



All About Michigan

The Sault Ste. Marie Canals



The Sault Ste. Marie Canals are two ship canals that bypass the rapids on the St. Marys River (where the water falls 21 feet) between Lake Superior and Lake Huron at the cities of Sault Ste. Marie, Michigan and Ontario. They are popularly called the Soo Locks. These locks navigate the rise/drop of the water levels so ships can have safe passage. It takes 22 million gallons of water to lift a boat. The locks are powered by gravity itself! Water moves in and out of the lock chambers by just opening and closing valves. As a boat locks in from Lake Superior, the gates at each end of the locks are closed and a valve is open to let the Lake Superior water already in the lock flow out to the lower water level of the St Mary's Canal and Lakes Huron and Michigan. When the water has dropped to the lower level, the lock gate at the south end is opened and the boat proceeds out of the locks into the St Mary's Canal. The north gate remains closed, holding back the waters of Lake Superior. When a boat locks in from the St. Mary's Canal at the lower level of Lakes Huron and Michigan, the gates at both ends are closed and the filling valve at the north end is opened to permit the Lake Superior water to flow into the lock. When the water in the lock has risen to that of Lake Superior, the lock gate at the north end is opened and the boat locks out into Lake Superior.

A single small lock is currently operated on the Canadian side of the Soo. Opened in 1998, it was built within a damaged older lock, and is 253 feet long, 51 feet wide and 44 feet deep. The Canadian lock is used for recreational and tour boats; major shipping traffic uses the U.S. locks.

The U.S. canal is 1.6 miles long and 80 feet wide. It was constructed in 1853-1855 by the State of Michigan and has since been reconstructed by the federal government to accommodate larger vessels. The entire canal, including the locks is now owned and maintained by the United States Army Corps of Engineers which provides free passage since 1881. It has four parallel lock chambers, each running east to west, starting at the Michigan shoreline and moving north toward Ontario.

- The MacArthur Lock, built in 1943. It is 800 feet long, 80 feet side and

29.5 feet deep. This is large enough to handle ocean-going vessels (called "salties") that must also pass through the smaller locks in the Welland Canal. The SS Carl D. Bradley was the first vessel to pass through it.

- The Poe Lock was originally completed in 1895. This lock is 800 feet long, 100 feet wide and was in 1896 the largest in the world when completed. It was rebuilt in 1968 to accommodate larger ships after the Saint Lawrence Seaway opened. It is now 1200 feet long, 110 feet wide and 32 feet deep. The Poe is the only lock that can handle the large lake freighters (or "lakers") used on the upper lakes. The first passage after the rebuild was by the vessel Phillip R. Clarke in 1969.

- The Davis Lock, built in 1914 is 1,350 feet long, 80 feet wide and 23.1 feet deep. This lock is used less frequently to lock light freighters, tour boats and small craft when traffic warrants. The SS James A. Farrell was the first vessel to lock through.

- The Sabin Lock was built in 1919. It is 1,350 feet long, 80 feet wide and 23.1 feet deep. This lock has been placed in caretaker status and is no longer used.

Even though they are closed during the winter by ice, they are among the country's busiest waterway traffic systems and are a vital link. The locks pass an average of 10,000 ships per year. Ships from all over the world visit this port as the locks are a part of the Saint Lawrence Seaway, which connects Duluth, Minnesota to the Atlantic!