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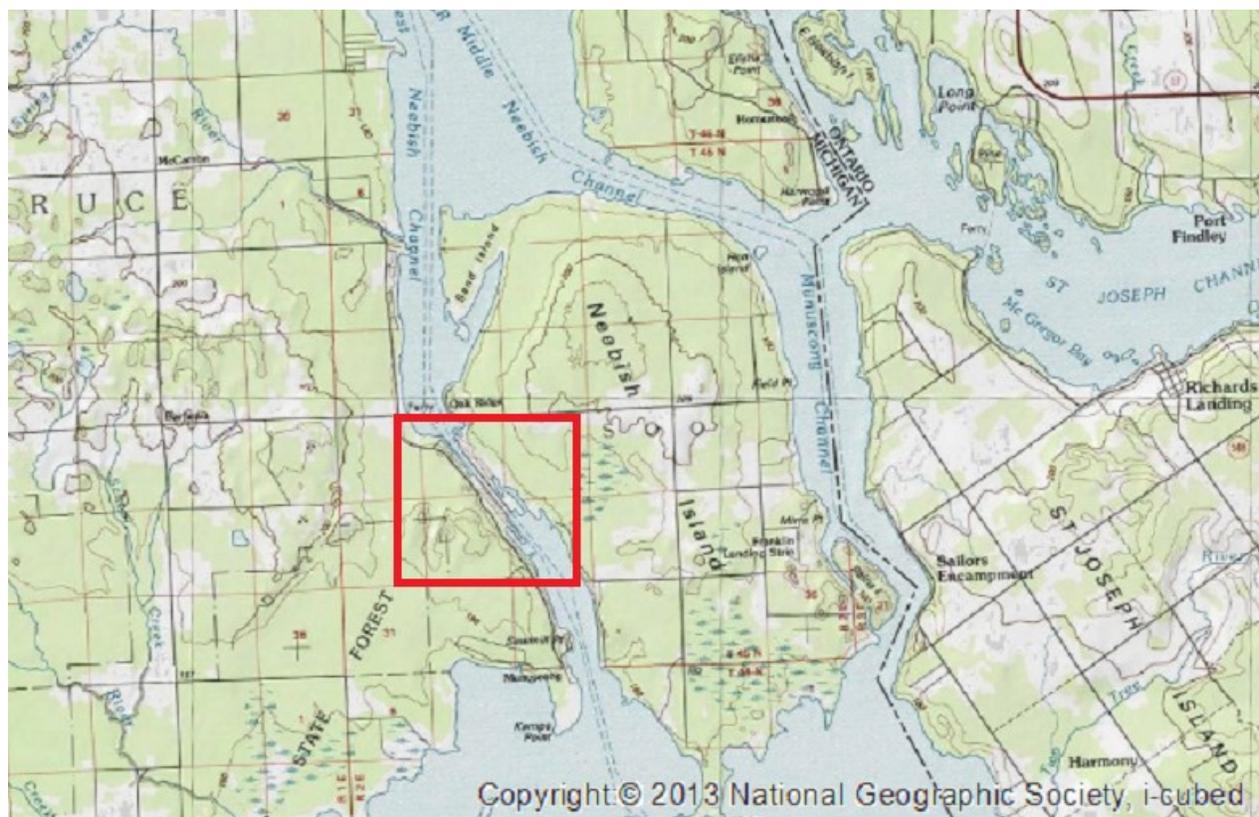
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The West Neebish Channel

By Gregg Beukema

Along the eastern edge of Michigan's Upper Peninsula lies the St. Mary's River, one of the busiest and yet most beautiful waterways in the world. Giant ore carriers, some exceeding one thousand feet in length, traverse the river daily. Navigating the St. Mary's requires twenty changes in course along its 65-mile length to dodge the islands, sandbars, and reefs that litter the river.

Near the halfway point in the river lies Neebish Island. Although smaller than Sugar, St. Joseph and Drummond, Neebish was the biggest hindrance because of a shallow rocky narrows along its west side called the West Neebish Rapids.



("Neebish" derives from the Ojibwe word *aniibiish*, meaning "leaf.")

After the construction of the St. Mary's Falls Ship Canal (the Soo Locks), even the channel around the east side of Neebish was the most difficult navigational problem the ships faced. Until the start of the 20th century the ships would tie up at the southeast corner of the island, at a place that became known as Sailors' Encampment, rather than attempt to go through the narrow passage at night. The channel was less than 300 feet wide and both up-bound and down-bound vessels were required to use it.

Since 1857, the U.S. Corps of Engineers has made improvements to the St. Mary's to simplify its transit.¹ Nearly every year the currents in the river require some modification to the channels to allow the passage of the many ships that travel its course.

In 1892 the ship owners and operators of the Great Lakes formed an organization known as the Lake Carriers Association (LCA) to improve conditions for the blossoming lake transportation business.² In 1895 the LCA began publishing its annual report, a document that contains, among other things, a list of harbor and channel improvement recommendations. In its 1897 report, the LCA suggested that the Corps of Engineers (then known as the United States Army Engineers) investigate a new channel around Neebish Island. This channel would separate traffic, up-bound going to the east and down-bound to the west of the island, through what was then known as the West Neebish Rapids, a section of the river that was very narrow, shallow and strewn with large boulders and limestone ridges.³ "This," the LCA said, "would make a grand improvement in the navigation between Lake Superior and Lake Huron."⁴

On March 3, 1899, Congress, realizing the need for iron ore in time of war, passed an act that directed the Secretary of War to initiate a survey of the waters connecting Lake Superior and Lake Huron as well as the St. Clair Flats at the north end of Lake St. Clair, and to provide a plan with estimates for "a safe and convenient channel 20 feet deep between said lakes . . ."⁵ Col. G. J. Lydecker, then District Engineer, Detroit District, in his preliminary report submitted May 29, 1900, proposed adoption of the LCA recommendations, including a channel at the foot of Hay Lake (now Lake Nicolet) through the West Neebish Rapids.⁶

The development of Lydecker's recommendation was undoubtedly influenced by a major tie-up in the river created when the *Douglass Houghton* was rammed and sunk by the barge it was towing at Sailors Encampment on September 5, 1899. Approximately 200 vessels were blockaded. With dual channels in this narrow part of the river, the jam-up could have been averted.⁷ On June 13, 1902, Congress adopted the Lydecker report and appropriated funding for the West Neebish improvements.⁸ On October 13, 1902, Major W. H. Bixby (new District Engineer) recommended that the channel be made 21 feet deep rather than 20, because of the many new ships under construction that could use the increased depth for a much greater cargo carrying capacity.⁹ The modest one-foot increase in hull depth, multiplied by the huge length and width dimensions of the big ships, would result in a major increase in payload.

By the spring of 1904, the contractor had been chosen and preliminary work was underway.¹⁰ The general contractor for the work was MacArthur Brothers of Chicago, Illinois, with A. F. MacArthur as the project manager.¹¹ The firm established an office in Sault Ste. Marie with Samuel J. Mills as office manager. Chief Engineer David Sloan outlined the dimensions of the project.

"We will employ about 300 to 400 men, I can see no reason why we cannot work the year around, as the cut is through rock. There is about two million yards to be removed."¹²

On May 13, 1904, the first crews arrived at the work site. Their first task was to establish a camp for the workmen. A home on the site belonging to John F. Maloney and Capt. Charles Chapman was being used as temporary quarters until the cabins were built.¹³ (In the late 1920s these cabins were towed up the river on the ice to Five Mile Point where several are still being used as tourist cabins at Lanphear's Resort.¹⁴)

The crews first undertook to build temporary dams to create “dead” water, to neutralize strong currents. Once these were built, the crew could build the earthen cofferdams that would hold back the water completely. Shortly after the temporary dams were completed, tug captains from Sailors Encampment began to complain about the increased water flow in the Middle Neebish and Munuscong Channels.¹⁵

The building of the cofferdams was a time consuming but simple process. Steam shovels dug up earth from the bottom of the channel and dropped it into the channel adjacent to the point from which it had been removed. Once this task was completed, two 12-inch pumps were run day and night to drain the first section of the project.¹⁶ The cofferdams held out the incoming water extremely well, with the first one thousand foot section pumped dry by Aug. 7, nearly thirty days ahead of schedule.

The free food that the laborers anticipated, however, was not to be found.

“Contrary to expectations, few fish were found in the section when it was pumped dry. In some of the deeper pools, a few fish were found and something like a half dozen went through the pumps, but the big quantities which were supposed to have been caught between the two dams were missing when the pumping began.”¹⁷

Nor were labor relations smooth at Neebish. On September 1, 1904, one hundred Italian laborers went out on strike after their demand for higher wages was refused. The men were requesting an increase of 25 cents a day for a total of \$1.75 a day.

“The ‘dagoes’ were brought from the city of Detroit several weeks ago and have been engaged in the work of building dams across the channel and making excavations.”

When the Italian workers walked off the job, they attempted to get the other workers to join in with them. When the remainder of the crews continued to work, they were pelted with stones by the strikers, forcing the work to stop until the strikers departed. “Most of the Italians boarded themselves and the wages paid did not include their living expenses.”¹⁸ By contrast, a common seaman on a freighter was paid \$25 a month for the same hours of labor, with room and board, uniforms, and minor health care included. In addition, if a sailor stayed on a boat through the end of the season, he received a cash bonus.¹⁹

Once the nascent rock cut was drained, workers could begin drilling, blasting and hauling. Deep holes were drilled with motors run by compressed air. Into these holes went a measured charge which, when ignited, shattered the rock into manageable pieces. The rock was hauled away with a unique cable system:

To carry away the debris from the bottom of the section immense towers are built each 105 feet in height with spans, two of 800 feet, two of 1,100 feet. From these will run the travelling cables to carry to the dump the rock broken up in the bottom of the section. These traveling cables have a capacity of 13 tons to the load and are the longest travelling cables in proportion to the load they are expected to carry in the world.²⁰

All of the machinery on the site was driven with compressed air. The air compressors, powered by three large wood-fired boilers, had a total of 1,050 horsepower and cost more than \$150,000.²¹ The foundations under these giant boilers remain standing today on the property of Roger Norton.

As the project was going to take four years to complete, a small city grew around Neebish. It contained a boarding house that could feed 700 men at one time, a commissary, a blacksmith shop, offices and many small cabins to house the workers. The contractors felt

that they would provide a better environment for the workers if they were housed in small homes as opposed to sharing one or two large barracks, since many of the workers had brought their families to the rock cut. While all of these buildings were being constructed, the workers lived in what became tent cities with names for each: The City, Hoodoo Town, and Little Detroit, as well as many more colorful titles.²²

Mr. John Mingay of Pickford was 14 years old when he got a job working for the MacArthur Brothers Company. For the first two weeks on the project he was employed as a drillman. This position required John to hold on to a giant drill bit approximately three to four feet long and one and a half inches in diameter. While John held the bit vertically, point down on the rock, his partner—known as the driver—pounded on the end of the bit with a sledge hammer. As often happened on a job with new crews, the driver missed the drill bit and hit John's fingers. He went to the company office and was bandaged. According to John, "It was a good thing it happened on a Saturday." When asked why, he responded, "It hurt too much to do anything on Sunday, but Monday it was not so bad." Since there were no sick days, Monday morning John reported back to work. He was assigned to a team of horses pulling a heavy wagon, "drivin' team." The team hauled rock from the rock cut to the rock pile.

John Mingay was lucky. His injury was minor and non-crippling. There were many serious injuries on the job. The company provided first aid on site, and would haul the worker off to the doctor, if needed. Unfortunately, many of the injuries were crippling or debilitating. For these workers there was no long-term assistance. Workman's compensation was years in the future.

Many of the injuries were caused by exploding tires. Early rubber tires, inflated to 100 p.s.i., exploded when driven over the sharp rock. Surprisingly, even though there was extensive use of dynamite, it caused only one injury, and that was from a falling piece of debris when a supposedly empty box harboring explosive was thrown into the wood stove in one of the workers' shacks.²³

As all of the drilling and blasting was taking place, work also progressed on the approaches to the rock cut. A reporter from the *Soo Evening News* made sure to fully inform readers of the magnitude of the undertakings:

The first dredge one meets when taking a sail down the river is the one nearest the head of Sugar Island, operated by the Two Rivers Dredge and Dock Company. Just a little below this is the big Pan American dredge, the largest on the lakes, the dipper of which has a level capacity of eight yards of the kind of material now being worked on but with the tenacious character of the clay usually brings up ten or even more yards. When it is noted that this company gets 17 cents a yard for its work, it is easy for the observer to figure that practically each dip brings up \$1.70. This might make it appear that there is an enormous profit in the operation of the dredge, but when one considers the expenses of operation and the loss which sometimes results from the necessity of remaining idle for a few days or a week those dollar seventies cease to look so large.

In addition to these two dredges, there were two more engaged in the work between Sugar Island and the mainland. At the point where the Middle Neebish Channel and the West Neebish Channel come together in the southern end of Lake Nicolet, six additional dredges were at work deepening the channel. These dredges were owned by Edward Brothers, C. H. Starke Dredging & Dock Co., James Pryor, Houghton & Co., and Fitzsimmons & Connell. Operating in the area immediately north of the rock cut was one additional dredge belonging

to Edward Brothers. These eleven dredges removed nearly six million cubic yards of material from the river bottom.

South of the rock cut in the new channel an additional group of dredges belonging to the Chicago and Great Lakes Dredging Company were at work removing another four million cubic yards of river bottom. Twelve million cubic yards of material in all were removed in completing the project. Again the *Evening News* seemed in awe of the West Neebish operation when it stated, "It is a gigantic undertaking which can scarcely be appreciated even by spending days in observation and asking questions and yet in order to get the first inkling of what is meant by the new West Neebish Channel it will be necessary to visit the place and see what is actually being done."²⁴

With a few minor exceptions, work continued quite smoothly for the next four years. In February 1905, an ice jam tore away a small portion of the cofferdam and caused a temporary panic but the break was quickly repaired.²⁵

Beginning in the spring of 1908, the Engineers under the direction of Louis C. Sabin (Superintendent at the St. Mary's Falls Ship Canal) began installation of navigational lighting in the channel. In June 1908, the wood cribs at the ends of the rock cut were installed.²⁶

On July 28, 1908, copies of the channel rules were made available at the dock of the United States Revenue Service, the forerunner of the U.S. Coast Guard. Rule number one stated that no vessel would be allowed to exceed a speed of ten miles per hour in the rock cut. Rule number two stated, "No up-bound vessel shall pass the St. Mary's River by way of the West Neebish Channel, and no down-bound boat shall pass by way of the Middle Neebish Channel except vessels of 500 tons or less and vessels making regular local stops on these channels."²⁷ The problem of the narrow passage around Neebish Island was solved.

On Monday, August 10, 1908, many dignitaries began to arrive for the opening of the new channel. Tuesday, August 11, saw this group of fleet managers being brought through the new channel to familiarize them with it so they could act as river pilots for their vessels' first pass-through. These men would board the down-bound vessels at the Soo and return back to the Soo in a launch provided by the LCA, after guiding their boat through the channel. William Livingston, president of the LCA, arrived on Friday, August 15, for the opening of navigation, held on Saturday, August 16.

"What boat will have the distinction of first passing down through?" asked the *Evening News* in its Friday, August 15, edition. It had been hoped that the *Thomas F. Cole*, flagship of the Pittsburg Steamship Co. (the forerunner of the U.S. Steel fleet) would have that distinction, but it was not possible as the *Cole* was on the lower lakes at the time.²⁹

At daybreak on Saturday, August 16, 1908, the *George F. Baker* of the Pittsburg Steamship Company had the honor of being the first ship to pass through the new West Neebish Channel. The ship had tied up in Lake Nicolet (Hay Lake) overnight to be the first one through. It was followed closely by *Conestoga*, a Canadian ship belonging to the Lakeports Navigation Company.³⁰

The long awaited West Neebish Channel was open.

(The *Baker* had a long career on the Great Lakes. In 1965 it was sold to the Kinsman Division of S. & E. Shipping Corporation, and was finally sold for scrap in 1979. The *Conestoga* was not so fortunate. Launched in 1878, the wooden freighter burned to the waterline near

Cardinal, Ontario, May 9, 1922.³¹⁾

The channel survived its first two seasons without any problems. But then on May 21, 1910, the steamer *John B. Ketchum II* grounded near the north end of the cut and obstructed the channel for seventeen days.³² Col. E. J. Dent, District Engineer, in his report of December 3, 1926, recommended that the West Neebish Channel be widened to 650 feet at an estimated cost of \$10.25 million. Col. Spencer Cosby, the Lakes Division Engineer, found Col. Dent's recommendation extravagant. It was estimated that to make the improvements, the channel would have to be closed for three years. By 1920, ships had been built in excess of 600 feet, which made two-way navigation of the Middle Neebish Channel next to impossible. If future developments were to make eventual closing down and widening or deepening of the West Neebish Channel advisable, the Middle Neebish Channel would have to be widened to at least 500 feet to handle two-way traffic. The Board of Engineers for Rivers and Harbors and the Chief of Engineers agreed that widening the Middle Neebish Channel should be given first priority.³³ The river and harbor act of January 21, 1927 authorized the funding.

By the late 1920s lake freighters had grown even larger, with many of the new ships having an available draft of 23 feet. There was only one thing that was restricting this added capacity (and revenue)—the West Neebish Channel. On July 4, 1930, President Herbert Hoover signed a \$145 million rivers and harbors act that among other things authorized the deepening of the West Neebish Channel. The Corps of Engineers wasted no time. The contract was bid, let and begun at the close of the shipping season late in 1930. The general contractor for the deepening was the firm of Connelly Brothers of Minneapolis. The same methods used in the original digging of the channel were used again, namely, build a cofferdam, drain the rock cut, drill, blast and haul away.³⁵ The cabins, mess halls, and offices used by the MacArthur Brothers for the first contract, however, were long gone. Faced with a tight time schedule, Connelly Brothers purchased the old passenger steamer *S.S. Indiana* from the Goodrich Steamboat Line and dug a small slip near the north end of the cut to dock the ship for use as a hotel and general office. The beautiful ship performed its duties perfectly. The workers (only 120 men were needed to complete the job) were very happy with its staterooms (each equipped with hot and cold running water), and its luxurious dining rooms, lounging rooms, barber shop, and showers. The construction superintendent set up his offices in the captain's quarters. Connelly Brothers continued to use the ship for a similar job in the Detroit River.³⁶

Although the contract was completed on time, the Connelly Brothers had two major problems. Rather than build a traveling cableway, they used rubber-tired dump trucks. Unfortunately the tires of the 1930s were still designed to utilize over 100 pounds of air pressure. The sharp rock blasted out of the rock cut punctured hundreds of tires, forcing the contractor toward bankruptcy. Their other problem had much longer lasting effects. The cofferdam on the lower end of the rock cut was released too fast. The rush of water pulled debris back into the channel and for the next few years there were many complaints from ship captains of damage to the bottoms of their ships.³⁷

The channel was reopened to navigation on July 18, 1933.³⁸

The West Neebish continued to serve the freighters faithfully throughout World War II. In the spring of 1949, the *Benson Ford* ran aground and caused another major back-up in the down-bound shipping lane. The Coast Guard was hesitant to have two-way traffic in the

Middle Neebish Channel because of the large ice floes that had been floating down the river. The problem was soon solved, however; the *Ford* was refloated four days later.³⁹

With the advent of the St. Lawrence Seaway in the early 1950s and its project depth of 27 feet, Col. Arthur C. Nauman, District Engineer, recommended that the St. Mary's River channels attain that depth as well, to allow the ships from the St. Lawrence Seaway to travel from the Atlantic Ocean to Duluth without having to stop because of shallower connecting channels. Of course, the governors of the surrounding states were extremely supportive of the proposal.⁴⁰

Unfortunately, in the ensuing years the ships of the Great Lakes had grown to the then maximum width of 75 feet, so once again the West Neebish Channel had to close for another deepening. However, this time there was no change in the river traffic patterns. The work was completed in the winter of 1959-60. Great Lakes Dredge and Dock Co. was the general contractor, with most on-site work performed by the firm of Trailor Brothers of Evansville, Indiana. The Supervising Engineer was Harold Lawson of the Corps of Engineers. The channel was open on schedule for the opening of the 1960 shipping season.⁴¹

Today the West Neebish is a much quieter place than it has been for most of the twentieth century. Until the late 1970s, ship traffic was very busy, with daily averages of 20 to 30 down-bound ships a day. By 1985, this number dropped to about ten. While total transits are down drastically, total tonnage has not dropped as severely, because the 1000-foot long ships of the 1980s carry three to six times the cargo tonnage of their predecessors.

The car ferry *Neebish Islander* makes many transits of the channel each day and the cottagers still come to watch the long ships pass by.

NOTES

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⁴¹Harold Lawson.