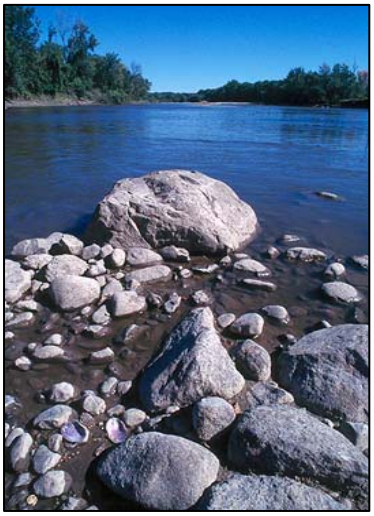
NET ENVIRONMENTAL BENEFITS ANALYSIS HABITAT FACT SHEET:
ROCKY SHORE HABITATS

I. Habitat Description



The rocky shore habitat includes wetland environments characterized by bedrock, stones, or boulders covering 75% or more and vegetation covering less than 30%. Rocky shore habitats are usually dominated by either bedrock or rubble. They support sparse plant and animal communities that are usually dominated by mosses, lichens and algae as well as a few macroinvertebrate species. The abundance and diversity of species depends greatly on the duration and frequency of flooding of the rocky shoreline.

II. Sensitivity to Oil Spills

Rocky shore habitats have a medium sensitivity to oil spills. The biological diversity in this habitat is sparse but may provide habitat for a few species of plants and animals. Plant species that may occur in this habitat are lichens, blue green algae, mosses and liverworts. Some animals that may occur in this habitat are the caddisfly and fingernail clams. In the rocky shore environment oil usually collects on and between the rocks, threatening the moss that lives on these rocks as well as the local ecology that depends on them. Oil can also penetrate the substrates between larger rocks. The depth of penetration is dependant on the size of the substrate.

III. Sensitivity to Response Methods

Methods Causing Least Adverse Habitat Impact

Debris Removal

- Degree of oiling that warrants debris removal and disposal depends on use by humans and sensitive resources

Low-Pressure, Cold-Water Flushing

- Only effective when the oil is fluid and loosely adheres to the sediments
- Usually used in conjunction with vacuum and sorbents
- Use on heavy oils is likely to leave large amounts of residual oil in the environment

Flooding

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- Usually used with various flushing techniques
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Natural Recovery

- Least impact for small spills, lighter oil types, remote areas, and eroding areas

Sorbents
- Overuse generates excess waste
- Useful for recovering sheens
- Physical removal rates of heavy oils will be slow, so less oil will be mobilized for recovery by sorbents

Methods Causing Some Adverse Habitat Impact

Vacuum
- Early use of vacuum on pooled, liquid oil can prevent deeper penetration

High-Pressure, Cold-Water Flushing
- High-pressure water jet is likely to flush finer sediments into nearshore submerged habitats
- Very viscous oils will require extremely high pressure to mobilize them

Manual Oil Removal/Cleaning
- Minimizes sediment removal and problems of erosion and waste disposal
- Deep penetration of oil in porous gravel reduces effectiveness

Sediment Reworking
- Used where gravel removal is not feasible because of erosion concerns
- Sufficient exposure to waves is required to rework the sediments into their original profile and distribution

Methods Causing Probable Adverse Habitat Impact

Low-Pressure, Hot-Water Flushing
- May be needed to flush viscous or deeply penetrated oil
- Any organisms present will be adversely affected by hot water

Mechanical Oil Removal
- Likely to remove large amounts of gravel with the oil
- Foot and vehicular traffic on gravel could mix oil deeper into the sediments

Methods Causing Most Adverse Habitat Impact

High-Pressure, Hot-Water Flushing
- High-pressure water jets are likely to flush oiled sediments into nearshore submerged habitats
- Any organisms present will be adversely affected by hot water and high pressure

Sources:

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