A detailed nautical chart from the NOAA Office of Coast Survey. The chart shows a coastal area with various navigational features. A large blue circular NOAA logo is centered in the upper half. The text "Office of Coast Survey" and "The Nation's Nautical Chartmaker" is overlaid in white. The chart includes depth soundings, navigational aids like buoys and lights, and labels for various areas such as "SPOIL AREA", "BARGE LANE", "HOUSTON CHANNEL", "TEXAS CITY OUTER RIDGE", and "HIGHWAY FERRY CHAN".

# Office of Coast Survey

## The Nation's Nautical Chartmaker



National Oceanic and Atmospheric Administration | Office of Coast Survey

# NOAA organization

**Under Secretary of Commerce for Oceans &  
Atmosphere, and Administrator**  
*Dr. Kathryn D. Sullivan*



**National Marine  
Fisheries Service**



**National Ocean  
Service**



**National  
Environmental  
Satellite, Data &  
Information  
Service**



**Oceanic &  
Atmospheric  
Research**



**National Weather  
Service**



**Marine & Aviation  
Operations**



# National Ocean Service

**Assistant Administrator**  
*Dr. Russell Callender*

## NAVIGATION SERVICES

### *Charts*

**Office of Coast  
Survey**

### *Tides & currents*

**Center for  
Operational  
Oceanographic  
Products &  
Services**

### *Geodesy*

**National Geodetic  
Survey**

**Office for Coastal  
Management**

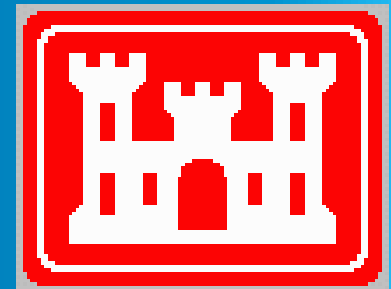
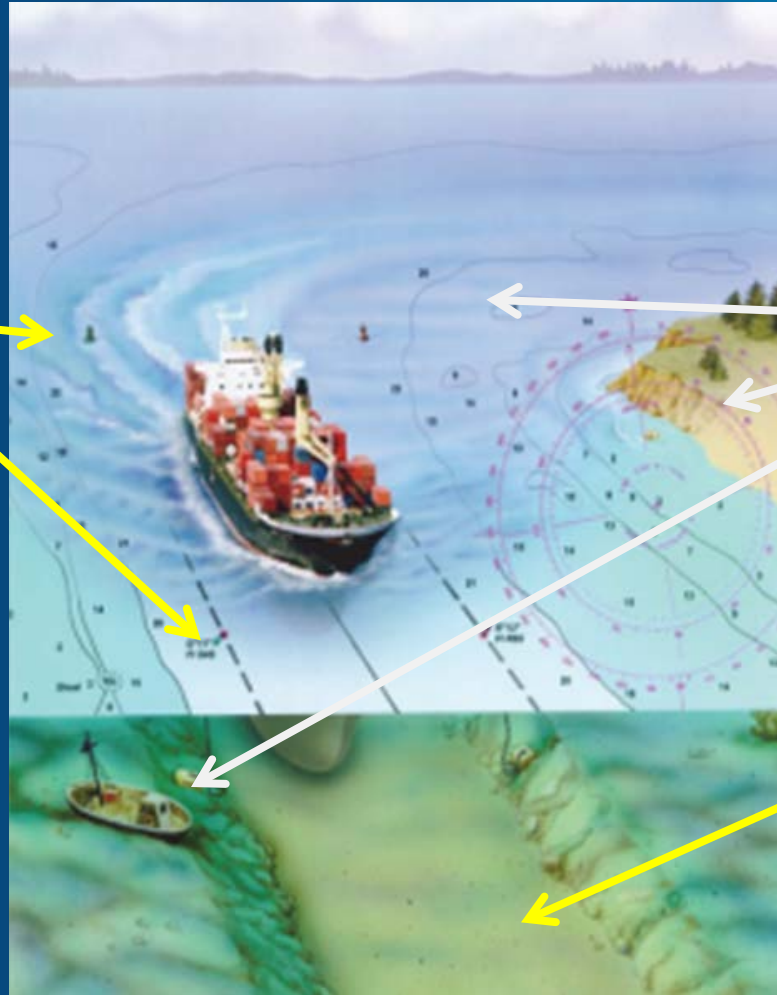
**National Marine  
Sanctuaries**

**Office of Response  
& Restoration**

**National Centers  
for Coastal Ocean  
Science**



# Charting responsibilities

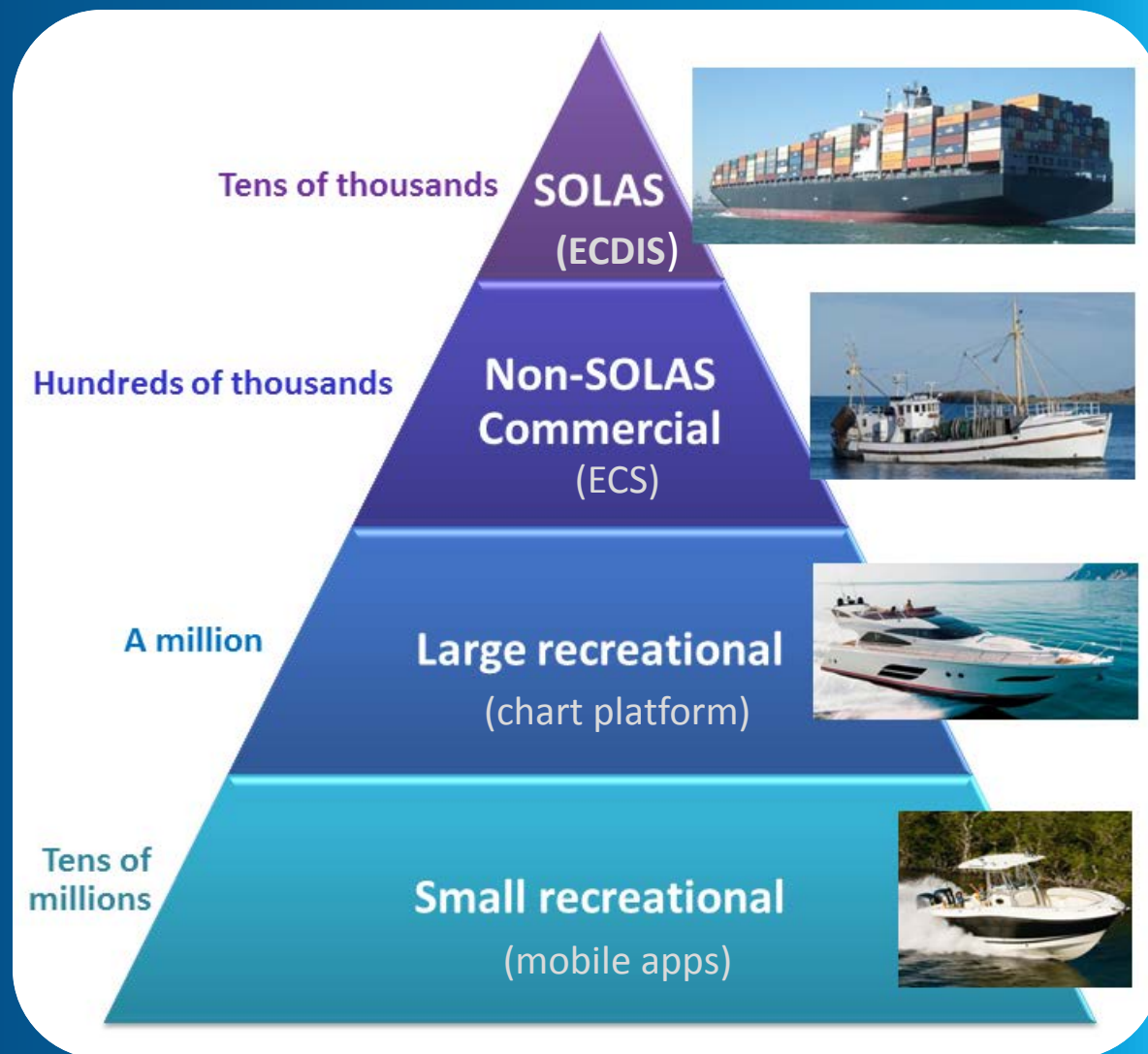




# Expanding user base

(new modes of use)

*\*A SOLAS ship is any ship to which the International Convention for the Safety of Life at Sea (SOLAS) 1974 applies; namely, a passenger ship engaged on an international voyage, or, a non-passenger ship of 500 tons gross tonnage or more engaged on an international voyage.*



# What product meets your needs?

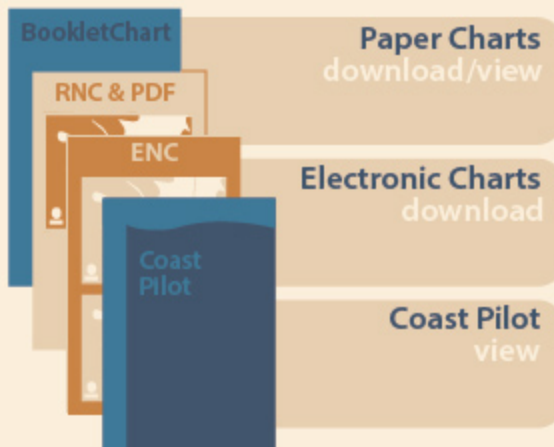


## NOAA'S INTERACTIVE CHART CATALOG

### 1 SELECT CHART



### 2 CHOOSE FORMAT

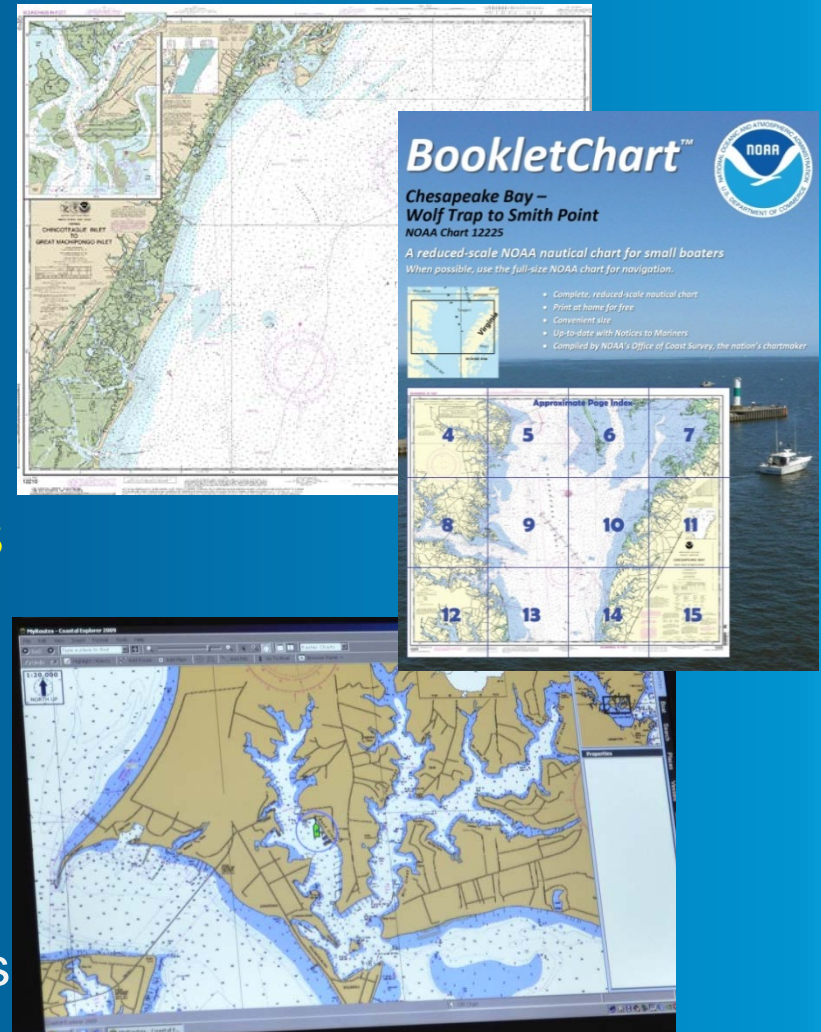


### 3 USE *immediately*



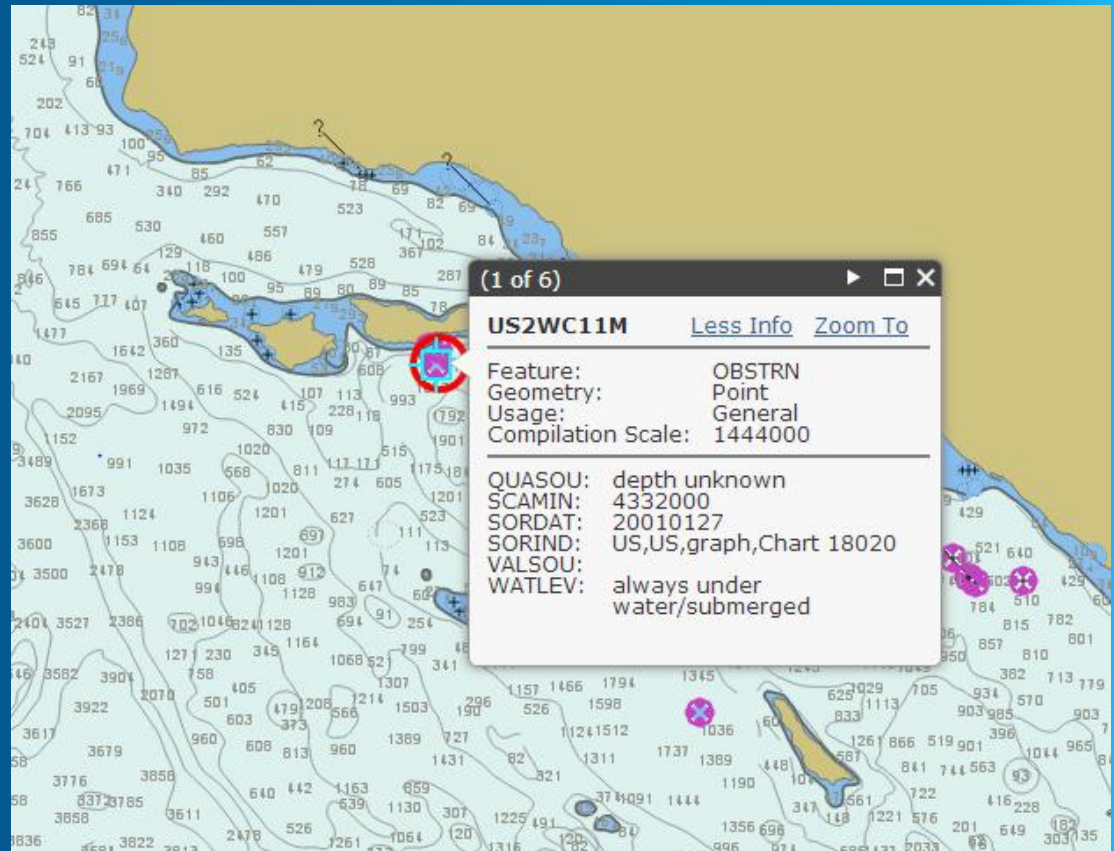
# Navigational charts

- Paper nautical charts
  - Sold commercially
- PDF charts
  - Free download
- Raster navigational charts
  - NOAA RNC®
- Electronic navigational charts
  - NOAA ENC®
- NOAA BookletChart™
  - Free download
- Chart Tile Service
  - For App and S/W developers



# ENC Online

- Can view ENC without ECDIS
- Useful for planning voyages



[nauticalcharts.noaa.gov/ENCOnline](https://nauticalcharts.noaa.gov/ENCOnline)





# U.S. Coast Pilot

## Use as HTML

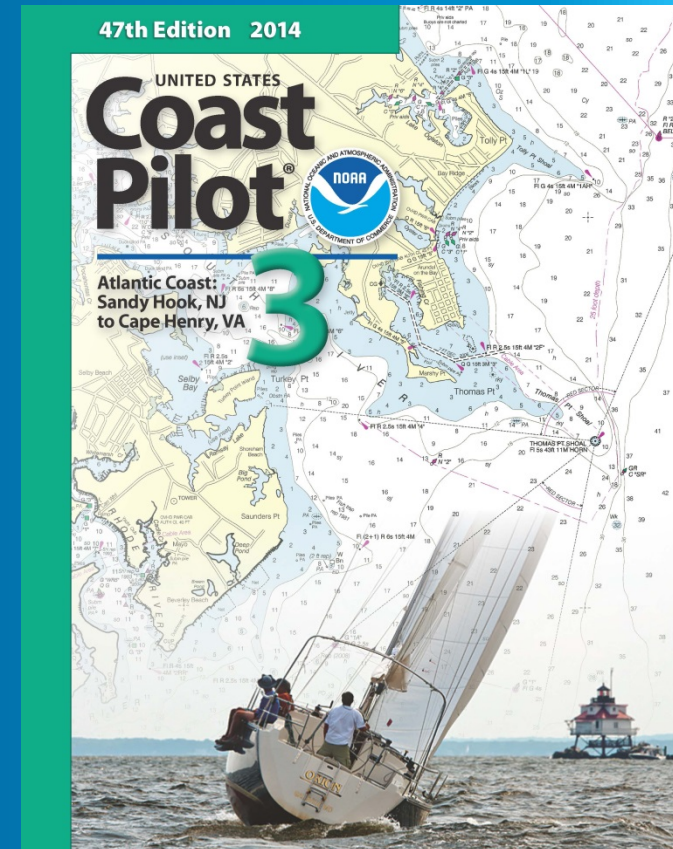
- Connect online to geo-tagged documents

## Available as print-on-demand

- Updated with critical corrections
- Currently three distributors
- Meets carriage requirements with a certificate of authenticity

## PDF available for free download

- Updated with critical corrections
- “Print Your Own” meets carriage requirements



[Paper Charts \(RNC & PDF\)](#)[Electronic Charts \(ENC\)](#)[Coast Pilot](#)[Help](#)

## General Information & Links

**NOAA RNCs (RNC):**  
Geo-referenced charts in BSB format.  
[Terms & Conditions](#)

**Print-on-Demand (POD):**  
Order POD charts from [Certified Agents](#).

**NOAA PDFs (PDF):**  
Full-size, 400dpi printable charts.

**NOAA BookletChart (BC):**  
8.5" x 11" printable panels of the charts.

**Notice to Mariner (NM):**  
Weekly corrections to the RNCs.

**NOAA ChartViewer (View)**  
[Historical Map & Chart Collection](#)

## Map Selection Information

Chart: 18704 1:20,000

Title: San Luis Obispo Bay, Port San Luis  
Type: Harbor Chart  
Scale: 1:20,000  
Edition: 13  
Print Date: 5/1/2004

### Available Products

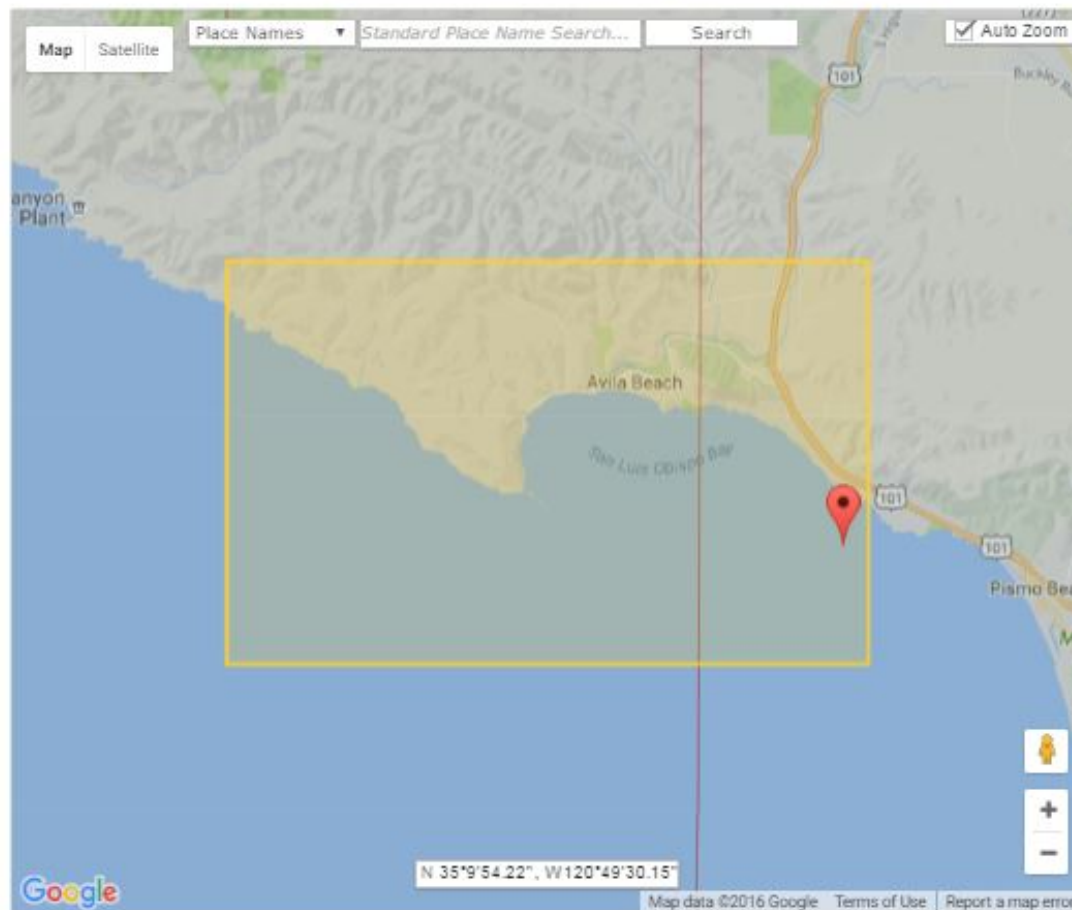
[View](#) [Buy](#) [PDF](#) [BC](#) [RNC](#) [NM](#)

Chart: 18700 1:216,116

Chart: 18022 1:868,003

Chart: 18020 1:1,444,000

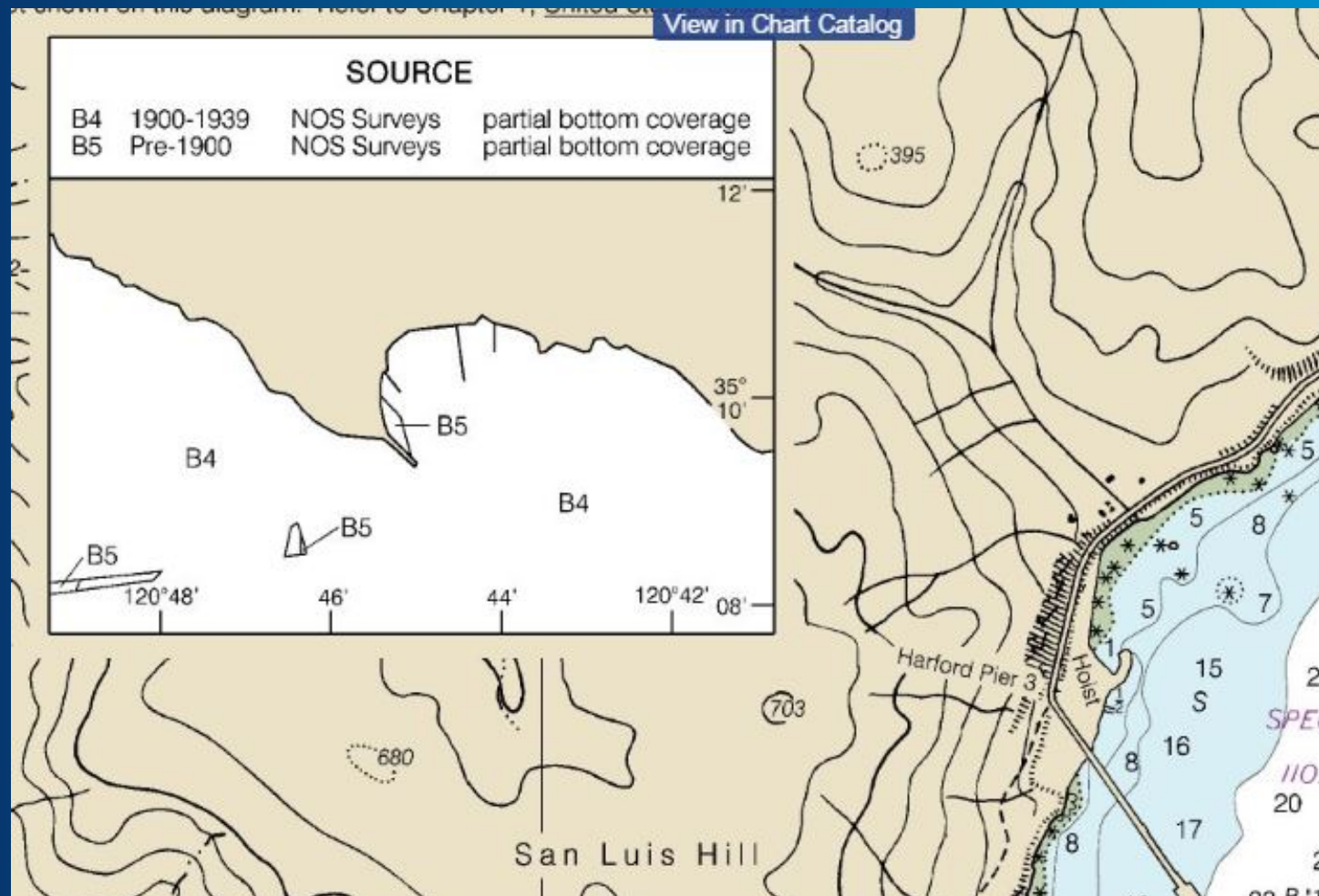
Chart: 501 1:3,500,000



Click on the map-based chart locator at [nauticalcharts.noaa.gov](http://nauticalcharts.noaa.gov)



# Source Diagrams

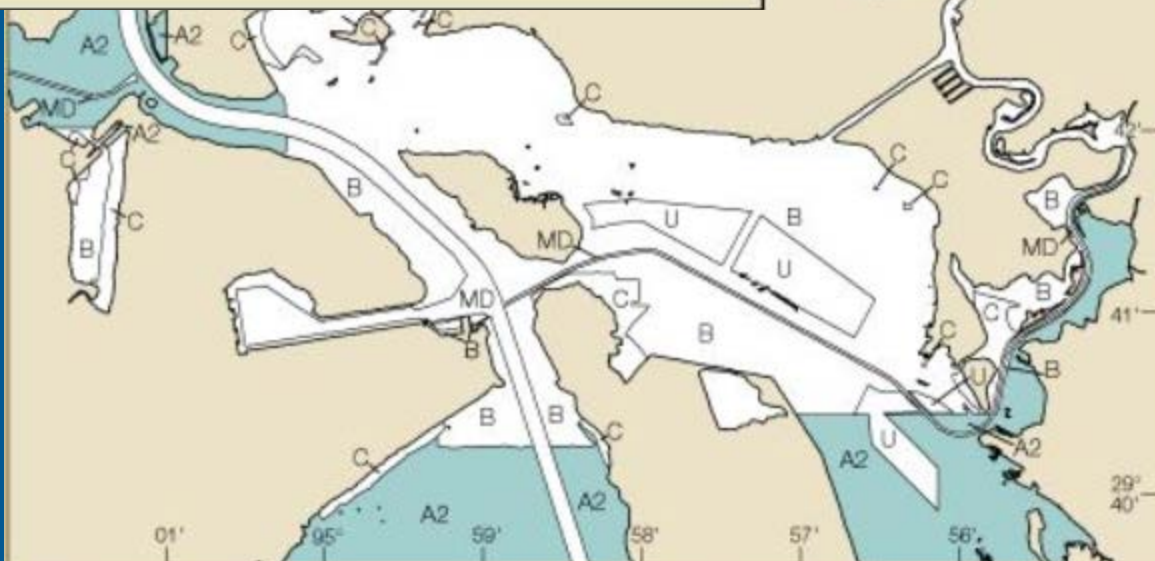




## ZOC CATEGORIES


(Refer to Chapter 1, United States Coast Pilot)

ZOC	DATE	POSITION ACCURACY	DEPTH ACCURACY	SEAFLOOR COVERAGE
A2	1996	± 66 ft	= 3.3 ft + 2% <i>d</i>	All significant seafloor features detected.
B	1965 - 1996	± 164 ft	= 3.3 ft + 2% <i>d</i>	Uncharted features hazardous to surface navigation are not expected but may exist.
C	1931 - 1933	± 1600 ft	= 6.6 ft + 2% <i>d</i>	Depth anomalies may be expected.
U	Unassessed - The quality of the bathymetric data has yet to be assessed.			
MD	Maintained Depth - See Chart			





# Report chart discrepancies

 Office of Coast Survey

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Nautical Charts & Pubs | Surveys & Wrecks | GIS & Other Products | Research & Development | Customer Service | Business Opportunities | Education

## Welcome to NOAA's Nautical Discrepancy Report System

Thank you for your interest in NOAA's nautical chart products. Your comments are very important. You will receive a response within 2 business days.

For a list of available nautical chart products and ordering information see [this page](#)

If you prefer to communicate by telephone please dial 1-888-990-6622

### CONTACT INFORMATION

Please enter an email address and/or a daytime telephone number to allow us to contact you.

Email address:  re-enter email address to confirm:

Submitting voluntary information constitutes your consent to the use of the information for the stated purpose. For more information, please see the [NOAA privacy policy](#).

OMB Control No. 0648-0007. Expiration date 3/31/2014.

Privacy | Disclaimer | NOAA's National Ocean Service | NOAA | U.S. Department of Commerce

nauticalcharts.noaa.gov/discrepancy



# NOAA survey assets



*Rainier*  
Newport, Oregon  
1968



*Fairweather*  
Ketchikan, Alaska  
1968, 2010



*Thomas Jefferson*  
Norfolk, Virginia  
1992

*Bay Hydro II*  
Silver Spring, Maryland  
2008



*Ferdinand R. Hassler*  
New Hampshire  
2012



6 Navigation  
Response Teams

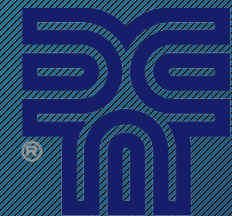


*King Air*  
2009





# Contracting for surveys

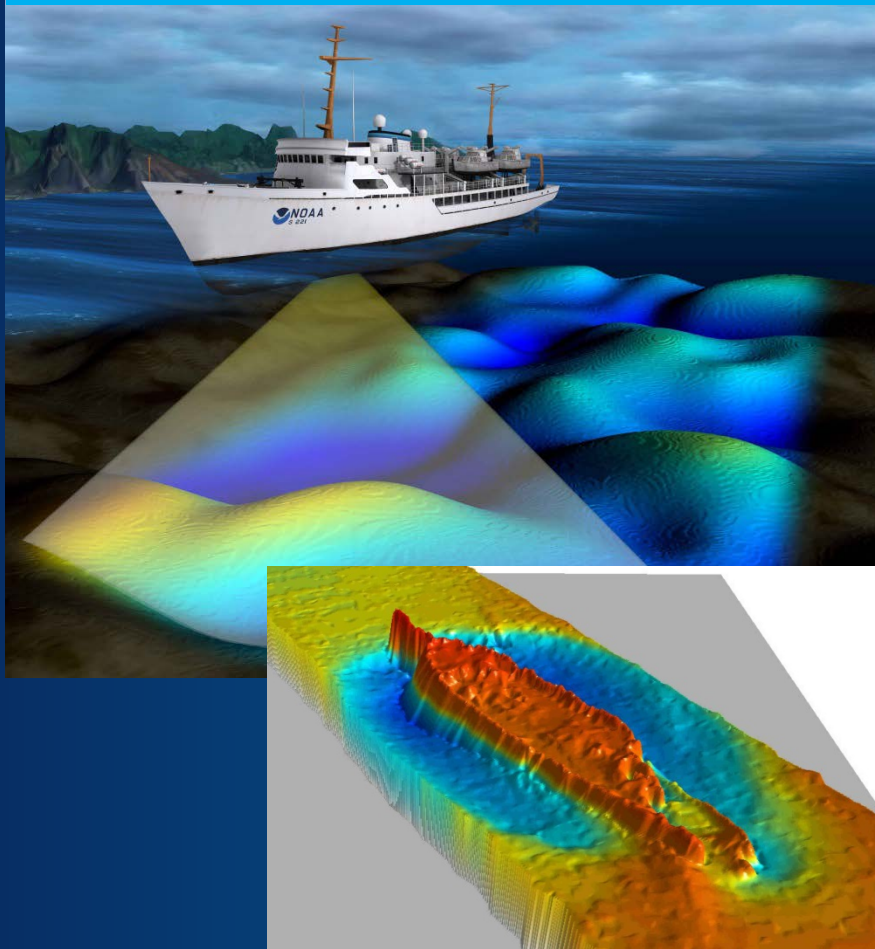


DAVID EVANS  
AND ASSOCIATES INC.

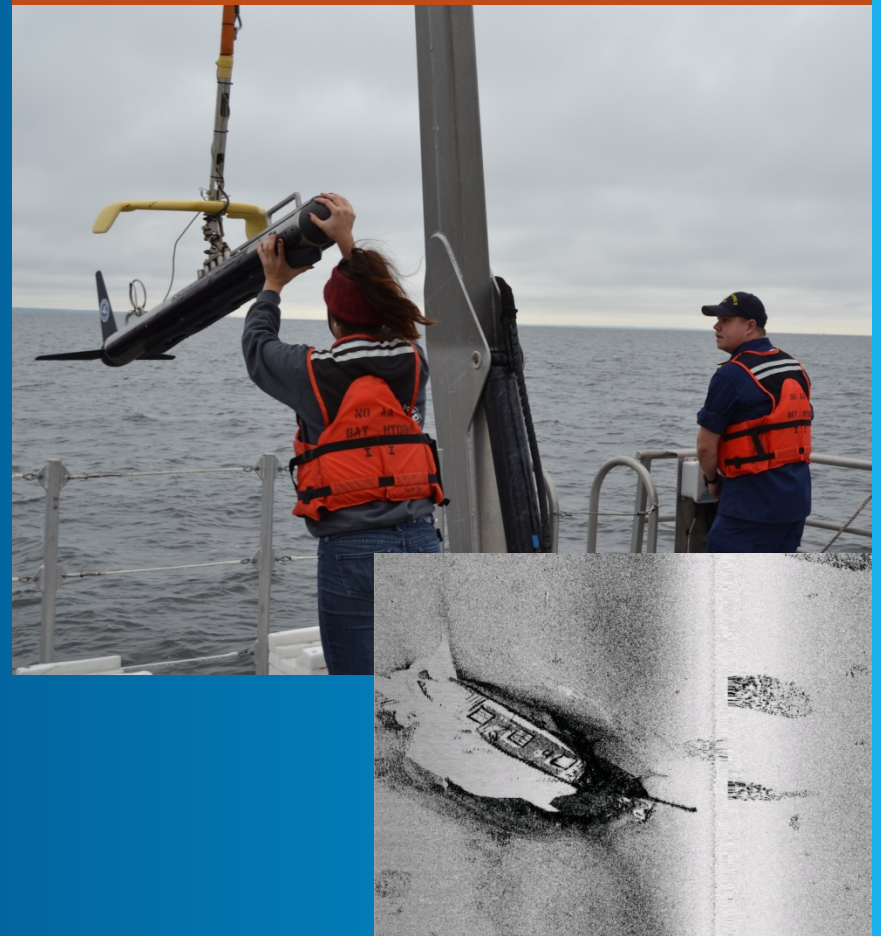
Data  
Acquisition

# Data acquisition

Multibeam echo sounder



Side scan sonar





# New technologies for more data



Autonomous underwater vehicles



Satellite-derived bathymetry



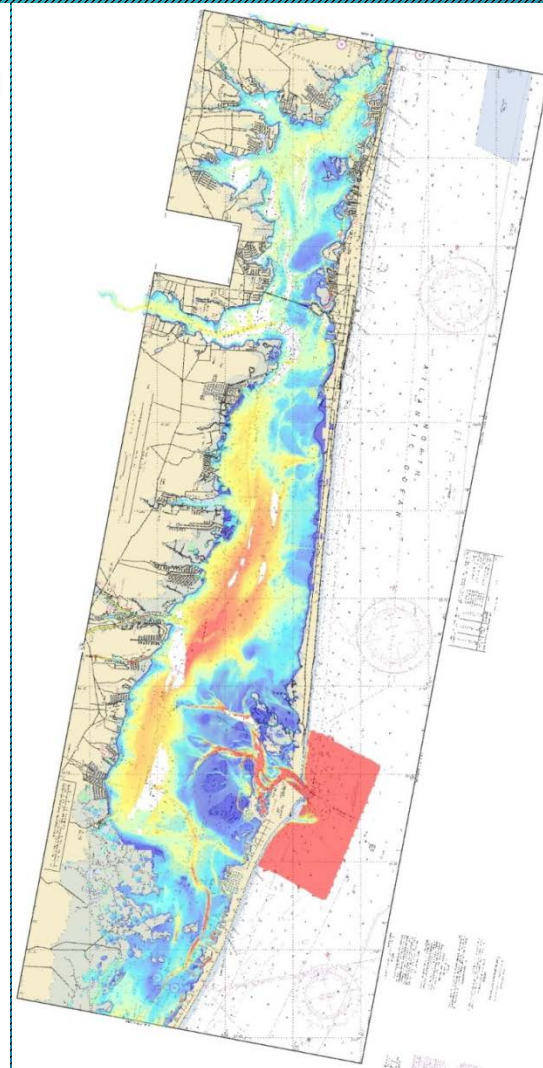
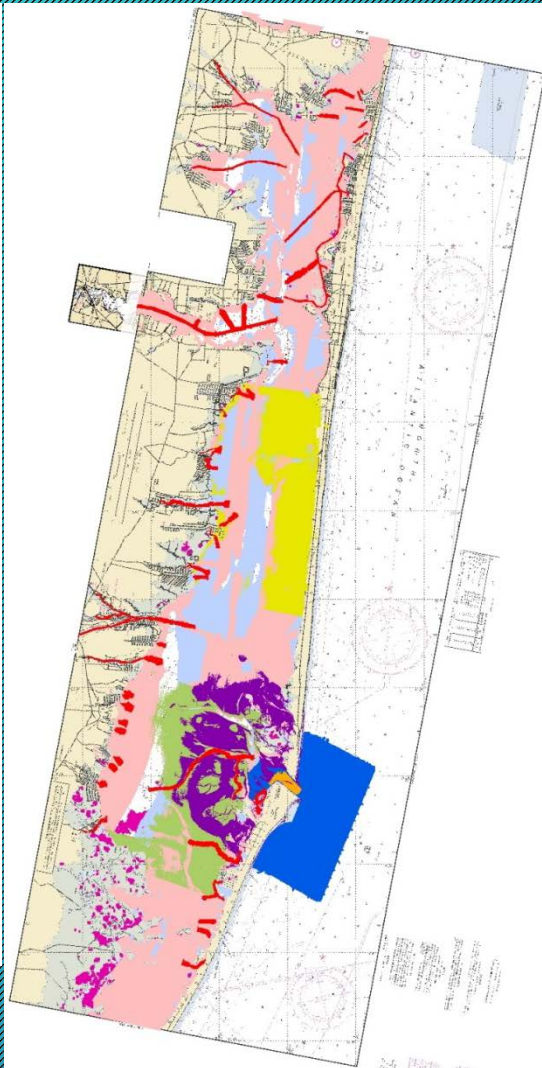
Autonomous surface vehicles



# Blending solutions



-  Survey Areas
- ☒ NJDOT Channels
- 
- ☒ Riegl Lidar
- 
- ☒ H12606 Area 1
- 
- ☒ H12606 Area 2
- 
- ☒ ACE Barnegat Inlet
- 
- ☒ H12596
- 
- ☒ EAARL-B postSandy
- 
- ☒ EAARL-B preSandy
- 
- ☒ SDB
- 



Barnegat Bay

Data  
Acquisition

# Tri-Agency Listening Sessions (2014)

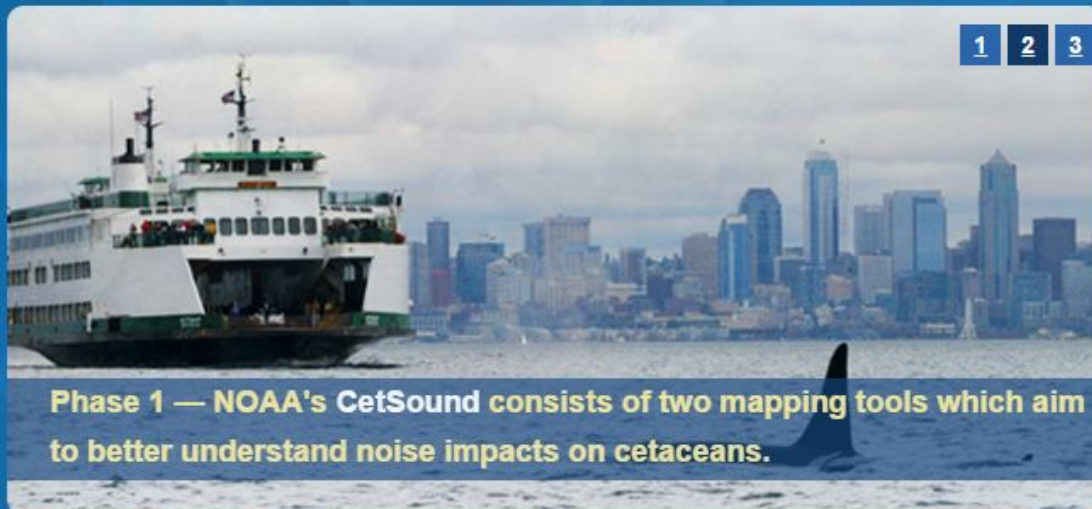
- NOAA – USCG – COE
  - 10 sessions around the country, including Oakland.
- Virtual Aids to Navigation (ATON)
  - Lots of passionate discussion
  - I think the USCG heard, loud and clear
- Concern that rec boaters are being ignored
  - Raster tile service, find ways to update data





[Home](#)[CetSound](#)[Ocean Noise Strategy](#)[Partners](#)[Contact](#)

## Underwater Noise and Marine Life



**\*\*NEW (September 2016)\*\***

**Final NOAA Ocean  
Noise Strategy Roadmap  
Released**



## Resources

[Science Tools for Managers](#)





**nauticalcharts.noaa.gov**  
**Blogging at noaanaauticalcharts.wordpress.com**  
**Twitter @NOAAcharts**  
**Facebook at NOAA Charts**

**jeffrey.ferguson@noaa.gov**

**Cell: 301-351-7798**



National Oceanic and Atmospheric Administration | Office of Coast Survey