Using XML to Modernize the United States Coast Pilot®

By: **Scott M. Sherman**

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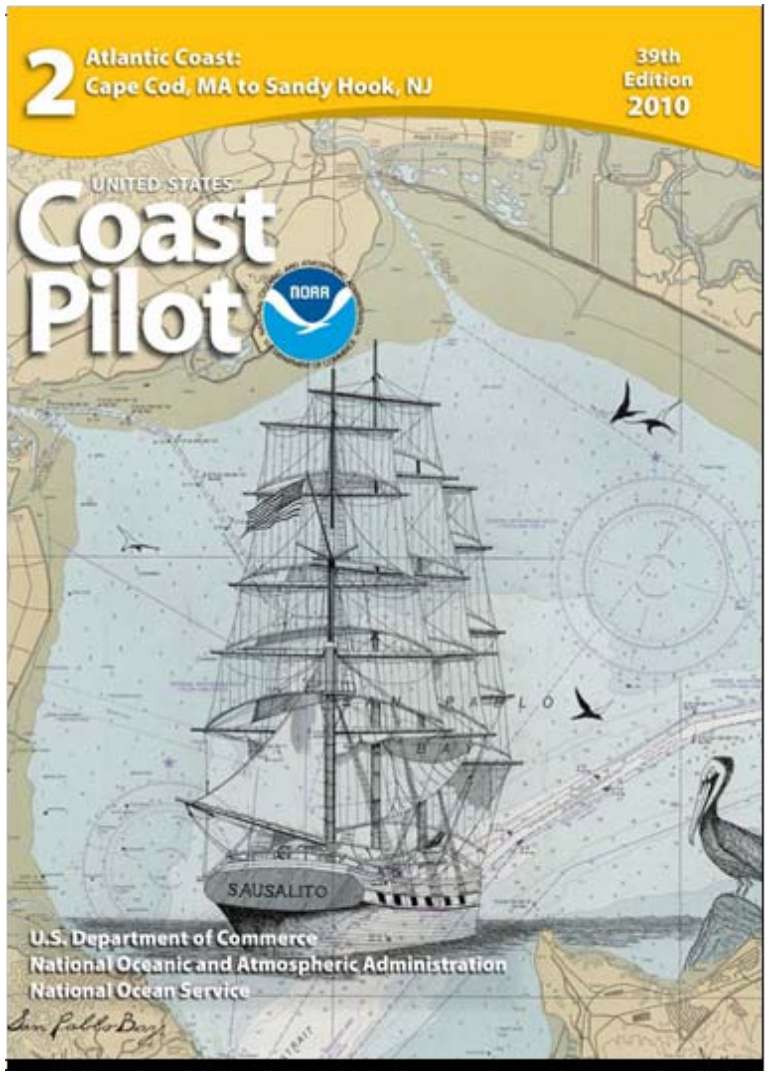

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UNITED STATES Coast Pilot® NOAA

Traditional Book Production

- Use Desktop Publisher to generate press quality PDF for commercial printer
- Ventura10 is current publishing system
- Press-ready files are sent to a contract printer (NPC) for pre-press work, printing, binding and packaging (3 year contract with 2 option years)
- All of our work is done in 4-color (CMYK) space for process color printing

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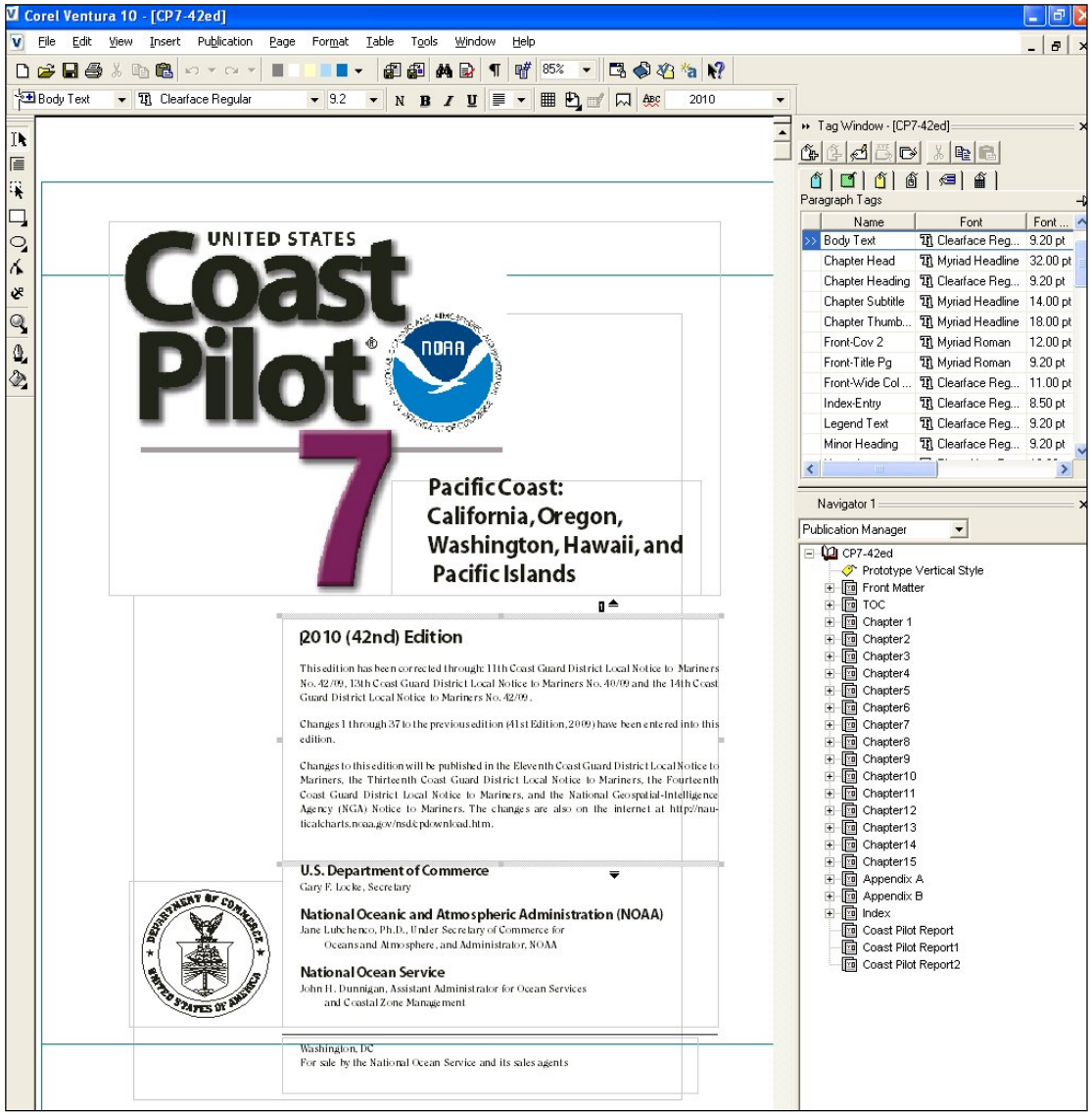
Traditional Book Production (cont.)



UNITED STATES Coast Pilot® 7

New Production System

UNITED STATES Coast Pilot

New Production System

- Based on Adobe InDesign which is the industry standard DTP system
  - File formats in PDF, XML and HTML
  - Image files in PDF, JPG and TIF
  - No real differences in the printed documents
- Documents are stored in OCS Oracle database in XML

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New Production System (cont.)

Why Switch?

- Ventura is no longer supported
- Why XML?
  - XML is a content language – few built-in commands
  - HTML is a display language – built-in codes
  - Documents follow a hierarchy
  - Tags and structure are created by the author
  - Very Versatile

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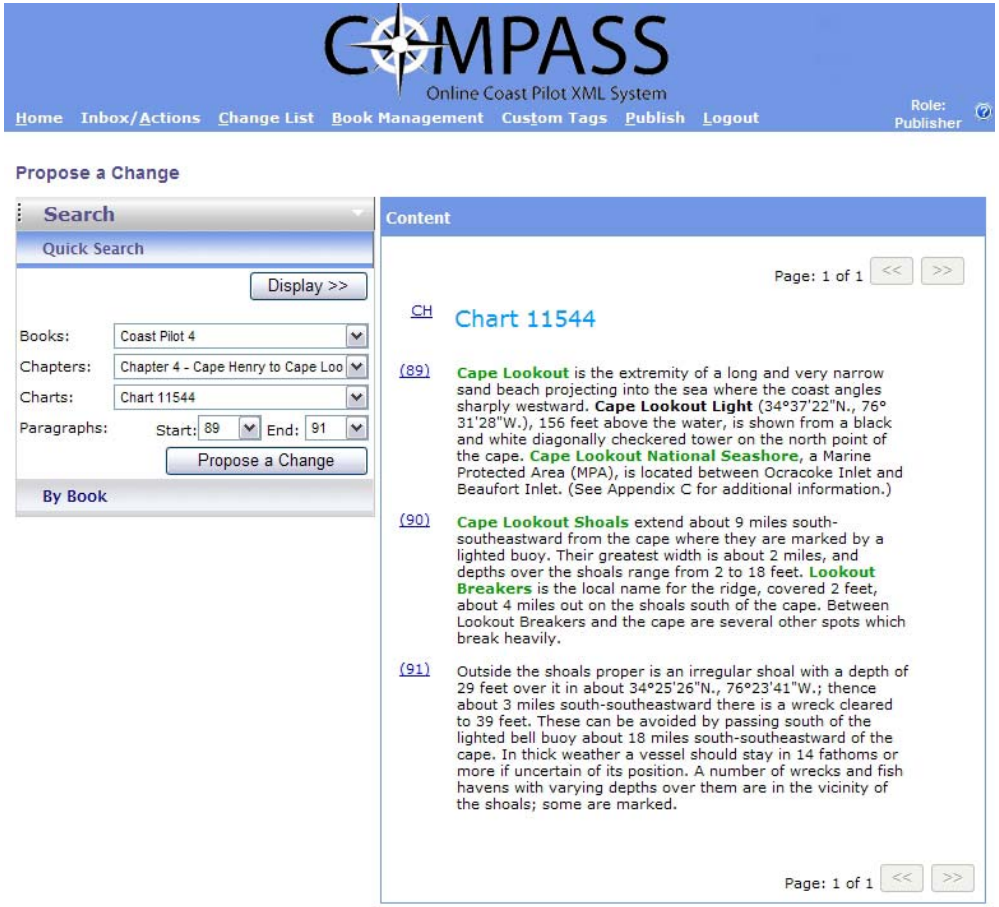
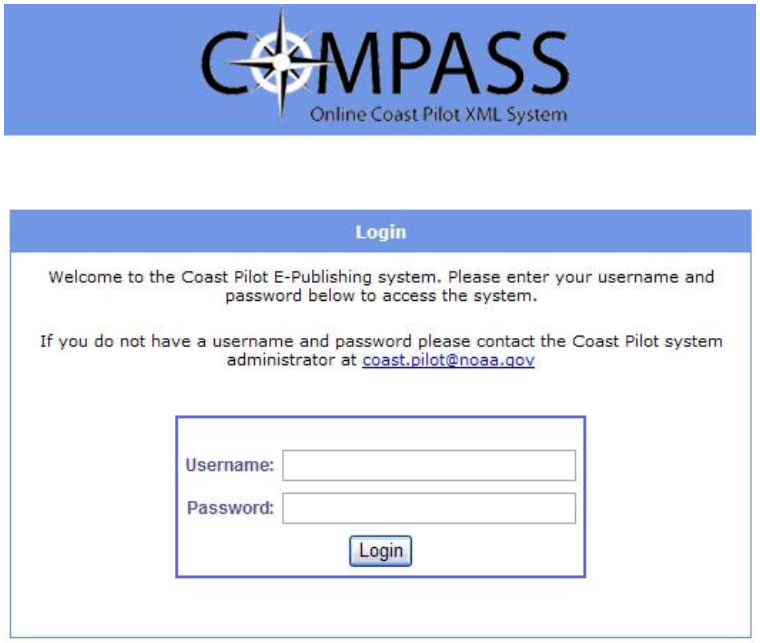
New Production System (cont.)

Updating the Book:



Login Screen:



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New Production System (cont.)


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- <Book Number="2010" BookID="81" Edition="42" ChapterNo="3" Title="Coast Pilot 7" Year="2010" Type="Chapter">
  - <Chapter>
      <chapterTitle>California, Oregon, and Washington</chapterTitle>
    - <paragraph>
        <paraIndex>(1)</paraIndex>
      - <paraText>
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          The California-Oregon-Washington coast of the United States, between Mexico on the S and Canada's British Columbia on the N, is mostly rugged and mountainous, with high land rising abruptly from the sea in many places. S of San Francisco Bay the mountains are usually bare or covered with chaparral and underbrush. N of the bay the mountains are generally well timbered, and in some places, especially N of the Columbia River, the timber is particularly dense and heavy.
        </paraText>
      </paragraph>
      <paragraphHeader>Disposal Sites and Dumping Grounds</paragraphHeader>
    - <paragraph>
        <paraIndex>(2)</paraIndex>
      - <paraText>
          <Spacer> </Spacer>
          These areas are rarely mentioned in the Coast Pilot, but are shown on the nautical charts. (See Disposal Sites and Dumping Grounds, chapter 1, and charts for limits.)
        </paraText>
      </paragraph>
      <paragraphHeader>Aids to navigation</paragraphHeader>
    - <paragraph>
        <paraIndex>(3)</paraIndex>
      - <paraText>
          <Spacer> </Spacer>
          Lights are numerous along the coast; there are only a few places where a vessel is not in sight of one or more lights. Fog signals are at most of the principal light stations. Many coastal and harbor buoys are equipped with radar reflectors, which greatly increase the range at which the buoys may be detected. Loran coverage is good. The critical dangers are buoyed and are generally marked by kelp.
        </paraText>
      </paragraph>
    - <paragraph>
        <paraIndex>(4)</paraIndex>
      - <paraText>
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New Products

- HTML generated from the XML
  - HTML is created on the fly
  - Display optimized for web viewing
- Web-based search
- Search By Geographic Location (coming soon)
- New uses of data from third parties

HTML Display

Vineyard Sound and Buzzards Bay

(1) This chapter describes Vineyard Sound and Buzzards Bay following the Massachusetts coast of Vineyard Sound, the northwestern shore of Martha?s Vineyard, the eastern shore of Buzzards Bay, the Cape Cod Canal, and the western shore of Buzzards Bay. Also described are Woods Hole, Cuttyhunk, Onset, Wareham, and the port of New Bedford, as well as the numerous fishing and yachting centers along the sound and bay.

COLREGS Demarcation Lines

(2) The lines established for this part of the coast are described in **80.145**, chapter 2.

Charts 13230, 13237, 13218

(3) **Vineyard Sound and Buzzards Bay** are deep and easily navigated day or night. Vineyard Sound, together with Nantucket Sound, provides an inside route from New York to Boston which avoids Nantucket Shoals. Buzzards Bay, together with Cape Cod Canal and Cape Cod Bay, provides the shortest deep-draft route between New York and Boston.

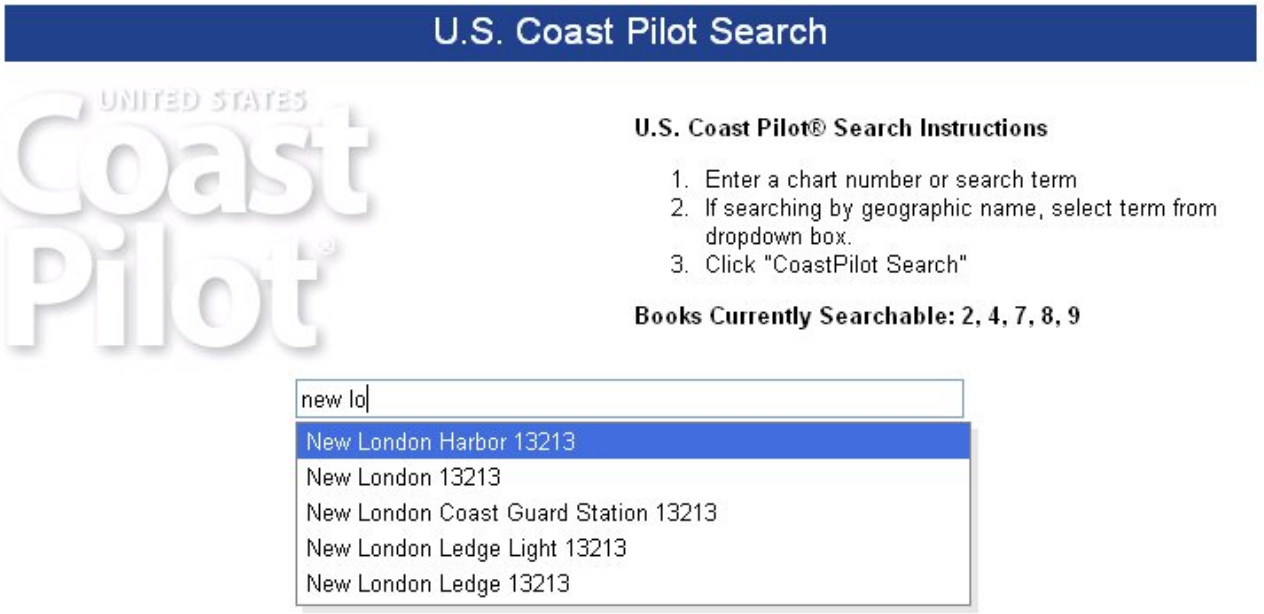
(4) **Vineyard Sound** is bounded on the north by the southwestern part of Cape Cod and the Elizabeth Islands, and on the south by part of Martha?s Vineyard, which presents a rugged and generally inaccessible shoreline. To the west, it joins Rhode Island Sound on a line between Cuttyhunk Island and Gay Head. To the east, it joins Nantucket Sound on a line between Nobska Point and West Chop and provides an inside passage clear of Nantucket Shoals. The navigational aids are colored and numbered for passing through the sound from the eastward. The channel through the sound is well marked and generally free of dangers.

(5) Deep-draft vessels entering or leaving Vineyard Sound should stay at least 3.5 miles southward of the southwest end of Cuttyhunk Island and pass southeast of ?NA? buoy.

Anchorages

(6) Woods Hole is the only anchorage providing shelter from all winds for vessels drawing more than 10 feet. In northerly and westerly winds, good anchorage may be had in Tarpaulin Cove. In southerly winds, shelter can be had in Menemsha Bight, although Vineyard Haven is generally used. Several general anchorages are in Vineyard Sound. (See **110.1 and 110.140 (c) (1), (c) (2), and (d)**, chapter 2, for limits and regulations.)

Web Based Search



- All 9 volumes available to search
- Search by Chart or Geographic Name
- Auto-complete Geographic Name with Chart Number

http://nauticalcharts.noaa.gov/nsd/cpsearch.php

Search Results

Charts 13213, 13212, 12372 - (Chapter 8)

(35) **New London Harbor**, near the east end of Long Island Sound at the mouth of the **Thames River,** is an important harbor of refuge. Vessels of deep draft can find anchorage here in any weather and at all seasons.

(36) Waterborne commerce in New London Harbor and on the Thames River is chiefly in petroleum products, chemicals, coal, copper, lumber, seafood products and general cargo.

(37) **Security Zones** have been established in New London Harbor. (See **165.1 through 165.7, 165.30, 165.33, and 165.140,** chapter 2, for limits and regulations.)

(38) **New London** is a city on the west bank of Thames River about 2.5 miles above the mouth. The town of **Groton** on the east bank is connected to New London by a highway bridge and a railroad bridge. The main harbor comprises the lower 3 miles of Thames River from Long Island Sound to the bridges, and includes Shaw Cove, Greens Harbor, and Winthrop Cove. It is approached through the main entrance channel extending from deep water in Long Island Sound to deep water in the upper harbor. The harbor is generally used by vessels drawing 9 to 30 feet; the deepest draft entering is about 36 feet. Petroleum products, seafood products, copper, lumber and other forest products are the principal waterborne commodities handled at the port.

(39) **Greens Harbor**, a small-craft shelter just north of the entrance, has general depths of 6 to 17 feet. **Special anchorages** are in the harbor. (See **110.1** and **110.52,** chapter 2, for limits and regulations.)

(40) **New London Coast Guard Station** and **Fort Trumbull State Park** are on the west side of the main channel northward of Greens Harbor.

(41) **Shaw Cove** is a dredged basin about 0.8 mile northward of Greens Harbor. In February 1986, the controlling depth was 15 feet in the entrance channel through the south draw of the bridge, thence depths of 11 to 15 feet were available in the basin. The railroad bridge over the entrance has a swing span with clearances of 6½ feet. (See **117.1 through 117.59 and 117.223**, chapter 2, for drawbridge regulations.)

(42) **Winthrop Cove**, northward of Shaw Cove, is part of the main waterfront channel. The fixed railroad bridge near the head of this cove has a clearance of 4 feet.

Prominent features

(43) **New London Ledge Light** (41°18'18"N., 72°04'42"W.), 58 feet above the water, is shown from a red brick building on a square white pier on the west side of New London Ledge; a fog signal is sounded at the station.

UNITED STATES Coast Pilot

What's Next?

- Continue with traditional book publication
- Make new production system operational this year
- Develop new services and applications
  - Geographic Based Searches
  - S-57 Integration
  - Coast Pilot Mobile App (iPhone / Android)
  - Integration with NOAA's Chart Finder

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