



### Wrapping up the 2016/2017 season

The 1000-foot-long tug/barge Presque Isle carried the last 58, 240 tons through the Poe Lock January 15, 2017, bringing the 2016/2017 season to a close. More than 7,000 passages and over 67 million tons of cargo passed through the Soo Locks in 2016.

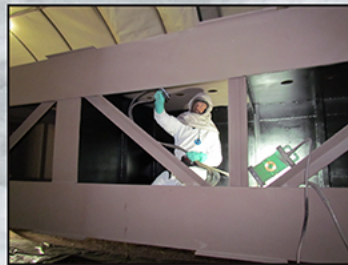
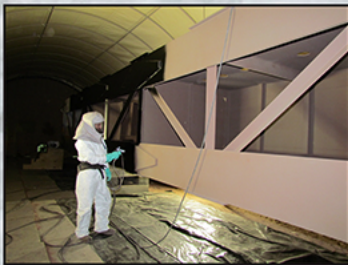
### No Such Thing As An Off Season

Vessel traffic may stop here on January 15, but crews work non-stop, year-round at the Soo Locks. Although, we did not dewater a lock this winter, crews had major lock maintenance projects to complete before the new shipping season began on March 25.



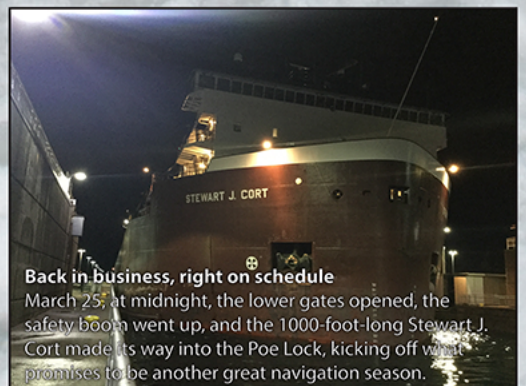
### A new look for old stop logs

One of the largest on-going projects at the locks in the last two winters has been the inspection, repair and repainting of the MacArthur Lock stop logs. Each log, weighing 29 tons, had to have its hardware removed and be pulled into a temporary shelter for sandblasting, inspection, grinding and welding before repainting. Although the logs are over 70 years old, regular repairs and maintenance ensures their use for years to come.



### Cylinder swap out

The Poe Lock uses hydraulic cylinders to operate its gates and valves. This winter, we replaced one of the valve cylinders when an inspection found excessive wear. These photos show workers in the shop preparing the new cylinder, and at the upper end of the lock unfastening and removing the old one. We will repair the old cylinder and keep it as a spare.



### Back in business, right on schedule

March 25, at midnight, the lower gates opened, the safety boom went up, and the 1000-foot-long Stewart J. Cort made its way into the Poe Lock, kicking off what promises to be another great navigation season.



# 100 Years Ago

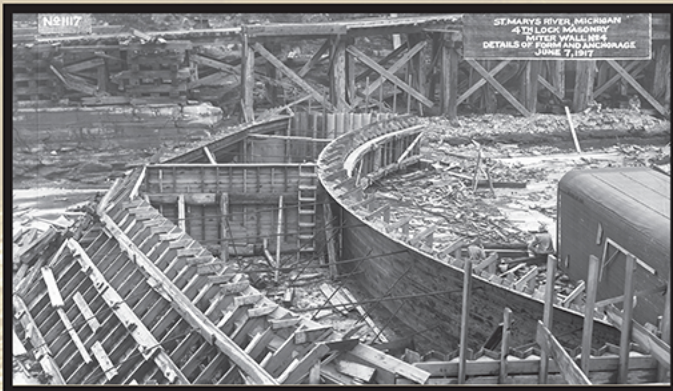
**1917** was the year the U.S. entered the war raging across Europe. Here in the Soo, work continued on the fourth lock using an interesting mix of new technology and old fashioned horse power. The two active locks on site, the Davis and original Poe Lock had a busy nine-month shipping season, with 17,536 vessel passages. The Weitzel Lock, now too small for the ever growing size of Great Lakes vessels, sat idle.

WILLIAM A. MCGON



ST. MARYS RIVER, MICHIGAN  
4TH LOCK MASONRY  
UNLOADING TRUSSES FOR FORMS  
LOWER GATE RECEIVED  
JANUARY 31 1917

EUGENE W. FARGNY



NO 1117

ST. MARYS RIVER, MICHIGAN  
4TH LOCK MASONRY  
DETAILS OF FORMS WALL AND  
FORMS AND BRIDGE  
JUNE 7 1917



NO 1120

ST. MARYS RIVER, MICHIGAN  
4TH LOCK MASONRY  
DETAILS OF FORMS WALL AND  
FORMS AND BRIDGE  
JUNE 7 1917



## Then and Now: Soo Locks Traffic

Year:	1917	2016/2017
Navigation Season:	238 days	297 days
Vessel Passages:	17,536	7,333
Tons of Cargo:	74,361,850	67,479,768
Tons of Iron Ore:	50,247,056	39,756,569
Largest Single Load:	15,399 tons	73,033 tons

Eugene W. Fargny American Integrity

*"Over there, over there,  
Send the word, send the word over there  
That the Yanks are coming..."*

The release of the Zimmerman Telegram on February 24 was the final straw that pushed the U.S. into the First World War. The telegram revealed German government efforts to convince Mexico to attack its northern neighbor and keep the U.S. busy on this side of the Atlantic. This telegram, combined with renewed German U-boat attacks and acts of sabotage at munitions plants and ports led Congress to approve President Woodrow Wilson's request for a declaration of war in April 1917. Within a month naval destroyers began patrolling off the coast of Ireland and by the end of June U.S. troops began arriving in France.

## Highlights of 1917

- January 11** – Suspicious explosion at munitions plant in Kingsland, NJ
- January 31** — Germany resumes unrestricted submarine warfare
- March 2** — Jones-Shafroth Act grants Puerto Ricans U.S. Citizenship
- March 4** – Jeanette Rankin of Montana becomes 1st woman in U.S. Congress
- April 6** – U.S. declares war on Germany
- May 18** – Selective Service Act passes congress authorizing a military draft
- May 29** – John F. Kennedy born
- October 27** – 20,000 women march in suffrage parade in New York City
- November 26** – National Hockey League is formed in Montreal, Quebec
- December 18** – Congress approves 18th Amendment prohibiting sale of alcohol

**U.S. Population** 103,268,000  
(beginning of 2017: 324,420,000 – U.S. Census)  
**Unemployment** at 4.6%  
(beginning of 2017: 4.7% – U.S. Bureau of Labor)





## Engineering with Nature

For hundreds of years, engineers considered nature something to manipulate, control and overcome. Today we realize that engineering projects that work WITH nature are more successful, efficient and beneficial to people, wildlife and ecosystems. "Engineering with Nature" is a nationwide U.S. Army Corps of Engineers program working on engineering solutions in harmony with natural processes. Several projects in the Detroit District show this effort and our commitment to protecting our water resources.



*Compensating Works - Sault Ste. Marie, Mich.*

### Stabilizing Spawning Grounds

The rapids next to the locks are one of only two rocky spawning beds in the St. Marys River and critical to the survival of several fish species. A gated dam has spanned the upper end of the rapids since 1921 to regulate the flow of water from Lake Superior into the lower lakes. In the past, raising and lowering its gates created a rush of water flushing eggs from the riverbed, or left fish stranded when water quickly disappeared. A project funded through the EPA's Great Lakes Restoration Initiative has allowed for the automation of the gates. This allows the gate positions to change over hours or even days reducing the impact on fish while still regulating flows into the lower lakes.



*Rock Ramp - Frankenmuth, Mich.*

### Restoring Upstream Passage

This project, one of the Detroit District's largest ecosystem restoration projects yet, restores more than 70 miles of spawning habitat. A dam built to power a mill in the 1850s blocked fish from reaching spawning grounds upstream until the Corps replaced the dam with a 350-foot long rock ramp structure in 2015. Built of limestone, it simulates natural rapids and maintains water levels upstream while allowing fish to pass through. Native fish have already begun returning to these previously unreachable spawning areas.

*21st Avenue West Embayment - Duluth, Minn.*

### Restoring Harbor's Wetlands

Before becoming a commercial harbor, a broad delta filled with shallow marshes marked where the St. Louis River meets Lake Superior. In the 19th Century, crews deepened the harbor and altered the character of the waterway; industrial sites lined its shores and pollutants settled into its sediment reducing and damaging wildlife habitat. The 21st Avenue West Embayment project seeks to undo some of this impact. In 2013, the Corps began this "Engineering with Nature" test project using clean dredged fill to encapsulate polluted soils. The 21st Avenue Embayment was not only the least costly location to place dredge material, it also helped restore 75 acres of wetlands by reducing water depths to help the growth of aquatic plants that support a healthy ecosystem.



*Regulatory Professionals*

### Protecting Water Resources Everyday

In addition to major projects, the U.S. Army Corps of Engineers is busy protecting our water resources on a daily basis through the efforts of a team of regulatory project managers active throughout the Detroit District. These specialists in wildlife biology, physical sciences and ecology oversee permits for private and public projects that could affect waterways and wetlands. They travel all over the District inspecting proposed building sites along federal navigable waters, monitoring work and ensuring that the needs of development and navigation are met while protecting critical ecosystems throughout the Great Lakes.

*Cat Island - Green Bay, Wis.*

### Rebuilding Lost Islands

In Green Bay, the Corps dredges 100,000-250,000 cubic yards of sediment from the lower Fox River and Green Bay channel each year. The Cat Island project offers an opportunity to economically place dredged material while also restoring 274 acres of island and wetland habitat lost in the 1970s. Once an important wildlife haven, the Cat Island chain was heavily eroded over the years to the point where very little of the historic chain of islands remained. In 2012, the Corps and local partners built a dredged material disposal facility that will eventually restore this island chain in 2012. Over the next 15-20 years, the Corps will place dredged sediment from Green Bay's outer navigation channel into the Cat Island dredged material disposal facility. This will eventually rebuild the islands, restore the wetlands and protect over 1,400 acres of wildlife habitat. Since 2014, birds, fish, and small mammals have returned to this area and are thriving.



To learn more about Engineering with Nature use your QR Scanner here

