



United States of America

Country Report *to the*

Meso-American and Caribbean Regional Hydrographic Commission

National Oceanic and Atmospheric Administration

Naval Meteorology and Oceanography Command

National Geospatial-Intelligence Agency

December 5, 2011

U.S. Hydrographic Services



Overview

- US mapping and charting responsibilities
- U.S. Marine Transportation System
- Current Survey Status of US Waters (MACHC)
- Distribution of ENC's
- Naval Oceanography Program in the MACHC
- Importance of Stakeholder Interaction and Data Sharing
- Three issues that keep us awake at night



U.S. Mapping and Charting Responsibilities



U.S. Department of Commerce

- NOAA – Hydrography/National Shoreline surveys for legal boundaries, Tides and Currents, Nautical Charts for U.S. Territorial waters (to U.S. EEZ 200 nautical mile limit)



U.S. Department of Defense

- Army Corps of Engineers – Dredging and maintenance of navigable channels and inland navigable waterways
- Naval Meteorology and Oceanography Command – Surveying international waters
- National Geospatial Intelligence Agency – Charting international waters for U.S. military, producing national U.S. Notice to Mariners



U.S. Department of Homeland Security

- Coast Guard – Maintenance of maritime Aids to Navigation
- FEMA – Disaster Response and Floodplain Mapping



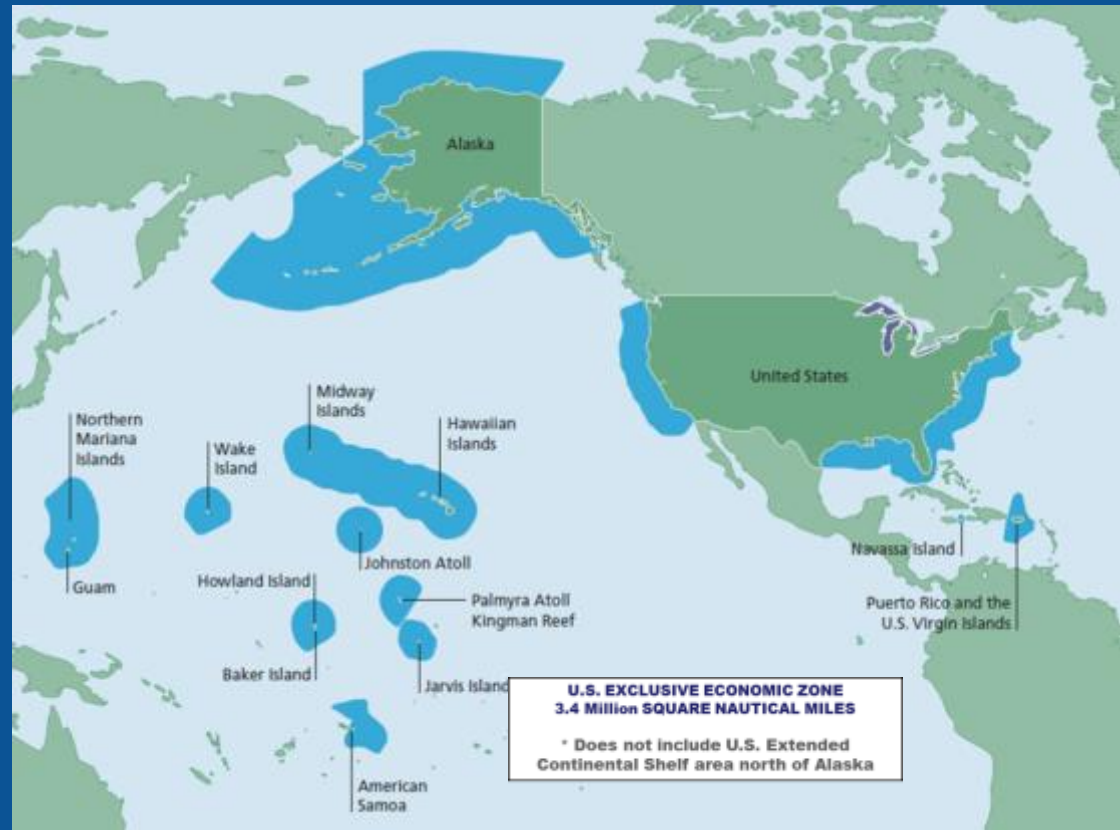
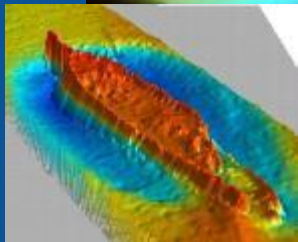
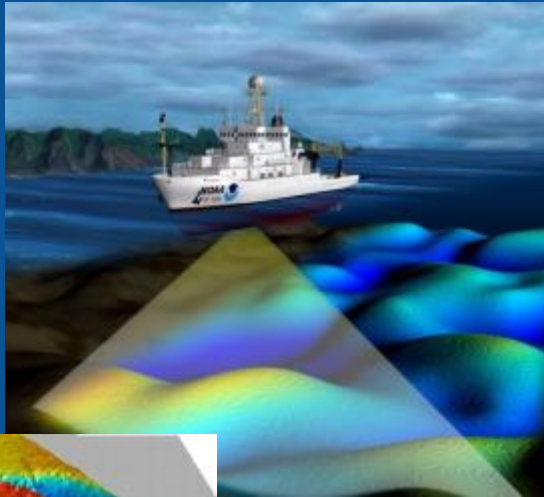
U.S. Department of Interior

- U.S. Geological Survey – Interior to coastline base maps

U.S. Hydrographic Services



Office of Coast Survey: Hydrographic Surveying



- *Integrated Ocean Observing System building block – basic parameter*
- *510,000 sq. nautical miles of EEZ are navigationally significant*
- *Rocks, wrecks, obstructions, depths and seafloor characteristics*
- *NOAA Hydro Survey Priorities at nauticalcharts.noaa.gov/staff/NHSP.html*

U.S. Hydrographic Services

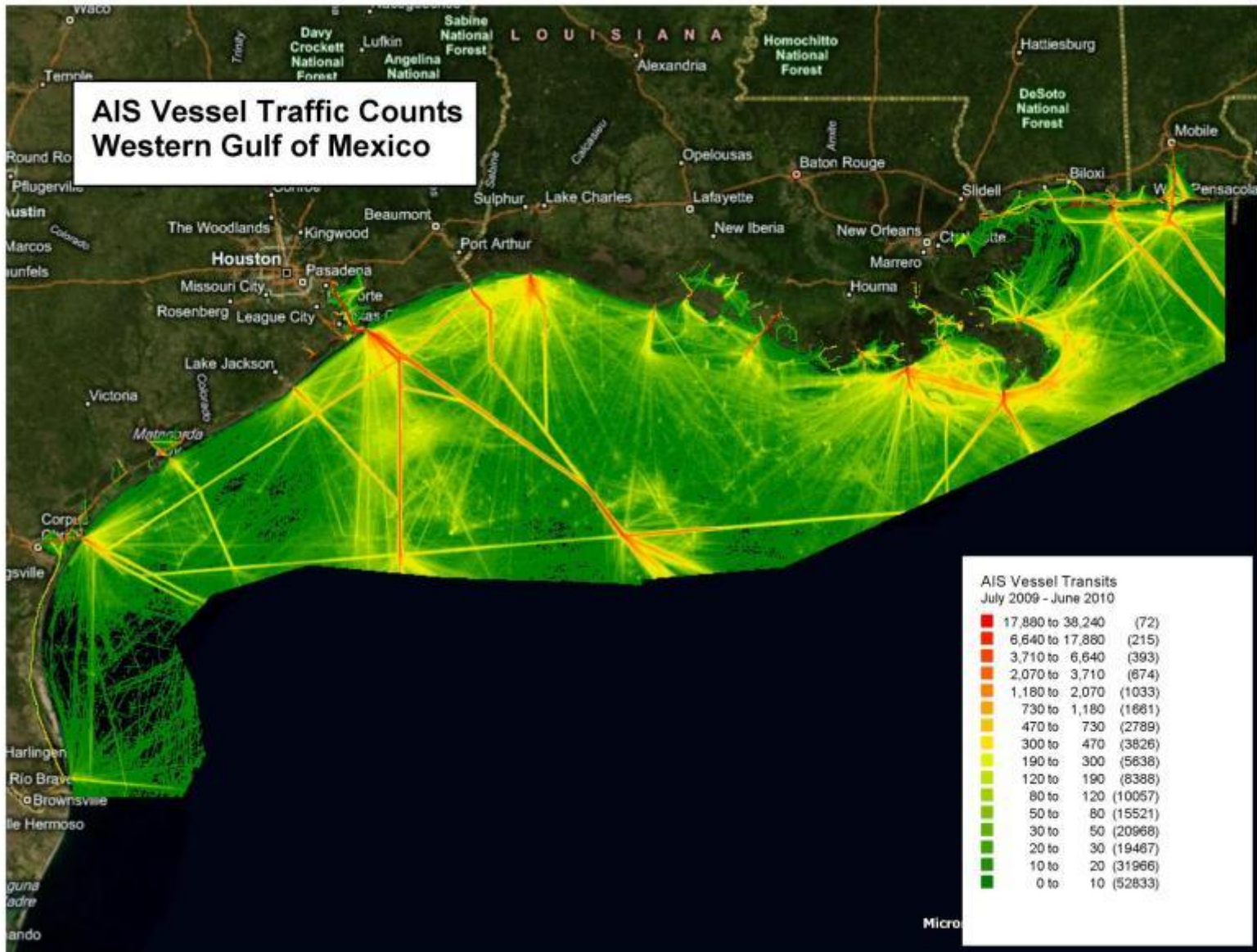


NOAA Hydrographic Survey Priorities (2011)

- www.nauticalcharts.noaa.gov/hsd/NHSP.html
 - shipping tonnage
 - vintage of survey data
 - requests from the marine community and local authorities
 - dynamic changes of the seafloor
 - proposed alternative uses in the area



AIS Vessel Traffic Counts Western Gulf of Mexico



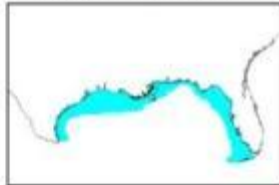
NOAA Hydrographic Survey Priorities - Gulf of Mexico

2011

Legend

	Critical Areas Remaining
7,709 Total Square Nautical Miles High Commercial Traffic Volume Inadequate Charts Competing Request Extensive Petroleum/Hazardous material transport Low Under Keel Clearance	
	Priority 1
11,133 Total Square Nautical Miles Navigation Significant - < 20 fathom depth Survey vintage pre-1940 Petroleum transport > 1,000,000 tons or Coal transport > 100,000 tons or Chemical/Waste transport > 100,000 tons or Cargo > 5,000,000 tons or Passenger transport > 10,000	
	Priority 2
8,065 Total Square Nautical Miles Navigation Significant - < 20 fathom depth Survey vintage pre-1940 Not Priority 1	
	Priority 3
14,357 Total Square Nautical Miles Navigation Significant - < 20 fathom depth Survey vintage pre-1970 Not Priority 1 or Priority 2	
	Priority 4
8,616 Total Square Nautical Miles Navigation Significant - < 20 fathom depth Survey vintage 1970-1993	
	Priority 5
14,368 Total Square Nautical Miles Navigation Significant - 20 - 50 fathom depth Survey vintage pre-1940	
	Full Bottom Coverage Era
7,147 Total Square Nautical Miles Navigation Significant Survey vintage post-1993	

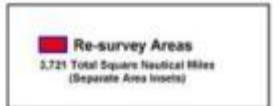
Navigationally Significant Areas



73,502 total square nautical miles



2,107 Total Square Nautical Miles

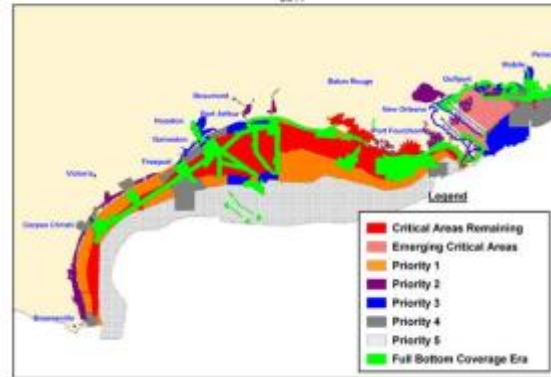


3,721 Total Square Nautical Miles
(Separate Area Insets)

NOAA Hydrographic Survey Priorities - Gulf of Mexico

West

2011



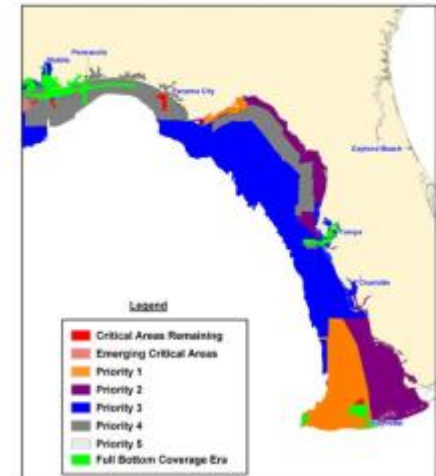
Legend

- Critical Areas Remaining
- Emerging Critical Areas
- Priority 1
- Priority 2
- Priority 3
- Priority 4
- Priority 5
- Full Bottom Coverage Era

NOAA Hydrographic Survey Priorities - Gulf of Mexico

East

2011



Legend

- Critical Areas Remaining
- Emerging Critical Areas
- Priority 1
- Priority 2
- Priority 3
- Priority 4
- Priority 5
- Full Bottom Coverage Era

Puerto Rico and U.S. Virgin Islands

NOAA Hydrographic Survey Priorities

2011



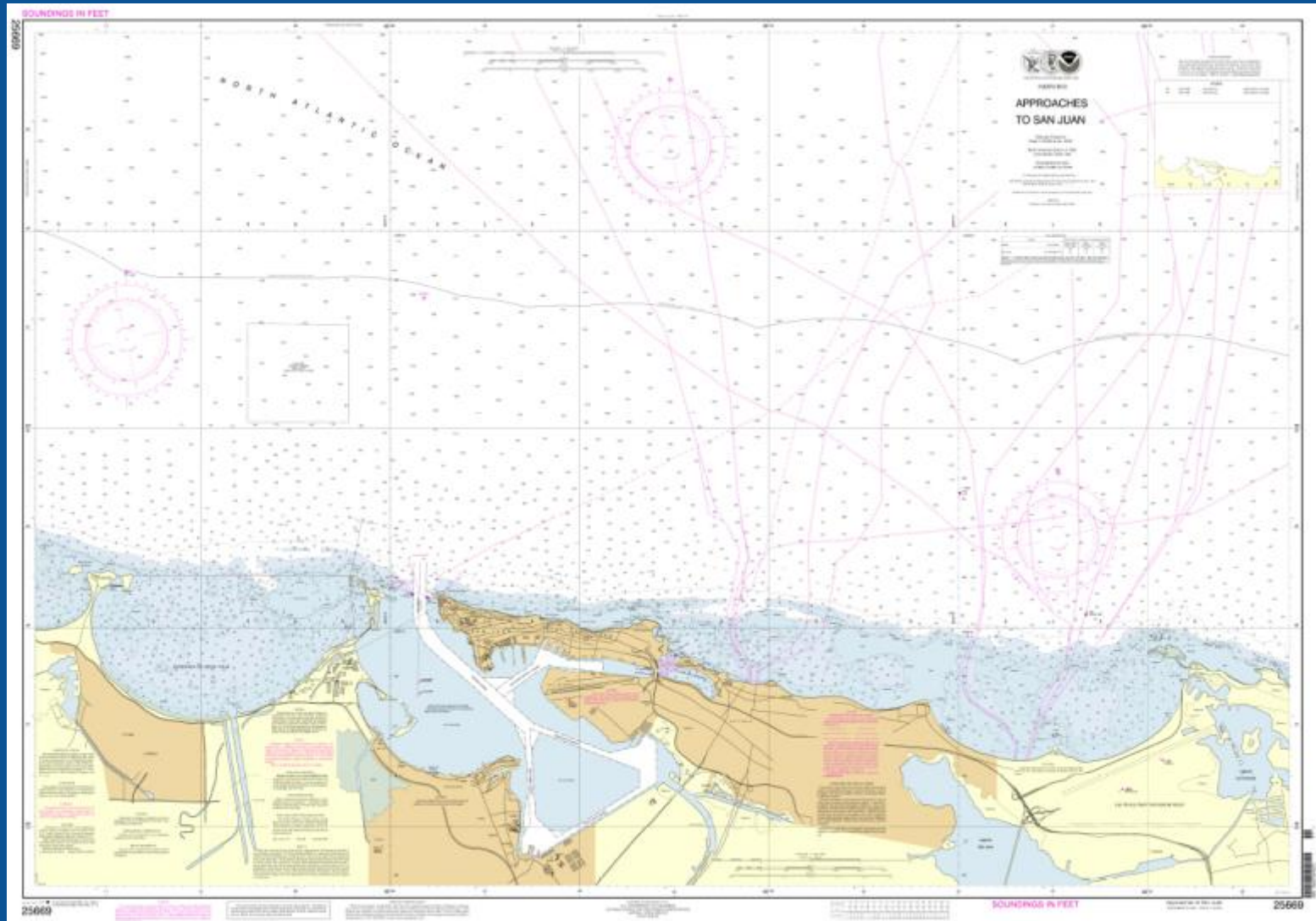
Legend

- Critical Areas Remaining
- Priority 1
- Priority 2
- Priority 3
- Priority 4
- Full Bottom Coverage Era

	Navig. Significant	Critical Areas	Emerging Critical	Priority 1	Priority 2	Priority 3	Priority 4 Areas	Priority 5 Areas	Completed (post 1993 survey)
Gulf of Mexico	73,502	7,709	2,107	11,133	8,065	14,357	8,616	14,368	7,147
Caribbean Islands	1,543	34	0	38	184	341	579	0	367
Total	75,045	7,743	2,107	11,171	8,249	14,698	9,195	14,368	7,514



Approaches to San Juan (1st Edition; Oct 2011)

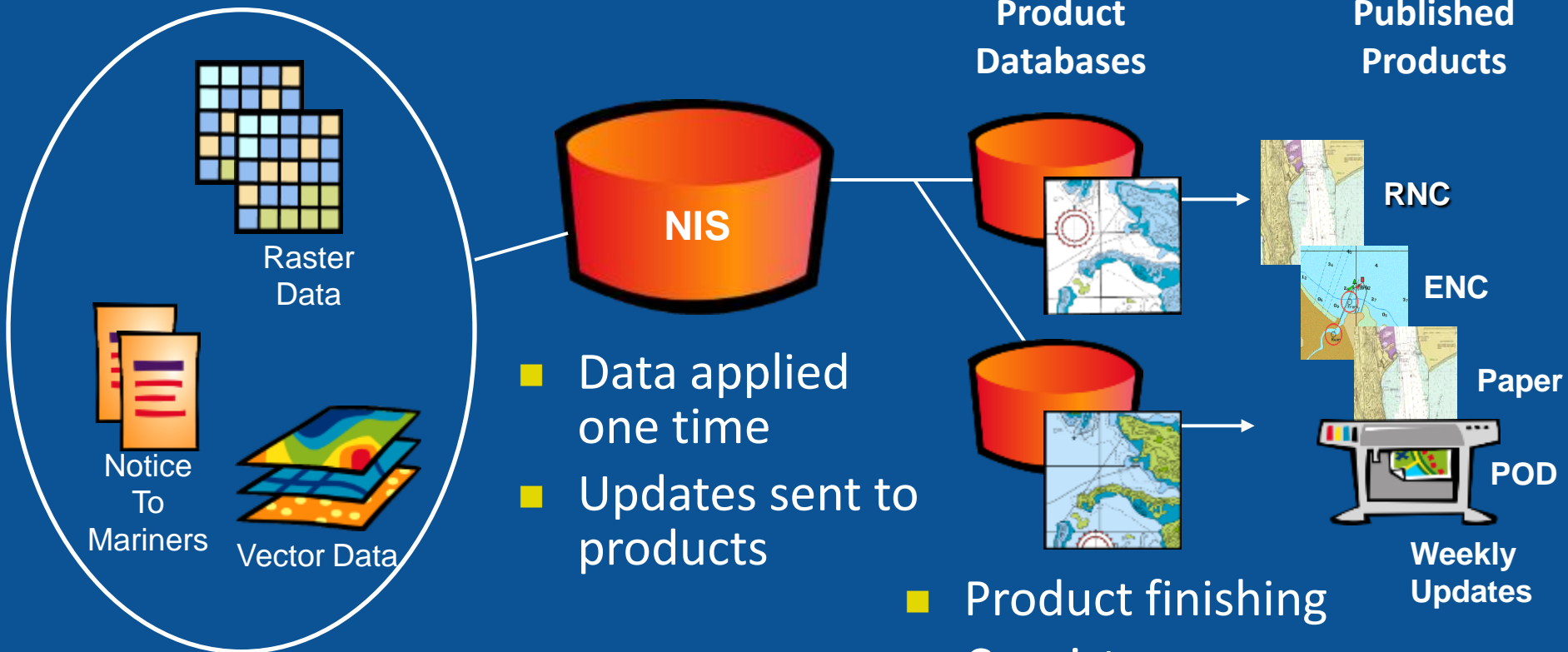


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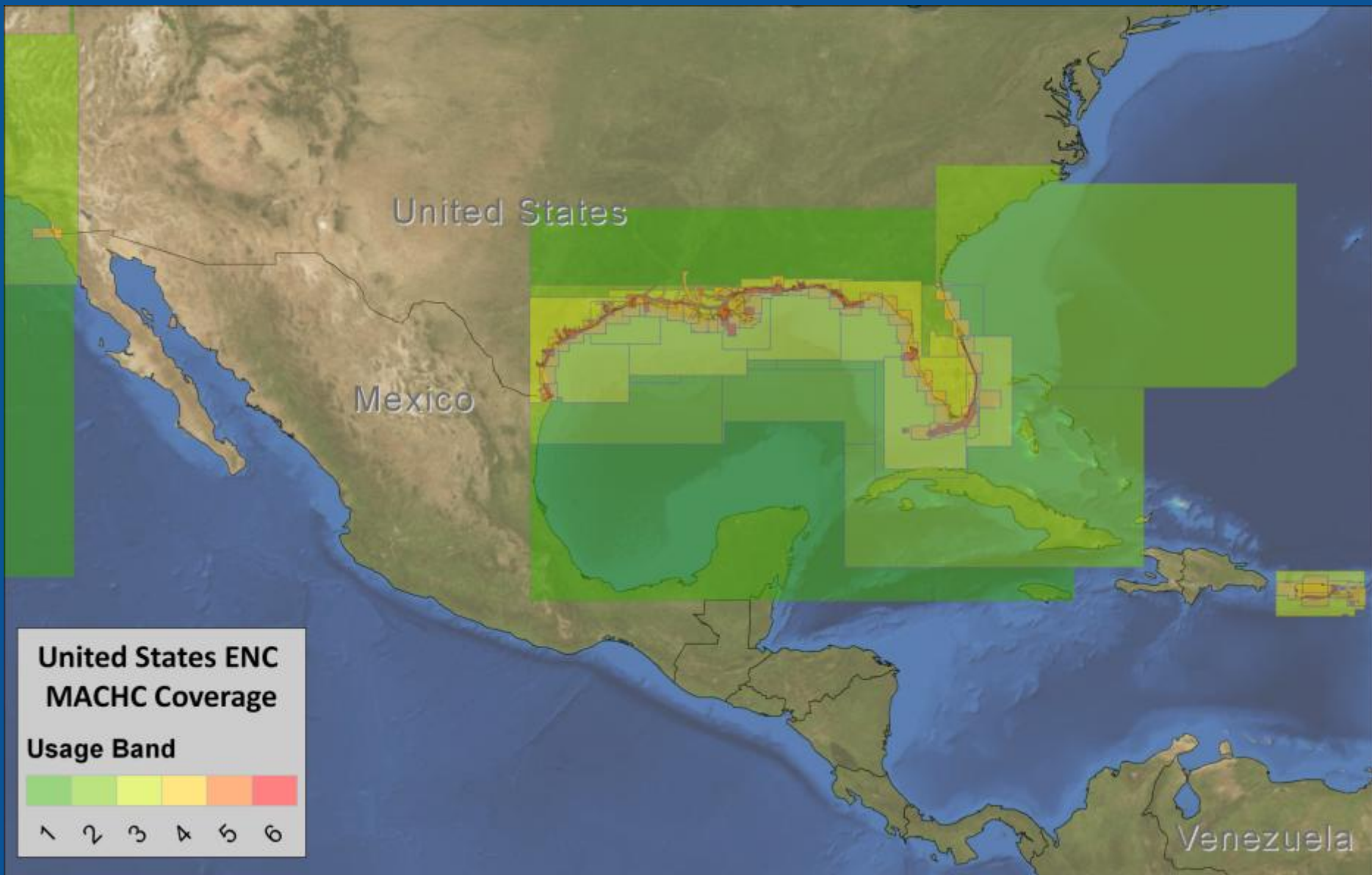
NCS2 System



ENC Status and Distribution

- Current status
 - National
 - As of August 2010, the United States has completed its ENC coverage to meet IMO obligations
 - This coverage includes the top 175 ports by tonnage in the United States and associated approaches to these ports and the transit ENC' s between these ports
 - National suite: Over 875 cells
 - MACHC
 - 175 US ENC in the MACHC Region
 - 65 US priority ports in the MACHC Region





U.S. ENC's for MACHC Region

U.S. Hydrographic Services



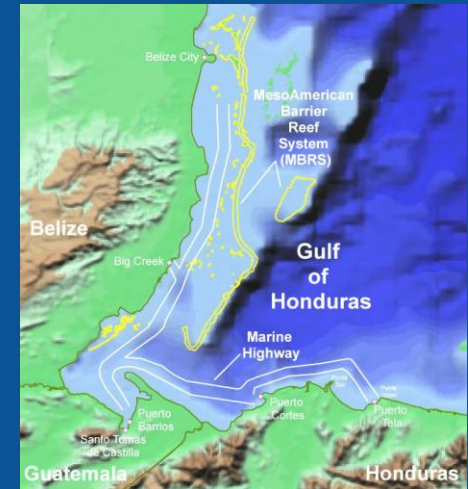
ENC Distribution

- www.nauticalcharts.noaa.gov/mcd/index.htm
- Through certified ENC Distributors
 - PRIMAR
 - UKHO
 - Jeppessen
 - Chart World
 - Maris



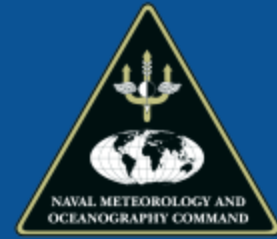
Gulf of Honduras training

- 2008-2011
- Three Phases
- Final Training completed 2011
- Future activities conducted via MACHC Capacity Building Committee
- Performance Assessment Report





Naval Oceanography Program Uniting the World through Oceanography



FY 2012 Proposed Activities

Cooperative Surveys :

- Barbados :MB survey (on-going)
- Costa Rica: MB survey (on-going)
- Panama: MB survey (proposed)
- Nicaragua LIDAR and MB surveys (planned)
- Colombia: Cooperative survey with Expeditionary Multibeam Kit (EMK) and joint demonstration hydrographic surveys in Barranquilla (Rio Magdalena) and Cartagena (planned)
- Chile: Cooperative survey with Multibeam Technology (proposed)

Subject Matter Expert Exchange Visits (TSC):

- USNS PATHFINDER PORT VISIT: Veracruz (Completed)
- Cartagena, Colombia: Marine Optics, Meteorology, Remote Sensing, Expeditionary Hydrography (planned)
- Brazil: Gondola Sonar installation & riverine hydrography (proposed)

Other:

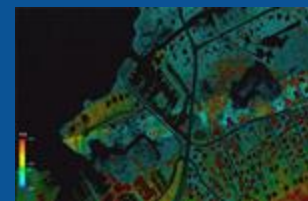
- Colombian Hydrographic Office: 1-week orientation visit to the Naval Oceanography Program (NOP) (Monterey, CA and Stennis Space Center, MS) (proposed)
- Chilean Hydrographic Office: 1-week orientation visit to the Naval Oceanography Program (NOP) (Monterey, CA and Stennis Space Center, MS) (proposed)
- Mexican Hydrographic Office: 1-week orientation visit to the Naval Oceanography Program (NOP) (Monterey, CA and Stennis Space Center, MS) (Completed)
- Participate IHO MACHC & PAIGH Hydro Committee
- Bi-Lateral Navy Staff talks: Brazil, Colombia, and Chile

U.S. Hydrographic Services



Integrated Ocean and Coastal Mapping

- The practice of acquiring, managing, integrating and disseminating ocean and coastal geospatial mapping data **in such a manner that permits these data and their derivative products to be easily accessed and used by and for the greatest range of users and purposes**
- IOCM requires intra-and interagency coordination with a focus on streamlining operations, reducing redundancies, improving efficiencies, developing common standards, and stimulating innovation



Data sharing

...all of NOAA's offices shall provide open access to ocean and coastal datasets for the purposes of transparency and collaboration...

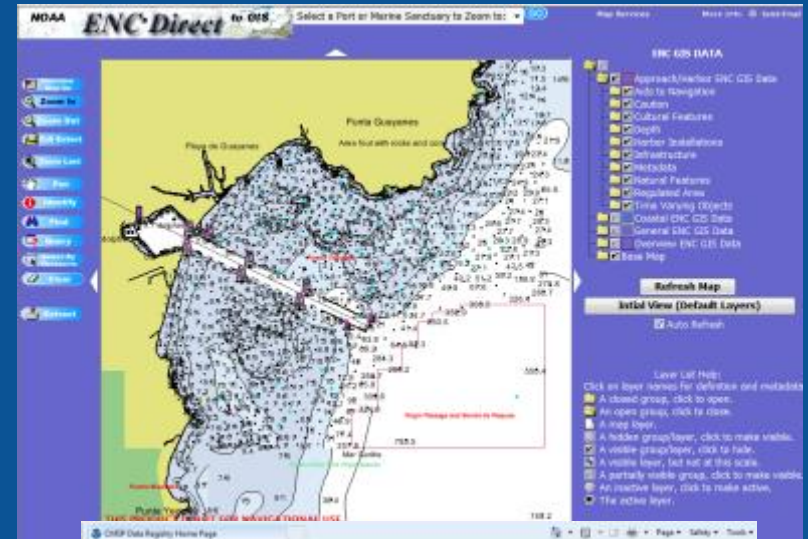


NOAA is directed to present all datasets in useful and meaningful ways to all users.

<http://www.ngdc.noaa.gov>

Support of the Non-Navigational User

Data Portals



Web Mapping Services

U.S. Marine Cadastre
U.S. Hydrographic Services



Three things that keep us awake...

- Resources under strain and competing agency pressures
 - Navigational vs. other National and agency priorities
- Mitigating and Responding to Disasters
- Systems and Personnel Transition
 - Human resources and skill sets
 - Next generation charting system
 - S57 to S101



Thank you

