

Conceptual Model of Arctic Oil Spill Exposure and Injuries

Top Predators
Marine mammal and bird populations are of global significance.

OIL IMPACT
Oil can produce health effects and degrade food web.

Wetlands, low coastal tundra, lagoons:
Provide refuge, nesting, and spawning areas. Highly productive.

OIL IMPACT
Oiled, degraded or eroding habitat reduces productivity.



Pelagic Zone
Productive area for food web.

OIL IMPACT
Surface and dispersed oil affects food web. Fish eggs and larvae are especially sensitive.



Benthos
Can be highly productive, important in cycling nutrients.

OIL IMPACT
Oil in sediments reduces productivity and affects food web.



Larval fish

Zooplankton

Phytoplankton

marine detritus

Ice Habitat
Seasonally important source of production, habitat for marine mammals.

OIL IMPACT
Sensitivity to oiling is poorly studied.

Impacts of an Arctic oil spill will vary due to environmental conditions, spill severity and response capacity.

