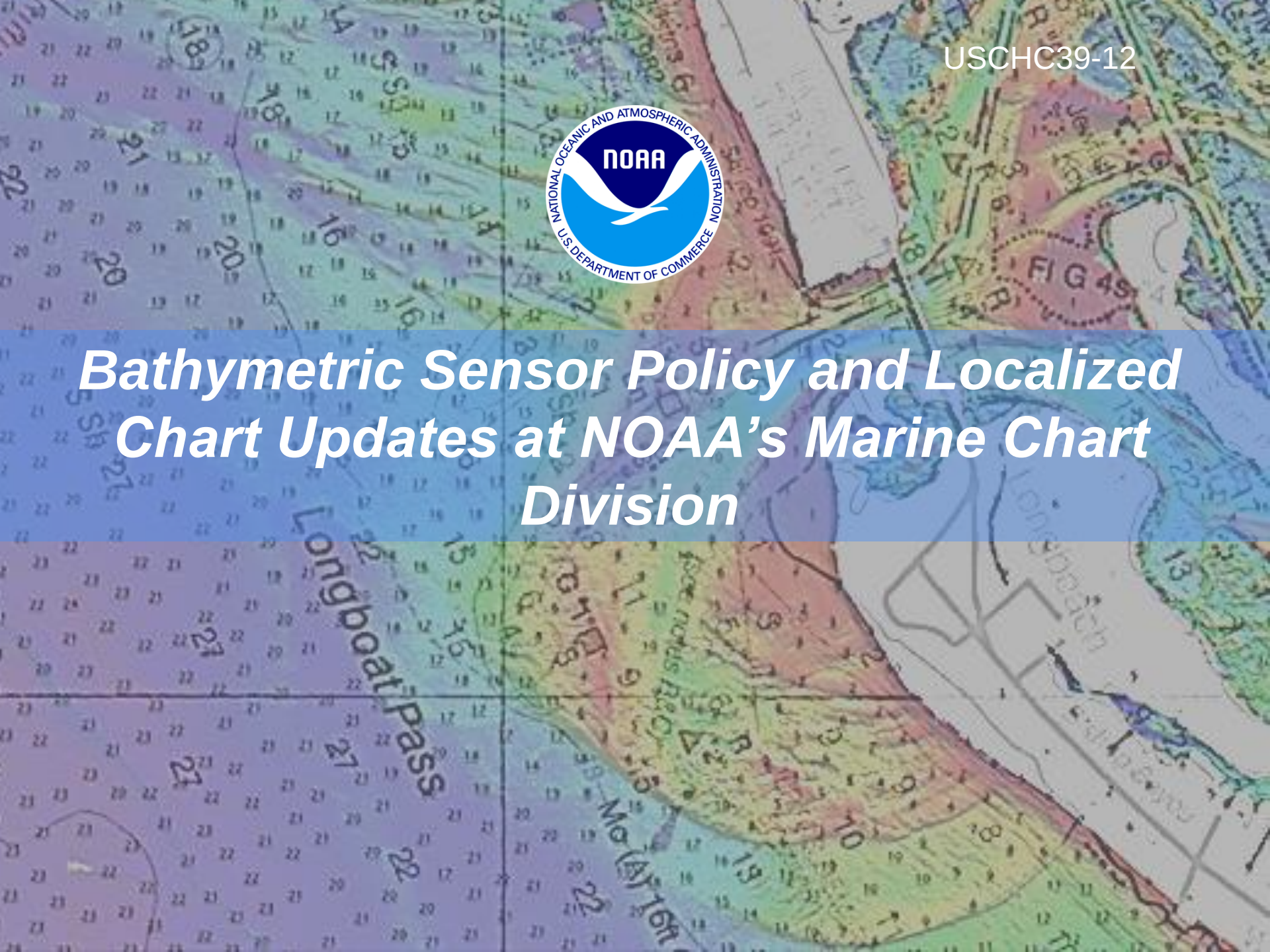
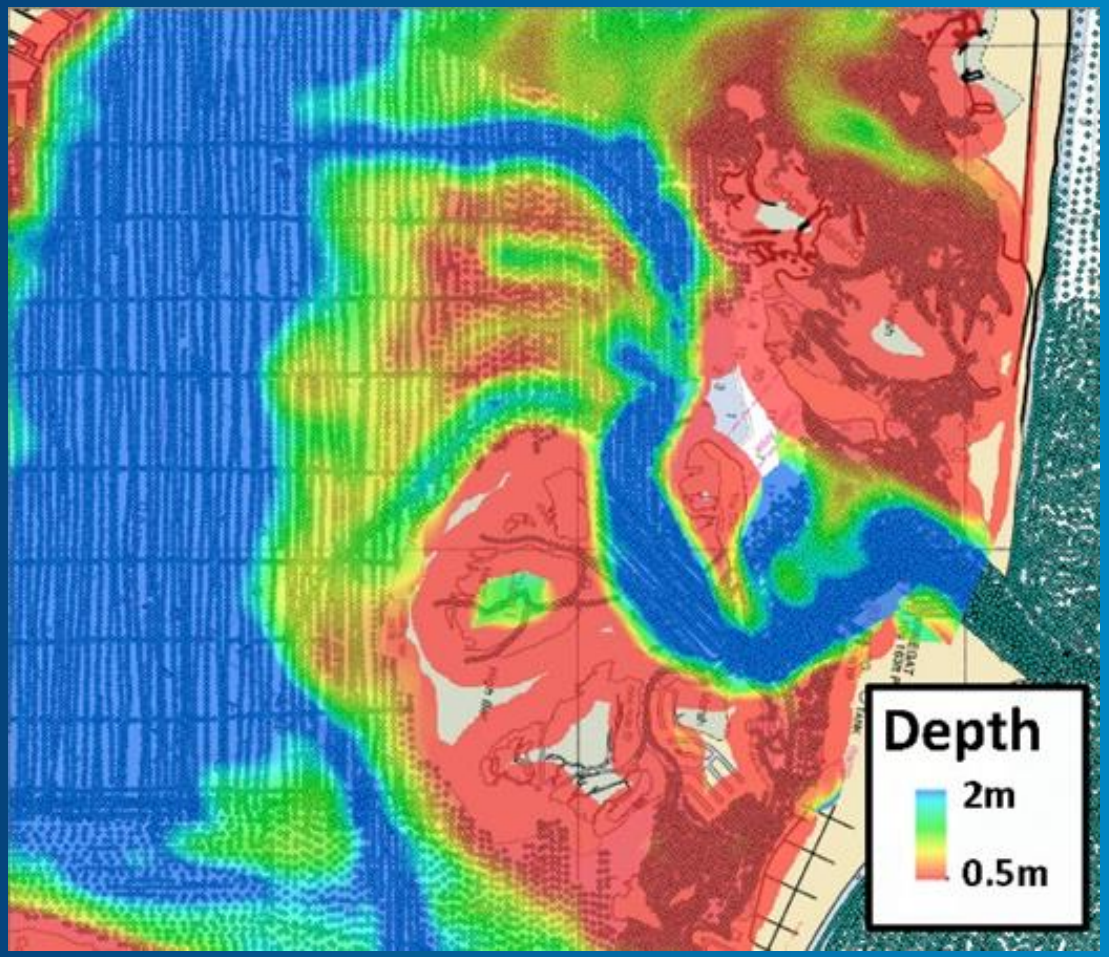


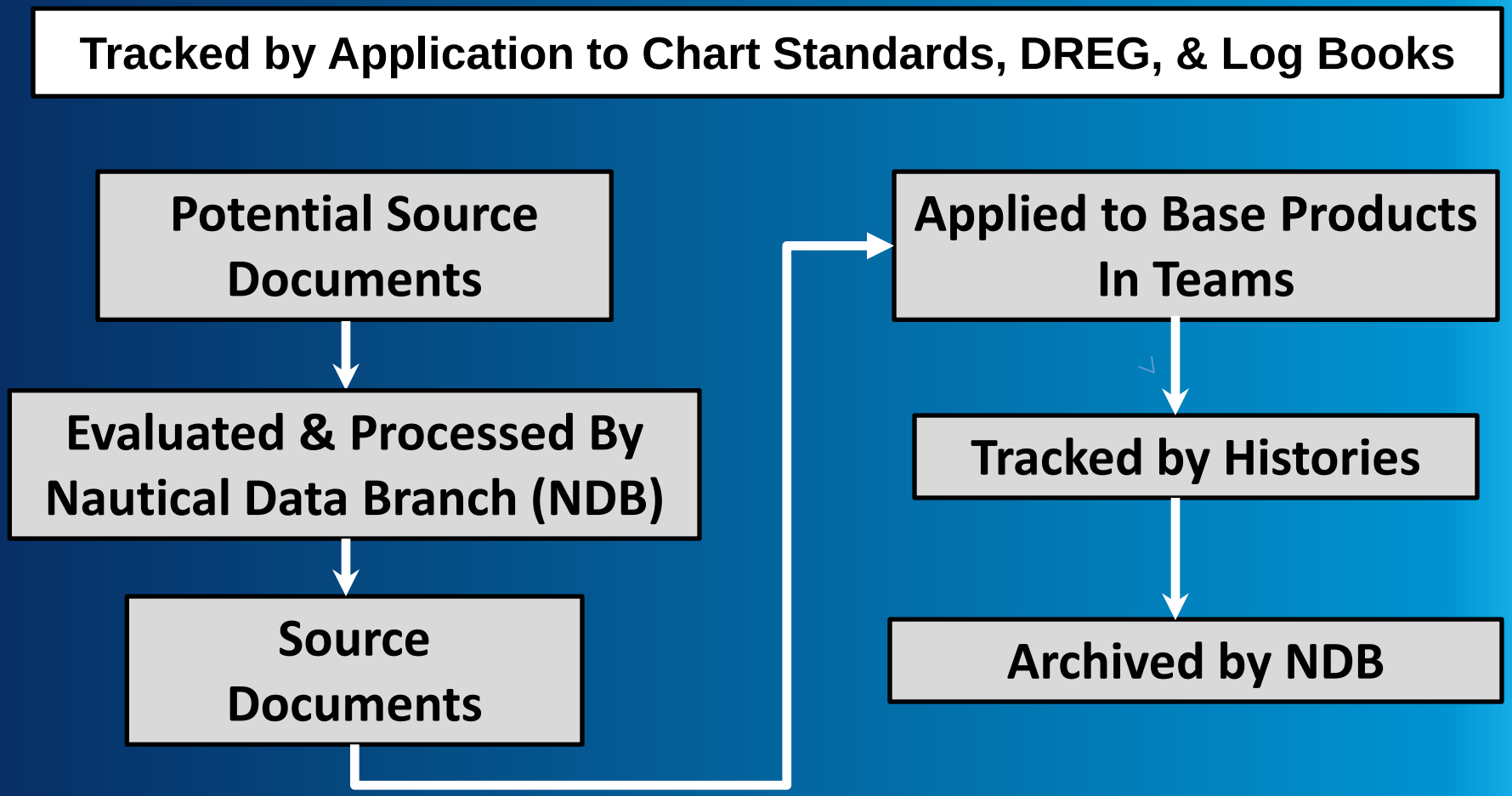
Bathymetric Sensor Policy and Localized Chart Updates at NOAA's Marine Chart Division

Barnegat Inlet, NJ



Outdated bathymetry of Barnegat Inlet, NJ. Smooth-sheet soundings from the 1930's are overlaid on a NOAA Nautical chart

Marine Chart Division (source flow)



MCD's Motivation (for incoming data)

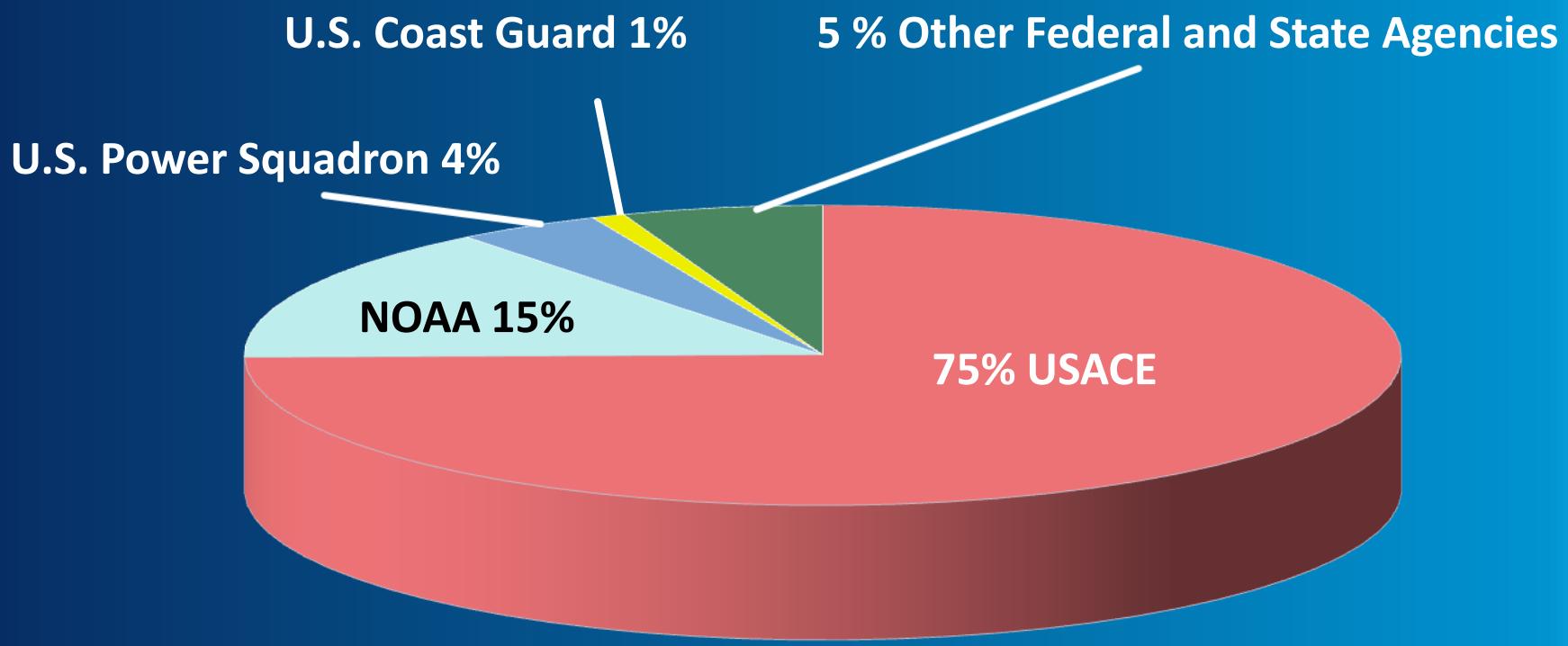
Quantity – NDB compilers evaluate approximately 9,000 source documents annually and about 70% of the total source documents (6,200) received are compiled to nautical products.

Quality – In 1992, an effort was made to measure the quality of document processing by NDB compilers. NDB has implemented a ranking system for documents to ensure that high priority source documents are assessed first.

Timeliness– Compilers are responsible for processing source documents based on criticality of information within an accepted period of time.

Data Workflow

The Nautical Data Branch annually receives 7,000 – 9,000 potential source documents from these sources



Old policy

The current data processing workflow at NOAA's Office of Coast Survey is designed for CATZOC A data products.

However, …

Following the need to maintain and update many of the shallow waters within NOAA's nautical charts, new sensor-derived policies were added to the NCM.

Revised policy

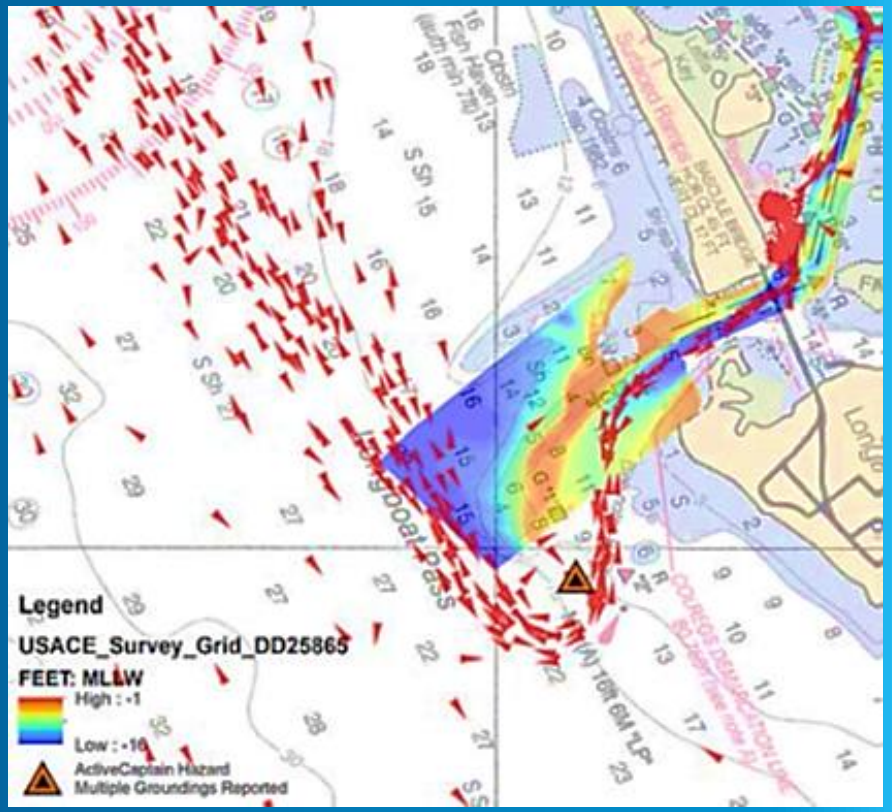
Incorporation of surveys collected using new CATZOC B technologies (namely, SDB and ALB)

CATZOC	Dataset	Description
A1	NOAA acoustic surveys and contracts	Bottom detection, dense coverage and high accuracy
A2	USACE acoustic surveys of channel back bays, inlets & ICW	Bottom detection and high accuracy
A2	DOT SBES surveys	Bottom detection
B	NOAA, USACE NCMP ALB surveys and contracts	Dense coverage and high accuracy. Bottom detection is dependent on water clarity.
B	Academic acoustic surveys	Dense coverage and high accuracy. Bottom detection is dependent on water clarity.
C	USGS ALB surveys	Dense coverage. Bottom detection is dependent on water clarity. USGS is not certified for surveying navigational channels.
C	SDB	Least turbid

EXAMPLES

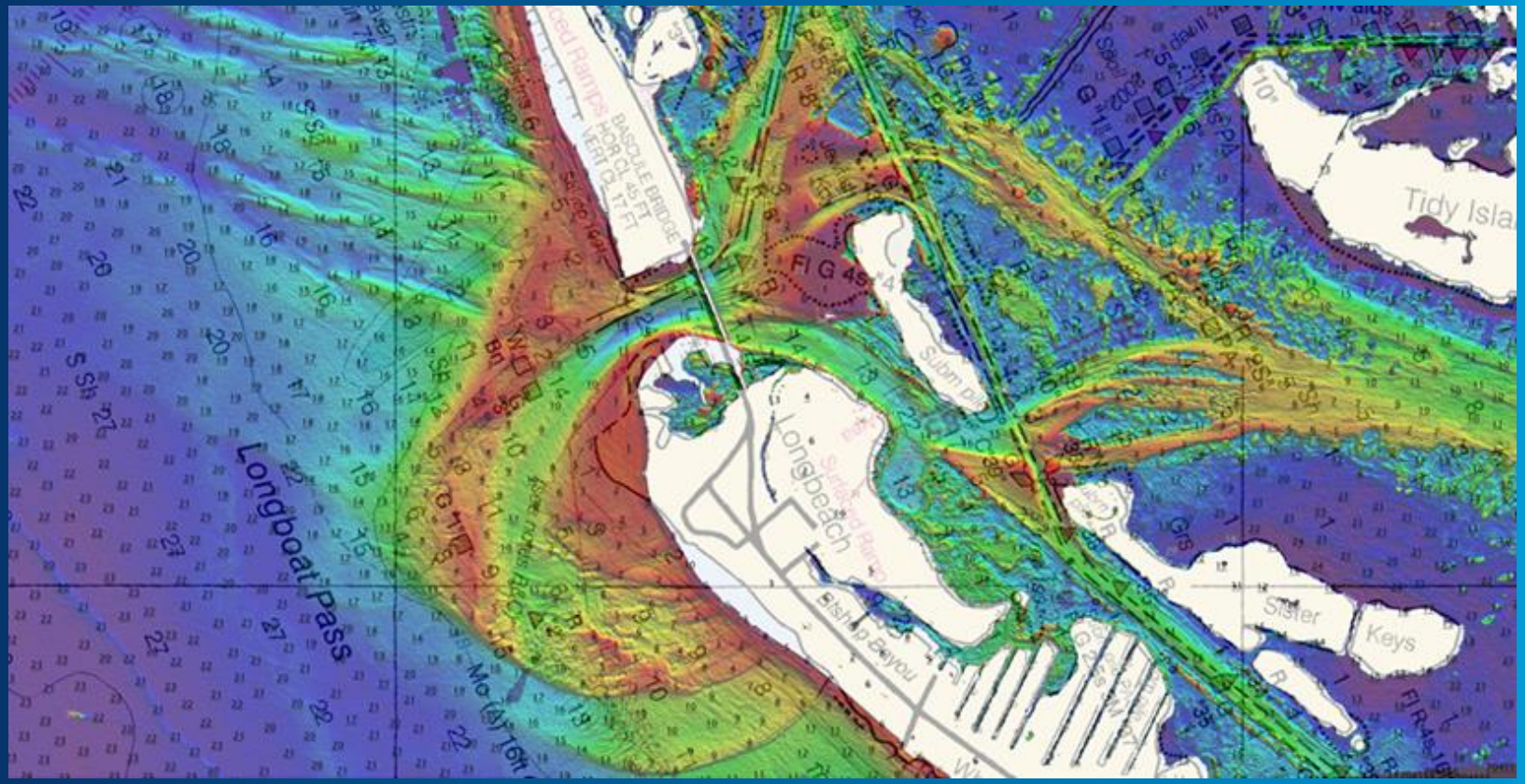
Longboat Pass, FL

Vessel traffic overlaid on satellite imagery



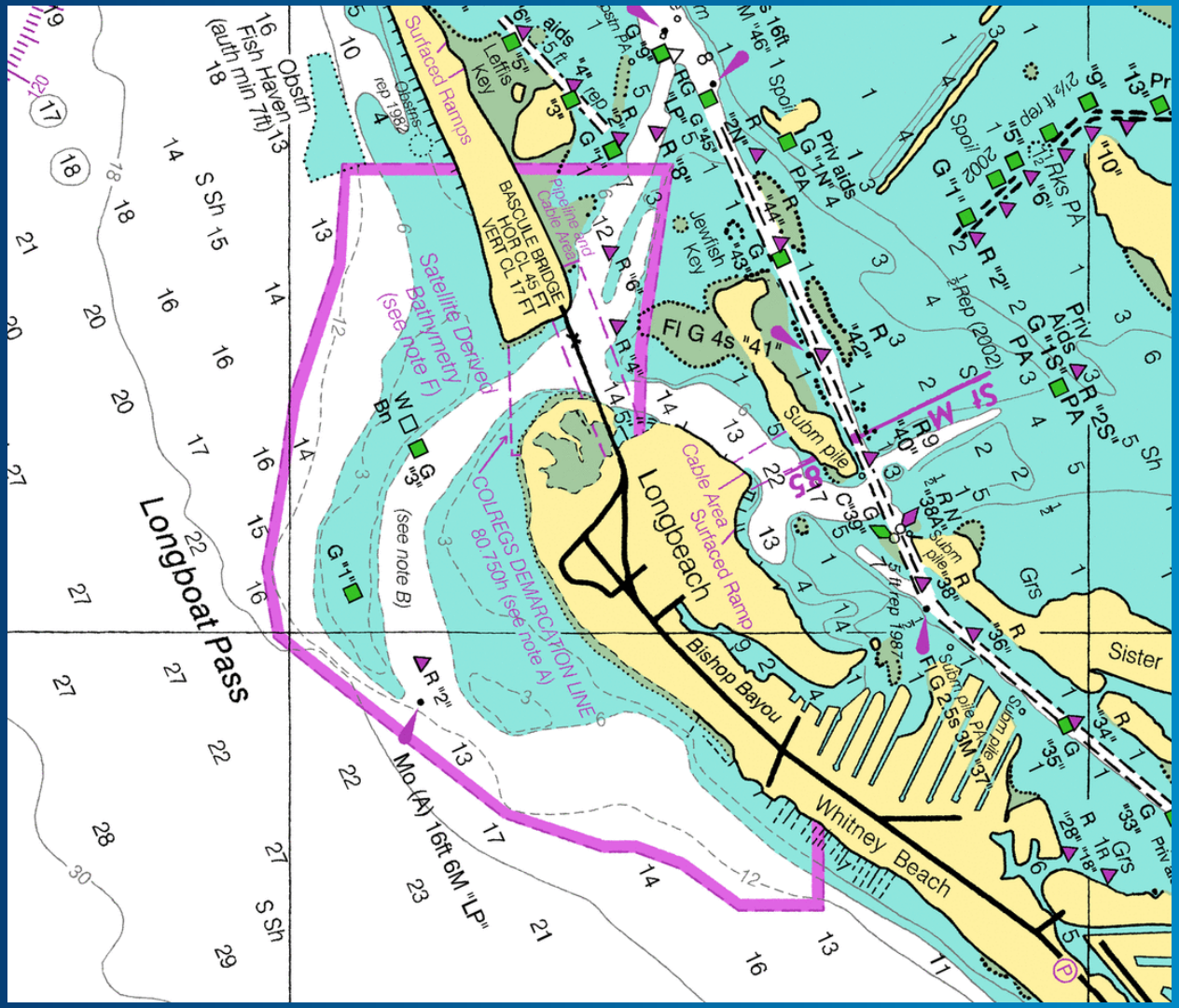
Vessel traffic overlaid on NOAA Chart and the USACE MBES survey

Longboat Pass, FL



Updated smooth sheet soundings and depth curves using SDB (GeoEye imagery) for NOAA Chart 11425

Longboat Pass, published chart 11425

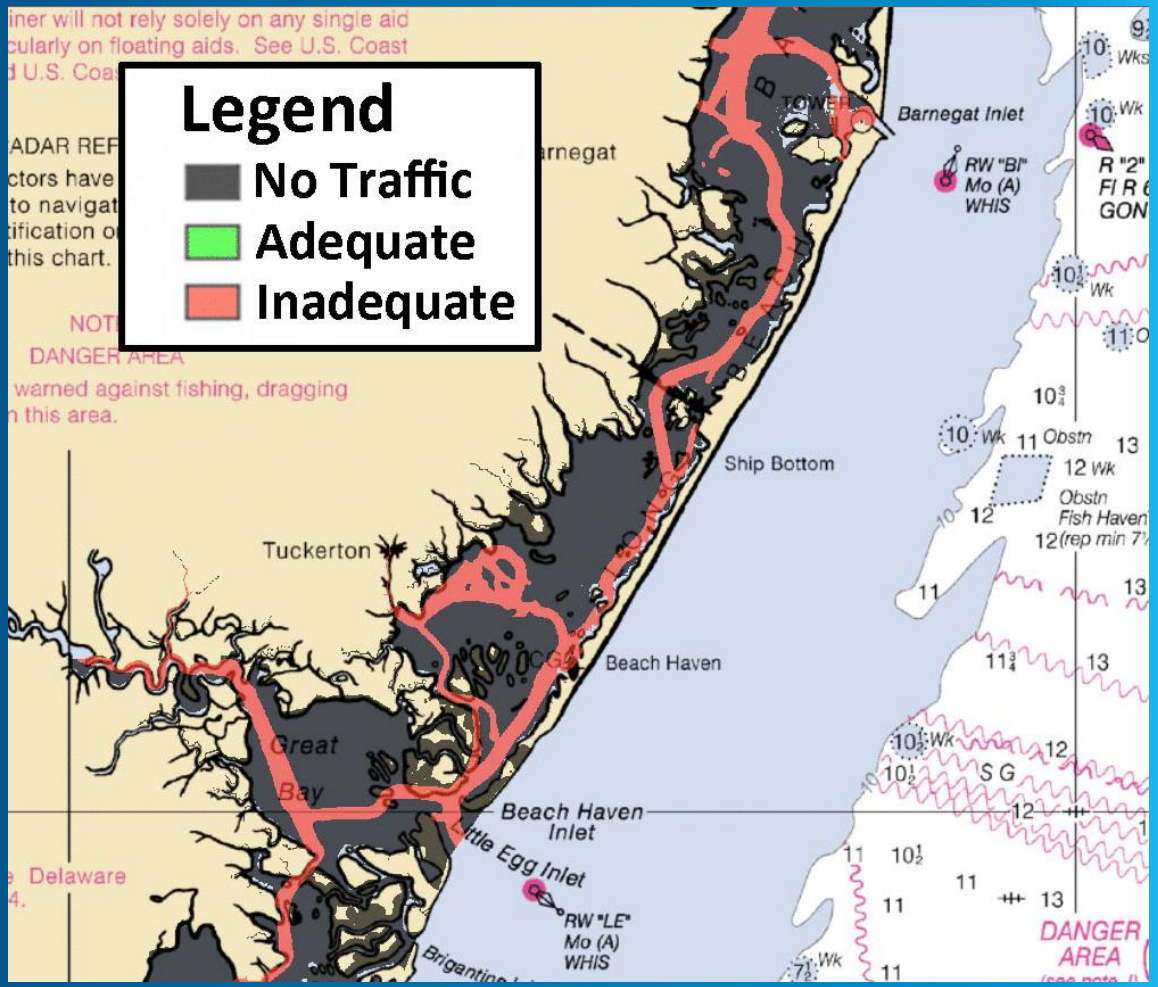


New Jersey Back Bay Areas

Total Adequate Areas for Navigation

Original survey data (Pre-Sandy) :
0.2% Adequate

Updated survey data (Post-Sandy) :
43.8% Adequate



Conclusions

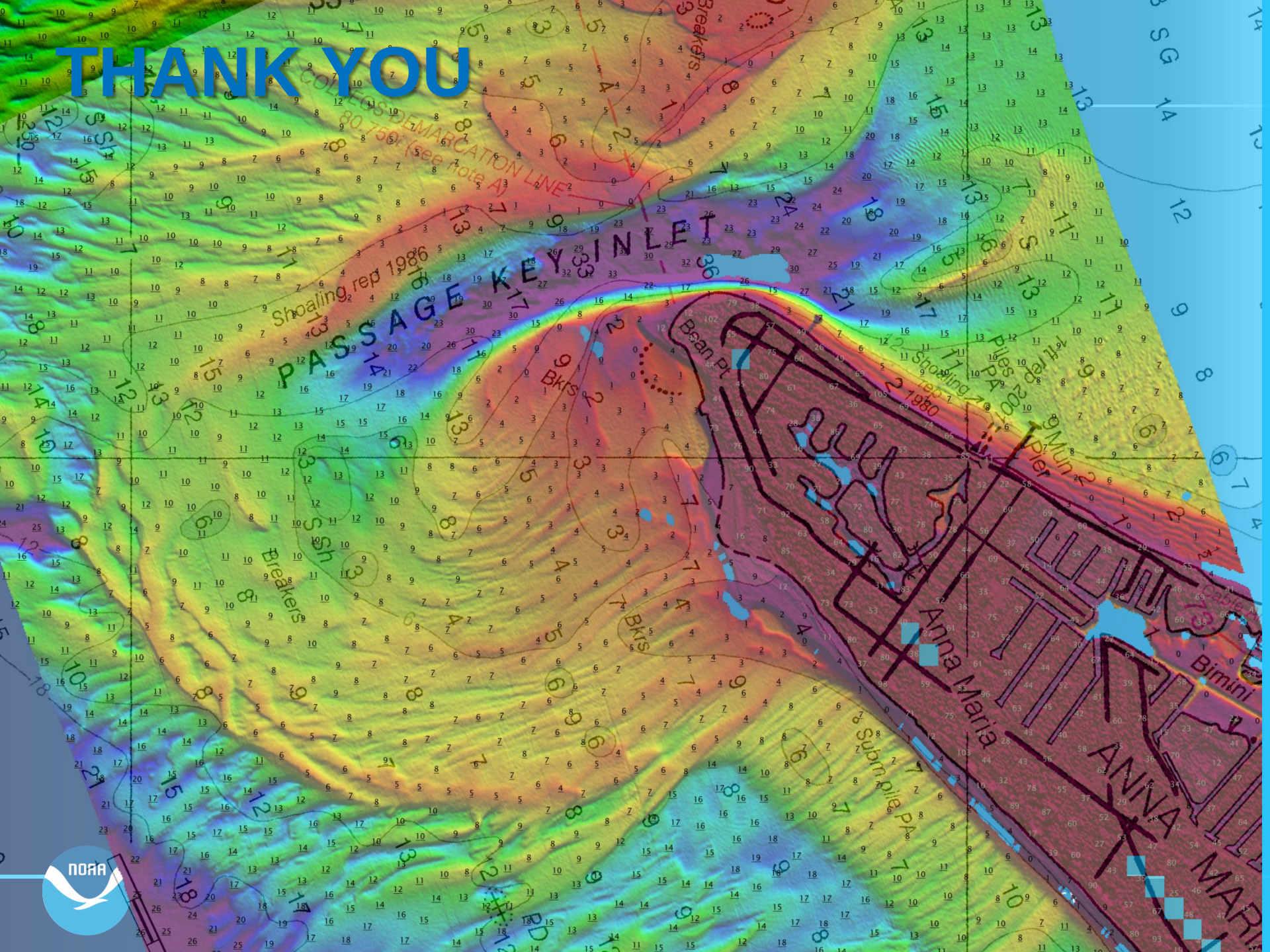
The revised new NOAA policies discuss the potential incorporation of surveys collected using new CATZOC B technologies (namely, SDB and ALB).

The contribution of a sensor-derived data policy is for areas which are not transited by large (SOLAS) class vessels with critical under-keel clearance.

The quality of the data must be reconciled against the existing chart data and in conjunction with the types of vessels transiting the waters.

It is important to account for the environmental and technological constraints of the data when considering appropriate use cases.

NCM is on a non-publically facing website. Access can be provided upon demand, and feedback on the policy is welcomed.


THANK YOU
PASSAGE KEY INLET
COLREGS DEMARCATION LINE
80.75° (see note A)
Shoaling rep 1986
Shoaling rep 1980
Bean Pt
Bkrs
Ssh
Breakers
Piles
Pier
Anna Maria
Bimini
ANNA MARIA
Cable
Submrine PA
NOAA