



Detroit River

Chart Datum, Detroit River

- (1) Depths and vertical clearances under overhead cables and bridges given in this chapter are referred to the sloping surface of the river corresponding to a Lake St. Clair stage of 572.3 feet (174.4 meters) and a Lake Erie stage of 569.2 feet (173.5 meters) above mean water level at Rimouski, QC, on International Great Lakes Datum 1985 (IGLD 1985), which elevations are the planes of Low Water Datum for the two lakes. (See Chart Datum, Great Lakes System, indexed as such, chapter 1.)

General description

- (2) **Detroit River** is about 32 miles long from Detroit River Light at its mouth in Lake Erie to Windmill Point Light at the head of the river at Lake St. Clair.
- (3) The lower part of the river is broad and is filled by many islands and shallow expanses. The river banks in this part are more flatly sloping than those in the upper river. The river bottom is generally earth and boulders, except for a section of bedrock and boulders about 6 miles north of the lower end of Bois Blanc Island. Extensive rock excavation and dredging have been necessary to provide channels for deep-draft vessels.
- (4) The upper 13 miles of the river is a single deep channel, except at its head where it is divided by Peche Island and Belle Isle. The river banks in this stretch are quite steep, and the bottom is earth.

Canadian Waters

- (5) Once upstream of Detroit River Light, the **International Boundary** either parallels the main ship channels of the Detroit River, or lays within the same. For a detailed description of the Canadian shoreline/facilities in the Detroit River consult **Canadian Sailing Directions CEN304, Chapter 1, Detroit River**

Channels

- (6) Two dredged channels lead from Lake Erie to the mouth of Detroit River. East Outer Channel, a two-way passage, extends north-northwest from the lake to Detroit River Light. West Outer Channel passes west of the light and provides a passage for vessels of moderate draft bound for Monroe or Toledo.
- (7) Above Detroit River Light, lower Livingstone Channel is a two-way passage to the junction with Amherstburg Channel. From the junction, the two channels extend north to the junction with Ballards Reef Channel, Amherstburg Channel for upbound traffic and

Livingstone Channel for downbound traffic. Ballards Reef and Fighting Island Channels lead from the upper junction of Amherstburg and Livingstone Channels to the north end of Fighting Island. From here, natural deep water can be carried to the upper end of Belle Isle, thence a dredged channel leads to Lake St. Clair.

- (8) The channels through the river are well marked by lights and buoys.

Anchorage

- (9) Numerous submerged pipelines and cables are in Detroit River. Vessel masters are advised to exercise caution when coming to anchor in the river.

Fluctuations of water level

- (10) Each year the normal seasonal fluctuations produce a difference of about 2 feet between the highest and lowest monthly mean levels in the river. However, strong east or west winds can raise or lower, respectively, the water levels in the west end of Lake Erie and in the lower Detroit River by as much as 6 feet within 8 hours. Atmospheric pressure changes may cause temporary water level fluctuations of 1 foot or more.
- (11) On the 5th and 20th of each month the District Engineer, Corps of Engineers, Detroit, publishes a bulletin of the predicted range of water levels. (See Appendix A for address.)
- (12) Water level information for the Gibraltar area may be obtained by contacting Detroit Coast Guard Sector on VHF-FM channel 16. The information is given in whole inches above or below chart datum. In addition, Detroit Sector, at the beginning of the scheduled radio broadcast notice to mariners (see schedule in the appendix) includes this information.

Currents, Detroit River

- (13) The following currents are based on the averages of water flow through the entire cross section of the river, that is, from bank to bank and from the surface to the bottom during normal water flow conditions. Normal water flow conditions are encountered when there is no wind, Lake St. Clair is at a stage of 573.9 feet (174.9 meters), and the lower Detroit River (Lake Erie) stage is 571.0 feet (174.0 meters) above mean water level at Rimouski, QC, on International Great Lakes Datum 1985 (IGLD 1985), that is 1.6 feet (0.5 meter) and 1.8 feet (0.5 meter) above their respective Low Water Datums. The current encountered at midstream is usually about 1.5 times the average velocity. Greater velocities may be

expected when the difference between the lake levels is greater, or when lake stages are higher.

- (14) Currents for the following locations on the Detroit River are given at high water flow of 210,000 cubic feet per second (cfs), medium water flow of 184,000 cfs, and low water flow of 170,000 cfs, respectively.
- (15) Livingstone Channel Upper Entrance Light: 0.8 mph (0.7 knots), 0.7 mph (0.6 knots), and 0.7 mph (0.6 knots)
- (16) Fighting Island Channel North Light: 1.5 mph (1.3 knots), 1.5 mph (1.3 knots), and 1.4 mph (1.2 knots)
- (17) 1.7 miles below the Ambassador Bridge: 1.6 mph (1.4 knots), 1.4 mph (1.3 knots), and 1.3 mph (1.2 knots)
- (18) Lower end of Belle Isle: 1.4 mph (1.2 knots), 1.3 mph (1.1 knots), and 1.2 mph (1.0 knot)
- (19) Peche Island Light: 1.5 mph (1.3 knots), 1.4 mph (1.2 knots), and 1.2 mph (1.1 knots).

Weather, Detroit River and vicinity

- (20) Detroit, MI, is located near the west shore of Lake Erie and in the southwestern part of the state on a rather large isthmus of land that separates Lake Erie from Lake Huron. Within this isthmus lies the Detroit river which not only acts as a natural border between Ontario and Michigan, but also serves to connect Lake Erie with Lake St. Clair. Detroit averages about 12 days each year with maximum temperatures in excess of 90°F (32.2°C). July is the warmest month with an average high of 83°F (28.3°C) and an average minimum of 62°F (16.7°C). January is the coolest month with an average high of 31°F (-0.6°C) and an average minimum of 16°F (-8.9°C). The highest temperature on record for Detroit is 104°F (40°C) recorded in June 1988 and the lowest temperature on record is -21°F (-29°C) recorded in January 1984. About 133 days each year experience temperatures below 32°F (0°C) and an average 14 days each year records temperatures below 5°F (-15°C). Every month has seen temperatures below 40°F (4.4°C) except July (extreme minimum of 41°F (5°C) recorded in July 1965) and every month except June, July, and August has recorded temperatures below freezing (0°C).
- (21) The average annual precipitation for Detroit is 32.2 inches (818 mm) which is fairly evenly distributed throughout the year. Precipitation falls on about 201 days each year. The wettest month is June with 3.6 inches (91 mm) and the driest is February with only 1.7 inches (43 mm). An average of 32 thunderstorm days occur each year with June and July being the most likely months. Snow falls on about 82 days each year and averages about 41 inches (1041 mm) each year. January is the snowiest month averaging about 11 inches (279 mm). An eighteen inch (457 mm) snowfall in 24-hours occurred in December 1974. About eight days each year has a snowfall total greater than 1.5 inches (38 mm) and snow has fallen in every month except June through September. Fog is present on average 159 days each year and is evenly distributed throughout the year with a slight maximum in during the Autumn.

- (22) The prevailing wind direction in Detroit is the southwest. The winter season and transitional months of January through April are the windiest period averaging around 12 knots. Extremes often occur in squall lines or thunderstorms. A maximum gust of 82 knots occurred in June 1973. Winds along the river blow mainly out of the southwest and west, but others are common. In spring and summer, north through east winds are frequently encountered as are northwesterlies and southerlies in fall and winter.
- (23) (See Appendix B for **Detroit climatological table.**)

Ice

- (24) The lower part of the Detroit River, below Fighting Island, is generally shallow and has the same freezing characteristics as the west end of Lake Erie, forming an average thickness of 7 inches and an average maximum thickness of 11 inches. This ice generally starts to clear by mid-March because of the temperatures and the prevailing west winds. The upper part of the river is generally ice free except for shore ice and occasional drift ice. However, as a track is opened through Lake St. Clair, the broken ice will accumulate in the river above the natural ice cover in the lower part of the river. (See Winter Navigation, chapter 3.)

Navigation regulations

- (25) A vessel traffic reporting system and related navigation regulations have been established for the connecting waters from Lake Erie to Lake Huron. (See **33 CFR 162.130 through 162.140**, chapter 2, for regulations.)

Vessel Traffic Service

- (26) The Canadian Coast Guard operates a Vessel Traffic Service in Canadian waters from Long Point in Lake Erie through the Detroit and St. Clair Rivers to De Tour Reef Light in Lake Huron. (See chapter 3 and the Annual Edition of Canadian Notices to Mariners for complete information.)

Pilotage

- (27) The waters of the Detroit River are Great Lakes designated waters; registered vessels of the United States and foreign vessels are required to have in their service a United States or Canadian registered pilot. Registered pilots for the Detroit River are supplied by Lakes Pilots Association. (See Appendix A for address.) Pilot exchange points are 1 to 2 miles south of Port Colborne in Lake Erie, just below the Ambassador Bridge in Detroit River, and off Port Huron at the head of St. Clair River in about 43°05'30"N., 82°24'42"W. The pilot boat in the Detroit River, HURON MAIN, has an orange hull and a white cabin with the word 'Pilot' printed on the side of the cabin. Three pilot boats are at Port Huron: HURON BELLE has an international orange hull with an aluminum cabin, and HURON MAID and HURON LADY each have an international orange hull with a white cabin. (See Pilotage, chapter 3, and **46 CFR 401**, chapter 2.)

Principal ports

- (28) The principal ports on the Detroit River are at Trenton, Wyandotte, and Detroit, MI, and Windsor, ON. Deep-draft facilities have been developed throughout the length of the river.

Charts 14830, 14848, 14853, 14854

- (29) The **Detroit River** flows south from Lake St. Clair and empties into the northwest end of Lake Erie.
- (30) **Detroit River Light** (42°00'03"N., 83°08'28"W.), 55 feet above the water, is shown from a white conical tower with black top, on a hexagonal pier in the entrance to the Detroit River at the junction of East and West Outer Channels; a sound signal and racon are at the light.

Channels

- (31) **East Outer Channel** and **West Outer Channel**, dredged and well marked, lead northward through the shallows at the upper end of Lake Erie to the mouth of the Detroit River. Immediately north of Detroit River Light, the channels merge to form lower Livingstone Channel. A Federal project provides for a depth of 28.5 feet in East Outer Channel and 22 feet in West Outer Channel. (See Notice to Mariners and latest edition of charts for controlling depths.)
- (32) East Outer Channel is a two-way passage. West Outer Channel may be used by downbound vessels whose drafts permit. (See **33 CFR 162.130, through 162.140**, chapter 2, for regulations.) East Outer Channel Light 1E is equipped with a racon and a seasonal sound signal.
- (33) From Detroit River Light, lower Livingstone Channel provides for two-way traffic to the lower junction of Amherstburg Channel and upper Livingstone Channel, 1.5 miles southwest of Bar Point, the east entrance point to the river. A Federal project provides for a depth of 29.0 feet in lower Livingstone Channel. (See Notice to Mariners and latest edition of charts for controlling depths.)
- (34) An unmarked temporary **dumping ground** is in the approach to the Detroit River between East and West Outer Channels.

Small-craft facilities

- (35) Numerous marinas on the Detroit River and adjacent waters provide gasoline, diesel fuel, water, ice, electricity, marine supplies, sewage pump-out, railway and hoists to 250 tons and 150 feet. A launching facility for craft to 34 feet is on the waterway north of Belle Isle.

Charts 14830, 14848, 14846

- (36) **Huron River** empties into the northwest end of Lake Erie through the marshes on the west side of the mouth of the Detroit River. Depths are about 2 feet over the bar, thence 5 to 10 feet in the lower part of the

river. A fixed highway bridge with a clearance of 11 feet crosses the river about 1.8 miles above the mouth. An overhead power cable on the west side of the bridge has a clearance of 38 feet. A **slow-no wake speed** is enforced on the Huron River. A marina on the south side of the river below the highway bridge provides gasoline, water, electricity, sewage pump-out, a launching ramp, and a 6-ton crane.

Charts 14848, 14853

- (37) In the lower part of the Detroit River, from southwest of Bar Point north for about 7 miles, the dredged channel divides into upbound and downbound channels. The upbound channel east of Bois Blanc Island comprises Amherstburg Channel and the lower mile of Ballards Reef Channel. The downbound channel is Livingstone Channel, west of Bois Blanc Island.
- (38) **Amherstburg Channel** comprises three reaches. **Hackett Reach** extends about 3.7 miles northeast from the junction with Livingstone Channel to the lower end of Bois Blanc Island, thence **Amherstburg Reach** extends about 1 mile to the upper end of Bois Blanc Island, and thence **Limekiln Crossing Reach** extends about 1.2 miles to the junction with Ballards Reef Channel.
- (39) The channel through each of the reaches is 600 feet wide. The west half of the channel is the deep-draft channel and is separated from the east or light-draft channel by lighted buoys. A Federal project provides for a depth of 28.5 feet in the west half of Hackett Reach and 27.5 feet in the west half of Amherstburg and Limekiln Crossing Reaches with 21 feet in the east half through the entire channel. (See Notice to Mariners and latest edition of charts for controlling depths.)
- (40) The channels are well marked by lights and lighted and unlighted buoys. The deep-draft channel is marked by a lighted range in each reach.
- (41) Because of current effects, mariners are advised to exercise caution when turning from Hackett Reach into Amherstburg Reach.

Anchorage

- (42) Care should be exercised when anchoring in Amherstburg Channel between its upper end and the south end of Bois Blanc Island. The current in this area may cause the anchor to drag and overturn rocks, which may then become obstructions. Dragging can probably be lessened or entirely avoided by paying out sufficient length of chain before strain is brought to bear on the anchor.
- (43) Canadian regulations specify a **speed limit** of 8 knots for vessels of 15 gross tons and over in Amherstburg Channel.
- (44) The upper part of **Livingstone Channel**, passing east of the lower half of Grosse Ile and west of Bois Blanc Island, is about 6.7 miles long from its north entrance at

Ballards Reef Channel to its south junction with Amherstburg Channel 1.5 miles southwest of Bar Point. This section of Livingstone Channel is for downbound vessels except that traffic becomes two-way under certain winter conditions designated by the Commander, Ninth Coast Guard District. (See **33 CFR 162.130, through 162.140**, chapter 2, for regulations.) Most of the channel is revetted on both sides with rock excavated from the channel. Most of the revetment is low and wooded.

(45) The channel is well marked with lights and buoys.

Ballards Reef Channel Light 77D (42°08'30"N., 83°07'30"W.) marks the west side of the downbound turn into the entrance to Livingstone Channel at its junction with Ballards Reef Channel. Because of the strong east set of the current at the junction of Livingstone and Ballards Reef Channels, mariners are advised to favor the west side, if draft permits.

(46) North from its junction with Amherstburg Channel to the junction with Ballards Reef Channel, a Federal project provides for a depth of 29.0 feet in the lower part and 27.7 feet in the upper part of Livingstone Channel. (See Notice to Mariners and latest edition of charts for controlling depths.)

(47) Canadian regulations specify a **speed limit** of 10 knots in Livingstone Channel for vessels of 500 gross tons and over.

(48) Various forms of submerged and exposed compensating dikes extend to the west from the west channel revetment, connecting with Stony Island in the north part and extending to within about 400 feet of Sugar Island at the midpoint of the channel.

(49) **Bois Blanc Island, ON**, popularly known as Bob-Lo Island, is in the lower part of the Detroit River, close to the Canadian mainland and separated from it by Amherstburg Channel. A marina on the west side of the island has water and electricity. A ferry runs between Bois Blanc Island and Amherstburg, ON.

(50) **Caution.**—Numerous small craft have reported striking two submerged obstructions between the west side of Bois Blanc Island and the Livingstone Channel revetment; caution is advised.

(51) **Amherstburg, ON**, is a town on the east side of the Detroit River, opposite Bois Blanc Island.

(52) The following is extracted from **Canadian Sailing Directions CEN304, First Edition**.

(53) *The town of Amherstburg, with a population of 8,921 (1991), is a tourist resort with much historic appeal, having been a major battleground in the War of 1812 and also the northern end of the Underground Railroad for escaping slaves. There are also chemical, distillation and manufacturing plants in the area.*

(56) *The Canadian Coast Guard Base lies between the Hackett Reach range lights. The south wharf has a buoy maintenance and storage building; the wharf is 250 feet (76.2 m) long and had a depth of 21 feet (6.4 m) in 1994.*

A protected basin formed by the northern part of the south wharf had a depth of 3 feet (0.9 m) in 1994. The north wharf, 290 feet (88.4 m) long, has workshops and office buildings. In an emergency, temporary berthing at the Canadian Coast Guard Base may be arranged with the Sub-District Manager. There is a launching ramp at the base.

(57) *Amherstburg is a Customs vessel reporting station for pleasure craft.*

(58) *The Allied Chemical wharf, at the upper end of Amherstburg, is a series of dolphins connected by catwalks. The wharf is 300 feet (91.4 m) long with a depth of 21 feet (6.4 m) in 1994.*

(59) *A Canadian Coast Guard Rescue Cutter is based at Amherstburg from the beginning of April to mid-December each year, though these dates are subject to change (see information on Search and Rescue in Sailing Directions booklet CEN 300—General Information, Great Lakes).*

(60) **Caution.**—*Extra care is necessary when anchoring in Amherstburg Channel between its upper end and the south end of Bois Blanc Island; the current may cause an anchor to drag and overturn rocks which then become obstructions.*

(61) **A submerged water intake** north of the front structure of the Fort Malden range extends 300 feet (91.4 m) into the river.

(62) **Caution.**—*Small craft operators have reported striking two submerged obstructions between the west side of Bois Blanc Island and the Livingstone Channel dyke.*

(63) *There are several small wharves and marinas in the area of Amherstburg Channel.*

(64) *Riverside Marina, 1 mile north of Bar Point, had depths of 2 feet (0.6 m) in 1994 and offered dockage with power outlets, picnic area, pay phone, groceries, bait, tackle, ice, gasoline and diesel fuel.*

(65) *Duffys Motor Inn & Marina, 0.2 mile north of the Coast Guard base, had depths of 1 to 10 feet (0.3 to 3 m) in 1994 and offered dockage with power and water, municipal ramp, motel accommodation (with pool), pay phone, snack bar, restaurant and licensed dining room, ice and gasoline. The facilities and attractions of Amherstburg are all near by.*

(66) *Duffs Marina, 1 mile farther north, had depths of 1 to 2 feet (0.3 to 0.6 m) in 1994 and offered dockage, fishing boat rentals, pay phone, drinking water, some groceries, bait, tackle, snack bar, restaurant, ice and gasoline.*

(67) Four radio masts north of Amherstburg in about 42°08'48"N., 83°05'30"W. are prominent. They are reported to be visible from Point Pelee in Lake Erie to Lake St. Clair.

(68) The lower part of the Detroit River west of Livingstone Channel is open and generally shallow with several small islands. Natural channels with depths of

about 13 feet and less, marked by buoys, provide access for small craft.

(69) West of the lower end of the revetments in Livingstone Channel, a small-craft channel marked by buoys leads from the open part of the lower Detroit River between **Sugar Island** and **Meso Island**, along the Grosse Ile shore, and thence west of **Stony Island**. In the narrow part of this channel between Stony Island and Grosse Ile, a line of submerged bridge abutments, with least depths of $\frac{1}{2}$ foot, crosses the channel, and submerged cables follow the same path just to the south and north of the abutments. A buoy marks the west side of the westernmost abutment, and in 1977, the best water was inside the buoy within 150 to 200 feet of the Grosse Ile shore. The west abutment is about 280 feet from shore.

(70) A natural channel marked by buoys leads from open water in the lower part of the Detroit River along the east side of **Celeron Island** and connects with Trenton Channel at Gibraltar. The least depth in this channel is about 7 feet.

(71) **Sugar Island Cut**, about 400 feet wide, is an opening between the east side of Sugar Island and a compensating revetment that extends west from the west revetted wall of Livingstone Channel.

(72) **Hole-in-the-Wall**, west of the north end of Bois Blanc Island, is a 0.2-mile-wide gap in the revetted walls of Livingstone Channel that allows small craft to cross the main channel to the Canadian side of the Detroit River. A strong southwest current flows through Hole-in-the-Wall; caution is advised.

(73) Protective riprap extends out 30 feet from the base of the light marking the north end of the west revetment on the south side of Hole-in-the-Wall. The structure should not be passed close aboard, even by vessels of shallow draft.

(74) **Ballards Reef Channel** is about 3.5 miles long from its lower end junction with Amherstburg Channel to its upper end junction with Fighting Island Channel. Upper Livingstone Channel joins Ballards Reef Channel about 1 mile above the latter's lower end. Below its junction with Livingstone Channel, Ballards Reef Channel is normally used for upbound traffic, and above the junction it is used for upbound and downbound traffic.

(75) Ballards Reef Channel is well marked by lights, lighted and unlighted buoys, and by a lighted range at each end. A Federal project provides for a depth of 28.5 feet above the junction with Livingstone Channel and 27.5 feet below the junction with Livingstone Channel. (See Notice to Mariners and latest edition of charts for controlling depths.)

(76) An auxiliary channel for light-draft vessels adjoins the east side of Ballards Reef Channel. It is marked by buoys and has depths of about 14 feet.

(77) **Fighting Island Channel** extends from the upper end of Ballards Reef Channel, about 2 miles below the head of Grosse Ile, along the west side of Fighting Island to the natural deep water north of Fighting Island. A Federal project provides for a depth of 28.5 feet in

Fighting Island Channel. (See Notice to Mariners and latest edition of charts for controlling depths.)

Anchorage

(78) A deep-draft anchorage, marked on the west side by buoys, is on the west side of the south end of Fighting Island Channel. The anchorage is used when conditions are unfavorable for proceeding through the confined deep channels leading south into Lake Erie. Vessels using this anchorage should be careful to avoid Mamajuda Island Shoal, a long shoal extending from the north end of Grosse Ile (Point Hennepin) into the north side of the anchorage.

(79) A buoyed natural channel leads north from the northwest part of the anchorage between the upper end of Grosse Ile and **Mamajuda Island Shoal** and joins with Trenton Channel at Wyandotte, MI. The controlling depth in the channel is about 21 feet.

(80) **Fighting Island, ON**, on the east side of Fighting Island Channel off the Ontario mainland, is about 4 miles long and about 0.5 mile wide. The entire island is either marsh or waste bed fill from various concerns that pump manufacturing residue to the island as waste. Low bluffs are on the west side of the island.

(81) From about the midpoint of Ballards Reef Channel, a natural deep channel leads north between Fighting Island and the Canadian mainland. The channel is divided by **Turkey Island, Grassy Island**, and several shoals, but near the upper end, the channels rejoin before merging with the main channel of the Detroit River at the north end of Fighting Island. The channel is marked by buoys; see the latest edition of the chart for general depths. **La Salle, ON**, on the east side of the channel at the north end, has several small-craft facilities.

(82) **Grosse Ile, MI**, about 8 statute miles (7 nm) long and 1.5 statute miles (1.3 nm) wide, is the largest island in the Detroit River. It extends along the west side of the dredged river channels from about the midpoint of upper Livingstone Channel north to about the midpoint of Fighting Island Channel opposite the city of Wyandotte, MI. Trenton Channel separates the west side of the island from the mainland. The north end of the island, **Point Hennepin**, is a waste disposal site; the rest of the island consists mostly of residential communities and private facilities.

(83) **Thorofare Canal**, a large shallow drainage ditch about 3.5 miles long, crosses the body of Grosse Ile in a northeast-southwest direction. Several highway bridges and overhead cables cross this ditch. Passage should not be attempted without local knowledge.

(84) A **slow-no wake speed** is enforced within 1,000 feet of shore of Grosse Ile, except in Trenton Channel and in the channel between the northeast side of the island and Mamajuda Island Shoal. A **slow-no wake speed** is enforced in Thorofare Canal and in the canals between Grosse Ile and the small islands off its south end.

Charts 14848, 14854, 14853

(85) **Ecorse Channel** is a buoyed, natural deepwater channel that follows the curve of the Michigan shoreline from the junction of Fighting Island Channel and Trenton Channel southwest for about 1.2 miles to its lower junction with Trenton Channel. Between the upper and lower junctions, Ecorse Channel is separated from Trenton Channel by **Mud Island, MI** and the shoals that extend northeast and southwest from it. Ecorse Channel has a controlling depth of about 10 feet at its northeast end, with deeper water in the lower part. **Ecorse, MI**, is on the west side of the channel at the mouth of the **Ecorse River**.

(86) A **slow-no wake speed** is enforced within 1,000 feet of shore in the waters of the Detroit River adjacent to the city of Ecorse.

(87) **Trenton Channel** extends from the north end of Fighting Island Channel southwest to the Michigan shore, thence south along the shore for about 6 miles to a turning basin at the upper end of the city of Trenton, thence 3 miles to another turning basin at the lower end of the city. The dredged channel, marked by buoys, is separated from the main part of the Detroit River by Grassy Island and Grosse Ile. (See Notice to Mariners and latest edition of charts for controlling depths.)

(88) From the lower end of the Trenton Channel lower turning basin, a depth of about 6 feet can be carried through the narrow, crooked natural channels between Grosse Ile and the mainland to the town of Gibraltar and the open river below Grosse Ile.

(89) The Grosse Ile Toll highway bridge, a swing span with a clearance of 10 feet, crosses Trenton Channel 2.2 miles below Point Hennepin. The Grosse Ile Parkway bridge, crossing Trenton Channel just above the lower turning basin, has a swing span with a clearance of 18 feet. (See **33 CFR 117.1 through 117.59 and 117.631**, chapter 2, for drawbridge regulations.)

(90) **Wyandotte, MI**, fronts Trenton Channel for about 3 miles opposite Point Hennepin. The city is an important industrial center, and numerous stacks in the city are prominent from the river.

(91) A **slow-no wake speed** is enforced within 1,000 feet of shore in the waters of the Detroit River adjacent to the city of Wyandotte.

Towage

(92) Tugs for Wyandotte are available from Detroit. (See Towage under Detroit.)

Wharves

(93) **City of Wyandotte, Power Plant Wharf**: 0.5 mile north of Point Hennepin; 630 feet of berthing space; 18 to 23 feet alongside; deck height, 8 feet; open storage for 60,000 tons of coal; receipt of coal; owned and operated by City of Wyandotte.

Small-craft facilities

(94) Several marinas in the north part of the city provide transient berths, gasoline, diesel fuel, water, ice, electricity, sewage pump-out, launching ramps, and marine supplies. Lifts to 45 tons are available for hull, engine, and radio equipment repairs.

(95) **Trenton, MI**, just south of Wyandotte, fronts Trenton Channel opposite Grosse Ile for about 4 miles. The stacks of the Detroit Edison Co., 0.5 mile southwest of the Grosse Ile Parkway bridge, are prominent from the river, especially from the south.

Towage

(96) Tugs for Trenton are available from Detroit. (See Towage under Detroit.)

Quarantine, customs, immigration, and agricultural quarantine

(97) (See chapter 3, Vessel Arrival Inspections, and appendix for addresses.)

(98) **Quarantine** is enforced in accordance with the regulations of the U.S. Public Health Service. (See Public Health Service, chapter 1.)

(99) A **slow-no wake speed** is enforced within 1,000 feet of shore within the limits of Trenton.

Wharves

(100) Trenton has three deep-draft facilities. (For a complete description of the port facilities, refer to Port Series No. 45, published and sold by the U.S. Army Corps of Engineers. See Appendix A for address.) The alongside depths given are reported depths. (For information on the latest depths, contact the operators.)

(101) **Detroit Steel Company**: (42°09'33"N., 83°09'59"W.); 1,000-foot face; 27 feet alongside; deck height, 7 feet; three 12-ton, traveling bridge cranes, operating rate of 1,200 tons per hour; open storage for over 2 million tons of iron ore, iron ore pellets, and limestone; receipt of iron ore, iron ore pellets, and limestone; owned and operated by Detroit Steel Company.

(102) **Mobil Oil Corp. Wharf**: (42°08'15"N., 83°10'33"W.); 225 feet of berthing space with dolphins; 17 feet alongside; deck height, 5 feet; loading platform, 9 feet; pipelines extend to storage tanks, capacity over 1¼ million barrels; occasional receipt and shipment of fuel oil and gasoline; owned and operated by Mobil Oil Corp.

(103) **Detroit Edison Co., Trenton Channel Power Plant Wharf**: west side of Trenton Channel lower turning basin; 960-foot face; 21 to 23 feet alongside; deck height, 9 feet; open storage for 732,000 tons of coal; receipt of coal; owned and operated by Detroit Edison Co.

Small-craft facilities

- (104) Two marinas at Trenton provide gasoline, diesel fuel, water, ice, electricity, marine supplies, a 10-ton hoist, and launching ramps.

Charts 14848, 14853

- (105) **Gibraltar, MI** is a town on the Michigan mainland opposite the south end of Grosse Ile, about 2 miles below the Trenton Channel lower turning basin. Private lights and a private **239°** lighted range mark the entrance channel to Gibraltar from the Detroit River. The range should be followed closely because of rocks along the south side of the channel. A **slow-no wake speed** is enforced within 500 feet of shore within the limits of Gibraltar. Marinas inside the entrance channel provide gasoline, diesel fuel, water, ice, sewage pump-out, and marine supplies. Hoists to 40 tons are available for hull and engine repairs.

- (106) **Lake Erie Metropark Marina**, developed by the Michigan State Waterways Commission, about 3 miles south of Gibraltar, provides transient berths with electricity, water, and sewage pump-out for boats no greater than 30 feet. The entrance is marked by private lighted and unlighted buoys and a **270°** lighted range.

- (107) Above Fighting Island, for about 9 miles to Belle Isle, the Detroit River narrows into a single channel from 0.35 to 0.5 mile wide. In this stretch the river is generally clear, with depths of 29 to 43 feet at midriver. Buoys mark the principal shoals that extend off the banks of the river.

- (108) The most prominent feature on the Detroit River is the Renaissance Center (42°19'44"N., 83°02'24"W.). The flashing light atop the building is reported to be visible for more than 20 miles.

Anchorage

- (109) An anchorage designated by the Canadian Government is 1 mile above the north end of Fighting Island. The anchorage, 800 feet by 4,000 feet with depths of 31 to 37 feet, is marked by a lighted buoy at the southeast corner.

Wharves

- (111) There are several deep-draft facilities along the west side of the river between the north end of Fighting Island and the mouth of the River Rouge, 2 miles upstream. (For a complete description of the facilities, refer to Port Series No. 45, published and sold by the U.S. Army Corps of Engineers. See Appendix A for address.) The alongside depths given are reported depths. (For information on the latest depths, contact the operators.)

- (112) **Nicholson Terminal and Dock Co., Ecorse Pier:** (42°15'23"N., 83°07'12"W.); 1,820 feet of berthing space northeast side, 25 to 28 feet alongside; 486-foot face, 36 feet alongside; 1,230 feet of berthing space southwest

side, 8 to 16 feet alongside; deck height, 7 to 9 feet; two 70-ton and two 12-ton, traveling, gantry cranes; three 220-ton, crawler cranes; four sheds providing 185,000 square feet covered storage; 47 acres open storage; receipt and shipment of conventional and containerized general cargo, steel, coal, scrap metal, and tallow; owned and operated by Nicholson Terminal and Dock Co.

- (113) **Detroit Bulk Storage, River Rouge Dock:** (42°15'31"N., 83°07'06"W.); 600 feet of berthing space and 900 feet of slip access, 26 feet alongside; deck height 7 to 9 feet; 13 acres of open storage; receipt of limestone, salt, coal, and coke; owned and operated by Detroit Bulk Storage.

- (114) **Usher Oil Co., Riverfront Terminal Wharf:** (42°15'39"N., 83°07'11"W.); 300 feet of berthing space; 24 feet alongside; deck height, 11 feet; storage tanks, capacity 835,000 barrels; receipt and shipment of petroleum products; owned by National Steel Corp., Great Lakes Division and operated by Usher Oil Co.

Repairs

- (115) Nicholson Terminal and Dock Co. operates a floating drydock at the inner end of their pier. The 2,500-ton drydock is 170 feet long with a width of 50 to 55 feet and a depth of 13 feet over the keel blocks. Portable equipment is available for making general repairs to vessels at berth anywhere in the harbor.

Charts 14848, 14853, 14854

- (116) **River Rouge** discharges into the Detroit River at the south end of the city of Detroit, about 2 miles above Fighting Island. A Federal project has improved River Rouge as far as a turning basin about 2.5 miles above the entrance.

- (117) **Short Cut Canal 21** is the section at the entrance to River Rouge from Detroit River to the junction with **Old Channel**. The canal avoids the large bend in the old river channel (Old Channel) at the lower part of River Rouge, and shortens the distance to facilities upstream by more than 1 mile. The connection between Short Cut Canal 21 and Old Channel has created **Zug Island**, which is occupied by large industrial corporations.

- (118) The Federal Project provides for a depth of 25 feet in Short Cut Canal 21 and River Rouge to about 300 feet below the West Jefferson Ave. Bridge, thence 21 feet to the turning basin at the head of the project, with 21 feet in the basin. Old Channel has a project depth of 25 feet from the entrance to just below the first bascule bridge, thence 18 feet to about 0.5 mile above the mouth, thence 17 feet to the railroad swing bridge, thence 21 feet to the junction with Short Cut Canal 21. (See Notice to Mariners and latest editions of charts for controlling depths.) The north side of the entrance to Short Cut Canal 21 is marked by a lighted buoy. Rapid shoaling occurs in the canal and river because of the soft

Structures across River Rouge						
Name•Description•Type	Location	Miles*	Clear Width of Draw or Span Opening (feet)	Clear Height above Low Water Datum (feet)	Information	
1	Overhead power cable	42°16'40"N., 83°06'54"W.	0.32		191	
2	Overhead power cable	42°16'40"N., 83°06'55"W.	0.37		191	
3	Overhead gas pipeline	42°16'41"N., 83°06'56"W.	0.39		153	
4	National Steel Corporation Railroad Bridge (bascule)	42°16'41"N., 83°06'57"W.	0.40	125	6	Notes 1 and 2 KUZ-371
5	Overhead gas pipeline	42°16'42"N., 83°06'58"W.	0.41	240	123	
6	Overhead cable	42°16'43"N., 83°07'00"W.	0.45		174	
7	West Jefferson Avenue Bridge (bascule)	42°16'51"N., 83°07'44"W.	1.10	125	9	Note 1
8	ConRail Bridge (bascule)	42°16'58"N., 83°08'08"W.	1.48	123	8	Notes 1 and 2
9	Fisher Freeway I-75 Bridge (fixed)	42°17'13"N., 83°08'22"W.	1.85	230	100	
10	Norfolk Southern Railroad Bridge (bascule)	42°17'15"N., 83°08'23"W.	1.87	125	8	Note 1
11	Overhead pipeline	42°17'15"N., 83°08'24"W.	1.90	300	103	
12	Fort Street Bridge (bascule)	42°17'28"N., 83°08'33"W.	2.20	118	9	Note 1
13	Dix Avenue Bridge (bascule)	42°17'47"N., 83°09'03"W.	2.73	125	8	Note 1
14	Overhead power cables	42°17'48"N., 83°09'04"W.	2.75		130	
Old Channel						
15	Overhead gas pipeline	42°17'20"N., 83°06'28"W.	0.26		153	
16	Delray Connecting Railroad Bridge (bascule)	42°17'21"N., 83°06'34"W.	0.34	120	7	Note 1
17	Overhead cable	42°17'24"N., 83°07'04"W.	0.77		188	
18	Delray Connecting Railroad Bridge (swing)	42°17'23"N., 83°07'05"W.	0.80	102	7	Note 1
19	Overhead cable	42°17'22"N., 83°07'07"W.	0.82		188	

* Miles above the mouth of the river

Note 1 – See 33 CFR 117.1 through 117.59, chapter 2, for drawbridge regulations.

Note 2 – The bridgetender monitors VHF-FM channel 16 (156.80 MHz) and works on channel 12 (156.60 MHz).

bottom. A number of cables, water mains, and tunnels cross under the canal and river; masters should exercise caution when dropping anchors.

Regulations

- (119) A **speed limit** of 4 mph is enforced in River Rouge and Short Cut Canal 21. (See **33 CFR 162.130 through 162.140**, chapter 2, for navigation regulations.)

Wharves

- (120) Both sides of River Rouge and Short Cut Canal 21 are lined by industrial corporations and their deep-draft facilities. Only the major deep-draft facilities are listed in the table. (For a complete description of facilities in River Rouge, refer to Port Series No. 45, published and sold by the U.S. Army Corps of Engineers. See Appendix A for address.) The alongside depths given in the table are reported depths. (For information on the latest depths, contact the operator.) Many of the facilities have railway, water, and electrical shore-power connections. A numbering system has been adopted by members of the Detroit and St. Clair River Operations Workgroup which helps identify a facility destination or tie-up location to another vessel or to the United States or Canadian Coast Guards. These numbers are shown in

parenthesis following the name of the facility in the table below.

Supplies

- (121) Bunker fuel is available at several facilities in the river, or by barge or truck. A supply company on the west side of Old Channel has supplies and provisions.

Charts 14848, 14853

- (122) About 0.5 mile above the mouth of Old Channel, overhead power cables with a minimum clearance of 165 feet across the Detroit River between Detroit and Windsor, ON.
- (123) The **Ambassador Bridge** crosses the Detroit River 2.2 miles above the mouth of Old Channel. The suspension span has a clearance of 156 feet for 100 feet at the center, decreasing to 133 feet at each side of the river.
- (124) A shoal, marked at its outer edge by a lighted buoy, extends off the Canadian side of the river for about 0.5 mile above the Ambassador Bridge.
- (125) Two tunnels cross under the Detroit River above the Ambassador Bridge. The ConRail Tunnel, 0.9 mile above the bridge, was covered by a depth of 31 feet at midchannel in 1959, with depths of 24 and 34 feet, 300

Facilities along Short Cut Canal 21, River Rouge, and Old Channel at Detroit

	Name	Location	Berthing Space (feet)	Depths* (feet)	Deck Height (feet)	Mechanical Handling Facilities and Storage	Purpose	Operated by:
1	Michigan Marine Terminal Wharf (Rouge 11)	42°16'44"N., 83°07'12"W.	700	22	7	Pipelines extend to tank storage (8 million barrels)	Receipt and shipment of petroleum products	Michigan Marine Terminal
2	BP Terminal River Rouge Wharf (Rouge 15)	42°16'45"N., 83°07'20"W.	1,000	20	7.5	Pipelines extend to tank storage (833,000 barrels)	Receipt and shipment of petroleum products	BP
3	Carmeuse Lime Co. River Rouge Wharf (Rouge 19)	42°16'47"N., 83°07'35"W.	1,280	25	4	Open storage (400,000 tons of limestone and 28,000 tons of coal)	Receipt of limestone and coal	Carmeuse Lime Company
4	U.S. Gypsum Co. Dock (Rouge 21)	42°16'52"N., 83°07'55"W.	905	21	6	• Open storage (85,000 tons of gypsum) • Silo storage (90,000 ton capacity)	Receipt of gypsum	United States Gypsum Company
5	Motor City Materials (Rouge 25)	42°16'54"N., 83°08'03"W.	730	17-20	4	Open storage (11 acres)	Receipt of miscellaneous dry bulk commodities	Dale Osburn Industries
6	Great Lakes Aggregates Rouge River Rock Dock (Rouge 31)	42°17'00"N., 83°08'18"W.	654	18-20	2-6	Open storage (100,000 tons of limestone)	Receipt of limestone	Great Lakes Aggregates
7	Trumbull Asphalt Co. Detroit Plant Wharf (Rouge 41)	42°17'18"N., 83°08'29"W.	500	20	6	Tank storage (131,000 barrels)	Receipt of asphalt	Trumbull Asphalt Company
8	Marathon Petroleum Co., River Rouge Terminal Wharf (Rouge 45)	42°17'23"N., 83°08'32"W.	415	20-23	5-6	Pipelines extend to storage tanks (900,000 barrels)	Shipment of asphalt	Marathon Petroleum Company
9	Detroit Lime Co. Wharf (Rouge 59)	42°17'44"N., 83°09'01"W.	800	21	9	• Open storage (350,000 tons of limestone) • Silo storage (8,700 tons of lime)	Receipt of limestone and occasionally coal	Detroit Lime Company
10	Jefferson Marine Terminal Biardi Dock (Rouge 20)	42°16'53"N., 83°07'46"W.	735	21	6	Open storage (25,000 tons of limestone)	Receipt of limestone	Angelo Baiardi and John Diangelo/ Jefferson Marine Terminal
11	Detroit Bulk Storage Rouge River Dock (Rouge 22)	42°16'54"N., 83°07'50"W.	735	15	6	Open storage (50,000 tons of limestone)	Receipt of limestone	Angelo Baiardi and John Diangelo/ Detroit Bulk Storage
12	Carmeuse Lime Co. Detroit Wharf (Rouge 24)	42°16'58"N., 83°08'02"W.	900	19-21	8	Open storage (110,000 tons of material)	Receipt of limestone	Carmeuse Lime Company
13	St. Marys Cement Co. Detroit Plant Wharf (Rouge 34)	42°17'03"N., 83°08'14"W.	700	19-21	11-15	• open storage (255,000 tons of limestone, slag, coal, and gypsum) • covered storage (120,000 tons of clinker) • silo storage (60,000 tons of cement)	• Receipt of limestone, gypsum, slag, cement clinker, coal • Shipment of cement	St. Marys Cement Company
14	Holcim Terminal Inc. (Rouge 42)	42°17'20"N., 83°08'25"W.	792	21	11	Open storage (15 acres)	Receipt of limestone/ shipment of scrap metal	Holcim Terminal Inc.
15	Morton Salt Co. Detroit Wharf (Rouge 48)	42°17'24"N., 83°08'28"W.	700	12	7	• Crawler crane (85 tons) • Silo storage (8,000 tons of salt) • Open storage (63,000 tons of salt)	Receipt of bulk salt	Morton International Inc.
16	Severstal North America East Wharf (Rouge 62)	42°18'06"N., 83°09'26"W.	2,514	17-22	6	• three cranes • Storage trough (152,000 tons of material) • Open storage (437,000 tons of coal / 308,000 tons of limestone / 800,000 tons of iron ore)	Receipt of iron ore, iron ore pellets, coal, and limestone	Severstal North America
17	Severstal North America West Wharf (Rouge 63)	42°18'03"N., 83°09'31"W.	2,915	6-21	6	• Open storage (11,000 tons of limestone)	Receipt of limestone	Severstal North America
18	Jefferson Marine Terminal Old Channel Wharf (Rouge 96)	42°17'10"N., 83°07'12"W.	1,257	10-21	5	• Unloading tower • Silo storage (26,000 tons of cement) • Open storage (77,000 tons of limestone)	Receipt of limestone and sand and occasionally slag, cement, and fly ash	Clawson Concrete
19	U.S. Steel Old Channel Ore Dock (Zug 71)	42°17'17"N., 83°06'20"W.	1,287	21	8	• Bridge crane • Open storage (250,000 tons of iron-ore)	Receipt of iron-ore pellets, scrap metal, slag, and limestone	United States Steel Corporation

Facilities along Short Cut Canal 21, River Rouge, and Old Channel at Detroit

	Name	Location	Berthing Space (feet)	Depths* (feet)	Deck Height (feet)	Mechanical Handling Facilities and Storage	Purpose	Operated by:
20	U.S. Steel Area B Dock (Zug 91)	42°17'16"N., 83°07'11"W.	1,000	17	8	Open storage (60,000 tons of coal)	Receipt of coal	United States Steel Corporation
21	U.S. Steel Short Cut Canal Dock (Zug 06)	42°16'37"N., 83°06'44"W.	1,300	21	8	Open storage (900,000 tons of coal)	Receipt of coal	United States Steel Corporation
22	U.S. Steel Stone Dock (Zug 05)	42°16'42"N., 83°06'30"W.	1,000	27	8	Open storage (520,000 tons of limestone and 500,000 tons of iron-ore)	Receipt of limestone and iron-ore pellets	United States Steel Corporation
23	U.S. Steel Ore Dock No. 3 (Zug 03)	42°16'50"N., 83°06'25"W.	1,349	27	10	• Four bridge cranes • Open storage (800,000 tons of iron-ore)	Receipt of iron-ore pellets	United States Steel Corporation
24	U.S. Steel Ore Dock No. 1 (Zug 01)	42°17'05"N., 83°06'17"W.	2,100	25-27	10	Pipeline extends to storage tanks (two million gallons of coal tar)	Shipment of coal tar, coke, coke breeze, mill scale, and iron-ore	United States Steel Corporation

* The depths given above are reported. For information on the latest depths contact the port authorities or the private operators.

feet from the United States shoreline and 350 feet from the Canadian shoreline, respectively. The Detroit-Windsor Tunnel, a highway tunnel 2 miles above the bridge, was covered by a depth of 40 feet at midchannel in 1959, with depths of 24 and 36 feet, 500 feet from the United States shoreline and 350 feet from the Canadian shoreline, respectively. Vessels are cautioned not to anchor over or near these tunnels.

(126) A shoal with a least depth of 16 feet extends off the U.S. shoreline between the two tunnels. Buoys mark the upper and lower ends of the shoal.

Anchorage

(127) A designated deep-draft anchorage is in U.S. waters between the upper tunnel and Belle Isle. (See **33 CFR 110.1 and 110.206**, chapter 2, for limits and regulations.)

Small-craft facility

(128) A public docking facility constructed by the city and the Michigan State Waterways Commission is on the north side of the river about 2.8 miles above the Ambassador Bridge. Water, electricity, and sewage pump-out station are available.

(129) The **harbormaster** assigns berths.

(130) **Belle Isle, MI**, about 3 statute miles (2.6 nm) long and 1 statute mile (0.9 nm) wide, is in midriver near the upper end of the Detroit River. **Fleming Channel**, the main river channel, follows between the south side of the island and the Canadian shore to the head of the river at Lake St. Clair. The lower part of the channel is through natural deep water, thence from about mid-length of Belle Isle to Lake St. Clair the channel is dredged. The limits of the dredged channel are marked by lighted buoys. **Belle Isle Light** (42°20'24"N., 82°57'35"W.), 30 feet above the water, is shown from a

pile on the southeast point of the island and marks the north side of Fleming Channel.

(131) A Federal project provides for a depth of 28.5 feet in the dredged sections of Fleming Channel from mid-length of Belle Isle to about 0.3 mile northeast of Peche Island Range Front Light, thence 27.5 feet to Peche Island Channel in Lake St. Clair (See Notice to Mariners and latest edition of charts for controlling depths.)

(132) A 074°–254° measured mile has been reported on the south side of Belle Isle.

(133) **William Livingstone Memorial Light** (42°20'49"N., 82°57'16"W.), 58 feet above the water and shown from a white pyramidal monument on the east end of Belle Isle, is a **247°** leading light marking the entrance to the Detroit River from Lake St. Clair.

(134) Generally, only local and pleasure craft use the channel on the north side of Belle Isle. The lower entrance is marked by a lighted buoy which marks a 6-foot shoal that extends 0.5 mile from the west end of Belle Isle. **Scott Middle Ground** is an extensive shoal area, with depths to 1 foot, between Belle Isle and the U.S. shore. Natural channels marked by buoys lead north and south of the shoal. The north channel has a controlling depth of about 18 feet. Above Scott Middle Ground, a 12-foot spot is marked on its north side by a buoy in midchannel north of Belle Isle. The upper entrance to the channel north of Belle Isle is through a dredged channel marked by lighted and unlighted buoys. In 2006, the controlling depth was 19.7 feet. A fixed highway bridge (Douglas McArthur Bridge) with a clearance of 32 feet crosses from Detroit to the lower end of Belle Isle.

(135) **Erma Henderson Boat Marina**, developed by the Michigan State Waterways Commission, is on the mainland side of the channel north of Belle Isle. The marina provides transient berths, electricity, water ice, and sewage pump-out. The entrance is marked by private lights.



Detroit River (upper end) and Lake St. Clair
Image courtesy of Photography Plus/Marge Beaver (1995)

(136) **Peche (Peach) Island, ON**, is off the Canadian shore on the south side of the head of the Detroit River. Extensive shoals are off the west, north, and east sides of the island. **Peche Island Light** ($42^{\circ}20'54''\text{N}$, $82^{\circ}56'33''\text{W}$), 44 feet above the water, is shown from a cylindrical tower with a triangular red daymark on the northwest side of the shoal off the west end of the island. The light marks the southeast side of Fleming Channel, but should not be passed close aboard because of protective riprap. A lighted buoy at the west extremity of the shoal marks the north side of the entrance to a buoyed natural deepwater channel that leads from Fleming Channel around the south side of Peche Island into Lake St. Clair. The depths in Lake St. Clair at the outer end of the channel are about 8 feet.

(137) **Windmill Point Light** ($42^{\circ}21'27''\text{N}$, $82^{\circ}55'48''\text{W}$), 42 feet above the water, is shown from a white conical tower on a concrete base on the north side of the entrance to the Detroit River.

(138) **Windsor, ON**, is a major industrial city fronting the southeast side of the Detroit River from Fighting Island northeast to the head of the river.

(139) The following is extracted from **Canadian Sailing Directions CEN304, First Edition**.

(140) *Windsor Harbour* ($42^{\circ}19'\text{N}$, $83^{\circ}04'\text{W}$) extends for 14 miles along the Canadian shores of Detroit River and Lake St. Clair. The SW limit of the harbour is a straight line drawn from Fighting Island North light at the International Boundary in a $046\frac{1}{2}^{\circ}$ direction to

the shore. The NE limit of the port is the northerly extension of the east limit of the city of Windsor to the International Boundary.

(141) *The city of Windsor*, with a population of 191,435 (1991) and a metropolitan area population of 264,800, has more than 500 industries and is a major Canadian automobile manufacturing centre. Windsor is the principal outlet for Ontario agricultural products; major canning companies operating in Windsor take advantage of the extended growing season and crop varieties. Windsor is also the home of Ontario's first major casino.

(142) *Windsor is a Customs land border reporting station for passengers, general public, and commercial highway traffic; a vessel clearing station for commercial traffic; and a vessel reporting station for pleasure craft.*

(143) *Immigration and agricultural inspection facilities are also available at Windsor.*

(144) *Windsor Harbour is administered by the Windsor Port Authority. Regulations, information and rates may be obtained from the office of the Port Authority at 502-251 Goyeau St., Windsor, ON N9A 6V2.*

(145) *Windsor Harbour was used by 2,822 ships, ferries and barges in 1994, with a total of 4.3 million tonnes of cargo. Commodities handled include aggregates, salt, lumber, petroleum, general cargo, grain, other dry and liquid bulk, and railroad barges.*

Major Port Facilities in Windsor Harbour				
Name	Wharf Length ft (m)	Depth* ft (m)	Elevation** ft (m)	Remarks
Sterling Fuels	1,000 (305)	27 (8.2)	8 (2.4)	Complete vessels bunkering facility, operation all year, 24 hours a day.
Windsor Harbour Confederation Dock				Open Storage area of 12 acres (5 ha) for stone, sand and bulk materials. Canada Building Materials Co. cement mixing plant occupies NW corner of wharf. Slip not used for docking vessels.
Canada Building Materials Slip	760 (232)	–		For self-unloading vessels.
River front	315 (96)	27 (8.2)		
Windsor Harbour Commission Lafarge Construction Materials	806 (246)	25 (7.6)	4 (1.2)	Open storage areas of 25 acres (10 ha) for stone, sand and bulk materials. For self-unloading vessels. Operated by Lafarge Construction Materials.
Adams Cartage Slip	850 (259)	16 (4.9)		Open storage for 90,720 tonnes, also covered storage. Not in use in 1995.
River front	150 (45.7)	25 (7.6)	4 (1.2)	
Pyramid Aggregates	450 (137)	20 (6.1)	3 (0.9)	Open storage area of 150,000 sq ft (13,935 m ²). Not in use in 1995.
Premier Concrete Dock Ltd.	1,000 (305)	21 (6.4)	3 (0.9)	Used by the owners for handling building aggregates and bulk cement into silos. Open storage area of 13.4 acres (5.4 ha)
Canadian Pacific Railway	150 (45.7)	25 (7.6)	4 (1.2)	Railroad ferry terminal. Ceased operations.
Dieppe Park Dock	800 (244)	26 (7.9)	4 (1.2)	Owned by the City of Windsor. Used by visiting noncommercial ships. Administered by the Department of Parks & Recreation.
Canadian National Railways		36 (11)	4 (1.2)	Railway ferry terminal ceased operations
Canadian Salt Co. Ltd Ojibway Mine	730 (223)	26 (7.9)	7 (2.1)	Open storage area of 300,000 sq ft (27,900 m ²). Road and railway connections.
ADM Grainco Windsor Grain Terminal	1,278 (389)	27 (8.2)	6 (1.8)	An elevator with a capacity of 105,000 tonnes of grain handles soy beans, corn, wheat, or oil seeds, as well as meal from the adjacent ADM-Agir Industries Ltd. plant. Modern conveyor equipment for loading and unloading. Access to major railways and highways.
Mortern Limited. Slip	2,400 (732)	16 to 23 ft (4.9 to 7 m)		Terminal area of 180 acres (73 ha). Direct railway and road connections. 157,000 sq ft (14,587 m ²) of covered storage. 15 fork-lift trucks, 2 mobile cranes.
River front	750 (229)	27 (8.2)		Open storage area of 50 acres (20 ha).
Ontario Hydro J. Clark Keith Generating Station	730 (223)	21 (6.4)	3 (0.9)	Not in use in 1996.
Southwestern Sales West Dock Railway	1,400 (427)	21 (6.4)	2 (0.6)	Open storage area of 21 acres (8.5 ha). Road and connections.
Canadian Salt Co. Ltd. Sandwich Dock	410 (125)	27 (8.2)	4 (1.2)	Operated by the Van de Hogen Group for handling inbound shipments of lumber.
Kennette Contracting Co. Ltd.	450 (137)	26 (7.9)	5 (1.5)	Open storage area of 21 acres (8.5 ha) for bulk materials. Road and railway connections. Privately owned. Not in use 1995.
Van de Hogen Material Handling Inc.	410 (125)	26 (7.9)	4 (1.2)	Major storage and distribution centre with complete handling capabilities. 56 acres (22.6 ha) of open storage; 80,000 sq ft (7,433 m ²) of covered storage.
Coco Harbour Terminals	630 (192)	28 (8.5)	4 (1.2)	Available for receiving and storing aggregate.
Hiram Walker and Sons Ltd.	2,200 (671)	24 (7.3)	6 (1.8)	Private wharf receiving bulk grain from self-unloading vessel up to 750 feet (229 m) in length.
Ford Motor Company of Canada Ltd.	1,800 (549)		8 (2.4)	Open storage area 1,800 x 200 feet (549 x 61 m), bulk materials including sand from self-unloading vessels. Private dock.
Southwestern Sales East Dock	700 (213)	28 (8.5)	3 (0.9)	Bulk storage with a rubble wall. Stone and sand discharged by self-unloading vessels only.

Note: All information in this table was provided by local authorities for latest conditions. User should consult local authorities for latest conditions.

* Depth below chart datum. ** Elevation above chart datum.

(146) *The normal navigation season is from April 15 to December. Depending on weather conditions, navigation may begin as early as March 20 and end as late as January 31. Local use of the harbour continues all year.*

(147) *Tugs are available locally or from Detroit. Major repairs can be carried out by Matt Shipbuilding Limited, a division of Romeo Machine Shop. There is no dry dock. Marine radar and radio repairs can be carried out by K.E.L. Communications. Garbage service, heavy lift equipment and fork lift trucks are available. Information on services can be obtained from the Harbour Master.*

(148) *(Windsor Harbour wharves are listed in the table.)*

(149) *(Shipyards in the Great Lakes area are listed in Sailing Directions booklet CEN 300 – General Information, Great Lakes.)*

(150) *All types of marine supplies, stores, fresh provisions and water are available in Windsor. Complete ship bunkering services are available at the Sterling Fuels wharf.*

(151) *Windsor Port Authority monitors VHF Channel 14. Canadian and United States railroads service the harbour. Transport truck lines operate between Windsor and all parts of Ontario as well as the States of Michigan, Ohio, Indiana and Illinois. Windsor Airport offers connections with other airports in Canada.*

Facilities along the Detroit River at Detroit

	Name	Location	Berthing Space (feet)	Depths* (feet)	Deck Height (feet)	Mechanical Handling Facilities and Storage	Purpose	Owned/ Operated by:
1	Rockway Aggregates Dock No. 1	42°17'26"N., 83°06'05"W.	450	25-27	5	Open storage (3.75 acres/90,000 tons of cement)	Receipt of concrete	McCoig Holdings, LLC
2	Lafarge Corporation Detroit Terminal Wharf	42°17'55"N., 83°05'57"W.	750	28-30	5	Pipelines extend to silo storage (50,000 tons of cement)	Receipt of bulk cement	Lafarge Corporation
3	City of Detroit Metersky Power Station Wharf	42°18'09"N., 83°05'22"W.	1,049	26	6	Pipelines extend to tank storage (capacity 450,000 barrels)	Receipt of fuel oil for plant consumption	City of Detroit
4	Motor City Intermodal Distribution, Summit Street Wharf	42°18'15"N., 83°05'15"W.	480	26	6	Open storage (5 acres)	Occasional receipt of non-ferrous metal ingots and lumber	Intermodal Distribution Inc.
5	Nicholson Terminal Detroit, Scotten Street Wharf	42°18'27"N., 83°05'04"W.	2,130	29	6	• Four cranes (200 tons) • Open storage (22 acres) • Covered storage (116,000 square feet)	Receipt and shipment of containerized and conventional general cargo and steel	Detroit/Wayne County Port Authority
6	Detroit Edison Connors Creek Coal Wharf	42°21'17"N., 82°57'17"W.	800	16-21	5	Open storage (4½ acres for limestone and 250,000 tons of coal)	Receipt of limestone and handling navigational aids	American Aggregate Company/USCG

* The depths given above are reported. For information on the latest depths contact the port authorities or the private operators.

(152) *Conspicuous objects in Windsor are the chimney at Hiram Walker and Sons; the lighted Home of Canadian Club sign WSW of Belle Isle; and the church cupolas between the Ford plant and Hiram Walker and Sons.*

(153) **Detroit, MI**, fronts the northwest side of the Detroit River from the mouth of Old Channel of River Rouge northeast to the head of the river. It is a major industrial city and the center of the U.S. automobile industry. The chief waterborne commerce is in coal, petroleum products, limestone, steel, iron ore and pellets, and general and containerized cargo.

Anchorage

(154) Anchorage in the Detroit River is restricted by Federal regulations. (See **33 CFR 162.136**, chapter 2, for regulations.) If weather conditions preclude passage through the river, vessels generally hold up or anchor in Lake Erie if northbound or in Lake Huron if southbound. Vessels awaiting berths, weather, or other conditions occasionally anchor on the northwest side of the river below Belle Isle. (See **33 CFR 110.206**, chapter 2, for boundaries and regulations.)

Towage

(155) Tugs to 2,200 and 2,000 hp are available for Detroit from Gaelic Tugboat Co. or Great Lakes Towing Co., respectively. Tugs of the former company moor in the River Rouge; from the latter moor about 1.3 miles south of the River Rouge, on the west bank of Detroit River.

(156) Arrangements for the Great Lakes Towing Co. tugs are made through the dispatcher in Cleveland at 800-321-3663 or on VHF-FM via remote antenna. At least 3 hours advance notice is requested. The Gaelic Tugboat

Co. dispatcher in Detroit is reached at 313-841-9440 or on VHF-FM channel 16.

Quarantine, customs, immigration, and agricultural quarantine

(157) (See chapter 3, Vessel Arrival Inspections, and appendix for addresses.)

(158) **Quarantine** is enforced in accordance with the regulations of the U.S. Public Health Service. (See Public Health Service, chapter 1.)

(159) Detroit is a **customs port of entry**.

Coast Guard

(160) A Sector Office and a Coast Guard base are at Detroit. (See Appendix A for address.) Belle Isle Coast Guard Station is on the southeast side of Belle Isle.

Wharves

(161) Detroit has numerous deep-draft facilities along the Detroit River. Only the major deep-draft facilities are listed in the table. (For a complete description of the port facilities, refer to Port Series No. 45, published and sold by the U.S. Army Corps of Engineers. See Appendix A for address.) The alongside depths given in the table are reported depths. (For information on the latest depths, contact the operator.) Most of the facilities listed have rail and highway connections and some have water and electrical shore-power connections.

Supplies

(162) Marine supplies and provisions of all types are available at Detroit. Water is available at many of the wharves. Number 1, 2, and 6 fuel oils are available, mostly by barge, but by truck at some locations and by

pipeline at the Shell Oil Co. and Texaco docks in River Rouge.

Repairs

(163) Detroit has no facilities for drydocking deep-draft vessels, but medium-draft vessels may drydock at the Nicholson Terminal and Dock Co. Pier, 1.4 miles below the mouth of Short Cut Canal 21. Detroit Boat Basin, Inc., opposite the north side of Belle Isle, performs repairs to pleasure and occasionally small commercial craft. A 200-ton marine railway with 7 feet over the keel blocks, a 20-ton marine elevator, and machine, carpenter, welding, and paint shops are available. The largest vessel handled by the marine railway is 135 feet.

Small-craft facilities

(164) Detroit has several small-craft facilities, most of which are opposite the head of Belle Isle. Transient

berths, gasoline, diesel fuel, water, ice, electricity, sewage pump-out facilities, marine supplies, and a launching ramp are available. Hoists to 50 tons and marine railways to 200 tons are available for hull, engine, and electronic repairs.

(165) The U.S. Postal Service operates a **Marine Post Office** at Detroit. A special mail boat delivers and receives mail from vessels passing through the river, usually meeting them at the Ambassador Bridge. Arrangements can be made with 1 hour advance notice by contacting agent "Westcott" on VHF-FM channels 10 or 16.

Communications

(166) Detroit has excellent rail and highway connections. The city has several airports.

