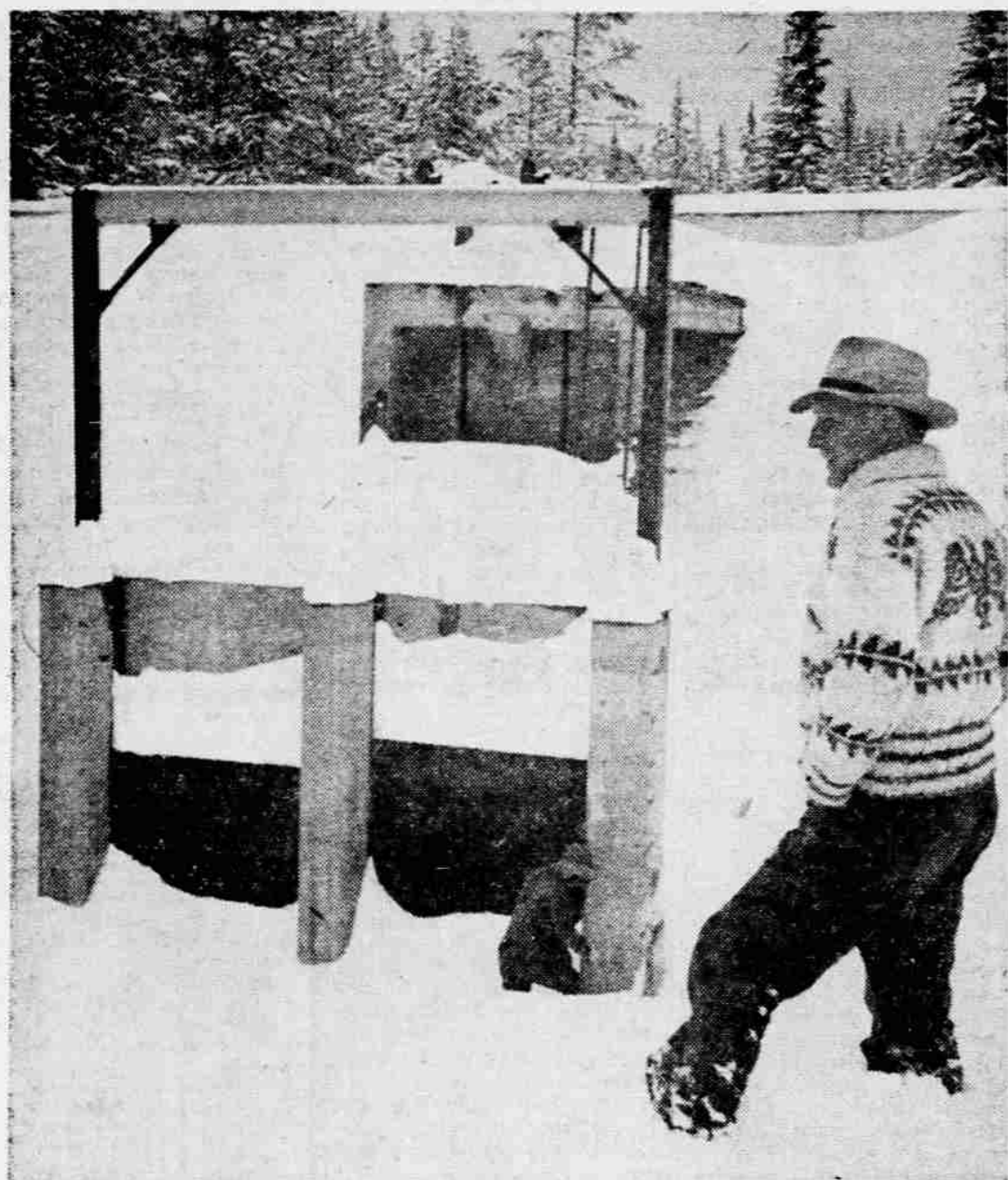


Snow Survey Trip Shows Lack of Water

12 MAIL TRIBUNE, Medford, Or. Sunday, Jan. 31, 1960



GATES EXPOSED—If you haven't got it here, you haven't got it, Paul Culbertson waxes philosophically as he looks over the water situation at Fourmile lake. Hoffbuhr, at the fish screen below, checks the gauge which shows that Fourmile lake has not come up at all since last October.



SINKS TUBE—Hoffbuhr, right, pushes tube into the snow to draw out a core at the Fourmile lake snow course. Some indication that the tube reached dirt must show after it is extracted. If there is more than a



EMERGENCY SHELTER—Billie Creek cabin, maintained by the Medford Irrigation district for emergency use, served as lunch room for noon stop on snow survey last Wednesday. Hoffbuhr relates that the cabin came in mighty handy the time he fell

Fire Destroys House In Applegate Valley

Applegate Valley—Fire Friday night destroyed a small frame house owned by Mr. and Mrs. John Deter about two miles south of Ruch. Cause of the blaze, which was reported to the ranger station here by passersby at 8:30 p.m., was unknown. The house and everything in it were destroyed when the

ODD JOBS FOR MACHINES

New York—(UPI)—Electronic computers are proving their versatility by tackling an increasing versatility of odd jobs. Some universities report they use computers to prepare class schedules, while other machines are being readied for such specific jobs as telling oil companies where to build new gas stations and abandon old ones.

Reservoirs Low For This Time of Year, Crew Notes

By BOB VROMAN
Mail Tribune Staff Writer
"Water shortage next summer? Ha! They said that last year and we still had plenty to go around."

A statement like this was heard recently in a conversation about our current irrigation water supply.

What this person didn't take into consideration was the fact that in order to give everyone enough water to see their crops through the driest year on record, the water in southern Oregon reservoirs was drawn down to an all-time low. Now, right on the heels of the driest year, comes another one, which, so far, has not brought enough precipitation to fill the reservoirs to anywhere near normal.

Serious Water Problem
Orchardists and farmers are facing a serious water problem. The only thing that can get them out of this "jackpot" is a vast amount of precipitation, coming in torrential proportions for weeks on end. And this is not likely.

According to Jack Hoffbuhr, manager of Medford Irrigation district, there is only about a month left for this "miracle" to happen. After that, the chances of getting precipitation that would really count in the total water picture tapers off rapidly.

Fruit growers, nevertheless, must go ahead with preparations for a normal crop, cultivating, spraying and otherwise caring for their trees. They have to gamble on whether or not the rains are going to come, and most of them feel they are sticking their necks way out this year, for none can remember a water situation quite as bad as this.

Snow Survey Trip
The sad picture was brought sharply into focus last Wednesday when Hoffbuhr and Paul Culbertson, chairman of the board of directors of Medford Irrigation district, took the monthly snow survey and inspection trip in the Fish lake and Fourmile lake areas.

Going with them on the trip were Ben Garrahan of North American Weather corporation (as an observer), Hoffbuhr's 11-year-old son, Dennis, who helped record snow measurements, and Jim Smith driver of the Copco Sno-Cat. The machine was loaned to the Medford Irrigation district under their cooperative snow survey plan.

Since the Dead Indian road had been plowed free of snow by loggers in the area, it was possible to take the 4-wheel drive station wagon and the truck to the Fish lake summer homes junction before putting the Sno-Cat to use. There the cat was "walked" off the truck on planks and the party transferred lunches and snow-measuring gear into the cab. Snow shoes and skis were already aboard.

First Course
The first course to be measured was the one on Rye Spur, where readings are taken along side the road. Since this is a new course, no measurements from past years are available for comparison, but the situation didn't look good. And what's more, the ground beneath did not appear to be saturated. The snow depth averaged 27.7 inches with a water content of 8.6 inches.

Ground saturation is the "unknown factor" in measuring the season's water supply, and a very important one. The soil in this part of the Cascades is mostly volcanic ash and highly absorbent, and before any water can run into reservoirs, the ground must satisfy its own thirst.

This year, lack of fall rain was responsible for low ground saturation. When precipitation did come it was in the form of snow which stayed on the surface instead of soaking in. Just how much of this year's snow pack will melt and drop into the ground instead of becoming run-off cannot be calculated, but from all indications the ground is still "sponging" it up. This fact was verified more substantially later on the trip.

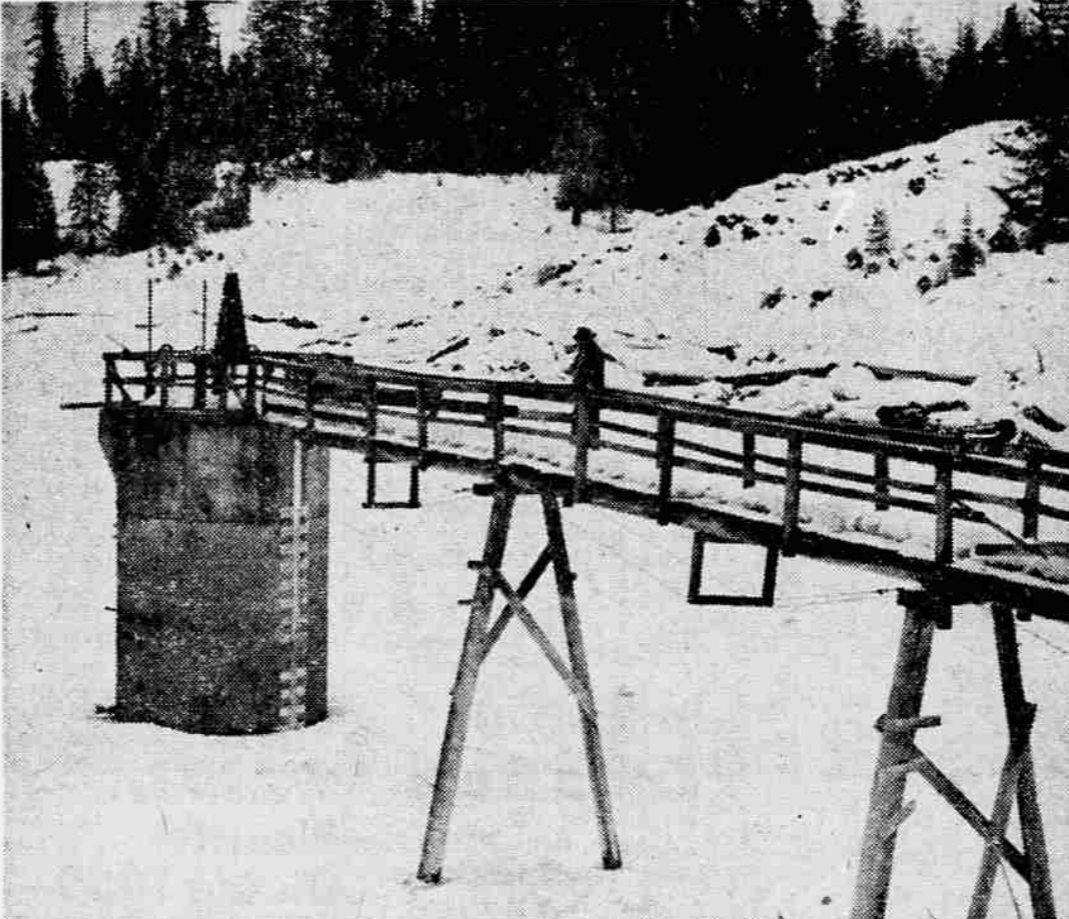
To Fourmile Lake
After taking the readings at Rye Spur, which is just north of Fish lake, the party headed for Fourmile lake, some nine miles away. The group stopped for lunch at Billie Creek cabin, an emergency shelter maintained by Medford Irrigation district.

The snow was noticeably deeper. After half an hour the Sno-Cat was again forging toward its destination.

At Fourmile the snow-measuring tubes and scales were removed from their canvas



CHECKS SCALES—Weight of snow in tube, indicated by sensitive scales, is used to determine water content. Paul Culbertson, chairman of the board of directors for Medford Irrigation district, left, holds scales while Manager Jack Hoffbuhr steadies tube to get accurate reading. Hoffbuhr's son, Dennis, records figures as they are called out. The picture above was taken at the Fish lake snow course near the summer home site.



LOW WATER—The picture above, taken last week, shows a big part of the gate tower at Fish lake dam above the water level. The staff gauge on the tower indicates that the lake contains 3,773 acre feet of water now as compared to a normal for this time



EN ROUTE—As the Tucker Sno-Cat rumbles up the road to Fourmile lake, Jack Hoffbuhr turns to talk to Paul Culbertson in the back seat. Driver is Jim Smith, Copco

employee. The Sno-Cat was loaned to Medford Irrigation district by Copco, under cooperative snow survey setup. Machine is radio-equipped.

bag. Hoffbuhr and Culbertson were apprehensive of what these readings would tell. After all 10 of the cores were taken it figured out that the average snow depth was 37.2 inches, with a water content of 11.4 inches. This is 49 per cent of the 1938-52 normal late January reading. The water content averages 23.8 inches over the years, and this year it is less than half that figure.

No Water
A look at the water level gauge at the dam showed that no water had entered the lake since last October. This meant that what snow had melted up to now, both from on top and from the warmth of the earth, had gone someplace besides into the reservoir. It was soaked up by the ground. Calculations showed that the lake did contain 4,209 acre feet of storage water at the present, compared to the

average 6,700 acre feet for this time of year.

Full, the lake holds 16,600 feet and it's the top half that really counts, for when the water gets low it takes "forever" to run out. Besides that, if the lake has to be drawn down to nearly empty much work must be done to remove silt deposited in the channel immediately in front of the release gates. This has not had to be done since the water shortage in 1930-31, Hoffbuhr said.

The same situation was revealed at Fish lake, although the percentage of water for this time of year was slightly higher. The lake now contains 3,773 acre feet instead of the 4,400 acre feet that is considered normal, or 84 per cent of what it should be. Hoffbuhr explained that underground springs in Fish lake bring the water up rather rapidly at first, then after the springs are submerged, a



READS GAUGE—Jack Hoffbuhr, above, reads the automatic cone gauge that shows precipitation fallen in the Fish lake area so far this year. The reading is cumulative because of a layer of liquid, resembling anti-freeze, that prevents evaporation after water has settled to the bottom. The gauge showed that only about half the normal amount of rain and snow has fallen in the area this year.

cone gauge located on the pier at Fish lake dam.

Other elements that are to be considered in the water supply picture are evaporation, intensified by warm southerly winds, ice crust, snow compaction and numerous other variables.

The truth is, we are way short on irrigation water this year, and the fact must be faced up to. Other irrigation districts in southern Oregon will feel it, and our general economy must be ready to "roll with the punch" if our fruit, cattle raising, and farm crop industries suffer from lack of water. Just because we have never run short before, common sense tells us it is no reason to think that it can't happen.

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