10. ST. JOHNS RIVER TO MIAMI

(1) This chapter describes the Florida coast southward from the St. Johns River (30°24'N., 81°24'W.) to Miami (25°46'N., 80°08'W.), and includes the deepwater ports at Port Canaveral, Fort Pierce, Port of Palm Beach, Port Everglades, and Miami. Information for offshore navigation is given first, followed by a detailed description of the coast, inlets, and seaports. The Intracoastal Waterway for this section of the coast is described in chapter 12.

(2) **COLREGS Demarcation Lines.**–The lines established for this part of the coast are described in **80.723 through 80.730**, chapter 2.

(3) **Weather**.–The most dangerous navigational weather hazards along this coast are tropical cyclones. While they can develop in any month, they are most likely from June through October. Mid-August through October is the peak season. There is about a 75 percent chance that at least one tropical cyclone will affect these waters each year; a 65 percent chance exists that it will be a hurricane. The frequency of landfalling tropical cyclones increases dramatically, south of Daytona Beach. On the average, Miami will experience hurricane force winds once in seven years, compared to once in 30 years at Daytona Beach and once in 50 years at Jacksonville. During the Fort Lauderdale hurricane of 1947, sustained winds reached 105 knots and gusted to 135 knots at Hillsboro Lighthouse, while Miami recorded 106-knot winds with 130-knot gusts in the October hurricane of 1950. Storm surges in severe hurricanes can reach 15 feet (4.6 m) or more above mean sea level. In deep water, waves of 30 to 40 feet (9 to 12 m) are possible. Early and late in the hurricane season, storms are often likely to approach the area from the western Caribbean either on a northerly or northeasterly heading. Midseason storms may either be recurving toward the north through northeast or moving west-northwestward.

(4) In general weather along this coast poses few problems for mariners. Gales are usually encountered less than 1 percent of the time with maximum winds reaching 35 to 50 knots from September through March. The easterly trade winds are common throughout much of the year with average speeds of 10 to 15 knots. Only infrequently will a severe cold front or winter storm affect these waters. These cold fronts bring large temperature drops and strong, gusty winds. Northwesterly and northerly winds are usually the strongest. Maximum waves of 18 to 25 feet (5.5 to 7.6 m) can be expected in deep waters from September through February while waves of more than 6 feet (1.8 m) occur 8 to 15 percent of the time from about October through March. Thunderstorms are most likely from May through October and may be associated with easterly waves or tropical cyclones. Tornadoes and waterspouts have been reported in all months; they are not usually as violent as the tornadoes of the mid-West.

(5) **Chart 11480.–**The coast from St. Johns River to Cape Canaveral trends south-southeastward for 125 miles. Three inlets, St. Augustine, Matanzas, and Ponce de Leon indent the coast. From St. Johns River to Ponce de Leon Inlet the coast is bold in appearance, with an almost continuous range of sand dunes backed by woods. The section southward of Ponce de Leon Inlet for 25 miles is formed by a very narrow strip of lowland lying between the sea, and Indian River North, and Mosquito Lagoon. From seaward this coast shows a lowline of sand dunes partially covered by grass and scrub trees with distant woods showing over them. The only natural object distinctive in appearance is Turtle Mound, a green hillock about 10 miles south of Ponce de Leon Inlet. When seen from northward and eastward, it is quite conspicuous but is less marked when viewed from other directions. The woods in the vicinity of Cape Canaveral are farther back from the beach and are less distinct when seen from seaward. Many landmarks are available along this stretch of the coast that may be used by southbound vessels proceeding close inshore to avoid the Gulf Stream.

(6) The depths from St. Johns River to Cape Canaveral are irregular. Depths of 5 to 7 fathoms are 1 mile offshore, while a depth of 3 fathoms is within 0.4 mile of the shore except off the entrances to St. Johns River, St. Augustine Inlet, Ponce de Leon Inlet, and from about 7 miles north of False Cape to Cape Canaveral.

(7) A **179°-359° measured nautical mile** is just southward of the entrance to St. Johns River; the markers are located northward and southward of St. Johns Light. A submerged instrument platform that extends about 6 feet off the bottom is 5.8 miles south of St. Johns river in about 30°18.1'N., 81°23.0'W. Shoal spots with depths of 33 to 38 feet over them are from 4 to 6 miles offshore and from 12 to 16 miles north-northeastward of St. Augustine Light. These shoals are about 8 miles long in a southeasterly direction and about 2.5 miles wide. A swash channel with depths of 40 to 50 feet is inside these shoals and about 2 miles from the beach.

(8) Off Ponce de Leon Inlet 10 fathoms will be found within 2 miles of the beach. A wreck with 35 feet over it and shoals with a least depth of 35 feet are 5 to 7 miles north-northeastward of Ponce de Leon Inlet, and privately marked and unmarked fish havens extend 11 miles offshore northeastward and 13 miles offshore southeastward of the inlet. A dangerous sunken wreck is about 1.7 miles east-southeast of the inlet. Going southward the 10-fathom curve gradually works offshore to a distance of 10 miles off False Cape. From about 7 miles north of False Cape to Cape Canaveral there are dangerous shoals.

(9) **Mandatory Ship Reporting Systems (WHALESNORTH and WHALESSOUTH)**, have been established within the area of this Coast Pilot. These MSR systems require all vessels, 300 gross tons or greater, to report to the U.S. Coast Guard prior to entering two designated reporting areas off the east coast of the United States. (See **33 CFR 169**, chapter 2, for limits and regulations.) Sovereign immune vessels are exempt from the requirement to report, but are encouraged to participate.

(10) The two reporting systems will operate independently of each other. The system in the northeastern United States will operate year round and the system in the southeastern United States will operate each year from November 15 through April 15. Reporting ships are only required to make reports when entering a reporting area during a single voyage (that is, a voyage in which a ship is in the area). Ships are not required to report when leaving a port in the reporting area nor when exiting the system.

(11) Vessels shall make reports in accordance with the format in IMO Resolution A.648 (16) General Principles for Ship Reporting Systems and Ship Reporting Requirements. (See **33 CFR 169.135 and 169.140**, chapter 2, for additional information.) Vessels should report via INMARSAT C or via alternate satellite communications to one of the following addresses:

(12) Email: RightWhale.MSR@noaa.gov or Telex: 236737831

(13) Example Reports:

(14) **WHALESNORTH** – To: RightWhale.MSR@noaa.gov
(15) WHALESNORTH//
(16) A/CALYPSO/NRUS//
(17) B/031401Z APR//
(18) E/345//
(19) F/15.5//
(20) H/031410Z APR/4104N/06918W//
(21) I/BOSTON/032345Z APR//
(22) L/WP/4104N/06918W/15.5.//
(23) L/WP/4210N/06952W/15.5//
(24) L/WP/4230N/07006W/15.5//
(25) **WHALESSOUTH** – To: RightWhaleMSR@noaa.gov
(26) WHALESSOUTH//
(27) A/BEAGLE/NVES//
(28) B/270810Z MAR//
(29) E/250//
(30) F/17.0//
(31) H/270810Z MAR/3030N/08052W//
(32) I/MAYPORT/271215Z MAR//
(33) L/RL/17.0//

(34) **Chart 11460.–**From Cape Canaveral to Fort Pierce Inlet, the coast trends generally south-southeastward for 62 miles and is broken only by Sebastian Inlet. The inlet is a narrow dredged channel, not distinguishable from any distance offshore except by the highway bridge across the inlet and by the sand spoil bank on the north side which is bare and a little higher than other sand dunes in the vicinity. This section of the coast is formed almost entirely by a low, narrow strip of sand, covered with vegetation, which lies at a distance of 1 to 2 miles from the mainland, from which it is separated by the shallow waters of Banana and Indian Rivers, a part of the Intracoastal Waterway. From seaward the coast shows a line of sand dunes partly covered with grass and scrub palmetto. At several places buildings show prominently from seaward. In the background the heavy woods on the mainland may be seen. Shoals extend 10 miles offshore with a least depth of 23 feet about 2.5 miles north-northwestward of Bethel Shoal Lighted Whistle Buoy 10, which is about 47 miles south-southeastward of Cape Canaveral Light.

(35) A **coral habitat area of particular concern (HAPC)** is centered about 22 miles, 055° from the entrance to Fort Pierce Inlet. (See **50 CFR 622**, chapter 2, for limits and regulations.)

(36) From Fort Pierce Inlet to Lake Worth Inlet, the coast trends generally south-southeastward for 43 miles and is broken by St. Lucie and Jupiter Inlets. This section of the coast is formed by a low, narrow strip of sand, covered with vegetation, and separated from the mainland by the shallow waters of Indian River and by the Intracoastal Waterway connection between the Indian River and Lake Worth. From seaward the coast shows a line of sand dunes partly covered with grass and scrub palmetto. In the background the heavy woods on the mainland may be seen. Buildings show prominently from seaward.

(37) From Lake Worth Inlet the general trend of the coast is south for 60 miles to the Miami Harbor entrance. The coastline is broken by Port Everglades, several unimportant inlets, Bakers Haulover Inlet, and the entrance to Miami Harbor. It is formed almost entirely by a low sand beach covered with grass and scrub palmetto, back of which it is wooded. Conspicuous from seaward are the buildings and piers at Palm Beach, Hillsboro Inlet Light, and the large buildings and tanks along the beach from Palm Beach southward, especially at Fort Lauderdale, Hollywood, Miami Beach, and Miami.

(38) This section of the coast is also fairly bold, and the 20-fathom curve runs parallel to the beach at a distance of about 2 miles until in the vicinity of the Miami Harbor entrance where the curve of the shore becomes south-southwestward and the 20-fathom curve is about 4 miles offshore. Between Port Everglades and the Miami Harbor entrance shoaling is rapid, depths of 6 to 8 fathoms being found in places 1.5 miles from the beach.

(39) **Chart 11488.–**The coast between St. Johns River and St. Augustine Inlet is straight with the 5-fathom curve about 0.5 mile offshore except at the entrances. Offshore shoals along this route have been described previously.

(40) The first 10 miles south of St. Johns River are marked by the water tanks and multistoried buildings at most of the beach resorts. The buildings, amusement park, and pier at **Jacksonville Beach,** and the spherical elevated water tank at **Ponte Verda Beach,** about 6.5 miles and 9 miles southward of the river entrance, respectively, are very prominent. Otherwise the coast is unmarked except for St. Johns Light and St. Augustine Light.

(41) **Charts 11488, 11485.–St. Augustine Inlet** is 30 miles south of the St. Johns River entrance. **St. Augustine,** the oldest city in the United States and a popular winter resort with several fine hotels, is 2 miles inside the entrance.

(42) **Prominent features.–St. Augustine Light** (29°53'06"N., 81°17'18"W.), 161 feet above the water, is shown from a conical tower with a black and white spirally banded shaft on the north end of **Anastasia Island,** 1.5 miles south of the entrance to St. Augustine Inlet.

(43) Other prominent features are an elevated water tank about 200 yards southeast of the light, the towers of the Vilano Beach (State Route A1A) lift bridge on the Tolomato River, a radio tower 1.3 miles southward of the light, the lighted cross and the radio tower in the northern part of the city, and a cupola on the south end of a large building in the city. **Castillo de San Marcos** may be seen after entering the inlet.

(44) **Channels.**–The entrance channel to St. Augustine Inlet is subject to frequent change in depth and direction due to current and storm action; it is protected by a partial groin on the north side and by a jetty on the south side. Dangerous and shifting shoals extend 1 mile seaward. A lighted whistle buoy marks the approach, and buoys mark the channel. These aids are not charted since they are moved frequently with changing conditions to mark the best water. Mariners are advised to seek local knowledge prior to entering.

(45) **Anchorages.–**There is good anchorage in the Matanzas River at St. Augustine both below and above the bridge. This anchorage, however, is not used as a harbor refuge because during strong northeasterly and northwesterly winds the sea makes the bar impassable even for small vessels. A more protected anchorage in depths of 20 feet, hard sand bottom, is reported in **Salt Run,** close south-southeastward of St. Augustine Inlet. About 8 feet can be taken to this anchorage. The mariner should favor the eastern shore for the best water and lee. Private buoys mark the channel into Salt Run.

(46) **Routes.–**The shore should be given a berth of at least 2 miles when approaching St. Augustine Inlet in order to stay

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outside of the outer sea buoy. No strangers should attempt to enter without a pilot as the channel shifts frequently.

(47) **Tides.–**The mean range of tide is 4.5 feet, and high water occurs about 20 minutes later than at Mayport.

(48) **Weather, St. Augustine and vicinity**.–While this area lies within the northern portion of the trades, local effects often determine the winds. In general there is a northerly component in winter and a southerly one in summer. The onshore trades are often reinforced by the local sea breeze, which results in strongest winds blowing during the afternoon. From May through September, winds of 17 knots or more occur about 1 to 5 percent of the time compared to 5 to 10 percent for the remainder of the year. These winter winds are also more variable due to occasional frontal passages and low pressure systems. Nighttime winds are usually the lightest. While damaging tropical cyclones are infrequent, less severe storms can still dump 8 to 10 inches (203 to 254 mm) of rain in this area. One of the worst storms to hit this area was hurricane Dora in 1964. Winds at St. Augustine were estimated at about 110 knots while a 12-foot (4 m) tide swept over Anastasia Island.

(49) The moderating influence of the ocean on maximum summer temperatures and minimum winter temperatures is pronounced along the coast but diminishes a few miles inland. Temperatures reach 90° (32.2°C) or higher at the beach on only a little more than one-half as many days as in the city. The rainy season runs from mid-June through mid-October when about one-half of the 52-inch (1,320 mm) annual average is recorded. During the summer, rain usually falls as afternoon and early evening thundershowers, which also help cool things off.

(50) **Pilots.–**All vessels including yachts not having local knowledge of the channel are advised to take a local pilot both entering and leaving the inlet. Pilots are available by prior arrangement with the dockmaster at the city yacht pier. At least 24 hours advance notice of time of arrival is requested.

(51) **Harbor regulations.–**A dockmaster controls moorage at the city yacht pier. The city has a **harbormaster,** who can be contacted through the dockmaster or by telephone (904-829-3966).

(52) **Small-craft facilities.–**A number of small private landings are on the east side of the city, north and south of the bridge. The city yacht pier is about 100 yards south of Route A1A highway bascule bridge which crosses the Matanzas River opposite the center of the city. The facilities are excellent, though the space is limited. There are four berths for transient boats to 60 feet. In May 1983, the dockmaster reported depths in these slips to be 7 to 14 feet. Gasoline, diesel fuel, water, and electricity are available. The dockmaster's office is at the head of the pier.

(53) A privately marked channel with a reported controlling depth of 7 feet leads to a marina on the west side of Salt Run. Berths with electricity, gasoline, diesel fuel, water, ice, and marine supplies are available.

(54) Marine railways to 90 feet and complete repair facilities are available at several boatyards and marinas in San Sebastian River.

(55) The Intracoastal Waterway enters the St. Augustine Inlet from the north through Tolomato River and continues southward through Matanzas River. Clearance of the Bridge of Lions (Route A1A) crossing the Matanzas River at St. Augustine is given in chapter 12.

(56) **San Sebastian River** flows past the west side of the city of St. Augustine and empties into the Matanzas River 1.4 miles south of the Route A1A highway bridge. In 1996, the controlling depth in the channel, marked by daybeacons, was 6 feet (8 feet at midchannel) to Kings Street Bridge. In stormy southeasterly weather small boats may find a good haven in the river. The overhead power cable crossing the river about 300 yards south of the Kings Street Bridge has a clearance of 66 feet.

(57) An extensive shrimp industry is conducted along the wharves in the upper part of the river, being supplied by seagoing shrimp boats during the shrimp season. Several small shipyards and shrimp boatbuilding yards are along the river. Shrimp boats up to 150 feet long can be handled for general repairs. Supplies and fuel may be obtained at the wharves.

(58) **Chart 11486.–**From St. Augustine Inlet to Ponce de Leon Inlet the coast continues straight, broken only by Matanzas Inlet. The 5-fathom curve is within 0.5 mile of the shore except off St. Augustine Inlet and Matanzas Inlet. Numerous marked and unmarked fish havens are as much as 18 miles offshore.

(59) An **oceanic spring** is 8.2 miles southeastward of St. Augustine Light and 2.4 miles east of **Crescent Beach**. The location of the spring can be easily detected by the appearance of the water; noticeable swirls, similar to those in a swiftly running stream, can be seen at a distance of about a mile. At times, especially in rough weather, there is a marked disturbance of the water and yellowish color trails off to the northeastward. In choppy weather, a slick is the most noticeable feature. In fact, it has all the appearances of a shoal or reef.

(60) A closer view shows a slick swirl with a slight overfall, the center of the swirl moving about 100 feet, first to the eastward and then to the westward, and a noticeable streak of current to the northeastward. The swirls and overfalls vary rapidly in intensity, as though large bubbles or intermittent volumes of water were being emitted. A boat will be thrown out of the swirl so that it is difficult to hold it in position.

(61) A strong odor, quite similar to the smell of water from the various sulfur springs of Florida, is noticeable, and under favorable circumstances can easily be detected 2 miles away.

(62) **Matanzas Inlet** (see chart 11485) is 11 miles southward of St. Augustine Light. It affords an outlet for Matanzas River, which extends northward to St. Augustine and southward, following the coast for a distance of 8 or 10 miles to **Graham Swamp.** The inlet is obstructed by a shifting bar, and breakers extend across the entire entrance in normal weather. However, in May 1983, it was reported that with local knowledge about 3 feet could be carried through the entrance. The Intracoastal Waterway passes through a land cut of the Matanzas River just inside the entrance.

(63) State Route A1A highway bridge across the inlet has a 41-foot fixed span with a clearance of 10 feet. An overhead power cable crossing on the west side of the bridge has a clearance of 32 feet. **Fort Matanzas National Monument** is about 1 mile northwestward of the inlet.

(64) At **Marineland,** 13.6 miles southward of St. Augustine Light, is a conspicuous building housing an oceanarium.

(65) **Flagler Beach** is 26.5 miles southward of St. Augustine Light. The microwave tower and ocean pier are good landmarks. The T-shaped pier extending offshore is 650 feet long and 20 feet wide.

(66) **Daytona Beach** is a popular winter resort about 42 miles southward of St. Augustine Light. The buildings, water tanks, and radio towers are visible from seaward. The large recreation pier on the oceanfront is a prominent landmark for passing vessels.

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(67) See Daytona Beach, chapter 12.

(68) **Chart 11484.**–From Ponce de Leon Inlet to False Cape the coast is straight. The 5-fathom curve is about 0.5 mile offshore for a distance of 24 miles. Beyond this distance dangerous shoals, wrecks, and numerous fish havens will be found up to 15 miles offshore.

(69) **Ponce de Leon Inlet** (see chart 11485) is 53 miles southward of St. Augustine Light and 41 miles northwestward of Cape Canaveral Light. It is used by both recreational and small commercial vessels bound for New Smyrna Beach or Daytona Beach, as well as others entering for an anchorage.

(70) **Ponce de Leon Inlet Light** (29°04'48"N., 80°55'42"W.), 159 feet above the water, is shown from a red brick conical tower on the north side of the inlet.

(71) The inlet, protected at the entrance by jetties, is entered through a channel that leads over a bar and through the jetties. The outer end of the north jetty is marked by a light, and the inner end of the jetty is awash. In May 2001, severe shoaling existed across the entire channel. Mariners are advised that due to constant shifting of the channel, passage through the inlet is not recommended; buoys marking the channel may not be marking the best water. Safe navigation is also hampered by numerous recreational fishing vessels that anchor inside the north jetty. Local knowledge and extreme caution is advised. To prevent silting, a weir is at the inshore end of the north jetty and an impoundment basin is close southward. The current through the inlet is strong. It is reported that the average ebb is 3 knots, however, this can increase to 5 or 6 knots with southeasterly winds. The mean range of tide is 2.3 feet, and high water occurs about the same time as at Mayport.

(72) Inside the inlet, three channels lead to the Intracoastal Waterway; northward through Halifax River, westward through **Rockhouse Creek,** and southeastward through Indian River North. The channels through Halifax River and Indian River North are marked by buoys. In May 2001, the controlling depth was 1.0 foot in the left outside quarter of Halifax River; thence in 1986, the midchannel controlling depth in Rockhouse Creek was 7 feet; thence in May 2001, using local knowledge, 1.1 feet could be carried to the Intracoastal Waterway by way of Indian River North.

(73) **Ponce de Leon Inlet Coast Guard Station** is on the south side of the entrance to Ponce de Leon Inlet. Supply and repair facilities inside the inlet are described in chapter 12.

(74) The Intracoastal Waterway is just inside the entrance to Ponce de Leon Inlet, passing through Halifax River from the north and Indian River North from the south.

(75) **Chart 11484.**–About 10 miles southward of Ponce de Leon Inlet is **Turtle Mound,** a prominent hill 50 feet high. It is under the protection of the Florida State Historical Society. The original Indian name was **Mount of Surruque**. It was charted on Florida maps in 1564. Spanish galleons stopped here for repairs, wood, and water.

(76) **Eldora** is a fishing camp 11.5 miles southward of Ponce de Leon Inlet.

(77) **False Cape,** about 7.5 miles northward of Cape Canaveral Light, is the name given to a small part of the coast which it resembles when seen from seaward.

(78) The **John F. Kennedy Space Center** and the **Cape Canaveral Air Force Station** occupy most of **Canaveral Peninsula** and **Merritt Island,** the large land areas between the ocean and the Banana and Indian Rivers, from Mosquito Lagoon on the north to Port Canaveral on the south. The huge Vehicle Assembly Building at the center, said to be one of the world's largest buildings, is visible far from shore. When closer in, other buildings and the mobile service towers at the cape are also conspicuous from all directions.

(79) Trawlers or other vessels should exercise caution while dragging the ocean floor within a 25-mile radius of Cape Canaveral because missile debris containing unexploded ordnance exists in the area.

(80) Ordnance disposal personnel occasionally detonate explosives on the beaches in the vicinity of the cape.

(81) **Cape Canaveral,** where the coast makes a sharp bend westward, is low and sandy. The shore in the vicinity of the cape is constantly moving eastward. **Cape Canaveral Light** (28°27'36"N., 80°32'36"W.), 137 feet above the water, is shown from a white and black horizontally banded conical tower 1 mile inshore from the cape.

(82) A **Security Zone** has been established to include certain land and water areas at Port Canaveral and adjacent areas at Kennedy Space Center and Cape Canaveral Air Force Station. (See **165.1 through 165.7, 165.30, 165.33, 165.701, and 165.705**, chapter 2, for limits and regulations.) During certain operations the Security Zone may be temporarily expanded. (See Local Notice to Mariners.)

(83) Shoals extend 13 miles north and northeast from Cape Canaveral; mariners should use care when in the vicinity of the shoals. The outer shoals consisting of **Hetzel Shoal, Ohio Shoal,** and **The Bull** have a least depth of 11 feet. The inner shoals consisting of **Chester Shoal** and **Southeast Shoal** have depths of 2 to 18 feet. A lighted whistle buoy is 2.5 miles northeast of Hetzel Shoal. A lighted buoy is off the southeast end and along the south side of Southeast Shoal. In a heavy sea the shoals are marked by breakers, but with a smooth sea there is nothing to indicate them except their relative positions to Cape Canaveral Light and the lighted buoys. Only small light-draft vessels in calm seas should pass inside the outer shoals.

(84) Several wrecks are east of Cape Canaveral within 13 miles of the shore. They have been cleared by a wire drag to a least depth of 43 feet. An unmarked sunken wreck is north of Ohio Shoal in about 28°39.7'N., 80°23.3'W.

(85) The effect of the Gulf Stream may be expected well in on the shoals, and this should be kept in mind in approaching the cape from the south. In approaching the cape, stay in at least 15 fathoms from the south and at least 13 fathoms from the north to avoid the shoals.

(86) A **danger zone** for missile testing extends 3 miles offshore from False Cape to the entrance to Port Canaveral. (See **334.590**, chapter 2, for limits and regulations.) **Canaveral Bight,** on the south side of the cape, is in the danger zone.

(87) **Charts 11478, 11481**.–**Port Canaveral (Canaveral Harbor)** is 4 miles southwest of Cape Canaveral Light and 150 miles south of the entrance to the St. Johns River. The city of **Cape Canaveral** is just southward of the port. The principal commodities handled in the harbor are petroleum products, cement, asphalt, salt, general cargo, citrus products, and newsprint. Commercial party fishing vessels, cruise ships, and many pleasure crafts operate from the port.

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(88) **COLREGS Demarcation Lines.**–The lines established for Port Canaveral are described in **80.727**, chapter 2.

(89) **Channels.–**A U.S. Navy project for Port Canaveral provides for an entrance channel 44 feet deep to East Basin, thence 41 feet in East Basin. A Federal project provides for a channel 36 feet deep from East Basin to Middle Basin, thence 35 feet deep in Middle Basin, thence 31 feet deep from Middle Basin to West Basin, and thence 31 feet in West Basin. The harbor is maintained at or near project depths. (See Notice to Mariners and latest edition of chart for controlling depths.) The entrance to the harbor is protected by jetties. The approach channel is marked by white **310°** lighted range and lighted buoys; the entrance channel between the jetties is marked by a green **270°** lighted range, a light, and lighted and unlighted buoys. The entrance to East Basin is marked by a red **325°30'** lighted range. Canaveral Barge Canal leads westward to Banana River and the Intracoastal Waterway from the western end of the harbor just west of West Basin entrance. (See also chart 11484 and chapter 12.)

(90) **Caution.**–The National Marine Fisheries Service has advised that the sea turtles and manatees which inhabit the Port Canaveral area are considered to be threatened and endangered species. In order to protect these turtles and manatees, its is requested that excursions from the centerline of the approach and entrance channels be held to a minimum.

(91) **Northern Right Whales.–**Approaches to Port Canaveral lie within designated critical habitat for endangered northern right whales (see **50 CFR 226.13(c)**, chapter 2.) The area is a calving grounds from, generally, December through March. It is illegal to approach right whales closer than 500 yards. (See **50 CFR 222.32**, chapter 2 for limits, regulations, and exceptions.) Special precautions may be needed to protect and avoid these animals. (See Northern right whales, indexed as such, chapter 3.)

(92) Small craft should stay clear of large vessels entering, leaving, or maneuvering in the harbor.

(93) **Dangers.**–The Navy pier on the east side of Middle Basin is within a **restricted area**, and East Basin is within a **danger zone**. (See **334.530 and 334.600**, chapter 2, respectively, for limits and regulations.)

(94) **Weather, Port Canaveral and vicinity**.–Tropical cyclones are a threat from about June through November. There are roughly four peak periods within this season. A slight maximum occurs in early June while more defined peaks occur in early August, early September and mid-October. The probability of at least one occurrence of gales from a tropical cyclone in 1 year is about 36 percent while the chance of two occurrences drops to 6 percent.

(95) Windspeeds of 17 knots or more are most likely from October through April when they occur 3 to 7 percent of the time at Cape Canaveral and 10 to 17 persent of the time at Patrick Air Force Base, about 13 miles south of the port. Thunderstorms are observed on about 70 days annually with a peak of 10 to 15 days per month from June through September. These are most likely during the late afternoon and early evening. Visibility is generally good, outside of showers. However, in December, January, and February, visibility drops below 0.5 mile (0.9 km) on about 2 to 4 days per month; they usually improve by midmorning. Temperatures only reach 90°F (32.2°C) or more on about 16 to 18 days annually but climb into the 80's (27.2° to 32.2°C) range on a little less than 200 days each year. Freezing temperatures are recorded just once or twice per year, on the average.

(96) **Pilotage, Port Canaveral.–**A State pilot is compulsory for all foreign flag vessels and all U.S. vessels under registry with a draft of 7 feet or greater. Certain U.S. vessels under enrollment are required to carry a federal pilot. A state pilot is required for all vessels over 500 gross tons docking or undocking at Canaveral Port Authority docks, unless specifically exempted by the Port Director. Pilotage for U.S. and foreign naval vessels is provided in accordance with an agreement between the U.S. Navy and the Canaveral Pilots Association. All Canaveral Pilots Association pilots are fully licensed by the state and federal governments.

(97) Canaveral Pilots Association office is in a white mobile home at 9060 Herring Street, Port Canaveral, Florida. The mailing address is: P.O. Box 0816, Cape Canaveral, Florida 32920-0816; telephone 321-783-4645 (office and residences), FAX 321-783-6268 (office only). The office monitors VHF-FM radiotelephone channel 12. Pilot service is available to all vessels. Canaveral Pilots Association serves the channels and basins of Port Canaveral; the pilots also dock and undock vessels.

(98) The Canaveral Pilots Association has two pilot boats, PILOT 1 and PILOT 2, both 40 feet long with a black hull and white superstructure and the word PILOT on the side. The pilot boats display a white light over a red light at night and the International Code flag HOTEL by day. Pilots board about 1 mile southeast of Canaveral Harbor Approach Channel Lighted Whistle Buoy 3 (28°22.5'N., 80°31.8'W.) unless special arrangement for boarding elsewhere has been made. Vessels should maintain a speed of about 6 to 8 knots and provide a pilot ladder about 1 meter above the water.

(99) Arriving vessels should advise the Port Authority, telephone 321-783-7831, and the pilots if they are close to or at the maximum allowable draft and/or if they have any defects or special needs. Port Authority will assign berths and provide line handlers. Pilots will arrange for tug services.

(100) Request for pilot service by FAX is discouraged, as the pilot station is not staffed 24 hours daily. Arrangements can be made by telephone directly or through the Canaveral Port Authority. A 24 hours ETA notice is requested. When working, pilots use VHF-FM channel 12, and the boats monitor channels 12 and 16.

(101) Reduced visibility affects pilot service. Operational guidelines (not in this text) established pursuant to Florida law and in conjunction with marine interests in the port state that vessels are not to maneuver on the channels and basins of the port if visibility is less than 0.5 nautical mile.

(102) The Canaveral Pilots Association participates in the northern right whale Early Warning System (see Northern right whales, indexed as such, chapter 3.)

(103) **Towage.–**Three conventional tugs, two 2,000 hp and one 2,150 hp, and one tractor tug 3,600 hp are available at the port. All tugs monitor VHF-FM channels 12 and 16.

(104) **Quarantine, customs, immigration, and agricultural quarantine.**–(See chapter 3, Vessel Arrival Inspections, and appendix for addresses.)

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

(106) Port Canaveral is a **customs port of entry.**

(107) **Port Canaveral Coast Guard Station** is at the northeast corner of West Basin.

(108) **Harbor regulations.–**The Canaveral Port Authority has jurisdiction and control over port areas and facilities not under

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the control of the federal government. Vessels are ranked for movement priority. Emergency movements are first priority. Naval vessels engaged in demonstration and shakedown operations and regularly calling cruise ships have second priority. Generally all other vessels move on a first come, first served basis. Port regulations are contained in the Port Authority tariff. In addition, Operational Guidelines for the port have been promulgated by the Port Authority in consultation with the U.S. Coast Guard, U.S. Navy, U.S. Army Corps of Engineers, other interested parties and the pilots. Copies of both publications are available from Canaveral Port Authority, P.O. Box 267, Cape Canaveral, Florida 32920-0267; see pilotage (previously mentioned) for telephone number. The Port Authority enforces regulations and assigns berths.

(109) **Radio transmissions are not allowed during missile launchings.**

(110) **Wharves.**–Port Canaveral has commercial berths owned by the Port Authority. Middle and West Basins are used by commerical vessels as well as at the north and south sides of the Inner Reach; cruise ships usually berth in the West Basin. Canaveral Port Authority maintains an internet website at www.portcanaveral.org. This internet site provides descriptions of port facilities and maximum allowable drafts. Pilots also provide information on allowable drafts. Information about facilities is also published in the U.S. Army Corps of Engineers Port Series No. 16 (See appendix for address.)

(111) **Facilities on the south side of Inner Reach:**

(112) **Canaveral Port Authority, Cruise Terminals Nos. 2 and 3 Wharf** (28°24'33"N., 80°36'00"W.): 1,403-foot face; 31.5 to 33 feet alongside; deck height, 10.5 feet; mooring cruise vessels; boarding passengers; owned and operated by Canaveral Port Authority.

(113) **Canaveral Port Authority, Cruise Terminals No. 4** (28°24'33"N., 80°35'46"W.): 750-foot face; 31.5 to 33 feet alongside; deck height, 10.5 feet; mooring cruise vessels; boarding passengers; owned and operated by Canaveral Port Authority. (Cruise Terminals 2, 3 and 4 form a continuous berth, 2,153 feet long.)

(114) **Canaveral Port Authority, South Cargo Piers 1, 2, and 3** (28°24'36"N., 80°36'20"W.): 1,615-foot face; 34 feet alongside; deck height, 10 feet; 108,000 square feet covered storage; 26 acres open storage; 2.5 million cubic feet cold storage; pipelines extend to storage tanks, 257,000-barrel capacity; roll-on/roll-off ramp at the east end of Pier 1; receipt and shipment of general cargo; receipt and shipment of petroleum products at Pier 3; receipt of paper products, asphalt; shipment of perishable food commodities; bunkering vessels; mooring pilot boats; owned by Canaveral Port Authority and operated by Canaveral Port Authority; Coastal Fuels Marketing, Inc.; and Mid-Florida Warehouses, Ltd.

(115) **Canaveral Port Authority, Tanker Berth No. 1** (28°24'34"N., 80°36'32"W.): 45-foot face; 340 feet of berthing space with dolphins; 36 to 38 feet alongside; deck height, 10 feet; storage silo for 32,000 tons of cement; pipelines extend from wharf to storage tanks, 257,000-barrel capacity; receipt of petroleum products; asphalt, and cement; bunkering vessels; owned by Canaveral Port Authority and operated by Coastal Fuels Marketing, Inc.; Transtate Industrial Pipeline Systems, Inc.; and Continental Cement of Florida, Inc.

(116) **Canaveral Port Authority, Tanker Berth No. 2** (28°24'34"N., 80°36'37"W.): 65-foot face; 340 feet of berthing space with dolphins; 38 feet alongside; deck height, 10 feet; pipelines extend from wharf to storage tanks, 250,000-barrel capacity; receipt and shipment of No. 6 fuel oil; owned by Canaveral Port Authority and operated by Transtate Industrial Pipeline Systems, Inc., and Exceltech Corp.

(117) **Canaveral Port Authority, South Cargo Pier 4** (28°24'32"N., 80°36'40"W.): 400-foot face; 400 feet of berthing space; 38 feet alongside; deck height, 10 feet; open storage area at rear for about 25,000 tons of salt; receipt and shipment of general cargo; receipt of salt and paper products; shipment of perishable food commodities; owned by Canaveral Port Authority and operated by Canaveral Port Authority; Mid-Florida Freezer Warehouses, Ltd., and Cargill, Inc., Salt Division. (Tanker Berths 1 and 2, and South Cargo Piers 4 and 5 form a continuous berth, 1,247 feet long.)

(118) **Facilities on the north side of Inner Reach:**

(119) **Canaveral Port Authority, North Cargo Piers 1 and 2** (28°24'45"N., 80°36'43"W.): 1,260-foot face; 1,350 feet of berthing space with dolphins; 38 feet alongside; deck height, 10 feet; crawler cranes to 165 tons; roll-on/roll-off ramp at north end; receipt of containerized and roll-on/roll-off general cargo; receipt of salt; owned by Canaveral Port Authority and operated by Canaveral Port Authority; Morton International, Inc., and Mid-Florida Freezer Warehouses, Ltd.

(120) **Canaveral Port Authority, North Cargo Pier 3** (28°24'39"N., 80°36'47"W.): 400-foot face; 400 feet of berthing space; 32 feet alongside; deck height, 10 feet; 600,000 square feet covered storage; receipt and shipment of general cargo; mooring vessels; owned and operated by Canaveral Port Authority.

(121) **CSR Rinker Materials Corp., Port Canaveral, North Cargo Pier 4** (28°24'39"N., 80°36'56"W.): 400-foot face; 400 feet of berthing space; 34 feet alongside; deck height, 10 feet; one traveling gantry ship unloader, 400 tons per hour rate; silos, 42,000 ton capacity; receipt of cement; mooring vessels; owned by Canaveral Port Authority and operated by CSR Rinker Materials Corp.

(122) **Canaveral Port Authority, Cruise Terminal 5** (northwest corner of West Basin): 565 feet of berthing space; 35 feet alongside; 59,000 square feet embarkation and baggage facility; mooring cruise vessels; boarding passengers; owned and operated by Port Canaveral Authority.

(123) **Canaveral Port Authority, Cruise Terminal 8** (south of Cruise Terminal 5): 800 feet of berthing space; 35 feet alongside; 70,000 square feet embarkation and baggage facility; mooring cruise vessels; boarding passengers; owned and operated by Port Canaveral Authority.

(124) **Canaveral Port Authority, Cruise Terminal 10** (south of Cruise Terminal 8): 724 feet of berthing space; 33.5 feet alongside; 75,000 square feet embarkation and baggage facility; mooring cruise vessels; boarding passengers; owned and operated by Port Canaveral Authority.

(125) **Communications.**–Good State highways connect to U.S. Route 1 and Interstate 95. The Florida East Coast Railway cargo facility, on the mainland, is 10 miles from the port.

(126) **Chart 11476.**–From southward of the shoals at Cape Canaveral to Bethel Shoal, a distance of about 43 miles, the shore is straight. The 5-fathom curve is from 0.3 to 1 mile offshore along this section of the coast.

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(127) A large water tank is prominent about 4.5 miles southward of **Cocoa Beach**, and 13 miles southward of Cape Canaveral Light. **Indian Harbor Beach** is marked by a water tank. **Indialantic** is marked by prominent water tanks.

(128) **Sebastian Inlet** (see chart 11472) is 36.5 miles southward of Cape Canaveral Light. In May 1983, there was a reported controlling depth of 5 feet from the Intracoastal Waterway through the dredged channel of the inside bar, thence 8 feet to the eastern entrance. In May 1983, it was reported that 12 feet can be taken across the bar in smooth seas. The western entrance is marked by private daybeacons and a light. The entrance is protected by a north jetty, marked by a private light, extending 600 feet from shore and a south jetty extending 500 feet from shore. A steel bulkhead leads in a west-northwest direction for about 1,500 yards from the south side of the inlet into Indian River. The inlet is used by local fishermen and party boats.

(129) Sebastian Inlet is dangerous and particularly hazardous to small boats not designed for the open seas. Persons using this inlet should be experienced boatmen and have local knowledge. It is reported that shoaling exists just north of the south jetty and for about 200 yards to the east of the south jetty. Shoaling also exists in the general area south of the small spoil island between the bridge and the Intracoastal Waterway. Shoals are gradually building up and shifting. Minimum depth in the inlet varies; the bottom is rocky in spots.

(130) It is further reported that the velocity of the tidal currents reaches 10 knots, and turbulence exists between the bridge and the end of the jetties. Anchoring east of the bridge is extremely hazardous, particularly by the stern. Except during flat calms, breaking and confused seas exist off the mouth of the inlet and inside the inlet as far as the bridge. Conditions worsen with increasing seas or winds and on an ebb tide. Small boats departing the inlet on a flood or slack tide can find it impossible to return on an ebb tide. While the inlet conditions are generally worse during the winter months, hazardous conditions develop rapidly in the summer in squalls and on ebb tides.

(131) Additional information on local existing conditions can be obtained by contacting the Fort Pierce Coast Guard Station (telephone: 561-464-6100) and asking for the Coast Guard Auxiliary telephone number. A fixed highway bridge, State Route A1A, crossing the inlet has a clearance of 37 feet.

(132) **Thomas Shoal,** with a least depth of 26 feet over it, is 7 miles eastward of Sebastian Inlet. **Bethel Shoal,** with depths of 29 to 30 feet over it, is 17 miles southeastward of the inlet and 11 miles offshore. A lighted whistle buoy is northeast of the shoal area. A 23-foot shoal spot is about 2.5 miles north-northwestward of the buoy.

(133) **Chart 11474.–**From Bethel Shoal to Jupiter Inlet, a distance of about 50 miles, shoal areas and wrecks are over 10 miles offshore.

(134) The twin towers at **Riomar,** 12 miles northward of Fort Pierce Inlet, and the water tanks south of Riomar, are prominent.

(135) **Indian River Shoal,** with depths of 10 to 30 feet over it, is about 8 miles northward of Fort Pierce Inlet and extends for about 3 miles offshore.

(136) **Chart 11475.–Fort Pierce Inlet** is 62 miles southward of Cape Canaveral Light and 33 miles northward of Jupiter Inlet Light. Care must be exercised in entering due to the strong currents. In southeasterly weather with an ebb tidal current the entrance is rough.

(137) **Fort Pierce,** on the west shore of the Indian River inside Fort Pierce Inlet, is the St. Lucie County Seat. The receipts into the harbor are aragonite (limestone), cement, and produce from the Bahama Islands. Citrus is shipped from the harbor.

(138) Several fishing vessels operate in and out of the harbor. It is the distributing point for supplies to the surrounding country. The Intracoastal Waterway passes through the Indian River east of the city. (See chapter 12.)

(139) **Fort Pierce Coast Guard Station** is on the south side of Fort Pierce entrance channel, on the west side of the cove immediately westward of **Faber Point.**

(140) **Prominent features.–**A 12-story condominium, 1 mile northward of the entrance is prominent. This feature is shown on chart 11474.

(141) Also prominent are several high-rise condominiums immediately south of the entrance, a 210-foot meteorological tower 7.2 miles south of the entrance, a 200-foot cement silo within the harbor, and the buildings of two nuclear powerplants about 7.6 and 9 miles southward of the entrance. The meteorological tower is marked by a fixed red light about halfway up and a flashing red light on top.

(142) **COLREGS Demarcation Lines.–**The lines established for Fort Pierce Inlet are described in **80.727**, chapter 2.

(143) **Channels.–**A Federal project provides for an entrance channel 30 feet deep, and an inner channel and turning basin 28 feet deep. Depths in the channel may vary considerably between dredging operations. (See Notice to Mariners and latest edition of chart for controlling depths.) Two rubblestone jetties with revetment extensions protect the entrance. The channel is marked with lighted ranges, and lighted and unlighted buoys.

(144) **Dangers.–**There are a number of shoals and wrecks in the approaches to the harbor; some of them are marked. A fish haven, about 1.7 miles long, from 0.8 mile to 1.2 miles offshore, and marked at the north and south ends by private buoys, is about 2 miles northward of the entrance. In the entrance channel, shoaling tends to build southward from the north side of the channel just inside the jetties, abeam Coon Island, and in the turning basin. Local knowledge is advised to determine the extent of shoaling in these areas.

(145) **Tides.–**The mean range of tide is 2.6 feet at the jetties and 1.2 feet in Indian River off the Municipal yacht basin.

(146) **Currents.–**The tidal currents in the inlet have a velocity of about 3 knots. (For predictions see the Tidal Current Tables.) The currents run through the cut parallel to the channel and are reported to reach velocities of 4 to 6 knots and at the turn in the channel, the current sets across the channel, flood to the north and ebb to the south. At the western end of the Causeway Island, where the channel crosses the Intracoastal Waterway, cross currents are encountered with the set to the south on the flood and to the north on the ebb. These currents are influenced by the wind. Vessels are advised to use caution when shaping their approach to the bridge that crosses the Intracoastal Waterway between Causeway Island and Fort Pierce and when mooring at the facilities just northward of the bridge.

(147) **Pilotage, Fort Pierce.–**Pilotage is compulsory for all foreign vessels and for U.S. vessels under register in foreign trade if drawing 7 feet or more of water. Pilotage is optional for U.S. coastwise vessels that have on board a pilot licensed by the Federal Government. The pilot will board at the sea buoy. The

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40-foot pilot boat has a black hull, white superstructure, red deck, and the word PILOT painted on the sides; it is equipped with VHF-FM channels 6, 12, 16, and 22A. Advance notice of at least 24 hours should be given for all arrivals. A 2 hour notice is required for all departures and inner port movements. The pilots home telephone is 561-464-1564 or 561-464-5502. Pilots advise vessels drawing less than 23 feet and not more than 500 feet in length can be handled at any stage of the tide. Vessels drawing more than 23 feet or more than 550 feet in length will be handled on high water slack only during daylight. Vessels drawing more than 27 feet or more than 820 feet in length are considered unsafe to handle at any time. One way traffic is recommended for vessels when transiting the dredged channel.

(148) **Towage.–**One 1,200 hp is available 24 hours a day and is equipped with VHF-FM channels 6, 12, 16, and 22A. Additional tugs are available from the Port of Palm Beach.

(149) **Quarantine, customs, immigration, and agricultural quarantine.–**(See chapter 3, Vessel Arrival Inspections, and appendix for addresses.)

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

(151) Fort Pierce is a **customs station.**

(152) **Harbor regulations.–**The port director is the harbormaster at Fort Pierce. The pilot is the deputy harbormaster. All vessels moving from one wharf to another shall have a pilot on board. The pilot boat will assist in movement.

(153) **Manatees.–**A regulated speed zone for the protection of manatees is at Fort Pierce in the vicinity of the municipal yacht basin. (See Manatees, chapter 3.)

(154) **Wharves.–**The active facilities at Fort Pierce are privately owned. Old City Pier (27°27'26"N., 80°19'23"W.) is 330 feet long on its north side with reported depths of 14 to 25 feet from west to east. On the east side of the pier is 200 feet of wharf with a roll on-roll off ramp and reported depths of 10 feet. The Indian River Refrigeration Terminal Co. pier is immediately northward on the west side of the turning basin. The pier is 455 feet long on the north side, 330 feet on the south side, and 178 feet wide; vessels moor on both sides of the pier and at the east face if their length is less than the pier's width. Depths are reported to be 26 to 28 feet on the north side and 15 to 25 feet, from west to east, on the south side. The bulkhead immediately north of the pier is 125 feet long with reported depths of 20 feet. Immediately northward is the Port Petroleum Fuel Dock with 200 feet of wharf and reported depths of 16 feet alongside. The berth is also used for the discharge of cement by mooring the vessel "mediterranean style." This type mooring, 70 feet from the bulkhead, provides reported depths in 1998, of 26 to 28 feet. The bulk aragonite-receiving berth of the Marcona Ocean Industries Co. is at three breasting dolphins in the dredged area north of the basin (27°27.8'N., 80°19.3'W.); depths of 26 to 28 feet were reported in 1998.

(155) **Supplies.–**Gasoline, diesel fuel, bunker C, water, and some marine supplies are available.

(156) **Repairs.–**There is a 1,000-ton lift at the railway drydock located 6 miles north on the Intracoastal Waterway. On the north side of Taylor Creek there is a marina and boat repair facility with a 150-ton travel lift. Sea going ships may be drydocked at Port Everglades and Jacksonville.

(157) **Communications.–**Fort Pierce is served by the Florida East Coast Railway, by U.S. Route 1, and by several State highways. The airport is 3 miles northwest of the town.

(158) **Small-craft facilities.–**The municipal yacht basin, just south of **Moore Creek,** has an approach channel from the Intracoastal Waterway which is immediately south of the bridge and parallel to it, thence southward along the waterfront to the basin; the channel is marked by privately maintained daybeacons. Extreme caution should be exercised as strong crosscurrents exist. The overhead power cable crossing this channel has a clearance of 85 feet. In October 2000, the reported controlling depth was 7 feet in the channel and the basin. Berths, gasoline, diesel fuel, ice, water and electricity are available. The yacht basin is controlled by a **dockmaster.** A marina on the west side of the Indian River just north of the Causeway Island bridge has open berths for about 20 boats with reported depths of 5 feet. Electricity, water, ice, and most yacht services are available. A 30-ton mobile lift here can haul out boats up to 60 feet for all types of repairs. The facilities of a yacht club are on the south side of the Fort Pierce entrance channel, immediately westward of Faber Point. There are about 80 open berths with reported depths of 6 feet. Gasoline, diesel fuel, fresh water, ice, and electricity are available. A dredged channel marked by daybeacons leads from the Intracoastal Waterway to **Taylor Creek.** In April 1999, the controlling depth was reported to be 6 feet almost to the railroad bridge. Marinas in Taylor Creek have berthing, gasoline and diesel fuel. A 150-ton lift is available for hull, engine, and electronic repairs.

(159) **Chart 11474.–**For a distance of 13 miles southward of Fort Pierce Inlet, broken ground with 18 to 28 feet over it extends from 2.5 to 6 miles offshore.

(160) **Capron Shoal** has a least depth of 18 feet over it about 3.6 miles southeastward of Fort Pierce Inlet. A buoy is 300 yards northeastward of the 18-foot spot.

(161) **Pierce Shoal,** with 21 to 30 feet over it, lies about 2 miles offshore, and 6 to 8.5 miles southeastward of Fort Pierce Inlet.

(162) **St. Lucie Shoal,** with 15 to 30 feet over it, lies from 3 to 6 miles offshore, and 22 to 26 miles northward of Jupiter Inlet Light. It is the principal danger in this area. The northern end of the shoal is marked by a lighted whistle buoy and an unlighted buoy is southeast of a 15-foot spot at the southern end.

(163) Several wrecks are eastward of the broken ground within 10 miles of the shore. The chart should be used as the principal guide.

(164) **Gilbert Shoal,** with 17 to 30 feet over it, is 1 to 1.5 miles offshore about 3 miles north of St. Lucie Inlet.

(165) **Charts 11474, 11472, 11428.–St. Lucie Inlet,** forming the mouth of the St. Lucie River and the south end of the Indian River, lies 20 miles south of Fort Pierce Inlet and 13.5 miles north of Jupiter Inlet Light. The entrance to the inlet is protected by jetties and a detached breakwater. The inner part of the north jetty is in ruins. A rock ledge across the inlet extends south for over 1 mile from the east end of the north jetty ruins. Extensive sandbars are on the north side of the inlet channel from the north jetty to the Intracoastal Waterway. It is reported that shoaling builds up across the channel from both the north and south sides. Depths in the channel vary.

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(166) St. Lucie Inlet is dangerous and particularly hazardous to small boats not designed to the open seas. Persons using the inlet should be experienced boatmen and have local knowledge.

(167) It is reported that tidal currents reach a velocity of 7 knots. Currents continue to flow 2 hours after high and low tides. Entrance is easiest just on the flood side of slack water.

(168) The approach is marked by a lighted whistle buoy. The entrance buoys are not charted, as they are frequently moved to mark the best water. It is reported that after heavy storms, buoys may be off station due to dragging or to shifting channels.

(169) It is further reported that ground swells can make inlet passage impossible for all craft. Breakers occur throughout the entire channel as seas, ground swells, and winds increase, particularly on an ebb tide.

(170) While the inlet conditions are generally reported to be worse during winter, hazardous conditions develop rapidly during summer squalls.

(171) Additional information on local existing conditions can be obtained by calling the Fort Pierce Coast Guard Station (telephone: 561-464-6100) and asking for the Coast Guard Auxiliary telephone number.

(172) **St. Lucie River** enters the sea through St. Lucie Inlet and connects with the Gulf coast via the Okeechobee Waterway. State Route A1A highway bridge crossing the river 3 miles above the junction with the Intracoastal Waterway has a fixed span with a clearance of 65 feet. The Florida East Coast Railway bridge at Stuart has a bascule span with a clearance of 7 feet at center. The bridge is on automatic operation, normally left in an open position and closed upon the approach of trains. (See **117.317**, chapter 2, for details of operation.) The Roosevelt (U.S.1) highway bridge, adjacent to the west, has a fixed span with a clearance of 65 feet. The Roosevelt bascule bridge has a clearance of 14 feet at the center. The overhead power cable at the bridge has a clearance of 75 feet over the main channel. (See **117.1 through 117.59 and 117.317**, chapter 2, for drawbridge regulations.)

(173) Cross currents at the entrance to St. Lucie River create a hazardous condition for vessels and barges making the short turn from the Intracoastal Waterway. Vessels should stay 100 yards southward of a line between Light 4 and Daybeacon 6 to avoid hitting the hard ledge on the north side of the channel.

(174) St. Lucie River has several branches of some commercial importance. These, with the main river, form an important center for yachting and fishing in the winter. Traffic on the river is mostly in fish and timber.

(175) **Manatee Pocket** is a protected body of water about 1 mile long and 0.2 mile wide. It had a reported controlling depth of 4½ feet in May 1983. The entrance is 0.6 mile west of the intersection of the St. Lucie River and the Intracoastal Waterway. The channel at the entrance is marked by daybeacons. Berthage, electricity, freshwater, ice, gasoline, diesel fuel, and limited supplies are available at any of several marinas. A 100-ton mobile lift is available for hull, engine, and electronic repairs at a repair yard at the southeast end of Manatee Pocket. Small boats can obtain protection from tropical storms in Manatee Pocket. The holding bottom is good. Yachts can anchor anywhere for overnight stops.

(176) **Port Salerno,** a small town at head of Manatee Pocket, has a marl plant and is headquarters for a fishing fleet. Several boatyards with machine shops and several resorts with good facilities for yachts are available. (See the small-craft facilities tabulation on chart 11472 for services and supplies available.)

(177) **Pilots** for St. Lucie Inlet can be obtained at Manatee Pocket.

(178) At **Port Sewall,** 1.2 miles above the junction of St. Lucie River and the Intracoastal Waterway, there is a boatyard which has two marine railways; the largest can handle craft to 60 feet long. Hull and engine repairs can be made; a machine shop is on the premises.

(179) **Rio** is a small real estate development on the north bank of St. Lucie River, 3.5 miles above **Sewall Point.** A privately dredged channel 1 mile west of Light 21 leads to a marina; the reported controlling depth in the channel was 7 feet in May 1983. There are about 58 berths; water, electricity, gasoline, diesel fuel, ice, and a launching ramp are available. Another marina in the slip 0.2 mile westward has gasoline, diesel fuel, water, and a 30-ton lift; hull and gasoline-engine repairs can be obtained.

(180) **Stuart** is a progressive city on the St. Lucie River, 5 miles above Sewall Point. It is the county seat of Martin County and is on the Florida East Coast Railway, U.S. Highway No.1, and the Okeechobee Waterway. The city has a hospital and is the distributing center to the surrounding area, which is noted for its winter vegetables, citrus and tropical fruits, poultry raising, ranching, and commercial fishing.

(181) The municipal pier, on the east side of the river 200 yards south of the Roosevelt bascule bridge, has berthage for two or three boats; in May 1983, there were reported depths of 9 feet at the end and 6 to 9 feet on the sides of the pier. An oil pier on the west side of the river 500 yards north of the Roosevelt bascule bridge pumps gasoline and diesel fuel, and water and limited moorage are available.

(182) There is a small protected basin in **Frazier Creek,** 0.3 mile south of the Roosevelt bascule bridge. Gasoline, water, some marine supplies, and dockage for 18 boats to 30 feet are available at the marina. A 3-ton mobile lift is available for hull, engines, and electronic repairs. A surfaced launching ramp is at the basin. In 1983, the reported controlling depth was 5 feet from the waterway to the highway bridge about 0.1 mile above the mouth. The bridge has a 33-foot fixed span with a clearance of 6 feet.

(183) **Pilots** for St. Lucie Inlet and connecting waterways can be obtained through the Stuart Chamber of Commerce.

(184) St. Lucie River divides into two forks west of Stuart. The **North Fork** extends several miles in a north-northwest direction. It is about 0.75 mile wide with an even bottom of 10 to 12 feet in depth. The South Fork is described as part of the Okeechobee Waterway, chapter 12.

(185) **Chart 11474.**–From St. Lucie Inlet to Jupiter Inlet, a distance of 14 miles, several shoals and wrecks are within about 3 miles of the shore. The shoals and wrecks should be avoided by deep-draft vessels. The 20-fathom curve is a safe guide.

(186) **Jupiter Inlet Light** (26°56'55"N., 80°04'55"W.), 146 feet above the water, is shown from a red brick tower on the north side of the inlet, 94 miles south of Cape Canaveral Light. The light is reported to be obscured by high-rise construction from 231° to 234° when within a range of 5.5 miles.

(187) **Charts 11474, 11472.–Jupiter Inlet,** an opening in the beach just south of Jupiter Inlet Light, is 14 miles south of St. Lucie Inlet. It leads to Jupiter Sound on the north, Loxahatchee River on the west, and Lake Worth Creek on the south. A short stone jetty is on the north side of the entrance to the inlet, and a

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concrete and steel barricade is halfway across the entrance from the south side. Private daybeacons mark the entrance. In 1983-February 2000, the reported controlling depth was 4 feet over the bar to the Intracoastal Waterway. Small boats of the fishing fleet use the inlet. The Intracoastal Waterway is 0.5 mile inside the entrance to the inlet. (See chapter 12.)

(188) Jupiter Inlet is dangerous and particularly hazardous to small boats not designed for the open seas. Persons using this inlet should be experienced boatmen and have local knowledge. It is reported that shallow sandbars exist from the lighthouse through the mouth of the inlet and that the sandbar at the junction of the Intracoastal Waterway and the entrance builds up continuously. A very shallow sandbar extends south and east from the north jetty across the entire inlet. The bar is very deceptive and usually lies 1 or 2 feet below the surface. The openings through the sandbar shift with rapidly changing weather conditions and can be very shallow.

(189) It is further reported that tidal currents reach a velocity of 6 knots. Eddies and extreme turbulence accompany flood and ebb tides, particularly near the south jetty. Breaking and confused seas frequently exist over the sandbars off the mouth of the jetty. Conditions are worst with ebb tide and easterly winds. Near low water, long ground swells and wake from passing vessels can create dangerous waves in seemingly calm seas. Conditions are most hazardous during the winter months.

(190) The mean range of tide at Jupiter Inlet is 2.5 feet.

(191) Additional information on local existing conditions can be obtained by contacting the Lake Worth Inlet Coast Guard Station (telephone: 561-840-8503) and asking for the Coast Guard Auxiliary telephone number.

(192) **Chart 11466.**–Between Jupiter Inlet and Lake Worth Inlet, a distance of about 10.5 miles, the coast is clear of shoals with the 10-fathom curve about 1 mile offshore. A fishing pier extends about 340 yards seaward from about 26°53'37"N., 80°03'24"W.

(193) **Lake Worth Inlet** is a dredged cut through the barrier beach 11 miles south of Jupiter Inlet Light and 31 miles north of Hillsboro Inlet Light. The entrance is protected by two jetties and the cut by revetments.

(194) In February 2000, shoaling was reported to an unknown extent through the entrance channel, especially in the N side of the channel. Mariners are advised to transit through the extreme S side of the channel for best water. Local knowledge and extreme caution are advised.

(195) **COLREGS Demarcation Lines.**–The lines established for Lake Worth Inlet are described in **80.727**, chapter 2.

(196) **Port of Palm Beach** is a deepwater port development 1.1 miles west of the entrance to Lake Worth Inlet. The port borders the communities of **Riviera Beach** on the north and **West Palm Beach** on the south. It is 259 miles south of Jacksonville and 68 miles north of Miami. The principal cargoes are bulk petroleum products, cement, and general cargo. There is extensive barge traffic. An extensive roll-on/roll-off operation is conducted in the Bahama Island trade. All of the wharves and warehouses are owned by the Port of Palm Beach District. **Lake Worth Inlet Coast Guard Station** is inside the entrance about 0.7 mile north of Peanut Island on the west side of the Intracoastal Waterway.

(197) **Prominent features.**–The dominant landmarks in the area are the charted twin 300-foot stacks at the powerplant adjacent to the port terminal; they are marked with horizontal bands of white and orange and by flashing red lights near their tops. Also prominent from offshore are the many multistoried buildings along the beaches north and south of the inlet. Of these, the 42-story condominium and the Breakers Hotel, 1 mile north and 3.5 miles south of the inlet, respectively, are the most prominent.

(198) **Channels.**–A Federal project provides for a 35-foot entrance channel, thence a 33-foot inner channel to two turning basins with depths of 33 and 24 feet, respectively, at the Port of Palm Beach. (See Notice to Mariners and latest edition of chart for controlling depths.) Markers include a **271°30'** lighted entrance range, lights, and lighted and unlighted buoys. The north (right outside) quarter of the entrance channel tends to shoal along the north jetty.

(199) **Anchorages**.–Two offshore anchorage grounds are close north and south of the channel entrance. (See **110.1 and 110.185**, chapter 2, for limits and regulations.) There is no deepwater anchorage in the harbor. Anchorage for craft drawing up to 8 feet is available in the vicinity of **Palm Beach.**

(200) **Dangers.**–A reef in the form of a ridge with scattered boulders extends for about 300 yards eastward of Peanut Island about 25 feet north of the improved channel. The reef, with a least depth of about 4 feet over it, is extremely dangerous. On the ebb, the current sets across the reef in a northeasterly direction. Two fish havens are 0.7 and 1.5 miles off the north side of the entrance and another is 1.5 miles off the south entrance.

(201) **Manatees.**–A regulated speed zone for the protection of manatees is in the vicinity of the powerplant on the west side of the turning basin. (See Manatees, chapter 3.)

(202) **Tides and currents.**–The mean range of tide is 2.8 feet at the inlet and 2.6 feet at the Port of Palm Beach. The currents in the inlet are strong and must be carefully guarded against. The current velocity is 2.4 knots on the flood and 3.6 knots on the ebb. Current predictions may be obtained from the Tidal Current Tables.

(203) **Weather, West Palm Beach and vicinity**.–With the Gulf Stream only about 2 miles (4 km) offshore and prevailing winds off the Atlantic most of the year, the climate of this area is pleasant. The average high temperature for West Palm Beach is 83°F (28.3°C) while the average low temperature is 67°F (19.4°C). July is the warmest month by a fraction of a degree with an average high temperature of 90°F (32.2°C) and an average low temperature of 75°F (23.9°C). January is the coolest month of the year with an average high temperature of 75°F (23.9°C) and an average low of 57°F (13.9°C). An official reading of 100°F (37.8°C) has never been recorded at West Palm Beach but the all-time high temperature is 99°F (37.2°C) recorded in July 1981. The extreme minimum temperature for West Palm Beach is 27°F (-2.8°C) recorded in January 1977. Every month except December and January has recorded maximum temperatures in excess of 90°F (32.2°C) and an average of 75 days each year has a maximum extreme in excess of 90ºF (32.2°C). An average of only one day each year has an extreme minimum at or below freezing.

(204) The average annual precipitation for West Palm Beach is 61 inches (1,549 mm). September is the wettest month averaging 8.8 inches (223.5 mm) and February is the driest month averaging only 2.6 inches (66 mm). Snowfall is nearly nonexistent at West Palm Beach and the greatest 24-hour snowfall was trace. This has occurred only once for the 50-year period of record, January 19, 1997.

(205) Winds speeds of 17 knots or more can be expected about 7 to 10 percent of the time from October through April as a result of lows, cold fronts or intensification of the trade winds. While

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gales are rare, they are most likely during the tropical cyclone season, which runs from June through October on the average.

(206) Since 1842, 60 tropical storms have come within 50 miles (93 km) of West Palm Beach, Florida, 22 of these storms since 1950. The most noteworthy in recent time was Hurricane David in September 1979. Around noon on September 3rd, David raked the West Palm Beach area with 85-knot winds while the center of the storm remained off shore and on August 27, 1964, Hurricane Cleo passed near West Palm Beach with 75-knot sustained winds and guests to 90 knots.

(207) Thunderstorms can generate strong, gusty winds along with heavy rain. They are most likely from June through September on about 10 to 16 days per month. Visibilities drop below 0.5 mile (0.9 km) on 1 to 2 days per month, on the average, from November through April.

(208) See page T-8 for **West Palm Beach** climatological table.

(209) **Pilotage, Port of Palm Beach.**–Pilotage is compulsory for foreign vessels and for U.S. vessels under register in the foreign trade and drawing more than 7 feet of water. Pilotage is optional for U.S. coastwise vessels which have a pilot aboard licensed by the Federal Government.

(210) The Port of Palm Beach is served by Palm Beach Pilots Association, at Riviera Beach Marina, 200 E. 13th Street, Suite B, Riviera Beach, FL 33404; telephone 561-845-2628, fax 561-845-2644. The office/station monitors VHF-FM radiotelephone channel 16 and works on channel 14.

(211) The pilot boats are PILOT#1 and PILOT#2; both have gray hulls, white superstructures, and the word PILOT on the sides. PILOT#1 is 31 feet long; PILOT#2 is 35 feet long. Both boats display a white over red light at night. The pilot boats monitor VHF-FM channel 16 and 14, and work on channel 14. The pilot boarding and cruising area, depending on wind and gulf stream current conditions, is near Lake Worth Lighted Whistle Buoy LW (26°46'18"N., 80°00'36"W.), or as instructed by the pilots. Vessels are requested to rig the pilot ladder on the leeward side about 1 meter above the water and maintain a speed of 6 knots or less. A northern gulf stream current almost all year makes an approach to the inlet from the southeast the safest, however, at times large swells do occur and alternate approaches may be instructed by the pilots for safety reasons. Large vessels are taken in only at slack water and may be restricted to daylight hours under certain conditions. Pilots do not maintain a 24-hour watch at the pilot office/station, but can be contacted by telephone or through the Palm Beach Marine Operator on VHF-FM channel 28. At least 24 hours advance notice of arrival is requested.

(212) **Towage.**–Two tugs to 1,000 hp are available and can be obtained through ships' agents or the pilots.

(213) **Quarantine, customs, immigration, and agricultural quarantine.**–(See chapter 3, Vessel Arrival Inspections, and appendix for addresses.)

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

(215) Palm Beach is a **customs port of entry.**

(216) **Coast Guard.**–A **vessel documentation office** is in West Palm Beach. (See appendix for address.)

(217) **Harbor regulations.**–Copies of the Port Tariff may be obtained at the offices of the Port of Palm Beach District at the Maritime Office Building in Riviera Beach. The Port Operations **Manager** assigns berths and enforces the harbor regulations. The Port of Palm Beach is a public corporation created by the State Legislature. Port regulations state it shall be unlawful for any vessel, boat, barge, or other watercraft of any kind to anchor in the channel or turning basin, except in cases of actual emergency.

(218) **Wharves.**–The Port of Palm Beach has two slips and four marginal wharves, two north and one south of the slips, and one between the slips. A marginal container wharf is 0.2 mile north of the north slip. The port district owns most of the facilities and the port tenants operate most of them. There are about 50 acres of open storage and 150,000 square feet of warehouse space. The port operates its own belt line railroad which connects with the Florida East Coast Railway. Mobile cranes to 230 tons are available, with other equipment available as required. All berths have fresh water available. All berths have a deck height of 8½ feet except Berths 13 and 14, 8 feet, and Berths 20, 21, and 22, 5 feet. Slip 1 is the north slip, Slip 2 is the south slip.

(219) **Berth 1:** marginal wharf immediately southward of Slip 2; 210 feet long; 25 feet alongside; pipelines extend to storage tanks with 40,000-ton capacity; receipt and shipment of general and refrigerated cargo; shipment of molasses; operated by Florida Molasses Exchange, Inc.

(220) **Berths 2, 3:** south side Slip 2; 620 feet long; 35 feet alongside; traveling shiploader with loading rate of 600 tons of sugar per hour; pipelines extend to storage tanks with 2-million-barrel capacity; receipt and shipment of general cargo; receipt of fuel oil and shipment of sugar and molasses; various operators.

(221) **Berth 4:** head of Slip 2; 220 feet long; 25 feet alongside; receipt and shipment of general cargo by small vessel and barge.

(222) **Berths 5, 6:** north side Slip 2; 640 feet long; 35 feet alongside; primary location for receipt of fuel oil, pipelines extend to oil storage tanks with 2 million barrel capacity; receipt of bulk cement; receipt and shipment of general cargo.

(223) **Berth 7:** marginal wharf between Slips 1 and 2; 215 feet long; 25 feet alongside; receipt and shipment of general cargo.

(224) **Berths 8, 9:** south side Slip 1; 700 feet long; 35 feet alongside; receipt and shipment of general cargo; various operators.

(225) **Berths 10, 11, 12:** three roll-on/roll-off ramps at the head of Slip 1; 210-foot face; 35 feet alongside; 2 ½ acres open storage, receipt and shipment of general, containerized, and roll-on/roll-off cargo; operated by Heavy Lift Service Inc.

(226) **Berths 13, 14:** north side Slip 1; 700 feet long; 35 feet alongside; receipt and shipment of general and containerized cargo; operated by Heavy Lift Service, Inc.

(227) **Berths 15, 16, 17:** marginal wharf immediately northward of Slip 1; 610 feet long; 25 feet alongside; receipt and shipment of general and containerized cargo; mooring cruise vessels; operated by the Crown Cruise Line.

(228) **Berths 18, 19:** S side of slip immediately north of Berth 17; 300 feet long; 25 feet alongside; receipt and shipment of general and containerized cargo and vehicles; operated by Tropical Shipping Co., Ltd.

(229) **Berths 20, 21, 22:** west of Berth 19; three roll-on/roll-off ramps; each 67 feet long; 25 feet alongside; receipt and shipment of roll-on/roll-off cargo; operated by Tropical Shipping Co., Ltd.

(230) **Berth 23:** across slip north of Berth 19; 80 feet long; 25 feet alongside; receipt and shipment of containerized cargo and vehicles; operated by Tropical Shipping Co., Ltd.

(231) **Berths 24, 25:** 0.2 mile north of Slip 1; 450 feet long; 25 feet alongside; receipt and shipment of containerized cargo and vehicles; operated by Tropical Shipping Co., Ltd.

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(232) **Supplies.**–Freshwater is piped to the berths. Diesel fuel and gasoline can be delivered by tank truck. Provisions and some marine supplies are available.

(233) **Repairs.**–Only minor repair work can be obtained for large ships. The nearest drydocks are at Jacksonville and Port Everglades.

(234) **Communications.**–The Port of Palm Beach Railroad connects with Florida East Coast Railway. There are highway connections to U.S. Route 1, Interstate Route 95, and Florida's Turnpike. The **Palm Beach International Airport** is 5.5 miles southwestward of the port area.

(235) The Intracoastal Waterway passes through Lake Worth just eastward of Port of Palm Beach. Facilities in the area for yachts and small craft are given in chapter 12.

(236) **Chart 11466.**–From Lake Worth Inlet the general trend of the coastline is south for 41 miles to Port Everglades. It is broken by several inlets of little importance. The coast is formed almost entirely by a low sand beach, with more or less conspicuous dunes partly covered by grass and scrub palmetto, and woods in the background. Numerous towns, tanks, radio towers, and scattered buildings are visible from seaward. Conspicuous from offshore are the buildings and pier at Palm Beach, Hillsboro Inlet Light, and the large buildings and tanks at Fort Lauderdale.

(237) The coast between Lake Worth Inlet and Port Everglades is fairly bold. The 20-fathom curve runs parallel to the beach and for a greater part of the distance is less than 2 miles from it. Several wrecks and obstructions are within 0.5 mile of the shore.

(238) **Palm Beach,** a resort on the narrow island between Lake Worth and the sea, is connected to West Palm Beach by highway bridges. The ocean pier here is used only for amusement purposes. Several other towns and cities are along the shores of Lake Worth.

(239) **Boynton Inlet** (see chart 11467), at the south end of Lake Worth, is a small dredged cut through the outside beach, about 100 feet wide. The entrance to the inlet is protected by jetties. In May 1983, the reported controlling depth over the bar and to the Intracoastal Waterway was 5 feet. The inlet is crossed by Route A1A highway bridge which has a fixed span with a clearance of 18 feet. An overhead power cable at the bridge has a clearance of 38 feet. Boynton Inlet is dangerous and particularly hazardous to small boats not designed for open seas. Persons using this inlet should be experienced boatmen and have local knowledge. The channel is unmarked.

(240) It is reported that shoaling exists, commencing about 100 yards south of the end of the north jetty and extending to the south. Submerged rocks extend 15 feet east of the end of the south jetty. Within the inlet, along the north and south jetties, east of the Route A1A highway bridge, is a concrete ledge which is just below the surface at high tide.

(241) Tidal currents through the inlet reach a reported velocity of 8 knots, and with an easterly wind it is impassible because of breakers at the entrance. There is a strong undertow when the tide is ebbing. Eddies and extreme turbulence accompany flood and ebb tides.

(242) It is further reported that except during a flat calm, breaking and confused seas exist in the channel from the bridge to the mouth of the inlet. Conditions worsen as seas and winds increase, particularly when the current is running. Conditions are more hazardous during winter.

(243) A dangerous wreck is about 1.8 miles south-southeast of the inlet.

(244) Additional information on local existing conditions can be obtained by contacting the Lake Worth Inlet Coast Guard Station (telephone: 561-840-8503), and asking for the telephone number of the Coast Guard Auxiliary.

(245) **Boca Raton Inlet** (see chart 11467) is a narrow dredged cut through the beach 5 miles northward of Hillsboro Inlet Light. It is used mostly by party fishermen. The hotel at **Boca Raton** is a prominent landmark. The mouth of the inlet is protected by short jetties marked by private lights. In December 1999, the inlet had a reported depth of about 5 feet in the lower south part of the entrance; shoaling to much lesser depths was reported across the rest of the entrance. The bar channel shifts with the winds.

(246) Boca Raton Inlet is dangerous and particularly hazardous to all boats not designed for open seas. Persons using this inlet should be experienced boatmen and should be extremely knowledgeable of the area. The channel is unmarked.

(247) It is reported that shoaling exists 30 yards outside of the inlet and also inside the inlet. Depth at low tide varies from 1 to 3 feet. A sandbar protrudes out of water inside the inlet on the north side. A sandbar extends underwater to within 30 feet of the south jetty. Shoaling and sandbars are continually shifting.

(248) In February 1980, it was reported that the outer 80 feet of the north jetty was being removed. It was further reported that increased shoaling may be expected and that the inlet may occasionally be closed by severe weather.

(249) Tidal currents through the narrow channel reach a reported velocity of 7 knots.

(250) It is further reported that except during a flat calm, breaking and confused seas exist at the mouth of the inlet. Conditions worsen as seas and winds increase, particularly during ebb tide. Breaking seas at the mouth of the inlet will extend 200 feet inside inlet mouth. Conditions are more hazardous during winter. Strong easterly winds are often encountered when attempting to navigate the inlet. These are particularly strong in November through May. In May through September heavy thunder storms often occur during early morning and afternoon.

(251) Additional information on local existing conditions can be obtained by calling **Fort Lauderdale Coast Guard Station** (telephone: 954-927-1611).

(252) Highway A1A bridge crossing the inlet has a 45-foot bascule span with a clearance of 23 feet at the center. (See **117.1 through 117.49**, chapter 2, for drawbridge regulations.)

(253) **Hillsboro Inlet Light** (26°15'36"N., 80°04'54"W.), 136 feet above the water, is shown from an octagonal pyramidal skeleton tower with central stair cylinder, lower third of structure white, upper two-thirds black, on the beach on the north side of the inlet.

(254) **Hillsboro Inlet** (see chart 11467), 31 miles southward of Lake Worth Inlet, connects with Hillsboro River and the Intracoastal Waterway. It has considerable importance as a base for party fishermen who run out into the Gulf Stream. In March 1985, the reported controlling depth was 7 feet in the privately maintained channel. The entrance channel is marked by private lights, a daybeacon, and a lighted entrance buoy, and protected by jetties that are partially awash at low tide. Rocky reefs are reported to extend northward and southward of the respective entrance lights; the southern reef is reported to dry at its southern end at low tide. The current in the entrance is reported to set northward across the channel on the flood, and southward on the

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ebb. In January 1990, shoaling to a depth of about 1 foot was reported at the entrance channel between Lights 1 and 2.

(255) Route A1A highway bridge crossing the inlet has a bascule span with a clearance of 13 feet. The bridgetender monitors VHF-FM channel 16 and works on channel 13. (See **117.1 through 117.59 and 117.289**, chapter 2, for drawbridge regulations.) On the flood tide the current past the bridge is reported to be as much as 5 to 6 knots. An overhead power cable at the bridge has a clearance of 64 feet. Yacht landings are on the south shore on either side of the bridge. A depth of 5 feet is at the landings. Berthage, electricity, gasoline, diesel fuel, water, ice, some marine supplies, a mobile 10-ton lift, and hull, engine, and electronic repairs are available.

(256) Southward of Hillsboro Inlet shoaling is rapid; depths of 6 to 8 fathoms have been found 1.5 miles offshore. A wreck 3.2 miles south of Hillsboro Inlet Light and 0.4 mile offshore has a depth of about 10 feet over it. Two small rock islets on each side of a stranded vessel were formed by the jettisoning of a cargo of cement about 5 miles south of Hillsboro Inlet Light and 0.4 mile offshore. They were blasted away during World War II, but until the depth over them has been determined, the area should be avoided by light-draft vessels.

(257) Fish havens extend 1 to 2.4 miles offshore between Hillsboro Inlet and Port Everglades.

(258) A submerged groin is 1 mile north of the entrance of Port Everglades and 0.4 mile offshore.

(259) **Chart 11470.–Port Everglades** is a deepwater port on the east coast of Florida, 301 miles south of Jacksonville and 948 miles from New York. Many of the world's large passenger vessels call at this major cruise port. Although principally a consumer port, considerable foreign commerce passes through. The principal commodities handled include petroleum products, automobiles, bulk cement, steel products, scrap iron, lumber, newsprint, glass, and a variety of general cargo. Two unmarked jetties protect the harbor entrance which is virtually landlocked.

(260) **Prominent features.**–The most prominent objects seen when approaching the port are four stacks painted with red and white bands about 1.2 miles southwest of the harbor entrance. These stacks are marked by red aircraft lights at night. There are numerous tall hotel buildings on the north side of the entrance close westward of the north jetties. The numerous hotels and several tanks along the beach, and tanks, and radio and television towers in Fort Lauderdale are other conspicuous objects.

(261) Because of the low shoreline good radar targets are limited in the approach to Port Everglades. It is reported, however, that the north and south jetties present good targets. Additionally, the entrance buoys are difficult to identify by radar because of the heavy small-craft traffic in the entrance.

(262) **COLREGS Demarcation Lines.**–The lines established for Port Everglades are described in 80.727, chapter 2.

(263) **Channels.–**A Federal project provides for a 500-foot-wide entrance channel 45 feet deep converging at the jetties to a 450-foot-wide channel 42 feet deep leading to a turning basin 42 feet deep at the main port facilities with north and south extensions 31 feet deep. From the turning basin southward, the Intracoastal Waterway leading to the Southport terminal has been dredged for a Port Everglades sponsored project width of 500 feet and project depth of 42 feet. Immediately north of the Southport terminal lies a turning notch on the west side of Intracoastal Waterway 850 feet by 750 feet, 42 feet project depth and marked by 7 fingered dolphins to the north and three articulated yellow buoys to the west. The federal maintenance plan includes the Intracoastal Waterway to Southport and the turning notch. Although not a part of the Federal project, the Port Everglades Department of Froward County has dredged the south extension of the turning basin to a depth of 38 feet and will maintain it at that depth. (See Notice to Mariners and latest edition of chart for controlling depths.)

(264) A lighted buoy marks the entrance, and channel markers include lighted buoys, lights, and a **269°30'** lighted entrance range.

(265) **Dangers.–**Two submerged breakwaters, extending almost 0.7 mile offshore on either side of the entrance, are unmarked. A large abandoned spoil area north of the entrance channel has very little water on it and at times appears above the water as an island; it was reported to be building up to the northwestward in April 1983. The shoal area westward of the spoil area is marked by daybeacons. A **Naval restricted area** extends about 2.5 miles offshore and about 4 miles southward of the south edge of the entrance channel. (See **334.580**, chapter 2, for limits and regulations.) Large vessels entering the port on weekends and holidays are advised to exercise extreme caution because of very heavy small-craft traffic. The ruins of a former jetty, covered 3 feet, extend south from the inner end of the north jetty.

(266) A large fish haven extends from 1.5 to 5.7 miles north of the entrance channel and from 1 to 2.2 miles offshore. A smaller fish haven is about 1 mile north of the entrance channel and about 1.5 miles offshore.

(267) Large commercial vessels approach, enter and depart the entrance channel within both quadrants east of Lighted Buoys 2 and 3. Small craft in the vicinity of the approach areas of the entrance channel are advised to be underway and prepared to get out of the way of any large commercial traffic at all times. They are advised never to anchor within 0.6 mile of Lighted Buoy PE or anywhere in the entrance channel itself, in order not to impede the passage of large commercial traffic.

(268) **Anchorage.–**Commercial anchorage areas A and B are NNE of Port Everglades Lighted Buoy 2 (See §**110.186**, chapter 2, for limits and regulations.) **All non-U.S. flag vessels planning to use the Port Everglades anchorages, whether bound for Port Everglades or not, are required to provide the US Coast Guard with a 24-hour advance notice of arrival**. (See **160.207**, chapter 2, for regulations.) Vessels using these anchorages must report their positions and time of anchoring to the Port Everglades Harbormaster on VHF-FM channel 14. Any vessel casualties such as engine malfunction and plans to perform engine repairs or maintenance while in the anchorage must be reported at the same time. Both anchorages are in close proximity to the three-reef system that runs along the entire coast of south Florida. Anchorage area A has charted soundings of 61 to 74 feet. Recent soundings of Anchorage area B indicate depths of 100 feet along the western edge sloping evenly down to 200 feet in an easterly direction for approximately 0.4 mile. The holding ground in both anchorages consists of a sand, mud, and coral rubble mixture that is not adequate during adverse weather. Several recent groundings have shown that there is very little time to respond to a dragging anchor before coming in contact with the inshore reefs. Violent, unpredictable winds in excess of 50 knots can be associated with local thunderstorm activity. Upon the approach of thunderstorms from any direction or in sustained winds of 25 to 30 knots from NNE through SSE all vessels are strongly

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advised to have engines on standby and be prepared to vacate the anchorage. It is highly recommended that vessels leave the anchorage and head to sea when sustained winds in excess of 30 knots are blowing from NNE through SSE. A proper anchor watch is vitally important with the vessel's position being checked frequently and VHF-FM channels 14 and 16 continuously monitored. Although not required, pilotage to the anchorages is available upon request and is strongly recommended for vessels not having the anchorages on a chart and for masters who are unfamiliar with the anchorages. Anchoring S of the entrance channel by vessels with a draft in excess of 12 feet is prohibited. (See **334.580**, chapter 2, for regulations.)

(269) **Tides and currents.**–The mean range of tide is 2.6 feet in the turning basin. The tidal currents in the entrance average about 0.7 knot. In April 1983, it was reported that the flood currents attain a velocity of 3 knots and the ebb currents 4 knots. Current swirls of varying characteristics are often encountered in the turning basin and make handling of ships difficult. Prevailing winds from the southeast and east coupled with a rising tide are the most hazardous. Caution should be exercised to avoid striking the piers or the rocky sides of the turning basin.

(270) The entrance channel has dangerously strong cross currents which vary in strength and are unpredictable in direction. These currents generally run at right angles to the direction of the narrow entrance channel making transit hazardous, without local knowledge, for deep draft vessels. These currents have been reported to be as much as 5 knots.

(271) Several locations in the port are also reported to be affected by man-made currents. The outflow from the Florida Power and Light cooling water discharge canal, just south of Berth 29, will effect passing ships in varying ways depending upon the output of the plant and the size and draft of the ship. After periods of heavy rainfall, the flood control gates in the Everglades of South Florida are opened causing very strong ebb currents which might dominate the flood currents in areas such as the Dania Cut-off Canal.

(272) **Weather, Port Everglades and vicinity**.–Tropical cyclones threaten (move within 180 miles of) Port Everglades once or twice each year on the average. About 50 percent of these are hurricanes. While the season runs from June through November, about 83 percent of all threats have occurred in August, September, and October. However the port has also been affected, outside of the normal season, in December, February and May. Tropical cyclones have approached the port from all octants although they are rare from the northwest through northeast. While the port is most vulnerable to winds off the open ocean, the relatively flat terrain provides little resistence to strong land winds; however, nearby manmade structures afford some protection. The Australian pines and other tall trees on the east side of the Intracoastal Waterway provide some lee effect from the prevailing easterly winds. Due to the narrow channel opening and two jetty systems the port is well protected from ocean waves except for those approaching from the east. However, energy from even these waves is lost by shoaling and diffraction inside the harbor. Wind waves inside are limited by lack of fetch. Storm tides have exceeded 12 feet (3.6 m) at Fort Lauderdale in the past. The lack of significant elevations on barrier land strips, subjects the entire Intracoastal Waterway in this area, including Port Everglades, to severe flooding from hurricanes. These factors plus the absence of sheltered berths or anchorages makes evasion at sea the best course of action for all seaworthy, deep-draft vessels when a hurricane threatens the port. Thousands of shallow draft boats are moored in the extensive canal system just north of Port Everglades. If feasible, they should be removed and transported inland to higher elevations. Because of the many boats, it might not be possible to move along the Intracoastal Waterway, to seek protection up a canal or river, unless departure is quite early. If a boat must be moored, it should be ballasted to be low in the water, to escape wind effects, and be well secured with allowance for increased water heights. More detailed information may be found in the **Hurricane Havens Handbook for the North Atlantic Ocean** as mentioned in chapter 3.

(273) Aside from the tropical cyclone threat the climate is conducive to marine activities. Gales are rare. They may occur with strong cold fronts or in severe thunderstorms. Winds of 17 knots or more are most likely from September through April when they blow about 2 to 5 percent of the time. Precipitation occurs on about 94 days annually and is most likely in summer. Thunderstorms occur on 10 to 15 days per month from June through October, a period which records more than 60 percent of the annual rainfall total. These brief, heavy showers usually help cool things off in the late afternoon or early evening. Temperatures climb to 90°F (32.2°C) or more on an average of 56 days each year and extreme of 100°F (37.8°C) has been recorded. The extreme minimum in winter is 28°F (-2.2°C). Visibilities are generally good and drop below 0.5 mile (0.9 km) on an average of just 8 days each year; November through March is the most likely period.

(274) **Pilotage, Port Everglades.**–Pilotage is compulsory for all foreign vessels and for U.S. vessels under register in the foreign trade with a draft of 7 feet or more. Pilotage is optional for U.S. coastwise vessels that have on board a pilot licensed by the Federal Government.

(275) The Port Everglades area is served by Port Everglades Pilots Association, P.O. Box 13017, Port Everglades, FL 33316; telephone 954-522-4491, fax 954-522-4498, radiotelephone VHF-FM channels 14, 16, 18A, 19, and 77.

(276) Port Everglades pilot boat has a gray hull, white superstructure with the word PILOT displayed on the sides. The pilot boat displays the hotel flag by day, and a white light over a red light at night. The pilot boat monitors and works VHF-FM channels 14 and 16. The pilots board in the vicinity of Port Everglades Lighted Buoy PE (26°05'30"N., 80°04'48"W.), day or night. The buoy is equipped with a racon. Vessels should maintain a speed of 7 knots and provide a pilot ladder 3 feet (1 meter) above the water on the lee side. Swift variable currents, usually east of the buoy, can affect boarding procedures.

(277) Arrangements for pilots can be made through ships' agents or the Port Everglades Harbormaster (telephone: 954-468-3531). At least 24 hours advance notice of arrival is requested, with confirmation given 1 hour in advance of arrival by radiotelephone.

(278) **Towage.**–Three conventional tugs to 4,200 hp, two tractor tugs to 5,200, and one Ship Docking Module of 4,000 hp are available for docking and undocking. Arrangements for tugs should be made through the harbormaster's office.

(279) **Quarantine, customs, immigration, and agricultural quarantine.**–(See chapter 3, Vessel Arrival Inspections, and appendix for addresses.)

(280) **Quarantine** is enforced in accordance with regulations of the U.S. Public Health Service. (See Public Health Service, chapter 1.) There are five general hospitals and several smaller private hospitals in the area.

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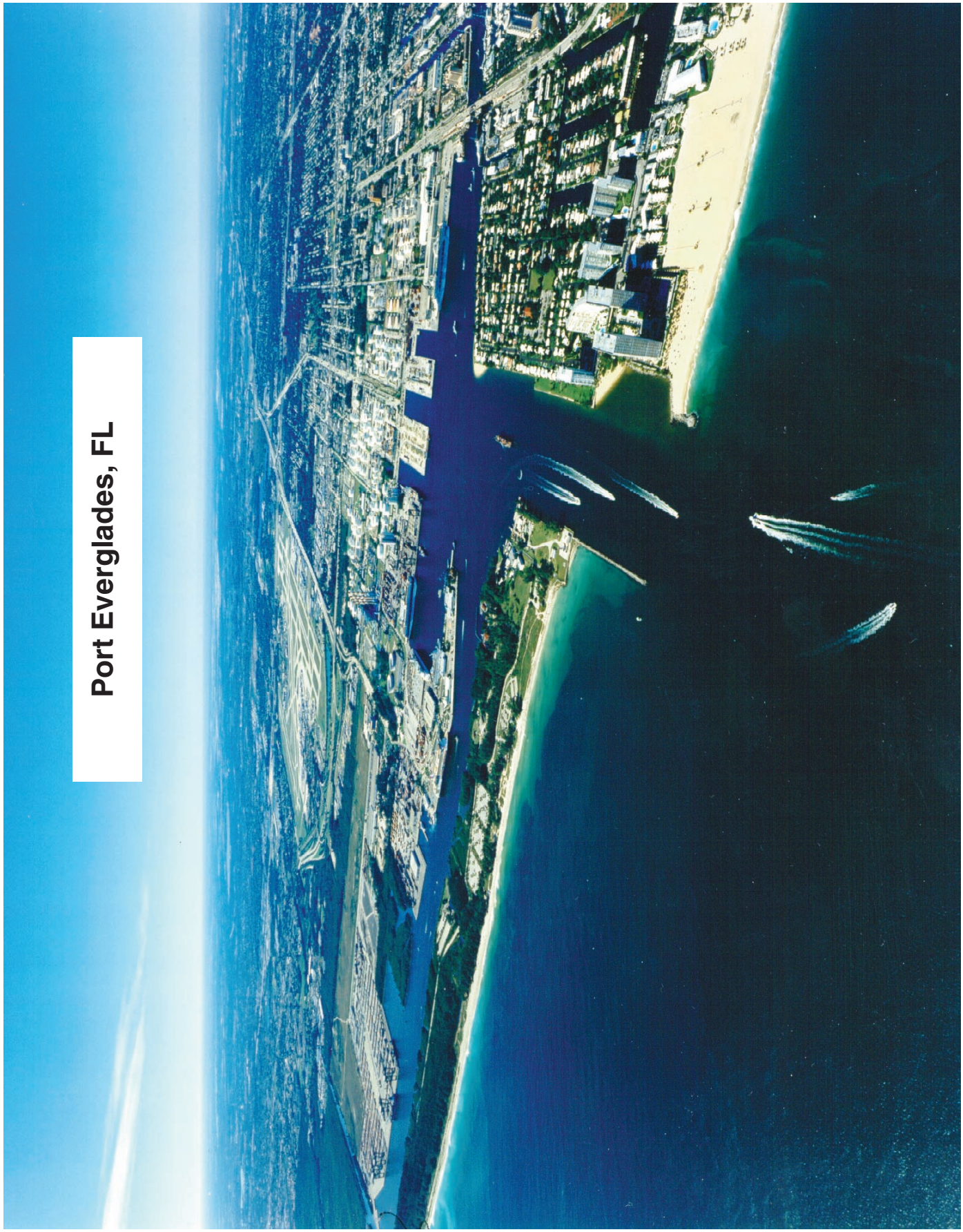
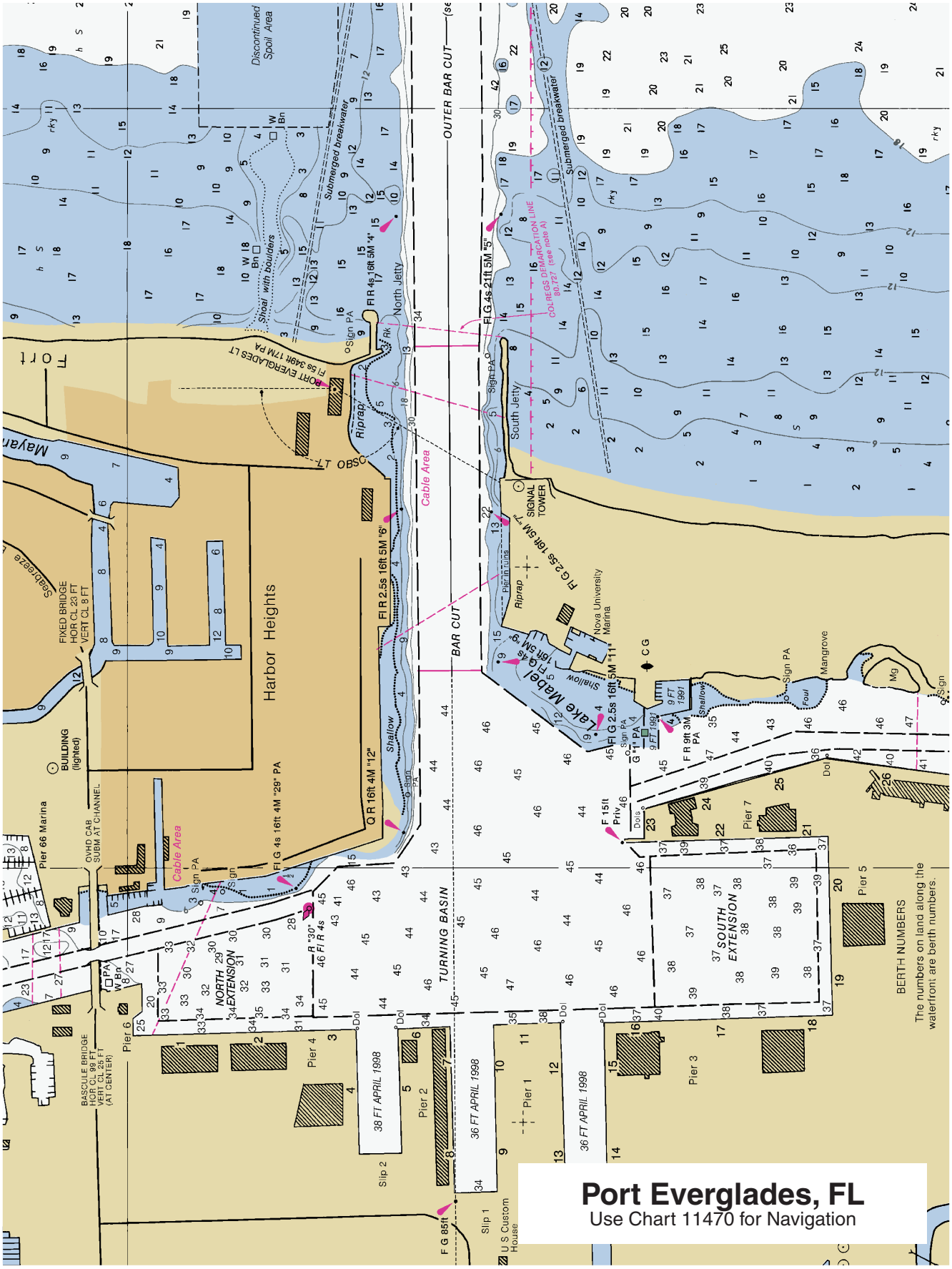

Port Everglades, FL


Port Everglades, FL
Use Chart 11470 for Navigation
Harbor Heights
Lake Mabel
TURNING BASIN
BAR CUT
OUTER BAR CUT
NORTH EXTENSION
SOUTH EXTENSION
Pier 1
Pier 2
Pier 3
Pier 4
Pier 5
Pier 6
Pier 7
Pier 66 Marina
Nova University Marina
SIGNAL TOWER
U S Custom House
Slip 1
Slip 2
North Jetty
South Jetty
Cable Area
Submerged breakwater
Discontinued Spoil Area
Shoal with boulders
Riprap
Shallow
Mangrove
BERTH NUMBERS
The numbers on land along the waterfront are berth numbers.
FIXED BRIDGE HOR CL 23 FT VERT CL 8 FT
BASCULE BRIDGE HOR CL 99 FT VERT CL 26 FT (AT CENTER)
BUILDING (lighted)
OVHD CAB SUBM AT CHANNEL
COLREGS DEMARCATION LINE (see note A)
38 FT APRIL 1998
36 FT APRIL 1998

(281) Port Everglades is a **customs port of entry.**

(282) **Coast Guard.**–Fort Lauderdale Coast Guard Station is on the east side of the Intracoastal Waterway southeast of the turning basin.

(283) **Harbor regulations** are established by the Port Everglades Department of Froward County. The administration, operation and maintenance of the port are under the direction and supervision of the port director. The **harbormaster** clears all traffic passing through the port, assigns berths and enforces the regulations ashore. The harbormaster should be contacted concerning all ship movements and any requirements that ships may have for their safe passage through the port, such as tug boat assistance or the removal of temporary obstructions. The Marine Division of local, county and state police departments enforce the regulations afloat. A copy of the port tariff is available at the port office which is in the Port Administration Building close westward of Pier 5. The harbormaster's office in the Port Administration Building can be contacted 24 hours a day by telephone (954-468-3531) or on VHF-FM channel 14.

(284) **Manatees.**–Regulated speed zones for the protection of manatees are in Port Everglades. (See Manatees, chapter 3.)

(285) **Wharves.**–Port Everglades has numerous deepwater berths adjacent to the main entrance channel and southern branch of the Intracoastal Waterway. All the berths are owned and operated by the Port Everglades Department of Froward County. The port has 380 acres of open storage, over 440,000 square feet of covered storage, over 2 million cubic feet of cold storage space, 380 electrical reefer outlets and 8 roll-on/roll-off ramps. Foreign Trade Zone No. 25 with 388,600 square feet of warehousing is also located in the port. Privately owned facilities provide over 9½ million barrels of storage space for petroleum products as well as 34 cement silos totaling 112,000 ton capacity. Berths 4 through 15 have pipeline connections available for handling petroleum products, asphalt, and other bulk liquids. Heavy lift cranes up to 300 tons, six container gantry cranes of 30 to 50 tons, and modern cargo handling equipment are available at the port. Containers can be worked at all berths listing general cargo by means of ship's gear or mobile container handling equipment available in the port. All berths have access to the highways and some have rail connections. The alongside depths given for each facility described are project depths. Actual depths alongside, in almost all locations, exceed project depth. For information on the latest depths, contact the Port Everglades Department of Froward County or the Port Everglades Harbormaster. Only the major facilities are described. For a complete description of the port facilities, refer to Port Series No. 16, published and sold by the U.S. Army Corps of Engineers (see appendix for address).

(286) **Berth 1A:** east side of Pier 6; 180 feet long; 12 feet (reported) alongside; deck height, 9 feet; used as a lay-over berth.

(287) **Berth 1B:**south side of Pier 6; 220 feet long with an adjacent 70-foot wide ro/ro ramp; 23 feet (reported) alongside; deck height, 9 feet; 6 feet at ramp; used as a lay-over berth.

(288) **Berths 1, 2, and 3:** east side of Pier 4; 1,600 feet long; 31 feet alongside; deck height, 9 feet; ro/ro cargo at berth 1, secondary fiber, break bulk and general cargo, Naval ships, cruise ships.

(289) **Berth 4:** south side of Pier 4; 900 feet long; 38 feet alongside; deck height, 7.5 feet; ro/ro cargo at head of slip, general cargo, cruise ships.

(290) **Berth 4A:** head of slip 2; 290 feet along; 42 feet alongside; deck height, 4 feet; fingered ro/ro ramp for ships at berths 4 and 5. products.

(291) **Berth 5:** north side of Pier 2; 900 feet long; 38 feet alongside; deck height, 7.5 feet; ro/ro cargo at head of slip, break bulk and general cargo, petroleum products, asphalt.

(292) **Berth 6:** east face of Pier 2; 380 feet long; 38 feet alongside; deck height, 7.5 feet; break bulk and general cargo.

(293) **Berths 7 and 8:** south side of Pier 2; 1,200 feet long; 38 feet alongside; deck height, 7.5 feet; primarily petroleum products, asphalt, occasional general cargo at berth 7.

(294) **Berths 8A:** head of slip 1; 300 feet long; 38 feet alongside; deck height, 7.5 feet; miscellaneous and tug lay-overs while barges being worked.

(295) **Berths 9 and 10:** north side of Pier 1; 1,200 feet long; 38 feet alongside; deck height, 7.5 feet; petroleum products.

(296) **Berth 11:** east face of Pier 1; 500 feet long; 38 feet alongside; deck height, 7.5 feet; liquefied petroleum gas with pipelines to storage tanks.

(297) **Berths 12 and 13:** south side of Pier 1; 1,226 feet long; 38 feet alongside; deck height, 7.5 feet; petroleum products.

(298) **Berths 14 and 15:** north side of Pier 3; 1,226 feet long: 33 feet alongside; deck height, 9 feet; rail mounted bulk cement self unloaders and pipelines leading to 34 cement silos adjacent to dockside; primarily bulk cement, petroleum products, occasional break bulk and general cargo.

(299) **Berths 16, 17 and 18:** east side of Pier 3; 1,648 feet long with 43-foot wide Ro/Ro ramp at south end of Berth 18; 38 feet alongside; deck height, 9 feet at ramp; one 30 ton container gantry crane having an outreach of 108 feet at 90 feet above MHW and one 50 ton container gantry crane having an outreach of 113 feet at 109 feet above MHW, pipelines extending to cement silos; containers, break bulk and general cargo, ro/ro cargo using ramp at west end of Berth 19.

(300) **Berths 19 and 20:** Pier 5; 1,300 feet long with 84 foot wide Ro/Ro ramp at west end of Berth 19; 38 feet alongside; deck height, 9 feet, 6 feet at ramp; break bulk and general cargo, Ro/Ro cargo using ramp at south end of Berth 18, Naval ships, cruise ships.

(301) **Berths 21 and 22:** west side of Pier 7; 1,475 feet long; 38 feet alongside; deck height, 8 feet; primarily cruise ships, Naval ships, occasional general cargo.

(302) **Berth 23:** north side of Pier 7; 200 feet long; 38 feet alongside; deck height, 9 feet; berth no longer used–pier head is occupied by a restaurant.

(303) **Berths 24 and 25:** east side of Pier 7; 1,369 feet long; 42 feet alongside; deck height, 9 feet; cruise ships, Naval ships, lay-overs.

(304) **Berths 26 and 27:** east side of Pier 9; 1,337 feet long; 42 feet alongside; deck height, 9 feet; break bulk and general cargo, cruise ships, Naval ships.

(305) **Berths 28A - 28F:** surrounding the small basin in the southern half of Pier 9; 28A (north wall), 480 feet; 28B and 28E (on finger pier), 350 feet each; 28F (south wall), 400 feet; 28A to 28E have 27 feet alongside, 28F has 21 feet alongside; deck height, 9 feet; 28A - harbor tug dockage; 28B to 28D - lay-over berths; 28F - general cargo.

(306) **Berth 29:** east side of Pier 9; 800 feet; deck height, 9 feet: 42 feet alongside; break bulk and general cargo, primary deep draft lumber dock.

(307) **Berth 30:** north side of Southport terminal; 900 feet; deck height, 11 feet; 42 feet alongside; general cargo, scrap metal, bulk products.

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(308) **Berths 31 and 32:** east side of Southport terminal; 2,000 feet; deck height, 11 feet; 42 feet alongside; three 40 ton container gantry cranes having an outreach of 145'-06" at 130 feet above MHW with setbacks of 5 feet from the bulkhead and 9 feet from the fenders; containers.

(309) **Berth 33A:** southeast corner of Southport terminal; 800 feet, 140 feet at ramp; deck height, 11 feet, 9 feet at ramp; 42 feet alongside; container cranes from berths 31 and 32 can be used; containers and ro-ro cargo.

(310) **Berths 33B and 33C:** southeast corner of Southport terminal, adjacent to 33A; finger pier 500 feet long by 20 feet wide between the two berths; 120 feet ramp at each berth; deck height, 11 feet, 7 feet at ramp; 42 feet alongside; ro-ro cargo.

(311) **Supplies** of all kinds in any quantity can be obtained and all types of marine supplies are available in Port Everglades. All berths have fresh water pipelines and some have electrical shore power connections. Berths 1 through 27 have pipeline connections for bunkering vessels while alongside. Berths 28 through 33 are accessible by tank truck and barge. Arrangements can be made for special blended fuels.

(312) **Repairs.–**There are no major repair facilities for large vessels in Port Everglades. The nearest major repair facility is in Jacksonville.

(313) Several machine, electrical, electronic, and marine engine repair firms located off the waterfront can make above-waterline repairs to small craft.

(314) **Communications.–**The Florida East Coast Railway and the Seaboard System Railroad serve the port through a beltline owned by the port but leased and operated by Seaboard System Railroad. Truck and barge lines serve the port and local and interstate bus service is available. Many domestic and overseas airlines serve the port through the **Fort Lauderdale-Hollywood International Airport,** 1 mile southwest of the port.

(315) **Small-craft facilities.–**Yachting and small-craft facilities are centered at Fort Lauderdale close northward of the port and are described with the Intracoastal Waterway in chapter 12.

(316) **Port Laudania,** just south of Port Everglades, is used by small ships handling general cargo and heavy equipment. The 3.1-mile route from Port Everglades entrance to the port is through the main channel, thence southward for 1.8 miles in the Intracoastal Waterway and westward for 0.9 mile in the Dania Cut-Off Canal to a 540 by 310-foot turning basin on the north side. Due to the size and draft of the commercial vessels calling at Port Laudania, the center of the channel in the Dania Cut-off Canal is generally required for safe navigation. To prevent dangerous meeting situations, Security calls should be given by vessels over 50 feet in length or over 7 feet in draft on VHF-FM channels 13 and 16 prior to transiting the Dania Cut-off Canal. In April 1983, the reported controlling depth from the Intracoastal Waterway to the turning basin was 5 feet. An overhead power cable across the Dania Cut-Off Canal has a clearance of 130 feet. Facilities include 1,440 feet of wharfage with 14 feet reported alongside, five ramps for roll-on/roll-off loading, 9 acres of open storage, over 15,000 square feet of enclosed warehouse storage, water, fuel and lubricants by truck. Truck service is available, and railroad sidings are nearby. Small-craft facilities in the area are described in chapter 12.

(317) **Chart 11466.–**Between Port Everglades and the Miami Harbor entrance, 20 miles to the southward, the general trend of the coastline is south, and it is formed almost entirely by a low sand beach. The large buildings and tanks in Hollywood, Miami Beach, and Miami are particularly conspicuous from seaward.

(318) This section of the coast is also fairly bold, and the 20-fathom curve runs parallel to the beach at a distance of about 2 miles until in the Miami Harbor entrance where the curve of the shore becomes south-southwestward and the 20-fathom curve lies about 4 miles offshore. Inside this curve shoaling is rapid, and northward of the Miami Harbor entrance 6 to 8 fathoms are found in places 1.5 miles from the beach.

(319) **Hollywood** is a popular resort 5 miles south of Port Everglades and about 1 mile west of the Intracoastal Waterway. The Florida Bible College, a very prominent structure, is on the ocean beach east of the city.

(320) **Charts 11466, 11467.–Bakers Haulover Inlet** has been dredged through the barrier beach at the north end of Biscayne Bay, 11.6 miles south of Port Everglades, to provide circulation of water in the bay. The channel leads westward through the inlet, thence northward to a boat basin on the east side of the channel and connects with the Intracoastal Waterway north of the basin and through a cut opposite the basin. In September 2001, the controlling depth was 11 feet through the inlet to the highway bridge, thence 8 feet in the basin and in the channels leading to the Intracoastal Waterway. Route A1A highway bridge over the inlet has a fixed span with a clearance of 32 feet; an overhead power cable just east of the bridge has a clearance of 53 feet. Current velocities of about 2.9 knots on the flood and 2.5 knots on the ebb have been recorded in the inlet. (For predictions see the Tidal Current Tables.)

(321) Many charter-boat fishermen use the inlet in good weather. A 700-foot fishing pier about 0.2 mile north of the inlet is reported to be illuminated by floodlights. The outer end of the pier is in ruins. Several prominent hotels are south of the inlet. The Intracoastal Waterway is 0.4 mile inside the entrance.

(322) The Florida Department of Natural Resources has established a **slow-no wake speed zone** in the Intracoastal Waterway where the channels converge in the vicinity of Bakers Haulover Inlet.

(323) An unmarked fish haven is about 5.5 miles northeast of the entrance channel and about 2.1 miles offshore.

(324) **Chart 11468.–Miami Harbor** is a deepwater port on the east coast of Florida under the jurisdiction of the Metropolitan Dade County Seaport Department. It is 324 miles south of Jacksonville, 971 miles from New York, and 151 miles from Key West. It is principally a consumer port, but considerable foreign commerce passes through, and it is of great importance as a cruise port. The principal commodities handled are petroleum products, bananas, steel products, meat, newsprint, foreign cars and other vehicles, alcoholic beverages, and general cargo. Two unmarked jetties protect the harbor entrance, known as **Government Cut,** which was dredged to form a deepwater entry to the port.

(325) **Miami,** the State's most populated city, covers most of the west shore of Biscayne Bay north of Key Biscayne and is 5 miles from the Gulf Stream, a fact which accounts for its year-round healthful climate. It is an internationally famous winter resort and a popular yachting center, particularly in winter. A large number of small boats that fish and cruise along the Florida Keys operate out of the port.

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(326) **Miami Beach** occupies the barrier beach that separates the ocean from the upper part of Biscayne Bay and is also an important yachting center. A number of causeways, with bridges over the channels, form good highway connections with Miami and the mainland communities. The city is principally residential, except for some shops and amusement places. The numerous large hotels take up most of the beach and along Biscayne Bay. Marinas, yacht basins, and numerous small private landings are on the west side of the city along the canals and other waterways off Biscayne Bay. A fishing pier extends out into the sea about 0.3 mile north of the jetties. **Miami Beach Coast Guard Base** and a commercial terminal are northward of the main ship channel near the east end of the MacArthur Causeway. Miami Beach City Yacht Harbor is on Meloy Channel at the southwestern end of Miami Beach.

(327) **Prominent features** (see also chart 11466).–There are numerous tall buildings and hotels in Miami and along the oceanfront at Miami Beach are visible for miles in all directions. A very prominent landmark in Miami Beach is the tall green and black building of a saving and loan company at about 25°47'26"N., 80°07'56"W., on which the red obstruction lights and an illuminated time and temperature sign, flashing from 7 a.m. to midnight, can be seen over 16 miles offshore. A tall stack and water tank on Virginia Key, Cape Florida Light, the aviation light at **Miami International Airport,** a number of radio and television towers, and numerous other tanks and towers are also prominent.

(328) Radar targets in the approaches to Miami Harbor are poor, except for the land and jetty configurations. Heavy small-craft traffic in the vicinity of the sea and entrance buoys may make visual or radar identification of these buoys difficult. In making a night approach, the many lights on Miami Beach may make identification of navigational aids difficult.

(329) **COLREGS Demarcation Lines.**–The lines established for Miami are described in **80.730**, chapter 2.

(330) **Channels.**–A Federal project provides for a 44-foot channel from the sea buoy to inside Government Cut, then 42 feet to the Fisher Island Turning Basin and to the end of container berth in Fishermans Channel. Miami Main Channel on the north side of the Port of Miami has a project depth of 36 feet to Main Turning basin with the same depth which is off the northwest corner of Dodge Island. The Lummus Island Turning Basin off the southwest corner of Lummus Island is under construction and has a proposed project depth of 42 feet and as of 1997 had a depth of about 25 feet. The Federal project extends 1,200 feet to the west of the Lummus Island Basin and is also under construction and as of 1997 had a depth of about 25 feet. The channels and turning basins are maintained at or near project depths (See Notice to Mariners and latest edition of chart for controlling depths). In 1998, the area between Miami Main Channel and the Port of Miami off the north side of Dodge Island had depths of 31 to 36 feet. Mariners are advised that abrupt shoaling may be encountered along the northerly and southerly edges of the dredged channel.

(331) A fishing pier, marked by a light at each end, is on the south side of the inshore end of the north jetty. The lights are reported to be difficult to distinguish.

(332) The area in Miami Harbor from the northwest corner of Lummus Island to the turning basin north of the northwest corner of Dodge Island is used intermittently as a seaplane operating area.

(333) A shoal marginal area about 100 feet wide extends between the northern edge of the channel and the MacArthur Causeway along almost its entire length.

(334) A lighted buoy marks the entrance; the buoy is equipped with a RACON. Channel markers include lighted buoys, lights and lighted ranges. A Precautionary Area has been established with a radius of one nautical mile around the sea buoy. This is necessary because large ships inbound and outbound of the port will board and disembark pilots within this area and will be severely limited in their ability to maneuver. All vessels are to exercise extreme caution within this area. Vessels may not anchor within those portions of the Precautionary Area that lie outside the designated anchorage.

(335) **Meloy Channel** branches from the main channel at the inner end of the land cut and extends northwestward along the southwest shore of Miami Beach to MacArthur Causeway. In December 1998, the reported controlling depth was 9 feet. A marina, protected by a breakwater marked by lights, is on the northeast side of the channel.

(336) **Fishermans Channel** is a private channel maintained by the City of Miami. The channel leads westward from the turning basin at Fisher Island for about 2.0 miles to a turning basin off the southwestern corner of Dodge Island; then southwestward to the junction with the Intracoastal Waterway. The channel west of the 1,200 foot extension from the Lummus Island Turning Basin is maintained by Miami-Dade County, and in 1995 had a depth of about 23 feet with lesser depths along the southern edges of the channel. (See Notice to Mariners and latest edition chart for controlling depths.) Natural depths to 10 feet lead from the turning basin off Dodge Island to the Intracoastal Waterway. The channel is well marked.

(337) Other channels in Biscayne Bay are discussed with the Intracoastal Waterway in chapter 12.

(338) **Anchorages.–**A Federal anchorage is located north of the sea buoy (See **11.188**, Chapter 2, for limits and regulations.) Non-U.S. Flag vessels destined for the anchorage must provide a 24-hour advance notice of arrival per Title 33 Code of Federal Regulations Part 160.207 before entering the anchorage area to anchor. Any vessel desiring to use the anchorage must notify the Coast Guard Captain of the Port, via the Biscayne Bay Pilots, on VHF-FM channel 12 or 16. Vessels granted permission to anchor must maintain a 24-hour bridge watch by an English speaking deck officer monitoring VHF-FM Channel 16. This individual must perform frequent checks of the vessel's position to ensure the vessel does not drag anchor. Vessels which are experiencing serious operating casualties such as malfunction of main propulsion, main steering, or anchoring equipment, or which are planning to perform main propulsion engine repairs or maintenance, must immediately notify the Coast Guard Captain of the Port, via Coast Guard Group Miami, on VHF-FM Channel 16. The Coast Guard Captain of the Port may close the anchorage area and direct vessels to depart the anchorage during periods of adverse weather or at other times as deemed necessary in the interest of port safety. The anchorage is in close proximity to the three-reef system that runs along the Atlantic Ocean coast of south Florida. Recent vessel groundings have shown there is very little time to respond to a dragging anchor before coming into contact with the inshore reefs. The holding ground in the anchorage consists of shallow sand, mud and coral rubble covering of the limestone substrate. During periods of high winds and seas, vessels anchors may not hold firmly in this ground. Violent, unpredictable winds

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in excess of 50 knots can be associated with local heavy thunderstorm activity. The area is also susceptible to large waterspouts. Upon the approach of thunderstorms from any direction or in sustained winds of 25 to 30 knots from NNE through SSE, all vessels are warned to have main propulsion engines on standby and be prepared to vacate the anchorage. When sustained winds in excess of 30 knots from NNE through SSE are to be expected, vessels may be ordered from the anchorage and advised to head directly to sea. Although not required, pilotage to the anchorage is available upon request and is strongly recommended for vessel masters who are unfamiliar with the anchorage.

(339) **Dangers.**–Shoals extend about a mile offshore northward of the entrance, and vessels approaching from the northward should keep at least 1.5 miles offshore until within 4 miles of the entrance and then haul out for the sea buoy. A fish haven with 17 feet over it is about 3.5 miles NE of Miami Harbor entrance in about 25°48'34"N., 80°05'26"W. The outer reefs, for about 10 miles south of the entrance, are unmarked except for the northerly red sector in Fowey Rocks Light, and vessels approaching from that direction should stay outside this sector until well up before closing the sea buoy.

(340) **Tides.**–The mean range of tide is 2.5 feet at the harbor entrance and 2 feet in the bay. Daily predictions for Miami Harbor are given in the Tide Tables.

(341) **Currents.**–Strong tidal currents run in the entrance between the jetties; the current velocity being about 2 to 4 knots. A northerly wind causes a considerable southerly set across the ends of the jetties. Vessels are advised to favor the southerly side of the entrance channel during southerly winds, as a pronounced northerly set may be experienced.

(342) The Biscayne Bay Pilots report variances between predicted and actual currents. Cross-channel current variations in Government Cut are particularly difficult to negotiate. Caution should be exercised when entering Government Cut from the sea during flood tide with northeasterly winds; a strong turning torque occurs when the bow is just inside the north jetty. A similar but less serious situation occurs when leaving the port during ebb tide. Horizontal current gradients which may make maneuvering difficult occur in the turning basin north of Fisher Island.

(343) Daily predictions for Miami Harbor entrance are given in the Tidal Current Tables.

(344) **Weather, Miami and vicinity**.–A subtropical marine climate features a long, warm summer with abundant rainfall followed by a mild, dry winter. Winds blow mainly from the east through southeast. This is often a combination of trades reinforced by an afternoon sea breeze. At night, winds may be more variable, lighter and sometimes blow off the land. From fall through spring, fronts, and sometimes lows, add to the variability but also cause a strengthening of winds. Winds speeds during these seasons climb to 17 knots or more, 2 to 5 percent of the time. Along the coast, winds are often stronger than inland.

(345) The marine influence is also reflected in the precipitation and temperatures. Miami Beach records about 48 inches (1,219 mm) annually compared to nearly 59 inches (1,499 mm) at airport. At the airport, June is the wettest month averaging 9 inches (228.6 mm) of rainfall while December is the driest month averaging 1.9 inches (48.3 mm). Snowfall is almost unheard of in Miami but on January 19, 1977 snow did fall. A dusting accumulated as far south as Ft. Lauderdale and flakes fell and melted on impact at Miami and as far south as Homestead, 20 miles south of Miami.

(346) The average high temperature at Miami is 83°F (28.3°C) and the average low is 69°F (20.6°C). August is the warmest month with an average high of 90°F (32.2°C) and an average low of 77°F (25°C). January is the coolest month with an average high of 76°F (24.4°C) and an average low of 60°F (15.6°C). The maximum temperature at Miami has never reached 100°F (37.8°C) and the extreme maximum of 98°F (36.7°C) has been recorded on five separate occasions, the last being on August 1, 1990. The coldest temperature on record is 30°F (-1.1°C) recorded on January 22, 1985. Miami has an average of 58 days each year when the temperature climbs above 90°F (32.2°C) and only six days each year when the temperature falls below 45°F (7.2°C).

(347) Visibilities drop to ¼ mile or less (<0.5 km) on about 7 days each year.

(348) Tropical cyclones are most likely to affect this area during August, September, and October although they can occur in any month. One or two tropical cyclones will threaten Miami in an average year but hurricane force winds are expected about once every 7 years. Miami lies in the heart of the U.S. hurricane belt, in an area where tropical cyclones are often recurving, slowing and intensifying. Of the 58 tropical cyclones that threatened Miami during the period 1842-1995, 52 occurred during the months August, September, and October and 24 have occurred since 1950. At this latitude, along with the proximity of the Caribbean Sea and much warmer water, October is the most likely month of occurrence. The predominate direction from which the storm arrives is from the south or southeast. Hurricane Cleo in 1964 and Hurricane Andrew in 1992 are likely the most noteworthy storms to affect Miami in recent memory. Hurricane Cleo was a very small storm and did little damage. It passed near Miami on August 27, 1964. It is perhaps most noteworthy due to it's punch. Maximum winds were 95 knots with gusts to 120 knots. Hurricane Andrew passed just south of Miami on August 24, 1992. Andrew goes on record as being the storm having the third lowest air pressure at landfall of any storm in U.S. history. Andrew ravaged Homestead Florida in the early morning hours of August 24 with winds in excess of 150 knots on a path that took it across southern, Florida, in four hours. Andrew ranks as the most costly natural disaster to date for the United States.

(349) See page T-9 for **Miami** climatological table.

(350) **Pilotage, Miami.**–Pilotage is compulsory for all foreign vessels and U.S. vessels under register in the foreign trade with a draft of 7 feet or more. Pilotage is optional for coastwise vessels which have on board a pilot licensed by the Federal Government.

(351) The Miami area is served by Biscayne Bay Pilots Association, at the far east end of the Port of Miami on Lummus Island, 2911 Port Blvd., Miami, FL 33132; telephone 305-374-2791 (office), 305-375-9453 (dispatch); fax 305-374-2896; VHF-FM radiotelephone channel 16. All types of vessels are served.

(352) Biscayne Bay Pilots have four boats: MIAMI, 42 feet long; BISCAYNE, 42 feet long; NO. 2, 36 feet long; VIZCAYA, 52 feet long; all boats have black hulls with buff superstructures, and the word PILOT in black letters on the sides. International Code Flag H is flown by day, and the standard pilot lights are displayed at night. The pilot boats monitor VHF-FM channel 16 and work on channel 12. The pilot boarding and cruising area is close seaward of Miami Lighted Buoy M (25°46.1'N., 80°05.0'W.). The buoy is equipped with a racon. Pilots will board vessels day or night. Vessels are requested to rig the pilot ladder on the leeward side about 1 meter above the water, and maintain a speed of

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about 5 knots. Large deep-draft vessels are requested to stay at least 1 mile eastward of the sea buoy for pilot boarding because of the strength and proximity of the Gulf stream current.

(353) Pilotage is usually arranged by telephone or fax through ship's agents. Vessels are requested to give a 24-hour advance notice of arrival with confirmation 1 hour before ETA by radiotelephone.

(354) **Towage.**–There are large tugs of up to 3,000 hp available in the port. **Salvage,** wrecking, and diving equipment is available.

(355) **Quarantine, customs, immigration, and agricultural quarantine.**–(See chapter 3, Vessel Arrival Inspections, and appendix for addresses.)

(356) **Quarantine** is enforced in accordance with regulations of the U.S. Public Health Service. (See Public Health Service, chapter 1.) There are more than 10 public and private hospitals in Miami and 3 at Miami Beach. Many others are in the surrounding area.

(357) A U.S. Quarantine station is at Miami. (See appendix for address.)

(358) Miami is a **customs port of entry.**

(359) **Coast Guard.**–The **district office** and a **Marine Safety Office** are in downtown Miami. (See appendix for addresses.) Miami Beach Coast Guard Base is on Causeway Island, 1.2 miles inside the outer end of the entrance north jetty.

(360) **Harbor regulations** are established by the Metropolitan Dade County Seaport Department. The Seaport Director assigns berths and enforces the regulations. It is unlawful for any vessel or other craft to proceed at a speed which will endanger other vessels or structures. Official signs are posted indicating limiting speeds through critical portions of the harbor or waterways.

(361) **Wharves.**–The Port of Miami has over 30 deepwater berths adjacent to the Miami Harbor Channel; these include the berths at the Port of Miami on Dodge Island and Lummus Island, and the privately owned facilities on the north side of Fisher Island and just west of Causeway Island.

(362) The facilities at the Port of Miami are owned by the Miami-Dade County Seaport Department. All berths have fresh water available, but electric power and telephone hookups are not provided. Dodge and Lummus Islands are fully merged, and should be considered a single facility. Vehicular traffic is served by a six-lane elevated highway bridge over the Intracoastal Waterway. A single track bascule bridge allows Florida East Cost Railway to access warehouses A, B, C & G in the cargo area of the Port. A four-track railway marshaling yard is provided in the cargo area. Fisher Island can only be reached by water transportation (shuttle barges). A total area of approximately 609,000 square feet of covered storage is available in transit sheds A, B, C, D. E and G. Fifty thousand square feet of refrigerated space is available in Shed G ; operated by a private company.

(363) The port has ten gantry cranes at the southeastern end of the facility. Three cranes have a 40-ton lift capacity, while the remaining seven gantry cranes can lift 50 tons. Mobile cranes are available through a private operator on the port, and from various contractors in the Miami area.

(364) The depths alongside each facility are reported depths. (Contact the Miami-Dade Seaport Department, Biscayne Bay Pilots Association or private operator for the latest depths). Only the major facilities of the port are described. For a complete description of the port facilities, refer to Port Series No. 16, published and sold by the US Army Corps of Engineers. (See appendix for address).

(365) **Port of Miami, Passenger Terminal No. 6** (25°46'48"N., 80°10'51"W.): 750-foot face, 32 feet alongside; deck height, 7.5 feet; mooring cruise vessels and harbor tugs; boarding passengers; operated by Miami-Dade County Seaport Department and Moran Towing of Miami, Division of Moran Towing Corp.

(366) **Port of Miami, Passenger Terminals Nos. 1 to 5, and 10 (Bays 1 to 25¾)** (25°46'45"N., 80°10'34"W.): 3,220-foot face; 31 to 36 feet alongside; deck height, 7.5 feet; mooring cruise vessels; boarding passengers; operated by Miami-Dade County Seaport Department.

(367) **Port of Miami, Bays 25¾ to 38** (25°46'33"N., 80°10'04"W.): 1,600-foot face; 36 feet alongside; deck height, 7.5 feet; mooring cruise vessels; boarding passengers; operated by Miami-Dade County Seaport Department.

(368) **Port of Miami, Passenger Terminals Nos. 8 and 9 (Bays 38 to 45)** (25°46'28"N., 80°09'56"W.): 1,680-foot face; 36 feet alongside; deck height, 7.5 feet; mooring cruise vessels; boarding passengers; operated by Miami-Dade County Seaport Department.

(369) **Port of Miami, Bays 45 to 55** (25°46'24"N., 80°09'46"W.): 1,220-foot face; 31 to 36 feet alongside; deck height, 7.5 feet; 119,000 square feet covered storage; receipt and shipment of conventional and roll-on/roll-off general cargo; shipment of automobiles; operated by Miami-Dade County Seaport Department.

(370) **Port of Miami, Roll-on/Roll-off Berth 55W** (25°46'22"N., 80°09'42"W.): 900-foot face; 31 feet alongside; deck height, 7.5 feet; container storage area in rear; receipt and shipment of conventional and roll-on/roll-off general cargo; operated by Miami-Dade County Seaport Department.

(371) **Port of Miami, Roll-on/Roll-off Berth 59W** (25°46'21"N., 80°09'36"W.): 550-foot face; 35 feet alongside; deck height, 7.5 feet; container storage area in rear; receipt and shipment of conventional and roll-on/roll-off general cargo; operated by Miami-Dade County Seaport Department.

(372) **Port of Miami, Roll-on/Roll-off Berth 65W** (25°46'21"N., 80°09'30"W.): 690-foot face; 35 feet alongside; deck height, 7.5 feet; container storage area in rear; receipt and shipment of conventional and roll-on/roll-off general cargo; operated by Miami-Dade County Seaport Department.

(373) **Port of Miami, Container Terminal, Berths 1 to 5 (Gantry Crane Berths 99 to 130.5)** (25°45'58"N., 80°09'12"W.): 4,377-foot face; 42 feet alongside; deck height, 12 feet; ten traveling container-handling cranes to 50-ton capacity; three 40-ton gantry cranes; paved storage areas to 135 acres with refrigerated cargo containers in rear; receipt and shipment of containerized general cargo; operated by Miami-Dade County Seaport Department.

(374) **Port of Miami, Bays 144 to 148** (25°46'02"N., 80°09'45"W.): 600-foot face; 30 feet alongside; deck height, 7.5 feet; container storage area in rear; receipt and shipment of containerized and roll-on/roll-off general cargo; operated by Miami-Dade County Seaport Department.

(375) **Port of Miami, Roll-on/Roll-off Berth 154** (25°46'08"N., 80°09'53"W.): 670-foot face; 24 feet alongside; deck height, 7.5 feet; 36,000 square feet of covered storage; receipt and shipment of containerized and roll-on/roll-off general cargo; operated by Miami-Dade County Seaport Department.

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(376) **Port of Miami, Roll-on/Roll-off Berth 155** (25°46'10"N., 80°09'58"W.): 550-foot face; 21 feet alongside; deck height, 7.5 feet; container storage area in rear; receipt and shipment of containerized and roll-on/roll-off general cargo; operated by Miami-Dade County Seaport Department.

(377) **Port of Miami, Roll-on/Roll-off Bays 160 to 177** (25°46'16"N., 80°10'18"W.): 1,661-foot face; 23 to 24 feet alongside; deck height, 7.5 feet; container storage area in rear; 73,500 square feet of covered storage; receipt and shipment of containerized and roll-on/roll-off general cargo; mooring harbor tugs; operated by Miami-Dade County Seaport Department and Coastal Tug & Barge, Inc., a subsidiary of The Coastal Corp.

(378) **Port of Miami, Passenger Terminal No. 12 (Bays 183 to 195)** (25°46'26"N., 80°10'34"W.): 1,450-foot face; 23 feet alongside; deck height, 10 feet; receipt and shipment of roll-on/roll-off general cargo; mooring cruise vessels and other floating equipment; boarding passengers; operated by Miami-Dade County Seaport Department.

(379) **Coastal Fuels Marketing, Fisher Island Terminal Dock and Slip** (25°45'50"N., 80°08'31"W.): 800-foot face; 36 feet alongside; deck height, 6 feet; pipelines extend from wharf to storage tanks with 667,190 barrel capacity; receipt and shipment of petroleum products; fueling vessels; mooring company-owned floating equipment; and occasional landing for vehicular and passenger ferry; owned by Coastal Fuels Marketing, Inc., and operated by Coastal Fuels Marketing, Inc., a subsidiary of The Coastal Corp. and Fisher Island Holdings, LLC.

(380) **Supplies** of all kinds in any quantity can be obtained, and all types of marine services are available in Miami. Freshwater is piped to most berths. Fuel oil and diesel oil are available at the oil terminals and by tank barge or truck; most vessels bunker by barge while alongside.

(381) **Repairs.**–There are no major repair facilities for large vessels in Miami. The nearest major repair facilities are at Jacksonville and Tampa. There are six heavy-lift, traveling, container cranes, lift capacity to 50 tons at Port Everglades and there are no facilities available for drydocking or hauling-out deep-draft vessels.

(382) Marine repair firms along the Miami River offer a wide range of services, including construction, repair, and conversions to small coastal and inter-island vessels. The largest marine railway is capable of hauling out vessels up to 500 tons; the largest vertical boat lift is capable of hauling out vessels up to 500 tons and 130 feet. The largest shaft machined in the port is 36 feet by 90 inches. Cranes up to 200 tons are available.

(383) Several machine, electrical, electronic, and marine engine firms located off the waterfront can make above-the-waterline repairs to vessels berthed at the port.

(384) **Communications.**–Miami is the main line terminus for CSX Transportation, Inc. The main line track on Dodge Island connects via a rail bridge with the Florida East Coast Railway. A connection with CSX Transportation, Inc. is effected through an interchange in the west part of Miami. Considerable ocean shipping calls at the port, and a large number of cruise ships operate from the port the year round.

(385) Local and interstate bus and truck lines operate over the excellent highways and freeways to and in the city and numerous domestic and overseas airlines serve the port through the Miami International Airport west of Miami.

(386) **Chart 11467.–Miami River** trends westward then northwestward through the heart of the city of Miami for about 2.8 miles to the confluence of **South Fork Miami River** and **North Fork Miami River.** North Fork leads northwest for another 0.6 mile to the junction with **Miami Canal** and then continues west as a narrow stream to its source just west of the NW. 27th Avenue bridge. Miami Canal leads northwest for 0.5 mile to its junction with **Tamiami Canal** and then continues northwestward to Lake Okeechobee. Miami River and Miami Canal are navigable for about 5 miles to a dam below the NW. 36th Street highway bridge. Miami Canal is reported to be navigable for small boats for about 10 miles above the dam. However, the head of navigation from seaward is at the dam. Tamiami Canal leads westward from Miami Canal to **Sweetwater** in the Everglades. A dam is about 1.2 miles above its junction with Miami Canal.

(387) In July 2000, the midchannel controlling depth was 8.0 feet from the Intracoastal Waterway to the NW 27th Ave. bridge, thence 9.5 feet in Miami Canal to about 100 yards below the head of navigation at the dam. In 1984, the South Fork had depths of 10 feet at the entrance to 4 feet at a fixed bridge about 0.3 mile above the mouth. In February 1982, shoaling to an unknown extent was reported on the north side of Miami River about 0.3 mile above the mouth. In September 1992, shoaling with numerous groundings was reported under the NW 27th Avenue bridge.

(388) Miami River and Tamiami Canal are **Regulated Navigation Areas**. (See **165.1 through 165.13, and 165.726**, chapter 2, for limits and regulations.)

(389) The Coast Guard reports that ships may encounter current anomalies at the mouth of Miami River which have caused occasional groundings. Currents in the river are strong on the ebb and cause swirls at the bends.

(390) The minimum clearance of the 10 drawbridges crossing Miami River and Miami Canal from the mouth to the head of navigation at the dam about 5 miles above the mouth is 6 feet. (See **117.1 through 117.59, 117.305, and 117.307**, chapter 2, for drawbridge regulations.) The drawbridges over Miami River from NW. 5th Street through NW. 22nd Avenue may at times be closed to marine traffic because of special events being held at the Orange Bowl. Advance notice of such closures will be published in the Local Notice to Mariners. The bridgetender monitors VHF-FM channels 13 and 16.

(391) A fixed people-mover bridge with a clearance of 75 feet crosses the river 0.25 mile above the mouth. The Miami Avenue bascule bridge with a clearance of 21 feet crosses the river about 0.3 mile above the mouth. A fixed railroad bridge with a clearance of 75 feet crosses the river 0.4 mile above the mouth. The triple fixed spans of Interstate Route 95 bridge cross the river 0.7 mile above the mouth; the vertical clearance is 75 feet. Another fixed highway bridge, 2.1 miles above the mouth, has a clearance of 75 feet.

(392) A highway bascule bridge with a reported 35-foot span and a clearance of 6 feet crosses the Tamiami Canal just above its junction with Miami River. (See **117.1 through 117.49**, chapter 2, for drawbridge regulations.)

(393) The river and canals are important parts of the Miami waterfront, for both commercial and pleasure craft. There are commercial wharves, yacht basins, marine repair plants, and oil-terminal wharves on the banks of Miami River and Miami Canal to just above the Seaboard System Railroad bridge about 0.2 mile below the dam. The principal wharves can accommodate any vessel able to enter the river.

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(394) **Charts 11468, 11467.–**Small-craft facilities are distributed along the east and west shores of Biscayne Bay from above Baker Haulover Inlet to Dinner Key, on Miami River, and on Tamiami and Miami Canals. Marine railways, lifts, and launching ramps are available. Gasoline, diesel fuel, freshwater, ice, berthing with electricity, marine hardware, provisions, and telephone services are available about the harbor. Hull, engine, and electronic repairs can be made. There are many large hotels, motels, tourist homes, and restaurants. (For details on facilities, channel depths, bridges, etc., between Bakers Haulover Inlet and Miami Harbor Channel, see chapter 12.)

(395) During the winter tourist season, when berthing space is at a premium, many craft have to anchor in the bay off the facilities. There are dockmasters at most of them to advise and assist in finding a secure berth. Many of the large hotels at Miami Beach have their own docks.

(396) The **City of Miami Miamarina** is at the northeast corner of **Bay Front Park,** which extends from the Dodge Island Causeway southward to Miami River and fronts on Biscayne Boulevard. The marina caters to private, commercial and sightseeing vessels. The facility has over 200 slips accommodating craft to 150 feet. Water, electricity, laundromat, and telephones are available. U.S. Customs and U.S. Department of Agriculture officials are on call at the dockmaster's office; they also handle immigration and U.S. Public Health Service matters. In April 1983, depths of 10 feet were reported in the approach with 9 feet in the basin. The **dockmaster's** office, at the marina, is manned 24 hours a day.

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