

# CLOUD SEEDING TO ENHANCE SNOWFALL

PRESENTATION BY ARLEN HUGGINS, DESERT RESEARCH INSTITUTE



Arlen Huggins, Desert Research Institute, has an active interest in applied research in both summer convective storms and wintertime storms. He has studied the evolution of winter storms over mountainous terrain, including field projects in the Sierra Nevada of California and Nevada, the Wasatch Mountains of Utah and the Victorian Alps and Snowy Mountains of Australia. As a researcher Mr. Huggins has studied the physical effects of both airborne and ground-based cloud seeding on winter storm clouds, and produced several publications documenting the effects of seeding from cloud to ground. He manages the Cloud Seeding Program at DRI, which is designed to augment snowfall in selected mountainous regions of Nevada, California and Colorado.

**Date:** Wednesday, October 20, 2010

**Time:** 5:30 No-Host Bar. Program begins promptly at 6:00 p.m.

**Cost:** \$5 donation requested.

**Location:** Tahoe Center for Environmental Sciences  
291 Country Club Drive, Incline Village, Nevada

Cloud seeding has been conducted in the Sierra Nevada since the 1950s and in the Lake Tahoe area since the 1960's. As a form of weather modification, wintertime cloud seeding is aimed at enhancing snowfall in mountainous regions to increase the snowpack, resulting in more spring runoff and water supplies to the surrounding areas.

Cloud seeding research is still being conducted, but the scientific basis for wintertime cloud seeding evolved mainly from detailed investigations of clouds and their response to various seeding materials in the 1980s and 1990s.

Significant results from several of these research efforts will be presented to explain how the conceptual model for seeding winter storms came about, and how it is being applied today in areas like the Tahoe Basin.

DRI scientists have played a major role in cloud seeding research and a specific DRI evaluation method using ultra trace chemical analysis of snow samples continues to be applied in ongoing research and operational seeding projects. Some examples of this unique evaluation method will also be presented.