Perched on the northernmost edge of America’s frontier, the Arctic National Wildlife Refuge is a finely calibrated ecosystem that many birds migrate 7,000 miles to reach. That’s because it’s a safe and advantageous place to raise their young. But if seismic surveys proceed, caravans of trailers, equipment and 40-ton seismic trucks will crush plants, reroute water, alter the permafrost and deliver myriad injuries to the delicate tundra.

**THE HAZARD OF SEISMIC SURVEYS in the ARCTIC NATIONAL WILDLIFE REFUGE**

**HOW IT WORKS**
To locate oil, “thumper” vehicles weighing up to 90,000 pounds grind methodically across the tundra 24 hours a day. A hydraulic panel sends massive shock waves deep into the earth. The way those waves bounce back indicates if oil reserves hide below.

**HOW MAPPING SCARs THE LAND**

- Crisscrossing trucks will carve 20,000 miles—almost the Earth’s entire circumference—of ruts into the fragile tundra.
- The tracks mark out a grid with rows as little as 650 feet apart.
- That’s the length of the U.S. Capitol building.
- The tire ruts can disfigure the landscape for decades. These tracks are 30 years old and still clearly visible.
- Each truck track would be over ten feet wide—or about two people across.

**HOW THE TUNDRA WILL CHANGE**

**TODAY**
Stands of grasses and tiny ponds dot the landscape, creating nooks where wildlife can thrive.

**DURING SURVEYS**
Truck tires threaten to flatten bird nests and polar bear dens across the tundra plain.

**IN THE FUTURE**
Altered water flow will waterlog the grasses and shrubs on the tundra, upending the food web for the region.

**HOW BIRDS WILL SUFFER**

- Dunlin rely on low, coastal tundra; seismic testing can crush mounds where they nest.
- Tundra Swans reuse nests and may be forced to spend precious energy rebuilding them.
- The American Golden Plover’s higher, drier habitat is vulnerable due to lack of snow cover.