Natural Trails & Waters
COALITION

OFF-ROAD VEHICLES POLLUTE

Dirt bikes, all-terrain vehicles (ATVs), snowmobiles and other off-road vehicles are major sources of air, water and noise pollution nationwide. Off-road vehicles produce a wide range of dangerous pollutants, including carbon monoxide, nitrogen oxides, hydrocarbon, particulate matter, benzene, methyl tertiary butyl ether (MTBE) and compounds known as polycyclic aromatic hudrocarbons (PAHs). Particulate matter, benzene and PAHs are known human carcinogens while MTBE is a possible carcinogen that has contaminated water supplies throughout the United States.

Small Engines, Big Polluters:

Most dirt bikes, snowmobiles, jet skis and ATVs in use today are powered by two-stroke engines that burn a combination of gas and oil. These engines are antiquated, highly-polluting and inefficient.

- According to the U.S. Environmental Protection Agency (EPA), the average two-stroke motor dumps 25 to 30 percent of its fuel mixture unburned into the air and water.

- At the Lake Mead National Recreation Area (AZ/NV), the National Park Service estimates that during peak summer weekends two-stroke engines alone discharge as much as 27,000 gallons of unburned fuel into the Lake per day. (Draft Environmental Impact Statement, p. 133)

- In a comprehensive report issued in May 2002, the National Research Council concluded jet skis and other boats equipped with two-stroke engines are a "significant source" of oil pollution throughout North America. While jet skis, boats and runoff produce more than 18 million gallons of oil pollution, oil drilling and exploration account for less than one million gallons. (Oil in the Sea: Inputs, Fates, and Effects, May 2002)

- Based on research by the California Air Resources Board, operating a jet ski with a two-stroke motor for one day produces as much smog-forming pollution as driving a car 100,000 miles.

- The EPA estimates that air pollution from off-road vehicles increased from 17 to 22 percent of the nationwide total produced by mobile sources between 1989 and 1998. During the same period, the total contribution from cars and light trucks decreased from 62 to 56 percent while the number of these vehicles and miles driven increased. (Proposed Rule, Control of Emissions from Nonroad Large Spark Ignition Engines and Recreational Engines, October 5, 2001)

- The magnitude of the air pollution problem triggered a provision in the Clean Air Act that required the EPA to issue formal emission limits for off-road vehicles. The Agency issued a final rule covering snowmobiles, dirt bikes and ATVs in September 2002.

Public Lands at Risk:

Off-road vehicles are major on-site sources of air, water and noise pollution in America's National Parks, Monuments, Forests and other public lands.

- Although cars outnumber snowmobiles by 16 to 1 in Yellowstone National Park, the Park Service estimates than snowmobiles produce up to 68 percent of the Park's annual carbon monoxide pollution and as much as 90 percent of total hydrocarbon emissions.

- A dirt bike with a two-stroke motor operating in a National Monument or Forest produces eight times more carbon monoxide pollution than the average car.

- In Canyonlands National Park in Utah, dirt bikes and ATVs have repeatedly driven in Salt Creek –

the only clear, perennial stream in the Park. The machines dump oil, gas, anti-freeze and other chemicals into the stream throughout its 11-mile course. In September 2002, the Park Service prohibited vehicle use in Salt Creek after concluding that this activity impairs park resources in violation of federal law and Park Service regulations and management policies.

Pollution Threatens Public Health:

While pollution in cities across the country is widely recognized as a major threat to public health, this issue receives less attention on public lands. However, visitors and employees face numerous risks and can be exposed to harmful pollutants at levels that rival urban areas. The most comprehensive analysis of this issue on public lands has occurred at Yellowstone National Park.

- During the winter of 2002, rangers at Yellowstone wore respirators at the west entrance gate to reduce their exposure to toxic exhaust generated by the thousands of snowmobiles entering the park on busy weekends. During the prior winter season, over a dozen rangers filed medical reports complaining of symptoms of carbon monoxide poisoning, including sore throats, headaches, lethargy, eye irritation and tightness in the lungs.

- During the winter of 2003, some rangers at Yellowstone's west entrance were outfitted with special hearing protection in order to reduce the risk of high-end hearing loss caused by snowmobiles.

- Growing concern about the adverse effects of exposure to tiny particles in snowmobile exhaust prompted the Park Service to issue paper dust masks to all employees that rode on or worked in close proximity to snowmobiles during winter 2003.

- National health organizations, including the American Cancer Society and Physicians for Social Responsibility, wrote to Yellowstone's Superintendent in 2003 urging that every visitor to the Park be warned of the dangers associated with particulate pollution and offered similar paper masks. The Park failed to take such action.

- As part of its decision to continue large-scale snowmobile use in Yellowstone, the Park Service acknowledges that: "Where high levels of [air] pollutants and other air toxics occur, visitors who are susceptible to respiratory problems would likely be adversely and minor to moderately affected." (Winter Use Final Supplemental Environmental Impact Statement, p. 191)

Pollution Harms Wildlife:

The toxic chemicals and compounds released by off-road vehicles adversely affect the health of fish, birds and other animals that are exposed to exhaust, inhabit polluted water and/or consume contaminated food.

- Pollution from snowmobiles is deposited and concentrated in snowpack and released very quickly with the spring thaw. One study found that 80 percent of the acidity in snowpack is released in the first 20 percent of snowmelt, and this acid pulse is a major cause of death for aquatic insects and amphibians. (Rawlins, 1993)

- Jet ski emissions can be especially pernicious. A study funded by the National Marine Manufacturers Association found fish growth was reduced by as much as 46 percent following exposure to pollutants from two-stroke engines, including PAHs, at minute levels between five and 70 parts per trillion. (Oris, 1998)

- PAHs are by-products of fuel combustion that are carcinogenic, extremely persistent in the environment and have the potential to mutate certain wildlife. Studies have found that the presence of PAHs at extremely low levels (parts per trillion) is toxic to zooplankton and limits the reproductive success of these organisms and many fish. (Oris, 1998; Giesy, 1997) The negative impact on zooplankton is particularly serious because these species form the basis of the food chain in many marine environments.