



David Vaughn

**Abandoned farm land can contribute blowing dust, which can obscure visibility.**

throughout the Central Valley, where it contributes to dust storms and air pollution by particulate matter 10 microns or less in diameter (PM-10).

In addition, previous studies have shown that Environmental Protection Agency standards for PM-10 are frequently exceeded in the San Joaquin Valley. Soil dust from a variety of sources comprises about 60% of the PM-10 in the Valley annually.

Because PM-10 particles are small enough to penetrate the lungs, they can threaten people's health. Studies have shown that in general the coarse particles in PM-10 dust come from agricultural fields, deserts and roads, while finer particles come from motor vehicle exhaust as well as industrial and residential combustion. But scientists still know few specifics about

where airborne particles come from, where they go, what is in them and how the various components affect people's health. UC researchers are working to answer these questions and to find ways for farmers to reduce PM-10 production.

The first step in determining how the particulate matter standards will affect farmers is finding out how much agriculture contributes to PM-10. UC Davis ecologist Lowell Ashbaugh is working towards that in a 5-year, USDA-supported study of particulate matter in the San Joaquin Valley.

—Editor



Jack Hlyne

**Buckwheat contributed significant vegetative cover in the 2,500 acre area.**

## *Summer boating main source of lake's MTBE*

Using a Sierra Nevada lake as a laboratory, UC Davis scientists have found that summertime recreational boating is the primary source of MTBE in the lake's water, and that the contamination most likely stems from unburned fuel in engine exhaust, not spills.

The study at Donner Lake is part of an overall effort to learn more about the sources, fate and transport of the gasoline oxygenate additive in California's water.

Researchers, including John Reuter and Brant Allen of UC Davis' Tahoe Research Group, found that 86% of the variation in the seasonal trend of total lake MTBE levels was explained

by recreational boating. Neither urban runoff nor precipitation contributed significantly, the researchers concluded, based on low concentrations of MTBE in the lake during spring months.

MTBE (methyl tert-butyl ether) is classified by the U.S. Environmental Protection Agency as a possible human carcinogen. The Donner Lake findings are among the first to show conclusively the impact of motorized boating on MTBE surface-water concentrations. The results have been reviewed by the U.S. Geological Survey and are being used in scientific discussions of MTBE nationwide.

—Editor