

HCTF Direct Pressures

(abbreviated: based on CMP Classification v 2.0)

HCTF is starting to implement the Open Standards framework for Conservation (www.conservationstandards.org). This information will be used for internal tracking purposes.

1. **Residential & Commercial Development:** Human settlements or other non-agricultural land uses with a substantial footprint.
Examples: urban areas, suburbs, villages, vacation homes, shopping areas, offices, schools, hospitals, manufacturing plants, shopping centers, office parks, power plants, train & shipyards, ski areas, golf courses, beach resorts, parks, campgrounds
2. **Agriculture & Aquaculture:** Threats from farming and ranching as a result of agricultural expansion, intensification, or practices; includes silviculture and aquaculture.
Examples: farms, orchards, vineyards, mixed agroforestry systems, Christmas tree farms, cattle feed lots, dairy farms, cattle ranching, chicken farms, aquaculture
3. **Energy Production & Mining:** Threats from the production of non-biological resources.
Examples: oil wells, coal mines, gold mines, rock quarries, solar farms, wind farms (including birds or bats flying into windmills)
4. **Transportation & Service Corridors:** Threats from long, narrow transport corridors and the vehicles that use them, including associated wildlife mortality.
Examples: highways, secondary roads, logging roads, bridges & causeways, road mortality, fencing associated with roads, railroads, electrical wires, seismic lines, aqueducts, oil & gas pipelines, electrocution of wildlife
5. **Biological Resource Use:** Threats from consumptive use of "wild" biological resources.
Examples: insect collecting, pest control, wild mushroom harvest, control of host plants to combat timber diseases, forestry, pulp operations, fuel wood collection, charcoal production
6. **Recreation & Disturbance:** Threats from human activities that alter, destroy, and disturb habitats and species associated with recreation and/or non-consumptive uses of biological resources.
Examples: off-road vehicles, motorboats, jet-skis, snowmobiles, ultralight planes, mountain bikes, hikers, birdwatchers, skiers, pets in recreational areas, temporary campsites, caving, rock-climbing, vandalism
7. **Natural System Modifications:** Threats from actions that convert or degrade habitat in service of "managing" natural or semi-natural systems, often to improve human structures or welfare.
Examples: fire suppression to protect homes, inappropriate fire management, escaped agricultural fires, campfires, wildfires, dam construction, dam operations, sediment control, levees and dikes, surface water diversion, groundwater pumping, channelization, artificial lakes, land reclamation projects, removal of snags from streams, lack of mowing of meadows, reduction in controlled burns, lack of Indigenous management of key ecosystems
8. **Invasive & Problematic Species, Pathogens & Genes:** Threats from non-native plants, animals, pathogens/microbes, or genetic materials that have or are predicted to have harmful effects on biodiversity following their introduction, spread, and/or increase in abundance or virulence.

Examples: feral household pets, zebra mussels, introduction of species for biocontrol, invasive plants, genetically modified trees

9. **Pollution:** Threats from the introduction of exotic and/or excess materials or energy from point and nonpoint sources.

Examples: leaking septic systems, oil or sediment from roads, fertilizers and pesticides from lawns and golf courses, road salt, illegal dumping of chemicals, mine tailings, acid mine drainage, nutrient loading from fertilizer run-off, herbicide run-off, litter from cars, flotsam & jetsam from recreational boats, waste that entangles wildlife, construction debris, acid rain

10. **Geological Events:** Threats from catastrophic geological events.

Examples: earthquakes, tsunamis, avalanches, landslides, mudslides

11. **Climate Change:** Change in climate patterns (e.g. those resulting from increased atmospheric greenhouse gases like CO₂) and/or events outside the natural range of variation that could impact common species or wipe out a vulnerable species or ecosystem.

Examples: changes in atmospheric CO₂ affecting plant growth, loss of sediment leading to broad-scale subsidence, heat waves, cold spells, melting of glaciers, droughts, changes in the timing of rains, loss of snow cover, increased severity of floods, decreased summer stream flows, changes in species distribution