

Overview of National Hurricane Center/ Tropical Analysis and Forecast Branch (TAFB) Marine Products and Services

Sandy Delgado

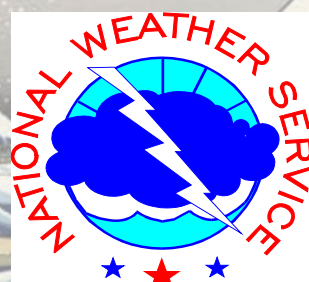
Sandy.Delgado@noaa.gov

NHC/TAFB Branch Chief

WMO Region IV Workshop

February 28th, 2023

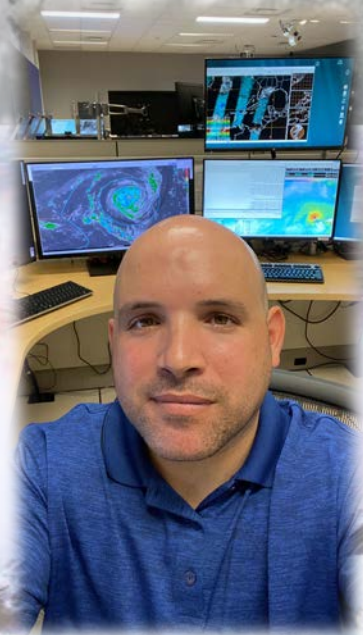
To provide meteorological analysis, forecasts and warnings over the tropical and subtropical oceans for the protection of life and property



ABOUT ME



- Born in Cuba in 1987, came to the United States with my parents and sister in 1999
- Bachelors of Arts and Sciences in Meteorology in 2011 & Masters in 2014 from Florida International University
- Worked on the Atlantic Hurricane Reanalysis Project (2010-2017)
- StormGeo in Houston (2017-2018)
- WFO Key West (2018-2021)
- NHC (2021 through retirement!)



Our Customers: The Mariners and the Mets



Our Customers: The Mariners and the Mets



Economic Impact of Marine Trade

- 80% of all traded goods globally are carried by sea
- In 2018, the American Blue Economy contributed \$373 billion to the nation's Gross Domestic Product (GDP), supporting 2.3 million jobs
- In 2020, the U.S. offshore oil and gas industry supported approximately:
 - 176,000 jobs
 - \$11.9 billion in labor income
 - \$20.6 billion in value added (contribution to GDP)
- Maritime commerce is expected to triple by 2030

Diverse Industries.

Ten Ocean Sectors Sales in 2018

	Tourism and Recreation	\$227 Billion
	Defense and Public Administration	\$190 Billion
	Offshore Oil and Gas	\$80 Billion
	Transportation	\$59 Billion
	Fisheries and other Bio-products	\$26 Billion
	Shipbuilding	\$19 Billion
	Power Generation	\$6.8 Billion
	Construction	\$4.4 Billion
	Research and Education	\$4.2 Billion
	Professional and Business Services*	\$51 Million

A Bad Cruise



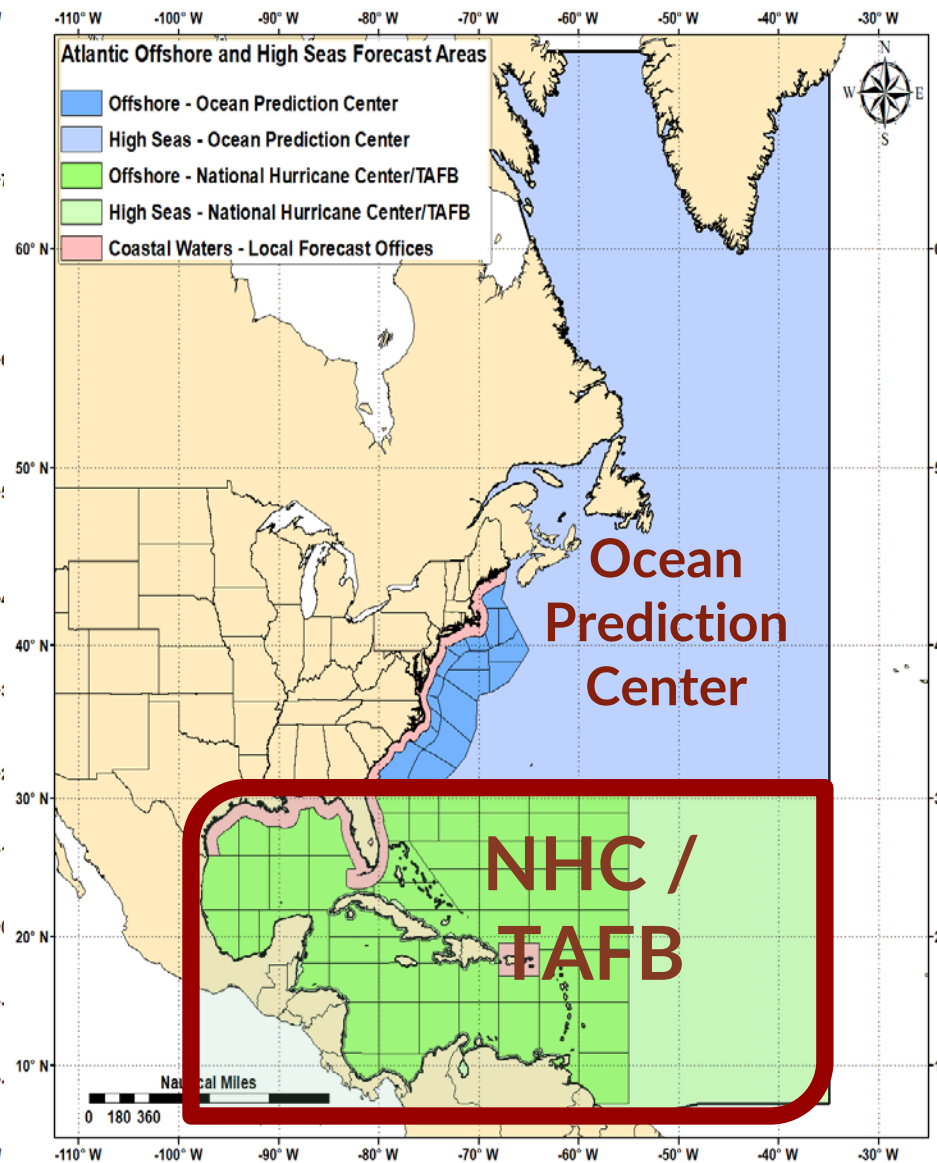
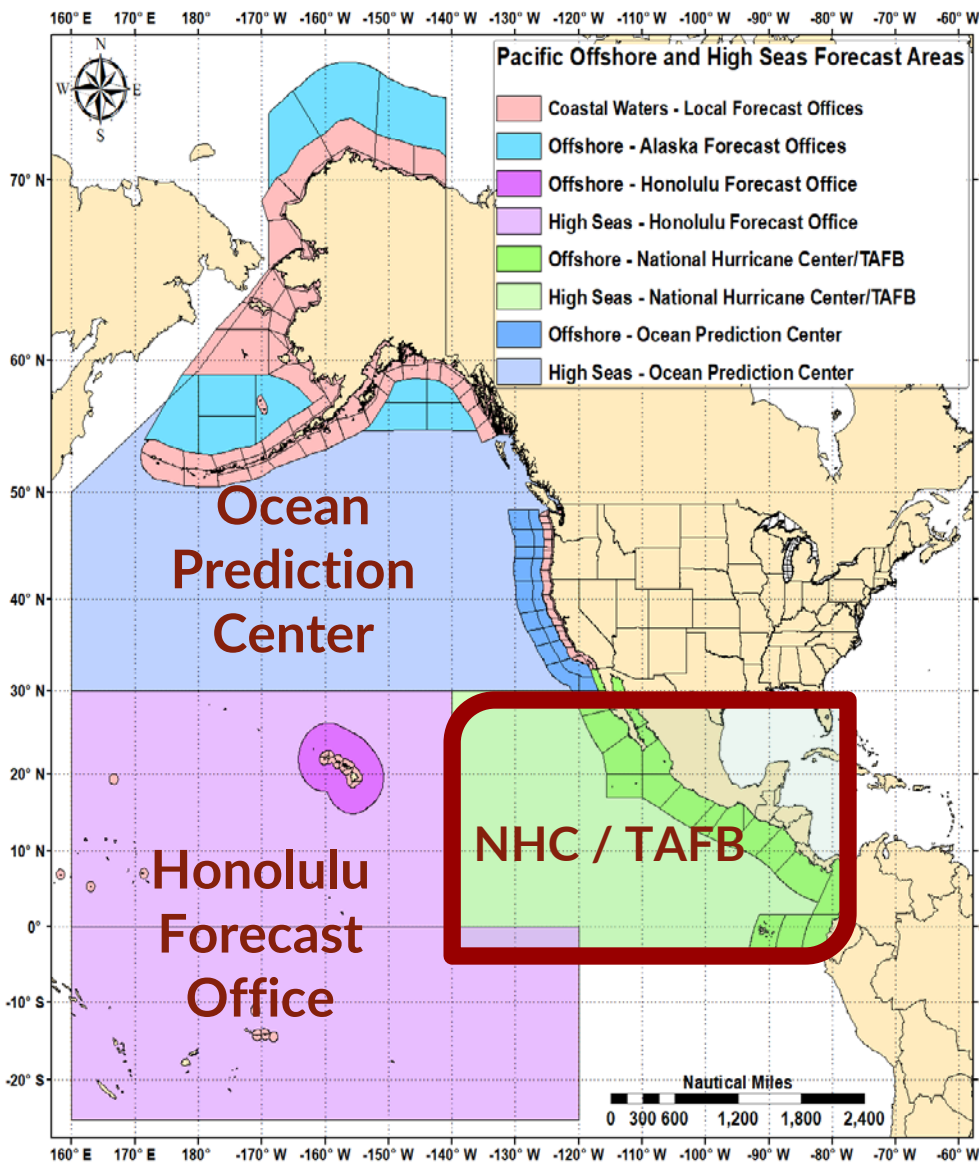
Global High Seas Forecasts

- International Maritime Organization

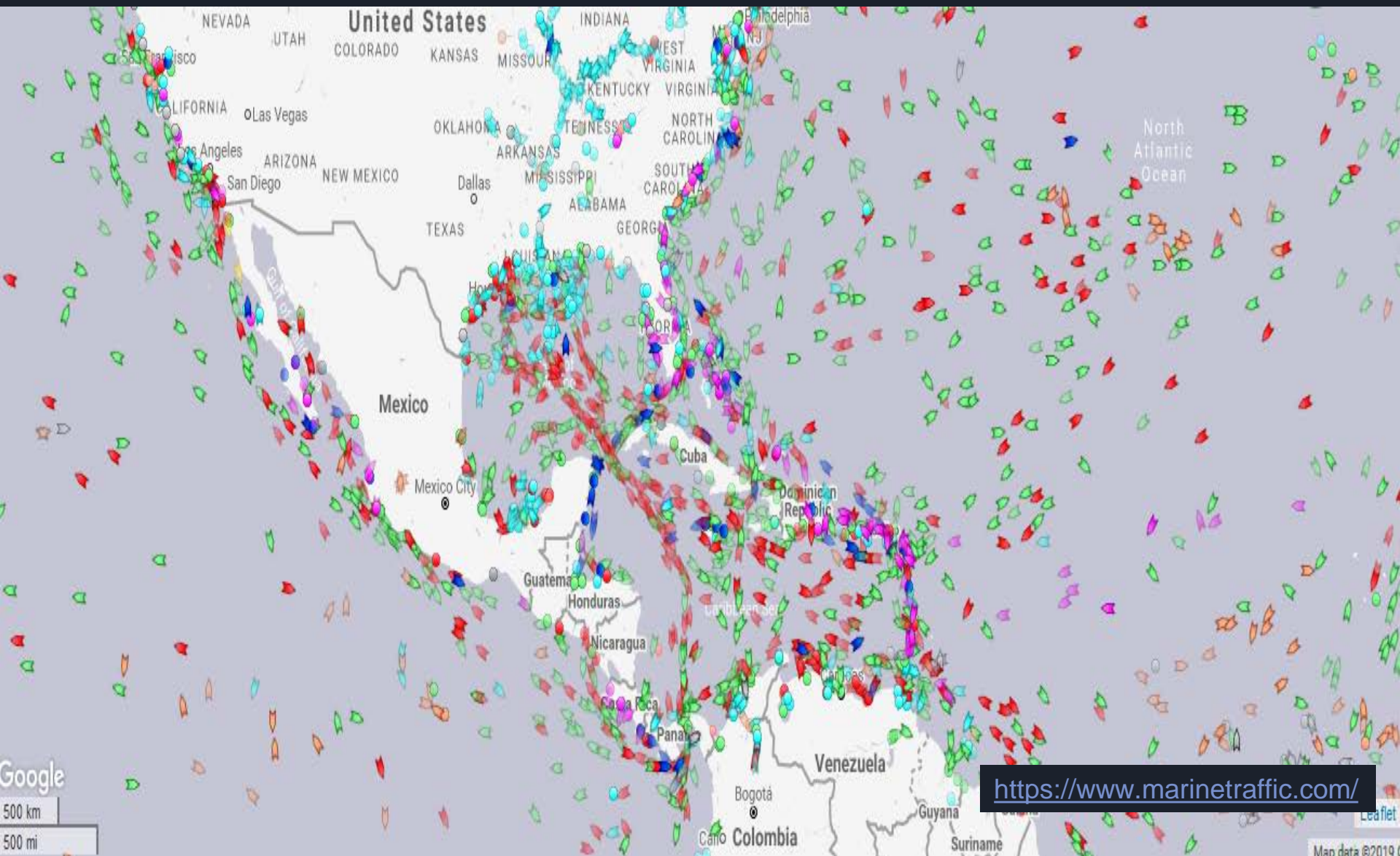




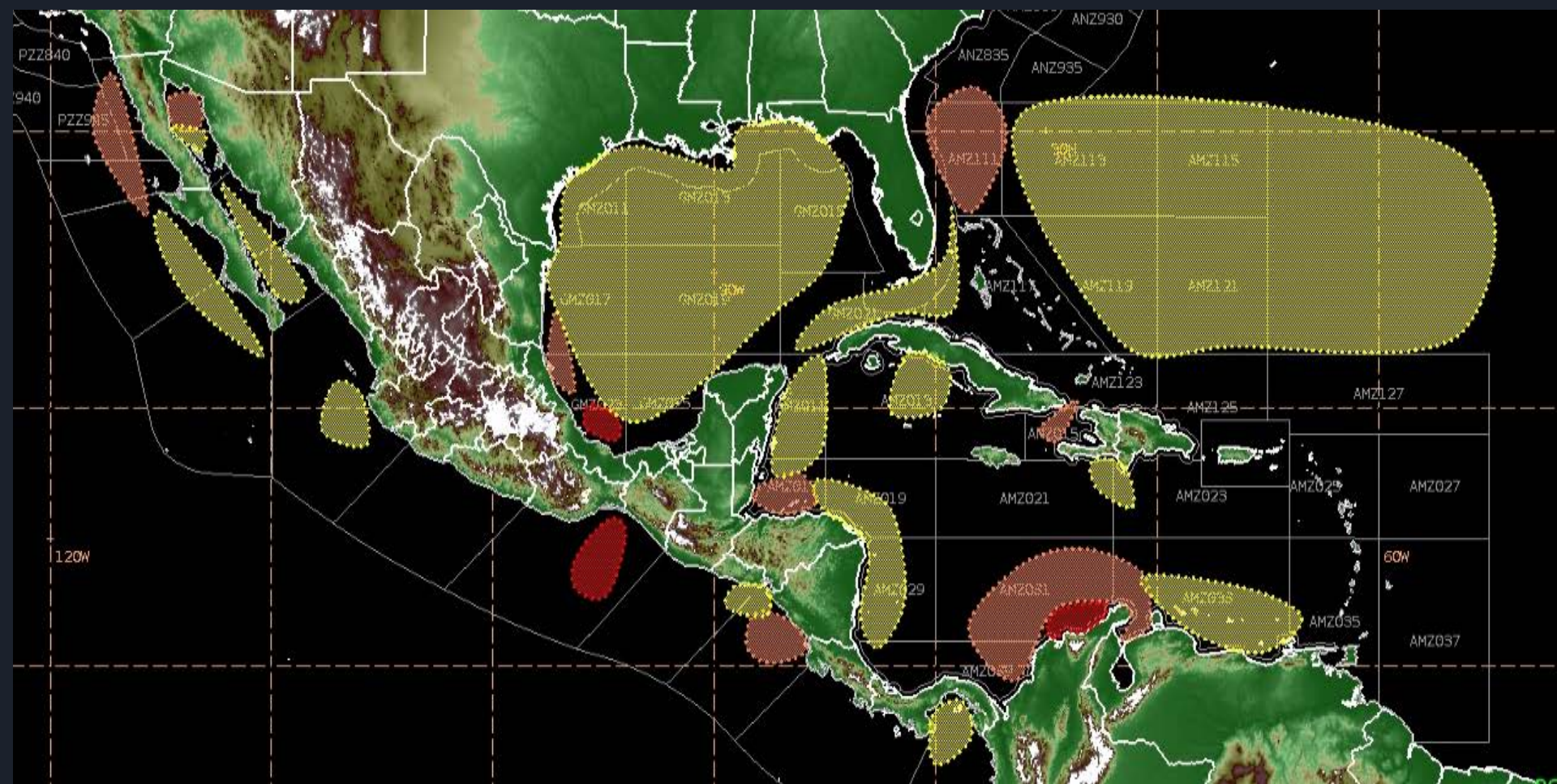
NHC/TAFB - Areas of Responsibility



Ships over the Open Ocean

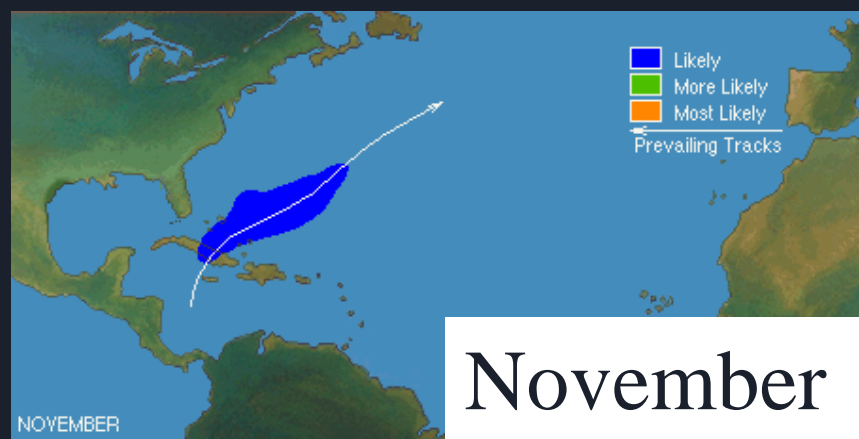
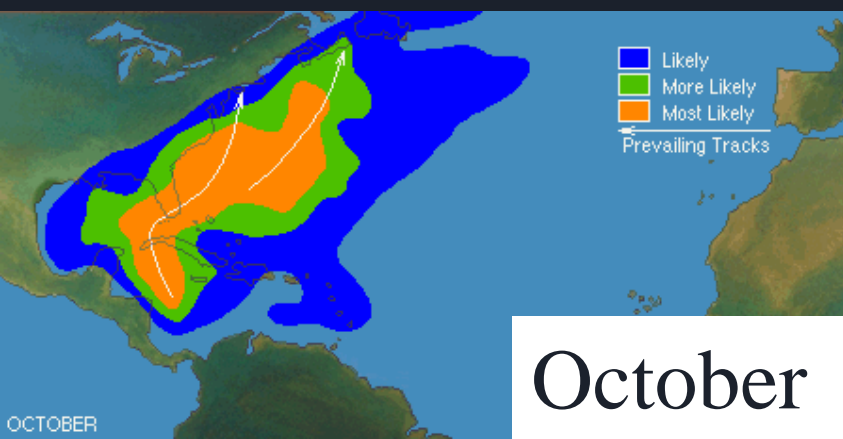
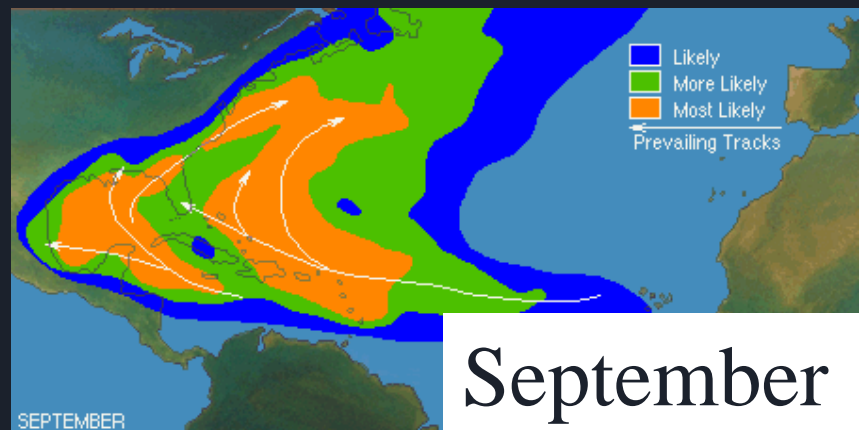
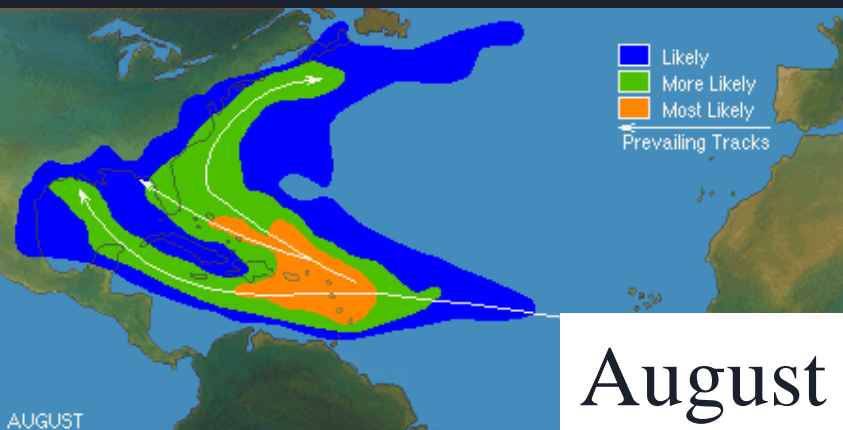
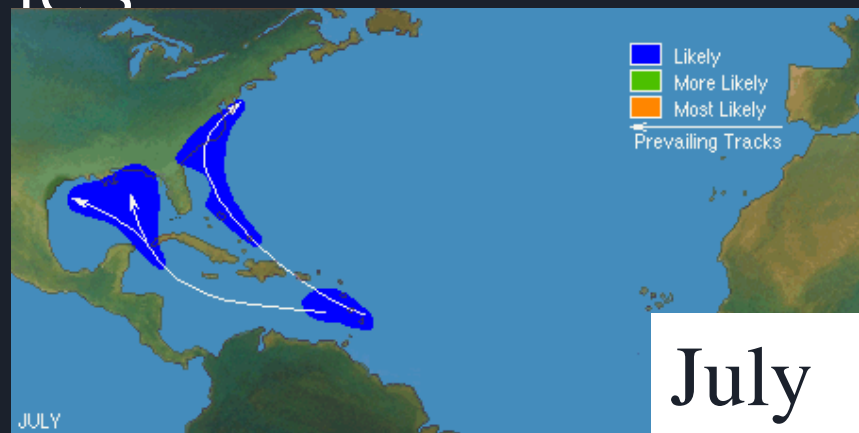
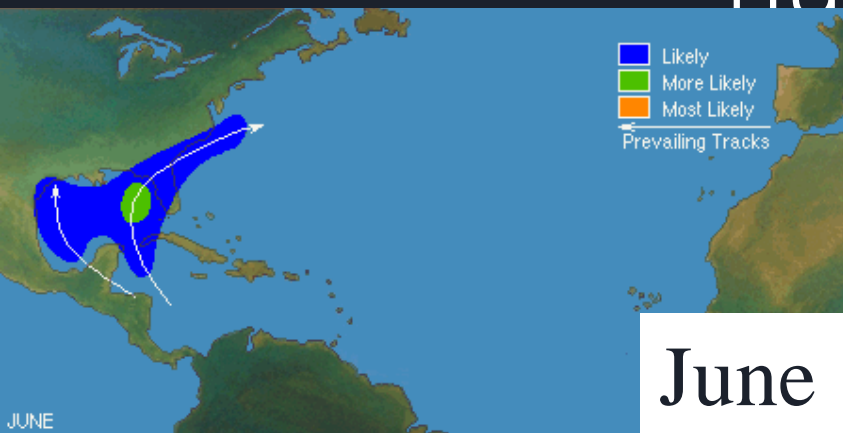


Typical areas for gale conditions

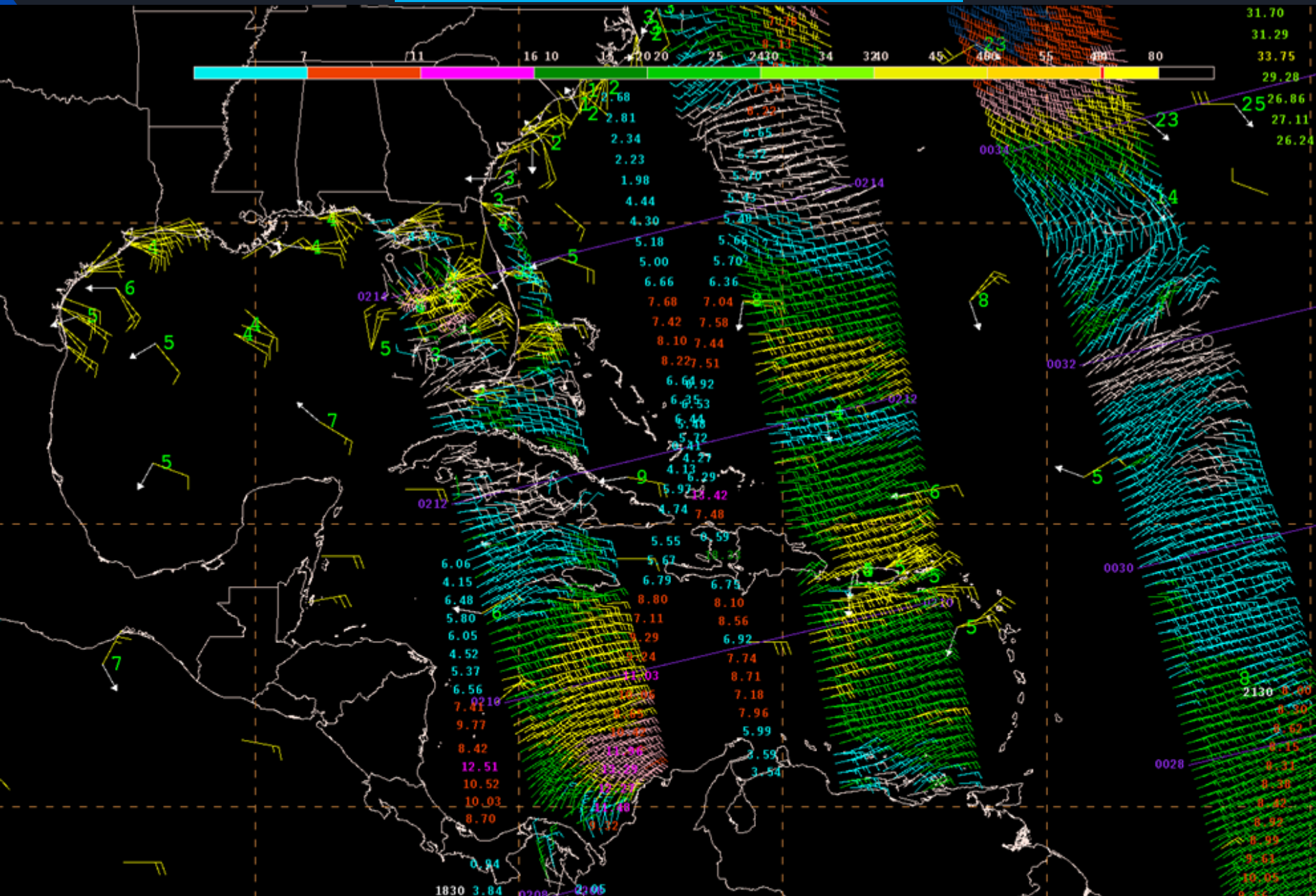


Note that the main areas for gales are near gaps and coastal terrain
- this is not a coincidence!

typical areas for tropical storms and hurricanes



Tools - Observations





Voluntary Observing Ship (VOS) Program

A worldwide program of the World Meteorological Organization (WMO) to recruit ships & platforms to voluntarily observe and report marine meteorological and oceanographic conditions to ensure *Safety Of Life At Sea (SOLAS)*, and reduce commercial loss.



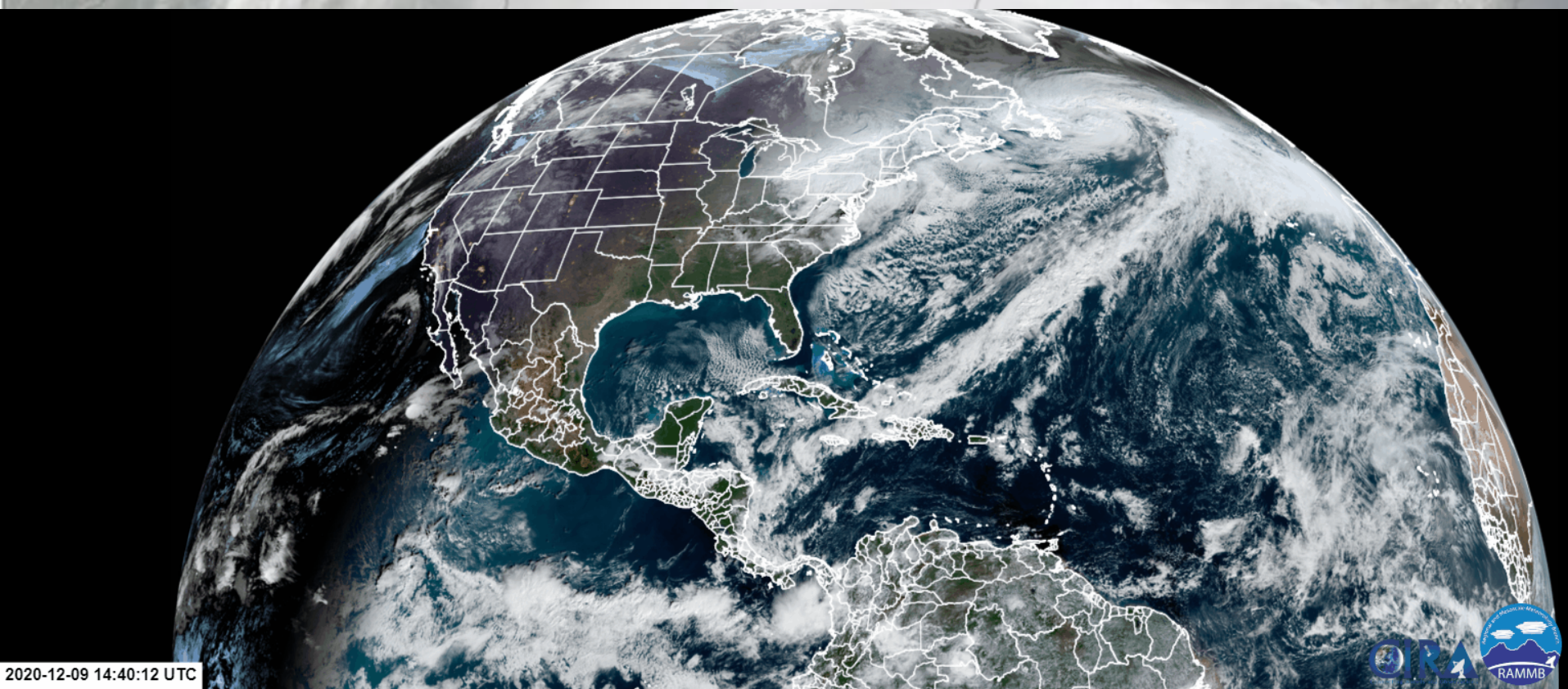
23 Countries Currently Participate

* There is only 1 Ship Observation For every 1000 Land Based Observations



<https://www.vos.noaa.gov/>

Tools - Observations



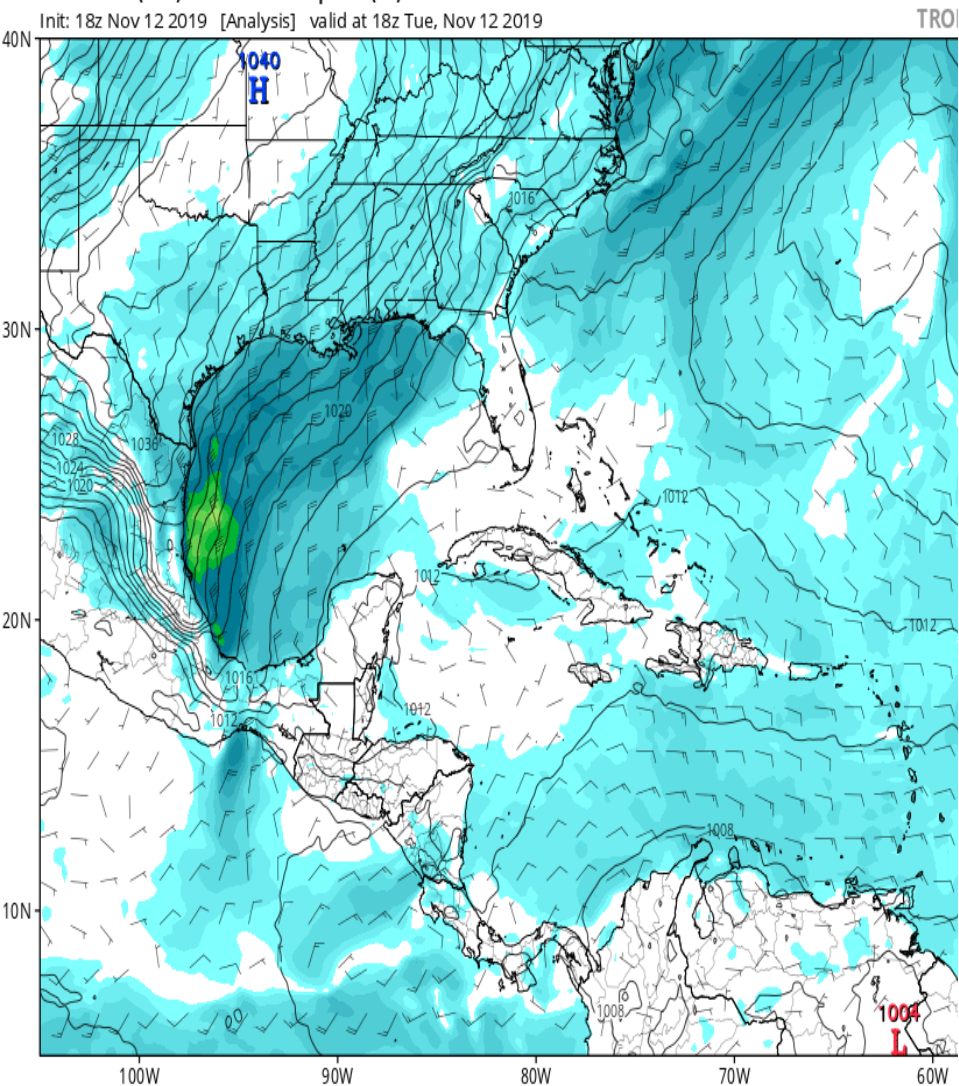
GOES-16: A new era of geo-stationary satellite imagery and data



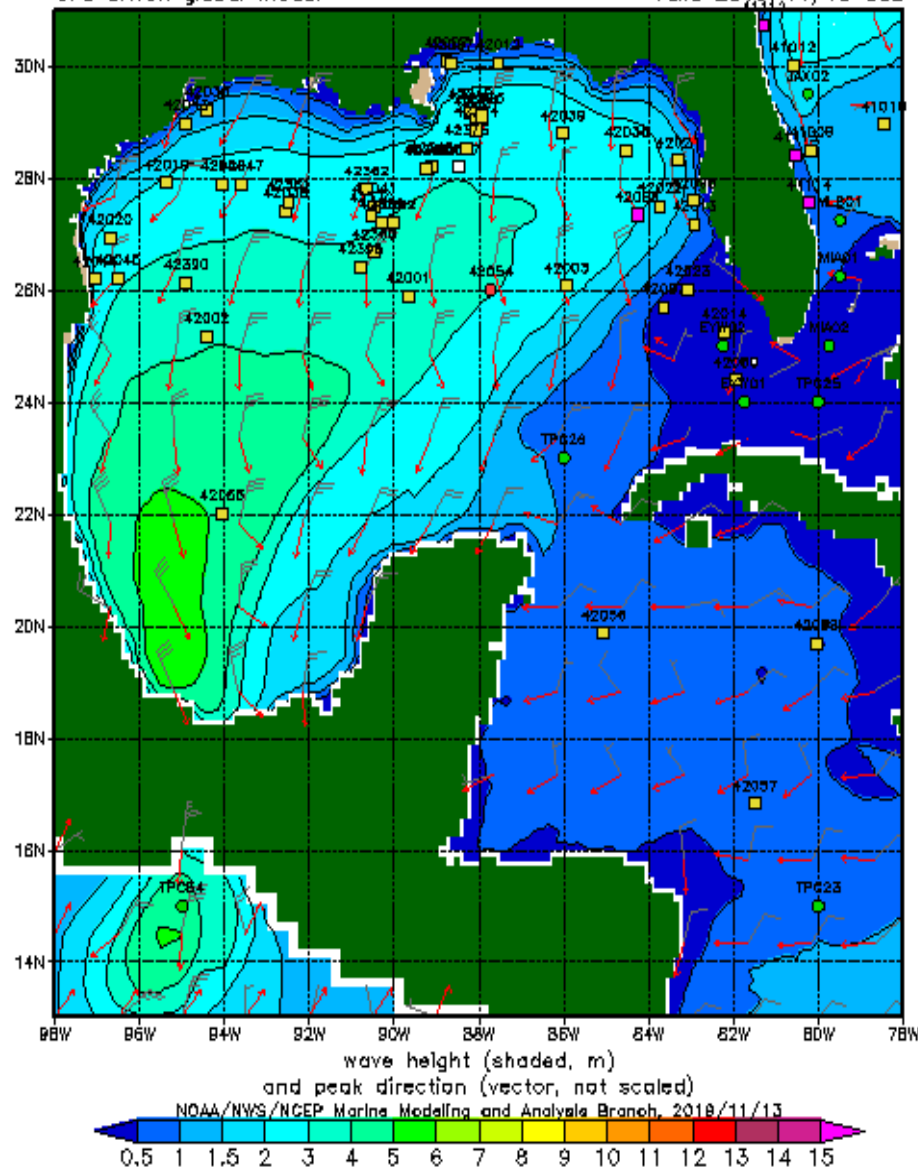
Tools - Models

GFS MSLP (mb) & 10m Wind Speed (kt)

Init: 18z Nov 12 2019 [Analysis] valid at 18z Tue, Nov 12 2019



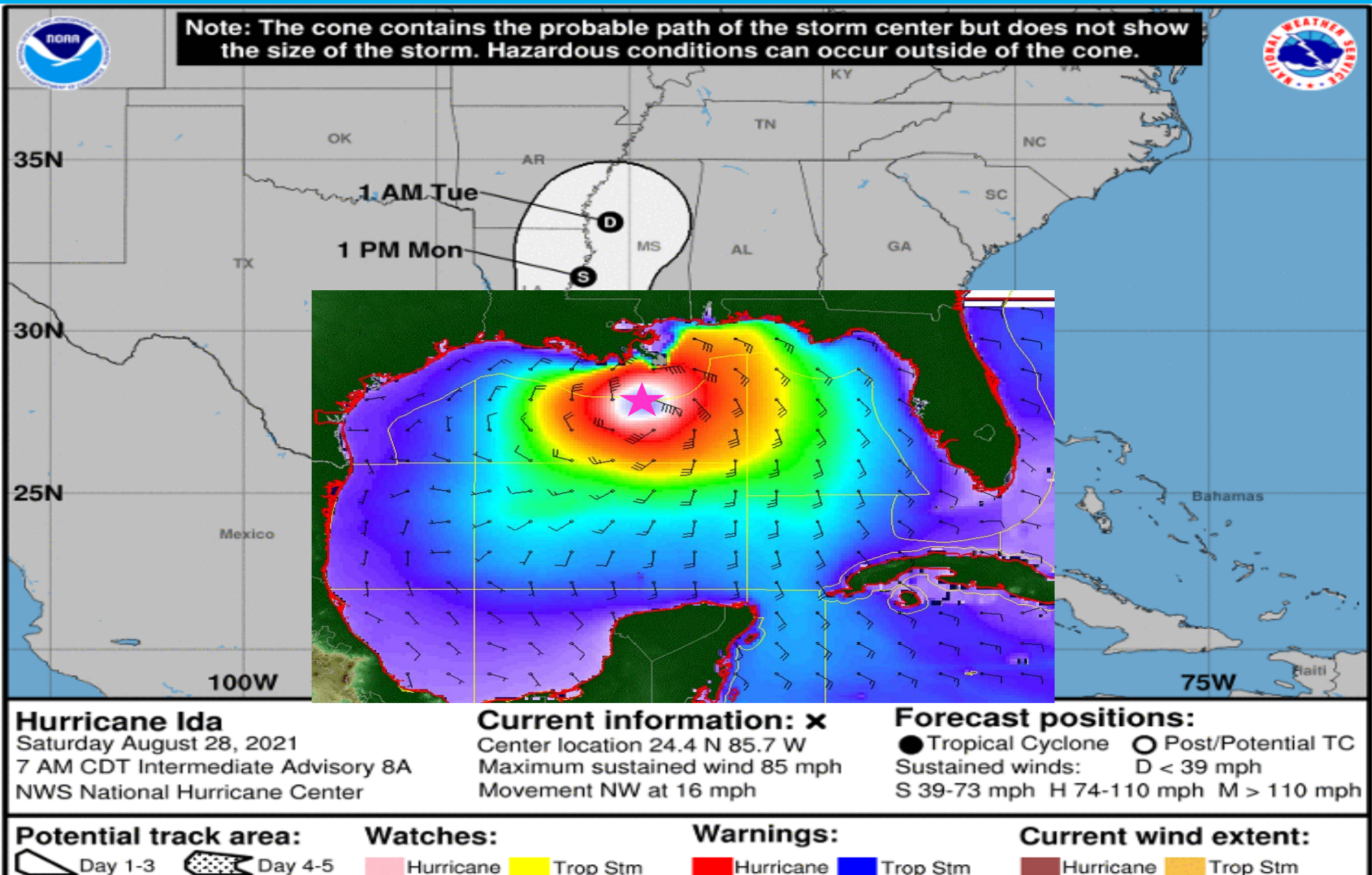
NMWW3 20191113 t12z hindcast
GFS driven global model valid 2019/11/13 03z



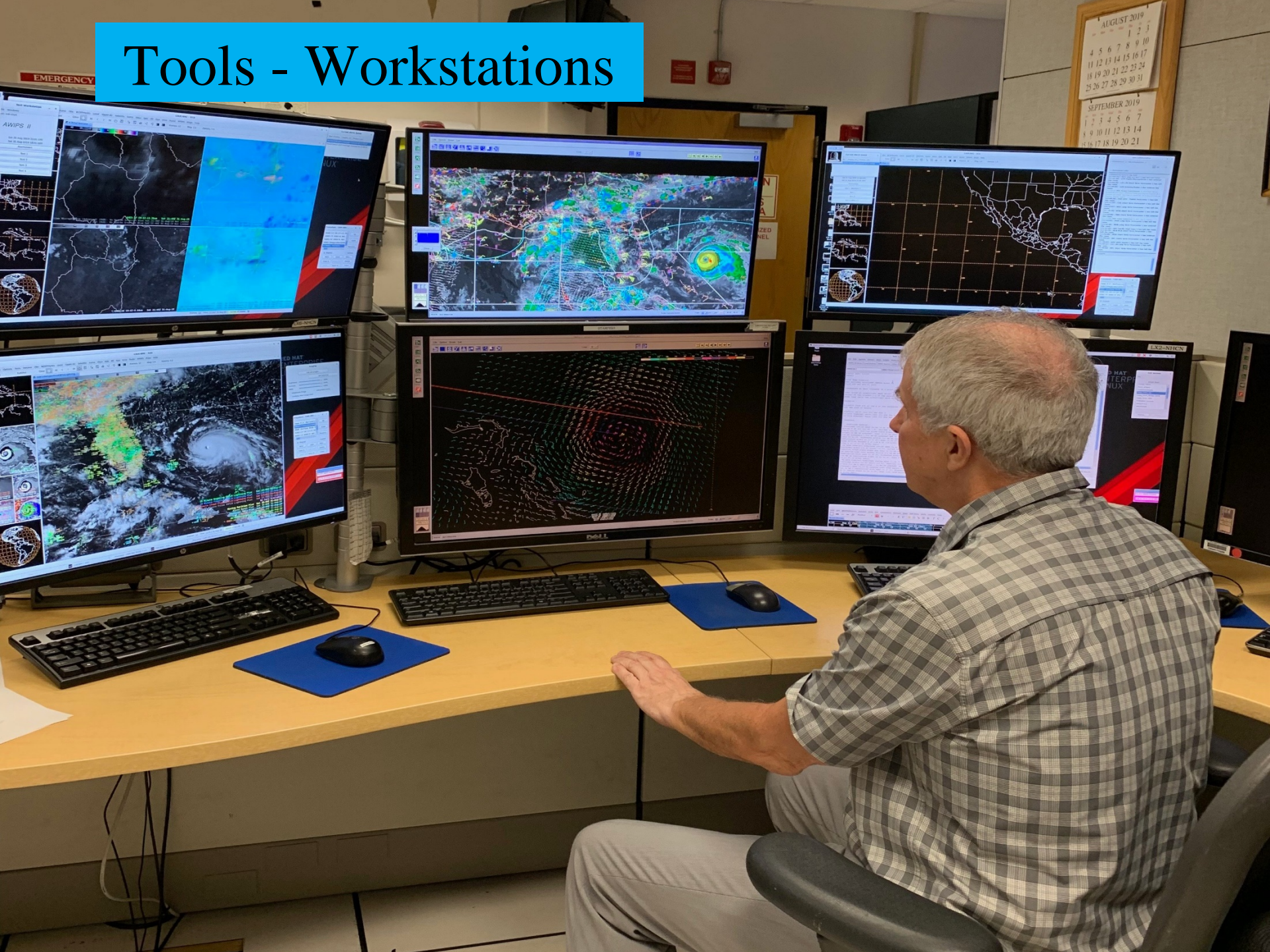
Tools – Incorporating NHC's Tropical Storm/Hurricane Forecast



Tools – Incorporating NHC's Tropical Storm/Hurricane Forecast



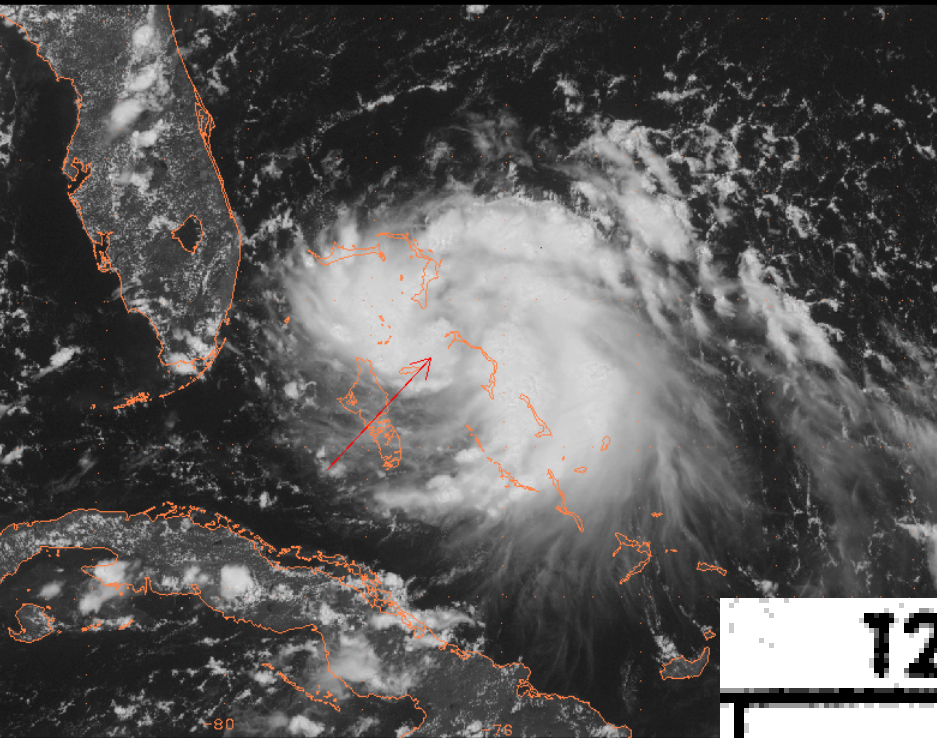
Tools - Workstations



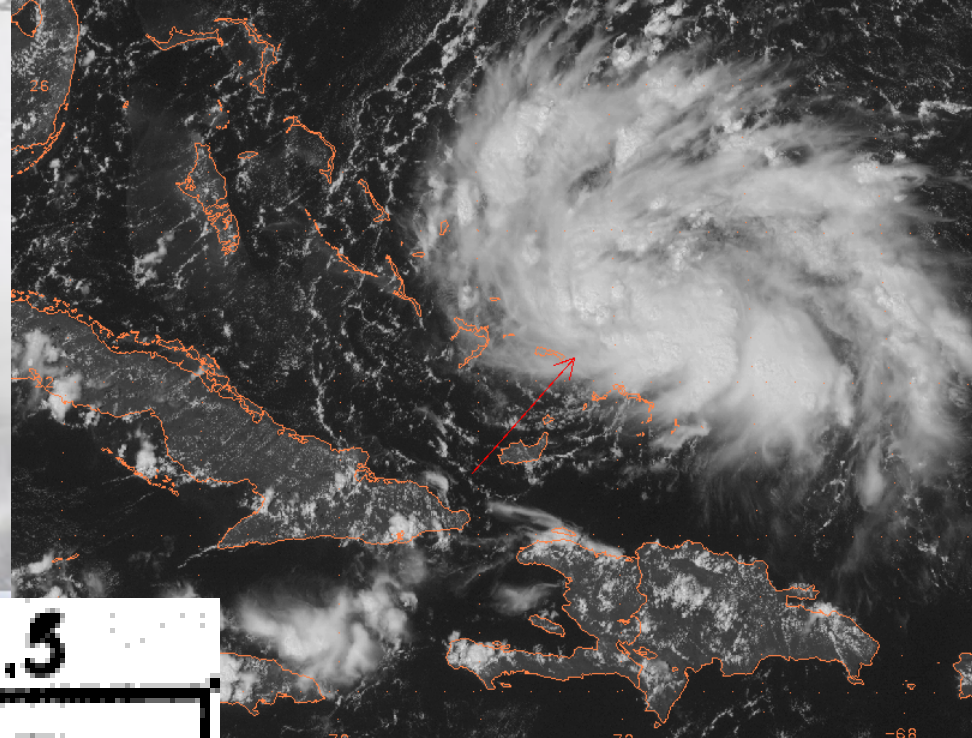
Satellite Imagery – Dvorak Technique

Katrina August 24

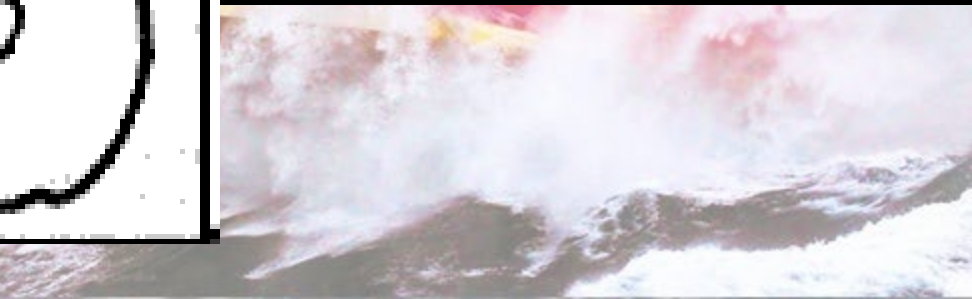
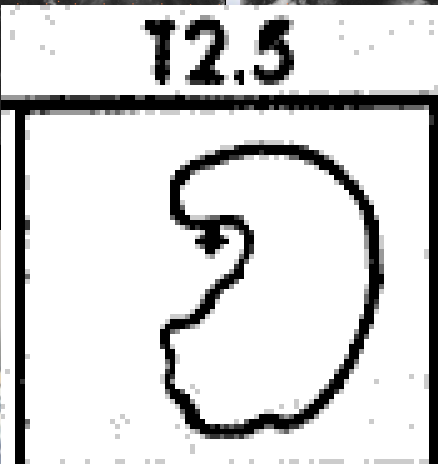
Rita September 18



60ES12 VIS 25.2 -77.1 20050824_1745



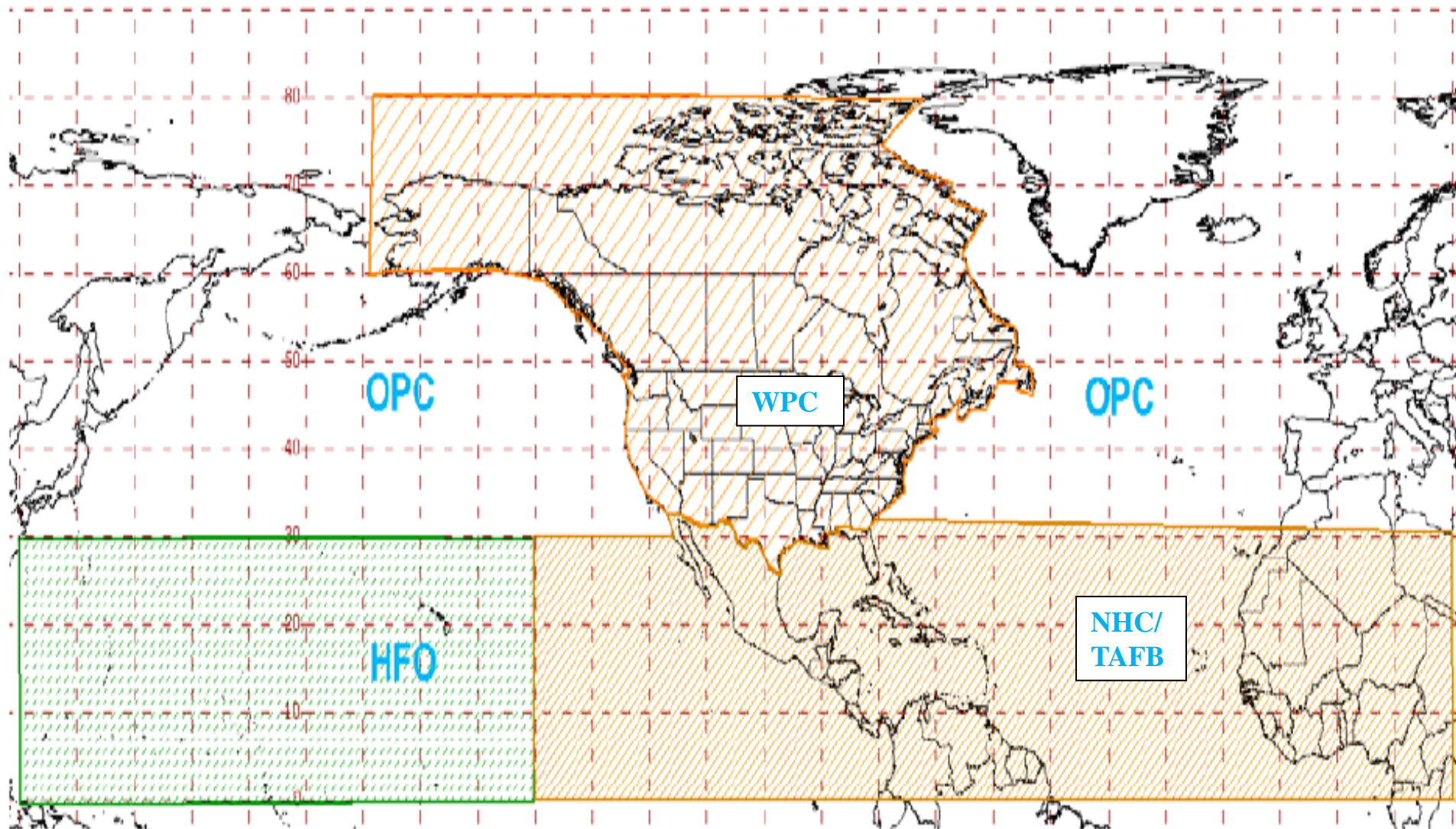
60ES12 VIS 22.3 -72.6 20050918_1745



Unified Surface Analysis

Areas of Responsibility

https://www.nhc.noaa.gov/tafb_latest/USA_latest.gif



Tropical Weather Discussions

The Tropical Weather Discussion describes major synoptic weather features and significant areas of disturbed weather in the tropics.

<https://www.nhc.noaa.gov/text/MIATWDAT.shtml>

Content:

Special Features

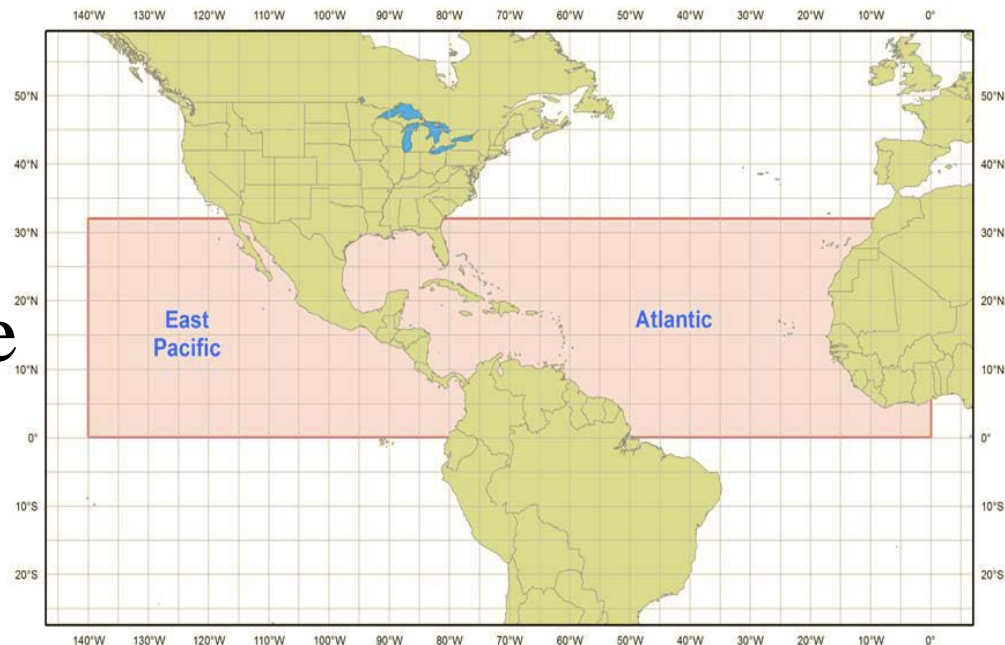
- Tropical Disturbances
- Tropical Cyclones
- Gales/Storm/Hurricane

Warnings

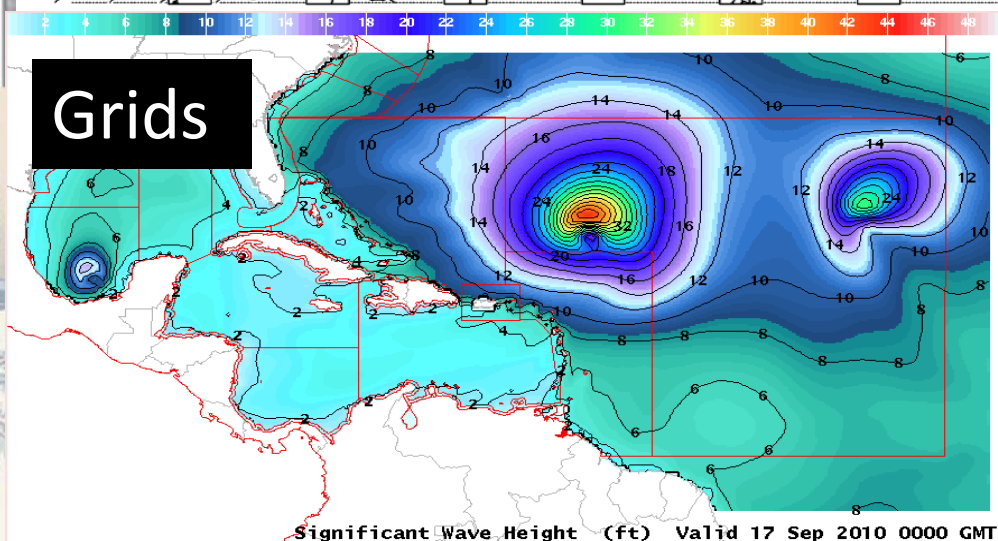
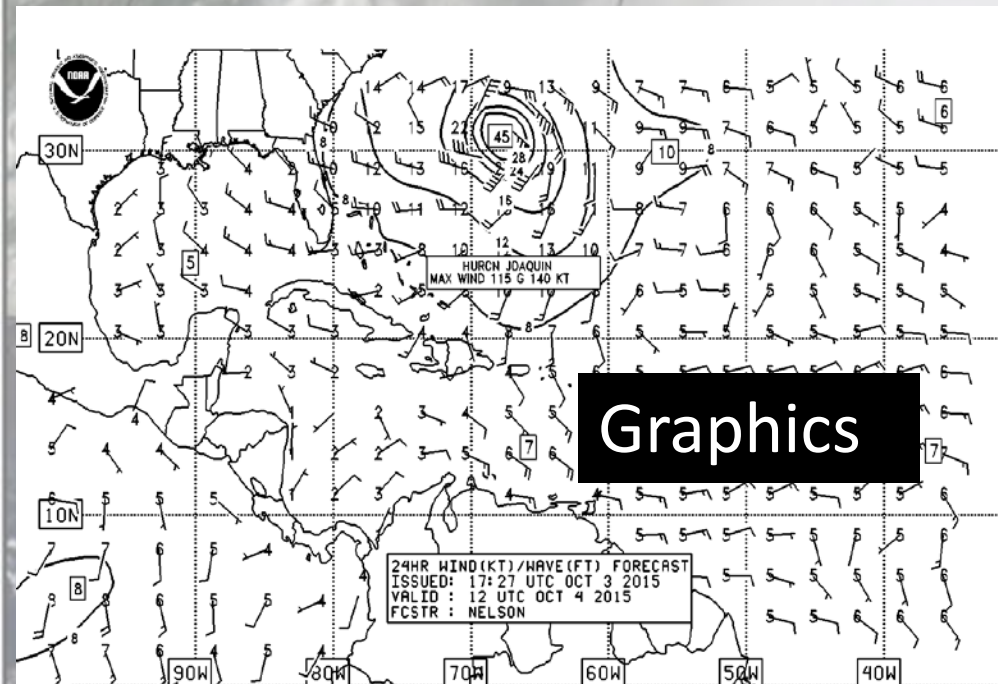
Tropical Waves

ITCZ

Discussion



NHC/TAFB Wind and Wave Forecasts



High Seas and Offshores Text Forecasts

HIGH SEAS FORECAST
NWS NATIONAL HURRICANE CENTER
1030 UTC FRI OCT 02 2015

SUPERSEDED BY NEXT ISSUANCE IN 6 HOURS

SEAS GIVEN AS SIGNIFICANT WAVE HEIGHT...WHICH IS THE AVERAGE HEIGHT OF THE HIGHEST 1/3 OF THE WAVES. INDIVIDUAL WAVES MAY BE MORE THAN TWICE THE SIGNIFICANT WAVE HEIGHT.

PAN PAN

ATLANTIC FROM 07N TO 31N W OF 35W INCLUDING CARIBBEAN SEA AND GULF OF MEXICO.

SYNOPSIS VALID 0600 UTC FRI OCT 02.
24 HOUR FORECAST VALID 0600 UTC SAT OCT 03.
48 HOUR FORECAST VALID 0600 UTC SUN OCT 04.

.WARNINGS.

...HURRICANE WARNING...
.HURRICANE JOAQUIN NEAR 23.3N 74.7W 935 MB AT 0900 UTC OCT 02 MOVING NW OR 315 DEG AT 3 KT. MAXIMUM SUSTAINED WINDS 115 KT GUSTS 140 KT. TROPICAL STORM FORCE WINDS WITHIN 160 NM W SEMICIRCLE...140 NM NE QUADRANT AND 180 NM SE QUADRANT. SEAS 12 FT OR GREATER WITHIN 400 NM NE QUADRANT...150 NM SE QUADRANT...120 NM SW QUADRANT...AND 300 NM NW QUADRANT WITH SEAS TO 39 FT. ELSEWHERE S OF 28N BETWEEN 70W AND 78W WINDS 20 TO 33 KT. SEAS 9 TO 12 FT. N OF 28N BETWEEN 70W AND 75W E WINDS 20 TO 25 KT SEAS 8 TO 10 FT. REMAINDER OF AREA N OF 21N BETWEEN 65W AND 78W AND OUTSIDE OF THE BAHAMAS WINDS 20 KT OR LESS. SEAS 8 TO 11 FT IN MIXED SWELL.

TAFB National Digital Forecast Database

Gridded Marine Forecasts

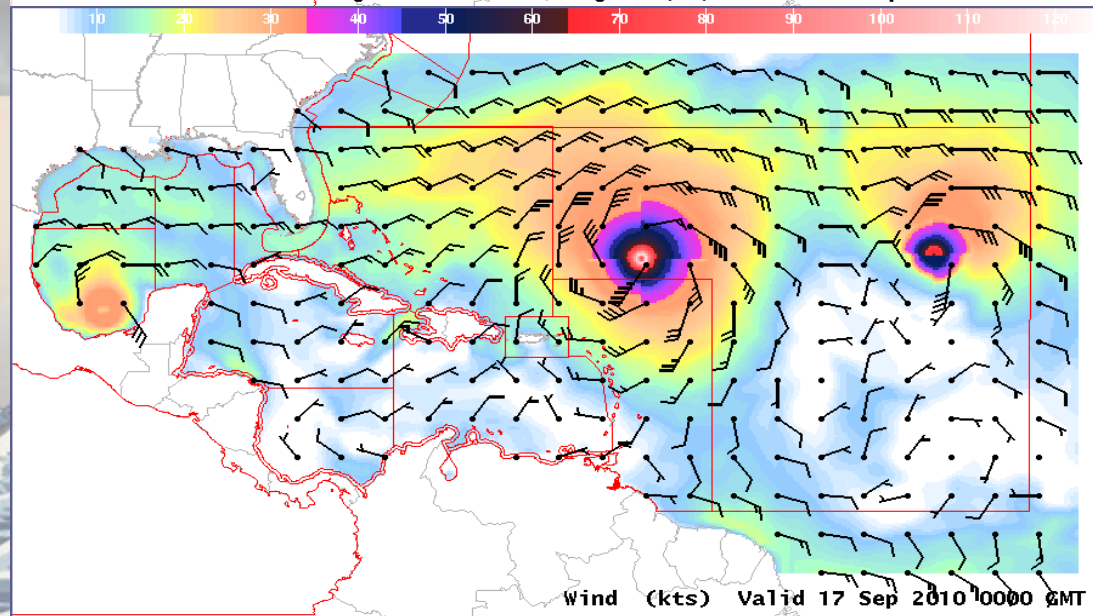
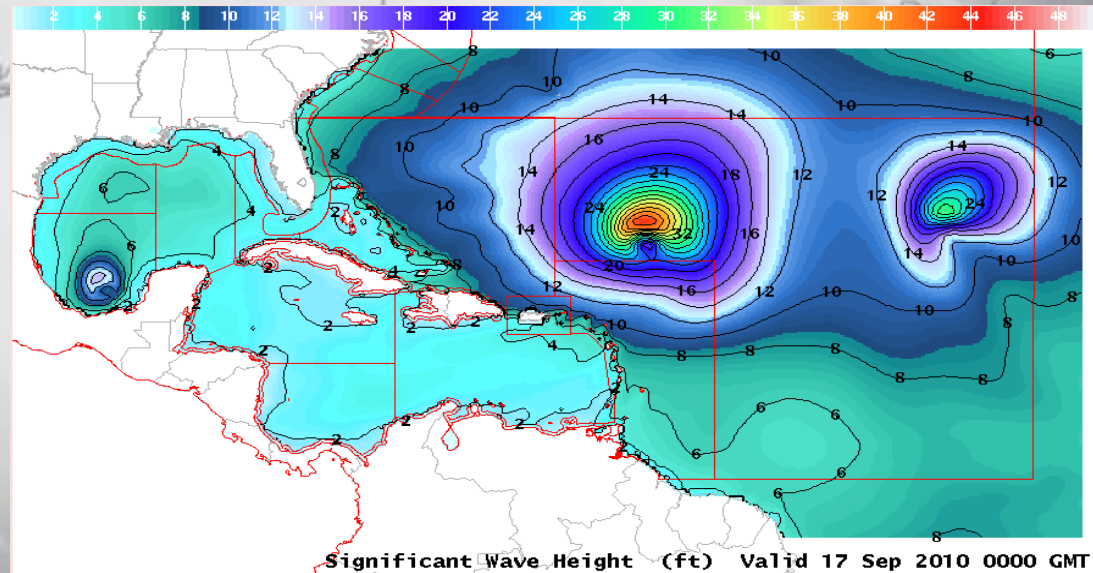
Spatial/Temporal resolution

- 10 KM
- 6 Hourly out to 144 hr
(3 Hourly to 72 hr)

Parameters

- 10-M Wind/Gusts
- Significant Wave Height
- Hazards

<https://digital.weather.gov/>



How do I get weather forecasts over the open ocean?

NOAA Weather Radio - Reliable weather broadcasts out to 25nm 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

InMarsat C SafetyNET - Satellite transmission of High Seas forecasts and warnings – Part of Global Marine Distress and Safety System

Iridium SafetyCast – Satellite transmission of High Seas forecasts and warnings - Part of Global Marine Distress and Safety System (Becoming operational now)

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

Marine Composite Page – Winds/Waves/Warnings in graphical form via low bandwidth internet - https://www.nhc.noaa.gov/marine/forecast/enhanced_atlcfull.php

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

TAFB High Seas

- High Seas Forecast is a text forecast issued primarily for large ocean going vessels.
- High Seas Forecast includes synopsis of primary weather features and a 48 hour forecast.
- High Seas Forecast primarily for strong winds (25 KT or greater) and/or seas 8 FT or higher.
- TAFB issues two text high seas forecasts four times a day.



<https://www.nhc.noaa.gov/text/MIAHSFAT2.shtml>

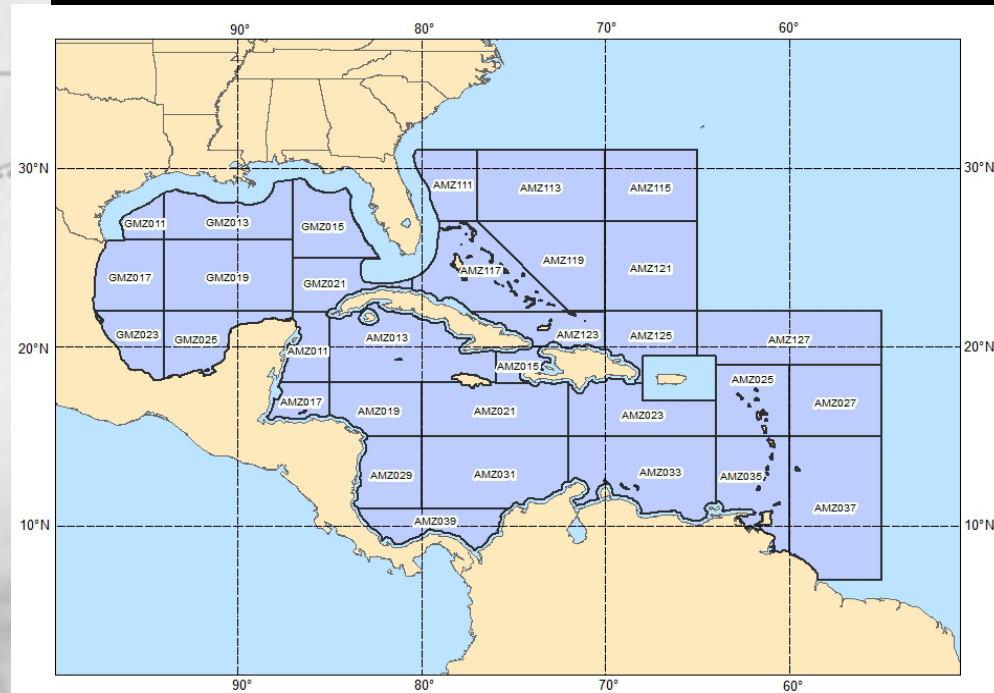
- OFF's are designed for recreational/smaller fishing vessels up to giant cargo/cruise ships.

- Warnings are issued for conditions up to 48 hours from issuance time. A headline such as “**Gale** Conditions Possible” can be included for events beyond 48 hours.


- **Tropical Storm** and **Hurricane** Warnings normally based on **34kt/64kt** wind radii given in the tropical cyclone advisory.

<https://www.nhc.noaa.gov/marine/offshores.php>

TAFB Offshore Zones

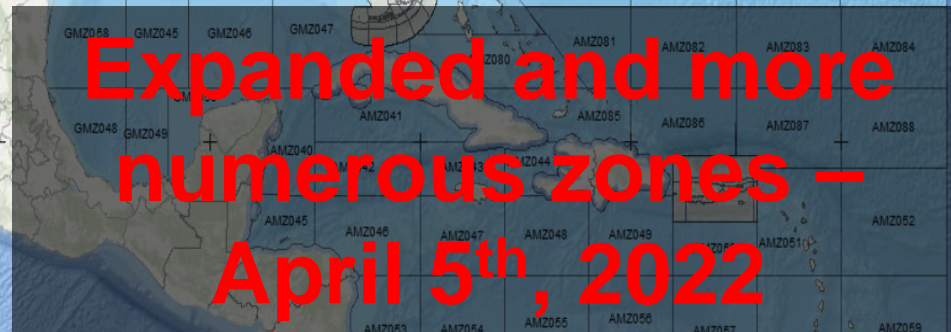


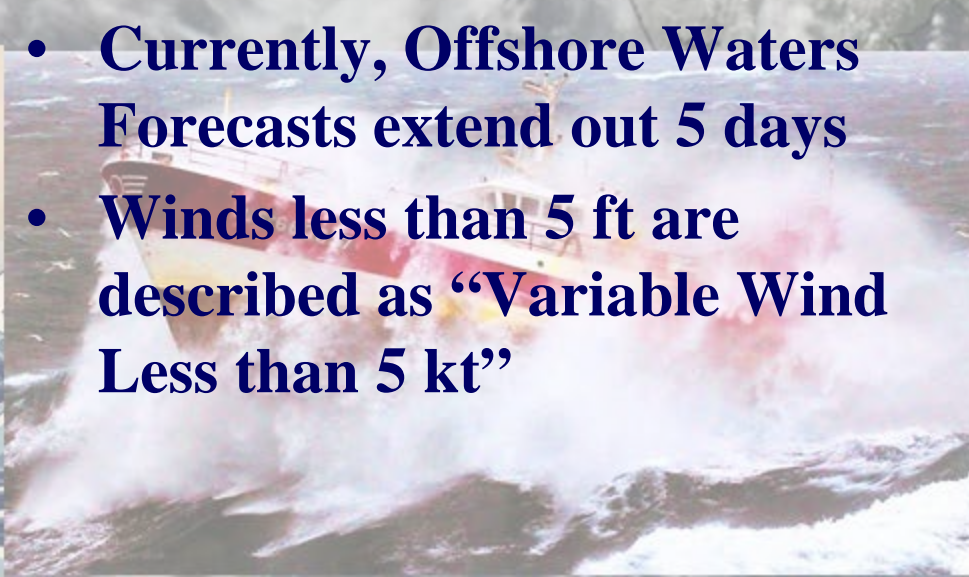
- Currently, Offshore Waters Forecasts extend out 5 days
- Winds less than 5 ft are described as “Variable Wind Less than 5 kt”

- 
- **Tropical Storm and Hurricane Warnings** normally based on **34kt/64kt** wind radii given in the tropical cyclone advisory.
- <https://www.nhc.noaa.gov/marine/offshores.php>

<https://www.nhc.noaa.gov/marine/offshores.php>

TAFB Offshore Zones



- 
- A yellow and red offshore supply vessel is shown navigating through rough, white-capped waves. The vessel is partially obscured by the spray and foam of the sea. The background is a hazy, overcast sky. The overall scene conveys a sense of maritime operations in challenging weather conditions.
- **Currently, Offshore Waters Forecasts extend out 5 days**
 - **Winds less than 5 ft are described as “Variable Wind Less than 5 kt”**

- OFF's are designed for recreational/smaller fishing vessels up to giant cargo/cruise ships.

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- **Tropical Storm** and **Hurricane** Warnings normally based on **34kt/64kt** wind radii given in the tropical cyclone advisory.

https://www.nhc.noaa.gov/marine/offshores_eastpac.php

TAFB Offshore Zones



- Currently, Offshore Waters Forecasts extend out 5 days.
- Winds less than 5 ft are described as “Variable Wind Less than 5 kt”

Navigation Telex (NAVTEX)

NAVTEX is an internationally required broadcast of coastal urgent marine safety information to ships.

In the United States there are 12 U.S. Coast Guard transmitter locations. TAFB products are transmitted from Miami, San Juan, and New Orleans, and contribute to the Charleston broadcast.

<https://www.nhc.noaa.gov/text/MIAOFFN04.shtml>

NAVTEX Zones



High Frequency Voice Broadcasts (VOBRA)

The USCG broadcasts basic weather information prepared by the NWS (**Ocean Prediction Center**, **National Hurricane Center** and **Honolulu Forecast Office**) via high frequency voice broadcasts (VOBRA) to vessels operating in areas beyond the range of coastal NOAA Weather Radio.

The VOBRA forecasts are prepared at a lower resolution than the offshore forecasts.

<https://www.nhc.noaa.gov/text/MIAOFFN21.shtml>

VOBRA Zones



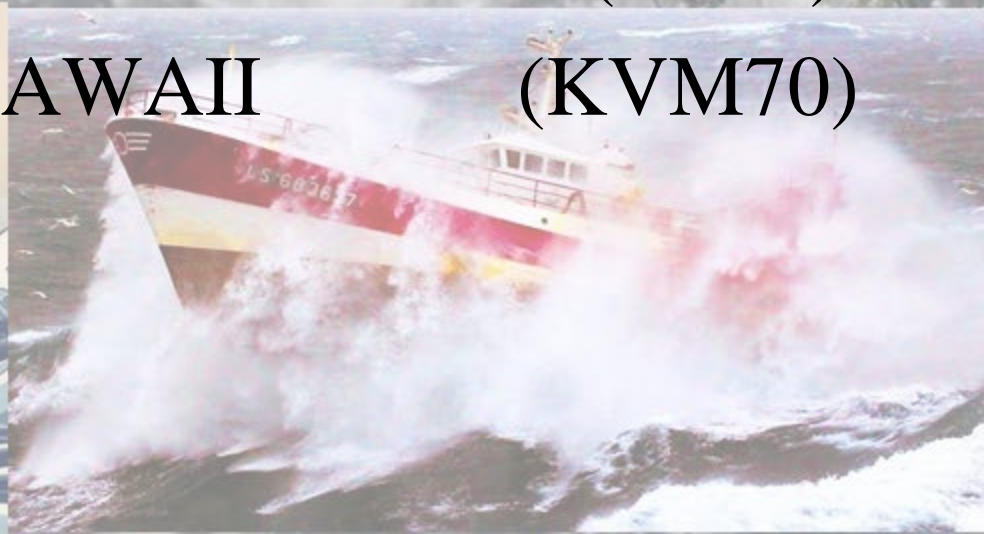
MARINE RADIOFAX

TAFB provides graphical products for
three U.S. Coast Guard transmitters:

NEW ORLEANS (NMG)

POINT REYES (NMC)

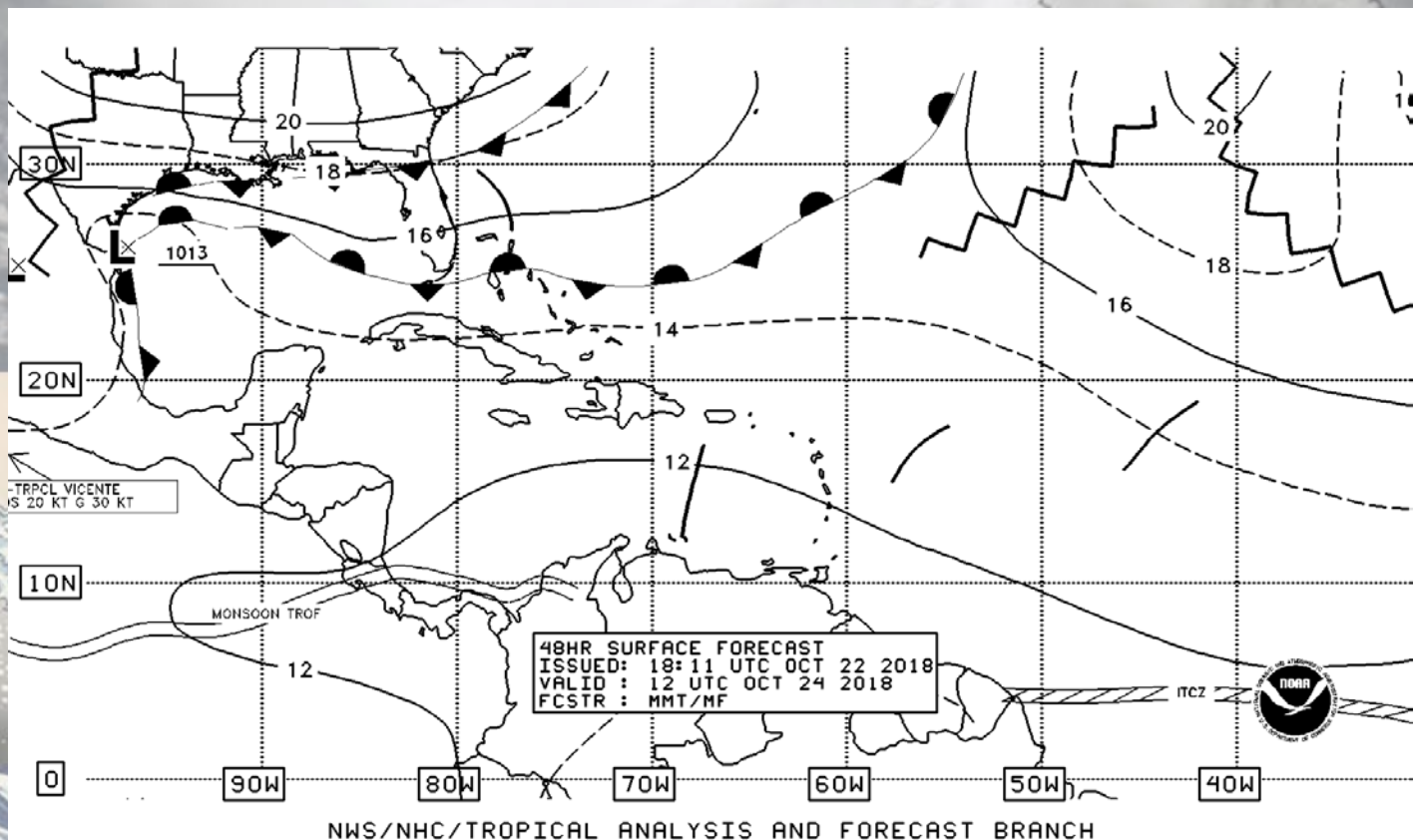
HAWAII (KVM70)



Surface Prog Graphics

- Fronts, troughs, tropical cyclones, tropical waves, ridges
- 24, 48, and 72 hr Forecasts
- W. Atlantic, Caribbean, Gulf of Mexico, and E. Pacific
- Issued twice daily

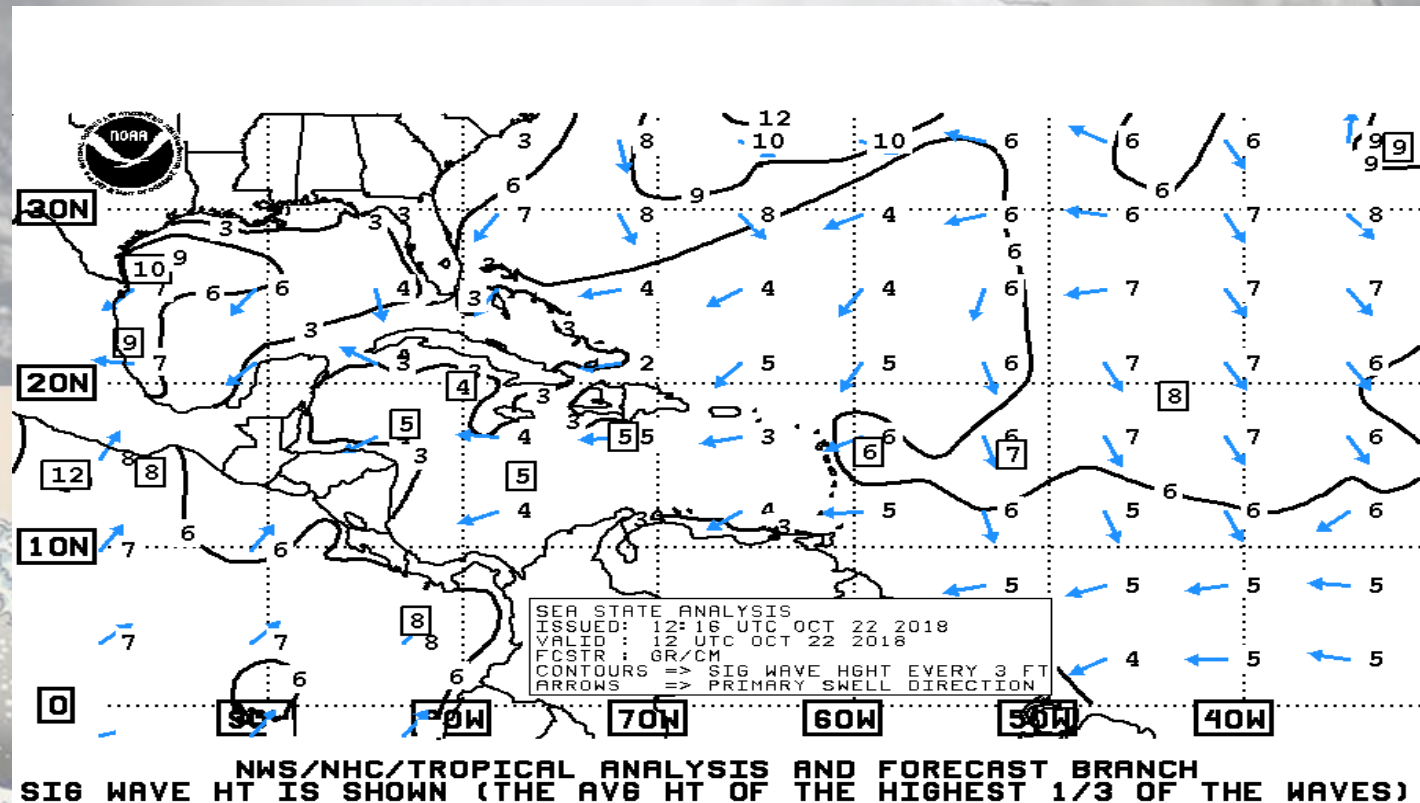
https://www.nhc.noaa.gov/tafb/latest/atlsfc72_latestBW.gif



Sea State Analysis Graphics

- Significant Wave Height Analysis (the average height of the highest one-third of the waves) and Primary Swell Direction
- W. Atlantic, Caribbean, Gulf of Mexico, and E. Pacific
- Issued twice daily

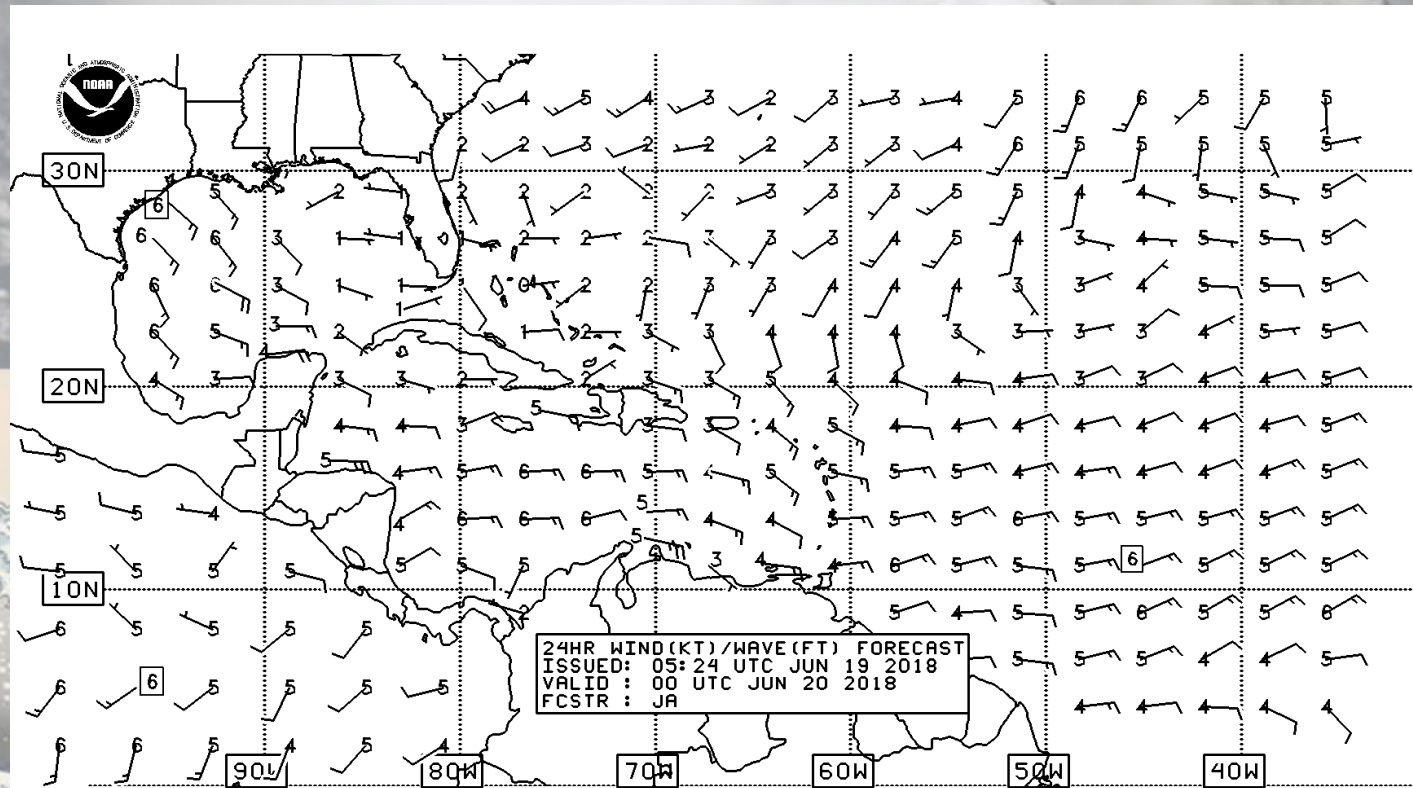
<https://www.nhc.noaa.gov/tafb/latest/atlsea/latestBW.gif>



WIND / WAVE Forecast Graphics

- Surface Winds and Significant Wave Height Predictions
- 24, 48, and 72 hr Forecasts
- W. Atlantic, Caribbean, Gulf of Mexico, and E. Pacific
- Issued twice daily

https://www.nhc.noaa.gov/tafb_latest/atl72_latestBW.gif

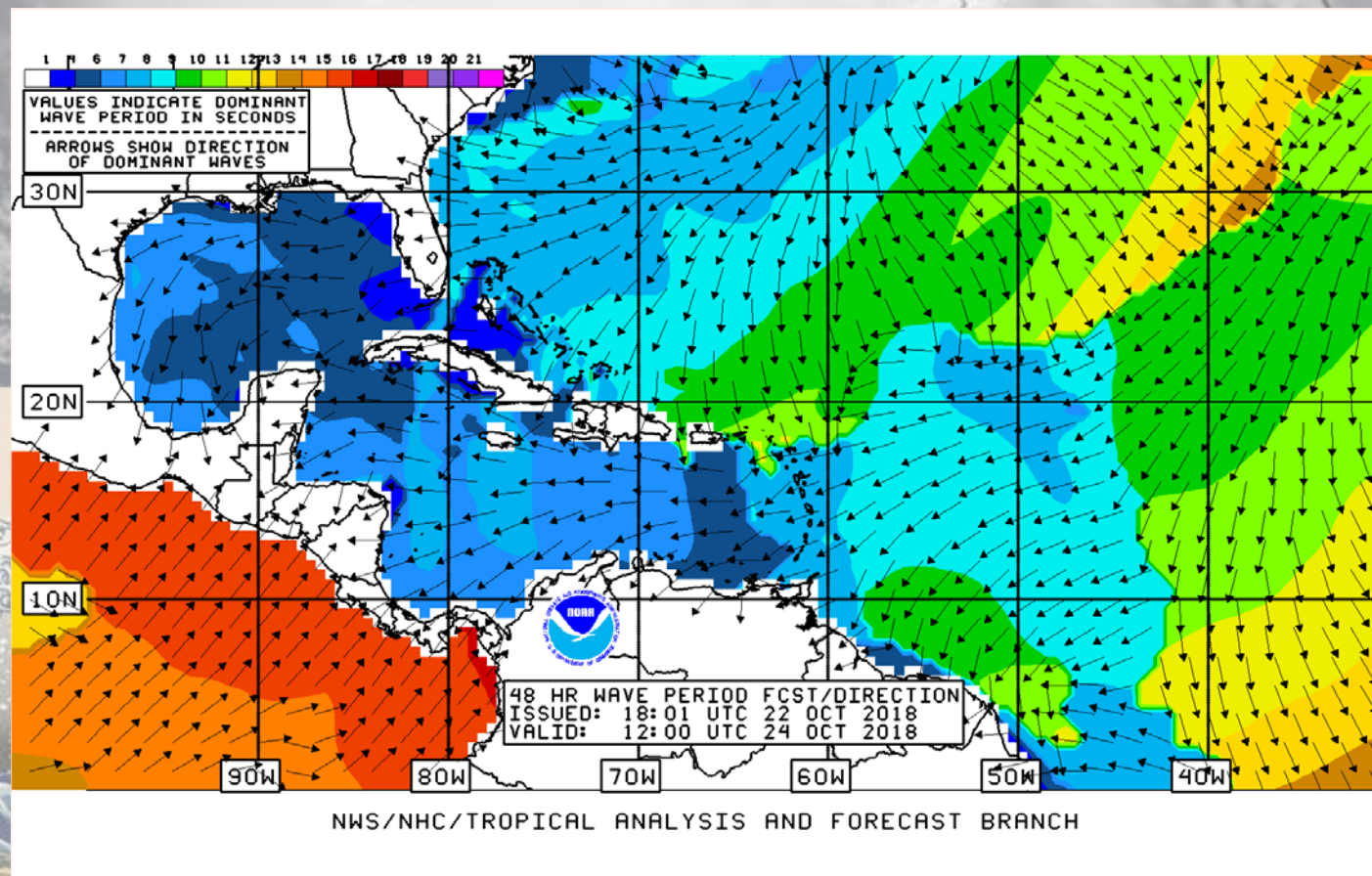


NWS/NHC/TROPICAL ANALYSIS AND FORECAST BRANCH
SIG WAVE HT IS SHOWN (THE AVG HT OF THE HIGHEST 1/3 OF THE WAVES)

WAVE PERIOD/DIRECTION Forecast Graphics

- Dominant wave period and direction
- 48 and 72 hr Forecasts
- W. Atlantic, Caribbean, Gulf of Mexico, and E. Pacific
- Issued twice daily

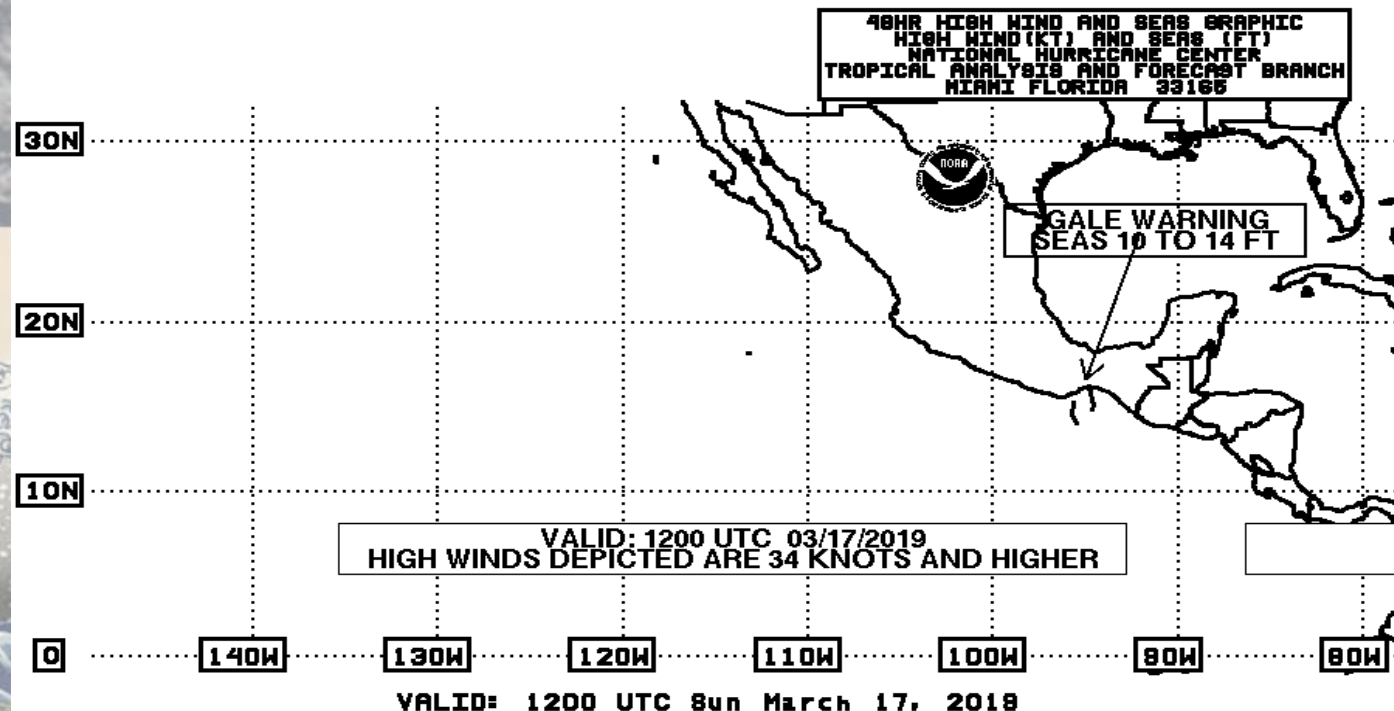
https://www.nhc.noaa.gov/tafb_latest/atl48per_latest.gif



High Wind and Seas Graphic

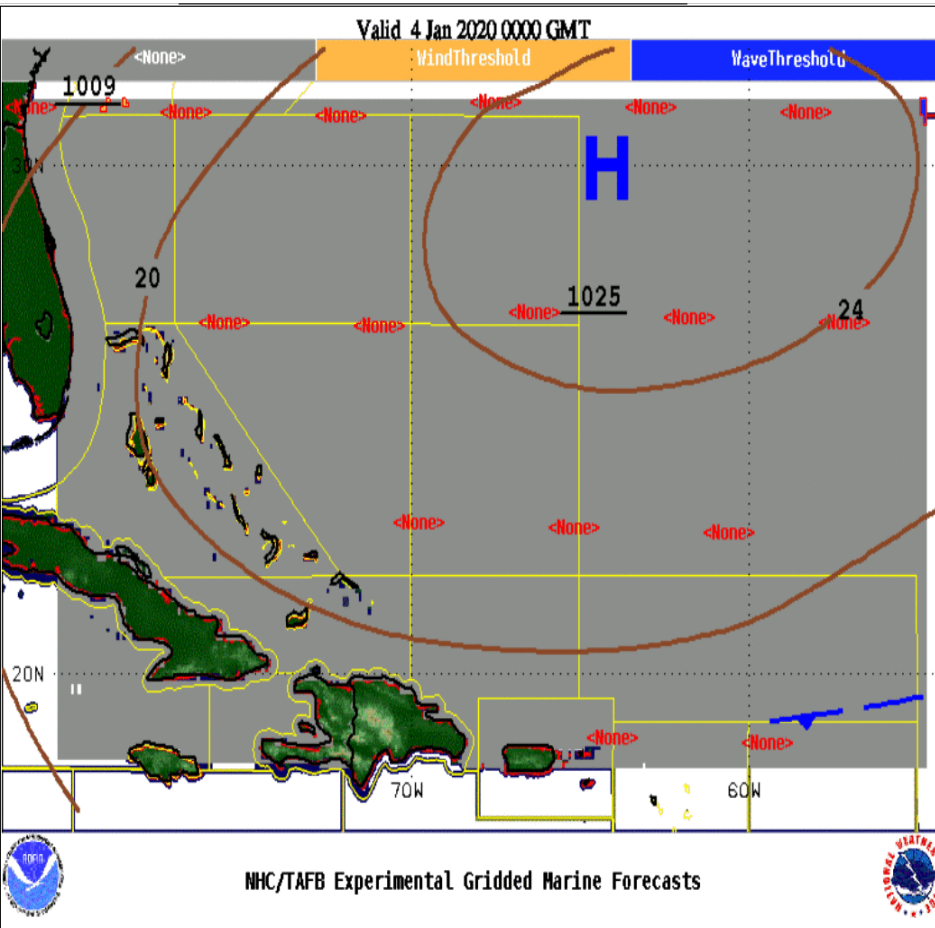
- 48 hr forecast depiction of Gale, Storm, and Hurricane-Force Wind Warnings (with peak seas)
- W. Atlantic, Caribbean, Gulf of Mexico, and E. Pacific
- Issued four times daily
- Issued 1 December to 14 May

https://www.nhc.noaa.gov/tafb/latest/hiwind_pac_lates_tBW.gif

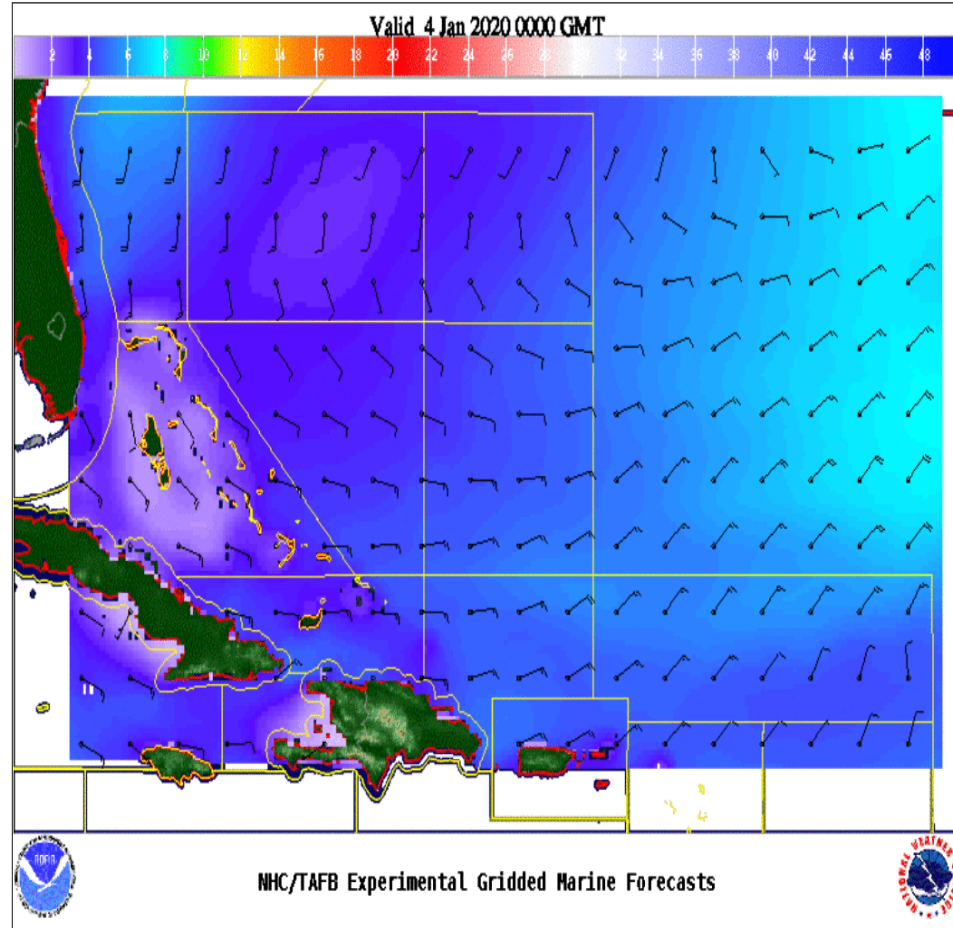


Marine Composite Page – Winds, Waves, Warnings, and Features

https://www.nhc.noaa.gov/marine/forecast/enhanced_atlcfull.php



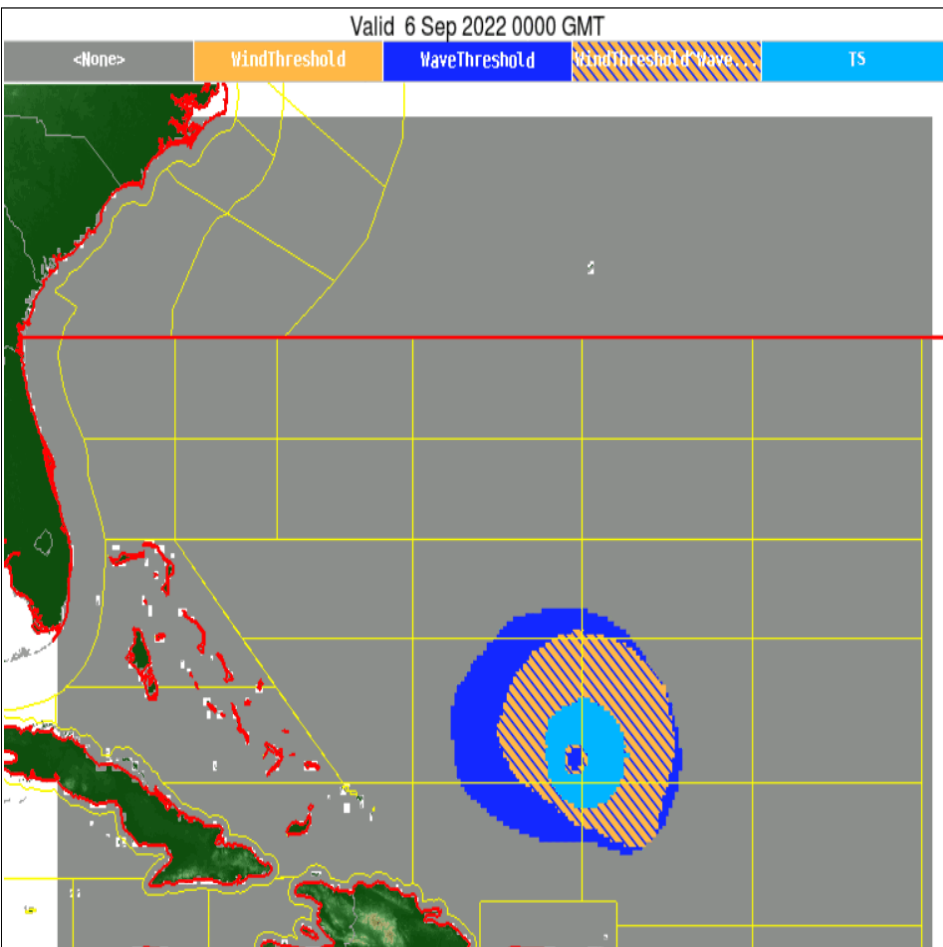
Red: Gale Warning
Orange: Winds > 23 kt Blue: Seas ≥ 8 ft



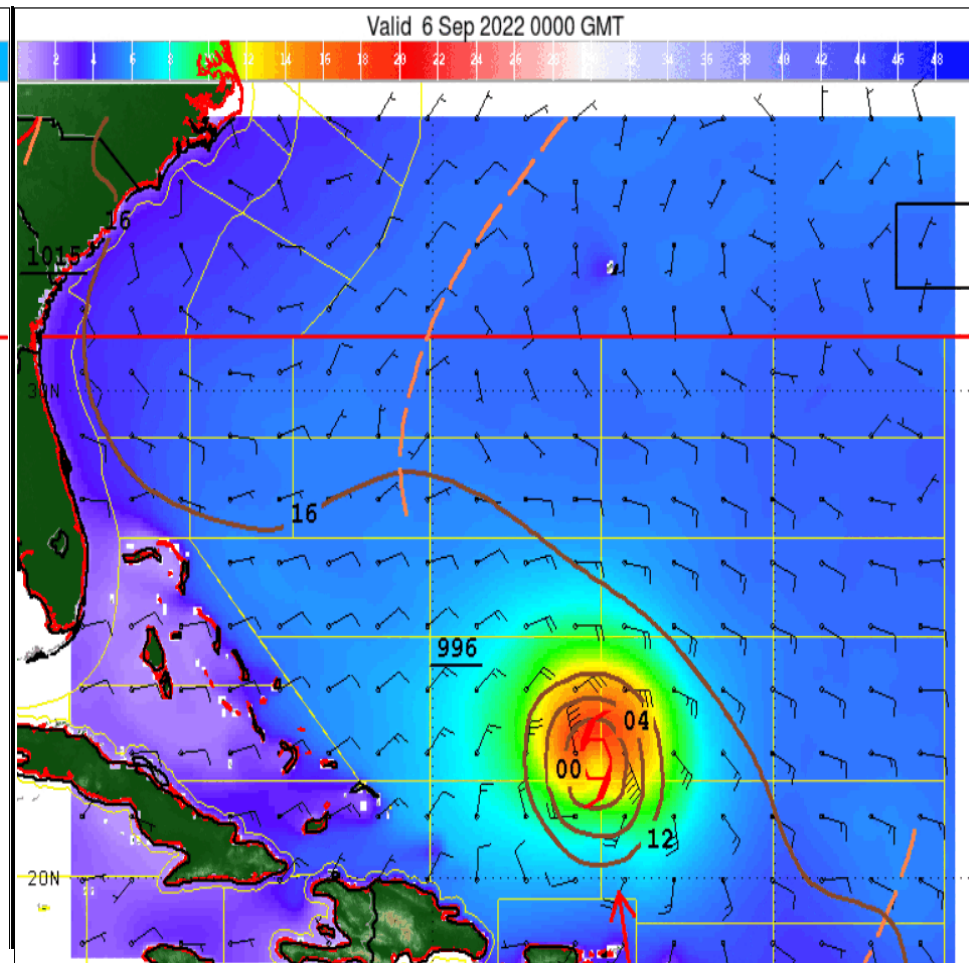
Colors: Seas (in feet)
Flags: Wind barbs (in knots)

Marine Composite Page – Winds, Waves, Warnings, and Features

https://www.nhc.noaa.gov/marine/forecast/enhanced_atlcfull.php



Gray: Hurricane Warning
Light Blue: Tropical Storm Warning
Orange: Winds > 23 kt Dark Blue: Seas \geq 8 ft

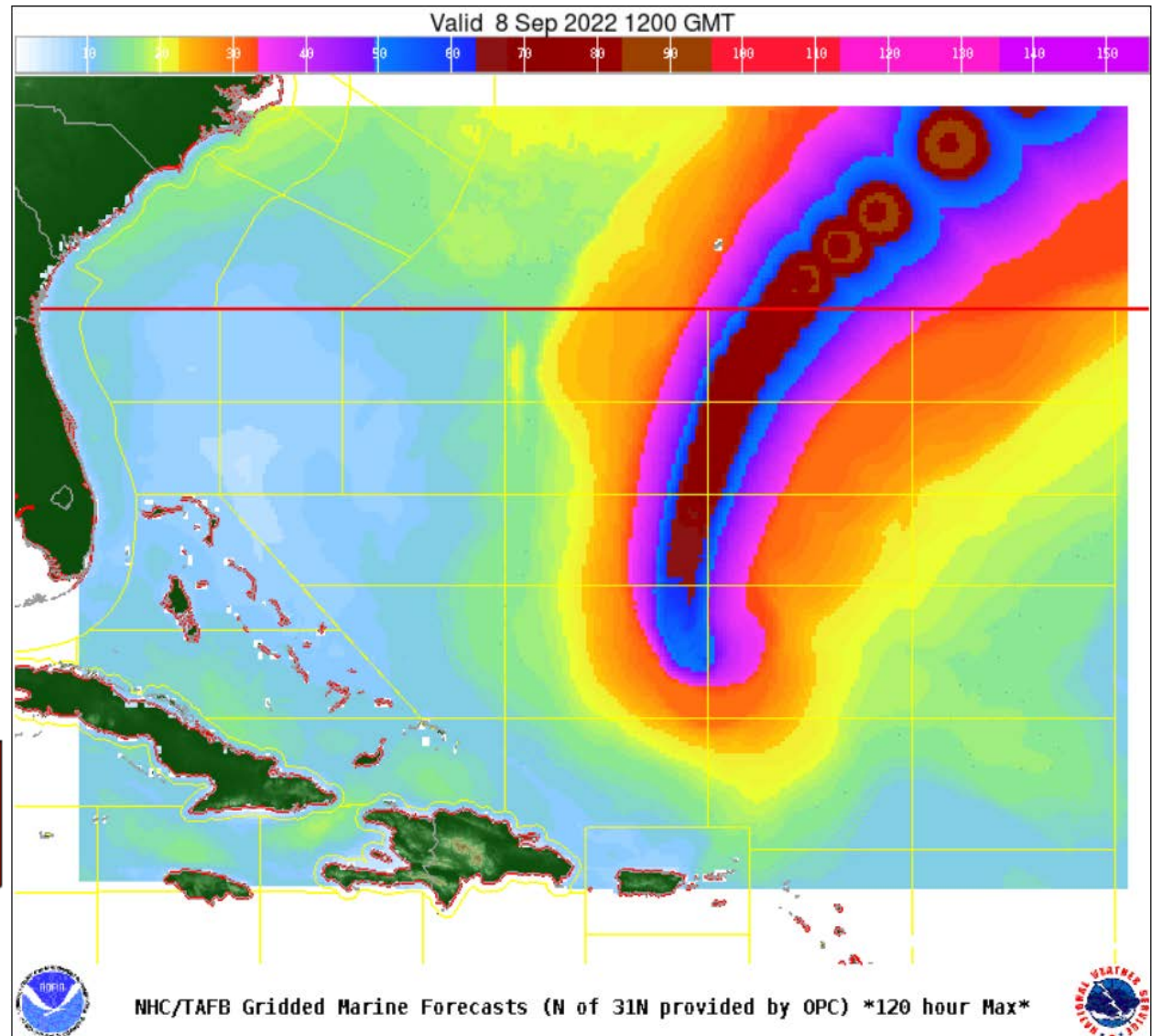


Colors: Seas (in feet)
Flags: Wind barbs (in knots)

Marine Composite Page – Winds, Waves, Warnings, and Features

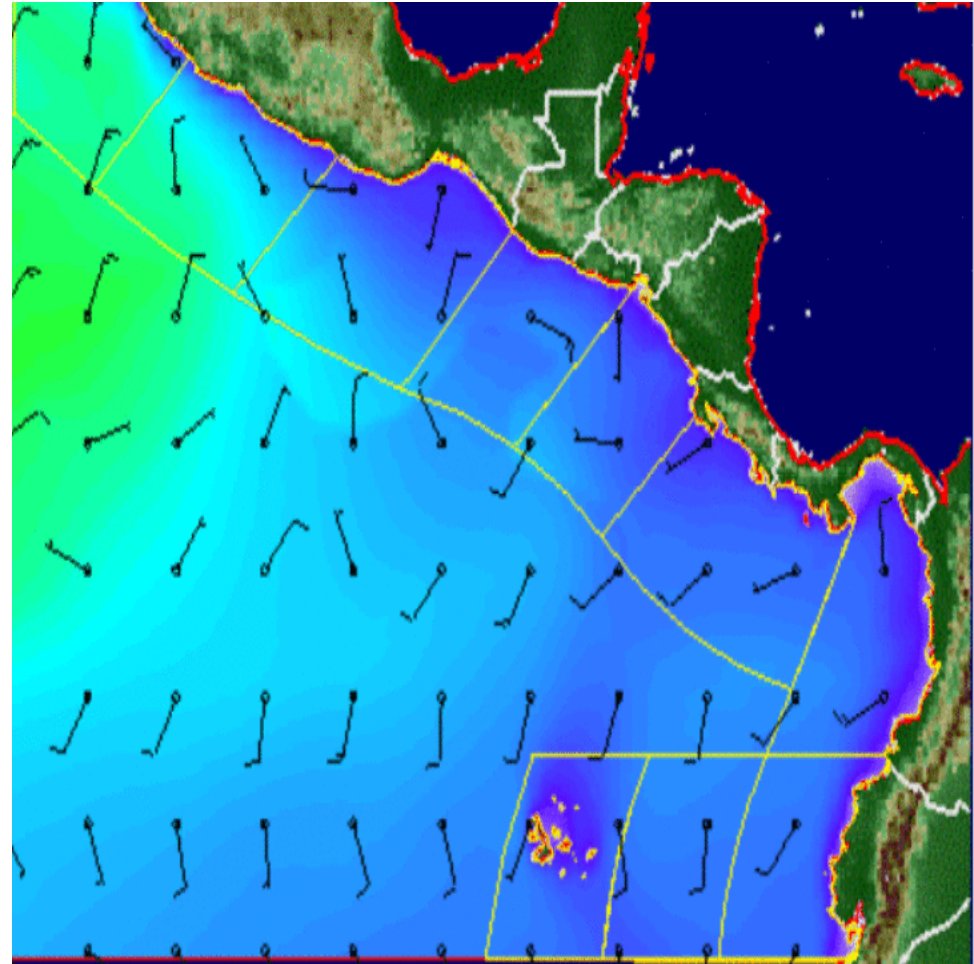
https://www.nhc.noaa.gov/marine/forecast/enhanced_atlcfull.php

**Maximum
Winds
Forecast**
(in knots,
over 5 days)



Marine Composite Page – Winds, Waves, Warnings, and Features

https://www.nhc.noaa.gov/marine/forecast/enhanced_atlcfull.php



Red: Gale Warning Green: Storm Warning
Orange: Winds > 23 kt Blue: Seas \geq 8 ft

Colors: Seas (in feet)
Flags: Wind barbs (in knots)

EL FARO

33 fatalities when it sank in Hurricane Joaquin (2015)

BOURBON RHODE

11 fatalities when it sank in Hurricane Lorenzo (2019)

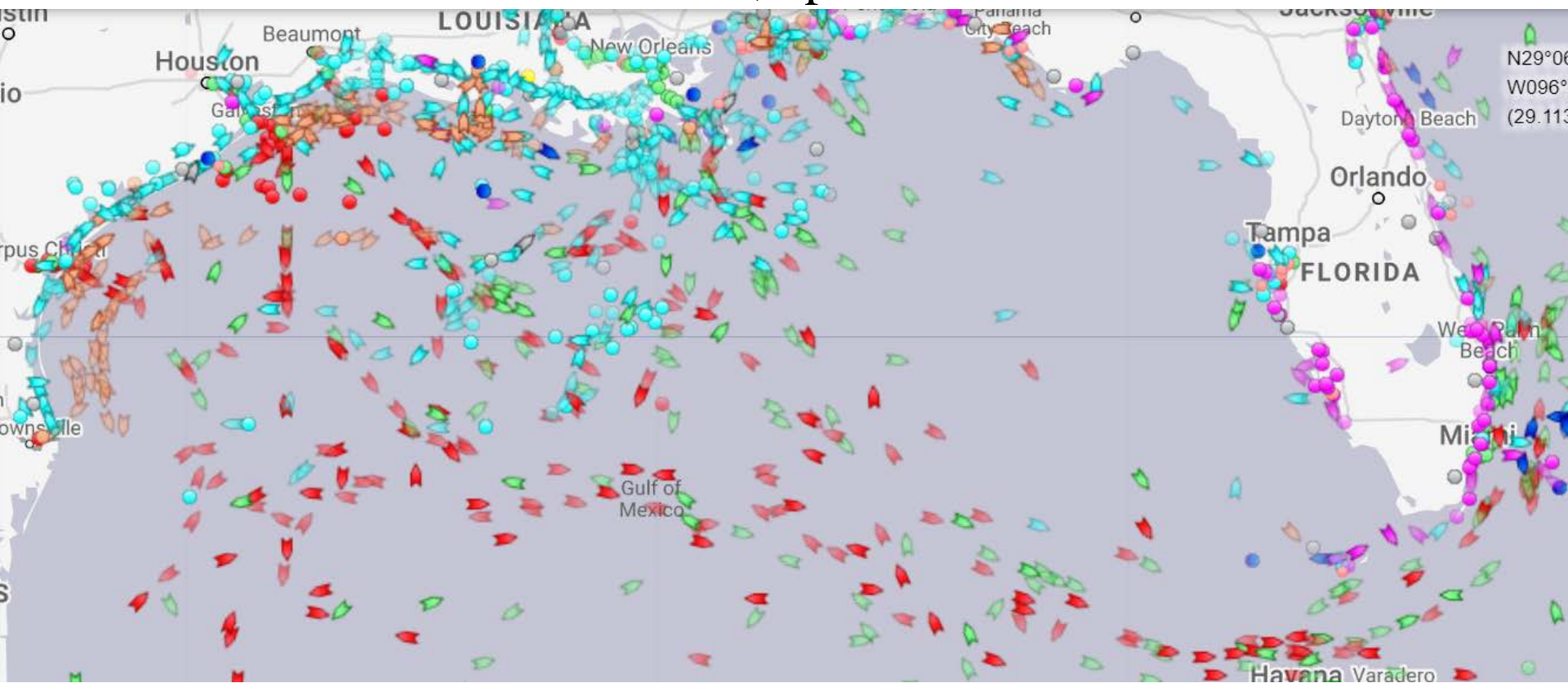
BOUNTY

2 fatalities when it sank in Hurricane Sandy (2012)

FANTOME

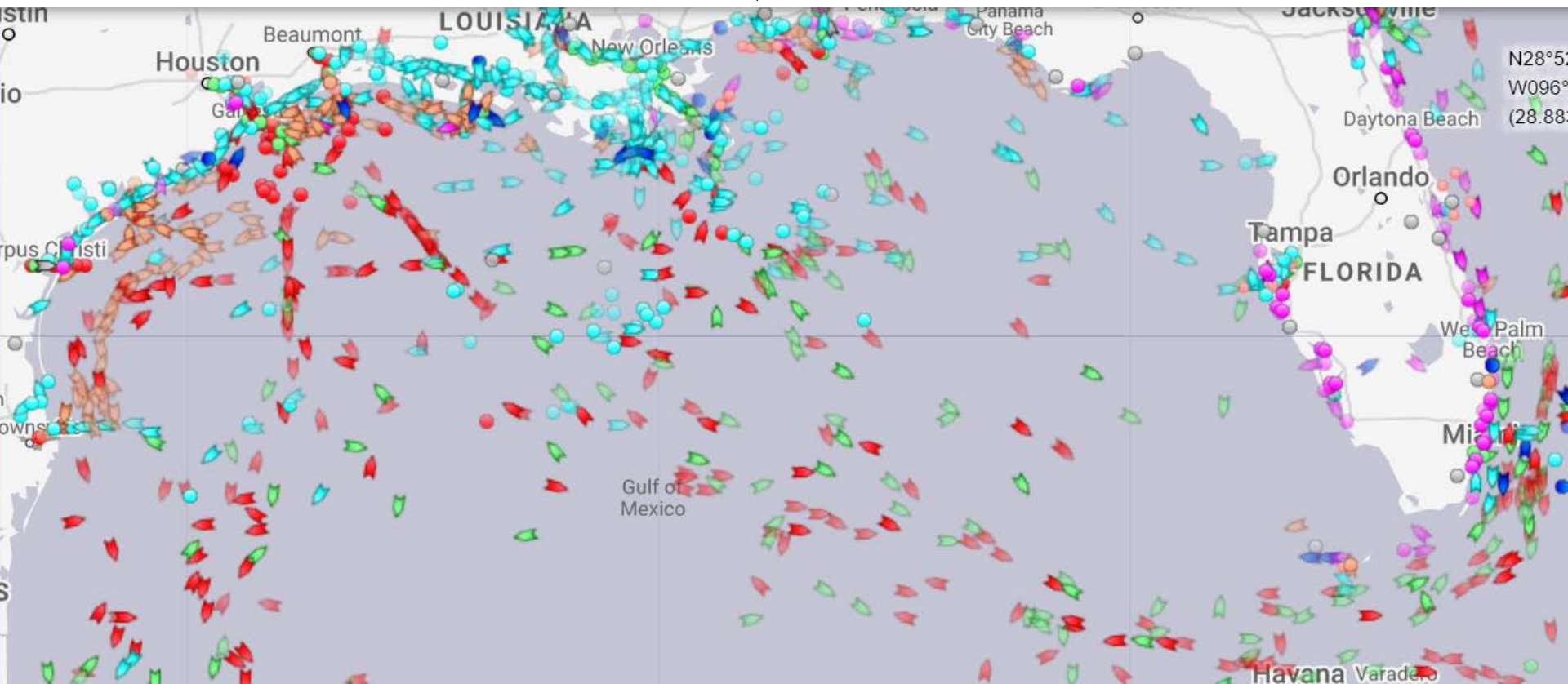
31 fatalities when it sank in Hurricane Mitch (1998)

Hurricane Delta - 2020 October 6th, 2pm EDT Weather Avoidance by Ships



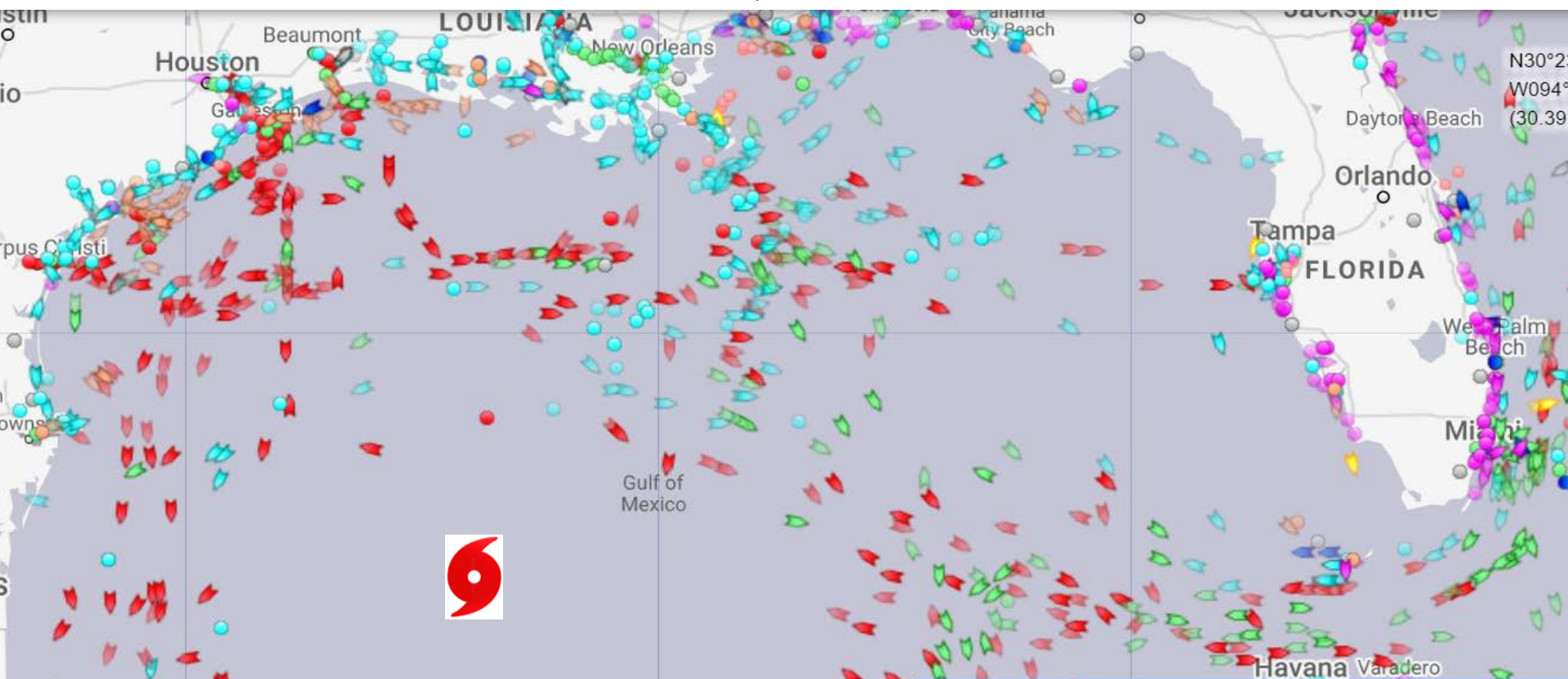
marinetraffic.com

Hurricane Delta - 2020 October 7th, 9am EDT Weather Avoidance by Ships



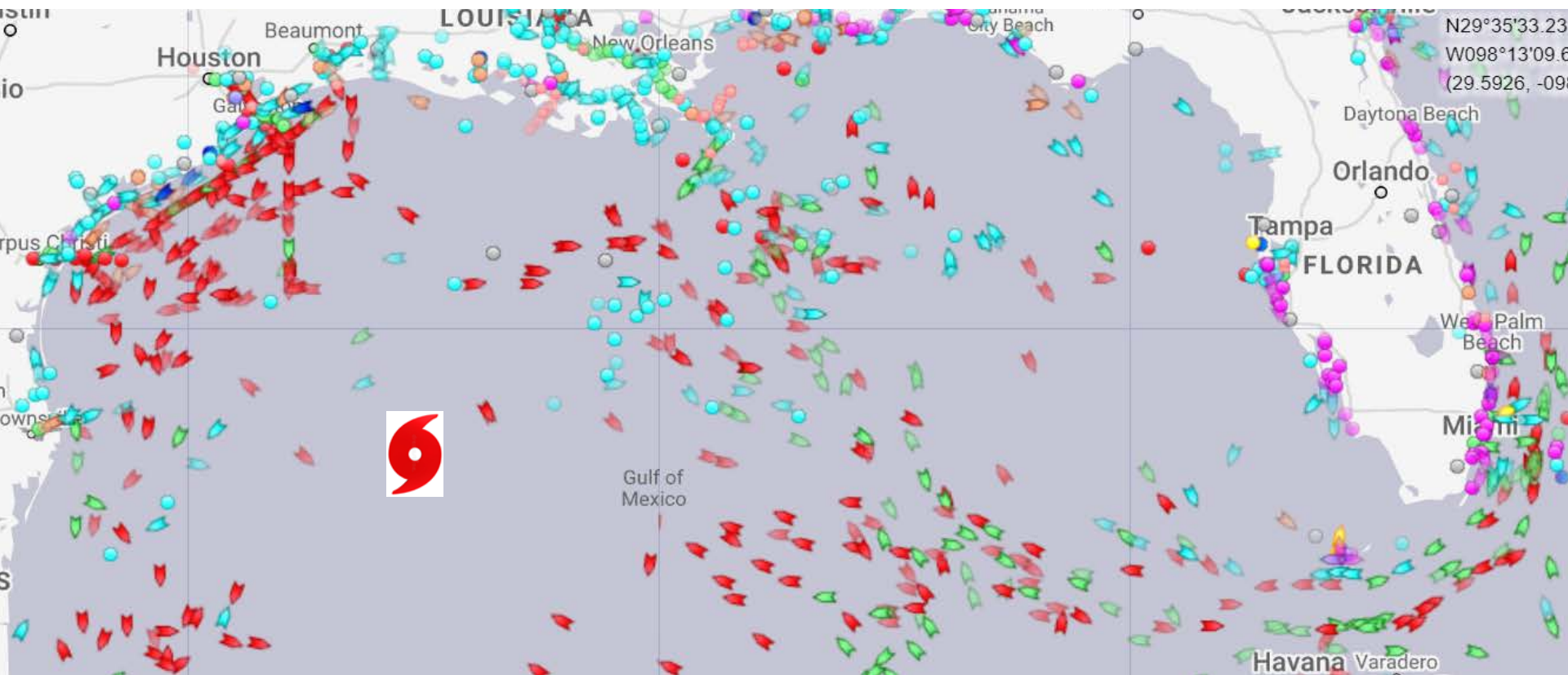
marinetraffic.com

Hurricane Delta - 2020 October 8th, 9am EDT Weather Avoidance by Ships



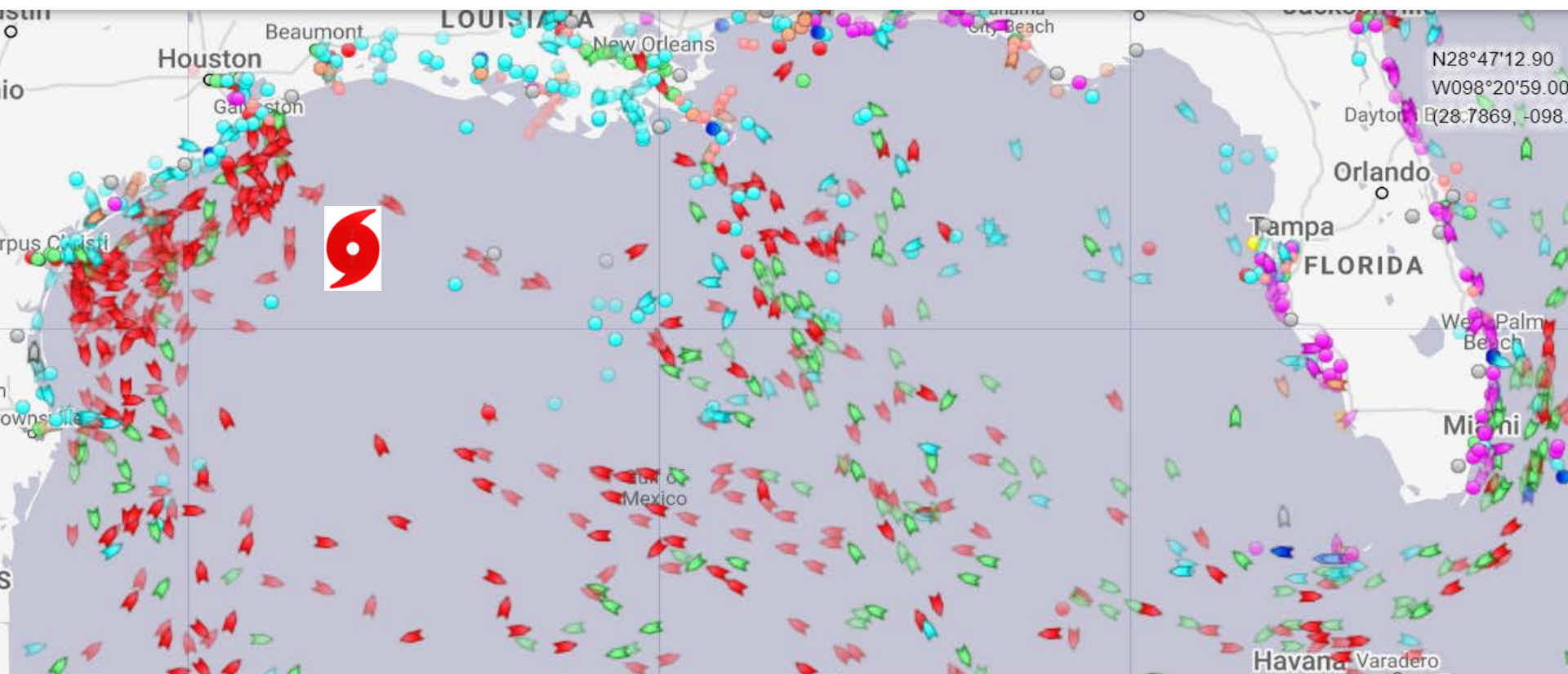
marinetraffic.com

Hurricane Delta - 2020 October 8th, 5pm EDT Weather Avoidance by Ships



marinetraffic.com

Hurricane Delta - 2020 October 9th, 9am EDT Weather Avoidance by Ships



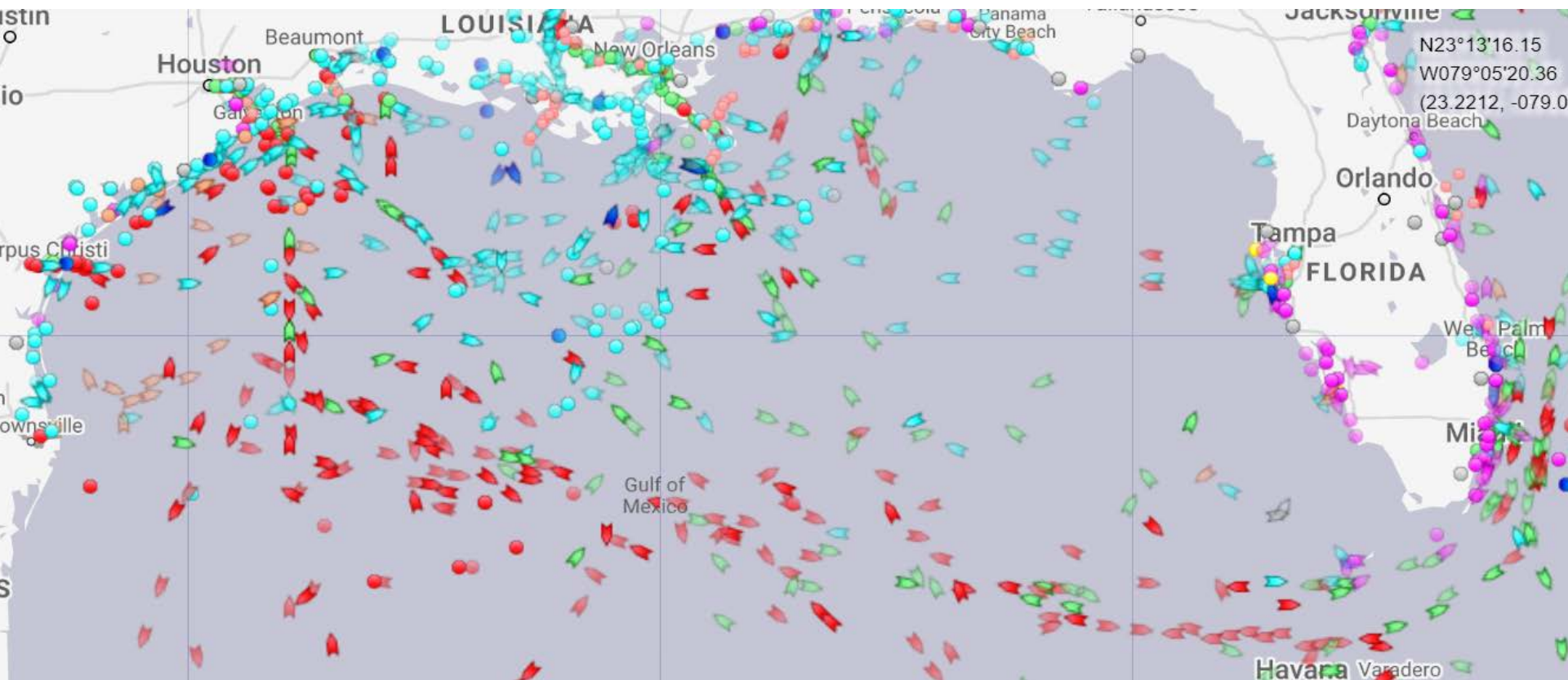
marinetraffic.com

Hurricane Delta - 2020 ⁶October 10th, 1pm EDT Weather Avoidance by Ships

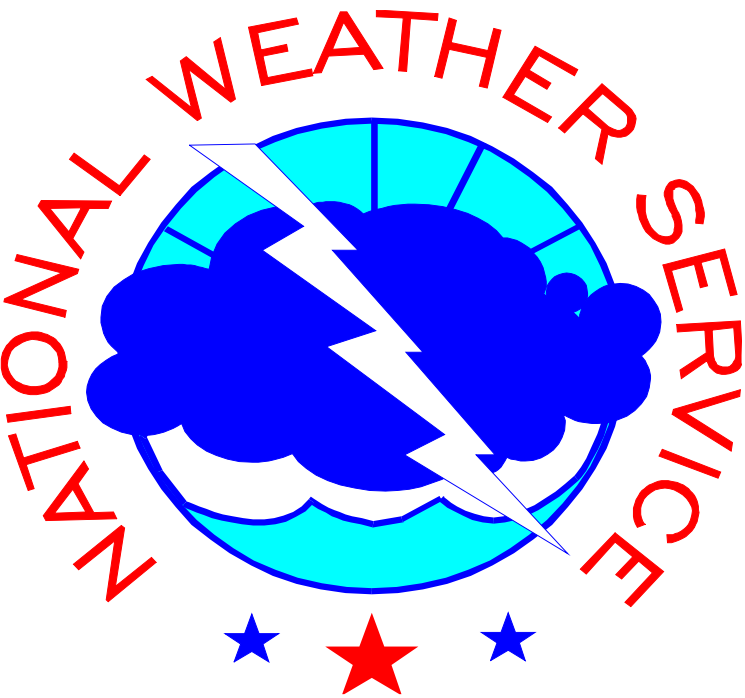


marinetraffic.com

Hurricane Delta - 2020 October 11th, 7am EDT Weather Avoidance by Ships



marinetraffic.com



**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**

APPROVED: 03/30/2020

Louis W. Uccellini

Louis W. Uccellini
NOAA Assistant Administrator
for Weather Services

APPROVED: 3/31/20

RV Timme

Richard V. Timme
Rear Admiral, USCG
Assistant Commandant for
Prevention Policy

USCG Weather Support Webpage

<https://www.nhc.noaa.gov/uscg/>



Tropical Analysis and Forecast Branch
NWS National Hurricane Center

National Hurricane
Center Tropical
Cyclone Status
Updates

USCG Weather Support

NOAA/NWS/National Hurricane Center
District 7 – Miami, FL
District 8 – New Orleans, LA

**National Hurricane Center
Tropical Cyclone Status Updates**
All NHC issuing advisories for the Atlantic on TD Cristobal

There are no tropical cyclones in the Eastern North Pacific at this time.
www.nhc.noaa.gov
Add this widget to your page

[District 7 Briefing](#)[Submit NWS Spot Forecast Request](#)[District 8 Briefing](#)

[Tropical Update](#)[Current Conditions](#)[Marine Forecasts](#)[Wave Models](#)[Weather Forecasts](#)[River Forecasts](#)[Other Links](#)

Tropical Update

Atlantic Tropical Cyclones/Disturbances

Two-Day Graphical Tropical Weather Outlook
National Hurricane Center, Miami, Florida

Atlantic Tropical Weather Outlook

Five-Day Graphical Tropical Weather Outlook
National Hurricane Center, Miami, Florida

NWS Watch, Warning, and Advisory Map

*Hover over map to enlarge.
Click on map for full map and product legend.*

- Hurricane Warning
- Tropical Storm Warning
- Hurricane Watch
- Tropical Storm Watch
- Gale Warning
- Storm Warning
- Hurricane Force Wind Warning
- Gale Watch
- Storm Watch
- Hurricane Force Wind Watch
- Small Craft Advisory

[Offshore Waters Forecast Text Products](#)[Marine Graphical Forecast Map](#)

Latest
Hurricane
Briefings
Available to
Download

Submit National
Weather Service
Spot Forecast
Request

Spot Forecast Example for USCG District 11

13 April 2022

SPOT FORECAST FOR SAR - RCC ALAMEDA...USCG
NWS NATIONAL HURRICANE CENTER MIAMI FL
537 AM PDT Wed Apr 13 2022

Forecast is based on forecast start time of 0900 PDT on April 13.
If conditions become unrepresentative...contact the NWS
National Hurricane Center/Tropical Analysis and Forecast
Branch at (305)229-4425.

.DISCUSSION...

Latitude = 0.5N Longitude = 104.25W

Gentle S winds with southerly swell are expected in the short term. The
southerly swell will cause significant wave heights to be near 7 ft. No
significant showers or thunderstorms are expected.

.REST OF TODAY...

Sky/weather.....Mostly cloudy (75-85 percent).

Max temperature.....Around 78.

Surface winds (kts).Southeast winds around 5 knots late in the
morning becoming light, then becoming south 5
to 7 knots late in the afternoon.

Swell height.....South swell 6 feet.

Wave height.....7 feet.

Wave period.....14 SECONDS.

TIME (PDT)	9 AM	NOON	3 PM
Sky (%).....	80	84	84
Weather cov.....			
Weather type....	NONE	NONE	NONE
Tstm cov.....			
Temp.....	78	78	78
SFC wind (kts)..	SE 5G10	S 4G8	S 5G10
Swell hgt (ft)..	S 6	S 6	S 6
Wave period (s).	14	14	14
Wave height (ft)	7	7	7
SST (F).....	81	81	81

SAR - RCC ALAMEDA

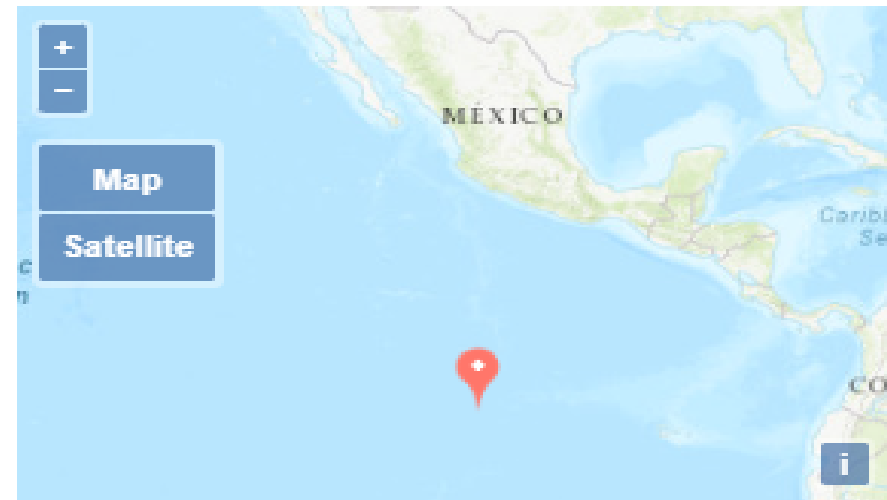
Marine Incident

Forecast Start Time:2022-04-13 9:00 AM PDT

Request Time: 2022-04-13 5:23 AM PDT

Deliver Time: 2022-04-13 5:23 AM PDT

Forecast Complete At: 2022-04-13 5:38 AM PDT





2022 Impact-based Decision Support Services to U.S. Coast Guard Districts by Tropical Analysis and Forecast Branch (TAFB)/ National Hurricane Center (NHC)



54 Spot Forecasts by NHC/TAFB for 2022 U.S. Coast Guard District Operations





2022 Impact-based Decision Support Services to U.S. Coast Guard Districts by Tropical Analysis and Forecast Branch (TAFB)/ National Hurricane Center (NHC)



USCG District 8 Hurricane Tabletop Exercise April 20-21, 2022

Planning

- Stephen Konarik led the TAFB team with Andrew Hagen and Amanda Reinhart
- Began planning with USCG District 8 in January 2022
- Two separate, simultaneous hurricanes impacting District 8/Gulf of Mexico (Texas coast and Florida Panhandle/Mobile Bay
- Alexandria Andonian (Storm Surge Unit) provided the Storm Surge forecasts

Exercise

- Organized 5 full briefings with each having 2 “mini” briefings within them (24 separate briefings altogether)
- On May 8, Chris Landsea, Stephen Konarik, Amanda Reinhart, Brad Reinhart, and Aidan Mahoney toured D8 facilities in New Orleans and provided additional training





2022 Impact-based Decision Support Services to U.S. Coast Guard Districts by Tropical Analysis and Forecast Branch (TAFB)/ National Hurricane Center (NHC)



Atlantic Maritime Search and Rescue Regions

UNCLASSIFIED



New Orleans Maritime SRR

Miami Maritime SRR

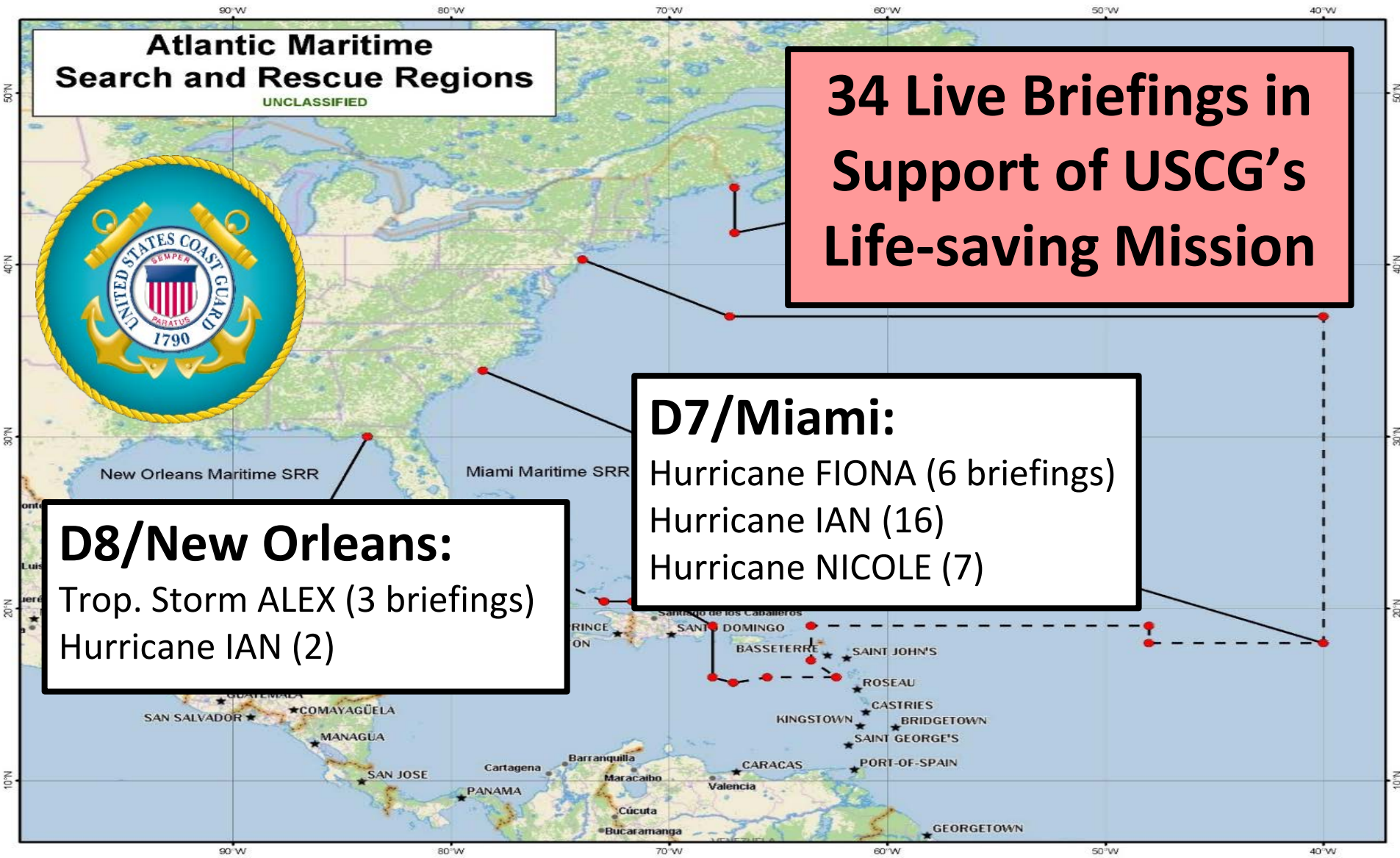
D8/New Orleans:

Trop. Storm ALEX (3 briefings)
Hurricane IAN (2)

D7/Miami:

Hurricane FIONA (6 briefings)
Hurricane IAN (16)
Hurricane NICOLE (7)

34 Live Briefings in
Support of USCG's
Life-saving Mission





USCGSoutheast
@USCGSoutheast

.@USCGSoutheast cutters are strategically placed in the #FloridaStraits to respond to offshore search and rescue while avoiding the worst of Hurricane #Ian. #DontTakeToTheSea #SAR



3:57 PM · Sep 28, 2022



USCGSoutheast
@USCGSoutheast

In just 1 week, @uscg members rescued 1,007 Floridians in distress following #HurricaneIan.

We are grateful for the support from units across @uscglantarea & @uscgpacarea that surged into Florida to help. We continue to assist federal, state & local partners in recovery efforts.



4:58 PM · Oct 7, 2022

2022 Impact-based Decision Support Services to U.S. Coast Guard Districts by Tropical Analysis and Forecast Branch (TAFB)/National Hurricane Center (NHC)

Hurricane Ian

NHC/TAFB provided 18 live briefings to US Coast Guard Districts 7 (Miami) and 8 (New Orleans)

“NHC team,



The forecasts and support you and your team provided [during Hurricane Ian] were excellent and were heavily relied on to make operational decisions to move aircraft and cutters. The flexibility of your team to meet CG meeting schedules was greatly appreciated.

Once again NHC has exceeded expectations and enabled the Coast Guard to make informed decisions to best protect resources and respond to those in distress. Thank You”

CAPT Aaron Ortenzio
CG District Seven Chief of Incident Management



**2022 Impact-based Decision Support Services
to U.S. Coast Guard Districts
by Tropical Analysis and Forecast Branch (TAFB)/
National Hurricane Center (NHC)**



NHC/TAFB's 2022 Foreign Nation IDSS

TAFB's Spanish-speaking forecasters (Aguirre-Echevarria, Delgado, Ramos, Rivera-Acevedo, Rubio, Stripling, Tichacek) provided critical Impact-based Decision Support Services during the 2022 Hurricane Season:

For NHC/Hurricane Specialist Unit - Coordinating Watches/Warnings:

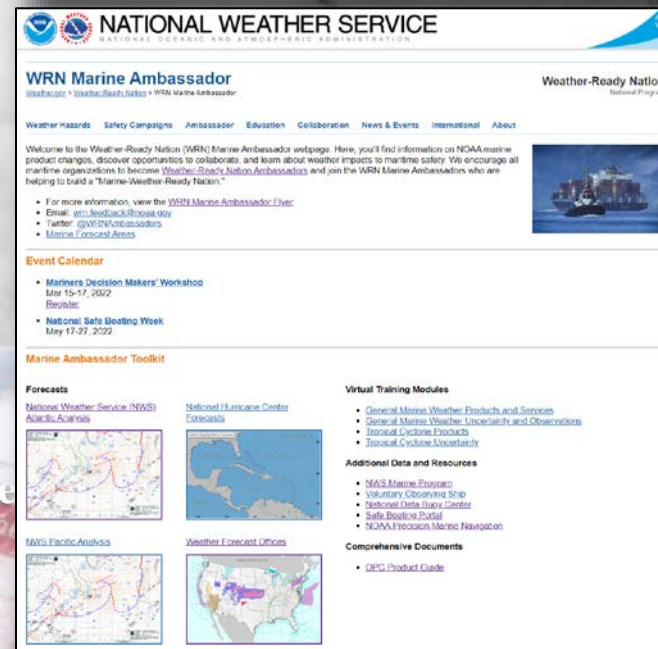
Colombia – 12 times	Costa Rica – 3
Cuba – 6	Dominican Republic – 3
El Salvador – 3	Guatemala - 4
Honduras – 8	Mexico – 50
Nicaragua – 10	Venezuela – 5

For NOAA Public Affairs – Conveying Forecasts/Impacts to the Spanish Media:

95 Live Interviews during Tropical Storm Alex, Hurricane Fiona, and Hurricane Ian

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



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

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

Mariners Weather Hazards Workshop



- Workshop at National Hurricane Center (NHC) every March
- Purpose: Increase awareness and understanding among mariners of the various forecast products and services available from the National Weather Service
- Attendees:
 - Cruise Lines
 - Cargo Ships
 - Oil Tankers/Oil Platforms
 - Commercial Fisheries
 - U.S. Coast Guard/U.S. Navy
 - Large Recreational Vessels
 - Maritime Academies
- Organizers:
 - NHC/Tropical Analysis and Forecast Branch
 - Ocean Prediction Center
 - Weather Forecast Offices
 - Port Meteorologists





2022 TAFB Social Media Highlights

2022 Twitter Stats

Tweets Sent

1,774 - 807 manual tweets

Profile Visits

709,000

Followers

34,925 - an increase of 5,765



Tropical Atlantic Marine Weather Briefing

- 5-day Briefing posted each Sunday and Thursday available publicly on NHC YouTube Channel; link also posted to TAFB Twitter
- This new service began 1/1/2023

Automated Marine Warning Tweets began January 2020



NHC_TAFB @NHC_TAFB · Apr 14

Thu Apr 14 1030 UTC: A Gale Warning is in effect for the Caribbean. More info: go.usa.gov/xdq8J

https://twitter.com/NHC_TAFB

TROPICAL ATLANTIC MARINE WEATHER BRIEFING



Sunday, January 1, 2023

VALID THROUGH Friday, January 6

Prepared by:

Dylan Flynn

*Tropical Analysis and Forecast Branch
NWS National Hurricane Center*



Play (k)

0:21 / 5:34

Tropical Atlantic Marine Weather Briefing - January 1st, 2023

[NHC/TAFB Marine Briefings](#)

Notification by email or
twitter.com/NHC_TAFB

Familiarization Floats

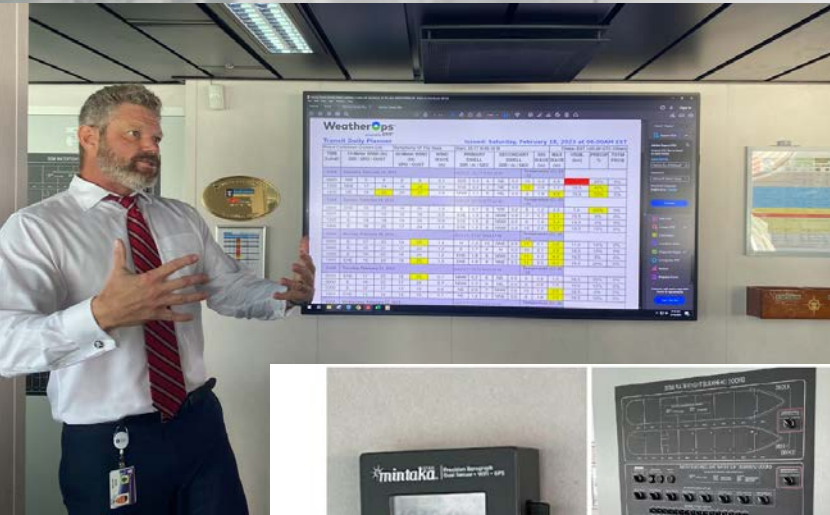


NOAA Ronald H. Brown - Nelsie Ramos – May 2019



NOAA Nancy Foster — Scott Stripling — Apr 2022

Familiarization Tours



Ship's barometer & semi/light/watertight bulkhead doors indicator panel



Center of Wheelhouse (used while cruising)



Ship clinometer

National Hurricane Center/Tropical Analysis and Forecast Branch

<https://www.nhc.noaa.gov/marine/?atlc>



1-305-229-4424 –Atlantic/Gulf/Caribbean 1-305-229-4425 –Pacific

On Twitter:

@NHC TAFB