



Hwy 40 Scenic Bypass

Central Sierra Snowlab

History

California has some of the most productive farmland in the world and a population of 38 million people. California alone is one of the biggest

economies in the world. Water is critical to that economy and Sierran snows are critical to that water supply. The snows serve as a frozen reservoir slowly releasing water in the spring to streams and rivers downstream. It is vital to know how much snow is in the Sierra what the water content the snow is. How much water will come from the melting snow? Reservoir managers and farmers can then plan. The Central Sierra Snow Lab was established in 1946 to gather accurate information and do snow research. The Snow Lab was built by the U.S. Weather Bureau and the Army Corps of Engineers. The U.S. Forest Service took over in 1952 and the University of California at Berkeley assumed responsibility in 1995.

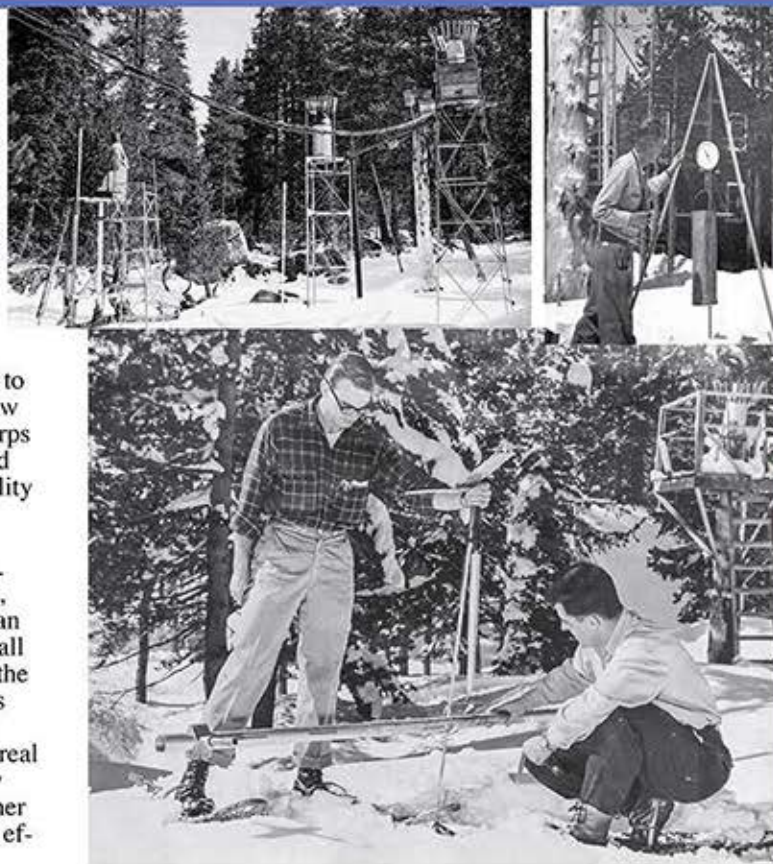
Donner Summit is a perfect spot for a snow research station. Long term records of snowfall, gathered first by the railroad, go back to 1881. The maritime influence of the Pacific Ocean on Donner Summit results in an average of 34 feet of snowfall each winter - the highest snowfall of any residential area in the continental U.S. The snowpack typically lasts seven months and is deep, ranging from six to sixteen feet. The Lab is located in a large watershed that drains the terrain north of Boreal and west of Castle Peak, making it an ideal location to study runoff and streamflow. With the snow/rain line moving higher each year Donner Summit is an excellent place to gauge the effects.

A Good Story

The Federal Snow Sampler, the tool being used just above, is an efficient way to measure snow water equivalent, and is used by hydrologists in addition to more advanced tools. The sampler is pushed into the snow to extract a core which is then weighed to determine the water content of the snow. Depth alone does not index water content. Accurate measurements help determine the extent of the snowpack and how much water to expect downstream during snowmelt. The sampler was developed by Dr. James Church, the "Father of Snow Surveying."

Things to do right here

Hiking up Boreal Ridge from Clair Tappaan Lodge (just up the road) to Crater Lake offers great views of Donner Summit. Walkers will like walking in Summit Valley, seeing more 20 Mile Museum signs and Native American grinding rocks.



Top Left: 1951 Geiger Mueller Counter*, battery of precipitation gauges, and radioactive Cobalt 60 (under snow to right).

Top Right: "Weighing a snow core for a water holding study" at the Snow Lab, 1948.

Bottom: Federal Sampler being used at the Snow Lab.

*The amount of water in the snow affected how much radiation was detected as the radioisotope was raised from underground. In that way a profile of the snowpack could be determined.

Avid mountain bikers use this turn off to bike the Hole in Ground trail that goes up to Boreal, under the overpass, up the dirt road 1.7 miles, onto a single track, around Andesite Peak to Lola Montez Lake, then follows a dirt road to the fire department back on Old 40.

