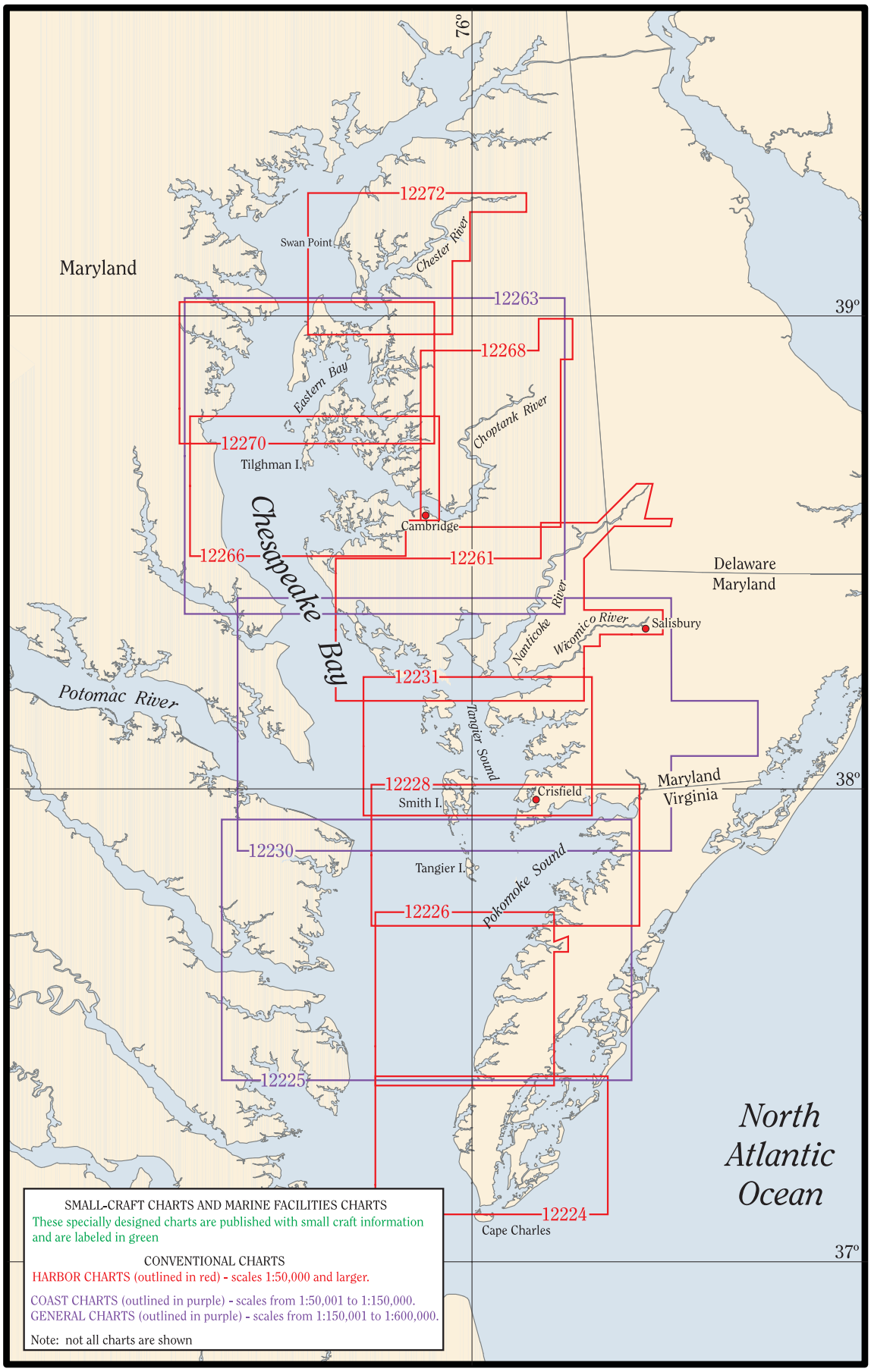
76°
39°
38°
37°
Maryland
Delaware
Maryland
Maryland
Virginia
Chesapeake Bay
Potomac River
Eastern Bay
Chester River
Choptank River
Nanticoke River
Wicomico River
Tangier Sound
Pokomoke Sound
Swan Point
Tilghman I.
Cambridge
Salisbury
Crisfield
Smith I.
Tangier I.
Cape Charles
North Atlantic Ocean
12272
12263
12268
12270
12266
12261
12231
12228
12230
12226
12225
12224
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

Chesapeake Bay, Eastern Shore

(1) This chapter describes the Eastern Shore of Chesapeake Bay from Cape Charles to Swan Point, about 6 miles northward of the entrance to Chester River, and several bodies of water and their tributaries that empty into this part of the bay. Included are Pocomoke Sound, Pocomoke River, Tangier Sound, Wicomico River, Nanticoke River, Little Choptank River, Choptank River, Eastern Bay, and Chester River, and the off-lying islands of Tangier, Smith, Hooper, and Tilghman.

(2) Also described are the ports of Cape Charles, Pocomoke City, Tangier, Crisfield, Salisbury, Easton, Cambridge, St. Michaels, and several smaller ports and landings.

COLREGS Demarcation Lines

(3) The lines established for Chesapeake Bay are described in **80.510,** chapter 2.

(4) During the ice navigation season, the Maryland waters of Chesapeake Bay described in this chapter are a **regulated navigation area.** (See **165.503,** chapter 2, for limits and regulations.)

Charts 12221, 12225, 12230, 12263, 12273

(5) The Eastern Shore of Chesapeake Bay, from Cape Charles to Chester River, is mostly low and has few prominent natural features. The mainland and the islands are subject to erosion, and many of the islands and points have completely washed away. **Fishtrap** limits are shown on the charts and usually are marked by black and white horizontal-banded buoys. In the tributaries of Pocomoke Sound, **ice** sufficient to interfere with the navigation of small vessels may be encountered at any time from January through March. The ice from Pocomoke Sound does not interfere with the larger vessels in the bay, but the smaller oyster and fishing boats frequently are held up and sometimes require assistance, especially in Kedges and Hooper Straits.

Charts 12224

(6) **Wise Poin**t (37°07.0'N., 75°58.3'W.), the mainland tip of Cape Charles, is included in chapter 9, which also describes Fishermans Island, Cape Charles Light on Smith Island, and the Atlantic entrance to Chesapeake Bay.

(7) **Kiptopeke Beach**, 3.2 miles northward of Wise Point, is the site of a former ferry terminal. The offshore breakwaters are obsolete ships filled with sand and sunk end-to-end. Just northward of the abandoned terminal is **Butlers Bluff,** which has steep bare faces conspicuous from the bay.

(8) **Old Plantation Creek**, 7 miles northward of Wise Point, has depths of about a foot. Many of the bars and middle grounds are marked by discolored water, and the channel usually is marked by bush stakes, but it is narrow and difficult to navigate without local knowledge. The opening in the thick woods at the mouth is visible from outside. No supplies are available along the creek.

(9) **Cape Charles Harbor**, 9 miles northward of Wise Point, is a dredged basin on the south side of the town of **Cape Charles**. A well-marked dredged channel leads to the harbor between sand flats on the south and a stone jetty on the north. Two small dredged basins are eastward of the main harbor basin. The northerly basin is known as the Harbor of Refuge, and the southerly basin as Mud Creek Basin. (See Notice to Mariners and latest edition of charts for controlling depths.) The current velocity is about 1.3 knots 0.5 mile southwest of the Cape Charles City Entrance Light 1.

(10) **Cape Charles Coast Guard Station** is on the spit between Mud Creek and the Harbor of Refuge.

(11) The mean range of tide is 2.4 feet at Cape Charles. The tidal currents set across the entrance to and across the southwest section of the dredged channel, but farther north they follow the general direction of the axis. The channel is exposed to westerly winds, but is partially protected by the flats to the westward, and seldom is too rough for motorboats. However, during severe W weather heavy surges may occur in the harbor. Ice may hinder navigation in the harbor during severe winters. Because of the limited space in the channel and harbor, the larger vessels and tows occasionally are somewhat of a hazard to small boats.

(12) Cape Charles is a **customs port of entry.**

(13) Cape Charles Harbor is a terminus of the Eastern Shore Railroad. The railroad operates floats to Little Creek. Floats are usually brought into the harbor in the

late afternoon, although there are also occasional early morning arrivals. Due to the limited maneuvering room in the channel and the harbor, larger vessels and tows are sometimes a hazard to small craft. The tugs that handle the floats monitor VHF-FM channels 13 and 16.

(14) There is public access to the bulkheads and slips at the eastern end of the harbor. Anchoring is forbidden in any part of the harbor or the basins. A "no-wake" **speed limit** is enforced. A **harbormaster** enforces harbor regulations, and a **dockmaster** supervises docking at the municipal facilities. Gasoline, diesel fuel, and water are available. Some marine supplies may be obtained in town.

(15) **Cherrystone Channel** is a passage inside Old Plantation Flats that leads from deep water 2 miles south-southeastward of Old Plantation Flats Light northward to Kings Creek and Cherrystone Inlet. The route follows part of the dredged channel to Cape Charles Harbor for about 1 mile. That part of Cherrystone Channel southward of the dredged channel to Cape Charles Harbor is unmarked and little used. Cherrystone Channel above Cape Charles Harbor is marked by lights and daybeacons to the vicinity of **Sandy Island.** This part of the channel has depths of about 10 feet, but is narrow in places, and local knowledge is required to carry the best water. The recommended southerly approach to Kings Creek and Cherrystone Inlet is via the marked dredged channel to Cape Charles Harbor, which was discussed earlier in this chapter.

(16) **Kings Creek**, about 1 mile northward of Cape Charles Harbor and eastward of Sandy Island, has depths of 3½ feet for 1 mile upstream. The shoal that extends out from the north side of the entrance bares at low water; a light marks the entrance. The creek is used extensively by fishermen and pleasure craft. Gasoline, berths, and some marine supplies are available at a marina just inside the entrance; a marine railway can haul out boats up to 60 feet for minor repairs.

(17) **Cherrystone Inlet**, which extends northeastward from Sandy Island, has depths of 5 feet for 2 miles, thence 4 to 2 feet to the upper end. The channel in the inlet sometimes is marked by bush stakes, but it is narrow and difficult to navigate without local knowledge.

(18) Boats bound for Kings Creek or Cherrystone Inlet can leave the Cape Charles Harbor channel west of the jetty on the north side of the harbor entrance and proceed northward in marked Cherrystone Channel. Depths of 2 to 4 feet over the flats that extend southward for 2 miles along the west side of Cherrystone Channel from Sandy Island limit the draft that can be carried over that area from westward and northwestward. The area between Sandy Island and **Wescoat Point,** 0.3 mile to the northward, bares at low water.

(19) A **fish haven**, marked by private buoys, is about 1.8 miles northwest of Wescoat Point.

Chart 12226

(20) **Hungars Creek** and **Mattawoman Creek** have a common outlet (37°23.7'N., 75°59.4'W.) to the bay 8 miles northward of Cape Charles Harbor (see chart 12224). Hungars Creek is marked by lights, daybeacons, and bush stakes, and Mattawoman Creek by bush stakes. Both creeks are difficult to follow without local knowledge.

(21) Hungars Creek extends about 4 miles in a northeasterly direction to **Bridgetown.** Depths of 3 feet are available in the narrow entrance channel, marked by lights, thence decreasing to 1 foot to Bridgetown.

(22) Mattawoman Creek extends about 2 miles in a southeasterly direction and has several branches at its head. The best approach is to follow the lights at the entrance of Hungars Creek to the light off **Wilsonia Neck,** then follow the bush stakes southeastward and southward along the shore. The controlling depth is about a foot to the head of navigation. The overhead power cables near the head of the creek have a minimum clearance of 33 feet.

(23) A **danger zone** for naval firing begins about 12 miles north-northwestward of Cape Charles Harbor and extends northward to Tangier Sound Light, just south of **Tangier Island**. (**See 334.220**, chapter 2, for limits and regulations.)

(24) **Nassawadox Creek**, 13 miles northward of Cape Charles Harbor and about 5 miles northward of the entrance to Hungars Creek and Mattawoman Creek, extends about 5 miles to the northeast. The controlling depth across the bar is about a foot, thence 4 feet for 4 miles upstream. The channel is marked by a light and daybeacons for about 1.6 miles, but local knowledge is necessary to carry the best water. An overhead power cable with a clearance of 38 feet crosses the creek about 3 miles above the mouth. The flats on either side of the entrance are nearly bare at low water, are covered by marsh grass in the summer, and are usually well defined. The mean range of tide is 1.8 feet. **Bayford**, on the southeast side of the creek 1.5 miles above the mouth, has a wharf and a store. Gasoline and diesel fuel are available. The several creeks that branch off from Nassawadox Creek have depths of 3 feet or less. A marine railway at **The Saltworks**, on the north side of the creek, can handle boats up to 35 feet for hull and engine repairs.

(25) **Occohannock Creek** (37°33.0'N., 75°56.3'W.) flows into Chesapeake Bay from eastward 18 miles northward of Cape Charles Harbor; a fixed bridge 5.4 miles

above the entrance is the head of navigation. In August 2003, the controlling depth was 6 feet over the bar to about 0.7 mile inside the entrance. Depths of about 5 feet can be carried to **Morley Wharf,** on the south side 4 miles above the entrance, with lesser depths to the fixed bridge. The mean range of tide is 1.8 feet.

(26) The channel over the bar of Occohannock Creek is marked by lights and daybeacons, but it is narrow and tortuous, and difficult to navigate without local knowledge. The channel within the creek also is narrow, but the ends of the shoals are marked by daybeacons all the way to Morley Wharf. A public pier and boat ramp are at Morley Wharf. Gasoline and limited marine supplies are available at **Davis Wharf,** on the north side of the creek; a marine railway can handle boats up to 40 feet.

(27) **Nandua Creek**, 23 miles northward of Cape Charles Harbor and about 5 miles northward of Occohannock Creek, is entered through a dredged channel which leads across the bar to the mouth of the creek. In August 2003, the controlling depth was 2.4 feet across the bar channel at Daybeacons 4 and 5; deeper waters are available elsewhere in the bar channel. Depths of about 4 feet can be carried in the creek channel to the wharf in ruins at the settlement of **Nandua**, 3 miles above the mouth. The mean range of tide is 1.7 feet. The bar channel, marked by lights and daybeacons, is narrow and shifting; local knowledge is required to carry the best water. The shoals at the entrance usually can be distinguished by the difference in color of the water, except in rough weather when the water is clouded. Daybeacons mark the critical parts of the channel to Nandua.

(28) **Back Creek,** on the north side of Nandua Creek, 1 mile above the mouth, has depths of 3 feet to the village of **Hacksneck.**

(29) **Pungoteague Creek,** 3 miles northeastward of Nandua Creek, has depths of 8 feet to the pier at **Harborton,** 2 miles above the mouth, and thence 4 feet to the ruins of **Boggs Wharf,** 3 miles above the mouth. Above this point the creek shoals rapidly. The entrance and inside channel are marked as far as Harborton. The mean range of tide is 1.7 feet. Barges load pulpwood at Harborton for delivery to West Point on York River.

Chart 12228

(30) **Onancock Creek** (37°43.4'N., 75°51.1'W.), 38 miles north of Cape Charles, has traffic in petroleum products, sand, and gravel. A marked dredged channel leads across the entrance bar and up the creek to an anchorage basin off the town of **Onancock,** about 4.3 miles above the mouth, thence to channels in the **North Branch** and **Central Branch** at the head of the creek. In February-March 2004, the controlling depths were 5.6 feet to Daybeacon 3, thence 8.6 feet (9.5 feet at midchannel) to the anchorage basin, thence 8.0 feet for about 0.25 mile above the anchorage basin in North Branch, thence 4.4 feet in Central Branch to the first bridge, thence 4.8 to 6.0 feet in the anchorage basin. The mean range of tide is 1.8 feet.

(31) A boatyard at **Poplar Cove Wharf,** 2.3 miles above the mouth of Onancock Creek, can haul out boats up to 40 feet for repairs. Gasoline can be obtained.

(32) Water and electricity are available at the public dock at Onancock. Gasoline is available at the oil wharf opposite the town dock. Diesel fuel is available by truck. The **harbormaster** makes berthing assignments and monitors VHF-FM channel 16.

(33) **Chesconessex Creek** is 2 miles northward of Onancock Creek. In February 1976, shoaling to an unknown extent was reported in the approach to the creek between Chesconessex Buoy 1 and Light 2. Above Light 2, depths are about 8 feet for 1 mile above the mouth to the middle of **Tobacco Island**, thence in April 1997, favoring the south side of the channel, 6 feet to **Chesconessex**, about 2 miles above the mouth of the creek; thence in March 2001, depths of about 1 to 3 feet could be carried to about 0.4 mile above the town. The creek is used by small local boats.

(34) The approach to Chesconessex Creek from eastward of Watts Island Light is marked by buoys and a light; the channel above the entrance is marked by daybeacons and sometimes bush stakes. Gasoline is available at Chesconessex; a marine railway can haul out craft up to 40 feet for minor hull repairs.

(35) The southern and main entrance to **Pocomoke Sound,** between the southern end of **Watts Island** and **Pocomoke Sound Light 6** (37°47'49"N., 75°50'19"W.), is 40 miles northward of Cape Charles. Extensive flats occupy most of the sound. A channel, wide and deep at the entrance but comparatively shallow in its most northerly part, leads to Pocomoke River, the most important tributary.

(36) The shores of Pocomoke Sound are low and without prominent natural landmarks. The critical points along the main channel between the entrance and the mouth of Pocomoke River are marked by lights and buoys. The Virginia-Maryland boundary line is marked by buoys with orange and white bands, and diamond-shaped white daybeacons with orange reflective borders.

(37) The sound is used by many local oyster and fishing boats and by some tugs and barges. Small boats can enter from northwestward in Tangier Sound by way of Broad Creek, which is discussed later. The mean range of tide is about 2 feet in Pocomoke Sound. (For current predictions, see the Tidal Current Tables.)

(38) A string of marshy islands and large shoals separates the lower part of Pocomoke Sound from Tangier Sound on the westward. **Watts Island,** southernmost of the string, is marshy and wooded. Watts Island Warning Light is 0.6 mile south-southwestward of the island.

(39) **Little Fox Island**, 5 miles northward of the entrance, is low with flats between it and Watts Island. The flats are shallow and should not be navigated without local knowledge. **Great Thorofare,** just northward of Little Fox Island, has depths of 2 feet and is sometimes used by local boats.

(40) **Great Fox Island,** 6 miles northward of the entrance to Pocomoke Sound, consists of a group of low islands, the northeasternmost of which is marked by a large building.

(41) Just north of Pocomoke Sound Light 6, a marked crooked tributary channel with depths of 8 feet or more leads between shallow flats for 5 miles into a dredged channel in Deep Creek. In June 2003, the controlling depth in the dredged channel from the entrance to the turning basin at the town of **Deep Creek** was 2.1 feet, thence depths from 1.6 to 2.2 feet were in the turning basin. The channel is marked by lights and daybeacons.

(42) Deep Creek is used only by small local boats, many of which enter from Hunting Creek on the eastward by way of **The Notch,** a passage behind the 1.5 mile chain of islands which separates the outer parts of the two creeks; the controlling depth in The Notch is about 2 feet; the channel is marked by bush stakes.

(43) Another tributary channel, 3.5 miles northeastward of Pocomoke Sound Light 6, leads to **Hunting Creek** along the south side of **Guilford Flats** and southward through **The Thorofare** to the wharf at **Hopkins** on the east side of Hunting Creek, 2.5 miles above the mouth. The marked channel has depths of 7 feet or more to within 0.7 mile of Hopkins, thence 2½ feet to the wharf.

(44) **Guilford Creek** is 2.5 miles northeastward of Hunting Creek, with which it has a common approach from the main channel as far as the light on the southwest end of Guilford Flats. The channel to Guilford Creek continues eastward along the flats, then turns northeastward and rounds a light off the mouth of the creek; the total distance from the main channel is about 8 miles and depths are 8 feet or more all the way. In June 2003, the controlling depth was 2.8 feet (4.5 feet at midchannel) to the turning basin, thence depths of 5.4 to 5.9 feet were in the basin.

(45) **Messongo Creek** empties into the east side of Pocomoke Sound 8 miles northeast of Pocomoke Sound Light 6. The marked approach to Messongo Creek is from west-southwestward. Depths of 7 feet at the mouth of the creek shoal gradually to about 1 foot at the village of **Marsh Market,** 2.5 miles above. The creek is used only by small local boats.

(46) **Starling Creek** is on the southeast side of Pocomoke Sound 9 miles northeast of Pocomoke Sound Light 6. A dredged channel, marked by lights and daybeacons, leads from the sound to a harbor basin on the north side of the creek. Starling Creek Light 1 has a seasonal fog signal. In August 2002, the midchannel controlling depth was 6.5 to the basin, thence depths of 4.9 to 7.0 feet were in the basin, except for lesser depths on the sides. **Saxis,** on the northeast side of the creek, is the center of a considerable shellfish industry. Gasoline and diesel fuel can be obtained at the bulkhead, and some groceries are available in the town.

Charts 12228, 12230

(47) **Pocomoke River** flows into the northeast end of the Pocomoke Sound 15.5 miles above Pocomoke Sound Light 6. The river has traffic in petroleum products, sand and gravel, pulpwood, and some fish products. The marked approach through Pocomoke Sound has natural depths of 7 feet or more for 12.5 miles above the southern entrance, then the route passes through a marked dredged cut to the mouth of Pocomoke River. In June 2000, the controlling depth in the dredged section was 1.7 feet (4.9 feet at midchannel). The cut is subject to continual shoaling, and lesser depths may be found, particularly on the southerly side of the channel.

(48) Pocomoke River has depths of 7 feet or more from the mouth for 14 miles to Pocomoke City, thence 5 feet or more for 12 miles to Snow Hill. Navigation is easy for 20 miles, but the remainder of the channel to Snow Hill is narrow and requires local knowledge to carry the best water. The mean range of tide is 2.4 feet at Shelltown and 1.6 feet at Pocomoke City, but is considerably affected by winds. Freshets cause a rise of 1 to 5 feet at Snow Hill, but are not dangerous. The water is fresh above **Rehobeth**, 7.5 miles above the mouth.

(49) **Shelltown** is a village on the west bank of Pocomoke River 1 mile above the mouth. Gasoline, diesel fuel, and some supplies can be obtained in the village. Marine railways at Shelltown can handle craft up to 40 feet long.

(50) **Pocomoke City,** on the east bank 14 miles above the mouth, has bus and rail communication, and all kinds of supplies. There are public landings at the highway bascule bridge. Electricity, water, and pumpout facilities are available. The railroad bridge over the river at Pocomoke City has a swing span with a clearance of 4 feet; the best water is in the western opening. (See

117.1 through 117.49, chapter 2, for drawbridge regulations.) The overhead power cables 0.3 mile below the bridge have a clearance of 57 feet. The highway bridge 0.5 mile above the railroad bridge has a bascule span with a clearance of 3 feet. (See **117.1 through 117.59 and 117.569,** chapter 2, for drawbridge regulations.) The fixed highway bridge 1 mile above the railroad bridge has a clearance of 35 feet.

(51) A dredged channel about 22 miles above the mouth of Pocomoke River leads southerly from the river to **Shad Landing State Park;** a marina and turning basin are at the head of the channel. In January 1983, the midchannel controlling depth was 4 feet in the channel, and depths of 6 to 7 feet were in the basin. The channel is marked by a light and a daybeacon. Gasoline and some supplies are available.

(52) **Snow Hill**, the town on the east bank 26 miles above the mouth, has rail freight service. The highway bridge just above the wharves has a 40-foot bascule span with a clearance of 2 feet. (See **117.1 through 117.59 and 117.569,** chapter 2, for drawbridge regulations.) An overhead power cable just above the bridge has a clearance of 61 feet. The river is navigable for 2 miles above the bridge. Gasoline and some supplies are available in the town.

(53) A line of marshy islands and flats, with Tangier Island at the south end, separates Tangier Sound from Chesapeake Bay to the westward; the principal thorofares between the islands are Kedges and Hooper Straits.

(54) The danger zone of a naval missile target area is centered about 3.5 miles west-southwest of **Tangier Island**. (See **334.210,** chapter 2, for limits and regulations.) Sunken ships and other obstructions are within the area.

(55) **Tangier Island** is low, sparsely wooded in the middle, and bare on the north and south ends. **Tangier** is the village midway along the eastern side of the island; a church spire and two television towers are prominent. Oystering, crabbing, and fishing are the principal industries. The island has telephone and motorboat communication with Crisfield.

(56) **Tangier Sound Light** (37°47'15"N., 75°58'25"W.), 45 feet above the water, is shown from a white square tower with a black and white diamond-shaped daymark on piles, in depths of 5 feet. The light is 53.3 miles above the Virginia Capes.

(57) **Tangier Sound,** its main entrance 1 mile northeastward of Tangier Sound Light, affords a broad and deep channel extending the 28-mile length of the sound. Extensive flats border the sound, but the critical points are marked by lights and buoys.

(58) The town of Tangier can be reached from either Chesapeake Bay or Tangier Sound through well-marked dredged channels. In February-March 2004, the controlling depths were 4.6 feet from Chesapeake Bay and 1.8 feet (2.4 feet at midchannel) from Tangier Sound; depths of 4.1 to 7.0 feet in the anchorage basin at Tangier with lesser depths along the N and S edges. In May 2004, shoaling to 2½ feet was reported in the E channel at Light 7.

(59) (**Note** that the numbering system of marking the aids to navigation in the channel from Chesapeake Bay to Tangier Sound and from Tangier Sound to Chesapeake Bay is not continuous but changes in about 37°49'54"N., 75°59'49"W.)

(60) An overhead power cable with a clearance of 50 feet crosses the channel at Tangier. Gasoline, diesel fuel, and some marine supplies are available at Tangier; a marine railway here can handle craft up to 50 feet for hull and engine repairs.

(61) The flats between Tangier Island and Smith Island, on the north, are shallow and can be navigated only by very small boats at high water.

Chart 12231

(62) **Smith Island** consists of a large group of marshy islands separated by narrow thorofares; travel from place to place is mostly by boat. **Tylerton, Ewell,** and **Rhodes Point** are small villages along the interior channels; crabbing, oystering, and fishing are the principal industries. Gasoline and diesel fuel are available at Ewell and only diesel fuel at Rhodes Point; some supplies can be obtained at the villages. The island has telephone and motorboat communication with Crisfield. A marine railway at Rhodes Point can haul out boats up to 40 feet for hull repairs.

(63) A well-marked 5-mile channel with several dredged sections extends from Tangier Sound through **Big Thorofare** to Ewell, thence northwestward in **Levering Creek** and again through Big Thorofare to Cheseapeake Bay. In 1991-April 1992, the midchannel controlling depth was 3½ feet from Tangier Sound to Tyler Ditch, thence a midchannel controlling depth of 4 feet to Ewell, thence in June 1990, a midchannel controlling depth of 5 feet from Ewell to Light 15, thence in May 1991-April 1992, a midchannel controlling depth of 5½ feet to Chesapeake Bay.

(64) A marked channel leads southward from Big Thorofare through **Tyler Ditch** to Tylerton, about 1.7 miles above the entrance. In February 1995, the midchannel controlling depth was 3½ feet in the dredged section, thence natural depths of about 4 feet to Tylerton.

(65) Another marked dredged channel from Tylerton to Rhodes Point, in February 1995, had a controlling

depth of 6 feet. Local fishermen in shallow-draft boats sometimes approach Tylerton from southward at high water, leaving the main channel in Tangier Sound 7 miles north of Tangier Sound Light and following the deeper water northward into Tyler Creek. The depth in the southern approach is about 4 feet.

(66) **Sheep Pen Gut** is the approach to Rhodes Point from the west. A dredged channel marked by daybeacons leads from Chesapeake Bay through the gut. In February 1995, the controlling depth was 4½ feet. Several other thorofares, with depths less than 3 feet, lead westward from the interior of Smith Island to Chesapeake Bay. Navigation of these channels requires local knowledge.

(67) **Kedges Straits,** between Smith Island on the south and uninhabited **South Marsh Island** on the north, is used by vessels bound from northward in Chesapeake Bay to points southward of Manokin River in Tangier Sound. The inner approach to the straits is about 16 miles north of Tangier Sound Light. A depth of 10 feet can be carried through the marked straits.

(68) **Holland Island Bar Light** (38°04'07"N., 76°05'45"W.), 37 feet above the water, is shown from a white square house with a black and white diamond-shaped daymark on piles in depths of 9 feet on the north side of the bay approach to Kedges Straits; a seasonal fog signal is at the light, which is 6.3 miles due east of a point on the bay ship channel 72.6 miles above the Virginia Capes.

(69) **Solomons Lump Light** (38°02'54"N., 76°00'54"W.), 47 feet above the water, is shown from a white octagonal dwelling, with a square tower, on a brown cylindrical base, in depths of 7 feet on the Smith Island side of Kedges Straits.

(70) The mean range of tide in Kedges Straits is 1.7 feet, but it is affected considerably by winds. Easterly winds raise the water and northwesterly winds lower it sometimes as much as 2 feet below the normal level. In severe winters, floating ice makes navigation of the straits dangerous.

(71) **Holland Straits,** on the north side of Kedges Straits between South Marsh Island on the south and **Bloodsworth Island** and other smaller uninhabited low marshy islands on the north, is generally shallow and should not be used without local knowledge. Sandbars obstruct the Chesapeake Bay side and patches of eel grass uncover in the Tangier Sound entrance on the lower tides. Bloodsworth Island is within a **danger zone** for naval firing and bombing. A **prohibited area,** within the danger zone and with a radius of 0.5 mile, is close off the western side of the island. (See **334.190,** chapter 2, for limits and regulations of the danger zone and prohibited area.)

(72) **Okahanikan Point Light** (38°11'42"N., 76°05'35"W.), 25 feet above the water, is shown from an concrete pile off the northwest side of Bloodsworth Island about 1.5 miles south of the bay entrance to Hooper Strait.

(73) **Hooper Strait,** between Bloodsworth Island on the south and Hooper Islands and Bishops Head on the north, is the most northerly direct passage from Chesapeake Bay into Tangier Sound and is used by vessels bound from northward in the bay to tributaries at the north end of the sound. The inner approach to the strait is 27 miles north of Tangier Sound Light.

(74) The narrow, crooked channel through Hooper Strait, in June 1975, had a controlling depth of 12 feet. The shoals on each side are well marked; strangers should have little difficulty if they pay close attention to the chart. **Hooper Strait Light** (38°13'36"N., 76°04'30"W.), 41 feet above the water, is shown from a skeleton tower with a black and white diamond-shaped daymark in depths of 9 feet midway along the north side of the channel.

(75) **Sharkfin Shoal Light** (38°12'06"N., 75°59'12"W.), 44 feet above the water, is shown above the water, is shown from a skeleton tower with a black and white diamond-shaped daymark in depths of 7 feet on the south side of the approach from the main channel in Tangier Sound.

(76) The mean range of tide is 1.7 feet at Hooper Strait Light and 2.2 feet at Sharkfin Shoal Light, but in the fall and winter continual northerly winds may lower the water as much as 2 feet below normal level. The current velocity is about 1.5 knots; the current floods eastward through Hooper Strait. In the winter vessels navigating Hooper Strait are in danger from running ice.

Charts 12231, 12228

(77) **Little Annemessex River** (37°58.0'N., 75°53.8'W.), the approach to the town of Crisfield, empties into Tangier Sound 10 miles north of Tangier Sound Light. The entrance to the river is 0.8 mile wide between **Great Point** on the south and **Island Point,** the southwest end of **Janes Island,** on the north.

(78) A **fish haven** is about 1.3 miles west-southwestward of Great Point.

(79) The main entrance to Crisfield is through the well-marked dredged channel of Little Annemessex River. In August 1990, the controlling depth was 8½ feet (10 feet at midchannel) from Daybeacon 8 to a point about 0.2 mile below the junction with the spur channel to Hop Point; thence in October 1991, 6½ feet in the west half and 4½ feet in the east half of the channel from Hop Point Channel to Daugherty Creek Canal. The spur channel to the wharves at **Hop Point** had a controlling depth of 8 feet in October 1991 to just

below Daybeacon 1, thence shoaling to 3½ feet at the upper end. Depths of 4 to 7 feet were available off the faces of the wharves at Hop Point. **Brick Kiln Channel,** the L-shaped channel and mooring basin 0.5 mile to the northward, had controlling depths of 3½ feet (6½ feet at midchannel) in the channel and 7 feet in the basin in October 1991.

(80) The southerly approach to Crisfield from Pocomoke Sound, used extensively by oyster boats, is through crooked **Broad Creek**. In 1994, the controlling depth was 2½ feet (3½ feet at midchannel). The northerly approach from Big Annemessex River is through marked **Daugherty Creek** and through **Daugherty Creek Canal**; in April-May 1995, the controlling depth was 4 feet through the creek and the canal. A 1-foot spot is in the channel just off Daugherty Creek Light 5. The tidal current floods northward in the canal and ebbs southward; the velocity is reported to be about 1.3 knots.

Tide and currents

(81) The mean range of tide in Little Annemessex River is 2 feet. The current velocity is 0.9 knot.

(82) **Jenkins Creek**, which enters Little Annemessex River close northeastward of Broad Creek, is used by fishermen and crabbers. Depths of 3 feet can be carried 0.5 mile above the mouth of the creek, thence 2 feet for 0.5 mile farther to the highway bridge with a 16-foot fixed span and a clearance of 6 feet; small boats pass through the bridge to piers on the north shore. The creek is marked by private daybeacons.

(83) **Crisfield,** on the east side of Little Annemessex River 2 miles above the mouth, is a fish and seafood processing and tourist center. Waterborne commerce consists chiefly of seafood and petroleum products. The harbor is used by many oyster, fish, and crab boats with drafts of 2 to 6 feet. Small freight and passenger boats operate daily to Tangier and Smith Islands.

(84) Crisfield is a **customs port of entry.**

(85) The Crisfield waterfront is largely built up with bulkhead wharves and timber piers, most of which are privately owned, but open to the public on equal terms. Some of the terminals have mechanical freight-handling equipment, but most of the freight is transferred by hand. Depths at the wharves and piers range from 5 to 12 feet, the deepest being at the outer end of the railroad pier.

(86) **Somers Cove,** a well protected basin on the south side of Crisfield, had controlling depths of 8½ feet in the entrance channel and 9 feet in the basin in October 1991. A state-owned full service marina is on the north side of the cove. A Coast Guard station is on the south side of the cove.

(87) Supplies, gasoline, and diesel fuel are available at Crisfield. The largest marine railway can haul out vessels up to 70 feet in length for repairs; mobile lifts to 50 tons are also available.

Chart 12231

(88) **Big Annemessex River** (38°02.9'N. 75°52.3'W.) joins Tangier Sound 15 miles north of Tangier Sound Light. The river has depths of 8 feet for 4 miles, thence 5 feet for 1 mile, and thence 3 feet for 1 mile. The channel is marked as far as Colbourn Creek. The mean range of tide is 2.1 feet.

(89) **Daugherty Creek,** already described, enters the south side of Big Annemessex River 1.3 miles above the mouth. **Jones Creek,** close eastward of the canal, has depths of 2 feet for about 1.5 miles above the mouth. The channel is narrow and crooked; private daybeacons and a buoy mark the channel.

(90) **Colbourn Creek,** on the south side of Big Annemessex River 3.5 miles above the mouth, has depths of 4 feet for about 0.7 mile, thence 2 feet for 0.5 mile. Excellent storm anchorage with good holding ground is available in depths of 5 feet in midstream 0.3 mile above the entrance.

(91) **Manokin River,** on the east side of Tangier Sound 16 miles north of Tangier Sound Light, is directly across the sound from Kedges Straits, described earlier. The entrance to the river is 3.5 miles wide between **Hazard Point** on the southeast and low **Little Deal Island** on the northwest, but is obstructed by numerous shoals.

(92) The main channel of Manokin River is narrow and crooked, and favors the southeast shore. The channel has depths of about 9 feet to abeam of **St. Pierre Island,** on the north side 4 miles above the mouth, thence 6 feet to within 0.5 mile of **Locust Point,** on the northwest side 7 miles above the mouth, and thence 1 foot to **Princess Anne,** 15 miles upstream.

(93) The channel is marked to a point about 6 miles above the mouth. The lower of the two fixed highway bridges, 14 miles above the mouth, has a clearance of 3 feet. The mean range of tide in Manokin River is 2.1 feet. Most of the piers and wharves along the river are in poor condition.

(94) **Goose Creek,** on the south side of Manokin River 1.3 miles above Hazard Point, is used by local fishermen and pleasure craft. A channel marked by lights and daybeacons leads to the village of **Rumbley** on the northeast side of the creek. In July 1995, the controlling depth was 2 feet. Goose Creek has considerable traffic in crabs and oysters. Berths, gasoline, diesel fuel,

and marine supplies are available. Hull and engine repairs can be made; a 15-ton mobile lift is available.

(95) **St. Peters Creek,** used mostly by fishing boats, is on the north side of Manokin River 5.5 miles above the mouth. A marked dredged channel leads to a basin and public wharf 1 mile above the entrance. In July 1992, the controlling depth was 3 feet in the channel and basin.

(96) A marked dredged channel, 21 miles north of Tangier Sound Light, leads through **Lower Thorofare** between **Little Deal Island** and **Deal Island** to a mooring basin with bulkhead and several small piers at the fishing village of **Wenona**. In 1994, the controlling depth was 2 feet. Gasoline, diesel fuel and some supplies can be obtained at the village.

(97) Another marked dredged channel, 25 miles north of Tangier Sound Light, leads through the west end of **Upper Thorofare** to an anchorage basin at the north end of Deal Island. In 1994, the midchannel controlling depth was 5½ feet from the entrance to the anchorage basin, thence depths of 3 to 9 feet were in the basin except for shoaling to less than 1 foot along a sandspit that extends about 80 feet into the basin near the western edge. A highway bridge crosses the thorofare and has a 84-foot fixed span with a clearance of 25 feet. A boatyard just east of the bridges has a mobile lift that can handle boats up to 15 tons for repairs. Gasoline, diesel fuel, berths, and some supplies are available. Beyond the bridge, least depths are about 1 foot southeastward for 2.5 miles to Manokin River.

Chart 12261

(98) **Wicomico River** flows into the north end of Tangier Sound eastward of the inner approach to Hooper Strait, described earlier, and 26 miles north of Tangier Sound Light. The entrance to Wicomico River is 1.5 miles wide between **Long Point** on the south and Nanticoke Point on the north. Waterborne commerce is largely in fish and shellfish, and fish byproducts.

(99) In 1995-September 1997, the midchannel controlling depths in the marked channel were 10 feet from the entrance to **Williams Point**, about 19 miles above the mouth; thence in August 2000, 10 feet was reported to South Prong at Salisbury.

(100) **Great Shoals Light** (38°12'52"N., 75° 52'46"W.), 37 feet above the water, is shown from a white skeleton tower with a black and white diamond-shaped daymark on piles in depths of 4 feet on the north side of the channel, 0.5 mile above the mouth; a seasonal fog signal is at the light.

Tide and currents

(101) The mean range of tide in Wicomico River is 2.3 feet at the entrance and 3 feet at Salisbury. Strong tidal currents set across the main channel off Monie Bay; the current velocity in the entrance to the river is 0.6 knot on the flood and 0.9 knot on the ebb.

Ice

(102) Ice usually forms on the river as far down as Whitehaven; in ordinary winters the channel usually is open to navigation, but in severe winters it is often closed for extended periods.

(103) **Monie Bay** is a large cove on the southeast side close within the mouth of Wicomico River. The bay has depths of 4 feet to the head, but is used only by small local boats.

(104) **Webster Cove,** on the south side 3.5 miles upriver, is entered by a marked dredged channel which leads to a public wharf inside. In March 1995, the controlling depth was 4½ feet.

(105) **Whitehaven,** on the north bank 6.5 miles above the entrance, has some supplies. Most of the docks are in poor condition. A marine railway can haul out boats up to 150 feet.

(106) A cable ferry crosses the river at Whitehaven. The ferry operates only during daylight hours. The cable is picked up as the ferry moves from bank to bank and is dropped to the bottom when the ferry is not operating. The crossing is unmarked. Caution should be exercised while navigating in the area. **DO NOT ATTEMPT TO PASS A MOVING CABLE FERRY.**

(107) **Wicomico Creek,** on the south side of Wicomico River 8.5 miles above the mouth, is navigable for small craft for several miles. The marked entrance channel has a controlling depth of about 4 feet with deeper water inside. A small yacht club on the north side of the entrance has gasoline and diesel fuel. A marina about 2.3 miles above the entrance has gasoline, diesel fuel, berths, and marine supplies. Hull and engine repairs can be made; a mobile lift is available.

(108) An overhead power cable about 14 miles above the mouth of Wicomico River has a clearance of 75 feet.

(109) A cable ferry crosses the Wicomico River at **Upper Ferry,** 15 miles above the mouth. The ferry operates only during daylight hours. The cable, held taut by winches ashore, is suspended at or near the water's surface at all times during daylight hours, but dropped to the bottom during nondaylight hours. The signal for lowering the cable is one blast on the whistle by a transiting vessel. The ferry slips are marked as a ferry crossing and warning signs are posted up and downstream of the crossing. Caution should be exercised

when navigating in the area. **DO NOT ATTEMPT TO PASS A MOVING CABLE FERRY.**

(110) Fishing boats use the large wharf on the south bank, 16.5 miles above the mouth; water is available. An overhead power cable, 17.7 miles above the mouth, has a clearance of 75 feet.

(111) **Shad Point** is 18 miles above the mouth on the southeast side.

(112) **Salisbury,** the head of navigation 20 miles above the mouth, is a major trading center of the Eastern Shore. Wicomico River forks at the city; the **North Prong,** in 1976–1977, had a controlling depth of 7½ feet or 10 feet at midchannel to the fixed bridge 0.4 mile upstream, but **South Prong** is rarely used. The Main Street highway bridge and the U.S. 50 highway bridge over the entrance to North Prong have 40-foot-wide bascule spans with a minimum clearance of 1 foot. The bridgetenders monitor VHF-FM channel 16 and work on channels 13 and 68; call signs KZA-869 and KYU-697, respectively. (See **117.1 through 117.59 and 117.579,** chapter 2, for drawbridge regulations.)

(113) Salisbury is a **customs station.**

(114) Most of the commercial wharves are below the fork, but there are some in North Prong. Traffic to Salisbury consists of petroleum, aggregates, grain, and fertilizer.

Weather

(115) Salisbury is in a region about midway between the rigorous climates of the North and the mild climates of the South and located on the Delmarva Peninsula immediately south of Delaware.

(116) Rainfall distribution throughout the year is rather uniform with the spread between the wettest month (August) and the driest month (October) being only 2.07 inches (52.6 mm). The average annual precipitation for Salisbury is 44.87 inches (1140 mm). The greatest 24-hour rainfall occurred in October 1980 when 4.93 inches (125.2 mm) fell. The average annual snowfall for Salisbury is 11.4 inches (289.6 mm) of which most falls in January and February. Snow has fallen in each month, October through April and the greatest 24-hour snowfall was 11.7 inches (297.2 mm) in February 1996.

(117) In summer, the area is under the influence of the large semipermanent high-pressure system commonly known as the Bermuda High. Based on climatology, it is usually centered over the Atlantic Ocean near latitude 30°N. This high-pressure system brings a circulation of warm, humid air masses over the area from the deep South. The proximity of large water areas and the inflow of southerly winds contribute to high relative humilities during much of the year.

(118) January is the coolest month, and July, the warmest. The average annual temperature at Salisbury is 56.4°F (13.6°C) with an average high of 66.3°F (19.1°C) and an average low of 45.9 (7.7°C). The warmest temperature on record at Salisbury is 102°F (38.9°C) last recorded in July 1993. The coldest temperature on record is -6°F (-21.1°C) last recorded in January 1987. Each month, October through May, has recorded temperatures below freezing (0°C) while only June and July have seen temperatures in excess of 100°F (37.8°C).

(119) **Nanticoke River** flows into the north end of Tangier Sound 29 miles north of Tangier Sound Light. Waterborne commerce is mostly in petroleum products, but there is also sizable traffic in fertilizers, corn, soybeans, pulpwood, shellfish, and shells.

(120) **Mileages** on Nanticoke River, such as Mile 11W, 19.6E, etc., are the nautical miles above the entrance which is between Nanticoke Point on the east side and **Clay Island** on the west. The letters N, S, E, or W following the numerals indicate the side of the river by compass direction where each feature is located.

(121) A depth of about 10.1 feet can be carried to Sharptown; local knowledge is advised. In 1997-January 2001, the midchannel controlling depth was 5.6 feet in the marked channel from Sharptown to the highway bridge at Seaford, Delaware. From the mouth to Wetipquin Creek, the river is more than 1 mile wide, and is obstructed by extensive shoals, most of which are marked. The deepest water is usually near the points rather than in the bends.

Tide and currents

(122) The mean range of tide in Nanticoke River is 2.3 feet at the entrance and 2.2 feet at Vienna. The current velocity is 1.2 knots in the entrance. The water is fresh above Vienna. Ice forms on the river in winter, but ordinarily there is enough traffic to keep the channel open. Spring freshets do not interfere with navigation.

(123) **Nanticoke,** Mile 2.5E, has two packing plants. A dredged channel, marked by a bouy and lights, leads to a smallboat harbor, protected by jetties, at the village. In May 2000, the controlling depth was 2.0 feet in the channel and 6.2 feet in the basin.

(124) **Bivalve** is at Mile 5.4E. A marked dredged channel leads to a municipal small-boat basin, 0.4 mile northeastward of the village. The basin is protected by jetties that are awash at high water. In August 1980, the controlling depths were 3 feet at midchannel in the entrance channel and 5 feet in the basin, with shoaling to bare along the southern limits of the entrance channel in about 38°18'39"N., 75°53'32"W. Gasoline, diesel fuel, berths, and limited marine supplies are available.

(125) **Wetipquin Creek,** Mile 7.0E, is entered through an unmarked dredged channel to the wharf at **Tyaskin** on the south side of the creek just inside the entrance. In February 2001, the reported controlling depth was 4 feet in the channel with 4 feet alongside the wharf. A surfaced launching ramp is available.

(126) **Vienna,** Mile 19.6W, has a public bulkhead wharf. A launching ramp is 100 yards below the bridge. Gasoline and some supplies can be obtained nearby.

(127) The overhead power cables crossing the river at the electric power plant at Mile 19.6 have a clearance of 135 feet. The highway bridge at Mile 20.1 in Vienna has a fixed span with a clearance of 50 feet.

(128) **Marshyhope Creek,** Mile 24.1W, has depths of 5 feet to the Harrison Ferry bridge, 9 miles above the entrance, above which point the creek is obstructed by snags and debris. The highway bridge at **Brookview,** 5 miles above the entrance, is kept in the closed position with a clearance of 11 feet. (See **117.563,** chapter 2, for drawbridge regulations.)

(129) **Sharptown,** Mile 26.1E, has a bulkhead wharf but little waterborne commerce. Pulpwood is loaded at the south end of town for West Point on York River. The highway bridge over the river at the town has a fixed span with a clearance of 50 feet.

(130) The Maryland-Delaware boundary line on Nanticoke River is at about Mile 27.5.

(131) **Broad Creek**, Del., Mile 29.0E, has a controlling depth of about 5 feet to Laurel. Daybeacons and buoys mark the channel from the entrance to about 0.5 mile above Bethel. The fixed highway bridge at **Bethel**, 3.5 miles above the entrance, has a clearance of 30 feet. The overhead power cables close eastward of the bridge have a least clearance of 50 feet. **Laurel**, 6 miles above the entrance, has a fertilizer plant and several mills. The railroad bridge at Laurel has a swing span with the north opening obstructed; the south opening has a width of 40 feet and a clearance of 14 feet. Between this bridge and the dam, 0.3 mile upstream, are two drawbridges and a fixed bridge which have a minimum width of 37 feet and clearance of 2 feet. (See **117.1 through 117.59 and 117.233**, chapter 2, for drawbridge regulations.) There are several power cables and a telephone cable crossing the creek near the bridges at Laurel, which have a minimum clearance of 20 feet.

(132) The vehicular cable ferry over Nanticoke River at **Woodland,** Mile 31.3W, operates during daylight hours only. The cable held tight by a winch ashore is suspended at or near the water surface at all times during ferry crossings and dropped when loading or unloading cars at the slips and during non-daylight hours. The ferry slips are marked, and warning lights and signs are posted facing up and downstream. Caution should be exercised. while navigating in the area. **DO NOT ATTEMPT TO PASS A MOVING CABLE FERRY.**

(133) A power cable crossing at Mile 33.7 has a clearance of 75 feet.

(134) **Seaford,** Del., Mile 34.7N, has several mills and factories. The Conrail bridge at Mile 34.4 has a swing span with a width of 47 feet in the southeast opening and no vertical clearance. (See **117.1 through 117.59 and 117.243,** chapter 2, for drawbridge regulations.)

(135) The highway bridge at Mile 34.7 has a 40-foot bascule span with a clearance of 3 feet. (See **117.1b and 117.240,** chapter 2, for drawbridge regulations and opening signals.) Depths of 7 feet are said to extend 1.5 miles above the highway bridge, and small boats can go to a milldam 5 miles from the bridge, but there is little traffic above Seaford. Gasoline, diesel fuel, and some supplies are available in the town.

(136) **Fishing Bay** is at the north end of Tangier Sound 28 miles north of Tangier Sound Light. The entrance to the bay is 3 miles wide between Clay Island on the east and **Bishops Head Point** on the west. The partially marked channel in Fishing Bay has depths of 9 feet for 2 miles, thence 13 to 30 feet for 4 miles, and thence 4 to 3 feet to the head, 9 miles above the mouth.

(137) **Tedious Creek,** on the west side of the bay 2 miles above Bishops Head Point, has depths of 4 feet for 0.5 mile from the mouth, then for 0.7 mile shoals gradually to 1 foot at the head. The entrance is marked by a light. The cove at **Crocheron,** a village on the south side of the creek just inside the entrance, has a county wharf and ramp.

(138) **Goose Creek,** on the west side of Fishing Bay 3 miles above the entrance, has a marked dredged channel which, in July 1995, had a controlling depth of ½ foot to the wharves just inside; gasoline is available. **McCreadys Creek,** on the east side of Fishing Bay 4 miles above the entrance, has a marked dredged channel which, in July 1995, had a controlling depth of 4 feet with 3 feet in the east half of the channel at the head of the project. Gasoline and some supplies are available at the village of **Elliott,** 0.6 mile inland.

(139) **Farm Creek,** on the west side of Fishing Bay 5 miles above the entrance, has a marked dredged channel which, in July 1995, had a controlling depth of 4½ feet to just below the head of the project; thence in 1992, 1 to 6 feet off the piers at the head.

(140) **Honga River** extends northwestward from the western part of Hooper Strait for 14 miles between the mainland on the northeast and the Hooper Islands on the southwest; the river is more than 1 mile wide for most of its length. Honga River has a sizable traffic in shellfish and shellfish products.

(141) The southern and main entrance to Honga River is between Hooper Strait Light on the east and Honga

River Light on the west. The narrow crooked channel in the river has depths of 13 to 55 feet as far as **Wroten Island,** on the east side 8.5 miles above the southern entrance, and thence 8 feet for 1.5 miles to the improved channel, described later, leading northwestward and westward to Fishing Creek. Depths northward of the Fishing Creek channel are 4 to 5 feet, shoaling gradually to 2 feet at the head. In 1982-1990, a depth of 4½ feet was reported between Light 2F and Light 5; thence in 1980, shoaling to 2 feet was reported between Light 5 and a point about 0.8 mile north of Light 5. The river is marked as far as Fishing Creek.

(142) **Fox Creek** is on the northeast side of Honga River 2.5 miles above the entrance. A light marks the east side of the creek entrance, and a daybeacon marks the point of a shoal that extends southeastward from **Paul Point.** The creek has depths of 8 feet to a line from Paul Point to **Wingate Point,** on the east side 2 miles above the entrance, then shoals gradually to 1 foot at the head, 1 mile farther up.

(143) **Duck Point Cove,** on the east side just inside the entrance of Fox Creek, has general depths of 1 to 5 feet. In December 1992, the marked dredged channel into **Hearns Cove** had controlling depths of 4 feet in the east half of the channel with shoaling to about 1 foot in the west half, thence 6 feet in the basin at **Wingate.** Greater depths may be available with local knowledge. The oyster-packing plants here have small wharves for the oyster boats. Gasoline is available.

(144) A 2-foot channel marked by private stakes leads to a marine railway in **Insley Cove** at the northeastern end of Fox Creek; boats up to 50 feet can be handled for hull repairs.

(145) The three **Hooper Islands** divide Honga River from Chesapeake Bay and Tar Bay. Middle and Upper Hooper Islands are connected with each other and with the mainland by bridges. **Hoopersville** is a village with general stores and packing plants on Middle Hooper Island, 3.5 miles above the southern entrance of Honga River. A dredged channel in **Muddy Hook Cove,** which is marked by a light and daybeacons, leads to a fish company-owned wharf at the village. In February 1988, the reported controlling depth in the channel was 4 feet; thence in 1983, depths of 3 to 6 feet were available in the basin. The westerly two of the three charted wrecks, just north of the channel, cover at high water and are hazardous to navigation. Gasoline and diesel fuel are available at the wharves.

(146) The highway bridge over the passage between **Middle Hooper Island** and **Upper Hooper Island,** at **Ferry Point,** has a fixed span with a clearance of 35 feet. The marked passage through the bridge from Honga River to Chesapeake Bay has a controlling depth of about 2 feet, but greater depths can be carried with local knowledge.

(147) **Back Creek,** midway along the inner side of Upper Hooper Island 8.8 miles above the river mouth, has a marked dredged channel that leads to a basin at its head. In September 1991, the controlling depths were 4½ feet in the north half and 3½ feet in the south half of the channel to Light 3, thence 4½ feet to the basin, thence 4½ in the basin except for shoaling to 1½ feet along the north edge. Oysterhouses and a marine railway are along the creek; boats up to 45 feet can be hauled out for repairs. A boat yard in Back Creek has gasoline, diesel fuel, water, ice, a pump-out facility, hull and engine repairs, and lifts up to 60 tons.

(148) **Wallace Creek** empties into the eastern side of Honga River 12 miles above the mouth. A privately dredged channel, marked by daybeacons, leads from Honga River to a public landing and a marina at **Crossroads,** 1.9 miles above the entrance. In April 1981, the reported controlling depth was 3 feet. Berths, gasoline, diesel fuel, and some supplies are available.

Charts 12264, 12261

(149) A 4-mile dredged channel marked by lights leads from the upper part of Honga River, 10.3 miles above the mouth, through Fishing Creek and Tar Bay to Chesapeake Bay. In May 1992, the controlling depths were 5½ feet from the entrance at Light 15 to Tyler Cove Channel, except for shoaling to 3½ feet on the north and south channel edges in the vicinity of Light 17, thence 3 feet (3½ feet at midchannel) through Tar Bay to Chesapeake Bay.

(150) **Fishing Creek** lies between Upper Hooper Island and **Meekins Neck.** The highway bridge over the creek has a fixed span with a clearance of 24 feet. The overhead power cable just west of the bridge has a clearance of 65 feet.

Tides and currents

(151) The mean range of tide is 1.3 feet. The current velocity is estimated to be 3 knots.

(152) A public wharf and several private wharves are along the creek.

(153) A dredged channel in **Tyler Creek,** just west of the bridge and on the north side of Fishing Creek, leads to an anchorage basin in **Tyler Cove.** The channel to the basin is marked by daybeacons. In May 1992, the controlling depth was 3½ feet (5½ feet at midchannel) in the entrance channel and 6 feet in the basin, except for shoaling to 1 foot along the east edge. The largest marine railway can handle boats up to 45 feet for repairs;

some supplies can be obtained at **Honga,** on the south side at the bridge. A marina 0.3 mile west of the bridge has gasoline, diesel fuel, and berths; the narrow entrance channel, marked by bush stakes, has depths of about 3 feet.

(154) **Tar Bay,** west of Meekins Neck and Upper Hooper Island, is separated from Chesapeake Bay by Barren Island and a smaller island to the northward. The bay is shallow and unimportant except for the channel that leads through it from Honga River to Chesapeake Bay.

Chart 12266

(155) **Sharps Island Light** (38°38'20"N., 76°22'39"W.), 54 feet above the water, is shown from a leaning, brown tower on a cylindrical pier, in 10 feet at the north end of a shoal that bares at the east end. The light is 2.9 miles due east of a point on the bay ship channel 108.2 miles above the Virginia Capes. A rock, covered 2 feet, and a wreck close eastward cleared to a depth of 6 feet, are about 0.4 mile south-southeastward of the light. A group of rocks, 1.4 miles south-southeast of the light, sometimes awash at low tide, is all that remains of Sharps Island. Submerged pilings are about 0.2 mile southwestward of the rocks.

(156) A **fish haven**, covered 15 feet, is about 4.5 miles south-southwestward of Sharps Island Light.

(157) **Little Choptank River** joins the eastern side of Chesapeake Bay 6 miles south-southeastward of Sharps Island Light. Although obstructed by shoals, the river has depths of 11 feet in a crooked channel for 7 miles and the tributaries have depths of 5 feet for considerable distances. The river is marked as far as Fishing Creek, above which it is difficult to carry more than 7 feet without local knowledge. The tributary channels are usually marked by bush stakes, but navigation is difficult without some local information.

Tide and currents

(158) The mean range of tide in the entrance to Little Choptank River is 1.4 feet. The current velocity is about 0.3 knot. The river carries some commercial traffic in shellfish and shells.

(159) The entrance to Little Choptank River is between **James Island** on the southwest and **Hills Point** on the northeast. James Island is subject to rapid erosion. Good anchorage is available in depths of 12 to 18 feet in the bight between James Island and **Hooper Point,** which is on the west side of the entrance to Slaughter Creek.

(160) **Slaughter Creek** (chart 12264), on the south side of Little Choptank River 4 miles above the mouth, has depths of 5 feet over the bar, thence 6 feet to the bridge at the village of **Taylors Island,** 2 miles above the entrance. The creek is marked by lights and daybeacons; a daybeacon on the west side of the entrance marks a submerged pile. The creek is used by oyster tongers and crab fishermen. A marina on the east side of the creek just north of the bridge has gasoline, diesel fuel, some supplies, and berths; a 25-ton mobile hoist is available for repairs. **Taylors Island Coast Guard Station** is on a houseboat moored about 1.6 miles south of Hooper Point.

(161) **Brooks Creek,** on the north side of Little Choptank River 5 miles above the mouth, has depths of 10 to 4 feet in a narrow channel for 2 miles then depths decrease to 2 feet at the head. The narrow entrance is marked, but local knowledge is required to carry the best water. There are small-craft facilities on the west side of the creek along Hills Point Neck. A marine railway can handle boats up to 40 feet for repairs.

(162) **Hudson Creek,** on the north side of Little Choptank River 6 miles above the mouth, has depths of 5 feet for 3.2 miles to just below **Hudson,** a village at the head. The entrance is marked, and the upper reaches usually are bush-staked. The wharves at Hudson are in poor condition.

(163) **Madison Bay,** on the south side of the river opposite Hudson Creek, has depths of 1 to 9 feet. The entrance to the bay is marked by a light. A dredged channel, marked by daybeacons, leads through the upper part of the bay to a turning basin. The east end of the turning basin is connected to an anchorage basin at **Madison,** a village at the head of the bay. In March 1992, the controlling depths were 5 feet in the east half and 1½ feet in the west half of the entrance channel, thence 5 feet in the turning basin and anchorage basin, except for lesser depths along the western edge of the turning basin, thence 2 feet in the channel south of the basins. Gasoline, diesel fuel, and some supplies are available at the wharf at Madison.

(164) **Fishing Creek,** on the southeast side 7 miles above the river mouth, has a controlling depth of 5 feet for 4 miles to the forks at the head. The channel is narrow and crooked, and difficult to navigate without local knowledge. There are several small piers along the creek which is used extensively by boats bound for Church Creek, the principal tributary. The entrance is marked by daybeacons, and the upper reaches usually are marked by bush stakes. **Northeast Branch** and **Southeast Branch** have depths of 3 feet.

(165) **Church Creek,** on the south side of Fishing Creek 2.5 miles above the latter's mouth, has depths of 6 feet for 0.8 mile, thence 4 feet for 0.8 mile, and thence 1 to 3 feet for 0.3 mile to **Church Creek,** a village near the head.

(166) Other tributaries of Little Choptank River have depths of 2 to 5 feet, and are used by small local boats.

(167) **Choptank River** (see also chart 12268), which flows into Chesapeake Bay 2 miles eastward of Sharps Island Light, is navigable for 53.4 miles to the town of Greensboro. Traffic on the river consists chiefly of petroleum products, fish and shellfish, shells, grain, soybeans, and fertilizer.

(168) **Mileages** on Choptank River, such as Mile 8N, 13S, etc., are the nautical miles above the entrance between Blackwalnut Point on the north and Hills Point on the south. The letters N, S, E, or W following the numerals indicate by compass direction the place where each feature is located.

(169) The principal approach to Choptank River is from southward through a buoyed channel commencing 6 miles southward of Sharps Island Light; the controlling depth is about 25 feet. The approach from northward, between designated fishtrap areas, has a least depth of 10 feet.

(170) The Choptank River main channel has depths of 19 to 25 feet to Cambridge, 15 miles above the mouth, thence in 1975, a controlling depth of 5 feet to Denton and a centerline controlling depth of 2 feet to the fixed bridge at Greensboro. The channel is marked as far as Denton.

Tide and currents

(171) The mean range of tide is 1.6 feet at Cambridge, 2.2 feet at Denton, and 2.5 feet at Greensboro. The river water is fresh above the town of Choptank. The current velocity is about 0.7 knot in the entrance off Cook Point. In Choptank and Tred Avon Rivers the current velocity is less than 1.0 knot.

(172) **Caution.**–It has been reported that during the winter many of the buoys marking the main river channel from the entrance to Cambridge may be moved off station due to ice conditions. It has been further reported that several vessels have grounded on the charted 12-foot shoal close westward of the main river channel in (38°37'37"N., 76°08'15"W.), about 0.2 mile southward of Lighted Buoy 18; mariners are advised to give this area a good berth. In 1970, a stake was reported southward of the main river channel in 38°35'47"N., 76°06'34"W., near Mile 11.9.

(173) Two miles above Hills Point, on the south side of the entrance, is shallow **Trippe Bay,** which is little used except by small oyster and fishing boats. The channel to **Brannock Bay** is marked by daybeacons.

(174) **Tilghman Island,** north of the entrance to Choptank River, has a substantial crabbing, oystering, and fishing industry. The island, 3 miles long in a north-south direction, is subject to rapid erosion on its western side.

(175) **Blackwalnut Cove,** at the south end of Tilghman Island, is well sheltered except from the south, and is used extensively by small boats. A marked dredged channel leads to a basin at the upper end of the cove. In 1991, the controlling depth was 3 feet in the channel, with 6 feet in the basin except for shoaling to 3 feet along the northern and eastern edges. A public pier at the south end of **Fairbank** has depths of 3 feet at the outer end.

(176) **Dogwood Harbor**, on the eastern side of Tilghman Island, has depths of 7 feet to a yacht club. A dredged channel in the upper part of Dogwood Harbor leads northwestward from just above a yacht club to an anchorage basin at Tilghman. In 1982, the midchannel controlling depth was 6 feet, thence in 1980-1982, depths of 5 to 6 feet were in the basin. The mean range of tide is 1.3 feet. No services are available in the harbor.

(177) **Knapps Narrows**, between the mainland and the northern end of Tilghman Island, affords passage from Choptank River to Chesapeake Bay. In 1994, the midchannel controlling depth was 6½ feet from the Choptank River to the highway bridge, thence 2½ feet (5½ feet at midchannel) to the Chesapeake Bay. **Note** that the system of marking is from each entrance and reverses at the bridge. The 42-foot highway bridge over the narrows has a bascule span with a clearance of 12 feet. The bridgetender monitors VHF-FM channel 16 and works on channels 13 and 68; call sign KZA-868. (See **117.1 through 117.49**, chapter 2, for drawbridge regulations.) The mean range of tide is 1.3 feet. The current at the bridge is reported to be 2 knots.

(178) The village of **Tilghman** is on the south side of Knapps Narrows. The bulkheaded sides of the turning basin on the west side of the southerly abutment of the bridge are available for public use. In March 1981, depths of 4 to 7½ feet were available in the basin, except for shoaling to 2 feet in the northeast corner. Full service marinas and boatyards are on either side of the narrows.

(179) **Harris Creek** empties into Choptank River at Mile 2.3N, along the east side of Tilghman Island. The channel has depths of 10 feet, with local knowledge, and is marked as far as Cummings Creek, 5.5 miles above the mouth. Above this point the narrow and crooked channel has depths of 6 feet to the forks, thence 5 feet in a channel marked by private stakes for 1 mile up **Northeast Branch** (chart 12270), and thence 2 feet for 1 mile to the head of the branch, 9 miles above to the mouth of the creek. **Northwest Branch** (chart 12270) also extends 2 miles from the forks, and has a controlling depth of about 2 feet to its head.

(180) **Sherwood** is a village on the west side of Harris Creek 4.5 miles above the mouth. The county wharf at the village, available for public use, has depths of 3 feet alongside.

(181) **Cummings Creek** empties into the northwest side of Harris Creek 5.5 miles above the mouth. A depth of about 5 feet can be carried up Cummings Creek to the county wharf at **Wittman** (chart 12270). The larger of two boatyards along the prongs just eastward of Cummings Creek can handle boats up to 40 feet for hull repairs.

(182) **Broad Creek,** Mile 4.4N, has depths of 16 feet as far as **Edge Creek,** on the east side 3 miles above the mouth. Above Edge Creek, the winding channel has depths of 9 feet for 3 miles, then shoals gradually to depths of 2 feet at the head, 7.5 miles above the entrance. The wide entrance channel is marked, but some local knowledge is needed in the narrow unmarked upper reaches.

(183) **Balls Creek,** on the west side of Broad Creek 1 mile above the entrance, has depths of 6 to 7 feet almost to its head; the narrow entrance is marked by a light and the channel by daybeacons. **Neavitt** is a village on the southwest side near the head.

(184) **Grace Creek,** on the west side of Broad Creek 2.3 miles above the entrance, is marked by daybeacons. A marine railway on the south side near the head of the creek can handle boats up to 40 feet.

(185) **St. Michaels,** a town with its main waterfront on Miles River, can be reached from Choptank River by way of Broad Creek, thence southeastward in Edge Creek for 0.7 mile, and thence northward in **San Domingo Creek** for 2.3 miles to its head, 6 miles from the mouth of Broad Creek. San Domingo Creek has depths of 7 feet or more for most of its length, and a controlling depth of 4 feet to St. Michaels. In August 1978, shoaling to an unknown extent was reported in 38°45'45"N., 76°13'52"W. In August 1991, shoaling to an unknown extent was reported in about 38°45'08"N., 76°13'38"W. The channel is marked by daybeacons. Berthing, electricity, ice, gasoline, diesel fuel, marine supplies, water, pump-out station, engine, electronic, and hull repairs are available; lift to 30-tons.

(186) **Irish Creek,** Mile 4.7N, has depths of 7 feet for 1.4 miles, then shoals gradually to 2 feet at its head, 2 miles above the entrance. In March 2004, shoaling to 2½ feet was reported in the channel between Daybeacons 3 and 4 in about 38°41'35"N., 76°13'24"W., and 38°41'47"N., 76°13'25"W. The narrow approach channel is marked by buoys and daybeacons. The creek is used only by small local boats.

(187) **Tred Avon River,** Mile 7.9N, has natural depths of 16 feet or more for 5 miles, thence 11 feet for 1 mile to **Peachblossom Creek,** thence in 1994, there was a controlling depth of 8 feet in the dredged channel to Easton Point, 8.5 miles above the mouth. The channel is marked as far as Easton Point. Shoals extend off **Watermelon Point,** on the east side 7 miles above the mouth; above this point midchannel courses can be steered. Caution should be exercised if going beyond Easton Point because of abrupt shoaling. The mean range of tide is 1.6 feet. Traffic in the river consists chiefly of petroleum products, shellfish, and pleasure craft.

(188) **Choptank River Light** (38°39'22"N., 76°11'04"W.), 35 feet above the water, is shown from a skeleton tower with small white house on piles in depths of 16 feet 0.6 mile outside the entrance to Tred Avon River. A Coast Guard station is about 1.5 miles NNE of the light.

(189) Small motorboats can find anchorage near midchannel of any of the larger tributaries of Tred Avon River. The river bottom is quite firm, but the bottom in the tributaries is mostly soft mud. There is usually excellent protection from the wind; the brush and trees that line most of the banks provide some protection.

(190) **Oxford** is on the east side of Tred Avon River, 2 miles above the mouth. The principal facilities are along Town Creek on the east side of the town. A marina is on the river side 2 miles above Choptank River Light; the marked entrance channel has a controlling depth of about 4 feet. The ferry landing on the river side of Oxford has depths of 14 feet at the face. Year-round ferry service is maintained to Bellevue, on the opposite side of the river. A public landing nearby has fuel.

(191) **Town Creek** enters Tred Avon River east of Oxford and comprises the waterfront area of the town. A marked dredged channel leads from the entrance to a turning basin at the head of the creek. In April 1989, the controlling depths were 5 feet in the channel and 4½ feet in the turning basin. Two anchorage basins, off the west side of the channel, 0.3 mile and 0.5 mile above the entrance had depths of 10 feet and 8 feet, respectively. In 1982, it was reported that the holding quality of the bottom in Town Creek was excellent. The range of tide is 1.4 feet.

(192) The several packing houses have wharves along the west bank of Town Creek, and small piers are scattered on both sides.

(193) **Bellevue,** across the river from Oxford, is the site of several oyster-packing plants in ruins but prominent as landmarks. A municipal mooring basin is immediately north of the ferry landing.

(194) **Easton Point,** at the head of Tred Avon River 8.5 miles above the mouth at the junction of **North Fork** and **Papermill Pond,** is 1 mile west of **Easton.** A public wharf and the wharves of the oil terminals are on the point. A marina here has gasoline, diesel fuel, some

supplies and slips. A 12-ton lift can haul out boats for repairs.

(195) **Island Creek,** Mile 8.3E, is entered on the north side of Choptank River through a bar channel marked by a light and a daybeacon. In 1982, the bar channel had a controlling depth of 4½ feet.

(196) **Lecompte Bay,** Mile 10.0S, has depths of 7 to 13 feet. A narrow channel, marked at the entrance by private daybeacons, has a controlling depth of about 4 feet and leads to a boatyard 0.5 mile inside **Lecompte Creek** on the west side of the bay. A marine railway can haul out boats up to 50 feet for repairs.

(197) **La Trappe Creek,** Mile 10.6N, has depths of 10 feet for 0.5 mile, thence 5 feet to the bulkhead at **Trappe Landing,** 3 miles above the mouth. The entrance is marked.

(198) **Cambridge,** Mile 15.2S, is the center of a large agricultural area with related industries serving the Delmarva Peninsula. Waterborne commerce consists chiefly of frozen fish, shellfish, petroleum products, grains, and road construction materials. The town has bus, railroad freight and truck services. An airport is near the town.

(199) A marked channel from deep water in Choptank River to a turning basin at the entrance to **Cambridge Creek** had, in 1991, a controlling depth of 23 feet; thence 21 feet was available throughout the turning basin to the **Cambridge Marine Terminal** on the south side and the entrance to Cambridge Creek on the northwest side. The dredged channel through Cambridge Creek had, in June 1984, a controlling depth of 12 feet to the highway bridge, thence 9½ feet to the head about 0.7 mile above the entrance; depths of 8 to 10 feet were available in the anchorage basins on each side of the channel about 0.2 mile inside the entrance.

(200) Most of the waterfront facilities inside the creek have depths of 8 to 12 feet alongside. The mean range of tide is 1.6 feet. The State Route 343 highway bridge 0.3 mile above the harbor entrance has a bascule span with a clearance of 8 feet. The bridgetender monitors VHF-FM channel 16 and works on channels 13 and 68; call sign KZA-695. (See **117.1 through 117.59 and 117.549,** chapter 2, for drawbridge regulations.)

Quarantine, customs, immigration, and agricultural quarantine

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

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

(203) Cambridge is a **customs port of entry.**

(204) The Cambridge Marine Terminal, under a port superintendent, is owned and operated by the Maryland Port Administration as a public facility. The 500-foot marginal wharf at the terminal provides an additional 150 feet of berthing space by a catwalk and two mooring dolphins; depths of 25 feet are reported alongside. Vessels usually moor portside-to for easier undocking. The terminal has rail and highway connections, a 16,000-square- foot warehouse, and 6 acres of open storage. Water is piped to the wharf.

(205) Fuel and supplies can be obtained at Cambridge. The largest shipyard has a marine railway that can handle vessels up to 75 feet for hull and engine repairs; a 35-ton mobile hoist is also available. An unmarked channel with a reported depth of 8 feet, in 2003, leads from Choptank River to the municipal boat basin just westward of Cambridge Creek; the basin has reported depths of 4 to 7 feet. Gasoline, electricity, a pump-out station, water, and ice are available. The Cambridge Yacht Club is on the north side of the basin.

Chart 12268

(206) The fixed highway bridge over Choptank River at the southeast side of Cambridge, Mile 15.5, has a clearance of 50 feet. Sections of the former swing bridge have been converted to recreational fishing piers. A hotel marina about 1.1 miles SE of the bridge, on the south side of the river, has gasoline, diesel fuel, berths, electricity, pump-out station, marine supplies and electronic repairs available.

(207) **Warwick River,** Mile 20.4E, is entered through a marked dredged channel which leads to the bulkhead wharves at **Secretary,** 1 mile above the entrance. In March 1992, the channel had a controlling depth of 4 feet except for lesser depths along the edges near the head of the project and shoaling to bare on the centerline in about 38°36'43"N., 75°57'58"W. Gasoline is available. A marine railway on the south side of the entrance to the river can haul out boats up to 60 feet for repairs; gasoline is available.

(208) **Cabin Creek,** Mile 22.6E, has depths of 3 feet to the fixed highway bridge 1 mile above the entrance, thence 2 feet for 0.5 mile nearly to the head. Private daybeacons mark the creek to below the bridge. The bridge has a width of 17 feet and a clearance of 7 feet.

(209) **Hunting Creek** at Mile 25.2E has depths of 3 feet for 3 miles to a fixed highway bridge. The fixed highway bridge 0.4 mile above the entrance has a width of 17 feet and a clearance of 7 feet.

(210) **Choptank** is a village at Mile 25.6N. The small yacht harbor at Choptank has depths of 2 to 3 feet behind its

wooden bulkheads. A 6 mph, no-wake **speed limit** is enforced. Gasoline is available.

(211) The overhead power cable at Mile 30.7 has a clearance of 139 feet.

(212) Dover Bridge, Mile 33.0, has a swing span with a clearance of 10 feet. (See **117.1 through 117.49, and 117.553(a),** chapter 2, for drawbridge regulations.)

(213) **Tuckahoe Creek** is at Mile 39.5N. The channel in the creek has depths of 8 feet for 2.7 miles, thence 5 feet for 6 miles, and thence less than a foot to the fixed highway bridge from **Hillsboro** to **Queen Anne,** at the head of navigation 11 miles above the entrance. **Tuckahoe Bridge,** 1.7 miles above the entrance, has a 40-foot fixed span with a clearance of 17 feet. The channel is unmarked, crooked, and difficult to navigate in places without local knowledge. The flats are covered with tuckahoes or marsh grass in the summer. The creek is used only by small fishing and pleasure boats. The overhead power and telephone cables just north of the bridge have a clearance of 25 feet. The overhead power cable across the creek about 6 miles above the mouth has a clearance of 32 feet.

(214) **Williston** is a small settlement with a bulkhead landing at Mile 42.0E.

(215) Choptank River is constricted by **Pealiquor Shoal** at Mile 44.3. A dredged channel through the shoal area, in October 1977, had a centerline controlling depth of 5½ feet.

(216) **Denton** is a town at Mile 46.6E. The highway bridge over the river here has a fixed span with a clearance of 25 feet. A bascule bridge with a clearance of 4 feet is just above the fixed bridge; in November 1980, the bridge was being maintained in the open position. The railroad bridge 0.4 mile above the highway bridge has a swing span with a clearance of 6 feet. (See **117.1 through 117.59 and 117.553,** chapter 2, for drawbridge regulations.) In 1981, a fixed highway bridge with a design clearance of 25 feet was under construction about 0.4 mile above the railroad bridge. The least clearance of the overhead power cables crossing Choptank River at Denton and above is 47 feet.

(217) **Greensboro** is a town at the head of navigation at Mile 53.4W. In April-June 1975, the centerline controlling depth in the dredged channel above Denton was 2 feet to the bridge at Greensboro. The fixed highway bridge at Greensboro has a width of 37 feet and a clearance of 10 feet. Gasoline and some marine supplies can be obtained in town.

Chart 12270

(218) **Eastern Bay**, the approach to Claiborne, St. Michaels, Miles River, and other tributaries, is entered between the southerly tip of Kent Island and the northerly end of Poplar Island, 2.2 miles southward.

(219) The shores are low and have few prominent marks. Light-draft vessels also can enter from southward through Poplar Island Narrows and from Chester River on the north by way of Kent Island Narrows.

(220) **Bloody Point Bar Light** (38°50'02"N., 76°23'30"W.), 54 feet above the water, is shown from a brown tower on a cylindrical foundation about 1 mile westward of the south end of Kent Island. The light is about 1 mile east of a point on the main ship channel 120.2 miles above the Virginia Capes.

(221) The bay is used extensively by oystermen and fishing craft, as well as by increasing numbers of pleasure craft. The channel is wide and deep; within the bay are large shoal areas, but depths of 25 feet can be taken without difficulty to the mouths of most of the tributaries.

Currents

(222) East of Poplar Island the current velocity is 1.0 knot on the flood and 0.6 knot on the ebb. Throughout Eastern Bay the current velocity is less than 1.0 knot.

(223) **Poplar Island,** on the south side of the main entrance, is 1.3 miles long in a north-south direction, and is low and wooded. Smaller **Jefferson Island,** southeast of the northern part of Poplar Island, and **Coaches Island,** east-southeast of the southern end, once were part of the large island. **Poplar Harbor,** formed by the three islands, has secure anchorage in depths of 4 to 6 feet.

(224) **Poplar Island Narrows** has a least width of 1 mile between Coaches Island and the mainland to the eastward. The channel through the narrows is marked. In July 1970, shoaling to 5½ feet was reported in the southern entrance to the narrows in about 38°44'03"N., 76°21'17"W.

(225) **Ferry Cove,** on the mainland side of Poplar Island Narrows, is entered through a marked dredged channel which leads to a turning basin on the south side of **Lowes Wharf** at the head. In August 1999, the controlling depth from the entrance to the turning basin was 2 feet, with 2 to less than 1 foot in the basin. A marina at the wharf provides water, ice, a pump-out station, berths with electricity, gasoline, diesel fuel, wet storage, a launching ramp and some supplies.

(226) **Claiborne** is a village on the southeast side of Eastern Bay 5 miles by deep channel from the main entrance. A combination pier and jetty extends 0.2 mile west-southwestward from the Claiborne waterfront; the pier is in ruins. The former ferry landing is just south of the old pier. The channel to Claiborne, marked by a light and private buoys, had a controlling depth of

4 feet in March 1990. In April 1987, depths of about 5 feet are available in the basin. Gasoline and some supplies can be obtained in the village.

(227) **Kent Point,** the northerly entrance point of Eastern Bay, is the southernmost extremity of **Kent Island,** which has a north-south length of 12.5 miles and a greatest width of 5.5 miles.

(228) **Cox Creek** flows southward from the interior of Kent Island into Eastern Bay between **Long Point,** 2 miles northeast of Kent Point, and **Turkey Point,** 3 miles farther to the northeastward. The channel has depths of 22 feet for 1.5 miles, thence 11 feet for 2 miles, thence 7 feet for 2 more miles, and then shoals gradually to 2 feet at the head of navigation, a fixed highway bridge 6.5 miles above the mouth.

(229) A landing at **Romancoke,** 1.5 miles northward of Long Point, has depths of about 4 feet off its end, but is in poor condition. Above Romancoke, Cox Creek has no villages on its shores and is used mostly by oyster boats. The channel is very narrow in places, and shallow water is close to the edges. The shoals are unmarked, and local knowledge is needed to avoid them.

(230) **Crab Alley Bay** joins Eastern Bay between **Bodkin Island,** 0.8 mile east-southeastward of Turkey Point, and **Parson Island,** 2 miles eastward of Turkey Point. Bodkin Island is very small and thickly wooded. Larger Parson Island is sparsely wooded and has a ragged appearance.

(231) Crab Alley Bay is 8 miles by deep channel from the Eastern Bay main entrance. The principal channel in Crab Alley Bay is marked and has depths of 8 feet for 2.5 miles to Crab Alley Creek, in the northwestern part of the bay.

(232) The mouth of **Crab Alley Creek,** between **Cox Neck** on the west and **Johnson Island** on the east, is partly obstructed by very shallow areas that extend out from both sides. The channel within the creek has depths of 6 feet for 1 mile, then shoals gradually to 1 foot at the head. In July 1978, shoaling to an unknown extent was reported on the west side of Johnson Island in about 38°55.8'N., 76°17.6'W.

Small-craft facilities

(233) Small-craft facilities are on the east side of the creek just north of Johnson Island. Gasoline, supplies, storage, pump-out station and a launching ramp are available. Lifts to 35-tons are available for hull, engine and electronic repairs.

(234) **Little Creek,** northeast of Johnson Island, is entered through a marked dredged channel which leads to a basin about halfway up the creek. In October 1991, the controlling depths were 3½ feet in the west half and 1½ feet in the east half of the channel to the basin, thence 2½ to 6 feet in the basin. The largest marine railway on the creek can haul out boats up to 30 feet for hull, engine and electronic repairs; berths, electricity, water, storage, pump-out stations, some marine supplies, and a 35-ton lift are available.

(235) **Prospect Bay,** in the northeastern part of Eastern Bay, is entered between Parson Island and **Piney Neck Point,** 2 miles to the east-southeastward. The entrance is 9 miles by deep channel from the main Eastern Bay entrance.

(236) Prospect Bay extends northward for 5 miles to the U.S. Route 50/301 highway bridge over Kent Island Narrows. The channel has natural depths of 21 feet for 2 miles, thence 11 feet for 1 mile, and thence 7 feet to the beginning of the marked approach to the narrows, which is described later in connection with Chester River. A **000°-180°** measured course, 0.5 mile long, is 1.2 miles north-northwestward of Piney Neck Point. The course is marked by private seasonal buoys.

(237) A **special anchorage** is in **Cabin Creek** on the northeast side of Prospect Bay. (See **110.1 and 110.71a,** chapter 2, for limits and regulations.)

(238) **Greenwood Creek,** entered on the southeast side of Piney Neck Point east of Prospect Bay entrance, has depths of 5 feet for nearly 3 miles inside, but only about 3 feet can be taken over the bar.

(239) **Miles River** flows into the eastern part of Eastern Bay from southeastward, between **Tilghman Point,** at the northeastern end of **Rich Neck,** and **Bennett Point,** 2.3 miles east-southeastward. The entrance is 8.5 miles by deep channel from the main entrance to the bay.

(240) Miles River channel has depths of 20 feet or more for 6 miles, thence 10 feet to the highway bridge 11 miles above the mouth, and lesser depths to the head 14.5 miles above the mouth. A shallow **middle ground,** about 2 miles above the entrance, bares in one place at low water, but is well marked on all sides by buoys and a daybeacon; the river channel is marked as far as the bridge. In September 1991, shoaling to 3 feet had reportedly advanced northward of Wye River Swash Buoy 2 in about 38°50'33"N., 76°12'55"W. The small trade on the river is chiefly in shellfish and shells.

(241) **Tilghman Creek** is on the west side of the entrance along the southeast side of Tilghman Point and Rich Neck. The outer end of Tilghman Point is heavily wooded. The narrow entrance, marked by a light and daybeacons, has depths of about 8 feet; depths of 11 to 8 feet are inside the creek for the remainder of its 1-mile length. A vessel must stay in midchannel to carry the best water. At the upper end of the creek, slips are available at a county wharf; depths to 3 feet alongside were reported in 2003.

(242) **Wye River** flows into the east side of Miles River entrance, just inside **Bennett Point.** The approach can be

made either around the middle ground or to the north of it. The northerly approach is shorter by 2 miles, but is limited to depths of 9 feet; the southerly encircling approach has depths of 30 feet or more. Both approaches are marked.

(243) Small local boats are the principal users of Wye River and its several branches. The twisting channels, some partially marked by private daybeacons, require local knowledge. The channel in the river proper has depths of 30 feet or more for 2 miles, thence 10 feet for 4 miles, thence 6 feet for 1.5 miles and shoaler depths, thence to the head 9.5 miles above the mouth. Oyster bars are along the channel edges in the vicinity of **Wye Island.** There are several landings along the river and its branches.

Anchorages

(244) A **special anchorage** is in a small cove along the western side of Wye River, opposite **Drum Point.** (See **110.1 and 110.71b,** chapter 2, for limits and regulations.)

(245) **Wye Narrows,** which branches eastward 4 miles above the mouth of Wye River, follows the north side of Wye Island for 4 miles to its junction with **Wye East River.** The channel through the narrows has a controlling depth of 6 feet. Midway along the narrows is a fixed highway bridge with a width of 43 feet and a clearance of 10 feet. An overhead power cable with a clearance of 32 feet crosses the narrows close eastward of the bridge.

(246) **Long Haul Creek,** on the west side of Miles River 5 miles above the entrance, has depths of 9 feet or more in most of its 0.6-mile length. The Miles River Yacht Club maintains the **285°** range that marks the channel into the small club harbor in the creek. The range is lighted from April through November and reportedly cannot be seen in daylight.

(247) **St. Michaels,** a town at the head of a small harbor on the west side of Miles River 6 miles above the entrance, has a marked entrance with depths of more 10 feet. In 1983, the harbor had depths of 7 to 10 feet in the middle with lesser depths towards the shores, thence in 1991, a controlling depth of 5½ feet was in the channel leading southward from the head of the harbor to a basin with a depth of 5 feet at the end of the channel. The mean range of tide is 1.2 feet.

(248) The **Chesapeake Bay Maritime Museum** is at St. Michaels.

Small-craft facilities

(249) Small-craft supplies, gasoline, diesel fuel, a pump-out station, electricity, water, ice, and slips are available at St. Michaels. Largest haul-out equipment for repairs is a 30-ton lift.

(250) **Leeds Creek,** marked at the entrance by a daybeacon, is directly across Miles River from St. Michaels. **Fairview Point,** on the north side of the entrance, is thickly wooded. The creek has depths of 5 feet for 2 miles to the village of **Tunis Mills,** then shoals gradually to 3 feet at the head, 0.5 mile farther up. In 1972, shoaling to an unknown extent was reported in Leeds Creek in about 38°47'56"N., 76°11'39.5"W. and 38°48'05"N., 76°11'35.5"W. The fixed highway bridge from Tunis Mills to **Copperville,** on the northwest side of the creek, has a width of 19 feet and a clearance of 6 feet. An overhead power cable just below the bridge has a clearance of 18 feet.

(251) **Oak Creek,** on the south side of Miles River 8 miles above the entrance, is privately marked by daybeacons and has depths of 2 feet in the mouth, thence 3 to 5 feet for about 0.6 mile to the village of **Royal Oak** at the head of the creek. The fixed highway bridge at the entrance has a width and clearance of 24 feet. Overhead power cables just southward of the the bridge have a reported clearance of 36 feet. Above the wharves at **Newcomb**, on the west side just above the bridges, the creek is obstructed by grass.

(252) **Hunting Creek,** directly across Miles River from Oak Creek, has depths of 5 feet for 2.5 miles. The peninsula on the west side of lower Hunting Creek has a breakthrough with a depth of 3 feet, 0.8 mile above the entrance.

(253) The highway bridge over Miles River 11 miles above the entrance has a 40-foot bascule span with a clearance of 18 feet. (See **117.1 through 117.59 and 117.565**, chapter 2, for drawbridge regulations.)

(254) The Chesapeake Bay shore of Kent Island is low and wooded. Marinas 3.8 and 4.8 miles north of Kent Point can provide supplies, gasoline, diesel fuel, berths, electricity, storage and a pump-out station. The southerly marina has a 25-ton lift and the northerly marina has a 40-ton lift available for hull, engine and radio repairs. In 2003, the reported controlling depth was 5 feet in the southerly marina and 4.5 feet in the northerly marina. Both entrances are protected by jetties. It is reported that submerged pilings are at the ends of the jetties protecting the southerly marina.

(255) A **001°30'–181°30' measured nautical mile** is off **Brickhouse Bar,** 5 miles north of Kent Point and 1 mile west of Kent Island; buoys and shore ranges mark the course.

(256) **Matapeake,** 7 miles north of Kent Point, is the site of a former ferry terminal. The jettied entrance channel has a controlling depth of about 7 feet leading to a pier of the Maryland Marine Police. The waters inside the

jetties are available as a State harbor of refuge in an emergency; a launching ramp is available.

(257) A marina, 1.7 miles north-northeast of Matapeake, is entered through a privately dredged channel marked by private unlighted buoys. In 2003, the channel had a reported controlling depth of 6 feet. Gasoline, diesel fuel, and limited supplies are available. Repairs can be made; mobile lift, 70 tons. The William P. Lane, Jr. Memorial (Chesapeake Bay) Bridge, 9 miles north of Kent Point, is described in chapter 13.

Chart 12272

(258) **Love Point Light** (39°03'25"N., 76°16'59"W.), 35 feet above the water, is shown from a skeleton tower, with a red and white diamond-shaped daymark, 1.4 miles northeast of Love Point.

(259) The main entrance to **Chester River** is between **Love Point,** the northern end of Kent Island, and Eastern Neck Island, 3 miles to the eastward. The approach is northward and eastward of Love Point Light.

(260) A fish haven, marked by a buoy, is in the approach to Chester River about 0.8 mile north-northwest of Love Point Light.

(261) Light-draft vessels can also enter from Eastern Bay and Miles River on the southward by way of Kent Island Narrows. Traffic on the river consists chiefly of petroleum products and shellfish.

(262) **Mileages** on Chester River are designated Mile 7S, 11W, etc., which are the nautical miles above the entrance. The letters N, S, E, or W, following the numerals indicate the side of the river by compass point direction where each feature is located.

(263) Chester River has channel depths of 13 feet or more to Chestertown, thence 7 feet to Crumpton, and thence 5 feet to Kirby Landing, Mile 35.2S. The channel is marked for about 32 miles to Crumpton. Above Chestertown, deepest water is difficult to follow except with local knowledge and extreme caution.

Tides and currents

(264) The mean range of tide in Chester River is 1.1 feet at the entrance, 1.3 feet at Queenstown, 1.8 feet at Chestertown, and 2.4 feet at Crumpton. The current velocity is less than 1.0 knot. The river is usually closed to navigation by ice for extended periods during ordinary winters; in mild winters the channel is kept clear most of the time by powerboats. The river water is fresh above Chestertown.

(265) **Love Point** is a village on the point on the west side of the entrance to Chester River. Shells are received by barge at the old railroad pier on the river side of the village.

(266) **Eastern Neck Island**, on the east side of the entrance, is about 3 miles long in a northwest-southeast direction. The island is sparsely wooded with extensive grassy flats along the south shore. It is connected with the mainland on the north by a fixed highway bridge, clearance 6 feet, over **Eastern Neck Narrows**, which is very narrow and little used.

(267) At Mile 2.7S, a privately marked channel leads to a basin with a marina on its south side. In August 2003, a depth of 6 feet was reported in the approach and alongside. Gasoline, diesel fuel, berths, electricity, water, ice, some marine supplies, and a pump-out station are available.

(268) **Kent Island Narrows** entrance is at Mile 4.0S. A marked channel, leads from Chester River to Eastern Bay; the chart is the guide. In December 2001, the reported controlling depth was 3 feet. Very heavy traffic can be expected through the channel during the summer months, especially on weekends.

(269) The State Route 50/301 highway bridge over the narrows has a fixed span with a clearance of 65 feet. Immediately south of the fixed highway bridge is the MD ROUTE 18 (old State Route 50/301) bascule bridge with a 48-foot span and a clearance of 18 feet. The bridgetender monitors VHF-FM channel 16 and works on channels 13 and 68; call sign KXE-254. (See **117.1 through 117.59 and 117.561**, chapter 2, for drawbridge regulations.) The nearby overhead power cable has a clearance of 85 feet. Temporary mooring areas for vessels awaiting bridge openings have been established by the State of Maryland on the west side of the channel about 50 yards north of the bridge, and 100 yards and 650 yards south of the bridge.

Currents

(270) The current velocity is 1.0 knot on the flood and 0.9 knot on the ebb at the bridge.

(271) Two detached nearly parallel breakwaters, 700 and 1,500 feet long in a northwest-southeast direction, are about 0.3 mile southward of the highway bridge crossing the narrows and about 0.1 mile southwestward of the channel entrance to Wells Cove.

(272) **Wells Cove,** on the east side of the narrows 0.4 mile southeast of the bridge, has general depths of 1 to 5 feet. A marked dredged channel leads to a basin in the cove; in 1966, the controlling depths were 6 feet in the channel and basin.

(273) Many crab and oysterhouse piers are along Kent Island Narrows and on the north side of Wells Cove. Complete small-craft facilities are also available in this area.

Photo by Waterway Images

(274) **Jackson Creek,** Mile 5S, has depths of 2 to 7 feet at the entrance and is used as an anchorage by oyster boats; the channel is marked. The bottom is covered with grass.

(275) **Queenstown Creek,** Mile 6.1E, is entered through a marked channel which leads to a turning basin at **Queenstown,** on the southeast side of **Little Queenstown Creek.** In March 1992, the controlling depths were 5½ feet in the east half and 1 foot in the west half of the channel to a point about 120 yards above Buoy 5, thence 6 feet to the basin, thence 6 feet in the basin except for lesser depths along the edges. The entrance channel is bordered by very shallow grassy flats.

(276) **Grays Inn Creek,** Mile 10.7W, has depths of 8 feet for 2.3 miles to a small settlement on the west side, then shoals gradually to 1 foot. About 1.8 miles above the mouth, a marina on **Skinners Neck** has a marine railway that can haul out craft up to 45 feet for repairs; gasoline is available.

(277) **Langford Creek,** Mile 11.3N., has depths of 12 feet over the bar and deeper water inside to the forks 1.7 miles above the mouth; the channel is buoyed to **Drum Point.** An unmarked shoal extends southwestward from small **Cacaway Island** toward the junction of the two fork channels; above the shoal the unmarked forks are clear in midchannel. **East Fork** has depths of 10 feet for 3 miles, thence 7 feet for 1 mile to within 1 mile of the head. **West Fork** has depths of 8 feet for about 3 miles, thence 6 feet for 0.7 mile.

(278) **Long Cove,** on the west side of Langford Creek 0.7 mile above the mouth, has depths of 4 feet to the head; the entrance to the cove is marked by daybeacons. The largest marine railway in the cove can haul out boats up to 50 feet for repairs; the largest lift is 70 tons. Gasoline, diesel fuel, launching ramp, a pump-out station and some supplies are available.

(279) **Davis Creek,** on the west side of Langford Creek 1.5 miles above the mouth, has depths of 9 feet to a marina on the south side near the entrance. A private daybeacon marks the entrance to the creek. Gasoline, diesel fuel, berths with electricity, a pump-out station, water, and ice are available. Repairs can be made, a 40-ton lift is available.

(280) The common entrance to **Reed Creek** and **Grove Creek** at Mile 10.7E is marked by two buoys. The channel to the fork 0.3 mile above the common mouth has a depth of 6 feet. In June 1984, a shoal was reported encroaching the channel from eastward about midway between Buoys 1 and 2. Reed Creek extends southeastward and has depths of 7 feet for about 0.6 mile above the fork, then shoals gradually to 1 foot 1 mile farther up. The channel in Grove Creek is only about 60 feet wide 0.3 mile above the fork, but has depths of 3 feet through the narrows and 5 feet for a mile above that.

Photo by Waterway Images

(281) **Corsica River** is at Mile 11.9E. The controlling depth to the public wharf at **Centreville Landing,** 5 miles above the mouth, was 2 feet at midchannel in March 1990 and less than 1 foot in the turning basin. The lower part of the river is marked, but it is difficult to stay in the upper channel without local knowledge. Some supplies and gasoline can be obtained at Centreville, 0.5 mile inland of the landing. The main wharf at the landing is in poor condition, but a smaller wharf is available.

(282) **Southeast Creek,** Mile 19.8S has depths of 4 feet for 1.8 miles, then shoals to 1 foot at the head of navigation 0.4 mile farther up. **Island Creek,** which empties into the south side of Southeast Creek, 0.5 mile above the mouth, has depths of 3½ feet in the entrance and 4 feet or more for 2 miles to a fixed highway bridge. Both creeks are marked by bush stakes in the difficult reaches. Private buoys mark a channel leading to **Kennersley Wharf,** on the east side of Island Creek 0.3 mile above the entrance; in September 1980, the reported controlling depth was 4½ feet. Gasoline and some supplies are available; a 15-ton mobile lift can handle boats for repairs.

(283) A marina is at **Rolphs,** Mile 20.7E. Some supplies, gasoline, diesel fuel, water, ice, a pump out station, a 7-ton lift, and berths with electricity are available. Small engine repairs are available.

Anchorages

(284) A **special anchorage** is in the Chester River southeast of Chestertown. (See **110.1** and **110.72a,** chapter 2, for limits and regulations.)

(285) **Chestertown,** Mile 23.8W, is a county seat and has bus and rail transportation. Water commerce consists chiefly of barged petroleum products.

(286) The highway bridge over the river at Chestertown has a bascule span with a clearance of 12 feet. (See **117.1 through 117.59 and 117.551,** chapter 2, for drawbridge regulations.) The county wharf 0.1 mile below the bridge has depths of 5 feet reported alongside. The wharf at the marina 0.2 mile below the bridge has depths of 14 feet at the outer end and 6 feet at the inner face. Water, ice, electricity, gasoline, diesel fuel, slips, a 25-ton lift, a pump-out station, supplies, and some repairs are available.

(287) Between Chestertown and Crumpton the channel is very narrow in places. Though marked in the more critical places, it is difficult to navigate without local knowledge and is more easily followed at low water.

(288) **Morgan Creek,** Mile 25.7N, in October 1979, had reported depths of 2 to 3 feet over the bar at the entrance and 2 to 5 feet for about 2 miles in a narrow crooked channel. The entrance is a narrow slough between flats almost awash at low water. A fixed highway bridge 0.6 mile above the entrance has a reported clearance of 6 feet. The overhead power cable close northward of the bridge has a clearance of 32 feet.

(289) A public wharf is at **Deep Landing,** Mile 30S. **Crumpton** is at Mile 32S. The highway bridge at the town has a 40-foot fixed span with a clearance of 14 feet. The overhead power cable on the east side of the bridge has a clearance of 28 feet.

(290) Above Crumpton, the channel in Chester River is difficult to follow without local knowledge, but navigation is possible to Jones Landing, at about Mile 37S.

(291) **Rock Hall Harbor,** north of the entrance to Chester River and 5 miles north-northeastward of Love Point Light, is the base for local fishing vessels and pleasure craft. The entrance channel leads north between converging breakwaters to two channels within the harbor. One channel leads to an anchorage basin at the west end of the harbor, thence eastward paralleling the waterfront at **Rock Hall** to a basin at the east end of the harbor. The second channel leads northeast from inside the entrance and connects with the channel paralleling the waterfront. In April 1990, the controlling depths were 7½ feet (8 feet at midchannel) in the entrance channel, anchorage basin at the west end of the harbor, and channel paralleling the waterfront, thence 8 feet in the basin at the east end of the harbor, thence 8½ feet (9½ feet at midchannel) in the channel that runs northeast from the entrance to the waterfront. In 1996, shoaling to 3 feet was reported in the channel between Rock Hall Harbor Light 5 and Daybeacon 6. The approach to the harbor is marked by a buoy and lights and daybeacons mark the channels inside the harbor. A seasonal fog signal is at the light on the west side of the entrance.

Small-craft facilities

(292) Numerous small-craft facilities are in Rock Hall Harbor. Berthing, water, electricity, gasoline, diesel fuel, pump-out station, launching ramp, storage and marine supplies are available. Repairs can be made with a marine railway that can haul out craft up to 50 feet and lifts to 35 tons.

(293) **Swan Creek** is 1 mile northwestward of Rock Hall Harbor and 0.7 mile southeastward of **Swan Point,** which is 139 miles above the Virginia Capes. A poorly marked channel leads north, then east, to **Deep Landing**. Mariners should use caution when passing **Little Neck Island**, west the channel, as it reportedly is visible only at extreme low water. Private, seasonal buoys reportedly mark the 3½-foot shoal 500 yards north of Light 6 and other shoal water in entrance of the creek. Mariners are advised to pass close to the private moorings on the south side of the channel as the water shoals quickly to the northwest.

(294) The shallow flats that extend 0.4 mile south-southeastward from Little Neck Island are marked by a buoy.

Small-craft facilities

(295) Several small-craft facilities are at **Gratitude,** 0.5 mile above the entrance to Swan Creek. Transient berths, electricity, water, ice, gasoline, diesel fuel, pump-out station, storage, limited marine supplies, and lifts to 40 tons for marine repairs are available.

(296) The area in Swan Creek just north of **Deep Landing** and **The Haven,** a cove 0.5 mile east of Deep Landing, provides a good small-boat refuge in heavy weather.

(297) The eastern shore of Chesapeake Bay above Swan Point is described in Chapter 15.