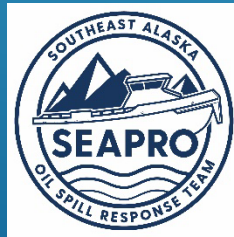


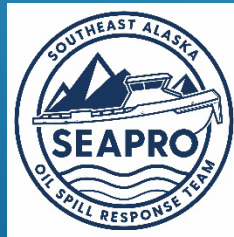
FATE AND BEHAVIOR OF OIL IN WATER

March 2022



DIESEL

- Diesel fuel is considered a non-persistent oil (as compared with heavier Bunker or crude oil) and will lose 40% of its volume due to evaporation within 48 hours.
- Diesel is much lighter than water. It is not possible for diesel to sink and accumulate on the bottom as free oil.
- When spilled, oil moves with the wind and the currents. The long, narrow sheens you see in pictures are referred to as “windrows”



DIESEL IN WATER



When spilled in open water and unconfined, most diesel will evaporate or naturally disperse within a few days (or less). Under many conditions, there is seldom any surface oil for responders to recover.

Oil described as a “heavy sheen” is only 0.001016 mm thick.

When we see oil that looks like a rainbow sheen, it is about 0.0003 mm thick



DIESEL IN WATER



When oil looks “silvery” on the water, it is about 0.0001 mm thick.

For skimmers to be effective, the oil must be more (thicker) than a sheen.

Entrainment is a phenomena that occurs when oil strikes a barrier (like an oil boom) at a speed of 3/4 of a knot (or greater). The force pushing the oil against the boom drive it down and under the boom. Even larger boom is subject to entrainment.

