Tracking Hurricane Ida through NOAA's Office of Response and Restoration: Preparedness, Response and Recovery

May 10, 2022

Photo: NOAA
Presenters

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response.restoration.noaa.gov
Hurricane Preparedness
Thursday morning, August 26, 2021: Confident in hurricane threat to the Northern Gulf of Mexico with landfall likely in Louisiana.

Friday morning, August 27 2021: NHC predicted Tropical Storm Ida would rapidly intensify into a major hurricane.
Hurricane Ida

- Cat. 4 w/ 150 mph winds.
- Landfall near Port Fourchon on August 29, 2021 - the 16th anniversary of Katrina
- Second most destructive storm to hit Louisiana.
- Second strongest storm to make landfall in Louisiana (tied with Hurricane Laura in 2020).
- 87 U.S. Deaths

Ida was the fourth hurricane to make landfall in Louisiana in less than 13 months.
Preparing for a Hurricane

The Disaster Preparedness Program (DPP) supported NOS and NOAA preparedness before, during, and after Hurricane Ida.

Before:

- NOS After Action Report from 2020 Storm Season
- Continuous Improvement (Corrective Actions)
- Annual NOAA Hurricane Preparedness Summit
- Pre-Summit Survey (2021 Preseason Survey)
  - Managing COVID-19 was still a challenge
  - Managing pandemic fatigue was identified
- COOP Planning (even at the individual level)
- Coordinate/Lead NOS Incident Management Team
- Situation Awareness and pre-storm coordination
During a Hurricane

NOAA Gulf of Mexico Disaster Response Center (DRC) in Mobile, AL

● Weather Hardened
● Redundant Systems for IT and Power
● Training/Incident Command Center
● Primary COOP for USCG Sector Mobile
● Supports NOAA Missions

During Hurricane Ida, the DRC supported the FEMA/NOAA NGS overflights and mapping mission by providing a base of operations and high speed internet to transfer the overflight image data.
Hurricane Response
Hurricane Support

Assist USCG with response to Oil and Hazmat response post Hurricane

Supporting many simultaneous responses

Remote and On-Site support

- Scientific Support Coordinators
- Spatial Data Managers
- Oceanographers
- Chemists
- Biologists

Bayou Segnette post-Ida, Credit: Jim Richard, GOHSEP

response.restore.noaa.gov
Pollution Target Data Management for USCG

- VaDR (Arc Collector + ERMA)
- Nat Env Satellite, Data & Info Service
- Overflight Imagery

Recommend Best Response Methods/Tools

- In-situ burns, sensitive habitats

Information sharing

- USCG, State, BSEE, Trustees

ESF 10 Mission Support

- Oil & Hazmat Response
- Coordinate with other ESF missions
Responding to Debris

- State Marine Debris Response Guides
- Supporting Joint Field Office, Incident Command Post, and Debris Task Force during response
- Funding
  - Supplemental
  - Removal Grants
Marine Debris Response Guides

[Map of the United States showing states with different colors indicating published or in progress status]

[Image of a Louisiana community affected by flood]


NOAA Marine Debris Program
National Oceanic and Atmospheric Administration
U.S. Department of Commerce
December 2021
Supporting Debris Response

- Debris Task force, JFO, and ICP support
- Best management practices for vessel & debris removal
- Louisiana abandoned & derelict vessel law review
- General coordination between agencies and across Essential Support Functions
- Aerial Imagery
  - Pulled together NGS, GIC, and CAP imagery into ERMA (need login)
  - Mapping of debris targets or hotspots (ex. vessels and barges)
Disaster Assessment and Restoration
Consequences from Ida
- Base environmental data
- Live data streams
  - Storm tracking, surge modeling, current water levels, ship locations, and more.
- Critical infrastructure
- Pre/post storm imagery
- Quick turnaround post storm data
- Live tracking of ESF-10 targets
Marine Pollution Surveillance Report

**UNCONFIRMED AS OIL**

**CONFIDENCE:** High (Low, Medium, Medium High, High)

### REPORT DATE/TIME:
9/2/2021 03:26 (UTC)

**DATA SOURCE:** SEVENCOS II

**MODE:** Multispectral

**RESOLUTION:** 10 meter

**IMAGE DATE/TIME:** 9/2/2021 1638 (UTC)

- **Possible Oil**
- **Possible Thicker Oil**

**TOTAL AREA OF POSSIBLE OIL:** 10.60 km²

**AREA BLOCK:** GRAND ISLE 39

**REMARKS:** Possible oil was observed in satellite imagery. This anomaly is unconfirmed as oil. The anomaly is silver in color likely due to sun illumination. It consisted of three sections. The length of these three sections are 10km, 3km and 3km respectively. The anomaly was consistent with the previous reported MSPR (NRC 1315461) using ICEYE imagery taken 1 hour prior although with a smaller area. The wind at the time was from WSW at 8kt.

**UNCERTAINTIES:** There were uncertainties related to the exact source. The point source was chosen as it was located near where were large areas of oil, but it was not definite that this was the source. Also, the anomaly was near the edge of the image, so the actual content might be larger.

**REPORT DATE/TIME:** 9/2/2021 10:00 (UTC)

**DATA SOURCE:** ICEYE

**MODE:** ISAN-X

**RESOLUTION:** 15 meter

**IMAGE DATE/TIME:** 9/2/2021 1539 (UTC)

- **Possible Oil**
- **Possible Thicker Oil**

**CENTER POINT OF OIL SPILL:** [29°00'21" N 89°04'32" W]

**FARAWAY:** 0.72 km²

**AREA BLOCK:** GRAND ISLE 39

**REMARKS:** Possible oil was observed in satellite imagery. This anomaly is unconfirmed as oil. The anomaly was 12km by the longest dimension and 5km wide in the other dimension. The anomaly had a good contrast with the surroundings, and was located close to many oil facilities. However, it was not clear which one is the source. The wind at the time was from WSW at 8kt.

**UNCERTAINTIES:** It is not possible to pin down the point source. Also, the actually extent of the anomaly could be larger since the anomaly was at the northern edge of the imagery. Another thing to note is that the western and southern part of the anomaly had a more diffuse edge, indicating a slight likelihood that this part might be false positives due to low wind. But at the same time, some feathering can be seen in these areas as well, so that likelihood was small.

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Natural Resource Damage Assessment (NRDA) Overview

- Purpose is to determine type and amount of restoration needed to compensate the public for injuries to their resources.
- Successfully getting to the end game requires a common vision and coordination.
- It is a legal process that involves public participation.
Hurricane Recovery
Hurricane Ida Recovery

OR&R continues to work with federal, state, and local partners to assist with the long-term impacts of Hurricane Ida, and ensure efficient and effective recovery.

Recovery Activities

- DPP serving as NOAA liaison to the interagency Recovery Support Functions (RSFs) activated for Hurricane Ida, which coordinate federal disaster recovery support to the State and impacted communities.
- NOAA supports Natural and Cultural Resources, Economic, and Community Planning and Capacity Building RSFs.

Marine Debris Disaster Supplemental Funds:

- Funding opportunity for assessment and removal of debris from Hurricane Ida should be announced soon.