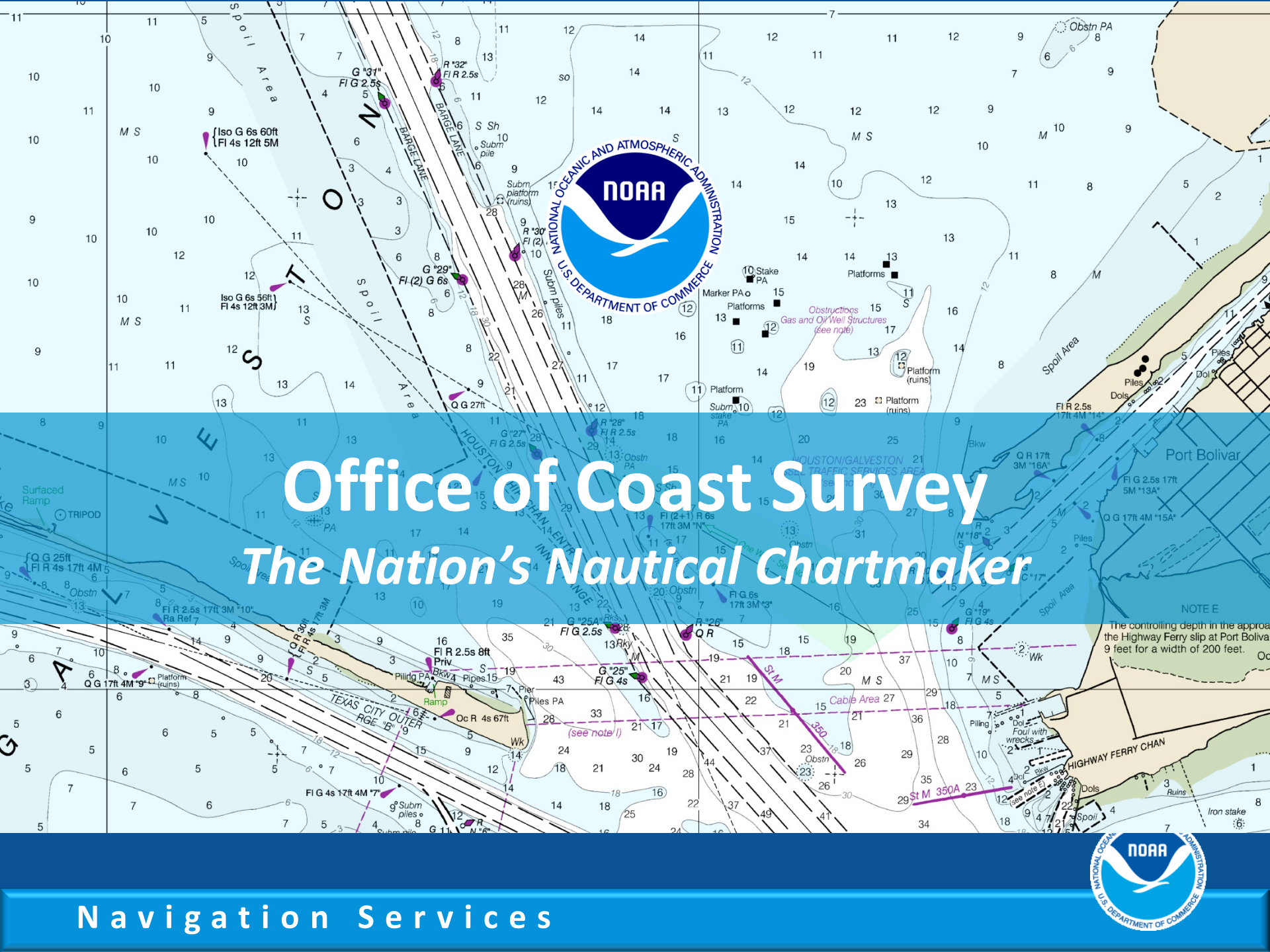


Maritime Transportation System Emergency Planning, Preparedness, Response & Mitigation

NOAA Office of Coast Survey
November 9, 2016
Marine Board Fall Meeting

Navigation Services



A detailed nautical chart from the NOAA Office of Coast Survey. The chart shows a coastal area with various navigational features. A large NOAA logo is centered in the upper half. The text "Office of Coast Survey" and "The Nation's Nautical Chartmaker" is overlaid in a large, white, serif font. The chart includes depth soundings, navigational aids, and various symbols for structures and hazards. A blue banner at the bottom contains the text "Navigation Services" and another NOAA logo.

Office of Coast Survey

The Nation's Nautical Chartmaker

Navigation Services





COASTAL INTELLIGENCE

Helping decision makers along the coast make the best choices for their communities.

satellite
communication



airborne LIDAR
aerial imagery
airborne gravimeter



decision support
tools



air gap sensor

PORTS®
visibility
sensor

meteorological
station

high
frequency
radar

continuously operating
reference station

water level gauge

water
quality
monitoring

buoys:
ocean chemistry
wave sensors
water temperature gauge
meteorological sensors
harmful algal bloom monitoring

single beam sonar
multibeam sonar

ATON mounted acoustic doppler current profiler
bottom mounted acoustic doppler current profiler

glider or autonomous
underwater vehicle

oceanservice.noaa.gov

Navigation Services





COASTAL RESILIENCE

Bouncing back & *building beyond.*

PLAN & BUILD RESILIENCE

Develop and implement plan to become more resilient.



improving forecasts, observation models, computer systems



getting information to decision makers faster



incorporating green infrastructure



DISASTER STRIKES

Disasters can be imminent or strike unexpectedly.



sea level rise



tsunamis



coastal storms and hurricanes



RESPOND

Immediately take action following a disaster.



pollution response



damage assessment imagery



completing hydrographic surveys to reopen ports



RECOVER

Assess resilience and manage adaptively.



assessing damage to communities, economy, and environment



issuing grants to rebuild and restore habitat



providing data and tools for analysis

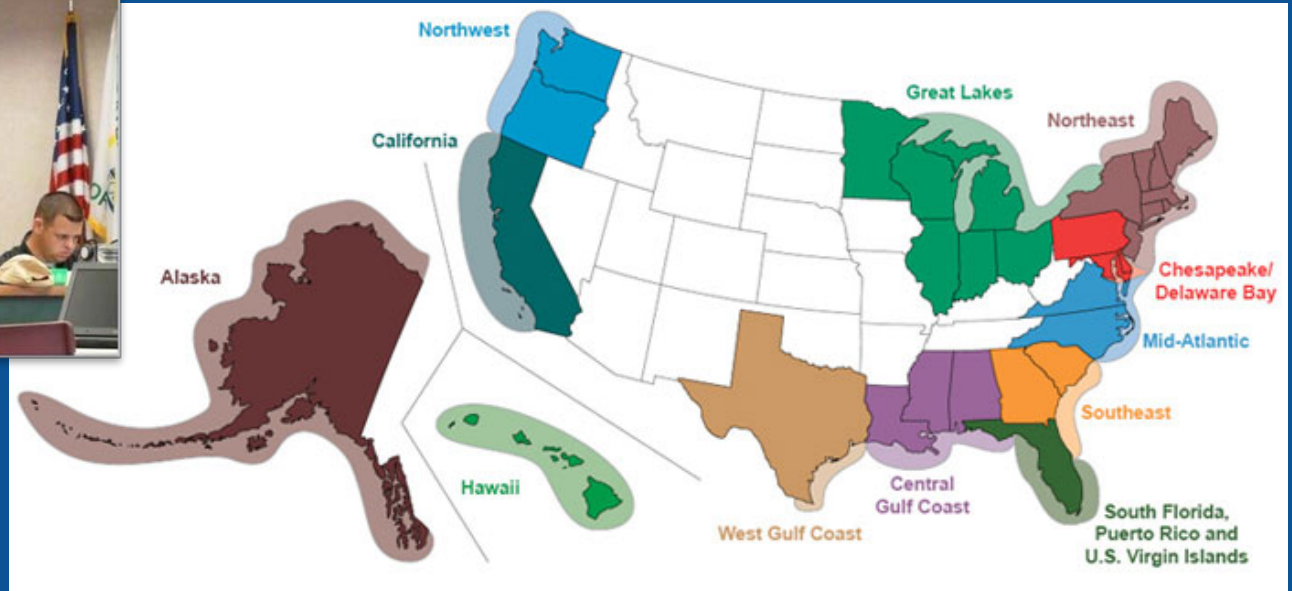


Assess resilience and begin planning for the next disaster.

Building resilience is an iterative process.

Navigation Managers work in port areas

NOAA point of contact for port clearance surveys and charting issues



Navigation Services



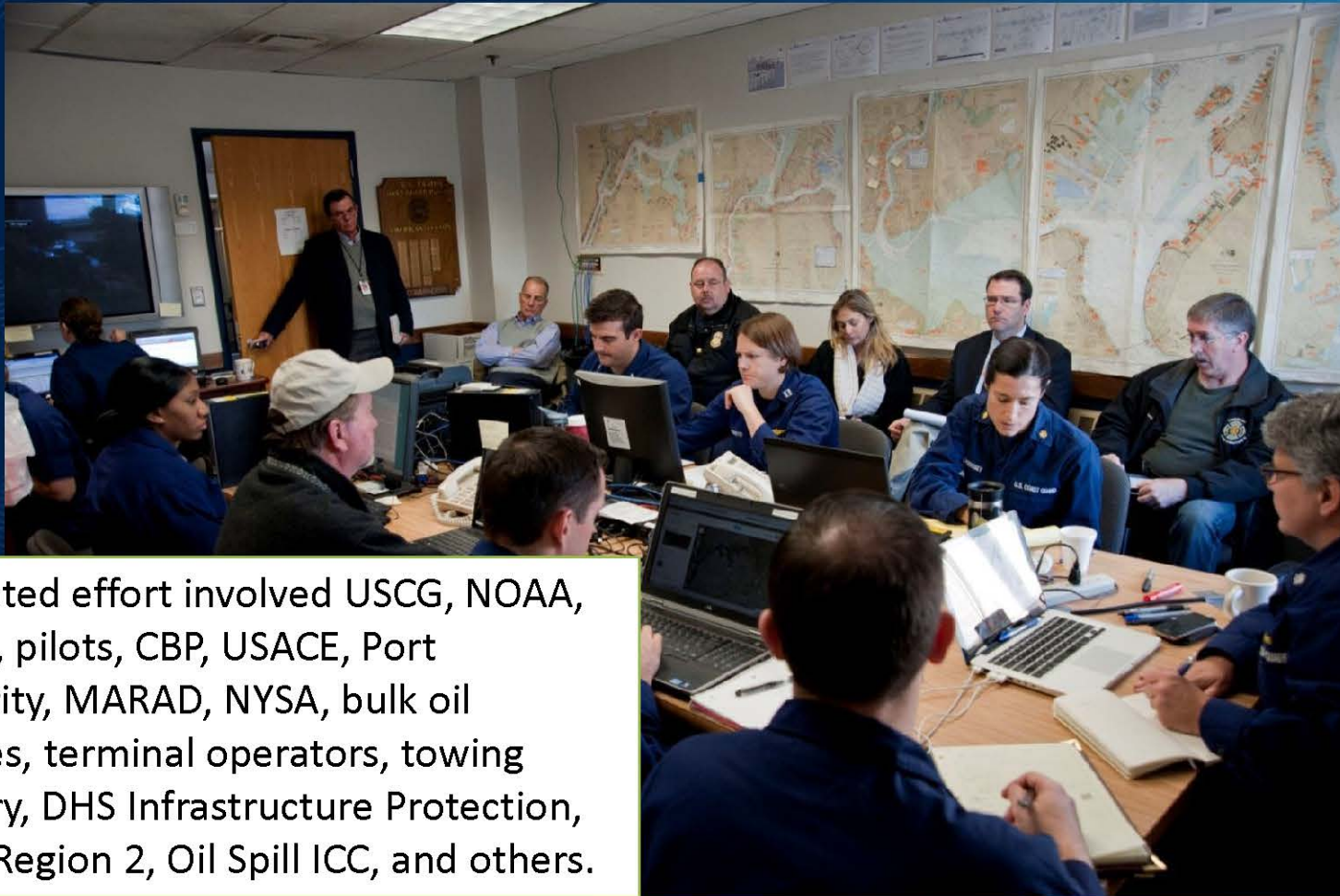
Command & Control

ESF COORDINATING, PRIMARY, AND SUPPORT DESIGNATIONS

Table 2. Designation of ESF Coordinator and Primary and Support Agencies

Agency	Emergency Support Functions														
	#1 - Transportation	#2 - Communications	#3 - Public Works and Engineering	#4 - Firefighting	#5 - Emergency Management	#6 - Mass Care, Emergency Assistance, Housing, and Human Services	#7 - Logistics Management and Resource Support	#8 - Public Health and Medical Services	#9 - Search and Rescue	#10 - Oil and Hazardous Materials Response	#11 - Agriculture and Natural Resources	#12 - Energy	#13 - Public Safety and Security	#14 - Long-Term Community Recovery	#15 - External Affairs
USDA			S		S	S	S	S		S	C/P/S	S		P	S
USDA/FS	S	S	S	C/P		S	S	S	S	S			S		
DOC	S	S	S	S	S		S	S	S	S	S	S	S	S	S
DOD	S	S	S	S	S	S	S	S	P	S	S	S	S	S	S
DOD/USACE	S		C/P	S		S	S	S	S	S	S	S	S	S	
ED					S										S

Sandy Response - Marine Transportation System Recovery Unit (MTSRU)



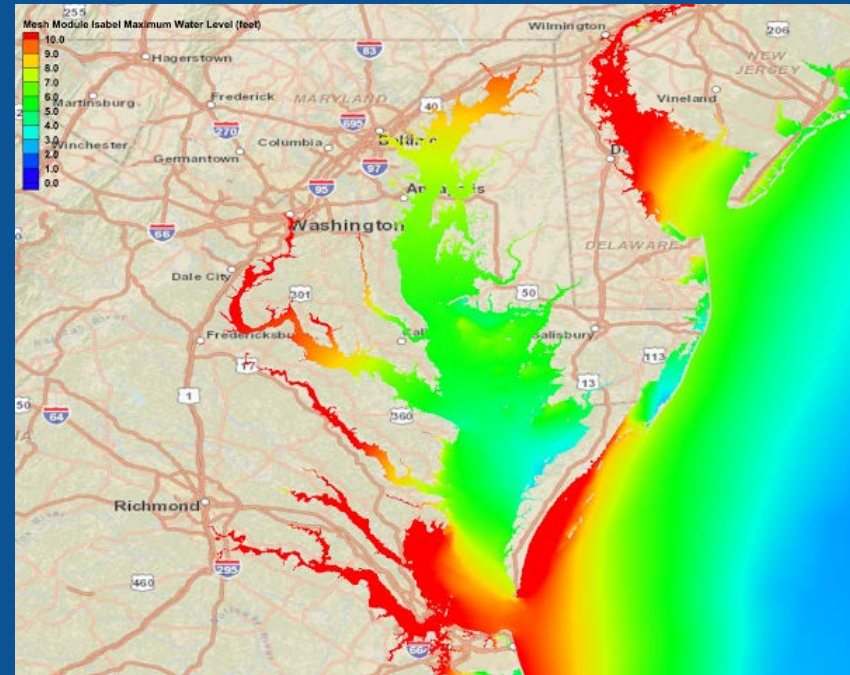
Integrated effort involved USCG, NOAA, USACE, pilots, CBP, USACE, Port Authority, MARAD, NYSA, bulk oil facilities, terminal operators, towing Industry, DHS Infrastructure Protection, FEMA Region 2, Oil Spill ICC, and others.



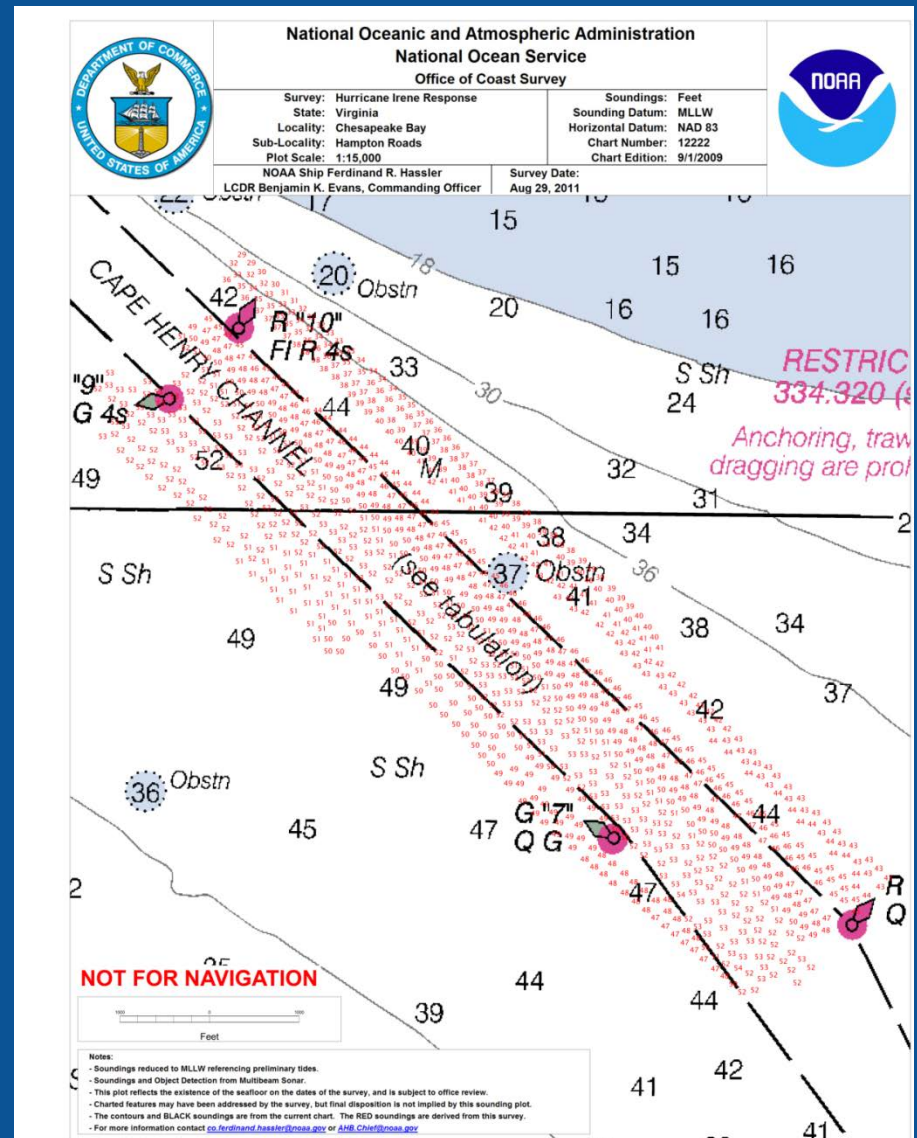
Providing data for coastal ocean modeling

Operational forecast systems predict ocean conditions for ports and estuaries

- Provides water levels, currents, temperature, salinity
- Supports next generation of precision navigation tools, rescues and spills, ecological predictions
- 14 systems operational
 - adding 1-2 per year
- Community-based models and data standards
- Model tidal datum fields for VDatum
- Develops storm surge models to support coastal resilience

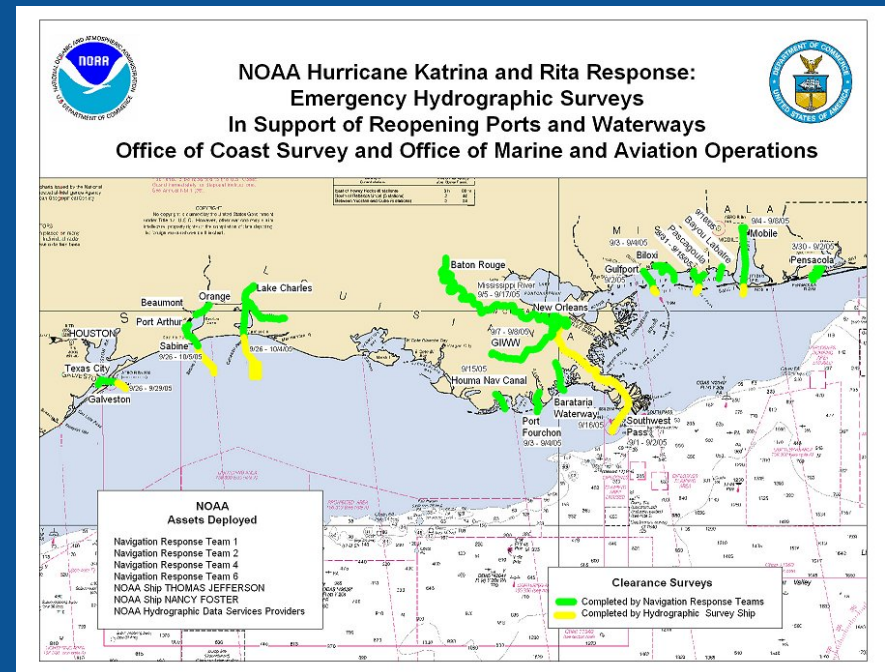
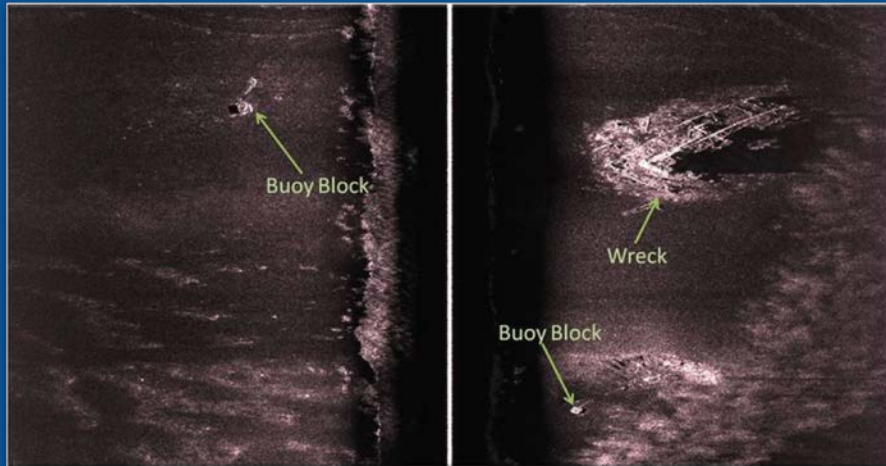


Acquiring low density sounding data



Speeding the re-opening of ports after hurricanes and other natural disasters

- *Response teams survey ports and channels, searching for submerged debris*
- *Real-time data guides post-storm response*



Gulf Coast (2005)

Capacity & Capability



Rainier
Newport, Oregon
1968

Bay Hydro II
Silver Spring, Maryland
2008



Ferdinand R. Hassler
New Hampshire
2012



Fairweather
Ketchikan, Alaska
1968

Contractors



Thomas Jefferson
Norfolk, Virginia
1992

King Air
2009

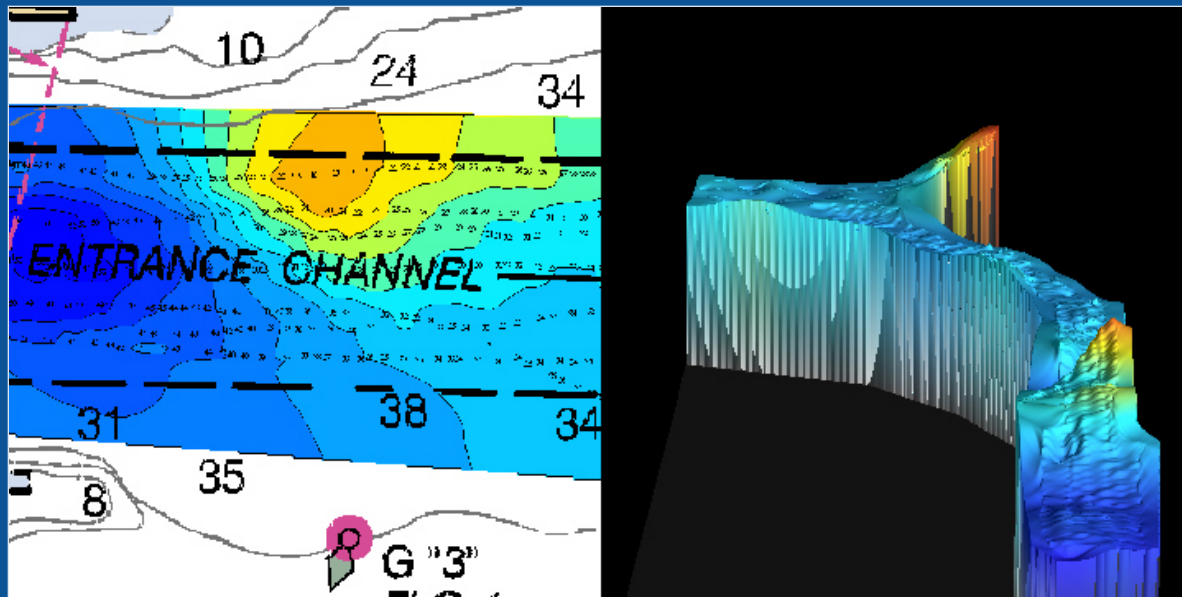


Navigation Services

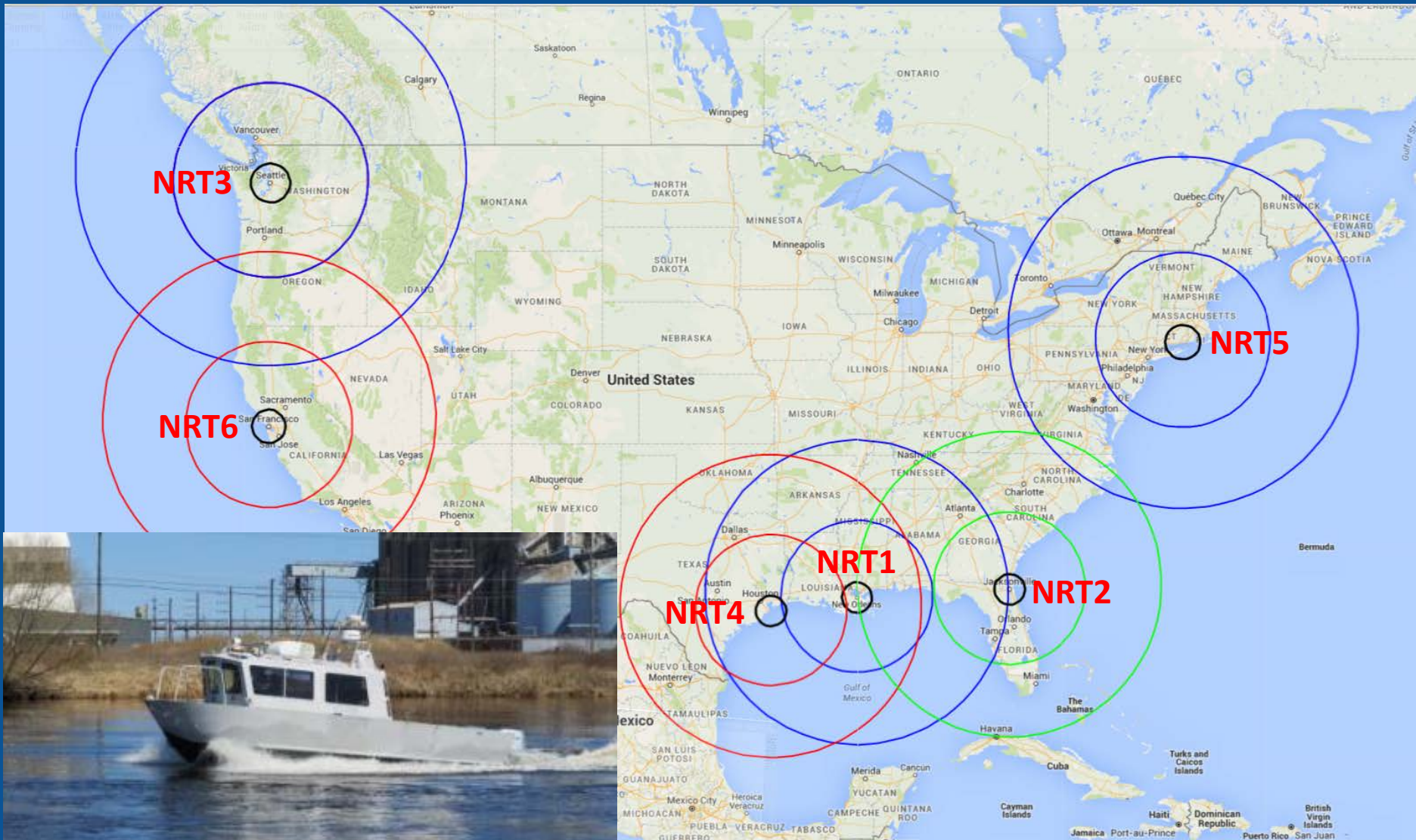


Navigation Response Teams deploy quickly

- *Respond to emergencies*
- *Conduct hydrographic surveys*
- *Validate ENC's*
- *Support homeland security*



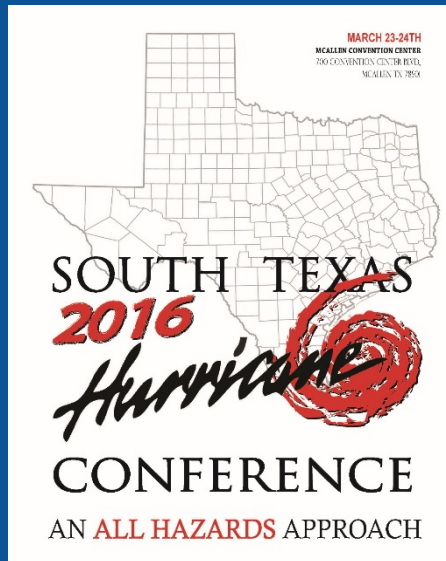
Navigation Response Teams



Navigation Services



Communication & Coordination



Navigation Services





Select Coast Guard Unit: JACKSONVILLE



SECTOR JACKSONVILLE (07-33231)
10426 ALTA DRIVE
JACKSONVILLE, FL 32226
Primary Phone: (904) 714-7500
Emergency Phone: (904) 714-7558 / 7555
Fax Number:
Rescue 21 VHF DSC MMSI Number: 003669962
URL: <http://www.uscg.mil/d7/sect/jacksonville/>
Quick Link <http://homeport.uscg.mil/jacksonville>
[Contact Us](#)

Response Phone: 904-714-7539
Incident Mgmt. Phone: 904-714-7521
Enforcement Phone: 904-714-7522
Prevention Phone: 904-714-7549
Inspection Phone: 904-714-7615
Investigations Phone: 904-714-7497
Waterways Management Phone: 904-714-7616
Prep/Planning Phone: 904-714-7546
Facilities Branch Phone:
Commercial Fishing Vessel Phone: 904-714-7601
Foreign Vessel Exams Phone: 904-714-7613
Facility Inspection Branch Phone: 904-714-7630



National Response Center Number: 800-424-8802 - Contact the NRC for oil spills, hazmat releases, and America's Waterway Watch.

News and Events

News and Events

- [MARINE SAFETY INFORMATION BULLETIN 074-16](#)

Port Conditions

- [MSIB 081-16 Port Condition IV Set for Port of Fernandina](#)

Coast Guard Prevention

Commercial Fishing

Container Inspections

Domestic Vessel Inspection

Drug And Alcohol Program

Facility Inspections

Homeland Security

Investigations

- [Useful Links!](#)
- [Suspension & Revocation for Drug Use and Possession](#)
- [Requirements for Reporting Marine Casualties & Mandatory Chemical Testing](#)
- [Marine Casualty Reporting Forms](#)
- [Administrative Clemency](#)

Port State Control (Foreign Vessel Boardings)

Regional Exam Center

Waterways Management

- [MSIB 13-11 Waterways Analysis Management System \(WAMS\) Study](#)

Coast Guard Response

Hazardous Materials Response

Homeland Security

Incident Command System Port-Specific

Marine Transportation System (MTS) Recovery

- [VOPASS](#)
- [VASPT](#)
- [2014 NE and East Central Florida MTS Recovery Plan](#)
- [Marine Transportation System Status / Facility Information Link](#)

COTP MARSEC Level

COTP MARSEC Level



Port Status Information

Port Status Information

JACKSONVILLE Port Status Information

Port	Status	Comments	Last Changed
PORT CANAVERAL	OPEN	Port Condition IV	10/13/2016
PORT OF FERNANDINA	OPEN	Port Condition IV	10/13/2016
PORT OF JACKSONVILLE	OPEN	Port Condition IV	10/09/2016

Top Content Information

Top Content Information

JACKSONVILLE Top Content List No Top Content List Found.

Safety and Security

Area Contingency Plan

- [Area Contingency Plan-Updated 2014](#)



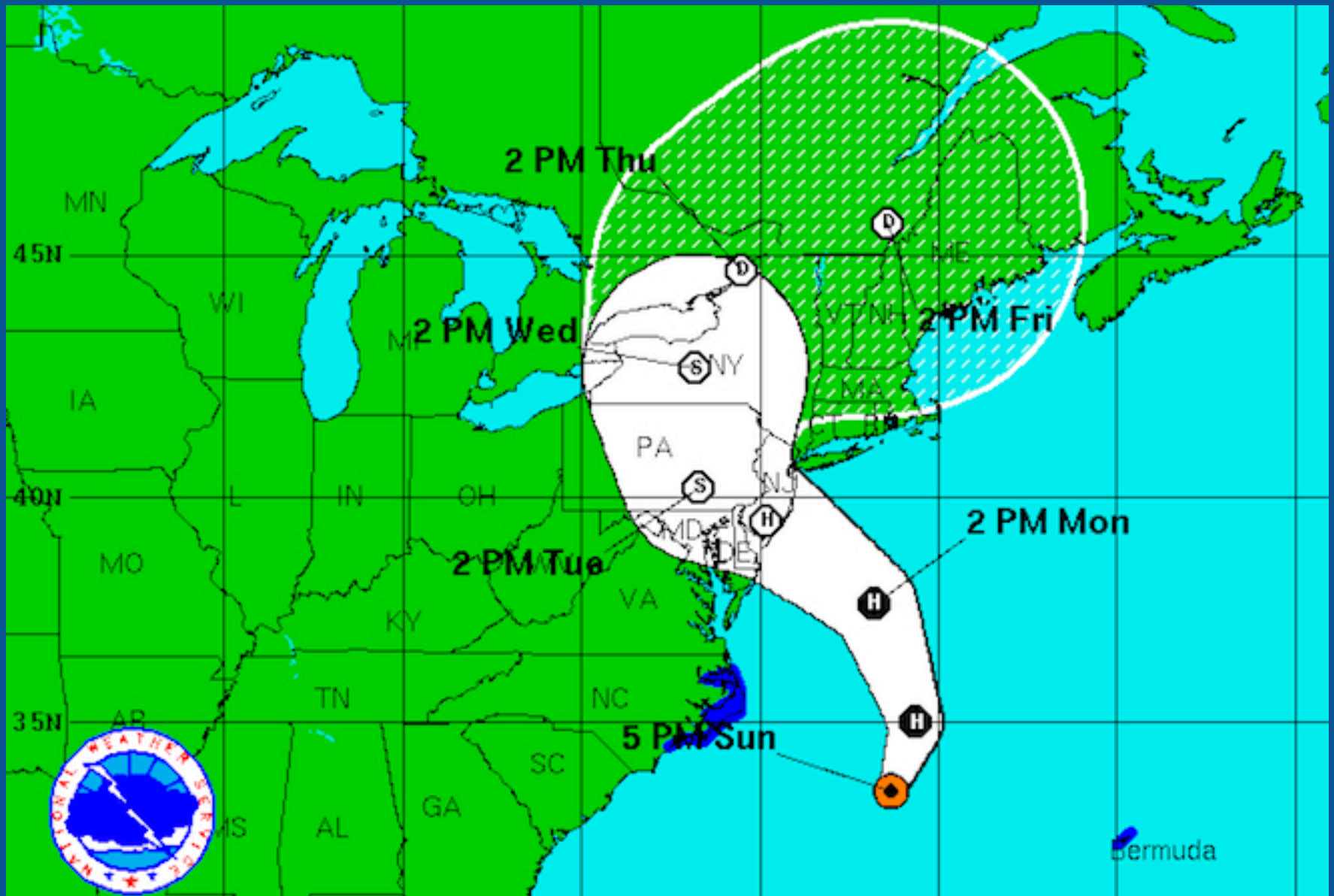
NIMS ICS All-Hazard Position
Specific Training



Hurricane
Preparedness
and Response



Navigation Services



Navigation managers coordinated with:

- ✓ Coast Guard
- ✓ Army Corps of Engineers
- ✓ Pilots
- ✓ Port officials
- ✓ Terminal operators



Lt. Brent Pounds uses sunlight to explain survey plans to a terminal operator.

For days, the team in NY-NJ had no power, no phones, no hot water / hot food, little / no connectivity, and a major fuel crisis.



Response Assets and Locations

NRT4
Galveston TX

MIST
DRC – Mobile AL

NRT1
Panama City FL

NRT2
Fernandina Beach FL
Mobilizing North along the I-95 Corridor
0600 EDT Tuesday - October 30th

Bay Hydro II
Norfolk VA

MIST and AUV
Silver Spring MD

Potomac
Annapolis MD

NRT5
Old Saybrooke, CT

Thomas Jefferson
New London, CT

Created by Office of Coast Survey
October 29, 2012 – 1200 EDT

Rapid Maritime Response

Port of New York - New Jersey

- NOAA starts surveying Oct 31
- Port resumes modified ops within 5 days

NRT5
NRT2 Thomas Jefferson

Cape May, New Jersey - Lewes, Delaware

- NOAA starts surveying Oct 31
- After comparison with earlier data, shoaling reported on Nov 4

R/V Potawaugh

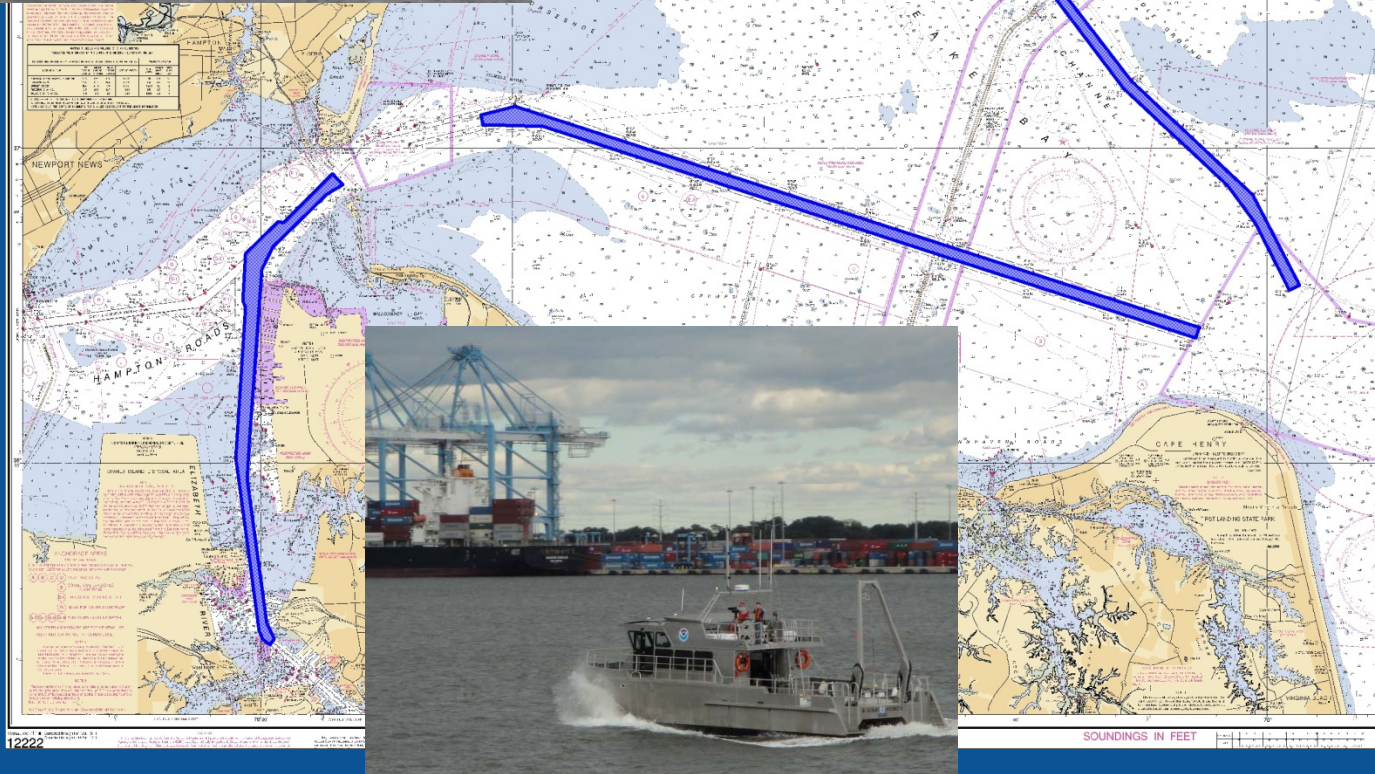
Ferdinand Hassler
R/V Bay Hydro II

Hampton Roads - Norfolk, VA

- NOAA starts surveying Oct 29
- Port resumes normal operations at 4 pm the next day (Oct 30)



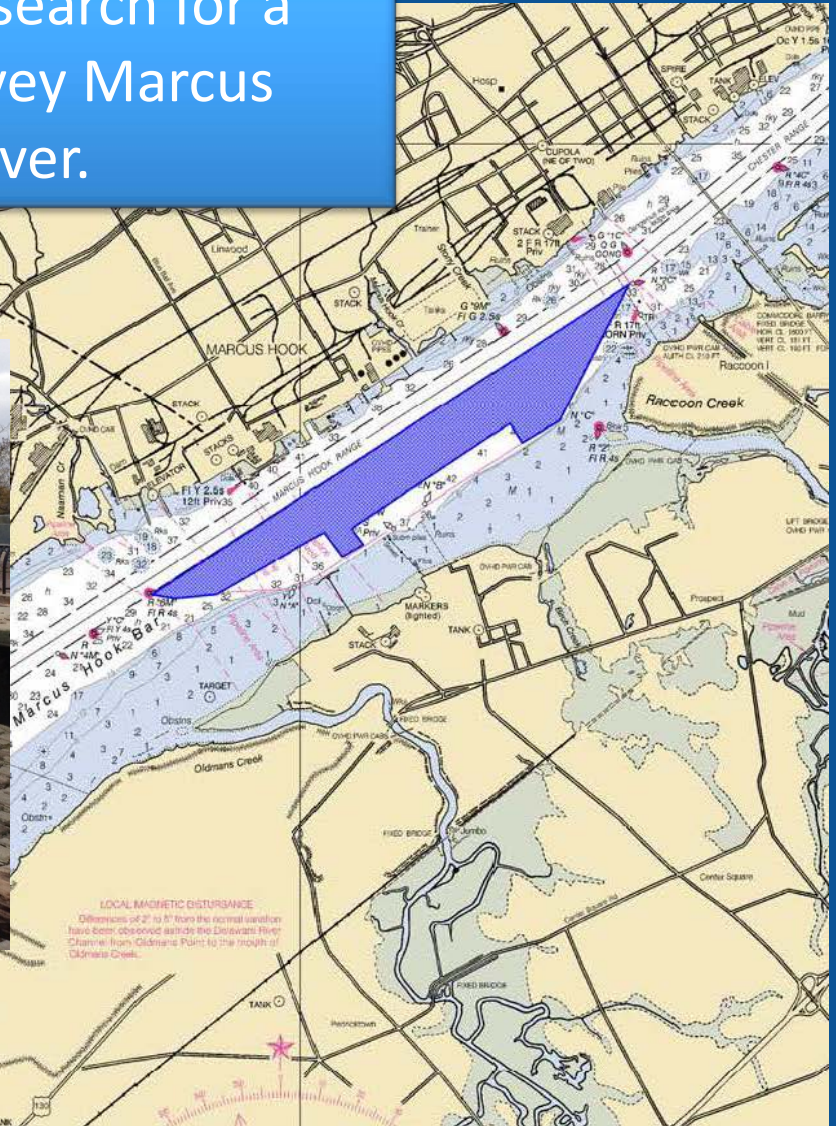
Chesapeake Bay and Hampton Roads



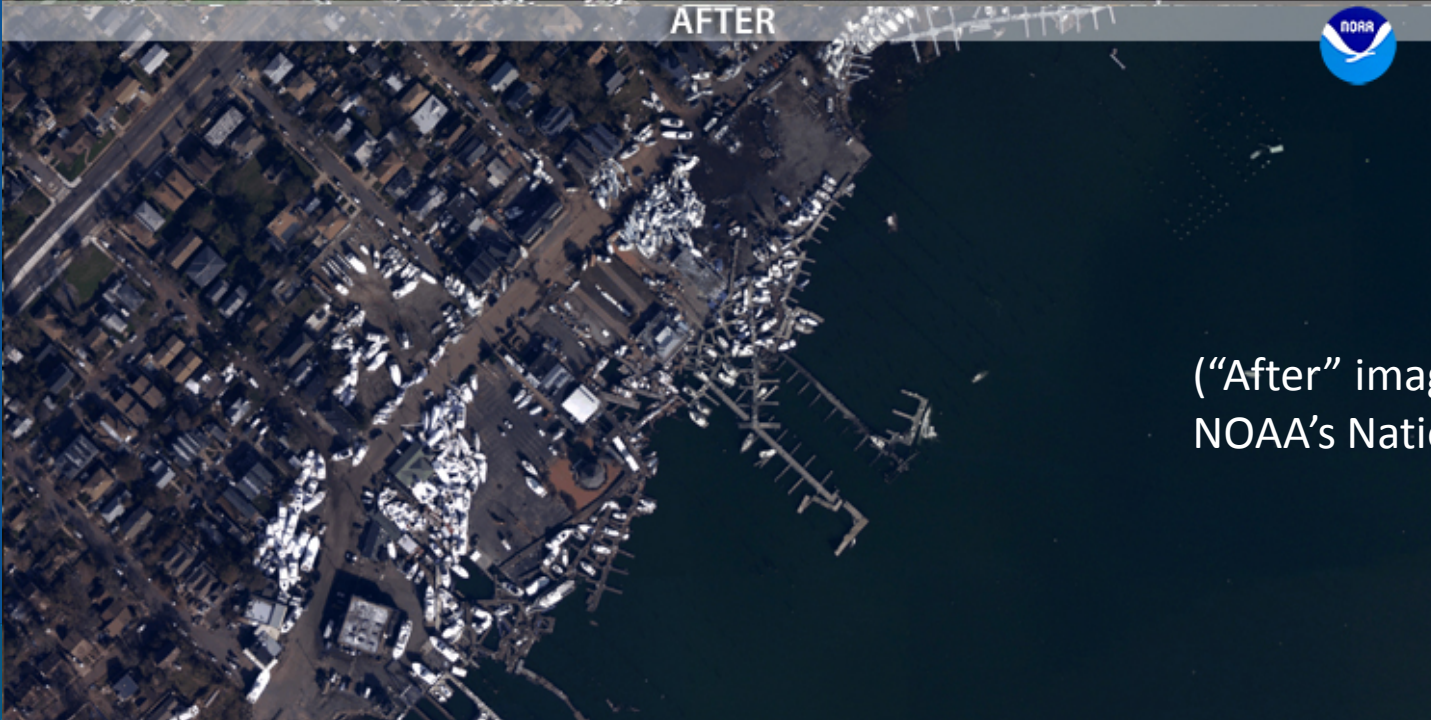
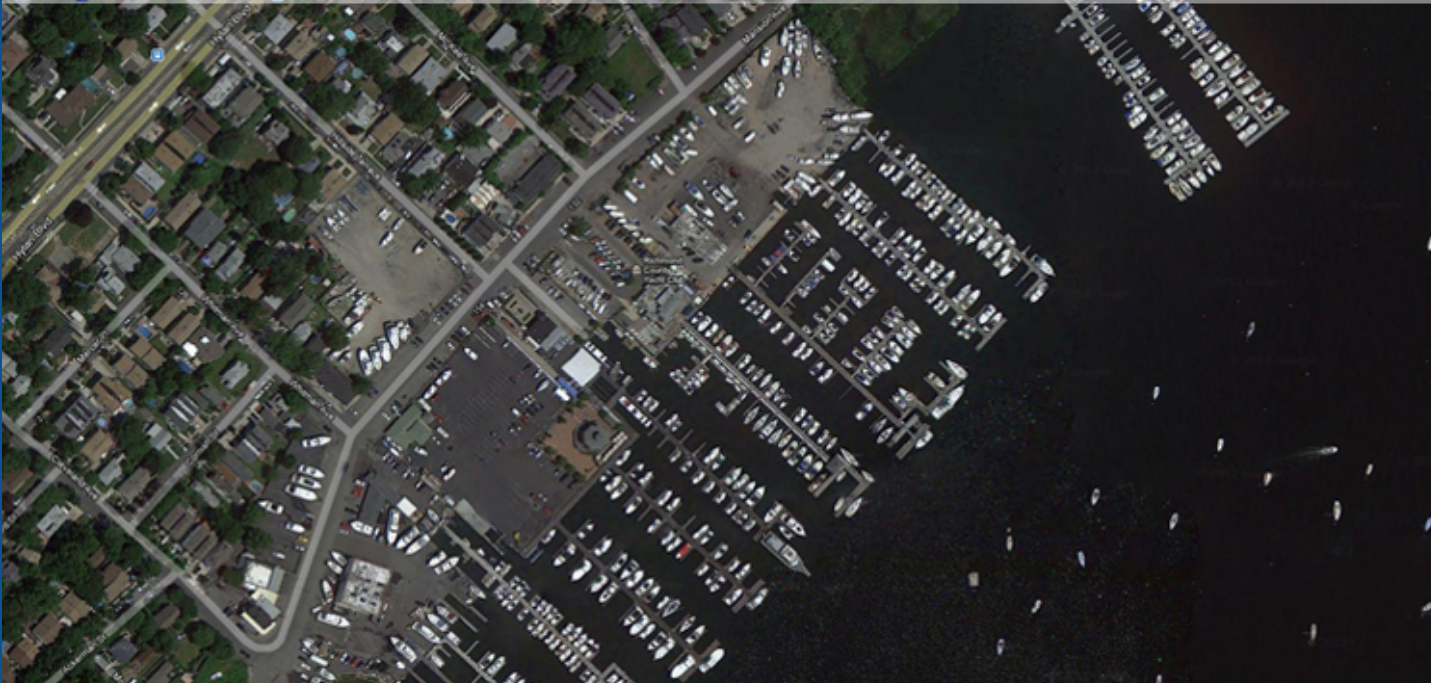
Navigation Services



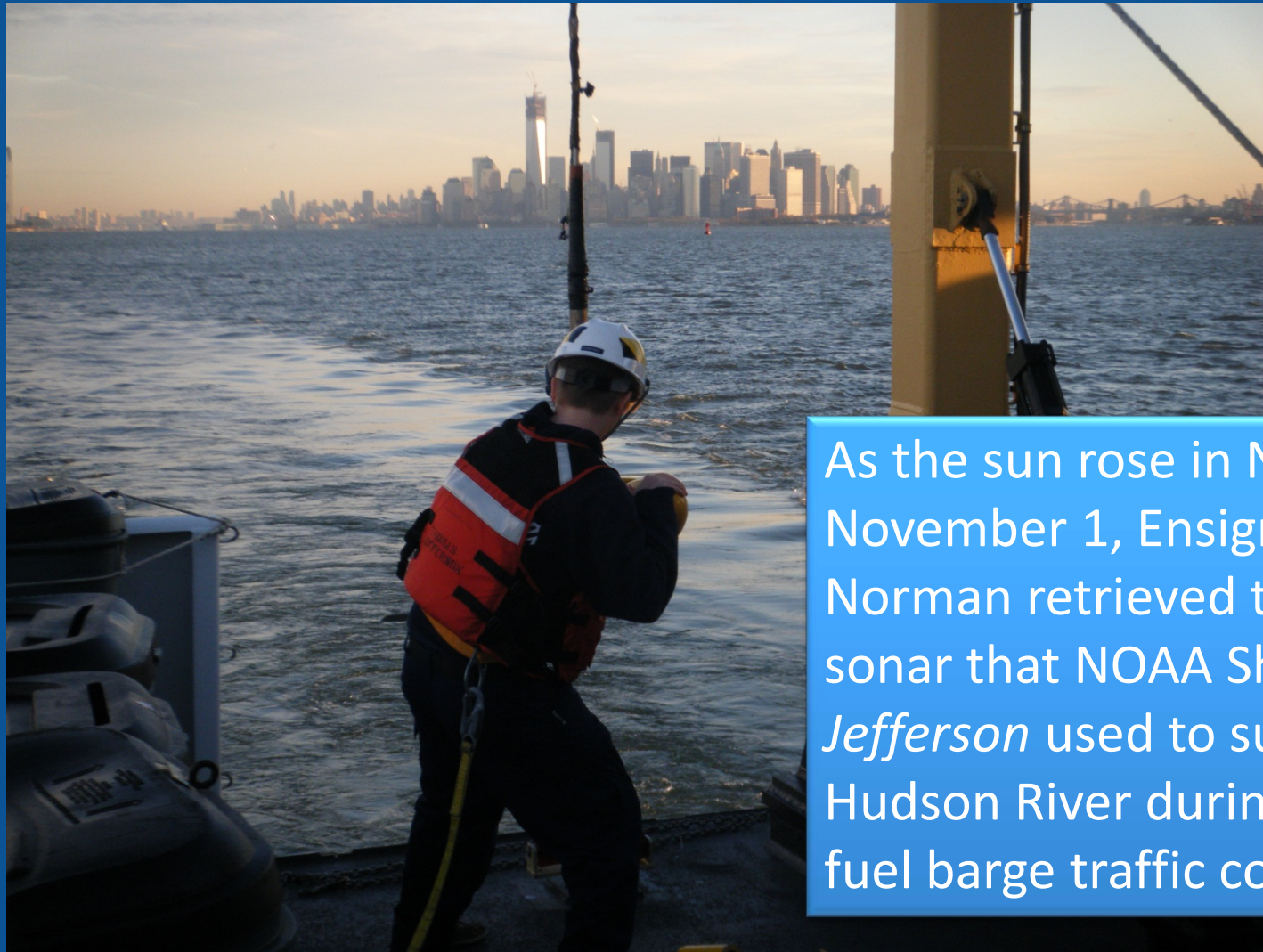
Navigation Response Team 2 had to search for a usable boat ramp, so they could survey Marcus Hook anchorage, on the Delaware River.



WILMINGTON



("After" image captured by
NOAA's National Geodetic Survey)



As the sun rose in New York on November 1, Ensign Lindsey Norman retrieved the side scan sonar that NOAA Ship *Thomas Jefferson* used to survey the Hudson River during the night, so fuel barge traffic could resume.

The New York / New Jersey port area is the country's largest for petro-chemical transportation, with the second largest oil refinery.



Response Surveys Port of New York/New Jersey

DATE	TIME	AREA	STATUS
11/01/12	0800	100-105	COMPLETE
11/01/12	0900	105-110	COMPLETE
11/01/12	1000	110-115	COMPLETE
11/01/12	1100	115-120	COMPLETE
11/01/12	1200	120-125	COMPLETE
11/01/12	1300	125-130	COMPLETE
11/01/12	1400	130-135	COMPLETE
11/01/12	1500	135-140	COMPLETE
11/01/12	1600	140-145	COMPLETE
11/01/12	1700	145-150	COMPLETE
11/01/12	1800	150-155	COMPLETE
11/01/12	1900	155-160	COMPLETE
11/01/12	2000	160-165	COMPLETE
11/01/12	2100	165-170	COMPLETE
11/01/12	2200	170-175	COMPLETE
11/01/12	2300	175-180	COMPLETE
11/01/12	2400	180-185	COMPLETE
11/01/12	2500	185-190	COMPLETE
11/01/12	2600	190-195	COMPLETE
11/01/12	2700	195-200	COMPLETE
11/01/12	2800	200-205	COMPLETE
11/01/12	2900	205-210	COMPLETE
11/01/12	3000	210-215	COMPLETE
11/01/12	3100	215-220	COMPLETE
11/01/12	3200	220-225	COMPLETE
11/01/12	3300	225-230	COMPLETE
11/01/12	3400	230-235	COMPLETE
11/01/12	3500	235-240	COMPLETE
11/01/12	3600	240-245	COMPLETE
11/01/12	3700	245-250	COMPLETE
11/01/12	3800	250-255	COMPLETE
11/01/12	3900	255-260	COMPLETE
11/01/12	4000	260-265	COMPLETE
11/01/12	4100	265-270	COMPLETE
11/01/12	4200	270-275	COMPLETE
11/01/12	4300	275-280	COMPLETE
11/01/12	4400	280-285	COMPLETE
11/01/12	4500	285-290	COMPLETE
11/01/12	4600	290-295	COMPLETE
11/01/12	4700	295-300	COMPLETE
11/01/12	4800	300-305	COMPLETE
11/01/12	4900	305-310	COMPLETE
11/01/12	5000	310-315	COMPLETE
11/01/12	5100	315-320	COMPLETE
11/01/12	5200	320-325	COMPLETE
11/01/12	5300	325-330	COMPLETE
11/01/12	5400	330-335	COMPLETE
11/01/12	5500	335-340	COMPLETE
11/01/12	5600	340-345	COMPLETE
11/01/12	5700	345-350	COMPLETE
11/01/12	5800	350-355	COMPLETE
11/01/12	5900	355-360	COMPLETE
11/01/12	6000	360-365	COMPLETE
11/01/12	6100	365-370	COMPLETE
11/01/12	6200	370-375	COMPLETE
11/01/12	6300	375-380	COMPLETE
11/01/12	6400	380-385	COMPLETE
11/01/12	6500	385-390	COMPLETE
11/01/12	6600	390-395	COMPLETE
11/01/12	6700	395-400	COMPLETE
11/01/12	6800	400-405	COMPLETE
11/01/12	6900	405-410	COMPLETE
11/01/12	7000	410-415	COMPLETE
11/01/12	7100	415-420	COMPLETE
11/01/12	7200	420-425	COMPLETE
11/01/12	7300	425-430	COMPLETE
11/01/12	7400	430-435	COMPLETE
11/01/12	7500	435-440	COMPLETE
11/01/12	7600	440-445	COMPLETE
11/01/12	7700	445-450	COMPLETE
11/01/12	7800	450-455	COMPLETE
11/01/12	7900	455-460	COMPLETE
11/01/12	8000	460-465	COMPLETE
11/01/12	8100	465-470	COMPLETE
11/01/12	8200	470-475	COMPLETE
11/01/12	8300	475-480	COMPLETE
11/01/12	8400	480-485	COMPLETE
11/01/12	8500	485-490	COMPLETE
11/01/12	8600	490-495	COMPLETE
11/01/12	8700	495-500	COMPLETE
11/01/12	8800	500-505	COMPLETE
11/01/12	8900	505-510	COMPLETE
11/01/12	9000	510-515	COMPLETE
11/01/12	9100	515-520	COMPLETE
11/01/12	9200	520-525	COMPLETE
11/01/12	9300	525-530	COMPLETE
11/01/12	9400	530-535	COMPLETE
11/01/12	9500	535-540	COMPLETE
11/01/12	9600	540-545	COMPLETE
11/01/12	9700	545-550	COMPLETE
11/01/12	9800	550-555	COMPLETE
11/01/12	9900	555-560	COMPLETE
11/01/12	10000	560-565	COMPLETE



NEW YORK HARBOR

NOAA's planned and completed surveys are 82% of total survey requests for the Port of New York/New Jersey

- NOAA COMPLETE
 - USACE COMPLETE
 - PORT AUTHORITY COMPLETE
 - UNASSIGNED
- * Unfilled Areas with Color Border are in Progress

Graphic compiled by Office of Coast Survey based on data received by 1400 hours, Nov 2, 2012

NOAA surveyed 20 square nautical miles in 5 days, ensuring that all shipping channels in the Port of NY/NJ were clear of any hazards.



Further Collaboration

- Post-Sandy Lessons
- CMTS Resilience IAT
- Regional Response Priorities

www.nauticalcharts.noaa.gov
Twitter @nauticalcharts



Navigation Services

