



# Building an Integrated Spill Response System for First Responders

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# Building an Integrated Spill Response System for First Responders

- Authors' experience with Massachusetts Marine Oil Spill Program
- Key Components of Massachusetts model:
  - Resources
  - Planning
  - Training
- Key Outcomes
- Suggested topics for discussion



# Massachusetts Marine Oil Spill Prevention & Response Program

- B-120 Oil Spill (April 2003)
- 2004 Oil Spill Act (Amended '08, '09)



# Oil Spill Prevention & Response Trust Fund

- 5 cents/bbl tax on incoming petroleum (marine terminals)
  - Equipment
  - Training
  - Damage assessment
  - Response costs (if no RP/federal)
  - Administrative/overhead
  - R&D
  - Claims





# Key Components

- Pre-positioned equipment trailers
- GRP development
- Training & exercise program



# Oil Spill Equipment Trailers





# Trailer Contents



# Key Factors: Equipment Trailers

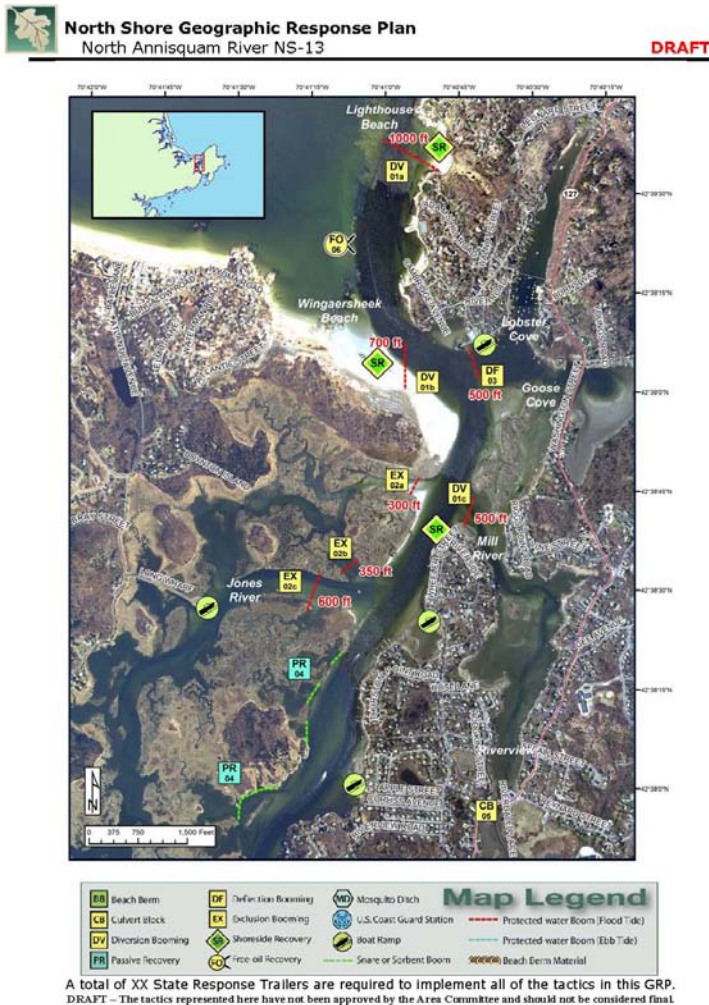
- Purchased & maintained with state funds
- Geared toward first response
- Significant aggregate capacity
  - 76,000 ft nearshore boom; 2,000 ft offshore boom



- Municipalities have discretion to use
- Resupply & maintenance program
- Mutual aid/cascade procedure



# Geographic Response Plan (GRP) Development

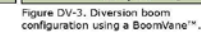
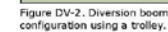


- Map-based sensitive area protection strategies
- Tactical plans - geared toward first responders utilizing equipment in state trailers
- Consensus product – developed in non-emergency setting
- Set realistic expectations



- Standard tactics & terminology
- Responder-oriented
- Local protection priorities
- Flexible & modifiable
- Standard format
- Incorporated into State GIS database & State/Federal Area Plan

## Diversion Boom



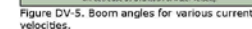
Trolleys require that a line be strung from one shoreline. Trolleys may block a route to impacts from

to another, thus they are mostly used in river to passage by vessels and they are superior debris. A relatively new type of boom control device is built on the principle of a wing or rudder. Devices such as the Boom Vane™, allow the boom to be deployed and controlled from the shoreline (Figure DV-3). This decreases the need for vessels and anchor systems, while allowing superior control of the boom angle.



A special type of boom, tidal-seal boom, is used on some boom arrays where the array contacts the shoreline to prevent oil from escaping. Tidal-seal boom typically contains three chambers as shown in Figure DV-4. Two of the chambers are filled with water, and contact the shoreline in shallow water

and shoreline areas. The third chamber is usually filled with air, and provides flotation as the water level rises. Tidal-seal boom should be used in areas with a smooth bottom of gradual slope and avoided where there are large rocks and sharp breaks in the bottom. If tidal-seal boom is not available, sorbent materials such as pom-poms or snare on rope can be placed next to or attached to conventional boom to hinder oil entrainment under the boom at the beach water interface. Plans should be made to change out oiled sorbent on each low water tide cycle.



Difficulty in deployment will increase and effectiveness will decrease as a function of water velocity.

# Key Factors : GRP Development



- Agency/industry/stakeholder work group process
- Local knowledge/field surveys
- Bridges equipment trailers & training/exercise program





# GRP Exercises & First Responder Training

- Goal: Field verify GRP tactics while providing training to local first responders.
- Objectives:
  - Interagency planning & coordination
  - Resource coordination
  - Local spill preparedness



# GRP Exercises & First Responder Training

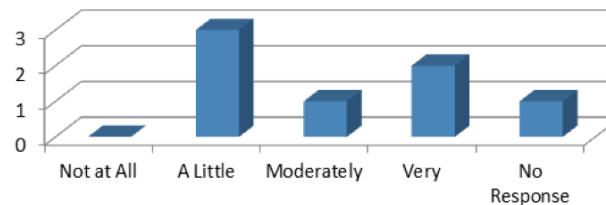
- Program initiated 2009
- 15 exercises completed, 7 planned for 2013
  - 398 responders from 106 agencies, 39 towns to date
- Exercise format:
  - Classroom or tailgate training
  - Field deployment of GRP tactic(s)
  - ICS-based, HSEEP-compliant
- Exercise planning: IPC, MPC, FPC
- Exercise participation:
  - 2-3 municipalities, 20-40 first responders
  - State/federal agencies (observe/evaluate)



# Key Factors : GRP Exercises



Based on Experience Today, Comfort Level With Deploying Similar Boom Array During Actual Incident



- Multi-jurisdiction; link between ER & spills
- Field verify tactics, logistics & communications;
- Rules-of-thumb for deployment
- Leveraged regional funding for BF/OT
- First responder practical experience with plans





# Integrated Spill Response System for First Responders: Take-aways for BC

- Multi-stakeholder, consensus-based planning
- Standard format/approach
- Link resources to plans to responders
- Field verification of tactics/strategies
- Local buy-in
- Long-term funding commitment
- Flexibility and program evolution
- After action reports/Improvement plans
- Leverage against other programs/funding sources



# Discussion Points

- How can you build on programs/capacities already in place? (EM, first responders)
- What are resource needs? (equipment, mobilization, deployment, communications)
- Logistical challenges, infrastructure
- Training needs assessment
- Program lead/champion
- Potential funding sources



# Questions?



<http://grp.nukaresearch.com/testing.htm>