Natural Trails & Waters
COALITION

IMPACTS ON WILDLIFE

Dirt bikes, jet skis, snowmobiles and other off-road vehicles have a wide range of damaging effects on many species of wildlife. Some are direct and highly visible ranging from chasing and harassment to mortality. Others are indirect and less obvious, but no less serious, including behavioral changes and habitat fragmentation. Taken together, these impacts threaten the well-being of wildlife in virtually every type of ecosystem where off-road vehicles operate. The major effects can be grouped into three broad categories: mortality; habitat destruction/fragmentation; and disturbance.

Off-Road Vehicles Can Kill Wildlife:

- The Mojave Desert provides critical habitat for the desert tortoise, which is listed as a threatened species under the Endangered Species Act. Several studies in this region have documented how dirt bikes, all-terrain vehicles (ATVs) and other off-road vehicles kill tortoise – these rare animals have literally been crushed under the wheels of larger vehicles – and destroy underground burrows that provide refuge for tortoise and their young during daylight hours. (Burge, 1983; Bury and Luckenbach, 1986; Berry 1990)

- Decades of research has consistently documented the negative impacts of roads on elk. A former Forest Service ranger explains the consequences of burgeoning cross-country off-road vehicle use: "It's simple biology and common sense. If a wildlife population is weakened by land management decisions – in this case motorized access – you'll see higher losses from everything: winter mortality, predation, accidents and disease." (Bugle, Mar/Apr 2002)

- Research connects off-road vehicle use of beach habitat in the Black Bay National Wildlife Refuge in Virginia with the decimation of the region's ghost crab population. (Fialka, 1975)

- Several studies have documented how snowmobiles and other vehicles that compact the snow can kill small mammals that inhabit the space between the snow and the ground. One study in Minnesota concluded that "intense snowmobiling" in a field "eliminated the small mammal population" in this region. (Rongstad, 1980) Moreover, research suggests that this mortality spills over to affect other species, including hawks, owls and fox, which depend on these small mammals for prey. (Brander, 1974)

Off-Road Vehicles Fragment and Damage Habitat:

Dirt bikes, snowmobiles and other off-road vehicles alter, damage and fragment habitat in innumerable ways.

- Swamp buggies, ATVs and other off-road vehicles have carved more than 23,000 miles of cross-country routes across Big Cypress National Preserve in Florida. This spaghetti network of mostly illegal routes touches virtually every corner of habitat for the critically endangered Florida panther. The human activity associated with this use and the footprint left by vehicles have caused the panther to avoid preferred hunting areas and home ranges.

- Off-road vehicles reduce and eliminate vegetation. This results in a decrease in shelter, foraging areas, and perches and/or nesting sites that are critically important to birds, mammals and reptiles.

- Extensive research has documented the adverse impacts of roads and cross-country off-road vehicle routes on a wide array of animals, particularly large mammals.

- Grizzly bear home ranges in Montana were disproportionately located in the least-roaded sections of areas studied. (Mace and Manley, 1993) Other studies conclude that female grizzlies

that have the most success raising litters "chose home range locations with substantial portions devoid of roads." (Mace and Manley, 1993; Mace et al., 1996; Mace and Waller, 1997)

Off-Road Vehicles Disturb Wildlife:

The noise, pollution and very presence of off-road vehicles disturb wildlife resulting in displacement from habitat, nest or den abandonment, disruption of predator-prey dynamics and other changes in natural behavior.

- After more than a decade of scientific analysis, the National Park Service moved to phase-out snowmobiles from Yellowstone and Grand Teton National Parks in part because the machines harass, stress and otherwise harm bison, elk and other wildlife.

- Research in Yellowstone has consistently documented how snowmobiles tend to herd bison down road corridors. An analysis of snowmobile-bison conflicts found that 60 percent of all bison groups observed on groomed surfaces had negative reactions to snowmobiles, most frequently involving running away from the machines. (Bjornlie, 2000)

- Research has concluded that jet ski use – regardless of operating speed – adversely affects dolphins. The greatest impacts are associated with use in shallow waters, which serve as feeding and calf-rearing areas. (Nowacek et al, 2001)

- A study of wolverines in Idaho concluded that "technological advances in over-snow vehicles and increased interest in winter recreation has likely displaced wolverines from potential denning habitat and will continue to threaten what may be a limited resource." (Copeland, 1996)

- Some suggest animals are unaffected by the noise and presence of off-road vehicles if they do not run away. However, research demonstrates that wildlife can be negatively impacted even if flight does not occur.

- In one study of captive white-tail deer, scientists found that heart rates increased by as much as 250 percent over baseline levels when snowmobiles approached even when the deer did not stand up and run away. (Moen et al., 1982)