



UNITED STATES OF AMERICA

National Report

**Meso-American and Caribbean Sea
Hydrographic Commission (MACHC)
St Maarten, Netherlands
9-13 December 2013**

NOAA, Office of Coast Survey <http://www.nauticalcharts.noaa.gov>

National Geospatial-Intelligence Agency <https://www1.nga.mil>

Naval Meteorology and Oceanography Command <http://www.navmetocom.navy.mil>

Hydrographic Office/Service

This National Report provides specific information pertaining to individual products and services of primary interest to the Meso-American and Caribbean Sea Hydrographic Commission (MACHC). U.S. domestic and international hydrographic services are primarily conducted by three government agencies: The National Oceanic and Atmospheric Administration's (NOAA) Office of Coast Survey (OCS), the National Geospatial-Intelligence Agency (NGA), and the Naval Meteorology and Oceanography Command (CNMOC, U.S. Navy).

Surveys

A statutory mandate authorizes NOAA to provide nautical charts and related hydrographic information for the safe and efficient navigation of maritime commerce as well as providing basic data for engineering, scientific, and other commercial and industrial activities within the nation's 3.4 million square nautical mile EEZ.

The *NOAA Hydrographic Survey Priorities* available at <http://www.nauticalcharts.noaa.gov/hsd/NHSP.htm> defines the methodology NOAA uses to identify survey priorities across the U.S. EEZ.

NOS Hydrographic Surveys Specifications and Deliverables has been updated for 2013 and includes new specifications and changes made since the 2012 version. Those who acquire hydrographic survey data in accordance with NOS specifications should use the current version; [2013 Specifications and Deliverables](#).

In 2013, the U.S. is involved in the following ongoing surveys in the Gulf of Mexico: Approaches to Mississippi Sound, Mississippi; Approaches to Barataria Bay, Louisiana; and the Louisiana Coast. The U.S. Navy surveys waters outside the United States and in the territorial waters of other nations through diplomatic channels and international agreements. As such, hydrographic surveys were conducted through these agreements or Diplomatic channels during 2013 in México, and Panamá. In addition, there are proposed or planned hydrographic surveys for 2014 in Honduras, and Guatemala. Any further inquiries regarding specific information on any of these surveys should be directed to the Hydrographic Service or Port Authority of the respective country.

New Charts and Updates

New U.S. Chart No. 1 shows both Paper Chart and ECDIS Symbology

Since the early days of ECDIS, there has been a desire to have a simple, easily accessible ECDIS/ENC symbology reference for mariners. In May of 2013, the U.S. released Edition 12 of the U.S. Chart No. 1. It is the first national Chart No. 1 to show both paper chart (IHO INT1) symbols side-by-side with the corresponding ECDIS (IHO S-52) symbols.

Chart No.1 may be downloaded at <http://www.nauticalcharts.noaa.gov/mcd/chart1/ChartNo1.pdf> for free. Paper copies may also be ordered from one of NOAA's four publishing partners listed at <http://www.nauticalcharts.noaa.gov/mcd/chartno1.htm>.

Over a period of two years, NOAA analyzed the IHO S-52 specifications, symbolization look-up tables and procedures; ECDIS displays; recent editions of the three official IHO INT No. 1s; as well as U.S. national charting specifications to develop a mapping between INT1 paper chart symbols and the IHO S-52 symbols specified for displaying ENC data in ECDIS. The figure below shows a sample of the document. INT1 symbols are on the left, national symbols in the center and ECDIS symbols on the right.

ENCs

The U.S. (NOAA) produces 189 ENCs in domestic waters within the MACHC region. There will be a total of 92 new editions and projected new editions for 2013. (See table in Appendix A.)

The U.S. (NGA) released its first 4 ENCs in S-57 format for the Panama Canal and approaches on 01 OCT 2013. These ENCs will continue to be maintained by NGA with new source information from both the U.S. and Panama as it becomes available. Additionally, the US (NGA) is working to expand its ENC Portfolio within the MACHC Region in areas where the U.S. is the Prime Charting Authority.

ENC Band	1	2	3	4	5	6
Number of U.S. ENCs existing in MACHC Region (NOAA)	3	4	14	60	106	2
Number of U.S. ENCs existing in MACHC Region (NGA)	0	0	0	1	3	0

ENC distribution

U.S. ENCs, including newly created NGA ENCs, are distributed through PRIMAR, UKHO, Maris, Jeppessen, Chart World, Creative Map Corporation, and directly from NOAA at www.nauticalcharts.noaa.gov.

RNCs and Paper charts

NOAA produces 178 raster charts in domestic waters within the MACHC region. There have been 55 new or projected new editions for 2013. See table in Appendix B. Starting in April 2014 NOAA will no longer produce lithographic paper charts with traditional print cycles for new editions. Future paper charts will be fully updated and available as Print on Demand (POD) products.

NGA produces 372 paper charts for the MACHC region in their Region 2 portfolio, but NGA is withdrawing many of them from public sale. The only charts NGA will continue to distribute to the public are those where NGA is the primary charting authority. These are specifically areas where the U.S. conducts the surveys, compiles and issues the chart, and there is no functioning national authority or NGA has specific authority (e.g. Trust Territory of the Pacific). (See table in Appendix C.)

INT Charts

NOAA and NGA share INT chart responsibility within the MACHC region. In February of 2013, NOAA released the first edition of INT 4148, a 1:470,940-scale chart in the Gulf of Mexico. The U.S. is responsible for 11 international series charts in the MACHC, ranging in scales between 1:300,000 to 1:2,750,000. (See Appendix C for table depicting projected INT chart production.)

New Publications and Updates

United States Coast Pilot®

The *United States Coast Pilot*® consists of a series of nine regionally-focused nautical books that cover a variety of useful information important to navigators of coastal and intracoastal waters and the Great Lakes. *Coast Pilots 4, 5, and 7* provide information for the MACHC region. U.S. Coast Pilot now offers completely [updated publications](#) every week.

Publication	Edition Date
U.S. Coast Pilot 4: Atlantic Coast of the United States from Cape Henry, Virginia to Key West, Florida	Edition 45, 2013
Coast Pilot 5: Gulf of Mexico from Key West, FL to the Rio Grande, Texas. Coast Pilot 5 also covers Puerto Rico and the U.S. Virgin Islands.	Edition 41, 2013
Coast Pilot 7: California, Oregon and Washington, between Mexico on the south and Canada's British Columbia on the north. <i>Coast Pilot 7</i> also includes Hawaii and other United States territories in the South Pacific.	Edition 45, 2013

U.S. Coast Pilots can be downloaded at: <http://www.nauticalcharts.noaa.gov/nsd/cpdownload.htm>

Sailing Directions

Sailing Directions are published by NGA, and digital updates can be downloaded from NGA at <http://msi.nga.mil/NGAPortal/MSI.portal>.

Six (6) volumes of *Sailing Directions* cover the MACHC region.

Publication	Edition Date
<i>Sailing Directions 120</i> – Pacific Ocean and Southeast Asia (Planning)	2013 Edition
<i>Sailing Directions 140</i> – North Atlantic Ocean and Adjacent Seas (Planning)	2013 Edition
<i>Sailing Directions 124</i> – East Coast of South America (Enroute)	2013 Edition
<i>Sailing Directions 147</i> – Caribbean Vol. 1 (Enroute)	2013 Edition
<i>Sailing Directions 148</i> – Caribbean Vol. 2 (Enroute)	2013 Edition
<i>Sailing Directions 153</i> – West Coast of Mexico and South America (Enroute)	2013 Edition

List of Lights, Radio Aids and Fog Signals

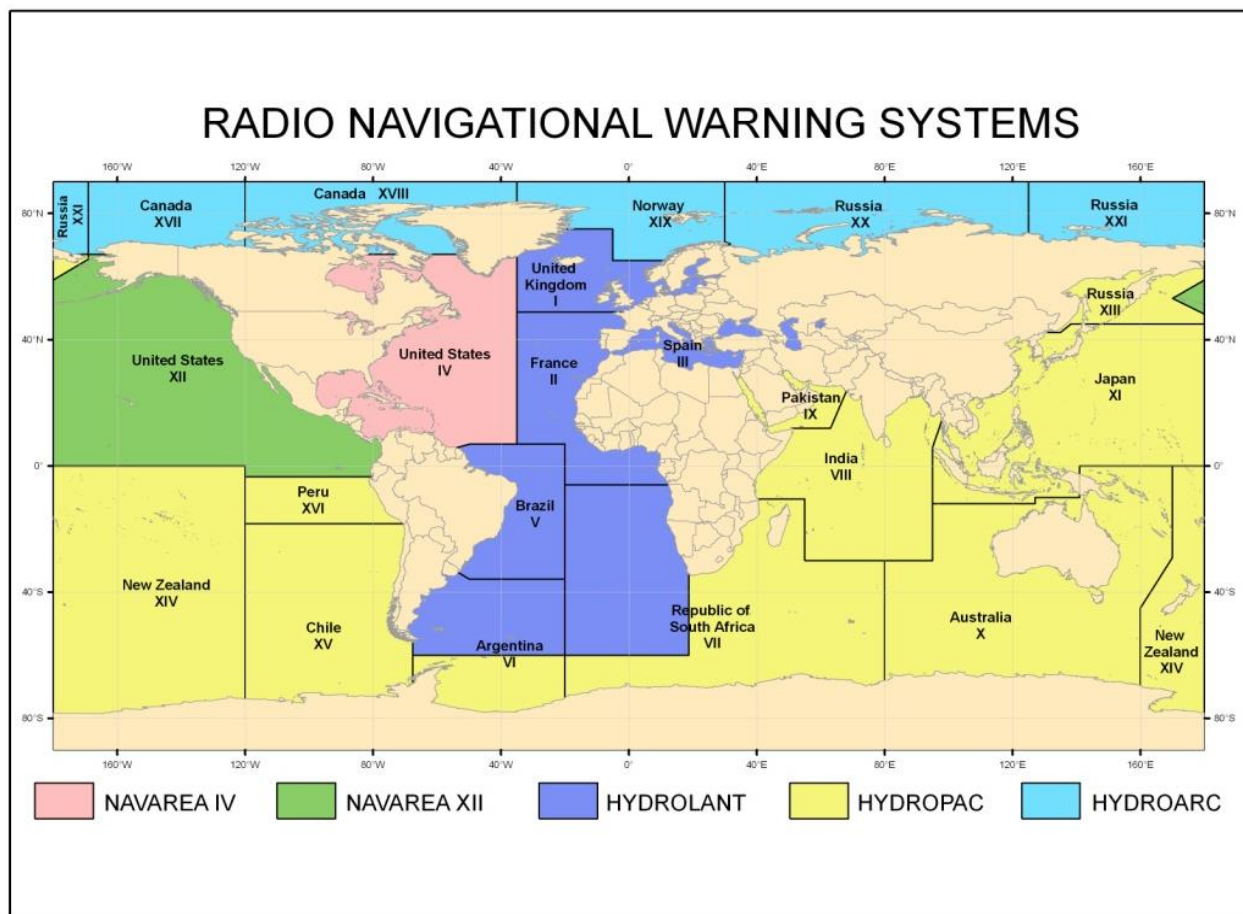
The NGA *List of Lights, Radio Aids and Fog Signals* and their digital updates are available to the public and are posted at the NGA Maritime Safety website, at <http://msi.nga.mil/NGAPortal/MSI.portal>.

Two (2) volumes of *List of Lights* cover the MACHC region.

Publication	Edition Date
List of Lights Pub. 110 (Greenland, E. Coast N & S America and W. Indies, excluding USA)	2013 Edition
List of Lights Pub. 111 (W. Coast N & S America (excluding USA), Australia, Tasmania, NZ, and Islands in the N/S Pacific Ocean)	2013 Edition

Maritime Safety Information (MSI)

The U.S. Coast Guard issues Notice to Mariners are issued for NOAA charts. NGA produces Notices to Mariners for NGA charts in the MACHC region.



NAVAREA Limits

NGA produces navigational warnings for the area including the MACHC Region. These are broadcast and uploaded to <http://msi.nga.mil/NGAPortal/MSI.portal>. NGA requests the assistance of all member states within the MACHC Region to relay pertinent maritime safety information for promulgation to navsafety@nga.mil. This is the most efficient process to keep mariners informed of time sensitive material while navigating within the MACHC Region, and it is both an IHO and IMO obligation per SOLAS.

NGA is the NAVAREA IV and XII Coordinator within the IMO/IHO World-Wide Navigational Warning Service (WWNWS) and also acts as Chairman for the WWNWS-Sub-Committee (SC).

C-55 Update

The most recent U.S. update to C-55, *Status of Hydrographic Surveying and Nautical Cartography Worldwide*, was for the International Hydrographic Conference in April 2012. This includes survey coverage in the MACHC region, where:

A = percentage which is adequately surveyed

B = percentage which requires re-survey at larger scale or to modern standards

C = percentage which has never been systematically surveyed

	A	B	C
Depths < 200m	17	1	0
Depths > 200m	0	0	94

Coverage of charts published by the U.S. in the MACHC region, where:

A = percentage covered by INT series, or a paper chart series meeting the standards in M-4

B = percentage covered by Raster Navigational Charts (RNCs) meeting the standards in S-61

C = percentage covered by ENCs meeting the standards in S-57

Purpose/Scale	A	B	C
Offshore passage/Small	100%	100%	100%
Landfall and Coastal passage/Medium	100%	100%	100%
Approaches and Ports/Large	100%	100%	100%
Percentage of Group A showing depths in metres	2.8%		
Percentage of Group A referenced to a satellite datum	100%		

The latest C-55 publication can be found online at http://www.iho.int/iho_pubs/CB/C-55/C-55_Eng.htm.

Capacity Building

The United States is an active participant in the IHO Capacity Building Sub-Committee (CBSC), and the U.S./NGA directly supports the IHO Maritime Safety Information (MSI) training course. In May of 2013 the the US/NGA supported the latest MSI Training Course in Claxton Bay, Trinidad by providing Mr. Chris Janus as one of the Instructors for the course.

Training Opportunities available in the United States

Training opportunities are available at various institutions in the United States. Two Category A certified hydrographic programs are available through the University of Southern Mississippi (www.marine.usm.edu/hs.php) and the University of New Hampshire (www.marine.unh.edu/research/ccom.html).

Capt. Andrew Armstrong, NOAA (ret.), the NOAA co-director of the Joint Hydrographic Center at UNH, is a member of the FIG/IHO/ICA International Board on Standards of Competence for Hydrographic Surveyors and Nautical Cartographers. As a member of the board, Capt. Armstrong is available to advise institutions on establishing hydrographic training curricula and preparing submissions to the International Board for Category A or Category B recognition.

(andy.armstrong@noaa.gov).

Oceanographic Activities

GEBCO

The United States participates on the IOC-IHO Guiding Committee for GEBCO, and hosts the IHO Data Centre for Digital Bathymetry at NOAA's National Geophysical Data Center. The United States actively participates in the International Bathymetric Chart of the Caribbean Sea & Gulf of Mexico.

Remote Sensing Shoreline Mapping: New shoreline mapping projects completed in last year include Cruz Bay, Christiansted, Frederiksted and Anguilla, St. Croix, USVI and Port of Mayaguez, Tallaboa Bay and Port of Yabucoa, Puerto Rico.

Tsunami Warning System: <http://tsunami.gov> The NOAA Tsunami Program currently provides tsunami alerts through out the Caribbean and Adjacent region with NOAA's Pacific Tsunami Warning

Center designated as the primary authority for all areas except Puerto Rico and the Virgin Islands (US and UK) which are serviced by the US National Tsunami Warning Center. Each Center serves as a back-up to each other. On February 1, 2010, NOAA's National Weather Service established the Caribbean Tsunami Warning Program (CTWP) at the University of Puerto Rico in Mayagüez. (See <http://www.srh.noaa.gov/srh/ctwp/> for more information). The CTWP works with local, national, and international stakeholders and partners to improve tsunami monitoring (sea level, seismic and GPS), warning (existing and new warning and forecast models), communications and education, and preparedness efforts including the TsunamiReady program. CTWP executes many activities, as direct support to the UNESCO IOC Intergovernmental Coordination Group for Tsunami and other Coastal Hazards Warning System for the Caribbean and adjacent regions (CARIBE EWS). An annual exercise called CARIBE WAVE is conducted to test the system and lead by CTWP. The next exercise is scheduled for March 26, 2014.

Appendix A

The U.S. (NOAA) produces 189 ENC's in domestic waters within the MACHC region. There will be a total of 92 new editions and projected new editions as follows for 2013.

NOAA	
Cell Name	Posted
US5TX14M	01/04/13
US5FL61M	01/15/13
US4FL71M	01/17/13
US5TX33M	01/24/13
US5FL73M	01/29/13
US5TX72M	02/01/13
US4FL71M	02/14/13
US5PR42M	02/14/13
US4FL15M	02/20/13
US5FL15M	02/20/13
US5FL65M	02/26/13
US5PR12M	02/26/13
US4PR31M	03/04/13
US5PR31M	03/04/13
US5FL91M	03/06/13
US4FL68M	03/19/13
US4FL97M	03/28/13
US5FL63M	03/28/13
US5FL24M	04/02/13
US5FL66M	04/09/13
US5LA38M	04/11/13
US5AL13M	04/15/13
US4LA10M	04/18/13
US4TX71M	04/18/13
US5TX55M	04/18/13
US5TX57M	04/18/13
US5TX54M	04/19/13
US5TX51M	04/25/13
US4LA30M	05/02/13
US4LA33M	05/02/13
US4LA35M	05/02/13

NOAA	
Cell Name	Posted
US5FL99M	05/02/13
US5LA33M	05/02/13
US4LA34M	05/06/13
US3PR10M	05/08/13
US5LA16M	05/13/13
US4FL20M	05/15/13
US5LA11M	05/17/13
US5LA12M	05/17/13
US5TX61M	05/17/13
US4AL11M	05/22/13
US5AL11M	05/22/13
US3GC07M	06/10/13
US5FL93M	06/10/13
US5LA16M	06/13/13
US4FL92M	06/17/13
US3GC03M	06/19/13
US4LA12M	06/24/13
US5LA12M	06/24/13
US3GC02M	07/03/13
US4AL12M	07/16/13
US4FL71M	07/16/13
US5AL12M	07/16/13
US5LA11M	07/29/13
US5FL64M	08/02/13
US3LA01M	08/07/13
US4LA33M	08/10/13
US5FL17M	08/10/13
US5LA33M	08/10/13
US3GC02M	08/17/13
US3GC03M	08/17/13
US4LA30M	08/22/13

NOAA	
Cell Name	Posted
US4MS10M	08/27/13
US5FL19M	09/06/13
US4FL12M	09/13/13
US5FL09M	09/13/13
US5FL11M	09/13/13
US5FL12M	09/13/13
US5PR13M	09/18/13
US4FL10M	09/23/13
US4FL43M	09/23/13
US4LA25M	09/23/13
US5FL43M	09/23/13
US5TX53M	10/01/13
US2EC01M	11/01/13
US2GC09M	11/01/13
US5LA23M	11/01/13
US5LA27M	11/01/13
US3FL30M	Projected*
US3FL90M	Projected*
US3GC07M	Projected*
US4FL13M	Projected*
US4PR11M	Projected*
US4PR41M	Projected*
US5FL94M	Projected*
US5FL94M	Projected*
US5LA37M	Projected*
US5LA51M	Projected*
US5LA52M	Projected*
US5PR11M	Projected*
US5PR46M	Projected*
US5PR47M	Projected*

*Projected to post before 31 December 2013.

The U.S. (NGA) is responsible for producing ENC's in areas where the US functions as the Prime Charting Authority outside US domestic waters. NGA currently has produced 4 ENCs within the MACHC region. There will be additional new edition ENC's produced within the region in 2014.

NGA Cells	
Cell Name	Posted
US409860	10/01/2013
US509860	10/01/2013
US515390	10/01/2013
US515410	10/01/2013

Appendix B

The U.S. (NOAA) produces 178 raster charts in domestic waters within the MACHC region. There have been 55 new or projected new editions for 2013.

Chart Number	Chart Title	Latest Print Date
11328	Houston Ship Channel Atkinson Island to Alexander Island	January 2013
11332	Sabine Bank	January 2013
11377	Mobile Bay Approaches and Lower Half	January 2013
11391	St. Andrew Bay	January 2013
11446	Intracoastal Waterway Sugarloaf Key To Key West	January 2013
11462	Fowey Rocks to Alligator Reef	January 2013
25640	Puerto Rico and Virgin Islands	January 2013
4148	Havana to Tampa Bay	February 2013
11325	Houston Ship Channel Carpenters Bayou to Houston	February 2013
11339	Calcasieu River and Approaches	February 2013
11363	Chandeleur and Breton Sounds	February 2013
11420	Havana to Tampa Bay	February 2013
11441	Key West Harbor and Approaches	February 2013
1113A	Havana to Tampa Bay (Oil and Gas Leasing Areas)	February 2013
11341	Calcasieu Pass to Sabine Pass	March 2013
11376	Mobile Bay Mobile Ship Channel-Northern End	March 2013
11439	Sand Key to Rebecca Shoal	March 2013
11330	Mermentau River to Freeport	April 2013
11340	Mississippi River to Galveston	April 2013
11348	Intracoastal Waterway Forked Island to Ellender, including the Mermentau River, Grand Lake and White Lake	April 2013
11378	Intracoastal Waterway Santa Rosa Sound to Dauphin Island	April 2013
1116A	Mississippi River to Galveston (Oil and Gas Leasing Areas)	April 2013
11347	Calcasieu River and Lake	May 2013
11361	Mississippi River Delta;Southwest Pass;South Pass;Head of Passes	May 2013
11402	Intracoastal Waterway Apalachicola Bay to Lake Wimico	May 2013
11411	Intracoastal Waterway Tampa Bay to Port Richey	May 2013
11415	Tampa Bay Entrance; Manatee River Extension	May 2013
11425	Intracoastal Waterway Charlotte Harbor to Tampa Bay	May 2013
11324	Galveston Bay Entrance Galveston and Texas City Harbors	June 2013
11356	Isles Dernieres to Point au Fer	June 2013
11412	Tampa Bay and St. Joseph Sound	June 2013

Chart Number	Chart Title	Latest Print Date
11416	Tampa Bay;Safety Harbor;St. Petersburg;Tampa	June 2013
11428	Okeechobee Waterway St. Lucie Inlet to Fort Myers; Lake Okeechobee	June 2013
11434	Florida Keys Sombrero Key to Dry Tortugas	July 2013
11447	Key West Harbor	July 2013
25677	South Coast of Puerto Rico Guanica Light to Punta Tuna Light;Las Mareas	July 2013
411	Gulf of Mexico	August 2013
11006	Gulf Coast - Key West to Mississippi River	August 2013
11355	Intracoastal Waterway Catahoula Bay to Wax Lake Outlet including the Houma Navigation canal	August 2013
11409	Anclote Keys to Crystal River	August 2013
11370	Mississippi River-New Orleans to Baton Rouge	September 2013
25641	Virgin Islands-Virgin Gorda to St. Thomas and St. Croix;Krause Lagoon Channel	September 2013
25673	Bahia de Mayaguez and approaches	September 2013
25687	Bahia de Jobos and Bahia de Rincon	September 2013
25689	Puerto Arroyo	September 2013
11374	Intracoastal Waterway Dauphin Island to Dog Keys Pass	October 2013
11383	Pensacola Bay	October 2013
11384	Pensacola Bay Entrance	October 2013
11301	Southern part of Laguna Madre	Projected*
11323	Approaches to Galveston Bay	Projected*
11326	Galveston Bay	Projected*
11329	Houston Ship Channel Alexander Island to Carpenters Bayou;San Jacinto and Old Rivers	Projected*
11343	Sabine and Neches Rivers	Projected*
11405	Apalachee Bay	Projected*
11406	St.Marks River and approaches	Projected*

*Projected to post before 31 December 2013.

Appendix C

The table below depicts projected INT chart production.

INT No.	Nat No.	Producing Agency	Title	Projected Availability
4015		NOAA		FY2016
4016	11006	NOAA	Gulf Coast - Key West to Mississippi River	FY2014
4017		NOAA		FY2016
4021	26005	NGA	Eastern Cuba to Puerto Rico	FY2013
4145	11300	NOAA	Galveston to Rio Grande	FY2015
4146	11340	NOAA	Mississippi River to Galveston	FY2015
4147	11360	NOAA	Cape St. George to Mississippi Passes	FY2014
4149		NOAA		FY2017
4178	25640	NOAA	Puerto Rico and Virgin Islands	FY2017