FUEL to BURN

THE CLIMATE AND PUBLIC HEALTH IMPLICATIONS OF OFF-ROAD VEHICLE POLLUTION IN CALIFORNIA

A CENTER FOR BIOLOGICAL DIVERSITY REPORT
Fuel to Burn:
The Climate and Public Health Implications of Off-road Vehicle Pollution in California

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May 2008

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Front Cover:
Motorcycle in Jawbone Canyon, California
Photo by Howard Wilshire

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The Center for Biological Diversity is a national nonprofit conservation organization with more than 40,000 members dedicated to the protection of endangered species and wild places. We work through science, law, and creative media to secure a future for all species, great or small, hovering on the brink of extinction.

The Clean Air Initiative, a project of the American Lung Association of San Diego & Imperial County, is dedicated to improving the air quality and health of residents in Imperial County and the Mexicali border region through education, advocacy, and support. The Clean Air Initiative coalition members include health care agencies, nonprofit organizations, environmental agencies, and Imperial Valley community members.

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An Executive Summary

In 2006, California took a giant leap forward in addressing the threats posed by global climate change by passing landmark legislation, the Global Warming Solutions Act. Under this law, the state commits to reducing its emissions of greenhouse gases to 1990 levels by the year 2020 — a reduction of approximately 29 percent compared to the projected business-as-usual scenario. In addition, Governor Schwarzenegger’s Executive Order S-3-05 commits the state to reducing greenhouse gas emissions to 80 percent below 1990 levels by 2050. Currently, the California Air Resources Board is crafting rules to achieve the new greenhouse gas emission reductions targets.

As described below, because off-road vehicles produce significant greenhouse gases, California should ensure that emissions from this source are reduced at the same pace as other sources. At a minimum, emissions from off-road vehicles should be reduced to at least 1990 levels by 2020 with further reductions to 80 percent below 1990 levels by 2050.

The state has also made a commitment to protecting the quality of the air that California residents breathe. California has among the poorest air quality in the nation and is home to 13 of 20 counties nationwide most at risk to adverse health impacts from smog.

In addressing the twin goals of reducing greenhouse gas emissions and protecting public health from the adverse effects of poor air quality, California needs to immediately address the pollution and greenhouse gas emissions from off-road vehicles. These emissions, while a relatively small component of the overall transportation sector, are a significant and growing source of greenhouse gases. Due to the meteoric rise in the number of off-road vehicles, these emissions will climb significantly if steps are not taken to curb them.

Off-road vehicles in California currently emit more than 230,000 metric tons — or 500 million pounds — of carbon dioxide into the atmosphere each year. This is equivalent to the emissions created by burning 500,000 barrels of oil. The 26 million gallons of gasoline consumed by off-road vehicles each year in California is equivalent to the amount of gasoline used by 1.5 million car trips from San Francisco to Los Angeles.

Because of the significant pollution caused by off-road vehicles, a reduction in emissions will have important health benefits for Californians. Off-road vehicles emit considerably more pollution than automobiles. According to the California Air Resources Board, off-road motorcycles and all-terrain vehicles produce 118 times as much smog-forming pollutants as do modern automobiles on a per-mile basis.

In the past 15 years, pollution from off-road vehicle use has increased significantly. Emissions of total organic gases and reactive organic gases — which are important precursors to smog — have doubled. Carbon monoxide emissions have increased by 56 percent. Emissions from current off-road vehicle use statewide are equivalent to the carbon dioxide emissions from 42,000 passenger vehicles driven for an entire year or...
the electricity used to power 30,500 homes for one year. If left unchecked, the emissions from off-road vehicles will continue to increase; as California addresses the difficult problems posed by global warming, emissions from off-road vehicles must be addressed.

This pollution is having a significant impact on the health of Californians. Imperial County, for example, is one of the most popular off-road vehicle destinations in the state. It also has among the worst air quality in California. Childhood asthma rates in Imperial County are far higher than the statewide average. Air pollution is a contributor to the high rates of asthma, bronchitis, pneumonia, and allergies in this region, especially among children younger than 14 years old.

Despite these serious climate and health implications, the State of California has failed to seriously address the greenhouse gas emissions and pollution associated with off-road recreation. The California Air Resources Board currently allows the continued sale and use of polluting off-road vehicles that do not meet state emissions standards. And the Department of Parks and Recreation spends tens of millions of dollars each year promoting and supporting off-road vehicle use on state and federal public lands.

The significant reduction in greenhouse gas emissions mandated by the Global Warming Solutions Act applies to all greenhouse gas sources throughout the state. However, not all sources are able to realize reductions to the same degree at the same economic and societal costs. Because recreational off-road vehicle use is entirely discretionary, emissions reductions in this source to levels at or significantly below 1990 levels may be used to offset other sources that are less discretionary or that involve higher costs. For the policy recommendations below,
we urge the Air Resources Board to assess the benefits of using each policy mechanism to achieve much greater reductions in this source. In all cases, a reduction to 1990 levels by 2020 should be considered only as the minimum reduction alternative.

Limiting overall off-road vehicle emissions will ensure that recreational polluters are reducing emissions at the same pace as other sectors of the population. Consistent with Assembly Bill 32 and the governor’s executive order, emissions from off-road vehicles should be reduced to at least 1990 levels by 2020 with further reductions to 80 percent below 1990 levels by 2050. In order to meet this target, we offer the following recommendations:

• The California Air Resources Board, in cooperation with the Department of Parks and Recreation, should limit greenhouse gas emissions from off-road vehicle use in state vehicular recreation areas and other state lands to at least 1990 levels.

The Department of Parks and Recreation should develop a statewide plan to reduce statewide off-road vehicle emissions to the maximum extent possible. The plan should include options to reduce greenhouse gas emissions from discretionary recreational off-road vehicle use to at least 1990 levels by 2020. No new state off-road vehicle sites should be established unless they are consistent with such a plan. An initial analysis of the amount of greenhouse gases currently being emitted from off-road vehicle use within state vehicular recreation areas and other state lands is crucial in developing a statewide plan and individual management plans to reduce off-road vehicle emissions from these areas.

• The State of California should ensure that federal agencies managing off-road recreation in California are limiting greenhouse gas emissions from off-road vehicles to at least 1990 levels and should withhold financial support and permits from federal agencies that do not meet this target.

Because significant greenhouse gas emissions arise from off-road vehicle use on federal lands, the State of California must ensure that those emissions are reduced along with emissions from other sources.

  o The California Air Resources Board should reject applications for continued or expanded off-road vehicle use by federal agencies that are not reducing emissions.

The California Air Resources Board should adopt rules that require rejection of applications for new, continued, or expanded off-road vehicle recreation on federal lands from federal agencies or districts that do not have an adequate plan to reduce overall off-road vehicle emissions from their jurisdiction to at least 1990 levels.

Off-road motorcycle sending up a cloud of dust
Photo by George Wuerthner
The Department of Parks and Recreation should reject applications for funding from federal agencies that are not reducing emissions.

The California Department of Parks and Recreation provides tens of millions of dollars to federal agencies to promote and manage off-road vehicle recreation. The Off-Highway Motor Vehicle Recreation Division should adopt rules that disallow applications for funding from federal agencies or districts that do not have a sufficient plan to reduce overall off-road vehicle emissions from their jurisdiction to at least 1990 levels.

The State of California should provide substantive comments on federal land-use plans and proposals that will result in increased greenhouse gas emissions.

The State of California has several opportunities to significantly reduce greenhouse gas emissions from off-road vehicle use on federal lands. The California Air Resources Board, the state, and appropriate state agencies should participate in the public planning process for proposed federal land management plans, travel management plans, and individual projects to actively promote the position that each plan or project must be consistent with an overall plan by the federal land management agency to reduce off-road vehicle emissions to the maximum extent possible. Such plans should include options to reduce greenhouse gas emissions from discretionary recreational off-road vehicle use to, at a minimum, 1990 levels by 2020.

Photo by Perry Hoffman

Off-road vehicle destruction in the Mojave Desert. Besides creating ugly tracks like these, California off-road vehicles together emit as much carbon dioxide as 42,000 passenger vehicles driven for a year.
• The Department of Motor Vehicles should cap the number of registrations issued for off-road vehicles in California.

The Department of Motor Vehicles should cap the number of registrations issued for off-road vehicles in California. The cap should be scaled to achieve, at least, a reduction of emissions to 1990 levels by 2020. Because registration enforcement is currently lax, additional resources may be required for effective enforcement.

Additionally, the California Air Resources Board should immediately address the adverse public health effects and climate implications of non-conforming off-road vehicles.

• The California Air Resources Board should eliminate loopholes that allow continued use of polluting off-road vehicles that fail to meet state emission standards.

Just as California does not allow the continued use of automobiles that do not meet state emission standards, the state should not allow the use of off-road vehicles that do not comply with state standards. The California Air Resources Board should eliminate the “red-sticker” loophole that allows continued use of polluting off-road vehicles that do not meet state emission standards.

• The California Air Resources Board should disallow continued or expanded off-road vehicle use on federal lands in areas that do not meet air quality standards.

California must certify that proposed land uses on federal lands conform to the state’s enforcement of the Clean Air Act. To date, the state regularly approves these uses — even in non-conforming areas like Imperial County — without significant evaluation. The California Air Resources Board should reject proposals to continue or expand off-road vehicle use on federal lands in areas that do not meet air quality standards.

Dust plume from off-road vehicle staging. Meeting California’s ambitious goals of reducing greenhouse gas emissions means that all emissions sources must be addressed.

Photo courtesy Community ORV Watch

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