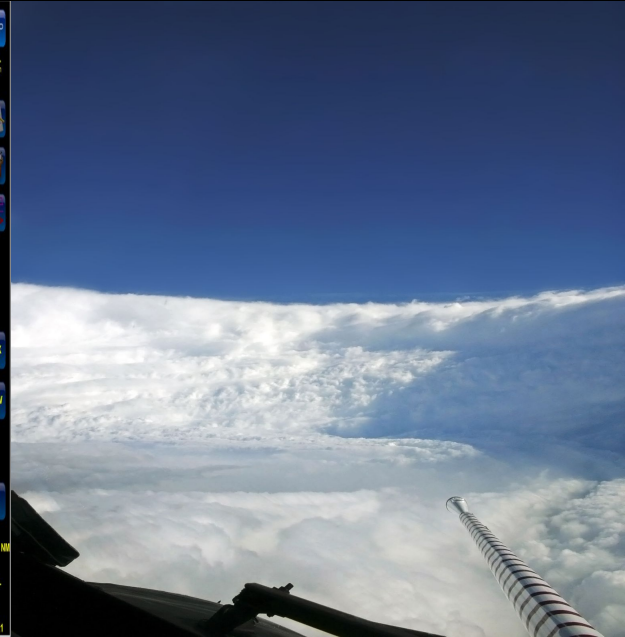
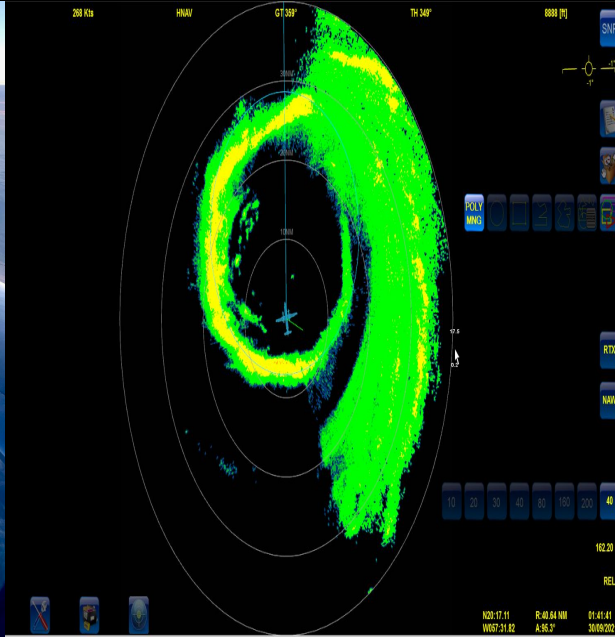
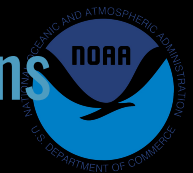


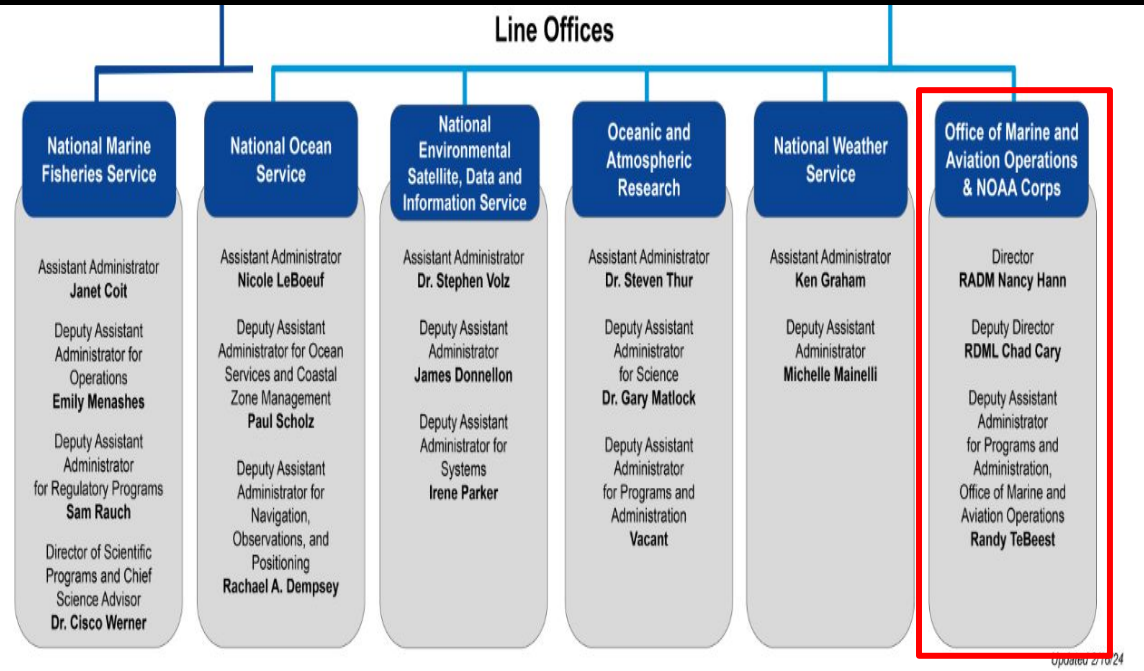
# NOAA Office of Marine & Aviation Operations: Aircraft Operations Center Overview



Samantha Timmers, Meteorologist  
2024 SECART Meeting  
May 20, 2024

# Overview

- NOAA OMAO oversees & manages 15 research ships and 10 aircraft for environmental data collection
  - NOAA Diving & UAS programs also fall under OMAO
- Staff made up of civilians and NOAA Corps Officers
- The Aircraft Operations (AOC) component is based out of Lakeland, FL and conducts a variety of aerial research tasks throughout the year



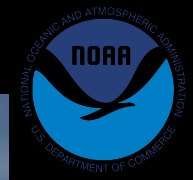
Updated 2/10/24

# Facility & People

- New hangar & office space opened in 2017 in Lakeland, Florida
- ~130 personnel across civilian and NOAA Corps:
  - Pilots & Navigators
  - Meteorologists
  - Technicians
  - Maintenance
  - Engineers
  - Admin
  - Operations/Programs



# Our Aircraft



- **2 WP-3D Orions**

- Hurricane Reconnaissance
- Ocean Winds
- GRAV-D
- TORUS

- **1 Gulfstream-450**

- Hurricane Syntopic Surveillance
- Atmospheric Rivers

- **4 DHC-6 Twin Otters**

- Snow Survey
- Right Whale
- Coastal Mapping

- **3 Beechcraft King Air**

- Snow Survey
- Coastal Mapping
- Emergency Response/Aerial Photography

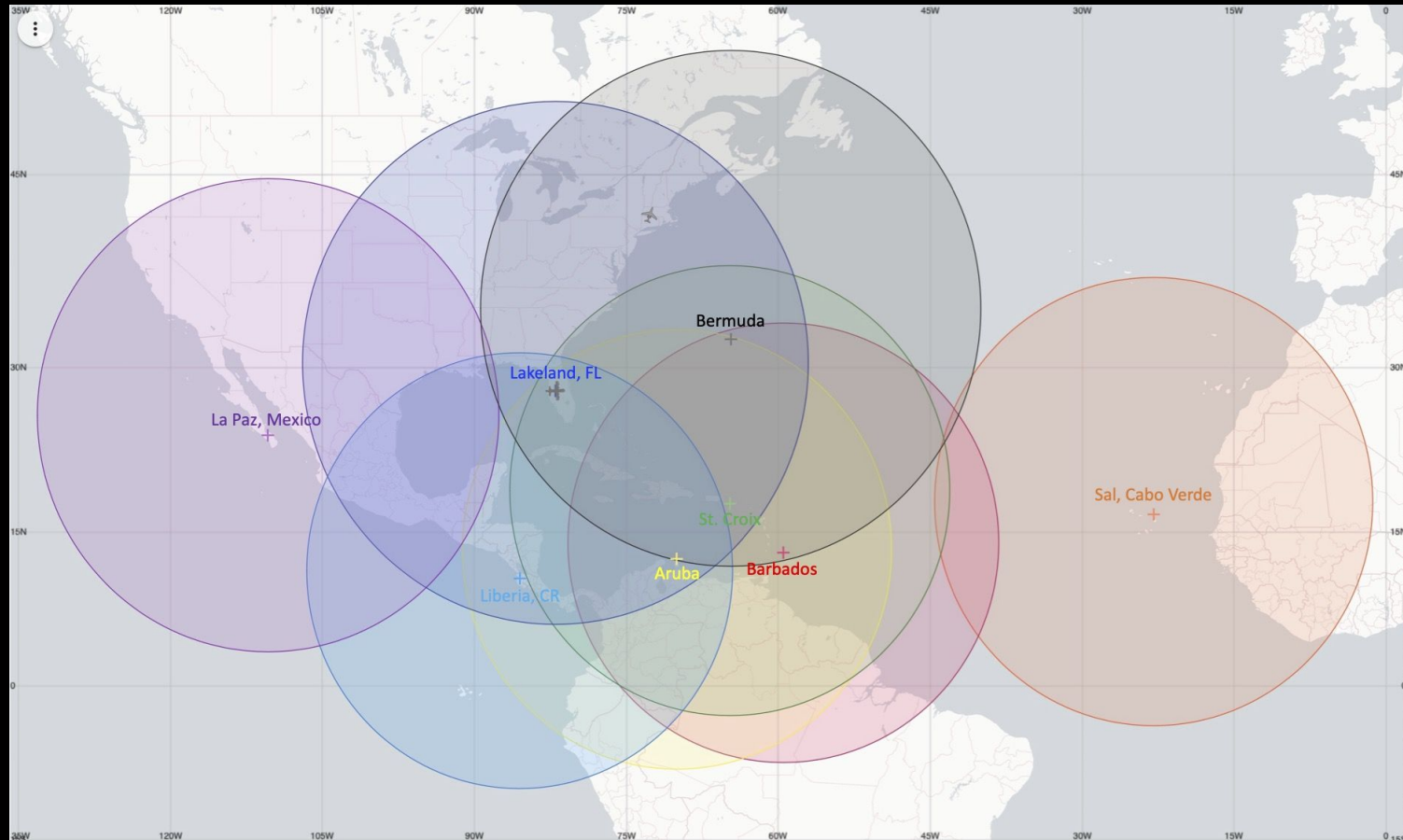


# Where We Operate:



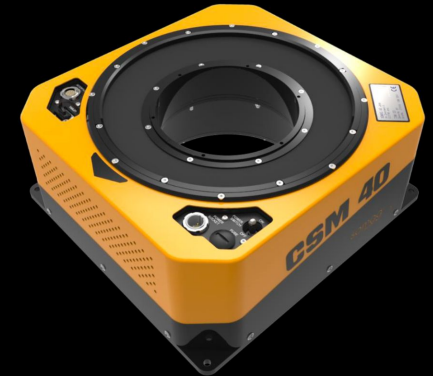
**Dropsondes & Deployment Locations 1996 - 2023**

# Where We Operate:



# Data Collection:

- Each aircraft is designed for customizable instrumentation depending on the project
- Heavy aircraft will utilize radar, dropsondes, LIDAR, and/or microwave spectrometry to collect atmospheric & oceanographic data
  - Much of this is directly fed into model runs while we're in the air
- Collected data impacts forecasts in the next available model runs: HAFS, HWRF, GFS, etc.





# Our Stakeholders:



Atlantic Oceanographic & Meteorological Laboratory  
U.S. Department of Commerce

UNIVERSITY OF  
**Nebraska**  
Lincoln



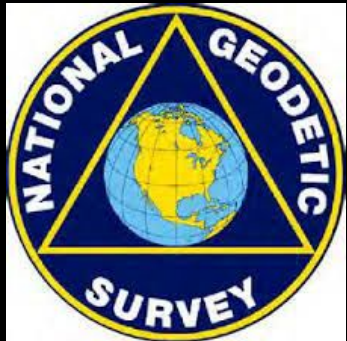
NOAA  
**FISHERIES**



NATIONAL WEATHER SERVICE



Center for Satellite Applications & Research  
NOAA/NESDIS  
**STAR**  
Bringing the power of satellite remote sensing science to all NOAA missions



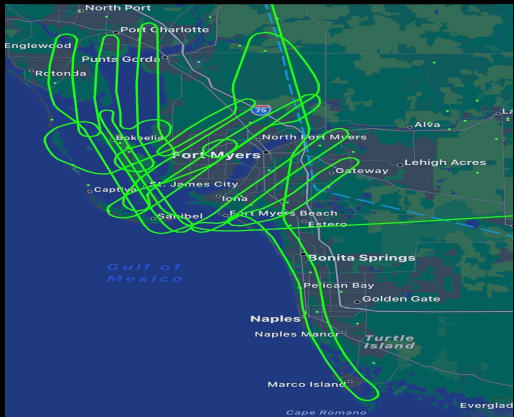
NATIONAL GEODETIC SURVEY



Center for Western Weather and Water Extremes  
SCRIPPS INSTITUTION OF OCEANOGRAPHY  
AT UC SAN DIEGO

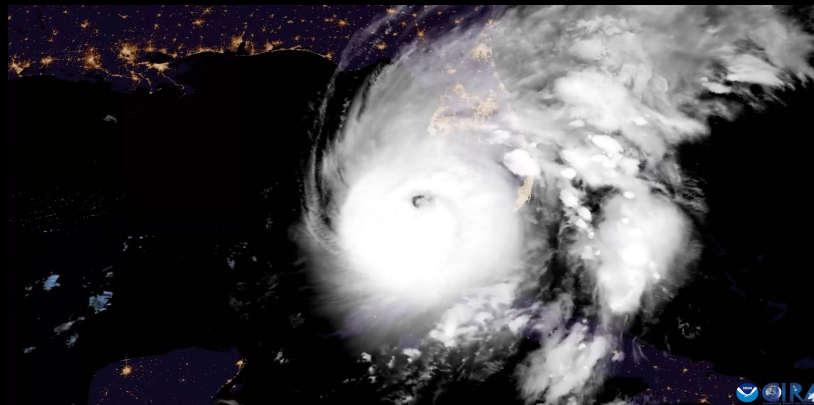
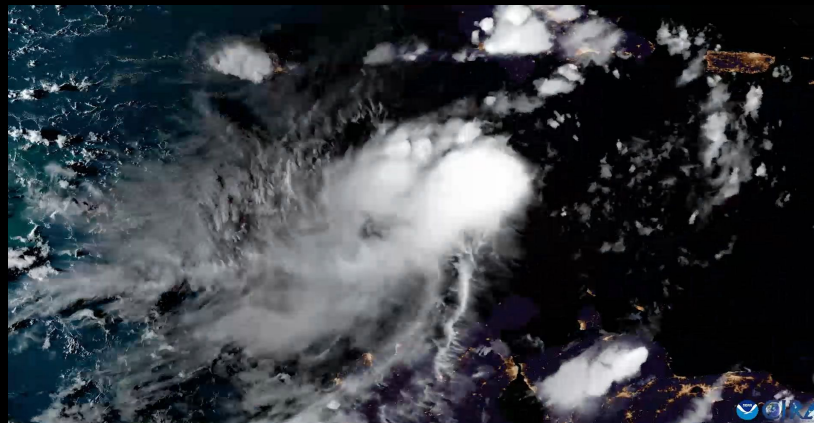


# AOC's Role in Emergency Response Efforts



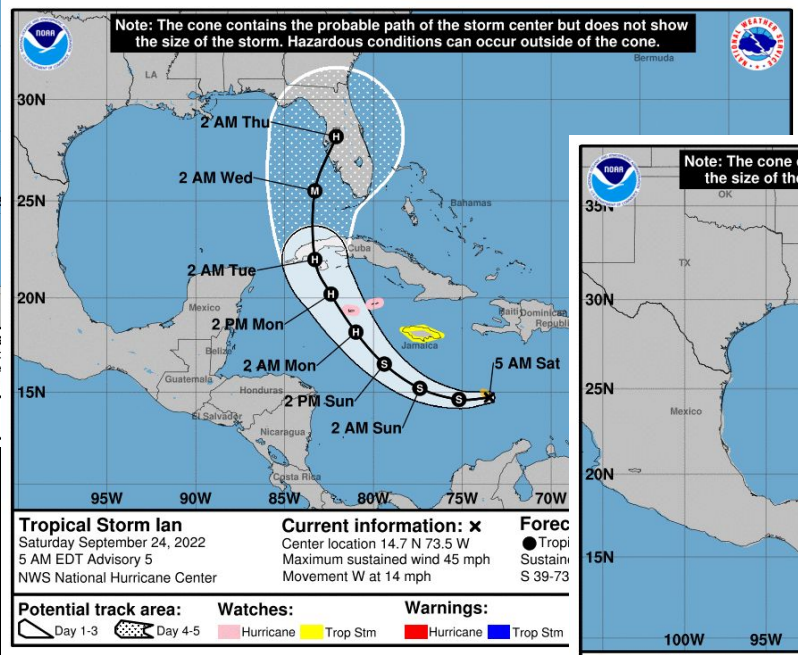
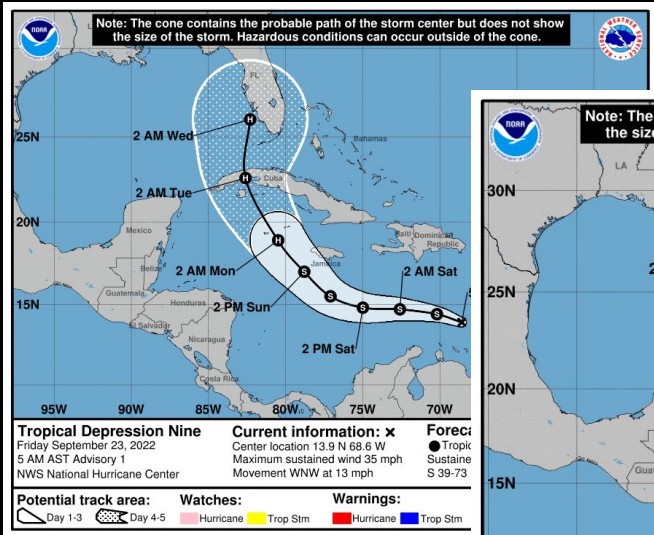
# Case Study: Hurricane Ian, 23 - 30 September 2022

- Ian entered the Caribbean Sea as a tropical wave on September 21st and was declared a tropical storm Sept. 24th
- NOAA aircraft deployed to TNCA & began reconnaissance on the storm Sept. 24th
  - Initiated 24-hour operations for both P-3's (NOAA42, NOAA43) and the G-IV (NOAA49) soon after, per NHC
- Deployment Locations:
  - Oranjestad, Aruba
  - Lakeland, FL
  - Houston, TX

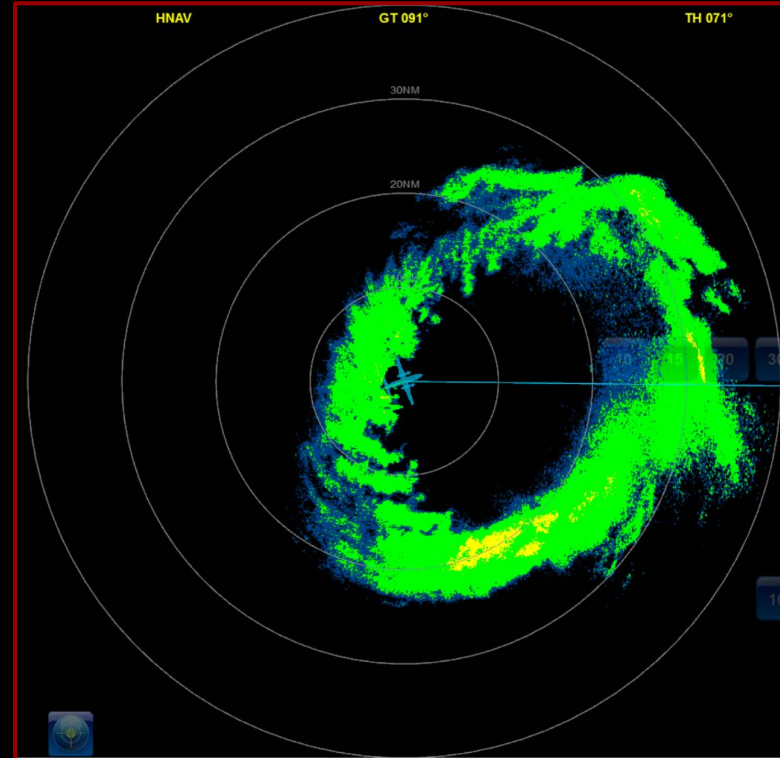
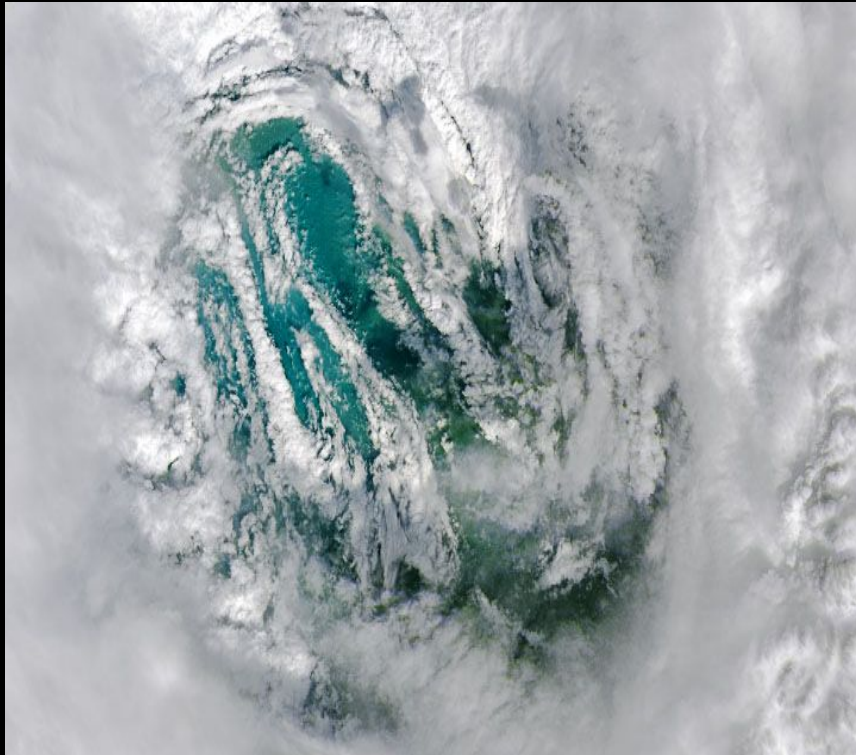




# Case Study: Hurricane Ian, 23 - 30 September 2022

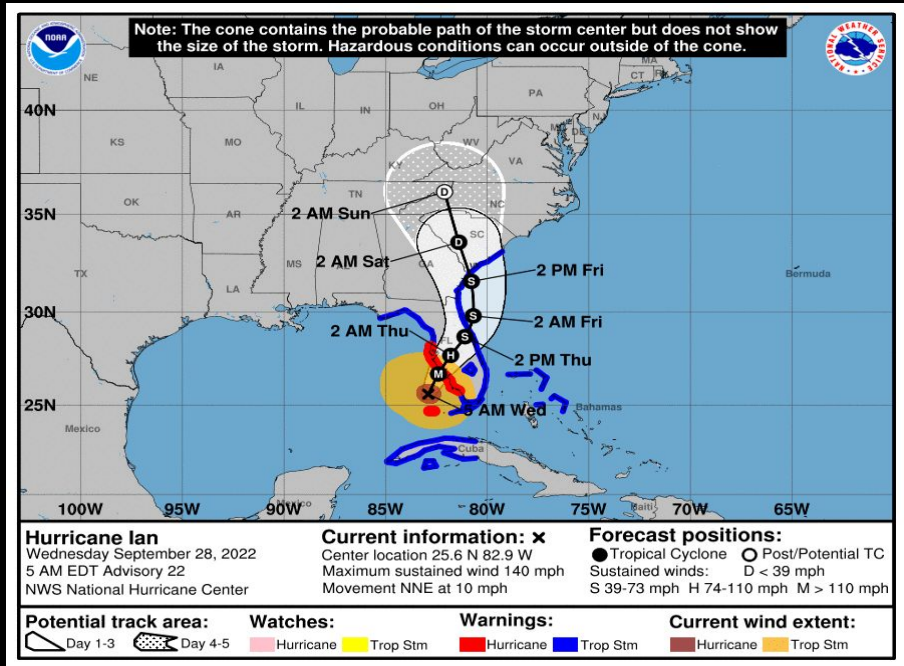


# Case Study: Hurricane Ian, 23 - 30 September 2022



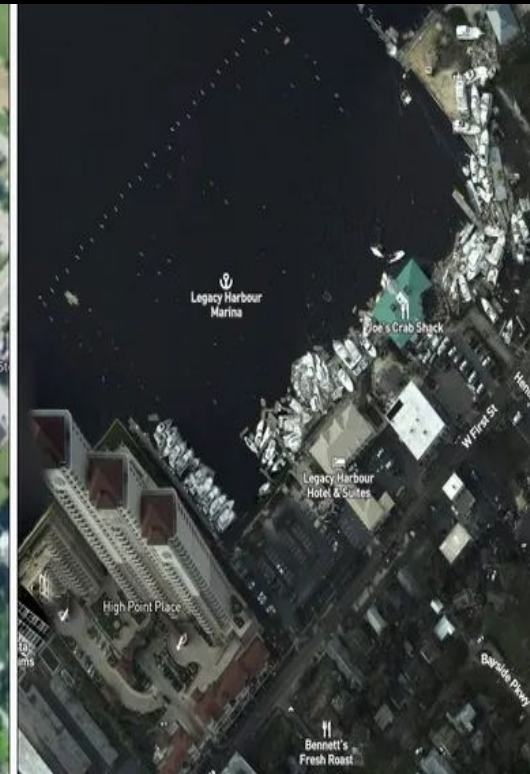
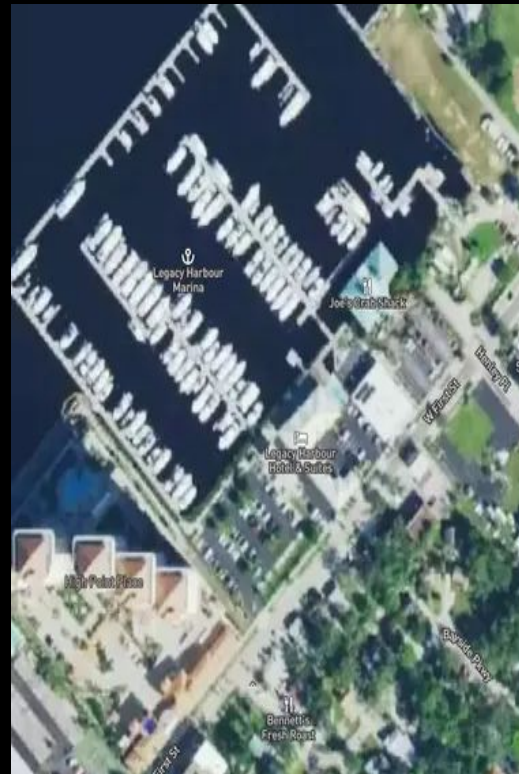
## September 27-28 Mission Flight

# Case Study: Hurricane Ian, 23 - 30 September 2022



# Case Study: Hurricane Ian, 23 - 30 September 2022

- TACREPO to Houston, TX after Ian made landfall in Florida Sept. 28
- NOAA King Air deployed to Fort Myers immediately after to collect aerial photography of the region



# Case Study: Hurricane Ian, 23 - 30 September 2022



## Collaboration:



FEMA

- AOC can provide tactical assistance to emergency situations via providing imagery, collecting data, or other aerial tasks
- OMAO as a whole is focused on data collection & operational assistance concerning natural hazards before, during, and after major events
- We rely on support to help us conduct our mission: air clearances, deployment support, & continued discussions on how to best serve you



Thank you!