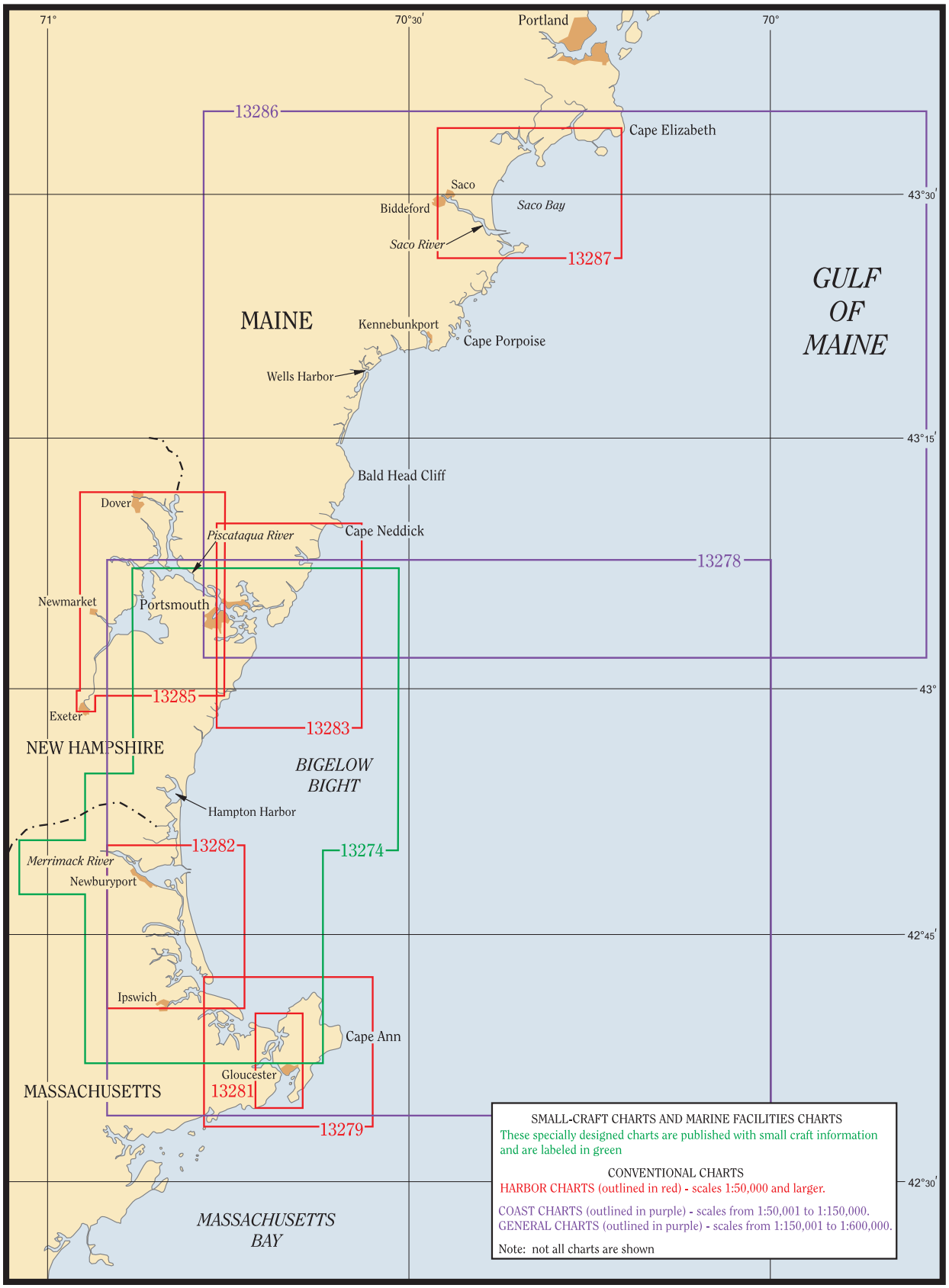

71°
70°30′
70°
Portland
13286
Cape Elizabeth
Saco
Biddeford
Saco Bay
Saco River
13287
43°30′
GULF
OF
MAINE
MAINE
Kennebunkport
Cape Porpoise
Wells Harbor
43°15′
Bald Head Cliff
Dover
Piscataqua River
Cape Neddick
13278
Newmarket
Portsmouth
43°
13285
Exeter
13283
NEW HAMPSHIRE
BIGELOW
BIGHT
Hampton Harbor
13282
13274
Merrimack River
Newburyport
42°45′
Ipswich
Cape Ann
Gloucester
MASSACHUSETTS
13281
13279
42°30′
MASSACHUSETTS
BAY
SMALL-CRAFT CHARTS AND MARINE FACILITIES CHARTS
These specially designed charts are published with small craft information and are labeled in green
CONVENTIONAL CHARTS
HARBOR CHARTS (outlined in red) - scales 1:50,000 and larger.
COAST CHARTS (outlined in purple) - scales from 1:50,001 to 1:150,000.
GENERAL CHARTS (outlined in purple) - scales from 1:150,001 to 1:600,000.
Note: not all charts are shown

Cape Elizabeth, Maine to Cape Ann, Massachusetts

Charts 13286, 13278

(1) From Cape Elizabeth the coast of Maine continues southwestward for about 37 miles to the Piscataqua River and the deepwater port of Portsmouth, N.H. The few harbors along this part of Maine are suited mostly to fishing vessels, yachts, and small pleasure craft. This is a summer-resort area, and many of the buildings are large and prominent. Two tall water tanks, one westward of Wood Island Light and one at Cape Porpoise Harbor, are the most prominent objects between Portland and Portsmouth.

(2) Extending south-southwestward from Portsmouth Harbor is the 13–mile coast of New Hampshire; the Isles of Shoals are 6 miles southeast of the harbor. Southward and eastward from the New Hampshire line the extreme northern part of the Massachusetts coast extends about 23 miles to Cape Ann Light. The Merrimack River approach to Newburyport, Mass., is about 3 miles south of the New Hampshire boundary.

COLREGS Demarcation Lines

(3) The lines established for this part of the coast are described in **80.115,** chapter 2.

Chart 13287

(4) Cape Elizabeth Light and Portland Lighted Whistle Buoy P were described in chapter 8.

(5) **Seal Cove**, on the southeast side of Cape Elizabeth and northeastward of Richmond Island, has numerous rocks and ledges. **The Sisters,** awash, and **Seal Rock,** which uncovers about 4 feet, are dangers near the center of the cove. The eastern extremity of the ledge extending eastward of Seal Rock is marked by a buoy that facilitates entrance to the anchorage north of the ledge. The holding ground in the cove is sand and poor, but some shelter is afforded in easterly weather north of a line between **McKenney Point** and Seal Rock. Care should be taken to stay clear of unmarked **Crowell Rock. Stevens Rock,** covered 6 feet, about 650 yards southward of Seal Rock is also unmarked. A small-craft launching ramp is in **Ship Cove,** 0.4 mile northeastward of Seal Rock, but no services are available. A bell buoy, about 0.5 mile southeastward of **Watts Ledge** off the eastern end of Richmond Island, marks the entrance to Seal Cove.

(6) **Richmond Island,** about 0.5 mile south of Cape Elizabeth and connected to it by a breakwater, is partly wooded with a conspicuous barn on it. Parts of the breakwater are covered at high water, and caution should be exercised in the vicinity.

(7) Small craft seeking refuge from westerly and southerly winds anchor in **Broad Cove** in the lee of **East Point,** the northeast point of Richmond Island, directly off the shore opposite a long, low barn. The bottom is sand and mud.

(8) **Richmond Island Harbor**, westward of Richmond Island and the breakwater, is sheltered from northerly and westerly winds, but is exposed to southwesterly and southerly winds. Foul ground extends 0.4 mile from the northern side of the harbor. The depths shoal gradually from 45 feet at the entrance to 15 feet 350 yards from the breakwater at the head. The holding ground is good, sand and mud. The anchorage is used by yachts and small craft.

(9) **Chimney Rock**, 0.3 mile from the north shore of Richmond Island Harbor, awash at low water, is marked by a buoy. Vessels must pass southward of the buoy. A rock covered 16 feet is 0.2 mile east-southeastward of Chimney Rock; an 18-foot spot 0.3 mile east-northeastward and a 12-foot spot about 0.5 mile east-southeastward are all unmarked.

(10) An unmarked rocky ledge covered 16 feet near its southwest end is about 0.4 mile westward of **Ram Island,** low and grassy, which is 0.2 mile northwestward of Chimney Rock. **The Brothers**, a ledge that uncovers, is 300 yards north-northeastward of Chimney Rock.

(11) **Spurwink River**, 1.6 miles northwestward of Richmond Island, can be entered only by small craft at half tide or higher with a smooth sea. **Higgins Beach,** on the west side at the entrance, has many visible cottages. The river is narrow and crooked, and there are no facilities. A bridge crossing the river about 1.7 miles above the mouth has a clearance of 5 feet. An obstruction,

covered 8 feet, is about 500 yards off the entrance to the river.

(12) **Old Proprietor**, a ledge which uncovers at low water, 0.9 mile from shore and 1.8 miles westward of Richmond Island, is marked on its south side by a buoy. A ledge covered 11 feet about 0.5 mile and a 17-foot spot about 0.7 mile north-northeastward of Old Proprietor are both unmarked.

(13) Between Richmond Island and Wood Island Light, a distance of about 6 miles, the shore forms a large open bight, the southern part of which is **Saco Bay.**

(14) **Prouts Neck**, a conspicuous point 3 miles westward of Richmond Island, is the northern point of Saco Bay. The neck is partly wooded and has many houses. A standpipe and an old observation tower on Prouts Neck and another standpipe on **Blue Point Hill** 2.3 miles northwestward are conspicuous.

(15) The Prouts Neck Yacht Club, float landing and moorings are on the west side and close northward of a short stone breakwater. There is reported to be a depth of 5½ feet at the float; water is available at the float.

(16) **Scarborough River** enters the sea about 0.6 mile northwestward of Prouts Neck. The river and its tributaries, the Libby and Nonesuch Rivers, are used by local fishing and pleasure craft in considerable number at half tide or higher. There are many fishing piers and private float landings on these rivers, most of which are dry at low water.

(17) A dredged channel leads across the bar from Saco Bay, thence into Scarborough River to an anchorage basin about 0.3 mile above Pine Point. In November-December 2004, a depth of 4.2 feet (6 feet at midchannel) could be carried to the anchorage basin with 5.5 feet available in the basin. The channel is marked by a daybeacon and buoys. A jetty extends in a southerly direction from Pine Point on the west side of the entrance. Following protracted spells of bad weather the positions of the buoys should not be relied upon as they often do not indicate the best water.

(18) The town pier, on the south side of the anchorage basin, has a depth of 6 feet reported at the float landing. Gasoline, electricity, water, ice, and some marine supplies are available at the pier; guest moorings are maintained. A small-craft launching ramp, usable at or near high tide, is close eastward of the pier.

(19) Provisions and lodging are obtainable in the village of **Pine Point** a short distance from the town pier.

(20) Along the shore of Saco Bay from northward to southward are **Grand Beach, Old Orchard Beach,** and **Ferry Beach.** The large hotels, and the standpipe at Old Orchard Beach are prominent.

(21) **Bar Ledge**, covered 11 feet, is 0.9 mile from shore off Grand Beach and is marked on its southern side by a buoy. About 0.6 mile westward of the buoy and 0.7 mile northeastward of the pier at Old Orchard Beach, **Little River Rock,** covered 2 feet and extending 0.5 mile from shore, is unmarked.

(22) **Goosefare Brook** enters the sea at the south end of Old Orchard Beach. The brook is foul, and the piles of an old highway bridge block the river near the entrance. About 150 yards farther upstream is State Highway No. 9 bridge with little or no vertical clearance.

(23) **Stratton Island** and **Bluff Island,** 20 feet high and grass-covered, are off the northern part of Saco Bay, 1 mile southward of Prouts Neck. Deep water is between the islands and Prouts Neck, but between the islands are numerous ledges. Ledges, awash at low water, are 0.3 mile off the eastern side of Stratton Island and 0.2 mile off the southwestern side.

(24) Islands and ledges in the southern end of Saco Bay extend up to 1.5 miles from the shore. Inside of the islands are Wood Island Harbor and the entrance to Saco River.

(25) **Eagle Island**, 2.5 miles southwest of Stratton Island, and **Ram Island,** 0.7 mile south of Eagle Island, are rocky and grass-covered; vessels should pass eastward of these islands, giving them a berth of at least 0.5 mile. There is a house on Ram Island.

(26) **Saco River**, with its entrance in the south end of Saco Bay west-northwestward of Wood Island, is the approach to the cities of **Biddeford,** on the south bank, and **Saco** on the north bank. The cities are at the head of navigation 5 miles above the mouth of the river. Private piers and a public boat ramp are located along the river. There has been limited commercial traffic on the Saco River in recent years, except for fishing vessels moored inside the mouth of the river. A party fishing boat operates from the pier at Camp Ellis, a settlement on the north bank of the river at its mouth. The **harbormaster** for the river resides there; telephone 207–284–6288.

Prominent features

(27) **Wood Island**, 4.2 miles south of Prouts Neck and eastward of the entrance to Saco River is wooded. **Wood Island Light** (43°27'24"N., 70°19'44"W.), 71 feet above the water, is shown from a white conical tower connected to a dwelling, on the east end of the island; a fog signal is at the light.

(28) **Negro Island**, low and grassy on top, is just westward of Wood Island. **Stage Island,** 0.6 mile west of Wood Island, is 20 feet high and marked by a prominent stone monument.

(29) **Basket Island**, 0.3 mile west of Stage Island, is 20 feet high and grassy, and has several cottages.

Channels

(30) Saco River is entered through a marked channel that leads over the bar between two jetties, thence to **Factory Island,** the head of river navigation at Biddeford and Saco. A fairway bell buoy, 0.3 mile eastward of Ram Island Ledge, marks the inner approach entrance from Saco Bay. The outer 0.6 mile of the southerly jetty and the outer 0.4 mile of the northerly jetty are covered at high water. The southerly jetty is marked by a buoy off its eastern end and by piers about 260 yards apart and about 10 feet above high water on the jetty; the northerly jetty is marked on the outer end by a daybeacon. In July-September 1999, the controlling depth in the natural channel was 5.9 feet to Brimstone Point about 1.8 miles above the entrance, thence a midchannel controlling depth of 2.6 feet to Cow Island, thence the basin northwest of Cow Island had depths of 3 to 5 feet surrounding the bare mudflats in the middle of the basin; the area in the vicinity of the submerged pilings at the southeast end of the flats should be avoided. The bar is subject to change; local knowledge is advised.

(31) Small craft can enter the river with a smooth sea and on a rising tide by passing between Ram Island Ledge and Negro Island Ledge and following the buoyed channel over the bar.

(32) The river channel, marked by buoys and daybeacons, is narrow, crooked, and bordered closely by shoals. In May 1985, an obstruction was reported northward of Brimstone Point in about 43°27'54"N., 70°23'38"W. No attempt should be made by small craft to cross the bar in either direction on the ebb with an easterly wind. Several small craft have grounded in attempting to do so.

Dangers

(33) **Ram Island Ledge**, extending 0.5 mile east of Ram Island and covered 6 feet, is marked by a buoy on its eastern side. **Stage Island Shoal,** partly bare at low water, extends 300 yards east-northeastward from the island and is marked at its end by a buoy. Wood Island Harbor, southeastward of the island, is described following the discussion of Saco River.

(34) **Negro Island Ledge**, 0.2 mile north of Wood Island, and covered 8 feet, is marked on its north side by a buoy. Ledges also extend nearly 200 yards northwestward and 300 yards southwestward from Negro Island; a buoy marks the end of the southwest ledge.

(35) The mean range of **tide** is 8.7 feet. From March to May heavy freshets are liable to change the channel depths by as much as 8 feet above high water at Saco; this condition also causes dangerous currents.

(36) **Ice** closes the river from January to April.

Wharves

(37) There are no active commercial wharves at Saco or at Biddeford. The old wharves at the cities are not kept in repair and are seldom used.

(38) At Saco, the float landings and moorings of the Saco Yacht Club are on the north shore of the river just northeastward of the eastern end of Factory Island. Depths of 7 feet are reported alongside the float; a small-craft launching ramp is at the club.

(39) A boatyard is on the south side of the river at Biddeford, about 0.2 mile below the bridge to Factory Island. Depths of about 10 feet are reported alongside the floats. The yard can build craft up to 55 feet in length, and has a 15-ton mobile hoist that can handle craft up to 40 feet in length for hull and engine repairs and open or covered winter storage. Gasoline, diesel fuel by truck, water, ice, and marine supplies are available. Moorings are maintained north and west of the channel.

(40) A marina with depths of 10 feet reported alongside its floats is on the north side of the river, about 3.5 miles upriver from the entrance, or 2 miles below Saco. Gasoline, water, and open winter storage facilities are available. Provisions and marine supplies can be obtained at Saco and Biddeford. Provisions can also be obtained near the wharf at Camp Ellis.

(41) On the south bank of the river about 2.5 miles below Saco is a State park; a large parking area for cars and trailers, and a small-craft launching ramp are available.

(42) At Biddeford an overhead power cable crossing the river from Factory Island has a clearance of 123 feet.

(43) **Wood Island Harbor,** south of Wood and Stage Islands, is an anchorage for small and moderate-sized vessels. Anchorage in depths of 18 to 36 feet is available south of Wood Island. Between Negro Island and Stage Island are depths of 17 feet or more in an area about 400 yards across; it is reported that larger yachts anchor in this area.

(44) Small craft can proceed to the southwestern part of Wood Island Harbor and anchor in depths of 6 to 18 feet. In entering this part of the harbor it is well to give the eastern side a good berth. The bottom in this inner anchorage is reported to be soft mud.

(45) **The Pool** is a shallow bay making southwestward from Wood Island Harbor inside **Fletcher Neck,** the south shore of Wood Island Harbor. The entrance is about 50 yards wide.

(46) A dredged channel, just southeast of Stage Island, leads through Wood Island Harbor to the entrance of The Pool. In 1992-1998, the controlling depth was 7.6 feet. A dredged anchorage basin is just inside the entrance to The Pool. In 1998, depths of 1.7 to 6 feet were available in the basin. Biddeford Pool Channel Buoy 10

marks the entrance to the basin and the shoal area. Three stone icebreakers are along the northeastern side of the basin. Care should be taken by strangers not to anchor too close to them. They are difficult to see at night at or near high water. Neither should they attempt to go between the northeasternmost icebreaker and the fish wharf because of a partially submerged breakwater between the breaker and the wharf.

(47) Small craft anchor just inside the inner end of the entrance, which is locally known as **The Gut,** if there is room. No attempt should be made to anchor in The Gut as the tidal currents have considerable velocity and holding ground is poor. Local fishing and pleasure craft usually occupy most of the moorings, but permission can usually be obtained to occupy one of the unoccupied ones.

(48) **Biddeford Pool** is a village on the south side of Wood Island Harbor, extending from The Pool nearly to the eastern point of Fletcher Neck. There are small wharves on each side of the Gut. There is a **harbormaster** at Biddeford Pool; telephone 207–282–0803.

(49) The Biddeford Pool Yacht Club wharf with 20 feet reported alongside the floats is at the inner end of The Gut on the east side, with a private wharf just to the northeast. A fish wharf close eastward of the yacht club wharf has 2 feet reported alongside.

(50) Gasoline, diesel fuel in small quantities and water are seasonally available at the yacht club float; the yacht club maintains two marked guest moorings in the outer harbor. Provisions can be obtained at a store near the landings. Meals, lodging, and most services are obtainable in the village.

Routes

(51) To enter Wood Island Harbor from the northeast, keep about 0.5 mile north of Wood Island, until near the fairway bell buoy eastward of Ram Island Ledge. Pass about 100 yards southeastward of this buoy, heading for the monument on Stage Island until Negro Island is abeam, then select anchorage in the area midway between Negro and Stage Islands.

(52) If proceeding to the southwestern or lower end of the harbor, pass about 100 yards eastward of the buoy 0.2 mile northeastward of Stage Island and from a position midway between Negro and Stage Islands head in a southwesterly direction for The Gut, being careful to give the east side a good berth. Select anchorage northwestward of Halftide Rock Daybeacon 9.

(53) If continuing on to the anchorage basin in The Pool, favor the northwesterly side until in The Gut, then in midchannel to the buoy at the inner end.

(54) If anchorage is desired southward of Wood Island, the best approach from northward is to the eastward of Wood Island. From a position 300 yards due east of Wood Island Light, head for the end of the bluff on the eastern extremity of Fletcher Neck until the monument on Stage Island opens up south of Wood Island; then bear around to the westward and head for the daybeacon on Philip Rock. Select anchorage from 150 to 250 yards off the middle of the island eastward of the cable area.

(55) If coming from the southeastward, head for the middle of Wood Island to pass midchannel between the buoy marking Washman Rock and the buoy southward of Dansbury Reef. When about 200 to 250 yards off Wood Island on this leg bear sharp around to the westward and select anchorage from 150 to 250 yards off the middle of the island.

(56) If coming from the southeastward and bound for Wood Island Harbor, continue as in the preceding paragraph to pass 50 to 100 yards south of the buoy, southwestward of Negro Island. Hold this course until The Gut opens up westward of the buoy and daybeacon marking Halftide Rock. Then bear around to the southwestward and select anchorage northwestward of Halftide Rock Daybeacon 9; or, if desirable, continue on inward through The Gut into The Pool.

(57) The chart must be the guide at all times. Proceed no farther until each aid to navigation is properly identified and passed correctly.

(58) **Washman Rock**, which uncovers 9 feet, is near the end of a reef which extends 600 yards southeastward from the eastern point of Fletcher Neck and is marked close southeastward by a buoy.

(59) **Dansbury Reef**, 0.5 mile southward of Wood Island Light, is a small ledge covered 2 feet and is marked on its southeast side by a buoy. There are several shoal spots between the reef and Wood Island, and strangers should not pass between them.

(60) Numerous rocks and ledges extend 0.6 mile southeastward of Fletcher Neck. The cupola and signal towers of a former Coast Guard station, on the east side of Fletcher Neck, are conspicuous, as are the many large homes on the neck.

Chart 13286

(61) **Hussey Rock** (43°25.8'N., 70°20.5'W.), covered 5 feet, is about 0.5 mile south of Fletcher Neck and is marked on its south side by a buoy.

(62) **Goosefare Bay**, 5.4 miles southwestward of Wood Island Light (43°27.4'N., 70°19.7'W.) is a shallow cove, full of rocks and ledges. The coast between Fletcher Neck and Goosefare Bay is lined with summer homes, some very large and prominent.

(63) **Little River** and **Batson River** empty into Goosefare Bay. Both are used by small pleasure craft.

There are no facilities in Little River. Overhead power and telephone cables with clearances of 25 feet cross Little River about 0.5 mile above the mouth.

(64) Only small craft use Batson River. There are no facilities. Navigation is terminated by a dam at the highway bridge about 1 mile above the mouth.

(65) **Stage Island Harbor**, 6.7 miles southwestward of Wood Island Light, is a small slough used by small local craft. The entrance is about 75 yards wide between the reefs making northward from **Cape Island** and southward from **Little Stage Island;** it is not safe for strangers. The ruins of a house are on Little Stage Island, the southern half of Stage Island.

(66) **Cape Porpoise Harbor**, about 7.5 miles southwestward of Wood Island Light, is a safe and protected harbor. It is ideal for the many fishing and pleasure craft that base there. It is midway between Portsmouth and Portland and is often a welcome haven for cruising craft caught in a blow on this stretch of coast.

(67) Seiners sometimes enter for shelter, though the anchorage is somewhat restricted by size and depth for the larger vessels.

(68) The village of **Cape Porpoise,** around **Porpoise Cove,** is at the head of the harbor. Lobstering, fishing, and summer tourism are the principal industries.

Prominent features

(69) The principal mark for approaching Cape Porpoise Harbor is **Goat Island Light** (43°21.5'N., 70°25.5'W.), 38 feet above the water, shown from a white cylindrical tower on the south end of Goat Island on the east side of the entrance; a fog signal is at the light. A bell buoy about 0.4 mile southeastward of the light marks the approach.

(70) A water tank and a church spire are at the head of the harbor.

Channels

(71) Cape Porpoise Harbor is entered by a dredged channel that leads from the entrance to a combined channel and anchorage to the town wharf, and thence through Porpoise Cove to the head of the harbor. In October 1992, the controlling depths were 14 feet in the entrance channel, thence 7 to 10 feet in the combined channel and anchorage to the town wharf, and thence 5 feet to the head of the harbor. The channel is marked by buoys and daybeacons.

Anchorage

(72) The anchorage basin is usually occupied by local fishing and pleasure craft. The holding ground is good, and a hole can usually be found to drop anchor in.

Dangers

(73) The **Old Prince,** a ledge that has a rock awash and extends from 400 to 500 yards southeastward of Goat Island Light, is marked by a buoy about 150 yards southward of it. Local craft sometimes cut between Old Prince and Goat Island in entering; this passage is not advisable for strangers.

(74) Ledges extending up to 0.3 mile south of grassy **Folly Island** on the west side of the entrance, are unmarked, but a buoy about 400 yards southeastward of the island marks the west side of the approach to the bar channel. A daybeacon marks the ledges extending northeastward from the island. This daybeacon is 180 feet from the westerly edge of the entrance to the dredged bar channel and should be given a berth of at least 250 feet in entering.

(75) Another daybeacon is on the ledge, bare at low water about 370 feet southwestward of Goat Island Light. The daybeacon is about 30 feet from the easterly edge of the bar channel, and should be given a berth of about 150 feet when entering.

(76) The principal hazards in approaching and entering are the numerous lobster pot buoys, which are in the channel and outlying waters in the summer. Care should be taken to avoid these, especially at night or during periods of low visibility.

Wharves

(77) A private wharf, formerly the town wharf, is on the east side of Cape Porpoise Harbor about 0.6 mile above the entrance. The wharf, 200 feet long with 6½ to 8 feet alongside, is used by commercial fishermen to offload their catches and by transients for temporary berthage. Gasoline, diesel fuel, water, and limited marine supplies are available. Small cranes are on the wharf; restaurants and lodging are close by.

Supplies

(78) Ice, provisions, and marine supplies can be obtained in or on order from the village. A telephone is on the dock. There are no marine railways or repair yards; the nearest is at Kennebunkport.

(79) Good roads connect the landing with the village and nearby towns and cities. Taxi service is available.

(80) Most of **Paddy Creek,** just west of Cape Porpoise Harbor, dries at low water.

(81) **Turbats Creek**, westward of Paddy Creek, has several private landings and considerable small-craft activity, but no service facilities.

(82) Southwestward of Goat Island Light is an area of broken ground, with depths of 16 to 34 feet, extending as much as 2 miles offshore in places.

(83) On the point locally known as **Walkers Point,** 1.8 miles west-southwestward of Goat Island Light, a large mansion with four large stone chimneys is one of the most conspicuous landmarks in the area.

(84) Near the head of the cove, west of the point, is a stone breakwater behind which is a town float landing. Local pleasure craft moor in the cove, and the reported depth at the landing is 8 feet. There are no facilities.

(85) A **security zone** at Walkers Point, including the coves on both sides, extends about 0.5 mile southward to its southernmost boundary, which extends about 0.5 mile south-southeastward from **Cape Arundel** on the east side of the approaches to Kennebunk River. (See **165.102**, chapter 2, for exact limits and regulations.)

(86) **Kennebunk River**, about 2.5 miles southwestward of Goat Island Light, is the approach to the popular summer resort and yachting center of **Kennebunkport.**

Prominent features

(87) The beach for 0.8 mile eastward and 1.7 miles westward of the entrance is lined with hotels and summer homes, the largest and most conspicuous of which is a large white hotel with cupola on the east side of the entrance to the river.

(88) The entrance to the river is between two stone jetties, the outer end of the easterly one being marked by **Kennebunkport Breakwater Light 6** (43°20'46"N., 70°28'34"W.), 25 feet above the water, shown from a white skeleton tower with a red triangular daymark.

Channels

(89) A dredged channel leads from the sea to a point about 60 yards below the highway bridge at Kennebunkport, about 1 mile above the jetties. Anchorages lie both east and west of the channel about midway from the jetties to the highway bridge. In February-April 2005, the controlling depths were 3.9 feet (5.7 feet at midchannel) in the channel to the end of the project with 5.6 feet available in the east anchorage and 5.8 feet in the west anchorage. Greater depths can be had using care and local knowledge. Buoys and a daybeacon mark the channel. It is reported that the entrance channel between the jetties is subject to frequent change.

Anchorages

(90) There are two dredged 6-foot anchorages, one on each side of the river channel, 0.3 and 0.4 mile north of the town wharf. In February-April 2005, 5.6 feet was available in the east anchorage and 5.8 feet was available in the west anchorage. Many moorings are maintained on the river.

Dangers

(91) **Fishing Rock,** about 0.6 mile southward of Kennebunkport Breakwater Light 6, uncovers 4 feet and is marked by a daybeacon. **Oaks Reef,** an extensive foul ledge area with a number of drying rocks and rocks awash, extends about 0.5 mile southward of Kennebunk Beach, where it is marked by a daybeacon.

(92) A reef covered 7 feet extends 0.8 mile southward of Fishing Rock where it is marked by a lighted bell buoy. Ledges with rocks awash extending eastward of the rock are marked by a buoy.

(93) State Route 9 highway bridge crossing the river at Kennebunkport has a swing span with a channel width of 39 feet and a clearance of 5 feet. (See **117.1 through 117.59 and 117.527**, chapter 2, for drawbridge regulations.)

Tides

(94) The mean range of **tide** is 8.6 feet.

Routes

(95) The chart should be the guide, keeping well clear of dangers and following the aids. In southerly weather with heavy seas running it is hazardous to enter through the jetties on the ebb.

(96) The approach to the port is marked by two buoys and two spindle daybeacons, which also mark the principal dangers. The best approach is to the eastward of the buoys.

(97) Some local craft prefer to approach the entrance through the passage between these two daybeacons, but strangers are advised against it.

(98) The best time to make the passage upriver is just after low water on a rising tide when the mudflats are still visible.

Wharves

(99) There are numerous private piers and float landings on the river, most of which are along the east bank. There are also a number of fish wharves and shipping plants on the upper river near the bridge.

(100) The town landing on the east bank about 500 yards inside the entrance is about 200 feet long with 6 feet reported alongside. A restaurant is nearby.

(101) The Kennebunk River Yacht Club is on the east bank about 150 yards above the town landing. Its basin, protected by a stone jetty covered at high water, has floats with 2 to 6 feet reported alongside. The upper and lower ends of the jetty are marked by stone pylons. Water is available at the floats.

(102) The Arundel Yacht Club has a pier and float landing on the east bank about 400 yards below the bridge.

(103) Small pleasure and fishing craft secure to moorings placed wherever there are sufficient depth and

swinging room in the river. The Kennebunkport **harbormaster** can be contacted through the town manager's office or the local police department.

Small-craft facilities

(104) There are several marinas and boatyards on both sides of the Kennebunk River. Most of these facilities can provide gasoline, diesel fuel, water, ice, and marine supplies, and some can make hull, engine, and electrical repairs. The largest haul-out facilities are: marine railway, 40 feet; and mobile hoist, 15 tons. Storage facilities are also available.

(105) Marine supplies and provisions can be obtained in Kennebunkport. The town has taxi service to Kennebunk with connections for bus service to other coastal and inland points.

(106) **Kennebunk Beach** is a village extending 1 mile westward of Kennebunk River entrance. Ledges extend 0.8 mile from shore southward of the village. **Great Hill,** a prominent yellow bluff at the western end of Kennebunk Beach, marks the mouth of the Mousam River. Several of the houses on the bluff are conspicuous.

(107) **Mousam River** is used by small craft with local knowledge. A fixed highway bridge, with a clearance of about 3 feet each side of the center pier, crosses the river about 0.3 mile above the mouth. There are private landings on the river, but no services.

(108) From Mousam River, a beach extends southwestward about 1.3 miles to another inlet into which **Little River** and its tributaries, **Branch Brook** and **Merriland River,** flow. A large house with a brick chimney, on a jutting point about the middle of the beach, is discernible among the other summer homes that line the beach. The inlet is not passable except for very small craft with local knowledge.

(109) **Drakes Island Beach**, extending from this inlet to the jettied entrance at Wells Harbor about 1 mile southwestward, is a resort of numerous summer homes. A foul area with many rocks awash is about 0.7 mile off Drakes Island Beach and is unmarked.

(110) **Wells Harbor**, about 6 miles west-southwestward of Goat Island Light, is used by local fishing and pleasure craft. **Webhannet River,** which flows into Wells Harbor from the southward, has no services. The harbor is protected at the entrance by two jetties marked by lights.

(111) A dredged channel leads from the sea through the jetties to an anchorage basin about 0.5 mile above the jetties. In September-October 2005, the controlling depths were 6.4 feet (7.1 feet at midchannel) in the jettied entrance channel, thence 6 feet to Buoy 4, thence 2.7 feet to the head of the project above the Town Landing. Depths of 1.6 to 6 feet were available in the northeast corner of the anchorage basin with shoaling to bare on the western side. The channel is marked by a buoy and daybeacons to the anchorage basin. It is reported that even during a moderate sea, swells break across the entrance and make entry hazardous; the south jetty should be favored.

(112) There are town piers and small-craft launching ramps on both the east and west sides of the anchorage basin at Wells Harbor. The pier on the east side has a depth of about 6 feet reported alongside its float landing, but no services. The pier on the west side has a depth of about 10 feet reported alongside its float landing; gasoline, diesel fuel, and water are available. A marina adjacent to southward is reported to have a marine railway that can handle craft up to 40 feet for engine repairs and dry open storage. A restaurant is nearby. The **harbormaster** maintains an office on the westerly pier; telephone 207–646–3236.

(113) Groceries and other services are available in the village of **Wells,** just westward of the harbor.

(114) The principal outlying dangers off these beaches are an unmarked shoal and foul area that extends about 0.5 mile off Wells Beach and has a rock which uncovers 3 feet and rocks awash on it. **Bibb Rock,** which uncovers 2 feet, about 0.8 mile off the point at the north end of Moody Beach, is marked on its east side by a buoy.

(115) The principal landmarks along this stretch of beach from Kennebunkport to Ogunquit are the large resort hotels at Bald Head Cliff; Ogunquit, Wells, and Kennebunk beaches; a church spire about 1.3 miles southward of Wells; and the standpipes at Ogunquit and Kennebunk. The numerous summer homes, some large mansions, also stand out.

(116) **Wells Beach** extends about 2 miles southward from the entrance to Wells Harbor to a bluff on which are a number of prominent homes, one of which has a conspicuous pointed cupola.

(117) **Moody Beach** extends southward 1.2 miles where it joins **Ogunquit Beach,** which extends 1.2 miles farther to the entrance of **Ogunquit River.** The river runs southward, draining the marshes behind these beaches, and enters the ocean at Ogunquit, 4.7 miles southward of Wells Harbor. Some small craft use the river above the highway bridge about 0.3 mile above the entrance, which has a 26-foot fixed span with a clearance of 6 feet.

(118) The entrance to the river is not marked, and the swells break across it making it difficult and dangerous to enter even in calm weather. There are no services, but there are restaurants, parking lot, and picnic areas on the beach.

(119) **Ogunquit** is a summer resort of historical importance, one of the beauty spots of New England. **Israels**

Head, a prominent headland, overlooks the entrance to the river on the south.

(120) **Perkins Cove**, at the mouth of **Josias River,** 1 mile southeastward of Ogunquit, is a small landlocked harbor, very popular with yachtsmen, at which a number of fishing, pleasure, and party fishing boats base.

(121) The facilities of the harbor are controlled by the village corporation, and the moorings are under supervision of the **harbormaster,** who usually can be found at the town float landing on the north side of the harbor by the footbridge.

(122) Perkins Cove is entered by a narrow entrance channel which leads to an anchorage basin at the head of the harbor, known as **Flat Pond.** In January-March 1994, the controlling depths were 6 feet in the entrance channel, thence 5 feet in the anchorage basin, except for lesser depths along the edges. The channel to the anchorage is unmarked, except for two buoys at the entrance and an approach fairway lighted bell buoy about 0.8 mile northeastward of the entrance.

(123) The harbor is a safe haven for small craft in this stretch of coast in a sudden blow, but no attempt should be made to enter once the sea has made up, as heavy swells break clear across the entrance during easterly weather, and for as long as 2 days after a heavy blow. Small craft may broach to in attempting to enter under such conditions.

(124) The harbor is crossed, just above the town float, by a wooden double bascule footbridge, which is operated by the harbormaster on request. The bridge has a channel width of 20 feet and a clearance of 16 feet.

(125) Diesel fuel by truck and water are available at the town float, which has 5 feet reported alongside. Seasonal stores, lodging, and restaurants are at the harbor. Ice, provisions, and marine supplies are also available at the harbor or at Ogunquit.

(126) Taxi and other services are available, and the main coastal highway passes a short distance from the harbor.

(127) A marine railway that can handle craft up to 40 feet is on the east bank at the town wharf. Open winter storage and use of the railway for repairs are on a do-it-yourself basis.

(128) **Bald Head Cliff**, 11 miles southwestward of Cape Porpoise, is a prominent high point on which are two conspicuous white buildings.

(129) **Mount Agamenticus** (see chart 13260), 691 feet high, is the highest and southernmost of three hills on a ridge 5 miles westward of Bald Head Cliff. The hill is a prominent landmark for vessels cruising along this section of the coast.

Chart 13283

(130) **Weare Point** (43°11.2'N., 70°35.9'W.), 2.3 miles southward of Bald Head Cliff, is a headland with several large houses on it.

(131) **Cape Neddick Harbor** is a small open bight between Weare Point and **Barn Point** about 1 mile northwestward of Cape Neddick. The entrance is marked, but the dangers inside the entrance are not marked. There is good anchorage in 9 to 30 feet in the middle of the bight, which is protected by the reefs on each side of the entrance from all but southeasterly weather. Even then there is a hole on the southwestern side where smooth water is found in 7 to 10 feet.

(132) The upper and western side is foul, and along with the Cape Neddick River, which flows into the head, dries out to about 350 yards below the fixed highway bridge. The bridge has a 40-foot fixed span with clearance of 11 feet.

(133) There are no landings, but a hard beach suitable for launching small craft from trailers is on the west side of the south end of the bridge. There is a store where provisions can be obtained, a restaurant, a picnic grove, and a campground.

(134) The entrance to the harbor is buoyed and not difficult to enter with the aid of the chart. From a position about 750 yards eastward of Cape Neddick Light, a course of **325°** carries through the entrance to an anchorage in 12 to 27 feet, about 200 yards westward of Weare Point. Use the lead if necessary to avoid getting too far up the harbor into the foul area at the head.

(135) Vessels approaching the harbor from northward or eastward should give the east shore of Weare Point a berth of about 0.3 mile to avoid the reefs.

(136) If York Harbor is crowded, or it is getting late, or a quiet, peaceful mooring for the night is desired, Cape Neddick Harbor is a fair haven.

(137) **Cape Neddick**, 14 miles southwestward of Cape Porpoise, is a prominent headland jutting out 1 mile from the coastline that terminates in a small rock islet called **Cape Neddick Nubble.**

(138) **Cape Neddick Light** (43°09'55N., 70°35'28"W.), 88 feet above the water, shown from a 41-foot white conical tower, is on the summit of the nubble; a fog signal is at the light.

(139) An overhead power cable with a clearance of 21 feet crosses the channel between the nubble and the cape. It is foolhardy for even small craft to pass through this channel, though lobster pot buoys were observed there.

(140) The cape is now almost completely covered with homes, guest houses, hotels, motels, and restaurants, but there are a few trees and brush on the summit.

Courtesy of Marblehead Sail and Power Squadron

(141) **York Beach** is a large village and much-frequented summer resort in the bights northward and southward of the cape. There are no wharves.

(142) **York Harbor**, 2.5 miles southwestward of Cape Neddick and 5.5 miles northeastward of Portsmouth Harbor entrance, is the approach to the town and summer resort of **York Harbor** on the north side just inside the entrance of the **York River,** flowing into the harbor from the westward. The harbor is used by many fishing boats and pleasure craft.

Prominent features

(143) The most important landmark when approaching York Harbor is a large stucco mansion with a red roof and stone terraces on the north side of **Godfreys Cove,** southwest of Seal Head Point. The large homes on the promontory from East Point to **Roaring Rock Point** and a white church spire at **York Village** are also prominent.

(144) **Stage Neck** is the peninsula 0.3 mile long on the north side of the harbor just inside the entrance. A lighted bell buoy marks the entrance to York Harbor.

(145) **Western Point**, on the south side of the entrance, is rocky with a few houses, while **East Point** on the north side has many houses built out to its end.

Channels

(146) The entrance to York Harbor is narrow and crooked, and leads between rocks, bare and submerged, on both sides of the channel. In 1992, natural depths of 7 to 10 feet were available to the wharves. In 1979, it was reported that the river was navigable for 7 to 8 miles for small outboard-powered craft, but larger craft and sailboats are restricted by low bridges. The channel is marked by buoys, a light, and a daybeacon to Bragdon Island, and the harbor is readily entered with the aid of the chart in clear weather and at any stage of the tide.

Anchorages

(147) In May 1996, the anchorage basins in the cove between Harris and Bragdon Islands and in the cove off the north side of Bragdon Island had depths of 8 feet. There is also limited anchorage off the service wharves at the head of the harbor. Moorings under supervision of the harbormaster extend upriver as far as Sewall Bridge, about 0.8 mile above the wharves.

(148) The town maintains guest moorings for visiting yachts in the reach below the wharves off the northwest side of Stage Neck. A town wharf is on the south bank just east of the first highway bridge. No facilities are at this landing.

Courtesy of Marblehead Sail and Power Squadron

Dangers

(149) The approach to the harbor from the fairway bell buoy about 0.6 mile eastward of the entrance is free of dangers, and all shoals close to the channel edge are marked.

(150) In closing the port coming alongshore from either northeastward or southward, give the shore a berth of at least 0.4 mile and make the fairway bell buoy off the entrance. Shoal water extending about 400 yards off East Point is marked by a buoy about 500 yards southeastward of the point.

(151) **Stones Rock**, about 1.2 miles south of the entrance, is awash and marked by a spindle; a buoy is east of the rocks. An unmarked rock, covered 11 feet, about 850 yards south-southeastward of Western Point breaks if any sea or swell is running and should be given a wide berth.

(152) On the northern side of the entrance, **Millbury Ledge** with two rocks which uncover 5 feet is unmarked. **Black Rocks,** north of the entrance, are an unmarked bare rocky ledge which uncovers 7 feet. A rock covered 5 feet, said to be plainly visible if the water is clear, is south of Black Rocks and is marked by a buoy.

(153) The ledge extending northeastward from Western Point is marked by a buoy about 200 yards northeastward of the point. These two buoys are the first pair in entering the harbor, and should be passed in midchannel, with York Harbor Entrance Leading Light 8 dead ahead on a course of **270°**.

(154) A rock covered 3 feet, part of a ledge extending 100 yards southeastward of **Fort Point,** the eastern end of Stage Neck, is marked on its south side by a buoy.

(155) **Rocks Nose**, a bare ledge extending 150 yards northeastward from the shore on the south side of the entrance channel, is marked by a buoy.

(156) A buoy marks the ledge off the southwestern extremity of Stage Neck and the sharp turn from the entrance channel up into the inner harbor. In making this turn, sharp seamanship is needed, especially on the strength of ebb, to avoid setting over to the westward and bringing up on the rock ledge covered 1½ feet which is eastward of **Harris Island;** give the daybeacon marking the east side of the ledge a good berth.

(157) The ledge off the eastern end of **Bragdon Island** is covered 3 feet and should be given a good berth when proceeding into the inner harbor. The northeast end of the ledge is marked by a buoy that also marks the turn of the river to the northwestward off the wharves.

(158) The mean range of **tide** is 8.6 feet. The **currents** are strong in the constricted sections of the channel, where the buoys are reported to tow under at times.

(159) The **harbormaster** will, on request, meet visiting craft outside the harbor and pilot them in. He can

usually be contacted through the marinas or be found about the harbor.

Bridges

(160) State Route 103 highway bridge about 1.15 miles above the entrance has a fixed span with a clearance of 15 feet. The second fixed highway bridge, **Sewall Bridge,** about 1.7 miles above the entrance, was rebuilt in 1940 as a replica of the first pile drawbridge built on the site in the colonial days of 1761. The present bridge has an imitation bascule drawspan which is not operable and has a clearance of 3 feet.

(161) About 3.5 miles above the entrance, the U.S. Highway No. 1 bridge has a fixed span with a clearance of 7 feet, and 300 yards farther upstream the twin bridges of the Maine Turnpike have fixed spans with a clearance of 7 feet.

Routes

(162) Craft entering York Harbor in daylight with the aid of the chart and following the aids should have no problems. The most difficult problem is making the sharp turn at the buoy at the southwestern end of Stage Neck.

(163) After making the bell buoy off the entrance, it is well to bring the leading light ahead on the bearing **270°** and, if at night, to run in on the intensified beam.

(164) It would be prudent, however, at night, if the sea and swell are not too heavy, to anchor in the hole eastward of Fort Point, just out of the channel in line with the two nun buoys, and wait for daylight before attempting the run into the harbor and negotiating the turn around Stage Neck.

Small-craft facilities

(165) The facilities for yachts and small craft in the harbor are full and complete. All services can be had, and ice, provisions, and supplies of all kinds are available or can be obtained on short notice. There are three service facilities along the waterfront with wharves and float landings with 8 to 12 feet reported alongside. Gasoline, diesel fuel, and water are available. Overnight berthing at the landings is permitted.

(166) A well-equipped marina and boatyard is on Harris Island in the cove westward of Stage Neck. There is a reported depth of 8 feet at the floats, and gasoline, diesel fuel, water, and electricity are available. Its marine railways can haul out sail or motor craft up to 50 feet long or 100 tons for hull and engine repairs, or dry winter storage. Marine supplies, lodging, and parking are available. Taxi and car rental service are available.

(167) Two town piers and floats are available. One is at the north end of Bragdon Island about 75 yards east of State Route 103 highway bridge. The second is on the east side of the causeway connecting Bragdon and Harris Islands, midway between them. The wharves have no services; docking is limited to 30 minutes.

Chart 13286

(168) Vessels must observe caution to avoid the offshore dangers in the northern approach to Portsmouth. **Boon Island,** 5.7 miles southeastward of Cape Neddick, is a small, low, rocky islet, marked by **Boon Island Light** (43°07.3'N., 70°28.6'W.), 137 feet above the water, and shown from a 133-foot gray granite conical tower. A fog signal is at the light.

(169) Boon Island is surrounded by deep water, but there are numerous detached ledges in the vicinity. The easternmost is **Boon Island Ledge,** 2.8 miles eastward of the light, which is awash at low water and has a lighted whistle buoy off its southeast end.

(170) Vessels should not pass between this buoy and Boon Island Light as there is a shoal area covered 16 feet between them. If passing westward of the light, give it a berth of 2 miles or more to assure staying in a depth of more than 30 feet as there is an unmarked rocky area covered 25 feet, about 1.6 miles west-southwestward of it. Depths of 26 feet are up to 1.3 miles southward of the light.

(171) **Pollock Rock**, covered 17 feet, and **Southeast Shoal**, covered 21 feet, are 0.7 mile southwest and southeastward, respectively, from Boon Island Light. **Sanders Ledge,** covered 26 feet, is about 1.2 miles south of Boon Island.

Caution

(172) U.S. Naval vessels may be operating with submarines in the area south and eastward of Boon Island. Escorting naval surface vessels usually display a red flag, or the international code flag signal **NE 2,** meaning: **You should proceed with great caution; submarines are exercising in this area.**

(173) All vessels should keep well clear of vessels displaying this signal and should obey promptly any orders that may be given by commanding officers of navy vessels.

Chart 13283

(174) Between Cape Neddick and the entrance to Portsmouth Harbor, a distance of 8 miles, the shore is indented by York Harbor, already described; Godfreys Cove, a shallow bight seldom entered; and Brave Boat Harbor.

Courtesy of Marblehead Sail and Power Squadron

Charts 13283, 13274, 13285

(175) **Brave Boat Harbor** (43°06.0'N., 70°39.6'W.), 2 miles southwestward of York Harbor, has a few private landings, but no facilities. Some local small craft were observed there, but the surf is reported to break clear across the entrance with the least sign of weather. Two old railway trestles cross the streams entering into it about 0.2 mile above the entrance. A large mansion on **Raynes Neck,** the point about 0.35 mile northeastward of the entrance, is conspicuous.

(176) **Cutts Island**, on the south side of the entrance, is connected with Gerrish Island to the south of it by a natural seawall of stones and rock thrown up by winter gales. It is conspicuous. A public beach is at the north end of the seawall.

(177) **Moores Rock**, covered 5 feet and unmarked, is about 0.5 mile eastward of the entrance to Brave Boat Harbor. A long reef which uncovers 4 feet is about 0.3 mile southeastward of the entrance.

(178) Two dangerous ledges are 2.5 miles offshore. **York Ledge,** the northernmost, covered 3 feet and 2.9 miles southeastward of York River, is marked on the east side by a buoy. **Murray Rock,** 1.5 miles south-southwestward of York Ledge, is covered 6 feet, and has a buoy off its southwest side. A lighted whistle buoy is 1.5 miles eastward of Murray Rock and southeastward of York Ledge. Between these ledges and the shore, the bottom is very broken and vessels are advised to pass outside of the lighted whistle buoy. In September 1997, a dangerous rock covered by 24 feet of water protruding from a rocky ledge was reported in about 43°03'45"N., 70°35'59"W., about 0.7 mile southeast of Murray Rock. Broken ground covered 24 to 39 feet, extends 2 miles south-southeastward of the buoy marking Murray Rock.

(179) **Portsmouth Harbor,** 37 miles southwestward of Cape Elizabeth and about 25 miles northward of Cape Ann Light, is the only harbor of refuge for deep-draft vessels between Portland and Gloucester. No large vessel should proceed northward of Kitts Rocks Lighted Whistle Buoy 2KR (43°03.0'N., 70°41.5'W.) without a pilot, as the anchorage area is limited.

(180) Portsmouth Harbor is at the mouth of Piscataqua River and is the approach to the cities of Portsmouth and Dover, and the towns of New Castle, Kittery, Newmarket, Durham, Newington, and Exeter.

(181) Several U.S. Navy activities, including the **Portsmouth Naval Shipyard** and a regional medical clinic, are on **Seavey Island** at Kittery, on the north side of the harbor opposite Portsmouth.

(182) A **Regulated Navigation Area** has been established in the vicinity of the Portsmouth Naval Shipyard on Seavey Island. (See **165.1 through 165.13 and 165.101,** chapter 2, for limits and regulations.)

(183) A moving safety zone is established surrounding tank vessels carrying Liquified Petroleum Gas (LPG)

Courtesy of Marblehead Sail and Power Squadron

while transiting Bigelow Bight, Portsmouth Harbor and the Piscataqua River. (See **165.20, 165.23 and 165.103,** chapter 2, for limits and regulations)

(184) **Restricted areas** are at the east end of Seavey Island in the cove between Clarks, Seavey, and Jamaica Islands and at the west end of Seavey Island from Henderson Point along the shore to the combined highway and railroad bridge across Back Channel. (See **334.50,** chapter 2, for limits and regulations.)

COLREGS Demarcation Lines

(185) The lines established for Portsmouth Harbor are described in **80.115,** chapter 2.

(186) **Portsmouth** is a city on the south bank of Piscataqua River about 4 miles above the entrance to the harbor.

(187) Foreign trade is in petroleum products, gypsum, frozen fish, fish products, and salt. Oil shipments in tankers, drawing as much as 35 feet, arrive frequently, except during the summer.

(188) Coastwise trade is in arrivals of oil tankers drawing up to 35 feet. The shipment of cable from Newington is of major importance.

(189) The harbor, of sufficient depth to accommodate large deep-draft ships, is open throughout the year, though vessels may be hampered somewhat in passing through the two lift bridges to deepwater berths above the city.

(190) **New Castle**, a village on the south side of the harbor and the northern part of **New Castle Island,** is reached from Portsmouth by a highway connecting the islands on the south side of the harbor. The island is of considerable importance as a summer resort.

(191) **Kittery** is a town on the north bank of Piscataqua River opposite Portsmouth.

Prominent features

(192) **Gerrish Island**, forming the east side of the harbor entrance, has many summer homes. A park and government reservation, with conspicuous buildings, are on the southwestern end. The old observation tower on the south end of the island is most conspicuous. A long pier is at the southwestern end of the island. The area just northwest of the pier is used as a bathing beach; boaters either beach their craft or anchor offshore. The park has picnic tables and other facilities.

(193) For craft approaching Portsmouth, the large hotel with a charted cupola at the southwest end of New Castle Island is prominent. Other landmarks are: the stone building and square tower of the former naval prison and the water tank on Seavey Island; Whaleback Light; the weathered buildings with conspicuous cupola of the abandoned Coast Guard station on Wood Island; and numerous standpipes, elevated tanks, church

spires, and stacks in the area, most of which are charted. The old blockhouse and parapets of **Fort McClary,** on Kittery Point, just westward of the entrance channel range lights, are also conspicuous.

(194) **Whaleback Light** (43°03.5'N., 70°41.8'W.), 59 feet above the water, is shown from a 75-foot gray granite conical tower on Whaleback Reef at the northeast side of the outer entrance. A fog signal is at the light.

(195) **Portsmouth Harbor (New Castle)** Light (43°04.3'N., 70°42.5'W.), 52 feet above the water, is shown from a white conical tower attached to a house on **Fort Point,** the northeast end of New Castle Island. A fog signal is at the light.

(196) **Portsmouth Harbor Coast Guard Station** and lookout tower are on Fort Point.

Security Broadcast System, Portsmouth Harbor

(197) The Coast Guard Captain of the Port, Portland, has established a voluntary system of radiotelephone broadcast/reporting procedures designed to give masters and pilots real-time information on marine traffic in Portsmouth Harbor. The system supplements the Vessel Bridge-to-Bridge Radiotelephone Regulations contained in 33 CFR 26 (see chapter 2), and all vessels subject to these regulations are urged to participate in the system. Nothing in these procedures shall supersede the Navigation Rules or relieve the master of the vessel of his responsibility for the safe navigation of the vessel. These recommended procedures are designed to give notice of unseen vessels, give notice of intended movement, clear VHF-FM channel 13 of traffic unrelated to navigation, and give vessels information on other vessels within the immediate vicinity.

(198) All participating vessels are requested to use VHF-FM channel 13 for listening watches and security calls, except when calling a small vessel not responding on channel 13, in which case channel 16 is appropriate.

(199) Participating vessels shall maintain a listening watch commencing 30 minutes prior to getting underway or 30 minutes prior to reaching the vicinity of Gunboat Shoal Lighted Bell Buoy 1 (43°01.4'N., 70°41.9'W.).

(200) Security calls shall be made as follows: 15 minutes prior to getting underway; when getting underway, including route; when passing Gunboat Shoal Lighted Bell Buoy 1, or from north when approaching Wood Island Lighted Buoy 2 (43°03'42"N., 70°42'06"W.), including destination if inbound; and when mooring or anchoring.

(201) Arrangements for bridge openings are made on channel 13.

(202) If a call is made to a ship or station to pass any of the above information on channel 13, an additional call is unnecessary. Example: a ship calling a bridge 15 minutes prior to getting underway to arrange for an opening.

(203) Vessels carrying passengers or cargo and not required by law to comply with Vessel Bridge-to-Bridge Radiotelephone Regulations are encouraged to monitor and respond on channel 13. During periods of low visibility, it is appropriate to follow security call procedures discussed above, except that security calls 15 minutes prior to getting underway should not be made.

(204) Portsmouth Harbor Coast Guard Station monitors VHF-FM channel 13.

Recommended minimum under-keel clearances for the Port of Portsmouth

(205) The U.S. Coast Guard, in cooperation with the Navigation Subcommittee of the Maine and New Hampshire Port Safety Forum, has established recommended minimum under-keel clearances for the Port of Portsmouth, in order to prevent groundings and to promote safety and environmental security of the waterway resources of the Port of Portsmouth. The group recommends that all entities responsible for safe movement of vessels in and through the waters of the Port of Portsmouth operate vessels in such a manner as to maintain a minimum under-keel clearance of 3 feet between the deepest draft of their vessel and the channel bottom when transiting Portsmouth Harbor and the Piscataqua River inside Kitts Rock Lighted Whistle Buoy 2KR; a minimum under-keel clearance of 1 foot is recommended at berthing areas.

(206) The Maine and New Hampshire Port Safety Forum, in cooperation with the U.S. Coast Guard Marine Safety Office, Portland, request vessels to follow the mooring recommendations for the Piscataqua River listed below.

(207) **Recommendation:**

(208) Due to the very strong ebb and flood tidal currents on the Piscataqua River and its tributaries, a mooring plan will be provided by the Portsmouth Pilots upon boarding, for the intended terminal.

(209) Vessels shifting at the dock must only do so during periods of slack water. It is extremely dangerous to attempt to shift a vessel at moorings on the Piscataqua River at any other time and should not be attempted. Masters should be particularly vigilant in minding and tending to their vessel's moorings.

(210) No vessel shall rely solely upon automatic tensioning winches while moored at any facility on the Piscataqua River.

(211) Vessels meeting **all** of the following criteria are recommended to obtain the services of a mooring master while moored on the Piscataqua River. Intentions for obtaining the services of a mooring master shall be included in the vessel's 24-hour advance notice of arrival.

(212) **Parameters for mooring master:**

(213) **Vessels meeting the maximum Length Over All (LOA) for the following terminals:**

Portsmouth-Schiller	Sprague Avery Lane	Sprague River Road
621' (189.28 meters)	648' (197.51 meters)	661' (201.47 meters)

(214) **Range of Tide:** 12 feet (3.66 meters) or greater, as per Boston HW and LW

(215) **Vessel draft:** Greater than 32 feet (9.75 meters).

(216) **NOTE:** Vessels meeting the above criteria that do not obtain the services of a mooring master must obtain permission from the U.S. Coast Guard Captain of the Port, Portland, Maine via the vessel agent or the U.S. Coast Guard Marine Safety Field Office, Portsmouth, NH.

(217) All vessels must maintain minimum under-keel clearance of 1 foot while moored at any terminal and 3 feet during transits.

(218) IMO Ship Safety Bulletin 13/95, "Safety of Ships Carrying Solid Bulk Cargoes" provides a checklist for vessels and terminals. The checklist is recommended for use by terminals and vessels conducting bulk cargo transfers on the Piscataqua River. A copy of this checklist can be obtained from U.S. Coast Guard Marine Safety Field Office Portsmouth, NH, the Portsmouth Pilots, or vessel agents.

Channels

(219) Depths of about 34 feet can be carried in the marked channel through Portsmouth Harbor to the Memorial (U.S. Route 1) Highway Bridge. From this point, a dredged marked channel leads for about 3.5 miles to a turning basin about 0.4 mile above Frankfurt Island in Piscataqua River. In September 2001, the controlling depth in the dredged channel was 27 feet to the turning basin, thence 33 feet in the basin. The entrance and harbor channels are marked by lights, lighted ranges, lighted and unlighted buoys, and daybeacons.

(220) **Portsmouth Harbor Channel Lighted Range** on Kittery Point leads into the harbor on the bearing **352°45'**. The range structures are in a narrow clearing of trees on Kittery Point. Outbound vessels are cautioned that the range lights will come into line soon after the rear light becomes visible. Vessels should commence their turn onto the range line early enough to avoid overrunning it. The rear light may be visible earlier during the winter months.

(221) **Pierces Island Lighted Range** marks the main channel to Portsmouth on bearing **266°**.

(222) A small-boat channel, privately marked by seasonal buoys, leads northerly from the main ship channel about 100 yards below the combined U.S. Route 1 Bypass highway and Boston and Maine Railroad bridge and passes under a retractable span of the railroad bridge. In 1968, the reported controlling depth in the channel was 6 feet. Clearances for the retractable span are given under bridges for Portsmouth Harbor.

(223) **Back Channel**, between Seavey Island and Kittery, is limited principally to small craft and is covered in geographical sequence in the description of the harbor features.

(224) The channel in Piscataqua River above the bridges is covered in the description of the river.

Anchorages

(225) The anchorage for medium-sized vessels is anywhere on the east and north sides of the channel between Wood Island, north of Whaleback Light, and Clarks Island, the small island on the north side about 0.8 mile above Fort Point, in 18 to 71 feet. Space is limited, however, to one medium-sized vessel northward of Fort Point.

(226) Strangers should not go above Kitts Rocks in deep-draft vessels without a pilot. Because of the strong currents and eddies in the bend around Fort Point, it is difficult for any large vessel to make the swing without the assistance of a tug. It is not advisable to proceed above Wood Island without a tug and pilot. Most large vessels awaiting tug and pilot, or favorable mooring or docking conditions, anchor temporarily between Gunboat Shoal and the lighted whistle buoy south of Kitts Rocks.

(227) With southerly wind, the best anchorage is above Fort Point on the south side of the channel in 49 to 58 feet, bottom generally clay. There is swinging room there for only one medium-sized vessel without encroaching on the channel ranges. There is no room to anchor in the channel above Clarks Island.

(228) Yachts and smaller vessels usually anchor in Pepperrell Cove, or northward of New Castle Island, southward of the range line.

(229) A **special anchorage** is off the north side of New Castle Island. (See **110.1 and 110.10,** chapter 2, for limits and regulations.)

Dangers

(230) The principal outlying dangers are marked so that no difficulty should be experienced when entering in clear weather, day or night.

(231) **Gunboat Shoal**, rocky and covered 19 feet, on the west side of the entrance about 2.2 miles southward of Whaleback Light, is marked on its northeast end by a lighted bell buoy. An area of rocks and ledges, some of

which uncover up to 5 feet, extends about 1.5 miles eastward of Whaleback Light and up to 0.6 mile offshore. They include **West Sister** which uncovers 3 feet and is marked by a buoy off its southeast end; **East Sister,** an unmarked ledge which uncovers 2 feet about 0.5 mile northeastward of West Sister; **Phillips Rock,** unmarked and covered 3 feet, about 0.2 mile southwestward of West Sister; **Horn Island,** surrounded by a drying reef; and 4-foot-high **White Island** and **White Island Reef,** southeastward of which are a number of unmarked rocks.

(232) **Kitts Rocks**, covered 11 feet, are on the east side of the channel, about 0.4 mile southward of Whaleback Light, and are marked by a lighted whistle buoy to the southward. **Wood Island Ledge,** extending 0.2 mile off **Wood Island,** is marked off its southwest end by a lighted buoy. **Stielman Rocks,** covered 2 feet, are on the west side of the entrance about 500 yards southward of Fort Point Light; they are marked by a daybeacon on the rocks and a buoy on the northeast end. **Cod Rock,** covered 17 feet, is 225 yards northwestward of Fort Point. The rock is marked by a distinct, violent eddy just before low water slack. The remaining dangers in the harbor are described in geographic sequence.

Bridges

(233) The principal bridges in Portsmouth Harbor are Memorial (U.S. Route 1) Highway Bridge, which has a lift span with clearances of 19 feet down and 150 feet up, and combined U.S. Route 1 Bypass highway and Boston and Maine railroad bridge, which also has a lift span, with clearances of 10 feet down and 135 feet up. (See **117.1 through 117.59 and 117.531,** chapter 2, for drawbridge regulations.) The bridgetender of the Memorial Highway bridge monitors VHF-FM channel 16 and works on channel 13; call sign KBK-472. The bridgetender of the combined U.S. 1 Bypass highway and railroad bridge monitors VHF-FM channel 16 and works on channel 13; call sign KAW-766.

(234) A retractable span of the Boston and Maine Railroad bridge which crosses a small-boat channel is about 150 yards to the northeastward of the lift span of the combined highway and railroad bridge. The span has a clearance of 5 feet in the closed position and is limited to 36 feet in the open position because of the fixed highway span passing above. The span is kept open at all times except for about one train per day, Tuesday through Saturday, from April 1 to November 1 each year.

(235) A fixed highway bridge, Interstate Route 95, with a clearance of 134 feet crosses Piscataqua River about 900 yards above the combined U.S. Route 1 Bypass bridge.

(236) All other bridges are described in geographic sequence.

Weather, Portsmouth and vicinity

(237) Portsmouth, located on the extreme north coast of New Hampshire, has an average annual temperature of 47.9°F (8.8°C). July is the warmest month with an average high of 79°F (26.1°C) and an average minimum of 61°F (16.1°C). January is the coolest month with an average high of 31°F (-0.6°C) and an average minimum of 15°F (-9.4°C). The highest temperature on record for Portsmouth is 101°F (38.3°C) recorded in July 1964 and the lowest temperature on record is -16°F (-26.7°C) recorded in January 1957. An average of six days each year record temperatures in excess of 90°F (32.2°C), 135 days have temperatures below freezing (0°C) and 14 days drop below 5°F (-15°C). Every month has seen temperatures below 50°F (10°C) and every month except June, July, and August has recorded temperatures below freezing (0°C).

(238) The average annual precipitation for Portsmouth is 42.8 inches (1087 mm) which is fairly evenly distributed throughout the year. Precipitation falls on about 180 days each year. The wettest month is November with 5.1 inches (130 mm) and the driest, August, averages only 2.3 inches (58 mm). An average of 18 thunderstorm days occur each year with June, July, and August being the most likely months. Snow falls on about 59 days each year and averages about 68 inches (1727 mm) each year. December, January, and February each average about 17 inches (432 mm) of snowfall each year. Seventeen inch (432 mm) snowfalls in a 24-hour period have occurred in January 1961 and again in December 1961. About 12 days each year have a snowfall total greater than 1.5 inches (38 mm) and snow has fallen in every month except June through September. Fog is present on average 168 days each year and is evenly distributed throughout the year with a slight maximum in the summer.

(239) The prevailing wind direction in Portsmouth is the west. February is the windiest month.

(240) (See page 425 for **Portsmouth climatological table**.)

Tides and currents

(241) The mean range of tide is 8.7 feet at Kittery Point and 6.4 feet at Dover Point. For predictions, see the Tide Tables.

(242) The tidal currents are strong, and special care is required especially in the restricted sections of the channel above and below the bridges. Daily predictions are given in the Tidal Current Tables.

(243) In the cove on the northwest side of Fort Point, the current is reported to frequently flow counter to the current in the harbor for a period after slack water.

Pilotage, Portsmouth

(244) Pilotage is compulsory for all foreign vessels and United States vessels under register in the foreign trade. Pilotage is optional for coastwise vessels under enrollment or license who have on board a pilot licensed by the Federal government.

(245) Pilotage is provided by Portsmouth Pilots, Inc., 34 Ceres Street Wharf, Portsmouth NH 03801, or Portsmouth Pilots, Inc., P.O. Box 72, Portsmouth, NH 03801; telephone 603–436–1209, FAX 603–436–0417. The pilot office usually monitors VHF-FM channels 16 and 13, between 0800 and 1600, daily. When tugs are required, the tugs are used as pilot boats. The tugs have green hulls, dark red superstructure, and a white letter "M" on black stacks. When a tug is not required, the pilot boat is a white 23-foot outboard launch with a cuddy cabin. The tugs monitor VHF-FM channel 16 and 13; usually work on channel 7A or 77. The launch when underway monitors channel 13. Pilots board about 1 mile south-southeast of Kitts Rocks Lighted Whistle Buoy 2KR (43°03.0'N.,70°41.5'W.) Vessels with freeboard greater than 10 feet should provide a boarding ladder 3 feet above the water. Vessel movements are coordinated with minimum current and may be canceled during periods of fog. Pilots are generally arranged for through ship's agents. A 24-hour advance notice of ETA is requested.

(246) Maximum wind for pilot boarding and transit is normally 40 knots, but may be extended to 50 knots on a case by case basis as determined by the vessel's master and the pilot. A minimum of ½ mile visibility is required for transit.

(247) As all commercial wharves now in use, except fish piers, are above the first bridge, Memorial Highway Bridge, all large vessels, including coastal tankers, take a pilot and tug from the outer anchorage.

(248) The strong currents in the narrow channel make the approach to and passage through the bridges very difficult. The largest vessels usually require two or more tugs and are taken through at or near the nearest slack water, depending on draft.

(249) A pilot to the outer anchorage is not necessary in clear weather when the aids are seen, but strangers should not go beyond Kitts Rocks at any time. In fog or low visibility no vessel of any size should proceed northward of Wood Island.

(250) The larger vessels awaiting a pilot or tide usually anchor between Kitts Rocks Lighted Whistle Buoy 2KR and Gunboat Shoal.

(251) Due to extremely strong currents on the Piscataqua River and its tributaries, vessels are recommended to follow the Coast Guard Captain of the Port mooring plans. The mooring plans are accepted as the minimum guidelines, and an even more conservative assessment of the local conditions should be made when determining whether the vessel is sufficiently moored. **All Liquefied Petroleum Gas vessels are required to comply with the mooring plans. The plans are available from the local pilots and shipping agents**.

Towage

(252) Tugs up to 3,000 hp are available at Portsmouth. They are also used as pilot boats; see Pilotage, Portsmouth Harbor, this chapter for a description of the tugs and radio frequencies used. Naval and other vessels docking at Seavey Island usually require tug assistance. Inbound laden tug/barge units carrying 70,00 barrels or more of oil and towing astern inside of Kitts Rock Lighted Whistle Buoy 2KR should engage the services of an assist tug when transitioning the mode of towing.

Quarantine, customs, immigration, and agricultural quarantine

(253) (See chapter 3, Vessel Arrival Inspections, and Appendix A for addresses.)

(254) Portsmouth is a **customs port of entry.**

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

(256) Portsmouth has several public and private hospitals.

Harbor Regulations

(257) Regulations for Portsmouth Harbor are established by the New Hampshire State Port Authority and are enforced by the **harbormaster.** The Authority maintains offices at the New Hampshire State Port Authority Marine Terminal; the harbormaster can be contacted through the Authority.

Wharves

(258) All of the commercial deep-draft facilities in use are on the south bank of the Piscataqua River between the first bridge, Memorial Highway Bridge, and Dover Point. All of the facilities have highway connections, and all except the Defense Fuel Support Point, Newington Dock, have rail connections. The alongside depths given for each facility described are reported; for information on the latest depths, contact the operator. Cargo discharge is curtailed at the discretion of the facility during severe electrical storms and at wind speeds above 50 miles per hour dependent on wind

direction. Only the major facilities are described. For a complete description of port facilities, refer to Port Series No. 1, published and sold by the U.S. Army Corps of Engineers. (See Appendix A for address.)

(259) **Granite State Minerals Dock:** about 0.3 mile above the Memorial Highway Bridge; 300-foot marginal wharf; 32 feet alongside; deck height, 18 feet; 2 acres of open storage; two crawler cranes with 2½-cubic yard clamshell buckets for combined lifting capacity of 20 tons; 2½-cubic yard front-end loader; 130-ton mobile crane; water and electrical shore power connections; receipt of salt, receipt and shipment of dry bulk cargoes and heavy lift items; owned and operated by Granite State Minerals, Inc.

(260) **New Hampshire State Port Authority, Marine Terminal Wharf:** about 0.45 mile above the Memorial Highway Bridge and immediately southeastward of the second bridge; 578-foot face; 35 feet alongside; deck height, 14 feet; 43,000 square feet covered storage and 10 acres open storage; mobile cranes up to 165 tons and fork lift trucks; receipt and shipment of containerized and conventional general cargo and shipment of scrap metals; owned by New Hampshire State Port Authority and operated by New Hampshire State Port Authority and John T. Clark and Son of New Hampshire, Inc.

(261) **National Gypsum Co., Portsmouth Plant Wharf:** about 0.9 mile above the Memorial Highway Bridge; 300-foot marginal wharf; 35 to 34 feet alongside; deck height, 14 feet; hopper conveyor-belt system for handling gypsum rock; receipt of gypsum rock by self-unloading vessels and receipt of petroleum products; owned by Gold Bond Building Products, division of National Gypsum Co. and operated by National Gypsum Co., and Northeast Petroleum Corp. of New Hampshire.

(262) **Mobil Oil Corp., Portsmouth Terminal Wharf:** about 1.75 miles above the Memorial Highway Bridge; offshore wharf; 250 feet with dolphins; 37 feet alongside; deck height, 10 feet; receipt of petroleum products; owned by Public Service Co. of New Hampshire and operated by Mobil Oil Corp.

(263) **C. H. Sprague and Son Co. Wharf:** immediately northward of Mobil Oil Corp. Wharf; 405-foot offshore wharf, 700 feet with dolphins; 37 feet alongside; deck height, 11 feet; water connections; receipt of coal and fuel oil; owned by Public Service Co. of New Hampshire and operated by C. H. Sprague and Son Co.

(264) **Simplex Wire and Cable Co. Wharf**: about 2.3 miles above the Memorial Highway Bridge; 130-foot offshore wharf, 690 feet with dolphins; 30 feet alongside; deck height, 15 feet; special equipment for loading cable; water connections; receipt and shipment of wire and submarine cable; owned and operated by Simplex Wire and Cable Co.

(265) **Defense Fuel Support Point, Newington Dock:** about 2.8 miles above the Memorial Highway Bridge; 344-foot offshore wharf; 32 feet alongside; deck height, 15 feet; occasional receipt and shipment of petroleum products; owned by U.S. Government, Department of Defense Logistics Agency and operated by New England Tank Industries of New Hampshire, Inc.

(266) **Storage Tank Development Corp. Dock:** about 2.9 miles above the Memorial Highway Bridge; 250-foot offshore wharf, 700 feet with dolphins; 38 feet alongside; deck height, 14 feet; pipelines extend to storage tanks, 900,000-barrel capacity; receipt and shipment of petroleum products and receipt of asphalt and LPG; owned and operated by Storage Tank Development Corp.

(267) **Sprague Energy Newington Terminal Wharf:** about 3.5 miles above Memorial Highway Bridge; 225-foot offshore wharf; 780 feet with dolphins; 35 feet alongside; deck height, 14 feet; receipt and shipment of petroleum products, asphalt, tallow and caustic soda; owned and operated by C. H. Sprague & Son Co.

Supplies

(268) Bunker and diesel fuel are available at the C.H. Sprague and Son Co. wharf or at the Mobil Oil Corp. wharf. Water is of good quality but high in lime and magnesia content. Provisions and marine supplies are available.

Repairs

(269) There are no facilities for drydocking deep-draft vessels in Portsmouth Harbor. The nearest for large vessels is at Boston. Several machine shops can make minor repairs to machinery. The several boatyards are capable of hauling out boats up to 85 feet in length.

Communications

(270) The port is served by a freight branch of the Boston and Maine Railroad, by bus service, both local and interstate, and taxi service. Charter and excursion boats operate from the harbor, and there is ferry service in summer to the Isles of Shoals.

Small-craft facilities

(271) There are wharves, boatyards, marine railway services, and marinas in the harbor, which are described in geographic sequence with the description of the harbor that follows.

(272) **Little Harbor** is on the west side of the entrance to Portsmouth Harbor, 0.8 mile westward of Whaleback Light. Vessels should not attempt to enter in bad southeasterly weather when the sea breaks across the entrance. The entrance is between two submerged

Courtesy of Marblehead Sail and Power Squadron

breakwaters, the northern of which is marked on the outer end by **Jaffrey Point Light 4** (43°03.3'N., 70°42.8'W.), 22 feet above the water and shown from a skeleton tower with a red triangular daymark. A buoy marks the outer end of the southern breakwater. A marked channel leads from outside the breakwaters to a marina at Wentworth By-the-Sea, a resort hotel; an anchorage area is on the south side of the harbor. In March 2001, the controlling depth in the channel was 9.7 feet to the marina, thence depths of 7 to 10 feet were in the eastern half and 3 to 5 feet were in the western half of the harbor's anchorage area. A limited anchorage only for very small craft is in the channel above the inner buoy.

(273) **Frost Point**, on the south side of the entrance to Little Harbor, is part of Odiornes Point New Hampshire State Park. A launching ramp is at the park.

(274) A highway bridge across Little Harbor has a 29-foot bascule span, manually operated, with a clearance of 12 feet. (See **117.1 through 117.59 and 117.699,** chapter 2, for drawbridge regulations.)

(275) Wentworth By-the-Sea is a large and conspicuous white hotel on the north side of Little Harbor. The hotel has a marina. Reported depths are 15 feet in the approach and 12 feet alongside. Berths with electricity, gasoline, diesel fuel, water, ice, marine supplies and pumpout facilities are available. Hull and engine repairs can be made. The marina monitors VHF-FM channels 16, 68, and 71. A charter fishing boat operates from the marina in summer.

(276) A narrow thorofare, partially dredged and marked by buoys, connects the northwestern end of Little Harbor with Portsmouth Harbor. The dredged section of the thorofare extends from just below the highway bridge across Little Harbor to a point about 0.8 mile above the bridge. Above this point, the thorofare leads between Shapleigh Island and Goat Island into Portsmouth Harbor. In October 2002, the controlling depths in the dredged section were 6 feet to the confluence area with Sagamore Creek channel, except for shoaling to 2.7 feet in the southwest section of the confluence area south of Buoy SL, thence 4.8 feet northward to the end of the dredged section. The thorofare has a number of private float landings. A highway bridge with a 48-foot fixed span and a clearance of 14 feet crosses the thorofare between Shapleigh Island and Goat Island.

(277) Portsmouth Harbor can also be reached through another part of the thorofare which leads westward of **Shapleigh Island** and **Pierces Island** from above the dredged section. Two fixed highway bridges cross it. State Route 1B highway bridge from Shapleigh Island to **Frame Point** has a clearance of 10 feet. The other bridge from Pierces Island to the Portsmouth mainland

has a clearance of 16 feet. Depths through this part of the thorofare are about 1 foot. A bare spot and a dangerous rock, which uncovers, are in midchannel about 0.3 mile and 0.2 mile southward of the first bridge, respectively; the chart is the guide. The entrance to the thorofare from Portsmouth Harbor is marked by buoys.

(278) **Sagamore Creek** empties into Little Harbor from the westward, about 0.2 mile above the highway bridge across the harbor. The creek is entered by a marked dredged channel which leads to a highway bridge 0.8 mile above the entrance; an anchorage basin is about 0.3 mile above the entrance. In October 2002, the controlling depths were 2.9 feet in the dredged channel to the bridge with 6 feet in the anchorage basin. The creek has considerable small-craft activity.

(279) A marina is on the south side of Sagamore Creek, about 0.5 mile above the mouth. Depths of 3 to 6 feet are alongside the floats. Berths with electricity, gasoline, guest moorings, and a small-craft launching ramp are available. A 10-ton and a 25-ton mobile hoist at the marina can handle craft up to 55 feet in length for hull and engine repairs and open and covered winter storage. Ice, provisions, and marine supplies can be obtained. Party fishing boats operate from the marina daily in the summer. A restaurant is on a pier close eastward.

(280) The fixed highway bridge crossing the creek 0.8 mile above the entrance has a clearance of 7 feet and a center pier about midchannel. A radio repair facility is at the bridge. An overhead power cable with a reported clearance of 16 feet crosses the creek about 750 yards above the bridge. There are several private landings on the creek.

(281) **Pepperrell Cove** is on the eastern side of the harbor, northeastward of Portsmouth Harbor Light, and on the north side of Fishing Island, which is grassy. The cove is subject to shoaling and has depths of about 7 to 11 feet. It is mainly used by fishing vessels, yachts, and small craft. A buoy northwestward of Fishing Island marks the entrance to the cove.

(282) **Kittery Point**, a village on the north side of the cove, has a public wharf and float landings with 12 feet reported alongside. Gasoline and water are available at the float, and ice, provisions, and marine supplies are available at the wharf. A small-craft launching ramp is alongside the wharf. The Pepperrell Cove Yacht Club, also at the wharf, has a float landing on the east side of the wharf and maintains guest moorings.

(283) Moorings in the cove are under the supervision of the **harbormaster,** who can be found at the landing or contacted through the yacht club, market, or local police.

(284) **Chauncey Creek**, which empties into the east side of Pepperrell Cove, has its entrance between Gooseberry Island and **Phillips Island** and extends about 1.2 miles eastward between Gerrish Island and the mainland. The creek is crossed by an overhead power cable with a reported clearance of 40 feet and a fixed bridge. There is considerable small-craft activity in the creek, which dries in its upper half.

(285) **Clarks Island**, close southeastward of Seavey Island, is joined with Seavey Island by a rock-fill causeway. The island is marked on its south side by a light. The cove is a restricted area. (See **334.50**, chapter 2, for limits and regulations.)

(286) **Hick Rocks**, a drying ledge with sections that uncover 11 and 7 feet, extends 350 yards from the southwest end of Kittery Point and is marked by a daybeacon on the ledge and by a buoy at its southern end.

(287) **Back Channel**, with its eastern entrance between Clarks Island and Hick Rocks, extends westward between Seavey Island and the Kittery mainland. It rejoins Piscataqua River westward of Badgers Island. There are landings for small craft and several wharves with depths of 8 to 9 feet which are no longer used commercially except for some fishing. A town wharf and float landing are about 125 yards westward of the westernmost bridge to Seavey Island.

(288) The western approach, with local knowledge, is between Badgers Island and Wattlebury Island on the northwest, and Seavey Island on the southeast, or, for small craft, northward of Seavey Island through Back Channel if coming from eastward. This approach is restricted by the clearance under the two bridges to the naval shipyard on Seavey Island. The easterly one, a highway bridge, has a fixed span with a clearance of 8 feet, at the center; and the westerly one, a combined highway and railroad bridge, has a fixed span with a clearance of 7 feet. The navigation channel through the east bridge is reported to be northward of the center pier, and through the west one under the second span from the south end of the bridge.

(289) Back Channel has several dangers and is used principally by small craft and fishermen. It is marked in the easterly half by buoys.

(290) **Spruce Creek** empties into the north side of Portsmouth Harbor at the eastern end of Back Channel. The creek has a narrow unmarked channel with a least depth of 12 feet for about 1.2 miles above the entrance, and lesser depths shoaling gradually to 1 foot or less to a point about 0.8 mile farther upstream. The creek dries out about 0.2 mile below the dam about 2 miles above the entrance at the fixed highway bridge of the main coastal highway, U.S. Route 1. Extensive mudflats border the channel for most of its length.

(291) Just above the entrance, State Route 103 highway bridge, a fixed span with a clearance of 6.8 feet, crosses the creek and joins Kittery Point with Kittery. About 0.2 mile above this bridge, the remains of an old railway trestle cross the creek; some of the trestle and its piling have been removed from the channel; horizontal clearance at the bridge is 24 feet. The creek has private landings, but no services.

Small-craft facilities in Portsmouth Harbor

(292) Portsmouth Yacht Club is on the north side of New Castle Island close westward of Salamander Point. Reported depths of 9 feet are at its float landings at which gasoline, diesel fuel, water, ice, and electricity are available. Guest moorings are maintained by the club, and other moorings in the special small-vessel anchorage are available for hire.

(293) A boatyard in the cove westward of the club has a marine railway that can haul out craft up to 30 feet in length for repairs or winter storage. The **harbormaster** for Portsmouth and New Castle can be reached through the yacht club or local police.

(294) Prescott Park Wharf is a public facility on the south bank of Piscataqua River, about 100 yards eastward of the Memorial Highway Bridge. Depths of 5 to 15 feet are reported alongside the float landings. Berthing for periods not to exceed 24 hours is available to small craft.

(295) There is a boat repair and storage yard in Kittery at the eastern end of Back Channel, northeastward of **Jamaica Island.** Its marine railway can haul out craft up to 60 feet long or 80 tons for hull and engine repairs or dry open or covered storage. Water, ice, provisions, and most marine supplies can be obtained. Another yard with a machine shop is on the south side of Badgers Island west of the bridge. Water is available at its 100-foot pier, which has a depth of 11 feet reported alongside. Two marine railways can handle craft up to 65 feet in length for repairs or storage. The yard maintains guest moorings and permits overnight berthing. Provisions, electricity, diesel fuel by truck, and most marine supplies can be provided.

(296) The Pepperrell Cove Yacht Club and the other facilities in Pepperrell Cove, Chauncey Creek, and Sagamore Creek were covered in the description of those places. The small-craft facilities on Piscataqua River above Portsmouth are covered in geographic sequence with the description of the river which follows.

Chart 13285

(297) The **Piscataqua River,** above Portsmouth, forms the approach to Salmon Falls, Cocheco, Bellamy, Oyster, Lamprey, and Squamscott Rivers. It is also the approach to the towns of Newington, Durham, Newmarket, and Exeter, and the city of Dover; all have rail freight service.

(298) The river has ample depth for large vessels for about 3.5 miles above the second lift bridge at Portsmouth to its confluence with its western branch at the fork at Dover Point. Most of the dangers in this section of the river are marked.

(299) The main river continues northward for 3.5 miles to the confluence of the Salmon Falls and Cocheco Rivers, both of which are described later.

(300) The Piscataqua River is buoyed to a point about 2.5 miles above Dover Point, and its western branch in Little Bay is marked for about 4.8 miles above Dover Point to a point in Great Bay, about 1 mile above Adams Point in Furber Strait. The western branch, Little and Great Bays and their tributaries are also described later in the text.

(301) The channels in all the tributary rivers are narrow, crooked, shoal at the heads, and unmarked; local knowledge is necessary to navigate them.

(302) Some of the buoys in the river are reported to tow under sometimes in the strong currents, and, in particular, Buoys 13 and 16, which mark extensive shoals extending from the west and east banks, respectively, in the vicinity of Dover Point. A number of wooden pile dolphins marking the southern and western edges of the shoal extending from the east bank are covered at high water and reported to be dangerous to small craft.

Currents

(303) General navigation throughout the entire length of the Piscataqua River system is severely hampered by rapid tidal currents. The velocities of these currents differ at various locations because of the irregularities in the width and depth of the river and its tributaries.

(304) The maximum average velocity in the river occurs off Nobles Island and off Dover Point at the entrance to Little Bay, and amounts to over 4 knots on the ebb. For predictions, see the Tidal Current Tables.

(305) The irregularities of width and depth plus the abrupt directional changes of course result in changes in the direction of the currents which at some locations do not coincide with the direction of the channel and cause hazardous crosscurrents.

(306) As a result of the combination of rapid tidal currents and hazardous crosscurrents, navigation of deep-draft vessels is limited to the 3-hour period from 1.5 hours before to 1.5 hours after slack water.

(307) The harbor pilots indicate that deep-draft vessels proceeding to the wharves above the lift bridges usually require more than one tug.

(308) Pilots and tugs can be obtained at Portsmouth. Traffic above Dover Point is confined to yachts, fishing boats, and other small craft.

(309) **Spinney Creek**, about 0.1 mile above the I–95 bridge, is crossed by a causeway dam, with culvert, about 300 yards above its entrance. The cove thus formed, marked on the south side of the entrance by a lighted buoy, is a snug haven for small craft out of the strong currents of the river.

(310) The east bank has several private float landings. A boatyard and marina on the northwest bank of the cove has a marine railway that can haul out craft up to 60 feet in length for hull and engine repairs, or dry open or wet winter storage. Gasoline, electricity, and water are available at the floats which have 12 to 25 feet reported alongside. Diesel fuel can be obtained by truck. The pier has a snack bar, and ice, provisions, and some marine supplies can be obtained. There is good anchorage in the cove in up to 25 feet, soft mud bottom. The yard has a small-craft launching ramp.

(311) On the west bank of the river, about 0.7 mile westward of the entrance to Spinney Creek, are two wharves. The lower one is the Mobil Oil Co. Wharf, and the upper one is the C. H. Sprague and Son Co. Wharf. These wharves were described earlier in this chapter under Wharves, Portsmouth Harbor.

Caution

(312) Mariners are advised to exercise caution when approaching these wharves as strong currents tend to sweep toward them. Also, the channel at this point may be reduced in width when large tankers drawing up to 35 feet are alongside these wharves.

(313) All vessels except the smaller tankers usually have the assistance of more than one tug when maneuvering the area.

(314) Vessels should exercise caution and pass this area with very little headway to avoid interference with or damage to the moored vessels or installations when unloading operations are in progress.

(315) An overhead power cable with a clearance of 165 feet crosses the river about 0.8 mile west-northwestward of the entrance to Spinney Creek.

(316) The Simplex Wire and Cable Co. Wharf, about 0.5 mile upstream of the C. H. Sprague and Son Co. Wharf, and the other deepwater wharves farther upstream were described earlier in this chapter under Wharves, Portsmouth Harbor.

(317) Prominent on this section of the river are the elevated tanks at the cable and gypsum plants, the coal transporter on the C. H. Sprague and Son Co. Wharf, the powerplant and its lighted stack, 0.4 mile west-northwest of the Sprague Wharf, and the U.S. Route 4 highway bridges crossing at Dover Point.

(318) From **Dover Point** the river extends 3.5 miles to the confluence of Salmon Falls and Cocheco Rivers.

(319) On the east side of Dover Point, **Hilton State Park** has a pier, float landing, gravel-surfaced ramp for launching small craft from trailers, special parking facilities for cars and boat trailers, and picnic areas. Water is available at the float; and restaurants, lodging, and telephones are nearby.

(320) About 1.9 miles northward of Dover Point, on the west bank, is a boatyard and marina with space for transients. A marine travel lift can handle craft to 35 tons and 65 feet in length. Both open and indoor winter storage is available. Marine supplies, professional marine services, a fuel dock and restaurant are also available.

(321) **Sturgeon Creek**, on the east bank about 2 miles north of Dover Point, dries out at low water and is foul. Small craft have been known to moor in the narrow crooked channel. There are some private landings on the creek, but no service facilities. A fixed bridge crosses the creek about 0.5 mile from the entrance.

(322) Piscataqua River is buoyed to about 2.5 miles north of Dover Point and has a fairly deep and clear channel for 1.8 miles in midriver. Above that point the river is unmarked and shoals gradually. About 3.2 miles north of Dover Point, overhead power cables crossing the river have a clearance of 65 feet.

(323) About 4 miles above Dover Point, Piscataqua River divides at a confluence known locally as **Three Rivers,** the north fork continuing northward as Salmon Falls River and the northwest fork as Cocheco River.

(324) **Salmon Falls River** is said to be navigable for small craft for about 3 miles to just below **South Berwick**, Maine. The channel is narrow, crooked, and unmarked. About 0.9 mile above its mouth, it is crossed by a highway bridge which has a 36-foot fixed span with a clearance of 5 feet. In 1970, no small-craft activity was observed on the river.

(325) **Cocheco River** has a crooked channel from Piscataqua River to the head of navigation at a dam at the city of **Dover,** about 10 miles above Portsmouth. In 2000-May 2002, the midchannel controlling depth was 4.1 feet to **Lower Narrows**. At and above Lower Narrows, and through **Upper Narrows** to the head of navigation at the dam, mariners are advised to consult local knowledge for channel conditions. The channel is privately marked with stakes.

(326) There is no commercial traffic on the river, but there is small-craft activity. A marina is on the north bank of the river, about 0.5 mile below the dam; hull and outboard engine repairs can be made; and gasoline, water, ice, and some marine supplies are available. Depths of 6 feet are reported alongside the marina's float. Meals and lodgings are available nearby.

(327) A number of overhead power cables cross Cocheco River; minimum clearance is 34 feet.

(328) **Little Bay**, the lower section of the western branch of Piscataqua River, is crossed at **Dover Point** by U.S. Route 4 twin highway bridges, which have fixed spans with a clearance of 46 feet for a middle width of 100 feet and 33 feet for a channel width of 200 feet.

(329) Little Bay extends about 1.7 miles westward from its confluence with the main river, as far as **Fox Point.** It then trends southward to a junction off Adams Point in **Furber Strait** with **Great Bay,** the upper section of the western branch, about 3.8 miles above U.S. Route 4 highway bridges.

(330) Most of the important dangers in Little and Great Bays are marked, and a buoyed channel can be followed from the mouth to a point in Great Bay about 0.35 mile above Furber Strait.

(331) Little Bay is deep and generally clear in the middle as far as **Goat Island,** but there are several unmarked shoal spots up to that point, and the edges are shoal with drying flats extending 200 to 300 yards offshore in places.

(332) Just inside the entrance to Little Bay on the west side of Dover Point, there is a marina where gasoline, water, storage facilities, marine supplies, a small-craft launching ramp, and a 1½-ton forklift are available. Engine repairs can be made.

(333) A large marina, protected on its westerly side by a stone breakwater, is on the south bank of Little Bay, about 0.4 mile westward of U.S. Route 4 highway bridges. Depths of 9 feet are reported alongside the floats. Berths with electricity, gasoline, diesel fuel, ice, water, marine supplies, a small-craft launching ramp, storage facilities, restaurant, and professional marine services are available. A 35 ton travel lift handles vessels to 65 feet.

(334) **Bellamy River**, flowing into Little Bay from northward, has a reported depth of less than 4 feet in a narrow, crooked, and unmarked channel for about 1.4 miles above the U.S. Route 4 highway bridge across the mouth which has a fixed span with a clearance of 11 feet.

(335) Local knowledge is necessary to keep in the narrow unmarked channel, which is seldom used except by small craft. An overhead power cable crosses the river about 2.4 miles above the bridge with a clearance of 52 feet.

(336) **Oyster River**, which flows into Little Bay westward of Fox Point, has a narrow, crooked, and unmarked channel, bare in places at low water, to the village of Durham, 8.2 miles above Portsmouth.

(337) **Durham,** site of the University of New Hampshire, has many historical colonial connections. There are several private landings, including the University of New Hampshire Sailing Club, but no service facilities. Local knowledge of the river is essential to its passage.

(338) **Great Bay**, a large expanse mostly of mudflats about 2 miles long and 3 miles wide, is the upper section of the western branch of the Piscataqua River. Into it flow the Lamprey and Squamscott Rivers. Deep water extends up the middle of the bay for about 1 mile above **Adams Point** in Furber Strait.

(339) From that point a crooked, unmarked, and somewhat foul channel leads to the mouths of the two rivers. Some small-craft activity was noted about the shores of the bay in 1970, but there were no service facilities.

(340) The University of New Hampshire's Jackson Estuarine Laboratory is on Adams Point. The two-story red brick laboratory building is prominent. The float landing at the facility has a depth of 6 feet reported alongside, but no services. A rock, covered 3 feet, about 70 yards east of the landing, should be avoided.

(341) A public small-craft launching ramp is about 0.3 mile northward of Adams Point.

(342) The **Great Bay National Estuarine Research Reserve**, a Marine Managed Area (MMA), includes the waters of Great Bay and a portion of Little Bay. (See **MMA 9-1**, Appendix C, for additional information.)

(343) **Lamprey River** has a depth of about 2 feet in a narrow, crooked, and privately marked channel to the village of **Newmarket,** 12 miles above Portsmouth. Small craft navigate the river, and local knowledge is necessary to its passage. Much of the river is reported to dry at low water, but there is always a narrow channel in which small craft can, and do, get through.

(344) There is a marina and boatyard on the west bank just below the dam and mill which straddle the river at the village. Depths of 8 feet are reported alongside the floats; gasoline and water are available. A 3½-ton mobile hoist can handle craft up to 30 feet for hull and engine repairs. Boats up to 30 feet can be built. Provisions and other essentials can be obtained in the village.

(345) There is room and depth for small craft to anchor off the marina.

(346) An overhead power cable crossing the river at the Lower Narrows has a clearance of 54 feet.

(347) **Squamscott River**, which flows into the western end of the head of Great Bay, had, in 1979, a depth of about 3 feet to **Oxbow Cut.** From there to the town of Exeter, about 16.5 miles above Portsmouth, the channel is reported to dry in places. Local knowledge is advisable to navigate the river to the head of navigation at the dam at Exeter.

(348) **Exeter** is the site of Phillips Exeter Academy and a town of antiquity and colonial historical importance. The buildings of the academy and public buildings of the town are impressive. There is a stone launching ramp for small boats at the town. During the spring,

summer, and fall, the river from the launching ramp to the State Route 101 Bypass bridge is used extensively by the academy rowing team. Caution should be exercised while navigating in this area.

(349) Three bridges cross the river northward of Exeter. The Boston and Maine Railroad bridge, 0.8 mile above the mouth, has a 30-foot fixed span with a clearance of 5 feet. State Route 108 highway bridge, 1.9 miles above the mouth, has a fixed span with a clearance of 9 feet. In November 2000, a replacement bridge with a fixed span and a design clearance of 12 feet was under construction just north of the existing State Route 108 bridge. State Route Bypass 101 highway bridge just south of Oxbow Cut has a fixed span with a clearance of 26 feet.

(350) Overhead power cables crossing the river about 0.7 mile and 3 miles, respectively, south of the railroad bridge have a minimum clearance of 50 feet. In 1979, some fishing and pleasure craft activity was noted on the river at the second bridge where there is a ramp for launching small craft from trailers at the east end, north side of the bridge.

Charts 13283, 13274

(351) From Portsmouth Harbor entrance for 5 miles to Rye Ledge, the coast has a general southwesterly trend with no marked indentations. It presents the appearance of a succession of sand beaches separated by ledges extending out about 0.5 mile with occasional hotels and many summer homes back of the high-water line.

(352) **Odiornes Point** (43°02.5'N., 70°42.8'W.), is about 0.8 mile south of Jaffrey Point on New Castle Island. The point is part of Odiornes Point New Hampshire State Park. A launching ramp is on the Little Harbor side of the park. About 0.7 mile southward of Odiornes Point is a conspicuous round concrete observation tower. This is an outstanding landmark for vessels approaching Portsmouth or Little Harbors from the southward.

(353) **High Rock**, covered 2 feet, and **Pulpit Rock** and **Seal Rocks,** which uncover 6 and 3 feet, respectively, are part of a foul area extending about 0.4 mile offshore southward of Odiornes Point. They are unmarked.

(354) Cruising small craft approaching Little Harbor or Portsmouth from the southward, when passing inside Gunboat Shoal, should keep at least 0.7 mile offshore in order to avoid this area, before coming up to Portsmouth Harbor Channel Range.

(355) **Concord Point** is about 3 miles southwestward of Whaleback Light. **Foss Ledges,** which uncover 3 feet, extend 0.5 mile offshore from the point and are marked by a buoy at the outer end.

(356) **Rye Harbor**, 4.2 miles southwestward of Whaleback Light, is a small cove used by pleasure and fishing boats. A stone breakwater extending southward from **Ragged Neck Point** is marked at the end by a light. Another breakwater extends northeastward from the point at the south side of the entrance to Rye Harbor. These breakwaters are about 6 feet above high water. A rocky ledge, covered 3½ feet, extends to within 10 feet of the entrance channel on the south side and is marked by buoys. A lighted whistle buoy marks the approach about 0.75 mile southeastward of the harbor entrance. A dredged channel leads through the breakwaters to anchorage basins on the north and south sides of the channel and State anchorage at the western limit. In June 2002, the controlling depths were 7.3 feet in the left half of the channel and 5.6 feet in the right half with shoaling to 4.5 feet at the end of the channel, thence depths of 5.0 to 6.0 feet in the north anchorage, thence depths of 7.1 to 8.0 feet in the south anchorage, except for shoaling to bare near the southeastern corner, thence a depth of 8.0 feet in the State anchorage, except for shoaling to 3.2 feet at the southwestern edge.

(357) About 500 yards westward of the north breakwater, a stone jetty extends about 150 yards in a southwesterly direction from the north side of the harbor. Rye State Park includes Ragged Neck, the north side of the harbor, and the head which has been diked and backfilled to form a public landing. Two State piers, the southerly one for commercial vessels and the northerly for pleasure craft, are at the landing. There are reported depths of 7 to 8 feet at the piers. The northerly pier has float landings with over 200 feet of berthing space. Both piers and floats are floodlighted at night, and water and electricity are available. The landing has a parking area.

(358) Water is available at the floats of a service wharf on the south side of the harbor; depths of 6 feet are reported alongside the floats. Party fishing boats and a charter fishing boat are available for hire at the wharf.

(359) The **harbormaster,** who can be contacted by calling (603) 431-1779 or (603) 436-8500, controls and assigns the moorings in the harbor. Occasionally some guest moorings become available. The harbor is small and congested, but safe for strangers attempting to enter during heavy easterly weather.

(360) **Lockes Neck (Straw Point)**, 0.5 mile south of Rye Harbor, is marked by a prominent white flagpole. **Rye Ledge** is 1.2 miles southward of Lockes Neck. The ledge, partly bare at high water, extends 0.4 mile from shore and is unmarked. The buildings and control tower of an Air Force installation on shore northwestward of the ledge are very conspicuous.

(361) **Isles of Shoals**, about 5 to 6 miles offshore and about the same distance southeastward of Portsmouth Harbor entrance, consist of a group of eight main

Courtesy of Marblehead Sail and Power Squadron

islands and a number of islets, rocks, and ledges. They extend about 3 miles in a northeast-southwest direction, and on a clear day can be seen for 10 miles. The islands first drew attention in 1614 when Captain John Smith on one of his voyages of exploration northward from the Jamestown Colony drew a chart of the New England Coast and named the islands the Smith Isles. However, the group had been known as the Isles of Shoals sometime before his arrival.

(362) Earlier, fishermen, mostly from England, had found it profitable to sail from home in early spring and return in the fall with rich cargoes of fish caught and cured at the isles. The isles are now frequented by fishermen and summer visitors, but only a few winter residents inhabit the isles in winter. Three of the islands, Star, Lunging, and White, are within the political jurisdiction of the town of Rye, New Hampshire; the others, Cedar, Smuttynose, Malaga, Appledore, and Duck, are in the town of Kittery, Maine. The State boundary line passes through the center of Gosport Harbor and between Star and Cedar Islands.

(363) **Gosport Harbor**, formed by breakwaters joining Star, Cedar, Smuttynose, and Malaga Islands of the group, is used as an anchorage by local fishermen, yachts, and sometimes by small coasting vessels seeking shelter. It offers protection from all but westerly winds; however, the bottom is reported to be rocky and foul and caution should be exercised in strong winds. A diesel-powered ferry carries passengers, mail, and supplies from Portsmouth to the 200-foot stone wharf on the north side of Star Island.

Prominent features

(364) **Isles of Shoals Light** (42°58.0'N., 70°37.4'W.), 82 feet above the water, is shown from a 58-foot white conical tower with covered way to a dwelling on the south end of **White Island,** the southernmost island of the group. A fog signal is at the light. The light covers the entire horizon, but is obscured by the houses on the island to the northward of it.

(365) The more prominent landmarks are the large white hotel and other buildings around it, and a flagpole on Star Island; a former Coast Guard station with cupola, an old tall concrete observation tower, three radio masts, and five old abandoned stone houses on Appledore Island; and a house and a flagpole on Lunging Island.

Channels

(366) Several channels between the islands lead into Gosport Harbor and are mostly deep and clear. The narrow channel between Appledore and Smuttynose Islands has a depth of 20 feet, though there is an unmarked 12-foot spot in its eastern approach. A

fairway bell buoy marks the western approach to Gosport Harbor.

Dangers

(367) Ledges surround most of the islands, but most of the detached shoals are marked. **Cedar Island Ledge,** 0.4 mile southeastward of Cedar Island, uncovers 4 feet and is marked by a buoy. It should be given a berth of at least 0.5 mile.

(368) **Anderson Ledge**, which uncovers 4 feet and is marked by a buoy off its south side, is about 1 mile east-southeastward of Isles of Shoals Light. The ledge, the outermost danger, is about 200 yards in diameter and has deep water around it.

(369) **Halfway Rocks**, a ledge which uncovers 2 feet, marked on its west side by a buoy, is in midchannel between Star and Lunging Islands. An unmarked rock, covered 6 feet, is midway between the ledge and Star Island.

(370) Bare **Square Rock** and a ledge which uncovers 3 feet, both unmarked, are off the west shore of Lunging Island.

(371) **Appledore Ledge**, covered 7 feet and marked on its west side by a buoy, is off the northwest end of Appledore Island. An unmarked 27-foot spot is about 500 yards off the north end of the island, and a 12-foot spot is off the southeast shore.

(372) **Southwest Ledge** and **Jimmies Ledge,** both drying ledges, and bare **Mingo Rock** and **Eastern Rocks** are off the 18-foot-high bare **Duck Island.** A **danger zone** of a naval target area is centered on **Shag Rock** off the east side of the island. (See **334.40,** chapter 2, for limits and regulations.)

(373) All dangers surrounding Isles of Shoals can be avoided by passing 0.5 mile to westward and 1.5 miles to eastward.

(374) Trawlers and other vessels conducting bottom operations within a 6.7-mile radius seaward of Isles of Shoals Light should exercise caution because of Jet Assist Take-Off racks and associated debris on the ocean floor.

(375) **Star Island**, the most important of the group, is the site of many religious conventions and seminars held in the hotel. There are many points of historical interest on the island. An old stone church, a graveyard, a 40-foot memorial obelisk, and a monument to Captain John Smith are near the south central part of the island. In clear weather Boon Island, Mount Agamenticus on the mainland, and even Cape Ann, 20 miles to the southward, can be seen from the island.

(376) **Appledore Island**, the largest of the group, has a former Coast Guard station, an old concrete observation tower on the highest part of the island, three radio towers, and five abandoned stone houses on the west side. Cornell University's Shoals Marine Laboratory maintains a small wharf on the west side of the island. A landing can also be made in Babbs Cove on the west side at the old Coast Guard boathouse. The laboratory maintains a picnic ground; fires are prohibited.

(377) **Cedar Island** with four houses on it and **Smuttynose Island** with three are northward of Star Island. **Haley Cove,** formed by a stone breakwater joining Smuttynose Island to **Malaga Island,** is occasionally used by recreational boaters in summer. Boats with over 1-foot draft should not enter Haley Cove because of reported uncharted rocks in the entrance channel. The boats lie aground at low water. There are no piers or moorings.

(378) **Lunging Island**, a bare low rocky islet about 0.5 mile west of Star Island, has a refuge hut on it.

Charts 13278, 13274

(379) From **Fox Hill Point** (42°57.9'N., 70°46.2'W.) to Merrimack River entrance, there are about 9 miles of sandy beaches, several rocky headlands, and offlying reefs and ledges up to 1 mile from shore. A large house with three chimneys on Fox Hill Point is very prominent. Summer resorts line the beaches, and hotels and prominent summer homes are on the headlands. Salt marshes between the beaches and the coastal ridge about 2 to 2.5 miles westward are drained by small rivers, most of which flow into the inlet at Hampton Harbor.

(380) **Little Boars Head** is a yellow bluff 7 miles southwestward of Whaleback Light. A summer resort of the same name extends over 0.5 mile northeastward from the bluff; a large mansion on the head is conspicuous. A ledge, awash at low water, is about 0.4 mile eastward of the head. A buoy, about 1 mile east-southeastward of the head, marks the ledge and the broken and foul ground off it.

(381) **Great Boars Head** (42°55.1'N., 70°47.7'W.) is a bluff point making out 0.3 mile between North Beach and Hampton Beach, and 9.5 miles southwestward of Whaleback Light. The summer resort of **Hampton Beach** extends southward from the point.

(382) **Hampton Harbor**, about 10 miles southwestward of Portsmouth Harbor and 1.5 miles southward of Great Boars Head, is an inlet formed by the confluence of **Hampton River** and **Blackwater River** and other rivers, sloughs, and creeks that drain the extensive area of salt marsh to the westward of Hampton, Seabrook, and Salisbury Beaches.

(383) The harbor is principally an anchorage for numerous pleasure craft and a considerable number of party

Courtesy of Marblehead Sail and Power Squadron

and charter hire fishing boats which operate from the harbor from late spring to early fall. There is also some year-round fishing activity.

(384) The entrance to the inlet is between two rock jetties. The outer part of the south jetty is submerged. A daybeacon is on the north jetty, and a daybeacon is off the end of the south jetty.

Prominent features

(385) The most prominent landmarks approaching the harbor are the pavilion and bath houses of Hampton Beach State Park on the north side of the entrance, a tank at the north end of Hampton Beach, the operating tower of the bridge crossing the inlet, and the numerous buildings along the beaches north and south of the entrance. It is reported that the buildings of the Seabrook Nuclear Power Station are visible behind the beach.

Channels

(386) Hampton Harbor is entered by a dredged entrance channel, which leads southwestward of the shoals off the north side of the entrance, to a highway bridge, thence to two privately dredged harbor channels, one leading northward to an anchorage basin off the marina and the other leading southward to the Public Service Company of New Hampshire barge pier on the eastern side of the harbor channel, thence to a turning basin off the pier at Seabrook. In October 2003, the controlling depth was 5.5 feet (6.4 feet at midchannel) in the channel to the bridge; thence in 1983, 4 feet in the northern harbor channel, and thence in 1980, 6 feet was reported in the basin. In 1980-1983, the southern harbor channel had a reported controlling depth of 3 feet except for shoaling to bare in 42°53'43"N., 70°49'10.8"W., thence in March 2001, 2.7 feet was reported in the turning basin, except for shoaling to bare in the southwest section. In 1983, the spur channel to the barge pier had shoaled to bare. The southern harbor channel is subject to shoaling and should be used only with local knowledge. Several rocks awash are on the north side of the entrance channel at the junction with the north harbor channel and extend a considerable distance into the channels; mariners should exercise extreme caution and transit the area only with local knowledge. A lighted bell buoy marks the approach to the entrance channel, and buoys mark the channel to the bridge.

(387) Anchorages are available in the basins or in the narrow channels of the Hampton and Blackwater Rivers and other rivers and creeks northward and southward of the inlet.

(388) In January 1984, the navigable entrance to Blackwater River was reported to have shifted about 220 yards north from its currently charted position.

No-Discharge Zone

(389) The State of New Hampshire, with the approval of the Environmental Protection Agency, has established a No-Discharge Zone (NDZ) in the Coastal Waters of the State of New Hampshire. The area covered includes all coastal waters of New Hampshire extending about 3 nautical miles offshore (see chart 13278).

(390) Within the NDZ, discharge of sewage, whether treated or untreated, from all vessels is prohibited. Outside the NDZ, discharge of sewage is regulated by **40 CFR 140** (see chapter 2).

Dangers

(391) Extensive rocky ledges obstruct the approaches to the entrance to the inlet. **Hampton Shoal Ledge,** covered 19 feet, about 2.8 miles eastward of the entrance, is unmarked.

(392) About 0.5 mile off the entrance is an extensive area of drying and covered rocky ledges consisting of **Old Cellar Rock, Inner Sunk Rocks, Outer Sunk Rocks,** and other rocks between Inner and Outer Sunk Rocks; a buoy is northeastward of the area.

(393) State Route 1A highway bridge crosses the inner end of the inlet. It has a 40-foot bascule span with a clearance of 18 feet. (See **117.1 through 117.59 and 117.697,** chapter 2, for drawbridge regulations.) It is reported that the flood velocity under the bridge is 1.5 to 2.2 knots and the ebb velocity 2 to 3.2 knots.

Routes

(394) For craft entering or leaving, the chart should be the guide; follow the aids with due attention to existing conditions. In heavy weather, the harbor may be closed because of heavy breakers across the entrance.

Small-craft facilities

(395) Several party fishing boats operate from the float landing of the State park inside the harbor, close northward of the bridge, and from a sport fishing pier and a service landing in the cove close to the northwestward of the park float. Water is available at the float, and a restaurant is on the pier.

(396) A marina is in a privately dredged basin protected by wooden jetties, about 0.4 mile northward of the bridge. There are slips with floats for 135 boats up to 60 feet in length with reported depths of 5 to 7 feet along side. In January 2003, the entrance channel had a reported depth of 6 feet. Gasoline, diesel fuel, and water are available at the service float on the south side of the entrance to the basin. Water and electricity are available at all of the berths. The marina has a 25-ton mobile hoist to haul out craft for engine or hull repairs and dry or open winter storage. The marina may be contacted on VHF-FM channels 16 or 10, or by calling (603) 929-1422. Ice, a pump-out station, provisions, and marine supplies are available. Motels, hotels, restaurants, markets, and many other conveniences are nearby. There is a small-craft launching ramp north of the basin.

(397) A State park is across the road. Motels, restaurants, lodging, markets, and other conveniences are available at the village at Hampton Beach.

(398) Taxi and bus services are available.

(399) There are a town wharf and two service wharves with 3 feet reported alongside at Seabrook at the southern end of the harbor from which a number of party and charter fishing boats operate. Water is available at the floats of the service wharves. A snack bar and refreshments are on the wharves, and a restaurant is nearby. A narrow dredged channel leads southward to it from the inlet. Numerous small craft are usually found moored in the channel as well as barges and workboats used in the construction of the Seabrook Nuclear Power Station, Public Service Company of New Hampshire.

(400) From Hampton Harbor, **Seabrook Beach** and **Salisbury Beach** extend 4.3 miles in a southerly direction to the entrance of Merrimack River. Unmarked ledges and foul and broken ground extend up to 0.8 mile offshore and among them a number of rocks awash, including **Thomas Rock** and **Round Rock. Breaking Rocks,** a ledge covered 3 feet, is 0.7 mile offshore and nearly 2 miles south of Hampton River. It is marked at its northeast end by a buoy.

(401) The seasonal amusement park with its large ferris wheel at Salisbury Beach is most conspicuous. The large bathing pavilion and bathhouses of Salisbury Beach State Park near the southern end of the beach are also conspicuous.

Charts 13282, 13274

(402) **Merrimack River** is the largest river in the eastern part of Massachusetts. It is the approach to the cities of Newburyport and Haverhill, and to the towns of Amesbury, Merrimacport, Groveland, and Bradford. The river is used by vessels of 6-foot draft at high water up to Haverhill and about 12-foot draft at high water to Newburyport. The head of navigation is at the dam just above Broadway Bridge in Lawrence, 25.7 miles above the mouth. The river is seldom entered for refuge and has virtually no commercial traffic.

(403) The shifting bar at the entrance is usually dangerous to cross in heavy weather. The whole entrance breaks in easterly gales. A lighted fairway whistle buoy, about 1 mile off the jetties, marks the approach.

Courtesy of Marblehead Sail and Power Squadron

(404) The Coast Guard has established a **rough bar advisory sign,** 47 feet above the water, on the roof of a boathouse to promote safety for small-boat operators. The sign is diamond-shaped, painted white with an international orange border, and with the words **"Danger Rough Bar"** in black letters. The sign is equipped with a flashing white light. The light will be activated when the seas exceed 2 feet in height and are considered hazardous for small boats. Small-boat operators are cautioned, however, that if the light is not flashing, it is no guarantee that sea conditions are favorable.

(405) **Newburyport** is a city on the south bank of the river, 3 miles above the entrance. It had no trade by water in 1979, except some fishing.

(406) **Merrimack River Coast Guard Station** is on the south side of the river west of the American Yacht Club.

Prominent features

(407) In the approach to the entrance of Merrimack River, the most important objects are the elevated water tank and ferris wheel at **Cushing**, 1.5 miles north of the entrance, and the large bathing pavilion and bath houses of the State park near the southern end of Salisbury Beach, just north of the entrance. A large water tank, standpipe, the bridges, church spires, several stacks, and a cupola, all in Newburyport, are conspicuous.

(408) **Newburyport Harbor Light** (42°48.9'N., 70°49.1'W.), 50 feet above the water, is shown from a white conical tower near the western end of **Plum Island Point,** the southern point of the entrance. The light is obscured in several sectors by shore structures.

Channels

(409) Merrimack River is entered by a dredged channel which leads through the bar between two jetties at the entrance. In 1998-October 2001, the controlling depth was 6.9 feet in the bar channel; thence 7.5 feet in the marked channel to the highway bridge at Newburyport, about 3 miles above the jetties. From Newburyport to Deer Island swing bridge, the controlling depth was 6 feet in July 1989, thence in 1964, the reported controlling depth was 3 feet to Haverhill. In March 1978, numerous obstructions and shoaling were reported in the channel between the bridge at Groveland and Haverhill. In September 1986, a submerged obstruction was reported in the center of the channel near Merrimack River Buoy 53 in about 42°48'44"N., 71°00'03"W. In May 1987, shoaling to an unknown depth was reported in the vicinity of Merrimack River Lighted Buoy 8.

(410) The jetties extend from both points at the entrance out to the bar and are difficult to see at high water,

particularly at night and in periods of low visibility. About 240 yards of the outer end of the north jetty is submerged at high water.

Anchorages

(411) At Newburyport the usual and best anchorage is in the channel about 400 yards below the highway bridge, favoring the north side of the channel and keeping clear of the two charted cable areas. The current is reported to run strongest along the south shore here. The holding ground is good.

(412) The yacht club maintains guest moorings as do many of the service facilities and marinas. Numerous private moorings are maintained off Newburyport and in the upper river as far as Haverhill. They are under control of the **harbormasters** at Newburyport, Amesbury, and Haverhill.

(413) Public floats are along the south side of the river at Newburyport, about 0.2 mile west of **Merrimack River Coast Guard Station**. In July 1979, 8 feet was reported alongside the floats. Berthing is under the control of the Newburyport harbormaster.

Dangers

(414) Endangered North Atlantic right whales have been reported swimming in shallow waters off of Plum Island and Ipswich, MA.

Bridges

(415) Merrimack River from the entrance to Haverhill is crossed by 10 bridges, 8 of which are highway and 2 are railroad. U.S. Route 1 highway bridge, which crosses the river at Newburyport, has a bascule span with a clearance of 35 feet. In the open position, the draws overhang the channel above a height of 55 feet. The bridgetender monitors VHF-FM channel 16 and works on channel 13; call sign WQA-806. The Boston and Maine Railroad bridge immediately westward has a swing span with a clearance of 13 feet. The channel is through the north draw. (See **117.1 through 117.59 and 117.605,** chapter 2, for drawbridge regulations on Merrimack River from Newburyport to Haverhill.)

(416) About 1.5 miles above the Newburyport bridges, the river is divided into a main or north channel, and a south channel by **Eagle Island** and **Deer Island,** and the shoals west of it.

(417) About 2 miles above Newburyport, a suspension highway bridge with a clearance of 28 feet crosses the south channel from Belleville to Deer Island. This bridge was originally built in 1810 with chain suspension. The highway then crosses to **Salisbury Point** from Deer Island on a swing bridge which has a clearance of 15 feet.

(418) About 300 yards westward of the swing bridge, the Interstate Route 95 (New Hampshire-Massachusetts Turnpike) bridge crosses the river from Salisbury Point to Belleville. The fixed span over the north channel (main passage) has a clearance of 55 feet, and that over the south channel, 32 feet. An overhead power cable with a clearance of 76 feet crosses the river about 4 miles above the Interstate Route 95 bridge.

(419) At **Rocks Village** on the north bank, about 8 miles above Newburyport, a highway bridge which has a hand-operated swing span with a clearance of 17 feet, crosses the river to **West Newbury.** An overhead power cable crossing the river about 0.1 mile downstream from Rocks Village Bridge has a clearance of 76 feet.

(420) At **Groveland,** about 11 miles above Newburyport, State Route 113 highway bridge, which has a bascule span with a clearance of 13 feet, crosses the river to **Riverside** on the north bank.

(421) At Haverhill three bridges cross the river; the lowest one, the Bradford Highway Bridge, has a 34-foot fixed span with a clearance of 25 feet.

(422) The Boston and Maine Railroad bridge about 0.5 mile above Bradford Bridge has a clearance of 31 feet, and the County highway bridge, close above the railroad bridge, has a 35-foot fixed span with a clearance of 30 feet. Overhead power cables crossing the river above the bridge have minimum clearances of about 30 feet.

Routes

(423) A lighted fairway whistle buoy is about 1 mile outside the bar at the entrance to Merrimack River, a seasonal lighted bell buoy is at the bar, and the channel across the bar is marked by an entrance leading light, buoys, lights, and a daybeacon. The chart should be the guide following the aids. Considerable chop is experienced on the bar with the wind against the tide.

(424) Small craft may enter when the sea is smooth and on a rising tide, following the buoys. The river cannot be entered during a heavy sea. The outer ends of the jetties are awash at high water.

(425) After the bar is crossed, the channel is well marked and easily followed to Newburyport. The channel leads between **North Pier,** marked by a light, and **South Pier,** bare at half tide and marked by a buoy. Westward of South Pier, for the best water favor the Newburyport, or south, shore until up with the overhead power cables, and the buoy under them, then head up for the draw of the highway bridge, still favoring the south side of the channel, and select anchorage or obtain a mooring off one of the service facilities or marinas.

(426) The channel between Newburyport and Haverhill is marked by buoys at the most difficult points, but is narrow and crooked, and leads close to rocks in places. Local knowledge is required to keep in it.

(427) Several of the buoys in the narrows at Merrimack Park and just below Rock Bridge have been reported to tow under during the strength of ebb.

(428) In 1979, the Coast Guard provided the following information to assist the mariner in crossing the bar when outbound from the Merrimack River.

(429) The bar area between the beach and Bell Buoy 2, both north and south of each jetty, is subject to breaking seas, particularly on an ebb tide with easterly winds. The ebb tide runs out of Merrimack River from 3 to 6 knots. Boats should proceed slowly out the channel, evaluating the bar well inside of the two breakwaters. If decision is made to cross, proceed all the way out beyond the breakers and do not attempt to turn around if the bar is breaking.

(430) The area southward of the outer 240 yards of the submerged north jetty and the channel is a shoaling sand bar subject to constant change in depth. This area and a portion of the channel just south are extremely hazardous. Avoid crossing the sunken jetty or sandbar, and use caution in the channel to the south of it.

(431) Ocean swells meeting an outgoing tide in the river mouth result in breaking seas. The most dangerous period is from about 1 hour before low water and 1 hour after low water. Even on the calmest days the tidal conditions may be such that small boats will be endangered at this period. Boatmen should learn the stages of the tide when local conditions are the most favorable for bar crossing.

(432) Due to the sandy nature of the river bottom, one can expect unannounced changes in the bar shoals depending upon prevailing winds and currents. These changing bars and shallow areas may not be marked on the charts.

(433) In addition to the above, and to further assist the outbound mariner, the Coast Guard, State of Massachusetts, and the City of Newburyport have established a **bar guide advisory sign** atop the former Merrimack River Coast Guard Station boathouse. The sign, a diamond-shaped white daymark with an orange reflective border, has a quick flashing white light and the words "Rough Bar" in its center. This light will be flashing when the bar is breaking 2 feet or more. The light will be extinguished when a lesser sea condition exists. The Coast Guard does not guarantee that the bar is safe if the light is not flashing. The bar can be dangerous at any time. When the warning sign light flashes, none but experienced boatman should attempt a bar crossing. This bar guide advisory sign will be maintained during daylight hours from April 1 to October 31 and is not visible from outside the river entrance.

Tides and currents

(434) The mean range of tide is 8.3 feet at the entrance and 7.8 feet at Newburyport. Currents are strong in the river, and yachts sometimes drag when anchored off the American Yacht Club. Strangers should use a mooring, if available. Current predictions for the entrance and at Newburyport are given in the Tidal Current Tables.

(435) **Freshets** occur in the spring, but do not interfere with navigation, as a rule.

(436) **Ice** occasionally obstructs navigation below the bridge at Newburyport. Westerly winds carry the drift ice out to sea and, during their continuance, the flood current has no effect upon the local formation of drift ice. With the wind from any other direction, the flood current will prevent the drift ice from leaving the river.

(437) Above the Newburyport bridges the river is liable to be closed by ice from January to March.

Pilotage, Merrimack River

(438) Two pilots for the river reside in Haverhill; telephone 617–372–3420 and 617–372–3745. Information on the river can be obtained from the local boatmen at Plum Island Point or any of the service facilities or marinas at Newburyport.

Towage

(439) There are no tugs at Newburyport, but there are three at Portsmouth.

Harbor regulations

(440) A **no-wake, headway-only speed limit** is enforced in the vicinity of boat docks along the Merrimack River.

(441) A hospital is at Newburyport.

Supplies

(442) Gasoline, diesel fuel, water, ice, provisions, bottled gas, and marine supplies can be obtained.

Small-craft facilities

(443) The port has a number of small-craft facilities along the waterfront. (See the small-craft facilities tabulation on chart 13274 for services and supplies available.)

(444) A town wharf and float landing are on the north bank east of the highway bridge. A municipal marina and launching ramp are on the south bank about 0.1 mile east of the highway bridge.

(445) The American Yacht Club at the east end of town has 14 feet alongside its float landing. Gasoline and water are available at the float. Guest moorings and club facilities are available to visiting yachtsmen. The North

End Yacht Club, open to members only, is at the west end of town above the bridge.

Communications

(446) The Boston and Maine Railroad freight service, and bus and truck lines serve the port; there is taxi service.

(447) **Amesbury** is a city on the **Powwow River,** 1 mile above its confluence with the Merrimack. Four highway bridges cross the river between the mouth and Amesbury. A 36-foot fixed span at the mouth has a clearance of 8 feet, twin 40-foot fixed spans 0.5 mile above the mouth have clearances of 12 feet, and a fixed span 0.6 mile above the mouth has a clearance of 8 feet. A railroad bridge at Amesbury has an 11-foot bascule span with a clearance of 4 feet. (See **117.1 through 117.49,** chapter 2, for drawbridge regulations.) An overhead power cable crossing the river 0.5 mile below the bascule bridge has a clearance of 30 feet.

(448) On the west side of the mouth of the Powwow River is a large marina and boatyard that has two marine railways. Craft up to 42 feet long or 25 tons can be handled for hull repairs or dry open or covered winter storage. Gasoline, diesel fuel, water, and electricity are available at the float landings, which have a reported 12 feet alongside. Ice, provisions, bottled gas, and marine supplies can be furnished. There is a launching ramp. Overnight berthing is permitted, and several guest moorings are maintained. Good restaurants, hotels, markets, and stores are in Amesbury. Taxi service is available.

(449) The **harbormaster** can be contacted through the Amesbury Police Department.

(450) A boat repair and building yard with marine railway close westward of the marina can build or haul out for hull repair or dry open storage craft up to 30 feet.

(451) About 0.7 mile westward of the Powwow, on the north bank, is another marina. Gasoline, water, and electricity are available at the floats, which have a reported 10 feet alongside. A marine railway at the marina can haul out craft up to 50 feet in length for hull and engine repairs, or dry covered or open winter storage. There is a gravel small-boat launching ramp and parking. Marine supplies and ice are available.

(452) **Merrimacport** is a village on the north bank of Merrimack River about 10 miles above the entrance. Two natural ramps for launching small craft from trailers and a float landing with 2 to 3 feet alongside are on the north bank at the town.

(453) **Groveland** is a town on the south bank of the river, 15 miles above the entrance.

(454) **Haverhill** is a city on the north bank, at the usual head of navigation of the Merrimack River, 18 miles above the entrance. The wharves are in disrepair. There has been no commerce by water for many years.

(455) There is a marina and boatyard at Riverside on the north bank 0.3 mile eastward of the Groveland highway bridge. The yard has two float landings with 9 feet alongside, a 20-ton crane, and a marine railway that can handle craft up to 200 tons or 140 feet long for hull or engine repairs or dry open winter storage.

(456) Diesel fuel and water are available at the floats. Ice, provisions, marine supplies, and bottled gas can be obtained. Haverhill Riverside Airport with an 1,800-foot landing strip is adjacent to the marina; a seaplane, landplane, and helicopter are available. The owner and manager of the marina is also the **harbormaster,** pilot for the river, and chief of the Merrimack River Rescue Service. The service, which operates the police boats, an amphibious craft, and a helicopter can be contacted directly, 617–372–3420, or through the Haverhill Police Department, 617–373–1212. There are two ramps at the facility, one of which is hard surfaced.

(457) Another marina and boatyard, about 0.7 mile below the bridge on the north bank, has two float landings with a reported 4 feet alongside. Gasoline, water, and electricity are available at the floats. There is a hard-surfaced ramp and a 3½-ton crane. Hull and engine repairs can be made, and dry open or covered storage is available. Guest moorings are maintained.

(458) **Bradford**, a town on the south bank of the river, is connected by two highway bridges and a railroad bridge with Haverhill. The Haverhill (Crescent) Yacht Club, on the south bank east of the lower bridge, has 6 feet at its float landing. Guest moorings are maintained. Small craft anchor or secure to moorings off the club. Fuel, provisions, and supplies can be obtained.

(459) At **Mitchells Falls,** about 2 miles above the upper highway (County) bridge at Haverhill, the river becomes foul and full of rocks, virtually impassable at low water, but at high water small craft are reported to navigate the river to the dam at Lawrence.

(460) **Plum Island River** forms a thorofare for small craft between Merrimack River, just inside its entrance, and Plum Island Sound. It is bare in places at low water and is said to have a depth of 7 feet at high water, but the deepest draft that is taken through at high water with local knowledge is reported to be about 6 feet. The unmarked channel is narrow and does not always lead in midchannel. Local knowledge is necessary for its navigation. It is crossed by a highway bridge which has a 40-foot bascule span with a clearance of 13 feet. (See **117.1 through 117.59 and 117.615,** chapter 2, for drawbridge regulations.) An overhead power cable with a reported clearance of 60 feet is just northward of the bridge.

Courtesy of Marblehead Sail and Power Squadron

(461) The approach to the north end of the thorofare is between the east side of **Woodbridge Island** and the west end of the breakwater, which uncovers about 3 feet.

(462) From Merrimack River entrance the seacoast, formed by **Plum Island,** is sand dunes, and trends southward for about 7.5 miles to the entrance of Plum Island Sound and Ipswich River. There are many cottages in the town of Plum Island on the north end of the island at Merrimack River entrance and scattered cottages southward along the beach for about 0.5 mile. The remainder of the island southward to Ipswich Bay is a Federal wildlife sanctuary for the most part.

Charts 13282, 13279, 13274

(463) **Ipswich Bay** is the bight between the northern point of Cape Ann and the south end of Plum Island. Between these points it is about 6 miles wide and makes in about 3 miles. The bay is the approach to Plum Island Sound and to the Essex and Annisquam Rivers. It has depths of 20 to 70 feet, except in its southern and southwestern sides where the shore should be given a berth of a little over 1 mile to avoid the shoals off the river entrances. Several rocks covered 2 to 5 feet and one that uncovers 4 feet are in the southern part of the bay about 0.9 mile westward of Annisquam Harbor Light and about 0.3 to 0.5 mile offshore.

(464) **Ipswich Light** (42°41'07"N., 70°45'58"W.), 30 feet above the water, shown from a white skeleton tower with a red and white diamond–shaped daymark, is on Castle Neck at the south side of the entrance to Plum Island Sound. A seasonal lighted bell buoy 1.6 miles eastward of the light marks the approach to Ipswich River and Plum Island Sound.

(465) The Crane mansion known as **The Castle,** on **Castle Hill,** is the most prominent landmark on this stretch of coast and can be seen for a great distance. The north side of **Steep Hill,** about 0.5 mile northwest of Ipswich Light, is a conspicuous bare rocky face.

Charts 13282, 13274

(466) **Plum Island Sound**, the approach to several small rivers, is frequented by many small craft. The bar channel at the entrance to the sound is subject to continual changes. The entrance is marked by a seasonal lighted bell buoy. The buoys on the bar are not charted because they are frequently shifted in position. The buoys marking the channels across the bar and through the sound and rivers inside are seasonal.

(467) In 1979, local boatmen reported that with local knowledge 6 feet could be taken over the bar and

through the entrance into Plum Island Sound, except in heavy easterly weather.

(468) **Bass Rock**, a stone ledge southward of Plum Island, is marked by a daybeacon. Shoaling extends from Plum Island to a point 200 yards southward of the daybeacon on Bass Rock, constricting the entrance channel at this point to a width of less than 100 yards. Rocks covered 4 feet are reported to extend 250 yards southwest of the daybeacon; caution is advised.

(469) A number of the buoys in Plum Island Sound are reported to tow under during the strength of tide, and too great reliance should not be placed on them as marking the best water. Local knowledge is recommended for strangers attempting passage through the sound for the first time.

(470) **Ipswich River**, emptying into the south end of Plum Island Sound from the westward, leads to the town of **Ipswich** about 2.5 miles above the entrance to the river at Little Neck.

(471) In July-September 1978, the river had shoaled to bare in several places between Little Neck and the town landing at Ipswich, and in the approach to the town landing which has five floats with 2 to 4 feet reported alongside, but no services. Meals and lodging as well as other services are available in the town.

(472) The launching ramp of the Ipswich Boat Club and two floats with 2 feet alongside are on the north bank at the town.

(473) The town of Ipswich is of great colonial antiquity and importance historically. It has railroad, bus, and taxi services, and markets.

(474) **Little Neck**, a summer settlement on a prominent hill on Plum Island Sound on the north side of the entrance to Ipswich River, has a landing on the west end of the neck, with 2 feet reported alongside its float. There are no services at the float.

(475) **Great Neck** is a distinctive headland on the west side of the south end of Plum Island Sound. It has two high hills, **North Ridge** and **Plover Hill,** that are very conspicuous. A tank on Plover Hill is very prominent.

(476) The Ipswich Bay Yacht Club is on the east side of North Ridge on the neck. Gasoline and water are available at the float landing, which has 4 to 8 feet reported alongside. The club has a snack bar, ice, and limited accommodations for visiting yachtsmen. Ice, provisions, and marine supplies can be obtained from Ipswich.

(477) During the summer many yachts moor off the landing in 10 to 15 feet, sand and mud bottom. The club maintains moorings.

(478) **Rowley River**, which empties into Plum Island Sound at **Hog Island Point,** about 1 mile north of Great Neck, dries in many places and is marked, during the summer, by stakes that are topped with red or black cans. Several landings are on the river. A town landing and a yacht club are about 250 yards above the Boston and Maine trestle bridge; clearance at the bridge is 11 feet. Little water is reported alongside the town landing and yacht club, and no services are available. The railroad station is only a short distance from the town landing. The town of **Rowley** is about 0.5 mile from the station.

(479) **Parker River**, emptying into the north end of Plum Island Sound from westward, has a depth of about 4 feet in a very narrow channel to State Route 1A highway bridge at **Newbury Old Town,** 1.6 miles above the entrance. The bridge has a fixed span with a clearance of 11 feet. The town is principally a summer settlement.

(480) The channel in Parker River is difficult to follow. In 1979, local boatmen reported that 4 feet could be taken to Newbury Old Town with local knowledge.

(481) Numerous pleasure craft of all sizes frequent the river.

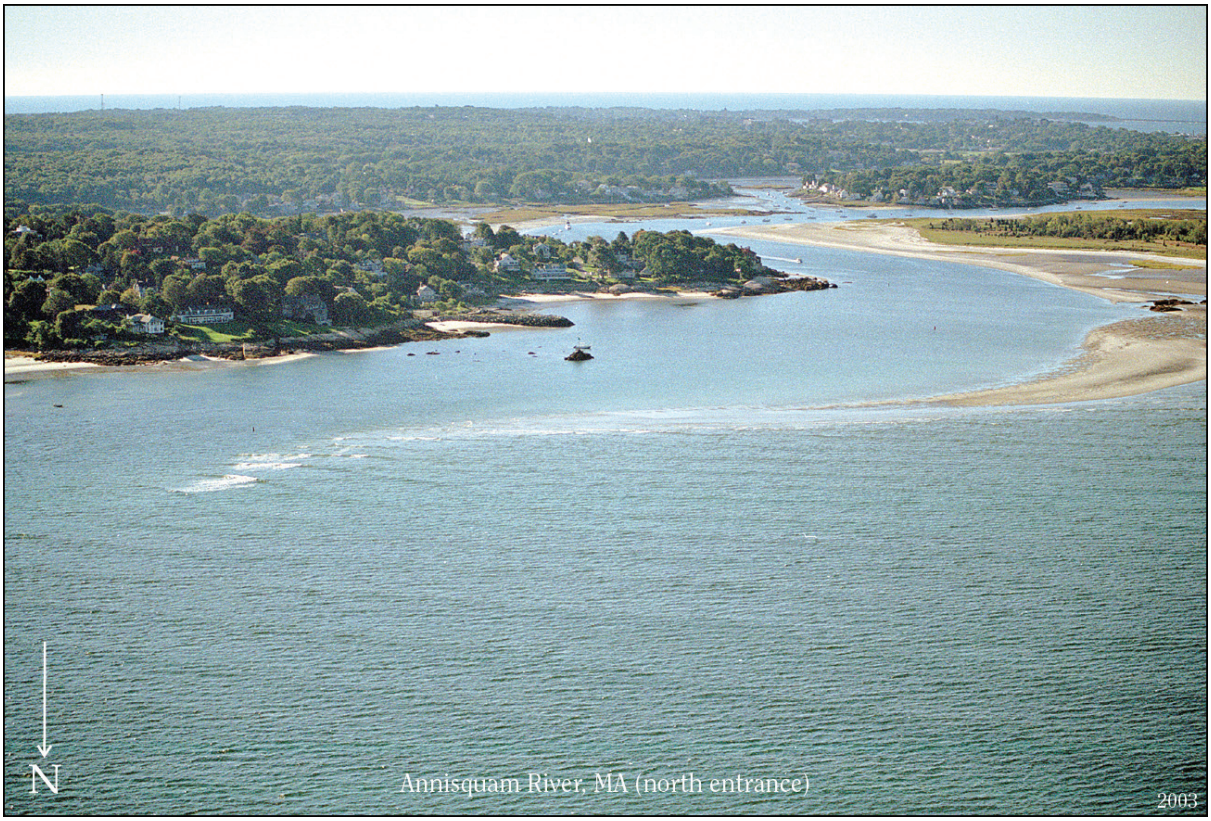
(482) There are two marinas on the south bank at the bridge. In December 2002 the marina on the east side had a reported approach and alongside depth of 3 feet and provides a one-ton lift and dry winter storage. It maintains guest moorings and has a snack bar nearby.

(483) The large marina on the west side of the bridge has a 14-ton mobile hoist, and a small-craft launching ramp. Craft up to 45 feet in length can be hauled out for hull or engine repair, or dry open or covered winter storage. The yard also builds craft up to 24 feet in length. Gasoline, water, electricity, and berthage for 50 boats are at the floats, which have 7 feet reported alongside. Overnight berthing is permitted, and guest moorings are maintained. Marine supplies and taxi service are available.

(484) A town wharf and a float landing with 2 feet reported alongside are on the north bank just eastward of the bridge. The Old Town Yacht and Country Club is on the south bank about 0.3 mile below the bridge. The depth alongside the club float is 5 feet.

(485) Above Newbury Old Town, the river is reported to be navigable for several miles, but is seldom used. This section of the river is crossed by three bridges. A railroad bridge 2.6 miles above the entrance has a 41-foot fixed span with a clearance of 7 feet. The U.S. Route 1 bridge 4.3 miles above the entrance has two fixed openings; the southern opening has a 37-foot span with a clearance of 7 feet. The Middle Street Bridge about 5 miles above the entrance has a 41-foot fixed span with a clearance of 3 feet.

(486) The **Parker River National Wildlife Refuge**, a Marine Managed Area (MMA), includes the waters of Plum Island Sound, Plum Island River, and Parker River. (See **MMA 9-3**, Appendix C, for additional information.)



Courtesy of Marblehead Sail and Power Squadron

Charts 13279, 13274

(487) **Essex Bay** and **Essex River** are about midway between Ipswich and Annisquam Harbor Lights. The entrance is through a shifting bar over which, with local knowledge, 5 feet can usually be carried. With onshore winds on an ebb tide, a heavy chop builds up and during heavy weather the bar is often impassable. Caution is always indicated, especially for smaller boats.

(488) The river is navigable for small craft to the town of **Essex,** about 5 miles above the entrance. Local fishermen and numerous pleasure craft use the river.

(489) The entrance is marked by a seasonal lighted bell buoy, and the bay channel is marked from the bar to about 2 miles above the entrance by a daybeacon and seasonal buoys. The bay channel is subject to continual change, and the buoys marking it are not charted because they are frequently shifted. Above **Conomo Point**, the town of Essex maintains seasonal midchannel spar buoys. The channel is narrow and difficult to follow. Mariners should obtain local knowledge before navigating the river.

(490) There are several small-craft facilities just below the bridge at Essex. (See the small-craft facilities tabulation on chart 13274 for services and supplies available.)

(491) Restaurants, lodging, and motels are on or near the waterfront; the town has markets, bank, and taxi services.

(492) A private residential yacht club is at Conomo Point.

Charts 13281, 13279, 13274

(493) The **Annisquam River** and **Blynman Canal** form a thorofare leading from the eastern part of Ipswich Bay, northwest of Cape Ann, to Gloucester Harbor, on the south side of the cape.

(494) **Annisquam** is a village and summer resort on the east side of Annisquam River just inside its north end. **Lobster Cove,** on the southeast side of the town, is the scene of much small pleasure-boat activity during the summer.

COLREGS Demarcation Lines

(495) The lines established for the Annisquam River and Blynman Canal are described in **80.115,** chapter 2.

Prominent features

(496) **Annisquam Harbor Light** (42°39.7'N., 70°40.9'W.), 45 feet above the water, is shown from a white cylindrical tower with elevated walk to a dwelling on **Wigwam Point** at the east side at the northern entrance to Annisquam River. A red sector in the light from 180° to

217° covers the shoals on the eastern side of the approach to the bar channel from the north. A lighted bell buoy marks the approach, and a fog signal is at the light.

Local magnetic disturbance

(497) Differences of as much as 3° from the normal variation have been observed in the vicinity of Annisquam.

Channels

(498) A marked channel with dredged sections across the bar at the northern entrance to Annisquam River and in the river and Blynman Canal leads from Ipswich Bay to Western Harbor at the north end of Gloucester Harbor. In September 2002, the controlling depths were 5.3 feet (5.8 feet at midchannel) in the dredged section across the bar from Ipswich Bay to Wigwam Point, thence greater depths in the natural channel to Buoy 17, thence 6.8 feet to Buoy 21, thence 5.6 feet in the dredged section between Buoys 21 and 23, thence 2.2 feet in the left outside quarter of the dredged channel between Buoys 23 and 26 with gradual shoaling from 1.1 feet to bare from the left side of the channel's center half through the right quarter. Above Buoy 26, the controlling depths were 4.8 feet (7.2 feet at midchannel) to the Route 128 highway bridge, thence 4.4 feet in the left half and 0.9 foot in the right half of the channel to Buoy 38, thence 1.8 feet (6.3 feet at midchannel) to Western Harbor.

(499) This thorofare is narrow, but is adequately marked by lights, daybeacons, and buoys and is extensively used by small craft. Strangers should have no trouble getting through with a smooth sea and by the use of the chart. The bar at the northern entrance is difficult to cross in a heavy sea. The best time is on a rising tide.

Anchorages

(500) Craft anchor in the coves, creeks, or estuaries of the waterway or moor at the marinas. The entrance of **Lobster Cove,** near the north end of the waterway east of Annisquam, has been dredged as far as the bridge. In 1997, the entrance had depths of less than 1 foot in the south part, gradually deepening to over 5 feet at the north edge; thence general depths of 5 to 8 feet were available in the middle of the anchorage.

Dangers

(501) No special directions are necessary. The chart is the best guide. In passing from north to south in the Annisquam River and Blynman Canal, take care to avoid the unmarked rocky area covered 4 feet on the east side of the channel about 775 yards north of the Annisquam Harbor Light and 100 yards southeast of Buoy 3; a rock covered 2 feet on the east side of the river channel about 60 yards southwestward of Annisquam Harbor Light; several rocks, submerged and awash, on the east side of the channel, marked by Daybeacon 7; a rock covered 4 feet, marked by a buoy, on the east channel edge about 125 yards northward of Annisquam Channel Light 25; and an unmarked rock that uncovers 1 foot on the southwest side of the southern entrance to Blynman Canal. In August 1980, obstructions were reported in the vicinity of Annisquam River Channel Light 46.

Bridges

(502) About 2.5 miles south of Annisquam Harbor Light, State Route 128 crosses the waterway on a fixed span which has a clearance of 65 feet for a center width of 100 feet. About 0.7 mile southward of it, the Boston and Maine Railroad Bridge has a 38-foot bascule span with a clearance of 16 feet. The bridgetender monitors VHF-FM channel 18A. At the southern end of the waterway, State Route 127 highway bridge has a 38-foot bascule span with a clearance of 8 feet. The bridgetender monitors VHF-FM channel 18A; call sign, WQA-834. (See **117.1 through 117.49 and 117.586**, chapter 2, for drawbridge regulations.)

Tides and currents

(503) The mean range of the tide is 8.7 feet. Currents at Annisquam Harbor Light average 1.3 knots at strength. Tidal currents at the southern entrance to Blynman Canal average over 3 knots at strength, but greater velocities to 10 knots were reported in 1992 in the vicinity of Blynman Bridge (State Route 127). Mariners are advised to use caution when approaching the bridge, especially during maximum flood and ebb.

Harbor regulations

(504) The Gloucester Chief of Police is also **harbormaster** for Annisquam River and Blynman Canal. The deputy harbormaster supervises the moorings and anchorages. A **speed limit** of 4 knots is enforced on the river and in Lobster Cove.

Small-craft facilities

(505) There is a marina on the west bank of Lobster Cove and several private float landings around the cove. Gasoline, diesel fuel, and water are available at the floats of the marina which have 12 feet reported alongside. Ice, provisions, and marine supplies are available. Overnight berthing is permitted, and guest moorings are maintained.

(506) A footbridge with a horizontal clearance of 30 feet and a vertical clearance of 6 feet crosses the cove about

0.3 mile above the entrance. A town float landing is on the south side of the bridge.

(507) A private marine railway that can haul out craft up to 40 feet in length in an emergency is on the west side of the cove near the entrance.

(508) The Annisquam Yacht Club is on the point on the west side of the entrance. The usual courtesies are extended by the club to visiting members of accredited yacht clubs. Showers, restrooms, and limited guest accommodations are available to visiting yachtsmen. Water is available at the float, ice is obtainable, and guest moorings are maintained by the club. A daybeacon and a buoy mark dangerous ledges south of the yacht club.

(509) **Mill River** is a tributary of Annisquam River, on the east side, 0.4 mile southward of Annisquam. Two rocks covered 2 feet are near the middle of the entrance to Mill River. There are numerous summer homes and float landings on the river, which is used by many small craft in the summer.

(510) On the east side of Annisquam River, just north of the fixed highway bridge at **Ferry Hill,** is a boatyard that builds wooden craft up to 35 feet long or handles craft up to 30 feet long for repairs or dry open or covered winter storage.

(511) A marina on **Rust Island** just west of **Biskie Head** on the north side of **Little River** has float landings with 5 feet reported alongside. Gasoline, ice, a small-craft launching ramp, marine supplies, and a restaurant are available.

(512) On the west bank of the waterway at the north end of Blynman Canal there is a marina with 12 feet reported at the floats. Gasoline, water, ice, berths with electricity, a pump-out station and some marine supplies are available; hull, engine and electronic repairs can be made. On the east bank opposite the marina is a 142-foot concrete ramp with float landings. No services are available.

(513) Blynman Canal and Gloucester Harbor are described in chapter 10, Cape Ann to Boston Harbor.

Charts 13279, 13274

(514) **Cape Ann** is very rocky and broken, 235 feet high at **Pool Hill,** its highest point, with numerous summer homes, and has several abandoned granite quarries. Communication is by railroad to Gloucester and Rockport, and by highway entirely around the cape.

(515) **Bay View** is a village on **Hodgkins Cove** on the west shore of Cape Ann, 0.8 mile northeastward of Annisquam Harbor Light. The University of Massachusetts Marine Station has a wharf on the outer southwest side of the long stone pier on the east side of the cove. In 1966, there was a depth of 12 feet on the outer half of the southwest side, in a channel about 70 feet wide. The cove at the inner end of the pier on the northeast side has a depth of about 2 feet at the entrance and mostly dry inside. Unmarked rocks are at the entrance.

(516) **Lanes Cove**, 1.4 miles northeastward of Annisquam Harbor Light, is a small cove protected by stone breakwaters at the entrance, forming a harbor for small craft. It has a depth of 12 feet at the entrance and 10 feet in the middle inside. **Lanesville** is a village on the cove. Many fishing and pleasure craft moor in the harbor. Provisions, ice, and some supplies are available from a market in the village.

(517) **Folly Cove** is on the north side of Cape Ann, 2.4 miles northeast of Annisquam Harbor Light. A 3-foot spot is about 100 yards north of **Folly Point,** the west entrance point, in about 42°41'25.5"N., 70°38'41.0"W. The cove has a stone wharf on the east side with about 16 feet alongside. A 3-foot spot is about 100 yards westward of the wharf. A restaurant is on the wharf and a motel at the head of the cove, the latter open only in summer. **Halibut Point** forms the northern extremity of Cape Ann.

(518) **Ocean View** is a summer resort on **Andrews Point** at the north end of Sandy Bay.

(519) **Sandy Bay** is a large bight in the northeastern shore of Cape Ann between Straitsmouth Island on the east and Andrews Point on the west. The bay is 2 miles wide between these points, and about 1.5 miles long to its head.

(520) A breakwater has been partially completed to form a harbor of refuge. It extends 1,200 yards northward from Avery Ledge, then 830 yards northwestward toward Andrews Point. In 1979, it was awash at low water except for a distance of about 300 yards near the middle where it was above high water. About 400 yards of each end of the breakwater are covered at low water. A lighted gong buoy is off the northwest end, and a lighted buoy is off the south end. It is reported that several boats have grounded on the breakwater. This can be avoided by keeping on the correct sides of the buoys marking the ends.

(521) Depths inside the breakwater are 31 to 86 feet, with several rocky spots of less depths in the southern part. **Ninefoot Rock** on the south side of the bay is marked on its northern side by a buoy. The bay is sometimes used as an anchorage, but is exposed to north and northeasterly weather, and at such times Gloucester or Salem Harbors are generally used.

(522) The entrance to Sandy Bay between Straitsmouth Island and the lighted buoy marking **Avery Ledge** has broken bottom and a rocky spot covered 22 feet in the middle. Strangers may be unable to avoid this and should not use this channel when drawing more than 18 feet.

Courtesy of Marblehead Sail and Power Squadron

(523) On the south side of this channel, a ledge which uncovers in places and is covered 17 feet near the end extends about 330 yards northeastward from the northeast end of Straitsmouth Island. The northern entrance to the bay westward of the lighted gong buoy at the northwest end of the breakwater is deep and clear.

(524) **Pigeon Cove**, 0.8 mile south of Andrews Point, is a small cove protected by a breakwater and having depths of 5½ to 15 feet inside. The entrance is marked by a buoy. In February-August 1987, the midchannel controlling depth was 10 feet. The most prominent features of Pigeon Cove are the high concrete stack of the foundry and the tank on **Pigeon Hill.** There are bulkhead wharves around the harbor, a public float landing with 6 feet reported alongside, and a small-craft launching ramp. A number of fishing and pleasure craft lay at moorings in the cove.

(525) The best water is on the northeast side. **Pigeon Rock,** 50 yards south of the east point outside the jetty, is nearly uncovered at extreme low water. A 5-foot spot is near the entrance about 80 yards southward of Pigeon Rock.

(526) Two old stone quarry breakwaters are built out from the shore 0.3 and 0.5 mile southward of Pigeon Cove. The southerly one forms a harbor that is used by fishing and pleasure craft. Mooring is not allowed alongside the stone wharves. A small-craft launching ramp is at the head.

(527) A small basin at **Rowe Point,** about 0.7 mile southward of Pigeon Cove, is now a lobster pound.

(528) **Dodge Rock,** Bartlett Rock, and **Mitchell Rock** are in a cluster of rocks about 300 yards from the western shore of Sandy Bay. Dodge Rock, awash at low water, is marked by a daybeacon. The western end of the rock is 100 yards offshore, and the southern rock, covered 10 feet, is about 150 yards southeastward of the daybeacon.

(529) Mitchell Rock, covered 4 feet, and another rock, covered 18 feet, are 280 and 400 yards, respectively, northward of the daybeacon. **Bartlett Rock,** awash at low water, is about 125 yards north of the daybeacon. With the exception of Dodge Rock, all are unmarked.

(530) **Sandy Bay Ledge** is partly bare at high water and extends 200 yards from the western shore of Sandy Bay at Rowe Point. In fair weather, vessels up to 150 feet long are reported to anchor in the cove south of Sandy Bay Ledge.

(531) **Rockport Harbor** at the southwest end of Sandy Bay is reported to be open to strong northeasterly to easterly winds, but can be entered at any time. The harbor is protected by two breakwaters, one of which extends eastward from **Bearskin Neck** on the northwest side of the harbor.

(532) The other breakwater extending in a northerly direction from **The Headlands** is a short one.

(533) The harbor consists of an outer basin and two inner basins which are separated by the town wharf. In February 2004, the outer basin had a least depth of 8 feet, the northern inner basin had depths of 4.5 to 8.0 feet and the southern inner basin had depths of 6.1 to 8.0 feet.

(534) **Rockport**, the town, has communication by railroad, bus, and taxi service. Banks, churches, restaurants, hotels and guest houses, hospitals, and markets are available.

Prominent features

(535) **Straitsmouth Island**, low and grassy, is marked on its eastern end by **Straitsmouth Light** (42°39.7'N., 70°35.3'W.), 46 feet above the water and shown from a white cylindrical tower, near the northeast end of the island. A fog signal is at the light. The radio tower and buildings of a former Coast Guard station are conspicuous on **Gap Head,** the peninsula westward of Straitsmouth Island. A standpipe on the summit of a hill south of the harbor is also prominent. Passage should not be attempted between Straitsmouth Island and Gap Head at low water without local knowledge.

(536) **Rockport Breakwater Light 6** (42°39'38"N., 70°36'42"W.), 32 feet above the water, is shown from a skeleton tower with a red triangular daymark on the end of the north breakwater.

Channels

(537) The entrance channel between the breakwaters is about 26 yards wide with depths from 8 to 10 feet. It is not advisable, however, to enter with drafts greater than 7 feet without local knowledge.

Harbor regulations

(538) Moorings and berths in the harbor are under control of the harbormaster, who can be contacted through the local police department. A **speed limit** of 4 miles per hour is enforced within the harbor limits. There are no guest moorings, but one can usually be arranged for through the harbormaster.

(539) In February 2004, a depth of 7.6 feet was available in the southwest basin and 7.2 feet was available in the northwest basin. The basin on the southeast side of the town wharf is used to moor small sailing craft and the northwesterly basin, or commercial basin, is used by fishing and lobster boats. In May 1993, a section of the town wharf had broken off and had reportedly created an obstruction in the northwesterly basin in about 42°39'32.7"N., 70°36'55.5"W. A town ramp, dry at low water and with 3 feet at high water, is at the head of the basin.

Dangers

(540) **Flat Ground**, a dangerous ledge 0.5 mile long covered 3 to 15 feet, is 1 to 1.5 miles north-northeastward of Straitsmouth Light. The ledge is marked by a buoy at its south end and a bell buoy at the north end.

(541) The engine block of the liberty ship CHARLES S. HAIGHT was reported, in 1979, to be still visible on the reef at low water.

(542) **Dry Salvages** is a bare ledge about 15 feet high near the middle of a reef about 500 yards long in a northerly direction. A lighted bell buoy is 0.5 mile northeastward of the ledge.

(543) **Little Salvages** is a ledge showing well bare at low water and with parts awash at high water. It is about 500 yards westward of Dry Salvages. Shoal water extends out a little more than 200 yards from the western side of the bare part of the ledge, and a rock bare at lowest tides and a sunken wreck are between it and Dry Salvages.

(544) **Harbor Rock**, covered 2 feet, is about 130 yards northeastward of the end of the north breakwater at the entrance of Rockport Harbor; a buoy is about 0.1 mile northeastward of the rock. Inshore of the rock, a shelving unmarked ledge extends 75 yards northeastward from the end of the north breakwater.

(545) The edges of the harbor are shoal and foul, with ledges near the shores, particularly on the north side northward of a line between the end of the north breakwater and the end of the first wharf on the north side. All except light-draft craft should stay out of that area.

Wharves

(546) The first wharf, in the northwest part of the harbor, is a private wharf locally known as **Tuna Wharf.** The second wharf, locally known as **Bradley Wharf,** has overnight berthage which can be arranged through the harbormaster. In 1979, 6 feet was reported alongside Bradley Wharf, with no services available.

(547) The town float landing, with 6 feet reported alongside, is at the head of the town wharf. Party fishing boats operate from the landing in the summer. Parking is available on the town wharf.

(548) On the southeast side of the head of the town landing is the Sandy Bay Yacht Club, which has float landings with 6 feet alongside. The club has restrooms available to visiting yachtsmen. Water, electricity, and ice are available at the floats.

(549) **Cape Ann Light** (42°38.2'N., 70°34.5'W.), 166 feet above the water, is shown from the southerly of two identical 124-foot gray stone towers on the east side of

Thacher Island, 1.3 miles south-southeast of Straightsmouth Island. A fog signal is at the light. The northerly tower is marked by a private light. **Oak Rock**, covered 5 feet and marked on its east side by a buoy, lies between Thacher Island and **Emerson Point**.

(550) **Londoner**, a ledge about 0.4 mile long in a northeasterly direction, covered 1 to 11 feet, is 0.5 mile east-southeastward of Cape Ann Light. Near the center of the ledge, on a cluster of rocks that uncover at low water, is a daybeacon. Between Londoner and Thacher Island is a passage with 16- to 28-foot depths. This passage should not be attempted by a stranger.

(551) **Milk Island**, about 0.4 mile southward of Emerson Point, is connected with that point and Thacher Island by two bars covered 2 to 7 feet. A rock awash is about 0.2 mile north-northeast of the north point of Milk Island. **Salt Island Ledge,** 1.3 miles southwestward of Milk Island, is awash at extreme low water. A buoy marks the southeast end of the ledge.

(552) There are numerous reddish brown bare bluffs along the coast between **Cape Hedge** and Eastern Point. The most prominent of these are on Cape Hedge, 50-foot **Salt Island,** the points to the north and west of Salt Island, the points on both sides of the entrance to **Brace Cove,** and on the southern part of Eastern Point.