

TABLE 2-1 Relative Changes in the Resources at Risk from Spills of Nonfloating Oils Compared to Floating Oils

Resource at Risk	Risks from Spills of Nonfloating Oils Compared to Spills of Floating Oils
Rocky Shores (-)	Less oil is likely to be stranded, but oil that is stranded is usually stickier and thicker.
Beaches (-)	Viscous oils are less likely to penetrate porous sediments. Oil is often stranded as tar balls, which are easy to clean up on sand beaches. Chronic recontamination is possible for months.
Wetlands and Tidal Flats (-)	Less oil coats vegetation. Because the oil does not refloat with the rising tide, any oil stranded on the lower intertidal zone will remain, thus increasing risk to biota. Cleanup of oil from these environments is very difficult, and natural recovery takes longer.
Water Surface (-)	Less oil remains on the water surface. Oil tends to form fields of tar balls. Potential for chronic impacts from refloats over time is high.
Water Column (+)	Oil can increase exposure as it mixes in the water column. Risks increase if oil refloats after separation from sediments. When submerged, slow weathering of the more toxic components can be a chronic source of risk.
Benthic Habitats (++)	Risks are significantly increased for areas where heavy oils accumulate on the bottom. Slow weathering rates further increase the risk of chronic exposures. Smothering and coating can be heavy. Bioavailability varies with oil and spill conditions.
Birds (-)	Less oil remains on the water surface, so direct and acute impacts are lower. There is a high probability of chronic impacts from exposure to refloats and re-stranded tar balls on shores after storms.
Fish (+)	Risks are increased to all fish, especially benthic or territorial fish, in areas where oil has accumulated on the bottom.
Shellfish (++)	Risks are increased to all shellfish, especially species that spend most of their time on the sediment surface (e.g., mussels, lobsters, crabs). Risk of chronic exposure from bulk oil, as well as the slow release of water-soluble PAHs (polynuclear aromatic hydrocarbons), is high.
Marine Mammals (-)	Less oil remains on the water surface, and the potential for contamination of marine mammals on shore is lower. Oil in the water column is not likely to have an impact on highly mobile species. Benthic feeders (such as manatees) could be exposed from accumulations on the bottom, which would weather slowly.
Sea Turtles (-)	Less oil remains on the water surface, and less oil is stranded on nesting beaches.
Water Intakes (++)	Oil mixed into the water column would pose serious risks to water treatment facilities. Closures are likely to be longer.

Note: (-) indicates a reduction in risk. (+) indicates an increase in risk. Actual risks for a specific spill will be a function of the composition and properties of the spilled oil and environmental conditions at the spill site.