

NWSHQ Marine Program Overview

USCG Sector Maryland Area Committee Meeting: Regional Response Team III

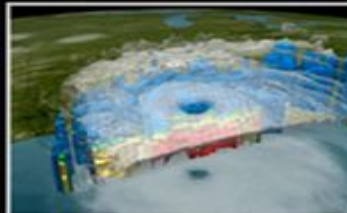
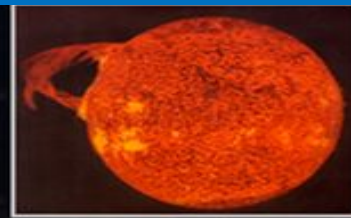
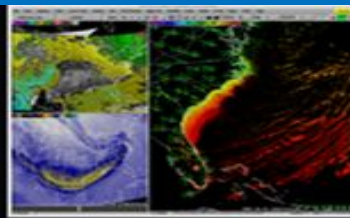
Greg Schoor

Chief, Marine, Tropical, and Tsunami Services Branch

Presenting:

Wayne Weeks, NWSHQ Marine Program Meteorologist

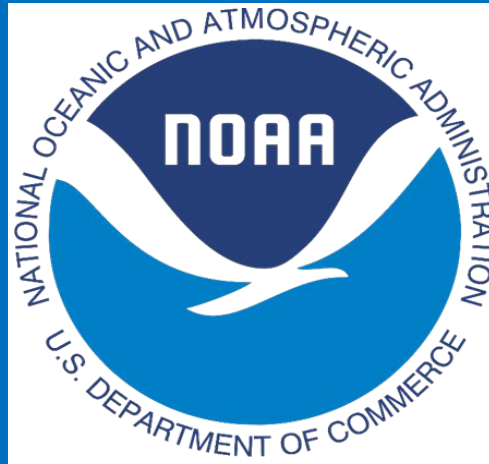
NOAA
NATIONAL
WEATHER
SERVICE





National Weather Service

Who Are We?



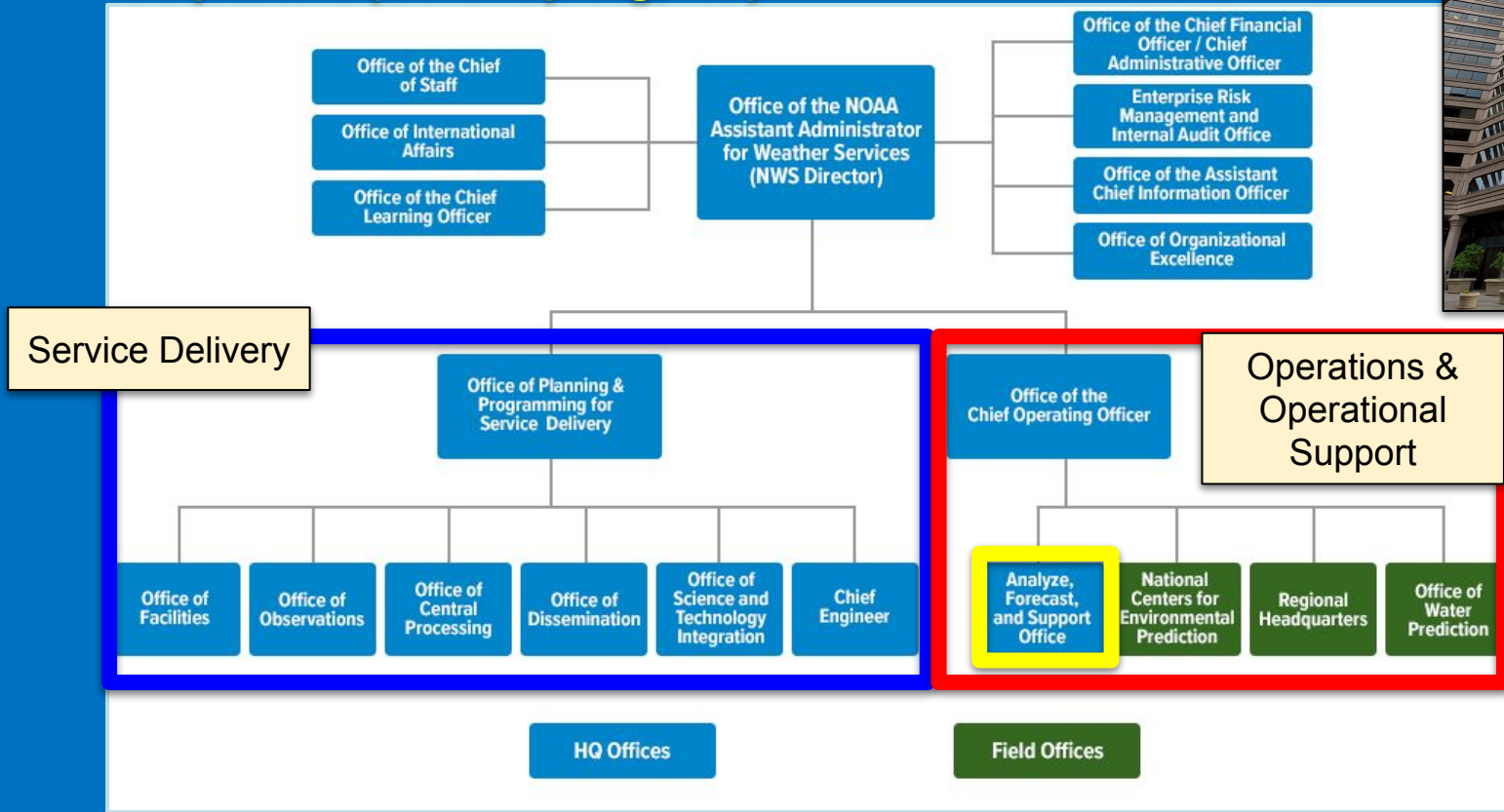
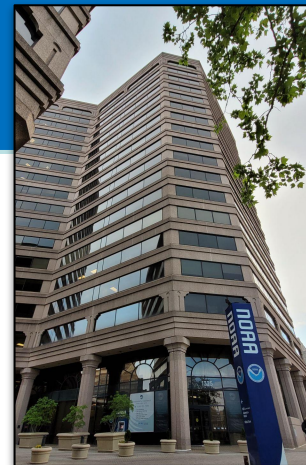
NOAA Line Offices

- **National Weather Service**
- Marine Fisheries Services
- National Environmental Satellite, Data, and Information Service
- Oceanic and Atmospheric Research
- National Ocean Service (Office of Response and Restoration; Office of Coast Survey)
- Marine and Aviation Operations (NOAA Corps, NOAA Hurricane Hunters)



National Weather Service

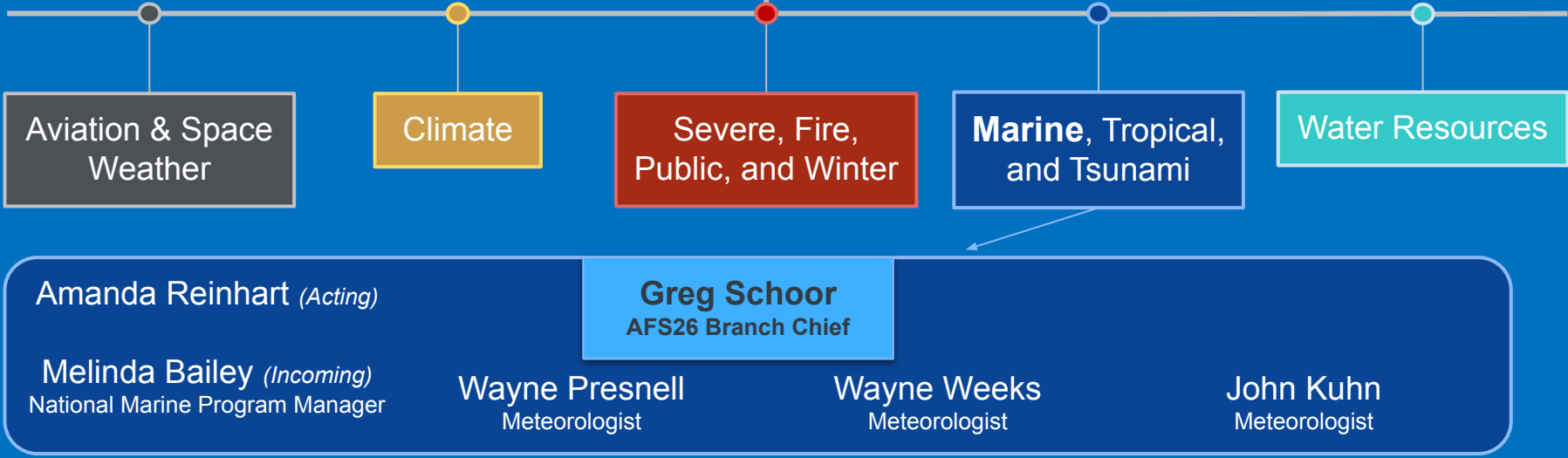
Headquarters (Silver Spring, MD)



NWS Analyze, Forecast and Support (AFS) National Service Programs

Forecast Services Division

Mary Mullusky
AFS2 Division Chief



Amanda Reinhart *(Acting)*

Melinda Bailey *(Incoming)*
National Marine Program Manager

Wayne Presnell
Meteorologist

Greg Schoor
AFS26 Branch Chief

Wayne Weeks
Meteorologist

John Kuhn
Meteorologist






National Marine Program

- Identify gaps and produce new requirements/enhancements to long-running products and services
- Coordinate with other NWS offices, NOAA, WMO, USCG and other key partners
- Directives, Service Change Notices, NTSB Responses
- Outreach & Training



NWS Wave Detail Experiment

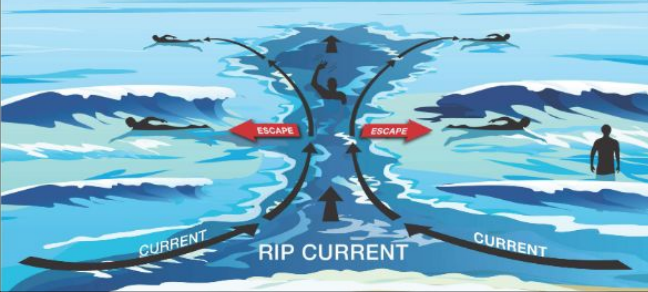


Attention Mariners!

The NWS is soliciting feedback on a new version of our Coastal Waters Forecast that includes more detail of wave groups in the forecast.

For more information, please see:
[Weather.gov/Marine/WaveDetail](https://www.weather.gov/Marine/WaveDetail)

RIP CURRENTS
Know your options



The diagram illustrates rip currents flowing from the beach out to sea. Swimmers are shown in the rip current. Red arrows labeled 'ESCAPE' point away from the rip current towards the shore. Black arrows labeled 'CURRENT' and 'RIP CURRENT' show the flow direction.



Recommendations from National Transport Safety Board (NTSB)



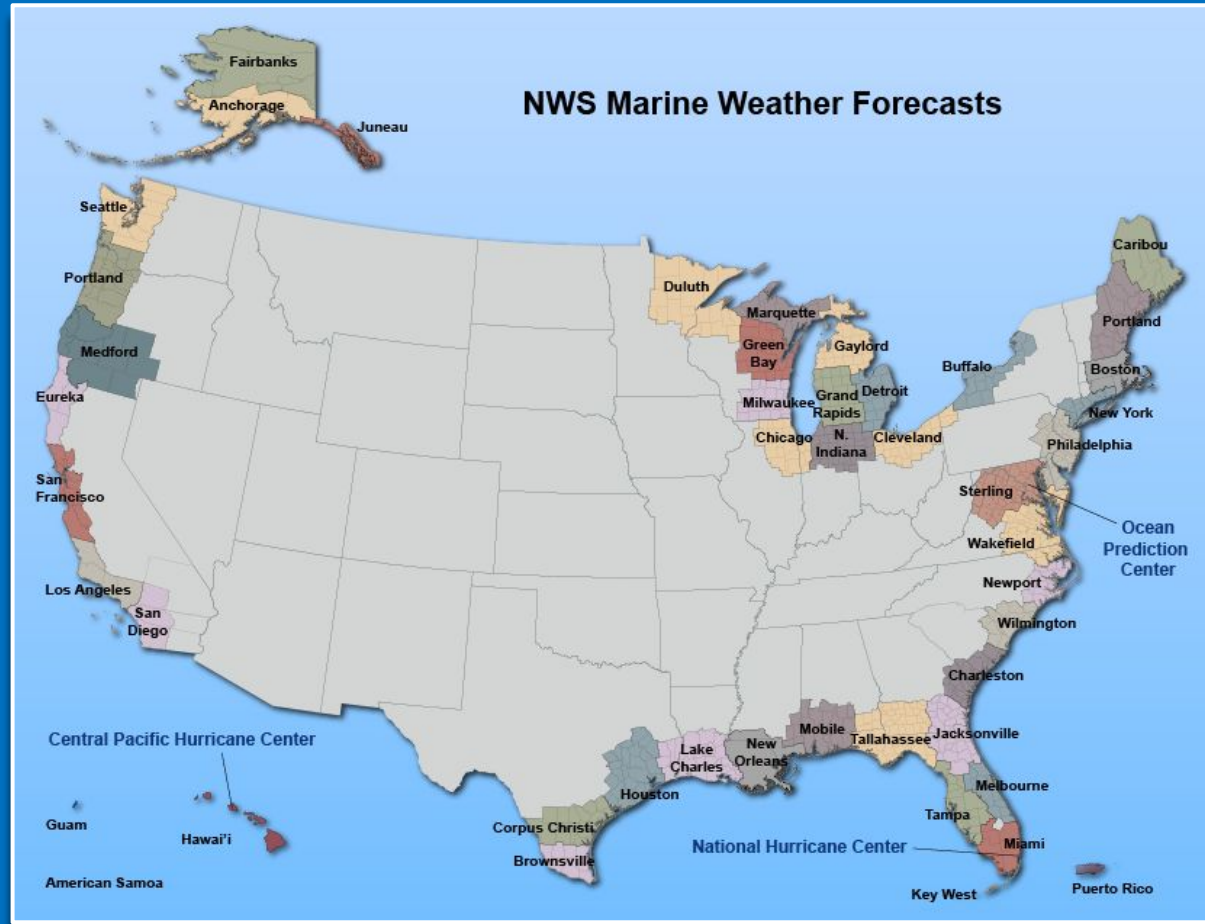
The NWS Marine Program is responsive to NTSB Investigations and Assessments.

Recent events, such as the **El Faro (2015)**, **Scandies Rose (2019)**, and **Seacor Power (2021)** incidents, demonstrates where the NWS responds to inquiries from the NTSB.



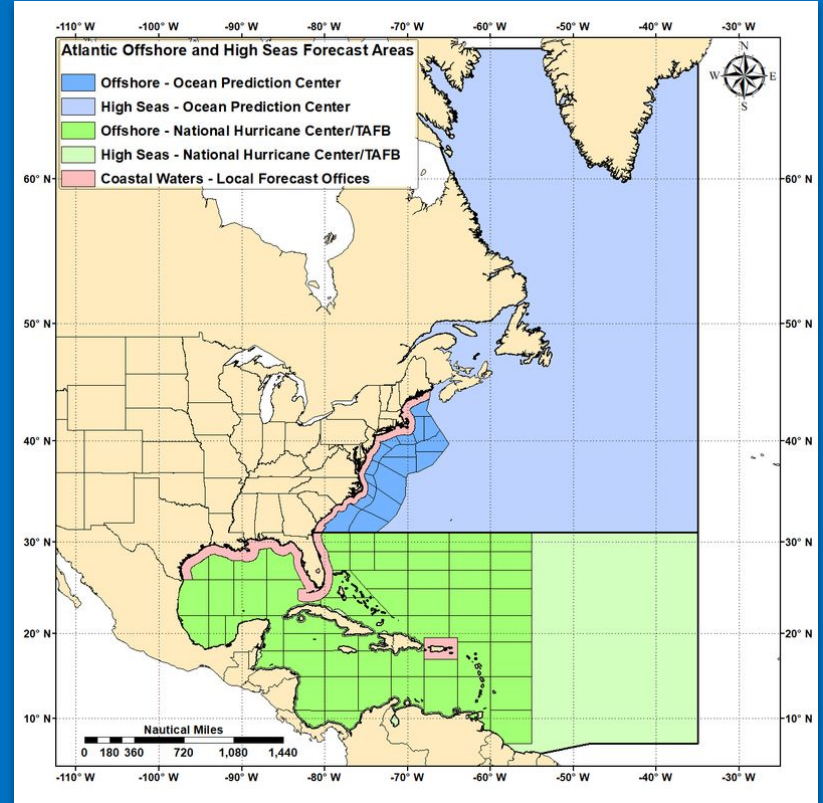
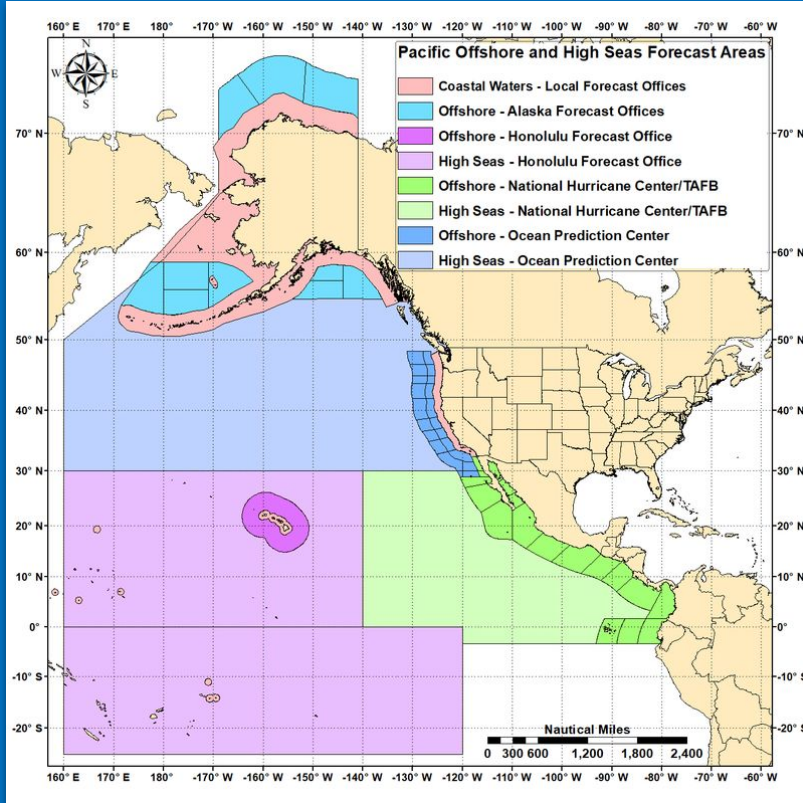
NWS Marine/Coastal Weather Forecast Offices (WFO)

In total, 47 NWS offices have marine/coastal forecast and warning responsibility





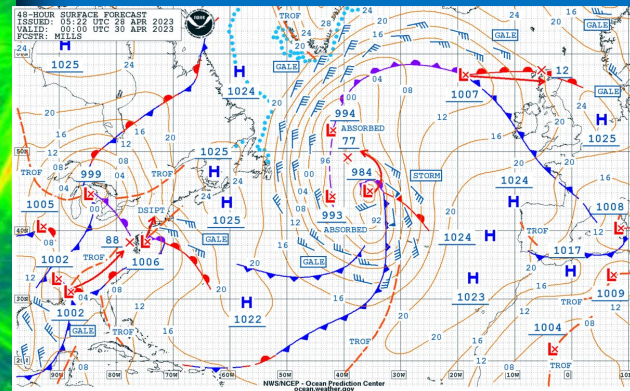
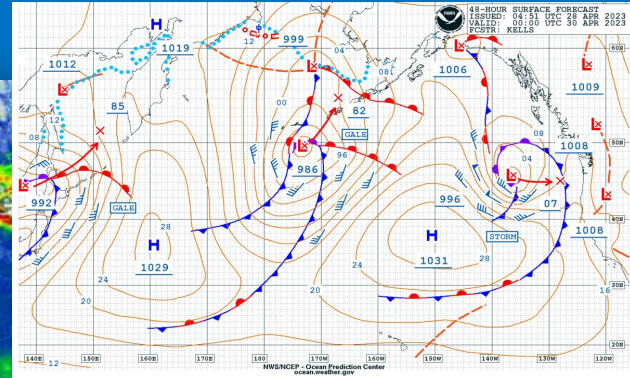
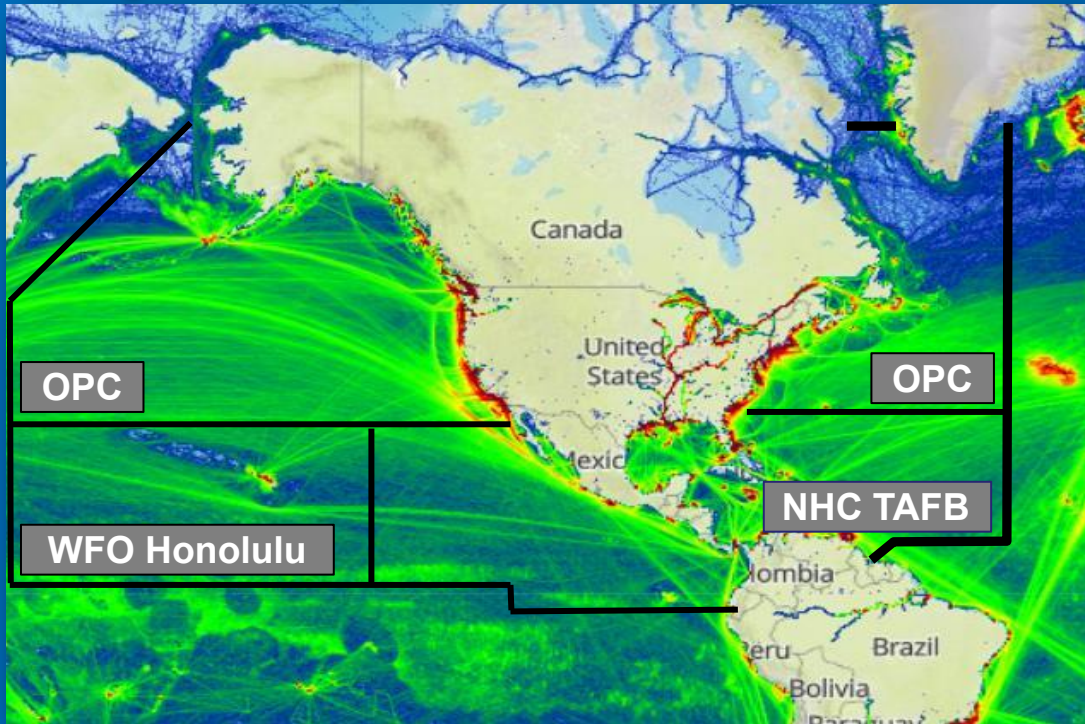
Coastal and Offshore Areas





NWS High Seas Marine Zones

Shipping lanes in green:



Source of 2013 total ship tracks and background: marinetraffic.com



NWS Marine Products

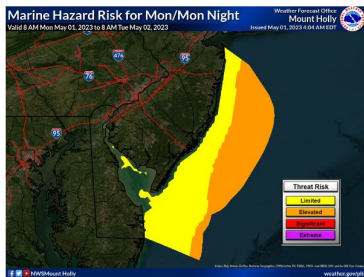
Watches,
Warnings, and
Advisories

Spot
Forecasts

Graphic
Forecast/Products

Experimental Graphical Hazardous Weather Outlook

Weather Forecast Office Mount Holly, NJ
Updated: May 1st 2023, 4:02:43 am



Risk Level	Category	Definition
None	None	No Marine Hazardous Risk.
Limited	Yellow	Wind or Wind Gusts >= 25 knots and/or Waves >= 5 feet.
Elevated	Orange	Wind or Wind Gusts >= 34 knots and/or Waves >= 8 feet.
Significant	Red	Wind or Wind Gusts >= 48 knots and/or Waves >= 12 feet.
Extreme	Purple	Wind or Wind Gusts >= 64 knots and/or Waves >= 16 feet.

Graphical
Hazardous
Weather
Outlook
(GHWO)

Small Craft Advisory

URGENT - MARINE WEATHER MESSAGE
National Weather Service Charleston
309 PM EST Tue Mar 2 2021

AMZ352-030415-
/O.CON.KCHS.SC.Y.0021.000000T0000Z-210304T0000Z/
Waters from Edisto Beach SC to Savannah GA out 20 NM-
309 PM EST Tue Mar 2 2021

...SMALL CRAFT ADVISORY REMAINS IN EFFECT UNTIL 7 PM EST
WEDNESDAY...

* WHAT...Northeast winds 15 to 25 kt with gusts up to 30 kt and
seas 4 to 7 ft.

* WHERE...Edisto Beach to Savannah out 20 NM.

* WHEN...Until 7 PM EST Wednesday.

* IMPACTS...Conditions will be hazardous to small craft.

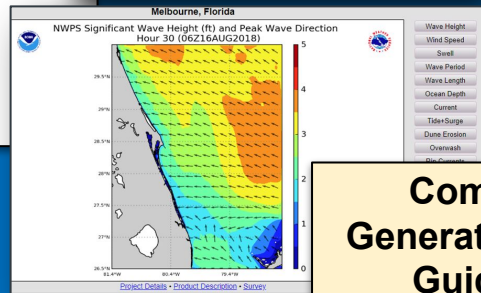
PRECAUTIONARY/PREPAREDNESS ACTIONS...

Inexperienced mariners, especially those
operating smaller vessels, should avoid navigating in hazardous
conditions.

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Text Forecast and
Products

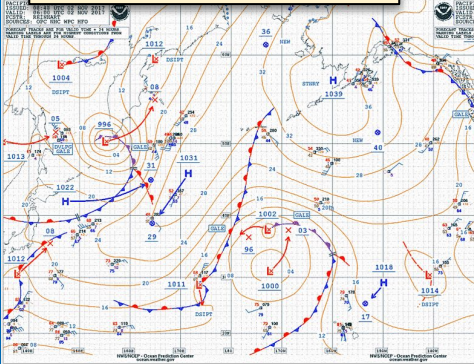


Computer
Generated Model
Guidance

Impact-Based
Decision
Support
Services
(IDSS)

Ice Analysis,
Forecasts, and
Iceberg Reports

Safety Messaging
and Response



Dissemination Methods

NOAA Weather Radio

Reliable weather broadcasts out to 40nm from shore

HF Radio

Long distance broadcast range with coastal and offshore weather information

VHF Radio

Marine radio on channels 16 and 22A.
Primarily broadcasts for coastal areas

NAVTEX

Medium Frequency weather broadcasts on 518 khz with a range up to 200 nm. Low cost and automated. Blend of outer coastal zones and offshore zone forecasts.

InMarsat C SafetyNET

Satellite transmission of high seas forecasts and warnings.

Iridium SafetyCast

Near future satellite transmission of high seas forecasts and warnings
(Testing now, will be operational in 2023)

FTPMail

User can request and receive NWS text and graphic products via email using ftp commands. Low bandwidth.

For more information: <https://weather.gov/marine> (Dissemination menu)

NWS Marine Program's Home Page

<https://www.weather.gov/marine>



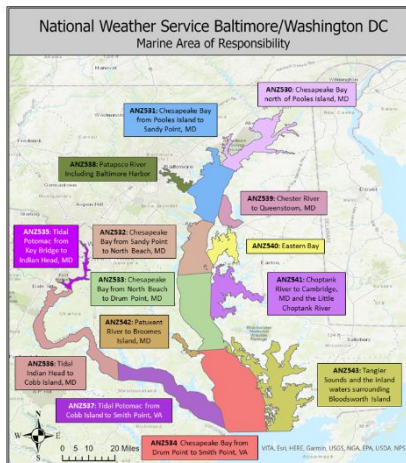
Click on one of the NWS Offices (along the coasts), to transfer to their marine page, gets forecasts, observations, and other useful information.

Latest Marine Discussion

MARINE - Low pressure will remain cutoff to the north, so a gusty southwest winds are expected today through tonight. An SCA is in effect for the waters. There may be a brief lull at times tonight over the inlets. More gusty winds are expected Tuesday through Wednesday night, with a shift to the west and northwest expected. An SCA is in effect for Tuesday, and will likely need to be expanded for Tuesday night through Wednesday night. SCA level wind gusts are likely into Thursday before lessening with building high pressure late week. Update as of: 357 AM EDT Mon May 1 2023

[Click/Tap on any zone on map below for marine forecast.](#)

Click [here](#) for the Synopsis and text forecast.



Chesapeake Marine Observations

- [Hourly roundup of local/marine observations \(tabular\)](#)
- [Chesapeake Bay Interpretive Buoy System \(CBIBS\)](#)
- [National Data Buoy Center](#) (select northeast region on right side)
- [NOAA Tides and Currents](#)

Tropical conditions

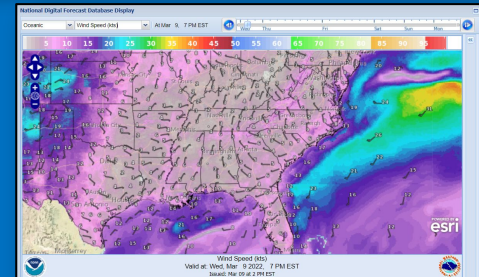
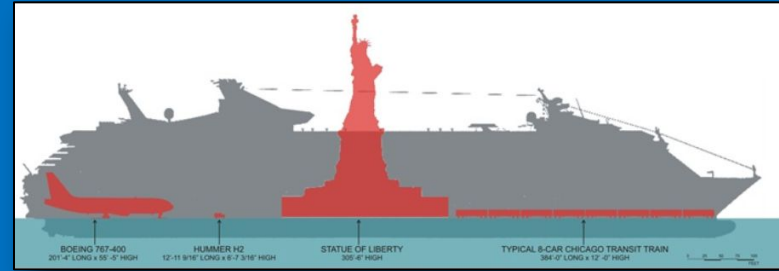


Ice Conditions



Elevated Wind Requirement

- **Winds** are currently provided at 10m and **Waves** in feet
- **Based on your request adding:**
 - Elevated 30-meter wind speed
 - Elevated 50-meter wind speed
 - Elevated 80-meter wind speed
 - Wave height in meters

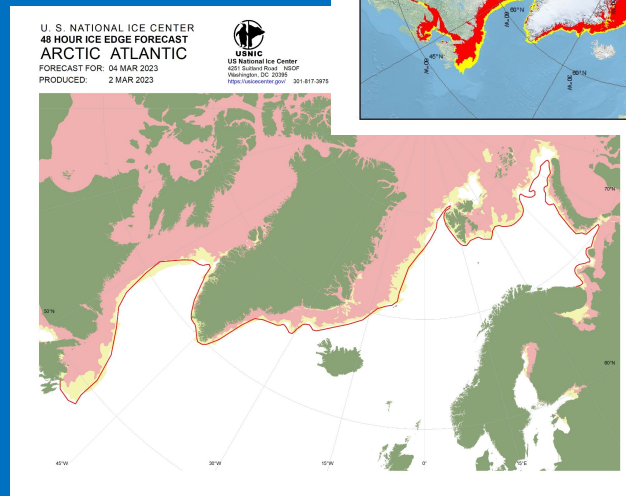
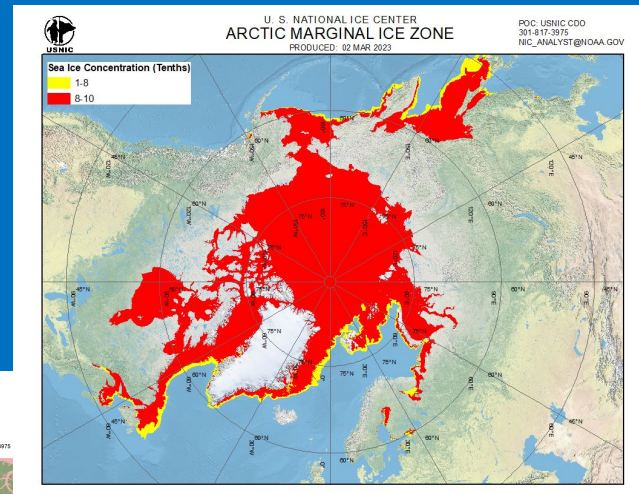




Ice Products into FTPMail



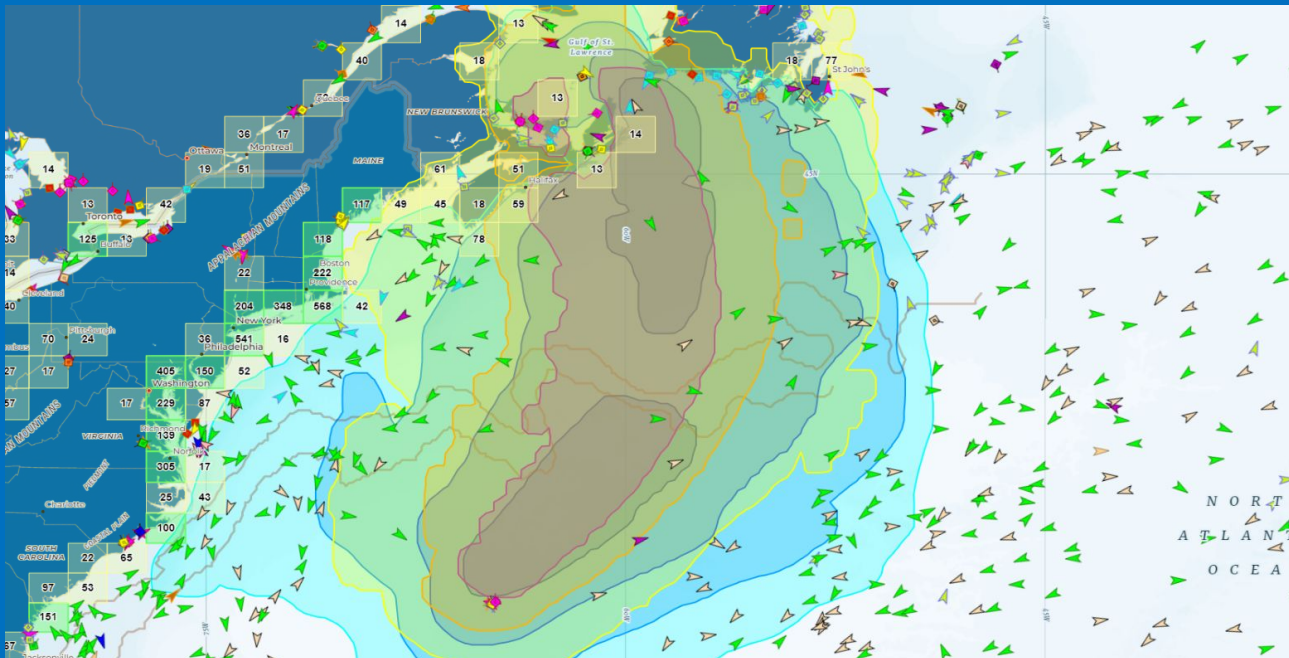
- Currently reviewing all US National Ice Center ice products that would be most useful to mariners
- Low-bandwidth format and in color



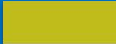




S-400 Compliant





Wind and Wave Warning Polygons for Hurricane Fiona - Sept 23, 1530 UTC



Wind Warnings:

- Gale Force 
- Storm Force 
- Hurricane Force 

Wave Warnings:

- 4-6 M 
- 6-9 M 
- 9-14 M 
- 14+ M 

Thank you to Joseph Sienkiewicz (OPC) for Slide Image





Surf Hazards and Products



Static Rip Current Map

weather.gov/beach

Beach Hazard Statement

Coastal Flood Warnings/Watches/Statements

Issued by NWS Miami, FL

[Home](#) | [Current Version](#) | [Previous Version](#) | [Text Only](#) | [Print](#) | [Product List](#) | [Glossary On](#)
Versions: 1

000
MHUS42 KMFL 022021
CFMFL

Coastal Hazard Message
National Weather Service Miami FL
321 PM EST Thu Mar 2 2023

FLZ172-031000-
/O.NEW.KMFL.RP.S.0011.230303T1200Z-230304T1200Z/
Coastal Broward-
321 PM EST Thu Mar 2 2023

...HIGH RIP CURRENT RISK IN EFFECT FROM FRIDAY MORNING THROUGH SATURDAY MORNING...

- * WHAT...Dangerous rip currents expected.
- * WHERE...Coastal Broward County.
- * WHEN...From Friday morning through Saturday morning.
- * IMPACTS...Rip currents can sweep even the best swimmers away from shore into deeper water.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

Swim near a lifeguard. If caught in a rip current, relax and float. Don't swim against the current. If able, swim in a direction following the shoreline. If unable to escape, face the shore and call or wave for help.

##

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FLZ168-031000-
/O.NEW.KMFL.RP.S.0011.230303T1200Z-230305T1200Z/
Coastal Palm Beach-
321 PM EST Thu Mar 2 2023

...HIGH RIP CURRENT RISK IN EFFECT FROM FRIDAY MORNING THROUGH SUNDAY MORNING...

- * WHAT...Dangerous rip currents expected.
- * WHERE...Coastal Palm Beach County.
- * WHEN...From Friday morning through Sunday morning.





NWS IDSS to the USCG



Impact-Based Decision Support Services

- New and evolving needs in society call for the NWS to provide impact-based support to our partners
- IDSS are tailored forecast and interpretative services the NWS provides to our partners (eg, USCG)
- NWS provides IDSS in numerous ways:
 - A high impact event (landfalling hurricane)
 - A particular event (Air & Sea shows)
 - Routine support (weekly briefings)
 - Forecast on-demand (spot forecasts)



Dr. Chris Landsea (TAFB) briefing USCG D7 about Hurricane Dorian (2019)



NWS IDSS to the USCG



NWS will provide USCG weather support

**MEMORANDUM OF AGREEMENT
BETWEEN THE UNITED STATES
COAST GUARD AND THE
NATIONAL OCEANIC AND
ATMOSPHERIC
ADMINISTRATION NATIONAL
WEATHER SERVICE REGARDING
THE MANAGEMENT OF MARINE
WEATHER INFORMATION**

Every decade the MOA is resigned and in 2020, it was identified that a stronger tie to the NWS mission (for IDSS) needed to be expanded in the MOA.

2020-2022, a tiger team in the NWS identified new and continuing best practices for the NWS to support USCG through more rigorous and standardized IDSS.



NWS IDSS to the USCG

Concept of Operations (CONOPS)

- CONOPS further enhances support to the USCG
 - NWS Products
 - IDSS
 - Training/Outreach
- NWS Signed CONOPS in March 2023

Weather Forecasting Products

The USCG-NWS MOA states: "THE USCG AGREES TO primarily use NOAA/NWS analysis and forecast products for USCG field unit decision making, such as weekly weather briefings and extraordinary events, such as hurricanes, winter storms, major oil spills, rescues, large-scale exercises, or other incidents of that caliber. NOAA/NWS will assist in identifying appropriate existing products for use in these purposes."

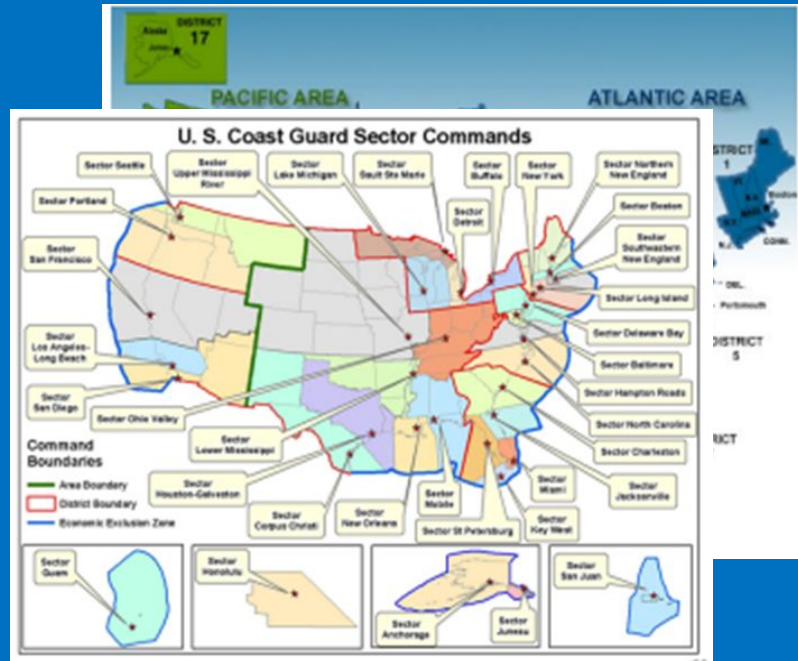
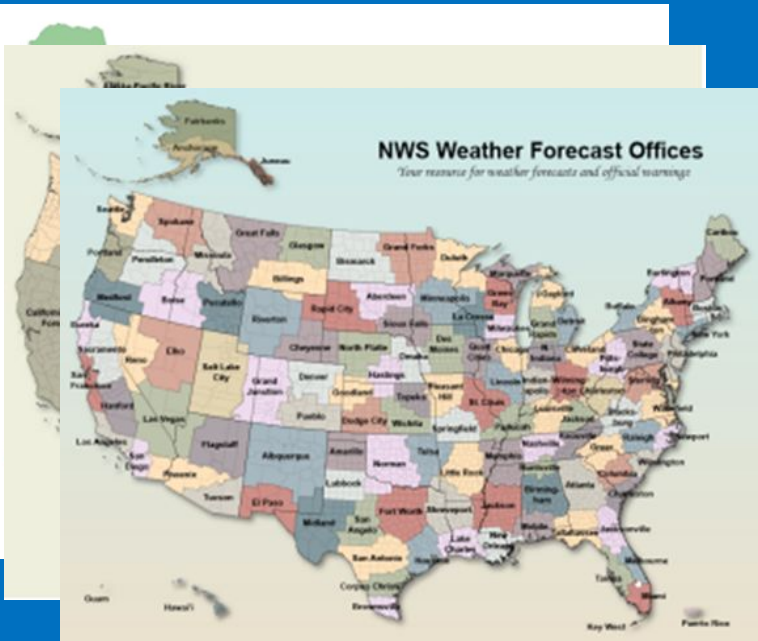
The National Centers for Environmental Prediction (NCEP) and NWC deliver national and global weather, water, climate and space weather guidance, forecasts, warnings and analyses to its partners and external user communities. These products and services are based on a service-science legacy and respond to user needs to protect life and property, enhance our nation's economy and support the growing need for environmental information. NCEP comprises nine centers, seven of which provide official NWS forecasts and/or warnings.

A variety of weather and water products are also produced by NWS Weather Forecast Offices (WFOs), Weather Service Offices (WSOs), and River Forecast Centers (RFCs) serving U.S. coastal and Great Lakes areas and coastal and inland rivers. WFOs are responsible for the provision of marine weather information for the waters immediately adjacent to the coastline (and Great Lakes shorelines), bays, sounds, etc. out to a set distance from shore. RFCs are responsible for the provision of flow and stage information for both inland and coastal rivers, creeks, and streams as well as hydrologic information to support navigation for coastal and inland waterways. These products are of both a routine (produced and disseminated on a predetermined schedule) and non-routine nature (produced and disseminated when needed, depending on the situation). Routine products are mostly "forecasts" or "informational" in nature.

Of critical importance to the USCG is the use of NWS ocean model current data and surface wind forecast data (including directly from NWS' National Digital Forecast Database [NDFD]) for the drift modeling and simulation in their Search and Rescue Optimal Planning System (SAROPS) to predict

NWS IDSS to the USCG

Structure of NWS Similar to USCG



NWS IDSS to the USCG

National Weather Service Offices Responsive to U.S. Coast Guard Assets

NWS Operations Center



USCG Headquarters

Regional Operational Centers
Tsunami Warning Centers



Areas
Districts

Aviation Weather Center
Central Pacific Hurricane Center/
Honolulu Forecast Office (HFO)
National Hurricane Center/



Districts

Tropical Analysis and Forecast Branch (TAFB)
National Water Center
Ocean Prediction Center (OPC)

Center Weather Service Units
River Forecast Centers
Weather Forecast Offices



Sectors/Stations
Air Stations
Aids to Navigation Teams
Marine Safety Units
Captains of the Port



NWS IDSS to the USCG

Examples of IDSS - Areas/Districts

Briefings

- Real-time briefings
 - **NHC-TAFB** provides on-demand briefings for landfalling hurricanes, storm force lows
- Weekly briefings
 - **OPC** issues twice a week briefings for situational awareness
- The ROCs (Regional Operations Centers) also brief Area Commands
 - On-demand briefings for landfalling tropical cyclones

NATIONAL WEATHER SERVICE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

Area to Watch

Saturday Night - Sunday

KEY MESSAGES:

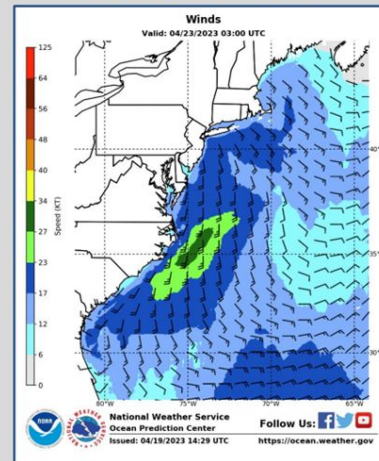
- A cold front will move E towards the US east coast Saturday and sweep across the waters Saturday night into Sunday.
- Strong southerly flow will develop ahead of the cold front especially along the Gulf Stream south of 38N. Winds of 20 to 30 kts are likely ahead of the front Saturday night into early Sunday. Gale force winds are possible. Waves to 12 ft are possible by Sunday morning.
- A line of thunderstorms is likely along or just ahead of the cold front and could move into the western Atlantic, mainly south of 38N, Saturday night. Mariners should expect locally higher winds and seas with any thunderstorms.
- Keep abreast of the latest in the tropics and high seas marine weather information at hurricanes.gov and ocean.weather.gov
- The next scheduled briefing will be Wednesday April 26, by noon EDT/1600 UTC.

WRN WEATHER READY NATION

ISSUED: 16 UTC April 19, 2023

[@NWSOPC](https://twitter.com/NWSOPC)
[@NHC_Atlantic](https://twitter.com/NHC_Atlantic)

Outlook for the Western Atlantic East Coast N of 31N to 65W



Wind forecast valid 11 PM EDT/03 UTC Saturday, April 22, 2023

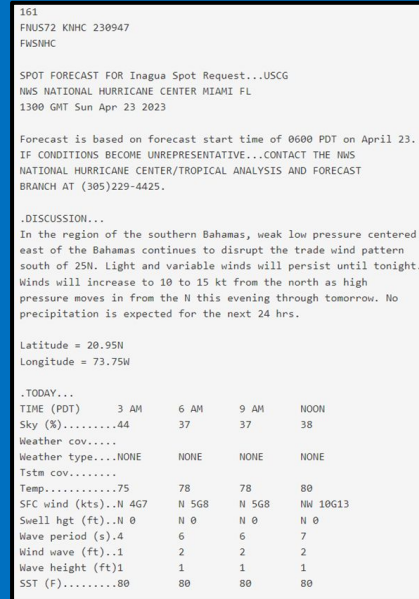
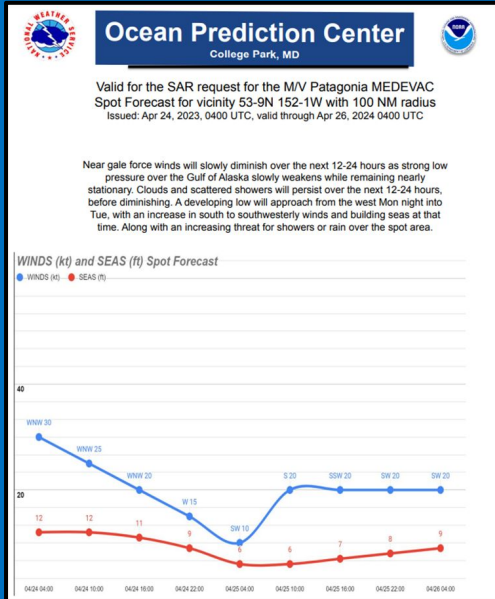
Briefing OPC emails out twice a week
E-mail ncep.opc.idss@noaa.gov and/or
Michael.Folmer@noaa.gov

NWS IDSS to the USCG

Examples of IDSS - Areas/Districts

Spot Forecasts

- National Centers (TAFB, OPC, HFO) provide point-based forecasts “on demand”
- These are provided for the offshore waters (60 nautical miles offshore) and for the high seas forecast
- Information provided in a spot forecast:
 - Brief synopsis
 - Wind and wave forecast
 - Sea Surface Temperatures
 - Thunderstorm information
 - Sky cover
 - And more



Examples of spot forecasts from OPC (left) and TAFB (right)

Spot Forecast Process - weather.gov/spot/request

1

2

3

Step 1: Establish incident location using A or B below.

A. Set request location using nearest street address.

Enter Location Plot Address

- OR -

B. Set request location using latitude & longitude, USNG, left-click on spot location, or drag the map pointer to spot location below.

Decimal Degree Latitude, Longitude
Valid for points between 84W and 82E Latitude
Require 13 character grid - 10 meter precision
Example: 22.6123 -80.0024

United States National Grid (USNG)
Valid for points between 84W and 82E Latitude
Require 13 character grid - 10 meter precision
Example: 18U UQ 3972 3300

Degree, Minute, Seconds
Can accept decimal minutes as an input
Example: 22 deg 31 min 33 sec N W

Elevation
Latitude & Longitude value used to determine elevation.
If elevation data is error, changes can be made on the second page of this spot request.

FT

Map

Step 2: Select the incident type for the request.

Set Incident Type

Fire
 Wildfire Prescribed Fire

Hazardous Materials
 HAZMAT Land HAZMAT Inland Waterway HAZMAT Marine

Search and Rescue
 SAR Land SAR Inland Waterway SAR Marine

Marine
 Other: (Volcano, Earthquake, Special Event)

832
BMB91 KNHC 121450
STQNH

A SPOT FORECAST REQUEST HAS BEEN RECEIVED FOR INCIDENT TYPE SAR NAMED "HYDROLANT 342/23(25)"

REQUEST TYPE: IMMEDIATE
DATE: 02/12/23
TIME: 1000
DELIVER DATE: 02/12/23
DELIVER TIME: 0650
SUBMIT DATE: 02/12/23
SUBMIT TIME: 0650
PROJECT NAME: HYDROLANT 342/23(25)
PROJECT TYPE: SAR
REQUEST REASON: PUBLIC SAFETY
REQUESTING AGENCY: USCG RSC San Juan
REQUESTING OFFICIAL: CMDR Sector San Juan
EMERGENCY PHONE: 787-289-2041
EMAIL: NAVSAFETY@nga.mil
STATE: MARINE
DLAT: 15.04
DLON: 73.06
CLON: -73.06
FAX:
SIZE (ACRES):
REQUESTING HYSPLIT: NO
FORMAT: T
INTERVAL: 3,3,3,3

WEATHER CONDITION AT INCIDENT OR NEARBY STATIONS

...REMARKS...
missing email contact for sector San Juan

431
FNU572 KNHC 121502
FWSNHC

SPOT FORECAST FOR HYDROLANT 342/23(25)...USCG RSC San Juan
NWS NATIONAL HURRICANE CENTER/TROPICAL ANALYSIS AND FORECAST
1800 GMT Sun Feb 12 2023

Forecast is based on forecast start time of 1000 PST on February 12.
IF CONDITIONS BECOME UNREPRESENTATIVE...CONTACT THE NWS
NATIONAL HURRICANE CENTER/TROPICAL ANALYSIS AND FORECAST
BRANCH AT (305)229-4425.

.DISCUSSION...High pressure over the central Atlantic is promoting strong easterly trades 20-25 kt and seas around 9 ft near the search location. Winds and seas will slowly abate today, and then more quickly tonight through Mon as a cold front enters the NW Caribbean and high pressure shifts NE and weakens across the region. Scattered moderate tradewinds showers are across the search area presently.
Latitude =15.04N
Longitude =73.06W

.REST OF TODAY...
TIME (PST) 10 AM 1 PM
Sky (%).....60 60
Weather cov....
Weather type...NONE NONE
Tstm cov.....
Temp.....78 78
SFC wind (kts)..E 19G25 E 19G25
Swell hgt (ft)..E 9 E 9
Wave period (s)..8 8
Wind wave (ft)..6 6
Wave height (ft)9 9
SST (F).....80 80

Put in a request
<https://www.weather.gov/spot/request/>

National Center/Office receiving request

What USCG receives





NWS IDSS to the USCG

Examples of IDSS - Areas/Districts



Training

- Hurricane Season Prep
 - NHC-TAFB provides training to Districts 7 and 8 pre-season
 - NHC-TAFB has provided 1 hurricane tabletop exercise for District 7 and 8
 - Currently underway with planning for second hurricane tabletop exercise for District 7 in July 2023



TAFB Forecasters and NOAA Corps providing USCG briefings during 2021 Hurricane Tabletop Exercise for District 7 in Miami, FL



NWS IDSS to the USCG

Examples of IDSS - Sectors/Air Stations, etc



Port Specific Sea State

Valid 09Z Advisory September 27, 2022

Sea State For USCG Sector Miami

Location	Today	Tonight	Tomorrow	Tomorrow Night
Offshore Port of Miami	Wind: SE 15-20 kts Seas: 3-5 feet	Wind: SE 25-30 kts Seas: 5-7 feet	Wind: SE 25-30 kts Seas: 7-10 feet	Wind: SE 25-30 kts Seas: 7-10 feet
Offshore Port Everglades	Wind: SE 15-20 kts Seas: 3-5 feet	Wind: SE 25-30 kts Seas: 5-7 feet	Wind: SE 25-30 kts Seas: 7-10 feet	Wind: SE 25-30 kts Seas: 7-10 feet
Offshore Port West Palm Beach	Wind: SE 15-20 kts Seas: 3-5 feet	Wind: SE 20-25 kts Seas: 4-6 feet	Wind: SE 25-30 kts Seas: 7-10 feet	Wind: SE 25-30 kts Seas: 7-10 feet
Offshore Port of Fort Pierce TS Warning in Effect	Wind: ESE 10-15 kts Seas: 3-4 feet	Wind: SE 15-20kts Seas: 3-5 feet	Wind: SE 25-30 kts Seas: 4-6 feet	Wind: SE 30-35kts Seas: 7-10 feet

SAMPLE

Briefings

- Real-time briefings
 - High impact events - landfalling tropical systems
 - Event driven - air and sea shows
- Weekly briefings for situational awareness
- WFOs will also provide phone briefings to USCG Admin and port calls

Sample of WFO Miami briefing for USCG Sector Miami for Hurricane Ian 2022



NWS IDSS to the USCG

Examples of IDSS - Sectors/Air Stations, etc

Spot Forecasts

- National Centers (TAFB, OPC, HFO) provide point-based forecasts “on demand”
- These are provided for the offshore waters (60 nautical miles offshore) and for the high seas forecast
- Information provided in a spot forecast:
 - Brief synopsis
 - Wind and wave forecast
 - Sea Surface Temperatures
 - Temperatures
 - Thunderstorm information
 - Sky cover
 - And more

Spot Forecast for Delaware Bay Barge Fire & SalvageB...US Coast Guard
National Weather Service Mount Holly NJ
954 AM EDT Thu May 26 2022

Forecast is based on forecast start time of 1100 EDT on May 26.
If conditions become unrepresentative...contact the National Weather Service.

Please contact our office if you have questions or concerns with this forecast.

.DISCUSSION...

Marine operations will be smooth most of today but may be hindered tonight by drizzle and mist reducing visibility into Friday morning. As the drizzle and mist end Friday morning, southerly winds will increase. There is then a risk of strong to severe thunderstorms later on Friday afternoon into Friday evening.

.REST OF TODAY...

Sky/weather.....Cloudy (85-95 percent). Slight chance of showers and drizzle late in the morning, then chance of showers and drizzle late in the afternoon.

Chance of pcpn.....30 percent.
Max temperature.....Around 68.
Min humidity.....76 percent.
Surface winds (mph).Southeast winds 8 to 9 mph.

TIME (EDT)	11A	12P	1PM	2PM	3PM	4PM	5PM
Sky (%).....	87	93	96	94	93	94	94
Weather cov....	SCH	SCH	SCH	SCH	CHC	CHC	CHC
Weather type...	RW	RW	RW	RW	RW	RW	RW
Tstm cov.....							
Chc of pcpn (%)	.20	.20	.20	.20	.30	.30	.30
Temp.....	64	65	65	65	66	68	66
RH.....	.81	.78	.78	.81	.81	.76	.84
Surface wnd dir	E	SE	SE	SE	SE	SE	SE
Surface wnd spd	.8	9	9	9	10	10	10
Surface wnd gst	.14	15	15	15	16	16	15
Wave height....	1	1	1	1	1	1	1

Example of spot forecast from Mt. Holly, NJ





NWS IDSS to the USCG

Examples of IDSS - Sectors/Air Stations, etc



Training

- NWS WFOs provides training on products and services year-round
- These offices also provide tabletop hurricane exercises for USCG Sectors, Air Stations, and Ports



MFL and KEY Forecasters during tabletop exercise for USCG Sectors in Key West, FL



NWS IDSS to the USCG

Oil Spills Support

- At the Sector-type level, will deploy employees to Command Posts to provide on-site support and briefings
- At the Areas/District level, National Centers and ROCs will provide on-demand briefings
 - These briefings will cover anything that will impact response (eg, thunderstorm activity, tropical cyclones, cold fronts causing gale-force winds)
- Forecast support
 - Provide tailored forecast packages to oil spill response (wind/wave forecast, tidal forecast)
 - Wave period/wave steepness was a new forecast parameter added in the Gulf of Mexico during the BP Oil Spill response
- Spot Forecasts



NWS San Diego briefing Command Staff at 730 A.M. PDT on October 11, 2021 at the new command post in Costa Mesa. Strong winds and high seas were the threat.





NOAA's Oil Spill Monitoring Program

Oil Spills Support - Marine Pollution Program



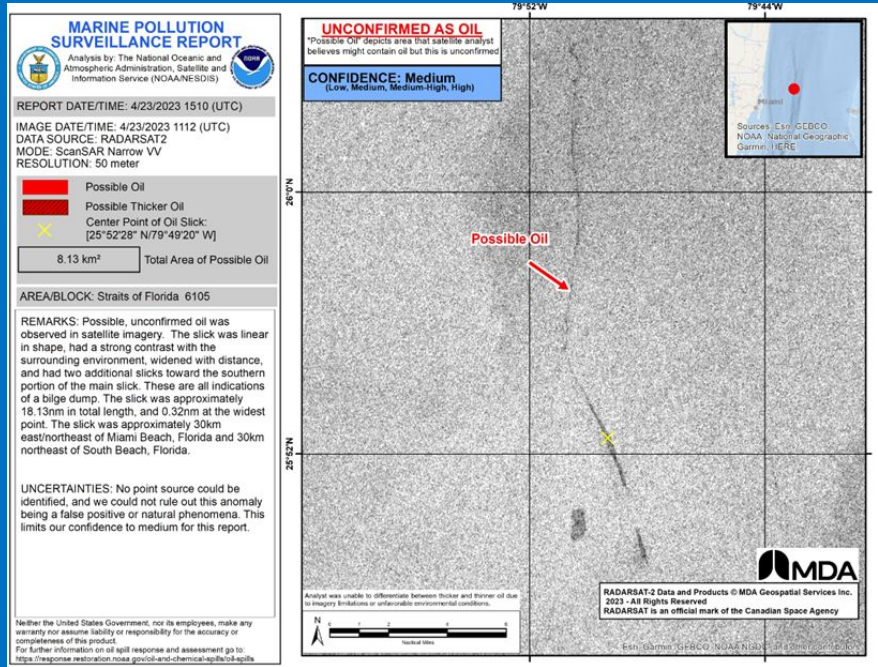
Satellite Analysis Branch (SAB)

- They are a **24/7/365** Operational Branch under the NOAA's NESDIS (National Environmental Satellite, Data, and Information Service)
- Co-located with NWS National Centers (OPC) at the NOAA Center for Weather and Climate Prediction (NCWCP) in College Park, MD
- Officially began their Marine Pollution Program in 2011 to meet a formal request from NOAA Emergency Response Division oil spill monitoring needs
- Analyze satellite data data and report unnatural oil-related anomalies in U.S. waters
 - This is specifically geared towards USCG and other key partners



NOAA's Oil Spill Monitoring Program

Oil Spills Support - Marine Pollution Program



Satellite Analysis Branch (SAB)

- During a major oil spill:
 - Augment routine operations by requesting ad hoc free-source commercial imagery
 - May purchase commercial imagery through established contracts
 - Communicate with NOAA's NOS, Office of Response and Restoration, and the Emergency Response Division (who is assigned to support the federal on-scene coordinator for the USCG)

NESDIS Marine Pollution Product
<https://www.ospo.noaa.gov/Products/ocean/marinepollution/>





NOAA's Oil Spill Monitoring Program

Oil Spills Support



BP Deep Water Horizon Oil Spill - 2010

- WFOs provided around-the-clock support including tailored forecasts
- SAB delivered point forecasts during this incident



Removal of Oil from WWII Shipwreck off NE US - 2019

- 62,000 gallons of oil removed from the tanks of Coimbra
- OPC provided customized seas forecast for this operation
- SAB provided support



Divers securely drill into and access oil tanks of the wreck of the British-flagged tanker Coimbra on May 8, 2019.



Weather-Ready Nation Ambassador



- From People to Ports to Communities, we are working to build a Weather-Ready Nation – Ready, Responsive and Resilient to extreme weather and other hazards
- The Ambassador campaign aims to magnify those efforts through partnerships with key businesses and organizations
- Who can be a Weather-Ready Nation Ambassador?
 - All levels of government
 - Academia
 - Businesses & non-profits
 - Weather-dependent sectors of economy



<https://www.weather.gov/wrn/>

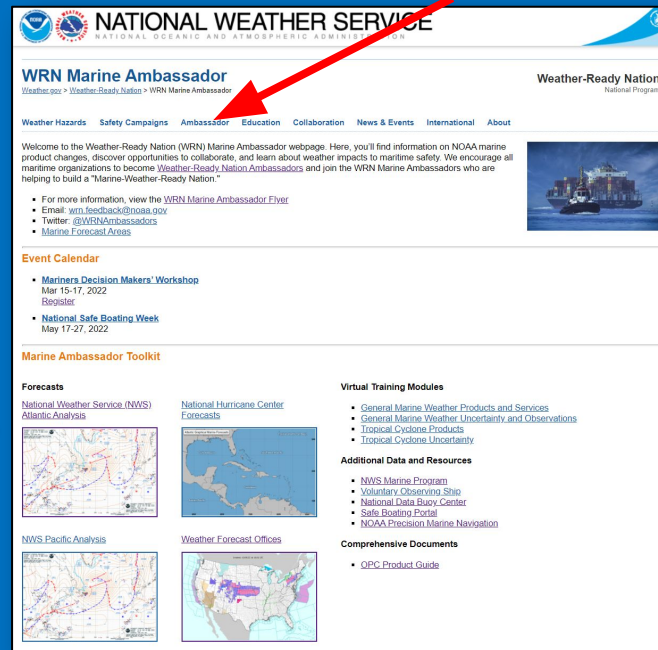


Weather-Ready Nation **Marine** Ambassador

Weather-Ready Nation Marine Ambassador Network

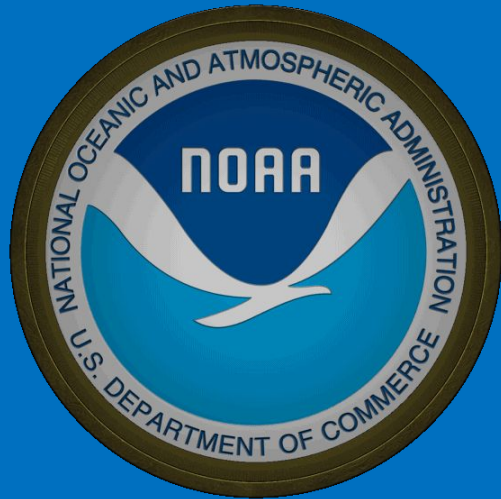
- Comprehensive toolkit including **virtual marine weather hazard training**
- Promotes **weather safety messaging** to their stakeholders
- Engages with NOAA personnel on potential **collaboration opportunities**
- Sharing **Success Stories** of Preparedness and Resiliency
- Virtual **WRN recognition** and share the **WRN logo** for your use
- **Direct line of feedback** for NWS product improvements
- Receive a **quarterly newsletter** from the NWS about marine weather

<https://www.weather.gov/wrn/wrna-marine>



The screenshot shows the 'WRN Marine Ambassador' webpage. The navigation menu includes: Weather Hazards, Safety Campaigns, Ambassador (highlighted with a red arrow), Education, Collaboration, News & Events, International, and About. The main content area includes a welcome message, contact information (WRN Marine Ambassador Flyer, Email: wrn.feedback@noaa.gov, Twitter: @WRNAmbassadors, Marine Forecast Areas), an Event Calendar (Mariners Decision Makers' Workshop, National Safe Boating Week), a Marine Ambassador Toolkit, and sections for Forecasts (National Weather Service (NWS) Atlantic Analysis, NWS Pacific Analysis, National Hurricane Center Forecasts, Weather Forecast Offices) and Virtual Training Modules (General Marine Weather Products and Services, General Marine Weather Uncertainty and Observations, Tropical Cyclone Products, Tropical Cyclone Uncertainty). Additional Data and Resources include NWS Marine Program, Voluntary Observing Ship, National Data Buoy Center, Safe Boating Portal, and NOAA Precision Marine Navigation. Comprehensive Documents include the QPC Product Guide.

Thank you! *Questions?*



Greg Schoor

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<https://www.weather.gov/marine/mttservices>





Background





National Marine Program



Our Vision

Leveraging new and upcoming technologies for better accessibility to all mariners



Our Mission

All marine users meet their safety and economic needs through ready access to accurate, timely, easily understood and technologically advanced coastal and marine forecasts, warnings and other products.

- Utilizing AIS as modernized mariners become more invested with graphics
- Expanding our marine grid capabilities
- Becoming S-400 compliant
- Enhance marine IDSS efforts and capabilities





High Seas Forecast



WARNINGS.

...HURRICANE FORCE WIND WARNING...
 ...LOW 40N38W 976 MB MOVING NE 30 KT. WITHIN 120 NM SW SEMICIRCLE WINDS 50 TO 65 KT. SEAS 18 TO 29 FT. ALSO WITHIN 360 NM E AND NE...420 NM S...AND 360 NM W AND NM QUADRANTS WINDS 35 TO 50 KT. ...

Wind Warnings

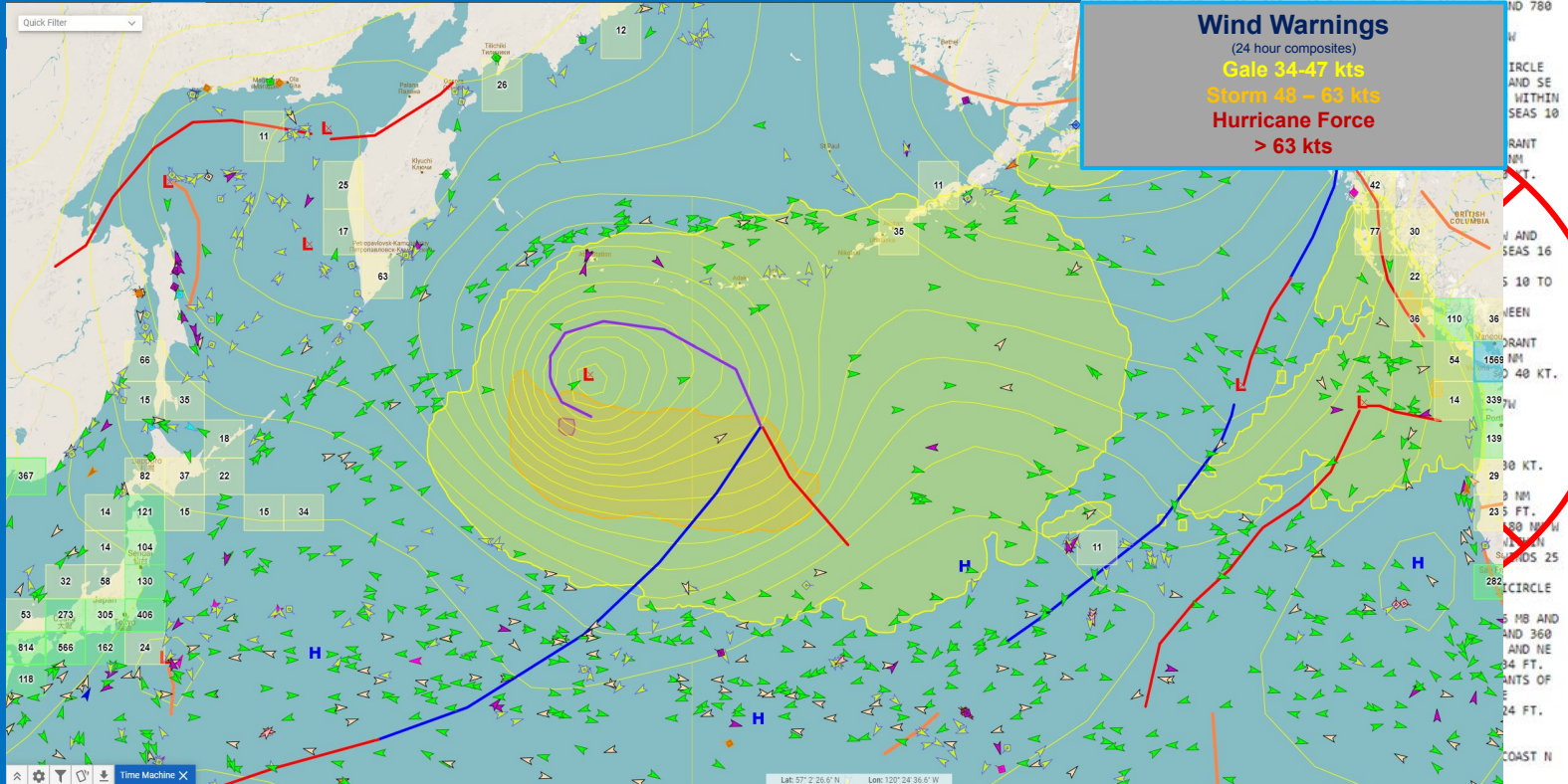
(24 hour composites)

Gale 34-47 kts

Storm 48 - 63 kts

Hurricane Force

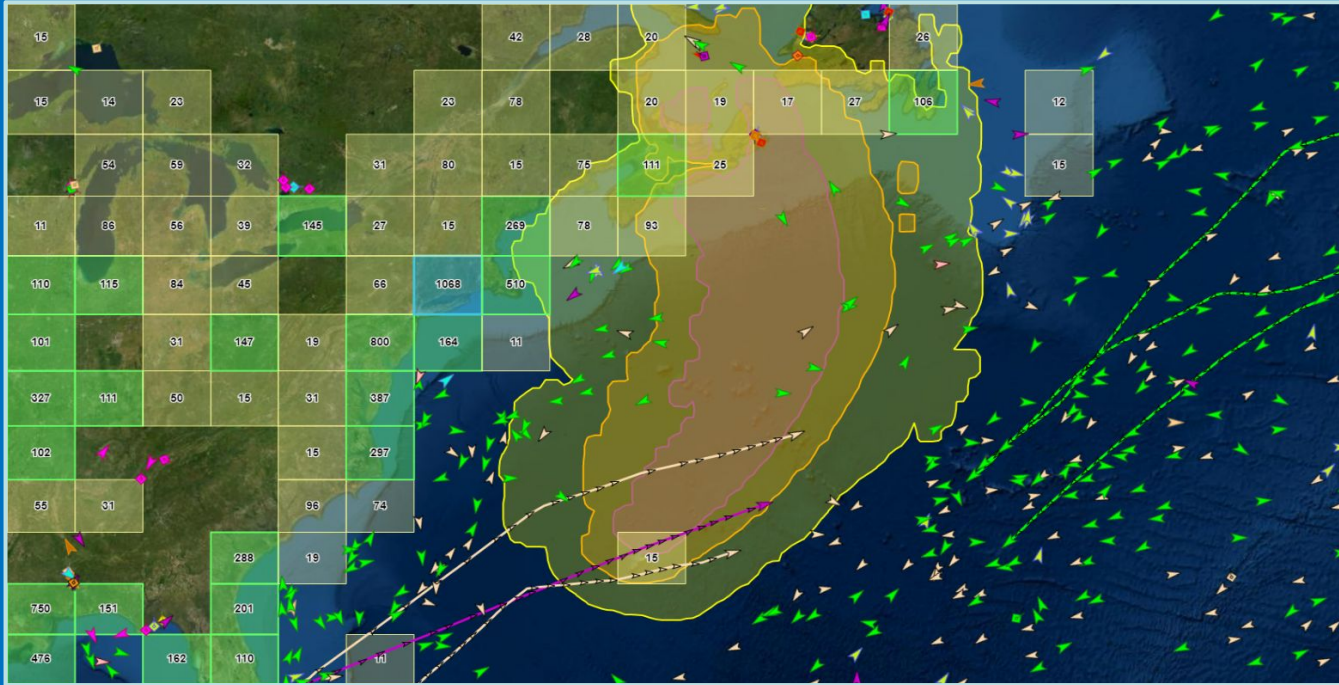
> 63 kts





S-400 Compliant

Wind Warning Polygons for Hurricane Fiona - Sept 23, 1400 UTC



Wind Warnings:

Gale Force 

Storm Force 

Hurricane Force 

Thank you to Joseph Sienkiewicz (OPC) for Slide Image

