GROWTH OF GOOD ROADS IN ONTARIO

According to a report recently prepared by W. A. McLean, Deputy Minister of Highways, thirty-three of the counties in older Ontario have now established county road systems. This leaves but six counties that are still without county systems and it is expected that these will soon fall in line.

The counties which have adopted county road systems are: Wentworth, Lanark, Simcoe, Wellington, Lincoln, Oxford, Hastings, Peel, Middlesex, Lennox and Addington, Prince Edward, Halton, Perth, Frontenac, Waterloo, Carleton, Leeds and Grenville, York, Haldimand, Welland, Essex, Prescott and Russell, Dundas, Stormont and Glengarry, Brant, Victoria, Elgin, Kent, Huron, Bruce, Norfolk and Ontario. Gray and Renfrew have passed preliminary by-laws and are therefore committed to early adoption of the county roads system.

According to this report "Southern Ontario has 55,000 miles of road in the open country, of which 40 per cent. has been surfaced with gravel, broken stone or other more permanent material. It is a conservative estimate that, in the past ten years, $28,000,000 has been spent on rural roads, of which less than one-quarter remains as bonded debt. This is a record very creditable to municipal governments of the province; and the construction of leading highways to join up the systems of improved local and county roads would place Ontario in a very enviable position with respect to good roads."

Cost of Road-building

Interesting figures showing the average cost per mile of county roads in 1915 are given as follows:—

County.	Average cost per mile completed, exclusive of bridges.	Total expenditure on bridges.
Wentworth	$2,315.45	$ 19,917.09
Lanark	1,329.41	33,120.32
Simcoe	1,128.30	127,573.86
Wellington	3,266.66	106,514.83
Lincoln	3,487.04	12,027.52
Oxford	2,560.15	78,668.84
Hastings	798.67	232,201.78
Peel	3,715.84	48,917.36
Middlesex	1,856.22	175,986.54
Lennox and Addington	1,092.48	22,806.91
Prince Edward	2,613.88	10,780.04
Halton	3,024.03	96,432.86
Perth	2,247.34	57,132.97
Frontenac	1,514.05	35,778.19
Waterloo	1,565.79	52,419.94
Carleton	2,403.99	28,306.60
Leeds and Grenville	1,998.92	24,576.40
York	7,245.38	20,520.26
Haldimand	5,865.86	4,508.60
Welland	4,890.82	7,597.43

In connection with the matter of cost it is only proper to state that this cost varies with local conditions, and the cost of each mile of road should be estimated on its own merits. Some counties have an abundance of local stone; in other counties, stone must be imported by rail, with attendant freight charges, and additional cost of handling from the cars. Some counties have large deposits of gravel, and build gravel roads. Some roads already have had a coating of stone or gravel, which serves as a foundation and requiring only resurfacing; other roads have had little or no previous attention.

INTERNATIONAL JOINT COMMISSION'S ANNUAL MEETING IN OTTAWA

At the annual meeting of the International Joint Commission, held in Ottawa, October 2nd, 3rd and 4th, the Commission gave very full consideration to the question of its final report to the Canadian and United States governments in the pollution of boundary waters investigation, having before it as a basis for discussion, a tentative draft prepared by the Commission's committee which had special charge of this matter.

The order of approval was adopted and signed for transmission to the two governments in the case of the application of the International Lumber Co. for approval of their plans for booms and sorting gaps in the Rainy River at International Falls. In approving the plans, the Commission stipulated that in the event of booms or other similar structures being found necessary on the Canadian side of the river opposite the booms of the International Lumber Co., the company should be required to remove their booms south of the international boundary to such a distance as the Commission might think necessary.

Another question that has been before the Commission for some time is that of the measurement and apportionment for irrigation purposes of the waters of the St. Mary and Milk Rivers in Montana, Alberta and Saskatchewan. Certain legal questions in connection with this matter were argued before the Commission at its Detroit meeting in May last by counsel for the United States and Canadian governments, the Canadian Pacific Railway and the State of Montana. On the request of counsel for the United States, the Commission at that time granted to the attorney-general of the United States, the right to submit an oral argument, if desired, at a future meeting of the Commission. At last week's meeting, M. M. Wyvell, on behalf of the U.S. attorney-general, explained that owing to the extraordinary pressure of work arising out of the war, the attorney-general had not yet had time to consider the matter. It was therefore decided that the Commission would hold another meeting in New York on November 12th, at which both the St. Mary and Milk Rivers matter and the pollution report would be further considered.

CORRECTION

In our July 26th issue, page 81, in a review of the new book, "Water Purification," by Jos. W. Ellms, it was stated that this book was published by John Wiley & Sons, Inc., of New York. This was an error, as the book was published by the McGraw-Hill Book Co., New York. Copies of this or any other technical book in print can be secured through *The Canadian Engineer* Book Department, 62 Church Street, Toronto.

During 1916 the value of the New South Wales mineral output was £10,975,742, a total which is the third highest in the history of the State. It exceeds that of 1915 by £911,173. The high prices ruling for the industrial metals, notably copper, are mainly responsible for this result. The increase is general, the only branches of the industry which show decreases to any extent being gold, coal and zinc. It is estimated that 31,304 persons were employed in and about the mines during the year, or a decrease of 107 when compared with the preceding year. The aggregate value of all minerals won in New South Wales to the end of 1916 was £273,154,084.