

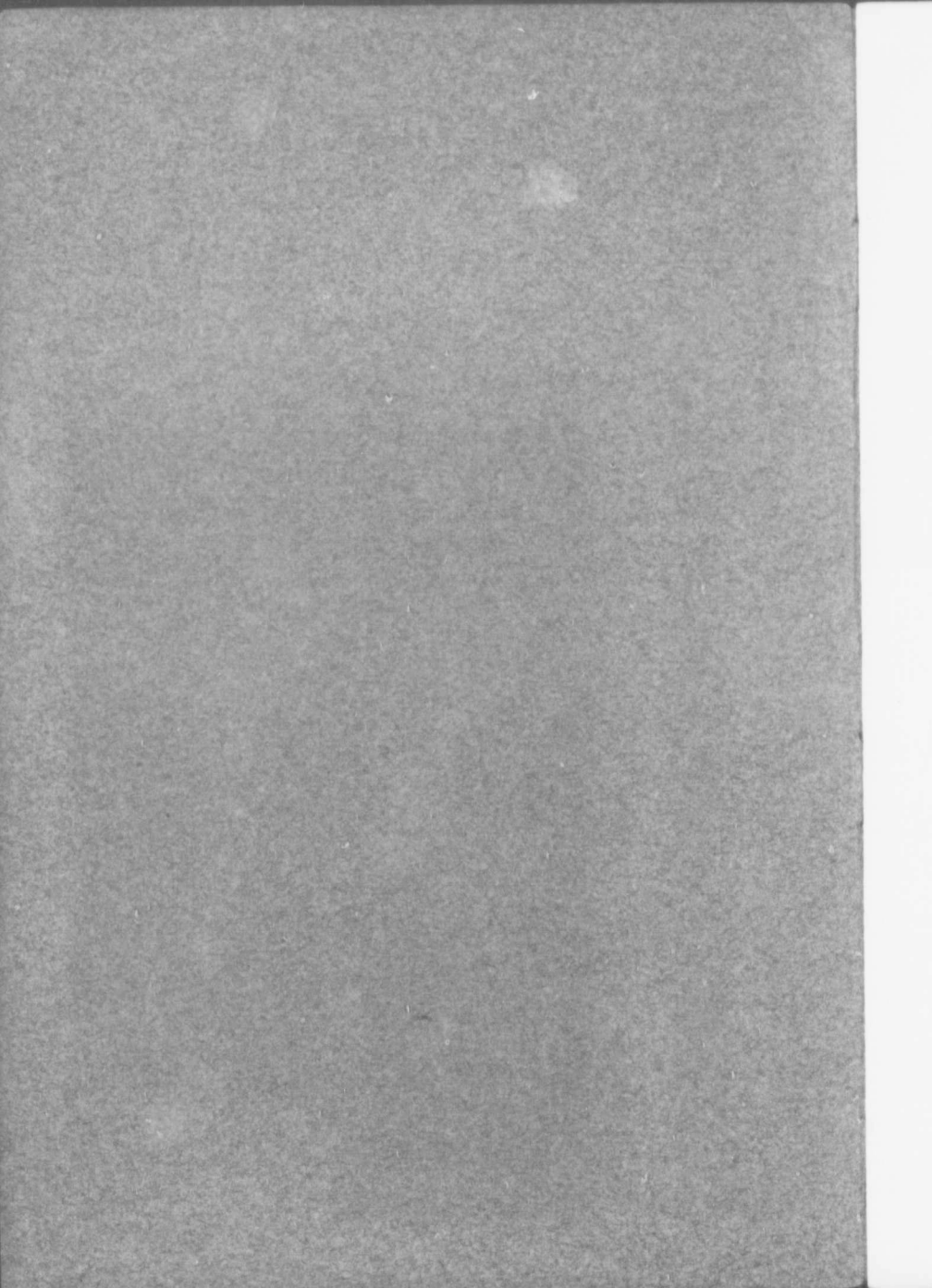
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1910

The Conservation of the Natural Resources of Ontario

AN ADDRESS DELIVERED BY THE HONOURABLE
FRANK COCHRANE BEFORE THE FIRST ANNUAL
MEETING OF THE COMMISSION OF CONSERVATION

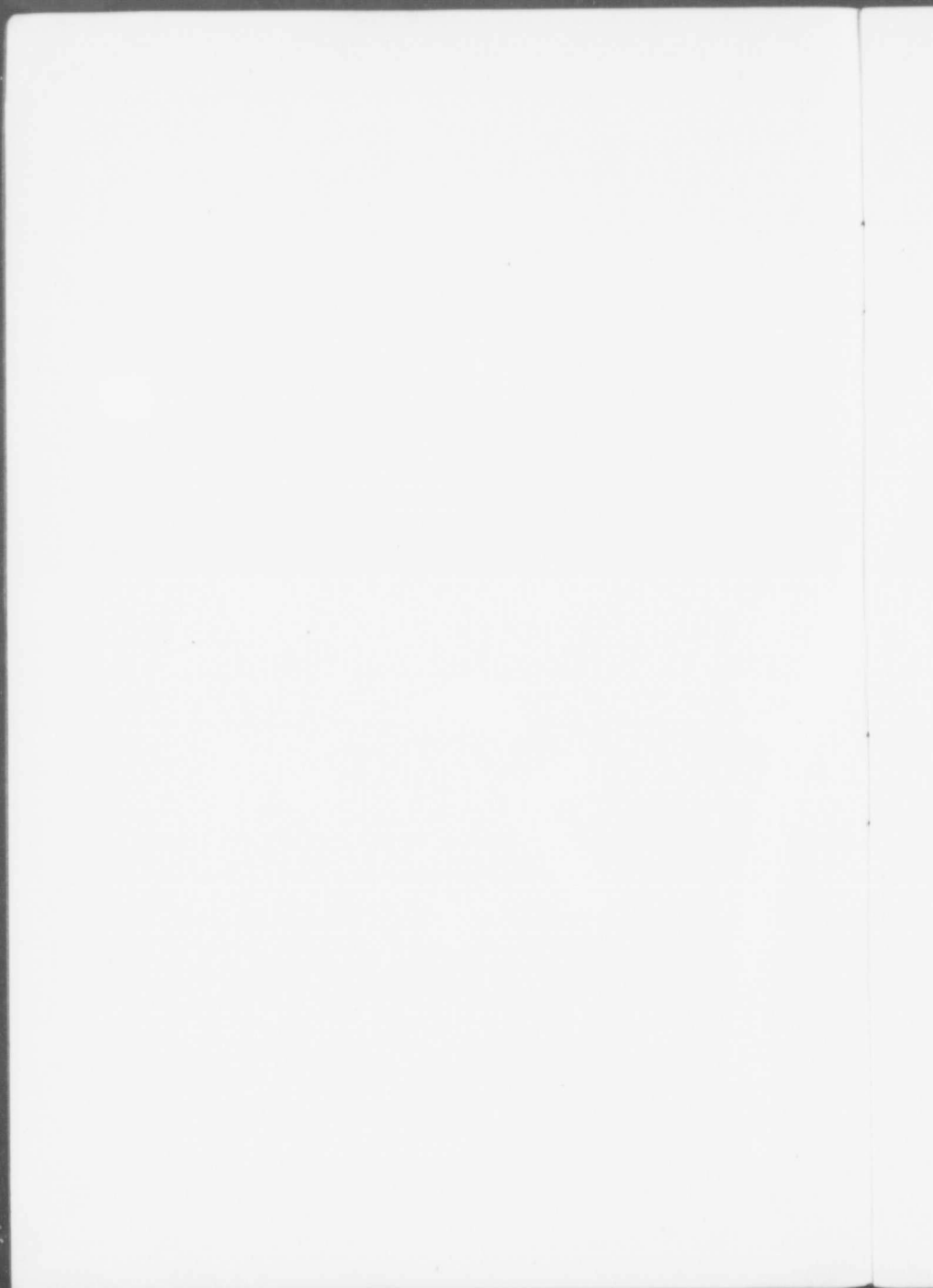
Reprinted from the First Annual Report of
The Commission of Conservation, 1910



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THE CONSERVATION OF THE NATURAL RESOURCES OF ONTARIO.

The natural resources of Ontario under the control of the Department of Lands, Forests and Mines are lands, timber, water-powers, mines and minerals. The conservation of the natural resources of Ontario may be said to consist of preserving them from destruction or waste and disposing of them as public necessities may require, subject to such conditions as will, as far as possible, prevent monopoly and ensure their economical development.

Lands—The total area of the province of Ontario, exclusive of the great lakes, is estimated at 140,000,000 acres. Of this, there is surveyed, 46,000,000 acres, leaving an area unsurveyed, of 94,000,000 acres. There has been alienated by sales, locations, etc., 24,000,000 acres, leaving still in the Crown, 116,000,000 acres. Of this, 20,000,000 acres are known to be valuable agricultural lands.

Having seen the folly of opening for settlement, townships that are rough and which contain only a small percentage of good land, the Government of Ontario has provided that, before a township is opened for settlement, it must be inspected by a competent officer to ascertain: (a) the percentage of good land in it; (b) the quantities and varieties of timber; (c) whether it is chiefly valuable for its mines and minerals. If the inspection shows it to contain less than 40 per cent. of good land, the policy of the Government is to keep it closed from settlement for the growing of timber, or, if it has large quantities of pine, to keep it closed until the pine timber has been removed, or, if it is valuable chiefly for its mines and minerals, to exclude all settlement.

In the same connection, we found that, in townships already opened, people took up rough lands for the purpose of obtaining possession of the timber, under the cloak of farming. By this practice, lands were withdrawn from the operation of timber license, so far as timber other than pine was concerned, to the injury of the licensee, and without benefit to the Crown.

We have now instituted the practice of inspecting all lands applied for, and if the inspection shows less than 50 per cent. of agricultural

land in the area desired to be located, we do not grant the application, but leave the land in forest. Our desire is, and we are carrying it out to the best of our ability, to keep the lands of the Crown for the use for which they are best adapted.

Timber—Secondly, as to timber. The Government has recognized that the pine timber is one of our most valuable assets, and wherever we have found large bodies of pine we have withdrawn the territory from settlement and put it into what we call "forest reserves," where no settlement is allowed.

The reserves already set apart in Ontario are:

Timagami Forest Reserve containing . .	5,900 sq. miles
Mississagi Forest Reserve " . .	3,000 "
Nipigon Forest Reserve " . .	7,300 "
Eastern Forest Reserve " . .	100 "
Quetico Forest Reserve " . .	1,560 "
Sibley Forest Reserve " . .	70 "
Algonquin National Park " . .	1,930 "

Total 19,860 sq. miles.

In each of these reserves there is a chief ranger with a staff of fire rangers under him. These rangers are assigned certain beats which they have to patrol. They are supplied with poster copies of the "Fire Act," printed on cotton, to be put up on portages, etc. and also with pamphlet copies of the Act to be handed to individuals whom they meet, so that no one shall be able to say he does not know the law. In addition to this, these rangers caution parties of the necessity for care in the use of fire and of extinguishing it when they are leaving the locality.

When mining prospecting is going on, as in the Timagami Reserve, prospectors must obtain a permit from the Department, giving them permission to explore in the Reserve, and they must produce the same when called upon to do so by the park ranger.

We do not sell any timber in these reserves except where it is damaged by fire. Of course, in the Timagami Reserve there is the Booth pulpwood concession, which covers spruce and jack-pine, and, in the Algonquin Park, part of the territory is under license for all kinds of timber and part for pine only.

It is estimated that there is on these Reserves about nine billion feet of pine, which is worth now about \$90,000,000. We had 202 men on duty in them as rangers last year, and we spent for fire ranging purposes about \$76,000.

Then there is an area of about 20,000 miles subject to license. On this area we have a staff of fire rangers. Recognizing that the licensees are the people best qualified to select the ranging staff on their limits, we have accepted their nominations—subject to the right of removing the rangers for incapacity or improper conduct—and appointed the men they desired as fire rangers. These rangers, in the same way as those in the reserves, are furnished with copies of the "Fire Act" to post up in public places and on portages, shanties, etc., and also pamphlet copies to hand to all parties with whom they come in contact, such as tourists, surveyors, prospectors, settlers, lumbermen, etc. The area is divided up into districts, and, in each district, there is a supervising ranger, who has charge of the staff in that district and is responsible for seeing that they are on duty and properly performing the work for which they are appointed. Where the licensees do not apply to have rangers put upon their limits, the Department selects the ranger, puts him on and makes the licensee pay his proportion of the expense.

One half of the cost of the wages and expenses of fire ranging is borne by the licensee and the other half by the Department. This system was inaugurated in 1885 and has grown from year to year, and one effect of it has been to enlist the sympathies of those who have an interest in the protection of the forest, such as lumbermen, settlers, explorers, etc. An additional advantage is this, that if a fire does take place, the rangers are able to report to their employers its locality and the quantity of timber damaged, so that the timber can be cut before it goes to waste. We had on duty on licensed land last year 450 rangers at a cost to the Crown of about \$60,000.

Recognizing the great danger to the forest incident to railway construction, the Minister of Lands, Forests and Mines was empowered by the Legislature to place fire rangers along the lines of railways traversing the back country, and to charge the expense to the railway companies.

This has been carried out wherever it is considered there is danger to the forest, such as along the Canadian Pacific railway, Canadian Northern railway, Transcontinental railway and the Timiskaming & Northern Ontario railway. We had on these railways, last season, 175 rangers, at a cost of about \$73,000.

In addition to the rangers on the forest reserves and along the lines of railways, we had, in exposed regions, along certain of the larger rivers that are used as highways, fire rangers who pursued the same course in warning parties with whom they came in contact, supply-

ing them with copies of the law and impressing upon them the necessity for care in the use of fire.

Along the line of the Transcontinental railway, extending from the eastern to the western boundaries of the Province, are enormous quantities of wood suitable for making pulp and paper. In this region there is estimated to be about 300,000,000 cords of this wood. The Transcontinental, in its course, crosses the following large streams:—

	Length
Abitibi river	250 miles
Frederick House river.	120 "
Mattagami river	250 "
Kakozhisk river	200 "
Kapuskasi river	200 "
Opazatika river	125 "
Missinaibi river.	250 "
Kabinakagami river	150 "
Kenogami river	250 "

besides other smaller streams.

The pulpwood in this region will float down these streams to the crossing of the railway and will there be manufactured into either pulp or paper. The construction of the railway has necessitated the placing of a considerable staff of fire rangers in that region, but, as the construction is extended, as it is likely soon to be, a large additional number of fire rangers will have to be placed along it, and the timber in this region will be in great danger, as the foreign labour employed in railway construction is ignorant of the law and careless in the use of fire. We have an asset in our timber, pulpwood, etc., which is valued at between three and four hundred millions of dollars, and we would be grossly neglectful of our duty if we did not use every effort to conserve it.

Recognizing that the people of the Province are entitled to the benefit of the labour incident to the using up of their natural resources, we have provided that all pine saw-logs, spruce pulpwood and hemlock must be manufactured in the Dominion, into lumber, pulp or paper. The effect of this has been to increase the demand for labour and give a market for all kinds of supplies used for lumbering purposes.

Waters—The protection of the flow of our rivers is a question of great importance, and this was one of the objects kept in view in the setting aside of parks and forest reserves.

In the Algonquin Park the head-waters of the following important rivers are to be found: Petawawa, Madawaska, Muskoka, Amable du Fond, South and Maganetawan.

In the Timigami Forest Reserve are to be found the head-waters of the Montreal, Matabitchuan, Timagami, Sturgeon, Vermilion, Wanapitei, Onaping and other tributaries of the Spanish, the Frederick House and the Mattagami.

In the Mississagi Forest Reserve are the Mississagi river and its tributaries, the Wenebegan, White and Sauble and branches of the Spanish.

In the Nipigon Reserve are the Nipigon river—the largest stream flowing into Lake Superior—the Black Sturgeon, Gull, Poshkokagan, Pikitigushi, Onaman, Mamewaminikan, Sturgeon and Wabinosh.

In the Quetico Reserve are the head-waters of the Rainy and its branches, the Maligue, Quetico and Sturgeon.

All of these rivers are large and important streams, and the protection of their head-waters is a matter of great public importance and a valuable conservation of natural resources.

Previous to 1898, no reservation of water-powers was made in grants of land by the Crown. If a water-power was situated on a lot or location, and the bed of the river—the actual site of the power—was included in the area of the lot, possession passed to the grantee. In 1898, however, the Legislature of Ontario passed an Act providing for the reservation of water-powers and for the making of regulations regarding their disposal, by the Lieutenant-Governor-in-Council. These regulations provided that all water-powers having a natural capacity at the low-water stage of more than 150 H. P. should not pass with the land, but should be leased, together with a sufficient area adjoining the fall, for its proper development. The lease provided:—

- (1) For the payment of an annual rental to the Crown.
- (2) For the development of a specified quantity of power within a given time.
- (3) For the supplying of surplus power by the lessees to others requiring it.
- (4) For the regulation by the Lieutenant-Governor-in-Council of the rates and conditions upon which such surplus power should be supplied.
- (5) For the development by the lessees of the full capacity of the power if there were a *bona fide* demand for it, of which demand the Lieutenant-Governor-in-Council should be the judge.

In 1907, these regulations were extended and the form of lease improved, the Hydro-Electric Power Commission being constituted the agent of the Government in dealing with water-powers subsequent to their lease by the Crown.

Under the Act of 1898 and the Regulations pertaining thereto, some twenty water-powers, providing for a minimum development of 26,600 H.P. and a maximum of 53,700 H.P. have been leased. The annual revenue accruing to the Government from these leases is \$12,000. Large investments, amounting to several millions of dollars, have been made by the lessees in dams, improvements, and machinery for the development and utilization of these powers.

There can be no doubt that the use of water-power will become more and more general, especially as mineral fuel tends to become dearer and scarcer. The possession of an effective measure of control in the public interest over the water-powers of the Province, is most important. Briefly, the policy of the Government in dealing with this item of the natural resources is to obtain a fair revenue for the public chest, while at the same time encouraging the development and utilization of these powers and guarding against their being monopolized or being held merely for speculative purposes.

The above has reference to water-powers other than the Niagara falls, which has been dealt with in a special way by the Queen Victoria Niagara Falls Park Commission, subject to approval of the Legislature.

Minerals—The application of a policy of conservation to minerals is somewhat more difficult than to water-powers. Minerals lying undiscovered and dormant in the earth's crust are, for all practical purposes, non-existent. Only when they are found and brought to the surface, can they be made subservient to the uses of man. The mechanical and industrial necessities of civilization require a constant and ever-increasing supply of the useful minerals, and it seems difficult, if not impracticable and useless, to put any check upon the production of such commodities as gold, silver, iron, lead, copper, etc. The demand for these primal necessities in the arts and industries of the world is not only urgent but imperative, and the demand must be supplied if the present complex civilization is to remain in existence and develop in the future as it has done in the past.

It must be recognized that the business of mining and extracting minerals is, so far as the deposits themselves are concerned, a destructive industry. A body of ore, no matter how large it may be, is strictly limited in quantity, and when it is taken out of the ground it cannot be restored or replaced or reproduced.

There are some mineral substances exceedingly valuable in their nature which, however, lend themselves more readily to conservation than do the metals. This remark is particularly applicable to the fuels—coal, petroleum, natural gas, peat.

Ontario is practically the only province in the Dominion which produces petroleum. Natural gas is found also in Alberta, as well as in this Province. The requirements of the home market are not now met by the domestic production of crude oil in Ontario, for a quantity equal to the home production is annually imported for refining purposes, and this, notwithstanding the bounty of 1½ cents per gallon paid by the Dominion Government on domestic crude. The production of petroleum in Ontario is, at present, declining, but there is good reason for believing that other sources of supply may be discovered at any time, since the formations in which the present fields exist are widespread in southern Ontario. On the northern slope of the height-of-land there is a large area of rocks similar in age and character to those in the southwestern peninsula, and it is reasonable to suppose they will be found to contain the same mineral substances, namely, petroleum, natural gas, salt, etc.

Natural gas is a fuel which has many advantages. It is cheap, efficient and clean, gives no smoke, leaves no ashes, can be turned on and off at will. The production of natural gas in this Province is annually and rapidly increasing. In 1907, the value at the wells, at a low rate of valuation, was three-quarters of a million dollars; in 1908, almost a million. In the production of natural gas, and especially in the opening up of new fields, there has, in the past, been enormous and shameful waste. In the United States, gas wells have been allowed to blow off into the air millions of dollars' worth of gas, or have been lighted and allowed to burn night and day for weeks and months. There have been similar scenes in our province. Steps have been taken by the present administration of Ontario to check such wanton extravagance. A tax of two cents per thousand feet has been levied on natural gas, with a rebate of 90 per cent., when the gas is used in Canada. A gas well giving off a million cubic feet of gas per day is not a very large well, but if the owner allows the gas to escape, he is presented with a bill of \$20 per day for every day of waste. Very few wish to indulge in the privilege of wasting gas and pay \$20 a day for the pleasure. The result has been that, since the Act was passed in 1907, there has been an almost entire stoppage of waste of gas in the gas fields of Ontario.

A further step in the direction of economizing this valuable fuel would be to restrict its use, if possible, to domestic purposes only. Large quantities are now used in generating steam and in the coarser industries, such as burning lime and making brick. At least fifty thousand people are enjoying the advantages of natural gas in Ontario to-day, and, if it could be confined to household purposes only,

they might continue to enjoy its advantages for very many years. At present, the outlook is for a much earlier exhaustion.

If natural resources, including minerals, cannot be withheld from the urgent requirements of the present generation, to serve the necessities of posterity, they can, at least, while being utilized, be made to yield a revenue for the public good. Accordingly, the Legislature in 1907, imposed a tax of 3 per cent. on the net profits of mining companies when such profits were in excess of \$10,000 per annum. All legitimate expenses, depreciation, etc., are allowed for, and the percentage computed only on actual profits. During the three years this Act has been in operation the amount received from this source has been \$156,900.

