9. ST. JOHNS RIVER

(1) **Charts 11490, 11491, 11492, 11495.–St. Johns River,** the largest in eastern Florida, is about 248 miles long and is an unusual major river in that it flows from south to north over most of its length. It rises in the St. Johns Marshes near the Atlantic coast below latitude 28°00'N., flows in a northerly direction, and empties into the sea north of St. Johns River Light in latitude 30°24'N. The river is the approach to the city of Jacksonville and a number of towns near its shores. Some of these places are winter resorts while others are centers of farming districts and citrus groves. Deep-draft vessels go as far as just below the Main Street Bridge. Southward of the Jacksonville bridges, commercial traffic is light and consists almost entirely of oil barges. Many pleasure craft navigate this part of the river, usually going only as far as Sanford, though small boats have navigated the river as far as Lake Washington, 188 miles south of Jacksonville.

(2) **Intracoastal Waterway.**–The Intracoastal Waterway crosses the St. Johns River at nearly right angles about 5 miles above the mouth, at about 30°23.1'N., 81°27.8'W.

(3) **Jacksonville** has expanded by consolidation to include most of Duval County and is now the largest city in the United States in terms of area; its extent along the St. Johns River is from the ocean to the town of Orange Park on the west side of the river and to Julington Creek on the east side. Most of the marine terminals are on the west side of the river about 21 miles above the entrance, just above the point where the river first turns southward. The deepwater port is the largest on the east coast of Florida. It is a major southeastern bulk-handling, distribution, and railroad center. Both general and bulk cargoes are handled, and Jacksonville is a leading southeastern container port. The principal exports are paper products, phosphate rock, fertilizers, chemicals, citrus products, naval stores, tallow, clay, scrap metal, feed, and general cargo. The principal imports are petroleum products, coffee, iron and steel products, limestone, pulpwood, cement, automobiles, lumber, chemicals, alcoholic beverages, and general cargo.

(4) **Caution.–**Broken ground with least depths of 4 to 5 fathoms lies from 4 to 6 miles from the coast for a considerable distance northward and southward of the St. Johns River entrance. Navigators should also bear in mind the prevailing northerly current in this area, which is felt until well inside the 10–fathom curve, except with northeasterly or northerly winds.

(5) **Northern Right Whales.–**Approaches to the St. Johns River entrance 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.)

(6) **Fish Havens.–**Numerous fish havens are eastward of the entrance to St. Johns River; the outermost, marked by a private unlighted buoy, is about 27 miles eastward of St. Johns Light.

(7) **Prominent features.–St. Johns Light** (30°23.1'N., 81°23.9'W.), 83 feet above the water, is shown from a white square tower on the beach about 1 mile south of St. Johns River north jetty; the radiobeacon antenna is 60 yards east of the light tower. A tower at Jacksonville Beach and a red and white checkered water tank at Mayport Naval Station are prominent off the entrance, and water tanks are prominent along the beaches to the southward.

(8) **COLREGS Demarcation Lines.**–The lines established for St. Johns River are described in **80.723**, chapter 2.

(9) **St. Johns River Navigational Guidelines.**–Completion of channel deepening projects in 1978 in the St. Johns River has resulted in a deeper steep-sided channel cut through rock in some areas. There has been no appreciable increase in channel width. This channel configuration combined with the increased size and draft of vessels entering the port has resulted in increased navigational problems. After consultation with the Jacksonville Waterways Management Council, the Coast Guard Captain of the Port has developed certain guidelines to enhance safe navigation.

(10) It is recommended that all vessels, particularly those which must navigate in the channel because of draft restraints, strictly adhere to them. Nothing in these guidelines shall supersede or alter any applicable laws or regulations. In construing and complying with these guidelines, regard shall be had to all dangers to navigation and collision and to any special circumstances, including the limitations of the vessels involved, which may make a departure from the guidelines necessary to avoid immediate danger.

(11) Local knowledge of the river and of local practices is deemed essential for the safe movement of vessels. Experience and knowledge at least comparable to that required for a Federal Pilot's License is recommended for the person in charge of the movement of vessels which do not take pilots.

Vessels Movements.

(12) **General Provisions.–**All time limits are subject to change due to weather conditions, low-powered vessels, emergencies or ship handling characteristics. All times refer to the flood/ebb currents as published for St. Johns River Entrance, FL.

(13) For purposes of these guidelines, **low-powered vessels** are those which are unable to maintain a speed of at least 8 knots through the water. **Poor handling vessels** are those which because of their configuration or steering characteristics, are unable to consistently navigate within the channel half-width.

Inbound vessels

(14) **(Sea Buoy to Main Street Bridge):**

(15) Vessels which are over 32 feet of draft (salt water) shall start in no sooner than one half (½) hour before flood current. Stop taking in vessels over 32 feet one (1) hour before ebb current.

Outbound vessels

(16) **(Main Street Bridge to N.B. Broward Bridge):**

(17) Vessels which are over 32 feet of draft (at their berth) sailing between Main Street Bridge and the N.B. Broward Bridge shall sail no sooner than 1½ (one and one half) hours after flood current. Cut off time is the beginning of ebb current. Vessels leaving Blount Island with a draft of over 36 feet (at their berth), sailing time shall be no sooner than the start of flood current. Cut off time is the beginning of ebb current.

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(18) **Docking and Undocking.–**Due to the unique characteristics at the following facilities, it is necessary to establish specific times for docking and undocking of vessels as follows:

Inbound vessels sailing to:

(19) All shipyard berths
(20) Gate Maritime Terminal
(21) Celotex Corporation Berth
(22) Jacksonville Electric Authority, Northside Berth
(23) U.S. Gypsum Company Berth

Outbound vessels sailing from:

(24) PCS Phosphates, Inc. Berth with drafts over 32 feet.
(25) Celotex Corporation, Inc.
(26) U.S. Gypsum Company Berth

(27) These times are generally set by the docking masters. Other berths may require specific times for docking or undocking and will be considered on a case by case basis.

(28) **Tows.–** All low-powered tows or vessels (speed less than 8 knots through water) will start no sooner than 1 (one) hour before flood current, and stop 2 (two) hours before ebb current. Vessels towed on a hawser have been found to demonstrate poor handling characteristics. When due to draft side they are required to navigate in the main channel, particular care should be exercised to ensure that they can, when necessary, navigate in their channel half-width and stop if required. It is recommended that they proceed at a moderate speed and avoid making a passage of the river with a strong fair tide. Under normal weather conditions, vessels up to 400 feet in length can generally be towed satisfactorily with these tide and speed conditions. It is required that barges in excess of 400 feet in length towed on a hawser take assist tug(s). It is recommended that towed vessels operating under adverse conditions, including strong fair tides, employ sufficient assist tugs or other equivalent measure to ensure the required degree of control. Deep-draft inbound tows are considered by knowledgeable local mariners to handle best when brought in at the beginning of the flood current. All tows should operate with tow lines shortened up as close as possible. Tandem tows, except for small scows and nondescript vessels which can operate outside the main channel, are considered unmanageable and should not be attempted.

(29) **Inbound Tows, in the notch or on the Hawser:**

(30) Tug 8,000 hp or greater - Barge 32' or less draft = anytime.

(31) Tug 5,000 hp or greater - Barge under 29' draft = anytime.

(32) Tug 5,000 hp or greater - Barge 29' or greater draft = flood current.

(33) Tug 4,000 hp or greater - Barge under 25' draft = current

(34) Additional assist tug/tugs may be required due to local conditions.

(35) **Tows Transiting Downtown Bridges.**

(36) Barges over 250' on a hawser should have at least one assist boat of sufficient horsepower to safely pass through the bridge draws.

(37) Barges over 300 feet towed on a hawser must confer with the Captain of The Port office prior to transiting the downtown bridges.

(38) Dredge pipe tows over 600 feet must advise Captain of The Port prior to transiting the downtown bridges.

(39) Slack water or a slightly opposing current has been found to be beneficial for safe handling of hawser tows while transiting the downtown bridges.

(40) **Vessels proceeding into and out of Pablo Creek.** Passage through the entrance to Pablo Creek is difficult at some stages of the current cycle. Unless it is certain that the vessel in question can be safely operated through the entrance without regard to the state of the current then the vessel's passage through this area should be made at slack water. Deeper draft vessels should transit this area at high water slack.

(41) **Dead Ship Movements.–**Dead ship condition is the condition in which the main propulsion plant, boilers and auxiliaries are not in operation due to the absence of power.

(42) Owners, agents, or other parties responsible for vessels requesting to enter, depart, or transit dead ship within the Jacksonville, FL Marine Safety Zone, as described in 33 CFR 3.35-20 (not carried in the Coast Pilot) must comply with the following requirements.

(43) a. The request must be in writing and be received a minimum of twenty four hours in advance of the expected movement. This request should include the towing arrangement and horsepower of the tug. Dead ship tows of vessels less than 250 feet in length will not be required to notify the U.S. Coast Guard unless there is some exceptional circumstance which would make notification necessary. Vessels 250 feet in length or greater will typically be issued a Captain of the Port Order to address the dead ship movement.

(44) b. The wind speed at the bar should be less than 15 knots.

(45) c. Transits should be during daylight hours only with a minimum of three (3) miles visibility.

(46) d. Six linehandlers must be provided for movements.

(47) e. A pilot shall be on the lead tug and on the dead-ship for all vessel over 300 feet in length.

(48) f. The number of tugs required in addition to the lead tug is as follows:

(49) 1. Less than 150 feet in length - One assist tug.

(50) 2. 150 feet up to 350 feet - Two assist tugs.

(51) 3. 351 feet up to 550 feet - Three assist tugs.

(52) 4. Greater than 550 feet - Four assist tugs.

(53) 5. Special conditions or handling characteristics may require more or less tugs.

(54) g. The St. Johns River Bar Pilots Association must be consulted regarding any additional requirements the pilots may have.

(55) **Communications and areas of concern.–**The entrance channel between the jetties is marked by St. Johns Bar Cut Range. Currents which often set across the ends of the jetties are discussed under Tides and Currents in this chapter. Vessels arriving at the bar should give a Security call on VHF-FM channel 13, 30 minutes before entering the jetties. So as not to delay river traffic, low-powered or poor handling vessels intending to enter the river should be prepared to delay up to 45 minutes, if necessary, to allow other vessels to clear outbound or to allow full-powered and more maneuverable vessels to precede them through the jetties. Entry into the St. Johns River through the jetties must be with careful regard to wake and speed in consideration of persons fishing off the jetties and adjacent shoreline.

(56) **Seagoing tows** sometimes makeup inside the jetties. Tows intending to makeup in this area should give a Security call on VHF-FM channel 13 at least 45 minutes prior to commencing

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operations and give consideration to the vessels which must transit the area.

(57) **Vessels intending to get underway from a berth** should give a Security call on VHF-FM channel 13 advising of their intentions at least 30 minutes prior to letting go. Low-powered and/or poor handling vessels should be prepared to delay up to 30 minutes to allow full-powered and more maneuverable vessels to precede them as this will avoid undue delay for overall river traffic.

(58) **Areas of particular concern.**–Four areas in the St. Johns River are considered to be particularly troublesome. These areas are listed in order of ascension when proceeding from sea. Vessels should make every effort to avoid meeting at these areas, and should give Security calls on VHF-FM channel 13 (165.65 MHZ) 15 minutes prior to arriving at any one of these areas. The vessel with the fair current should initiate a proposal for meeting or passing and the vessel stemming the current should hold as necessary. Any departure from this procedure should be agreed to by both vessels in a timely manner.

(59) (1) **Intracoastal Waterway** (30°23.1'N., 81°27.8'W.). This waterway is used extensively by tows, and its junction with the St. Johns River is subject to strong and unpredictable crosscurrents at various stages of the tide. The situation is further complicated by repair docks on the north side which may require speed reductions to reduce wake. Tows intending to enter the main river channel from the Intracoastal Waterway should give a Security call on VHF-FM channel 13, 30 minutes prior to entry and adjust speed so as to enter the river when the channel is clear. Every effort, including holding, should be made to avoid unduly restricting full-powered vessels, and allow them to clear this area when either inbound or outbound.

(60) (2) **Dames Point Turn** (30°23.1'N., 81°33.6'W.). Navigation of this sharp turn is complicated by crosscurrents coming from the old channel behind Blount Island which tend to set a vessel deep into the bend on both the flood and ebb. In addition, the channel in this area is used as a turning basin for vessels using Blount Island terminal and the waterfront facilities in the old channel to the west of Blount Island.

(61) (3) **Trout River Cut** (30°23.3'N., 81°37.6'W.). This dredged channel extends through rock formations, and deep loaded vessels must exercise great care not to leave the channel in this area. Local knowledge is necessary to predict current effects as they tend to set across the channel on both the flood and ebb. Poor handling vessels should use an assist tug when transiting the area of Trout River Cut and Chaseville Turn to avoid being set on vessels transferring at the many oil terminals on the west bank of the river.

(62) (4) **Commodore Point** (30°19.1'N., 81°37.7'W.). The nearly 90-degree turn at Commodore Point is complicated by the Hart Bridge, with its piers located in the turn, as well as the Matthews Bridge just to the north. Poor handling vessels, or those whose engines are questionable for any reason, should use assist tugs to avoid being set on the support piers of either bridge.

(63) Smaller vessels continuing up the river are advised that about 2 miles above Commodore Point, at a bend in the river at **Hendricks Point** (30°19.1'N., 81°39.8'W.), a series of four bridges is within a 0.7 mile reach. Mariners should ensure that they can clear the closed bridges or that they can navigate safely between the bridges when opening. There is limited stopping and turning room once committed to the transit of the area which is subject to strong currents in the constricted bend.

(64) **Channels.–**A Federal project provides for a channel 42 feet deep from the ocean to St. Johns Point, thence 38 feet deep to a point 2.1 miles north of Mathews highway bridge, thence 34 to 38 feet deep to Commodore Point via Terminal Channel. The main channel is maintained at or near project depths. (See Notice to Mariners and latest edition of chart for controlling depths.)

(65) A lighted buoy with a racon is about 3 miles off the entrance to the river. The entrance channel, between two converging rubblestone jetties, and the channel in the river are marked by lighted and unlighted buoys, lights, and lighted ranges.

(66) **Anchorages.–**Vessels waiting outside the entrance to St. Johns River can anchor in depths of 36 to 50 feet north-northeastward of the jetties if wind and sea permit. (See **110.182**, chapter 2, for limits and regulations of the anchorage areas.) Anchorage south of the south jetty is not recommended because of the heavy shrimpboat activity in that area.

(67) **General and quarantine anchorages** are in the St. Johns River in the vicinity of Jacksonville. (See **110.183**, chapter 2, for limits and regulations.) Special small-craft anchorages are 4.5 miles south of Jacksonville. (See **110.1 and 110.73**, chapter 2, for limits and regulations.)

(68) Merchant ships are normally anchored either in the area off Talleyrand Docks and Terminals, locally termed the lower anchorage, or in the area off Commodore Point, known as the upper anchorage. Though these are the only practical anchorages available, the holding ground is only fair and both anchorages are somewhat constricted. In April 1981, a concrete dolphin was reported northeast of Commodore Point, in about 30°19'49"N., 81°37'11"W. A **security zone** has been established along a portion of the north bank of the St. Johns River at the junction of Brills Cut Range and Broward Point Turn. (See **165.1 through 165.7, 165.30, 165.33, and 165.710**, chapter 2, for limits and regulations.)

(69) **Bridges.–**Seven bridges cross the St. Johns River at downtown Jacksonville. A fixed highway bridge with a clearance of 169 feet crosses the river just above Blount Island at Dames Point. The fixed Matthews highway bridge, 0.5 mile north of Commodore Point, has a clearance of 152 feet across the main (Terminal) channel and 86 feet at the center of the span across Arlington Channel. At Commodore Point, the Hart suspension bridge has a clearance of 135 feet, with 141 feet at the center. Main Street (Alsop) highway bridge, the first of four bridges at Hendricks Point, has a vertical-lift span with clearances of 40 feet down and 135 feet up; the second, Acosta highway bridge, 0.3 mile upstream from the Main Street bridge, has a fixed span with a clearance of 75 feet; the third, the Florida East Coast Railway Co. bridge adjacent to the Acosta bridge, has a bascule span with a clearance of 5 feet; the fourth, the Fuller Warren highway bridge, has a bascule span with a clearance of 44 feet at the center. (See **117.1 through 117.59 and 117.325,** chapter 2, for drawbridge regulations.) The bridgetenders of the bridges at Hendricks Point monitor VHF-FM channel 16 and work on channel 17; call signs as follows: Main Street (Alsop) WHV-528 and Fuller Warren WHV-927. The bridgetender of the FEC bridge monitors VHF-FM channel 16 and works on channel 13; call sign, KXR-936.

(70) Overhead power cables with a clearance of 175 feet cross the river about 9 miles above the entrance at Blount Island.

(71) **Routes.–**Along the coast from Charleston to Jacksonville, the course between the outer lighted whistle buoys is from 10 to 15 miles offshore. Vessels making for St. Johns River

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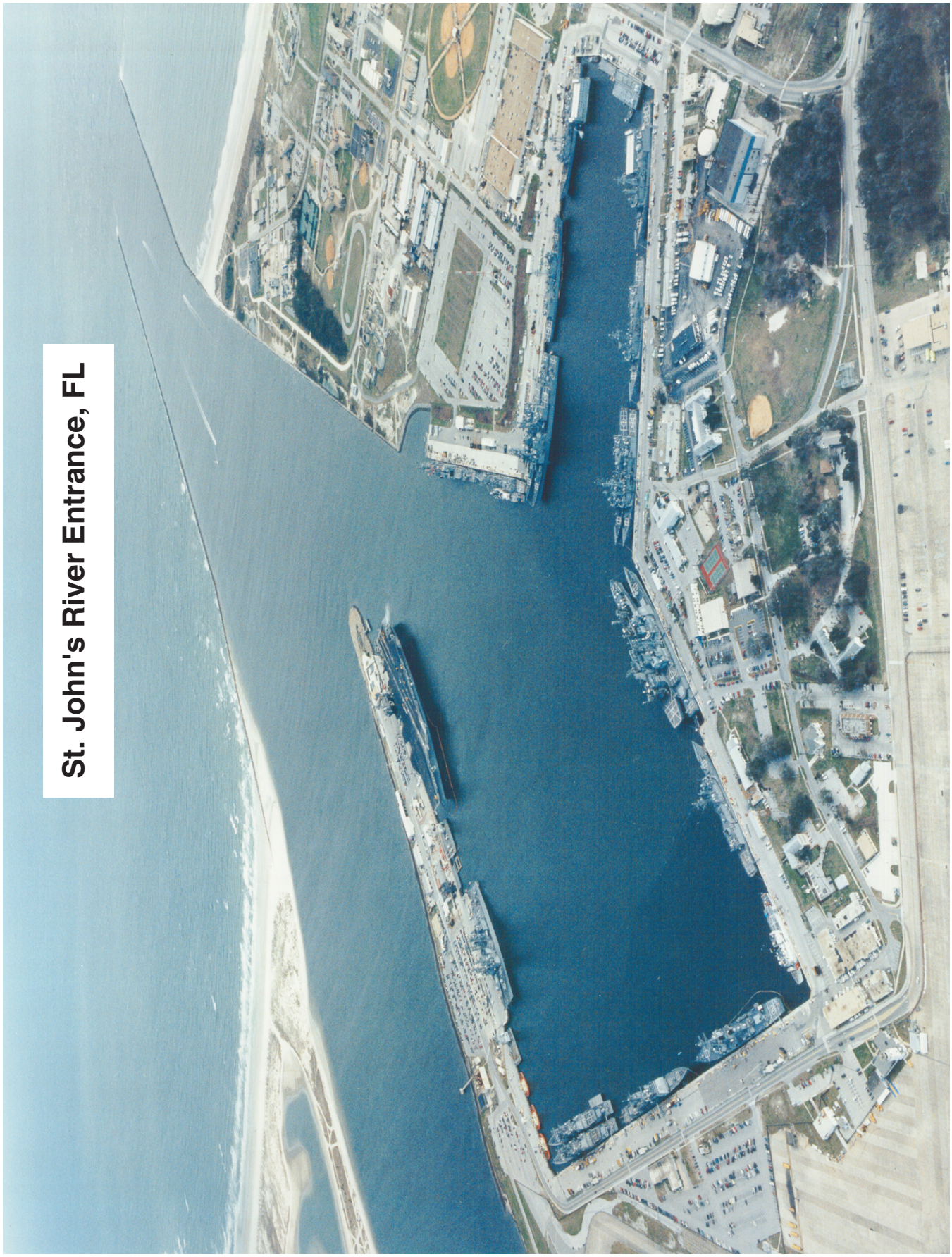
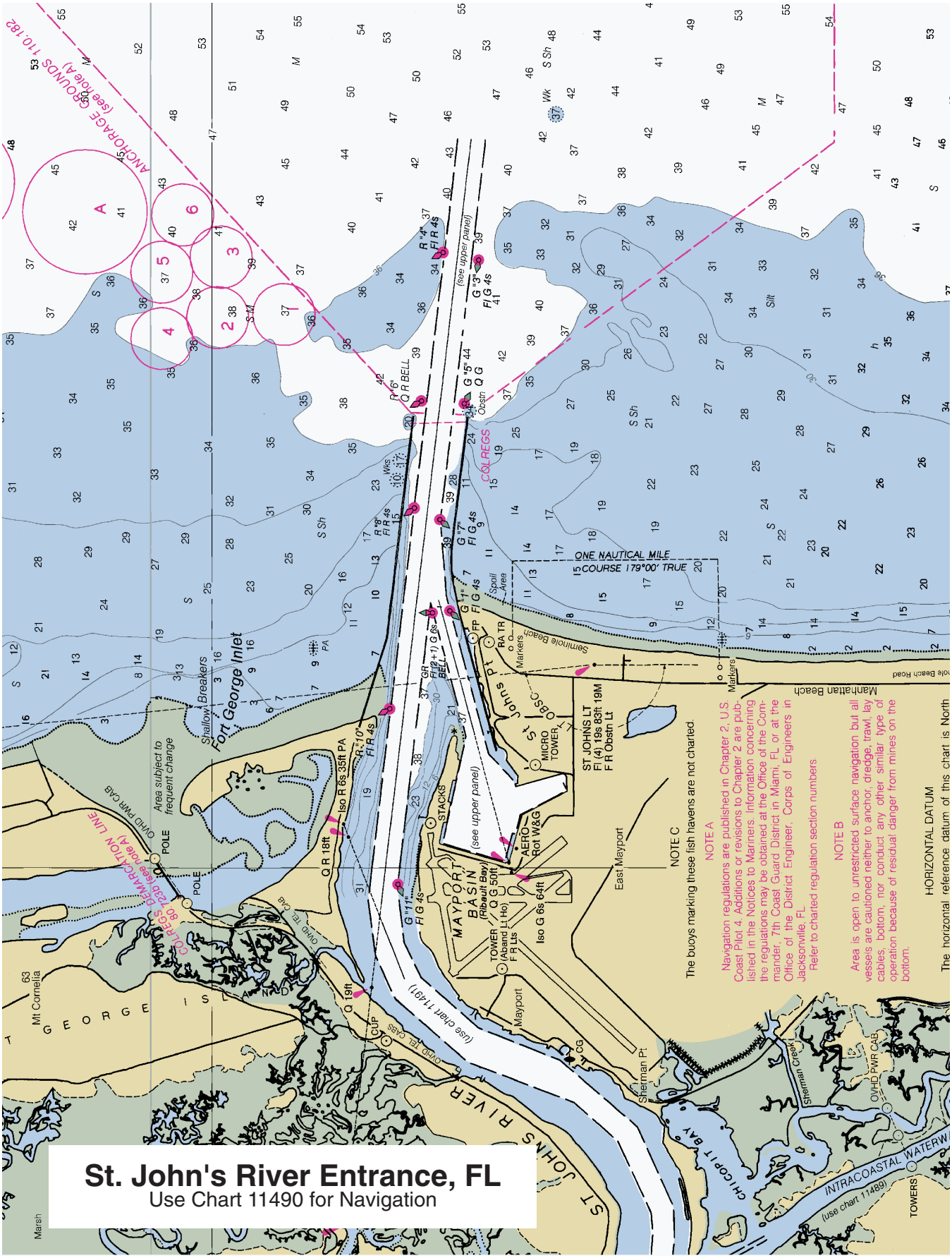

St. John's River Entrance, FL


St. John's River Entrance, FL
Use Chart 11490 for Navigation
ANCHORAGE GROUNDS 110.182 (see note A)
COLREGS DEMARCATION LINE 80.730 (see note A)
Fort George Inlet
Shallow Breakers
Area subject to frequent change
ONE NAUTICAL MILE
COURSE 179°00' TRUE
COLREGS
MAYPORT BASIN (Ribault Bay)
ST JOHNS LT Fl (4) 19s 83ft 19M F R Obstn Lt
MICRO TOWER
AERO Rot W&G
Iso G 6s 64ft
Iso R 6s 35ft PA
Q R 18ft
Q 19ft
Q R BELL
Fl R 4s
Fl G 4s
Fl (2+1) G 6s
STACKS
TOWER (Aband Lt Ho) F R Lts
East Mayport
Mayport
Sherman Pt
Sherman Creek
OVHD PWR CAB
OVHD TEL CABLE
POLE
CUP
Mt Cornelia
63
GEORGE ISLAND
ST JOHNS RIVER
CHICOPIT BAY
INTRACOASTAL WATERW
(use chart 11489)
TOWERS
Marsh
Manhattan Beach
Sawmile Beach
Spoil Area
Markers
(see upper panel)
(use chart 11491)
NOTE C
The buoys marking these fish havens are not charted.
NOTE A
Navigation regulations are published in Chapter 2, U.S. Coast Pilot 4. Additions or revisions to Chapter 2 are published in the Notices to Mariners. Information concerning the regulations may be obtained at the Office of the Commander, 7th Coast Guard District in Miami, FL or at the Office of the District Engineer, Corps of Engineers in Jacksonville, FL.
Refer to charted regulation section numbers.
NOTE B
Area is open to unrestricted surface navigation but all vessels are cautioned neither to anchor, dredge, trawl, lay cables, bottom, nor conduct any other similar type of operation because of residual danger from mines on the bottom.
HORIZONTAL DATUM
The horizontal reference datum of this chart is North

entrance should guard against an inshore set which may amount to a knot or more due to the currents into the inlets. In thick weather, vessels approaching from the northeastward should be mindful of the fact that deep holes may be encountered which may lead them to believe that they are farther offshore than they actually are. Approaching from the southward, vessels clear Hetzel Shoal before shaping a course for St. Johns River entrance. A set of 0.5 to 0.8 knot in a northerly direction parallel with the coast may be expected in this area due to the prevailing current, except with northerly or northeasterly winds. Southbound light-draft vessels can avoid the northerly set due to the prevailing current by following the coast at a distance of from 3 to 5 miles to abeam Ponce de Leon Inlet Light, and then shaping the course to pass outside of Hetzel Shoal Lighted Whistle Buoy 8.

(72) **Tides and currents.–**The mean range of tide is 4.9 feet at St. Johns River entrance and about 1.2 feet at the railroad bridge at Jacksonville. From Jacksonville to Palatka the mean range of tide is about 1 foot. At low-water stages, tidal action is felt to Lake George. (See the Tide Tables for daily predictions at Mayport and several places on St. Johns River.)

(73) The tidal currents are strong in St. Johns River as far as Jacksonville. The currents at the entrance between the jetties require special attention. The Bar Pilots report that 1 hour after the beginning of a blow from any direction from north through east to south, a very strong current sets with the wind across the end of the jetties, and the condition is usually dangerous; when such winds reach gale force, the positions of the buoys should not be relied upon as they may drag from station.

(74) The velocity of the current between the jetties is 1.9 knots on the flood and 2.3 knots on the ebb; at Mayport, 2.2 knots on the flood and 3.1 knots on the ebb; at Mile Point, 2.7 miles above the mouth, about 2.8 knots. At downtown Jacksonville (Commodore Point), the velocity of current is about 1.0 knot; however, in 1967 a naval vessel reported being forced against the Acosta highway bridge by flood currents estimated to exceed 5 knots. Caution should be exercised in this area. The flood is increased by northeasterly and easterly winds and the ebb by southwesterly and westerly winds. (See the Tidal Current Tables for daily predictions of the tidal current in St. Johns River entrance and for a number of places on St. Johns River.)

(75) The tidal currents above Jacksonville average less than a knot. The winds have considerable effect on the water level and velocity of the currents. Strong northerly and northeasterly winds raise the water level about 2 feet at Jacksonville, about 1 foot at Palatka, and about 1.5 feet at the mouth of Dunns Creek. Strong southerly and southwesterly winds lower the water level about 1 to 1.5 feet, increase the ebb, and decrease or may interrupt the flood. The currents in Deep Creek are weak, being due primarily to the winds and tide. There is a moderate drainage current in the Oklawaha River. The wind has no appreciable effect on the water level at the head of Dunns Creek and in Lake Crescent.

(76) The river water may be fresh at Jacksonville at low water with westerly winds, while with northeasterly winds the water may be brackish to Palatka.

(77) **Freshets.–**The flood stages in the river usually occur during the fall and are about 1 foot above ordinary low-water level at Jacksonville, 2 feet at Palatka, 3 feet at Lake George, 5 feet at Sanford, and 6.5 feet at Lake Harney.

(78) **Weather, Jacksonville and vicinity.–**Jacksonville is near the northern boundary of the trade winds in summer. Winds off the water produce a maritime influence that tempers the heat of summer and cold of winter. Winter storms and severe cold waves often remain north of the area. Occasionally a "nor-easter" will skirt the Florida coast bringing 15- to 30-knots winds, low stratus clouds and drizzle. These are most likely in late summer and fall. This area lies within the hurricane belt although hurricane force winds are rare, since most storms either remain offshore or have tracked inland and weakened.

(79) The average high temperature in Jacksonville is 79°F (26.1°C) and the average low is 59°F (15°C). By a fraction of a degree, July is the warmest month with an average high of 92°F (33.3°C) and an average low of 73°F (22.8°C). January is the coolest month with an average high of 65°F (18.3°C) and an average low of 43°F (6.1°C). Each month, May through August has recorded temperatures in excess of 100°F (37.8°C) and the all-time maximum temperature is 103°F (39.4°C) recorded in June 1950, June 1954, and again in July 1981. Below freezing temperatures have been recorded from November through March and the record minimum is 7°F (-13.9°C) recorded in January 1985. On average, 83 days each year has a maximum temperature of 90°F (32.2°C) or greater while only 15 days can be expected to have minimums of 32°F (0°C) or below.

(80) Over one-third of the annual average rainfall of 53 inches (1346.2 mm) falls during the summer months of June, July, and August. September is the wettest month averaging 7.67 inches (194.8 mm) and November is the driest month averaging about 2 inches (50.8 mm). Most of the summer rainfall is compliments of convective activity or precipitation of a tropical origin. Snowfall is almost unheard of however small amounts have fallen in each month, December through March. The greatest 24-hour snowfall was 1.5 inches (38.1 mm) falling in February 1958.

(81) On the average the Jacksonville area is threatened (tropical cyclone) within 50 nm (93 km) once or twice each year. While this may occur in any month it is most likely from June through October, with a peak in September and October. Most storms have crossed over some portion of the Florida peninsula and weakened. The Port of Jacksonville and Mayport Basin are not considered hurricane havens since surrounding low topography does not provide an adequate windbreak. The Port of Jacksonville, which is less susceptible to storm surges than Mayport, can be used as a haven from tropical storms if there is certainty that winds will not intensify to above 60 knots. While the entrance to the St. Johns River is exposed, farther upstream, between Blount Island and downtown Jacksonville, some sheltering from south and southeast winds is provided by higher elevations, including some river bluffs. Special care should be taken with storms approaching from the the southeast. Since 1842, 69 tropical cyclones have come within 50 miles (93 km) of Jacksonville, 21 of those storms have done so since 1950. Hurricane Dora, for example, was one of the worst storms to affect this area. In the early morning hours of September 10, 1964, Hurricane Dora made landfall north of St. Augustine. At Mayport, winds reached 65 knots with gusts to 80 knots while the airport recorded 71-knot sustained winds. Dora provided the first sustained hurricane wind speeds in the 80-year period of record for the Weather Bureau Air Station at Jacksonville. Unusually high tides were produced by onshore winds that exceeded 50 knots for some 12 hours. Water levels reached 5 to 7 feet (1.5 to 2.1 m) above mean sea level on the coast and along the St. Johns River.

(82) Storm tides are more frequent than destructive winds and, along the coast, are the major threat to shipping and residents.

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Storm surges vary significantly over short distances. Maximum heights occur along the beaches and the entrance jetties at Mayport, then decrease rapidly up the St. Johns River. In October 1944, an overland hurricane combined with an offshore nor'easter to generate tides that reached 12.3 feet (3.75 m) above mean sea level at Jacksonville Beach and 7.3 feet (2.2 m) above mean sea level on **McCoy Creek** (30°19'23"N., 81°40'03"W.) at Stockton Street in Jacksonville. For more details see the **Hurricane Havens Handbook for the North Atlantic Ocean** as discussed in chapter 3.

(83) In general, prevailing winds are northeasterly in fall and winter and southwesterly in spring and summer, although afternoon sea breezes often bring winds off the water in these latter seasons. Windspeeds are often highest from September through April when they exceed 17 knots about 3 to 8 percent of the time. Local climatic variations are most noticeable in the heat of summer. Along the beach, on 20 to 30 days annually, temperatures reach the 90's (°F) compared to 70 to 80 days near the city. Fog is mainly a wintertime phenomena, rolling in with any easterly wind but often remaining across the entrance when it has cleared elsewhere. In calm weather, smog from fertilizer and paper plants often obscures the channel above Dame Point. Radiation type fog, which may occur near the city, usually burns off by noon. On the average, there are 25 to 35 days annually, when visibilities drop below 0.5 mile; November through February are the most likely months. Summertime showers and thunderstorms are responsible for much of the precipitation in the area. Thunderstorms are most likely during June, July, and August, when they occur on about 10 to 16 days per month.

(84) The National Weather Service station is at Jacksonville International Airport, about 6.5 miles north-northwestward of the entrance to Trout River, and **barometers** can be compared there or checked by telephone. (See Page T-6 for **Jacksonville climatological table.)**

(85) **Pilotage, Jacksonville.–**Pilotage is compulsory for all foreign vessels and for U.S. vessels under register. Pilotage is optional for U.S. coastwise vessels which have on board a pilot licensed by the Federal Government. Pilotage is available from St. Johns Bar Pilot Association, 4910 Ocean Street, Mayport, FL; telephone 904-246-6716, FAX 904-249-7523.

(86) The pilot station (above address) is just below the ferry terminal (30°23.7'N., 81°25.8'W.), on the port hand entering from sea, about 3 miles above St. Johns River entrance. The pilot station monitors VHF-FM channels 16, 13, and 14; works on 14. The pilot boats are 50-foot, with black hull, white superstructure, and the word PILOT on the sides. The boats monitor channel 14, work on 14.

(87) Vessels are requested to report their estimated time of arrival (ETA) at St. Johns Lighted Whistle Buoy STJ (the sea buoy), and their draft, by radio to the pilot station at least 2 hours and again 1 hour prior their ETA at the sea buoy. Pilots report that many times they can hear radio calls but vessels are unable to pick up the pilots return transmissions. The pilot boarding area is between the sea buoy and the outermost entrance-channel buoys; a boarding ladder should be rigged 10 feet above the water. Arrangements for pilots are generally arranged in advance through ship's agents or directly by shipping companies.

(88) The St. Johns Bar Pilots Association participates in the northern right whale Early Warning System. (See Northern right whales, indexed as such, chapter 3).

(89) **Towage.–**Tugs up to 3,500 hp, and docking pilots are available 24 hours a day at Jacksonville. Tugs use VHF-FM channels 7A, 10, 13, 16, 18A, and 19. Docking pilots use VHF-FM channels 7A, 13, 16, and 19.

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

(91) **Quarantine** is enforced in accordance with regulations of the U.S. Public Health Service. (See Public Health Service, chapter 1.) Vessels are usually boarded at their berths. There are public and private hospitals in and about Jacksonville. Deratization and fumigation services are available.

(92) Jacksonville is a **customs port of entry.**

(93) **Coast Guard.**–A **marine safety office** is in Jacksonville. (See appendix for address.) Mayport Coast Guard Base is on the east side of the river about 2.7 miles above the mouth at the southerly end of the waterfront at Mayport.

(94) **Harbor regulations.–**There is no harbormaster for the city of Jacksonville. The Jacksonville Port Authority, a State agency and corporation, operates the Talleyrand Docks and Terminals and the Blount Island Terminal; the berthing of vessels and other aspects of the direct operation of these terminals is controlled by the Director of Marine Division. The operating staff of the port authority is directed by a managing director; the offices are at the Port Central Office Building, 2701 Talleyrand Avenue, near Talleyrand Docks and Terminals.

(95) Portions of Blount Island Terminal are within a **safety zone** and a **security zone**. (See **165.1 through 165.33, 165.720, 165.728, and 165.729**, chapter 2, for limits and regulations.)

(96) **Wharves.–**Of the 27 principal piers and wharves described for the port, 6 are operated by the Jacksonville Port Authority and the others are privately owned and operated. Most of the terminals have excellent highway connections. Three switching railroads connect the terminals and the three major railroads serving Jacksonville. General cargo at the port is usually handled by port cranes, and equipment is available for all lifts. Crawler and truck cranes with lifting capacities to 100 tons are available.

(97) With one exception, only the deep-draft piers and wharves are described. For a complete description of the port facilities, refer to Port Series No. 15, published and sold by the U.S. Army Corps of Engineers. (See appendix for address.) The alongside depths given for each facility are reported depths. (For the latest such depth information, contact the Jacksonville Port Authority or the private operator.)

(98) **Gate Maritime Terminal**: five berths, capable of berthing vessels in excess of 1,000 feet along both sides of Back River (Gate Maritime Slipway), at the southeast end of Blount Island; maximum draft permitted alongside is 40 feet; deck height, 10 feet; one 40-ton crane; water and electrical connections; receipt and shipment of miscellaneous bulk materials, notably gypsum and lime rock, mooring vessels and harbor tugs, and handling heavy-lift items and military cargo; used by commercial and government vessels; owned and operated by Gate Maritime Properties, Inc.

(99) **Blount Island Terminal**: seven berths on the main St. Johns River channel on the west part of Blount Island, 10 miles above St. Johns River entrance; 5,250-foot bulkhead wharf; 38 feet alongside; deck height, 9 feet; cranes to 45 tons; handles containerized, conventional, and roll-on roll-off general cargo, automobiles, steel products, kraft paper, and lineboard rolls; operated by Jacksonville Port Authority. A 600-foot dock on the

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west side of Blount Island is operated by the port and used for the loading and unloading of automobiles.

(100) **St. Johns River Coal Terminal**: on main St. John River channel east of Jacksonville Port Authority berths, 10 miles above St. Johns River entrance; 808-foot bulkhead wharf; 38 feet alongside; deck height 9 feet 45-ton clamshell bucket unloader, unloads coal on to a conveyor system which transports coals to a coal-fired generation station 3.5 miles inland, unloading rate 750-1500 tons per hour; operated by St. Johns River Power Park.

(101) **Celotex Corp. Dock**: west side of Blount Island Channel (old river channel), 0.35 mile northward of the southwest tip of Blount Island; offshore wharf with 20-foot face, 536-foot berth with dolphins; 32 feet alongside; deck height, 10 feet; adjustable receiving hopper on wharf connected by conveyor to open storage area, delivery rate about 1,100 tons per hour; handles gypsum rock.

(102) **North Side Generating Station Wharf**: northwestern side of Blount Island Channel, 1.15 miles northeastward of Kaiser Gypsum Co. Wharf and 0.2 mile southwestward of the Blount Island highway bridge; offshore wharf with 60-foot face, 700 feet with mooring dolphins; 20 feet alongside; deck height, 13½ feet; fuel oil for plant consumption; operated by Jacksonville Electric Authority.

(103) **Amerada Hess Corp., Jacksonville Terminal Wharf**: north side of St. Johns River at mouth of Broward River, 0.3 mile east-northeastward of Drummond Point; offshore wharf with 300-foot face, 800 feet with mooring dolphins; 38 feet alongside; deck height, 12 feet; handles petroleum products, Bunker C, and occasional loading of harbor bunkering barges.

(104) **Drummond Point Terminal**: extending from Drummon Point; offshore wharf with 143-foot face, 1,000-foot berth with dolphins; 38 feet alongside; deck height, 12 feet; hose-handling derrick; handles petroleum products and loading harbor bunkering-barges; operated by Gulf Oil Refining and Marketing Co. and American Oil Co.

(105) **U.S. Gypsum Co. Pier**: just south of Trout River entrance on west side of St. Johns River at 30°23'01.5"N., 81°37'55.0"W.; pier 616 feet long and 42 feet wide, berthing only along south side, usable space 455 feet with dolphins; 28 feet alongside; deck height, 6 feet; self-unloading vessels discharge into a hopper served by a conveyor system, which extends full length of pier to an open storage area ashore, delivery rate 1,000 tons per hour; handles gypsum rock.

(106) **ST Services Wharf**: 0.34 mile southward of U.S. Gypsum Co. Pier, west side of river; offshore wharf with 80-foot face, 1,000 feet with mooring dolphins; 38 feet alongside; deck height, 12 feet; handles petroleum products; operated by Philips Petroleum Co. and ST Services.

(107) **PCS Phosphate**: on south side of entrance to Long Branch Creek, offshore wharf consisting of a line of dolphins connected by catwalks, 800-foot berth; 38 to 40 feet alongside; deck height, 10 feet; 2 loading towers, each with a loading rate of 3,000 long tons per hour; towers are served by conveyor from phosphate storage silos, total capacity 30,000 tons; handles phosphate rock, phosphoric acid, and phosphatic products.

(108) **Alton Box Board Co. Fuel Dock**: 30°22'03"N., 81°37'31"W.; offshore wharf with mooring dolphins in line with face, 51-foot face, 250-foot berth with dolphins; 24 feet alongside; deck height, 10 feet; hose-handling derrick; pipeline connects wharf and storage tanks; handles fuel oil for plant consumption.

(109) **J. Dillon Kennedy Generating Station Wharf**: 30°21'53"N., 81°37'22"W.; offshore wharf with 101-foot face 220-foot berth with two dolphins; 36 feet alongside; deck height, 10 feet; handles fuel oil for plant consumption; operated by Jacksonville Electric Authority.

(110) **Coastal Fuels Marketing, Inc. Terminal wharf**: west side of river, 0.29 mile southeastward of J. Dillon Kennedy Generating Station Wharf; offshore wharf with 140-foot face, 750-foot berth with dolphins; 34 feet alongside; deck height, 13 feet; hose-handling derrick; handles asphalt products.

(111) **Chevron Tanker Dock**: west side of river, 0.16 mile south of Belcher Oil Co. Terminal Wharf; 50-foot face, 280-foot berth with dolphins; 31 feet alongside; deck height, 12 feet; hose-handling derricks; handles petroleum products; operated by Chevron USA, Inc.

(112) **Jacksonville Port Authority, 8th Street Terminal**: west side of river at 30°20'42"N., 81°37'20"W.; 700-foot bulkhead wharf; 36 feet alongside; deck height, 9 feet; handles automobiles; operated by Joyserv Co. Ltd.

(113) **Jacksonville Port Authority, Talleyrand Docks and Terminals, Berths 1, 2, 3, 4, and 5** (Berth 1 being the most northerly of the five): bulkhead wharf providing 4,100 feet of continuous berthing space immediately northward of the JPA 8th Street Terminal; deck heights, 9 feet; 36 feet alongside; handles containerized cargo, conventional general cargo, refrigerated cargo, automobiles, molasses, bagged coffee beans, caustic soda, lumber, steel products, chemicals, and lignin sulfonate; berth 1 also handles petroleum products; Municipal Docks Railway connects the terminal with all trunkline carriers serving the port.

(114) **Crowley American Transport Trumbull Asphalt Dock**: west side of river 0.7 mile north of the Matthews Highway Bridge; 425-foot face; 17 feet alongside; deck height 9 feet; receipt of asphalt.

(115) **Crowley American Transport Barge Dock**: west side of river immediately south of the CAT Trumbull Asphalt Dock and 0.5 mile north of the Matthews Highway Bridge; 3 mooring dolphins extend out in a line from the West bank 430 feet; 260-foot face; 20 feet alongside; deck height, 9 feet; 3 deck roll-on/roll-off ramp; handles containerized ro-ro general cargo, automobiles, and heavy-lift items.

(116) **Commodore's Point Terminal Wharf**: west side of the river at Commodore Point; 700-foot face; 28 feet alongside; deck height, 5 ½ feet; handles conventional general cargo, petroleum products, chemicals bulk cement, bananas, and fertilizer; various operators.

(117) **Jacksonville International Terminals Co.**: north side of the river at 30°19'19"N., 81°38'56"W., at the sight of the old Jacksonville Shipyards; 5 berths available ranging from 300 feet to 900 feet; alongside water depth to 42 feet; deck height, 8 feet; 250-ton crane; container and break bulk handling equipment; stevedoring and terminal services for both ro/ro and lo/lo operations.

(118) **South Side Generating Station Wharf**: south side of river at 30°19'01"N., 81°38'50"W.; offshore wharf with 100-foot face, 428-foot berth with dolphins; 30 feet alongside; deck height, 12 feet; two hose-handling derricks; handles fuel oil for plant consumption; operated by Jacksonville Electric Authority.

(119) **Supplies** of all kinds in any quantity can be obtained, and all types of marine services are available in Jacksonville. Freshwater is piped to the terminals. Fuel oil and diesel oil are

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available at the oil terminal wharves and by tank barge; most vessels bunker by barge while alongside.

(120) **Repairs.–**A small shipyard is on the river at the junction with Sisters Creek (Intracoastal Waterway) and has a 4,000-ton marine railway. A yard about 3 miles above the mouth of the St. Johns River has a 200-ton and a 500-ton marine railway that can handle vessels up to 100 feet in length with complete shipyard facilities available. A shipyard on the west bank of the river at Commodore Point has a floating drydock with a 2,800-ton lift capacity for vessels up to 389 feet in length and 3 wet berths for vessels up to 700 feet in length and 25-foot draft with complete shipyard facilities available.

(121) In addition to the shipyards, Jacksonville has all types of specialized marine manufacturing, sales, and repair firms which handle such items as electronic equipment, electric motors and other components, ventilation and air conditioning systems, shafts and propellers, etc.

(122) **Small-craft facilities.–**Excellent facilities are available in Jacksonville. The municipal marina is on the south side of the river between the Main Street and Acosta bridges. A dockmaster assigns slips and enforces regulations for the marina; copies of the regulations may be obtained from his office. Public toilets are in the dockmaster's house. Adequate mooring lines and fenders should be used, as currents become quite strong in the slips. A large illuminated fountain is in the city park back of the marina. There are a number of other modern well-equipped marinas and boatyards in Jacksonville; the major facilities are on the Ortega and Trout Rivers. Supplies, services, and repairs are available for all types of yachts. (See the small-craft facilities tabulation on chart 11491 for services and supplies available.) Other small-craft facilities on St. Johns River above Jacksonville are in Goodbys Creek, Doctors Inlet, and Julington Creek.

(123) **Communications.–**The port is served by three railroads, Seaboard System Railroad, Florida East Coast Railway Co., and Southern Railway Co. The Jacksonville Port Authority operates its own switching railroad, which serves the Talleyrand Docks and Terminals. Excellent highways reach the city, and there is a toll expressway system providing rapid transportation within the city; the primary highways leading from Jacksonville are Interstate Highways 10 and 95, and U.S. Routes 1, 17, and 90. Jacksonville International Airport, operated by the Jacksonville Port Authority about 10 miles northward of the heart of the city, is served by six airlines. Both passenger and air freight service is available. There are also three general-aviation airports in the city. Numerous steamship lines connect with most of the principal foreign and domestic ports. Barge service is available for the Intracoastal Waterway, coastwise, and up the St. Johns River as far as Sanford.

(124) **Chart 11490.–Mayport Basin** is on the south side of the St. Johns River just inside the entrance jetties and westward of **St. Johns Point.** A deep channel leads along the inshore end of the south jetty to the basin. It is marked by a **255° lighted range,** lights, and lighted and unlighted buoys. Due to the relatively short distance between the lights of the range, sensitivity is poor. Mariners are advised to use the range with caution. Dangerous cross currents are reported to exist in the entrance to Mayport Basin; mariners are advised to enter at slack water or at a recommended speed of 13 knots. The waters of the turning basin are within a **prohibited area** of the U.S. Naval Station Reservation; commercial and pleasure vessels are prohibited from entering except in cases of extreme emergency. (See **334.500**, chapter 2, for limits and regulations.)

(125) **Mayport** is a town on the south bank of St. Johns River, 3 miles inside the entrance jetties. It has a ferry connection with the town of **Fort George Island** across the river. The wharves at Mayport are private and are used by fishing vessels. A Coast Guard base is at the southerly end of the waterfront. There is a marina and a yacht basin with reported depths of about 10 feet. Gasoline, diesel fuel, water, ice, restrooms, charter boat hire, showers, electricity, and bottled gas are available. Restaurants are nearby.

(126) **Chart 11491.–**The Intracoastal Waterway crosses the St. Johns River 5.3 miles from the entrance through Sisters Creek on the north and Pablo Creek on the south.

(127) A shipbuilding and drydock company is on the north side of the river and on the east side of Sisters Creek. The firm builds steel-hulled tugs and fishing vessels and does all kinds of repair work on commercial and Government vessels; work on pleasure craft, except very large yachts, is not done here. There is a 4,000-ton marine railway, several mobile cranes, complete shop facilities, and berths for vessels of up to 585 feet. The marine railway is on the St. Johns side of the yard, while the construction work is done on the Sisters Creek side. This firm has built a vessel 220 feet long.

(128) **Blount Island,** low and sandy with fringing marshes, is on the north side of the St. Johns River about 9 miles above the entrance. The Jacksonville Port Authority terminal near the southwestern tip of the island, and Gate Maritime Terminal in Back River (Gate Maritime Slipway) at the southeastern tip of the island have been described under "Wharves" for the Port of Jacksonville.

(129) **Blount Island Channel,** a cutoff bend of the St. Johns River, extends from the main river channel around the northern side of Blount Island and rejoins the main channel at the southwestern tip of the island. The channel is practically divided near its midpoint by four low fixed bridges with least clearances of 18 feet horizontally and 5 feet vertically. Overhead power cables, with clearances of 175 feet, are on both sides of the southwesternmost highway bridge. The Federal project depth for the channel is 30 feet, but the controlling depth is usually considerably less than project depth. (See Notice to Mariners and chart tabulation for the latest controlling depths.) Two deep-draft private wharves on the marked western leg of Blount Island Channel are described under Jacksonville "Wharves".

(130) A fixed highway bridge with a clearance of 169 feet crosses St. Johns River just above Blount Island at Dames Point.

(131) **Broward River,** on the north side and 13 miles from the entrance to St. Johns River, has depths of 1 to 3 feet to Cedar Heights. The Heckscher Drive (State Route 105) highway bridge at the mouth has a 40-foot bascule span with a clearance of 13 feet. Overhead power cables at the bridge have a least clearance of 34 feet. (See **117.1 through 117.49**, chapter 2, for drawbridge regulations.)

(132) The offshore wharf and shore facilities of a U.S. Navy Fuel Depot are 1.2 miles southwestward of **Drummond Point** on the northwest side of the St. Johns River, just below the mouth of the Trout River. The wharf has a 351-foot face, 660 feet of berthing space with dolphins, 38 feet alongside, and a deck height of 11 feet. Pipelines extend from the wharf to storage tanks onshore.

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The fuel depot is in a **restricted area.** (See **334.510**, chapter 2, for limits and regulations.)

(133) **Trout River,** north of downtown Jacksonville, has depths of 7 feet to the mouth of Ribault River and 3 feet to the highway bridge 4.5 miles above the mouth. The entrance is marked by daybeacons. A small repair yard is on the east side of a small cove on the south side of the river about 0.4 mile above the entrance. The yard has berths, electricity, water, two 6-ton lifts, and a marine railway that can handle craft up to 85 feet long or 200 tons; hull and engine repairs can be made. Depths of 8 feet are reported in the approach and alongside. The Main Street (U.S. Route 17) highway bridge 0.9 mile above the entrance has a fixed span with a clearance of 29 feet. The highway bridge, adjacent to the westward, except for the channel span, remains as a fishing pier. The overhead power cable at the bridge has a clearance of 38 feet. The Seaboard System Railroad (SCL) bridge just upstream has a swing span with a channel width of 46 feet and a clearance of 2 feet. (See **117.1 through 117.59 and 117.337**, chapter 2, for drawbridge regulations.) The overhead power cable, 0.5 mile above the bridge, has a clearance of 45 feet. A marina on the south side, just east of the Main Street bridge, has berths, electricity, gasoline, diesel fuel, water, a launching ramp, and storage; outboard engines can be repaired. The Interstate 95 highway bridge, 2 miles above the mouth, has a fixed span with a clearance of 29 feet at the center.

(134) State Route 115 highway bridge, 4.5 miles above the mouth, has a 40-foot fixed span with a clearance of 18 feet. The overhead power cable just westward of the bridge has a clearance of 45 feet.

(135) Groups of piles, sunken wrecks, and barges are near the shores of Trout River. There are numerous private piers and landings on the river. The Jacksonville City Zoo is on the north side of the river downstream of the first bridge.

(136) **Charts 11492, 11495.–St. Johns River south of Jacksonville bridges.** Many pleasure craft ply the river south of Jacksonville, going as far as Sanford. Commercial traffic is light and consists of barges hauling petroleum products for oil company distributors and fuel oil for power plants; the oil barges are loaded at Jacksonville and towed to Palatka and Sanford.

(137) The route from Jacksonville to Sanford, a distance of 123 miles, is well marked by lights and daybeacons, and is comparatively easy to navigate with the aid of the charts. However, if a local pilot is desired, fishermen from Jacksonville, Palatka, Welaka, or Sanford will serve. The upper reaches of the river are partly obstructed by hyacinths at certain times of the year, and floating obstructions are a continual menace to navigation. A program for eradication of obnoxious aquatic plant growth, consisting mostly of spraying, is carried on jointly by the Corps of Engineers and the Florida Game and Fresh Water Fish Commission. The unimproved creeks tributary to the St. Johns River may be obstructed by logs and hyacinths.

(138) Fish traps, pilings, and remains of old wharves are generally found close inshore or on the bars in midstream. Fish traps are usually constructed of small poles and are frequently destroyed and rebuilt. In some cases, they extend several feet above high water and can be avoided in daylight hours. In some places they have been broken off below the water and are a serious menace to small craft.

(139) **Channels.–**A Federal project provides for a channel 13 feet deep from Jacksonville for 48 miles to Palatka, thence 12 feet deep for 75 miles to Sanford, and thence 5 feet deep for about 18 miles to Lake Harney. This project, however, has not been maintained in recent years because of the light commercial traffic. (See the charts for controlling depths.)

(140) **Bridges.–**General drawbridge regulations and opening signals for bridges over the St. Johns River and tributaries are given in **117.1 through 117.49**, chapter 2. Special drawbridge regulations for certain bridges that supplement the general regulations are referenced with the area description of the waterway.

(141) **Chart 11492.–**A **038°56'-218°56'** measured nautical mile is near the northwest shore of the St. Johns River between **Winter Point** and the Ortega River. The target at each end of the course has two pile structures 8 feet apart and perpendicular to the course with a steel rod at the top of each pile. The piles are connected by an observer's platform.

(142) **Ortega River** is about 2 miles south of Fuller Warren Bridge (30°18.9'N., 81°40.3'W.) on the west side of the St. Johns River. It is the major yachting center in the Jacksonville area. The mouth of the river is marked by a light. In May 1983, the reported controlling depth was 6 across the bar at the entrance, thence 7 feet to the railroad bridge, thence 5 ½ feet for a distance of 1.4 miles above the second highway bridge.

(143) In August 1985, shoaling to 2 feet was reported in the vicinity of Ortega River Light 3.

(144) The Grand Avenue (State Route 211) highway bridge, at the entrance to Ortega River connecting **Ortega** and **St. Johns Park** has a bascule span with a clearance of 9 feet. The Roosevelt Boulevard (U.S. Route 17) highway bridge, 0.7 mile upstream, has dual fixed spans each with a clearance of 45 feet. The northern 180-foot section of the former highway bascule bridge immediately westward remains as a fishing pier. An overhead power cable with a clearance of 65 feet is at the fishing pier. The Seaboard System Railroad (SCL) bridge immediately westward of the fishing pier has a 40-foot bascule span with a clearance of 2 feet. The Timquana Road highway bridge crossing the river 1.9 miles above the railroad bridge has a fixed span with a clearance of 20 feet.

(145) A modern well-equipped marina and boatyard are on the northwest side of the Ortega River about 0.4 mile above the first bridge. The marina has about 235 slips and 20 berths and can accommodate boats up to 60 feet in length with a reported approach depth of 8 feet and alongside depth of 5 feet in January 2001. Gasoline, ice, water, electricity, and showers are available with a shopping center and restaurants nearby. The boatyard, closed Sundays, makes complete hull and engine repairs; a 50-ton travel lift is available.

(146) Another marina on the northwest bank of the Ortega River just northeastward of the twin highway bridges has berths for 75 boats to 52 feet in length, with reported depths of 10 feet in May 1983. A 25-ton mobile lift and a 3½-ton forklift are available for complete repairs. Gasoline and oil, diesel fuel, water, ice, electricity, and other supplies and services are available. On the southwest side of this bridge is the yard of a yacht-building corporation. About 0.2 mile above the twin bridges, on the northwest side, there is another excellent marina for yachts. There are 50 transient berths with reported depths of 7 feet. Gasoline and oil, diesel fuel, water, ice, electricity, and marine supplies are available. Complete repairs can be made; there are two 30-ton hoists. A shopping center and a cafeteria are within three blocks of the marina.

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(147) **Cedar River,** a tributary of the Ortega, enters from the northward about 1.5 miles above the mouth. In May 1983, the reported controlling depth was 6 feet from the entrance to the highway bridge 1.4 miles above the entrance. The Blanding Boulevard highway bridge, 0.6 mile above the mouth, has twin fixed spans with a horizontal clearance of 30 feet and a vertical clearance of 16 feet. An overhead power cable 100 yards above the bridge has a clearance of 43 feet. The San Juan Avenue highway bridge, 1.4 miles above the mouth, has a 39-foot fixed span with a clearance of 11 feet at the center.

(148) On the west side of St. Johns River, 4 miles southward of Fuller Warren Bridge at the entrance to **Pirates Cove,** is the private Florida Yacht Club. **Special anchorages** are off the entrance to Pirates Cove. (See **110.1 and 110.73**, chapter 2, for limits and regulations.)

(149) **Goodbys Creek,** on the east side of the St. Johns River about 7 miles southward of Fuller Warren Bridge, has reported depths of about 2 feet to just above the twin bridges of State Route 13, about 0.3 mile above the entrance; the twin 32-foot spans have a clearance of 11 feet. The entrance is marked by a light, and pilings border the channel. Local knowledge is advised. Two small marinas are on the north side of the creek, on either side of the bridges; gasoline and oil, berths, water, ice, and some marine supplies are available. The lower marina has a 15-ton hoist; hull, engine, and electronic repairs can be made. In May 1983, with local knowledge, 6 feet was available to the lower marina.

(150) Jacksonville Naval Air Station extends along the west side of the St. Johns River about 0.7 mile northwestward of and 2.5 miles south-southwestward of **Piney Point.** A large pier is close south of Piney Point. In April 1982, the dredged channel leading to the pier had a controlling depth of 14 feet to the outer end of the pier except for shoaling to 13 feet along the northeast edge of the basin, thence 16 feet north and 11 feet south of the pier. Another dredged channel leads to a small basin at the station about 2.4 miles southward of Piney Point. In 1978, the controlling depth was 9 feet in the channel and 6 feet in the basin except for shoaling to 3 feet at the west end.

(151) The twin fixed spans of Highway 295 bridge, with clearances of 65 feet cross the St. Johns River just below the Naval Air Station, 2.5 miles southward of Piney Point.

(152) In August 1985, a sunken wreck was reported near the Highway 295 bridge in about 30°11'21"N., 81°39'33"W. In 1996, a submerged wreck was about 1,000 yards southward of the bridge, in about 30°11.0'N., 81°41.0'W.

(153) **Orange Park,** 10 miles south of Fuller Warren Bridge on the west bank of the St. Johns River, is a winter resort.

(154) In September 1986, a 10-foot shoal spot was reported about 1.1 miles southeast of Orange Park in about 30°09'14"N., 81°41'11"W.

(155) **Doctors Inlet,** 10.5 miles southward of Fuller Warren Bridge, is the entrance to **Doctors Lake** from the St. Johns River. In May 1983, the inlet had a reported controlling depth of 12 feet, thence general depths of 7 to 12 feet to the head of the lake. Because of extensive shoals on both sides of the inlet, midchannel courses must be steered from abeam of Light 10 until through the inlet. The lake is an excellent fishing ground for sportsmen and a haven for small boats in stormy weather. U.S. Route 17 fixed highway bridge with a clearance of 37 feet crosses the mouth of Doctors Inlet.

(156) There is a well-equipped marina on the south side of Doctors Inlet immediately west of the highway bridge. There are 35 covered slips for boats of up to about 40 feet and 7 open 24-foot slips; depths to the berths are reported to be about 5 feet. Gasoline pumps are on a bulkhead about 300 feet long; sailboats too large for the open slips may moor here. Ice, water, electricity, and some marine supplies are available. Also, on the south side of the inlet just eastward of the bridge is another marina. The entrance channel is marked by private daybeacons. In April 1990, the reported alongside depth was 6 feet. Ice, water, electricity, and some marine supplies are available. A 20-ton mobile lift is available, and hull repair can be made.

(157) In May 1983, many pilings, visible at low tide, but submerged at high tide, were reported in Doctors Lake: several along the northern lakeshore between Orange Point and Macks Point, others off Cane Point, Dixton Siding, and Catfish Point. An old target area and submerged pilings are reported in Mill Cove.

(158) **Swimming Pen Creek,** with two small arms at its head, is entered through an unmarked channel at the south end of Doctors Lake. A 23-foot fixed span highway bridge with a clearance of 6 feet crosses the creek about 0.4 mile above the entrance. In January 1996, a replacement fixed highway bridge with a clearance of 10 feet was under construction at the same location as the existing bridge; upon completion, it will replace the existing bridge. With local knowledge depths of about 4 feet can be carried to the bridge, thence about 1 to 2 feet to the head of east and west arms. An overhead power cable with a clearance of 31 feet crosses the creek just above the bridge. Piles, some submerged, are in the creek; exercise extreme caution. A small fish camp is on the east side of the bridge; gasoline, water, and ice are available.

(159) **Julington Creek,** 13 miles south of Fuller Warren Bridge on the east bank, had a reported controlling depth of 5 feet in May 1983, to State Route 13 highway bridge about a mile inside the entrance, thence 4½ feet for another 1.3 miles. The highway bridge has a 44-foot fixed span with a clearance of 15 feet. An overhead power cable with a clearance of 40 feet crosses the creek at the bridge on the east side.

(160) A fish camp, on the north bank of the creek just westward of the bridge, has berths, electricity, gasoline, water, ice, launching ramp, and limited marine supplies. A marina is on the north side of the creek just eastward of the bridge. There are 50 covered and open berths with fresh water and electricity. Gasoline and oil, ice, showers, and a restaurant are available. A 12-ton mobile lift is available, and all types of repairs can be made. The southern city limit of Jacksonville follows the north side of Julington Creek.

(161) **Black Creek,** 18 miles southward of Fuller Warren Bridge at Jacksonville, is navigable for vessels of about 8-foot draft for about 15 miles to the town of **Middleburg.** In May 1983, the reported controlling depth was 7 feet to the Seaboard System Railroad bridge. The creek is used by small craft as a refuge during hurricanes. The trees along the bank form an excellent windbreak. Just inside the entrance are U.S. Route 17 twin fixed highway bridges with clearances of 30 feet. About 2.2 miles above the highway bridge an overhead power cable has a clearance of 47 feet. The Seaboard System Railroad (SCL) bridge, 5 miles above the mouth, has a 44-foot fixed span with a clearance of 20 feet. Above the Seaboard System Railroad bridge up Black Creek to Middleburg are numerous bridge and cable crossings. The minimum vertical clearances are: 20 feet in Black Creek to

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the junction with North Fork and South Fork; 16 feet in North Fork; and 13 feet in South Fork. The bridges minimum horizontal clearances are: 40 feet in Black Creek to North Fork and South Fork; 30 feet in North Fork; and 40 feet in South Fork.

(162) **Green Cove Springs,** a town on the west bank of the St. Johns River about 20 miles south of Jacksonville's Fuller Warren Bridge, has a number of private piers and a public concrete T-pier owned by the city. A hotel and restaurant are three blocks up the street leading from the foot of the municipal pier. A **customs station** is at Green Cove Springs.

(163) The many long piers and the extensive group of buildings and other facilities just southeastward of Green Cove Springs were formerly part of a U.S. Naval Station, but are now included in a privately owned industrial park; the northwesternmost pier is used by a small shipyard which builds steel barges, and the other piers are used for the dismantling of vessels by a scrap-metal company. A large orange and white checkered tank in the industrial park is prominent from the river. A boatyard that repairs company-owned tugs and barges is southwest of the long piers on the west side of the entrance to **Red Bay Creek**. The yard has a 1,000-ton synchrolift drydock and transfer system. Emergency hull, engine, and electronic repairs can be made.

(164) A section of a former bridge 2 miles southeastward of Green Cove Springs extend out into the river 500 yards from the south shore and 500 yards from the north shore; the rest of the bridge was removed. State Route 16 highway bridge, 0.5 mile upstream, crosses the river from **Red Bay Point** to **Smith Point;** it has a fixed span with a clearance of 45 feet. There are submerged obstructions in the river from **Magnolia Point,** 4 miles below the bridge, to Smith Point. The areas are outlined on the chart and should be avoided.

(165) **Trout Creek** and **Sixmile Creek** have a common entrance 24 miles south of Fuller Warren Bridge. These creeks are navigable for about 3 or 4 miles upstream. In May 1983, the reported controlling depth was 4½ feet to Hardwood on Trout Creek, and a depth of 4 feet could be carried with local knowledge for about 2.2 miles on Sixmile Creek. State Route 13 highway bridge, 0.5 mile above the entrance of Trout Creek, has a 38-foot fixed span with a clearance of 14 feet. Gasoline, water, ice, minor repairs, limited marine supplies, and launching ramps are available at small fish camps in **Palmo Cove,** at the head of the common entrance, in Trout Creek, just above the bridge, and in **Florence Creek,** about 1 mile northwestward of Palmo Cove. State Route 13 highway bridge, 1 mile above the entrance to Sixmile Creek, has a 40-foot fixed span with a clearance of 12 feet. An overhead power cable with a clearance of 40 feet crosses the creek just below the bridge.

(166) **East Tocoi,** 32 miles south of Fuller Warren Bridge, is a small fish camp on the east side of the river. Gasoline, ice, and water are available.

(167) **Chart 11492.–Ninemile Point,** south of Jacksonville, is a sharp point at a wide bend of the river. An overhead power cable across the outside bend about 1.5 miles east of the point has a clearance of 38 feet.

(168) **Rice Creek,** 44 miles south of Jacksonville, is used occasionally by fuel barges going to the paper plant, about 2.3 miles above the mouth, near the head of its southerly branch. Paper from the plant is shipped by rail and barge. The creek is entered through a dredged channel which leads westward from St. Johns River to near the head of the southerly branch. In May 1985, the midchannel controlling depth was 10 feet from St. Johns River to near the head of the southerly branch. The channel is marked by a **273.3°** lighted approach range, lights, and daybeacons. The Seaboard System Railroad (SCL) bridge, 0.6 mile above the mouth, has a swing span with a channel width of 40 feet and a clearance of 2 feet. U.S. Route 17 highway bridge, 0.8 mile above the mouth, has twin fixed spans with a clearance of 45 feet. The overhead power cables at the bridge and 1.1 miles westward have clearances of 60 feet and 59 feet, respectively.

(169) Putnam County Barge Port, about 0.6 mile southward of the entrance to Rice Creek, has a 410-foot marginal wharf with 8 feet reported alongside. Water, electricity, railroad connections, and warehouse space are available. Traffic is mostly in paper products. Transient pleasure craft may moor alongside the wharf at their own risk.

(170) An overhead power cable, with a clearance of 91 feet over the main channel and 60 feet elsewhere, crosses St. Johns River about 1.6 miles southward of the channel into Rice Creek.

(171) **Palatka** is an important upriver town on the St. Johns River 48 miles south of Jacksonville. There are several sawmills; wood chips are shipped from them by rail to the papermill on Rice Creek. The marina here has good facilities for yachts. There are over 30 berths with water and electricity at finger piers in front of a large building about 0.3 mile southwestward of U.S. Route 17 highway bridge. Gasoline and diesel fuel are pumped; ice, marine hardware, accessories, and other supplies are available at the marina; and groceries, laundry facilities, and overnight accommodations are available nearby. A 40-ton marine railway is available for hull, engine, and propeller repairs. The city pier, just northeastward of the marina, has berths, electricity, and water. Only overnight berthing is permitted. U.S. Route 17 fixed highway bridge across St. Johns River at Palatka has a clearance of 65 feet.

(172) **Wilson Cove,** 0.7 mile south of Palatka, is very shallow and fouled by hulks, piling, and concrete-ballast blocks.

(173) Overhead power cables with a least clearance of 90 feet cross the St. Johns River about 2.5 miles above the highway bridge.

(174) In January 1984, an overhead power cable with a design clearance of 100 feet was under construction about 3.5 miles above the highway bridge at Palatka.

(175) Along the southern shore of the St. Johns River, about 4.5 miles above Palatka between **San Mateo** and **Edgewater,** submerged piling of old piers are a menace to inshore navigation. Keep at least 150 yards off this shore. A submerged pile is on the northwest side of the river opposite Edgewater, in about 29°36'00"N., 81°36'30"W.

(176) A 25-ton mobile lift is available at San Mateo for do-it-yourself repairs.

(177) In April 1991, shoaling to an unknown extent was reported in St. John River between Murphy Island Daybeacon 18 and Light 20.

(178) **Dunns Creek,** 6.5 miles above Palatka, is the approach to Crescent Lake, and is used by pleasure and fishing boats. In May 1983, the reported controlling depth for 7.5 miles to the lake was 3 feet. Northeast storms raise the height of water in the creek. Some of the bends in the creek are sharp.

(179) From St. Johns River the creek should be entered from a point northeast of its mouth, passing about 50 yards off the fish traps on the east side of the entrance. The eastern entrance of

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Polly Creek is just to the west of the mouth of Dunns Creek, and care should be taken not to confuse the two.

(180) **Murphy Creek** crosses Dunns Creek 0.5 mile inside the entrance. The easterly section of the creek is obstructed by a row of piling in Dunns Creek.

(181) U.S. Route 17 fixed highway bridge crosses Dunns Creek 0.9 mile above the mouth and has a clearance of 45 feet. Overhead power and television cables are N of the bridge with a clearance of 55 feet.

(182) **Crescent Lake** is about 11 miles long and has a maximum width of about 2 miles. The general depths in June 1975 were between 8 and 13 feet, gradually shoaling toward shore. There are no periodic tides in the lake; the range of tide in Dunns Creek becomes zero near its end. Sudden squalls in the lake cause a chop dangerous to small boats. In the center of the lake, the bottom is soft mud. Near the shore, the bottom changes to hard sand. Large patches of hyacinth drift about the lake with the changing wind. The lake appears to be free of sunken logs, but when navigating near the shore a close watch should be maintained for broken-off piling and sunken logs. On the west side of the lake, about 1 mile above Crescent City, is a motel and fishing resort where berths with electricity, water, ice, gasoline, and limited marine supplies are available.

(183) **Crescent City** is on the west side of the lake about 6.5 miles from the north end. There are a municipal pier and a number of private piers, some of which are in ruins. The municipal pier had 10 feet reported alongside in May 1983.

(184) In May 1983, it was reported that a draft of 2 feet could be taken into and for a distance of 5 miles up **Haw Creek** at the head of Crescent Lake. Above this point navigation is obstructed by trees and logs. About 3 miles above the mouth is the hulk of a gunboat sunk during the Civil War.

(185) **Dead Lake** is about one mile long and 0.5 mile wide at the head of Crescent Lake and, in 1963, had a general depth of 8 feet in the center. St. Johns Park and the ruins of a dock are on the northeast shore. Considerable hyacinths are found at times in the lake.

(186) **Chart 11495.–**There are many fishing camps, resorts, and small marinas along the St. Johns River as far as Lake George; most have gasoline pumps, and some have moorage and other facilities. A recreation map showing the various facilities may be obtained from the Putnam County Chamber of Commerce, Box 550, Palatka, Fla. 32077.

(187) At **Buffalo Bluff,** 9.8 miles above Palatka, the St. Johns River is crossed by the Seaboard System Railroad (SCL) bridge which has a bascule span with a clearance of 7 feet. There are three boatyards at **Stokes Landing,** 1.6 miles southward of the railroad bridge at Buffalo Bluff. The southernmost has a 40-ton marine railway and complete yard facilities for hull, engine and electrical repairs. The other two boatyards are used for shipbuilding and maintenance of company-owned tugs and barges.

(188) The entrance to the **Cross Florida Greenway** is on the west side of the St. Johns River 2.4 miles southward of the railroad bridge at Buffalo Bluff. The canal is primarily open to barge traffic, but also pleasure and fishing boats. It extends from St. Johns River for 93 miles to the Gulf of Mexico at a point about 3.0 miles N of the Crystal River power plant.

(189) In December 1968, the **Henry Holland Buckman Lock** and **Rodman Dam** were completed, and the lock was open for use; it is the easternmost lock and is about 1.5 miles westward of the canal entrance from the St. Johns River. The lock is 84 feet wide and 600 feet long, has a depth of 14 feet over the gate sills, and a lockage time of 15 to 20 minutes; it is operated from 0800 to 1130 and 1200 to 1600 daily until the entire barge canal is completed. Traffic lights are in operation at both ends of the lock. (See **207.160**, chapter 2, for regulations.) Rodman Dam, across the Oklawaha River about 8 miles above its junction with the St. Johns River, blocks navigation of the Oklawaha River above the dam, as there is no lock; the upper Oklawaha River is reached through the eastern entrance of the barge canal from the St. Johns River, through Henry Holland Buckman Lock, thence through Lake Ocklawaha, the pool formed by Rodman Dam.

(190) In May 1983, the canal had been completed from the St. Johns River to the lock and for about 4.7 miles westward of the lock, where it enters Lake Ocklawaha. This completed section of the canal is unmarked; it is crossed about 1.6 miles westward of Henry Holland Buckman Lock by State Route 19 fixed highway bridge with a clearance of 68 feet; an overhead cable east of the bridge has a clearance of 85 feet. In traversing Lake Ocklawaha to the upper Oklawaha River, prior to completion of the dredged barge canal, it is advisable to follow the course of the Oklawaha River bed through the lake, which is marked by aids to navigation installed by the Corps of Engineers; the markers, on iron pipes, are red on the right side of the river and green on the left side when going down the lake (away from Henry Holland Buckman Lock). Caution should be exercised since numerous floating obstructions may be encountered in the lake. The lake extends about 13 miles to the site of the **Eureka Lock and Dam,** construction of which has been suspended, but which has a navigation bypass; boats of less than 3-foot draft can continue up the Oklawaha River from Eureka Lock and Dam to the junction with **Silver Springs Run,** a distance of about 17 miles; navigation of the river from Silver Springs Run to **Moss Bluff Lock and Dam,** about 12 miles, and from Moss Bluff Lock to **Lake Griffin,** about 8 miles, may not be feasible at times due to low water. Vessel operators should verify water levels with the Moss Bluff lockmaster (telephone 288-4171). Navigation regulations for the Moss Bluff Lock and Dam are given in **207.169**, chapter 2.

(191) Information on the pool level above Moss Bluff Dam is given in **207.170**, chapter 2. State Route 316 fixed highway bridge across the barge canal and Oklawaha River about 1 mile above the Eureka Dam has a clearance of 65 feet at the canal. The minimum clearances of the several highway swing bridges across the Oklawaha River above Eureka Dam are 8 feet vertical and 34 feet horizontal. (See **117.1 through 117.59 and 117.319**, chapter 2, for drawbridge regulations.)

(192) In 1986, the Federal government de-authorized the Cross Florida Barge Canal project and in 1990, turned the right of way over to the State of Florida. It is operated by the Office of Greenways and Trails under the State of Florida Department of Environmental Protection. For current information on the Cross Florida Greenway, contact the Office of Greenways and Trails at (850) 488-3701 in Tallahassee, FL.

(193) At the settlement of **Saratoga,** on the east side of the St. Johns River 2.3 miles southward of the Cross Florida Barge Canal entrance, there is a small private wharf with clock faces on the cupola of the shelter roof.

(194) A marine resort is on the east side of the river 0.9 mile southeastward of the charted cupola at Saratoga. There is a long landing and float here for moorage of about 100 boats, with re-

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ported depths of 8 feet. Gasoline and oil, diesel fuel, water, electricity, ice, and limited marine supplies are available.

(195) **Welaka** is a town on the east side of the St. Johns River, 18 miles above Palatka and 66 miles south of Jacksonville. There are several fishing camp landings, with depths of 5 to 7 feet alongside, where gasoline, water, ice, and some marine supplies can be obtained. A marine railway can haul out boats up to 35 feet for general repairs. Provisions are available.

(196) **Oklawaha River** has its source in the system of large lakes in the central part of the peninsula of Florida and flows in a general northerly direction, then eastward, emptying into the St. Johns River 19 miles south of Palatka. Do not confuse the entrance of **Bear Creek** to the southward with the mouth of the river. The river is navigable for about 8 miles above the mouth to Rodman Dam; this is the head of navigation, as the dam has no lock. The upper Oklawaha River and Rodman pool are reached from the St. Johns River through the Cross Florida Barge Canal. (See the preceding description of that waterway.)

(197) The depths and the speed of the downstream current in Oklawaha River below Rodman Dam are uncertain and will vary with the amount of water discharged from the dam's spillway. In May 1983, it was reported that a depth of 4 feet could be taken to the dam. The river is extremely winding and is obstructed by shoals; snags and hyacinths may be encountered. State Route 19 fixed bridge crosses the river about 2.5 miles above the mouth with a clearance of 34 feet at low water stage.

(198) A ferry consisting of a tug and barge crosses St. Johns River 4.2 miles south of Welaka just below Mt. Royal. An overhead power cable with a clearance of 65 feet crosses the river at this point. Gasoline can be obtained at several fishing camps along the river between **Fort Gates,** about 5.3 miles south of Welaka, and Georgetown.

(199) **Georgetown** is a small town on the east bank of St. Johns River at the north end of Lake George, 8 miles south of Welaka. A ferry consisting of a tug and barge crosses the river between the town and **Drayton Island.** A marine railway that can handle craft up to 35 feet for hull and engine repairs is about 0.1 mile southeastward of the ferry landing. Fish camps at Georgetown have gasoline, water, ice, and limited marine supplies.

(200) **Lake George,** the first of the larger lakes on St. Johns River 75 miles south of Jacksonville, is about 10 miles long and 5.5 miles wide. The bottom is fairly uniform with depths of 8 to 12 feet in the center, shoaling rather abruptly near the shores. The improved channel, marked by a **347**° lighted range at the north end and a **166.8**° lighted range at the south end, lights, and daybeacons, cuts through the middle of the lake. In strong northerly and southerly winds the water becomes very rough. Small patches of hyacinth drift about the lake with the changing winds. Numerous old piling are found near the lake shore in 2 to 8 feet of water. The creeks emptying into the lake are shoal. A **naval bombing area** is in the eastern part of the lake. (See **334.520**, chapter 2, for limits and regulations.)

(201) In May 1982, guide piles at the south end of Lake George between Lights 15 and 17 were reported in disrepair and extending into the channel.

(202) **Astor** is a small village 4.5 miles south of Zinder Point at the south end of Lake George. State Route 40 highway bridge, across the St. Johns River has a bascule span with a clearance of 20 feet; in the open position the draw overhangs the west side of the channel above a height of 72 feet. The bridgetender monitors VHF-FM channel 16 and works on channel 13; call sign, WXY 904. The nearby overhead power cable has a clearance of 50 feet. In November 1984, the cable was reported to have sagged below its authorized clearance.

(203) There are good overnight accommodations here, on both sides of the river just south of the bridge. There are restaurants and motels with landings, and gasoline is pumped from several fuel piers. There are reported depths of 7 to 13 feet at the piers.

(204) **Chart 11495.–**The main channel of St. Johns River flows through the northwest portion of **Lake Dexter,** 92 miles south of Jacksonville. This very shallow lake is 3.7 miles long and about 0.9 mile in its widest part. In May 1983, it was reported that a draft of 3 feet could be carried eastward through Lake Dexter, **Tick Island Creek, Lake Woodruff, Spring Garden Creek,** and the northern portion of **Spring Garden Lake** to **De Leon Springs.** The channel and aids to navigation are privately maintained. De Leon Springs is a privately owned tourist attraction and is one of the larger freshwater springs in Florida.

(205) On the St. Johns River 14.6 miles south of **Dexter Point,** at **Crows Bluff,** the river is crossed by State Route 44 highway bridge which has a bascule span with a clearance of 15 feet at the center. An overhead power cable with a clearance of 83 feet crosses the river 0.3 mile north of the bridge. A marina is on the east side of the river 0.2 mile north of the bridge; berths with electricity, water, ice, gasoline, launching ramp, hull and engine repairs, and a 20-ton mobile lift are available. On the east side of the river just north of the bridge, is a small park with boat basin, small piers, and launching ramp. In June 1975, general depths of about 7 feet were reported in the basin. Water can be obtained at the park. Just south of the bridge, gasoline is available at a landing which had a reported depth of 4½ feet alongside in May 1983.

(206) Several fishing resorts are between the bridge at Crows Bluff and Lake Beresford; berths, electricity, gasoline, diesel fuel, water, ice, some marine supplies, and launching ramps are available, and hull and engine repairs can be made.

(207) **Lake Beresford** is a small lake, 2.2 miles long north and south and 0.5 mile wide, on the east side of the St. Johns River, 107 miles south of Jacksonville. A yacht club, fish camp, and boatyard are on the west side of the lake, and two fish camps are on the east side. Gasoline, water, and ice are available at the fish camps. The boatyard has a 32-foot marine railway, 4-ton marine lift, 32 berths with reported depths of 5 to 7 feet alongside, wet and covered storage, marine supplies, water, and electricity; hull and engine repairs can be made. **Beresford** is a small town and landing near the north end of the lake. In May 1983, the reported controlling depth was 3 feet to and alongside the dock of a fish camp at the town.

(208) **Manatees.**–A motorboat prohibited zone for the protection of manatees is in **Blue Springs Run,** and regulated speed zones are at its junction with St. Johns River, about 2 miles above Lake Beresford. (See Manatees, chapter 3.)

(209) **Wekiva River,** 115 miles south of Jacksonville, had a reported controlling depth of 3 feet in May 1983 for a distance of about 3 miles above the mouth; above this point the river is little used and is obstructed by trees, logs, and hyacinth. The entrance is difficult to distinguish.

(210) The improved channel of St. Johns River enters **Lake Monroe** 120 miles south of Jacksonville. Near the west end of the lake the river is crossed by three bridges. The Seaboard System Railroad (SCL) bascule span and the U.S. Route 17 highway swing span have a minimum clearance of 7 feet. In March 1993, a

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replacement fixed highway bridge was under construction for the Route 17 swing span. The overhead power cables below and above these bridges have a minimum clearance of 49 feet. On the north side of the river just east of the highway bridge is the small dredged basin of a State Park with reported depths of about 5 feet in March 1980. Berths and launching ramps are available. The Interstate Route 4 fixed bridge, nearest the lake, has a clearance of 45 feet.

(211) **Enterprise** is a town on the north shore of Lake Monroe. A channel, marked by daybeacons, leads to the wharf of a powerplant west of the town. In 1984, the centerline controlling depth was 7½ feet.

(212) **Sanford,** 123 miles south of Jacksonville, is an important city and railroad center on the south side of Lake Monroe in the heart of the celery district. Commercial barge traffic consists of petroleum products from Jacksonville; there are three oil company receiving piers westward of the yacht harbor. The modern well-equipped yacht harbor has two fueling stations which pump gasoline and diesel fuel, and ice, water, electricity, and other supplies and services are available. A large motel is adjacent to the harbor. A mobile hoist can haul out boats up to 50 feet or 20 tons for complete repairs. Depths are reported to be 6 feet. Another small-craft facility available in the Sanford area is at a boatworks just off the St. Johns River about 3 miles eastward of the city; the facility is on the south bank of **Indian Mound Slough,** just northwestward of the highway bridge at 28°48'06"N., 81°12'49"W. Freshwater, gasoline, diesel fuel, ice, and electricity are available here. Boats 75 feet long can use the docks and moorings. The marine railway is capable of hauling out boats 55 feet long. Hull and engine repairs can be made. A wharf 200 feet long provides covered storage for over 50 boats up to 60 feet in length. A depth of about 8 feet can be taken to the railway.

(213) **St. Johns River above Sanford.–**The route from Lake Monroe to Lake Harney, a distance of 15 miles, is marked by numerous markers which have not been maintained since 1940. Navigation is not difficult except during periods of high water when the banks are flooded, at which time a local pilot should be taken.

(214) State Route 415 highway bridge crossing the St. Johns River, 3 miles east of Sanford, has a fixed span with a clearance of 25 feet. An overhead power cable at the bridge has a clearance of 69 feet.

(215) At the entrance to **Lake Jesup,** 6 miles east of Sanford, State Route 46 highway bridge crosses the channel entering the lake. It has a 47-foot fixed span with a clearance of 14 feet. A section of the old bridge just downstream extends 45 feet from the west shore and is used as a fishing pier. Lake Jesup is about 8.5 miles long with a greatest width of 2.2 miles. It is very shallow at the entrance and little used. General depths in the lake are 6 to 8 feet. An overhead power cable, about 6.1 miles upriver from Lake Jessup to Lake Harney, crosses the river with a clearance of 65 feet.

(216) St. Johns River flows from **Lake Harney,** 140 miles south of Jacksonville. The lake is about 3.6 miles long with a greatest width of 2.2 miles. It is uniformly 6 to 7 feet deep except along the shores where it shoals. Boats do not generally go above the lake.

(217) Above Lake Harney the St. Johns River continues generally southward through Lake Poinsett, Winder, Washington, Sawgrass, and Hellen Blazes, then into St. Johns Marshes.

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