

# NOAA Electronic Navigational Chart 2.0

*John Nyberg*  
*Chief, Marine Chart Division*



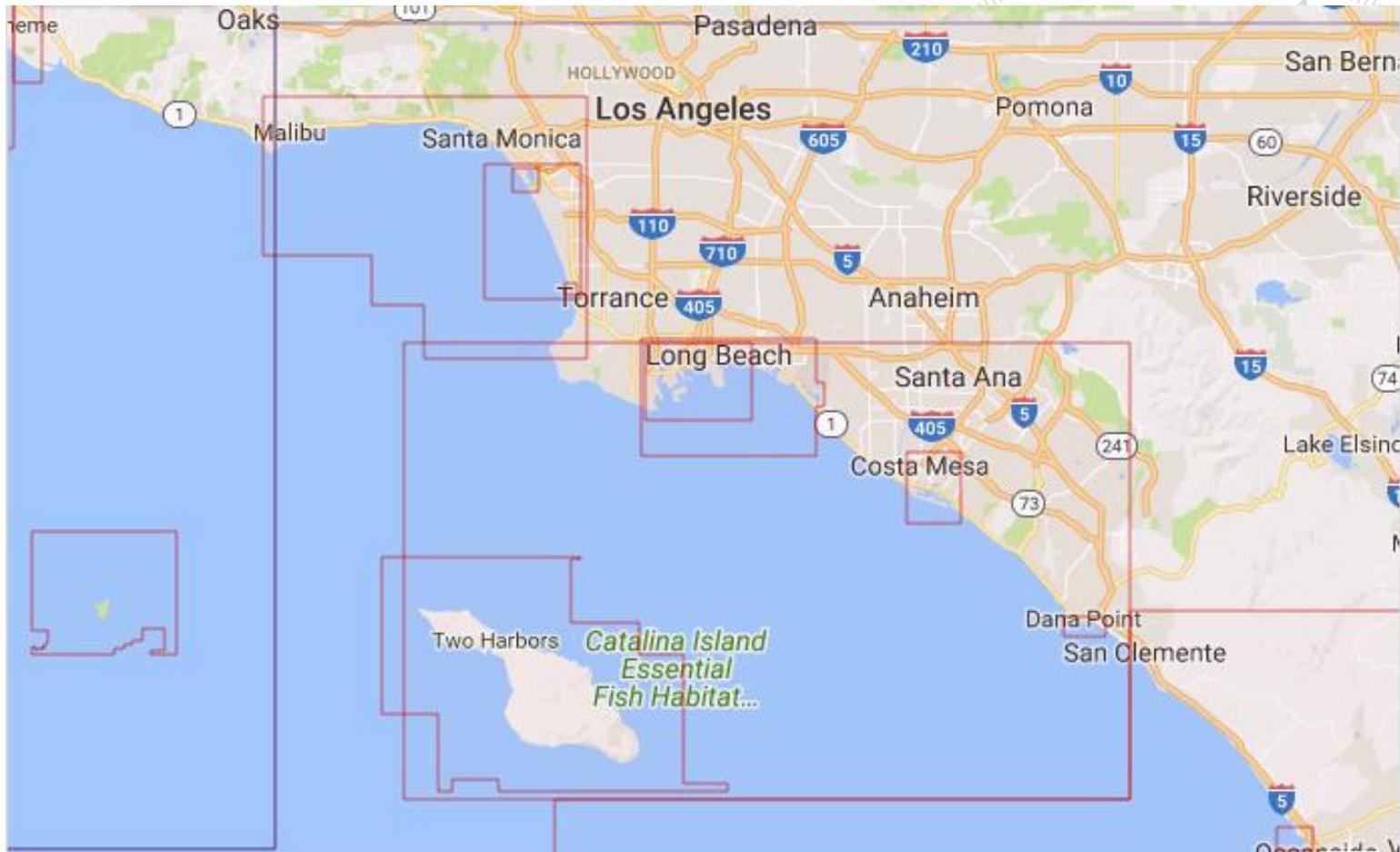
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National Oceanic and Atmospheric Administration

# ENC Feedback from Mariners

- Too many alarms on caution areas
- Need more detailed depth areas in key locations
- Need accurate least depths on wrecks and obstructions-we are training our users to ignore the magenta Xs.
- ENC's are not standalone products-they are components of a seamless suite. There are too many discontinuities.
- Symbology is not good for recreational mariners

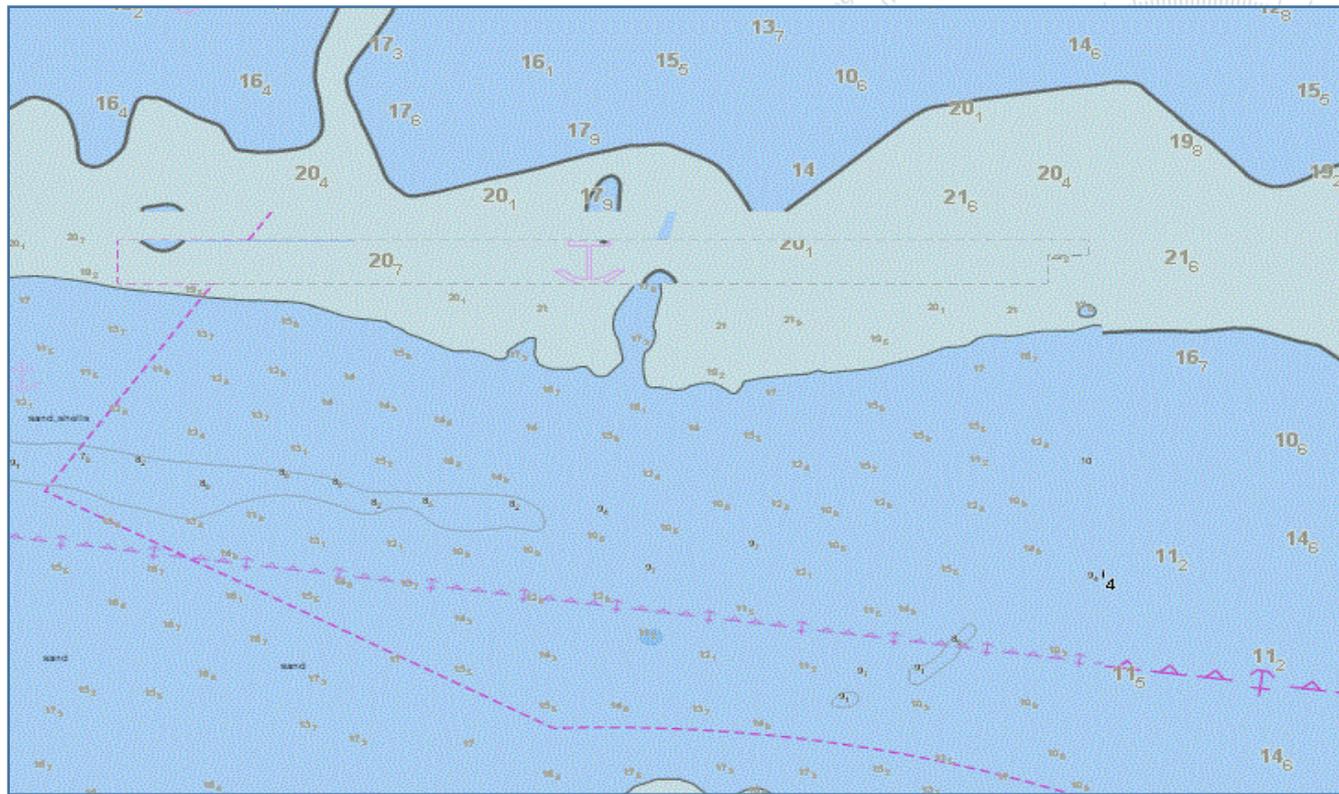


# Paper to ENC



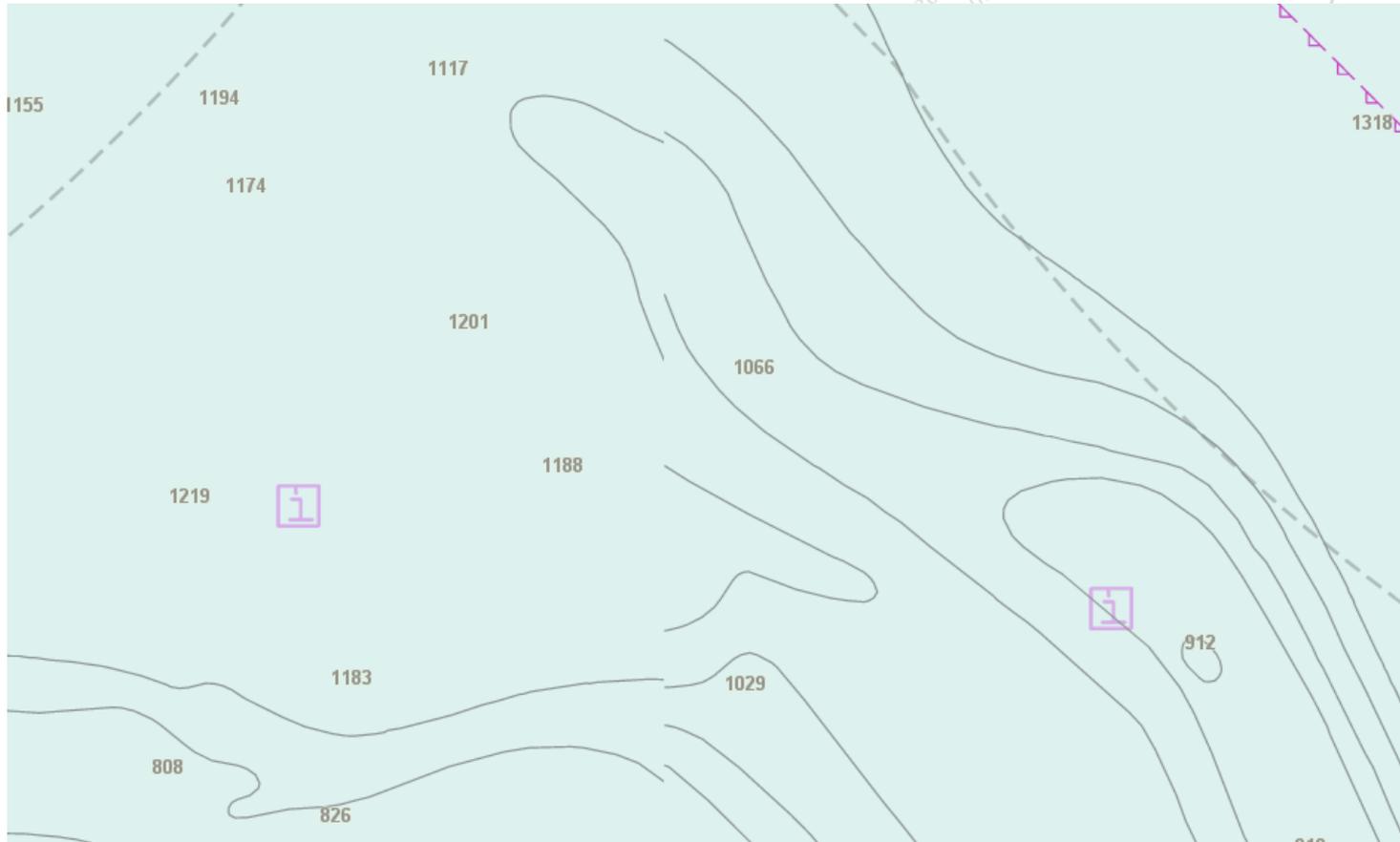
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# Paper to ENC – Scale Bar



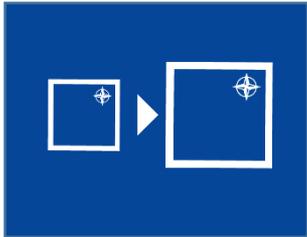
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# Edge Matching

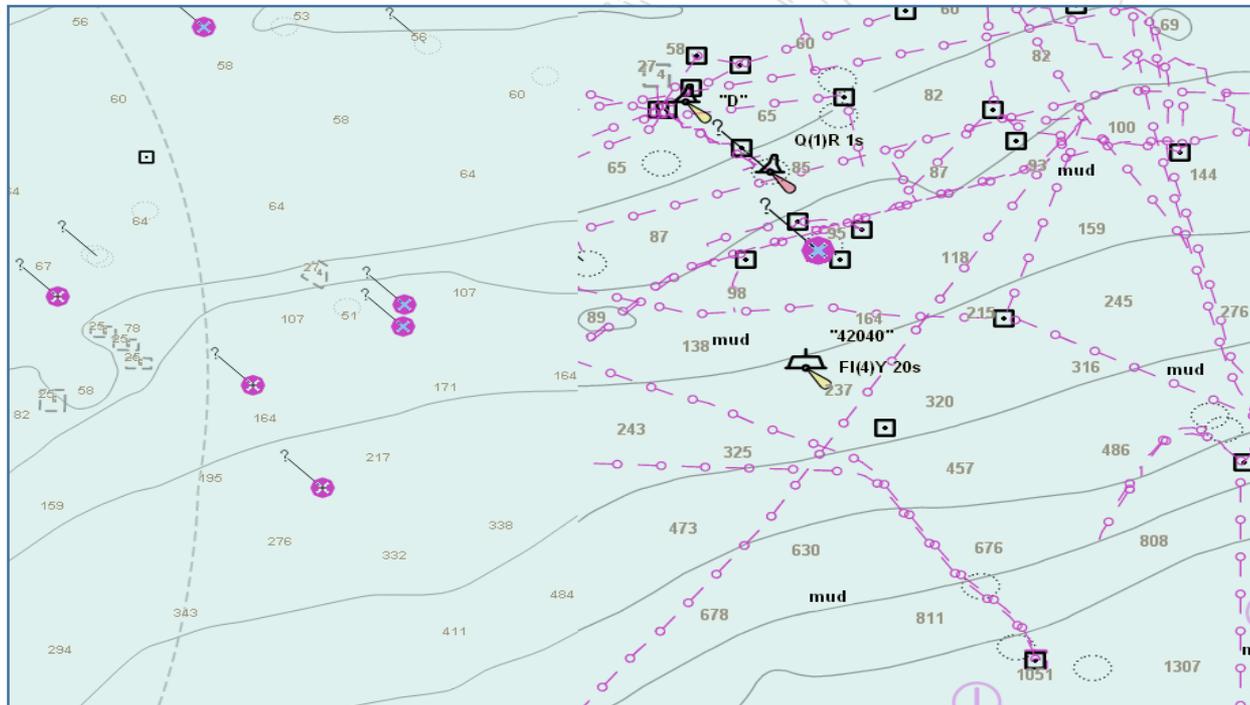


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# Improving Chart Schemes

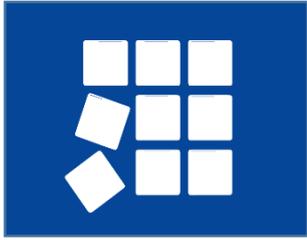


## Standardize Scales

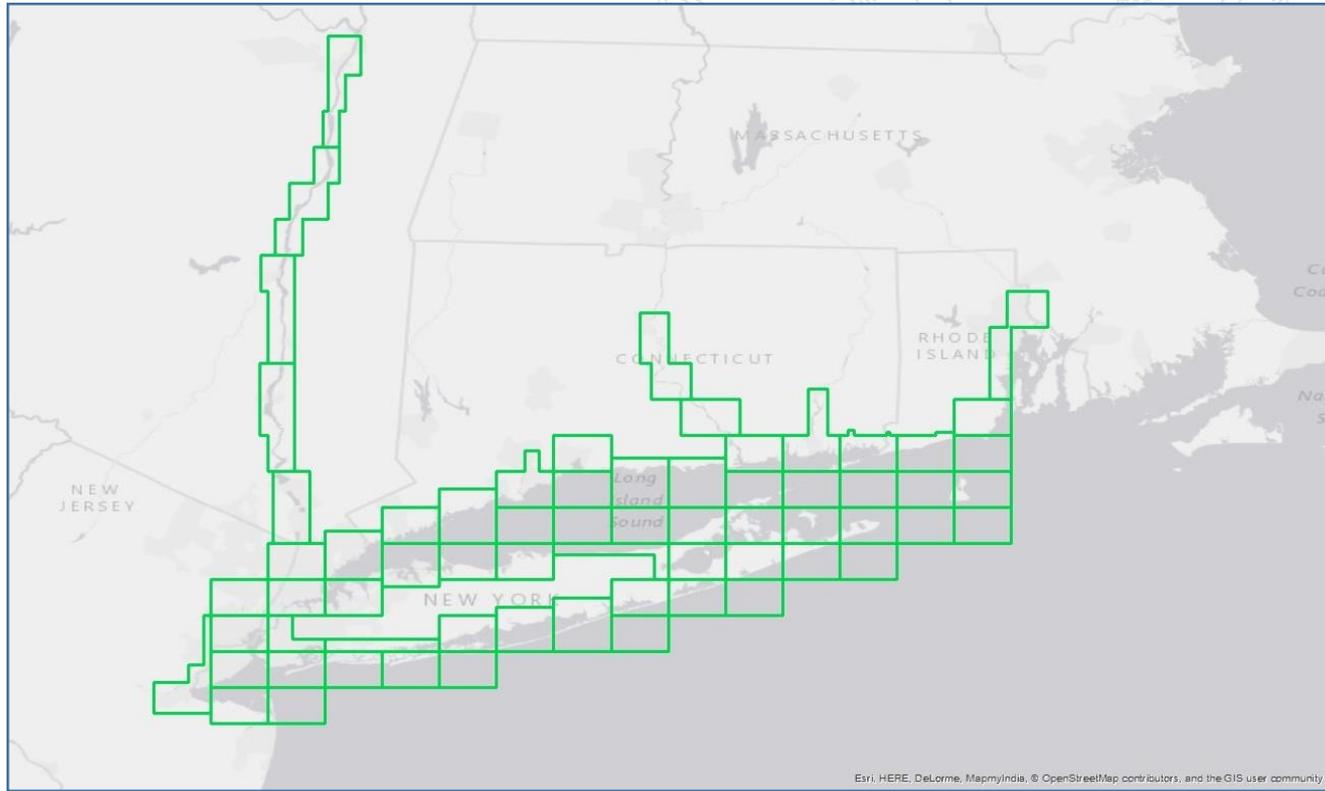


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# Improving Chart Schemes

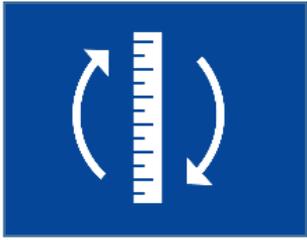


Create an orderly layout for ENCs

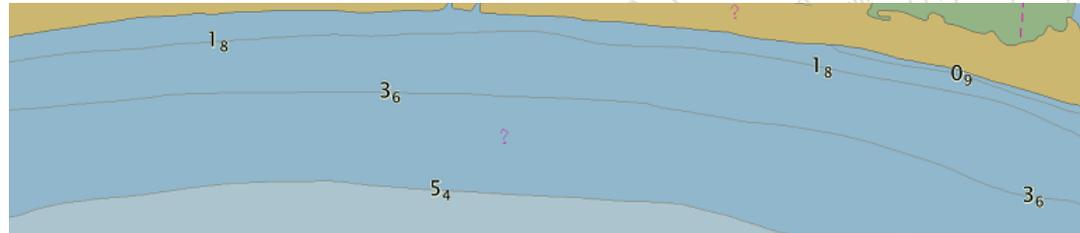


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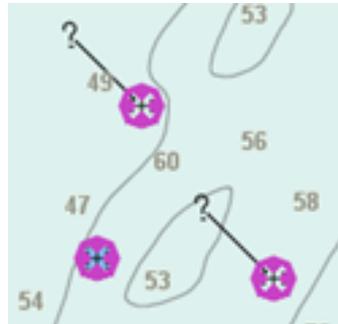
# Improving Chart Content



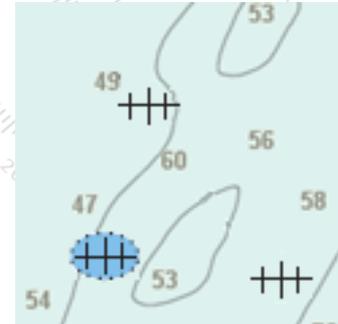
Convert to metric



Reduce unwarranted alarms & isolated danger symbolization



ECDIS display of wrecks with an "isolated danger" symbol



"Normal" ECDIS display of the same two "non-dangerous" and one "dangerous" wrecks

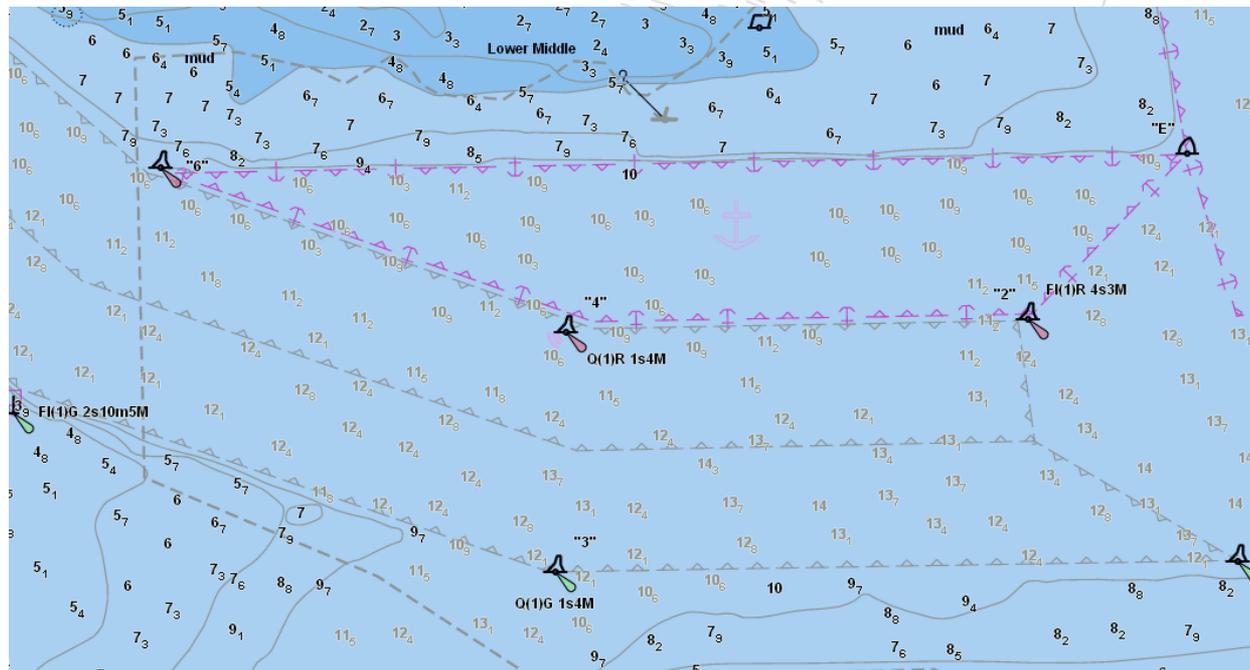


# Improving Chart Content



Provide timelier data

Standardization of USACE data formats



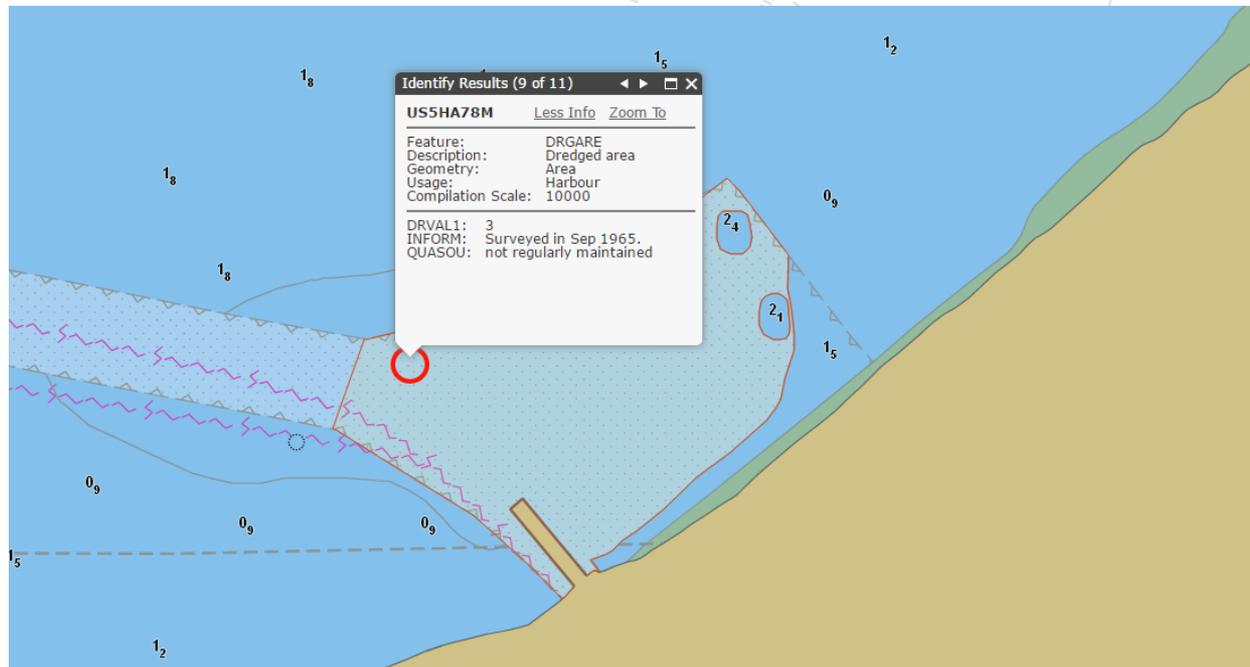
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# Improving Chart Content



Provide timelier data

Standardization of USACE data formats

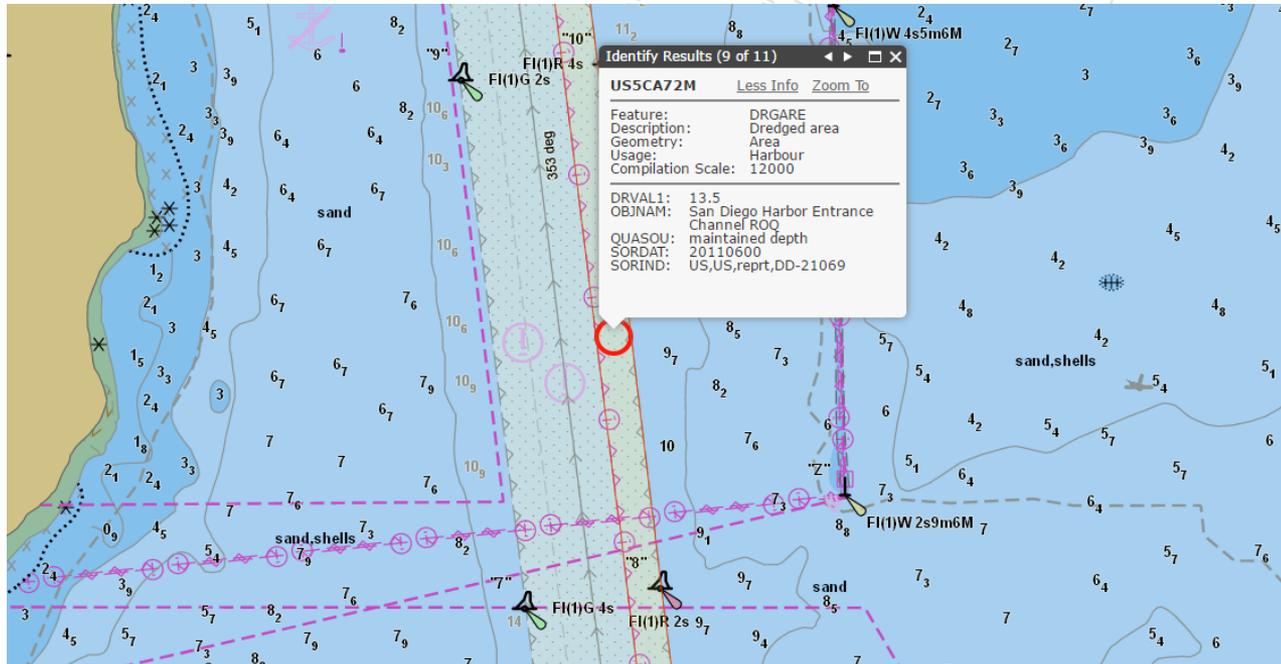


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# Improving Chart Content

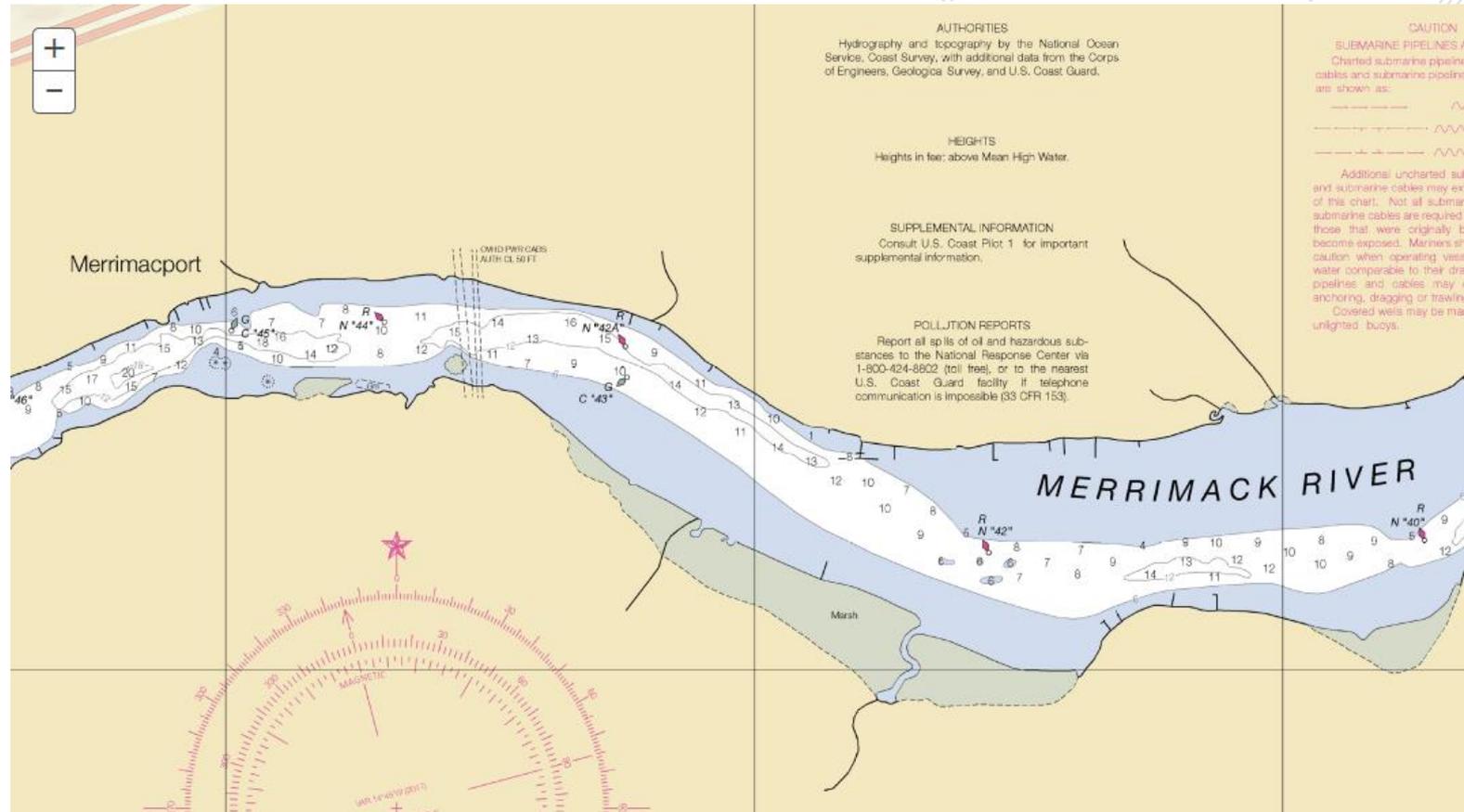


Provide timelier data  
Standardization of USACE data formats



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# Chart Tile Service Template



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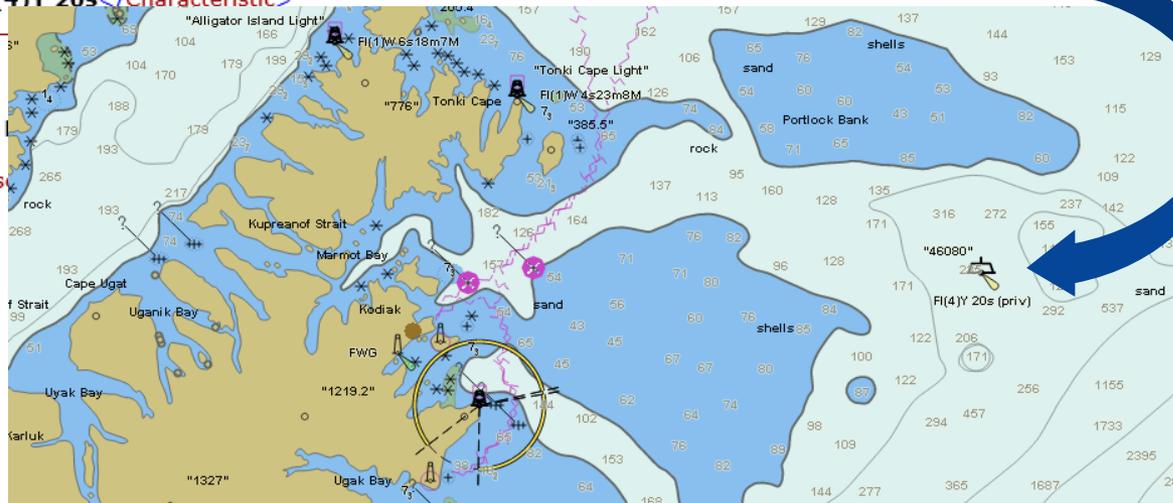
# Improving Chart Production Efficiency



Increase efficiency

Direct input of USCG light list data into production

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# NATIONAL CHARTING PLAN

*A strategy to transform nautical charting*

**Purpose** Improve NOAA nautical chart coverage, products, and distribution

## Improvements

Reduce  
unwarranted  
alarms



Convert to metric



Provide  
timelier data



Improve  
chart coverage



Create an  
orderly layout



Reduce  
uncertainties



Improve chart  
update information



Increase  
efficiency



**Outcome** Ease of access to more precise, higher-resolution charts that deliver the most up-to-date navigation information possible



A nautical chart of San Francisco Bay, showing the Golden Gate Bridge, various piers, and depth soundings. The chart is rendered in a light blue and yellow color scheme.

# THANKS!!!

<https://www.nauticalcharts.noaa.gov/mcd/docs/NationalChartingPlan.pdf>