Standardizing Coastal Geographic Response Plans at a National Level

Jill Bodnar & Jay Coady

NOAA Office of Response & Restoration
Spatial Data Branch
Coastal GeoTools Conference
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Overview

• What are Geographic Response Plans?
• What’s the problem with coastal GRPs?
• What is NOAA’s role?
• What are the successes, recommendations & goals?
• Inland GRPs
What are Geographic Response Plans?
What are Geographic Response Plans?
GRPs should contain (at a minimum) the following information:

- Type and amount of required boom and the intended purpose of the boom (e.g., deflection, exclusion, containment, etc.)
- Method for deploying boom for each area
- Map that clearly shows the location(s) of deployed boom
- Description and location of staging area
- Collection points
- Access to site
- Detailed key describing map symbology and identifying characteristics
- Limitations on access to areas surrounding the sensitive or significant area.
GRP Jurisdictions

Federal Agency Regions & Offices

EPA/USCG Region 1 Jurisdictional Boundary Polygon (EPA)
- EPA Jurisdiction
- MSO Long Island Sound
- MSO Providence
- MSO Boston
- MSO Portland

EPA/USCG Region 2 Jurisdictional Boundary Polygon (EPA)
- US EPA – Region 2
- USCG Sector Long Island
- USCG Sector Eastern Great Lakes
- USCG Sector New York
- USCG Sector Delaware Bay

EPA/USCG Region 1 Jurisdictional Boundary Line (EPA, 2004)
- EPA Region 1 Coast Guard Jurisdictional Boundary (EPA, 2004)

EPA/USCG Region 2 Jurisdictional Boundary Line (EPA, 2004)
- EPA Region 2 Coast Guard Jurisdictional Boundary (EPA, 2004)
What’s the Problem?
## Need: Standard Attributes

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<th>CA/OSPR</th>
<th>TXGLO</th>
<th>SecNOLA</th>
<th>FWRI/D7</th>
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MAP/CHART SYMBOLOGY

ICS MAP/CHART DISPLAY SYMBOLOGY

MINIMUM RECOMMENDED

BLACK

- Proposed Boom
- Completed Boom
- Absorbent Material

RED

- 10 Aug 14 Hazard Origin

BLUE

- Incident Command Post
- Incident Base
- MEC Camp (Identify by Name)
- Staging Area (Identify by Name)
- Joint Information Center
- Hellspot (Location & Number)
- Helibase
- Mobile Relay

OPTIONAL

- Police Station
- Telephone
- Fire Station
- Mobile Weather Unit
- Emergency Operations Center
- Fire Aid Section
- Hospital

ORANGE

- Oil Spread Prediction

BLACK

- Actual Oil or Chemical Plume

- Branches (Initially numbered clockwise from incident origin)
- Division (Initially lettered clockwise from incident origin)
- Division Boundary
- Branch Boundary
- Wind Speed and Direction

TO BE USED ON INCIDENT BRIEFING AND ACTION PLAN MAPS/CHARTS

Legend

- Beach Berm
- Culvert Block
- Diversion Boom
- Green
- Pillar
- Safety/Security Zone
- Boat Ramp

All overlays must contain registration marks. These may consist of identified road intersections, towns, or ranges, coordinates, map corners, etc.
1. Incident Name
2. Operational Period (Date/Time)
3. Branch
4. Division/Group
5. Operations Personnel
   Name
   Affiliation
   Contact #
5. Division/Group Supervisor

6. Resources Assigned This Period

<table>
<thead>
<tr>
<th>Resource Identifier</th>
<th>Leader</th>
<th>Contact Info</th>
<th># of Persons</th>
<th>Reporting Info/Notes/Remarks</th>
</tr>
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7. Assignments

Boom natural pass to prevent migration of oil from Lydia Ann Channel to the interior of Harbor Island Northeast. Provide daily boom maintenance during tide, wind, and other climatological changes.

**Safety Note:** Responders should note the adjacent Lydia Ann channel is highly trafficked. Often large shrimp boats, barges and other vessels travel high energy waves in this area.

8. Site 
9. Gulf Name
10. NOAA Chart 
11. TGO Atlas Page 
12. County
13. Location
   on Harbor Island Northeast, on the west bank along Lydia Ann Channel. This
   is a natural pass/slash along and between Lydia Ann Channel and the interior of Harbor
   Island Northeast. Site encompasses fringe marsh including Smooth Cordgrass and Black
   Mangrove.

14. Latitude
15. Longitude

16. Closest Boat Ramp
17. Distance From Ramp
18. Boat Type

19. Directions From Sector Corpus Christi
Take Hwy 35 north through Gregory-south on Hwy 361 to Aransas Pass, east on
361 approx. 5 miles to Port Aransas, TX. Boat access only.

20. Closest Airport
21. Closest Helipot

22. Trusted/Contact Numbers
   USCG 361-888-3162
   USCG Duty 361-533-7166
   TCG 361-826-3300
   TCEQ 361-825-3110
   NRDA 512-426-7291

23. Resources at Risk
   High - high quality seagrass, birds
   Environmental:
   High - salt and brackish marshes

24. Width of Inlet
25. Water depth

26. Boom Strategy Recommendation

Exclusion booming of natural pass/slough are along and between the Lydia Ann Channel and the interior of Harbor Island Northeast. Pass/slough is approx. 360 ft wide.
Need: Comprehensive Portal
What is NOAA’s Role

• 2015 BSEE and EPA contact funding to inventory, ingest, and deliver current GRP data via ERMA

• Develop *recommendations* on GRP creation and visualization for ERMA and other GIS systems

• Create tools to support creation of new GRP data (ERMA Draw) and enhanced ESI queries and reporting (ICS 232/RAR)
Environmental Response Management Application (ERMA)

ERMA DEEPWATER GULF RESPONSE

SCAT Team 1 photos 07-27-2010 at 30.2038...

Petibola Island, MS. Buried layer of oil. Left image shows burial further inland by wind action; right image shows burial by wave action (Gulf is below image).

Location: 30.39232°, -88.48641°
What Did We Do for BSEE?

• Evaluated uniqueness and commonality
• Developed ERMA GRP Drawing Tool
• ERMA Comprehensive GRP Coverage
  • Inventory complete, but still gaps
• Developed initial recommendations
• Producing recommendations report in 2017
Success: ERMA GRP Drawing Tool
Success: Comprehensive Portal
<table>
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<th>Location and Description</th>
<th>Response Strategy</th>
<th>Implementation</th>
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| BH-15-01 | Two Locations on the Southern shore of Peddocks Island near:  
  a.) Lat. 42°17′14.03″N  
  Lon. 70°56′51.07″W  
  b.) Lat. 42°17′22.22″N  
  Lon. 70°56′30.72″W | Exclusion Booming  
Prevent oil from entering the interior marshes on the Southern shore of Peddocks Island. | For a & b.) Deploy two legs of boom (each 1000ft) in semicircle formation around the entrances to the marshes.  
The boom must be placed far enough from the entrances of the marshes to be able to withstand the current.  
The entrances may shift periodically; therefore tactics may need to be adjusted.  
Deploy anchors every 200ft and tend throughout tidal cycle. |
Rec’d: Standard Attribution

• Core GRP Attributes
  – Name, Strategy Name
  – Create Date
  – Resource(s) Protected
  – Type/Description
  – Lat/Lon (Decimal Degrees)
  – Status
  – GRP Documentation Link
Future Coastal GRP Goals

• Producing recommendations report in 2017
• Continue conversation of standards
• Continue working with partners to update GRPs
• National standards adopted?
Inland GRP Overview

• EPA Region 2 funding for:
  – Expansion of NOS’ Environmental Response Management Application (ERMA) for the Atlantic Region.

• Reviewed current data for the states of New York and New Jersey in Atlantic ERMA
  – Updated where possible and new data added
    • Environmentally sensitive areas
    • Population centers
      – Day care facilities, schools, police stations, fire stations, hospitals, and more
    • Infrastructure
      – Rail lines, rail crossings, water intakes, sewer service locations
National Transport of Crude by Rail

• Inland transport of crude, hazardous substances has increased nationally.
• As more crude is transported on primary lines, secondary lines are seeing more hazardous substance transport.
• New York State has committed to updating regional response plans.
Inland GRP data (NY)

- Being developed by the State of New York (NYSDEC).
  - Map-based tactical plans
    - Show priority protection areas
    - Include descriptive text:
      - Where & how to establish protection
      - What materials are needed (people & equip)
  - Contracted out to complete 21 counties along
    - Using ESI data where available and creating Sensitive Resource Maps (SRM) when needed.
NEW YORK INLAND RAIL GRPs

COUNTIES OF INTEREST:
Clinton County, NY
Response Symbology

**RAILROAD FEATURES**
- Type of Crossing:
  - Railroad / Street Crossing - RR Above Grade (1)
  - Railroad / Street Crossing - RR Below Grade (0)
  - Rail Junction (0)
  - Train Station (1)
  - MILE Marker
  - CP Railroad
- 0.5 Mile ERG Distance (Fires)
- 1000 ERG Distance (Fires)

**ENVIRONMENTAL FEATURES**
- Bird Conservation Area (0)
- Booming Opportunity (0)
- Water Feature
- Wetland / Aquatic Community and Upland / Terrestrial Community
- Contours - 10 FT

**HUMAN FEATURES**
- Track Off Waterbody Access Point (0)
- Boat Launch/Marina (1)
- Dam (0)
- DPW (1)
- Drafting (4)
- Fire Department (1)
- Government Office (1)
- Home Cluster (0)
- Incident Command Post (0)
- Hospital (0)
- Police Department (1)
- Quarry (0)
- Senior Living (0)
- Staging Area (4)
- Storm Drain (2)
- Utility (1)
- WWTP (1)
- Foam AFF (0)
- Daycare / Preschool Within 0.5 Mile (1)
- School Within 0.5 Mile (1)
- College Within 0.5 Mile (0)
- Public Water Intake (Not Shown) (1)
- Historic Register Site (1)
- Historic Site / Park Boundary (0)
- Retail Gasoline Stations (4)
- Other Petroleum Storage Facilities (>1,100 Gals) (2)
- Major CI Storage Facilities (>400,000 Gals) (0)
GRP Project Summary

- ERMA data & tools support Response planning
- Operational and Environmental data libraries in ERMA will facilitate GRP development
- GRP data delivery will capitalize on existing ERMA functionality
- ERMA tool development will directly support creation of GRP data
- GRP recommendations will encourage ongoing maintenance & update of digital plan data
Acknowledgements

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Questions?