

Forest Conservation and Irrigation

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Necessity for Prevention of Deforestation of Watersheds to Insure Steady Flow and Conservation of Water for Purpose of Irrigation—Address Delivered Before Western Canada Irrigation Convention at Penticton.

It is unnecessary to argue the benefits of forest fire protection before a body of men dependent upon the water from mountain streams for the irrigation of their crops. The irrigation farmer of Canada and the Western States early learned by bitter experience the effect of forest on stream flow. Old settlers in this Valley have told me that the forested streams give off the water gradually, delay the melting of the snow, and act as reservoirs, holding back the run-off, so that a large proportion of it is available in times of drought. Deforested water-sheds, swept clear by fire, do not protect the snow against the early sun, nor do they absorb the falling rain; the deforested water-sheds, in comparison with a forested water-shed, is as a tin-proof contrasted with a sod-proof. The deforested water-shed shoots the rain into the valley below, produces floods in the wet season, with their attendant erosion destroying property. Then, when the water is most needed, the stream runs dry.

In every important irrigation district of Western Canada there is, I believe, insufficient water to supply fully the land requiring irrigation.

The streams all rise in forested water-sheds, and should the amount of water available for summer use be reduced by destructive forest fires, the area irrigable is automatically reduced, and at the same time it becomes necessary to undertake serious expenditures for the construction of artificial reservoirs, and the control or prevention of floods. It is now realized that the regulation of any stream must be undertaken at its source by the maintenance of its forest cover.

The amount of land to be brought under cultivation in this Okanagan water-shed depends largely upon whether we succeed or not in keeping the hills green.

Every possible precaution is now being undertaken to prevent forest fires. The support of the public is sought by signs and posters distributed throughout the country. No one is allowed to light a fire through the summer without a permit. A constant patrol is maintained along the railroads now constructing through extremely inflammable sections of the Okanagan water-shed. Every probable source of fire has been studied and provided for.

Then, knowing that fires will occur, provision has been made for discovering and fighting them. Forest guards patrol every district. A high-level trail has been constructed around Okanagan Lake. Two mountains, controlling a view of the whole Okanagan water-shed, have been connected with the district office by telephone. During the danger season a man on duty on each mountain spots the first sign of fire, and telephones its location to the nearest patrolman. The principle of fire protection is that a man can put out 100 small fires more easily than 100 men can put one large fire out. Every effort is, therefore, made to

get to the fire while it is small and controllable; as the value of the water-sheds for irrigation increases, the measures for fire protection will be intensified. Personally, I believe that the two or three million acres of forest in the stream headwaters are worth protection for their water protection value alone. There may be some persons who do not agree—to them I wish to point out the value of the timber crop. The development of the timber industries of this district has been held up by lack of transportation; yet during 1913, not an especially good year, 30,000,000 feet of timber were manufactured, resulting in a labor expenditure in this Valley of \$450,000.00. The timber revenue to the Government from this district was, in 1913, about \$35,000.00. Timber manufacture in this district has not yet started. There is now standing here about ten billion feet of merchantable forest, twice as much as is cut for lumber in a year in the whole of Canada! Such an extensive and profitable asset certainly merits protection from fire.

You, who are interested in irrigation, have been our best friends. I wish to thank you, both for your general support of forest protection and for the active measures individual companies and persons have here taken personally to prevent and control fire.

ITEMS OF ENCOURAGEMENT

The three mills that are in the paper and pulp manufacturing lines in this Province are busy working twenty-four hours each day, and their managements undoubtedly regret that the capacities are not larger. The Powell River Company has three machines in operation turning out fifty tons of news print each per day. While the plant is laid out for eight machines it will be some months before even one new unit could be placed in operation. Nevertheless from the present units in operation a very handsome profit is being made, and the company is able to employ a large number of men in the mill itself and on logging operations.

The British Columbia Sulphite Company at Mill Creek, Howe Sound, is also working at full capacity. The product, wood pulp, has recently found a very desirable market in the Eastern States, where a large part of the output is going. The Ocean Falls plant at Ocean Falls is also enjoying these favored times in the pulp and paper trade.

The British demand for lead will shortly have a very stimulating effect on the mining and smelting of lead in this Province. It is too early to state what the movements are likely to be, but that the developments will soon be up to normal seems certain.

The outlook in silver mining is not so dark as it at first seemed. The London market has strengthened due to local and continental demand, particularly in France. While prices do not look to go as high as they were immediately before the start of the war, they are expected to be high enough to warrant silver properties going into operation again, and to admit of better profits for those that did not close down.