

THE SANITARY REVIEW

LETHBRIDGE: ITS SEWAGE DISPOSAL PROBLEM.

The city of Lethbridge discharges its raw sewage into the waters of the Belly River. Lethbridge draws its own water supply above the sewer outlets. Lethbridge does not drink its own diluted sewage, but towns below Lethbridge rely on diluted Lethbridge sewage for domestic water supply.

Typhoid fever is general in the towns below Lethbridge located on the Belly River. The towns are mostly coal mining centres. Lethbridge, as well as being the chief distributing centre in the southern Province of Alberta, also depends upon the surrounding coal industry.

The city of Lethbridge is anxious to at once adopt a system of sewage purification which will protect the purity of the waters of the Belly River.

The City Council and Board of Health have recently accepted a proposed scheme of sewage purification. The scheme embodies three distinct processes, viz. :—

Removal of solids by sedimentation.

Removal of putrescibility by coarse percolating filters.

Removal of germs by disinfection.

The system is, therefore, complete and up-to-date, as it does not only include the removal of the visible nuisance, but also the removal of the unseen, but, no less important, sanitary nuisance, viz., the capability of the sewage to transmit disease infection.

The working parts of the system are to be made frost-proof. No septic action will be allowed, and the smells which generally accompany such action will be avoided.

The city engineer recently submitted the proposals to the Provincial Board of Health of Alberta.

The Provincial Board of Health have given only a half-hearted consent to the scheme. They, in a letter recently sent to the city engineer, acknowledge that the inhabitants below Lethbridge will be protected, but point out the possibility of foul odors from the works and the liability of a fly nuisance from the percolating filters; and, therefore, although they consent to the scheme, will take no responsibility.

In view of the fact that it has been clearly shown, both by the British Royal Commission and other leading authorities, that any nuisance from odors is almost entirely eliminated by treating sewage fresh and non-septic, and that the fly nuisance is easily and effectually overcome, the position of the Alberta Provincial Board would be somewhat extraordinary if it were not for the fact that the Board has become strongly prejudiced to all existing systems of sewage disposal in favor of one special method of treatment, advanced by one of the members of its board.

Only lately we published a letter, sent out by the Provincial Board to Alberta municipalities, advising them to stay their hands in installing sewage plants for the present, as all existing systems were found wanting, and they were about to ask for an appropriation to test and experiment with a new system, called "The Live Earth System."

We have given a full description of this so-called "Live Earth System," which is simply a contact bed, or succession of contact beds, filled with concrete slabs placed in layers. These beds are part of the time

standing full, when they are simply septic tanks, and the remainder of the time standing empty, when oxygen is admitted to the beds. They are in every way simply contact beds, which, instead of containing the ordinary filtering material, are filled with these concrete slabs, thus copying the slate bed system of Dibden in England for sludge-digesting purposes.

Thus, in order to wait for the results of an experiment on an improved septic tank, municipalities in Alberta can only receive half-hearted consent to any scheme of sewage disposal which is even in advance of many of the up-to-date schemes in Great Britain and in America.

We are, however, at a loss to understand what the Alberta Provincial Board of Health really mean when they state as they do: "By allowing you (the city) to assume all responsibility for the installation of the system, the Board are prepared to give such a limited approval to the plans."

Under any case or circumstances will the Provincial Board of Health accept full responsibility and grant a continuous guarantee in connection with any system, whether it be their own pet one, on which they are about to experiment, or any other system, advised and based upon the accumulative experience and practice of other countries?

Does the Provincial Board of Health of Alberta really suggest that there may be some scheme submitted to them which will carry with it a consent which will relieve the municipalities from all further responsibility? That with such a scheme they will find and provide all sums necessary to meet any future desired alterations incurred by any errors of judgment or construction? Absolute hot air nonsense and piffle on the part of the Provincial Board of Health, or, if not so, then the sooner the Legislature look into the responsibilities which their Board of Health suggest they will assume, the better for the Province of Alberta.

SANITARY RIVER SURVEYS IN QUEBEC PROVINCE.

We publish in this issue an interesting paper by James O. Meadows (Sanitary Engineer of the Provincial Board of Health of Quebec).

Mr. Meadows has been, and is at the present time, engaged in making useful sanitary surveys of the Quebec rivers which are in use as municipal water supplies.

The data which the author is enabled to lay before us at present applies chiefly to the Ottawa River, as also to the result of mechanical filtration with and without the use of a coagulant. The observations dealing with the pollution of the Ottawa from Pembroke to Montreal are both interesting and instructive to those municipalities located on the banks of the river.

The data shows a very slightly sewage polluted water above Ottawa city, with a slight increase below Ottawa, and a falling off in pollution content near Montreal. An interesting observation made has reference to the low bacterial count, owing to the numerous lakes on the river, and the consequent purification by sedimentation. The chief natural characteristics of the Ottawa River are its softness, making it an ideal domestic supply, and its slight brown color, owing to vegetable content. The color, Mr. Meadows points out, is effectually