

Boom Types and Capabilities

Environmental Response Training Program

S. EPA ERT's Oil Response Training

Functions of Boom

- **Protection**
 - Shoreline, creeks, wetlands, water-intakes etc.



Functions of Boom



- **Deflection**
 - Move oil from one side of river to the other, or to a collection point, or around an object or island etc.

Functions of Boom

- **Collection**
 - Catch or hold oil at a location on water where the oil can be collected using various techniques.



Boom Profile



- Profile
 - Flotation
 - Skirt
 - Weight

Boom Construction

- **Materials**
 - Flotation
 - Shell material
 - Connectors
 - Weights
 - Top Cables



Boom Types

- **Commercial**
 - **Internal Flotation**
 - **Spring Loaded**
 - **Self Inflatable**
 - **Fire Boom**
 - **Shoreline sealing**
 - **Adsorbent**

Boom Types

- Internal Flotation



Boom Types

- Spring Loaded



Boom Types

- Self Inflatable



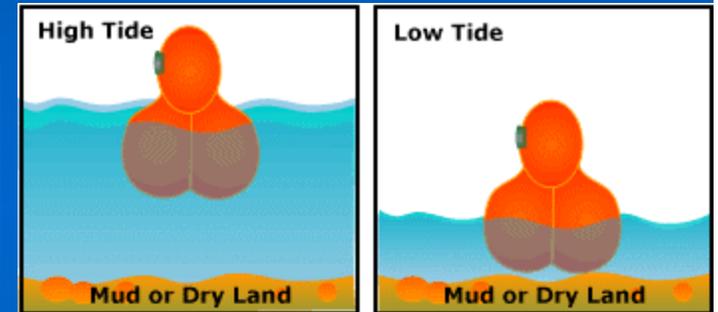
Boom Types

○ Fire Boom



Boom Type

- Shoreline Sealing Boom



Boom Types

- Adsorbent Boom



Field Expedient Containment Methods

- Plastic Sheeting & fire hose
- Log, debris
- Water Spray
- Filter fence using grass, weeds, debris
- Under flow dams
- Weir Dams

Field Boom

- Plastic sheeting & fire hose



Field Boom

- Logs / debris



Field Containment

- Water Spray



Field Containment

- Filter fence



Field Containment



- Under Flow Dams



Field Containment

- Weir Dams



Commercial Boom

- **Advantages**

- Fairly easy to deploy in most cases.
- Usually quick deployment, limited by travel time to scene.
- Good at what it is designed to do.
- In most cases, can be decontaminated and reused.

Commercial Boom

- **Disadvantages**

- Storage and transport to scene
- High winds, waves, fast current
- Decontamination /expense
- Disposal issues

Field Expedient Methods

- **Advantages**

- Found on site in most cases
- On site personnel can deploy almost immediately
- No special equipment required in most cases

Field Expedient Methods

- **Disadvantages**
 - Impossible to decontaminate in most cases
 - Waste disposal issues
 - Temporary in nature

Boom Safety Issues

- Deployment in river, flow rate of river
- Length of deployment / goal of booming operation (deflect, protect, collect)
- Anchoring method
- Anticipated boom pressure

Boom Safety Issues

- **Rope : Tensile strength / working load**
- **Rope safety**
- **Boat Safety operations / capabilities**

Boom Types and Capabilities

- Commercial Boom
- Field Expedient Methods
- Safety

QUESTIONS??