



# UNITED STATES OF AMERICA

## National Report

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**Meso-American and Caribbean Sea  
Hydrographic Commission (MACHC)  
Antigua, Guatemala  
November 19-23, 2012**

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 in the region 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 (U.S. Navy). A national-level overview of the services, mandates, activities and leadership of these three agencies is provided in a separate companion U.S. Hydrographic Program Overview document which is available on the MACHC web site at [http://www.iho-machc.org/documents/machc\\_doc.html#nov2012](http://www.iho-machc.org/documents/machc_doc.html#nov2012).

## 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* (2012 edition) defines the methodology that NOAA uses to identify survey priorities across the U.S. EEZ. The document is at <http://www.nauticalcharts.noaa.gov/hsd/NHSP.htm>.

	Navig. Significant	Critical Areas	Emerging Critical	Priority 1 Areas	Priority 2 Areas	Priority 3 Areas	Priority 4 Areas	Priority 5 Areas	Completed (post-1993 survey)
<b>Gulf of Mexico</b>	73,459	7,552	2,055	10,812	7,976	14,355	8,596	14,368	7,745
<b>Caribbean Islands</b>	1,558	22	0	38	184	339	524	0	451

*NOAA survey priorities for U.S. waters in the MACHC region (in square nautical miles)*

In 2012, four new hydrographic survey projects were completed in the MACHC Region, covering coastal waters of Louisiana, Mississippi and Puerto Rico. Three additional survey projects will be completed in the coastal waters of Louisiana, Mississippi, and Florida in 2013. (For a graphic depiction of these projects, see Appendix A.)

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 via these mechanisms during 2012 in Barbados, Belize, Colombia, Honduras, Mexico, and Nicaragua. In addition, there

are proposed or planned hydrographic surveys for 2013 in Belize, Chile, Colombia, and Panama. 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

### ENCs

The U.S. (NOAA) produces 184 ENCs in domestic waters within the MACHC region. There will be a total of 64 new editions and projected new editions for 2012. (A list appears in Appendix B.)

The U.S. (NGA) is producing its first ENCs in S-57 format for the Panama Canal and approaches. These ENCs will contain updates from U.S. Navy surveys as well as from the Panama Canal Commission. . When complete early next year, there will be a total of six ENCs. NGA will also produce updated paper charts of the same areas for public sale through NOAA’s chart distributor.

ENC Band	1	2	3	4	5	6
Number of U.S. ENCs existing in MACHC Region (NOAA)	3	10	12	59	98	2
Number of U.S. ENCs planned & in progress in MACHC Region (NGA)	0	0	0	1	3	0

### ENC distribution

U.S. ENCs, to include newly created NGA ENCs next year, are distributed through PRIMAR, UKHO, Maris, Jeppesen, Chart World, Creative Map Corporation, and directly from NOAA at [www.nauticalcharts.noaa.gov](http://www.nauticalcharts.noaa.gov).

### RNCs and Paper charts

The U.S. (NOAA) produces 338 raster charts in domestic waters within the MACHC region. There have been 58 new or projected new editions for 2012. (See table in Appendix C.)

The U.S. (NGA) produces approximately 300 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 D.)

## INT Charts

NOAA and NGA share INT chart responsibility within the MACHC region. Since MACHC-12, an agreement has been reached between Cuba and the U.S. for the U.S. to take over responsibility as producer nation for INT 4119 and possibly INT 4017.

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 E 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.

Publication	Edition Date
<b><i>Coast Pilot 4</i></b> covers the Atlantic coast of the United States from Cape Henry to Key West	Edition 44, 2012
<b><i>Coast Pilot 5</i></b> covers the Gulf of Mexico from Key West, FL to the Rio Grande. <i>Coast Pilot 5</i> also covers Puerto Rico and the U.S. Virgin Islands.	Edition 40, 2012
<b><i>Coast Pilot 7, 44th Edition, 2012</i></b> , covers the United States coast of 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 44, 2012

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)	2012 Edition
<i>Sailing Directions 140</i> – North Atlantic Ocean and Adjacent Seas (Planning)	2012 Edition

<i>Sailing Directions 124</i> – East Coast of South America (Enroute)	2012 Edition
<i>Sailing Directions 147</i> – Caribbean Vol. 1 (Enroute)	2011 Edition
<i>Sailing Directions 148</i> – Caribbean Vol. 2 (Enroute)	2012 Edition
<i>Sailing Directions 153</i> – West Coast of Mexico and South America (Enroute)	2012 Edition

### List of Lights, Radio Aids and Fog Signals

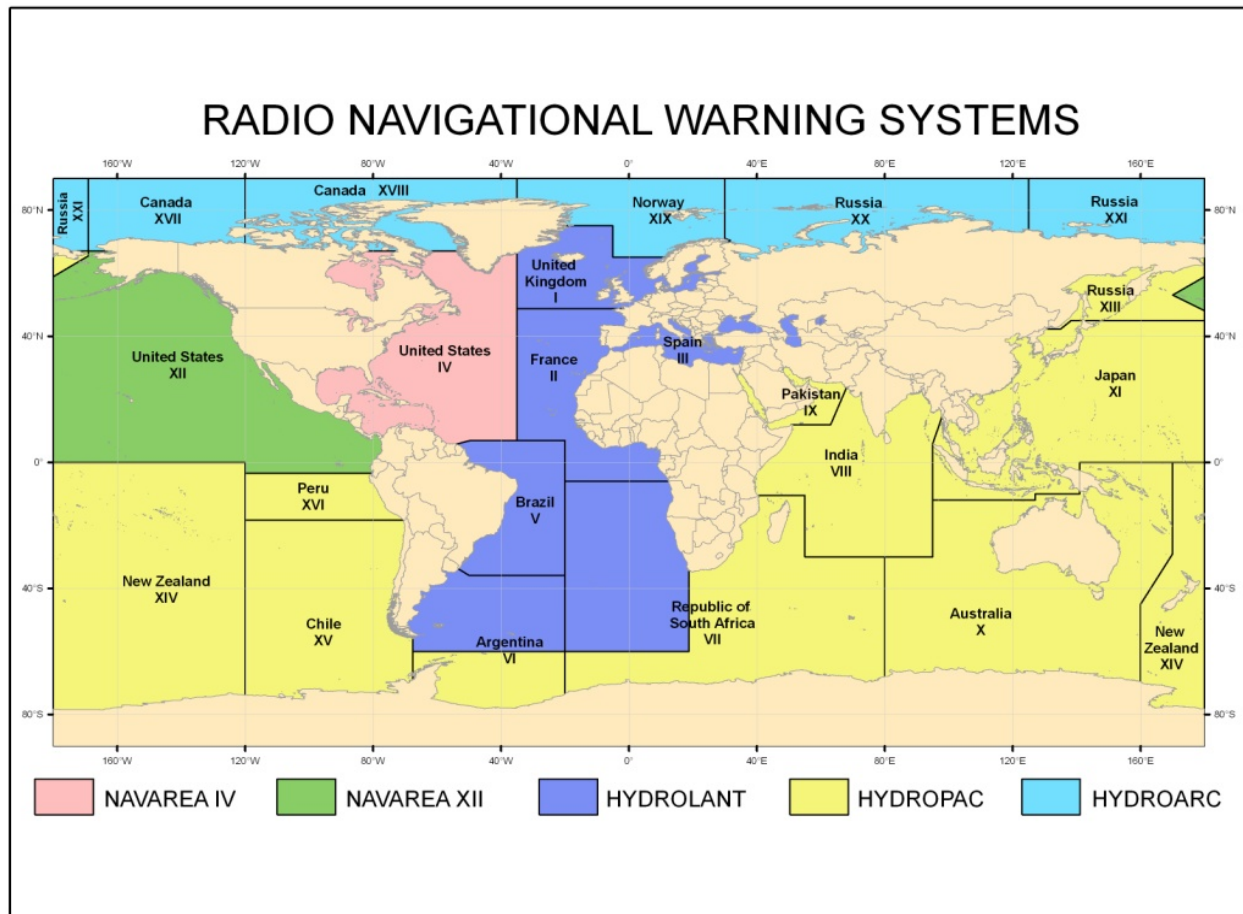
The NGA *List of Lights, Radio Aids and Fog Signals* and their digital updates are available to the public and are posted at the NGA Maritime Safety website, at <http://msi.nga.mil/NGAPortal/MSI.portal>.

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)	2012 Edition
List of Lights Pub. 111 (W. Coast N & S America (excluding USA), Australia, Tasmania, NZ, and Islands in the N/S Pacific Ocean)	2012 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 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](mailto: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 U.S. has updated its C-55, *Status of Hydrographic Surveying and Nautical Cartography Worldwide*, 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 ENC's 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%		

## 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. An overview and description of NGA's training activities in the field of Marine Safety Information (MSI) are provided in the U.S. Hydrographic Program Overview document on the MACHC web site.

### 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](http://www.marine.usm.edu/hs.php)) and University of New Hampshire ([www.marine.unh.edu/research/ccom.html](http://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](mailto: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://www.tsunami.noaa.gov/> 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 have been or are executing numerous activities, many in 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).

### Other

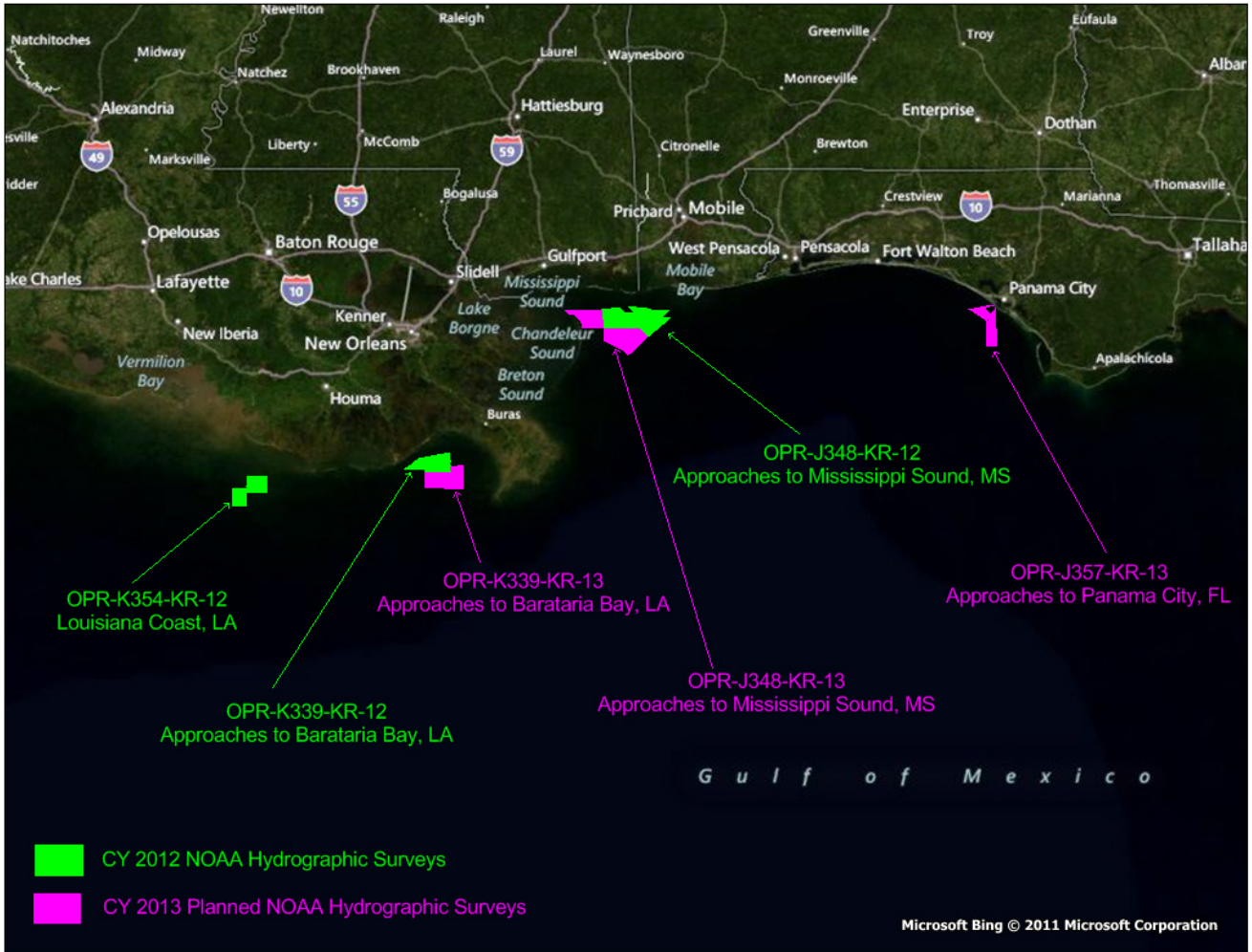
#### Hydrographic Office Response to Extreme Events

The U.S. response to Hurricane Sandy will be described in a special presentation at MACHC13.




# Appendix A

## NOAA surveys in the MACHC region in 2012-2013



M-1907-NF-12  
Puerto Rico Mapping Project  
(IOCM)



 CY 2012 NOAA Hydrographic Surveys

## Appendix B

The U.S. (NOAA) produces 184 ENC's in domestic waters within the MACHC region. There will be a total of 64 new editions and projected new editions for 2012.

Cell Name	Posted
US5FL43	1/24/2012
US4FL43	1/26/2012
US4FL89	2/7/2012
US5PR33	2/28/2012
US5FL52	3/14/2012
US5LA37	3/29/2012
US5FL57	4/3/2012
US4FL92	4/5/2012
US4FL46	4/9/2012
US4FL97	4/9/2012
US4FL27	4/12/2012
US4FL26	4/12/2012
US4FL20	4/12/2012
US5FL27	4/18/2012
US5FL40	5/1/2012
US5FL41	5/1/2012
US5FL54	5/3/2012
US5FL56	5/3/2012
US5FL84	5/8/2012
US5FL53	5/10/2012
US5FL11	5/17/2012
US5FL12	5/17/2012

Cell Name	Posted
US4FL12	5/17/2012
US5FL09	5/17/2012
US5FL16	5/25/2012
US5TX25	6/5/2012
US4FL13	6/12/2012
US4CA73	6/15/2012
US5FL17	6/21/2012
US5PR62	6/28/2012
US4FL18	7/3/2012
US5GA15	7/24/2012
US5LA26	8/1/2012
US4FL74	8/10/2012
US5FL95	8/18/2012
US4FL10	8/30/2012
US5LA13	10/4/2012
US4LA13	10/4/2012
US3FL30	10/18/2012
US5CA74	10/18/2012
US5PR55	10/22/2012
US5FL21	Projected*
US5FL88	Projected*
US4TX11	Projected*

Cell Name	Posted
US5TX32	Projected*
US5TX56	Projected*
US5AL13	Projected*
US5AL14	Projected*
US5FL67	Projected*
US5LA33	Projected*
US3GC03	Projected*
US4LA15	Projected*
US3LA02	Projected*
US4LA32	Projected*
US4LA30	Projected*
US4LA33	Projected*
US4LA35	Projected*
US5LA37	Projected*
US5LA52	Projected*
US5LA51	Projected*
US4MS12	Projected*
US5GA13	Projected*
U1409880	Projected
U1509860	Projected
U1515390	Projected
U1515410	Projected

\*Projected to post before 31 December 2012.

## Appendix C

The U.S. (NOAA) produces 338 raster charts in domestic waters within the MACHC region. There have been 58 new or projected new editions for 2012.

Chart Number	Chart Title	Latest Print Date
11364	Mississippi River-Venice to New Orleans	January 2012
11368	New Orleans Harbor Chalmette Slip to Southport	January 2012
11375	Pascagoula Harbor	January 2012
11467	Intracoastal Waterway West Palm Beach to Miami	January 2012
11370	Mississippi River-New Orleans to Baton Rouge	January 2012
18020	San Diego to Cape Mendocino	January 2012
11374	Intracoastal Waterway Dauphin Island to Dog Keys Pass	February 2012
11013	Straits of Florida and Approaches	February 2012
11416	Tampa Bay;Safety Harbor;St. Petersburg;Tampa	February 2012
11332	Sabine Bank	February 2012
11344	Rollover Bayou to Calcasieu Pass	February 2012
11411	Intracoastal Waterway Tampa Bay to Port Richey	March 2012
11351	Point au Fer to Marsh Island	March 2012
11415	Tampa Bay Entrance; Manatee River Extension	March 2012
11503	St. Marys Entrance Cumberland Sound and Kings Bay	March 2012
11371	Lake Borgne and approaches Cat Island to Point aux Herbes	March 2012
11424	Lemon Bay to Passage Key Inlet	April 2012
11412	Tampa Bay and St. Joseph Sound	April 2012
11323	Approaches to Galveston Bay	April 2012
11309	Corpus Christi Bay	April 2012
11304	Northern part of Laguna Madre	April 2012
11345	Intracoastal Waterway New Orleans to Calcasieu River West Section	April 2012
1116A	Mississippi River to Galveston (Oil and Gas Leasing Areas)	May 2012
11346	Port Fourchon and Approaches	May 2012
11357	Timbalier and Terrebonne Bays	May 2012
11445	Intracoastal Waterway Bahia Honda Key to Sugarloaf Key	May 2012
11322	Intracoastal Waterway Galveston Bay to Cedar Lakes	May 2012
11340	Mississippi River to Galveston	May 2012
11350	Intracoastal Waterway Wax Lake Outlet to Forked Island including Bayou Teche, Vermilion River, and Freshwater Bayou	June 2012
11356	Isles Dernieres to Point au Fer	June 2012
25644	Frederiksted Road;Frederiksted Pier	June 2012
11388	Choctawhatchee Bay	June 2012
11491	St. Johns River-Atlantic Ocean to Jacksonville	June 2012

11369	Lakes Pontchartrain and Maurepas	June 2012
25663	Pasaje de San Juan to Puerto de Humacao and Western Part of Isla de Vieques	July 2012
11460	Cape Canaveral to Key West	July 2012
11358	Barataria Bay and approaches	July 2012
11354	Intracoastal Waterway Morgan City to Port Allen, including the Atchafalaya River	July 2012
11352	Intracoastal Waterway New Orleans to Calcasieu River East Section	July 2012
11373	Mississippi Sound and approaches Dauphin Island to Cat Island	August 2012
11349	Vermilion Bay and approaches	August 2012
11366	Approaches to Mississippi River	August 2012
11372	Intracoastal Waterway Dog Keys Pass to Waveland	September 2012
11319	Intracoastal Waterway Cedar Lakes to Espiritu Santo Bay	September 2012
11383	Pensacola Bay	September 2012
11488	Amelia Island to St. Augustine	September 2012
11390	Intracoastal Waterway East Bay to West Bay	October 2012
11306	Intracoastal Waterway Laguna Madre Middle Ground to Chubby Island	October 2012
11382	Pensacola Bay and approaches	October 2012
11384	Pensacola Bay Entrance	October 2012
11342	Sabine Pass and Lake	October 2012
11407	Horseshoe Point to Rock Islands;Horseshoe Beach	Projected*
11404	Intracoastal Waterway Carrabelle to Apalachicola Bay;Carrabelle River	Projected*
11442	Florida Keys Sombrero Key to Sand Key	Projected*
25668	North Coast of Puerto Rico Punta Penon to Punta Vacia Talega;Puerto Arecibo;Puerto Palmas Altas	Projected*
11327	Upper Galveston Bay-Houston Ship Channel-Dollar Pt. to Atkinson	Projected*
25645	Christiansted Harbor	Projected*
25683	Bahia de Ponce and Approaches	Projected*

\*Projected to post before 31 December 2012.

## Appendix D

The US (NGA) Charts issued in the last year, and also those planned for FY2013, are in the table below.

Chart	Chart Title	Edition Date	Distribution
25845	Puerto Viejo de Azua and Bahia de Las Calderas, Dominican Republic	February 2012	
21525	Corinto and Approaches, Nicaragua	December 2011	
26131	Ocho Rios Bay, Jamaica	February 2012	LIM DIS
25487	Bridgetown, Barbados	February 2012	LIM DIS
21441	Salina Cruz and Approaches, Mexico	March 2012	LIM DIS
21489	Approaches to Puerto San Jose and Puerto Quetzal, Guatemala	March 2012	
24464	Caracas Bay, Curacao	April 2012	LIM DIS
28136	The Witties, Nicaragua	July 2012	LIM DIS
28135	Miskito Cay, Nicaragua	November 2011	LIM DIS
21546	Putearenas and Puerto Caldera, Costa Rica	August 2012	
24271	Baia De Sao Marcos, Brazil	March 2012	LIM DIS
24252	Approaches to Port of Mucuripe, Brazil	March 2012	LIM DIS
21021	Bahia de Todos Santos and Ensenada, Mexico	November 2012	LIM DIS
24463	Aruba	In Work	LIM DIS
28251	Port of Mucuripe, Brazil	In Work	LIM DIS
28260	Barra Tupilco to Isla Piedra, Mexico	In Work	LIM DIS
24240	Fortaleza to Ponta Dos Tres Irmaus, Brazil	FY2013	LIM DIS
24250	Camocin to Fortaleza, Brazil	FY2013	LIM DIS
25485	Approaches to Barbados	FY2013	LIM DIS
25849	Approaches to Andres, San Pedro de Macoris and La Romana, Dominican Republic	FY2013	
26130	Plans on the North Coast of Jamaica	FY2013	LIM DIS
26320	Northern Part of Straits of Florida and Northwest Providence Channel	FY2013	
26323	Freeport, Riding Point and Approaches, Bahamas	FY2013	LIM DIS
28050	Nicaraguan Rise – Western Part	FY2013	
11004	Mississippi River to Rio Grande, United States	FY2013	
21125	La Paz and Approaches, Mexico	FY2013	LIM DIS
24480	Cabo Tiburon to Barranquilla, Panama - Colombia	FY2013	LIM DIS
24502	Baranquilla, Columbia	FY2013	LIM DIS
25723	Approaches to Bahia de Samana, Dominican Republic	FY2013	
25800	Isla Beata to Isla Saona, Dominican Republic	FY2013	
26050	Nicaraguan Rise – Eastern Part	FY2013	LIM DIS
27005	Key West to San Juan	FY2013	
28130	Cabo Gracias a Dios to Puerto Isabel, Nicaragua	FY2013	
28140	Northern Reaches to Cabo Gracias a Dios, Honduras - Nicaragua	FY2013	
21580	Cabo Matapalo to Morro de Puercos, Panama – Costa Rica	FY2013	
21601	Morro de Puercos to Panama, Panama	FY2013	

Chart	Chart Title	Edition Date	Distribution
26060	Puerto Cristobal to Cabo Tiburon, Panama - Columbia	FY2013	
26100	Morant Cays to Cabo Maisi, Jamaica – Haiti – Cuba - US	FY2013	
26240	Crooked Island Passage to Punta de Maisi, Cuba - Bahamas	FY2013	LIM DIS
26288	Bird Rock to Mira Por Vos Passage, Bahamas	FY2013	
28196	Isla Cozumel, Mexico	FY2013	LIM DIS
28197	San Miguel de Cozumel, Mexico	FY2013	LIM DIS

## Appendix E

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
4148	11420	NOAA	Havana o Tampa Bay	FY2013
4149		NOAA		FY2017
4178	25640	NOAA	Puerto Rico and Virgin Islands	FY2017