

**Commission of Conservation  
CANADA**

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CONSERVATION is published the first of each month. Its object is the dissemination of information relative to the natural resources of Canada, their development and proper conservation, and the publication of timely articles on town-planning and public health.

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**Third Largest Dam  
In World in Quebec**

Makes Nearly a Million Horse-power Available. Exceeded Only by Assuan and Gatun Dams

The most important water conservation work thus far undertaken in Canada is that undertaken by the Quebec Government and now nearing completion at La Loure on the St. Maurice river. It will store up the waters of the St. Maurice for the benefit of its many water powers and will double the low-water flow.

This work had been projected for many years as the regulation of the river is of the greatest value to the important developed water powers at La Tuque, Grand'mère and Shawinigan Falls, but no construction work was undertaken. After full investigation of the project, both from the engineering and financial view-point, the Quebec Streams Commission let the contract for construction in the summer of 1915.

The work has progressed steadily since in spite of the great difficulties in transportation. It is now 80 per cent completed and will cost about \$1,500,000. When finished, it will create a reservoir of 160,000 million cu. ft., forming the third largest artificial reservoir in the world, being exceeded only by the Assuan reservoir on the Nile and the Gatun lake on the Panama canal. From the owners of the power-sites already developed, the Commission will receive a revenue of upwards of \$130,000.

Between the reservoir and the mouth of the St. Maurice there are 17 power sites with heads of from 10 feet to 150 feet. The aggregate descent at these sites totals 800 feet, but the dams erected in developing the various sites will increase this total head to 900 feet. Under present conditions, these sites have a total capacity of approximately 350,000 theoretical h.p., but it is estimated that some 900,000 h.p. will be available when the flow is regulated from the reservoir. At Shawinigan, Grand'mère and La Tuque alone, the three sites at present utilized on the St.

**THE RED PLAGUE OF FIRE**

**D**URING 1917, fire losses in Canada amounted to \$23,251,604. The loss in each month of the year was as follows:

January	\$2,176,594	July	\$1,450,073
February	2,487,766	August	1,628,233
March	2,766,431	September	1,755,104
April	1,804,422	October	1,002,969
May	1,235,767	November	1,284,517
June	1,392,448	*December	4,267,340

The number of fires reported totalled 14,092, but over \$15,500,000 of damage resulted from 76 fires. One hundred and ninety-eight persons were burned to death during the year, exclusive of lives lost by fire in the Halifax disaster. Over eighty per cent of the fires in Canada are easily preventable. Will you help to reduce their number in 1918?—J.G.S.

\*Losses during last week of December incomplete.

Maurice, the potentiality will be raised from an aggregate of some 190,000 theoretical h.p. to over 400,000 h.p.

**PREVENTION OF FOREST FIRES IN QUEBEC**

The co-operative forest protective associations in the province of Quebec have been remarkably successful in reducing the damage by forest fires throughout large areas of that province. The pioneer in this movement was the St. Maurice Forest Protective association, organized in 1912. The success with which it met resulted in the organization of other associations, until now there are four such protecting a total of nearly 70,000 square miles of forest land. These associations are maintained and administered primarily by timber owners, although the provincial Government contributes to their support in consideration of the protection afforded unlicensed Crown lands. Approximately 80 per cent of the licensed Crown timber lands of the province are now under this form of forest fire protection. Each association has a manager, staff of inspectors, and force of fire-rangers, all selected on the sole basis of fitness for the work in hand. The accompanying table shows the approximate areas of the several classes of land receiving protection by each of the associations.—C.L.

FOREST PROTECTIVE ASSOCIATIONS IN QUEBEC, 1917

Name of association	Licensed Crown land (acres)	Crown granted land (acres)	Unlicensed Crown land (acres)	Total area patrolled (acres)
Ottawa River.....	16,996,723	.....	4,060,800	20,967,520
St. Maurice.....	8,049,645	.....	1,000,000	9,049,645
Laurentian.....	6,002,634	230,710	1,344,000	7,580,344
So. St. Lawrence (East)	3,464,493	225,018	4,000,000	4,689,511
So. St. Lawrence (West)	1,557,960	1,115,027	.....	2,672,987
Totals, acres.....	35,981,452	1,579,757	5,804,800	44,366,009
Totals, sq. miles ..	56,221	2,468	10,632	69,321

**Food Conservation  
In Logging Camps**

At the Pacific Logging Congress held recently, Mr. W. B. W. Armstrong of the British Columbia Loggers' Association made some very pointed remarks in connection with the present wastage of food-stuffs in logging and lumber camps. Something like a competition has developed among the several companies in providing luxurious food for their employees, with the definite object of attracting men to their employ. It was stated that: 'now the foods served in our logging camps are more expensive and more varied than those used in our own homes or in the average hotel.' Mr. Armstrong attributed the present 'great waste of food' in the camps to the general and lavish use of canned fruits and vegetables. This waste he classified as follows:

- (1) The labour cost of canning fruits and vegetables is greater than that of drying or evaporating.
- (2) The heavy syrup in which fruits are put up is very expensive—and this class of fruit is used almost exclusively in the camps.
- (3) The material of which the containers is made is expensive and scarce, and is, moreover, very necessary for the conduct of the war.
- (4) It has been demonstrated that the food values of evaporated fruits are equal, if not superior, to those of the same materials put up in a heavy syrup.

No class of men, he pointed out, requires better food than the logger if he is to be efficient. 'but, of late years, the selection of his food has been wrong in theory and wasteful in practice.' As a remedy, Mr. Armstrong urged that this mistaken competition should be stopped by the companies co-operating and working out a standard diet of palatable, body-building foods for their employees. He urged that legislation be had enforcing such standardization, at least for the period of the war.

It is most desirable that the men should be given plenty of wholesome food prepared in sanitary kitchens and served in clean, bright dining rooms, but this may be done without 'the tremendous waste that now prevails.'

**SUPPLIES OF GASOLENE**

In 1915, Canada consumed over 43,000,000 gallons of gasolene. Of this amount about 5 per cent was produced from Canadian crude, while the remainder was either imported direct or produced from imported crude. This fact shows the dependence of Canada upon supplies of gasolene and petroleum from United States and strengthens the argument used in a previous issue wherein it was stated that 20 per cent of the gasolene used in Canada was produced from Canadian crude oil.