ENVIRONMENT

The fragile desert

Some of the most beautiful and varied land of the Mojave Desert is being badly damaged by a series of off-road motorcycle races between Barstow, Calif., and Las Vegas. This is the conclusion of a study by H. G. Wilshire and J. K. Nakata of the U.S. Geological Survey of the effects of off-road vehicles on the desert, specifically, the annual one-day, 150-mile Barstow to Las Vegas race, which has 3,000 participants. The race has been held each of the last eight years. The course varies in location each time.

The races have destroyed desert pavement, mature vegetation and other natural barriers to erosion that required centuries to form within areas now totalling more than 9,000 acres of desert lands, the authors report in the June CALIFORNIA GEOLOGY. The races have produced mechanical erosion of hundreds of tons of soil. Major loss of animal and plant life has occurred, and habitats in the affected areas have been seriously modified. Furthermore, some archaeological sites have been damaged. Among these are Indian intaglios, large figures drawn on desert pavement near Blythe, Calif., at least several centuries ago by Indians. The markings were made by scraping aside the darker surface to expose lighter soil beneath, just as were the ancient Nazca plains inscriptions in the Peruvian desert.

Tracking pollution by balloon

Much is still unknown about the reactions pollutants undergo as they drift long distances away from their sources, or indeed how far they can travel unabated. This summer a series of balloon flights should answer some of these questions as they measure pollution along the path of prevailing winds passing over U.S. cities. The flights are called Project DaVinci and are sponsored by ERDA, Sandia Laboratories, the National Geographic Society, NOAA and EPA.

Already a flight along a plume from St. Louis to Indiana has produced some surprising results. Ozone was believed to dissipate at night and reform the next day as new exhaust was added to the air. But balloon measurements indicate that instead, the layer of pollution simply rises at night and descends again the next day. Sulfur dioxide was thought to disperse fairly rapidly as it was blown away from its source, but measurements again found a much greater persistence than expected.

The fuss over sludge

The idea of recycling sewage wastes to provide natural fertilizer for crops seems so attractive that it has gained wide support. But now a controversy has arisen over what to do about dangerous chemicals and trace elements from industrial wastes that find their way into the sludge and eventually into the crops. The June 19 ENVIRONMENTAL ACTION summarizes the present situation.

As early as 1971 the Food and Drug Administration began examining plants grown on the sludge left over after urban sewage is treated. They found in test soybeans a veritable pharmacopia of potentially dangerous substances: lead, cadmium, mercury and chlorinated pesticides. The Environmental Protection Agency formed a task force to analyze the situation and they made some recommendations, particularly concerning cadmium, which had been singled out as a health hazard.

In the end, however, the Office of Management and Budget overruled EPA's guidelines and an EPA Science Advisory Council recommended that the FDA or the Agriculture Department choose the sludge standards. Thus, for now, sewage sludge is being sold to farmers without any regulations on its cadmium content or even a coherent federal approach to the problem.