

# DISASTER RESILIENCE REPORT



# 2022

## It was a challenging year for DISASTERS and EXTREME WEATHER

- Six hurricanes and tropical storms impacted eight reserve sites. Hurricane Ian had the most devastating impacts, with a historic storm surge flooding key Rookery Bay Reserve facilities.
- Two unusual cold waves in ACE Basin and Mission-Aransas Reserves
- One forest fire at South Slough Reserve
- One nearby oil spill at Mission-Aransas Reserve
- Wet and wild December weather hit both the Pacific and Atlantic coasts, resulting in flooding impacts to three different reserves.
- All three California reserves experienced extreme winter weather with multiple atmospheric rivers and bomb cyclones, resulting in flooding in parts of the reserves.
- All 30 reserves continued to face COVID-19 challenges that impacted how they conducted their programs and limited the accessibility of some of their facilities, resources, and programs.

## But we were PREPARED

- Thus far, 12 of 30 sites have completed disaster resilience plans, and nine have completed disaster-focused exercises.



- The NOAA Office for Coastal Management was successful in obtaining additional 2023 Office of Response and Restoration funding to support construction of pilot disaster-resilient monitoring platforms at the North Carolina, North Inlet-Winyah Bay, and Weeks Bay Reserves. Originally funded in 2021, this project aims to test platform designs using fiber-reinforced piles. These composite structures were designed to be long-lasting and significantly stronger than traditional materials. Once constructed, U.S. Naval Academy Ocean Engineering staff will collect data and analyze the structural performance to determine their suitability as long-term System-Wide Monitoring Program platforms.
- This year, in partnership with the National Disaster Preparedness Training Center, the Office for Coastal Management completed a national needs assessment of disaster resilience planning in the reserve network. Using the results of that assessment, the center updated the reserve disaster resilience plan guidance and template to encourage more reserves to complete plans.
- ACE Basin in South Carolina developed and added cold snap preparations to their disaster plan.



# 2022 DISASTER RESILIENCE REPORT

---

## We helped our communities RESPOND

- Mission-Aransas Reserve experienced a cold freeze that dropped water temperatures in the bays, and the Amos Rehabilitation Keep received 168 green sea turtles in a five-day period. Jumping into action, the team heated pools, cleared floor space, and stocked up on supplies such as fluids and eye drops.
- In late December, multiple cracks in a pipeline in Corpus Christi, Texas, resulted in an oil spill leaking 14,000 gallons of light crude oil into Corpus Christi Bay adjacent to the Mission-Aransas Research Reserve. Although no oil reached the reserve, reserve staff were involved in wildlife cleanup efforts with multiple oiled or dead sea turtles and birds brought to the reserve. Over the following month, they received 84 animals and unfortunately had to purchase freezers to store animals that were not able to be rehabilitated. Handling of oiled wildlife requires special training and storage facilities that the reserve's Amos Rehabilitation Keep provides.



## We support ongoing DISASTER RECOVERY

- Rookery Bay Facility Recovery Update – Many of the Hurricane Irma recovery projects at Rookery Bay are now complete. In 2022, the Goodland Field Station, completed with resilience in mind, was fully operational throughout Hurricane Ian. The last big project is reconstruction of their maintenance pole barn, which is expected in the coming months.
- Mission-Aransas Facility Recovery Update – Mission-Aransas Reserve documented over \$30 million in damages from Hurricane Harvey, and recovery is nearly complete. NOAA Office for Coastal Management Director Jeff Payne attended the ribbon-cutting ceremony for the reserve's education and outreach facilities at the University of Texas' Marine Science Institute campus in 2022. Construction of the replacement dormitory is well underway and will be completed later this year. The Amos Rehabilitation Keep's new animal hospital is in the design phase.
- During Restore America's Estuaries 2022 Coastal and Estuarine Summit, staff from the Office for Coastal Management and Gulf of Mexico reserves led a dedicated session on "Building Disaster Resilience at the National Estuarine Research Reserves of the Gulf of Mexico." In the session, they shared ways the reserves were impacted by extreme storm events, recovered, and learned lessons along the way in an effort to help others improve their resilience to future events.



**NATIONAL ESTUARINE RESEARCH RESERVES**

[coast.noaa.gov/nerrs](https://coast.noaa.gov/nerrs)

