

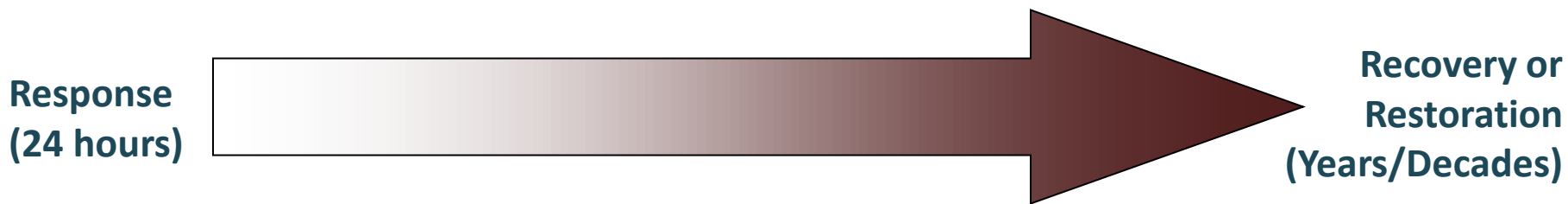
Good COP, Bad COP: Do you know ERMA®?

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Chevron/OSPR Technology Workshop 2015
Oakland, CA

Office of Response & Restoration
NOAA's Ocean Service
Seattle, Washington



CONTINUUM OF “RESPONSE” FRAMEWORK FOR THE OFFICE OF RESPONSE & RESTORATION



Response

Assessment

Restoration



WHAT'S A COP?

“The **Common Operational Picture (COP)** is the core DHS situational awareness (SA) capability for ***effective decision making, rapid staff actions***, and appropriate mission execution.

It is an integrated SA application that supports the DHS mission of responding to threats and hazards to the nation by ***collecting, sharing and displaying multi-dimensional information*** that facilitates collaborative planning, and responses to these threats.” *(Department of Homeland Security 2012)*

WHAT'S A COP WORTH?

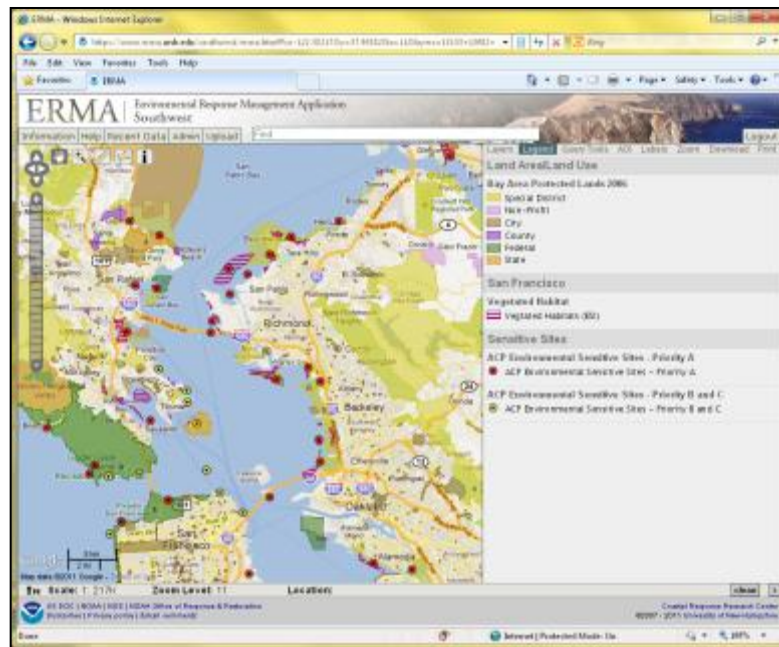
- OR&R ERMA COP Application Areas
 - Regional Response Planning
 - Information Management Plans and Data Sharing
 - Federal oversight of Incident data
 - On-scene GIS and Data Management
 - Hazardous waste site remediation (CERCLA)
 - Natural Resource Damage Assessment (NRDA) case support
 - Restoration planning and implementation

WHAT IS REQUIRED FOR A GOOD COP?

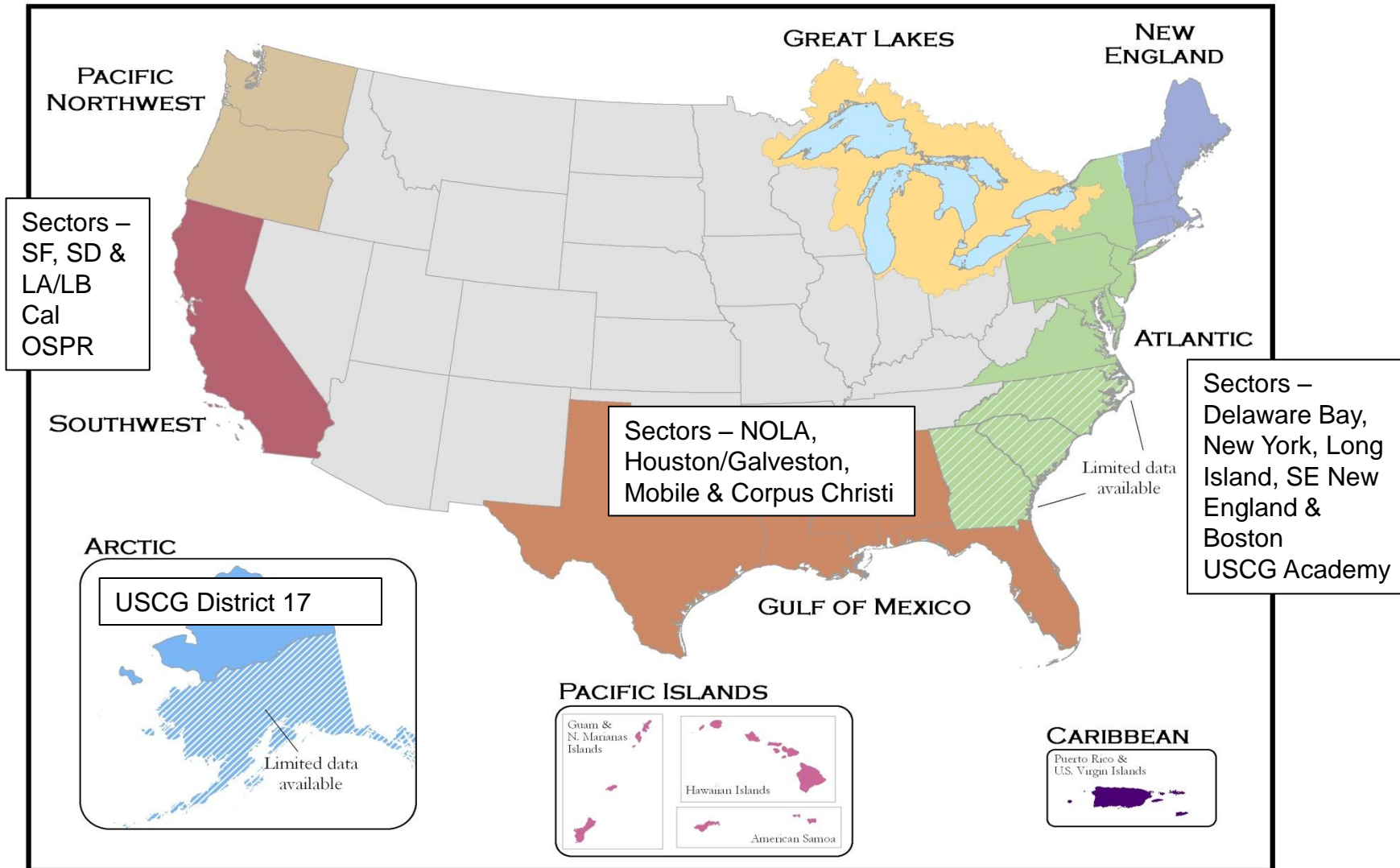
- Current, accurate operational and environmental data for an incident
- Secure access control (data/users)
- Standard interface and symbology
- Consistent presentation of data and products
- Support Planning and Response needs
- Ability to support both on-scene (Incident Command) and off-site (HQ/NIC) information needs

DO YOU KNOW ERMA?

- Web-based mapping tool
- Provides centralized access to information
- Increases communication, coordination, and efficiency
- Prepare for, respond to, assess impacts from hazardous incidents or conditions
- Analyze and visualize environmental information relevant to all hazards



WHERE IS ERMA AND WHO UTILIZES ERMA?



HOW ERMA CAN HELP YOU?

- **Operations Section**

- Incident Location
- Vessel Locations
- Dispersant Zones
- In-Situ Burns
- Divisions & Segments
- Booming Strategies

- **Environmental Unit**

- Threatened & Endangered Species
- SCAT Data
- Sensitive Sites
- Wildlife Observations
- Overflight Observations

- **Situation Unit**

- Mirror SitStat Board
- Trajectories
- Weather
- Current Operations

- **Unified Command**

- Up-To-Date Picture of All Operations

- **JIC**

- Up-To-Date Picture of All Operations
- Potential to show publically released data

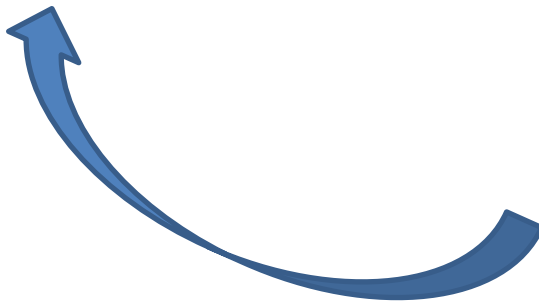
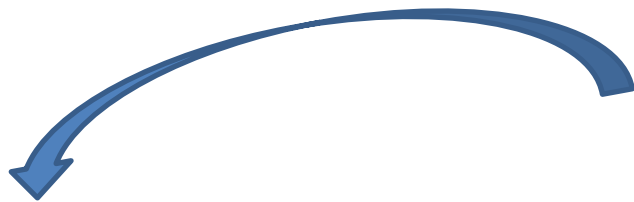
HOW ERMA CAN HELP YOU?

- **Data Collection, Visualization, and Sharing**
 - Cross Jurisdictional boundaries (Multi Agency, Multi State)
- **Natural Resource Information**
 - Sensitive habitats
 - Species distribution and life history
 - Threatened & Endangered Species identification
 - Resource at Risk reporting
 - Restoration planning
- **Critical Infrastructure**
 - Railroad Lines
 - Water intake locations
 - Critical facilities and hazards information
- **Aid in the development of Response Plans**
 - Environmental Sensitivity Index (ESI) maps
 - Area Contingency Planning (ACP)
 - Geographic Response Plans (GRP)

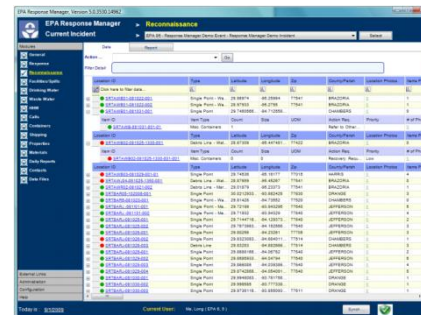
ERMA COP INTEROPERABILITY & STANDARDS

Data Collection
Visualization, Query
and Reporting

Other Mobile/form field data
Collection and Delivery



Response Manager NDOW



Mobile field data
Collection, QA
Database
Ingestion
and Delivery

ERMA ACCOUNT ACCESS/SECURITY

- **Public Side**
 - All publically available data
- **Restricted Account Side for Planning & Response**
 - Username/password required
 - Verified by NOAA
 - Various levels of access
 - Active incidents
 - Sensitive datasets
 - NRDA
 - Drills
- **Data available only to appropriate users and use**



ERMA LAYOUT

ERMA | Environmental Response Management Application
Gulf of Mexico

Information | Help | Recent Data | Admin | Upload

Find **Find Box**

Map Toolbar

Map Controls

Map Key

Scale: 1: 3M | Zoom Level: 7 | Location: 29.41089°, -84.81445°

Tool Tabs

- Background
- Admin Boundaries & Reference Features
- Bathymetry & Hydrology
- Environmental Quality & Monitoring
- Imagery & Remote Sensing
- Marine Debris
- Natural Resources, Habitats, & Managed Areas
- Habitat Areas
- Critical Habitat Areas
- Essential Fish Habitat (EFH)
 - Essential Fish Habitat - Areas Protected from Fishing
 - EFH Coastal Migratory Pelagics (Gulf of Mexico)
 - EFH Coral and Coral Reefs
 - EFH Red Drum (Gulf of Mexico)
 - EFH Reef Fish (Gulf of Mexico)
 - EFH Shrimp (Gulf of Mexico)
 - EFH Spiny Lobster (Gulf of Mexico)
 - EFH Stone Crab (Gulf of Mexico)
- Habitat Areas of Particular Concern (HAPC)
- Managed Areas
- Environmental Sensitivity Index (NOAA ESI)
- Cultural Resources & Human Use
- Navigation & Marine Infrastructure
- Public Safety & Infrastructure
- Response Planning
- Restoration
- Weather, Oceanography, & Natural Hazards
- ERMA Tools
- Historic Incidents & Drills

Table of Contents

Shortcut Menu

- view metadata
- zoom to extent
- bring to front
- send to back
- view data

Bookmark Views Panel

Bookmark Views: new | Expand | clean

US DDC | NOAA | NDS | NOAA Office of Response & Restoration
Disclaimer | Privacy policy | Email comments

2014 ERMA DEVELOPMENT STATUS

- Enhance ERMA Cloud deployment
 - Capacity and speed
- Moving ERMA to quarterly updates
 - 3.2 tentatively scheduled for May 2015
- Application interoperability
 - NOAA Trajectories & ResponseLink, EPA Response Manager
- Find bar enhancements
 - Geographic search, wild cards, ESRI API

2015 ERMA DEVELOPMENT PRIORITIES

- Merge Atlantic & New England ERMAAs
- Draw tab
 - Combining label and AOI features
- ESI Tool Enhancements
- NOAA nowCoast integration updates
- Time enabled data (Time Slider)
- Optimizing cloud architecture and scalability
 - Capacity, speed, expandability and cost
- Security & Documentation (TUG)
- Geographic Response Plans Inventory and Prioritize
- Continued focus on Data Sharing

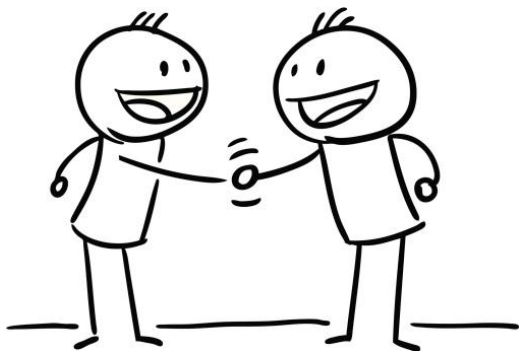
DATA ARE THE FOUNDATION OF A GOOD COP

FEMA Course E0948 SA/COP Training:

“Situational Awareness and Common Operating Picture (SA/COP) support the Communications and Information Management component of the National Incident Management System (NIMS). ***Individuals and organizations at all levels of response have a responsibility to both contribute to and use reliable information*** as a part of incident response efforts.”

INFORMATION MANAGEMENT PLAN: CONCEPT

- IMP documents how all cooperatively collected and processed data are managed for a incident
- IMP cooperatively developed by RP, Feds, States & signed by Unified Command
- IMP becomes part of ICS



NOAA Office of Response & Restoration
DRAFT Information Management Plan Template

Information Management Plan Template

GIS data, Photography, SCAT, Remote Sensing, and Response Sampling

Purpose:

Information and data generated as a result of the response, or germane to the mitigation of the incident, are in support of the Unified Command's Critical Information Requirements (CIRs). This Information Management Plan is meant to ensure continuity of information across the various CIRs and facilitate sharing amongst the response personnel during the incident. Furthermore, this plan will set the foundation for archive and access to information. The scope of this plan includes all operational and environmental Geographic Information Systems (GIS) data, all photography, SCAT, remote sensing, and response sampling efforts. Development of this plan will:

- Help to avoid compartmentalized isolation of information within units and sections
- Ensure all parties understand responsibilities, methods, and resources available
- Help maintain information continuity over time regardless of personnel changes
- Provide the basis for periodic review, evaluation, and updating of procedures

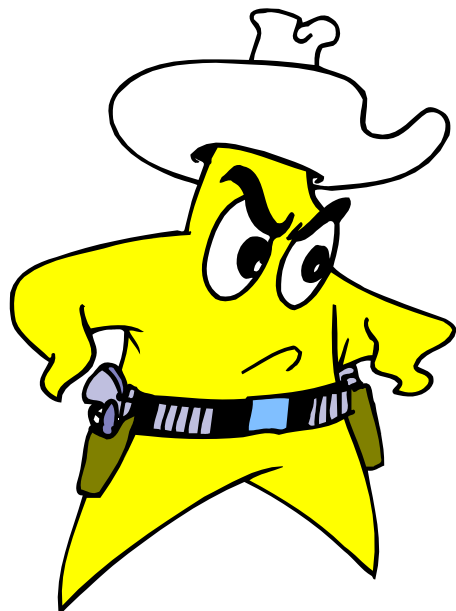
WHAT THE IMP ENSURES

- Cooperation between all data providers
- Data partners all have access to the same data
- Standard formats & approaches: Interoperability
- Data retention during and after the response
- Continuity of information



MANY COPs: ONE DATA

- Multiple Organizations means Multiple Audiences
- *IMP* goal is to ensure they're all showing the same data for an incident



“A COP without data is like a gun without bullets”

COP DATA MANAGEMENT FUNDAMENTALS

Data Sharing and Common Access

- Incident specific data sharing and access is a fundamental requirement
- Data sharing means a copy of the data and not just data viewing during response
- Data sharing includes Environmental and Operational data
- Data ownership is retained by creators
- Data ownership is NOT transferred

ERMA as a Federal COP

- ERMA provides 24/7 access
- Ensures Secure Access
- Delivers Operational AND Environmental data
- Data Interoperability with RP and other agencies
- Maintains data after the Incident ends
- Supports internal and external audience
- Federal COP supports the Public right to know and government transparency

Outreach

Partnerships

Planning

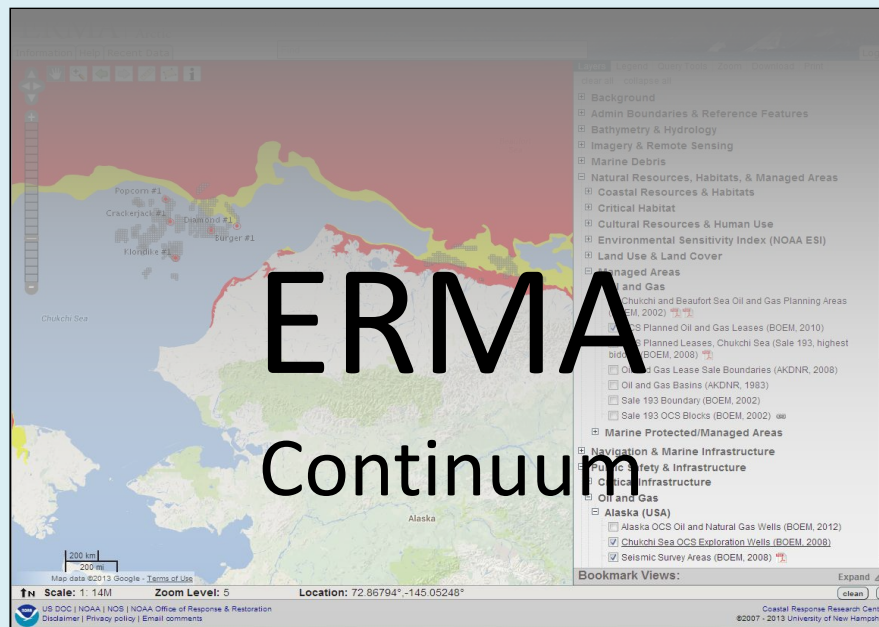
Training

Incident Notification

Ongoing Incident Support

Restoration

Assessment



ERMA Continuum

ACKNOWLEDGMENTS

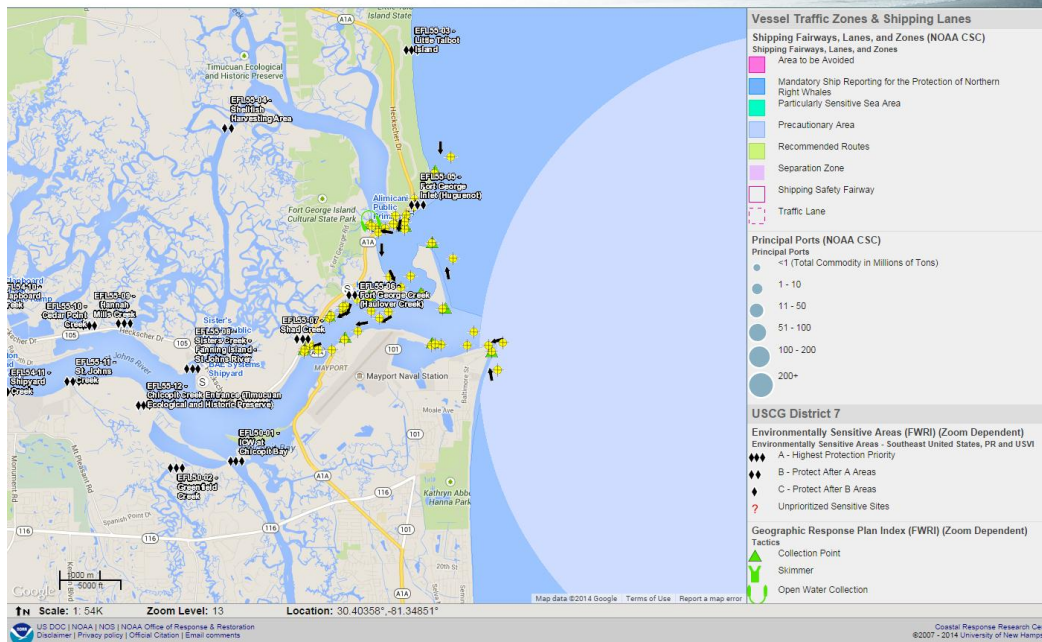
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NOAA | National Ocean Service
Office of **Response and Restoration**



ERMA | Environmental Response Management Application
Gulf of Mexico



<https://erma.noaa.gov/gulfofmexico/erma.html>

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