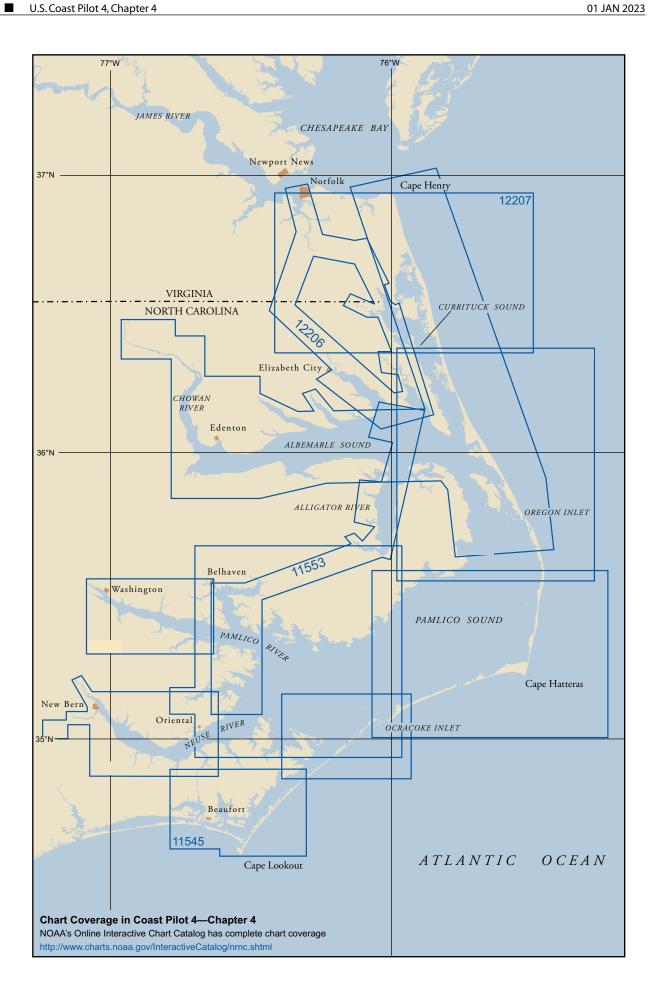
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Cape Henry to Cape Lookout

(18)

METEOROLOGICAL TABLE – COASTAL AREA OFF NORFOLK, VIRGINIA Between 36°N to 38°N and 72°W to 76°W													
WEATHER ELEMENTS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ост	NOV	DEC	YEARS OF RECORD
Wind > 33 knots ¹ Wave Height > 9 feet ¹ Visibility < 2 nautical miles ¹	4.9	5.5	4.7	2.3	0.5	0.4	0.2	0.3	1.1	2.1	3.6	5.0	2.5
	9.2	9.6	8.0	4.7	2.1	1.5	0.9	1.3	2.8	5.5	6.5	9.8	4.9
	3.1	4.4	4.8	4.7	5.2	3.6	1.6	1.3	1.3	1.7	1.7	1.9	2.9
Precipitation ¹ Temperature > 69° F Mean Temperature (°F)	9.3	8.3	6.9	5.5	4.9	4.3	4.2	4.1	4.7	5.6	6.3	7.7	5.9
	1.0	0.9	1.3	4.3	16.1	61.5	96.3	96.9	76.8	25.9	6.6	1.7	33.7
	47.6	47.6	50.4	56.2	63.3	71.9	77.6	77.9	73.9	66.1	58.6	51.6	62.3
Temperature < 33° F ¹ Mean RH (%) Overcast or Obscured ¹	6.2	5.5	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.8	1.2
	76	76	76	78	81	82	82	81	79	76	74	75	78
	38.3	36.7	33.9	27.9	26.0	22.7	21.0	19.8	20.7	22.7	26.3	34.2	27.3
Mean Cloud Cover (8 ^{ths}) Mean SLP (mbs) Ext. Max. SLP (mbs)	5.2	5.1	4.8	4.3	4.4	4.4	4.4	4.4	4.2	4.2	4.5	5.1	4.6
	1019	1017	1017	1016	1016	1016	1017	1017	1018	1018	1018	1019	1017
	1047	1047	1039	1040	1038	1036	1035	1037	1036	1044	1044	1045	1047
Ext. Min. SLP (mbs) Prevailing Wind Direction Thunder and Lightning ¹	982	978	978	987	990	991	996	995	993	990	986	986	978
	N	NW	N	SW	S	SW	SW	SW	NE	N	N	NW	N
	0.6	0.7	0.9	1.0	1.7	1.8	2.7	2.7	1.4	1.0	0.7	0.6	1.3
¹ Percentage Frequency													

<u>(1)</u>

ENCs - US3DE01M, US3SC10M Charts - 12200, 11520

This chapter describes a 190-mile section of the Virginia and North Carolina coastline between Cape Henry and Cape Lookout, known as the Outer Banks, and the series of sounds and tributary waters behind the banks through which the Intracoastal Waterway passes from Chesapeake Bay southward. The Outer Banks, a line of long, low and narrow islands, include the Portsmouth Islands, the uninhabited Core Banks and Bodie, Hatteras and Ocracoke Islands, parts of which comprise the Cape Hatteras National Seashore. The Intracoastal Waterway is described in chapter 12.

There are no deepwater ports along this stretch of the coast. Oregon, Hatteras and Ocracoke Inlets provide the main entrances to the shallow, sandy-bottom waters behind the Outer Banks. These inlets are used principally by fishing vessels.

Discussed in this chapter are the waters of Albemarle Sound and its tributaries Little, Perquimans, Chowan and Roanoke Rivers and the towns of Hertford, Edenton and Plymouth; Croatan and Roanoke Sounds, Roanoke Island and the towns of Kitty Hawk, Nags Head, Manteo and Wanchese; Pamlico Sound and the towns of Rodanthe, Avon, Buxton, Hatteras and Ocracoke, which are on

the western side of The Outer Banks; Pamlico River and the towns of Swanquarter, Bath and Washington; Neuse River and the town of New Bern; and Core Sound, Cedar Island and the towns of Atlantic, Sealevel, Davis and Marshallberg. These ports and waters support considerable traffic in barges and pleasure craft and a large fishing and boatbuilding industry.

There are many off-lying shoals and other hazards along this coast including Diamond Shoals and Cape Lookout Shoals. Deep-draft vessels should give these dangers a wide berth.

Many **restricted** and **danger areas** are located offshore and in the inland waters. (See **33 CFR 165** and **334**, chapter 2 for rules and regulations.)

The low sandy beaches of the coastline do not present any good radar targets. However, four Navy-maintained offshore towers, 16 to 32 miles east to northeast of Oregon Inlet, are reported to be prominent and to be good radar targets. The towers, each 72 feet high and marked by lights and sound signals, are in about

(7) 35°57'00"N., 75°15'58"W.; (8) 36°13'35"N., 75°15'01"W.; (9) 36°03'53"N., 74°58'59"W.; and (10) 35°47'11"N., 75°05'42"W.

(11)

The Traffic Separation Scheme at the entrance to Chesapeake Bay is described in United States Coast Pilot 3, Atlantic Coast–Sandy Hook to Cape Henry.

North Atlantic right whales

(12)

(15)

Endangered North Atlantic right whales are often seen within 30 miles of the Virginia and North Carolina coasts from November through April. (See **North Atlantic right whales**, indexed as such, in chapter 3 for more information on right whales and recommended measures to avoid collisions.)

All vessels 65 feet or greater in length overall (LOA) and subject to the jurisdiction of the United States are restricted to speeds of 10 knots or less in the Seasonal Management Area existing around the entrance to the Chesapeake Bay and the Ports of Morehead City and Beaufort, North Carolina, between November 1 and April 30. The areas are defined as the waters within a 20-nm radius of 37°00'36.9"N., 75°57'50.5"W. (Chesapeake Bay) and 34°41'32.0"N., 76°40'08.3"W. (Morehead City and Beaufort). (See **50 CFR 224.105** in chapter 2 for regulations, limitations and exceptions.)

COLREGS demarcation lines

The lines established for this part of the Virginia and North Carolina coasts are described in **33 CFR 80.515** and **80.520**, chapter 2.

Weather, Cape Henry to Cape Lookout and vicinity. This stretch of coast is subject to strong winds and rough seas from both tropical and extratropical storms and occasionally to dense spring sea fog that hugs coastal routes landward of the Gulf Stream. Rough weather and numerous shoals have combined to give the seas off the Outer Banks the reputation of "Graveyard of the Atlantic."

Winter (November through April) provides the greatest likelihood of rough weather, due to the frequent extratropical storms. Fueled by the Gulf Stream, about 3 to 6 storms per month affect these waters. Their predominant movement is toward the northeast or east at 25 to 30 knots. Not all of these systems are severe weather producers, but in winter, gales blow about 5 percent of the time near Diamond Shoals and up to 10 percent to the east and northeast. From December through March, seas of 8 feet (2.4 m) or more are encountered about 20 to 25 percent of the time near Diamond Shoals and even more often to the east. Conditions improve somewhat in other directions. Maximum wave heights have been estimated at more than 40 feet (12 m). Steep waves of 5 feet or more (1.5 m) with periods of less than 6 seconds are uncommon. However, those of 5 feet or more (1.5 m) with 6- to 9-second periods occur about 30 percent of the time creating problems for vessels in the 100- to 400-foot (31 to 122 m) range. Winter storms also produce rain and snow that can hamper visibility along the routes through this region. Visibilities drop below 0.5 mile (<0.9 km) less than 3 percent of the time, except in late winter and spring.

During March, April and May the air is often warmer than the water between Cape Charles and Oregon Inlet, sometimes creating sea fog; visibilities drop below 0.5 mile (<0.9 km) about 2 to 5 percent of the time in spring. Farther out to sea the warmer Gulf Stream inhibits fog formation. To the south, fog occasionally develops west of the Gulf Stream.

Tropical cyclones, while infrequent, can create havoc when they strike. Hurricanes are most likely along this coast during August and September.

In addition to winds of 100 knots or more and waves of 30 feet (9 m) or more, hurricanes can generate extreme storm tides, which cause damage to coastal facilities. These tides can also occur in severe extratropical storms. From the Virginia-North Carolina border to Cape Lookout it has been estimated that in an average 100-year period, tides could reach 8 to 10 feet (2.4 to 3 m) above mean sea level. South to the North Carolina-South Carolina border, they could reach 10 to a little more than 13 feet (3 to 4 m) above mean sea level.

ENC - US4NC32M Chart - 12207

(24) The summer resort of Virginia Beach is about 5 miles southward of Cape Henry Light. Many high-rise buildings and two water tanks are prominent. Some of these are lighted at night. A hotel cupola, 3.4 miles south of Cape Henry Light, is distinctive.

Rudee Inlet, at the southern end of Virginia Beach and about 6 miles south of Cape Henry Light, is protected by two jetties at the entrance. A dredged channel leads between the jetties to a basin just inside the jetties, thence westward to a safety area about 0.2 mile above the jetties, thence northwestward to Lake Rudee. While dredging operations attempt to maintain Rudee Inlet channel to a depth of 10 feet, the inlet is subject to continual shoaling. Rudee Inlet is marked by lighted buoys and a light.

The inlet leads northward to**Lake Rudee**, and southward to**Lake Wesley**. Two fixed highway bridges, an east span and a west span, both with a clearance of 28 feet, cross the arm of the inlet leading to Lake Rudee. Several overhead power and telephone cables with a least known clearance of 54 feet cross eastward of the bridge. A municipal marina and two private marinas are on the north shore of Lake Rudee west of the bridge. Berths, electricity, gasoline, diesel fuel, water, ice and marine supplies are available; engine and electrical repairs can be made.

Local magnetic disturbance

(27)

Differences of as much as 6° from the normal variation have been observed 3 to 17 miles offshore from Cape Henry to Currituck Beach Light.

A **naval restricted area** extends northward, eastward and southeastward from Cape Henry. (See **33 CFR 334.320**, chapter 2, for limits and regulations.)

(23)

(21)

(30) A **naval prohibited area** is off Camp Pendleton, 7.4 miles southward of Cape Henry. (See **33 CFR 334.400**, chapter 2, for limits and regulations.)

Firing range danger zones are between 7 and 9 miles southward of Cape Henry. (See 33 CFR 334.380, 334.390 and 334.405, chapter 2, for limits and regulations.)

Two radar towers and a blue water tank, 158 feet above the water, are prominent at the Dam Neck Naval Station about 9 miles southward of Cape Henry Light.

Sandbridge Beach, about 11 miles south of Cape Henry Light, has a tower and a green water tank that are prominent. There are about 3 miles of beach residences south of Sandbridge Beach.

Part of Back Bay National Wildlife Refuge extends from 15 to 18.5 miles south of Cape Henry Light along The Outer Banks.

False Cape, so called because of its resemblance to Cape Henry when approaching from southward, is about 22 miles southward of Cape Henry Light. Several spots with depths of 10 to 17 feet are 0.8 to 1.5 miles offshore from False Cape.

Sand dunes in this area have a tendency to alternately erode and then build up again as the seasons change, generally working to the southward; they should not be depended upon as navigational marks.

ENC - US4NC31M Chart - 12204

(39)

(42)

CurrituckBeachLight(36°22'37"N.,75°49'47"W.), 158 feet above the water, is shown from a red conical tower on the beach near the settlement of **Corolla**.

Local magnetic disturbance

Differences of as much as 11° from the normal variation have been observed 5 to 7 nautical miles offshore from Currituck Beach Light to Wimble Shoals (36°22.6'N., to 35°35.0'N.).

Many homes are prominent along the beach from **Duck** to **Whalebone**, 17 miles and 31 miles south of Currituck Beach Light, respectively. **Wright Monument**, a high stone memorial on the highest of the **Kill Devil Hills**, 3.5 miles southward of Kitty Hawk, is very prominent and is a good landmark on this low sandy coast. Water tanks at Kill Devil Hills and Nags Head, 1 mile north and 5.6 miles south of Wright Monument, respectively, are also prominent.

Bodie Island Light (35°49'07"N., 75°33'48"W.), 156 feet above the water, is shown from a conical tower with alternate white and black horizontal bands above the granite base, about 2 miles northward of the southern end of Bodie Island and 36 miles southward of Currituck Beach Light.

Oregon Inlet, about 2.5 miles southward of Bodie Island Light, is entered over a shifting bar. A lighted whistle buoy marks the approach; other buoys, not charted, are frequently shifted in position to mark the

best water. A fish haven is about 4.5 miles southeast of the lighted whistle buoy. The inlet, used by local fishing vessels but not recommended to strangers, requires continuous dredging; it deepens with northwest winds and fills in with northeast winds.

Current

(44)

(45)

(46)

Tidal currents in the inlet are reported to be as much as 5 knots, but with southwesterly winds as much as 6 to 8 knots. See the Tidal Current prediction service at *tidesandcurrents.noaa.gov* for specific information about times, directions, and velocities of the current at numerous locations throughout the area. Links to a user guide for this service can be found in chapter 1 of this book.

The Herbert C. Bonner (State Route 12) highway bridge crosses the inlet and is under construction (2016). **Oregon Inlet Jetty Light** (35°46'26"N., 75°31'30"W.), 28 feet above the water, is shown from a pile with a black and white diamond-shaped daymark. A **regulated navigation area** surrounds the bridge. (See **33 CFR 165.1** through **165.13** and **165.520**, chapter 2, for limits and regulations.)

Three marked dredged channels with a federal project depth of 12 feet lead from Oregon Inlet into Pamlico Sound. Oregon Inlet Channel leads westward from the inlet to a junction with Old House Channel, which then leads southwestward into Pamlico Sound. From the junction, the inlet channel continues northward to a junction with Roanoke Sound Channel, which continues northward to a turning basin at Manteo. A side channel of the same project depth leads westward to a turning basin at Wanchese at the south end of Roanoke Island. A connecting channel with a project depth of 6 feet continues northward into Albemarle Sound from the north end of the Roanoke Sound Channel. (For detailed channel information and minimum depths as reported by the U.S. Army Corps of Engineers (USACE), use NOAA Electronic Navigational Charts. Surveys and channel condition reports are available through a USACE hydrographic survey website listed in Appendix A.)

On the southern end of Bodie Island, just west of the bridge, there is a National Park Service small-boat basin operated by a concessionaire and the **Oregon Inlet Coast Guard Station**. A channel, marked by lights, buoys and daybeacons, leads east-northeastward passing through **Walter Slough**, ending at the small-boat basin. A 150-foot radio tower at the Coast Guard Station can be seen from the approach. In 2011, the controlling depth was 3.2 feet in the channel with 4.4 feet in the basin.

Pea Island, on the south side of the entrance to Oregon Inlet, and the waters to the westward of the island, have been designated as a **National Wildlife Refuge**. Pea Island is the northern extension of Hatteras Island.

Roanoke Island, close westward of Bodie Island, separates Roanoke Sound on the east from Croatan Sound on the west.

(66)

(52)

METEOROLOGICAL TABLE – COASTAL AREA OFF HATTERAS, NORTH CAROLINA Between 34°N to 36°N and 73° to 77°W													
WEATHER ELEMENTS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ост	NOV	DEC	YEARS OF RECORD
Wind > 33 knots ¹	6.3	6.8	5.5	3.5	1.1	0.7	0.4	0.7	1.6	3.5	3.7	5.5	3.2
Wave Height > 9 feet 1	11.9	13.2	11.4	7.6	4.2	2.4	1.6	1.7	4.4	9.0	8.7	11.3	7.1
Visibility < 2 nautical miles ¹	2.8	2.8	2.3	1.4	1.5	1.0	0.9	1.0	0.9	0.9	1.2	1.7	1.5
Precipitation ¹	8.6	8.3	6.7	5.1	5.5	5.3	5.9	5.8	5.4	6.0	6.3	7.7	6.4
Temperature > 69° F	5.6	5.0	9.1	23.9	58.6	91.1	99.4	99.4	93.7	58.6	26.2	10.4	49.3
Mean Temperature (°F)	55.4	55.6	58.6	64.3	70.9	76.5	80.3	80.4	77.5	71.0	64.5	58.6	68.0
Temperature < 33° F ¹	1.5	1.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2
Mean RH (%)	75	74	74	74	77	80	81	80	77	74	73	74	76
Overcast or Obscured ¹	36.0	35.7	32.1	23.8	22.6	21.4	19.7	19.6	20.5	23.4	24.5	31.8	25.8
Mean Cloud Cover (8ths)	5.4	5.2	5.0	4.3	4.5	4.6	4.7	4.6	4.6	4.7	4.7	5.2	4.8
Mean SLP (mbs)	1018	1018	1016	1017	1016	1016	1017	1017	1018	1017	1018	1019	1017
Ext. Max. SLP (mbs)	1047	1047	1046	1039	1038	1036	1036	1040	1036	1043	1045	1044	1047
Ext. Min. SLP (mbs)	974	977	973	981	990	988	997	992	990	985	984	987	973
Prevailing Wind Direction	N	N	N	SW	SW	SW	SW	SW	NE	N	N	N	N
Thunder and Lightning ¹	8.0	1.0	1.5	1.8	2.8	3.0	4.2	3.7	2.1	1.5	1.3	0.9	2.1
¹ Percentage Frequency													

(59)

(60)

(51) Wanchese is a small town near the south end of Roanoke Island. A dredged channel leads southwest from Roanoke Sound Channel to the waterfront of the town and a large boat basin. Within the basin, gasoline, diesel fuel, water, limited marine supplies and small charter boats are available. A 75-ton mobile lift here can haul out vessels to 120 feet for hull and engine repairs. Just south of the entrance to the boat basin, a marine railway can handle vessels up to 50 feet; there is also a launching ramp here.

On the western side of Roanoke Island, just south of Baum Creek, a basin with facilities can provide transient berths, gasoline, diesel fuel, electricity, water, surfaced launching ramp hull and engine repairs. A marine railway is avialable that can handle craft up to 60 feet; there is also a 25-ton mobile lift.

(53) The Washington Baum highway bridge over Roanoke Sound connects Roanoke Island with Bodie Island and U.S. Route 64-264 highway to Norfolk. It has a fixed span with a clearance of 65 feet.

An unnamed creek on Roanoke Island just north of the bridge is privately dredged with a controlling depth of 4.5 feet in 2006. A marina in the creek has transient berths, water, electricity, ice, diesel fuel, gasoline, pumpout station and limited marine supplies.

Manteo, the principal town on Roanoke Island and the seat of Dare County, is at the head of **Shallowbag Bay**, which indents the island near its northeast end. Berths, electricity, water, ice, diesel fuel, gasoline, a pump-out station, a marine railway that can handle craft to 35 feet in length, marine supplies and a launching ramp are available in Manteo. Oil is barged into an oil terminal at Manteo.

(56) Fort Raleigh National Historic Site is at the northern end of Roanoke Island in Fort Raleigh City.

Nags Head is a summer resort on the east side of Roanoke Sound, 3.5 miles northeastward of Manteo. Other inland waters are described in another section.

Platt Shoals, consisting of several spots covered 30 to 39 feet, are east-southeastward of Oregon Inlet and 2.5 to 4 miles offshore. Between the shoals and the shoal water off the shore the depths are 30 to 71 feet. In easterly gales the shoaler spots are marked by breakers.

Wimble Shoals. 15 miles southward of Oregon Inlet, are a number of ridges extending offshore about 4 miles, with depths ranging from 21 to 36 feet. In easterly gales the shoaler parts are marked by breakers. A lighted buoy is outside the shoals.

Local magnetic disturbance

Differences of as much as 8° from the normal variation have been observed in 35°32.0'N., 75°21.2'W. Differences of as much as 3° from the normal variation have been observed 6 to 12 miles offshore from Wimble Shoals to Cape Hatteras.

(62) A microwave tower at **Waves** about 12.8 miles southward of Oregon Inlet Light is a prominent object.

Cape Hatteras

4) Cape Hatteras, where the coast makes a sharp turn westward, is low and sandy. Cape Hatteras Light (35°15'02"N., 75°31'44"W.), 192 feet above the water, is shown from a black and white spirally banded tower on red brick base. About 1.5 mile north-northwest of Cape Hatteras Light, a microwave tower and green water tower in close proximity to each other are prominent.

Weather, Cape Hatteras and vicinity. Due to its maritime exposure and proximity to the Gulf Stream this area has a marine climate with an average of only five days when summer temperatures climb above 90°F

(32.2°C); freezing temperatures are about one-half as frequent as at inland stations and average only 29 days each year. In addition, rain occurs on 8 to 12 days per month on the average. Rainfall reaches a maximum in July, August and September when it often occurs as brief, heavy showers or thunderstorms. Occasionally rains are prolonged and are associated with offshore storms, either tropical or extratropical. Both types can generate strong winds and extreme tides along the Outer Banks where the average elevation is less than 10 feet (3 m) above mean sea level.

The average temperature for Cape Hatteras is 62.6°F (17°C). July is the warmest month with average extremes of 85°F (29.4°C) and 72°F (22.2°C). January is the coldest month with average extremes of 53°F (11.7°C) and 38°F (3.3°C). The warmest temperature on record is 96°F (35.6°C) recorded in July 1992. The coldest temperature on record is 6°F (-14.4°C) recorded in January 1985.

The annual average precipitation is 57 inches (1,448 mm). The wettest month, August, averages 6.24 inches (158 mm) and the driest month, April, averages 3.27 inches (83 mm). Due to the coastal location, the annual average snowfall totals only two inches (51 mm). Historical distribution is relatively uniform for the months December through March, each averaging about one-half inch (13 mm). Snow has fallen in each month, November through April. The 24-hour record snowfall is 8.2 inches (208 mm) recorded in December 1989.

Prevailing wind direction varies with the seasons. During the cooler season, prevailing winds are from the north through northeast and during the summer, southwest winds are dominant.

Since 1842, 81 tropical systems have passed within 50 nautical miles of Cape Hatteras, North Carolina. The most infamous of recent time was Hurricane Gloria in 1985. Gloria passed nearly overhead on the morning of September 27th. Highest winds reported were 119 knots at Cape Point. Less than 48 hours earlier, the lowest pressure ever recorded in a North Atlantic storm had been documented by a reconnaissance aircraft (919 mb). Due to geographical orientation, nearly all tropical systems approach the coastline from the south or southeast.

Diamond Shoals extend off Cape Hatteras in a southeasterly direction for about 9 miles. Depths of 3 feet have been found on the shoaler parts. Outer Diamond Shoal consists of irregular patches usually marked by breakers with depths of 3 to 18 feet. A buoy marks the east extremity of Outer Diamond Shoal.

Caution

(73) Hydrography is not charted on Diamond Shoals due to the changeable nature of the area. Navigation in the area is extremely hazardous for all types of craft. During strong winds the currents set across the shoals with great velocity.

The difficulty of making proper allowance for the Gulf Stream and the strong currents near the shoals

may cause considerable error in the reckoning. When approaching in thick weather and uncertain of the position, care should be taken to stay in at least 120 feet, or preferably 180 feet. Diamond Shoals Lighted Buoy 12 (35°09'05"N., 75°17'33"W.) marks the remaining structure of Diamond Shoals Light and is the guide for clearing the shoals.

The submerged wreckage of the Civil War Ironclad **MONITOR**, about 7.7 miles south of the eastern limit of Diamond Shoals, has been designated **USS Monitor National Marine Sanctuary** by the Secretary of Commerce. The sanctuary, administered by the Administrator, NOAA, Department of Commerce, is about 1 mile in diameter centered in 35°00'23"N., 75°24'32"W. (See **15 CFR 922**, chapter 2, for limits and regulations.)

From Cape Hatteras to Cape Lookout the coast trends generally southwestward for 64 miles and is broken by several inlets. For 6 miles from Cape Hatteras it is thickly wooded near the beach, and between the woods and the beach is a range of sand dunes 10 to 40 feet high. For the remainder of the distance the coast is a narrow barrier beach with numerous sand dunes. The coast is fairly bold, and depths of 4 to 7 fathoms will be found within 0.5 mile offshore, except off Hatteras Inlet, where shoals extend out 1.2 miles, and off Ocracoke Inlet, where they make out 1.6 miles.

Hatteras Inlet, 11 miles westward of Cape Hatteras Light, is entered over a shifting bar that is subject to continual change; local knowledge is recommended. The approach is marked by a lighted whistle buoy; buoys marking the channel over the bar are not charted because they are frequently shifted in position. Hatteras Inlet Light (35°11'52"N., 75°43'56"W.), 48 feet above the water, is shown from a skeleton tower on a black house.

Hatteras, a town 3 miles northeast of Hatteras Inlet, has many stores, lodging and restaurants. There are several small wharves in the basin at Hatteras where berths, gasoline, diesel fuel and limited marine supplies can be obtained. A mobile lift can handle craft up to 45 feet for emergency repairs. Extensive repairs can be made at Wanchese.

Hatteras Inlet Channel is a dredged channel that leads from Hatteras Inlet to Rollinson Channel in the vicinity of the basin entrance at Hatteras. The channel is reported to shoal rapidly between dredgings and should only be used with local knowledge. The channel is marked by lights, buoys and daybeacons. The positions of the buoys are frequently shifted to mark the best water. About 1 mile southwest of the basin at Hatteras, a marked side channel leads southeast to another basin used by the Hatteras Inlet Coast Guard Station and the North Carolina State Ferry. The ferry carries vehicles and passengers across Hatteras Inlet to Ocracoke Island.

Rollinson Channel, the approach to Hatteras from Pamlico Sound, is discussed later in this chapter.

(80)

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(81)

Current

The tidal currents in the channel through the inlet are influenced by winds and attain velocities of about 2 knots. See the Tidal Current prediction service at *tidesandcurrents.noaa.gov* for specific information about times, directions, and velocities of the current at numerous locations throughout the area. Links to a user guide for this service can be found in chapter 1 of this book

Other channels in Pamlico Sound are described in another part of this chapter.

(84)

Okracoke Inlet to New Drum Inlet

Ocracoke Inlet, 27 miles west-southwest of Cape Hatteras Light, is entered over a shifting bar between the southern end of Ocracoke Island and the northern end of Portsmouth Island; the bar is subject to frequent changes. An unlighted buoy marks the approach. Other buoys marking the inlet are frequently shifted in position; local knowledge is advised.

Ocracoke Light (35°06'32"N., 75°59'10"W.), 75 feet above the water, is shown from a white tower near a clump of woods on the western part of Ocracoke Island and about 3 miles northeastward of Ocracoke Inlet. **Ocracoke Coast Guard Station** is 0.4 mile north of the light.

Several channels or sloughs lead from Ocracoke Inlet through the shoals to deep water in Pamlico Sound. Teaches Hole Channel follows the western side of Ocracoke Island and connects with Silver Lake through a dredged channel at Ocracoke. It also joins **Big Foot Slough Channel** northwest of Ocracoke, which leads to Pamlico Sound. Teaches Hole Channel is subject to frequent changes; buoys are frequently shifted in position. Big Foot Slough Channel is reported to shoal considerably between dredgings. Strong currents have been experienced in these channels. Mariners are advised to exercise caution while navigating in the area.

A swash channel, marked by a light and daybeacons, connects Big Foot Slough Channel with **Nine Foot Shoal Channel**. which leads off in a northwesterly direction. The controlling depth is about 5 feet through the swash channel to Pamlico Sound. Some local vessels use this channel as a short cut, but Big Foot Slough Channel is the recommended channel.

There are other unmarked shallow channels leading from Ocracoke Inlet to Pamlico Sound, but they should not be used without local knowledge because of the shifting shoals.

The town of **Ocracoke**, 3.5 miles inside the inlet, is frequented by numerous fishing vessels. Supplies in limited quantities are available. Gasoline, diesel fuel, water and ice may be obtained at the piers.

A toll ferry transports passengers and autos daily from Ocracoke to a ferry landing on the north side of Cedar Island, about 12 miles by road north of Atlantic on the mainland and also to a ferry landing at Swanquarter, about 25 miles north-northwest of Ocracoke. There are several motels and restaurants in the village. There are numerous points of interest on the island, and the National Park Service has a museum at the village and also maintains camp sites for tourists. Facilities for repairing boats are limited.

Silver Lake, a circular basin at Ocracoke, affords good anchorage in depths of 12 feet and has several wharves extending from the shore to depths of 10 or more feet. Vessels are requested to anchor only in the southern end of the lake so as not to interfere with ferry traffic. Diesel fuel, gasoline, marine supplies, a pumpout station, water, ice, berthing with electricity and a launching ramp are available nearby. The National Park Service piers on the north side of the basin have berths with electricity and water.

Portsmouth is a small abandoned town overseen by the National Park Service on the west shore of Ocracoke Inlet. A spire and a cupola here are prominent landmarks. The inactive Coast Guard Station, the largest building, is near the inlet.

(94)

Current

(95) The currents in the inlet and connecting channels are influenced by the winds. The ebb current usually has a greater velocity than the flood. Velocities up to 4 knots have been observed.

New Drum Inlet, 19 miles southwestward of Ocracoke Inlet, is an opening in the barrier beach leading to deep water in Core Sound. The channel is not maintained by dredging and is constantly shifting. In 1983, the inlet was reported to be dangerous and not recommended for use by anyone.

(97)

ENC - US4NC16M Chart - 11544

Cape Lookout is the extremity of a long and very narrow sand beach projecting into the sea where the coast angles sharply westward. Cape Lookout Light (34°37'22"N., 76°31'28"W.), 156 feet above the water, is shown from a black and white diagonally checkered tower on the north point of the cape.

Cape Lookout Shoals extend about 9 miles south-southeastward from the cape where they are marked by a lighted buoy. Their greatest width is about 2 miles, and depths over the shoals range from 2 to 18 feet. Lookout Breakers is the local name for the ridge, covered 2 feet, about 4 miles out on the shoals south of the cape. Between Lookout Breakers and the cape are several other spots which break heavily.

Outside the shoals proper is an irregular shoal with a depth of 29 feet over it in about 34°25'26"N., 76°23'41"W.; thence about 3 miles south-southeastward there is a wreck cleared to 39 feet. These can be avoided

by passing south of Cape Lookout Lighted Buoy 14, about 18 miles south-southeastward of the cape. In thick weather a vessel should stay in 14 fathoms or more if uncertain of its position. A number of wrecks and fish havens with varying depths over them are in the vicinity of the shoals; some are marked.

(101)

ENC - US5NC18M Chart - 11545

affords good anchorage, immediately outside the Bight, for large vessels, except with winds from south through west to northwest. Power Squadron Spit, the west side of Lookout Bight, is subject to continual change and is partially protected by a rubblestone breakwater awash at low water and hardly visible when a heavy sea is running; its outer end is marked by a lighted buoy north of its seaward end. Mariners should give it a wide berth in bad weather.

Large oceangoing vessels usually anchor north or northwest of the breakwater in 39 to 45 feet, soft sand and mud bottom.

entrance, good anchorage for small to medium vessels can be had in the inner bight; deeper water may be found by favoring the western side of the bight along Power Squadron Spit. Good holding ground of soft mud can be found throughout the area, but caution must be observed on the eastern side of the bight with shifting shoals that can bare at low water. Prevailing swell from all directions is effectively excluded, but the surrounding terrain is too low to greatly restrain the force of wind. A severe blow could cause a vessel to drag, but most boats drop an extra anchor if the wind reaches gale force from any direction.

A marked channel extends from deep water in Lookout Bight through **Barden Inlet** and **Lighthouse Bay** to deep water in Back Sound. The channel is very unstable and has a tendency to fill; strangers should use extreme caution. Due to shoaling a marked channel no longer connects Barden Inlet to Back Sound; caution and local knowledge are advised.

106) The channels in Back Sound and Core Sound are described in another section.

(107

INLAND WATERS

(108)

COLREGS Demarcation Lines

of this part of the coast are described in **33 CFR 80.515** through **80.525**, chapter 2.

(110)

ENC - US4NC32M Chart - 12207

(III) Currituck Sound is a narrow and shoal body of water that extends for 25 miles in a north-south direction behind the barrier beach near Currituck Beach Light. The southern part of the sound is navigable for craft drawing 4 or 5 feet to the junction with Albemarle Sound, but navigation among the extensive shoals depends on local knowledge of the channels and on the level of the water. The northern part of the sound is practically unnavigable due to dense grass. There are no periodic tides in Currituck Sound; the water level depends upon the force and direction of the winds.

There are several small-craft facilities on **Knotts Island** at the northern end of Currituck Sound. Berths, electricity, water, ice and launching ramps are available.

(113)

ENC - US4NC32M Chart - 12207

extending a little over 10 miles northward from the northeastern end of the sound. This shoal bay is navigable only for small boats. Northward of Back Bay are shallow **Shipps Bay** and **North Bay**. Facilities with small-boat launching ramps, and some with gasoline, water, ice, and bait and tackle, are along the western shore of Back Bay.

North Landing River extends in a northnorthwesterly direction from the north end of Currituck Sound. The river is a part of the Intracoastal Waterway and is described in chapter 12.

North Landing River off Troublesome Point, and in Currituck Sound east of Bell Point. (See 33 CFR 334.410, chapter 2, for limits and regulations.)

(117)

Whale Head Bay to Sampson Point

Several landings are on the east shore of **Whale Head Bay**, just southward of **Currituck Beach Light** (36°22'37"N., 75°49'47"W.).

(119) A cable area, marked by private daybeacons, crosses Currituck Sound from Corolla to Aydlett.

of Currituck Sound, about 6 miles south-southwestward of Currituck Beach Light, is frequented by local fishermen and duck hunters. In 1983, depths of 3 feet were reported in the approach to the pier and 7 feet alongside. In 1983, a midchannel controlling depth of 2 feet was reported in the channel to **Gaffy Landing**, about 2 miles south of Poplar Branch.

of Poplar Branch, is approached through Lone Oak
Channel and Beasley Bay. Lights mark the channel. In

218 U.S. Coast Pilot 4, Chapter 4

1983, the reported midchannel controlling depth was 2 feet. Dense grass covers the whole area.

(122) Wright Memorial Highway Bridge crosses the south end of Currituck Sound between Sampson Point and the outer beach. The bridge has 40-foot fixed span with a vertical clearance of 35 feet. An overhead power cable at the bridge has a vertical clearance of 60 feet over the navigation channel.

(123)

ENCs - US5NC54M, US5NC52M, US4NC55M Charts - 12206, 11553

(124) Albemarle Sound is about 45 miles long in an east-west direction, and in width ranges from 11 miles near its eastern end to 3 miles about 10 miles from the western end. The sound has good navigable depths for any vessel able to pass through the canals and, with its numerous tributaries, forms the approach to many towns and landings.

from North River and Pasquotank River to Croatan Sound and Alligator River, and less water farther eastward. Fish stakes and nets extending long distances from shore are often found on the shoals, especially at the northern entrance to Croatan Sound. The shores of Albemarle Sound are low and generally wooded; there are no prominent natural features.

(126) A danger zone for naval aircraft operations is on the south side of Albemarle Sound, westward of the entrance to Alligator River. (See 33 CFR 334.410, chapter 2, for limits and regulations.)

A restricted area is on the north side of Abermarle Sound just south of Harvey Neck. The area is marked by lights with diamond shaped, white and orange dayboards with the words DANGER BOMBING AREA. (See 33 CFR 334.412, chapter 2, for limits and regulations.)

The eastern end of Albemarle Sound, which is separated from the Atlantic Ocean by the barrier beach about 15 miles north of Bodie Island Light, is connected northward with Currituck Sound and southward with Croatan and Roanoke Sounds and by the latter sounds with Pamlico Sound.

Westward of Laurel Point, about 33 miles from the east end of Albemarle Sound, the water is usually fresh or slightly brackish. The rise and fall of the water level depends on the direction of the winds.

(130)

Kitty Hawk Bay

(131) **Kitty Hawk Bay**, with depths of about 3 to 8 feet, is at the east end of Albemarle Sound. Daybeacons mark the best water into the bay. **Kitty Hawk** is a small town on the north side of the bay. There are several private landings along its shores. A public marina is at **Avalon Beach** at the southeastern end of the bay; berths, electricity, water, ice and a launching ramp are available during the summer.

North River, on the north side of Albemarle Sound near the eastern end, is a part of the Intracoastal Waterway and is described in chapter 12.

(133)

ENC - US5NC54M Chart - 12206

(134) Pasquotank River Entrance Light PR (36°09'23"N., 75°58'38"W.), 23 feet above the water, shown from a multi-pile structure with a black and white diamond-shaped daymark, marks the entrance to Pasquotank River. A light is about 2.2 miles westward of the entrance light. The river, entered between Wade Point on the west and Camden Point on the east, and Elizabeth City are described in connection with the Dismal Swamp Route of the Intracoastal Waterway, chapter 12.

(135)

Flatty Creek to Creswell

(136) Flatty Creek, about 7.5 miles westward of Pasquotank River Entrance Light PR, is shoal and little used.

(137) Little River is on the north side of Albemarle Sound and 4 miles westward of Flatty Creek. The channel at the entrance is about 0.3 mile wide between shoals and is marked by a daybeacon. The river has a general northwesterly trend to the village of Nixonton, which is on the east bank 7 miles above the entrance. There are no facilities at the village. In 2015, shoaling was reported to the village. Spits, with little water over them and generally steep-to, make out some distance in places from the shores, especially off the points. The channel in the upper reaches of the river is well marked by the outer ends of the fishweir stakes that make out from shore. A launching ramp and limited supplies are available to sport fishermen in Hall Creek, about 1.5 miles above Nixonton.

Sound, about 4 miles westward of Little River, has its entrance between **Harvey Point** on the west and **Reed Point** on the east. A light is about 1.2 miles southward of Reed Point, and a light is close eastward of Harvey Point. Numerous submerged piles are south and southeastward of Harvey Point. A depth of about 8.8 feet can be carried to **Hertford**, about 11.5 miles above the entrance, thence about 7 feet for about 1 mile to the railroad bridge.

Perquimans River between **Ferry Point** and **Crow Point**, about 10.5 miles above the entrance. The bridge has two fixed spans with a vertical clearance of 33 feet. The U.S. Route 17 highway swing bridge, about 0.6 mile above the fixed bridges, crosses the narrowest part of the river at Hertford. The swing span has a vertical clearance of 7 feet in the north and south draws. The railroad bridge, about 0.7 mile above the swing bridge, has a fixed span with a horizontal clearance of 22 feet and a vertical clearance of

3 feet. (See **33** CFR **117.1** through **117.59** and **117.835**, chapter 2, for drawbridge regulations.)

(140) Obstructions have been reported near midriver about 0.5 mile and 1 mile below the highway fixed bridge.

(141) **Hertford**, on the southwest bank of Perquimans River, has rail connections with the Class I Railway and highway connections with U.S. Route 17 to Edenton and Elizabeth City. Oil is barged into Hertford to an oil pier on the south side of the river just above the highway swing bridge. The river water is fresh at Hertford.

has fairly good depths for about 8 miles to a point near **Goodwin Creek**. Navigation is restricted to very small boats, about a mile above the highway swing bridge, by the railroad bridge, which has a 22-foot fixed span with a clearance of 3 feet.

has depths of 3 to 9 feet. Local knowledge is advised. A shoal area, marked at its southeastern extremity by a daybeacon, extends from the entrance. The area near the center of the shoal is foul with stumps and other obstructions and should be avoided. In crossing the shoal, mariners should leave the daybeacon to the eastward and slightly favor **Drummond Point**, the southern entrance point of Yeopim River.

Six miles southwestward from Drummond Point, State Routes 32-37 highway bridge crosses Albemarle Sound between **Sandy Point** on the north shore and **Leonards Point** on the south. The fixed span has a vertical clearance of 65 feet. About 4 miles west of the highway bridge, an overhead power cable crosses the sound and has a clearance of 94 feet over the main channel and 54 feet elsewhere.

Sound. **Edenton Bay** is on the north side of Albemarle Sound. **Edenton**, a town at the head of the small bay, has rail and highway communications with Norfolk and the south. Lumber is shipped by rail, truck, and by barge. The main industries are peanuts, lumber, veneer, inks, textiles, plywood and boatbuilding. The river water is fresh.

Two large water tanks in the town are the most prominent objects from the sound. Also prominent is a radio tower near the city wharf.

A dredged channel leads from deep water in Albemarle Sound to the head of the bay where it separates into dredged reaches leading in northwesterly and northeasterly directions along the town waterfront. The channel is well marked by lights and daybeacons.

(148) The inner anchorage, close eastward of the channel entrance, has a depth of 9 feet but is small. The larger anchorage is on the western side of the entrance. Numerous fish stakes, some of which are covered at low water, are reported inside the 12-foot contour on the west side of the entrance to Edenton Bay from Reedy Point eastward.

49) The town dock, at the head of the entrance channel, is marked by a light. In 2013, a depth of 8 feet was reported alongside the dock. Available amenities include berths, gasoline, pump-out station, electricity, water and ice. A fish wharf and an oil wharf are close westward of the city wharf; depths of 10 feet were reported alongside in 1983.

Pembroke Creek is a small nontidal stream flowing easterly into the head of Edenton Bay. U.S. Route 17 highway bridge, 0.6 mile above the mouth of the creek, has a 20-foot fixed span with a clearance of 5 feet. With local knowledge a draft of 5 feet can be carried to the bridge. In 1978, a submerged obstruction was reported in the channel near the mouth of the creek in about 36°03'25"N., 76°37'04"W.

Albemarle Sound from northward and with its tributaries forms one of the largest rivers in North Carolina. In 1977, the controlling depth was 12 feet to Winton, about 32 miles above the mouth, and to the confluence of Blackwater and Nottoway Rivers, 45 miles above the mouth. For about 17 miles above its mouth, Chowan River has an average width of 1.5 miles. Snags, many of which are underwater, are generally found on the shoals in this part of the river; the worst place, known as **Stumpy Reach**, is between Colerain Landing and **Bennetts Creek**, a distance of about 6 miles. The channel must be followed closely passing through this reach.

(52) Chowan River is marked by lights and daybeacons to a point about a mile below Winton.

Traffic on the river is mainly in pulpwood barges, and there is some commercial fishing. Gasoline, limited supplies, and launching ramps are available for small craft at various marinas along the river as far as Winton.

54) **Salmon Creek** is a small stream that flows easterly into the west side of Chowan River just above the mouth. The entrance to the creek is a good harbor for boats of drafts up to 6 feet. **Avoca** is a village on the south bank about a mile above the entrance. In 1963, the controlling depth was 7 feet to Avoca, thence 5 feet for another 0.5 mile.

(155) The U.S. Route 17 highway bridge, between Emperor Landing and Edenhouse Point, about 2 miles above the mouth of Chowan River, has a fixed span with a clearance of 65 feet.

Gasoline, berthing, limited supplies and a launching ramp are available at a marina in **Rockyhock Creek** on the east bank of the river about 6 miles above the mouth. Depths in the approaches and alongside were reported to be 4 feet in 1983.

River, 12 miles above the entrance, is the site of a large herring factory. Just above it is an oil dock. The village of **Colerain** is on a hill 0.5 mile inland.

Limited supplies, gasoline and a launching ramp are available at a marina on the south bank of the river about 20 miles above the mouth.

River 30 miles above the mouth. An overhead power cable at Tunis has a clearance of 74 feet. Gasoline, limited supplies, and a launching ramp are available at a marina on the west side of **Catherine Creek** just above the overhead power cable.

Winton is a small town on the west bank of the river 32 miles above the mouth. U.S. Route 13 highway bridge at Winton has a fixed span with a clearance of 35 feet. A small wharf is below the bridge on the south bank and eastward of a ramp used by barges for loading pulpwood.

Meherrin River joins the Chowan River from westward 2.5 miles above Winton. A cable ferry crosses Meherrin River about 0.4 mile above the mouth. The ferry, operated during daylight hours only, carries passengers and vehicles. The ferry is guided by a cable that passes over pulleys 3 feet above the water at each end of the ferry and then runs below the water surface about 15 feet from each end of the ferry. The cable is dropped to the bottom when the ferry is not underway. Warning signs are posted 1 mile from each side of the crossing. DO NOT ATTEMPT TO PASS A MOVING CABLE FERRY.

Murfreesboro is a small town 10.5 miles above the mouth. U.S. Route 258 highway bridge here has a fixed span with a clearance of 24 feet. In 1965, the controlling depth was 10 feet to Murfreesboro; the turning basin here had a controlling depth of about 12 feet.

About 13 miles above Winton, Chowan River is formed by the confluence of Blackwater River and Nottoway River near the Virginia state line. In 1983– 2003, the controlling depth in Blackwater River was reported to be 8.3 feet to **Franklin**, VA. There are reports of numerous snags in the river. Small craft are able to reach Burdette, VA, 10.5 miles above Franklin. A highway bridge across Blackwater River, 8 miles above its mouth at South Quay, has a swing span with a clearance of 15 feet. (See 33 CFR 117.1 through 117.59 and 117.999, chapter 2, for drawbridge regulations.) Five other bridges cross the river between Franklin and Burdette; the fixed bridges have a minimum channel width of 22 feet and a minimum clearance of 12 feet. Navigation of Nottoway River is restricted by seven fixed bridges; the minimum channel width of the bridges is 13 feet and the clearance 7 feet.

Roanoke River rises in the Blue Ridge Mountains, west of Roanoke, VA, and flows southeasterly into Batchelor Bay, a shoal bight at the southwestern end of Albemarle Sound; about halfway it is joined by the Dan River, its principal tributary. There are a number of flood control and power dams on the rivers. The largest of these, about 17 miles below Clarksville, VA, forms the John H. Kerr Reservoir. The reservoir extends upstream about 48 miles on the Roanoke and about 30 miles on the Dan River. Another dam is at Roanoke Rapids about 120 miles from the mouth of the river.

feet at midchannel from Albemarle Sound to Plymouth, thence 2½ feet to Hamilton, 52 miles above the mouth, with shoaling to bare between Hamilton and Palmyra Landing, 67 miles above the mouth. The river is marked by lights and daybeacons to a mile below Plymouth. In 1982, a foul area was reported between Daybeacon 12 and Light 13. Traffic on the river is mainly in petroleum products, and some plywood products hauled by barges.

A fixed highway bridge, which spans the Roanoke, Middle and Cashie Rivers, crosses the Roanoke 2.5 miles above the mouth with a clearance of 50 feet.

(167) **Plymouth** is an important town 6 miles above the mouth of Roanoke River. The town has good highway and rail connections. Water, gasoline, diesel fuel, marine supplies and a launching ramp are available. There are several small wharves at Plymouth with 12 feet reported alongside. A veneer factory is on the river front below the town, and 1 mile above the town is the large wharf of a pulpmill, which has 15 to 18 feet of water alongside.

Williamston is 26 miles above the mouth of the river.
U.S. Routes 13 and 17 highway bridge at Williamston has a fixed span with a clearance of 45 feet. Just below the bridge are a fertilizer plant and an oil dock. Several oil piers are above the bridge. Logs and oil comprise most of the shipping.

About 9 miles above Hamilton, a fixed bridge with a clearance of 14 feet crosses the river.

to its intersection with the **Thorofare**, connecting Cashie and Roanoke Rivers; thence it flows northeasterly for about 6 miles and empties into Batchelor Bay. In 1977, the midchannel controlling depth was 9 feet to Windsor. Mariners are advised, however, that shoaling and many obstructions have been reported in Cashie River. A fixed highway bridge, which spans the Cashie, Middle and Roanoke Rivers, crosses the Cashie River about 1 mile above Batchelor Bay and has a clearance of 16 feet.

A cable ferry crosses Cashie River about 6 miles above the mouth. The ferry, operated during daylight hours only, carries passengers and vehicles. The ferry is guided by a cable that passes over pulleys 3 feet above the water at each end of the ferry and then runs below the water surface about 15 feet from each end of the ferry. The cable is dropped to the bottom when the ferry is not underway. Warning signs are posted 1 mile from each side of the crossing. DO NOT ATTEMPT TO PASS A MOVING CABLE FERRY.

The Thorofare has several sharp bends, and at its junction with the Cashie River there are two small islands. Pass eastward of the islands. The head of navigation in Cashie River is the fixed highway bridge at **Windsor**. Gasoline is available. An overhead power cable crossing the river about 0.5 mile below the bridge has a clearance of 55 feet.

(173) **Kendrick Creek** is on the south side of Albemarle Sound just westward of the overhead power cable that crosses the sound. Several fisheries with gasoline and marine supplies and a launching ramp are on the creek. The entrance is marked by a light and daybeacon.

(174) The channel into Kendrick Creek is marked on either side by rows of piles. There are stumps in places on the shoals at the mouth of the creek. An overhead power cable just above the mouth has a clearance of 77 feet. **Mackeys** is a small town 0.5 mile above the entrance. The highway bridge about 0.5 mile above Mackeys has a 34-foot fixed

span with a clearance of 8 feet. An overhead power cable just south of the bridge has a reported clearance of 9 feet.

Bull Bay is on the south side of Albemarle Sound, about 13 miles eastward of Kendrick Creek. Bunton Creek (Bull Creek) and Deep Creek empty into the western side of the bay. A channel, with a reported depth of 5 feet in 1983, leads through the flats to the entrance of Bunton and Deep Creeks.

of Bull Bay from southeastward. Lights and daybeacons mark the channel from the bay to Columbia. A marina on the south side of the river, 3 miles above the mouth, has berths with electricity, gasoline, diesel fuel, pumpout station, water, ice, some marine supplies, wet and dry storage and a launching ramp. A 25-ton mobile lift is available; hull and engine repairs can be made. In 2013, the reported approach depth was 6 feet.

177) Columbia, a small town 4 miles above the mouth of the river, has two inactive oil docks and several landings. The landings have depths of 14 to 16 feet alongside but are in poor condition and not able to accommodate more than one boat at a time. A marina on the east side of the river has gasoline, diesel fuel, berthing and water. In 2013, the reported alongside depth was 8 feet.

The U.S. Route 64 highway bridge, about 4.3 miles above the entrance, has a 35-foot fixed span with a clearance of 12 feet; the navigation span of this bridge is removable.

of Scuppernong River, has a fixed span with a channel width of 32 feet and a clearance of 5 feet. **Spruills Bridge**, 15 miles above the mouth near **Creswell**, has a 32-foot removable span with a clearance of 6 feet. An overhead power cable at the bridge has a clearance of 25 feet.

(180)

ENCs - US5NC52M, US4NC55M Chart - 11553

(181) Alligator River is on the south side of Albemarle Sound directly opposite Pasquotank River. For about 18 miles above the mouth (see also chart 11553), Alligator River has a southerly direction, is 2 to 3 miles wide, and has general depths of 8 to 11 feet. Above this, the river has a further length of about 24 miles and is narrow and crooked but, in 1983, had a reported centerline controlling depth of 8 feet to Cherry Ridge Landing; the upper part, however, is too narrow to turn in.

Good anchorages in depths of about 6 to 8 feet are reported in **Milltail Creek**, **Whipping Creek** and **Swan Creek**, which make into the east side of Alligator River about 10 miles, 19 miles and 20 miles above its mouth, respectively. Mariners should take care to avoid stumps along the banks of these creeks.

The entrance to Alligator River is full of shoals, but the channel of the Intracoastal Waterway, described in chapter 12, has been dredged through the shoals and along the entire length of the wider part of the river.

Numerous fish stakes are reported to exist on the east side of the river extending about 0.5 mile offshore.

on the eastern side of Alligator River and just above the mouth is the entrance to **East Lake** and **South Lake**, which in 1983 had reported depths of 6 feet. The village of **East Lake** is on the east side of Alligator River, 4 miles above the mouth. U.S. Route 64 highway bridge crossing the river at East Lake has a swing span with a clearance of 14 feet. VHF-FM channel 16 and 13 are monitored at the bridge. (See **33 CFR 117.1** through **117.59** and **117.821**, chapter 2, for drawbridge regulations.)

from westward just inside the entrance. The narrow, crooked channel of Little Alligator River, in 1983, had a reported controlling depth of 4 feet to the head of the river, 6 miles above the mouth. The river is reported to be a good anchorage for boats drawing 3 feet or less.

(186)

Croatan Sound

(187) Croatan Sound, between Roanoke Island and the mainland, connects Albemarle and Pamlico Sounds. The dredged channel is well marked, but strangers should not attempt passage at night. Fish stakes are numerous in season.

Height of water in Croatan Sound depends entirely on the wind, which under exceptional conditions may lower or raise the level as much as 1.5 feet from normal; easterly winds lower the water and westerly winds raise it. Strong northerly or southerly winds produce currents that are especially marked when the wind shifts suddenly to the opposite direction.

There is a good harbor in **Peter Mashoes Creek**, westward of Croatan Sound Light 3CS, but entrance is possible only for small craft. The fixed highway bridge (U.S. Routes 64 and 264) between **Redstone Point** on the mainland and **Weir Point** on Roanoke Island has a clearance of 44 feet.

(190) A fixed highway bridge across Croatan Sound about 2.75 miles southward of the U.S. Routes 64/264 fixed highway bridge has a clearance 66 feet.

Roanoke Sound and the towns on the east side of Roanoke Island are described in another section.

(192)

Pamlico Sound

Carolina, extends from Roanoke Island to Cedar Island. On the east it is separated from the Atlantic Ocean by a narrow barrier beach extending from Oregon Inlet to the southern end of Portsmouth Island. To the west it is joined by the Pamlico and Neuse Rivers and to the south by Core Sound. It is about 65 miles long and has a maximum width of about 25 miles. Oregon, Hatteras and Ocracoke Inlets pierce the narrow beach, giving access to the ocean, but all are blocked by inside bars with little water over them; they are described in another section.

(194)

Caution

Numerous fishtraps, stakes and pound nets have been reported in Pamlico Sound; some may be submerged. Small craft should use caution when operating outside the main channel. **Pamlico Sound Light PS** (35°25'29"N., 75°50'01"W.), 35 feet above the water, shown from a skeleton tower on a multi-pile structure with a red and white octagonal-shaped daymark, marks a dangerous wreck, reported covered 12 feet.

The northern and western shores of Pamlico Sound are broken by numerous small bays and two large rivers, Pamlico River and Neuse River. General depths in the middle of the sound are 14 to 24 feet, but shoals extend miles from shore in many places. **Bluff Shoal**, northward of Ocracoke Inlet, has 7 to 12 feet over it and extends completely across the sound; it is marked by a light.

In the exposed parts of the sound, strong winds from any direction raise a short, choppy sea uncomfortable to small craft and even dangerous to open boats but protected anchorage for small craft can be found in the many bays along the northern shore and along the southern shore in several sloughs that lead to sheltered berths in the lee of shoals. Middletown Anchorage and the anchorage in the bight formed by the hook of Royal Shoal can be made either day or night, with caution.

(198)

Current

(199) Currents are negligible except in the vicinity of the inlets.

200

Stumpy Point Bay to Rodanthe

Stumpy Point Bay, on the west side of Pamlico Sound 10 miles from the south end of Roanoke Island and about 11 miles southwestward of Oregon Inlet, affords good anchorage in depths of about 2 to 3 feet. A dredged channel leads from Pamlico Sound into the bay and splits into two channels at Light 10. One channel leads north to a ferry dock and the other leads northwest to a turning basin at Lake Worth, the small town at the head of the bay. The channels are well marked by lights, buoys and daybeacons. Two fishhouses at the upper end of the basin have diesel fuel, gasoline, water, ice and marine supplies.

Long Shoal River, which flows southerly into Pamlico Sound about 8 miles southwestward of Stumpy Point Bay, is 1.5 miles wide at the mouth and is a good anchorage for vessels with drafts of 8 feet or less. Shoals with 1 to 2 feet over them on both sides of the entrance break up the sea from southward. Long Shoal, to the east of the entrance, and Pingleton Shoal, on the west, are marked by lights, and daybeacons mark the points of shoals in the entrance. With the aid of the chart, strangers should have little difficulty entering Long Shoal River in daytime. The danger zone of a naval ordnance test area is centered at targets on Long Shoal. (See 33 CFR 334.410, chapter 2, for limits and regulations.)

(203) Rodanthe is a town on the narrow barrier beach on the east side of Pamlico Sound 12 miles southward of Oregon Inlet and nearly opposite Stumpy Point Bay. Chicamacomico Channel is a dredged channel leading from the sound to the basin at Rodanthe. The channel approach and channel are marked by lights and daybeacons. Two landings are in the basin in addition to the bulkhead area.

(204

Avon to Nebraska

Avon is a town on the barrier beach on the southeast side of Pamlico Sound 5.7 miles northward of Cape Hatteras Light. Shoal water extends about 3 miles from shore. A dredged channel leads from Pamlico Sound to the basin at Avon. The channel is subject to extreme shoaling; local knowledge is advised. The channel is marked by lights. Gasoline and diesel fuel are available at a fishhouse landing in the basin.

(206) Cape Channel (Buxton Harbor Channel), a natural opening in the shoal about 5 miles southwestward of Avon, was formerly part of a channel leading to Avon. It is now used by local fishermen passing from Pamlico Sound to anchorage north of Buxton. Local knowledge is advised. The channel is partially marked by lights and daybeacons.

of Cape Hatteras Light. The town of **Frisco** is about 4 miles westward, on the southeast side of Pamlico Sound. There are no wharves at either place, and anything but light-draft vessels must anchor well offshore. Local fishermen usually approach Buxton through Cape Channel.

of Avon, is a dredged channel, about 12 miles southwestward of Avon, is a dredged channel leading from deep water in Pamlico Sound to the basin at Hatteras; it also joins with Hatteras Inlet Channel, which leads to Hatteras Inlet. The channel is well marked by lights. The lights were reported to be difficult to distinguish from the background lights on shore; caution is advised, and strangers should not attempt passage at night. A light, off the end of **Oliver Reef**, is about 1.5 miles southwestward of the Pamlico Sound entrance to Rollinson Channel.

(209) Hatteras Inlet, Hatteras Inlet Channel and the facilities at Hatteras were described previously in another section.

(210) **Far Creek** (35°30.5'N., 75°58.0'W.) is on the northwest side of Pamlico Sound between Pingleton Shoal and **Gibbs Shoal**. A dredged channel leads from deep water in the sound to the basin at the town of **Engelhard**. The channel is marked by lights and daybeacons.

An oil dock and several piers, with depths of 7 to 12 feet alongside, are on the south side of the basin just below U.S. Route 264 fixed highway bridge at Engelhard. There is barge traffic in oil, grain and sand and gravel. Fishing vessels unload here, and seafood is shipped from the town by truck. Gasoline, diesel fuel, ice and some marine supplies are available.

(212) An oyster sanctuary is just south of Gibbs Shoal Light GBS. The sanctuary is marked by several white buoys with orange diamonds worded DANGER SUBMERGED ROCKS. Mariners should use caution when transiting this area.

Middletown Anchorage, a broad open bight in the northwestern shore of Pamlico Sound just southward of Far Creek, has depths of 9 to 13 feet and is sheltered from eastward by Gibbs Shoal, which has 1 to 4 feet over it. There is no shelter from southeasterly or southerly winds. The anchorage is large and easy of access and is used by tows and other vessels. Middletown, a short distance inland from the anchorage, is reached by light-draft boats by way of Middletown Creek. In 1983, the reported controlling depth over the bar and to the fixed bridge over the creek at Middletown was 3 feet. Vessels must pass south of the light on the southeast end of Gibbs Shoal in entering. Gasoline is obtainable in the town.

(214)

Caution

Caution should be used in approaching Middletown Anchorage at night, as the low marshy shore extends long distances from the woods in places and does not show well. In rough weather vessels with drafts less than 4 feet prefer to pass inside Gull Shoal Light GS when bound southwestward from Middletown Anchorage. They enter Wysocking Bay, pass westward of Gull Rocks, and thence eastward of the light 0.4 mile eastward of Hog Island.

of Far Creek, indents the north shore of Pamlico Sound northwestward of Gull Shoal Light GS. It is a convenient anchorage for small craft drawing less than 5 feet when following the north shore of the sound. In 1983, the bay had reported depths of 5 feet from the entrance to its head. The entrance is obstructed by shoals. Daybeacons and lights mark the channel that leads northward of Gull Shoal and into the bay. Gull Rocks, on the south side of the entrance to the bay, are covered at ordinary water levels

Nebraska Canal leads from the head of Wysocking Bay to a fixed bridge south of Nebraska, 2 miles inland. The privately maintained canal is marked by a light at its entrance and in 1983 had a reported depth of 1 foot. Local knowledge is advised in the canal.

(218)

Bluff Point to Deep Bay

Bluff Point Shoal Light (35°19'19"N., 76°07'13"W.), 15 feet above the water, shown from a multi-pile structure with a white and black diamond-shaped daymark, marks the end of the shoal making eastward about 1.8 miles from Bluff Point. The point, low and marshy, separates East Bluff Bay and West Bluff Bay, two unimportant bights southwestward of Wysocking Bay. A daybeacon marks the 4-foot shoal 2 miles south-southeastward of Bluff Point. Extending southward from Bluff Point is a large area of shoal water, a tongue of which, called

Bluff Shoal, extends completely across Pamlico Sound. Depths of Bluff Shoal are 7 to 12 feet. A light is near the middle of the shoal. Close northward of this light is a wreck reported covered 4 feet. A 12-foot slough through the shoal is about 1 mile northward of the light.

miles westward of Bluff Point, is about 1.5 miles wide at the entrance but narrows gradually toward its head to a narrow, crooked stream 3 miles above the entrance. Shoals extend from both shores. A light marks the shoal extending from the east point at the entrance. The bay has considerable traffic in small craft with drafts less than 5 feet; these make the passage to and from Belhaven by way of Swanquarter Narrows, Swanquarter Bay and The Haulover to Deep Bay.

Juniper Bay, is low and grassy. A light marks the shoal extending southeast from the island. **Great Island Narrows**, between Great Island and the mainland to the north, had a reported centerline controlling depth of 5 feet in 1983. A light marks the western entrance to the narrows.

(222) **Swanquarter Bay**, northwestward of Great Island, is about 2 miles wide at the mouth but narrows gradually toward its head 4 miles above. Oyster beds are numerous in the bay. A water tank, painted orange, near the northwest end of town in about 35°24.5'N., 76°19.9'W., is reported prominent from the bay.

Swanquarter Bay to a ferry terminal basin at Swanquarter just north of Long Point. In 1983, the channel had a reported controlling depth of 5 feet. Another dredged channel leads from near the northern end of the bay to a boat basin at Swanquarter. In 2003, the controlling depth in the entrance channel and in the basin was 7.9 feet. The channels through Swanquarter Bay are marked by lights and a daybeacon.

Swanquarter, the seat of Hyde County, is the center of trade for much of this area. Gasoline, diesel fuel, water, marine supplies and a launching ramp are available in the basin. The town has highway connections with U.S. Route 264.

as **The Haulover**, from the west side of Swanquarter Bay, about 3.5 miles above the entrance, and connects with Deep Bay to the westward. In 2001, the reported controlling depth through The Haulover was 13 feet. A light is at each end of the cut. Local vessels use this route.

Rose Bay, westward of Swanquarter Bay on the north side of the entrance to Pamlico River, is 1.8 miles wide at the entrance, but shoals extending from both sides restrict the entrance channel to a width of 0.6 mile. A small marina is at the head of the bay. Berths, gasoline, water, limited marine supplies and two launching ramps are available. A light is at the entrance, and daybeacons and lights mark the best water in the bay. The bay is used mostly by local fishing boats.

Deep Bay, leading eastward from just inside the entrance of Rose Bay, is the approach to The Haulover, a dredged land cut to Swanquarter Bay that was described previously. Local vessels use this route. The Blowout is a privately maintained channel cut through the narrow neck of Judith Island from Deep Bay to Deep Cove on the Pamlico Sound side. The channel is used considerably by local fishermen; strangers should not attempt it. In 1983, the reported controlling depth through The Blowout was 1½ to 2 feet.

(228)

Pamlico River - Tar River

(229) Pamlico River and Tar River are the two names applied to the same river; it is known as the Pamlico below Washington, NC, and as the Tar above that point. The river rises in Person County, flows in a general southeasterly direction, and empties into the northwestern part of Pamlico Sound.

dredged channel leads to Washington, and, in Tar River, a natural channel leads for about 15 miles to the entrance to Hardee Creek, thence for another 3 miles to Greenville. The channel is marked by lights to Washington.

Pamlico River is nontidal; variations in the water level at Washington, due to prevailing winds, seldom exceed 2 feet. The extreme range of the flood or freshet stage for Tar River is 34 feet at Tarboro, 75 miles above the mouth. For the lower section, the extreme range due to winds is 8.5 feet.

(232)

ENCs - US5NC52M, US4NC55M Chart - 11553

Pungo River empties into Pamlico River from northward about 5 miles above the mouth. The channel through the lower 15 miles of the river, part of the Intracoastal Waterway, is well marked by lights and daybeacons. Above the Intracoastal Waterway, the river narrows. In 1983, the reported centerline controlling depth in this section of the river was 5 feet to Leechville, a town 18 miles above the mouth. The U.S. Route 264 highway bridge at Leechville has a 30-foot fixed span with a clearance of 7 feet. An overhead power cable on the north side of the bridge has a clearance of about 28 feet. Tributaries to the Pungo River include several navigable creeks. The most important in order of ascension are Wright, Slade, Pungo, Pantego and Wilkerson, which empty into the northeast end of the river. The route of the Intracoastal Waterway, described in chapter 12, follows Pungo River from Wilkerson Creek to and across Pamlico River.

234) **Wright Creek** empties into the west side of Pungo River 2 miles above the mouth and about 8 miles south of Belhaven. The creek is entered from deep water in Pungo River through a dredged channel that leads to a turning basin at the head of **North Prong**, about 1.1 miles above the entrance. In 1982, the channel had a midchannel controlling depth of 8 feet, thence 4.5 feet in the basin. The channel is marked by lights, daybeacons and a buoy.

(235) Two small marinas are on North Prong. Berths with electricity, diesel fuel, limited marine supplies, gasoline and launching ramps are available; minor hull repairs can be made.

eastward about 4 miles above the mouth, in 2006, had reported depths of 3.6 feet or more. A pile was reported in the creek entrance about 0.2 mile north-northwest of July Point at about 35°27'32"N., 76°33'21"W. An unmarked fish haven is about 1 mile northwest of the creek entrance in about 35°28'15"N., 76°34'18"W.

Pungo Creek empties into Pungo River from westward about 8 miles above the mouth of the river and 1.5 miles southwestward of Belhaven. A highway bridge, 2.5 miles above the mouth of the creek, has a fixed span with a clearance of 15 feet. The overhead power cable just north of the bridge has a clearance of 35 feet. In 1983, the creek had reported depths of 7 feet or more to the bridge and thence 5 feet for about 2 miles. A light and a daybeacon mark the entrance to the creek.

Pantego Creek, just northward of Pungo Creek, empties into Pungo River northward about 9 miles above the mouth of the river. Timber breakwaters, in fair condition, extend from both shores of the entrance. The outer ends of the breakwaters are marked by lights.

A dredged channel leads from Pungo River through the breakwaters and to the basin at Belhaven just below State Route 92 highway bridge. In 2000, the reported midchannel controlling depth to the basin was 8.9 feet. Above the dredged channel, in 1963, there were depths of about 7 feet for 1 mile above the bridge, thence 4 feet to the highway bridge at the town of **Pantego**; lights and daybeacons mark the dredged channel. State Route 92 highway bridge at Belhaven has a 32-foot fixed span with a clearance of 13 feet.

Belhaven, on the northeastern side of the entrance to Pantego Creek, has an excellent harbor for small craft. The town is connected with the interior by highway and railroad. Seafood, grain and lumber are shipped from here. Marine supplies can be obtained in the town, and hotel accommodations are available.

(241) Berthage, electricity, gasoline, diesel fuel, water, ice and marine supplies can be obtained at the small-craft facilities on the north side of the creek at Belhaven, just inside of the breakwater. One of the facilities has a marine railway that can handle craft up to 60 tons for engine and hull repairs. A launching ramp is also available.

catalog Goose Creek, opposite the entrance to Pungo River, empties into Pamlico River from southward about 7 miles above the mouth of the river. The dredged channel of the Intracoastal Waterway crosses the shoals, that obstruct the mouth of the creek, and passes southward to Upper Spring Creek and the land cut which connects with Bay River.

(243)

South Creek to Washington

Pamlico River, empties into the river from the southward. The deeper entrance is southward of **Indian Island** and the shoal extending westward from that island to **Hickory Point** (35°21.8'N., 76°41.9'W.), the north point at the entrance to the creek. In 1983, a reported draft of 5 feet could be taken through the channel across the shoal west of Indian Island; a light and a daybeacon mark the best water. The creek has depths of 7 feet or more for 4 miles above Hickory Point. Above this point, a dredged channel leads to Aurora. The channel is marked by daybeacons to Aurora

Aurora is a town on the west side of South Creek, about 7 miles above Hickory Point. An oil dock here is in ruins. State Route 33 highway bridge, with a 37-foot fixed span and a clearance of 5 feet, crosses the creek at Aurora.

(246) A channel, marked by private daybeacons, leads to a barge slip at a phosphate plant on the north side of South Creek about 3.9 miles southwest of Hickory Point. In 1983, the slip had reported depths of 10 feet.

entrance close eastward of South Creek, about 1 mile southward of Hickory Point. The town of **South Creek**, about 0.5 mile above the entrance, is bordered on the west by Bond Creek and on the east by Muddy Creek. The entrance is marked by daybeacons. A crabmeat packinghouse is on the east side of town. In 1983, a reported depth of 5 feet could be taken in Bond Creek for about 2.3 miles. In 1990, an obstruction was reported in Bond Creek in about 35°20'26"N., 76°41'49"W. Gasoline and diesel fuel are available at the crabmeat packinghouse pier on Muddy Creek.

opposite South Creek empties into Pamlico River directly opposite South Creek. The channel had a reported centerline depth of 4 feet for about 1.5 miles in 1983 and is marked by a light and daybeacons, but its navigation should not be attempted by strangers. In East Fork, the channel, in 1983, had a reported centerline depth of 5 feet for 1.5 miles above the entrance.

A ferry, operated by the State Roads Commission, crosses Pamlico River about 15 miles above the mouth. The marked channels leading to the northern terminal in **Gaylord Bay**, about 3.5 miles westward of North Creek, and to the southern terminal about 3 miles westward of Hickory Point, had reported depths of 7 feet in 1983.

A privately dredged channel leads to a basin of a phosphate plant on the south side of Pamlico River, about 15.5 miles above the mouth and 4 miles westward of Hickory Point. The channel is marked by private daybeacons. In 1983, the reported controlling depth was 10 feet. The structures at the plant are the most conspicuous objects in the area. outhward 17.5 miles above the mouth and 6.5 miles westward of Hickory Point. In 1983, local knowledge was advised to pass over the bar across the entrance to the creek, thence depths of 3 feet were reported available to Bonnerton, 4 miles above the entrance. A fixed highway bridge with a clearance of 2 feet crosses the creek at Bonnerton. A daybeacon marks the entrance.

River 6.5 miles northwestward of Hickory Point and about 2 miles eastward of the entrance to Bath Creek. Small tourist cabins are available, and a good secondary road connects with State Route 92 highway northward. The nearest rail connections are at Washington, about 20 miles distant by highway. Gasoline and some supplies are available at Bayview, and there is a small-boat launching ramp. Allofthe docks at Bayview are in ruins. Afish haven, marked by yellow buoys, is about 0.7 mile southwest of Bayview in about 35°25'55"N., 76°48'25"W.

southward into Pamlico River 8 miles northwestward of Hickory Point. In 1983, the reported controlling depths were 5 feet to the bridge at the town of Bath, thence 4 feet for about another 1.7 miles. The most difficult part of the channel to Bath is the entrance, where a shoal extends halfway across from the west side and drops off abruptly. The channel is marked by lights and daybeacons to a point about 0.35 mile southward of the highway bridge. The outer edge of the shoal is marked by a light. Numerous fish traps are off the creek entrance during the fishing season from January through May.

The State Route 92 highway bridge at Bath has a 37-foot fixed span with a clearance of 13 feet. Overhead cables close northward of the bridge have a clearance of 24 feet. A marina, on the bulkhead just below the east side of the bridge, can provide transient berths and electricity and has a reported depth of 9 feet alongside the berths. Gasoline and other supplies are available in Bath.

Back Creek empties into the east side of Bath Creek about 1 mile above its mouth. A highway bridge with a 41-foot fixed span and a clearance of 7 feet crosses the creek about 0.5 mile above the mouth. An overhead power cable with a clearance of 43 feet crosses the creek just west of the bridge. A marina, on the north side of the creek, just below the bridge has a reported approach depth of 5 feet and 7 feet alongside the berths. The marina can provide gasoline, water, ice, marine supplies and a surfaced launching ramp.

Pamlico River above Bath Creek is usually fresh.

(256)

which is on the south side of Pamlico River, about 25 miles above the mouth. A highway bridge, 0.2 mile above the entrance of the creek, has a 36-foot fixed span with a clearance of 15 feet. Overhead power and telephone cables immediately southward of the bridge have a reported clearance of 10 feet. The entrance to the creek is marked by a daybeacon; however, local knowledge is advised. Above the entrance, the creek, in 1963, had

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depths of 5½ feet or more for about 1 mile above the bridge and 3 feet for an additional 2 miles. A small-craft facility at **Cotton Patch Landing**, 1.5 miles above the bridge, can provide transient slips, gasoline, pump-out station, electricity, water, ice, a surfaced ramp, engine repairs and dry and wet storage. The facility monitors VHF-FM channel 16. A store here can also provide marine supplies of all types.

opposite Blounts Bay. The channel is marked by lights, daybeacons, and "no wake" markers. A private marina is on the east side of the creek. Pump-out services and transient berths with electricity, water, and launch ramps are available. A private yacht club and two marinas are on the west side of the creek. Gasoline and diesel fuel are available and transient berths. The reported approach depth is 6 feet, and VHF-FM channel 16 is monitored. A full-service boatyard is located in the area with a lift to 30 tons; hull, engine and electronic repairs can be made.

Whichard Beach is on the south side of the Pamlico River about 4 miles above Blounts Bay and about 0.4 mile above Fork Point at the junction of Pamlico River and Chocowinty Bay. A marina at Whichard Beach has berths, gasoline, limited marine supplies, water, ice, provisions and launching ramps. Hull and outboard engine repairs can be made.

Runyon Creek is on the north side of Pamlico River at Washington, NC. The Route 32 highway bridge and the railroad bridge crossing the creek just above the mouth have 18-foot fixed spans and a clearance of 4 feet. In 1983, there was reported depth of 4 feet available in the channel immediately north of the highway bridge. A launching ramp near the bridge is available.

Nashington, 32 miles above the mouth of Pamlico River, is the seat of Beaufort County and an important business center with communications extending to nearly all points on Pamlico River and Pamlico Sound. The town has restaurants, hotels and motels. Marine supplies are available.

Two swing bridges cross the river at Washington. The railroad bridge has a vertical clearance of 7 feet; the west draw is closed to navigation. The U.S. Route 17 highway bridge, about 0.7 mile above, has a vertical clearance of 6 feet. (See 33 CFR 117.1 through 117.59 and 117.831, chapter 2, for drawbridge regulations.) An overhead power cable close westward of the highway bridge has a clearance of 75 feet. About 0.6 mile west of the bridge is another overhead power cable with a reported clearance of 82 feet. The U.S. Route 17 Bypass fixed bridge crosses the river 0.4 mile above the overhead power cable.

(263) A county hospital is at Washington.

The Washington City Docks are on the north side of the Pamlico River, between the railroad bridge and highway bridge. The bulkhead extends approximately 1,700 feet and has both small craft slips and tieup dockage. Approximately 15 transient berths are available and supplies include water, pump-out facility

and electricity; some marine supplies are within walking distance of the docks. The reported approach depth to the docks is 10 feet with 8 feet alongside the docks. Boats up to 60 feet can be accommodated in the outermost slip. The North Carolina Estuarium is located at the waterfront.

(265) Washington has rail connections with two Class I railroads and highway connections with U.S. Route 17 and NC Route 32.

(266)

Jones Bay

Mouse Harbor, Big Porpoise Bay, and Middle Bay are small unmarked shallow bays on the east side of Goose Creek Island on the western side of Pamlico Sound between Pamlico Point Light PP (35°18'49"N., 76°27'00"W.) and Jones Bay. The light marks the south side of the entrance to Pamlico River and is shown 25 feet above the water from a multi-pile structure with a white and black diamond-shaped daymark. Mouse Harbor Ditch and Leary Canal are two small-boat passages that connect Mouse Harbor with Clark Creek on Pamlico River and Big Porpoise Bay with Middle Bay. These passages are not being maintained and are used only by shallow-draft skiffs; local knowledge is advised. The three bays are frequented only by local fishermen.

about 7 miles southward of Pamlico Point Light PP and just northward of the entrances of Bay and Neuse Rivers. In 1983, the bay had reported depths of 6 feet or more for 4 miles above its mouth. The entrance is somewhat obstructed by shoals through which a marked channel leads into the bay. On the north side, near the head of the bay, is the town of **Hobucken**. Small craft bound for the town can land in the cove 0.8 mile above **Drum Creek**, which indents the north shore of the bay about 3.5 miles above the entrance.

Ditch Creek, on the opposite side of Jones Bay from Drum Creek, leads to an old canal through which small boats can be taken at high water to Bay River. Hobucken is discussed further in chapter 12 in connection with the Intracoastal Waterway, which crosses the head of Jones Bay and links it with Goose Creek on the north and Bay River on the south. Hobucken Coast Guard Station fronts the Intracoastal Waterway at Hobucken.

The approach to Jones Bay from eastward is over or around **Brant Island Shoal**, which extends for 10 miles in a southeasterly direction from the north side of the entrance to the bay. For 6 miles southeastward to Brant Island Slue Light 1, the shoal has depths of 2 to 3 feet; between that light and Brant Island Shoal Light BI at the outer end are depths of 5 to 8 feet. Shoaling to 2 feet was reported west of the slue, mariners are advised to navigate this area with caution and local knowledge is recommended. The wreck of the GOVERNOR SCOTT FERRY is about 0.7 mile east of Light BI and is marked by a light. In 1991, a sunken wreck was reported between Brant Island Shoal and Royal Shoal in about 35°07'14"N.,

76°12'44"W. Other wrecks and obstructions are west and south of Brant Island Shoal Light BI.

The **danger zone** of a bombing and rocket firing area is in Pamlico Sound westward of the entrance to Jones Bay. Numerous lights and daybeacons mark the perimeter of the danger zone. (See **33 CFR 334.420**, chapter 2, for limits and regulations.)

(272)

ENC - US4NC16M Chart - 11544

Point Light PP empties into the western part of Pamlico Sound between Jones Bay and the mouth of Neuse River. The natural channel, from the entrance to off the mouth of Trent Creek about 12 miles above the entrance, is marked by lights and daybeacons and, in 1963, had depths of 9 feet or more. It can be followed readily. Above this point, a dredged channel leads to Bayboro, which is practically the head of navigation. In 1983, the reported controlling depth was 10 feet. The dredged channel is marked by daybeacons to Stonewall. An overhead power cable crossing the river about 0.3 mile below Bayboro has a clearance of 75 feet.

The route of the Intracoastal Waterway is along Bay River for 4 miles, thence northward through Gale Creek.

River 8 miles above the mouth. Gasoline, diesel fuel, a launching ramp and some supplies are available. There are two marine railways that can haul out vessels up to 65 feet in length for hull repairs, and there is a machine shop with engine repair service. In 1983, the reported controlling depth was 8 feet to Vandemere, and thence 8 feet alongside the piers and 4 feet at end of railways.

(276) **Stonewall** is a small town on the south side of the river 14 miles above the mouth; most of its docks are in ruins.

(277) Bayboro. 15 miles above the mouth of the river, has docks in fair condition on the east side of the creek leading to Mill Pond. In 1983, depths of 7 feet were reported alongside the oil and fish docks. Gasoline, ice and some supplies are obtainable here. Navigation above Bayboro is restricted by fixed bridges at the town.

Carolina and flows for about 250 miles in a general east-southeasterly direction into the western end of Pamlico Sound. Its mouth is about 5 miles wide but is reduced to a navigable width of about 2 miles by shoals that extend from either side. The river has natural depths of 13 feet or more for 25 miles above its mouth. Strangers should not attempt to navigate the river above this point. The river channel is marked by lights, buoys and daybeacons to about 4 miles above the city of New Bern, 34 miles above its mouth.

(279)

Tides

Neuse River has practically no tide, the variation in water level being due principally to winds. Easterly winds cause high water and westerly winds low water, the maximum variations with heavy gales amounting to about 2 feet above or below the normal in the lower part of the river and about 3 or 4 feet at New Bern. Freshets of 10 to 20 feet occur in the upper reaches of the river above New Bern but have little effect at or below the town.

Broad Creek empties into the north side of Neuse (281)River about 4 miles above the mouth. In 1983, the reported controlling depth in the creek was 5 feet for 2.5 miles, thence 4 feet to Whortonsville. A light marks the entrance to the creek. Grace Harbor is an artificial basin with an entrance channel that is located about 1.4 miles west of the entrance light on the south side of the creek. A full-service marina is located there with transient berths. water, ice, electricity, gasoline, diesel fuel, a pump-out facility and wet storage. In 2012, the reported approach and alongside depths were 8 feet. Pamlico is a village on the south side of the creek, 3 miles above the entrance. Whortonsville is on the east side of the entrance to Brown Creek about 0.5 mile northeast of Pamlico and on the opposite side of Broad Creek. Berthage, electricity, water, limited marine supplies and a launching ramp are available at the pier, which has a depth of 5 feet alongside.

south River flows into the south side of Neuse River about 8 miles above the mouth. The entrance is marked by lights. In 2001, the channel had a reported midchannel depth of 10 feet for about 3 miles; thence in 2000, there was 6 feet for another 4.5 miles.

(283) The **danger zones** of bombing, rocket firing and strafing areas are center around and in the vicinity of **Rattan Bay**, on the south side of the Neuse River entrance. (See **33 CFR 334.420**, chapter 2, for limits and regulations.)

(284)

ENC - US5NC51M Chart - 11541

(285) **Garbacon Shoal** extends halfway across Neuse River from the southern shore 10 miles above the mouth, leaving a clear width of about 0.8 mile between the 12-foot contours. The outer end of the shoal is marked by a light.

(286) Whittaker Creek, on the north side of Neuse River opposite Garbacon Shoal, is marked by lights and daybeacons. In 2003, the privately dredged entrance channel had a reported controlling depth of 6.1 feet. An uncharted private range marks the entrance channel. Several small-craft facilities are in the creek.

Oriental is a small town at the entrance to Smith Creek on the north bank of the Neuse River about 11 miles above the mouth. Fishing is the principal industry and seafood is trucked to the interior. The harbor is

protected by a rubble-mound breakwater marked by a light off the end.

Adredged channel, marked by lights and daybeacons, leads from Neuse River to a basin at Oriental. The harbor provides excellent anchorage for small craft. Two marinas are in the harbor and basin.

(289) A fixed highway bridge 0.2 mile above the entrance to Smith Creek has a clearance of 45 feet. An abandoned railroad bridge, in ruins, crosses **Morris Creek** about 1 mile above the highway bridge. **Greens Creek** joins Smith Creek at **Dewey Point** just above the highway bridge. Good anchorage was reported in Greens Creek for vessels drawing less than 4 feet.

Adams Creek empties into the south side of Neuse River about 13 miles above the mouth. The creek is part of the Intracoastal Waterway and is described in chapter

Clubfoot Creek flows into Neuse River from southward about 15 miles above the mouth. The approach is marked by a daybeacon and the entrance by a light and daybeacons. The channel southward of the light is narrow with shoals rising abruptly on both sides. Depths in the channel, in 2002, were reported to be 4.5 feet or more for 3 miles above the light. A marina on the west shore of Clubfoot Creek, at the entrance to Mitchell Creek, has berths, electricity, gasoline, diesel fuel, pump-out station, water, and ice.

2) **Dawson Creek**, on the north side of Neuse River about 14 miles above the mouth, is entered through a dredged channel, marked by daybeacons, that leads from the river to the mouth of the creek. In 1983, the reported controlling depth was 5 feet. A highway bridge with a 32-foot fixed span and a clearance of 13 feet crosses the mouth of the creek at **Janeiro**.

(293) A ferry crosses Neuse River about 18 miles above the mouth between Cherry Point and **Minnesott Beach**.

Hancock Creek is on the south side of Neuse River about 20 miles above the mouth. In 1983, the reported controlling depths were 7 feet through the narrow entrance channel to the Marine Corps Air Station basin just inside the mouth, thence 12 feet in the basin. Lights and daybeacons mark the channel. A launching ramp and pier are on the east side of the creek about 1.5 miles above the mouth.

A **restricted area** surrounds the shoreline of the Cherry Point Marine Corps Air Station, from Hancock Creek to Slocum Creek. A **danger zone** is around the mouth of Hancock Creek. (See **33 CFR 334.430**, chapter 2, for limits and regulations.)

(296) A water tank at the air station is conspicuous.

Slocum Creek, on the south side of Neuse River 22 miles above the mouth, in 1983, had a reported controlling depth of 4 feet for 4 miles to the forks. Along the East Prong, a foot bridge across the creek obstructs passage for further navigation. A light and daybeacons mark the critical parts of the channel at the entrance to the creek. A bridge with 45-foot fixed span and a vertical clearance of 16 feet crosses 3 miles above the entrance. An overhead

cable with a clearance of 39 feet crosses the creek just north of the bridge.

Beard Creek is on the north side of Neuse River opposite Slocum Creek. The mouth of the creek is marked by a daybeacon. The reported controlling depth from the entrance to the highway bridge, 2.3 miles upstream, was 4 feet in 1983. Good anchorage may be found off the eastern side of the entrance.

Goose Creek, on the northeast side of Neuse River 27 miles above the mouth, in 2000, had reported depths of 4.4 feet or more to Wood Landing, 3 miles above the entrance. Upper Broad Creek, on the northeast side of Neuse River 28 miles above the mouth, had reported depths of 5 feet or more, in 1983, to Lees Landing 4 miles above the entrance. The entrance is marked by lights and a daybeacon.

(300) **Fairfield Harbour** is a resort and residential community on the east side of **Northwest Creek**, about 1 mile west of Upper Broad Creek. The entrance to Northwest Creek is marked by a light; depths of 4 feet can be carried through the unmarked creek. A marina is on the east side of the creek, about 0.7 mile above the entrance. In 1983, depths of about 6 feet were alongside the marina piers; berths, electricity, gasoline, diesel fuel, water, ice, pump-out station and launching ramp are available.

New Bern, a city on the west bank of Neuse River 34 miles above the mouth, is the seat of Craven County and an important center for this area. The city has many points of historical interest including Tryon Palace, an 18th century restoration. A county hospital is here, and there are numerous restaurants, hotels and motels. Gasoline, diesel fuel, pump-out station, berthing with electricity, water, ice, marine supplies and provisions are available. Hull, engine and electronic repairs can be made; lift to 30 tons.

(302) The rectangular lighted clock tower atop City Hall is visible for about 6 miles downriver and is an excellent landmark. Vessels proceeding up the river to New Bern are advised to stay in the channel because of the numerous fish traps scattered indiscriminately throughout the unmarked areas. The river is slightly brackish except during freshets.

(303) **Weather, New Bern and vicinity**. New Bern's climate is influenced by both the Atlantic Ocean and Pamlico Sound, particularly in the winter. Winds blowing from a southerly or easterly direction have a moderating effect on temperatures.

The long hot summers begin in May when afternoon temperatures occasionally reach 90°F (32.2°C) and reach a peak in July when they average 89°F (31.7°C); they begin to fall off by the end of September. The average high temperature in New Bern is 73°F (22.8°C) and the average low is 52°F (11.1°C). July is the warmest month, with an average high of 80°F (26.7°C) and an average low of 71°F (21.7°C). January is the coolest month, with an average high of 55°F (12.8°C) and an average low of 34°F (1.1°C). Each month, May through September has recorded temperatures in excess of 100°F (37.8°C), while

each month, October through May, has had temperatures below freezing. The warmest temperature on record in New Bern is 106°F (41.1°C) recorded in July 1952 while the coldest temperature on record is -4°F (-20°C) recorded on Christmas Morning 1989. The average number of days with a maximum temperature of 90°F (32.2°C) or warmer is 41 while the average number of days with a minimum temperature of 32°F (0°C) or cooler is 50.

southwestward of the railroad bridge has three 100-footlong piers with depths of 9 feet alongside. Berths, electricity, gasoline, diesel fuel, water and dry storage are available; hull and engine repairs can be made.

New Bern is served by two Class I railroads. The city is also served by commercial airlines.

U.S. Route 17 highway bridge over Neuse River just below New Bern has a fixed span with a clearance of 65 feet. The railroad bridge, 1.7 miles above the highway bridge, has a swing span with a clearance of 0 feet at extreme high water and 2 feet at low water. In 1984, the northeast draw of the bridge was reported closed to navigation. The overhead power cable at the railroad bridge has a clearance of 50 feet over the main channel.

A small-craft repair facility is on the northeast side of the river just above the bridge at **Bridgeton**, opposite New Bern. A 35-ton mobile hoist and surfaced ramp are available. Hull, engine, sail, electrical and electronic repairs can be made.

(309) Trent River empties into Neuse River on the south side of New Bern. The river channel above New Bern is marked by lights and daybeacons for a distance of about 5.5 miles.

River at the mouth has a clearance of 14 feet. (See **33** CFR 117.1 through 117.59 and 117.843, chapter 2, for drawbridge regulations.) The railroad bridge, about 0.2 mile westward of the highway bridge has a swing span with a clearance of 5 feet. (See **33** CFR 117.1 through 117.49, chapter 2, for drawbridge regulations.) Fixed twin highway bridges about 0.3 mile southwest of the railroad swing bridge have clearances of 45 feet. Overhead power cables cross Trent River about 1.8, 4.8, 8.8 and 14 miles above its mouth; clearances are 55 feet, 48 feet, 55 feet and 63 feet, respectively.

(311) At **Pollocksville**, 15 miles above the mouth, U.S. Route 17 highway bridge has a 48-foot fixed span with a clearance of 5 feet.

about 1.7 miles above the mouth. In 1983, the reported controlling depth to the highway bridge 1 mile above the mouth was 5 feet. The highway bridge has a 35-foot fixed channel span with a clearance of 15 feet. An overhead power cable with a clearance of 14 feet is just north of the bridge.

(313)

West Bay

on the southwest side of Pamlico Sound west of Cedar Island and just southeastward of Neuse River entrance. The shores of the bay and its numerous branches are marshy, and it is of little importance other than for its oyster beds. In 1983, a reported depth of 6 feet could be taken into the three principal arms of the bay through narrow and devious channels. Lights and daybeacons mark the entrance to West Bay and the channels in **West Thorofare Bay** and **Long Bay**, the middle and west arms, respectively.

(315) The **danger zones** of bombing, rocket firing and strafing areas are on the west side of West Bay and Long Bay. (See **33 CFR 334.420**, chapter 2, for limits and regulations.)

from the vicinity of Ocracoke Inlet. The shoal, which bares in one place and is covered 1 to 4 feet elsewhere, is marked by three lights along the north side; a fourth light marks a wreck on the south side. Tows and other vessels sometimes anchor inside the hook when the seas are too rough to make headway in the sound. In 1983, however, it was reported that this anchorage was not a good one.

(317) A dangerous sunken wreck is reported to be about 0.4 mile north of Royal Shoal Light 5RS in about 35°09.8'N., 76°09.5'W. Caution is advised.

(318)

ENC - US5NC18M Chart - 11545

inside the barrier beach from the south side of Pamlico Sound to Cape Lookout, a distance of about 27 miles; the width varies between 2 and 3 miles. The channel through Core Sound is heavily shoaled with portions impassable; local knowledge is advised. Behind Cape Lookout, Core Sound is joined by Back Sound and The Straits, both of which connect with Beaufort Harbor.

Channels

(320)

(321) The main route from Pamlico Sound to Beaufort Harbor with the best water is through the Neuse River and the Intracoastal Waterway. The channels in Core Sound have shoaled and local knowledge is required to safely pass.

(322) From The Straits, the main route to Beaufort Harbor leads southwestward to the junction with the alternate route, westward of Harkers Island, thence westward along the north side of Middle Marshes to abeam Lenoxville Point where it turns sharply northward and then westward into Taylor Creek. The route is then westward through Taylor Creek to the wharves at Beaufort.

(323)

Currents

in the southern part of Core Sound. See the Tidal Current prediction service at *tidesandcurrents.noaa. gov* for specific information about times, directions, and velocities of the current at numerous locations throughout the area. Links to a user guide for this service can be found in chapter 1 of this book.

The Channels from Core Sound to Beaufort Inlet via The Straits and Back Sound are described later in this chapter.

(326)

Wainwright Slue to White Point

Wainwright Slue is a small anchorage used by local mariners in the northeastern entrance to Core Sound. Shelter from the sea is provided by surrounding shoals that have depths of 1 to 3 feet over them. The marked channel into Core Sound at Wainwright Slue has been discontinued due to shoaling. Local knowledge is advised.

Island, makes into the northwest side of Core Sound. The bay is used mainly by fishing boats. An improved channel leads from the entrance, about 2.8 miles southwestward of Wainwright Island, to a small-craft basin on the west side of the bay. The channel is marked by lights and buoys. Gasoline, diesel fuel and water can be obtained at the pier at the head of the basin. A radar dish antenna and a telephone tower are conspicuous on the south entrance point to the bay.

of Wainwright Island. The passenger and vehicle ferry operates daily to Ocracoke on the outer beach.

and 8 miles from the northwest side of Core Sound and 8 miles from the northeastern entrance, indents the eastern shore of Cedar Island about 3 miles southward of Cedar Island Bay. The bay is connected with West Thorofare Bay by a land cut known as the **Thorofare**.

(331) A dredged channel leads through Thorofare Bay, and thence through the Thorofare to West Thorofare Bay. This passage provides a convenient route to local fishermen from Core Sound to West Bay and to the mouth of Neuse River. In 2001, the reported midchannel controlling depth was 3 feet from West Thorofare Bay to Core Sound. The critical part of the channel is marked by lights and daybeacons.

(332) A fixed highway bridge near the eastern end of the Thorofare has a clearance of 45 feet.

from the main channel to a basin at **Atlantic**, a town on the northwest side of Core Sound about 2 miles southwestward of the eastern entrance to Thorofare Bay. The basin at Atlantic is used mainly by fishing boats. Gasoline, diesel fuel, water, ice, provisions and limited

marine supplies are available. A spur channel leads to a marine railway just southward of the basin; craft up to 45 feet can be handled for hull repairs. A cluster of four aluminum-colored fuel storage tanks on the beach and a tall church spire are prominent from seaward. The marked, dredged channel continues from Atlantic northeastward to **White Point**, thence for another 0.3 mile to a basin.

(334) U.S. Route 70 highway connects with Beaufort and Morehead City.

(335

ENC - US5NC18M Chart - 11545

Sealevel is a small fishing community about 3 miles southwestward of Atlantic on the west shore of Core Sound. A restaurant and a motel are in town. A dredged channel leads from the sound to a basin at Sealevel. In 2001, the reported controlling depth was 3 feet to the basin and 4 feet in the basin. The channel is marked by a light and a buoy.

(337) A private hospital is in Sealevel.

(338) A pier, used mainly by fishing vessels, is in the basin; depths of 8 feet are reported alongside. Gasoline, diesel fuel, water and ice are available. Limited amounts of marine supplies can be obtained in town.

(339) Sealevel is connected with Beaufort and Morehead City by U.S. Route 70 highway.

Davis, another small fishing community, 5 miles southwestward of Sealevel, ships seafood to the interior by truck. A dredged channel leads from Core Sound to a basin at Davis. In 1982, the controlling depth to the basin was 3 feet, with 3 to 4 feet in the basin. Gasoline, diesel fuel, water and ice are available at a pier in the basin; depths of 4 feet are reported alongside. There are cabins and a restaurant at Davis; limited amounts of marine supplies also can be obtained here.

Davis is connected with Beaufort and Morehead City by U.S. Route 70 highway.

A pier, with reported depth of 6 feet alongside, is on the north side of **Oyster Creek**, about 1 mile northward of Davis. The entrance channel into the creek is marked by a light and a daybeacon. A machine shop, near the pier, is available for engine repairs. U.S. Route 70 highway bridge, about 0.4 mile above the entrance, crosses Oyster Creek just above the pier. The bridge has a 41-foot fixed span with a clearance of 7 feet.

of Davis, is on the west shore of Core Sound and on the north side of the eastern entrance to The Straits. A dredged channel leads from the main channel in Core Sound to a basin at Marshallberg. In 1978, the midchannel controlling depth was 6 feet to and in the basin. The channel is marked by daybeacons. A boatyard on the south side of the basin has two marine railways. The longest can handle craft to 200 tons or 200 feet for complete hull and engine repairs. In 1983, depths of 9

feet were reported alongside the boatyard. A boatyard is immediately westward of the marina. A marine railway here can handle vessels up to 125 feet in length for complete hull and engine repairs. Depths of 6 feet are reported alongside the marina and boatyard. A boatyard, about 900 yards west of the mouth of **Sleepy Creek**. 0.6 mile northwest of the basin at Marshallberg, has a marine railway that can handle craft up to 20 tons or 50 feet long for hull repairs. In 1983, the reported controlling depth to the railway was 4 feet.

The Straits, which parallel Back Sound on the opposite side of the island, provide two marked routes from Core Sound to a junction with the Morehead City Harbor Channel at Beaufort Inlet. The northern route leads westward through The Straits and along the northerly side of Middle Marshes; the southerly route leads westward through Back Sound and along the southerly side of Middle Marshes. Both routes have several shoals close to the channels. The chart is the best guide.

The improved channel from Back Sound to Lookout Bight has been discussed previously.

(346) The Straits, with an average width of about 0.5 mile, but in places only 100 yards wide in the channel, also affords a through passage from Core Sound to Beaufort Harbor. The passage has been discussed previously in

this chapter. A highway bridge over the western end of The Straits has a swing span with a channel width of 36 feet and a clearance of 14 feet. The overhead power cable close eastward of the fixed bridge has a clearance of 70 feet.

Westmouth Bay is a cove on The Straits side of Harkers Island. A marine railway at a boatbuilding yard at the head of the bay can handle vessels to 40 feet for hull repairs. The town of **Harkers Island** in the central part of the island, has piers both on Back Sound and at the head of Westmouth Bay; depths to the piers were reported to be 2 feet in 2000. Berths, electricity, gasoline, diesel fuel, water, ice, launching ramp, wet and dry storage and some provisions may be obtained at the piers, and there is also a small machine shop. In Westmouth Bay, depths to the piers were reported to be 3 feet in 1983. Gasoline, diesel fuel, water, ice and some marine supplies may be obtained at the piers.

(348) Several marinas are at **Shell Point**, at the eastern end of Harkers Island. Berths, electricity, gasoline, diesel fuel, water, ice, marine supplies, launching ramps, and wet and dry storage is available.

(349) Seafood is shipped by truck and boat from Harkers Island.

(350) A marina on the southwest point of the island has gasoline, water, ice and some marine supplies.