Oil Effects on Natural Resources – Overview

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Group 4 and group 5 oils may behave as non-floating oils due to their physical-chemical properties and the environmental conditions in which they are released.

Submerged/sunken oil may reside longer in the sediments due to slow weathering, its density, and viscosity.

Laboratory and field studies have shown exposure to this oil type results in adverse effects on benthic macroinvertebrates and fish.

Adverse effects include:

- Reduction in benthic communities due to contaminated sediments
- Physical malformations on bottom dwelling fish, including skin lesions, tumors, hemorrhages and developmental defects
- Reduction in food supply
- Reduction in feeding capabilities and growth
- Reduction in reproduction and development
- Mortality

Submerged and sunken oils may have various effects on both freshwater and marine ecosystems such as:

- Bottom-up effects – where the abundance of lower trophic level organisms shift.
- Top-down effects – where the biomass of upper level trophic organisms, such as predators is enhanced.

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