

Regional Response Team/Northwest Area Committee Oil Spill Shoreline Assessment and Cleanup

Shoreline Cleanup

It is almost impossible to prevent shoreline oiling during a spill. Thinking through cleanup methods in advance of a moving oil slick is critical. Two things must be considered in a cleanup plan. The type and quantity of the oil must be determined. Oil types vary widely on the degree of impact, ease of cleanup, and persistence of contamination. For example, lighter fuels (diesel, home heating fuel and light crude oils) evaporate quickly, but tend to be more toxic and penetrate deeper in the shoreline. Heavy oils (bunker C, #6 fuel and heavy crude oils) are less toxic to shoreline ecosystems, but are very persistent, difficult to clean, and may smother shoreline organisms. Also, the type of shoreline must be identified. Both state and federal mapping projects have categorized much of the U.S. shoreline in terms of habitat sensitivity to spilled oil. Shoreline types, from least to most sensitive are:

- Exposed rocky cliffs & seawalls
- Wave cut rocky platforms
- Fine to medium-grained sand beaches
- Coarse-grained sand beaches
- Mixed sand and gravel beaches
- Gravel beaches/Riprap
- Exposed tidal flats
- Sheltered rocky shores/man-made structures
- Sheltered tidal flats
- Marshes

Once responders understand the type and degree of impact and shoreline, they can begin planning an effective cleanup strategy.

Defining Cleanup Options

Many areas have pre-planned shoreline cleanup plans. The responders discuss different types of cleanup methods. The shorelines are discussed by type rather than by location.

Mobilizing the Cleanup

The Shoreline Cleanup Assessment Team (SCAT) determines where the cleanup should take place. They map the shoreline in terms of type, degree of oiling, location of specific sensitive resources to be avoided or protected, and other logistical information. The team then recommends cleanup methods for that shoreline area. Although this process may seem redundant, it



Members of a Coast Guard environmental response team clean up oil absorbent materials off the beach during an oil spill. USCG Photo

enables the cleanup team to set response priorities and use the most appropriate cleanup method for specific shoreline conditions and note site-specific constraints in order to minimize further damage during cleanup.

Shoreline Cleanup Methods

Listed below are examples of shoreline cleaning methods.

- Natural Recovery
- Manual Removal
- Mechanical Removal
- Passive Collection with Sorbents
- Vacuum
- Debris Removal
- Sediment Reworking/Tilling
- Vegetation Cutting/Removal
- Flooding (deluge)
- Ambient Water Washing (Low Pressure (< 50 psi) or • High Pressure (< 100 psi))
- Warm/Hot Water Washing (-/+90 °F)
- Slurry Sand Blasting
- Solidifiers
- Shoreline Cleaning Agents
- Nutrient Enrichment
- Burning

The italics represent methods that require special approvals under federal law.