

THE Sanitary Review

SEWERAGE, SEWAGE DISPOSAL, WATER SUPPLY AND
WATER PURIFICATION

PROVINCIAL SANITARY LEGISLATION AND EXPERT ADVICE.

Since our issue of January 28th last, in which the leading features of the new Public Health Act (Saskatchewan) were explained with reference to sanitary engineering, we have had some correspondence from engineers upon the subject.

A doubt appears to exist in the minds of some engineers as to the effect this legislation may have upon their profession. It is feared in some quarters that the formation of a Government department providing expert sanitary advice may curtail somewhat the field for private consulting engineers.

This fear, we think, has no basis in fact.

Dr. Probst, in the last Quarterly Bulletin, Ohio State Board of Health, states: "At times the Board of Health is consulted by municipal authorities before they engage an engineer. It may send an engineer in such cases to look over the ground and give general advice. It insists, however, that an engineer must be finally engaged to prepare definite plans."

Dr. Probst also claims that municipalities have been saved great cost by the avoidance of errors, while the system has worked without friction, and, in fact, in perfect harmony with the engineering profession.

We are assured by the Chief Commissioner of Health of Saskatchewan that it will not be the object of the Bureau of Public Health to supplant the private engineer, but insist in every case that a capable engineer is retained by municipalities.

We cannot see that it can be otherwise, as the new Act provides that even before a by-law is submitted to the people plans must first be submitted to the Bureau of Health, giving a general and comprehensive outline of the scheme. It is, therefore, apparent that at the very outset it will be necessary for a municipality to engage the services of an engineer.

The duties of the engineering section of the new Bureau of Health in Saskatchewan will be on the same lines as those which have proved so effective in the past in the United States. Engineers all over the world owe a deep debt of gratitude to the efforts of such boards of health as those of Massachusetts, Ohio, New York, etc., and the central controlling authorities in Europe.

Throughout the whole of Canada, at the present time, there is a strong feeling that something must be done, and done immediately, to avert the pollution of streams by sewage.

This feeling we see manifested in a Bill lately introduced in the Senate providing for the prevention of sewage pollution to navigable waters and waters flowing into navigable waters; this apart from the provincial control which is being adopted in the Western Provinces, and which has partly been adopted in Ontario. In fact,

what is now happening in Canada is just a repetition of the sanitary evolution of the older countries.

The passing of legislative Acts necessitates the formation of authorities to administer such Acts. When such Acts carry with them legislation of an engineering character, then there must be engineering control in connection with such authorities.

The whole subject of the disposal of sewage with reference to its purification is practically new in Canada. We have an abundance of evidence of how the matter may be treated successfully in other countries. Most of the evidence, however, unfortunately applies to countries where the average temperature is much warmer than in Canada. The annual isotherm of 40 degrees Fahrenheit which passes through the thickly populated part of Canada only makes itself again apparent in lower Germany and Austria, and we have to go there to find similar climatic conditions in connection with results in sewage disposal. All data from these countries make it apparent that, generally, in Canada sewage disposal works must be protected from frost in winter, and even in some places supplied with artificial heat.

It is just in connection with climatic conditions, and how to overcome them, that much valuable data can be collected in Canada by central authorities.

It will avail little to waste time in repeating all the valuable experimental and research work which has been made in the past in older countries. All the data referring to sedimentation, chemical precipitation, land filtration, and biological treatment of sewage can be easily obtained and definite conclusions as to limitations arrived at. The study of the data, however, with reference to extremes of frost is still an open field, and must be boldly faced by the Canadian sanitary engineer if results of a satisfactory character are to be obtained.

Unfortunately, in Canada at present we have no complete sewage purification systems in our colder Western lands which any engineer can refer to for data. In fact, even in our warmer Provinces, with the exception of a few isolated cases, **sewage purification has not yet been attempted, and little data is forthcoming as to results in the cases which exist as to the effect of extreme frost on bacterial action.**

The formation of central sanitary authorities in Canada should be welcomed by every progressive sanitary engineer who is interested in the question of sewage disposal, and who wishes to see this branch of engineering put upon a sound and non-experimental basis.

The formation of central sanitary authorities can only be looked upon with jealousy by those non-progressive engineers, whose main endeavor lies in the retention of data and knowledge, and whose professionalism is restricted to obtaining dollars regardless of general efficiency.