

of the larger towns, is only one instance of the vigilant guard which must be kept over the streams. With this in view, the Bureau of Health is about to commence a thorough and exhaustive inspection of the various watercourses throughout the province.

If immunity from typhoid is to be aimed at in Saskatchewan, all possible sources of domestic water supply must be under constant supervision, and this can only be accomplished by making a systematic survey of the entire province.

There are two periods in the history common to all rivers which serve as a source of water supply for the populated districts through which they flow. First, that of gradually increasing pollution from domestic sewage and trade wastes, which, unnoticed, continues to render the water dangerous, until a severe outbreak of typhoid fever is reported at some point down stream, involving the loss of perhaps scores of lives. Then follows a period of investigation into the source of contamination, and legislation to prohibit further pollution of the river in question. This history has repeated itself in practically every civilized country, and at the present time a bill is receiving its second reading at Ottawa, the object of which is to prohibit further pollution of Dominion waterways. A special committee has been elected to report on the subject. Further, the Commission on Conservation is making careful inquiry into the question of stream pollution, and inviting the provincial authorities to co-operate in safeguarding the public health. A third commission is seeking to solve the problem from an international standpoint.

It is to be regretted that several outbreaks of typhoid fever, accompanied by many deaths, should have been necessary to awaken general interest in the increasing pollution of our rivers and streams. Generally speaking, it is an accepted fact that the typhoid death rate of any country may be taken as the index for the condition of its streams and rivers.

The average death rates from typhoid fever in Norway, Sweden, Holland, Germany, Switzerland and Great Britain vary from 6.2 to 12.8 per 100,000 of the population. In Canada the typhoid death rate is 35.5. Unfortunately, the province of Saskatchewan has contributed in a large measure to this high death rate for the Dominion. Within recent years outbreaks of typhoid fever have occurred at Moose Jaw, Saskatoon and Prince Albert. The number of cases in Regina has never been so great as in the other cities. This fact is significant when it is considered that Regina receives its water supply from underground sources.

Conditions have greatly improved within the last few years, however, and the death rate from typhoid fever in the province should show a marked decrease this year. Saskatoon and Prince Albert have both installed efficient filtration plants, and Moose Jaw has abandoned a surface supply in favor of water from springs at Caron, the construction and plant of whose system was dealt with in *The Canadian Engineer* for March 6th, 1913.

A NEW ROAD MATERIAL.

With a view of obtaining a road surface which will give a better resistance to automobile traffic, experiments are being made again in France with a road-bed material consisting of a mixture of "iron straw," or iron in the shape of a wiry or fibrous mass, together with cement mortar and sand. Such material is called "ferro-cement," and it appears from tests that it is giving good results. The iron is specially prepared by suitable machines, and it is claimed that the resulting material is not over-expensive.

COAST TO COAST.

Regina, Sask.—The parks and playgrounds committee of the Town Planning Association are endeavoring to have more playgrounds established in the city, with the required equipment. The city of Regina has already spent thousands of dollars on this work.

Ottawa, Ont.—Preparations are being made to commence immediately the extension of the refinery at the Dominion Mint. A vote of \$40,000 for that purpose was passed last session, as the refining of Canadian gold has gradually increased, and made necessary an extension of the present refinery. Last year the amount of Canadian gold was \$1,168,823. Government architects will have charge of the work.

Toronto, Ont.—The proposal to use the Niagara River from Lake Ontario to a point near Queenston in connection with a new Welland Canal, which would be built from that point to a Lake Erie outlet, was presented before the Toronto Harbor Board recently by Ald. L. Pitt, of Niagara Falls, Ont., who is behind the project. Should this plan be adopted it is claimed that about \$30,000,000 would be saved over the cost of the new Welland Canal proposed by the Government. Ald. Pitt, after showing the plans to the harbor board, stated that he was his intention to at once lay the question before Hon. Frank Cochrane, Minister of Railways and Canals.

Ottawa, Ont.—The Department of Public Works is investigating the utility of railway marine docks. Mr. Arthur St. Laurent, Assistant Deputy Minister of Public Works, has returned from Boston, where he inspected the Crandall engineering works, makers of this style of docks. For vessels or steamers up to 10,000 tons they are well suited, the ship entering a cradle and being quickly drawn up high and dry by an engine. The average cost is about \$60,000, and as many as four vessels can be accommodated at once. Mr. St. Laurent was favorably impressed, and will recommend the railway docks for places where it is not desirable to go to the heavy expense of a graving or floating dock.

Ottawa, Ont.—Either the increase in population of the city, consequently causing an increased demand, or the percentage of waste has abnormally increased, is the reason for the high average of the water consumption reached this year. Acting Waterworks Engineer Wm. Storrie has reported to the waterworks committee that the average daily consumption last year was 17.7 million gallons daily, while so far the average this year has touched 18.6 million gallons per day. The figures this year for maximum million gallons daily are: January, 19.6; February, 19.7; March, 20.2; April, 19.1; May, 19.4; June, 20.0; July, to date, 21.5. The work on the pitometer survey for the detection of wastes is going ahead satisfactorily, and a number of small leaks have been detected and quickly repaired.

Vancouver, B.C.—Advertisements calling for tenders for the new dock to be built at Vancouver by the Dominion Government have been sent out and plans and specifications are being mailed to this city. Information to this effect was received recently by Mr. H. H. Stevens, M.P., in a telegram from Mr. J. B. Hunter, Deputy Minister of Public Works, Ottawa. The Government wharf will be located at the foot of Salsbury Drive, and will cost about \$750,000. Construction work will probably start about the middle of next month, and the work is expected to take twelve months. The dock will be approximately 1,000 feet in length and 300 feet wide, with three railway tracks in the centre and concrete retaining walls on each side. The lowest depth of water at the land end of the dock will be thirty-five feet, thus enabling vessels of large draft to berth at all stages of the tide. A large