

Welcome!

Three Minute Thesis Webinar: Tropical Weather



Regional Collaboration Network

Improving NOAA's service to the Nation through collaboration

Three Minute Thesis Outline

Welcome and Overview

New Technologies for Sampling Hurricanes – Shirley Murillo

Three Questions that Guide Hurricane Forecasting – John Cangialosi

Trying to Reason with Hurricane Season – Jamie Rhome

Audience Questions

Tropical Weather Decision Support Services – Jennifer Hubbard

Selling the Hurricane Story- Know Your Audience – Dennis Feltgen

Audience Questions

After the Storm... How NOAA Helps Re-Open Ports – Kyle Ward

Disasters R Us? NOAA Fisheries and Disaster Assessments – Michael Jepson

Hurricane Hunters on a Record Breaking Season – LCDR Becky Shaw

Audience Questions

Webinar Concludes / Brief Survey

New Technologies for Sampling Hurricanes



Shirley Murillo

Deputy Director, Hurricane Research Division, Atlantic Oceanographic and Meteorological Laboratories, OAR

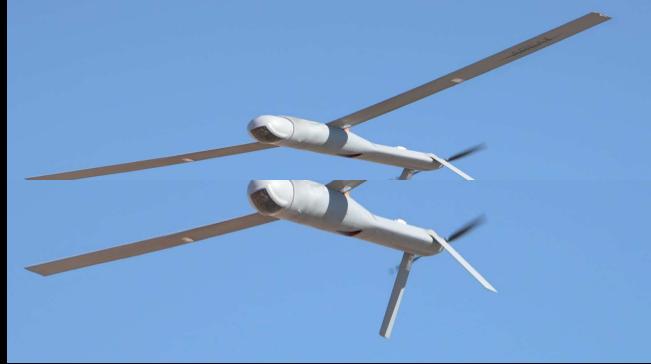


Doppler Wind Lidar

- Provides wind profiles of the hurricane environment



Un-crewed areal system: Altius-600



- Flies close to the ocean surface



Un-crewed Ocean Hurricane Glider

- Collects ocean data below a hurricane



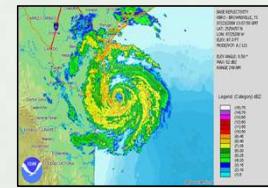
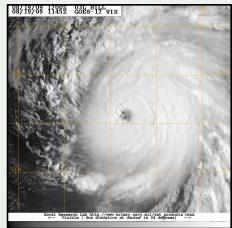
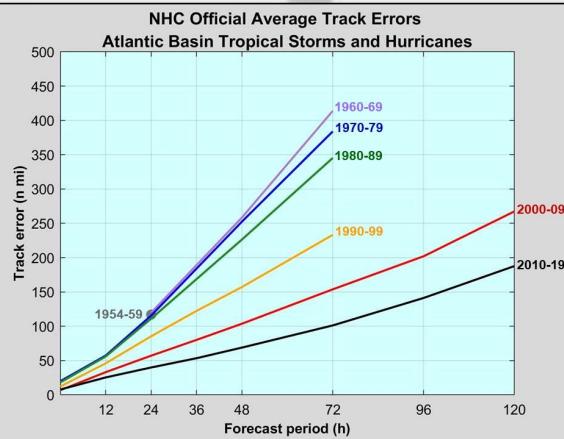
Three Questions that Guide Hurricane Forecasting

* Before the Forecast Begins

- *Find the center of circulation*
- *Estimate the intensity*
- *Evaluate the wind field*

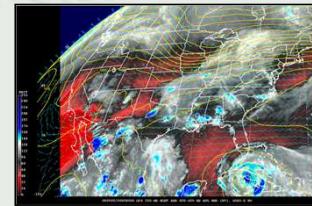
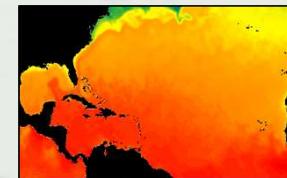
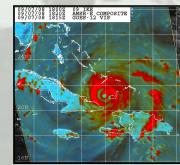
1. Where is it going?

Motion of tropical systems is largely controlled by synoptic scale ridges, troughs, jet streams



2. How strong will it become?

A storm's strength is dependent on its exact track. It also depends on wind, temperature, moisture patterns near the core and in the environment of the tropical system.

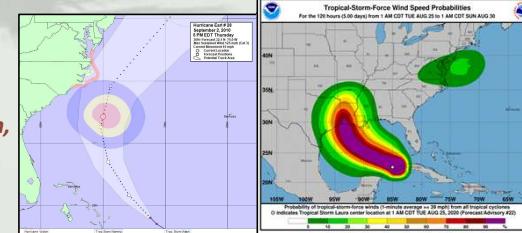


3. How big will it get?

The most challenging part to predict as the models are not very skillful yet.

Basic concepts

- * *Storms get bigger with latitude*
- * *Storms get bigger as they strengthen*
- * *Consider friction, extratropical transition asymmetries, environment*



Our Mission and Who We Are

- Support coastal community preparedness and resiliency through storm surge vulnerability and risk analysis (Stafford Act)
 - National Hurricane Program
 - Evacuation planning, modeling, and mapping
 - Training and technical assistance
- Provide accurate real-time storm surge forecasts during tropical cyclone events (Weather Service Organic Act)
- Support post-landfall response and recovery (Stafford Act and Coastal Act)



Questions?

New Technologies for Sampling Hurricanes
Shirley Murillo

Three Questions that Guide Hurricane Forecasting
John Cangialosi

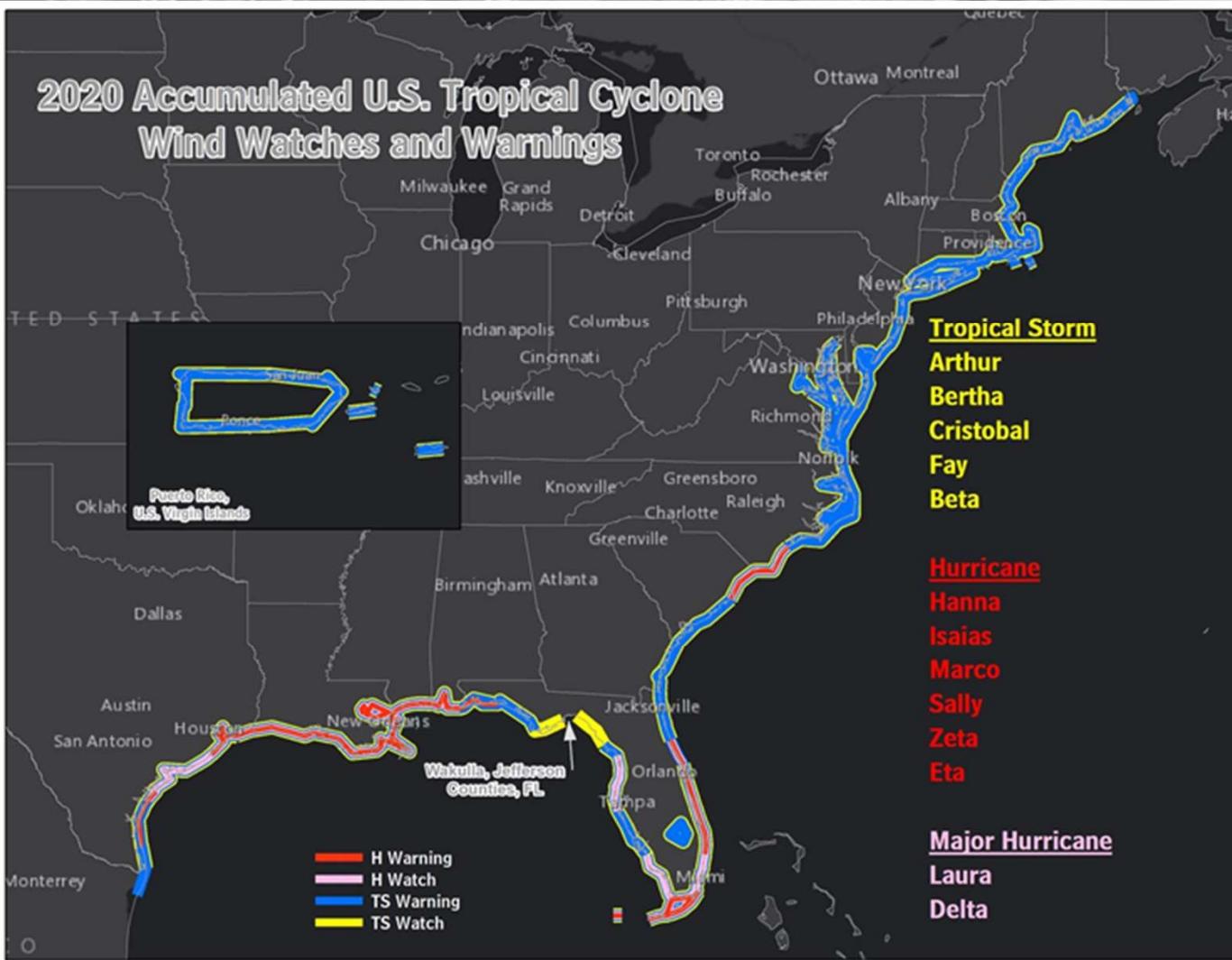
Trying to Reason with Hurricane Season
Jamie Rhome



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Tropical IDSS: Managing Partner Expectations



 Tampa Bay (Ruskin)
WEATHER FORECAST OFFICE

east Florida, with **Phase 1** seeing rain or) through Monday. **Phase 2** will drift northward over the eastern

through Friday. Severity of this surge and Eta's size / strength at that time. After rise (2-5' MHHW) during the

- a multi-day event
- starts from Eta until very late this week or coming weekend
- Tonight through the Florida Straits
- eastern Gulf of Mexico Tuesday Night

www.weather.gov/TampaB/
Tornadoes not expected



Selling the hurricane story - know your audience



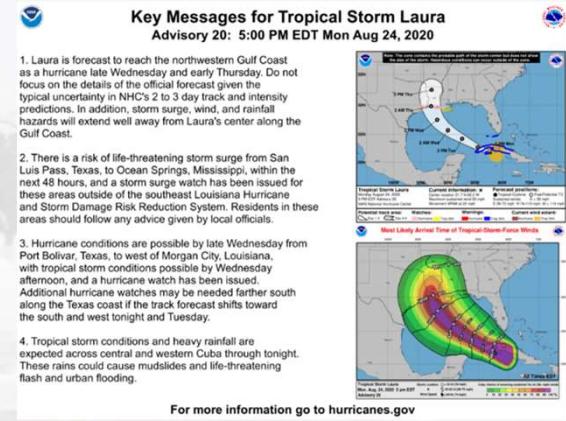
MEDIA

- Who are they
- Local, local, local
- Building the trust



SOCIAL MEDIA

- Consistency
- Facebook Live
- Twitter & Instagram



GRAPHICS

- It's not radio
- Short & to the point
- Targeting the hazards

Questions?

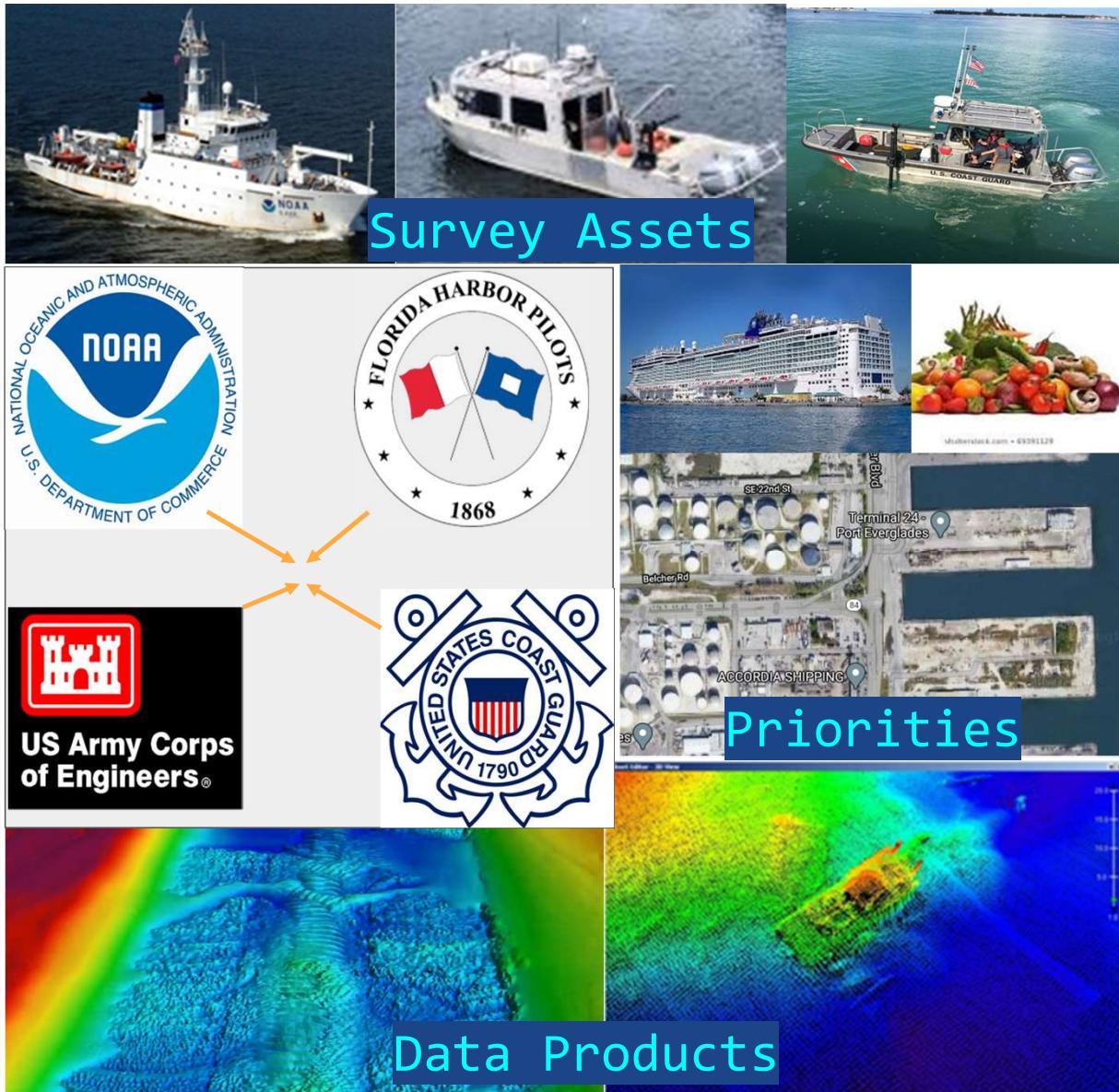
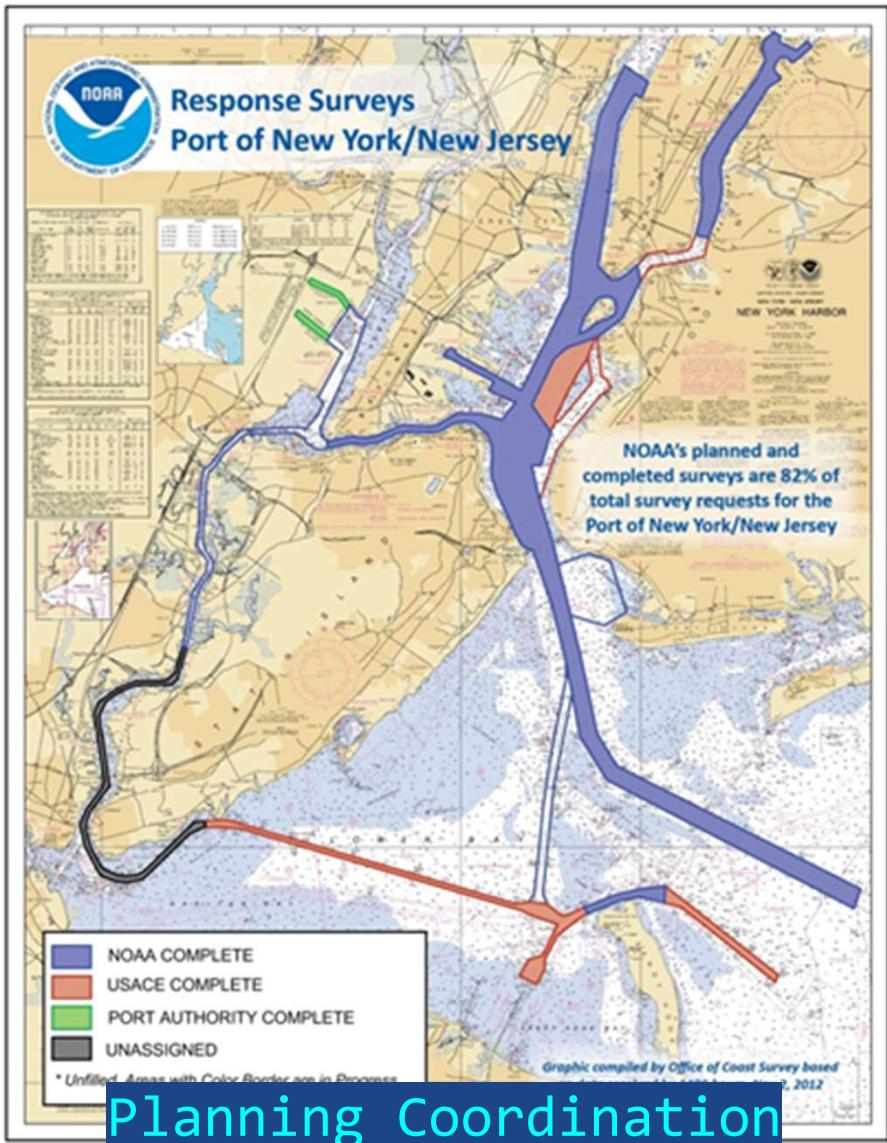
Tropical Weather Decision Support Services
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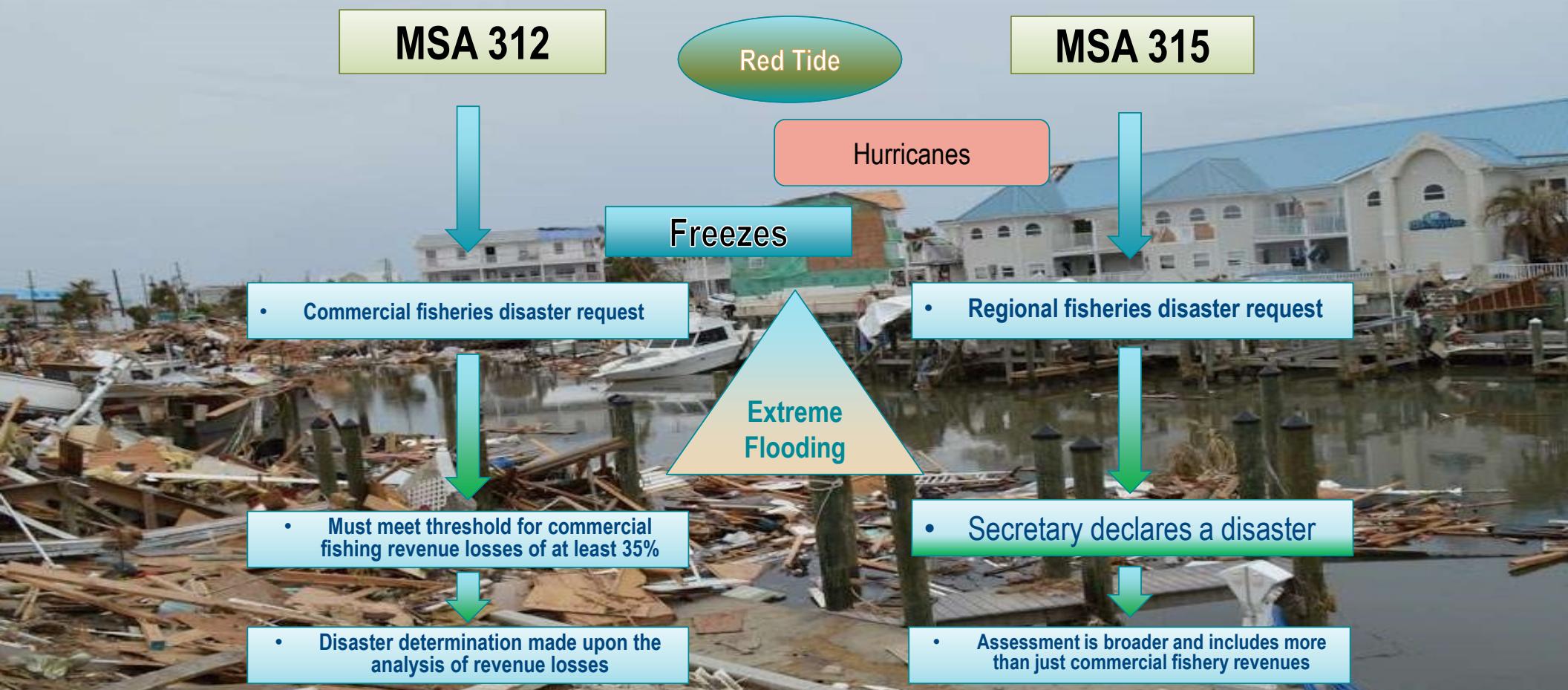


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NOAA Fisheries Disaster Assessment



Hurricane Hunters on a Record Breaking Season

- Who flies on the Hurricane Hunters?
- What science instruments do we have onboard the aircraft?
- How did this team overcome the pandemic?



The edge of Hurricane Eta in October of 2020. The 2020 season exhausted the named storms relying on the Greek alphabet. This was the first use of the name Eta storm in history of named storms.

Questions?

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What Questions Do You Have?

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Thank You for attending!

Your input is valuable to us.
Please take a moment to provide your
feedback at the conclusion of the webinar.



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Group Picture Placeholder