 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Bolles Harbor, MI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | | | 15 | | 15 | |
| Maintenance Dredging – Primary Work Package | | | 250 | | 250 | |
| | | | | | | |
| **TOTALS** | **0** | **0** | **265** | **0** | **265** | **0** |

## Congressional Interests

- Representative Tim Walberg R-MI-7
- Senator Carl Levin D-MI
- Senator Debbie Stabenow D-MI

US Army Corps of Engineers
Buffalo District

Great Lakes Navigation System

# Buffalo Harbor, NY

## Harbor Features

- Located on Lake Erie in the city of Buffalo, Erie County, New York
- Authorization: River & Harbor Acts of 1826, 1866, 1874, 1896, 1899, 1900, 1902, 1907, 1909, 1910, 1912, 1919, 1927, 1930, 1935, 1945, 1960, 1962 and Water Resources Development Acts (WRDA) of 1986, 1988 and 2007
- Deep draft commercial harbor
- Authorized depths are 23-30 feet in the outer harbor and 22 feet in the river
- Five year average (2006-2010) tonnage of 1.46M tons of material shipped and received
- Ranked 33rd among the Great Lakes Harbors based on five year average (2006-2010) tonnage
- 127th leading U.S. port in 2010
- Buffalo Harbor is ranked 29th among the Great Lakes Ports
- Over 4.5 miles of breakwater structures
- 5.5 miles of Federal channel on the Buffalo River
- A confined disposal facility (CDF) is located adjacent to the south entrance channel
- Major stakeholders include the Port of Buffalo, U.S. Coast Guard, General Mills, Exxon-Mobil, Lafarge Cement and Founders Supplies, Incorporated

## Project Requirements

- Approximately 140,000 cubic yards of material must be dredged every 2 years. The harbor was last dredged in 2011-2012 when approximately 556,000 CY of material was removed. This project included the Great Lakes Restoration Initiative (GLRI) funded removal of 452,000 CY of backlog dredged material from the Federal channel.
- Maintenance dredging is required in 2014.
- Under the Great Lakes Legacy Act (GLLA) USEPA plans to do environmental dredging of approximately 500,000 cubic yards outside the Federal Channel. A goal of the project is for future year Buffalo River dredging to be suitable for placement in the open lake, resulting in reduced O&M costs for the Buffalo Harbor in addition to significant environmental benefits.
- Deteriorated sections of the South Breakwater and CDF #4 require repairs to restore proper function of the structures.

## Consequences of Not Maintaining the Project

- Reduction of bulk commodities that pass through the harbor and generate $50M annually in direct revenue while supporting 410 direct, indirect, and induced jobs that produce over $36M per year in personal income.
- If the harbor was closed to commercial traffic, commodities would have to be transported by rail and truck. This would increase annual emission rates by over 26,273 tons of harmful particulate matter (PM-10) and increase costs by $253,000 due to increased railroad related accidents, and $2,864,000 due to increased trucking related accidents.

March 2013

**Consequences of Not Maintaining the Project**

- Light loading; losses of between 1 and 2 feet of channel depth would result in increased transportation costs of between $100,000 and $319,000 annually.

**Transportation Importance**

- Major receiving and shipping port on the Great Lakes; and Critical Harbor of Refuge.
- Commodities shipped or received include aggregates, limestone, salt, grain, cement, and ores and minerals.

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Buffalo Harbor, New York - Project Requirements and President's Budget ($1,000)**

| Work Package | GLRI Funds | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|---|
| Project Conditions Survey | | 115 | | 115 | | | |
| Maintenance Dredging | 5,270 | | | 1,425 | | 1,420 | 1,420 |
| Interim Repair CDF #4 | 3,435 | | | 178 | | 250 | |
| DMMP | | 200 | | | | | |
| E&D South Breakwater Repair (1,800 LF) | | 300 | | 300 | | 300 | |
| Structure Repair – South Breakwater (Floating Plant) | | 900 | 874 | | | | |
| Sediment Sampling and Analysis | | 150 | | | | | |
| Snagging and Clearing | | 50 | 48 | | | | |
| Environmental Compliance (CDF Monitoring, Field) | | 70 | | | | | |
| Water Control Data Collection | | 48 | | | | | |
| **TOTALS** | **8,705** | **1,833** | **922** | **2,018** | **0** | **1,970** | **1,420** |

**Congressional Interests**

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

US Army Corps of Engineers

Great Lakes Navigation System

# Burns Waterway Harbor, IN

## Project Features

- Located on Lake Michigan in the city of Portage, Lake County, Indiana.
- Authorization: Rivers and Harbors Act of 1965.
- Authorized depths are 30 feet in the approach channel, 28 ft. in the outer harbor, and 27 ft. in both harbor arms.
- Five year average (2006-2010) tonnage is 6.4M tons of material shipped or received
- Ranked 12th among Great Lakes Harbors based on five year average (2006-2010) tonnage
- 68th leading U.S. port in 2010
- Interconnected with 65 commercial ports: ships cargo to 27 ports, and receives cargo from 38 ports.
- 5,830 linear feet of rubblemound breakwater structures.
- 2.5 miles of Federal Channel combined within the approach, outer harbor, and east and west arms.
- Major stakeholders include ArcelorMittal Steel, Tanco Terminals, and 29 other tenants - 14 of which are steel-related industries.

## Project Requirements

- Approximately 50,000 cubic yards of sand must be dredged each year in the approach channel. The harbor was last dredged in 2008, and will be dredged in 2014. A 1,000' bulk carrier loaded with taconite for ArcelorMittal grounded in the approach channel in April 2012.
- Due to the severe Hurricane Sandy storm on southern L. Michigan on 31-Oct-2012, the approach channel received approximately 66,000 CY of additional sediment.
- Maintenance dredging in 2014 will include the harbor arm areas and the approach channel.
- The rubblemound breakwater is the harbor's only protective structure. Three sections, totaling 600 feet overall, require repair work.

## Consequences of Not Maintaining the Project

- Light loading: losses of between 2 and 3 feet of channel depth would result in increased transportation costs of between $1.7M and $3.0M annually.
- Reduction of bulk commodities that pass through the harbor and generate $3.4B annually in direct revenue while supporting 19,678 direct, indirect, and induced jobs that produce over $1.5B per year in personal income.
- If the harbor was closed to commercial traffic, commodities would have to be transported by rail and truck. This would increase annual emission rates by nearly 53,400 tons of harmful particulate matter (PM-10) and increase costs by $3.0M due to increased railroad related accidents, and $1.1M due to increased trucking related accidents.

## Transportation Importance

- ArcelorMittal's Burns Harbor facility is one of the largest steelmaking facilities in North America. It operates two blast furnaces, has a total raw steelmaking capability of 4.7M tons annually, and primarily serves the automotive industry. Principal products made are hot-rolled, cold-rolled and coated-sheet products. Other markets served include appliances, construction, office furniture and rail cars.

- Commodities are iron ore, steel products, limestone, grain, chemicals, fertilizers, and coal. The port handles over 15% of all U.S. steel trade with Europe.
- The harbor provides safe refuge for inland river barges traveling between Gary Harbor, Indiana Harbor, and Calumet Harbor.

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Burns Waterway Harbor, IN**
**Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Work Plan | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | 172 | 172 | 176 | 176 | 179 | 179 |
| Maintenance Dredging of Harbor Approach Channel – Primary work package | | | | | 1,900 | 1,900 |
| Maintenance Dredging of Harbor Channel – Backlog work package | | | | | | |
| Structural Repair - Outer Breakwater (Completed by Gov't Floating Plant) | 2,940 | | 2,980 | | 3,290 | |
| Maintenance Dredging NIPSCo | 2,903 | | 3,480 | | 4,080 | |
| Maintenance Dredging NIPSCo – Backlog workpackage | | | | | | |
| | | | | | | |
| **TOTALS** | **6,015** | **172** | **6,636** | **176** | **9,449** | **2,079** |

**Congressional Interests**

- Representative Peter J. Visclosky, D-IN-1
- Senator Dan Coats, R-IN
- Senator Joe Donnelly, D-IN

US Army Corps of Engineers

Great Lakes Navigation System

# Burns Waterway Small Boat Harbor, IN

## Project Features

- Located on Lake Michigan near the city of Portage, Lake County, Indiana.
- Authorization: Section 107 of the River and Harbor Act of 1960.
- Project depths are 11 ft. in the approach channel, 10 ft. in the inner harbor, and 6 ft. in the River Channel.
- Combined length of 1,688 linear feet of rubblemound breakwater structures.
- 5,200 ft of Federal channel in the harbor and channel leading to the public marina. The channel also serves numerous private marinas upstream of the public marina.

## Project Requirements

- Structural repairs to the North breakwater were completed in FY10 using USACE hired labor forces. Both the North and West Breakwaters are in satisfactory condition.
- Due to the severe Hurricane Sandy storm on southern L. Michigan on 31-Oct-2012, the outer harbor entrance received approximately 20,000 CY of new sediment.
- Hydraulic dredging was last completed in 2009. Approximately 75,000 CY of clean sand was removed, and placed offshore adjacent to the community of Ogden Dunes.
- Erosion control along the slopes adjacent to Burns Ditch is critically needed to help reduce the rate of shoal accumulation within the channel.

## Consequences of Not Maintaining the Project

- The available depth of the navigation channel is slightly reduced due to shoaling at the harbor entrance. Current shoaling could adversely affect only very few recreational users. Funding of channel maintenance in all recreational harbors is lower priority than commercial harbors.

## Transportation Importance

- The harbor provides berthing and launching for hundreds of recreational boats. Numerous marinas are located upstream of the federal project. In addition, the harbor and channel provide safe refuge for recreational boats on southern Lake Michigan traveling between Michigan City and Chicago's Calumet Harbor during periods of adverse weather. The commercial harbors in the immediate area, such as Burns Harbor, Gary Harbor and Indiana Harbor do not have any facilities for the protection of recreational boats during intense periods of rapidly developing summer/fall thunderstorms.

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Burns Waterway Small Boat Harbor, IN**
**Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Work Plan | FY13 Requirement | FY13 Work Plan | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys / Caretaker Funds | 25 | 0 | 25 | 0 | 25 | 0 |
| Sampling/Testing of Harbor and Channel for Maintenance Dredging – primary work package | | | | | | |
| Maintenance Dredging of Harbor and Channel – Primary work package | | | | | | |
| Structural Repair - North and West Breakwaters | | | | | | |
| | | | | | | |
| **TOTALS** | **25** | **0** | **25** | **0** | **25** | **0** |

**Congressional Interests**

- Representative Peter J. Visclosky, D-IN-1
- Senator Dan Coats, R-IN
- Senator Joe Donnelly, D-IN

April 2013

US Army Corps of Engineers

Great Lakes Navigation System

# Calumet Harbor, IL and IN

## Project Features

- Located on Lake Michigan in the city of Chicago, Illinois. The approach channel and outer harbor are located in Lake County, Indiana
- Authorization: Rivers and Harbors Acts of 1899, 1902, 1935, 1960, 1962, and 1965.
- Authorized depths are 29 ft. in the approach channel, 28 ft. in the outer harbor, and 27 ft. in the main river channel.
- The Federal navigation channel within the harbor is 4.40 miles long. The channel extends up the Calumet River to the Illinois Waterway (6.74 miles), and to L. Calumet (1.30 miles).
- 12,153 linear feet of steel sheetpile and timber crib breakwater structures.
- Chicago Confined Disposal Facility (CDF), which has a nominal storage capacity of 1.3M cubic yards for contaminated sediment.
- The harbor is the central element of the Port of Chicago.
- Five year average (2006-2010) tonnage for Calumet Harbor alone is 12.9M tons of material shipped and received
- Interconnected with 181 commercial ports: ships to 96 ports, and receives from 85 ports.
- 30 industrial tenants operate in the harbor, as well as a USCG Search and Rescue Station.

## Project Requirements

- The CDF's original storage capacity was estimated at 1.6 M cubic yards (CY). A portion of the volume was set aside for future cap and closure improvements that may require up to 0.3 M CY. The CDF currently contains 1.3 M CY. 50,000 CY of shoaling occurs annually. The ongoing Dredged Material Management Plan, set for FY14 completion, is investigating future sediment disposal options and locations.
- Authorized depth is maintained only in the center half-width of the harbor channel. The loss of depth elsewhere ranges between 1.0 to 4.0 feet.
- The outer harbor was last dredged in 2009, and will be dredged again in 2013. River areas were completed in 2011. Debris removal under the bridges was completed in FY12.

- The detached breakwater is the harbor's primary shield. Its condition is poor, having lost 6-10 inches of protective height, and there is a high probability of failure due to steel fatigue from over 80 years of service. Two breaches have previously occurred - both were large and expanded rapidly. Repairs to this structure continue, and will be completed in FY13.

## Consequences of Not Maintaining the Project

- Light loading losses of between 2 and 3 feet of channel depth results in increased transportation costs of between $0.9M and $1.6M annually.
- Reduction of bulk commodities that pass through the harbor and generate $84.5M annually in direct revenue while supporting 2,700 direct, indirect, and induced jobs that produce over $175.6M per year in personal income.
- If the harbor was closed to commercial traffic, commodities would have to be transported by rail and truck. This would increase annual emission rates by 238 tons of harmful particulate matter (PM-10) and increase costs by $218,000. due to increased railroad related accidents, and $23,000 due to increased trucking related accidents.

## Transportation Importance

- Commodities are limestone, coke, coal, salt, grain, cement, liquid bulk, potash, and steel. Nearly 3M tons of coal is shipped to 22 other ports.

April 2013

**Transportation Importance, continued**

- The harbor is the primary link (of only two possible routes) between the Inland-Waterway system, the Great Lakes, and foreign ports. From this harbor, deep-draft ships can reach the Atlantic Ocean through the St. Lawrence Seaway, and barges can reach the Gulf of Mexico through the Illinois and Mississippi Rivers.

- The harbor is the best safe refuge on southern Lake Michigan due to its ease of entry during storms. It permits the safe operation of over 3,000 river barges annually between the Inland-Waterway system and Indiana, Gary, or Burns Waterway Harbors.

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Calumet Harbor, IL and IN**
**Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Work Plan | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | 355 | 355 | 350 | 350 | 357 | 357 |
| Chicago CDF Water Quality Monitoring | 100 | 100 | 100 | 100 | 102 | 102 |
| Chicago CDF Dredged Material Management Plan | 650 | 650 | 30 | 606 | 278 | 278 |
| Maintenance Dredging of Harbor Channel – Primary work package | 743 | 665 | 1,459 | 697 | 1,820 | 1,700 |
| Maintenance Dredging of Harbor Channel – Backlog work package | | | | | 600 | |
| Structural Repairs – Detached Breakwater by Gov't Floating Plant | 1,760 | 1,760 | 1,850 | 1,074 | 1,720 | 1,620 |
| Maintenance Dredging of River Channel – Backlog work package | | | | | | |
| Chicago CDF Dikes Mod/Closure prep | | | 70 | 0 | 0 | 0 |
| Chicago CDF Sediment Management (grading & piling) | 375 | 375 | 375 | 460 | 635 | 635 |
| CDF ops modification (sediment segregation area) | | | 940 | 422 | 900 | 220 |
| **TOTALS** | **3,983** | **3,905** | **5,174** | **3,709** | **6,412** | **4,912** |

**Congressional Interests**

- Robin Kelly, D-IL-2
- Senator Richard Durbin, D-IL
- Senator Mark Kirk, R-IL

US Army Corps of Engineers
Buffalo District

Great Lakes Navigation System

# Cape Vincent Harbor, NY

## Harbor Features

- Located along the St. Lawrence River in the Village of Cape Vincent, Jefferson County, New York
- Authorization: River & Harbor Acts of 1899 and 1945
- Deep draft recreational harbor
- Authorized depths are 20 feet in the entrance channel and 16 feet in the harbor basin
- The harbor is protected by one detached breakwater with a total length of 1,381 feet
- Major stakeholders include one marina, charter fishing interests and the recreational boating community

## Project Requirements

- Critical requirements include periodic project conditions surveys, sediment sampling and analysis, and dredging

## Consequences of Not Maintaining the Project

- Potential safety issues for recreational boating community
- Potential functional loss of Critical Harbor of Refuge
- Negative economic impacts, locally and regionally

## Transportation Importance

- Critical Harbor of Refuge
- Supports 13 charter fishing boats generating approximately $106,158 in net income annually

February 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Cape Vincent Harbor, New York - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Sediment Sampling and Analysis | | | 60 | | | |
| **TOTALS** | **0** | **0** | **60** | **0** | **0** | **0** |

## Congressional Interests

- Representative Bill Owens D-NY-21
- Senator Kirsten Gillibrand D-NY
- Senator Charles Schumer D-NY

US Army Corps of Engineers

Great Lakes Navigation System

# Caseville Harbor, MI

## Harbor Features

- Located at the mouth of the Pigeon River on the east shore of Saginaw Bay, about 17 miles southwest of Port Austin, MI.
- Authorization: River & Harbor Act of 23 Oct 1962
- Shallow draft recreational harbor
- Project depth of 10 feet in the entrance channel and 8 feet in the inner channel
- Over 4,000 feet of maintained Federal channel
- Approximately 1,800 feet of pier
- Dredged material is placed along the beach as beach nourishment.
- Major stakeholders include the Michigan DNR, Village of Caseville, and various marina owners.

## Project Requirements

- Approximately 10,000 to 18,000 cubic yards of material must be dredged on a three to five year cycle; the harbor was last dredged 2009.
- The harbor currently requires maintenance dredging.

## Consequences of Not Maintaining the Project

- Loss of jobs locally
- Loss of recreational and charter fishing in the area
- Federal breakwater protects infrastructure including public boardwalk
- Potential safety issues for recreational boating community

## Transportation Importance

- This project serves as an important Harbor of Refuge and supports charter fishing and recreational navigation interests.
- The local community has established a significant infrastructure around the harbor facilities that generates income from harbor users and visitors to the area.
- Supports 200 recreational boat slips

April 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Caseville Harbor, MI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | | | 25 | | 25 | |
| Maintenance Dredging – Primary Work Package | | | 300 | | 300 | |
| | | | | | | |
| **TOTALS** | **0** | **0** | **325** | **0** | **325** | **0** |

## Congressional Interests

- Representative Candice S. Miller R-MI-10
- Senator Carl Levin D-MI
- Senator Debbie Stabenow D-MI

US Army Corps of Engineers
Buffalo District

Great Lakes Navigation System

# Cattaraugus Creek Harbor, NY

## Harbor Features

- Located on Lake Erie at the mouth of Cattaraugus Creek, Cattaraugus County, New York
- Authorization: River & Harbor Act of 1968
- Shallow draft recreational harbor
- Authorized depths are 8 feet in the entrance channel and 6 feet in the Cattaraugus Creek channel
- The harbor is protected by the north and south breakwaters with a total length of 2,450 feet
- Construction of the project provided flood control benefits to the local community by removing shoals at the mouth of the creek and thereby reducing the threat of annual ice jam flooding
- Maintenance for this project is cost-shared 59% Federal and 41% local cost-share partner. The local cost-share partner is the New York State Office of Parks, Recreation and Historic Preservation (NYSPRHP)
- Major stakeholders include NYSDEC, NYSPRHP, the Seneca Nation, private marinas, charter fishing interests and the recreational boating community

## Project Requirements

- Maintenance dredging is required very infrequently. The project has not been dredged since construction in 1983
- There are no critical requirements at this time

## Consequences of Not Maintaining the Project

- Potential safety issues for recreational boating community
- Potential functional loss of Harbor of Refuge
- Negative economic impacts, locally and regionally

## Transportation Importance

- Harbor of Refuge
- Supports 11 charter fishing boats generating approximately $90,000 in net income annually

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Cattaraugus Creek Harbor, New York - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| TOTALS | 0 | 0 | 0 | 0 | 0 | 0 |

**Congressional Interests**

- Representative Chris Collins R-NY-27
- Senator Kirsten Gillibrand D-NY
- Senator Charles Schumer D-NY

US Army Corps of Engineers

Great Lakes Navigation System

# Cedar River Harbor, MI

## Harbor Features

- Located on Green Bay off of Lake Michigan, about 25 miles northwest of Menominee, MI.
- Authorization: River & Harbor Acts of 2 Aug 1882, 27 Oct 1965
- Shallow draft recreational harbor
- Project depth is 8 feet at the upstream limit and 10 feet in the outer harbor channel.
- Approximately 3,500 feet of maintained Federal channel
- Approximately 2,400 feet of piers
- Dredged material is placed along the beach as beach nourishment.
- Major stakeholders are the Ruleau Brothers and Michigan DNR.

## Project Requirements

- Approximately 20,000 to 40,000 cubic yards of material must be dredged on a three to five year cycle; the harbor was last dredged in 2006.
- The harbor currently requires maintenance dredging.
- The east rubble mound breakwater requires modification to prevent sediment deposition in the navigation channel.

## Consequences of Not Maintaining the Project

- Loss of jobs locally
- Loss of recreational and charter fishing in the area
- Loss of recreational boating access to Great Lake
- Loss of safe harbor during storm events
- Potential safety issues for recreational boating community

## Transportation Importance

- This project serves as an important Harbor of Refuge and supports charter fishing and recreational navigation interests.
- The local community has established a significant infrastructure around the harbor facilities that generates income from harbor users and visitors to the area.

April 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Cedar River Harbor, MI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | 25 | | 25 | | 25 | |
| Maintenance Dredging – Primary Work Package | 500 | | 500 | | 500 | |
| East Rubblemound Breakwater – E&D | 260 | | 260 | | 260 | |
| East Rubblemound Breakwater – Contract | 2,000 | | 2,000 | | 2,000 | |
| | | | | | | |
| **TOTALS** | **2,785** | **0** | **2,785** | **0** | **2,785** | **0** |

## Congressional Interests

- Representative Dan Benishek R-MI-1
- Senator Carl Levin D-MI
- Senator Debbie Stabenow D-MI

US Army Corps of Engineers

Great Lakes Navigation System

# Channels in Lake St. Clair, MI

## Project Features

- One of Great Lakes connecting channels. Two-way 14.5 mile vessel track located in the expansive shallow basin of Lake St. Clair.
- Authorization: Acts of 5 Aug 1886, 13 Jul 1892, 13 Jun 1902, 2 Mar 1919, 3 Jul 1930, 30 Aug 1945, 21 Mar 1956.
- Deep draft commercial project.
- Project depth is 27.5 feet.
- Five year average (2006-2010) tonnage of 55M traverses these channels annually
- Approximately 14.5 miles of Federal channels
- Dickinson Island confined disposal facility has provided a suitable placement site for all material dredged from the St. Clair River and Lake St. Clair since 1980 and is anticipated to have sufficient capacity for at least 25 more years.
- Major stakeholders include U.S. Coast Guard, Lake Carriers' Association, and a majority of Great Lakes shipping interests.

## Project Requirements

- The upper end of the channel near the mouth of the St. Clair River requires maintenance dredging on a 5 to 10 year cycle of approximately 75,000 to 150,000 cubic yards.
- The channels were last dredged in 2012
- Occasional obstruction removal is required by Government floating plant.
- CDF repairs are required.

## Consequences of Not Maintaining the Project

- Reduction of bulk commodities that transit the channels that generate $1.6B annually in direct revenue while supporting 32,000 direct, indirect, and induced jobs that produce over $2B per year in personal income

- If the channel was closed to commercial traffic, commodities would have to be transported by rail or truck. This would increase annual emissions rates by over 1.6B lbs of harmful particulate matter (PM-10) and increase costs by $25.6M due to increased railroad related accidents, or by $50.7M 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 $6.9M and $23.7M annually.
- Access between Lake Huron and the Detroit River would be cut off.
- Key component of the Great Lakes and St. Lawrence Seaway navigation system. Disruption of service would have severe maritime and economic impacts.

## Transportation Importance

- Great Lakes connecting channel between the St. Clair River and the Detroit River.
- This project is vital to the Great Lakes and St. Lawrence Seaway shipping industry.
- Commodities transported through these channels include coal, iron ore, limestone, wood pulp, petroleum products, salt, and other general cargo.

April 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Channels in Lake St. Clair, MI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | 172 | 169 | 170 | 170 | 173 | 173 |
| Maintenance Dredging – Primary Work Package | 550 | 539 | | | | |
| Maintenance Dredging – Backlog Work Package | 1,000 | | | | | |
| CDF Repairs | | | 850 | | 850 | |
| | | | | | | |
| **TOTALS** | **1,722** | **708** | **1,020** | **170** | **1,023** | **173** |

## Congressional Interests

- Representative Candice S. Miller R-MI-10
- Representative Sander M. Levin D-MI-9
- Representative Gary Peters D-MI-14
- Senator Carl Levin D-MI
- Senator Debbie Stabenow D-MI

US Army Corps of Engineers

Great Lakes Navigation System

# Channels in Straits of Mackinac, MI

## Project Features

- One of the Great Lakes connecting channels; the Straits of Mackinac are located between Michigan's Upper and Lower Peninsulas and connect Lake Michigan with Lake Huron.
- Authorization: Adopted by Acts of 30 August 1935 and 23 March 1956
- Deep draft commercial project that provides for a 1,250 feet wide channel between Mackinac Island and Round Island; and for removal of the Poe Reef shoal.
- Project depth is 30 feet
- 70 to 80 million tons of commerce traverse these channels annually
- Approximately 3,500 feet in length
- Major stakeholders include U.S. Coast Guard, Lake Carriers' Association, and a majority of Great Lakes shipping interests.

## Project Requirements

- The channels were dug in hard bottom areas of the Straits of Mackinac; consequently, they require infrequent maintenance. It is anticipated that all future maintenance will consist of occasional strike removal operations.

## Consequences of Not Maintaining the Project

- Significant loss of jobs locally, regionally, and internationally.
- Light loading; loss of channel depth results in increased transportation costs.
- Access between Lake Superior and the lower Great Lakes would be cut off.

- Key component of the Great Lakes and St. Lawrence Seaway navigation system.
- Disruption of service would have severe maritime and economic impacts.

## Transportation Importance

- Key connecting channel between Lake Superior and the lower Great Lakes and the St. Lawrence Seaway.
- This project is vital to both domestic and international maritime interests using the Great Lakes and St. Lawrence Seaway.
- Commodities transported through these channels include coal, iron ore, limestone, wood pulp, petroleum products, salt, and other general cargo.

April 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Channels in Straits of Mackinac, MI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | | | | | | |
| | | | | | | |
| **TOTALS** | **0** | **0** | **0** | **0** | **0** | **0** |

## Congressional Interests

- Representative Dan Benishek R-MI-1
- Senator Carl Levin D-MI
- Senator Debbie Stabenow D-MI

US Army Corps of Engineers

Great Lakes Navigation System

# Charlevoix Harbor, MI

## Harbor Features

- Located on the east shore of Lake Michigan, 276 miles northeast of Chicago, IL and 75 miles northeast of Frankfort, MI.
- Authorization: River & Harbor Acts of 14 Aug 1876, 2 Aug 1882, 13 Jun 1902, 20 Jun 1938, 24 Mar 1977
- Deep draft commercial harbor
- Project depths of 18 feet in Lake Michigan and in inner channels to Lake Charlevoix
- Five year average (2006-2010) tonnage is 17,000 tons of material shipped and received
- Ranked 72nd among the Great Lakes Harbors based on five year average (2006-2010) tonnage
- Over 4,100 feet of structures including piers and revetments
- Approximately one mile of maintained channel
- Major stakeholders include U.S. Coast Guard, Lake Carriers' Association, St. Marys Cement, Charlevoix City Marina, Beaver Island Ferry Service, St. James Marine Company, Sunshine Charters sailing, and various fishing charters and sightseeing cruises.

## Project Requirements

- Maintenance dredging required on a 10 to 15 year cycle; the harbor was last dredged in 1984.

## Consequences of Not Maintaining the Project

- Loss of jobs locally
- Loss of recreation and charter fishing

## Transportation Importance

- Commodities shipped or received include coal, slag, petroleum products, lime and cement.
- Provides for the only ferry service to Beaver Island, supporting over 600 people that live on the island year round.
- Harbor is home to the U.S. Coast Guard Station Charlevoix.
- Harbor is home to the 110' Keweenaw Star, a sightseeing cruise vessel.
- The Charlevoix City Marina was renovated in 2007 and brought in 1,500 visitors by boat in 2011.

April 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Charlevoix Harbor, MI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | 25 | 24 | | | | |
| Obstruction Removal – by Govt. Floating Plant | 160 | 157 | | | | |
| Repair Safety Platform – by Govt. Floating Plant | 140 | 137 | | | | |
| | | | | | | |
| **TOTALS** | **325** | **318** | **0** | **0** | **0** | **0** |

## Congressional Interests

- Representative Dan Benishek R-MI-1
- Senator Carl Levin D-MI
- Senator Debbie Stabenow D-MI

US Army Corps of Engineers

Great Lakes Navigation System

# Cheboygan Harbor, MI

## Harbor Features

- Located at the mouth of the Cheboygan River and empties into western Lake Huron approximately 16 miles southeast of the Straits of Mackinac.
- Authorization: River & Harbor Acts of 3 Jun 1896, 2 Mar 1907, 26 Aug 1937, 17 May 1950
- Deep draft commercial harbor
- Project depths of 21 feet in outer channel/turning basin, 18.5 feet above the turning basin and 8.5 feet above State Road Bridge.
- Five year average (2006-2010) tonnage is 146,000 tons of material shipped and received
- Ranked 56th among the Great Lakes Harbors based on five year average (2006-2010) tonnage
- Approximately 775 feet of rubble mound breakwaters
- Approximately 12,000 feet of maintained channel
- Major stakeholders include U.S. Coast Guard, Lake Carriers' Association, U.S. Fish and Wildlife Service, Michigan DNR, Durocher Marine (division of Kokosing), Ryba Marine, U.S. Oil Fuel Terminal, Shepler's Ferry, Plaunt Transportation, Walstrom Marine, Arkona, LLC, TherCom Inc., Moran Iron Works, and Cheboygan Dive Center.

## Project Requirements

- Maintenance dredging required on a 10 to 20 year cycle; the harbor was last dredged in 1976.
- Dredging is currently required to eliminate balance of shoaling in the harbor. Shoaling is impacting U.S. Coast Guard operations in the harbor.

## Consequences of Not Maintaining the Project

- Light loading; loss of channel depth results in increased transportation costs.
- Narrowing of the maintained channel increases risk of vessel groundings in offshore approach channel.
- Not maintaining the project could negatively affect U.S. Coast Guard and Homeland Security operations within the harbor.

## Transportation Importance

- Significant receiving port on the Great Lakes
- Commodities shipped or received include sand, gravel, crushed stone, gasoline, fuel oil, and slag.
- Home port of the U.S. Coast Guard's only U.S. heavy ice breaking resource, the cutter Mackinaw, which is essential to keeping navigable waterways open in late fall/early winter and spring on the Great Lakes. The Mackinaw also plays a key role in buoy tending in spring and fall.

April 2013

**Transportation Importance (cont.)**

- Provides only ferry service to Bois Blanc Island; Marine bypass route for freight not permitted across Mackinac Bridge. Ferry carries people, cars, trucks, commodities and mail. Approximately 4-5 ferry trips are made daily from early spring through late fall.
- Harbor of Refuge

**Transportation Importance**

- Supports approximately 40 charter fishing boats and approximately 300 recreation boat slips
- Supports scuba diving training and shipwreck diving excursions.
- Serves as gateway to 43 miles of inland waters that support a large amount of tourism in Cheboygan County.

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Cheboygan Harbor, MI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | 24 | | 24 | | 24 | |
| Maintenance Dredging – Primary Work Package | | | 600 | | 600 | |
| Maintenance Dredging – Backlog Work Package | 400 | | 400 | | 400 | |
| | | | | | | |
| **TOTALS** | **424** | **0** | **1,024** | **0** | **1,024** | **0** |

**Congressional Interests**

- Representative Dan Benishek R-MI-1
- Senator Carl Levin D-MI
- Senator Debbie Stabenow D-MI

US Army Corps of Engineers

Great Lakes Navigation System

# Chicago Harbor, IL

## Project Features

- Located on Lake Michigan in the city of Chicago, Cook County, Illinois
- Authorization: The Rivers and Harbors Acts of 1870, 1880, 1912, 1919 and 1962.
- Authorized depths are 29 feet in the Lake Michigan harbor approach, 28 feet in the outer harbor, and 21 feet to Rush Street.
- The Federal channel within the harbor is 2.2 miles and it connects to the deep draft Chicago River channel extending 4.02 miles to the North Avenue Turning Basin.
- The harbor is a part of the Port of Chicago, and is the secondary link between the Great Lakes, the Inland Waterway System, and foreign ports.
- Five year average (2006-2010) tonnage is 22.1M tons of material shipped and received
- 37th leading U.S. port in 2010
- 20,357 lineal feet of timber crib, laid-up stone, and concrete caisson breakwater structures.
- Chicago Lock completes over 11,500 lockages annually, passing over 40,000 vessels.
- The harbor hosts a USCG Station, Chicago Marine Police, and Illinois Conservation Police, Chicago Fire Dept.'s Fire Boat and City tug.
- Tour and Charter Boat Operations – 20 companies operate 55 boats, and host approximately 370,000 passengers annually.
- Privately-owned marinas moor 1,450 recreational boats within the harbor.

## Project Requirements

- The Federal channel is at authorized depths. The channel has not been dredged in 27 years.
- The 5,321 LF northeastern breakwater is the harbor's primary shield. It is in very poor condition, a 100' segment has failed, and the loss of further sections is expected.
- Chicago Lock has a Dam Safety Action Classification System rating of II. Several repairs are Urgent, and that the project is considered Very High Risk. Stabilization of the North Pier Utility tunnel, and the addition of gate winches as a fail-safe measure are unfunded requirements.

## Consequences of Not Maintaining the Project

- The Jardine Water Purification Plant is located in the harbor and serves 5M consumers in 118 municipalities.
- The lock limits Lake Michigan water flow into the Illinois Waterway. It provides flood damage reduction to the downtown area from Chicago River, protecting $1.40B in real estate.
- Navy Pier annually hosts 9M visitors and generates nearly $138M in sales. Its operation employs 700 full-time and 2,000 part-time workers. Over 100 private businesses operate there, employing 750 workers.
- Reduction of bulk commodities that pass through the port and generate $426M annually in direct revenue while supporting 6,934 direct, indirect, and induced jobs that produce over $574M per year in personal income.
- If the port was closed to commercial traffic, commodities would have to be transported by rail and truck. This would increase annual emission rates by over 12,900 tons of harmful particulate matter (PM-10) and increase costs by $1.2M due to increased railroad related accidents, and $126.K due to increased trucking related accidents.

## Transportation Importance

- The harbor is a safe refuge on southern Lake Michigan for barges and vessels traveling north from or south to the Port of Chicago.

April 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Chicago Harbor, IL**
**Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Work Plan | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | 96 | 95 | 100 | 95 | 102 | 102 |
| Lock Operations | 1,908 | 1,847 | 1,850 | 1,850 | 1,912 | 1,912 |
| Routine Lock Maintenance | 250 | 173 | 250 | 55 | 250 | 250 |
| East and West Lock Gates Replacement & S&A | | | | | | |
| Structural Repairs - Northeast Breakwater Crib Encapsulation of 100' failed segment by Contract | 3,390 | | 3,710 | | 3,900 | |
| Structural Repairs - Northeast Breakwater Crib Stabilization by Contract (900') | 4,250 | | 4,280 | | 7,000 | |
| Structural Repairs – Eastern Outer Breakwater Repairs by Gov't Floating Plant (500') | 1,895 | | 1,895 | | 1,960 | |
| **Chicago Lock Asset Renewal** | | | | | | |
| Upgrade Lock Emergency Generator and Lockwall Lightning protection | 450 | | | | 1,000 | |
| Concrete Resurfacing Chamber Walls, Guidewalls, walkways | 7,170 | | 7,170 | | 7,420 | |
| North Pier Tunnel Stabilization | 10,320 | | 10,320 | | 10,680 | |
| Lock Scour Hole Repairs | 2,550 | | | | | |
| Lock Facility Security Lighting, Fire & Intrusion Alarms, Security upgrades | 1,480 | | 1,930 | | 990 | |
| Installation of Emergency Winches Lock SectorGates | 940 | | 990 | | 1,980 | |
| To design a direct gas line to the Lock House to improve the efficiency. | | | 137 | | | |
| Investigate a geo-thermal cooling system for the Lock House to reduce energy consumption. | | | 120 | | | |
| **TOTALS** | **34,699** | **2,115** | **32,752** | **2,000** | **37,194** | **2,264** |

**Congressional Interests**

- Representative Danny K. Davis, D-IL-7
- Senator Richard Durbin, D-IL
- Senator Mark Kirk, R-IL

April 2013

US Army Corps of Engineers

Great Lakes Navigation System

# Chippewa Harbor, MI

## Harbor Features

- Located on Isle Royale, an island in northwest Lake Superior, Chippewa Harbor is situated approximately 50 miles north of Michigan's Upper Peninsula's shoreline.
- Authorization: River & Harbor Acts of 2 Mar 1945, 17 Aug 1967
- Shallow draft recreational harbor; provides an entrance channel connecting the inner and outer harbors.
- Project depth is 14 feet
- Major stakeholders include the National Park Service, the Michigan DNR, and a variety of recreational interests.

## Project Requirements

- This harbor requires very infrequent maintenance dredging because the channel was constructed in a hard bottom area.

## Consequences of Not Maintaining the Project

- Loss of jobs locally
- Loss of access to the National Park and other recreation opportunities in the area.

## Transportation Importance

- This project serves as an important Harbor of Refuge and supports the National Park Service on Isle Royale and recreational boating.
- The navigation channel provides subsistence ferry service to Isle Royale from both Michigan and Minnesota harbor facilities that generates income from regional visitors to the area.

April 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Chippewa Harbor, MI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | | | | | | |
| | | | | | | |
| **TOTALS** | **0** | **0** | **0** | **0** | **0** | **0** |

## Congressional Interests

- Representative Dan Benishek R-MI-1
- Senator Carl Levin D-MI
- Senator Debbie Stabenow D-MI

US Army Corps of Engineers
Buffalo District

Great Lakes Navigation System

# Cleveland Harbor, OH

## Harbor Features

- Located on Lake Erie in the city of Cleveland, Cuyahoga County, Ohio
- Authorization: River & Harbor Acts of 1875, 1886, 1888, 1896, 1899, 1902, 1907, 1910, 1916, 1917, 1935, 1937, 1945, 1946, 1958, 1960, 1962, Water Resources Development Acts of 1976 and 1986, Supplemental Appropriations Act of 1987 and the Energy & Water Appropriations Act of 1988
- Deep draft commercial harbor
- Authorized depths are 25-29 feet in the outer harbor and 18-27 feet in the river
- Five year average (2006-2010) tonnage of 11.1M tons of material shipped and received
- Ranked 6th among the Great Lakes Harbors based on five year average (2006-2010) tonnage
- 49th leading U.S. port in 2010
- Over 5.5 miles of breakwater structures
- 5.8 miles of Federal channel on the Cuyahoga River and 1 mile of Federal channel on the Old River
- Confined disposal facilities (CDFs) are located to the east of the harbor entrance
- Major stakeholders include Cleveland-Cuyahoga County Port Authority, Burke Lakefront Airport, ArcelorMittal, U.S. Coast Guard, Lake Carriers' Association, and Cargill

## Project Requirements

- A minimum of 225,000 cubic yards (CY) of material must be dredged each year. Dredging was last completed in 2012 and is scheduled for 2013.
- Maintenance dredging is required in 2014.
- The sediment backlog within the Cuyahoga River channel was approximately 600,000 CY in 2012.

- Severely deteriorated sections of the east and west breakwaters, arrowheads and finger pier must be repaired. Additional damage/deterioration was observed following Superstorm Sandy.
- The existing CDF's will reach capacity by current hydraulic placement methods in 2014. An interim DMMP is being prepared to address the short-term (through 2018) capacity needs until a new long-term plan is in place. Continuation of critical fill management planning, design and maintenance activities is required to ensure the continued availability of CDF capacity for annual dredging quantities.
- Results of sediment sampling conducted in 2012 will be also evaluated to determine the suitability of placing sediment in the open lake instead of a CDF.

**Consequences of Not Maintaining the Project**

- Reduction of bulk commodities that pass through the harbor and generate $1.7B annually in direct revenue while supporting 15,003 direct, indirect, and induced jobs that produce over $1B per year in personal income.
- If the harbor was closed to commercial traffic, commodities would have to be transported by rail and truck. This would increase annual emission rates by over 207,000 tons of harmful particulate matter (PM-10) and increase costs by $4,666,000 due to increased railroad related accidents, and $7,067,000 due to increased trucking related accidents.
- Light loading; losses of between 1 and 2 feet of channel depth would result in increased transportation costs of between $1.9M and $4.3M annually.

**Transportation Importance**

- Major receiving and shipping port on the Great Lakes; and Critical Harbor of Refuge.
- Commodities shipped or received include iron ore, limestone, sand and gravel, salt, cement and concrete, general cargo and liquid bulk.
- Major iron ore transshipment facility located at Cleveland's Outer Harbor. This facility provides iron ore to inland steel mills at lower delivery costs when compared to truck or direct rail delivery.

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**

Cleveland Harbor, Ohio - Project Requirements and President's Budget ($1,000)

| Work Package | GLRI Funds | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|---|
| Maintenance Dredging – Primary | | 2,850 | 2,587 | 2,585 | 2,585 | 4,775 | 4,775 |
| DMMP/CDF Beneficial Use Activities | 50 | 200 | 190 | 259 | 259 | | |
| Dredged Material Management Operations CDF 10B Excavation | | | | | | | |
| E&D, New CDF/Additional Interim Measures | | 600 | 570 | | | | |
| E&D Long Term Management Plan | | | | 494 | 494 | 400 | 400 |
| Fill Management Activities, Interim CDF (Dike 12, Phase 2) | | | | | | | |
| Fill Management Activities, Phase 1 | | 4,000 | 3,694 | | | | |
| Fill Management Activities, Phase 2 | | 4,000 | | 3,760 | 3,760 | | |
| E&D Interim CDF (Dike 9, Phase 2) | | | | | | | |
| E&D, Wharf and Utility Repair | | | | | | 300 | |
| Interim CDF Maintenance (Grading) | | 350 | 258 | 300 | 300 | 365 | 365 |
| Snagging & Clearing Floating Plant (F/P) | | 60 | 57 | 65 | | | |
| Critical Maintenance of Coastal Navigation Structures and Obstruction Removal | | | | | | 1,040 | 1,040 |
| Structure Repair. – E & W Arrowhead Breakwaters (F/P) | | 970 | 970 | 1,055 | 806 | | |
| Structure Repair. – E & W Arrowhead Breakwaters (Stone) | | 450 | | 450 | | 450 | |
| Structure Repair – Dike 10B (F/P) | | | | 330 | | | |
| Construction, West Pierhead Repair | | | 288 | 60 | | | |
| Construction, East Breakwater Repair (Sta 84-94) | | 2,900 | 24 | | | | |
| Const., East Breakwater Repair (Sta 98-100, 89-91) | | | | 2,375 | | 2300 | |
| Construction, Finger Pier Repair, Phase 1 | | | | 3,100 | | | |
| Construction, Finger Pier Repair, Phase 2 | | | | 3,100 | | | |
| Construction, Wharf and Utility Repair (1&3) | | 300 | | 3,900 | | | |
| Construction, Wharf and Utility Repair (2) | | 300 | | 3,200 | | | |
| E&D, East Breakwater West End Section Repair | | 150 | | 250 | | | |
| E&D, Finger Pier Repair | | | | 225 | | | |
| Project Condition Surveys | | 515 | 505 | 505 | 505 | 515 | 515 |
| Regional Economic Data Collection | | 250 | 237 | 250 | 250 | 250 | 250 |
| Sediment Sampling and Analysis | | | | 500 | | | |
| **TOTALS** | **50** | **17595** | **9,380** | **26,763** | **8,959** | **10,395** | **7,345** |

## Congressional Interests

- Representative Marcia Fudge D-OH-11
- Senator Rob Portman R-OH
- Senator Sherrod Brown D-OH

March 2013

US Army Corps of Engineers

Great Lakes Navigation System

# Clinton River, MI

## Project Features

- River starts in Oakland County, MI; it flows east about 60 miles and empties into Anchor Bay in the northwest part of Lake St. Clair.
- Authorization: River & Harbor Act of 5 Aug 1886, modified under Section 107 River & Harbor Act of 1960
- Shallow draft recreational harbor
- Project depth is 8 feet
- Approximately 8 miles of maintained Federal channel
- Approximately 1,500 feet of breakwater
- The Clinton River Confined Disposal Facility was placed in operation in the 1980s and is anticipated to have sufficient capacity for at least the next 15 years.
- Major stakeholders include the Michigan DNR, the City of Mount Clemens, and various marina owners and private boaters.

## Project Requirements

- Requires periodic maintenance dredging on a three to five year cycle of approximately 20,000 cubic yards; the channel was last dredged in 2009.
- The channel currently requires maintenance dredging.

## Consequences of Not Maintaining the Project

- Loss of jobs locally
- Loss of recreational and charter fishing in the area
- Loss of access to MDNR and County Sheriff facilities

## Transportation Importance

- This project serves as an important Harbor of Refuge and supports charter fishing and recreational navigation interests.
- The local community has established a significant infrastructure around the harbor facilities that generates income from harbor users and visitors to the area.
- Home to the highest used DNR public access site (boat launch) in the State of Michigan. Provides multiple launch ramps and parking for 349 vehicles.
- Harbor contains about 50 commercial boat slips/dry storage bays.
- The harbor is home to the Macomb County Sheriff, Marine Division Headquarters.
- Michigan DNR operates a field office a few miles up the river.

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Clinton River, MI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | 30 | | 30 | | 30 | |
| Maintenance Dredging – Primary Work Package | 630 | | 630 | | 630 | |
| Maintenance Dredging – Backlog Work Package | | | | | | |
| Maintenance Dredging – Backlog Work Package | 850 | | 850 | | 850 | |
| | | | | | | |
| **TOTALS** | **1,510** | **0** | **1,510** | **0** | **1,510** | **0** |

## Congressional Interests

- Representative Candice S. Miller R-MI-10
- Senator Carl Levin D-MI
- Senator Debbie Stabenow D-MI

US Army Corps of Engineers
Buffalo District

Great Lakes Navigation System

# Conneaut Harbor, OH

## Harbor Features

- Located on Lake Erie in the city of Conneaut, Ashtabula County, Ohio
- Authorization: River & Harbor Acts of 1910, 1917, 1935 and 1962
- Deep draft commercial harbor
- Authorized depths are 22-28 feet in the outer harbor and 27 feet in the inner harbor
- Five year average (2006-2010) tonnage of 4.7M tons of material shipped and received
- Ranked 20th among the Great Lakes Harbors based on five year average (2006-2010) tonnage
- 81st leading U.S. port in 2010
- Over 2.2 miles of breakwater structures
- 142 acre outer harbor and 2,450 feet of Federal channel in the inner harbor channel
- Major stakeholders include U.S. Steel, Conneaut Port Authority, U.S. Coast Guard, and the Pittsburgh and Conneaut Dock Company

## Project Requirements

- Approximately 120,000 cubic yards (CY) of material must be dredged every 2-3 years. The harbor was last dredged in 2010 when approximately 122,000 CY of material was removed. Dredging is scheduled for 2013.
- Sections of the east and west breakwaters are deteriorated and in need of repairs.

## Consequences of Not Maintaining the Project

- Reduction of bulk commodities that pass through the harbor and generate $175M annually in direct revenue while supporting 504 direct, indirect, and induced jobs that produce over $45M per year in personal income.

- Light loading; losses of between 1 and 2 feet of channel depth would result in increased transportation costs of between $268,000 and $1,211,000 annually.
- If the harbor was closed to commercial traffic, commodities would have to be transported by rail and truck. This would increase annual emission rates by over 40,230 tons of harmful particulate matter (PM-10) and increase costs by $2,563,000 due to increased railroad related accidents, and $908,000 due to increased trucking related accidents.

## Transportation Importance

- Major receiving and shipping port on the Great Lakes; and Harbor of Refuge.
- Commodities shipped or received include coal, iron ore, limestone, lime, ores and minerals.

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Conneaut Harbor, Ohio - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Conditions Survey | 90 | | 90 | | | |
| Maintenance Dredging – Primary | 1,090 | | 1,001 | 1,001 | | |
| E&D East Breakwater End Section Repair | 250 | | 250 | | 250 | |
| Snagging and Clearing – Floating Plant | | | 55 | | | |
| Critical Maintenance of Navigation Structures and Obstruction Removal | | | | | 1,030 | 1,030 |
| Structure Repair – E.&W. Breakwater Floating Plant | | | 970 | | | |
| **TOTALS** | **1,430** | **0** | **2,366** | **1,001** | **1,280** | **1,030** |

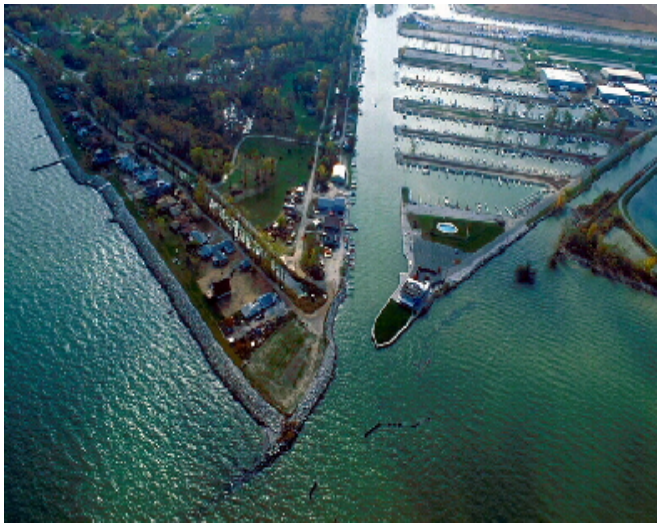
**Congressional Interests**

- Representative David Joyce R-OH-14
- Representative Mike Kelly R-PA-03
- Senator Rob Portman R-OH
- Senator Sherrod Brown D-OH

US Army Corps of Engineers
Buffalo District

Great Lakes Navigation System

# Cooley Canal Harbor, OH



## Harbor Features

- Located on Lake Erie at the mouth of Cooley Canal in the Jerusalem Township, Lucas County, Ohio
- Authorization: Section 107 of the Rivers and Harbors Act of 1960, as amended
- Shallow draft recreational harbor
- Authorized depth is 4 feet in the Federal navigation channel
- The harbor is protected by the east and west breakwaters with a total length of 1,650 feet
- Major stakeholders include Lucas County, private marinas, charter fishing interests and the recreational boating community

## Project Requirements

- The harbor typically requires dredging every five to ten years. On average, approximately 10,000 cubic yards (CY) of material is dredged per event. It was last dredged in 2004 when 7,500 CY of material was removed
- Maintenance dredging is the primary critical requirement

## Consequences of Not Maintaining the Project

- Potential safety issues for recreational boating community
- Potential functional loss of Harbor of Refuge
- Negative economic impacts, locally and regionally

## Transportation Importance

- Harbor of Refuge
- Supports 66 charter fishing boats generating over $350,000 in net income annually

February 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Cooley Canal Harbor, Ohio - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Sediment Sampling & Analysis | | | 80 | | 80 | |
| Maintenance Dredging | 830 | | 830 | | 880 | |
| **TOTALS** | **830** | **0** | **910** | **0** | **960** | **0** |

**Congressional Interests**

- Representative Marcy Kaptur D-OH-9
- Senator Rob Portman R-OH
- Senator Sherrod Brown D-OH

US Army Corps of Engineers

Great Lakes Navigation System

# Cornucopia Harbor, WI

## Harbor Features

- Located at the mouth of the Siskiwit River on the south shore of Lake Superior, 49 miles east of Duluth, MN.
- Authorization: River & Harbor Acts of 26 Aug 1937, 3 Sep 1954
- Shallow draft recreational harbor
- Project depth is 10 feet between the piers and 8 feet in the turning basin and inner channels.
- Approximately 2,000 feet of maintained Federal channel
- Approximately 1,500 feet of piers
- Dredged material is placed along the beach as beach nourishment.
- Major stakeholders include Siskiwit Marina, Town of Bell Marina, Halvorson's Fisheries, Red Cliff Tribe Fisheries, US Coast Guard, and the Wisconsin DNR.

## Project Requirements

- Requires periodic maintenance dredging on a three to five year cycle of approximately 5,000 to 10,000 cubic yards; the harbor was last dredged in 2008.
- The harbor currently requires maintenance dredging.

## Consequences of Not Maintaining the Project

- Loss of jobs locally
- Loss of recreational and charter fishing in the area

## Transportation Importance

- This project serves as an important Harbor of Refuge and supports charter fishing and recreational navigation interests.
- The local community has established a significant infrastructure around the harbor facilities that generates income from harbor users and visitors to the area.

April 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Cornucopia Harbor, WI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | 15 | | 15 | | 15 | |
| Maintenance Dredging – Primary Work Package | 170 | | 170 | | 170 | |
| | | | | | | |
| **TOTALS** | **185** | **0** | **185** | **0** | **185** | **0** |

## Congressional Interests

- Representative Sean Duffy R-WI-7
- Senator Ron Johnson R-WI
- Senator Tammy Baldwin D-WI

US Army Corps of Engineers

Great Lakes Navigation System

# Detour Harbor, MI

## Harbor Features

- Located on the north shore of Lake Huron at the southern entrance to Detour Passage and the St. Marys River; about 40 miles east of the Mackinac Bridge.
- Authorization: River & Harbor Act of 1960
- Shallow draft recreational harbor
- Project depth of 10 feet in the entrance channel and 8 feet in the inner channel
- Over 4,000 feet of maintained Federal channel
- Approximately 2,400 feet of breakwater
- Major stakeholders include the Michigan DNR and charter fishermen.

## Project Requirements

- The harbor channels are stable and require infrequent maintenance dredging; the harbor was last dredged in 1981.

## Consequences of Not Maintaining the Project

- Loss of jobs locally
- Loss of recreational and charter fishing in the area
- Loss of recreational boating access to Great Lake
- Loss of safe harbor during storm events

- Potential safety issues for recreational boating community

## Transportation Importance

- This project serves as an important Harbor of Refuge and supports charter fishing and recreational navigation interests.
- The local community has established a significant infrastructure around the harbor facilities that generates income from harbor users and visitors to the area.

April 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Detour Harbor, MI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | | | | | | |
| | | | | | | |
| **TOTALS** | **0** | **0** | **0** | **0** | **0** | **0** |

## Congressional Interests

- Representative Dan Benishek R-MI-1
- Senator Carl Levin D-MI
- Senator Debbie Stabenow D-MI

US Army Corps of Engineers

Great Lakes Navigation System

# Detroit River, MI

## Project Features

- One of the Great Lakes connecting channels, flowing south from Lake St. Clair to Lake Erie.
- Authorization: River & Harbor Acts of 13 Jun 1902, 3 Mar 1905, 25 Jun 1910, 4 Mar 1913, 2 Mar 1907, 2 Mar 1919, 3 Jul 1930, 30 Aug 1935, 26 Aug 1937, 2 Mar 1945, 24 Jul 1946, 17 May 1950, 21 Mar 1956, 14 Jul 1960, 13 Aug 1986
- Deep draft commercial project
- Project depths varying from 25 to 29 feet
- 59.3M tons of material moved annually through the channels of the Detroit River on average between 2006 and 2010.
- Total of 76 miles of Federal channels, including up-bound and down-bound channels
- Five year average (2006-2010) tonnage is 13.3M tons of material shipped and received in the Port of Detroit
- Ranked 3rd among the Great Lakes Harbors based on five year average (2006-2010) tonnage for the Port of Detroit
- 43rd leading U.S. port in 2010
- Contains water level and compensating dikes
- Material dredged from the Detroit River is placed in the Pointe Mouille confined disposal facility located in Lake Erie.
- Major stakeholders include U.S. Coast Guard, Lake Carriers' Association, Nicholson Terminal and Dock Co., Harridon Terminal, Inc., Motor City Materials, Detroit Bulk Storage, Inc., J.W. Westcott Co., Michigan Marine Terminal, Carmeuse Lime, Edward C. Levy Co., Holcim Inc., Koenig Fuel & Supply, Lafarge North America, Marathon Ashland Petroleum, LLC, Morton Salt, St. Marys Cement, the Rockdock, LLC, U.S. Steel Corp., and Severstal North America.

## Project Requirements

- Obstruction removal is required on an annual basis.
- Requires periodic maintenance dredging (on a 1 to 2 year cycle) of approximately 300,000 cubic yards; the river was last dredged in 2012 and there are plans to dredge the river in 2013; dredging is also funded for 2014.
- Compensating dikes require periodic maintenance.

## Consequences of Not Maintaining the Project

- Reduction of bulk commodities that pass through the Detroit River that generate $1.8B annually in direct revenue while supporting over 35,260 direct, indirect, and induced jobs that produce over $2.3B per year in personal income
- If the channel was closed to commercial traffic, commodities would have to be transported by rail and truck. This would increase annual emission rates by over 1.75B lbs of harmful particulate matter (PM-10) and increase costs by $26M due to increased railroad related accidents, and $53.6M due to increased trucking related accidents.
- Key component of the Great Lakes and St. Lawrence Seaway navigation system.
- Disruption of service would have severe maritime and economic impacts.

April 2013

## Transportation Importance

- Commodities transported through these channels include coal, iron ore, crude materials, manufactured goods, chemicals, steel products, petroleum products, food and farm products, and other general cargo, including overseas cargo.
- Great Lakes connecting channel between Lake St. Clair and Lake Erie.
- The Detroit River is the home port of the U.S. Coast Guard's 140 foot long ice breaking cutter, Bristol Bay.
- Located along the banks of the Detroit River is the U.S. Coast Guard Sector Detroit Station, which is responsible for the operations of subordinate commands including: search and rescue, law enforcement, aids to navigation, ice breaking, ice rescue and maritime homeland security.

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Detroit River, MI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | 992 | 972 | 990 | 990 | 1,010 | 1,010 |
| Strike Removal | 3,000 | 2,942 | 2,820 | 2,820 | 2,820 | 2,820 |
| Maintenance Dredging – Primary Work Package | 1,785 | 1,750 | 1,974 | 1,974 | 1,954 | 1,954 |
| Maintenance Dredging – Backlog Work Package | 1,656 | | 1,700 | | 1,700 | |
| CDF Fill Management Activities | | | 800 | | 400 | |
| Repair Compensating Dikes – by Gov Floating Plant | 550 | | 550 | | 550 | |
| | | | | | | |
| **Other Business Lines:** | | | | | | |
| Environmental Stewardship | 115 | 38 | 60 | 30 | 30 | 30 |
| Strategic Sustainability Performance Plan (SSPP) initiatives | 250 | | | | | |
| | | | | | | |
| **TOTALS** | **8,348** | **5,702** | **8,894** | **5,814** | **8,464** | **5, 814** |

## Congressional Interests

- Representative John D. Dingell D-MI-12
- Representative John Conyers Jr. D-MI-13
- Representative Gary Peters D-MI-14
- Senator Carl Levin D-MI
- Senator Debbie Stabenow D-MI

US Army Corps of Engineers

Great Lakes Navigation System

# Duluth-Superior Harbor, MN & WI

## Harbor Features

- Located at the western end of Lake Superior
- Authorization: River and Harbor Act of 3 Jun 1896
- Deep draft commercial harbor
- Project depths of 28 to 32 feet in the entrance; 27 feet deep in the iron-ore route channels, and 20 to 23 feet in inner channels
- Five year average (2006-2010) tonnage is 41.1M tons of material shipped and received
- Ranked 1st among the Great Lakes Harbors based on five year average (2006-2010) tonnage
- 18th leading U.S. port in 2010
- Tonnage is almost equally split between Duluth and Superior Entries.
- Over 10,000 feet of structures including breakwaters, piers and revetments.
- Over 18 miles of maintained channel
- The Erie Pier Confined Disposal Facility is located within the St. Louis Bay portion of the harbor.
- Major stakeholders include U.S. Coast Guard, Lake Carriers' Association, Canadian National, BNSF, Midwest Energy, General Mills/Cargill, Lafarge North America, Marine Tech LLC, Murphy Oil, Cutler Magner, US Steel, Riverland Aggregates, Cenex Harvest States, Gavalon, C. Reiss Coal, Greymont, Cleveland-Cliffs, and Hallet Dock.

## Project Requirements

- Approximately 110,000 cubic yards of material must be dredged each year. The harbor was last dredged in 2012 and is scheduled to be dredged in 2013.
- Maintenance dredging is also planned for 2014.
- Navigation structures are primarily maintained by Government Floating Plant.
- Superior Entry north concrete pier requires repairs.
- Superior Entry requires ice plate repairs.

- Excessive freshwater corrosion rate impacting both Federal and non-Federal steel sheet pile navigation structures.
- Critical fill management activities are planned for 2014 to ensure Erie Pier's sustainability.

## Consequences of Not Maintaining the Project

- Reduction of bulk commodities that pass through the harbor that generate $1.5B annually in direct revenue while supporting 7,700 direct, indirect, and induced jobs that produce over $546M per year in personal income.
- If the harbor was closed to commercial traffic, commodities would have to be transported by rail and truck. This would increase annual emission rates by over 500M lbs of harmful particulate matter (PM-10) and increase costs by $18.8M due to increased railroad related accidents, and $5.5M due to increased trucking related accidents.
- Light loading losses of between 1 and 2 feet of channel depth results in increased transportation costs of between $2.9M and $8.8M annually.

## Transportation Importance

- Major international receiving and shipping port on the Great Lakes; and Harbor of Refuge
- $2 Billion worth of cargo is shipped via the Duluth-Superior docks annually.

April 2013

## Transportation Importance

- Commodities shipped or received include iron ore, limestone, coal, coke, forest products, petroleum, grain, general cargo, steel, and scrap iron.
- Home port of U.S. Coast Guard's 225 foot long cutter Alder. Home to U.S. Coast Guard auxiliary station and a Marine Safety Unit, responsible for: port safety and security, marine environmental protection, and commercial vessel safety missions under the auspices of the Dept. of Homeland Security.

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Duluth-Superior Harbor, MN & WI**
**Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | 572 | 561 | 570 | 570 | 581 | 581 |
| Maintenance Dredging – Primary Work Package | 2,750 | 2,695 | 2,491 | 2,491 | 2,800 | 2,800 |
| Maintenance Dredging – Backlog Work Package | 500 | | 500 | | 500 | |
| Emergency Dredging & Fill Mgt | | 1,256* | | | | |
| Breakwater Repairs – by Govt. Floating Plant | 1,300 | 1,274 | 1,182 | 900 | | |
| Superior Entry N. Pier Replacement by Contract | | | 1,600 | | 1,600 | |
| Erie Pier Fill Management Activities | 2,000 | 1,960 | 940 | 940 | 1,750 | 1,750 |
| DMMP | 175 | 172 | 71 | 71 | 300 | 300 |
| Regional Asset Management | 250 | 245 | 250 | | 250 | |
| Duluth Harbor Navigation Structure Repair by Contract | 1,600 | | | | | |
| | | | | | | |
| **Other Business Lines:** | | | | | | |
| Recreation: | | | | | | |
| Operation/maintenance of visitor center | 555 | 510 | 609 | 500 | 564 | 526 |
| Repair building foundation | 108 | | 108 | | 111 | |
| | | | | | | |
| Environmental Stewardship | 40 | 15 | 50 | 22 | 30 | 30 |
| Strategic Sustainability Performance Plan (SSPP) Initiatives – UV film | 250 | | | | 46 | |
| | | | | | | |
| **TOTALS** | **10,100** | **8,688** | **8,371** | **5,494** | **8,532** | **5,987** |

*Emergency dredging and fill management funds provided after 2012 flood event

## Congressional Interests

- Representative Rick Nolan D-MN-8
- Representative Sean Duffy R-WI-7
- Senator Al Franken D-MN
- Senator Amy Klobuchar D-MN
- Senator Ron Johnson R-WI
- Senator Tammy Baldwin D-WI

April 2013

US Army Corps of Engineers
Buffalo District

Great Lakes Navigation System

# Dunkirk Harbor, NY

## Harbor Features

- Located on Lake Erie in the city of Dunkirk, Chautauqua County, New York
- Authorization: River & Harbor Acts of 1827, 1867, 1896, 1910, 1948 and Section 201 of the Flood Control Act of 1965
- Deep draft commercial harbor
- Authorized depths are 17 feet in the outer channel, 16 feet in the inner channel, 8 feet in the access channel and 6 feet in the dock front recreation channels
- Over 1.3 miles of breakwater structures
- The outer, inner, access, and dock front Federal channels total approximately 7,000 feet in length
- Major stakeholders include the NRG Energy power plant, City of Dunkirk, private marinas, charter fishing interests and the recreational boating community

## Project Requirements

- Approximately 20,000 cubic yards (CY) of material must be dredged every 2 years. The harbor was last dredged in 2009 when approximately 106,000 CY of material was removed. Prior to 2009, the harbor was last dredged in 2003
- Sections of the north breakwater are in poor condition and in need of repair

## Consequences of Not Maintaining the Project

- Failure to complete periodic dredging will result in continued shoaling, reduced channel dimensions and unsafe navigation conditions
- Failure to repair deteriorated sections of the north breakwater, will result in the continued degradation of the structure, increased future maintenance costs and unsafe navigation conditions within the harbor
- Negative economic impacts, locally and regionally

## Transportation Importance

- Receiving and shipping port on the Great Lakes
- Harbor of refuge
- Supports 24 charter fishing boats generating approximately $196,000 in net income annually

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Dunkirk Harbor, New York - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Maintenance Dredging – Primary | 650 | | 650 | | 650 | |
| Structure Repair – N. Breakwater (F/P) | 800 | | 800 | | | |
| Project Condition Surveys | 85 | | 85 | | 85 | |
| **TOTALS** | **1,535** | **0** | **1,535** | **0** | **735** | **0** |

## Congressional Interests

- Representative Tom Reed R-NY-23
- Senator Charles Schumer D-NY
- Senator Kirsten Gillibrand D-NY

US Army Corps of Engineers

Great Lakes Navigation System

# Eagle Harbor, MI

## Harbor Features

- Located on the south shore of Lake Superior on the western shore of the Keweenaw Peninsula, about 35 miles northeast of the North Entry to the Keweenaw Waterway.
- Authorization: River and Harbor Act of 2 March 1945
- Shallow draft recreational harbor
- Project depth is 12 feet
- Federal Harbor basin is approximately 4.2 acres
- Structures include a rubblemound breakwater near the old Coast Guard station and a steel revetment from the old Coast Guard ramp to the existing boat ramp.
- Major stakeholders include Eagle Harbor Township and local recreational boating interests.

## Project Requirements

- Requires periodic maintenance dredging on an infrequent basis. The harbor was last dredged in 1973.

## Consequences of Not Maintaining the Project

- Loss of jobs locally
- Loss of recreational and charter fishing in the area
- Loss of recreational boating access to Great Lake
- Loss of safe harbor during storm events
- Potential safety issues for recreational boating community

## Transportation Importance

- This project serves as an important Harbor of Refuge and supports charter fishing and recreational navigation interests.
- The local community has established a significant infrastructure around the harbor facilities that generates income from harbor users and visitors to the area.

April 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Eagle Harbor, MI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | | | | | | |
| | | | | | | |
| **TOTALS** | **0** | **0** | **0** | **0** | **0** | **0** |

## Congressional Interests

- Representative Dan Benishek R-MI-1
- Senator Carl Levin D-MI
- Senator Debbie Stabenow D-MI

US Army Corps of Engineers
Buffalo District

Great Lakes Navigation System

# Erie Harbor, PA

## Harbor Features

- Located on Lake Erie in the city of Erie, Erie County, Pennsylvania
- Authorization: River & Harbor Acts of 1824, 1899, 1910, 1922, 1935, 1954, 1960 and 1962
- Deep draft commercial harbor
- Authorized depths are 29 feet in the entrance channel and 18-28 feet in the harbor
- Five year average (2006-2010) tonnage of 849k tons of material shipped and received
- Ranked 41st among the Great Lakes Harbors based on five year average (2006-2010) tonnage
- The north and south piers total approximately 1.0 mile in length
- Harbor basin and 2.4 miles Federal entrance channel
- A confined disposal facility (CDF) is located adjacent to the south pier
- Major stakeholders include the Erie-Western Pennsylvania Port Authority, U.S. Coast Guard, the Erie Sand and Gravel Company and private marinas

## Project Requirements

- Dredging is conducted on an infrequent, as-needed basis. The harbor was last dredged in 2011 when approximately 220,000 CY of material was removed. Prior to 2011, the harbor was last dredged in 1998.
- Maintenance dredging is required in 2014.

## Consequences of Not Maintaining the Project

- Reduction of bulk commodities that pass through the harbor and generate $54M annually in direct revenue while supporting 854 direct, indirect, and induced jobs that produce over $66M per year in personal income.
- If the harbor was closed to commercial traffic, commodities would have to be transported by rail and truck. This would increase annual emission rates by almost 10,958 tons of harmful particulate matter (PM-10) and increase costs by $444,000 due to increased railroad related accidents, and $1,404,000 due to increased trucking related accidents.
- Light loading; losses of between 1 and 2 feet of channel depth would result in increased transportation costs of between $107,000 and $260,000 annually.

## Transportation Importance

- Major receiving and shipping port on the Great Lakes; and a Critical Harbor of Refuge.
- Commodities shipped or received include aggregates, sand products, limestone and miscellaneous products.

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Erie Harbor, Pennsylvania - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | 49 | | 49 | | | |
| Maintenance Dredging – Primary | 830 | | 1,415 | | 1,415 | |
| Sediment Sampling and Analysis | | | | | 105 | |
| **TOTALS** | **879** | **0** | **1,464** | **0** | **1,520** | |

**Congressional Interests**

- Representative Mike Kelly R-PA-3
- Senator Pat Toomey R-PA
- Senator Robert P. Casey D-PA

US Army Corps of Engineers
Buffalo District

Great Lakes Navigation System

# Fairport Harbor, OH

## Harbor Features

- Located on Lake Erie in the city of Fairport, Lake County, Ohio
- Authorization: River & Harbor Acts of 1825, 1896, 1905, 1919, 1927, 1930, 1935, 1937 and 1946
- Deep draft commercial harbor
- Authorized depths are 25 feet in the outer harbor and 18-24 feet in the river
- Five year average (2006-2010) tonnage of 1.8M tons of material shipped and received
- Ranked 31st among the Great Lakes Harbors based on five year average (2006-2010) tonnage
- 118th leading U.S. port in 2010
- Over 2.2 miles of breakwater structures
- 360 acre Outer Harbor and 1.5 miles of Federal Channel on the Grand River
- Major stakeholders include the Fairport Harbor Port Authority, U.S. Coast Guard, private marinas, Carmuse Lime, Morton International, Northeastern Road Improvement Company, Osborne Concrete & Stone, and Sidley Stone Products

## Project Requirements

- Approximately 150,000 cubic yards (CY) of material must be dredged every 1-2 years. The harbor was last dredged in 2011 when approximately 118,000 CY of material was removed.
- Maintenance dredging is required in 2014.
- Additional critical requirements include the addition of safety ladders to the east pier and repairs to deteriorated sections of the east and west arrowhead breakwaters.

## Consequences of Not Maintaining the Project

- Reduction of bulk commodities that pass through the harbor and generate $85M annually in direct revenue while supporting 1,685 direct, indirect, and induced jobs that produce over $109M per year in personal income.
- Light loading; losses of between 1 and 2 feet of channel depth would result in increased transportation costs of between $164,000 and $478,000 annually.
- If the harbor was closed to commercial traffic, commodities would have to be transported by rail and truck. This would increase annual emission rates by 20,814 tons of harmful particulate matter (PM-10) and increase costs by $574,000 due to increased railroad related accidents, and $2,198,000 due to increased trucking related accidents.

## Transportation Importance

- Major receiving and shipping port on the Great Lakes; and a Critical Harbor of Refuge.
- Commodities shipped or received include limestone, aggregates, ores and minerals.

March 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Fairport Harbor, Ohio - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Conditions Survey | 87 | | 87 | | | |
| Maintenance Dredging – Primary | 1,500 | | 1,490 | | 2,000 | 2,000 |
| Evaluate East Breakwater (Eastern 4,000') | | | | | 100 | |
| E&D/Construction, Addition of Safety Ladders to E. Pier | 120 | | 120 | | 120 | |
| Structure Repair – E./W. Arrowhead Breakwater (Floating Plant) | 950 | 923 | | | | |
| Snagging and Clearing | 50 | 47 | | | | |
| **TOTALS** | **2,707** | **970** | **1,697** | **0** | **2,220** | **2,000** |

## Congressional Interests

- Representative David Joyce R-OH-14
- Senator Rob Portman R-OH
- Senator Sherrod Brown D-OH

US Army Corps of Engineers

Great Lakes Navigation System

# Frankfort Harbor, MI

## Harbor Features

- Located on the east shore of Lake Michigan, 204 miles northeast of Chicago, IL and 28 miles north of Manistee, MI.
- Authorization: River & Harbor Acts of 23 Jun 1866, 3 Mar 1925, 26 Aug 1937, 27 Oct 1965
- Deep draft commercial harbor, primarily recreational use
- Project depths of 22 to 24 feet in the entrance and outer basin to Lake Betsie; 18 feet deep in the Lake Betsie basin and 10 feet deep in the Lake Betsie anchorage area.
- Over 6,400 feet of structures including breakwaters, piers and revetments.
- About one half mile of maintained channel
- Major stakeholders include U.S. Coast Guard, Lake Carriers' Association, Frankfort Municipal Marina and Luedtke Engineering.

## Project Requirements

- Approximately 6,000 to 13,000 cubic yards of material must be dredged on a 5 to 10 year cycle; the harbor was last dredged in 2009.
- The harbor currently requires maintenance dredging.
- Breakwaters require repair to protect the structure from further deterioration and failure.

## Consequences of Not Maintaining the Project

- Significant loss of jobs locally
- Light loading associated with inadequate maintenance dredging, increasing vessel transportation costs.

## Transportation Importance

- Locally significant receiving port on the Great Lakes.
- U.S. Coast Guard Station Frankfort is located within the harbor.
- Supports over 200 recreational boat slips
- Harbor of Refuge

April 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Frankfort Harbor, MI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | | | 70 | | 70 | |
| Maintenance Dredging – Primary Work Package | | | 300 | | 300 | |
| Maintenance Dredging – Backlog Work Package | 277 | | 275 | | 275 | |
| Sediment Budget Analysis – Section 111 | 150 | | 150 | | 167 | |
| Structural Repair – Breakwater Repair | 300 | | 300 | | 300 | |
| | | | | | | |
| **TOTALS** | **727** | **0** | **1,095** | **0** | **1,112** | **0** |

## Congressional Interests

- Representative Dan Benishek R-MI-1
- Senator Carl Levin D-MI
- Senator Debbie Stabenow D-MI

US Army Corps of Engineers

Great Lakes Navigation System

# Grand Haven Harbor, and Grand River, MI

## Harbor Features

- Located on the east shore of Lake Michigan, 180 miles northeast of Chicago, IL and 23 miles north of Holland, MI. The Grand River originates in Jackson County, MI and flows 260 miles west into Lake Michigan.
- Authorization: River and Harbor Acts of 23 Jun 1866, and subsequent acts
- Deep draft commercial harbor
- Project depths of 23 feet in the entrance; 18 to 21 feet in the river channel and turning basin; 8 feet in the upper Grand River channel
- Five year average (2006-2010) tonnage is 965,000 tons of material shipped and received
- Ranked 40th among the Great Lakes Harbors based on five year average (2006-2010) tonnage
- 146th leading U.S. port in 2010
- Over 9,000 feet of structures including piers and revetments.
- Over 2.5 miles of maintained deep draft channel and 14.5 miles of shallow draft river channel.
- Outer channel dredged material is used for beach nourishment. Inner channel material is placed upland in a site that enables reuse.
- Major stakeholders include U.S. Coast Guard, Lake Carriers' Association, Verplank Trucking, Meekoff Dock, Construction Aggregate Corporation, St. Marys Cement, Grand Haven Board of Light and Power and Eagle Group.

## Project Requirements

- Approximately 35,000 cubic yards of material must be dredged from the outer harbor annually. Approximately 20,000 to 40,000 cubic yards of material must be dredged from the inner channel on a 2 to 4 year cycle. The outer harbor was dredged in 2012. The inner and outer harbor will be dredged in 2013; maintenance dredging in the outer harbor is also planned for 2014.

- The upland placement site requires periodic maintenance to enable continued recycling of dredged material.
- Work was completed in 2011 on a section of the South Revetment that was damaged in a 2009 storm, however a large section is still in need of repair.

## Consequences of Not Maintaining the Project

- Reduction of bulk commodities that pass through the harbor that generate $33M annually in direct revenue while supporting 880 direct, indirect, and induced jobs that produce over $57M per year in personal income
- Light loading; loss of between 4 and 5 feet of channel depth results in increased transportation costs of between $3.6M and $5.1M annually.

## Transportation Importance

- Significant regional receiving port on the Great Lakes.
- Harbor of Refuge
- Large recreational tourism base that relies on the functionality of the harbor; the City of Grand Haven reports revenue of $49M and 3,100 jobs that rely on harbor tourism.

April 2013

## Transportation Importance

- Commodities received include sand, gravel, salt, cement, gypsum, coal, and manufactured goods
- Adequate rail lines do not exist to deliver coal to the municipal power plant, which supplies power to over 13,500 customers.
- The harbor is home to the U.S. Coast Guard Sector Grand Haven Station, which is responsible for subordinate commands including: search and rescue, law enforcement, ice rescue, homeland security defense operations.

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Grand Haven Harbor and Grand River, MI**
**Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | 208 | 204 | 195 | 195 | 200 | 200 |
| Fill Management Activities | | | | | | |
| Maintenance Dredging Outer Harbor – Primary Work Package | 525 | 514 | 551 | 551 | 450 | 450 |
| Maintenance Dredging Inner Harbor – Primary Work Package | | | 594 | 594 | | |
| Maintenance Dredging – Backlog Work Package | 983 | | 1,000 | | 1,000 | |
| Sediment Budget Analysis – Section 111 | 150 | | 150 | | 150 | |
| Repair to Damaged Section of South Pier - Contract | | | | | | |
| South Revetment Repair by Contract | 1,775 | | 1,800 | | 1,800 | |
| | | | | | | |
| **Other Business Lines:** | | | | | | |
| Environmental Stewardship | 40 | | 10 | 8 | 8 | 8 |
| Recreation | 10 | 10 | 10 | 10 | | |
| | | | | | | |
| **TOTALS** | **3,691** | **728** | **4,310** | **1,358** | **3,608** | **658** |

## Congressional Interests

- Representative Bill Huizenga R-MI-2
- Senator Carl Levin D-MI
- Senator Debbie Stabenow D-MI

US Army Corps of Engineers

Great Lakes Navigation System

# Grand Marais Harbor, MI

## Harbor Features

- Located on the south shore of Lake Superior, 93 miles west of Sault Ste. Marie, MI.
- Authorization: River & Harbor Acts of 14 Jun 1880, 17 May 1950
- Deep draft harbor, however, current use is primarily recreational.
- Project depths of 20 feet in the entrance channel and 18 feet in the inner harbor channel
- Maintained depths of 15 to 17 feet
- Approximately 3,000 feet of maintained Federal channel.
- Approximately 4,000 feet of piers, and a 5,770 feet long pile dike, currently in ruins.
- Dredged material is placed along the beach as beach nourishment.
- Major stakeholders include USFWS, Michigan DNR, Village of Grand Marais, and a variety of boating interests.

## Project Requirements

- Requires infrequent maintenance dredging; the harbor was last dredged in 1973.
- In 2012 the remnants of a 300 foot section of timber cribbing was removed and a rubble mound breakwater was constructed at the southernmost end of the east pier.
- The local community used state and local funding to provide repairs and construct a new section of breakwater in 2012.

## Consequences of Not Maintaining the Project

- Loss of jobs locally.
- Loss of recreational and charter fishing in the area.

## Transportation Importance

- This project serves as an important Harbor of Refuge and supports charter fishing and recreational navigation interests.
- This harbor is very scenic and provides a large tourism base for Michigan's Upper Peninsula.
- The local community has established a significant infrastructure around the harbor facilities that generates income from harbor users and visitors to the area.

April 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Grand Marais Harbor, MI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | 48 | | 50 | | 50 | |
| Maintenance Dredging – Backlog Work Package | 485 | | 485 | | 485 | |
| Repairs to Pile Dike Breakwater – by Contract | 8,900 | | | | | |
| | | | | | | |
| **TOTALS** | **9,433** | **0** | **535** | **0** | **535** | **0** |

## Congressional Interests

- Representative Dan Benishek R-MI-1
- Senator Carl Levin D-MI
- Senator Debbie Stabenow D-MI

US Army Corps of Engineers

Great Lakes Navigation System

# Grand Marais Harbor, MN

## Harbor Features

- Located on the north shore of Lake Superior, about 110 miles northeast of Duluth, MN.
- Shallow draft recreational harbor.
- Authorization: River and Harbor Act of 1879
- Project depth of 20 feet at the harbor entrance, depths range between 16-18 feet within the harbor, and the project depth of the small boat harbor is 8 feet.
- Federal small boat basin of approximately 38 acres makes up the major portion of the project. A small Federal channel behind the west breakwater is approximately 500 x 100 feet.
- Over 1,600 feet of breakwaters. Over 800 feet of concrete seawalls in the southeast corner of the harbor.
- Major stakeholders include the U.S. Coast Guard, Minnesota DNR, City of Grand Marais marina, a private yacht club leasing land from the U.S. Forest Service, and North House Folk School.

## Project Requirements

- Requires periodic maintenance dredging on an infrequent basis. The harbor was last dredged in 2008.
- There is backlog shoaling present in the harbor, but it is not currently impacting the functionality of the harbor channel.
- Reconfiguration of and dredging behind the west inner breakwater has been recommended by the local community to allow for easier access to docking and support facilities and to improve water quality in the area.

## Consequences of Not Maintaining the Project

- Loss of jobs locally
- Loss of use by U.S. Coast Guard station
- Loss of recreational and charter fishing in the area
- Loss of highly utilized boat launch

## Transportation Importance

- This project serves as an important Harbor of Refuge as well as charter fishing and recreational navigation interests.
- This project provides access to Lake Superior for several governmental agencies with such functions as law enforcement, research, and search and rescue.
- Harbor is home to U.S. Coast Guard Station North Superior.

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Grand Marais Harbor, MN - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | | | | | | |
| Maintenance Dredging – Primary Work Package | | | | | | |
| Maintenance Dredging – Backlog Work Package | 300 | | 300 | | | |
| Misc. Safety Repairs to Navigation Structures | 50 | | | | | |
| Breakwater Repair By Contract | | | 2,000 | | 2,000 | |
| | | | | | | |
| **TOTALS** | **350** | **0** | **2,300** | **0** | **2,000** | **0** |

## Congressional Interests

- Representative Rick Nolan D-MN-8
- Senator Al Franken D-MN
- Senator Amy Klobuchar D-MN

US Army Corps of Engineers

Great Lakes Navigation System

# Grand Traverse Bay Harbor, MI

## Harbor Features

- Located on the south shore of Lake Superior at the mouth of the Traverse River on the eastern shore of Keweenaw Bay, about 20 miles northeast of the Portage Entry to the Keweenaw Waterway.
- Authorization: River & Harbor Act of 1945
- Shallow draft recreational harbor
- Project depth is 12 feet in the entrance channel and 12 feet in the Traverse River.
- Approximately 1,500 feet of maintained Federal channel
- Approximately 1,438 feet of piers
- Dredged material is placed along the beach as beach nourishment.
- Major stakeholders include Schoolcraft Township, Native American Fishing Interests, and local boating interests.

## Project Requirements

- Approximately 12,000 to 20,000 cubic yards of material must be dredged on a three to five year cycle; the harbor was last dredged in 2009.
- The harbor currently requires maintenance dredging.
- A solution to the stamp sand infiltration problem must be resolved before the harbor can be dredged again. The Corps along with the U.S. EPA, and the State of Michigan are evaluating methods to reduce erosion of the sands through the construction of a wall along the shoreline.

## Consequences of Not Maintaining the Project

- Loss of jobs locally
- Loss of recreational and charter fishing in the area

## Transportation Importance

- This project serves as an important Harbor of Refuge and supports charter fishing and recreational navigation interests.
- The local community has established a significant infrastructure around the harbor facilities that generates income from harbor users and visitors to the area.

April 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Grand Traverse Bay Harbor, MI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | | | 30 | | 30 | |
| Maintenance Dredging – Primary Work Package | | | 350 | | 350 | |
| | | | | | | |
| **TOTALS** | **0** | **0** | **380** | **0** | **380** | **0** |

## Congressional Interests

- Representative Dan Benishek R-MI-1
- Senator Carl Levin D-MI
- Senator Debbie Stabenow D-MI

US Army Corps of Engineers

Great Lakes Navigation System

# Grays Reef Passage, MI

## Project Features

- Located between Grays Reef and Vienna Shoal in the northeast end of Lake Michigan.
- Authorization: River & Harbor Act of 30 Aug 1935
- Federal navigation channel 3,000 feet wide
- Project depth is 25 feet
- Five year average (2006-2010) tonnage is 9.75M tons of material passed through the passage
- Major stakeholders include U.S. Coast Guard, Lake Carriers' Association, and all Great Lakes shipping interests that use Lake Michigan ports.

## Project Requirements

- The project requires occasional obstruction removal.
- The passage was last dredged in 1970.

## Consequences of Not Maintaining the Project

- Significant loss of jobs locally, regionally, and internationally.
- Key component of the Great Lakes navigation system for Lake Michigan ports. Disruption of service would have severe maritime and economic impacts on those ports.

## Transportation Importance

- Great Lakes passage way between Lake Michigan and Lake Huron
- Critical narrow passage between Grays Reef and Vienna Shoal.
- Occasional condition surveys are essential to maintain safe commercial navigation through this passage.
- Commodities transported through these channels include coal, cement, iron ore, petroleum products, chemicals, iron, steel, lumber, sand and gravel, manufactured goods and other general cargo.

April 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Grays Reef Passage, MI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | | | | | | |
| | | | | | | |
| **TOTALS** | **0** | **0** | **0** | **0** | **0** | **0** |

## Congressional Interests

- Representative Dan Benishek R-MI-1
- Senator Carl Levin D-MI
- Senator Debbie Stabenow D-MI

US Army Corps of Engineers
Buffalo District

Great Lakes Navigation System

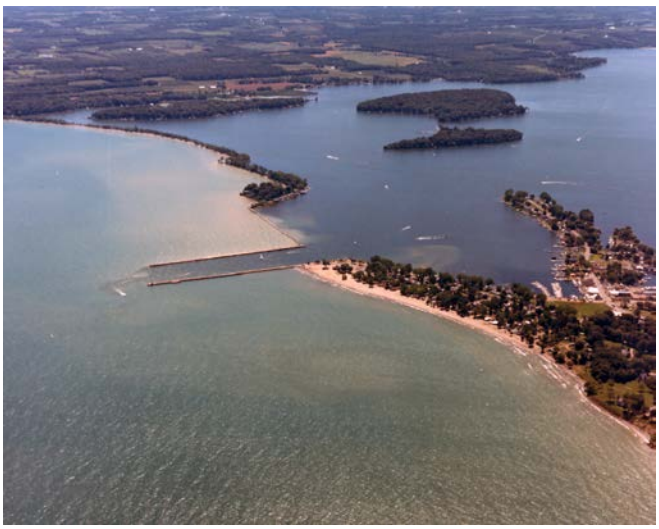
# Great Sodus Bay Harbor, NY

## Harbor Features

- Located on Lake Ontario in the Village of Sodus Point, Wayne County, New York
- Authorization: River & Harbor Acts of 1829, 1882, 1925, 1930, 1935 and 1962
- Deep draft recreational harbor
- Authorized depths range from 20 to 22 feet. The current maintenance depth is 10 feet
- The current maintenance depth is based on recreational needs only
- The harbor consists of an entrance channel that is approximately 5,000 feet long and extends from the lake into Sodus Bay
- The harbor entrance is delineated by the east breakwater and west pier with a total length of 4,575 feet
- Major stakeholders include charter fishing interests, U.S. Coast Guard, private marinas and the recreational boating community

## Project Requirements

- The project was last dredged in 2004 when 42,500 cubic yards (CY) of material was removed
- In order to maintain adequate channel depth for vessels, an estimated 20,000 CY of maintenance dredging will be required
- Sections of the east breakwater and west pier are in poor condition and in need of repair
- Critical requirements include maintenance dredging and E&D for east breakwater repairs



## Consequences of Not Maintaining the Project

- Failure to dredge will result in continued shoaling, reduced channel dimensions, and unsafe navigation conditions
- Failure to repair the east breakwater will result in the continued degradation and eventual failure of the structure, increased future maintenance costs, unsafe navigation conditions within the bay and potential damage to shoreline structures
- Potential safety issues for recreational boating community
- Potential functional loss of Critical Harbor of Refuge
- Negative economic impacts, locally and regionally

## Transportation Importance

- Critical Harbor of Refuge
- Home to Auxiliary U.S. Coast Guard station
- Supports 5 charter fishing boats generating approximately $41,000 in net income annually

February 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Great Sodus Bay Harbor, New York - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| E&D, East Breakwater Repair | 250 | | 250 | | 250 | |
| Maintenance Dredging - Primary | 730 | | 730 | | 830 | |
| Structure Repair – West Pier Stone Repair | | | 400 | | | |
| **TOTALS** | **980** | **0** | **1,380** | **0** | **1,080** | **0** |

**Congressional Interests**

- Representative Daniel Maffei D-NY-24
- Senator Kirsten Gillibrand D-NY
- Senator Charles Schumer D-NY

US Army Corps of Engineers

Great Lakes Navigation System

# Green Bay Harbor, WI

## Harbor Features

- Located at the mouth of the Fox River at the head of Green Bay in Lake Michigan.
- Authorization: River & Harbor Acts of 23 Jun 1866, 13 Jul 1892, 26 Jun 1910, 8 Aug 1917, 3 Mar 1925, 30 Aug 1935, 26 Aug 1937, 2 Mar 1945, 23 Aug 1962
- Deep draft commercial harbor
- Project depths of 26 feet for about 11.5 miles upstream from the entrance channel, 24 feet from Grassy Island to 0.5 mile upstream from the mouth of the Fox River, and 22 feet 0.5 miles upstream of the river mouth to 3.3 miles upstream of the river mouth.
- Five year average (2006-2010) tonnage is 2.3M tons of material shipped and received
- Ranked 27th among the Great Lakes Harbors based on five year average (2006-2010) tonnage
- 109th leading U.S. port in 2010
- Over 14 miles of maintained channel
- Material is currently placed in the Bay Port disposal facility under an agreement with the Brown County Port Department, since the Green Bay Confined Disposal Facility at Renard Island is currently at capacity and in the process of being closed.
- Major stakeholders include U.S. Coast Guard, Lake Carriers' Association, Flint Hills Resources, Great Lakes Calcium Corp., Fox River Dock Co., Sanimax Corp., St. Mary's Cement Co., Western Lime Corp., C. Reiss Coal Co., Leicht Transfer & Storage Co., Noble Petro, K&K Integrated Logistics, Lafarge Corp., Construction Resource Management, Georgia Pacific Corp, Proctor & Gamble, and Wisconsin Public Service.

## Project Requirements

- Approximately 180,000 cubic yards of material must be dredged each year to provide for one-way vessel traffic; the harbor was last dredged in 2012.
- There are plans to dredge the harbor in 2013. Maintenance dredging is also planned for 2014.

- The Renard Island CDF must be closed and turned over to the local sponsor. The first phase of this process has been completed (construction of the causeway), and Brown County completed an initial transport of material from the Bay Port CDF to Renard. Additional material will be transported to Renard Island in FY13 and the material will be shaped prior to turnover.
- An EPA Superfund site is located within the Federal channel. Close coordination with EPA and WDNR is required for maintenance dredging projects.
- The Cat Islands project involves restoring a series of barrier islands in Green Bay Harbor. This project will provide significant long-term capacity for material dredged from the bay. Construction began in FY12 with Great Lakes Restoration Initiative funding and will be completed with USACE Construction General funding. Construction is scheduled to be complete in 2015.

## Consequences of Not Maintaining the Project

- Reduction of bulk commodities that pass through the harbor that generate $96M annually in direct revenue while supporting 1,495 direct, indirect, and induced jobs that produce over $103M per year in personal income
- Light loading; loss of between 1 and 2 feet of channel depth results in increased transportation costs of between $439,000 and $1.1M annually; product diversion to Menominee, MI at a significant transportation cost.

April 2013

**Consequences of Not Maintaining the Project**

- If the harbor was closed to commercial traffic, commodities would have to be transported by rail and truck. This would increase annual emission rates by over 5.2M lbs of harmful particulate matter (PM-10) and increase costs by $690,000 due to increased railroad related accidents, and $529,000 due to increased trucking related accidents.

**Transportation Importance**

- Major receiving port on the Great Lakes
- Commodities include coal, limestone, cement, salt, pig iron, fuel oil, liquid asphalt, lumber, gypsum, petroleum products, heavy equipment and general cargo, including overseas cargo.
- Supports approximately 200 recreational boat slips.

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Green Bay Harbor, WI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | 361 | 354 | 360 | 360 | 367 | 367 |
| Maintenance Dredging – Primary Work Package | 3,045 | 2,985 | 2,820 | 2,820 | 3,000 | 3,000 |
| Maintenance Dredging – Backlog Work Package | 1,600 | | 600 | | 1,600 | |
| CDFs – Renard Island Closure | 5,000 | | 5,000 | | 5,000 | |
| | | | | | | |
| Phase 1 Cat Island Disposal Construction - CG | | | 7,000 | 7,000 | 1,900 | 1,900 |
| | | | | | | |
| **TOTALS** | **10,006** | **3,339** | **15,780** | **10,180** | **11,867** | **5,267** |

**Congressional Interests**

- Representative Reid Ribble R-WI-8
- Senator Ron Johnson R-WI
- Senator Tammy Baldwin D-WI

US Army Corps of Engineers

Great Lakes Navigation System

# Greilickville Harbor, MI

## Harbor Features

- Located on the southwest shore of Grand Traverse Bay West Arm, Lake Michigan, 2 miles northwest of Traverse City, MI.
- Shallow draft recreational harbor
- Authorization: River and Harbor Acts of 1948 and 26 June 1964
- Deauthorized a portion of the inner basin in 1992
- Project depths are 14 feet in the basin area and 10 feet in the mooring area
- Approximately 1,220 feet of steel sheet pile breakwater and 750 feet of rubble mound breakwater structures.
- Major stakeholders include Michigan DNR, Elmwood Township, local business owners and recreational boating interests.

## Project Requirements

- Project requires infrequent maintenance dredging. Currently, there are no critical maintenance requirements.

## Consequences of Not Maintaining the Project

- Potential safety issues for recreational boating community
- Negative economic impacts locally

## Transportation Importance

- This project supports recreational navigation interests.

April 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Greilickville, MI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| | | | | | | |
| | | | | | | |
| | 0 | 0 | 0 | 0 | 0 | 0 |

## Congressional Interests

- Representative Dan Benishek R-MI-1
- Senator Carl Levin D-MI
- Senator Debbie Stabenow D-MI

US Army Corps of Engineers

Great Lakes Navigation System

# Hammond Bay Harbor, MI

## Harbor Features

- Located on the western shore of Lake Huron, about 30 miles southeast of the Straits of Mackinac.
- Authorization: River & Harbor Act of 2 Mar 1945, 17 Aug 1967
- Shallow draft recreational harbor
- Project provides for a 12 feet deep entrance channel, and a 10 feet deep inner basin.
- More than 1,900 feet of breakwaters.
- Dredged material is placed along the beach as beach nourishment.
- Major stakeholders include the Michigan DNR, Native American fishing, and other fishing interests.

## Project Requirements

- This harbor requires infrequent maintenance dredging, and was last dredged in 1994. It is estimated that approximately 20,000 cubic yards of material needs to be removed on a 15-20 year interval.
- Maintenance dredging is currently required within the harbor.

## Consequences of Not Maintaining the Project

- Loss of jobs locally
- Loss of Native American, recreational and charter fishing in the area.
- Loss of recreational boating access to Lake Huron
- Loss of safe harbor during storm events
- Potential safety issues for recreational boating community

## Transportation Importance

- This project serves as an important Harbor of Refuge and supports a variety of commercial and recreational fishing interests.
- The Michigan DNR has established a significant infrastructure around the harbor facilities that generate income from harbor users and visitors to the area.

April 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Hammond Bay Harbor, MI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | 20 | | 20 | | 20 | |
| Maintenance Dredging – Primary Work Package | 275 | | 275 | | 275 | |
| | | | | | | |
| **TOTALS** | **295** | **0** | **295** | **0** | **295** | **0** |

## Congressional Interests

- Representative Dan Benishek R-MI-1
- Senator Carl Levin D-MI
- Senator Debbie Stabenow D-MI

US Army Corps of Engineers

Great Lakes Navigation System

# Harbor Beach Harbor, MI

## Harbor Features

- Located on the west shore of Lake Huron about 60 miles north of Port Huron, MI.
- Authorization: River & Harbor Acts of 3 Mar 1871, 8 Aug 1917, 21 Jan 1927
- Deep draft commercial harbor
- Project depth of 23 feet in entrance channel and 21 feet in interior basin to provide safe vessel draft of 21 feet.
- Five year average (2006-2010) tonnage is 59,000 tons of material shipped and received
- Ranked 65th among the Great Lakes Harbors based on five year average (2006-2010) tonnage
- Nearly 7,900 feet of breakwater structures
- About one half mile of maintained channel.
- Major stakeholders include U.S. Coast Guard, Lake Carriers' Association, Detroit Edison, City of Harbor Beach, U.S. Fish and Wildlife Service.

## Project Requirements

- Approximately 65,000 to 130,000 cubic yards of material must be dredged on a 5 to 10 year cycle; the harbor was last dredged in 2010 using FY 2009 funds. The recreational portion of the harbor was dredged in 2007.
- Dredging is currently required to eliminate balance of shoaling in the harbor.

## Consequences of Not Maintaining the Project

- Reduction of bulk commodities that pass through the harbor that generate $627,000 annually in direct revenue while supporting 49 direct, indirect, and induced jobs that produce over $3.2M per year in personal income
- Light loading; loss of channel depth results in increased transportation costs.

## Transportation Importance

- Harbor is the only delivery option for fuel to the coal fired power plant.
- Commodities received include coal and lignite.
- U.S. Fish and Wildlife Service use the harbor to restock trout population for Lake Huron.
- Coast Guard Station leases slips from city owned marina and is responsible for area from Port Sanilac to Caseville.
- Harbor supports one city owned and one privately owned marina totaling 146 seasonal and transient slips.
- Dive and fishing charters operate out of city owned marina.
- U.S. Coast Guard Station Harbor Beach resides within the harbor. They have expressed concerns about inadequate depth in the harbor to accommodate their vessels.

April 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Harbor Beach Harbor, MI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | | | | | | |
| Maintenance Dredging – Primary Work Package | | | 850 | | 850 | |
| Maintenance Dredging – Backlog Work Package | 1,000 | | 1,000 | | 1,000 | |
| | | | | | | |
| **TOTALS** | **1,000** | **0** | **1,850** | **0** | **1,850** | **0** |

## Congressional Interests

- Representative Candice S. Miller R-MI-10
- Senator Carl Levin D-MI
- Senator Debbie Stabenow D-MI

US Army Corps of Engineers

Great Lakes Navigation System

# Harrisville Harbor, MI

## Harbor Features

- Located on the west shore of Lake Huron, 20 miles north of Oscoda and 30 miles south of Alpena.
- Authorization: River & Harbor Act of 2 Mar 1945
- Shallow draft recreational harbor of refuge
- Project depth is 12 feet in the entrance channel and 10 feet in the harbor basin
- Approximately 3,000 feet of maintained Federal channel
- More than 2,600 feet of breakwaters
- Dredged material is placed along the beach as beach nourishment.
- Major stakeholders include the Michigan DNR, City of Harrisville, Beyers Charter Service, and Blue Bird Charter Service.

## Project Requirements

- Approximately 10,000 cubic yards of material must be dredged on a five to ten year cycle; the harbor was last dredged in 2000.
- The harbor currently requires maintenance dredging.

## Consequences of Not Maintaining the Project

- Loss of jobs locally
- Loss of recreational and charter fishing in the area
- Loss of safe harbor during storm events
- Potential safety issues for recreational boating community

## Transportation Importance

- This project serves as an important Harbor of Refuge as well as charter fishing and recreational navigation interests.
- The local community has established infrastructure and business within easy walking distance of the harbor facilities that generate income from harbor users and visitors to the area.
- Supports nearly 100 recreational boating slips
- Supports 5 charter fishing boats

April 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Harrisville Harbor, MI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | 15 | | 15 | | 15 | |
| Maintenance Dredging – Primary Work Package | 270 | | 275 | | 275 | |
| | | | | | | |
| **TOTALS** | **285** | **0** | **290** | **0** | **290** | **0** |

## Congressional Interests

- Representative Dan Benishek R-MI-1
- Senator Carl Levin D-MI
- Senator Debbie Stabenow D-MI

US Army Corps of Engineers

Great Lakes Navigation System

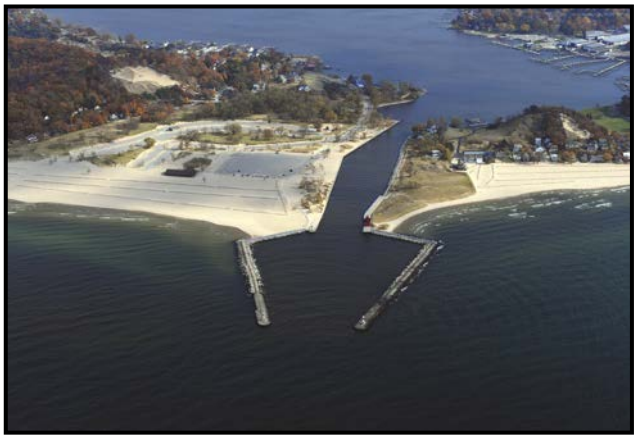
# Holland Harbor, MI

## Harbor Features

- Located on the east shore of Lake Michigan 95 miles northeast of Chicago, IL and 23 miles south of Grand Haven, MI.
- Authorization: River & Harbor Acts of 30 Aug 1852, 2 Mar 1867, 3 Mar 1899, 3 Mar 1905, 3 Jul 1930, 30 Aug 1935, 3 Sep 1954
- Deep draft commercial harbor
- Project depths of 23 feet in the entrance; 21 feet in inner channel and Lake Macatawa.
- Five year average (2006-2010) tonnage is 360,000 tons of material shipped and received
- Ranked 51st among the Great Lakes Harbors based on five year average (2006-2010) tonnage
- Over 5,500 feet of structures including breakwaters, piers, and revetments.
- Over 6.5 miles of maintained channel
- Outer harbor dredged material is used for beach nourishment.
- The City of Holland operated the Lakewood Road dredged material placement site which enables recycling of material dredged from the inner harbor and Lake Macatawa.
- Major stakeholders include U.S. Coast Guard, Lake Carriers' Association, Verplank Trucking, Padnos Iron and Metal, Holland Public Works, and Brewers Dock.

## Project Requirements

- Approximately 35,000 cubic yards of material must be dredged from the outer harbor annually. Approximately 45,000 to 65,000 cubic yards of material must be dredged from the Lake Macatawa channel on a 2 to 4 year cycle.



- Maintenance dredging was funded by an allocation from the National Provision in the FY12 Consolidated Appropriation Bill and allowed dredging of the outer harbor in 2012. Maintenance dredging of the outer harbor will also occur in 2013. In 2014 funding for maintenance dredging was provided in both the inner and outer harbor.

## Consequences of Not Maintaining the Project

- Reduction of bulk commodities that pass through the harbor that generate nearly $13M annually in direct revenue while supporting 330 direct, indirect, and induced jobs that produce $22 M per year in personal income
- If the harbor was closed to commercial traffic, commodities would have to be transported by rail and truck. This would increase annual emission rates by nearly 7M lbs of harmful particulate matter (PM-10) and increase costs by $27,000 due to increased railroad related accidents, and $2.4M due to increased trucking related accidents.
- Light loading; loss of between 4 and 5 feet of channel depth results in increased transportation costs of between $738,000 and $1.1M annually.

April 2013

## Transportation Importance

- Major regional receiving port on the Great Lakes and Harbor of Refuge
- Commodities received include limestone, coal, scrap metals, sand, and gravel.
- U.S Coast Guard Station Holland resides within the harbor.

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Holland Harbor, MI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | 149 | | 147 | 147 | 150 | 150 |
| Maintenance Dredging of Outer Harbor – Primary Work Package | 525 | 585* | 511 | 511 | 511 | 511 |
| Maintenance Dredging of Inner Harbor – Primary Work Package | 1,515 | | 1,500 | | 1,139 | 1,139 |
| Maintenance Dredging – Backlog Work Package | 456 | | 456 | | 456 | |
| Structural Repairs – by Govt. Floating Plant | 360 | | | | | |
| Sediment Budget Analysis – Section 111 | 150 | | 150 | | 150 | |
| CDF Fill Management Activities | 375 | | | | | |
| Breakwater Repairs by Contract | | | 360 | | 360 | |
| | | | | | | |
| **Other Business Lines:** | | | | | | |
| Recreation | 10 | 10 | 10 | 10 | | |
| | | | | | | |
| **TOTALS** | **3,540** | **595** | **3,134** | **668** | **2,766** | **1,800** |

*Provided by National Provision in the FY12 Consolidated Appropriation Bill

## Congressional Interests

- Representative Bill Huizenga R-MI-2
- Senator Carl Levin D-MI
- Senator Debbie Stabenow D-MI

US Army Corps of Engineers
Buffalo District

Great Lakes Navigation System

# Huron Harbor, OH

## Harbor Features

- Located on Lake Erie in the city of Huron, Erie County, Ohio
- Authorization: River & Harbor Acts of 1905, 1919, 1935, and 1962
- Deep draft commercial harbor
- Authorized depths are 29 feet in the lake approach channel, 27-28 feet in the entrance channel and 21 feet in the turning basin
- Five year average (2006-2010) tonnage of 836k tons of material shipped and received
- Ranked 42nd among the Great Lakes Harbors based on five year average (2006-2010) tonnage
- 150th leading U.S. port in 2010
- Over 1 mile of navigation structures
- 2.0 miles of Federal channel
- A confined disposal facility (CDF) is located adjacent to the west pier at the west end of the harbor
- The CDF is filled to approximately 65% of capacity. Presently, this facility is not utilized for normal maintenance dredging
- Major stakeholders include the Huron Port Authority, private marinas, WLH Rentals, Wheeling & Lake Erie Railway Company and Huron Lime Inc

## Project Requirements

- Approximately 190,000 cubic yards (CY) of material must be dredged every 1-2 years. The harbor was last dredged in 2009 when approximately 303,000 CY of material was removed.
- Maintenance dredging is required in 2014.

## Consequences of Not Maintaining the Project

- Reduction of bulk commodities that pass through the harbor and generate $39M annually in direct revenue while supporting 893 direct, indirect, and induced jobs that produce over $58M per year in personal income.
- If the harbor was closed to commercial traffic, commodities would have to be transported by rail and truck. This would increase annual emission rates by over 539,427 tons of harmful particulate matter (PM-10) and increase costs by $12,505,000 due to increased trucking related accidents.
- Light loading; loss of between 3 and 4 feet of channel depth results in increased transportation costs of between $104,000 and $281,000 annually.

## Transportation Importance

- Major receiving and shipping port on the Great Lakes; and a Harbor of Refuge.
- Commodities received include limestone and grain.

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Huron Harbor, Ohio - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Conditions Survey | 83 | | 83 | | | |
| Maintenance Dredging – Primary | 1,880 | | 2,200 | | 2,200 | |
| E&D and Construction, CDF Weir Repair | 200 | | 350 | | 500 | |
| Evaluate West Pier | | | | | 50 | |
| Structure Repair – CDF Wier Repair (Floating Plant) | | | 400 | | | |
| **TOTALS** | **2,163** | **0** | **3,033** | **0** | **2,750** | **0** |

## Congressional Interests

- Representative Marcy Kaptur D-OH-9
- Senator Rob Portman R-OH
- Senator Sherrod Brown D-OH

US Army Corps of Engineers

Great Lakes Navigation System

# Indiana Harbor, IN

## Project Features

- Located on Lake Michigan in the City of East Chicago, Lake County, Indiana.
- Authorized depths are -29 ft. L.W.D in the approach channel, -28 ft. in the turning basin, -27 ft. in the outer dock area, and -22 ft. within the main and two branch channels.
- 4.7 miles of Federal Channel combined within the Indiana Harbor Canal, the Calumet River Branch, and the Lake George Branch.
- 3,085 linear feet of laid-up stone and concrete caisson breakwater structures.
- A confined disposal facility (CDF) with a storage capacity of 4.8M CY.
- Five year average (2006-2010) tonnage is 13M tons of material shipped and received
- Ranked 4th$^{th}$ among Great Lakes Harbors based on five year average (2006-2010) tonnage
- 50$^{th}$ leading U.S. port in 2010
- Interconnected with 83 commercial ports: ships to 41 ports, and receives from 42 ports.
- Major stakeholders: ArcelorMittal Steel, US Gypsum, LaFarge Cement, and Amoco.

## Project Requirements

- The project had not been dredged since 1972 due to the lack of a suitable disposal facility for the highly contaminated sediment. Average shoaling depth in the channel areas is 4.0'.
- Dredging began in FY 2012, and removed 134,000 CY from the Federal Channel.
- FY13 funds will remove 187,000 CY from Federal channel areas. FY14 funds will remove 148,000 CY from Federal channel areas. Additional dredging in non-Federal areas will also be completed during FY13 and FY14 with funds from ArcelorMittal.
- Initial dredging funding levels increased the operational costs of the CDF in FY13 and FY14. CDF groundwater pumping must be performed to protect regional groundwater resources; the placement of dredged material within the CDF will reduce water infiltration, and reduce these costs substantially.

## Consequences of Not Maintaining the Project

- Light loading losses of between 3- 4 feet of channel depth results in increased transportation costs of between $5.9M and $8.3M annually.
- Reduction of bulk commodities that pass through the harbor and generate $332.M annually in direct revenue while supporting 1,495 direct, indirect, and induced jobs that produce over $263.M per year in personal income.
- If the harbor was closed to commercial traffic, commodities would have to be transported by rail and truck. This would increase annual emission rates by over 48,900 tons of harmful particulate matter (PM-10) and increase costs by $4.9M due to increased railroad related accidents, and $222.K due to increased trucking related accidents.

## Transportation Importance

- Commodities are iron ore, limestone, coke, gypsum, steel, cement and concrete, petroleum products, and miscellaneous bulk products.
- ArelorMittal's Indiana Harbor facility is the largest steelmaking complex in N. America. It is fully integrated, operating five blast furnaces, and has a total raw steelmaking capability of 10.M tons annually. It produces hot-rolled, cold-rolled and hot-dipped galvanized sheet products. Markets served include automotive, appliance, agricultural, construction, line and pipe tube, electrical/motor lamination, converters and steel service centers.

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Indiana Harbor, IN**
**Project Requirements and President's Budget ($1,000)**

| Harbor Operations Work Packages | FY12 Requirement | FY12 Work Plan | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | 175 | 175 | 175 | 175 | 178 | 178 |
| CDF Site Operations | 4,120 | 4,120 | 5,800 | 6,270 | 4,677 | 5,016 |
| Maintenance Dredging of Federal Harbor Channel – Primary work package | 5,000 | 2,248 | 4,440 | 3,970 | 5,340 | 5,001 |
| Maintenance Dredging of Federal Harbor Channel – Backlog work package | 10,000 | | 2,820 | | 2,750 | |
| Structural repairs to Easterly Breakwater (Completed by Gov't. Floating Plant) | 2,285 | | 2,385 | 500 | 778 | 778 |
| **TOTALS** | **21,580** | **6,543** | **15,620** | **10,915** | **13,723** | **10,973** |

**Congressional Interests**

- Representative Peter J. Visclosky, D-IN-1
- Senator Dan Coats, R-IN
- Senator Joe Donnelly, D-IN

US Army Corps of Engineers

Great Lakes Navigation System

# Inland Route, MI

## Project Features

- The Inland Route is a series of interconnected lakes and streams stretching across the northern tip of the Lower Peninsula of Michigan, and extending from Conway near Lake Michigan to Cheboygan on Lake Huron. Crooked and Indian Rivers are connecting channels in the waterway.
- Authorization: River & Harbor Act of 3 Sep 1954
- Shallow draft recreational project
- Project depth is 5 feet
- Approximately 35 miles of maintained Federal channel
- Crooked River lock and weir at Alanson, MI.
- Dredged material is placed at an upland site, currently operated by the State of Michigan under lease agreement.
- Major stakeholders include the Michigan DNR, numerous boating associations and marinas and the Michigan Boating Industries Association.

## Project Requirements

- Critical repairs of electrical and mechanical components of the Crooked River lock were initiated in 2009 and completed in 2010 utilizing funding received in the American Recovery and Reinvestment Act of 2009.
- Recommended completion of Section 216 initiative to transfer ownership of the project to local entity.
- Requires periodic maintenance dredging on a 7 to 12 year cycle of approximately 10,000 cubic yards; the channel was last dredged in 1999.
- Latest condition survey showed minimal shoaling.

## Consequences of Not Maintaining the Project

- Loss of jobs locally
- Loss of recreational and charter fishing in the area
- Loss of recreational boating access to Great Lakes
- Loss of safe harbor during storm events
- Potential safety issues for recreational boating community

## Transportation Importance

- This project serves primarily charter fishing and recreational navigation interests.
- Local communities have established significant infrastructure around the project facilities that generates income from boaters and visitors to the area.

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Inland Route, MI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | | | | | | |
| Maintenance Dredging – Primary Work Package | | | | | | |
| Section 216 Activities | 220 | | 220 | | 220 | |
| | | | | | | |
| **TOTALS** | **220** | **0** | **220** | **0** | **220** | **0** |

## Congressional Interests

- Representative Dan Benishek R-MI-1
- Senator Carl Levin D-MI
- Senator Debbie Stabenow D-MI

US Army Corps of Engineers
Buffalo District

Great Lakes Navigation System

# Irondequoit Harbor, NY

## Harbor Features

- Located on Lake Ontario, 5 miles east of Rochester, in the town of Irondequoit, Monroe County, New York
- Authorization: River & Harbor Act (RHA) of 1958
- Shallow draft recreational harbor
- Authorized depths are 9 feet in the entrance channel and 8 feet in the harbor basin
- The harbor is protected by the west breakwater and east jetty with a total length of 2,100 feet
- Major stakeholders include charter fishing interests, private marina and the recreational boating community

## Project Requirements

- The harbor typically requires dredging every five to ten years. On average, approximately 15,000 cubic yards (CY) of sediment is dredged per event. It was last dredged in 2008 when approximately 21,000 CY of material was removed
- The current sediment backlog within the functional harbor areas is estimated at approximately 23,000 CY
- Local communities and elected officials have expressed concern over the project's impact to the littoral sand flow in the project area. USACE has initiated a study under Section 111, Mitigation of Damages Caused by Federal Navigation Projects, of the 1968 RHA, The Town of Webster is the non-Federal sponsor. A determination of Federal interest was completed by USACE, Buffalo District on August 31, 2011 and found to be negative. No further work is anticipated at this time
- Critical requirements include maintenance dredging

## Consequences of Not Maintaining the Project

- Failure to dredge will result in continued shoaling and reduced channel dimensions; resulting in unsafe navigation conditions
- Potential safety issues for recreational boating community
- Potential functional loss of Harbor of Refuge
- Negative economic impacts, locally and regionally

## Transportation Importance

- Harbor of Refuge
- Supports 8 charter fishing boats generating approximately $65,000 in net income annually

February 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Irondequoit Harbor, New York - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Maintenance Dredging | | | 820 | | 820 | |
| **TOTALS** | **0** | **0** | **820** | **0** | **820** | **0** |

**Congressional Interests**

- Representative Louise Slaughter D-NY-25
- Senator Kirsten Gillibrand D-NY
- Senator Charles Schumer D-NY

US Army Corps of Engineers

Great Lakes Navigation System

# Kenosha Harbor, WI

## Harbor Features

- Located on the west shore of Lake Michigan about 35 miles south of Milwaukee and about 54 miles north of Chicago, IL.
- Authorization: River & Harbor Act of 3 Mar 1899
- Commercial harbor that currently serves primarily recreational boat traffic.
- The harbor also supports transitory barge traffic.
- Project depths between 21 feet and 27 feet
- Approximately 5,300 feet of breakwater and pier structures
- Approximately 5,000 feet of maintained channel
- Major stakeholders include the U.S. Coast Guard, the City of Kenosha, and the Wisconsin DNR.

## Project Requirements

- Infrequent maintenance dredging is required at the outer end of the entrance channel; the harbor was last dredged in 1999. The community performed minimal dredging in 2012, but harbor access is still constricted.
- The harbor currently requires maintenance dredging.
- In the past an upland dredged material placement site was required prior to dredging.
- Structural repairs are required for the detached breakwater.

## Consequences of Not Maintaining the Project

- Loss of jobs locally
- Loss of recreational and charter fishing in the area

## Transportation Importance

- This project serves as an important Harbor of Refuge and supports charter fishing and recreational navigation interests.
- The harbor community has established a significant infrastructure around the harbor facilities that generates income from harbor users and visitors to the area.
- U.S. Coast Guard Station Kenosha resides within the harbor.
- The Coast Guard is scheduled to receive a new search and rescue vessel in the spring of 2013, which requires 6 feet of available depth. Current shoaling in the harbor may not provide adequate depth for the vessel.

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Kenosha Harbor, WI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | 48 | | 50 | | 50 | |
| Structural Repairs – by Govt. Floating Plant | 175 | | | | | |
| Maintenance Dredging – Primary Work Package | 550 | | 550 | | 550 | |
| Maintenance Dredging – Backlog at Authorized Dimensions | 1,200 | | 1,200 | | 1,200 | |
| E&D for Detached Breakwater | 200 | | 200 | | 200 | |
| Repairs to Detached Breakwater by Contract | 4,500 | | 4,800 | | 4,800 | |
| | | | | | | |
| **TOTALS** | **6,673** | **0** | **6,800** | **0** | **6,800** | **0** |

## Congressional Interests

- Representative Paul Ryan R-WI-1
- Senator Ron Johnson R-WI
- Senator Tammy Baldwin D-WI

US Army Corps of Engineers

Great Lakes Navigation System

# Kewaunee Harbor, WI

## Harbor Features

- Located on the west shore of Lake Michigan about 105 miles north of Milwaukee, WI and about 78 miles from Green Bay, via the Sturgeon Bay Harbor and the Lake Michigan Canal.
- Authorization: River & Harbor Acts of 3 Mar 1881, 25 Jun 1910, 30 Aug 1935, 14 Jul 1960
- Commercial harbor that currently serves primarily recreational boat traffic.
- The harbor also supports transitory barge traffic.
- Project depth is 20 feet
- Approximately 6,500 feet of breakwater and pier structures
- Approximately 5,500 feet of maintained channel
- Dredged material is placed in the Kewaunee CDF.
- Major stakeholders include the U.S. Coast Guard, City of Kewaunee, and the Wisconsin DNR.

## Project Requirements

- Maintenance dredging of approximately 30,000 cubic yards is required on a three to five year cycle. This harbor was last dredged in 2009 with ARRA funds.
- Dredging is currently required to eliminate a balance of shoaling in the harbor.
- Repair to navigation structures are currently required.

## Consequences of Not Maintaining the Project

- Loss of jobs locally
- Loss of recreational and charter fishing in the area

## Transportation Importance

- This project serves as an important Harbor of Refuge and supports charter fishing and recreational navigation interests.
- The harbor community has established a significant infrastructure around the harbor facilities that generates income from harbor users and visitors to the area.
- This harbor is vital to supporting the Government Floating Plant on Lake Michigan.

April 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Kewaunee Harbor, WI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | | | | | | |
| Structural Repairs – by Govt. Floating Plant | 400 | | | | | |
| Maintenance Dredging – Primary Work Package | | | | | | |
| Maintenance Dredging – Backlog at Authorized Dimensions | 1,200 | | 1,200 | | 1,200 | |
| Structural Repairs by Contract | | | 400 | | 400 | |
| | | | | | | |
| **Other Business Lines:** | | | | | | |
| Environmental Stewardship | 30 | 8 | 19 | 14 | | |
| | | | | | | |
| **TOTALS** | **1,630** | **8** | **1,619** | **14** | **1,600** | **0** |

## Congressional Interests

- Representative Reid Ribble R-WI-8
- Senator Ron Johnson R-WI
- Senator Tammy Baldwin D-WI

US Army Corps of Engineers

Great Lakes Navigation System

# Keweenaw Waterway, MI

## Harbor Features

- Located in the Keweenaw Peninsula of the upper peninsula of Michigan, between Keweenaw Bay and Lake Superior. The west, upper entrance is 169 miles east of Duluth, MN and the east, lower entrance is approximately 60 miles west of Marquette, MI.
- Authorization: River & Harbor Acts of 3 Mar 1865, 3 Jul 1866, 10 Apr 1869, 2 Mar 1871, 27 Mar 1872, 3 Mar 1873, 5 Aug 1886, 19 Sep 1890, 15 Mar 1898, 25 Jun 1910, 2 Mar 1919, 30 Aug 1935
- Deep draft commercial harbor
- Project depth of 32 feet in the upper entrance channel, 28 feet in the lower entrance channel, and 25 feet in the interior channel.
- Over 24,300 feet of structures including breakwaters, piers, and revetments.
- Over 18 miles of maintained channels
- The Keweenaw Waterway Confined Disposal Facility has adequate capacity for at least the next 25 years of dredging.
- Major stakeholders include U.S. Coast Guard, Lake Carriers' Association, UP Power, and Canadian National.

## Project Requirements

- Approximately 10,000 to 30,000 cubic yards of material must be dredged on a 10 to 20 year cycle. The harbor was last dredged in 1994.
- Dredging is currently required to eliminate balance of shoaling in the harbor.
- Lower entry concrete pier and ice plates require repair
- Rubble mound at upper entry requires repair
- Repairs are required for safety ladders and torn steel at the north entry to the lily pond area.

## Consequences of Not Maintaining the Project

- Significant loss of jobs locally
- Light loading associated with inadequate maintenance dredging, increasing vessel transportation costs.

## Transportation Importance

- Critical Harbor of Refuge on Lake Superior
- Commodities shipped or received include gasoline, and various other products.

April 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Keweenaw Waterway, MI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | 56 | | | | | |
| Maintenance Dredging – Primary Work Package | | | | | | |
| Maintenance Dredging – Backlog Work Package | 882 | | 882 | | 882 | |
| Repair Breakwater – by Govt. Floating Plant | 420 | | | | | |
| Engineering & Design – Upper Entry | 150 | | 235 | | 235 | |
| Engineering & Design – Lower Entry | 250 | | 370 | | 370 | |
| Upper entry rubble mound repairs | 2,200 | | 2,420 | | 2,420 | |
| Lower Entry Concrete and Ice Plate Repair – by Contract | 3,000 | | 2,090 | | 2,090 | |
| Lower Entry rubble mound Repair – by Contract | 1,000 | | | | | |
| | | | | | | |
| **Other Business Lines:** | | | | | | |
| Recreation | 12 | 11 | 12 | 12 | 14 | 21 |
| | | | | | | |
| Environmental Stewardship | | | 34 | 25 | 29 | 29 |
| | | | | | | |
| **TOTALS** | **7,970** | **11** | **6,043** | **37** | **6,040** | **50** |

## Congressional Interests

- Representative Dan Benishek R-MI-1
- Senator Carl Levin D-MI
- Senator Debbie Stabenow D-MI

US Army Corps of Engineers

Great Lakes Navigation System

# Knife River Harbor, MN

## Harbor Features

- Located on the north shore of Lake Superior, near the mouth of the Knife River, about 18 miles northeast of Duluth, MN.
- Authorization: River and Harbor Acts of 2 Mar 1945, 3 Sep 1954, and 7 Mar 1974
- Shallow draft recreational harbor
- Project depths range between 8 and 10 feet
- Approximately 1,000 feet of maintained Federal Channel
- Approximately 215 foot rubble breakwater with a 30 foot timber crib on the end
- Major stakeholders include Lake County, Town of Knife River, Knife River Marina, MNDNR and local boating interests.

## Project Requirements

- Requires periodic maintenance dredging on an infrequent basis. The harbor was last dredged in 1976 and currently requires maintenance dredging.
- Local stakeholders and MNDNR have expressed concerns and would like to explore a reconfiguration of the navigation structures to better address wave conditions at the harbor.
- Corrections for design deficiencies which result in unsatisfactory entrance and mooring conditions were authorized in the Water Resources Development Act (WRDA) of 1996 and 2007. With receipt of necessary appropriations, the Corps could complete the Limited Reevaluation Report (LRR) to determine recommended deficiency corrections.

## Consequences of Not Maintaining the Project

- Loss of important Harbor of Refuge
- Loss of jobs locally
- Loss of recreational and charter fishing in the area

## Transportation Importance

- This project serves as an important Harbor of Refuge and supports charter fishing and recreational navigation interests.
- The local community has established a significant infrastructure around the harbor facilities that generates income from harbor users and visitors to the area.
- Harbor contains a mobile boat crane, with a lifting capability of 35 tons.

April 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Knife River Harbor, MN - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | 15 | | 15 | | 15 | |
| Maintenance Dredging – Primary Work Package | 135 | | 135 | | 135 | |
| | | | | | | |
| **TOTALS** | **150** | **0** | **150** | **0** | **150** | **0** |

## Congressional Interests

- Representative Rick Nolan D-MN-8
- Senator Al Franken D-MN
- Senator Amy Klobuchar D-MN

US Army Corps of Engineers

Great Lakes Navigation System

# Lac La Belle, MI

## Harbor Features

- Located in the northeastern tip of the Keweenaw Peninsula off the shore of Lake Superior. The harbor is about 40 miles northeast of Houghton, MI.
- Authorization: River & Harbor Act of 2 Mar 1945
- Shallow draft recreational harbor
- Project depth is 12 feet in the entrance channel and 10 feet in the inner channel
- Approximately 4,500 feet of Federal channel
- 1,000 feet of north and south breakwater
- Major stakeholders include local tourism businesses, marina.

## Project Requirements

- Requires maintenance dredging of approximately 5,000 cubic yards every 5 years; the harbor was last dredged in 1994.
- The harbor currently requires maintenance dredging.
- North pier requires repair

## Consequences of Not Maintaining the Project

- Loss of jobs locally
- Loss of recreational and charter fishing in the area
- Loss of recreational boating access to Lake Superior
- Loss of safe harbor during storm events
- Potential safety issues for recreational boating community

## Transportation Importance

- Serves as an important Harbor of Refuge
- Recreational and charter fishing interests

April 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Lac La Belle, MI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | 20 | | 20 | | 20 | |
| Maintenance Dredging – Primary Work Package | 230 | | 230 | | 230 | |
| North Pier Repair | 235 | | 235 | | 235 | |
| | | | | | | |
| **TOTALS** | **485** | **0** | **485** | **0** | **485** | **0** |

## Congressional Interests

- Representative Dan Benishek R-MI-1
- Senator Carl Levin D-MI
- Senator Debbie Stabenow D-MI

US Army Corps of Engineers

Great Lakes Navigation System

# La Pointe Harbor, WI

## Harbor Features

- Located on Madeline Island across from Bayfield, WI; approximately 85 miles east of Duluth, MN.
- Authorization: 1960 River & Harbor Act
- Shallow draft recreational harbor
- Project depth is 10 feet
- Approximately 200 feet of maintained Federal channel
- 200 feet of breakwater
- Dredged material is placed upland
- Major stakeholders include the Town of La Pointe, Madeline Island Ferry Lines, and Nelson Construction.

## Project Requirements

- Requires maintenance dredging of approximately 1,200 cubic yards every 5 or 6 years. The harbor was last dredged in 2007 by the local community.
- Maintenance dredging is currently required.
- Local interests have requested that project limits be expanded to allow for the larger ferry vessels that need to access this harbor. This would require new authorization.

## Consequences of Not Maintaining the Project

- Loss of jobs locally
- Loss of recreational boating and charter fishing in the area
- Loss of only commercial transportation option to the mainland
- Loss of emergency and all essential services to the local community

## Transportation Importance

- This project serves as an important ferry hub, carrying commuters in the local community daily between Bayfield and La Pointe, WI.
- Subsistence Harbor - This harbor provides all essential services to the town. It is vital to emergency services and schools.
- This project serves as an important Harbor of Refuge and supports charter fishing and recreational boating interests.
- The local community has established a significant infrastructure around the harbor that generates income from harbor users and visitors to the area.
- Serves as a gateway to the Apostle Islands National Lakeshore.

April 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**La Pointe Harbor, WI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | | | 25 | | 25 | |
| Maintenance Dredging – Primary Work Package | | | 165 | | 165 | |
| | | | | | | |
| **TOTALS** | **0** | **0** | **190** | **0** | **190** | **0** |

## Congressional Interests

- Representative Sean Duffy R-WI-7
- Senator Ron Johnson R-WI
- Senator Tammy Baldwin D-WI

US Army Corps of Engineers

Great Lakes Navigation System

# Leland Harbor, MI

## Harbor Features

- Located on the east shore of Lake Michigan at the mouth of the Carp River, about 40 miles north of Frankfort, MI and 40 miles southwest of Charlevoix, MI.
- Authorization: River & Harbor Acts of 30 Aug 1935, 23 Oct 1962
- Shallow draft recreational harbor
- Project depth of 12 feet in the approach channel, 6 feet in the inner channel and 10 feet in the anchorage area
- Over 4 acres of maintained Federal channel
- More than 1,200 feet of breakwaters, and 470 feet of piers.
- Dredged material is placed along the beach as beach nourishment.
- Major stakeholders include the Leland Ferry Service, National Park Service, Leland Township, Michigan DNR and Leelanau County.

## Project Requirements

- Requires annual maintenance dredging of approximately 17,000 cubic yards; the harbor was last dredged in 2010. The community performed minimal dredging in 2012.
- The harbor currently requires maintenance dredging.

## Consequences of Not Maintaining the Project

- Loss of jobs locally
- Loss of recreational and charter fishing in the area

## Transportation Importance

- This project serves as an important Harbor of Refuge and supports charter fishing and recreational navigation interests.
- The local community has established a significant infrastructure around the harbor facilities that generates income from harbor users and visitors to the area.
- Supports local ferry service that transits north to Empire Point twice daily from 1 June through 18 October.

April 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Leland Harbor, MI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | 24 | | 28 | | 28 | |
| Maintenance Dredging – Primary Work Package | 212 | | 232 | | 232 | |
| | | | | | | |
| **TOTALS** | **236** | **0** | **260** | **0** | **260** | **0** |

## Congressional Interests

- Representative Dan Benishek R-MI-1
- Senator Carl Levin D-MI
- Senator Debbie Stabenow D-MI

US Army Corps of Engineers

Great Lakes Navigation System

# Les Cheneaux Islands Channels, MI

## Harbor Features

- Archipelago encompassing 36 islands aligning the northern shore of Lake Huron between Straits of Mackinac, Drummond Island & North Channel areas.
- Authorization: Authorized by the Chief of Engineers 15 March 1967, pursuant to Section 107 of the 1960 River and Harbors Act
- Shallow draft recreational harbor
- Project depth 7 feet
- Over 7.5 miles of maintained Federal channel
- Dredged material placed at an upland site
- Major stakeholders include Michigan Boating Industries Association, U.S. Department of Interior (Government Island), Michigan DNR (State Lands-Island Property), marine historical properties, charter boats, recreational & tribal fisherman, as well as island residential populations.
- Historically provided a protected passage for travelers from Mackinac Island to the St. Marys River and a harbor of refuge for tribal members, voyagers, fishermen, ferries, water liveries and recreational boaters.

## Project Requirements

- Requires infrequent maintenance dredging (every 20-30 years) of approximately 80,000 cubic yards; the harbor was last dredged in 2010.

## Consequences of Not Maintaining the Project

- Loss of recreational and charter fishing in the area
- Loss of only means of access to channel of islands

## Transportation Importance

- Subsistence Harbor - Waterborne transportation is sole linkage as infrastructure between island residential and mainland services community.
- Multiple harbors in this project serve as Harbors of Refuge. The project also supports charter fishing and recreational navigation interests.
- The local regional area has established a significant infrastructure around the channels that generates income from users and area visitors.
- The channels provide subsistence access to approximately 900 island homes for barge/workboat service for the transportation of supplies.
- Supports approximately 2,800 recreational boat slips throughout the 36 Les Cheneaux Islands.

April 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Les Cheneaux Islands Channels, MI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | | | | | | |
| Maintenance Dredging – Primary Work Package | | | | | | |
| | | | | | | |
| **TOTALS** | **0** | **0** | **0** | **0** | **0** | **0** |

## Congressional Interests

- Representative Dan Benishek R-MI-1
- Senator Carl Levin D-MI
- Senator Debbie Stabenow D-MI

US Army Corps of Engineers

Great Lakes Navigation System

# Lexington Harbor, MI

## Harbor Features

- Located on the west shore of Lake Huron about 20 miles north of Port Huron, MI.
- Authorization: River & Harbor Act of 27 October 1965
- Shallow draft recreational harbor
- Project depth is 10 feet in the approach channel and 8 feet in the anchorage area
- Over 217,000 sq. feet of maintained Federal channel
- More than 2,400 feet of breakwaters
- Dredged material is placed along the beach as beach nourishment.
- Major stakeholders include Michigan DNR, Oldford's Marina, and various fishing charters and small boaters.

## Project Requirements

- Approximately 20,000 to 30,000 cubic yards must be dredged on a 3 to 5 year cycle; the harbor was last dredged in 2010. Dredged material is placed on the beach for nourishment purposes.
- Maintenance dredging is currently required; the harbor is experiencing shoaling that is impacting use of the harbor.
- Accretion of material within the harbor adjacent to the north breakwater has heightened local concerns about the condition of the structure. An engineering analysis would be required to fully investigate any deficiencies and potential corrective actions.

## Consequences of Not Maintaining the Project

- Loss of jobs locally
- Loss of recreational and charter fishing in the area
- Loss of recreational boating access to Lake Huron
- Loss of safe harbor during storm events
- Potential safety issues for recreational boating community

## Transportation Importance

- This project serves as an important Harbor of Refuge as well as charter fishing and recreational navigation interests.
- The local community has established a significant infrastructure around the harbor facilities that generates income from harbor users and visitors to the area.
- Supports a public and private marina totaling 190 seasonal and transient slips.

April 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Lexington Harbor, MI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | | | 20 | | 20 | |
| Maintenance Dredging – Primary Work Package | | | 230 | | 230 | |
| Sediment Budget Analysis – Section 111 | 150 | | 150 | | 150 | |
| Engineering Analysis of N. Breakwater Condition | 200 | | 200 | | 200 | |
| | | | | | | |
| **TOTALS** | **350** | **0** | **600** | **0** | **600** | **0** |

## Congressional Interests

- Representative Candice S. Miller R-MI-10
- Senator Carl Levin D-MI
- Senator Debbie Stabenow D-MI

# Little Bay De Noc Harbor, MI

## Harbor Features

- Located in the northwest corner of Lake Michigan at the mouth of the Whitefish River, about 85 miles northeast of Green Bay, WI.
- Authorization: River & Harbor Act of 1962
- Deep draft recreational harbor
- Project depth 24 feet
- Over 2,400 feet of maintained Federal channel
- Major stakeholders include charter fishermen, local recreational boating interests, and various marina owners.

## Project Requirements

- Naturally deep harbor; maintenance dredging is seldom required.

## Consequences of Not Maintaining the Project

- Loss of jobs locally
- Loss of recreational and charter fishing in the area

## Transportation Importance

- This project serves charter fishing and recreational navigation interests.
- The local community has established a significant infrastructure around the harbor facilities that generates income from harbor users and visitors to the area.

April 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Little Bay De Noc Harbor, MI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | | | | | | |
| | | | | | | |
| **TOTALS** | **0** | **0** | **0** | **0** | **0** | **0** |

## Congressional Interests

- Representative Dan Benishek R-MI-1
- Senator Carl Levin D-MI
- Senator Debbie Stabenow D-MI

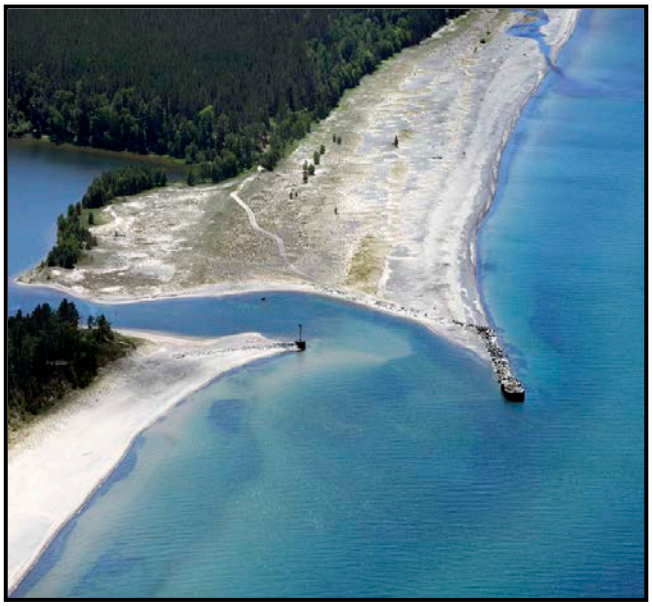
US Army Corps of Engineers

Great Lakes Navigation System

# Little Lake Harbor, MI

## Harbor Features

- Located on the south shore of Lake Superior, about 21 miles west of Whitefish Point and 30 miles east of Grand Marais, MI.
- Authorization: River & Harbor Act of 2 Mar 1945
- Shallow draft recreational harbor
- Project depth is 12 feet
- Approximately 1,600 feet of maintained Federal channel
- More than 1,100 feet of breakwaters
- Dredged material is placed along the beach as beach nourishment.
- Major stakeholders include Michigan DNR, Native American fishermen, and a variety of sport fishing interests.



## Project Requirements

- Requires annual maintenance dredging of approximately 18,000 cubic yards; the harbor was last dredged in 2010 using MI regional dredging provision funding.
- The harbor currently requires maintenance dredging.

## Consequences of Not Maintaining the Project

- Loss of jobs locally
- Loss of recreational and charter fishing in the area
- Loss of recreational boating access to Lake Superior
- Loss of safe harbor during storm events
- Potential safety issues for recreational boating community

## Transportation Importance

- This project serves as an important Harbor of Refuge and supports charter fishing and recreational navigation interests.
- The local community has established a significant infrastructure around the harbor facilities that generates income from harbor users and visitors to the area.

April 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Little Lake Harbor, MI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | 19 | | 21 | | 20 | |
| Maintenance Dredging – Primary Work Package | 430 | | 449 | | 480 | |
| | | | | | | |
| **TOTALS** | **449** | **0** | **470** | **0** | **500** | **0** |

## Congressional Interests

- Representative Dan Benishek R-MI-1
- Senator Carl Levin D-MI
- Senator Debbie Stabenow D-MI

US Army Corps of Engineers
Buffalo District

Great Lakes Navigation System

# Little River Harbor, NY

## Harbor Features

- Located along the Niagara River in the City of Niagara Falls, Niagara County, New York
- Authorization: River & Harbor Act of 1954
- Shallow draft recreational harbor
- Project consists of an entrance channel approximately 1,200 feet long and 50 to 200 feet wide
- Authorized depth is 8 feet in the entrance channel
- Major stakeholders consist mainly of the recreational boating community

## Project Requirements

- The harbor requires dredging on an infrequent basis. On average, approximately 10,000 cubic yards (CY) of sediment is dredged per event. The harbor was last dredged in 1988
- Critical requirements include maintenance dredging

## Consequences of Not Maintaining the Project

- Failure to dredge will result in continued shoaling and reduced channel dimensions; resulting in unsafe navigation conditions
- Potential safety issues for recreational boating community
- Negative economic impacts, locally and regionally

## Transportation Importance

- Provides safe access between Little River and Niagara River

February 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Little River Harbor, New York - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Maintenance Dredging | | | | | 750 | |
| **TOTALS** | **0** | **0** | **0** | **0** | **750** | **0** |

**Congressional Interests**

- Representative Chris Collins D-NY-27
- Senator Kirsten Gillibrand D-NY
- Senator Charles Schumer D-NY

US Army Corps of Engineers
Buffalo District

Great Lakes Navigation System

# Little Sodus Bay Harbor, NY

## Harbor Features

- Located on Lake Ontario, in the Town of Fair Haven, Cayuga County, New York
- Authorization: River & Harbor Acts of 1852, 1866, 1871, 1881 and 1902
- Deep draft recreational harbor
- Authorized depth is 15.5 feet in the entrance channel. The current maintenance depth is 8 feet
- The current maintenance depth is based on recreational needs only
- The harbor is protected by east and west piers and an east breakwater with a total length of 5,237 feet
- Major stakeholders include commercial fishing interests, a private marina and the recreational boating community

## Project Requirements

- The harbor requires dredging on an infrequent basis. It was last dredged in 2005 when 12,000 cubic yards (CY) of material was removed
- Sections of the west pier are in poor condition and in need of repair
- Critical requirements include maintenance dredging and west pier repairs

## Consequences of Not Maintaining the Project

- Failure to dredge will result in continued shoaling and reduced channel dimensions; resulting in unsafe navigation conditions
- Failure to repair deteriorated sections of the west pier, will result in the continued degradation of the structure and increased future maintenance costs
- Potential safety issues for recreational boating community
- Potential functional loss of Harbor of Refuge
- Negative economic impacts, locally and regionally

## Transportation Importance

- Harbor of Refuge
- Provides safe passage between Little Sodus Bay and Lake Ontario

February 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Little Sodus Bay Harbor, New York - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Maintenance Dredging – Primary | 895 | | 1,010 | | 1,010 | |
| West Pier Repair | | | | | 250 | |
| | | | | | | |
| **Other Business Lines:** | | | | | | |
| Recreation | 10 | 4 | 5 | 5 | | |
| **TOTALS** | **905** | **4** | **1,015** | **5** | **1,260** | **0** |

## Congressional Interests

- Representative Daniel Maffei D-NY-24
- Senator Kirsten Gillibrand D-NY
- Senator Charles Schumer D-NY

US Army Corps of Engineers
Buffalo District

Great Lakes Navigation System

# Lorain Harbor, OH

## Harbor Features

- Located on Lake Erie in the city of Lorain, Lorain County, Ohio
- Authorization: River & Harbor Acts of 1899, 1907, 1910, 1917, 1930, 1935, 1945, 1960, 1965 and the Water Resources Development Act of 1986
- Deep draft commercial harbor
- Authorized depths are 16-29 feet in the outer harbor and 17-27 feet in the river
- Five year average (2006-2010) tonnage of 2.05M tons of material shipped and received
- Ranked 28th among the Great Lakes Harbors based on five year average (2006-2010) tonnage
- 145th leading U.S. port in 2010
- Over 2.5 miles of breakwater structures
- 60 acre outer harbor and 2.6 miles of Federal channel on the Black River
- A confined disposal facility (CDF) is located at the eastern end of the harbor
- Major stakeholders include the Lorain Port Authority, private marinas, U.S. Coast Guard, American Metal Chemical Corp., National Gypsum Co., Jonick Dock & Terminal, Lorain Tubular Co., and Terminal Ready Mix, Inc

## Project Requirements

- Approximately 200,000 cubic yards (CY) of material must be dredged every 3 years; 150,000 CY from the lower reach and 50,000 from the upper reach. The harbor was last dredged in 2012 when approximately 126,000 CY of material was removed.
- Maintenance dredging is required in 2014.
- The implementation of a fill management plan has been necessary to extend the useful life of the CDF. The third and final perimeter berm lift was completed in FY12 and will provide sufficient capacity for 2 dredging events requiring CDF placement.

- Material from the upper reaches of the Black River Federal navigation channel requires placement in a CDF; this area is typically dredged once every 3 years.
- Due to lack of commercial activity and limited CDF capacity, the upper reaches of the Black River Federal navigation channel will not be regularly maintained until a need exists.
- Deteriorated sections of the east arrowhead and west shore-arm breakwaters require repairs.

## Consequences of Not Maintaining the Project

- Reduction of bulk commodities that pass through the harbor and generate $84M annually in direct revenue while supporting 1,794 direct, indirect, and induced jobs that produce over $117M per year in personal income.

March 2013

**Consequences of Not Maintaining the Project**

- If the harbor was closed to commercial traffic, commodities would have to be transported by rail and truck. This would increase annual emission rates by over 35,113 tons of harmful particulate matter (PM-10) and increase costs by $20,000 due to increased railroad related accidents, and $2,022,000 due to increased trucking related accidents.
- Light loading; loss of between 3 and 4 feet of channel depth results in increased transportation costs of between $79,000 and $167,000 annually.

**Transportation Importance**

- Major receiving and shipping port on the Great Lakes; and a Harbor of Refuge.
- Commodities shipped or received include aggregates, limestone, chemicals, ores and minerals.

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Lorain Harbor, Ohio - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 President's Budget | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Conditions Survey | 55 | 50 | | | | |
| Sediment Sampling & Analysis | | | | | | |
| Maintenance Dredging – Primary | 1,510 | 910 | | | 1,350 | 1,350 |
| Dredged Material Management Plan (DMMP) | | | 50 | | | |
| E&D, E. Arrowhead Breakwater Repair (2,000 LF) | 300 | | | | 300 | |
| CDF Maintenance | | 65 | | | | |
| Environmental Compliance (CDF Monitoring, Field) | | | | | | |
| Structure Repair – Breakwaters Floating Plant (F/P) | | | 600 | | | |
| Snagging and Clearing F/P | | | 40 | | | |
| CDF ERGO Compliance (O&M Manual) | | | | | | |
| **TOTALS** | **1,865** | **1,025** | **690** | **0** | **1,650** | **1,350** |

**Congressional Interests**

- Representative Marcy Kaptur D-OH-9
- Senator Rob Portman R-OH
- Senator Sherrod Brown D-OH

US Army Corps of Engineers

Great Lakes Navigation System

# Ludington Harbor, MI

## Project Features

- Located on the east shore of Lake Michigan, 156 miles northeast of Chicago, IL and 67 miles north of Grand Haven, MI.
- Authorization: River & Harbor Acts of 2 Mar 1867, 3 Mar 1899, 2 Mar 1907, 31 Dec 1970
- Deep draft commercial harbor
- Project depth of 27 to 30 feet in the entrance channel and 18 feet deep in the basins.
- Five year average (2006-2010) tonnage is 464,000 tons of material shipped and received
- Ranked 46th among the Great Lakes Harbors based on five year average (2006-2010) tonnage
- Over 8,700 feet of structures including breakwaters, piers and revetments.
- Over one mile of navigation channel
- Major stakeholders include U.S. Coast Guard, Lake Carriers' Association, Lake Michigan Car Ferry service (Badger), Reith and Riley Asphalt, Dow Chemical, Pere Marquette Shipping, and multiple charter boat fisherman.

## Project Requirements

- Approximately 56,000 to 75,000 cubic yards of material must be dredged on a 2 to 3 year cycle; the harbor was last dredged in 2011.
- The harbor currently requires maintenance dredging.
- South breakwater nose requires repair. Failure of the nose pier would threaten navigation.

## Consequences of Not Maintaining the Project

- Light loading; loss of between 2 and 3 feet of channel depth results in increased transportation costs of between $445,000 and $793,000 annually.

- Reduction of bulk commodities that pass through the harbor that generate $22M annually in direct revenue while supporting 407 direct, indirect, and induced jobs that produce over $26M per year in personal income
- If the harbor was closed to commercial traffic, commodities would have to be transported by truck. This would increase annual emission rates by over 25M lbs of harmful particulate matter (PM-10) and increase costs by $4.8M due to increased trucking related accidents.

## Transportation Importance

- The U.S Coast Guard Station Ludington resides within the harbor.
- Regionally significant receiving port on the Great Lakes and Harbor of Refuge
- Home port to S.S. Badger ferry that maintains cross-Lake Michigan service. Since 1992 the Badger has carried 120,000 passengers, 30,000 passenger vehicles and 11,000 commercial trucks.
- Commodities received include limestone, sand and gravel, slag, and salts.
- Many recreational users reside within the municipal marina and utilize the boat launch on a daily basis. The municipal marina services approximately 1,100 transient boats per year.

April 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Ludington Harbor, MI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | | | 103 | | 105 | |
| Maintenance Dredging – Primary Work Package | | | 452 | | 485 | |
| South Breakwater Nose Pier Repair by Contract | 1,500 | | 1,625 | | 1,625 | |
| E&D – South Breakwater Nose Repair | 125 | | 125 | | 125 | |
| Sediment Budget Analysis – Section 111 | 150 | | 150 | | 150 | |
| | | | | | | |
| **TOTALS** | **1,775** | **0** | **2,455** | **0** | **2,490** | **0** |

## Congressional Interests

- Representative Bill Huizenga R-MI-2
- Senator Carl Levin D-MI
- Senator Debbie Stabenow D-MI

US Army Corps of Engineers

Great Lakes Navigation System

# Mackinac Island Harbor, MI

## Harbor Features

- Located between Biddle Point and Mission Point on the southeastern shore of Mackinac Island, MI in Lake Huron, along the northern channel limit of the Straights of Mackinac.
- Authorization: River & Harbor Acts of 25 Jun 1910, 17 August 1966
- Shallow draft recreational harbor
- Five year average (2006-2010) tonnage is 18,000 tons of material shipped and received
- Ranked 70th among the Great Lakes Harbors based on five year average (2006-2010) tonnage
- Approximately 1,860 feet of rubble mound breakwaters originally constructed in 1914 and rehabilitated in 1987.
- Major stakeholders include Michigan DNR and Great Lakes Small Harbors Coalition.

## Project Requirements

- Periodic repairs to navigation structures are required.

## Consequences of Not Maintaining the Project

- Loss of jobs locally
- Loss of recreational fishing
- Loss of recreational boating access to Great Lake
- Loss of safe harbor during storm events
- Potential safety issues for recreational boating community

## Transportation Importance

- Maintenance of the federal breakwaters helps protect the Mackinac Island State Harbor from wave action.
- Subsistence Harbor - Waterborne transportation is sole linkage as infrastructure between island residential and mainland services community.
- Receives three ferry lines that service Mackinaw City. Approximately 560,000 passengers use the ferries on an annual basis.
- Supports approximately 76 recreation boat slips

April 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Mackinac Island Harbor, MI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | | | | | | |
| | | | | | | |
| | | | | | | |
| **TOTALS** | **0** | **0** | **0** | **0** | **0** | **0** |

## Congressional Interests

- Representative Dan Benishek R-MI-1
- Senator Carl Levin D-MI
- Senator Debbie Stabenow D-MI

US Army Corps of Engineers

Great Lakes Navigation System

# Mackinaw City Harbor, MI

## Harbor Features

- Located on the western shore of Lake Huron along the southern channel limit of the Straights of Mackinac.
- Authorization: River & Harbor Act of 15 January 1965
- Shallow draft recreational harbor
- Project depth is 10 feet
- Approximately 630 feet of rubble mound breakwaters including 300 feet of wave absorbing slope protection constructed in 1976.
- Major stakeholders include Michigan DNR, City of Mackinaw and Great Lakes Small Harbors Coalition.

## Project Requirements

- Maintenance dredging required on an infrequent basis; the harbor was last dredged in 1968.

## Consequences of Not Maintaining the Project

- Loss of jobs locally
- Loss of recreational fishing
- Loss of safe harbor during storm events
- Potential safety issues for recreational boating community

## Transportation Importance

- Maintenance of the federal navigation channel supports the use of the Mackinaw City Municipal Marina.
- Supports approximately 104 recreation boat slips.
- This project serves as an important Harbor of Refuge as well as recreational navigation interests.
- Home port to three ferry lines that service Mackinac Island. Approximately 560,000 passengers use the ferries on an annual basis.

April 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Mackinaw City Harbor, MI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | | | | | | |
| | | | | | | |
| **TOTALS** | **0** | **0** | **0** | **0** | **0** | **0** |

## Congressional Interests

- Representative Dan Benishek R-MI-1
- Senator Carl Levin D-MI
- Senator Debbie Stabenow D-MI

US Army Corps of Engineers

Great Lakes Navigation System

# Manistee Harbor, MI

## Harbor Features

- Located on the east shore of Lake Michigan, 179 miles northeast of Chicago, IL and 26 miles north of Ludington, MI.
- Authorization: River & Harbor Act of 2 Mar 1867, 19 Sep 1890, 25 Jul 1910, 3 Jul 1930, 2 Mar 1945, 14 Jul 1960
- Deep draft commercial harbor
- Project depths of 25 feet in the entrance, 23 feet in river channel.
- Five year average (2006-2010) tonnage is 502,000 tons of material shipped and received
- Ranked 45th among the Great Lakes Harbors based on five year average (2006-2010) tonnage
- Over 6,000 feet of structures including breakwaters, piers, and revetments.
- About 2 miles of maintained channel
- Major stakeholders include U.S. Coast Guard, Lake Carriers' Association, Seng Dock Co., Martin Marietta Corporation, American Materials, T.E.S. Filer City Generating Station, Morton Salt, Packaging Corporation of America - Filer Mill, North Star Ethanol and many northern Michigan county road commissions.

## Project Requirements

- Approximately 80,000 to 120,000 cubic yards of material must be dredged on a 2 to 3 year cycle.
- The harbor was last dredged in 2012 and there are plans to dredge the harbor in late 2013.

## Consequences of Not Maintaining the Project

- Significant loss of jobs both locally and regionally
- Five major industrial facilities are served by the harbor, including a coal-fired power plant, and receive materials via ship due to the large quantities of commodities they receive. Not all of the facilities have rail lines that are accessible for use.

- Shutdown of the Filer City Generating Station served by this harbor may impact electric grid stability in northern Michigan.
- Reduction of bulk commodities that pass through the harbor and generate $18M annually in direct revenue while supporting 237 direct, indirect, and induced jobs that produce over $15M per year in personal income
- Light loading; loss of between 1 and 2 feet of channel depth results in increased transportation costs of between $286,000 and $563,000 annually.
- Failure to maintain the harbor may impact consideration of this port as a potential site for future industrial facilities.

## Transportation Importance

- Regionally significant receiving port on the Great Lakes
- Commodities received include sand, gravel, limestone, and coal.
- Harbor of Refuge
- The harbor is home to the U.S. Coast Guard Station Manistee.

April 2013

## U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014
## Manistee Harbor, MI - Project Requirements and President's Budget ($1,000)

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | 23 | | 22 | 22 | | |
| Maintenance Dredging – Primary Work Package | 550 | 495* | 519 | 519 | | |
| Structural Repairs – by Govt. Floating Plant | 230 | | | | | |
| Sediment Budget Analysis – Section 111 | 150 | | 150 | | 150 | |
| Structural Repairs by Contract | | | 230 | | 230 | |
| | | | | | | |
| **TOTALS** | **953** | **495** | **921** | **541** | **380** | **0** |

*Provided by National Provision in the FY12 Consolidated Appropriation Bill

## Congressional Interests

- Representative Dan Benishek R-MI-1
- Senator Carl Levin D-MI
- Senator Debbie Stabenow D-MI

US Army Corps of Engineers

Great Lakes Navigation System

# Manistique Harbor, MI

## Harbor Features

- Located on the north shore of Lake Michigan, 135 miles northeast of Green Bay, WI and 220 miles north of Milwaukee, WI.
- Authorization: River & Harbor Acts of 3 Mar 1905, 2 Mar 1907, 17 May 1950
- Authorized as a deep draft commercial harbor; harbor use is mostly recreational.
- Project depth is 19 feet in the entrance channel and 18 feet in the inner channel.
- Maintained depth is authorized at 12 feet
- Nearly 3,000 feet of breakwater and pier structures and approximately 4,000 feet of maintained channel.
- Dredged material is placed in upland placement sites as needed.
- Established commercial operations, which depend on the harbor, include: two (2) commercial fishing operations; tug-barge company providing fuels to Beaver Island; and a private recreational marina. Public recreational marine facilities dependent upon the harbor includes: the Manistique Municipal Marina and the Manistique River Boating Access Site.
- Major stakeholders include Manistique Papers, City of Manistique, Michigan DNR, USEPA, commercial fishing enterprises, commodity barge operations, Beaver Island, Manistique Rentals Inc., charter and sports fishing interests, and recreational boating.

## Project Requirements

- Infrequent maintenance dredging of the harbor is required; the harbor was last dredged in 2010 using Michigan regional dredging provision funding.

## Consequences of Not Maintaining the Project

- Loss of commercial fishing companies and commodity tug-barge service to Beaver Island.
- Loss of recreational boating facilities at the Manistique Marina (public) and the Northern Lights Marina (private).

## Transportation Importance

- The harbor serves as a Harbor of Refuge and supports a variety of sport and charter fishing interests and public/private recreational boating facilities.
- The harbor further supports two commercial fishing companies.
- Subsistence harbor - supports a tug-barge company providing gasoline, diesel and home heating fuels to Beaver Island.
- Harbor generates revenue locally and regionally from both commercial and public marine infrastructure located within the navigational channel.
- The harbor is the only vessel launching facility within an eighty mile radius on the northern Lake Michigan/Upper Peninsula shoreline capable of launching law enforcement and search and rescue vessels.

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Manistique Harbor, MI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | | | | | | |
| Maintenance Dredging – Primary Work Package | | | | | | |
| | | | | | | |
| **TOTALS** | **0** | **0** | **0** | **0** | **0** | **0** |

## Congressional Interests

- Representative Dan Benishek R-MI-1
- Senator Carl Levin D-MI
- Senator Debbie Stabenow D-MI

US Army Corps of Engineers

Great Lakes Navigation System

# Manitowoc Harbor, WI

## Project Features

- Located on the west shore of Lake Michigan about 79 miles north of Milwaukee, WI, and about 106 miles from Sturgeon Bay Harbor and the Lake Michigan Ship Canal.
- Authorization: River & Harbor Acts of 2 Mar 1907, 30 Aug 1935, 26 Aug 1937, 23 Oct 1962, 14 Jul 1960 (Sec 107), 31 Dec 1968
- Deep draft commercial harbor
- Project depths varying from 22 to 25 feet in entrance and inner channels and a 12-foot deep channel at the upper end of the project. A 10-foot deep recreational navigation channel is adjacent to the CDF.
- Five year average (2006-2010) tonnage is 326,000 tons of material shipped and received
- Ranked 52nd among the Great Lakes Harbors based on five year average (2006-2010) tonnage
- Over 4,100 feet of structures including breakwaters and piers
- Over 2.5 miles of maintained channel
- The Manitowoc Harbor Confined Disposal Facility is located in Lake Michigan extending northward from the north breakwater.
- Major stakeholders include U.S. Coast Guard, Lake Carriers' Association, Burger Boat Building, St. Marys Cement, and Lake Michigan Car Ferry.

## Project Requirements

- Approximately 25,000 to 40,000 cubic yards of material must be dredged from the river channel on a 2 to 3 year cycle; the harbor was last dredged in 2009 with FY09 ARRA funding.
- Maintenance dredging is currently required within the harbor.

- Periodic maintenance of the CDF is required; funding is needed to replenish protection stone and to repair existing walkways and handrails. Some of these repairs are within a section of the CDF that is open to public use.
- WRDA 2007 authorized the deepening of this harbor to 18 feet (in previously 12 foot depth area). To date this deepening has not been funded.

## Consequences of Not Maintaining the Project

- Significant loss of jobs both locally and regionally
- Reduction of bulk commodities that pass through the harbor and generate $18M annually in direct revenue while supporting 186 direct, indirect, and induced jobs that produce over $12M per year in personal income.
- If the harbor was closed to commercial traffic, commodities would have to be transported by rail or truck. This would increase annual emission rates by 27 M lbs of harmful particulate matter (PM-10) and increase costs by $6,000 due to increased railroad related accidents, and $3.9M due to increased trucking related accidents.
- Light loading; loss of channel depth results in increased transportation costs.

April 2013

**Transportation Importance**

- Locally significant receiving port on the Great Lakes and Harbor of Refuge
- Commodities received include coal, cement, and bio fuels.
- Boat building is a significant economic catalyst to the local economy.

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Manitowoc Harbor, WI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | 41 | | 41 | | 41 | |
| Maintenance Dredging - Primary Work Package | 549 | | 549 | | 549 | |
| Maintenance Dredging - Backlog at Authorized Dimensions | 850 | | 850 | | 850 | |
| CDF Fill Management | 800 | | 800 | | 800 | |
| Structural Repairs | 240 | | 240 | | 240 | |
| | | | | | | |
| **TOTALS** | **2,480** | **0** | **2,480** | **0** | **2,480** | **0** |

**Congressional Interests**

- Representative Thomas E. Petri R-WI-6
- Senator Ron Johnson R-WI
- Senator Tammy Baldwin D-WI

US Army Corps of Engineers

Great Lakes Navigation System

# Marquette Harbor, MI

## Project Features

- Located in Marquette Bay on the south shore of Lake Superior, 160 miles west of Sault Ste. Marie, MI and 265 miles east of Duluth, MN.
- Authorization: River & Harbor Acts of 2 Mar 1867, 11 Aug 1888, 25 Jun 1910, 30 Aug 1955, 14 Jul 1960
- Deep draft commercial harbor
- Project depth of 27 feet in entrance channel and inner basins
- Five year average (2006-2010) tonnage is 966,000 tons of material shipped and received
- Ranked 39th among the Great Lakes Harbors based on five year average (2006-2010) tonnage
- 136th leading U.S. port in 2010
- Over 4,500 feet of breakwater structure
- Over one-half mile of navigation channel
- Major stakeholders include U.S. Coast Guard, Lake Carriers' Association, Wisconsin Electric, and Cliffs Natural Resources, Inc.

## Project Requirements

- Maintenance dredging is required infrequently; the harbor was last dredged in 1978.
- The harbor currently requires maintenance dredging.
- Navigation structures are primarily maintained by Government floating plant; Latest inspection revealed loss of critical armor stone protection and loss of core stone from timber cribbing.

## Consequences of Not Maintaining the Project

- Reduction of bulk commodities that pass through the harbor that generate $37M annually in direct revenue while supporting 1,000 direct, indirect, and induced jobs that produce over $65M per year in personal income
- If the harbor was closed to commercial traffic, commodities would have to be transported by rail and truck. This would increase annual emission rates by over 113M lbs of harmful particulate matter (PM-10) and increase costs by $112,000 due to increased railroad related accidents, and $4.8M due to increased trucking related accidents
- Light loading; loss of channel depth results in increased transportation costs.

## Transportation Importance

- Major regional receiving port on the Great Lakes
- Harbor of Refuge
- Commodities received include limestone, coal, and iron ore.
- Harbor is home to the U.S. Coast Guard Station Marquette.

April 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Marquette Harbor, MI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | 25 | | 25 | | 25 | |
| Maintenance Dredging – Primary Work Package | 600 | | 600 | | 600 | |
| Repair Outer Breakwater – by Govt. Floating Plant | | 230 | 297 | | 1,200 | |
| | | | | | | |
| **TOTALS** | **625** | **230** | **922** | **0** | **1,825** | **0** |

## Congressional Interests

- Representative Dan Benishek R-MI-1
- Senator Carl Levin D-MI
- Senator Debbie Stabenow D-MI

US Army Corps of Engineers

Great Lakes Navigation System

# Menominee Harbor, MI & WI

## Project Features

- Located on Lake Michigan at the mouth of the Menominee River on the western shore of Green Bay, 16 miles northwest of the mouth of Sturgeon Bay and 49 miles northeast of Green Bay Harbor, about 155 miles from Milwaukee via Sturgeon Bay Harbor and the Lake Michigan Ship Canal.
- Authorization: River & Harbor Act of 3 Mar 1871, with modification in the ensuing years
- Deep draft commercial harbor
- Project depth is 26 feet in the entrance channel, 12 feet to 24 feet in the Menominee River, and the turning basin has a project depth of 21 feet.
- Five year average (2006-2010) tonnage is 325,000 tons of material shipped and received
- Ranked 53rd among the Great Lakes Harbors based on five year average (2006-2010) tonnage
- Over 3,300 feet of pier structures
- Over 2 miles of maintained channel
- Major stakeholders include U.S. Coast Guard, Lake Carriers' Association, K&K Warehousing, Marinette Marine, and Marinette Fuel and Dock Co.

## Project Requirements

- Approximately 25,000 to 50,000 cubic yards of material must be dredged from the channel on a 5 to 10 year cycle. The downstream reach of the harbor was last dredged in 2009.
- Maintenance dredging is currently required.

## Consequences of Not Maintaining the Project

- Significant loss of jobs locally
- Reduction of bulk commodities that pass through the harbor that generate $4M annually in direct revenue while supporting 248 direct, indirect, and induced jobs that produce over $16M per year in personal income
- Light loading; loss of channel depth results in increased transportation costs.

## Transportation Importance

- Locally significant receiving port on the Great Lakes.
- Commodities received include pig iron, pulp and paper and coal.
- Harbor of Refuge

April 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Menominee Harbor, MI & WI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | | | 60 | | 60 | |
| Maintenance Dredging – Primary Work Package | | | 400 | | 400 | |
| Maintenance Dredging – Backlog at Authorized Dimensions | 650 | | 650 | | 650 | |
| Structure Repair – by Gov. Floating Plant | 185 | | | | | |
| Structure Repair by Contract | | | 185 | | 185 | |
| | | | | | | |
| **TOTALS** | **835** | **0** | **1,295** | **0** | **1,295** | **0** |

## Congressional Interests

- Representative Reid Ribble R-WI-8
- Representative Dan Benishek R-MI-1
- Senator Ron Johnson R-WI
- Senator Tammy Baldwin D-WI
- Senator Carl Levin D-MI
- Senator Debbie Stabenow D-MI

US Army Corps of Engineers

Great Lakes Navigation System

# Michigan City Harbor, IN

## Project Features

- The harbor is located in Michigan City, Indiana in LaPorte County, Indiana.
- Authorization: Rivers and Harbors Acts of 1836, 1870, 1899, 1905, 1927 and 1935. Section 107 of the Rivers and Harbors Act of 1960. Section 123 of the Hovers and Harbors Act of 1970, Water Resources Development Act 1986 and 1996.
- Maintained navigation channel depths are 14 ft. in the harbor entrance, 12 ft. in the outer harbor, 10 ft. in Turning Basin No. 1, 10 ft in Trail Creek from Turning Basin No. 1 to Turning Basin No. 2 and 6 ft in Trail Creek from Turning Basin No. 2 to E. Street.
- Harbor structures consist of 2,304 linear feet of timber crib breakwaters, a West Pier 835 ft long and an East Pier 2,276 ft long.
- The Federal navigation channel within the harbor and Trail Creek is 2 miles long.

## Project Requirements

- A Confined Disposal Facility (CDF) is needed for future disposal of the contaminated sediments in the channels. The previous harbor CDF was capped after it reached capacity in 1979.
- The outer harbor and entrance was last dredged of clean sand to 14 feet in June 2012. Due to the severe Hurricane Sandy storm on southern L. Michigan on 31-Oct-2012, the outer harbor received approximately 40,000 CY of new sediment.
- Trail Creek dredging is needed on a 6-8 year cycle, and is currently required as the authorized depth loss due to shoaling ranges between 9’ to 10’; approximately 52,000 CY should be removed. Trail Creek was last dredged in July 2002, with disposal at a landfill that was closing.
- The detached breakwater is the primary shield for safe vessel passage into and out of the harbor. Its condition is poor, and the concrete cap is progressively collapsing due to the timber crib deterioration beneath. Segments of the concrete cap are dislodged periodically.

- A 40’ segment of the East Pier collapsed on 25 Mar 2010. Two other 60' long adjacent segments, one on the landward side of the outer basin gap, and one directly adjacent to the failed segment, are also heavy damaged and have further settled 8" further since the original event. The loss of the East Pier will result in much less protection to the outer basin recreational boat slips.

## Consequences of Not Maintaining the Project

- The harbor is critical to the vitality of Michigan City. The USCG marine safety mission is vital to all vessels in southern Lake Michigan.
- Due to recreational boating, the harbor generates minimally 118 jobs, $3.2 million in labor income and $5.3 million in value added to the local economy.

## Transportation Importance

- The U.S. Coast Guard maintains law enforcement and search & rescue vessels within the port. The Coast Guard needs access to and from the port to conduct its Homeland Security missions on Lake Michigan.
- The harbor is the safe refuge on southern Lake Michigan for recreational boats because its detached breakwater provides protection for vessels entering the harbor. There are transient berths, gasoline, diesel fuel, water, electricity, sewage pump-out and launching.

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Michigan City Harbor, IN**
**Project Requirements and President's Budget**

| Work Package | FY12 Requirement | FY12 Work Plan | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Survey / Caretaker Funding | 50 | | | | 52 | |
| Maintenance Dredging of Harbor Entrance – Primary work package | 630 | | 810 | | 760 | |
| Dredged Material Management Plan | | | | | | |
| Maintenance Dredging of Trail Creek (Turning basin No. 2 to E Street) – Backlog work package | 2,550 | | 2,650 | | 3,050 | |
| Structural Repairs - Detached Breakwater (performed by Gov't. Floating Plant) | 972 | | 1,060 | | 1,092 | |
| Structural Repairs – East Pier reconstruction (performed by Contract) | 2,600 | | 2,700 | | 2,780 | |
| **TOTALS** | **6,802** | **0** | **7,220** | **0** | **7,734** | **0** |

**Congressional Interests**

- Representative Peter J. Visclosky, D-IN-1
- Senator Dan Coats, R-IN
- Senator Joe Donnelly, D-IN

US Army Corps of Engineers

Great Lakes Navigation System

# Milwaukee Harbor, WI

## Harbor Features

- Located on the west shore of Lake Michigan about 85 miles north of Chicago, IL.
- Authorization: River & Harbor Acts of 30 Aug 1935, 2 Mar 1945, 14 Jul 1960, 23 Oct 1962
- Deep draft commercial harbor
- Project depths of 30 feet in the approach channel, 28 feet in the entrance channel, 27 feet in a major portion of the south basin, 21 feet in the north basin.
- The project also provides for river channels with a depth of 27 feet in the Kinnickinnic and Milwaukee Rivers, lakeward of the first railway bridges on each river, a depth of 21 feet on the Menomonee River to 25th Street, the South Menomonee Canal to 13th Street, and Burnham Canal to 11th Street.
- Five year average (2006-2010) tonnage is 3.4M tons of material shipped and received
- Ranked 22th among the Great Lakes Harbors based on five year average (2006-2010) tonnage
- 96th leading U.S. port in 2010
- Over 21,000 feet of structures including breakwaters, piers and revetments.
- The Milwaukee Confined Disposal Facility is located within the harbor; in the southwest corner. A new Dredged Material Disposal facility was completed in 2012 on top of the old CDF. It has 20 years capacity.
- Major stakeholders include U.S. Coast Guard, Lake Carriers' Association, Ace World Wide, Canadian Pacific Railway, Cargill Salt, Charter Wire, CP Railway, Edward E. Gillen Co., Federal Marine Terminals, Inc., International Longshoremen's Assoc., Jacobus Co., Lafarge Corporation, Milwaukee Bulk Terminals, Lake Express Ferry Service, Milwaukee Intermodal Terminal, Milwaukee World Festivals, North American Salt Co., RSI Logistics, St. Mary's Cement, Support Terminal Services, U.S. Navy, FEDNAV, Union Pacific Railroad Company, Valero Inc., We Energies, and Wisconsin Lake Schooner.

## Project Requirements

- Dredging is completed on a 3 to 4 year cycle. The harbor was last dredged in 2011.
- There currently is a backlog of material that needs to be dredged from the harbor.
- Navigation structures are primarily maintained by Government floating plant; Steel sheet pile substructure already exposed and showing signs of excessive deterioration; Concrete cap section already out of alignment and beginning to fail. Structure repairs were funded by an allocation from the National Provision in the FY12 Consolidated Appropriation Bill.
- It is anticipated that the detached section of the breakwater will require major reconstruction.
- The Milwaukee CDF reached capacity in 2011. A new Dredged Material Disposal Facility was constructed on top of the old CDF by raising the elevation of the containment berms. Work on the facility was completed in 2012.

## Consequences of Not Maintaining the Project

- Light loading; loss of between 1 and 2 feet of channel depth results in increased transportation costs of between $335,000 and $761,000 annually.
- Reduction of bulk commodities that pass through the harbor that generate $146M annually in direct revenue while supporting 1,416 direct, indirect, and induced jobs that produce over $103M per year in personal income
- If the harbor was closed to commercial traffic, commodities would have to be transported by rail and truck. This would increase annual emission rates by over 127M lbs of harmful particulate matter (PM-10) and increase costs by $833,000 due to increased railroad related accidents, and $8.5M due to increased trucking related accidents.

## Transportation Importance

- Major receiving and shipping port on the Great Lakes and serves as a Harbor of Refuge.
- Commodities include non-metal minerals, coal, corn, soybeans, peas, cement and concrete, sand and gravel, and manufactured goods.
- Transportation hub for car ferry service crossing Lake Michigan and a new terminal for cruise ships.
- The Port of Milwaukee is the inland waterway system's most northern connection to the Great Lakes system. Due to its strategic location, accessibility to deep-draft vessels, river barges, and Class I railways, and its heavy lift cranes and large amounts of lay down space, the Port of Milwaukee is well-positioned to continue to play a key role in the growth of Midwest wind farms by handling wind energy equipment.
- The U.S. Coast Guard's Sector Lake Michigan is located in Milwaukee, WI and is responsible for all Coast Guard missions on Lake Michigan and surrounding navigable waterways, including: Search and Rescue, Law Enforcement, Aids to Navigation, Marine Safety, and Homeland Security.

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Milwaukee Harbor, WI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | | | | | | |
| Maintenance Dredging – Primary Work Package | | | | | | |
| Maintenance Dredging – Backlog Work Package | 1,968 | | 2,225 | | 2,225 | |
| Repair North Detached Breakwater Section D – by Contract | 7,000 | | 7,000 | | 7,000 | |
| Design of North Breakwater Repairs – Sec. D | 350 | | 350 | | 350 | |
| E&D-Repairs to North Detached Breakwater – Section B & C | 200 | | 200 | | 200 | |
| Repair Breakwaters with Govt. Floating Plant | 2,000 | 1,485* | 1,782 | | 700 | **700** |
| | | | | | | |
| **TOTALS** | **11,518** | **1,485** | **11,557** | **0** | **10,475** | **700** |

*Provided by National Provision in the FY12 Consolidated Appropriation Bill

## Congressional Interests

- Representative Gwen S. Moore D-WI-4
- Senator Ron Johnson R-WI
- Senator Tammy Baldwin D-WI

US Army Corps of Engineers

Great Lakes Navigation System

# Monroe Harbor, MI

## Harbor Features

- Located on the lower reach of the Raisin River, which empties into Lake Erie, 36 miles south of Detroit, MI
- Authorization: River & Harbor Acts of 24 Feb 1835, 3 Jul 1930
- Deep draft commercial harbor
- Authorized depths of 21 feet in Lake Erie to the turning basin, which has an 18 foot depth. Project depth of 9 feet upstream from the turning basin.
- Five year average (2006-2010) tonnage is 1.5M tons of material shipped and received
- Ranked 32nd among the Great Lakes Harbors based on five year average (2006-2010) tonnage
- 97th leading U.S. port in 2010
- Approximately 28,000 feet of maintained Federal channel
- 328 acres available -- zoned for heavy industrial
- 1,500 feet of private dock on the turning basin
- 2,200 feet of public dock on the River
- 1,600 feet of private dock on the River (Detroit Edison)
- Sterling State Park Confined Disposal Facility is located just north of the harbor; it has approximately 20 years of capacity.
- Property served by Canadian National and Norfolk Southern railroads
- Major stakeholders include The Detroit Edison Company (DTE); Gerdau MacSteel Inc., Michigan Paving and Materials Co. (MPMC); Barnhart Crane & Rigging, Ventower Industries, OmniSource Corp., U.S. Coast Guard and Lake Carriers' Association.
- MPMC -- The complex has the ability to store 56 million gallons of asphalt products in eight, seven-million gallon tanks, and is the largest asphalt blending facility in the country.

- DTE -- The Monroe Plant is a clean coal-fired electrical generating station, which utilizes stack emission scrubbers and has a capacity of 3,000MW. In 2012 the facility received over 2 million tons of coal and over 100,000 tons of limestone. This is the largest coal blending facility in the world.
- Barnhart Crane & Rigging specializes in the transport of project cargo and operates 1,500 feet of dock on the turning basin. Barnhart began shipping wind tower sections for Ventower Industries in 2012.

## Project Requirements

- Dredging of approximately 90,000 to 135,000 cubic yards is completed on a 2 to 3 year cycle. The harbor's main channel was last dredged in 2011. The Corps partnered with the EPA in 2011 to conduct additional dredging within the navigation channel. The EPA conducted additional dredging in River Raisin in 2012 with placement at Sterling State Park CDF and will continue dredging operations in 2013. The harbors turning basin will receive maintenance dredging in 2014.

April 2013

**Consequences of Not Maintaining the Project**

- Reduction of bulk commodities that pass through the harbor that generate $38M annually in direct revenue while supporting 577 direct, indirect, and induced jobs that produce over $44M per year in personal income
- Channel maintenance less than the authorized depth poses navigational safety issues for all harbor users.
- Light loading; loss of between 2 and 3 feet of channel depth results in increased transportation costs of between $1.6M and $2.6M annually.
- Restriction of normal vessel delivery to DTE has indirect impacts including higher risk to operational reliability due to uncertain coal and limestone inventory, and increased reliance on rail delivery.
- MPMC is the largest asphalt paving company in Michigan; their Monroe facility serves one of the largest asphalt pavers in Ohio. Increasing water borne shipment costs will increase the cost of road construction and paving throughout the Midwest.

**Transportation Importance**

- Major receiving port on the Great Lakes
- Commodities include petroleum products, coal, and stone and aggregates.
- A mix of coal was received at the DTE plant from three other Great Lakes ports: Superior, Sandusky, and Toledo. Limestone delivery from a northern Michigan quarry began in 2009.

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Monroe Harbor, MI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | | | 100 | | 100 | 100 |
| Maintenance Dredging Main Channel – Primary Work Package | | | | | | |
| Maintenance Dredging Turning Basin – Primary Work Package | 1,000 | | 900 | | 900 | 900 |
| Maintenance Dredging – Backlog Work Package | 509 | | 510 | | 510 | |
| CDF Fill Management | 418 | | 420 | | 420 | |
| **TOTALS** | **1,927** | **0** | **1,930** | **0** | **1,930** | **1,000** |

**Congressional Interests**

- Representative Tim Walberg R-MI-7
- Senator Carl Levin D-MI
- Senator Debbie Stabenow D-MI

US Army Corps of Engineers
Buffalo District

Great Lakes Navigation System

# Morristown Harbor, NY

## Harbor Features

- Located on the St. Lawrence River, in the Town of Morristown, St. Lawrence County, New York
- Authorization: River & Harbor Act of 1927
- Shallow draft recreational harbor
- Authorized depth is 9 feet in the entrance channel
- The harbor consists of an entrance channel 150 wide and approximately 800 feet long
- Major stakeholders include fishing interests, private marinas and the recreational boating community

## Project Requirements

- Currently, there are no critical maintenance requirements

## Consequences of Not Maintaining the Project

- Potential safety issues for recreational boating community
- Potential functional loss of Harbor of Refuge
- Negative economic impacts, locally and regionally

## Transportation Importance

- Provides safe access between Morristown Bay and the St. Lawrence River

February 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Morristown, New York - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| TOTALS | 0 | 0 | 0 | 0 | 0 | 0 |

**Congressional Interests**

- Representative Bill Owens D-NY-21
- Senator Kirsten Gillibrand D-NY
- Senator Charles Schumer D-NY

US Army Corps of Engineers

Great Lakes Navigation System

# Muskegon Harbor, MI

## Harbor Features

- Located on the east shore of Lake Michigan, 114 miles northeast of Chicago, IL.
- Authorization: River & Harbor Acts of 13 Jun 1902, 3 Mar 1935, 30 Aug 1935, 23 Oct 1962
- Deep draft commercial harbor
- Project depths are 29 feet at the outer harbor entrance and 28 feet in the inner entrance channel. The project depth is 27 feet at the upstream limit of the federal project.
- Five year average (2006-2010) tonnage is 1.9M tons of material shipped and received
- Ranked 30th among the Great Lakes Harbors based on five year average (2006-2010) tonnage
- 118st leading U.S. port in 2010
- Approximately 6,500 feet of maintained Federal channel
- Dredged material from this harbor is used for beach nourishment.
- Over 6,200 feet of structures maintained, including breakwaters, piers, and revetments.
- Major stakeholders include U.S. Coast Guard, Lake Carriers' Association, Verplank, West Michigan Dock and Market, Lafarge Corporation, Lake Express Ferry Service, Grand Valley State University, NOAA, City of Muskegon, MDNR, Consumers Energy, St. Marys Cement, as well as multiple private marinas and charter fishing vessels.

## Project Requirements

- Maintenance dredging of approximately 60,000 to 90,000 cubic yards is required on a 2 to 3 year cycle; the harbor was last dredged in 2011. The harbor will be dredged in 2013.

- Navigation structures are primarily maintained by Government floating plant; Latest inspection revealed loss of critical armor stone protection; Wood cribbing is now exposed and shows signs of deterioration and resultant loss of core stone from the structure.

## Consequences of Not Maintaining the Project

- Reduction of bulk commodities that pass through the harbor that generate $571M annually in direct revenue while supporting 2,065 direct, indirect, and induced jobs that produce over $134M per year in personal income
- If the harbor was closed to commercial traffic, commodities would have to be transported by rail and truck. This would increase annual emission rates by over 98M lbs of harmful particulate matter (PM-10) and increase costs by $264,000 due to increased railroad related accidents, and $8M due to increased trucking related accidents.
- Light loading; loss of between 2 and 3 feet of channel depth results in increased transportation costs of between $134,000 and $302,000 annually.

## Transportation Importance

April 2013

- Harbor of Refuge
- Home to the U.S. Coast Guard Station Muskegon
- Major receiving port on the Great Lakes
- Commodities include primarily sand, gravel, limestone, cement, concrete, and coal.
- Harbor serves as the port for Grand Rapids and the greater West Michigan Region for commercial and recreational traffic, education and environmental research.
- Harbor is home to the NOAA Great Lakes Environmental Research Laboratory Lake Michigan Field Station, Grand Valley State University Annis Water Resources Institute and the Michigan Alternative and Renewable Energy Center.
- Ten private marinas on Muskegon Lake, with more than 1,000 boat slips.
- The City of Muskegon maintains one public marina and five public launches, including: Hartshorn Marina with 143 major boat slips, 30 small slips and 102 moorings.
- Muskegon State Park, Laketon Township and the City of North Muskegon each maintain public boat launch facilities.
- Harbor is home to Fisherman's Landing, which is an 18.6-acre sport-fishing and recreational bass tournament camping facility.
- Home port to the Lake Express, a commercial terminal providing high speed cross lake ferry service to and from Milwaukee, WI.

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Muskegon Harbor, MI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | | | 80 | 80 | | |
| Maintenance Dredging – Primary Work Package | | | 531 | 531 | | |
| Breakwater Repairs – by Gov. Floating Plant | 700 | 686 | 297 | | | |
| E&D for Repairs to N. Breakwater | 175 | | 175 | | 175 | |
| Sediment Budget Analysis – Section 111 | 150 | | 150 | | 150 | |
| | | | | | | |
| **TOTALS** | **1,025** | **686** | **1,233** | **611** | **325** | **0** |

**Congressional Interests**

- Representative Bill Huizenga-MI-2
- Senator Carl Levin D-MI
- Senator Debbie Stabenow D-MI

US Army Corps of Engineers

Great Lakes Navigation System

# New Buffalo Harbor, MI

## Harbor Features

- Located at the mouth of the Galien River on the southeast shore of Lake Michigan in Berrien County, about 45 miles east of Chicago, IL.
- Authorization: River & Harbor Act of 1962
- Shallow draft recreational harbor
- Project depths are 10 feet in the entrance channel and 8 feet in the inner channel
- Approximately 2,100 feet of maintained Federal channel
- More than 2,000 feet of breakwaters
- Dredged material is placed along the beach as beach nourishment
- Major stakeholders include the Michigan DNR, Galien Marina, the Michigan Boating Industries Association, Dunewood Condo Association, South Cove, Harbor Landings Condo Association, Harbor Pointe Shores Association, Lake Michigan Yacht Club, Light House Landings, The Moorings Condo Association, New Buffalo Yacht Club, Oselka's Snug Harbor, and Pleasure Island Marina.

## Project Requirements

- Approximately 10,000 cubic yards of material must be dredged on a 1 to 2 year cycle; the harbor was last dredged in 2012 by the City of New Buffalo.
- Maintenance dredging is currently required within the harbor.

## Consequences of Not Maintaining the Project

- Loss of recreational and charter fishing in the area

## Transportation Importance

- This project serves as an important Harbor of Refuge and supports charter fishing and recreational navigation interests.
- The local community has established a significant infrastructure around the harbor facilities that generates income from harbor users and visitors to the area.
- Supports 1,058 recreational boat slips

April 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**New Buffalo Harbor, MI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | 19 | | 20 | | 20 | |
| Maintenance Dredging – Primary Work Package | 200 | | 250 | | 250 | |
| | | | | | | |
| **TOTALS** | **219** | **0** | **270** | **0** | **270** | **0** |

## Congressional Interests

- Representative Fred Upton R-MI-6
- Senator Carl Levin D-MI
- Senator Debbie Stabenow D-MI

US Army Corps of Engineers
Buffalo District

Great Lakes Navigation System

# Oak Orchard Harbor, NY

## Harbor Features

- Located on Lake Ontario at the mouth of Oak Orchard Creek, in the Hamlet of Point Breeze, Town of Carlton, Orleans County, New York
- Authorization: River & Harbor Act of 1945
- Shallow draft recreational harbor
- Authorized depths are 10 feet in the entrance channel and 8 feet in the harbor basin
- The harbor is formed by the east and west jetties and a detached breakwater with a total length of 2,120 feet
- Non-Federal facilities includes 2 state and county marine parks offering seasonal and transient docking, launching and fish cleaning, 6 private marinas, 2 with fish cleaning stations, 2 restaurants, 3 rental cottage facilities, 1 motel, pump out facilities, fuel and travel-lifts
- Major stakeholders include Orleans County, U.S. Coast Guard, private marinas, charter fishing interests and the recreational boating community

## Project Requirements

- Maintenance dredging is required every 3-5 years. The project was last dredged in 2004 when 10,700 cubic yards (CY) of sediment was removed
- In order to maintain adequate channel depth for vessels, an estimated 18,000 CY of dredging will be required
- The current sediment backlog within the functional harbor areas is estimated at approximately 35,000 CY
- Maintenance dredging is the primary critical requirement

## Consequences of Not Maintaining the Project

- Failure to dredge will result in continued shoaling and reduced channel dimensions; resulting in unsafe navigation conditions
- Potential safety issues for recreational boating community
- Potential functional loss of Harbor of Refuge
- Negative economic impacts, locally and regionally

## Transportation Importance

- Provides safe recreational access between Lake Ontario and Oak Orchard Creek
- Orleans County Sheriff Marine Patrol and Coast Guard Auxiliary unit located at Orleans County Marine Park
- Hosts annual harbor festivals and fishing derbies
- Supports 33 charter fishing boats generating approximately $269,000 in Net Income annually

February 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Oak Orchard Harbor, New York - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Sediment Sampling and Analysis | | | 50 | | | |
| Maintenance Dredging | 860 | | 810 | | 810 | **0** |
| **TOTALS** | **860** | **0** | **860** | **0** | **810** | **0** |

## Congressional Interests

- Representative Chris Collins R-NY-27
- Senator Kirsten Gillibrand D-NY
- Senator Charles Schumer D-NY

US Army Corps of Engineers

Great Lakes Navigation System

# Oconto Harbor, WI

## Harbor Features

- Located on the west shore of Lake Michigan in Green Bay about 40 miles north of the City of Green Bay, WI and about 20 miles south of Marinette, WI.
- Authorization: River & Harbor Act of 2 Aug 1882, 25 Jun 1910
- Primary use is as a recreational harbor
- Project depth is 15 feet
- Over 3,900 feet of authorized navigation channels
- Over 2,100 feet of federal navigation structures
- Major stakeholders include several marinas and yacht clubs, and various businesses.

## Project Requirements

- Maintenance dredging is required infrequently.
- The harbor was last dredged in 1992; maintenance dredging is currently required.

## Consequences of Not Maintaining the Project

- Loss of jobs locally
- Loss of recreational and charter fishing in the area

## Transportation Importance

- This project serves charter fishing and recreational navigation interests.
- The harbor community has established a significant infrastructure around the harbor facilities that generates income from harbor users and visitors to the area.
- Harbor of Refuge

April 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Oconto Harbor, WI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | 30 | | 30 | | 30 | |
| Maintenance Dredging – Primary Work Package | 1,320 | | 1,320 | | 1,320 | |
| | | | | | | |
| **TOTALS** | **1,350** | **0** | **1,350** | **0** | **1,350** | **0** |

## Congressional Interests

- Representative Reid Ribble R-WI-8
- Senator Ron Johnson R-WI
- Senator Tammy Baldwin D-WI

US Army Corps of Engineers
Buffalo District

Great Lakes Navigation System

# Ogdensburg Harbor, NY

## Harbor Features

- Located on the St. Lawrence River, at the mouth of the Oswegatchie River, in the City of Ogdensburg, St. Lawrence County, New York
- Authorization: River & Harbor Acts of 1910, 1919 and 1935
- Deep draft commercial harbor
- Authorized depths are 19 feet in the upper entrance channel and city front channel, 21 feet in the lower basin and 27 feet in the lower entrance channel
- Five year average (2006-2010) tonnage of 112k tons of material shipped and received
- Ranked 61st among the Great Lakes Harbors based on five year average (2006-2010) tonnage
- Major stakeholders include U.S Coast Guard, Ogdensburg Bridge and Port Authority, commercial shipping interests and the recreational boating community

## Project Requirements

- The harbor requires dredging on an infrequent basis, and was last dredged in 1984.
- USACE has initiated a study under Section 107, Small Navigation Projects program. The Ogdensburg Bridge and Port Authority is the non-Federal sponsor. A determination of Federal interest was completed by the USACE, Buffalo District on August 31, 2011 and found a positive interest in moving forward to the cost-shared Feasibility study phase. Feasibility will commence once a Feasibility Cost-Sharing Agreement is signed.

## Consequences of Not Maintaining the Project

- Reduction of bulk commodities that pass through the harbor and generate $4M annually in direct revenue while supporting 31 direct, indirect, and induced jobs that produce over $2M per year in personal income.
- If the harbor was closed to commercial traffic, commodities would have to be transported by rail. This would increase annual emission rates by over 40 tons of harmful particulate matter (PM-10) and increase costs by $70,000 due to increased railroad related accidents.
- Light loading; losses of between 3 and 4 feet of channel depth would result in increased transportation costs of between $79,000 and $167,000 annually.

## Transportation Importance

- Ogdensburg is the only U.S port on the St. Lawrence River and is the northernmost port in New York.
- Commodities shipped or received include road salt and corn gluten.
- Harbor of Refuge.
- Home to Auxiliary U.S. Coast Guard station.

March 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Ogdensburg Harbor, New York - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| TOTALS | 0 | 0 | 0 | 0 | 0 | 0 |

**Congressional Interests**

- Representative Bill Owens D-NY-21
- Senator Kirsten Gillibrand D-NY
- Senator Charles Schumer D-NY

US Army Corps of Engineers
Buffalo District

Great Lakes Navigation System

# Olcott Harbor, NY

## Harbor Features

- Located on Lake Ontario at the mouth of Eighteen Mile Creek in the Village of Olcott, Niagara County, New York
- Authorization: River & Harbor Acts of 1867 and 1913 and Water Resources Development Act of 1986
- Shallow draft recreational harbor
- Authorized depth is 12 feet in the Federal navigation channel
- The channel is 140 feet wide and approximately 1,400 feet long
- The harbor entrance is protected by the east and west piers with a total length of 1,723 feet
- Major stakeholders include Town of Newfane, private marinas, charter boats, charter fishing interests and the recreational boating community

## Project Requirements

- The harbor typically requires dredging every five to ten years. It was last dredged in 1997 when 9,900 cubic yards (CY) of material was removed
- The current sediment backlog within the functional harbor areas is estimated at approximately 10,000 CY
- Maintenance dredging is the primary critical need

## Consequences of Not Maintaining the Project

- Failure to dredge will result in continued shoaling and reduced channel dimensions; resulting in unsafe navigation conditions
- Potential safety issues for recreational boating community
- Potential functional loss of Critical Harbor of Refuge
- Negative economic impacts, locally and regionally

## Transportation Importance

- Critical Harbor of Refuge
- Supports 14 charter fishing boats generating approximately $114,000 in net income annually

February 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2011, 2012 and 2013**
**Olcott Harbor, New York - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Maintenance Dredging – Primary | 760 | | 760 | | 790 | |
| **TOTALS** | **760** | **0** | **760** | **0** | **790** | **0** |

## Congressional Interests

- Representative Chris Collins R-NY-27
- Senator Kirsten Gillibrand D-NY
- Senator Charles Schumer D-NY

US Army Corps of Engineers

Great Lakes Navigation System

# Ontonagon Harbor, MI

## Project Features

- Located about 140 miles east of Duluth, MN, on the south shore of Lake Superior, at the mouth of the Ontonagon River, MI.
- Authorization: River & Harbor Acts of 2 Mar 1867, 23 Jun 1874, 13 Jun 1902, 2 Mar 1907, 3 Mar 1909, 26 Aug 1937, Act of 1962
- Deep draft commercial harbor
- Project depth is 23 feet in the entrance channel in Lake Superior, 22 feet in the inner harbor channel, 30 feet in the sedimentation basin, and 21 feet at western upstream portion of the channel
- Five year average (2006-2010) tonnage is 150,000 tons of material shipped and received
- Ranked 55th among the Great Lakes Harbors based on five year average (2006-2010) tonnage
- Over 4,800 feet of structures including piers and revetments
- About 3/4 mile of maintained channel
- Major stakeholders include U.S. Coast Guard, Lake Carriers' Association, Smurfit-Stone Container, and White Pine Power.

## Project Requirements

- Approximately 40,000 cubic yards of material must be dredged each year; the harbor was last dredged in 2011.
- Maintenance dredging is currently required within the harbor.
- The West Pier is currently in need of minor repairs.

NOTE: The harbor's primary user, Smurfit-Stone Container has ceased operations. At this time, it is unclear if the plant will re-open under new ownership. Consequently, future maintenance dredging will be dependent upon harbor conditions and confirmation of continuing commercial navigation requirement.

## Consequences of Not Maintaining the Project

- Significant loss of jobs both locally and regionally in an already economically depressed area.
- Failure to dredge will result in continued shoaling and reduced channel dimensions.

## Transportation Importance

- Locally significant receiving port on the Great Lakes. Harbor provides main economic catalyst for the area.
- Harbor of Refuge
- Commodities include coal and lignite

April 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Ontonagon Harbor, MI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | 48 | | 50 | | 50 | |
| Maintenance Dredging – Primary Work Package | 660 | | 690 | | 700 | |
| | | | | | | |
| **TOTALS** | **708** | **0** | **740** | **0** | **750** | **0** |

## Congressional Interests

- Representative Dan Benishek R-MI-1
- Senator Carl Levin D-MI
- Senator Debbie Stabenow D-MI

US Army Corps of Engineers
Buffalo District

Great Lakes Navigation System

# Oswego Harbor, NY

## Harbor Features

- Located on Lake Ontario in the city of Oswego, Oswego County, New York
- Authorization: River & Harbor Acts of 1870, 1907, 1930, 1935, 1940, 1948, 1954 and 1962
- Deep draft commercial harbor
- Authorized depths are 21-25 feet in the outer harbor, 27 feet in the lake approach channel and 21-24 feet in the Oswego River channel
- Five year average (2006-2010) tonnage of 459k tons of material shipped and received
- Ranked 47th among the Great Lakes Harbors based on five year average (2006-2010) tonnage
- Over 2.5 miles of Over 1.94 miles of breakwater structures
- 280 acre outer harbor and 3000 feet of Federal Channel in the Oswego River
- Major stakeholders include Port of Oswego, U.S. Coast Guard, NRG Energy, Sprague Energy Corporation, Lafarge Cement, Essroc Cement and private marinas

## Project Requirements

- Approximately 72,000 cubic yards (CY) of material must be dredged every 3-4 years. The harbor was last dredged in 2008 when 71,000 CY of material was removed.
- Maintenance dredging is required in 2014.
- The east and west arrowhead breakwaters are severely deteriorated and require significant repairs.
- Emergency repairs to the detached Breakwater are required to stabilize the light foundations located on either end of the structure. Significant loss material around and under the foundations has led the Coast Guard to declare an inability to change/repair the lights due to safety concerns.

## Consequences of Not Maintaining the Project

- Reduction of bulk commodities that pass through the harbor and generate $38M annually in direct revenue while supporting 517 direct, indirect, and induced jobs that produce over $42M per year in personal income
- If the harbor was closed to commercial traffic, commodities would have to be transported by truck. This would increase annual emission rates by over 37,202 tons of harmful particulate matter (PM-10) and increase costs by $3,499,000 due to increased trucking related accidents
- Light loading; losses of between 3 and 4 feet of channel depth would result in increased transportation costs of between $52,000 and $132,000 annually

## Transportation Importance

- Major receiving and shipping port on the Great Lakes; and a Harbor of Refuge
- Commodities shipped or received include petroleum, cement, chemicals, ores and minerals

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Oswego Harbor, New York - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Maintenance Dredging – Primary | 1,085 | | 1,579 | | 1,455 | |
| Construction, West Breakwater | 4,600 | | 4,600 | | 4,900 | |
| Emergency Repairs to Stabilize Detached Breakwater Light Foundations | | | | | 250 | |
| E&D Detached Breakwater Light Foundation Repair | | | | | 250 | |
| Project Conditions Survey | 39 | | 40 | | | |
| Maintenance Dredging – Backlog | 320 | | 320 | | | |
| **TOTALS** | **6,044** | **0** | **6,539** | **0** | **6,855** | **0** |

## Congressional Interests

- Representative Daniel Maffei D-NY-24
- Senator Kirsten Gillibrand D-NY
- Senator Charles Schumer D-NY

US Army Corps of Engineers

Great Lakes Navigation System

# Pensaukee Harbor, WI

## Harbor Features

- Located on the western shore of Green Bay, WI about 20 miles north of the Port of Green Bay.
- Authorization: River & Harbor Act of 26 Aug 1937
- Shallow draft recreational harbor
- Project depth is 8 feet
- Nearly one mile of federal navigation channel stretching from the mouth of the Pensaukee River into Lake Michigan.
- Major stakeholders include commercial and recreational fishermen

## Project Requirements

- This project requires infrequent maintenance dredging; the harbor was last dredged in 1993.
- Maintenance dredging is currently required in this harbor.

## Consequences of Not Maintaining the Project

- Loss of jobs locally
- Loss of recreational and charter fishing in the area

## Transportation Importance

- This project serves primarily charter fishing and recreational navigation interests.
- The local community has established a significant infrastructure around the harbor facilities that generates income from harbor users and visitors to the area.

April 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Pensaukee Harbor, WI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | 17 | | 17 | | 17 | |
| Maintenance Dredging – Primary Work Package | 650 | | 650 | | 650 | |
| | | | | | | |
| **TOTALS** | **667** | **0** | **667** | **0** | **667** | **0** |

## Congressional Interests

- Representative Reid Ribble R-WI-8
- Senator Ron Johnson R-WI
- Senator Tammy Baldwin D-WI

US Army Corps of Engineers

Great Lakes Navigation System

# Pentwater Harbor, MI

## Harbor Features

- Located on the east shore of Lake Michigan, 146 miles northeast of Chicago, IL and 14 miles south of Ludington, MI.
- Authorization: River & Harbor Acts of 2 Mar 1867, 3 Mar 1873, 5 Jul 1884, 13 Jul 1982, 2 Mar 1907
- Primary use is recreational
- Project depth is 16 feet
- Approximately 2,500 feet of maintained Federal channel, between Lake Michigan and Pentwater Lake.
- More than 4,000 feet of maintained piers and revetments
- The North and South Harbor piers and revetments were reconstructed in 1999 and 1996, respectively. Wave attenuators were also added during reconstruction.
- Dredged material is placed along the beach as beach nourishment.
- Major stakeholders include Snug Harbor Marina, Charlie's Marina, the Village of Pentwater, Michigan DNR, Pentwater Yacht Club and local businesses and charter boats.

## Project Requirements

- Historically, has required maintenance dredging of approximately 12,500 cubic yards on a near annual basis; the harbor was last dredged in 2010 using Michigan regional dredging provision funding. The community performed minimal dredging in 2012.
- Maintenance dredging is currently required.

## Consequences of Not Maintaining the Project

- Loss of jobs locally
- Loss of recreational and charter fishing in the area
- Decline of recreational boating
- Significant loss of seasonal retail, marina, and village revenues and jobs.
- Decline in local real estate values from reduced boating access

## Transportation Importance

- This project serves as an important Harbor of Refuge and supports Lake Michigan recreational boating interests. Revenues from these activities flow into the local community, retailers and to the marine industry.
- The local community has established a significant infrastructure around the harbor facilities that generates income from harbor users and visitors to the area.

April 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Pentwater Harbor, MI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | 24 | | 26 | | 26 | |
| Maintenance Dredging – Primary Work Package | 180 | | 204 | | 204 | |
| | | | | | | |
| **TOTALS** | **204** | **0** | **230** | **0** | **230** | **0** |

## Congressional Interests

- Representative Bill Huizenga R-MI-2
- Senator Carl Levin D-MI
- Senator Debbie Stabenow D-MI

US Army Corps of Engineers

Great Lakes Navigation System

# Petoskey Harbor, MI

## Harbor Features

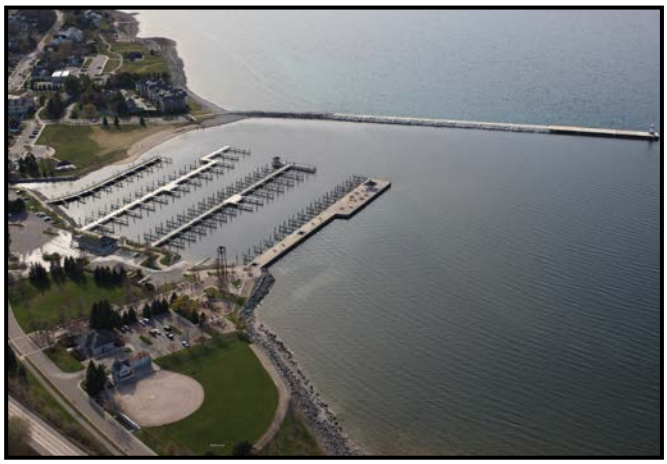
- Located on the east shore of Lake Michigan about 50 miles south of the Straits of Mackinac.
- Authorization: River & Harbor Acts of 18 Aug 1894, 13 Jun 1902
- Shallow draft recreational harbor
- Approximately 1,345 feet of breakwater
- Major stakeholders include the City of Petoskey, Emmet County, Michigan DNR, and Michigan Boating Association.

## Project Requirements

- A full reconstruction of the breakwater was completed in 2010 after a 2006 storm caused a partial failure of the old breakwater. Breakwater reconstruction was partially funded by the American Recovery and Reinvestment Act of 2009.

## Consequences of Not Maintaining the Project

- Loss of jobs locally
- Loss of recreational and charter fishing in the area



## Transportation Importance

- This project serves as an important Harbor of Refuge and supports charter fishing and recreational navigation interests.
- The local community has established a significant infrastructure around the harbor facilities that generates income from harbor users and visitors to the area.

April 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Petoskey Harbor, MI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | | | | | | |
| | | | | | | |
| **TOTALS** | **0** | **0** | **0** | **0** | **0** | **0** |

## Congressional Interests

- Representative Dan Benishek R-MI-1
- Senator Carl Levin D-MI
- Senator Debbie Stabenow D-MI

US Army Corps of Engineers

Great Lakes Navigation System

# Point Lookout Harbor, MI

## Harbor Features

- Located on the Au Gres River on the west shore of Lake Huron at the entrance to Saginaw Bay, about 17 miles northeast of the mouth of the Saginaw River.
- Authorization: River & Harbor Act of 2 Mar 1945
- Shallow draft recreational harbor
- Project depth is 12 feet in the entrance channel in Lake Huron, 10 feet in the inner harbor channel, and 6 feet at the upstream end of the project
- Approximately 3 miles of maintained Federal channel
- More than 7,800 feet of breakwaters
- Dredged material is placed in an upland placement site, which is provided by the State of Michigan as needed.
- Major stakeholders include Michigan DNR, various sport fishing interests and Au Gres Dock.

## Project Requirements

- Requires periodic maintenance dredging of approximately 20,000 cubic yards on a 5 to 6 year cycle; the harbor was last dredged in 2010 with 2009 funds.

## Consequences of Not Maintaining the Project

- Loss of jobs locally
- Loss of recreational and charter fishing in the area

## Transportation Importance

- This project serves as an important Harbor of Refuge and supports charter fishing and recreational navigation interests.
- The local community has established a significant infrastructure around the harbor facilities that generates income from harbor users and visitors to the area.

April 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Point Lookout Harbor, MI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | | | | | | |
| Maintenance Dredging – Primary Work Package | | | | | | |
| | | | | | | |
| **TOTALS** | **0** | **0** | **0** | **0** | **0** | **0** |

## Congressional Interests

- Representative Dan Kildee D-MI-5
- Senator Carl Levin D-MI
- Senator Debbie Stabenow D-MI

US Army Corps of Engineers

Great Lakes Navigation System

# Port Austin Harbor, MI

## Harbor Features

- Located on Lake Huron at the tip of the thumb of Michigan, about 80 miles northeast of Saginaw, MI
- Authorization: River & Harbor Act of 2 Mar 1945
- Shallow draft recreational harbor
- Project depth for the entrance channel is 12 feet and the harbor basin is 10 feet deep. Federal channel does not go further than mouth of Bird Creek.
- More than 2,300 feet of breakwaters
- Dredged material is placed in an upland placement site.
- Major stakeholders include Michigan DNR Marina, 6 private marinas, Village of Port Austin Marina, Port Austin Township Marina, Huron County Park & Beach, and various sport fishing interests.

## Project Requirements

- Requires infrequent maintenance dredging of approximately 15,000 cubic yards on a 10 to 15 year cycle; the harbor was last dredged in 2010.

## Consequences of Not Maintaining the Project

- Loss of jobs locally
- Loss of recreational and charter fishing in the area; harbor supports 12 charter fishing boats.
- Federal breakwaters protect the Michigan DNR Marina, and Huron County's Bird Creek Park and public beach.

- Reduction or loss of handicap access
- Potential safety issues for recreational boating community
- Loss of safe harbor during storm events
- Loss of recreational boating access to Lake Huron

## Transportation Importance

- This project serves as an important Harbor of Refuge as well as charter fishing and recreational navigation interests.
- The local community has established a significant infrastructure around the harbor facilities that generates income from harbor users and visitors to the area.
- Supports 100 recreational boat slips; the State of Michigan installed new dock facilities in 2010.

April 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Port Austin Harbor, MI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | | | | | | |
| Maintenance Dredging – Primary Work Package | | | | | | |
| | | | | | | |
| **TOTALS** | **0** | **0** | **0** | **0** | **0** | **0** |

## Congressional Interests

- Representative Candice S. Miller R-MI-10
- Senator Carl Levin D-MI
- Senator Debbie Stabenow D-MI

US Army Corps of Engineers

Great Lakes Navigation System

# Port Sanilac Harbor, MI

## Harbor Features

- Located on the west shore of Lake Huron, about 30 miles north of Port Huron, MI.
- Authorization: River & Harbor Act of 2 Mar 1945
- Shallow draft recreational harbor
- Project depths are12 feet in the entrance channel and 6 feet in the harbor basin
- More than 2,500 feet of breakwaters
- Dredged material is placed on the beach as beach nourishment.
- Major stakeholders include Michigan DNR, Port Sanilac Marina, Bark Shanty Marina and Boat Club, and various charter fishermen.

## Project Requirements

- Requires maintenance dredging on a three to five year cycle of approximately 10,000 cubic yards; the harbor was last dredged in 2010 with Michigan Regional dredging allocation funding.
- Maintenance dredging is currently required

## Consequences of Not Maintaining the Project

- Loss of jobs locally
- Loss of recreational and charter fishing in the area

## Transportation Importance

- This project serves as an important Harbor of Refuge and supports charter fishing and recreational navigation interests.
- The local community has established a significant infrastructure around the harbor facilities that generates income from harbor users and visitors to the area.
- Supports one Michigan DNR and two private marinas totaling 214 seasonal and transient slips.

April 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Port Sanilac Harbor, MI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | | | 20 | | 20 | |
| Maintenance Dredging – Primary Work Package | | | 230 | | 230 | |
| Sediment Budget Analysis – Section 111 | 150 | | 150 | | 150 | |
| | | | | | | |
| **TOTALS** | **150** | **0** | **400** | **0** | **400** | **0** |

## Congressional Interests

- Representative Candice S. Miller R-MI-10
- Senator Carl Levin D-MI
- Senator Debbie Stabenow D-MI

US Army Corps of Engineers

Great Lakes Navigation System

# Port Washington Harbor, WI

## Project Features

- Located on the west shore of Lake Michigan, about 53 miles south of Manitowoc and about 29 miles north of Milwaukee, WI.
- Authorization: River & Harbor Acts of 11 Jul 1870, 14 Aug 1876
- Deep draft commercial harbor
- Project depth of 21 feet in entrance and inner channels and 18 foot depths in inner basins. Project depths providing access to the marina and launch ramp vary between 8 and 10 feet.
- Five year average (2006-2010) tonnage is 447 tons of material shipped and received
- About 3,000 feet of structures including breakwaters and piers
- Over one-half mile of maintained channel
- Major stakeholders include U.S. Coast Guard and Lake Carriers' Association.

## Project Requirements

- Approximately 11,000 to 16,000 cubic yards of material must be dredged from the inner basins on a 10 to 15 year cycle; the harbor was last dredged in 2003.
- The harbor currently requires maintenance dredging.
- Local interests have expressed concerns regarding the structural stability of the north breakwater. An operational condition assessment was completed for the structure in 2009, which identified areas of deterioration. Funding to initiate more detailed engineering and design efforts is required.

## Consequences of Not Maintaining the Project

- Significant loss of jobs both locally and regionally
- Light loading associated with inadequate maintenance dredging, increasing vessel transportation costs.

## Transportation Importance

- Locally significant receiving port on the Great Lakes
- Harbor of Refuge

April 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Port Washington Harbor, WI - Project Requirements and President's Budget**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | 21 | | 25 | | 25 | |
| Maintenance Dredging – Primary Work Package | | | 170 | | 170 | |
| Maintenance Dredging – Backlog Work Package | | | 417 | | 417 | |
| Breakwater Repair | 225 | | | | | |
| Design Repairs to N. Breakwater | 200 | | 200 | | 200 | |
| | | | | | | |
| **TOTALS** | **446** | **0** | **812** | **0** | **812** | **0** |

## Congressional Interests

- Representative Thomas E. Petri R-WI-6
- Senator Ron Johnson R-WI
- Senator Tammy Baldwin D-WI

US Army Corps of Engineers

Great Lakes Navigation System

# Port Wing Harbor, WI

## Harbor Features

- Located on the south shore of Lake Superior, about 34 miles east of Duluth, MN.
- Authorization: River & Harbor Acts of 12 Jun 1902, 30 Jun 1948
- Shallow draft recreational harbor
- Project depth of 15 feet in the entrance channel and 8 feet in the upstream portion of the federal project (South and East ends)
- About 2,500 feet of maintained Federal channel
- About 2,000 feet of piers
- Dredged material is placed on the beach as beach nourishment
- Major stakeholders include Port Wing Marina, Everett Fisheries, and various charter fishermen.

## Project Requirements

- Requires maintenance dredging on a three to five year cycle of approximately 15,000 to 25,000 cubic yards; the harbor was last dredged in 2008.
- The harbor currently requires maintenance dredging.

## Consequences of Not Maintaining the Project

- Loss of jobs locally
- Loss of recreational and charter fishing in the area

## Transportation Importance

- This project serves as an important Harbor of Refuge and supports charter fishing and recreational navigation interests.
- The local community has established a significant infrastructure around the harbor facilities that generates income from harbor users and visitors to the area.

April 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Port Wing Harbor, WI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | 16 | | 20 | | 20 | |
| Maintenance Dredging – Primary Work Package | 165 | | 170 | | 170 | |
| | | | | | | |
| **TOTALS** | **181** | **0** | **190** | **0** | **190** | **0** |

## Congressional Interests

- Representative Sean Duffy R-WI-7
- Senator Ron Johnson R-WI
- Senator Tammy Baldwin D-WI

US Army Corps of Engineers
Buffalo District

Great Lakes Navigation System

# Port Clinton Harbor, OH

## Harbor Features

- Located on Lake Erie at the mouth of the Portage River in the city of Port Clinton, Ottawa County, Ohio
- Authorization: River & Harbor Act of 1872
- Shallow draft recreational harbor
- Authorized depth is 10 feet in the Federal navigation channel
- The channel is 5,000 feet long; it is 100 feet wide for the outer 4,200 feet and 200 feet wide for the inner 800 feet
- The harbor is protected by parallel east and west jetties with a total length of 4,180 feet
- Major stakeholders include City of Port Clinton, Jet Express Ferry, private marinas, charter fishing interests and the recreational boating community

## Project Requirements

- The current sediment backlog within the functional harbor areas is estimated at approximately 10,000 cubic yards
- Critical requirements consist of repairs to the east and west jetties

## Consequences of Not Maintaining the Project

- Failure to repair the east and west jetties will result in the continued degradation and eventual failure of the structures; increased future maintenance costs and unsafe navigation conditions within the harbor
- Potential safety issues for recreational boating community
- Potential functional loss of Critical Harbor of Refuge
- Negative economic impacts, locally and regionally

## Transportation Importance

- Critical Harbor of Refuge
- Supports commercial ferry service to Put-in-Bay and Middle Bass Islands
- Supports 78 seasonal charter fishing boats generating approximately $1.2M in annual revenue.

February 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Port Clinton Harbor, Ohio - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Sediment Sampling & Analysis | | | | | | |
| E&D, Inside East Jetty Repair | 150 | | 150 | | 200 | |
| Structure Repair Outer E. Jetty | | | 400 | | 400 | |
| **TOTALS** | **150** | **0** | **550** | **0** | **600** | **0** |

## Congressional Interests

- Representative Marcy Kaptur D-OH-9
- Senator Rob Portman R-OH
- Senator Sherrod Brown D-OH

US Army Corps of Engineers
Buffalo District

Great Lakes Navigation System

# Port Ontario Harbor, NY

## Harbor Features

- Located on Lake Ontario, Port Ontario, Oswego County, New York
- Authorization: River & Harbor Act of 1945
- Shallow draft recreational harbor
- Authorized depths are 8 feet in the entrance channel and 6 feet in the harbor basin
- The harbor is protected by the north and south breakwaters with a total length of 1,690 feet
- In accordance with project documentation, all operation and maintenance, including sand bypassing, is to be undertaken by the U.S. Army Corps of Engineers (USACE) on an as-needed basis. The cost of operation and maintenance is to be cost shared between the local sponsor, New York State Office of Parks, Recreation, and Historic Preservation (65%), and USACE (35%)
- Major stakeholders include private marina, charter fishing interests and the recreational boating community

## Project Requirements

- Maintenance requirements include periodic project conditions surveys, sediment sampling and analysis, dredging, and sand bypassing
- Since construction in 1987, approximately 300,000 cubic yards (CY) of sand has accumulated on the south side of the south breakwater. Sand bypassing is required to move this material to reduce shoreline erosion north of the harbor
- Critical requirements include sand bypassing

## Consequences of Not Maintaining the Project

- Failure to complete sand bypassing could potentially result in additional erosion of the shoreline north of breakwater system
- Potential safety issues for recreational boating community
- Potential functional loss of Harbor of Refuge
- Negative economic impacts, locally and regionally

## Transportation Importance

- Harbor of Refuge
- Supports 3 charter fishing boats generating approximately $24,000 in net income annually

February 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Port Ontario Harbor, New York - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| E&D, Construction Sand Bypass | 800 | | 800 | | 1,300 | |
| **TOTALS** | **800** | **0** | **800** | **0** | **1,300** | **0** |

**Congressional Interests**

- Representative Richard Hanna R-NY-22
- Senator Kirsten Gillibrand D-NY
- Senator Charles Schumer D-NY

US Army Corps of Engineers

Great Lakes Navigation System

# Portage Lake Harbor, MI

## Harbor Features

- Located on the east shore of Lake Michigan, 146 miles northeast of Chicago, IL and 14 miles south of Ludington, MI.
- Authorization: River & Harbor Act of 3 Mar 1879
- Recreational harbor
- Project depth is 18 feet
- Over 2,000 feet of maintained Federal channel, between Lake Michigan and Portage Lake
- More than 4,400 feet of maintained piers and revetments
- Dredged material is placed along the beach as beach nourishment
- Major stakeholders include the City (Village) of Onekama, U.S. Coast Guard, Michigan DNR, Michigan Boating Association, Portage Lake Harbor Commission and a variety of charter and sport fishing interests.

## Project Requirements

- Approximately 22,000 cubic yards of material must be dredged on a 3 to 5 year cycle; the harbor was last dredged in 2010 using Michigan Regional dredging provision funding.
- Maintenance dredging is currently required.
- The north and south revetment rehabilitation is not yet complete. Due to cost considerations, the structures may have to be repaired in phases over several years.

## Consequences of Not Maintaining the Project

- Loss of jobs locally; the harbor supports approximately 200 jobs.
- Loss of tourism, recreational & charter fishing in the area; the harbor supports 11 charter fishing boats.
- Potential safety issues for recreational boating community

## Transportation Importance

- This project serves as an important Harbor of Refuge and supports charter fishing and recreational navigation interests.
- The local community has established a significant infrastructure around the harbor facilities that generates income from harbor users and visitors to the area.
- Supports approximately 230 recreational boat slips

April 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Portage Lake Harbor, MI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | | | 15 | | 15 | |
| Maintenance Dredging – Primary Work Package | | | 200 | | 200 | |
| Structural Repair – by Contract | 6,000 | | 6,000 | | 6,000 | |
| Design for Revetment repairs | 250 | | 250 | | 250 | |
| | | | | | | |
| **TOTALS** | **6,250** | **0** | **6,465** | **0** | **6,465** | **0** |

## Congressional Interests

- Representative Dan Benishek R-MI-1
- Senator Carl Levin D-MI
- Senator Debbie Stabenow D-MI

US Army Corps of Engineers

Great Lakes Navigation System

# Presque Isle Harbor, MI

## Harbor Features

- Located on the south shore of Lake Superior near Marquette, MI
- Authorization: River & Harbor Acts of 3 Jun 1896, 13 Jun 1902, 30 Aug 1935, 14 Jul 1960
- Deep draft commercial harbor
- Project depths of 30 feet in the approach, 28 feet in the inner basin
- Five year average (2006-2010) tonnage is 8.5M tons of material shipped and received
- Ranked 8th among the Great Lakes Harbors based on five year average (2006-2010) tonnage
- 55th leading U.S. port in 2010
- Over 2,800 feet of breakwater
- Major stakeholders include U.S. Coast Guard, Lake Carriers' Association, Lake Superior & Ishpeming Railroad, Cleveland Cliffs Tilden, and Empire Mines.

## Project Requirements

- Requirement for maintenance dredging limited to a 10 to 15 year cycle. The harbor was last dredged in 1984.
- The harbor currently requires maintenance dredging.
- Navigation structures are primarily maintained by Government Floating Plant; Close proximity of the structure to Federal navigation channel exacerbates the consequences of any structural failure.

## Consequences of Not Maintaining the Project

- Reduction of bulk commodities that pass through the harbor that generate $204M annually in direct revenue while supporting 3,394 direct, indirect, and induced jobs that produce over $220M per year in personal income

- If the harbor was closed to commercial traffic, commodities would have to be transported by rail. This would increase annual emission rates by over 97M lbs of harmful particulate matter (PM-10) and increase costs by $3.2M due to increased railroad related accidents.
- Light loading; loss of between 1 and 2 feet of channel depth results in increased transportation costs of between $330,000 and $1.1M annually.
- Deterioration of breakwater would cause hazards to vessel navigation and mooring and endanger harbor infrastructure.

## Transportation Importance

- Major receiving port on the Great Lakes
- Commodities include iron ore, coal, and limestone.

April 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Presque Isle Harbor, MI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | 21 | | 21 | | 21 | |
| Maintenance Dredging - Primary | 575 | | 575 | | 575 | |
| Maintenance Dredging – Backlog Work Package | 720 | | 720 | | 500 | |
| Structural Repairs - by Gov. Floating Plant | 315 | | 297 | | | |
| | | | | | | |
| **TOTALS** | **1,631** | **0** | **1,613** | **0** | **1,096** | **0** |

## Congressional Interests

- Representative Dan Benishek R-MI-1
- Senator Carl Levin D-MI
- Senator Debbie Stabenow D-MI

US Army Corps of Engineers
Buffalo District

Great Lakes Navigation System

# Put-In-Bay Harbor, OH

## Harbor Features

- Located on Lake Erie on the north side of South Bass Island, Ottawa County, Ohio
- Authorization: River & Harbor Act of 1937
- Shallow draft commercial harbor
- Authorized depths are 14 feet in the entrance channel and 8 feet in the harbor basin
- Five year average (2006-2010) tonnage of 14k tons of material shipped and received
- Ranked 73rd among the Great Lakes Harbors based on five year average (2006-2010) tonnage
- Major stakeholders include Put-In Bay Township Port Authority, Jet Express Ferry, commercial shipping interests, charter fishing interests and the recreational boating community

## Project Requirements

- Maintenance dredging is required very infrequently. The project was last dredged in 2000 when 5,000 cubic yards of sediment was removed.

## Consequences of Not Maintaining the Project

- Potential safety issues for commercial and recreational boating community.
- Potential functional loss of Harbor of Refuge.
- Negative economic impacts, locally and regionally.

## Transportation Importance

- Provide safe access point to South Bass Island and town of Put-In Bay for residents, tourists, commercial ferries and commercial shippers.
- Destination for commercial ferry service departing from Port Clinton Harbor, OH.
- Commodities shipped or received in gasoline, distillate fuel oil, limestone and manufactured products.
- Harbor of Refuge.
- Supports 4 seasonal and 50 transient charter fishing boats generating approximately $62,000 in annual revenue.

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Put-In-Bay Harbor, Ohio - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Sediment Sampling and Analysis | | | 60 | | | |
| **TOTALS** | **0** | **0** | **60** | **0** | **0** | **0** |

**Congressional Interests**

- Representative Marcy Kaptur D-OH-9
- Senator Rob Portman R-OH
- Senator Sherrod Brown D-OH

US Army Corps of Engineers
Buffalo District

Great Lakes Navigation System

# Rochester Harbor, NY

## Harbor Features

- Located on Lake Ontario in the city of Rochester, Monroe County, New York
- Authorization: River & Harbor Acts of 1829, 1882, 1910, 1935, 1945 and 1960
- Deep draft commercial harbor
- Authorized depths are 24 feet in the approach channel, 23 feet in the entrance channel and 21 feet in the Genesee River
- Five year average (2006-2010) tonnage of 115k tons of material shipped and received
- Ranked 60th among the Great Lakes Harbors based on five year average (2006-2010) tonnage
- Protective structures include the east and west piers that total approximately 1.1 miles in length
- The west pier is adjacent to the Ontario Beach Park and is used as a recreational walkway and fishing pier
- Lake Approach, Entrance, and Genesee River Federal channels total approximately 2.7 miles in length
- Major stakeholders include the Rochester-Monroe County Port Authority, Port of Rochester, U.S. Coast Guard, Essroc Cement Corporation and Shellet-Genesee Shipping Group

## Project Requirements

- Approximately 220,000 cubic yards (CY) of material must be dredged every 2 years. The harbor was last dredged in 2009 when approximately 160,000 CY of material was removed. Maintenance dredging is required in 2014.
- Sections of the Federal channel are being dredged by a non-Federal entity; work was initiated in 2012 and will be completed in 2013. USACE provided assistance under the Low-Use Navigation Pilot Program.
- Approximately 1000 ft of the east pier is severely deteriorated and in need of repair.

## Consequences of Not Maintaining the Project

- Reduction of bulk commodities that pass through the harbor and generate $1.2M annually in direct revenue while supporting 95 direct, indirect, and induced jobs that produce over $6.2M per year in personal income.
- If the harbor was closed to commercial traffic, commodities would have to be transported by truck. This would increase annual emission rates by over 11,880 tons of harmful particulate matter (PM-10) and increase costs by $1,579,000 due to increased trucking related accidents.
- Light loading; losses of between 2 and 3 feet of channel depth would result in increased transportation costs of between $222,000 and $456,000 annually.

## Transportation Importance

- Receiving and shipping port on the Great Lakes; and a Critical Harbor of Refuge.
- Location of U.S. Coast Guard station.
- Cement is the major commodity shipped and received.

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Rochester Harbor, New York - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Conditions Survey | 55 | | 55 | | | |
| Maintenance Dredging – Primary | 1,920 | | 4,000 | | 2,205 | |
| Constr., East Pier Repair | | | | | 4,750 | |
| Maintenance Dredging-Backlog | | | | | 500 | |
| | | | | | | |
| **Other Business Lines:** | | | | | | |
| Recreation | 10 | 4 | 5 | 5 | | |
| **TOTALS** | **1,985** | **4** | **4,060** | **5** | **7,455** | **0** |

## Congressional Interests

- Representative Louise Slaughter D-NY-25
- Senator Kirsten Gillibrand D-NY
- Senator Charles Schumer D-NY

US Army Corps of Engineers
Buffalo District

Great Lakes Navigation System

# Rocky River Harbor, OH

## Harbor Features

- Located on Lake Erie at the mouth of the Rocky River, in the City of Rocky River, Cuyahoga County, Ohio
- Authorization: River & Harbor Acts of 1872, 1937 and 1965
- Shallow draft recreational harbor
- Authorized depths are 10 feet in the entrance channel and anchorage basin and 6-8 feet in the river channel
- The project consists of a 5,000 foot long navigation channel and an anchorage basin
- The harbor is protected by the east pier with a total length of 900 feet
- Major stakeholders include private marinas, fishing interests and the recreational boating community

## Project Requirements

- Maintenance dredging is required every 3-4 years. The project was last dredged in 2004 when 18,400 cubic yards (CY) of material was removed
- The current sediment backlog within the functional harbor areas is estimated at approximately 22,000 CY
- Maintenance dredging is the primary critical requirement

## Consequences of Not Maintaining the Project

- Failure to dredge will result in continued shoaling and reduced channel dimensions; resulting in unsafe navigation conditions
- Potential safety issues for recreational boating community
- Potential functional loss of Harbor of Refuge
- Negative economic impacts, locally and regionally

## Transportation Importance

- Provides safe access between Rocky River and Lake Erie
- The harbor is used by thousands of boaters annually and includes: public launch facility with 190 trailer capacity and 6 launch ramps
- Other features include 640 seasonal and 20 transient recreational boat slips
- Supports 2 seasonal charter fishing boats generating approximately $31,000 in annual revenue

February 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Rocky River Harbor, Ohio - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Maintenance Dredging – Primary | 925 | | 1,267 | | 1,267 | |
| **TOTALS** | **925** | **0** | **1,267** | **0** | **1,267** | **0** |

## Congressional Interests

- Representative Marcy Kaptur D-OH-9
- Senator Rob Portman R-OH
- Senator Sherrod Brown D-OH

US Army Corps of Engineers

Great Lakes Navigation System

# Rouge River, MI

## River Features

- Rouge River originates in Oakland and Washtenaw Counties, MI. The river is 30 miles long, flows southeast through Wayne County, and joins the Detroit River at the westerly limit of the City of Detroit. The navigation channel is located on the lower 2 ½ miles of the river.
- Authorization: River & Harbor Acts of 8 Aug 1917, 30 Aug 1935, 3 Jul 1958, 23 Oct 1962
- Deep draft commercial harbor
- Project depths varying from 21 to 25 feet in the Cut-off and Main Rouge channel to 17 to 25 feet in the Old Rouge channel.
- Five year average (2006-2010) tonnage is 7.8M tons of material shipped and received
- Ranked 10th among the Great Lakes Harbors based on five year average (2006-2010) tonnage, if considered separately from Port of Detroit.
- Total of 4.5 miles of Federal channels and one turning basin
- Pointe Mouille confined disposal facility is located in Lake Erie and has sufficient capacity to accommodate Rouge River dredged material for the next 25 years.
- Major stakeholders include U.S. Coast Guard, Lake Carriers' Association, Harridon Terminal, Inc., Michigan Marine Terminal, Nicholson Terminal & Dock Co., Motor City Materials, Severstal North America, Marathon Oil, and U.S. Gypsum.

## Project Requirements

- Rouge River historically requires maintenance dredging of 50,000 to 60,000 cubic yards on a 2 to 5 year cycle; the river was last dredged in 2012 to address portions of the channel that were experiencing up to 3 feet of shoaling.
- There is currently no dredging need within the federal navigation channel.

## Consequences of Not Maintaining the Project

- Reduction of bulk commodities that pass through the harbor that generate $226M annually in direct revenue while supporting 4,110 direct, indirect, and induced jobs that produce over $267M per year in personal income.
- If the channel was closed to commercial traffic, commodities would have to be transported by rail and truck. This would increase annual emission rates by 548M lbs of harmful particulate matter (PM-10) and increase costs by $3.8M due to increased railroad related accidents, and $14.5M due to increased trucking related accidents.
- Light loading; loss of between 1 and 2 feet of channel depth results in increased transportation costs of $2M to $4.5M annually.

## Transportation Importance

- Major receiving port on the Great Lakes.
- Commodities include iron ore, petroleum products, coal, slag, cement, limestone, lignite, fuel oil, coke, salt, sand and gravel.

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Rouge River, MI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | 60 | 59 | | | | |
| Maintenance Dredging – Primary Work Package | 900 | 882 | | | | |
| Maintenance Dredging – Backlog Work Package | | | | | | |
| | | | | | | |
| **TOTALS** | **960** | **941** | **0** | **0** | **0** | **0** |

## Congressional Interests

- Representative John Conyers Jr. D-MI-13
- Senator Carl Levin D-MI
- Senator Debbie Stabenow D-MI

US Army Corps of Engineers

Great Lakes Navigation System

# Saginaw River, MI

## River Features

- Saginaw River is formed by the union of the Tittabawassee and Shiawassee Rivers, is 22 miles long, and flows northerly into the south end of Saginaw Bay in Lake Huron. The cities of Saginaw and Bay City are on the river.
- Authorization: River & Harbor Acts of 25 Jun 1910, 3 Jul 1930, 26 Aug 1937, 20 Jun 1938, 3 Sep 1954, 23 Oct 1962, 27 Oct 1965
- Deep draft commercial harbor
- Project depths varying from 27 feet in the Saginaw Bay entrance channel to 22 to 26 feet in the Saginaw River channel, and 20 feet in two of the turning basins.
- Five year average (2006-2010) tonnage is 3.5M tons of material shipped and received
- Ranked 21st among the Great Lakes Harbors based on five year average (2006-2010) tonnage
- Total of 26 miles of Federal channels and 5 turning basins
- Material dredged from the upper river Federal navigation channel is placed in the Upper Saginaw Dredged Material Disposal Facility, which was constructed in 2008. It is located adjacent to the river approximately 10 miles upstream of the river mouth.
- Material dredged from the Federal navigation channels in the lower river and bay is placed in the Saginaw Bay Confined Disposal Facility, located one mile northeast of the mouth of the river in Saginaw Bay.
- Major stakeholders include U.S. Coast Guard, Lake Carriers' Association, ADM, Bay Aggregates, Bit-Mat Products of Michigan, BMT Terminals, Burroughs Materials Corp., Conagra, Consumers Energy, C. Reiss Coal, Dow Chemical, Essroc Italcementi Group, General Motors, International Materials, Lafarge North America, Lee Wood Terminal, Morton Salt, Mosaic, Northern Star Minerals, Peavey Grain, Potash Corp Saskatchewan, Saginaw Bay Fertilizer, Saginaw Asphalt Paving Co., Saginaw Rock Products,

Additional Major Stakeholders are: Saginaw River Alliance, Sargent Docks & Terminal Company, SIFTO North American Salt, Triple Clean Liquifuels, Wirt Stone Docks.

## Project Requirements

- Entrance channel in Saginaw Bay requires annual maintenance dredging of approximately 180,000 cubic yards. The upper river channel requires maintenance dredging of 50,000 to 100,000 cubic yards on a 2 to 3 year cycle.
- Maintenance dredging was conducted in 2012. Dredging is also funded for 2013 and 2014.
- The remaining capacity of the Bay CDF is being assessed as part of a Dredged Material Management Plan to ensure 20 years of dredged material disposal remain.

## Consequences of Not Maintaining the Project

- Reduction of bulk commodities that pass through the harbor that generate $306M annually in direct revenue while supporting 2,435 direct, indirect, and induced jobs that produce over $183M per year in personal income
- Light loading; loss of between 1 and 2 feet of channel depth results in increased transportation costs of between $1.3M and $3.4M annually.

April 2013

**Transportation Importance**

- Major receiving port on the Great Lakes
- All Mid-Michigan and thumb of Michigan fertilizer shipped through Saginaw River.
- Commodities include coal, limestone, petroleum products, gypsum, salt, fertilizers - potash, urea, DAP, Ag lime; food and grains, and cement.

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Saginaw River, MI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | 350 | 343 | 350 | 350 | 357 | 357 |
| Maintenance Dredging – Primary Work Package | 2,205 | 2,079* | 3,290 | 3,290 | 2,000 | 2,000 |
| Maintenance Dredging – Backlog Work Package | 3,170 | | 2,000 | | 2,000 | |
| CDF Fill Management | 1,000 | | 750 | | 1,000 | 1,000 |
| DMMP Development | 200 | 196 | 188 | 188 | 200 | 200 |
| Upper Saginaw CDF Operations | | | 263 | 263 | 280 | 280 |
| | | | | | | |
| **TOTALS** | **6,925** | **2,618** | **6,841** | **4,091** | **5,837** | **3,837** |

*Provided by National Provision in the FY12 Consolidated Appropriation Bill

**Congressional Interests**

- Representative Dan E. Kildee D-MI-5
- Senator Carl Levin D-MI
- Senator Debbie Stabenow D-MI

US Army Corps of Engineers
Buffalo District

Great Lakes Navigation System

# Sandusky Harbor, OH

## Harbor Features

- Located on Lake Erie in the city of Sandusky, Erie County, Ohio
- Authorization: River & Harbor Acts of 1899, 1902, 1919, 1927, 1935, 1945 and 1960
- Deep draft commercial harbor
- Authorized depths vary from 21-26 feet in the Federal Channels
- Five year average (2006-2010) tonnage of 2.9M tons of material shipped and received
- Ranked 24th among the Great Lakes Harbors based on five year average (2006-2010) tonnage
- 100th leading U.S. port in 2010
- Over 2 miles of breakwater structures
- The Moseley, Bay, Dock and Straight Federal channels total 5.95 miles in length
- Major stakeholders include Norfolk Southern, Sandusky Dock Corp., City of Sandusky, George Gradel Co., Cedar Point Amusement Park, commercial ferries and private marinas

## Project Requirements

- Approximately 140,000 cubic yards (CY) of material must be dredged annually. The harbor was last dredged in 2011 when approximately 140,000 CY of material was removed. Dredging is scheduled for 2013.
- Maintenance dredging is required in 2014.

## Consequences of Not Maintaining the Project

- Reduction of bulk commodities that pass through the harbor and generate $33M annually in direct revenue while supporting 2,327 direct, indirect, and induced jobs that produce over $151M per year in personal income.
- If the harbor was closed to commercial traffic, commodities would have to be transported by rail and truck. This would increase annual emission rates by over 3,129 tons of harmful particulate matter (PM-10) and increase costs by $751,000 due to increased railroad related accidents, and $234,000 due to increased trucking related accidents.
- Light loading; losses of between 1 and 2 feet of channel depth would result in increased transportation costs of between $168,000 and $398,000 annually.

## Transportation Importance

- Major receiving and shipping port on the Great Lakes; and a Harbor of Refuge.
- Coal is the major commodity shipped.

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Sandusky Harbor, Ohio - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Conditions Survey | 90 | | 90 | | | |
| Maintenance Dredging – Primary | | | 983 | 983 | 1,440 | 1,440 |
| **TOTALS** | **90** | **0** | **1,073** | **983** | **1,440** | **1,440** |

## Congressional Interests

- Representative Marcy Kaptur D-OH-9
- Senator Rob Portman R-OH
- Senator Sherrod Brown D-OH

US Army Corps of Engineers

Great Lakes Navigation System

# Saugatuck Harbor and Kalamazoo River, MI

## Harbor Features

- Located on the east shore of Lake Michigan about 90 miles northeast of Chicago, IL and 22 miles north of South Haven, MI.
- Authorization: River & Harbor Acts of 3 Jun 1896, 2 Mar 1907, 25 Jun 1910
- Recreational harbor
- Project depth is 16 feet in the entrance channel and 14 feet in the Kalamazoo River
- Over 2 miles of maintained Federal channel, between Lake Michigan and Kalamazoo Lake.
- Nearly 4,000 feet of maintained piers and revetments
- Dredged material is placed along the beach as beach nourishment.
- Major stakeholders include Tower Marine, Corral Cables, The King Co., and Sargent Marina.

## Project Requirements

- Approximately 42,000 cubic yards of material must be dredged on a 3 to 4 year cycle; the outer harbor was last dredged in 2010. Funds for dredging this harbor were provided by the Michigan Regional Dredging Provision.
- Maintenance dredging is currently required.

## Consequences of Not Maintaining the Project

- Loss of jobs locally
- Loss of recreational and charter fishing in the area

## Transportation Importance

- This project serves as an important Harbor of Refuge and supports charter fishing and recreational navigation interests.
- The harbor also serves cruise vessels.
- The local community has established a significant infrastructure around the harbor facilities that generates income from harbor users and visitors to the area.

April 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Saugatuck Harbor, MI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | | | 20 | | 20 | |
| Maintenance Dredging – Primary Work Package | | | 350 | | 350 | |
| | | | | | | |
| **TOTALS** | **0** | **0** | **370** | **0** | **370** | **0** |

## Congressional Interests

- Representative Fred Upton R-MI-6
- Senator Carl Levin D-MI
- Senator Debbie Stabenow D-MI

US Army Corps of Engineers

Great Lakes Navigation System

# Saxon Harbor, WI

## Harbor Features

- Located on the southern shore of Lake Superior about 90 miles east of Duluth, MN.
- Authorization: River & Harbor Act of 1958
- Shallow draft harbor
- Project depth in outer channel is 10 feet, inner basin and side channel is 8 feet.
- Project length total is 3,800 feet
- Approximately 1,000 feet of breakwaters
- Dredged material placed in upland site
- Major stakeholders include several marinas and yacht club, and various businesses.

## Project Requirements

- Periodic maintenance dredging of approximately 7,000 cubic yards is required every 4 to 7 years; the harbor was last dredged in 2008.
- The harbor currently requires maintenance dredging.

## Consequences of Not Maintaining the Project

- Loss of jobs locally
- Loss of recreational and charter fishing in the area

## Transportation Importance

- This project serves as a Harbor of Refuge and supports charter fishing and recreational navigation interests.

April 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Saxon Harbor, WI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | | | 10 | | 10 | |
| Maintenance Dredging – Primary Work Package | 240 | | 240 | | 240 | |
| | | | | | | |
| **TOTALS** | **240** | **0** | **250** | **0** | **250** | **0** |

## Congressional Interests

- Representative Sean Duffy R-WI-7
- Senator Ron Johnson R-WI
- Senator Tammy Baldwin D-WI

US Army Corps of Engineers

Great Lakes Navigation System

# Sebewaing River, MI

## Project Features

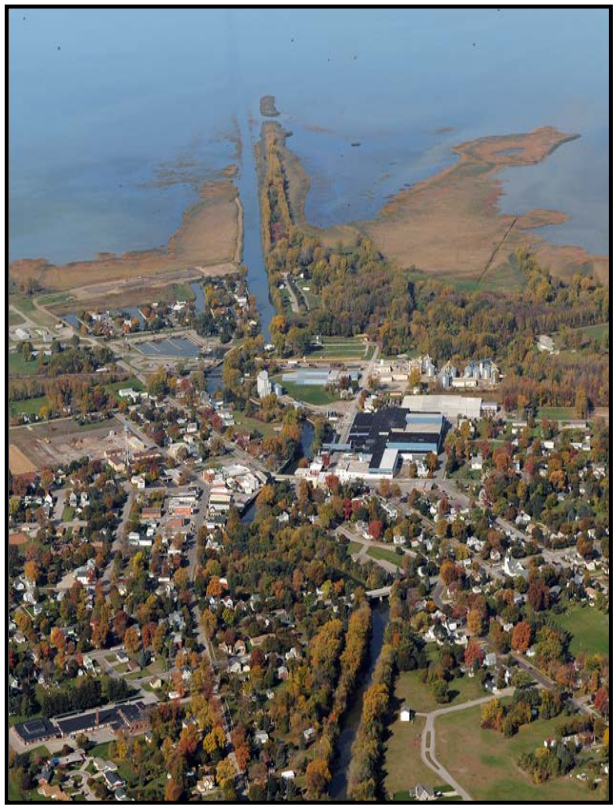
- Located on Saginaw Bay in the thumb of Michigan on the west shore of Lake Huron, about 20 miles northeast of the mouth of the Saginaw River.
- Authorization: River & Harbor Act of 3 Jun 1896
- Shallow draft recreational project
- Project depth is 8 feet
- Over 15,000 feet of maintained Federal channel
- The Sebewaing Confined Disposal Facility was turned over to the local community.
- Major stakeholders include the Village of Sebewaing, Michigan DNR and Crooked Creek Marina.

## Project Requirements

- Requires periodic maintenance dredging on a 3 to 5 year cycle of approximately 9,000 to 15,000 cubic yards. This river was last dredged in 2008.
- The river currently requires maintenance dredging.
- Flood risk management component (levee system) of the project requires repairs. Levee along the north embankment underwent a major reconstruction in 2012, however extensive vegetation removal is still needed. The south embankment still requires repair.

## Consequences of Not Maintaining the Project

- Loss of jobs locally
- Loss of recreational and charter fishing in the area



## Transportation Importance

- This project serves as an important Harbor of Refuge and supports charter fishing and recreational navigation interests.
- The local community has established a significant infrastructure around the harbor facilities that generates income from harbor users and visitors to the area.

April 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Sebewaing River, MI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | 35 | | 35 | | 35 | |
| Maintenance Dredging – Primary Work Package | 513 | | 550 | | 550 | |
| Maintenance Dredging – Backlog Work Package | 750 | | | | | |
| | | | | | | |
| **Other Business Lines** | | | | | | |
| Ice Jam Removal Support | 70 | 19 | 25 | 25 | 25 | 25 |
| Levee Repair and Replacement (south embankment) | 3,000 | | 4,000 | | 4,000 | |
| Vegetation Removal (north embankment) | | | | | 1,000 | |
| | | | | | | |
| **TOTALS** | **4,368** | **19** | **4,610** | **25** | **5,610** | **25** |

## Congressional Interests

- Representative Candice S. Miller R-MI-10
- Senator Carl Levin D-MI
- Senator Debbie Stabenow D-MI

US Army Corps of Engineers

Great Lakes Navigation System

# Sheboygan Harbor, WI

## Harbor Features

- Located on the west shore of Lake Michigan about 26 miles south of Manitowoc and about 55 miles north of Milwaukee, WI.
- Authorization: River & Harbor Act of 2 Mar 1907
- Authorized as a commercial harbor but currently serves primarily recreational boat traffic.
- Project depth is 25 feet in the entrance channel; 21 feet in the inner harbor channel and turning basin up to the 8th Street bridge; and 15 feet upstream of the 8th Street bridge.
- More than 6,300 feet of breakwater and pier structures
- Approximately 4,000 feet of maintained channel
- Dredged material is placed on the beach as beach nourishment, and upland as needed.
- Major stakeholders include the Wisconsin DNR, City of Sheboygan and various charter and sport fishing interests.

## Project Requirements

- Maintenance dredging of approximately 7,000 to 12,000 cubic yards is required on a five to ten year cycle; the harbor was last dredged by the EPA in 2012.
- The harbor currently requires dredging to remove a balance of shoaling in the harbor.
- This harbor is a Superfund site, therefore the USEPA conducted environmental dredging in 2012. Their work re-established maintained depths in the Federal navigation channel of 15 feet in the outer harbor and 11 feet in the inner harbor.
- South Breakwater requires repair. Due to the magnitude of the estimated cost ($13.5M), the breakwater may have to be repaired in phases over several years.

## Consequences of Not Maintaining the Project

- Loss of jobs locally
- Loss of recreational and charter fishing in the area

## Transportation Importance

- This project serves as a Harbor of Refuge and supports charter fishing and recreational navigation interests.
- Starting in 2012 the harbor also began serving the Great Lakes Cruise Ship industry, serving as a docking port for the Wisconsin shoreline.
- The harbor community has established a significant infrastructure around the harbor facilities that generates income from harbor users and visitors to the area.

April 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Sheboygan Harbor, WI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | 90 | | 90 | | 90 | |
| Maintenance Dredging – Primary Work Package | 875 | | 875 | | 875 | |
| Maintenance Dredging – Backlog at Authorized Dimensions | 1,200 | | 1,200 | | 1,200 | |
| Repair of North Pier | 375 | | | | | |
| Initial Phase of Repair of South Pier | 4,500 | | 4,875 | | 4,875 | |
| | | | | | | |
| **TOTALS** | **7,040** | **0** | **7,040** | **0** | **7,040** | **0** |

## Congressional Interests

- Representative Thomas E. Petri R-WI-6
- Senator Ron Johnson R-WI
- Senator Tammy Baldwin D-WI

US Army Corps of Engineers

Great Lakes Navigation System

# Silver Bay, MN

## Harbor Features

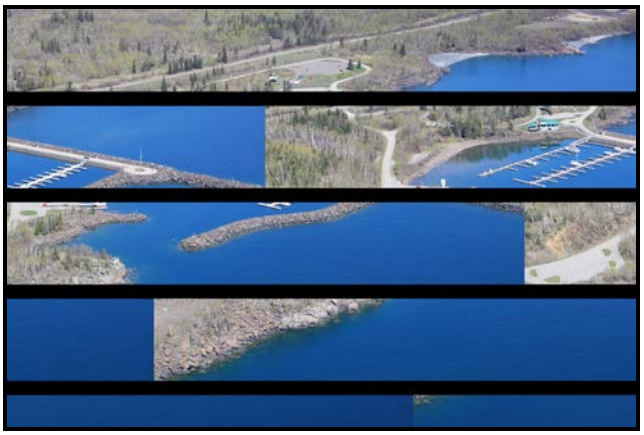
- Located on the north shore of Lake Superior, 55 miles northeast of Duluth, MN.
- Authorization: Section 2 of the River and Harbors Act of 2 March 1945 and Water Resources Development Act (WRDA) of 2007
- Shallow draft recreational harbor
- Approximately 2,730 feet of rubble mound break water structure with 660 feet of concrete walkway on breakwater, encompassing 12 acres.
- Major stakeholders include Minnesota DNR, City of Silver Bay, Cliffs Natural Resources, LLC, Marina Concessionaire and recreational boating interests.

## Project Requirements

- Currently, there are no critical maintenance requirements.

## Consequences of Not Maintaining the Project

- Potential safety issues for recreational boating community
- Major economic implications to the community if the harbor were to close, as the harbor provides recreational activities for tourists traveling from the Twin Cities.
- Potential functional loss of Critical Harbor of Refuge
- Negative economic impacts locally



## Transportation Importance

- Critical Harbor of Refuge
- This project supports recreational navigation interests.
- The harbor supports a marina providing 108 seasonal boat slips.

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Silver Bay, MN - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| | | | | | | |
| | | | | | | |
| | **0** | **0** | **0** | **0** | **0** | **0** |

**Congressional Interests**

- Representative Rick Nolan D-MN-8
- Senator Amy Klobuchar D-MN
- Senator Al Franken D-MN

US Army Corps of Engineers

Great Lakes Navigation System

# South Haven, MI

## Harbor Features

- Located on the east shore of Lake Michigan, 77 miles northeast of Chicago, IL.
- Authorization: River & Harbor Acts of 11 Aug 1888, 3 Mar 1905, 30 Aug 1935
- Authorized as a commercial harbor, but current use is primarily recreational.
- Project depths of 21 feet in the entrance channel and 19 feet in the river.
- Approximately 3,100 feet of maintained Federal channel
- More than 4,300 feet of maintained structures, including breakwaters, piers, and revetments.
- Major stakeholders include U.S. Coast Guard, All Seasons Marina, Friends Goodwill, South Haven Yacht Club, River Bend Boat Club, Oak Harbor, River Noire, South Haven Municipal Marina, Black River Yacht Club, Black River Park Boat Launch, Boat Yard Basin and Woodland Harbor.

## Project Requirements

- Requires periodic maintenance dredging of 18,000 cubic yards on a two to four year cycle; the harbor was last dredged in 2009.
- Maintenance dredging is currently required within the harbor.

## Consequences of Not Maintaining the Project

- Significant loss of jobs locally
- Loss of commercial fishing in the area

## Transportation Importance

- Harbor of Refuge
- This project serves primarily commercial fishing and recreational navigation interests.
- The local community has established a significant infrastructure around the harbor facilities that generates income from harbor users and visitors to the area.
- Harbor supports 1,000 seasonal and transient boat slips.

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**South Haven, MI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | 25 | | 25 | | 25 | |
| Maintenance Dredging – Primary Work Package | 320 | | 330 | | 330 | |
| Sediment Budget Analysis – Section 111 | 150 | | 150 | | 150 | |
| | | | | | | |
| **TOTALS** | **495** | **0** | **505** | **0** | **505** | **0** |

## Congressional Interests

- Representative Fred Upton R-MI-6
- Senator Carl Levin D-MI
- Senator Debbie Stabenow D-MI

US Army Corps of Engineers

Great Lakes Navigation System

# St. Clair River, MI

## Project Features

- One of Great Lakes connecting channels; 40 miles long, flowing south from Lake Huron and discharging into Lake St. Clair.
- Authorization: River & Harbor Acts of 13 Jul 1892, 3 Jul 1930, 2 Mar 1945, 24 Jul 1945, 21 Mar 1956
- Deep draft commercial project
- Great Lakes connecting channel between Lake St. Clair and Lake Huron with 65M tons of commerce passing through annually (average from 2006-2010).
- Project depths vary from 27.1 to 30.0 feet
- Serves ports of Marysville, Marine City and St. Clair
- Five year average (2006-2010) tonnage is 9.5M tons of material shipped and received for ports of Marysville, Marine City and St. Clair
- Ranked 11th among the Great Lakes Harbors based on five year average (2006-2010) tonnage for port of St. Clair
- Over 44 miles of Federal channels
- Dickinson Island confined disposal facility has provided a suitable placement site for all material dredged from the St. Clair River since 1980 and is anticipated to have sufficient capacity for at least 25 more years.
- Major stakeholders include U.S. Coast Guard, Lake Carriers' Association, Marysville Ethanol LLC, Marine City Ferry, DTE Energy, Blue Water Aggregates, St. Clair Aggregates and all connecting channels users.

## Project Requirements

- Requires periodic maintenance dredging of 25,000 to 40,000 cubic yards on the lower river channels on a 3 to 8 year cycle. The St. Clair River channels were last dredged in 2012, using 2011 funds.
- Obstruction removal is required on an annual basis.

- The river currently requires dredging to remove a backlog of shoaling that is present within the channel.

## Consequences of Not Maintaining the Project

- Reduction of bulk commodities that transit the river generate $1.83B annually in direct revenue while supporting 41,000 direct, indirect, and induced jobs that produce over $2.66B per year in personal income.
- If the channel was closed to commercial traffic, commodities would have to be transported by rail and truck. This would increase annual emission rates by over 1.9B lbs of harmful particulate matter (PM-10) and increase costs by $28M due to increased railroad related accidents, and $63.6M 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 $2.8M and $9.5M annually.
- Key component of the Great Lakes and St. Lawrence Seaway navigation system. Disruption of service would have severe maritime and economic impacts.

April 2013

**Transportation Importance**

- Contains three major receiving ports on the Great Lakes.
- Commodities transported through these channels include coal, limestone, wood pulp, iron ore, petroleum products, salt, and other general international cargo

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**St. Clair River, MI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | 188 | 184 | 190 | 190 | 194 | 194 |
| Maintenance Dredging – Primary Work Package | | | | | | |
| Maintenance Dredging – Backlog Work Package | 352 | | 350 | | 350 | |
| CDF Fill Management | 130 | | | | | |
| Strike Removal – by Govt. Floating Plant | 455 | 446 | 428 | 428 | 455 | 455 |
| | | | | | | |
| **TOTALS** | **1,125** | **630** | **968** | **618** | **999** | **649** |

**Congressional Interests**

- Representative Candice S. Miller R-MI-10
- Senator Carl Levin D-MI
- Senator Debbie Stabenow D-MI

US Army Corps of Engineers

Great Lakes Navigation System

# St. James Harbor, Beaver Island, MI

## Harbor Features

- Located in St. James Bay on Beaver Island, MI in Lake Michigan about 31 miles northwest of Charlevoix, MI.
- Authorization: River & Harbor Act of 2 Mar 1945
- Shallow draft recreational harbor
- Project depth is 14 feet
- Approximately 750 feet of maintained Federal channel
- Dredged material is placed along the beach as beach nourishment.
- Major stakeholders include Michigan DNR, Beaver Island Ferry Service, a variety of boating interests and the Michigan Boating Association.

## Project Requirements

- This project requires infrequent maintenance dredging; the harbor was last dredged in 1957.

## Consequences of Not Maintaining the Project

- Loss of jobs locally
- Loss of recreational and charter fishing in the area
- Loss of only commercial transportation option to the mainland
- Loss of emergency and all essential services to the local community

## Transportation Importance

- Subsistence Harbor - This harbor provides all essential services to the town. It is vital to emergency services and schools.
- This project serves as an important Harbor of Refuge and supports charter fishing and recreational navigation interests.
- The local community has established a significant infrastructure around the harbor facilities that generates income from harbor users and visitors to the area.

April 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**St. James Harbor, MI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | | | | | | |
| Maintenance Dredging – Primary Work Package | | | | | | |
| | | | | | | |
| **TOTALS** | **0** | **0** | **0** | **0** | **0** | **0** |

## Congressional Interests

- Representative Dan Benishek R-MI-1
- Senator Carl Levin D-MI
- Senator Debbie Stabenow D-MI

US Army Corps of Engineers

Great Lakes Navigation System

# St. Joseph Harbor, MI

## Harbor Features

- Located on the east shore of Lake Michigan, 60 miles east of Chicago, IL, and 24 miles south of South Haven, MI.
- Authorization: River & Harbor Acts of 3 Mar 1875, 14 Jun 1880, 3 Mar 1899, 30 Aug 1935, 2 Jun 1937, Mar 1945, 3 Jul 1958
- Deep draft commercial harbor
- Project depths of 21 feet in the entrance and inner channel; 18 feet in the inner river channel and turning basin.
- Five year average (2006-2010) tonnage is 450,000 tons of material shipped and received
- Ranked 49th among the Great Lakes Harbors based on five year average (2006-2010) tonnage
- Over 5,300 feet of structures including piers and revetments
- Over 1.5 miles of maintained channel
- Outer channel dredged material is used for beach nourishment. Inner channel material is placed upland.
- Major stakeholders include U.S. Coast Guard, Lake Carriers' Association, Lafarge North America, Dock 63, and Central Dock Company.

## Project Requirements

- Approximately 40,000 cubic yards of material must be dredged from the entrance channel annually. Approximately 30,000 to 60,000 cubic yards of material must be dredged from the inner harbor on a 2 to 4 year cycle.
- Emergency dredging of the entrance channel was performed in January 2012 after a storm caused severe shoaling that closed the harbor in December 2011.
- Maintenance dredging of St. Joseph Outer and Inner Harbor was last conducted in 2012.
- Commercial traffic currently not able to access the harbor due to significant shoaling in the mouth of the harbor.

- LaFarge Corp. paid for dredging in December 2012 to open a limited access channel. However, subsequent storms again closed the harbor.

## Consequences of Not Maintaining the Project

- If dredging is not conducted in the spring of 2013, the harbor will remain closed to commercial traffic. The severe shoaling resulted from gale force winds generated by Hurricane Sandy.
- Reduction of bulk commodities that pass through the harbor and generate $12.2M annually in direct revenue while supporting 324 direct, indirect, and induced jobs that produce over $21M per year in personal income.
- Light loading; loss of between 4 and 5 feet of channel depth results in increased transportation costs of between $1.6M and $2.4M.

## Transportation Importance

- Regionally significant receiving port on the Great Lakes.
- Commodities received include limestone, sand, gravel, armor stone, cement, slag, salt, and petroleum products.
- Project serves as an important Harbor of Refuge
- Harbor is home to the U.S. Coast Guard Station Saint Joseph.

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**St. Joseph Harbor, MI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | 185 | | 190 | | 190 | |
| Maintenance Dredging of Outer Harbor – Primary Work Package | 604 | 693* | 570 | | 570 | |
| Maintenance Dredging of Inner Harbor – Primary Work Package | 750 | | 750 | | 740 | |
| Maintenance Dredging – Backlog Work Package | 225 | | 225 | | 225 | |
| Emergency Dredging of Outer Harbor | | 100** | | | | |
| Structure Repair – by Govt. Floating Plant | 280 | | | | | |
| Shoreline Mitigation (Court Decision) | 750 | | 750 | | | |
| Sediment Budget Analysis, Section 111 | 150 | | 150 | | 150 | |
| Structure Repair - by contract | | | 280 | | 280 | |
| | | | | | | |
| **TOTALS** | **3,059** | **793** | **2,915** | **0** | **2,155** | **0** |

*Provided by National Provision in the FY12 Consolidated Appropriation Bill
**Emergency dredging funds provided in December 2011 due to shoaling caused by storm event

## Congressional Interests

- Representative Fred Upton R-MI-6
- Senator Carl Levin D-MI
- Senator Debbie Stabenow D-MI

US Army Corps of Engineers

Great Lakes Navigation System

# St. Marys River, MI

## Project Features

- One of Great Lakes connecting channels; 63 miles long, 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: River & Harbor Acts of 11 Jul 1870, 5 Aug 1886, 13 Jul 1892, 13 Jun 1902, 2 Mar 1905, 3 Mar 1907, 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, 21 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
- Project includes two active locks and two canals that handle over 80M tons of cargo annually and a hydropower plant of 20,000 kilowatt capacity.
- Major stakeholders include U.S. Coast Guard, Lake Carriers' Association, MCM Marine, Purvis Marine Ltd., Gardiner Marine Ltd., Kemp Coal Dock, Algoma Steel, Great Lakes Power, 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 2008.
- Obstruction removal by Government plant is required in hard bottom channels of the St. Marys River on an annual basis.

- The Corps has developed a multi-year asset renewal plan to modernize the existing infrastructure of the locks to provide reliable infrastructure through the year 2035. 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 replacement of the compressed air system, rehabilitation of the Poe and MacArthur Lock electrical systems, and many miscellaneous improvements and upgrades.
- Critical repairs to the main and Unit 10 hydropower plants are also needed; a portion of these will be addressed in 2014.
- The guidewalls along the West Neebish Island navigation channel (Rock Cut) are failing at various locations. Government plant completed a limited test repair of the walls in 2012, with additional repairs planned for 2013.

**Consequences of Not Maintaining the Project**

- Reduction of bulk commodities that transit the river that generate $1.7B annually in direct revenue while supporting 38,380 direct, indirect, and induced jobs that produce over $2.5B per year in personal income.
- If the channel was closed to commercial traffic, commodities would have to be transported by rail and truck. This would increase annual emission rates by over 952M lbs of harmful particulate matter (PM-10) and increase costs by $29M due to increased railroad related accidents, and $24M 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 $4.7M and $14.5M 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 and Locks 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, and 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) 2012, 2013 and 2014
## St. Marys River, MI - Project Requirements and President's Budget ($1,000)

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Lock Operations & Maintenance | 12,797 | 12,545 | 12,800 | 12,800 | 13,000 | 13,000 |
| Project Condition Surveys | 2,200 | 2,157 | 2,200 | 2,200 | 2,244 | 2,244 |
| Strike Removal | 3,245 | 3,181 | 3,050 | 3,050 | 3,245 | 3,245 |
| Maintenance Dredging | 684 | | | | 500 | 500 |
| DMMP | 150 | | | | | |
| CDF Fill Management Activities | 200 | | | | 1,000 | 1,000 |
| St. Marys River Rock Cut Repairs (Gov't Plant) | 750 | 735 | 1,000 | 1,000 | 1,200 | 1,200 |
| **Soo Locks Asset Renewal** | | | | | | |
| Misc. Poe Lock repairs/upgrades (gate anchorages) | | | 1,400 | | | |
| Replace Mac Lock Controls | 2,000 | | 8,000 | | 8,000 | |
| Poe Lock dewatering pump & contr. | | | | | 600 | 600 |
| Poe Lock gate coating replacement | | | | | 1,000 | 1,000 |
| Poe Lock electrical system rehab | | | | | 4,600 | |
| Poe Lock gate 1 replacement | | | | | 6,300 | |
| Design and Award Contract -Repairs to Southwest Pier Mac Lock Approach Wall | 6,000 | | | | | |
| West Center Pier Repair | | | | | 3,000 | |
| Rock Cut Repair Design | | | 200 | | | |
| Neebish Island Rock Cut Repairs (Contract) | 2,000 | | 5,800 | | | |
| Compressed Air System | 5,000 | 4,051** | 3,102 | 3,102 | | |
| Design of New MacArthur Lock Culvert Valve Bulkheads | 150 | | | | | |
| Mac Lock Tainter Valve Bulkheads | | | 100 | | | |
| Mac Lock Bevel Gear Replacement | 500 | 500* | | | | |
| Mac Lock Gate Anchorages Replac. | 653 | 653* | | | | |
| Strategic Sustainability Performance Plan (SSPP) initiatives | 250 | | 200 | | | |
| | | | | | | |
| Major Rehab Report | | | | | 500 | |
| **Other Business Lines** | | | | | | |
| Recreation: Visitors Center | 638 | 314 | 373 | 291 | 401 | 318 |
| Hydropower | | | | | | |
| -Hydropower Operations | 817 | 801 | 850 | 856 | 876 | 876 |
| -Hydropower Maintenance | 1,140 | 1,118 | 1,186 | 1,186 | 1,222 | 1,222 |
| -Hydropower Repairs & Upgrades | 3,280 | | 4,252 | | 4,854 | 1,945 |
| Environmental Stewardship | 111 | 109 | 73 | 55 | 49 | 49 |
| Lock Security Contract | 1,300 | 1,274 | 1,260 | 1,260 | 1,260 | 1,247 |
| Lock Grounds/Snow Removal Contract | 851 | 834 | 966 | 966 | 966 | 957 |
| **TOTALS** | **44,716** | **28,272** | **46,812** | **26,766** | **54,817** | **29,403** |

*Provided by National Provision in the FY12 Consolidated Appropriation Bill

** $1.6M provided by National Provision in the FY12 Consolidated Appropriation Bill

**Congressional Interests**

- Representative Dan Benishek R-MI-1
- Senator Carl Levin 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.

US Army Corps of Engineers

Great Lakes Navigation System

# Sturgeon Bay Harbor and Lake Michigan Ship Canal, WI

## Harbor Features

- Located on the west shore of Lake Michigan about 52 miles northeast of Green Bay and about 128 miles north of Milwaukee, WI.
- Authorization: River & Harbor Acts of 3 Mar 1873, 13 Jul 1892, 13 Jun 1902, 30 Aug 1935, 2 Mar 1945
- Deep draft commercial harbor
- Project depths of 22 to 23 feet in the entrance channel and canal; 20 feet in turning basin at Sturgeon Bay.
- Over 15,100 feet of structures including breakwaters and revetments
- Over 8.5 miles of maintained channel
- Major stakeholders include U.S. Coast Guard, Lake Carriers' Association, Bay Shipbuilding, and Palmer Johnson.

## Project Requirements

- Approximately 80,000 cubic yards of material must be dredged on a 5 year cycle. Maintenance dredging was last conducted in 2009 with ARRA funds.
- Dredging is currently required to eliminate balance of shoaling in the harbor.
- Section N of the South Revetment was repaired in 2010 using ARRA funding. Additional repair work, including stone repair and replenishing of crib fill stone is required on the North and South breakwaters. Due to cost considerations, the South breakwater may have to be repaired in phases over several years.

## Consequences of Not Maintaining the Project

- Significant loss of jobs both locally and regionally
- Light loading associated with inadequate maintenance dredging, increasing vessel transportation costs.

## Transportation Importance

- Locally significant receiving and shipping, and shipbuilding port on the Great Lakes.
- Harbor of Refuge
- Commodities shipped or received include iron ore, cement and concrete.
- An integral winter berthing facility for the Great Lakes fleet to conduct winter maintenance.
- Sturgeon Bay Harbor is home port of the U.S. Coast Guard Cutter Mobile Bay. The harbor also houses an auxiliary station and a Marine Safety Detachment Unit that is responsible for executing the Coast Guard's Port Safety and Security, Marine Environmental Protection, and Commercial Vessel Safety missions under the Department of Homeland Security.

April 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Sturgeon Bay Harbor and Lake Michigan Ship Canal, WI**
**Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | | | | | | |
| Maintenance Dredging – Primary Work Package | | | | | | |
| Maintenance Dredging – Backlog | 1,800 | | 800 | | 800 | |
| | | | | | | |
| **Other Business Lines** | | | | | | |
| Recreation | 19 | 18 | 19 | 19 | 20 | 20 |
| | | | | | | |
| **TOTALS** | **2,347** | **18** | **819** | **19** | **820** | **20** |

## Congressional Interests

- Representative Reid Ribble R-WI-8
- Senator Ron Johnson R-WI
- Senator Tammy Baldwin D-WI

US Army Corps of Engineers
Buffalo District

Great Lakes Navigation System

# Sturgeon Point Marina, NY

## Harbor Features

- Located on Lake Erie, 29 miles southwest of Buffalo, in the town of Evans, Erie County, New York
- Authorization: River & Harbor Act of 1960
- Shallow draft commercial/recreational harbor, Federally constructed and locally operated and maintained
- Authorized depths are 8 feet in the entrance channel and 4-6 feet in the harbor basin
- The harbor is protected by east and west breakwaters with a total length of 840 feet and a shoreline revetment with a total length of 580 feet
- Existing Local Cooperation Agreement (LCA), dated October 26, 1987 between the U.S Army Corps of Engineers, Buffalo District and town of Evans states, "the Government annually shall pay the town one hundred percent of the incurred operation and maintenance costs allocated to commercial navigation."
- The LCA also states that in the event that annual appropriations are insufficient to meet expenditures for the current fiscal year, either party may terminate the agreement or suspend performance
- Major stakeholders include the Town of Evans, charter fishing interests and the recreational boating community

## Project Requirements

- Annual Corps reimbursement to the non-Federal sponsor, the town of Evans, for sand bypassing and/or dredging
- Federal funds were last appropriated in FY05

## Consequences of Not Maintaining the Project

- Failure to dredge will result in continued shoaling and reduced channel dimensions; resulting in unsafe navigation conditions
- Potential safety issues for recreational boating community
- Potential functional loss of Harbor of Refuge
- Negative economic impacts to local economy

## Transportation Importance

- Harbor of Refuge
- Supports 11 charter fishing boats generating approximately $90,000 in net income annually

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Sturgeon Point Marina, New York - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Annual Sand By-Pass | 20 | | 20 | | 20 | |
| **TOTALS** | **20** | **0** | **20** | **0** | **20** | **0** |

## Congressional Interests

- Representative Chris Collins R-NY-27
- Senator Kirsten Gillibrand D-NY
- Senator Charles Schumer D-NY

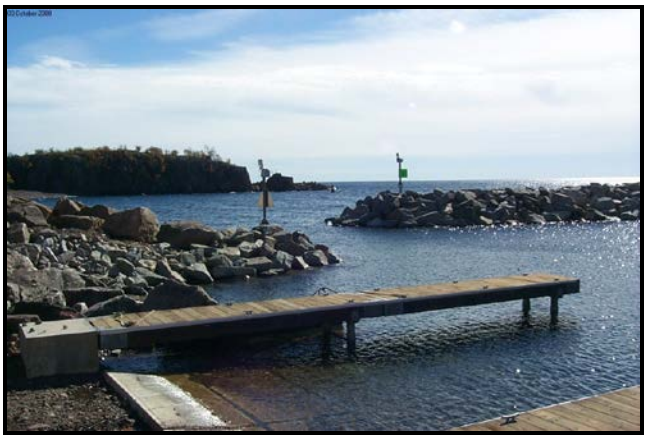
US Army Corps of Engineers

Great Lakes Navigation System

# Taconite Harbor, MN

## Harbor Features

- Located on the north shore of Lake Superior, 78 miles northeast from Duluth, MN.
- Shallow draft recreational harbor
- Authorization: Section 107 of the River and Harbor Act of 1960 and Water Resources Development Act (WRDA) of 2007
- Approximately 585 feet of rubble mound breakwater structure
- Major stakeholders include Minnesota DNR, recreational boating interests, and commercial fishermen.



## Project Requirements

- Currently, there are no critical maintenance requirements.
- There is a need to move a large (20 ton) armor stone that could start impacting the navigation channel.

## Consequences of Not Maintaining the Project

- Potential safety issues for recreational boating community
- Potential functional loss of Critical Harbor of Refuge
- Negative economic impacts locally

## Transportation Importance

- Critical Harbor of Refuge
- Project supports recreational navigation interests and commercial fishing interests.

April 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Taconite Harbor, MN - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| | | | | | | |
| | | | | | | |
| | 0 | 0 | 0 | 0 | 0 | 0 |

**Congressional Interests**

- Representative Rick Nolan D-MN-8
- Senator Amy Klobuchar D-MN
- Senator Al Franken D-MN

US Army Corps of Engineers

Great Lakes Navigation System

# Tawas Bay Harbor, MI

## Harbor Features

- Located on west shore of Lake Huron, about 45 miles northeast of the mouth of the Saginaw River.
- Authorization: River & Harbor Act of 13 August 1968
- Shallow draft recreational harbor
- Project depths of 12 feet in the entrance channel, and 10 feet in the inner basin.
- More than 1,750 feet of breakwaters
- Dredged material must be placed in an upland placement site, which is provided by the State of Michigan as needed.
- Major stakeholders include Michigan DNR, U.S. Coast Guard, and various boating and sport fishing interests.

## Project Requirements

- Requires infrequent maintenance dredging; the harbor has not required maintenance dredging since it was originally constructed in 1978.

## Consequences of Not Maintaining the Project

- Loss of jobs locally
- Loss of recreational opportunities and charter and sport fishing in the area
- Loss of recreational boating access to Great Lake
- Loss of safe harbor during storm events
- Potential safety issues for recreational boating community

## Transportation Importance

- This project serves as an important Harbor of Refuge and supports charter fishing and recreational navigation interests.
- The local community has established a significant infrastructure around the harbor facilities that generates income from harbor users and visitors to the area.

April 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Tawas Bay Harbor, MI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | | | | | | |
| Maintenance Dredging – Primary Work Package | | | | | | |
| | | | | | | |
| **TOTALS** | **0** | **0** | **0** | **0** | **0** | **0** |

## Congressional Interests

- Representative Dan Kildee D-MI-5
- Senator Carl Levin D-MI
- Senator Debbie Stabenow D-MI

US Army Corps of Engineers
Buffalo District

Great Lakes Navigation System

# Toledo Harbor, OH

## Harbor Features

- Deep draft commercial harbor located on Lake Erie in the City of Toledo, Lucas County, Ohio
- Authorization: River & Harbor Acts of 1899, 1910, 1935, 1950, 1954, 1958 and 1960
- 7 miles of Federal channel on the river and 18 on the bay. Authorized depths are 28 feet in the bay, 27 feet in the lower and 25 feet in the upper river
- Five year average (2006-2010) tonnage of 11.0M tons of material shipped and received
- Ranked 7th among the Great Lakes Harbors based on five year average (2006-2010) tonnage
- 50th leading U.S. port in 2010
- Federal confined disposal facilities (CDF) include Island 18 and Site 3
- Major stakeholders include the Toledo-Lucas County Port Authority, City of Toledo, U.S. Coast Guard, St. Mary's Cement Inc., Midwest Terminals of Toledo International, Kuhlman, The Andersons, ADM Grain Company, Hansen Mueller Co., BP Husky Refining LLC, Arc Terminals Holdings LLC, Shelly Liquid Division, Seneca Petroleum Company, Sunoco MidAmerica M&R, CSX, Lafarge Cement, Arms Dock, Kraft Foods and Ironhead Marine Inc

## Project Requirements

- A minimum of 850,000 cubic yards (CY) of material must be dredged each year to retain minimum channel clearance. The harbor was last dredged in 2012 when approximately 850,000 CY of material was removed. Dredging is scheduled for 2013.
- Restoration of active commercial project areas would require removal of nearly 2M CY of material.
- Maintenance dredging is required in 2014.

- Repairs to deteriorated sections of the Island 18 CDF stone perimeter are required.

## Consequences of Not Maintaining the Project

- Reduction of bulk commodities that pass through the harbor and generate $381M annually in direct revenue while supporting 6,971 direct, indirect, and induced jobs that produce over $558M per year in personal income.
- If the harbor was closed to commercial traffic, commodities would have to be transported by rail and truck. This would increase annual emission rates by over 69,568 tons of harmful particulate matter (PM-10) and increase costs by $4,775,000 due to increased railroad related accidents, and $971,000 due to increased trucking related accidents.
- Light loading; loss of between 2 and 3 feet of channel depth results increased transportation costs of between $752,000 and $1,962,000 annually.

March 2013

**Transportation Importance**

- Major receiving and shipping port with direct access to inter-modal connections.
- Critical Harbor of Refuge.
- Cargo includes coal, petroleum, aggregates, metal products, limestone, grain, chemicals, iron ore, steel products, cement, ores, minerals and sugar.
- Growing port with ongoing improvements and commodity diversification.

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Toledo Harbor, Ohio - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Conditions Survey | 567 | 539 | 570 | 570 | 581 | 581 |
| Maintenance Dredging – Primary-Maumee Bay | 3,740 | 2,740 | 3,238 | 3,238 | 4,015 | 4,015 |
| Maintenance Dredging – Backlog-Maumee Bay | 1,600 | | 1,600 | | | |
| Maintenance Dredging – Primary-Maumee River | 2,215 | 2,527 | 1,664 | 1,664 | 1,275 | 1,275 |
| E&D/Const. Island 18 Stone Repair | 2,350 | | 2,350 | | 3,200 | |
| Master Plan for Island 18 (ENS) | 50 | | 75 | | 75 | |
| **TOTALS** | **10,522** | **5,806** | **9,497** | **5,472** | **9,146** | **5,871** |

**Congressional Interests**

- Representative Marcy Kaptur D-OH-9
- Senator Rob Portman R-OH
- Senator Sherrod Brown D-OH

US Army Corps of Engineers
Buffalo District

Great Lakes Navigation System

# Toussaint River, OH

## Harbor Features

- Located on Lake Erie at the mouth of the Toussaint River, Carroll Township, Ohio
- Authorization: River & Harbor Act of 1960 and Water Resources Development Act (WRDA) of 2007
- Shallow draft recreational harbor
- Authorized depth is 4 feet in the Federal navigation channel
- Maintenance dredging work for this project is cost shared 72% Federal and 28% local. The local project sponsor is Carroll Township
- The former Erie Army Depot utilized an area near the Toussaint River project as a military munitions range from 1918 – 1967. The Army National Guard, located at Camp Perry, currently utilizes a portion of this range as part of daily operations
- The possible presence of military munitions must be considered during maintenance dredging activities
- Under WRDA 2007 the costs of operation and maintenance activities related to the presence of unexploded ordnance, are carried out at Federal expense
- Formerly Used Defense Sites (FUDS) program funds are used to address safety items during maintenance dredging of the Federal project and for ordnance remediation of the beach areas adjacent to the river. All dredging costs associated with ordnance safety are funded 100% by the FUDS program
- Major stakeholders include fishing interests and the recreational boating community

## Project Requirements

- Maintenance dredging is required every 3-4 years

- The project was last dredged in 2004 when 24,000 cubic yards (CY) of material was removed
- The current sediment backlog within the functional harbor area is estimated at approximately 25,000 CY

## Consequences of Not Maintaining the Project

- Failure to complete periodic dredging will result in continued shoaling and reduced channel dimensions; resulting in unsafe navigation conditions
- Potential safety issues for recreational boating community
- Negative economic impacts, locally and regionally

## Transportation Importance

- Provides safe access between Toussaint River and Lake Erie
- Other features include 400 seasonal and 50 transient recreational boat slips

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Toussaint River, Ohio - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Technical Assistance for Locals | | | | | 35 | |
| Sediment Sampling and Analysis | 60 | | 60 | | 60 | |
| Maintenance Dredging – Primary (Requires Cost Share) | 670 | | 670 | | 670 | |
| **TOTALS** | **730** | **0** | **730** | **0** | **765** | **0** |

## Congressional Interests

- Representative Marcy Kaptur D-OH-9
- Senator Rob Portman R-OH
- Senator Sherrod Brown D-OH

US Army Corps of Engineers

Great Lakes Navigation System

# Two Harbors, MN

## Harbor Features

- Located on the north shore of Lake Superior, 27 miles northeast of Duluth, MN.
- Authorization: River & Harbor Acts of 5 Aug 1885, 30 Aug 1935, 7 Nov 1945, 14 Jul 1960
- Deep draft commercial harbor
- Project depth is 30 feet in the entrance channel and 28 feet at the upstream end of channel
- Five year average (2006-2010) tonnage is 12.3M tons of material shipped and received
- Ranked 5th among the Great Lakes Harbors based on five year average (2006-2010) tonnage
- 42nd leading U.S. port in 2010
- Approximately 2,500 feet of maintained Federal channel
- More than 2,500 feet of maintained breakwaters
- Major stakeholders include U.S. Coast Guard, Lake Carriers' Association, US Steel, Canadian National, MDNR, City of Two Harbors, and multiple commercial fishermen.

## Project Requirements

- Requires periodic maintenance dredging on an infrequent basis. The harbor was last dredged in 1976.
- East breakwater requires repairs to the concrete, ice plates, joints, and handrails.
- Navigation structures are primarily maintained by Government floating plant; Stone along west breakwater must be replaced to maintain functionality of the structure.

## Consequences of Not Maintaining the Project

- Reduction of bulk commodities that pass through the harbor that generate $323M annually in direct revenue while supporting 3,075 direct, indirect, and induced jobs that produce over $200M per year in personal income
- If the harbor was closed to commercial traffic, commodities would have to be transported by rail and truck. This would increase annual emission rates by over 207M lbs of harmful particulate matter (PM-10) and increase costs by $5.4M due to increased railroad related accidents.
- Light loading; loss of between 2 and 3 feet of channel depth results in increased transportation costs of between $5.4M and $9.2M annually.
- Failure of the breakwater structure protecting many docks and wharfs

## Transportation Importance

- Major shipping port on the Great Lakes
- Serves as a Harbor of Refuge
- Commodities include mostly iron ore
- MDNR invested $1M into rebuilding the boat launch in 2012, which attracts nearly 100 boats every weekend during the boating season
- One of the major recreational boat accesses on northern Lake Superior.

April 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Two Harbors, MN - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | | | | | | |
| Maintenance Dredging – Primary Work Package | | | | | | |
| Maintenance Dredging – Backlog Work Package | | | | | | |
| Structural Repair – by Govt. Floating Plant | 405 | | 397 | 350 | | |
| Design East Breakwater Repair | 175 | | 180 | | 180 | |
| | | | | | | |
| **TOTALS** | **580** | **0** | **577** | **350** | **180** | **0** |

## Congressional Interests

- Representative Rick Nolan D-MN-8
- Senator Amy Klobuchar D-MN
- Senator Al Franken D-MN

US Army Corps of Engineers

Great Lakes Navigation System

# Two Rivers Harbor, WI

## Harbor Features

- Located on the west shore of Lake Michigan about 82 miles north of Milwaukee and about 101 miles from Green Bay, WI.
- Authorization: River & Harbor Acts of 3 Mar 1871, 2 Mar 1907, 30 Aug 1935, 3 Jul 1958
- Deep draft Commercial harbor, yet the primary use is recreational
- Project depth is 10 feet in the East Twin River and 18 feet in the entrance channel and inner basin
- Approximately 6,000 feet of maintained Federal channel
- More than 2,700 feet of piers and revetments
- The material from lower portions of the harbor is placed on the beach as nourishment. The inner harbor material needs to be placed in an upland placement site.
- Major stakeholders include U.S. Coast Guard, Suzy Q Fish Market, City of Two Rivers and a variety of charter and sport fishing interests.

## Project Requirements

- Approximately 40,000 CY of material are dredged from this harbor on a five year cycle. The lower portion was last dredged in 2009. The community performed minimal dredging in 2012.
- The upper portion of the harbor currently requires dredging.

## Consequences of Not Maintaining the Project

- Loss of jobs locally
- Loss of recreational and charter fishing in the area

## Transportation Importance

- This project serves as an important Harbor of Refuge and supports charter fishing and recreational navigation interests.
- The local community has established a significant infrastructure around the harbor facilities that generates income from harbor users and visitors to the area.

April 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Two Rivers Harbor, WI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | 30 | | 30 | | 30 | |
| Maintenance Dredging – Primary Work Package | 1,000 | | 1,000 | | 1,000 | |
| | | | | | | |
| **TOTALS** | **1,030** | **0** | **1,030** | **0** | **1,030** | **0** |

## Congressional Interests

- Representative Thomas E. Petri R-WI-6
- Senator Ron Johnson R-WI
- Senator Tammy Baldwin D-WI

US Army Corps of Engineers
Buffalo District

Great Lakes Navigation System

# Vermilion Harbor, OH

## Harbor Features

- Located on Lake Erie at the mouth of the Vermilion River in the City of Vermilion, Erie County, Ohio
- Authorization: River & Harbor Acts of 1836, 1875, 1905 and 1958
- Shallow draft recreational harbor
- Authorized depths are 12 feet in the east lake approach channel and entrance channel and 8 feet in the west lake approach channel and upper river channel
- The harbor is protected by east and west piers and a detached breakwater with a total length of 2,560 feet
- Major stakeholders include Vermilion Port Authority, private marinas, charter fishing interests and the recreational boating community

## Project Requirements

- The harbor typically requires dredging every two to three years. It was last dredged in 2004 when 32,000 cubic yards (CY) of material was removed
- The current sediment backlog within the functional harbor areas is estimated at approximately 59,000 CY
- Maintenance dredging is the primary critical requirement

## Consequences of Not Maintaining the Project

- Failure to dredge will result in continued shoaling and reduced channel dimensions; resulting in unsafe navigation conditions
- Potential safety issues for recreational boating community
- Potential functional loss of Harbor of Refuge
- Negative economic impacts, locally and regionally

## Transportation Importance

- Harbor of Refuge
- Supports 13 seasonal charter fishing boats generating approximately $202,000 in annual revenue

February 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Vermilion Harbor, Ohio - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Sediment Sampling and Analysis | | | | | | |
| Maintenance Dredging | 850 | | 850 | | 875 | |
| **TOTALS** | **850** | **0** | **850** | **0** | **875** | **0** |

## Congressional Interests

- Representative Marcy Kaptur D-OH-9
- Senator Rob Portman R-OH
- Senator Sherrod Brown D-OH

US Army Corps of Engineers

Great Lakes Navigation System

# Washington Island, WI

## Harbor Features

- Located about 2 miles to the northeast of the tip of the Door Peninsula in Wisconsin.
- Authorization: River & Harbor Act of 26 August 1937
- Two recreational harbors – Detroit Harbor and Jackson Harbor
- Project depth of Detroit Harbor is 14 feet and Jackson Harbor is 12 feet.
- Approximately 4,000 feet of maintained Federal channel
- Major stakeholders include the Washington Island Ferry Line, U.S. Coast Guard, and a variety of charter and sport fishing interests.

## Project Requirements

- Requires infrequent maintenance dredging. The harbor was last dredged in 1939.
- Since the channel was originally dredged (1939) the Washington Island Ferry Line has consistently updated and increased the size of its ferries to meet the growing requirements of commerce on the Island. Consequently, the current largest ferries have drafts of 12 feet plus, depending upon loaded cargo. This results in unsafe transits for the ferries during times of low lake levels or adverse weather conditions.
- To satisfy the requirements of the larger ferries, it would be required to deepen the Federal navigation channel at Detroit Harbor to an authorized project depth of 16 feet, requiring a change to the project authorization in WRDA. The estimated cost of deepening is $8-10M. It is believed that the current 12 foot project depth at Jackson Harbor is adequate.
- Limited shoaling has occurred and the projects currently require dredging to remove a balance of shoaling within the federal channels.

## Consequences of Not Maintaining the Project

- Loss of jobs locally
- Loss of recreational and charter fishing in the area
- Loss of only commercial transportation option to the mainland
- Loss of emergency and all essential services to the local community.

## Transportation Importance

- Subsistence Harbor - This harbor provides all essential services to the town. It is vital to emergency services and schools.
- This project serves as an important Harbor of Refuge and supports charter fishing and recreational navigation interests.
- The local community has established a significant infrastructure around the harbor facilities that generates income from harbor users and visitors to the area.

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Washington Island, WI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | | | | | | |
| Maintenance Dredging – Primary Work Package | | | | | 150 | |
| | | | | | | |
| **TOTALS** | **0** | **0** | **0** | **0** | **150** | **0** |

## Congressional Interests

- Representative Reid Ribble R-WI-8
- Senator Ron Johnson R-WI
- Senator Tammy Baldwin D-WI

US Army Corps of Engineers

Great Lakes Navigation System

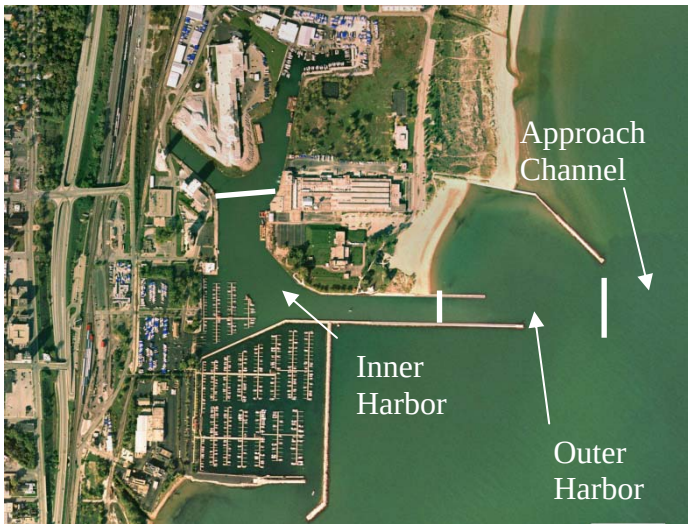
# Waukegan Harbor, IL

## Project Features

- Located on Lake Michigan in the city of Waukegan, Lake County, Illinois.
- Authorization: River and Harbor Acts of 1880, 1882, 1902, 1945, 1965, and 1970.
- Deep draft commercial harbor, with a Federal channel length of 1.35 miles.
- Authorized depths are 22 feet in the Lake Michigan harbor approach, and 18 feet in the outer harbor and inner basin areas.
- 6,051 linear feet of timber crib, steel sheet pile, or concrete caisson breakwater structures, plus 1,076 linear feet of steel pile revetments.
- Five year average (2006-2010) tonnage is 452,000 tons of material shipped and received
- Interconnected with 13 commercial ports: ships to six ports, receives from seven ports.
- Local stakeholders include National Gypsum, Lafarge Cement, and St. Mary's Cement, Inc.

## Project Requirements

- Due to the severe Hurricane Sandy storm on southern L. Michigan on 31-Oct-2012, the outer harbor received 60,000 CY of new sediment. The approach channel currently blocks entry to all commercial vessels. No funding was provided for the project by the President's Budget in FY13. The annual dredging need is 75,000 CY to maintain safe vessel passage through this area. The rate of shoaling in the approach has increased due to sediment accumulation north of the breakwater.
- The outer and inner harbor areas have not been dredged for over 27 years due to the contaminants present in the sediment. The average loss of depth in the outer harbor area is between 5-6 feet; 98,000 CY of material is planned for removal. The USEPA Great Lakes Restoration Initiative (GLRI) dredging project is scheduled to begin in September 2013.
- The inner harbor is part of a Superfund site due to PCB contamination. 230,000 CY of contaminated sediment will be removed. USEPA dredging is ongoing and will be completed late in 2013.




## Consequences of Not Maintaining the Project

- Loss of 11.5 feet of depth in the approach channel from shoaling results in project closure. The increased transportation cost of shipping materials via other methods is over $2M annually.
- Both the National Gypsum Drywall Plant and the LaFarge Cement Terminal will permanently close down within two years. St. Mary's Cement would attempt to truck materials from Milwaukee.
- Elimination of bulk commodities that pass through the harbor and generate $9.5M annually in direct revenue while supporting 313 direct, indirect, and induced jobs that produce over $20.4M per year in personal income.
- By closing to commercial traffic, commodities would have to be transported by rail and truck. This would increase annual emission rates by over 543 tons of harmful particulate matter (PM-10) and increase costs by $95.K due to increased railroad related accidents, and $185.K due to increased trucking related accidents.

. **Transportation Importance**

- Commodities are bulk cement and gypsum rock.
- The harbor is a safe refuge on southern Lake Michigan for barges and vessels traveling north from or south to the Port of Chicago.

April 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Waukegan Harbor, IL**
**Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Work Plan | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | 93 | | 95 | | 98 | |
| Maintenance Dredging of Harbor Approach Channel - Primary work package | 804 | 788* | 1,750 | | 1,325 | 472 |
| Maintenance Dredging of Dredging Harbor Approach Channel – Backlog Work package | | | | | | |
| Maintenance Dredging of Outer Harbor Channel – Primary work package | | | | | | |
| Maintenance Dredging of Outer Harbor Channel – Backlog work package | 700 | | 800 | | | |
| Structural Repairs - North Pier, by Government Plant | 1,625 | | 1,800 | | 1,890 | |
| | | | | | | |
| **TOTALS** | **3,222** | **788** | **4,445** | **0** | **3,313** | **472** |

*Provided by National Provision in the FY12 Consolidated Appropriation Bill

**Congressional Interests**

- Representative Bradley Schneider, R-IL-10
- Senator Richard Durbin, D-IL
- Senator Mark Kirk, R-IL

US Army Corps of Engineers
Buffalo District

Great Lakes Navigation System

# West Harbor, OH

## Harbor Features

- Located in the "islands" area of southwestern Lake Erie, eight miles northeast of Port Clinton, OH
- Authorization: River & Harbor Act of 1965
- Shallow draft recreational harbor
- Authorized depths are 10 feet in the entrance channel and 8 feet elsewhere
- The harbor consists of a series of channels totaling approximately 13,000 feet in length
- The harbor is protected by east and west arrowhead breakwaters with a total length of 2,925 feet
- Major stakeholders include charter fishing interests, private marinas and the recreational boating community

## Project Requirements

- Maintenance dredging is required very infrequently. The project was last dredged in 2004 when 48,000 cubic yards (CY) of material was removed
- The current sediment backlog within the functional harbor areas is estimated at approximately 86,000 CY
- Maintenance dredging is the primary critical requirement

## Consequences of Not Maintaining the Project

- Failure to dredge will result in continued shoaling and reduced channel dimensions; resulting in unsafe navigation conditions
- Potential safety issues for recreational boating community
- Potential functional loss of Harbor of Refuge
- Negative economic impacts, locally and regionally

## Transportation Importance

- Harbor of Refuge
- Supports 124 seasonal charter fishing boats generating approximately $1.9M in annual revenue

February 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**West Harbor, Ohio - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Maintenance Dredging - Primary | 925 | | 925 | | 1,020 | |
| **TOTALS** | **925** | **0** | **925** | **0** | **1,020** | **0** |

## Congressional Interests

- Representative Marcy Kaptur D-OH-9
- Senator Rob Portman R-OH
- Senator Sherrod Brown D-OH

US Army Corps of Engineers

Great Lakes Navigation System

# White Lake Harbor, MI

## Harbor Features

- Located on the east shore of Lake Michigan, 120 miles northeast of Chicago, IL and 45 miles south of Ludington, MI.
- Authorization: River & Harbor Acts of 1 Mar 1867, 3 Mar 1873, 5 Jul 1884, 13 Jul 1892, 2 Mar 1907
- Recreational harbor
- Project depth is 16 feet
- Almost 2,000 feet of maintained Federal channel, between Lake Michigan and White Lake.
- Nearly 4,800 feet of maintained piers and revetments
- Dredged material is placed along the beach as beach nourishment.
- Major stakeholders include the White Lake Association, City of Montague, Michigan DNR and Fruitland Township.

## Project Requirements

- Approximately 9,000 cubic yards of material must be dredged on a 5 year cycle; the harbor was last dredged in 2010 using Michigan regional dredging provision funding.
- Maintenance dredging is currently required.

## Consequences of Not Maintaining the Project

- Loss of jobs locally
- Loss of recreational and charter fishing in the area

## Transportation Importance

- This project serves as an important Harbor of Refuge and supports charter fishing and recreational navigation interests.
- The local community has established a significant infrastructure around the harbor facilities that generates income from harbor users and visitors to the area.

April 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**White Lake Harbor, MI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | 23 | | | | | |
| Maintenance Dredging – Primary Work Package | | | 300 | | 300 | |
| Sediment Budget Analysis – Section 111 | 150 | | 150 | | 150 | |
| | | | | | | |
| **TOTALS** | **173** | **0** | **450** | **0** | **450** | **0** |

## Congressional Interests

- Representative Bill Huizenga R-MI-2
- Senator Carl Levin D-MI
- Senator Debbie Stabenow D-MI

US Army Corps of Engineers

Great Lakes Navigation System

# Whitefish Point Harbor, MI

## Harbor Features

- Located on the south shore of Lake Superior, about 55 miles east of Grand Marais, MI and 40 miles west of Sault Ste. Marie, MI.
- Authorization: River & Harbor Act of 2 Mar 1945, 17 Aug 1967
- Shallow draft recreational harbor
- Project depth is 12 feet
- Approximately 8 acres of maintained Federal channel
- More than 1,500 feet of breakwaters
- Dredged material is placed along the beach as beach nourishment.
- Major stakeholders include Michigan DNR, Great Lakes Shipwreck Historical Society, Native American fishermen, and a variety of sport fishing interests.

## Project Requirements

- Maintenance dredging of approximately 28,000 cubic yards is required every 2 to 6 years; the harbor was last dredged in 2010 using Michigan regional dredging provision funding.

## Consequences of Not Maintaining the Project

- Loss of jobs locally
- Loss of recreational and charter fishing in the area
- Loss of recreational boating access to Lake Superior
- Loss of safe harbor during storm events
- Potential safety issues for recreational boating community

## Transportation Importance

- This project serves as an important Harbor of Refuge and supports charter fishing and Native American navigation interests.
- The local community has established a significant infrastructure around the harbor facilities that generates income from harbor users and visitors to the area.

April 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Whitefish Point, MI - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Project Condition Surveys | | | | | | |
| Maintenance Dredging – Primary Work Package | | | | | | |
| | | | | | | |
| **TOTALS** | **0** | **0** | **0** | **0** | **0** | **0** |

## Congressional Interests

- Representative Dan Benishek R-MI-1
- Senator Carl Levin D-MI
- Senator Debbie Stabenow D-MI

US Army Corps of Engineers
Buffalo District

Great Lakes Navigation System

# Wilson Harbor, NY

## Harbor Features

- Located on Lake Ontario at the mouth of Twelve Mile Creek in the Town of Wilson, Niagara County, New York
- Authorization: River & Harbor Acts of 1945 and 1968
- Shallow draft recreational harbor
- Authorized depths are 8 feet in the entrance channel and 6 feet within the Tuscarora Bay
- The channel is approximately 4,900 feet long, 80 feet wide, and suitably widened at bends
- The harbor is protected by parallel east and west piers with a total length of 1,331 feet
- Major stakeholders include Town of Wilson, charter fishing interests, private marinas and the recreational boating community

## Project Requirements

- The harbor typically requires dredging every three to five years. It was last dredged in 2000 when 5,100 cubic yards (CY) of material was removed
- The current sediment backlog within the functional harbor areas is estimated at approximately 55,000 CY
- Maintenance dredging is the primary critical requirement

## Consequences of Not Maintaining the Project

- Failure to dredge will result in continued shoaling and reduced channel dimensions; resulting in unsafe navigation conditions
- Potential safety issues for recreational boating community
- Potential functional loss of Harbor of Refuge
- Negative economic impacts, locally and regionally

## Transportation Importance

- Harbor of Refuge
- Supports 9 charter fishing boats generating approximately $73,000 in net income annually

February 2013

**U.S. Army Corps of Engineers Fiscal Year (FY) 2012, 2013 and 2014**
**Wilson Harbor, New York - Project Requirements and President's Budget ($1,000)**

| Work Package | FY12 Requirement | FY12 Appropriation | FY13 Requirement | FY13 President's Budget | FY14 Requirement | FY14 President's Budget |
|---|---|---|---|---|---|---|
| Maintenance Dredging – Primary | 910 | | 910 | | 910 | |
| **TOTALS** | **910** | **0** | **910** | **0** | **910** | **0** |

**Congressional Interests**

- Representative Chris Collins R-NY-27
- Senator Kirsten Gillibrand D-NY
- Senator Charles Schumer D-NY