

## PORT COLBORNE - PORT WELLER, ONTARIO, WELLAND CANAL

The Lake Ontario entrance to the Welland Canal is at Port Weller, the approaches to which are all clear. The Lake Erie entrance to the canal is at Port Colborne, the approaches to which are all clear except for a shoal which lies about 1-1/2 miles east of the harbor entrance and extends out into the Lake 1 mile.

From Port Colborne to Buffalo 21 mi.; Port Maitland 17 mi.; Erie 63 mi.; From Port Weller to Niagara River Mouth (Youngstown) 8 mi.; Hamilton 28 mi.; Toronto 27 mi.

LIGHTS AS OF 1949: #475 Port Colborne Black & White vertical stripes buoy Fl. W. 3 mi. 208° from Port Colborne.

#476 Port Colborne outer F.R. vis. 13 mi., white square tower on south end west breakwater spur.

#477 Port Colborne black buoy Fl. W. east side harbor entrance 550 ft. 103° from outer light. (#476)

#478 Port Colborne inner Fl. W. 5 sec. Vis. 14 mi. white square tower with sloping roof, on outer end west breakwater.

#479 Port Colborne east breakwater Fl. G. vis. 12 mi., red square pyramidal skeleton tower.

#161 Port Weller outer Fl. R. vis. 12 mi. Pole on outer end west embankment.

#162 Port Weller entrance east Fl. G. vis. 12 mi. on outer end east embankment.

#163 Port Weller main Fl. W. 5 sec. vis. 17 mi., white skeleton tower, red day mark on N and E sides, on west breakwater.

TRANSIT OF THE WELLAND CANAL: The Welland Canal is the shipping link between Lakes Erie and Ontario. The difference of 327 ft. between Ontario's 243 ft. and Erie's 570 ft. above low water sea level datum is adjusted through 8 locks, 7 of them with an average lift of about 46 ft. each, the 8th or guard lock having a lift of from 2 ft. to 11 ft. depending upon the water level in Lake Erie.

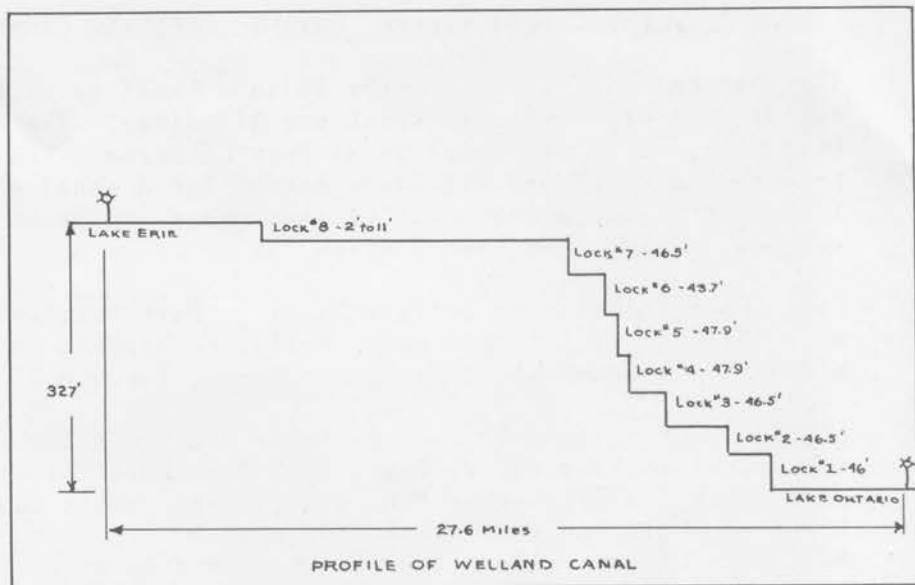
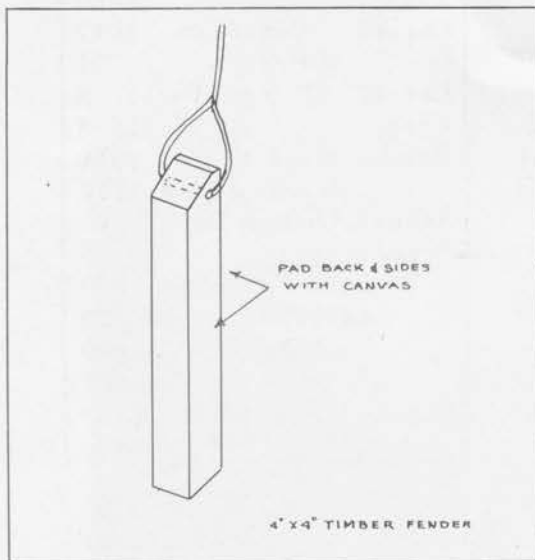
The distance between Port Weller on Lake Ontario and Port Colborne on Lake Erie is 27.6 mi., all in Canadian territory. The canal is toll free, but a lines handling charge of \$15 per vessel under 275 ft. overall, and \$30 for vessels over that length is levied for each transit of the canal. Thus a yacht and a freighter are on equal terms and a small vessel need not lock through with a larger vessel, unless the skipper and lock master mutually agree. Once the transit has commenced no vessel may pass another headed in the same direction unless so ordered by the lock master. Two pamphlets, "The Canals of Canada" and "Canal Rules and Regulations" should be secured in advance of the transit if possible, from Director of Canals Service, Dept. of Transport, Ottawa, Canada. They are also available at the Canal offices.

A fast passage will occupy about 8 hrs.; a day of heavy traffic will require about 12 hrs. because 5 of the 8 locks are one way only. Vessel movements are governed by red and green signal lights. If upon approaching a lock the signal is red, a vessel ties to the designated mooring wall until the green signal appears. The tops of these walls are a good 6 ft. above water level so a small boat crew must be able to scramble. The canal is lighted but a night transit is not recommended for a small boat unless those in charge have been through the canal and are experienced.

Bridges, of which there are 21, utilize the same signalling technique except that a period of flashing red occurs while the bridge is in the process of swinging. If upon signal a bridge fails to respond the chances are it is a railway bridge and a train has passed the last block. There are no places to tie to in such emergencies so the small vessel must circle, or idle, always under control.

LINES & FENDERS: For the average yacht, lines of 1-2" or 3/4" diameter are adequate, not less than 75 ft. in length and in good condition, but preferably not new because

E-25	1950
Charts - Canadian	2042
- U.S.	31
Lat. 42° 52' N to 43° 15' N	
Long.	79° 15' W
Mag. Var. S end 7° 15' W	1950
N end 10° W	1950
Annual Change Dec	1'
Populations	
Port Colborne	7000
Welland	12,000
Port Weller	2000
Thorold	5000
Lights 475 - 479	Erie
161 - 163	Ontario

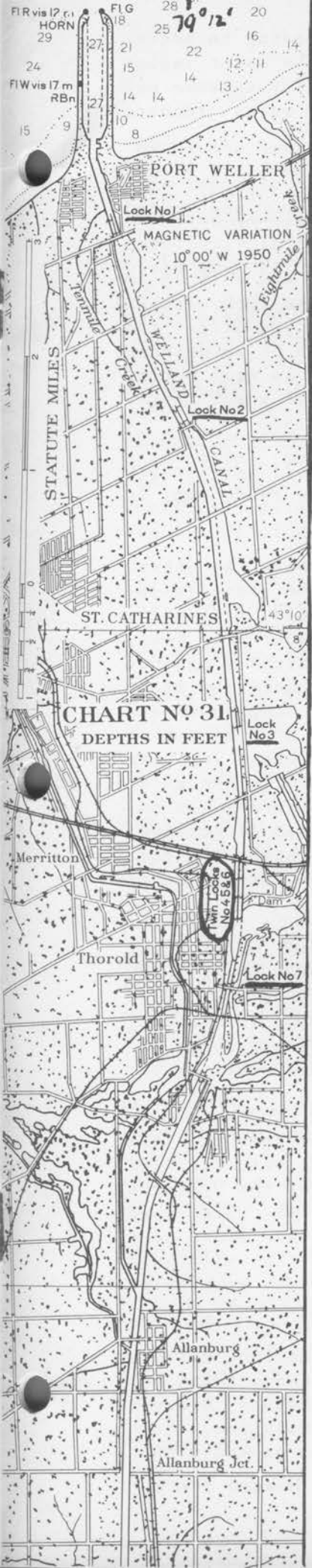


of the lack of flexibility in new lines. The lines need not be in one section but may be made up of two or more sections. The lock edges are steel shod and rounded so no chafe is encountered.

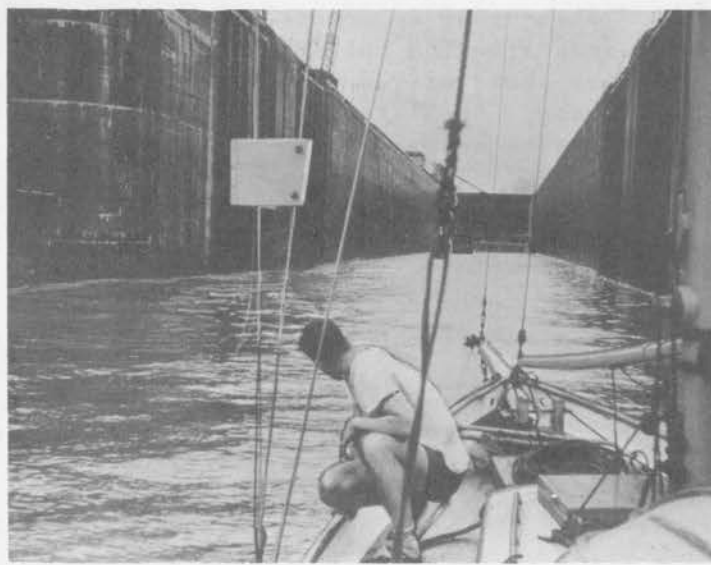
Ordinary fenders are not recommended because they will be well chewed. Nor is the scheme of using a 2 x 4 or 2 x 6 timber outboard of the usual fenders. I built some special fenders upon advice of the canal superintendent and found them excellent, for reasons which will be clear later on. Take 4" x 4" timbers, 2' or more in length depending upon freeboard, chamfer one end like a sled runner, round off the edges and face three sides with heavy canvas. For a fancy job work some padding under the canvas. Splice a suspension bridle into one end so that the line is free of contact from front and rear surfaces. Use not less than 1/2" line. Four fenders are minimum. For the power cruiser with wide bow overhangs a couple of heavy sacks well stuffed with straw will ride the coaming if necessity arises. Of course, the larger standard fenders will do here but may be ruined in the course of events. The sled runners stow easily and will always be useful when tying to rough docks anywhere. They cost under \$1.00 each if you do your own work and I have found them an excellent piece of cruising gear.

**THE ACTUAL TRANSIT:** Let us take a lock-by-lock passage from Lake Ontario to Lake Erie, the uptrip and by far the most difficult. I have talked with many yacht owners about the Welland Canal passage and believe that knowledge beforehand of what to expect and how to meet it is quite necessary to peace of mind and avoidance of damage.

**Lock 1** at port Weller is about two mi. from the pierheads. Near the lock, on the port (east) side, is a fine small boat mooring where one may tie while making last minute preparations or waiting out a blow. The spot is marked with a large sign. When ready for the transit move over to the starboard (west) side of the canal. The lock master interprets this as your ready signal. If no other vessels are waiting take up position at the head of the waiting dock. If a small freighter is waiting take up position behind her. In any event the yacht will be placed at the extreme north end of locks 1, 2 & 3, because of the least disturbance as the water is let in. The locks are about 800 ft. long so there is plenty of room to avoid the prop wash of a small freighter. You will tie to the starboard side of the lock. As you move in, two heaving lines will be dropped from the lock edge, as near bow and stern as possible. The heavers are skillful but the crew must be alert because sometimes a miss occurs. Have your lines coiled with an eye splice or bowline of at least 2 ft. diameter at one end. Bend on the heaving line to the eye with any easy hitch and up they go. There will not be much lead either fore or aft. Take an easy turn around a stout cleat or niggerhead and have a deck hand on each line to take up slack and check the swing. As the water is let in to the lock, your vessel will move away from the wall toward the middle. You cannot check this, so do not be alarmed but keep her parallel to the wall. There will also be some movement fore and aft which you cannot check.



Port Weller Entrance



Lock #3



One of the 21 bridges in The Welland Canal.



← To Left, the North end of Welland Canal. To Right, the South end of Welland Canal. →

About half way up the lock walls will be found large sally ports leading to access tunnels. You may find yourself exactly opposite one or between two. The water rushes in and creates some turbulence and current which can be compensated for to some extent. The skipper, or a competent hand should be alert to change or adjust fenders and to advise the line handlers.

Upon arrival at the top the skipper goes ashore to the administration offices, with ships papers, pay his \$15 and secures a "let pass". Never leave the yacht unattended in any lock!

Some skippers may prefer to tie to the small boat dock below lock #1 and walk up to the administration office, secure the pass, and discuss things with the lock master, before coming into the lock. When ready to proceed out of the lock you direct the line handlers to remove your lines from the bollards - they are not to do so without your permission. With a freighter ahead of you keep secured until she is well out of the lock. With a cross wind blowing, the larger vessel must put on the power to get away quickly and the prop wash may be considerable.

Locks #2 & #3 are identical to #1. The preceding lock master will tell you, or you inquire, as to which side of the lock you will tie to so you can be ready well in advance.

Locks #4, #5 and #6 are known as the flight locks, one directly above the other. Here you lift over the Niagara escarpment, the ledge which forms the great falls. There are double locks, side by side and the water is let in from one side only. Under great pressure the water shoots across the lock floor, 20 feet under your keel, ricochets off the opposite wall and returns in a rush which pins you tightly against the wall. The pressure is so great that there is no fending off. Here the stout timber sled runners do their stuff because ordinary fenders will be compressed and chewed to pieces against the rough concrete wall. A long 2" x 4" or a 2" x 6" timber against fenders will exert a strain on cleats that is almost irresistible. In these locks the small boat goes to the extreme south end of the lock, right to the gate, because the water is quieter there. The lock master will be there, motioning you on. But the first few minutes are exciting because the entire lock is a mass of boiling, hissing water, due to air entrapped in the inlet tunnels. After 5 minutes the turbulence subsides but the pressure against the wall continues. The vessel moves directly from one lock to the other, staying always on the port side.

Lock #7 is a repetition of #1 and then there is a long stretch of level water until Lock #8 is reached. Here the skipper again goes ashore for some more paper work. Port Colborne is but a short distance away. There is only one place for a small boat to tie and that is on the starboard or west side of the channel about in front of Stan Kennedy, the ship chandler. The tops of harbor walls elsewhere are about 15' above the water with no access ladders. Anchorage may be made in the outer harbor behind the breakwall, out of ship lanes and well protected.

The trip down, from Lake Erie to Lake Ontario is quite simple. The skipper pays the \$15 fee at Lock #8 and surrenders the "let pass" at Lock #1 before the water is let out. As you pass into each lock, the line handlers place your lines over the bollards and cast them off and drop them to you upon signal at the bottom. As the gates open there is a slight surge of the water so have your power on before the lines come down. The before-mentioned sally ports pour out a miniature torrent that will move the vessel about but only for a brief interval. Needless to say the deck crew keeps the lines taut but paying out smoothly.

Human beings are not all cast in the same mold, but by and large the lock masters are capable, cooperative, friendly people. A pleasant word, a smile, and a thank you here and there go a long way. If you have any special problem or uncertainty, discuss it frankly with the lock master. He'll probably have an effective solution. Each lock is in telephone communication with the others and the word gets passed along.

Report by Howard Sharp.