



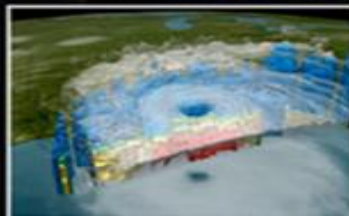
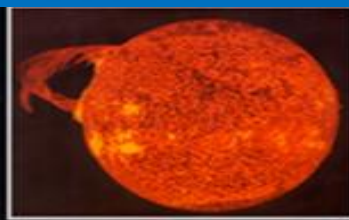
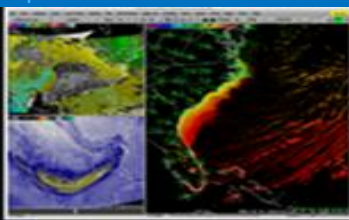
NOAA

National
Weather
Service

National Weather Service

Marine Weather Safety

Darren Wright
National Marine Program Leader

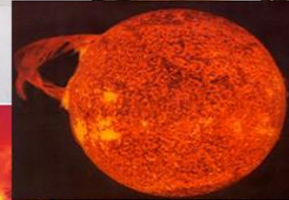




NWS National Service Programs

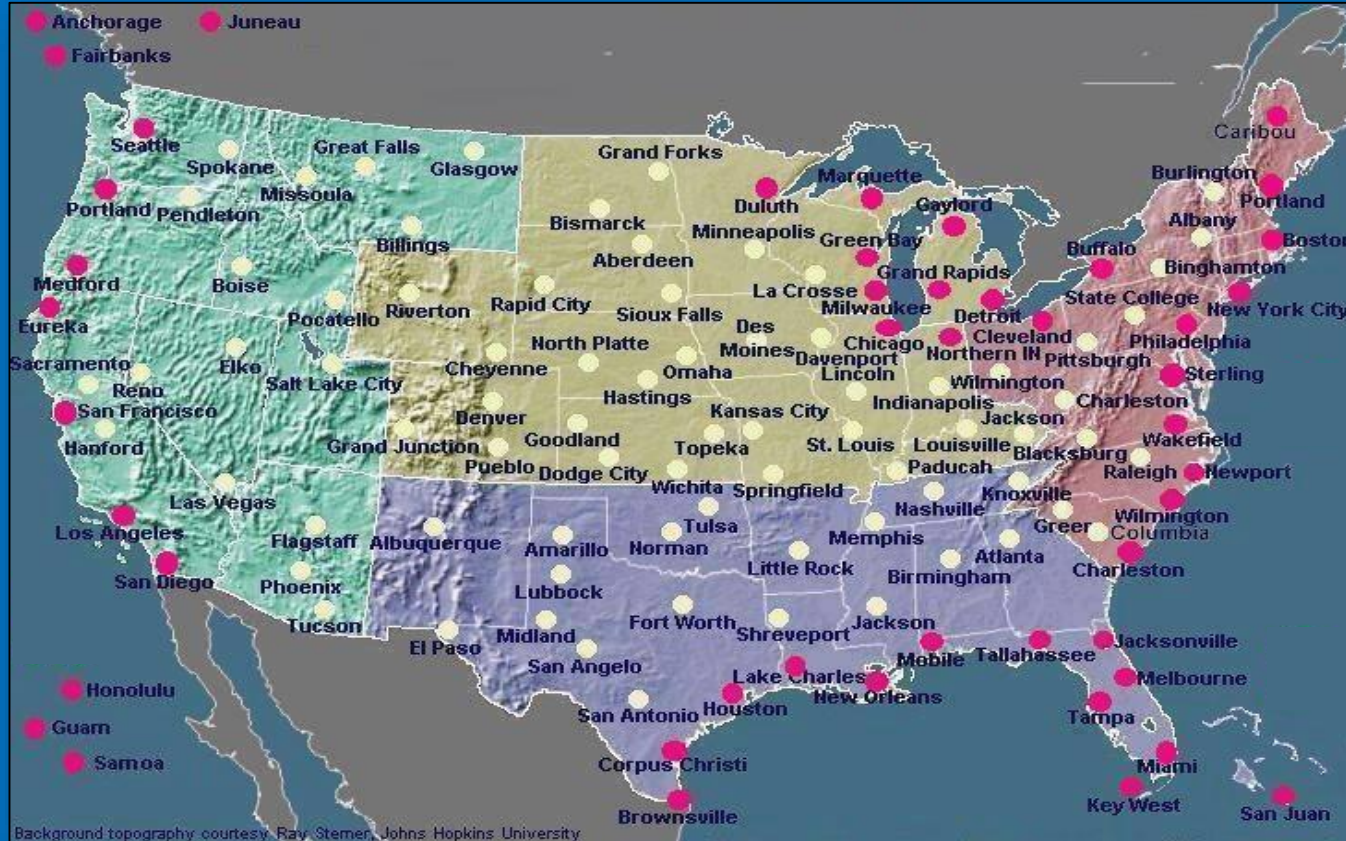


- Aviation Weather
- Climate
- Fire Weather
- Hydrology/Water Resources
- **Marine and Coastal**
- Public Weather
- Severe Weather
- Space Weather
- Tropical Weather
- Tsunami
- Winter Weather



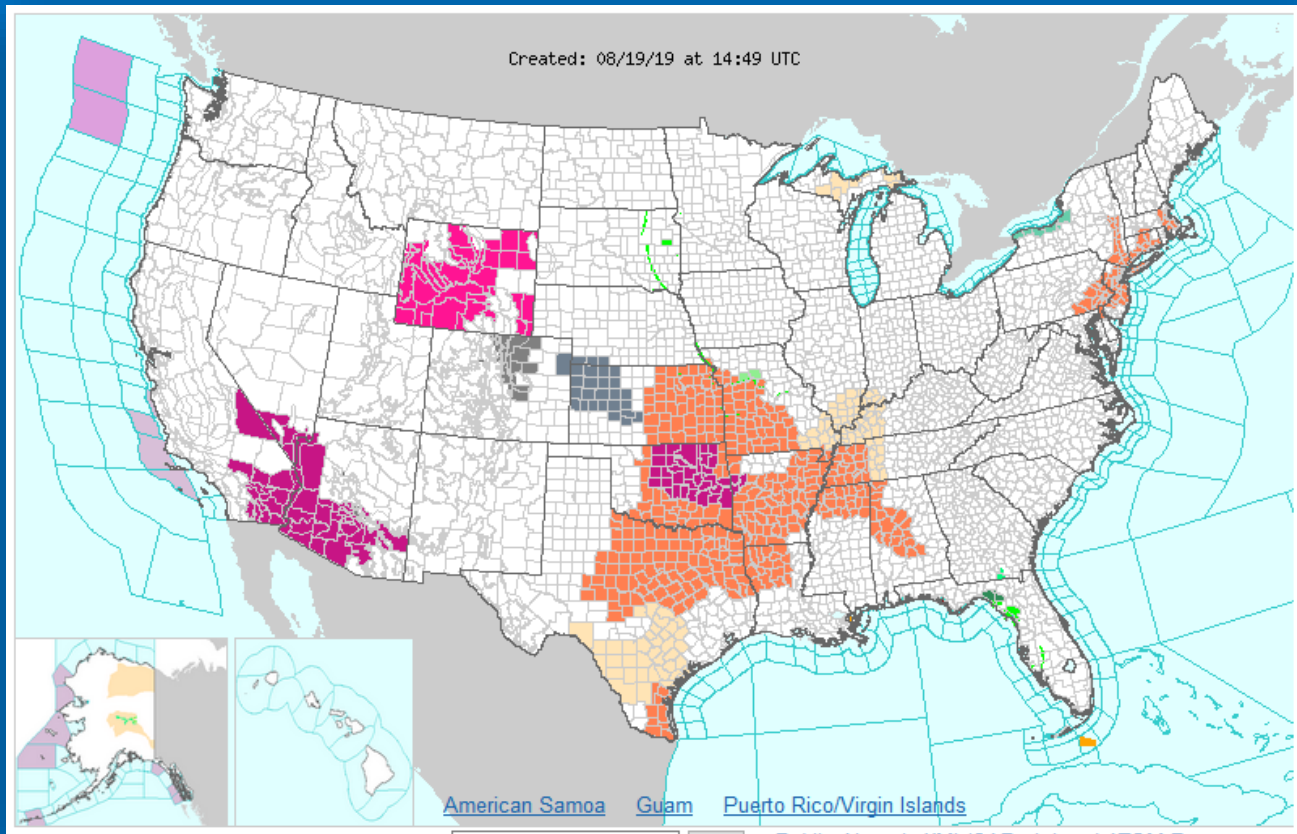


NWS Weather Forecast Offices



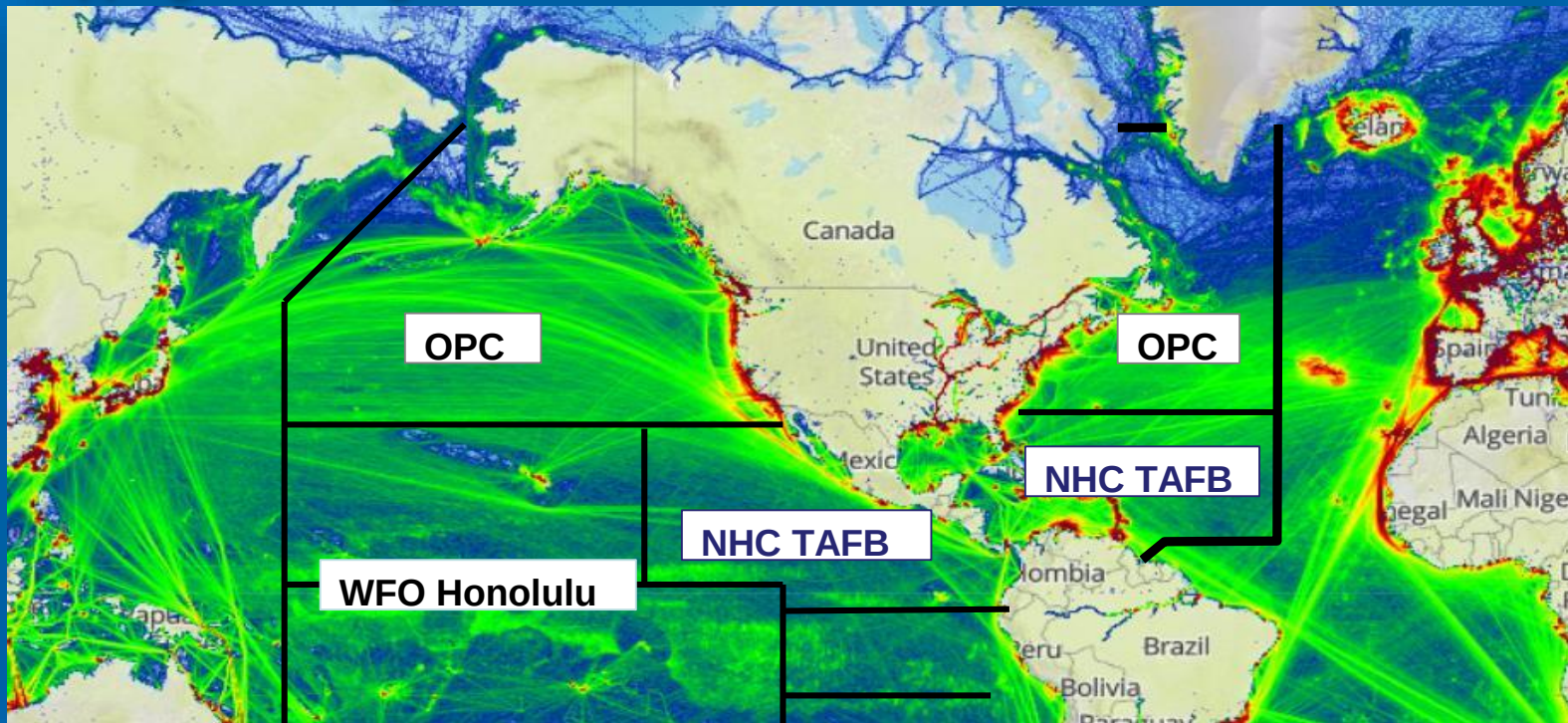


Coastal and Offshore areas



NWS High Seas Marine Zones

Shipping lanes in green:



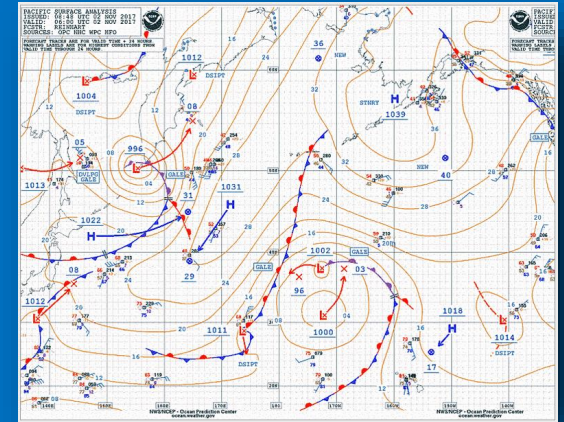
Source of 2013 total ship tracks and background:

marinetraffic.com





- Marine Text Forecasts and Products
- Marine Graphic Forecasts and Products
- Satellite and RADAR Imagery
- Ice Analysis, Forecasts and Iceberg Reports
- Computer Generated Model Guidance
- Foreign Marine Forecasts
- Marine Climatological Information





Other Dissemination Methods



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.

Iridium SafetyCast - Near future satellite transmission of high seas forecasts and warnings (Operational in 2020)

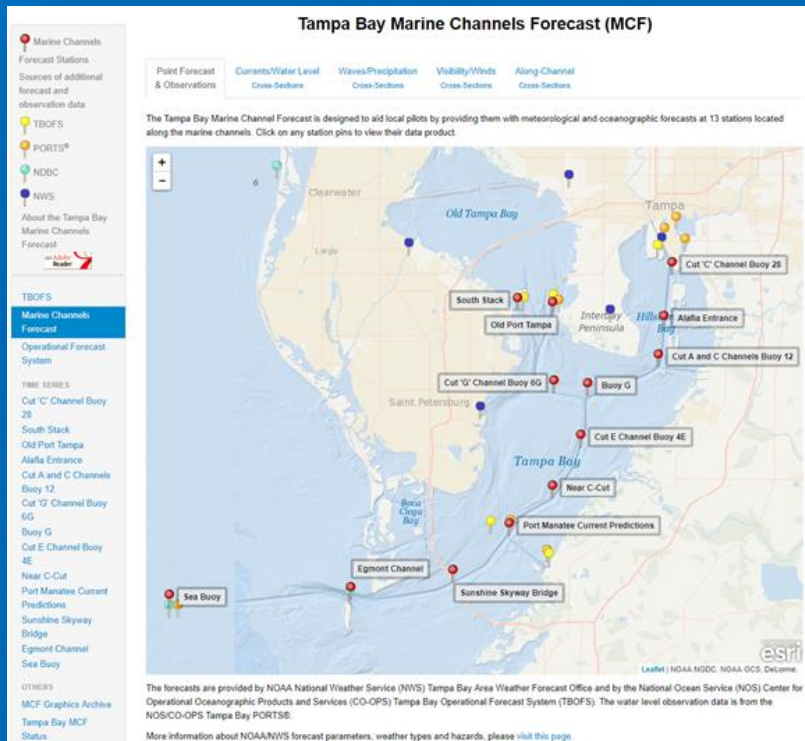
FTP Mail - User can request and receive NWS text and graphic products via email using ftp commands. Low bandwidth.

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





Tampa Bay Marine Channel Forecast



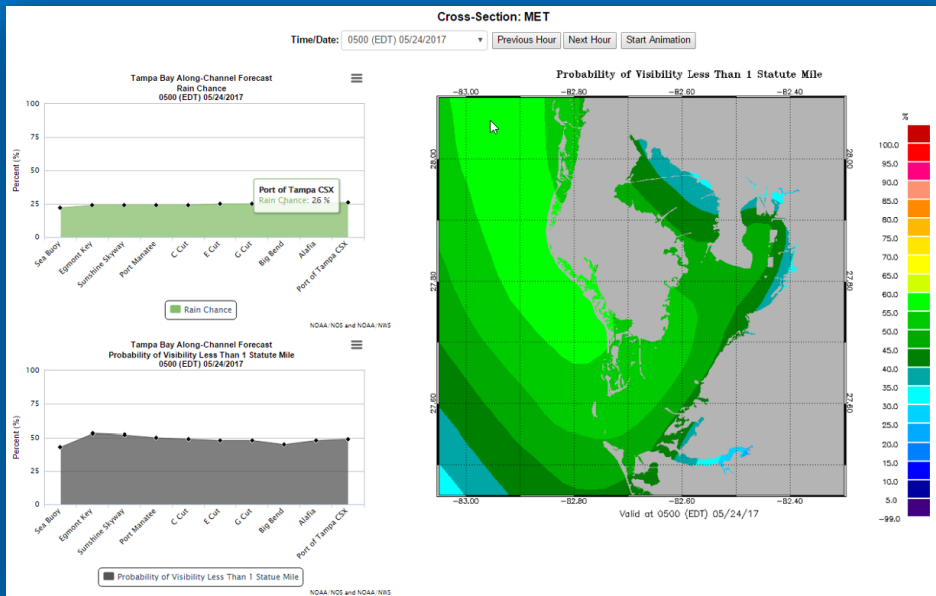
- The Weather Forecast Office -TB Developed the Marine Channel Forecast product (2012)
- Forecasts guidance of water levels, currents, salinity, water temp, **winds, precip, waves and visibility** at critical locations within the Tampa Bay waterway
- TBMCF transitioned to the NOS CO-OPS in Aug. 2017

https://tidesandcurrents.noaa.gov/ofs/tbofs/tbofs_mcf.html

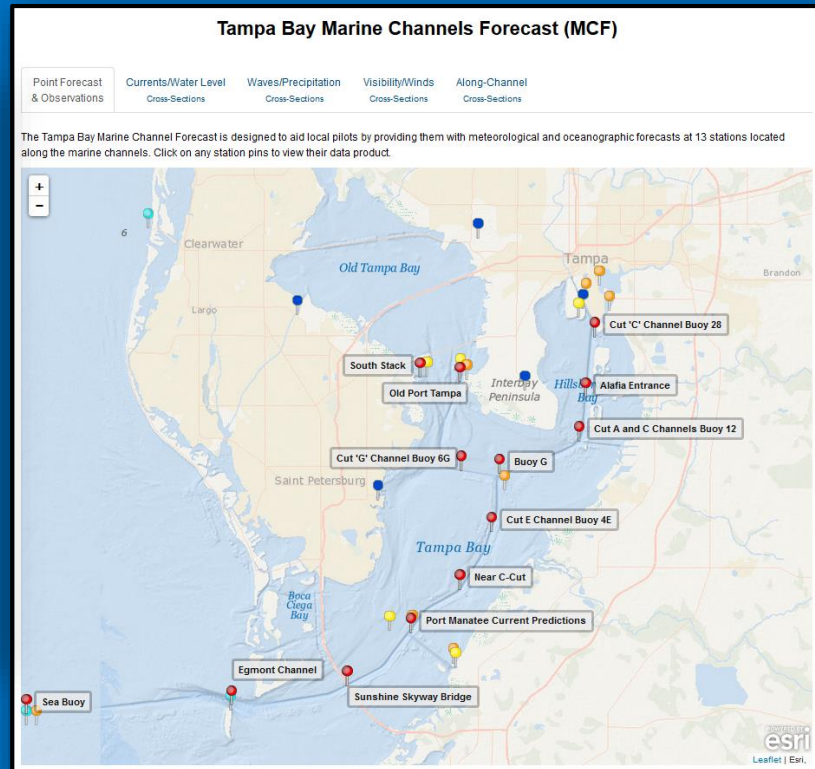




Probability of Visibility

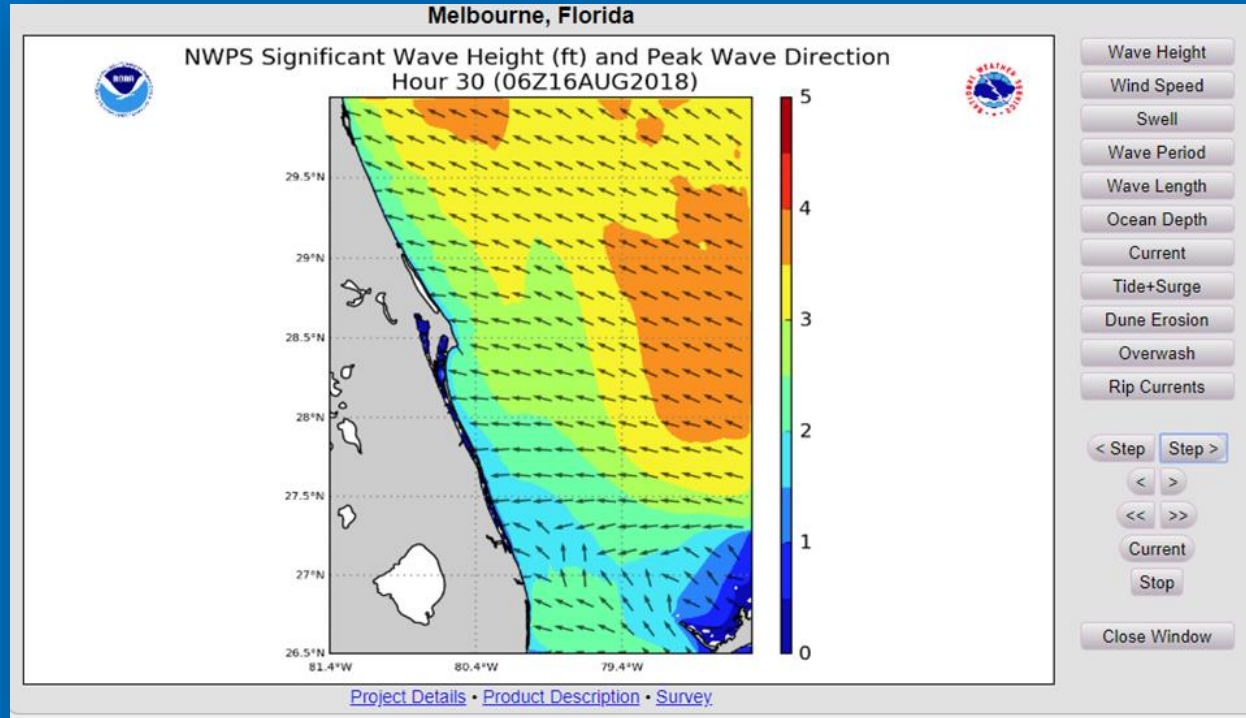


Tampa Bay Marine Channel Forecast





Nearshore Wave Prediction System (NWPS)



<http://polar.ncep.noaa.gov/nwps/viewer.shtm>





Wave and Wind Forecast Along Transect

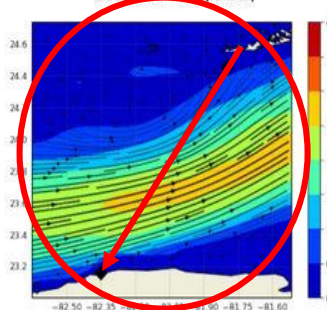


Key West, Florida

Experimental Nearshore Wave Prediction System Transect Forecast Guidance



Ocean Current (Knots)

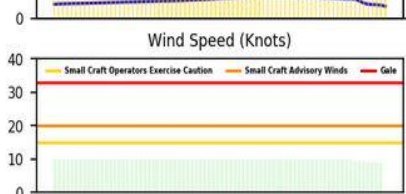


(ft) Significant Wave Height

Peak Wave Period (sec)

Small Craft Advisory Line

Wind Speed (Knots)



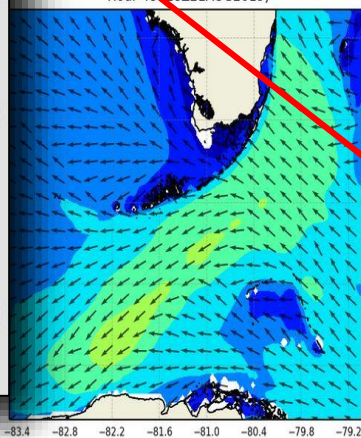
Key West Sea Buoy to Havana
Hour 48 (18z21Aug2019)
Distance: 155NM

****EXPERIMENTAL**:** The accuracy or reliability of these forecasts are not guaranteed nor warranted in any way.
Forecast should not be used as the sole resource for decision making. Graphics may not be available at all times.

Nearshore Wave Prediction System (NWPS)

Key West, Florida

NWPS Significant Wave Height (ft) and Peak Wave Direction
Hour 48 (18Z21AUG2019)



Wave Height

Wind Speed

Wave Period

Wave Length

Ocean Depth

Current

Tide+Surge

Dune Erosion

Overwash

Rip Currents

Wave System

Transects

< Step >

< >

<< >>

Current

Stop

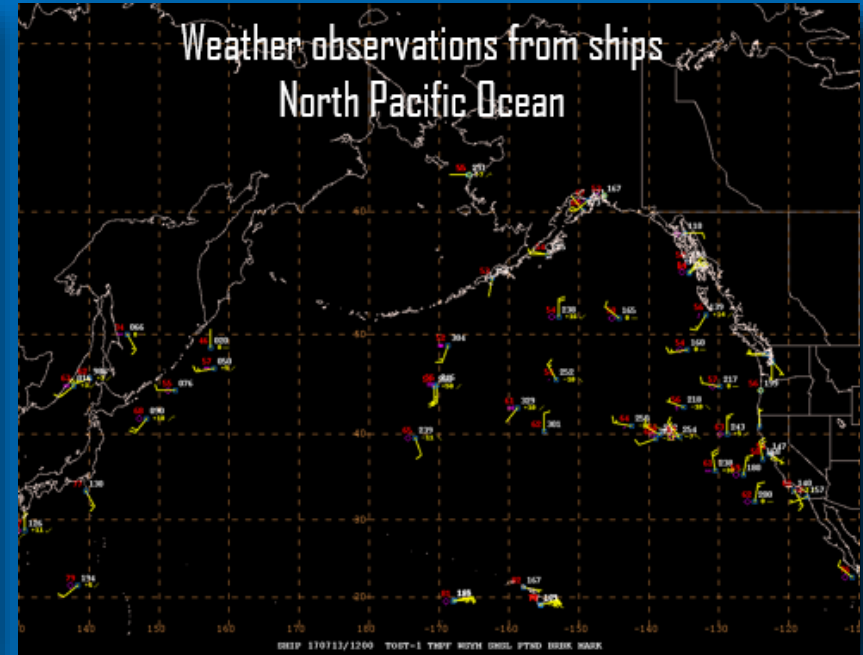
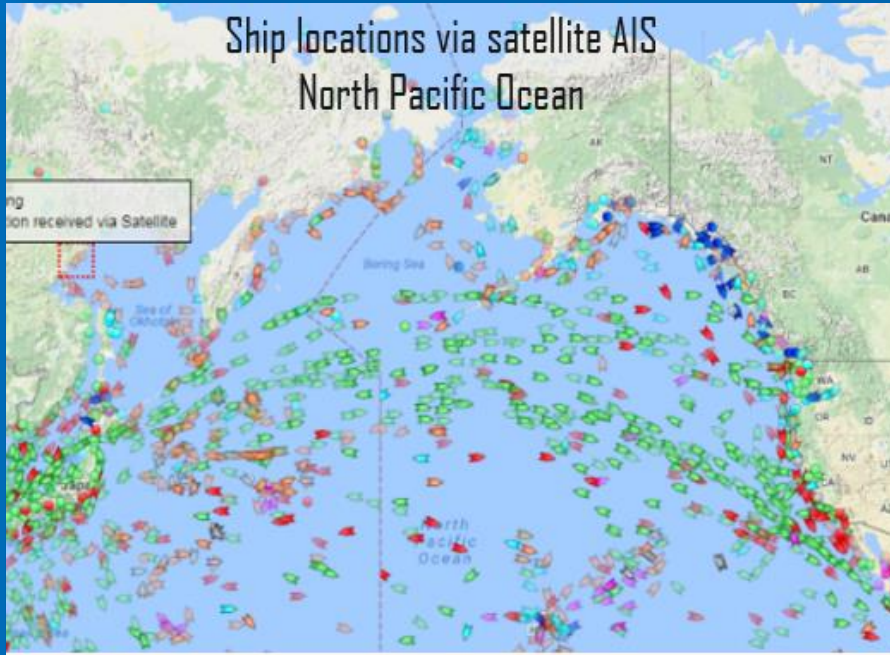
Close Window

<https://polar.ncep.noaa.gov/nwps/para/viewer.shtml>





Lack of Weather Obs at Sea





Receiving Weather Observations via AIS

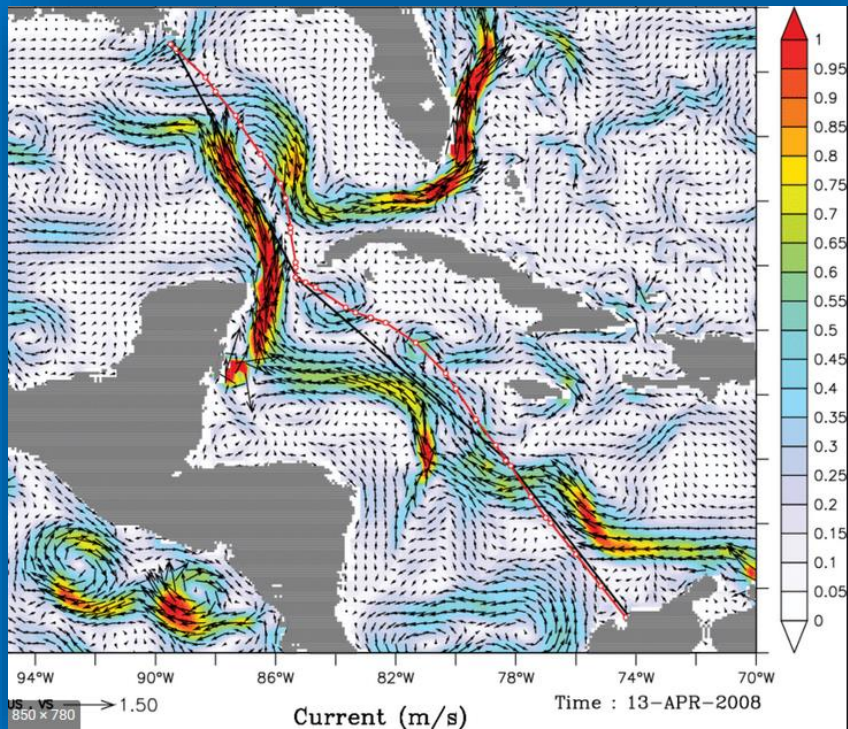


- NOAA, in partnership with US Army Corp and MARAD, are conducting a “proof-of-concept” project transmitting weather observations from ships using AIS
- The potential increase in data would help improve weather forecasts in the open seas
- NOAA hopes to complete this project in 2020





Weather Observations from Marine Companies



Are you collecting Weather Observations corporately for ship tracking?



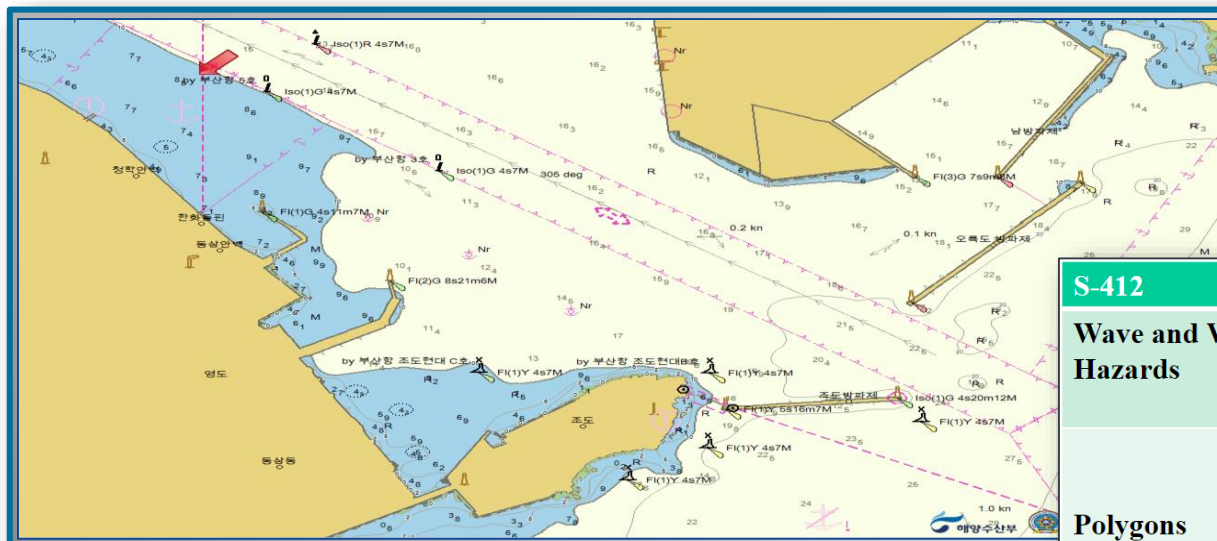


S-41X Weather Overlay Goal



S-412	S-413	S-414
Wave and Weather Hazards	Wave and Weather Conditions	Wave and Weather Observations
Polygons	Features (e.g. fronts) Graphics & Gridded Data	Point Based Data

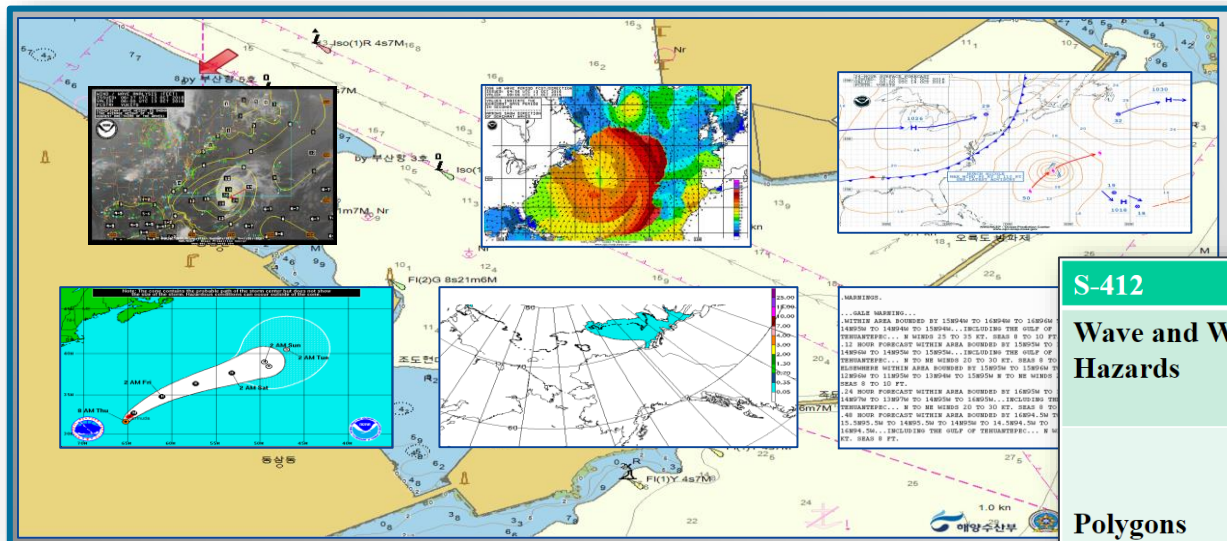
S-41X Weather Overlay Goal



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S-41X Weather Overlay Goal

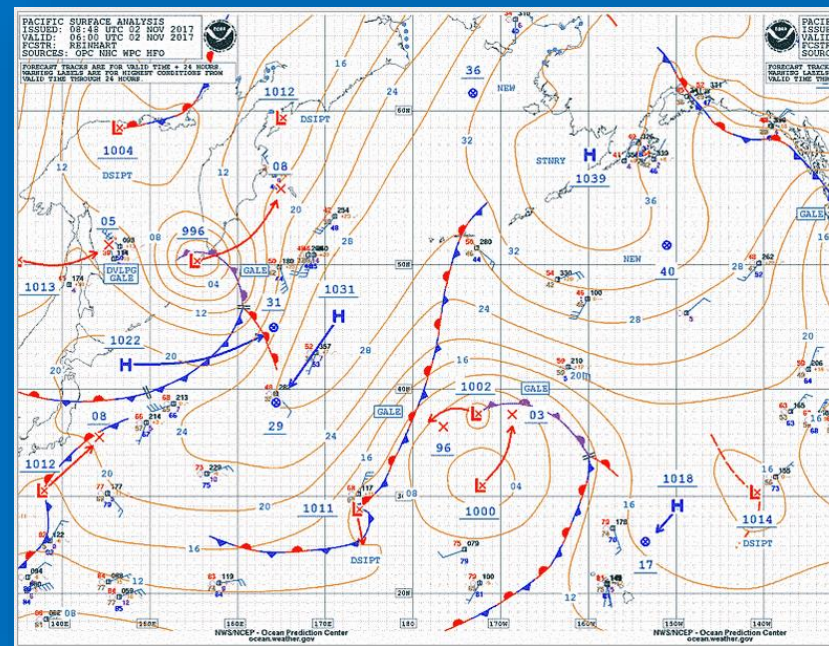
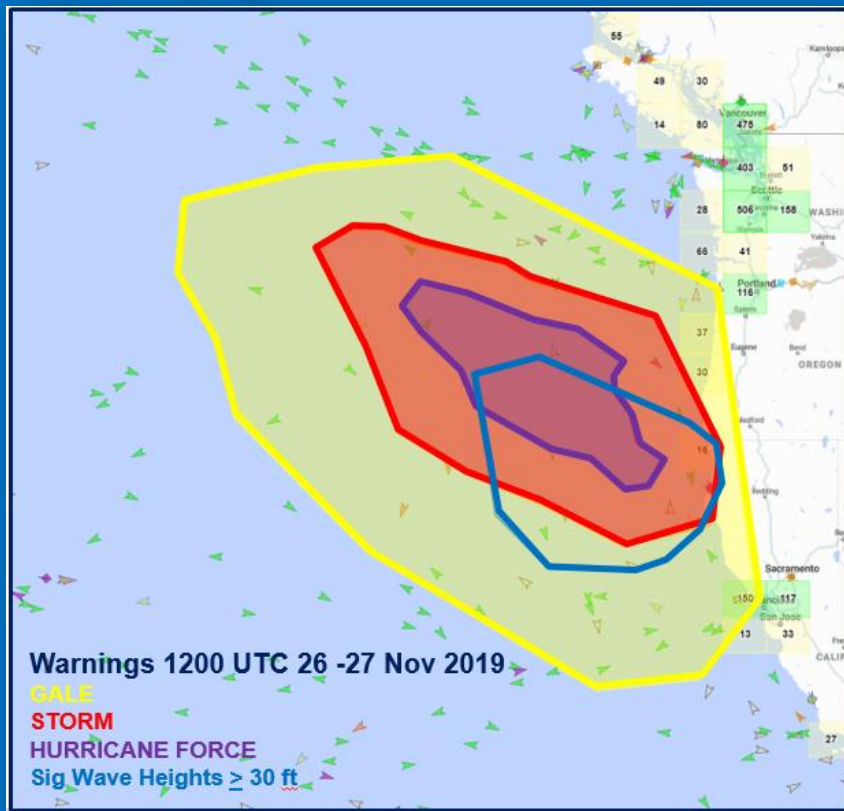
Develop a navigation safety product specification for weather information for use in Electronic Chart and Navigation Display System (ECDIS)



S-412	S-413	S-414
Wave and Weather Hazards	Wave and Weather Conditions	Wave and Weather Observations
Polygons	Features (e.g. fronts) Graphics & Gridded Data	Point Based Data



Polygons for Marine Hazards



Thank you! Questions?



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National Marine Program Leader

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301-427-9283