

UNDERGROUND WATERS AS SOURCES OF PUBLIC WATER SUPPLIES IN ONTARIO.

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Mr. Chairman and Gentlemen of the Engineering Society,—When we observe the remarkable situation of Old Canada, but notably of Ontario, in its relations to the bodies of fresh water constituting the Great Lakes, and note the configuration of the surface of the country contributing to the supply of these great lakes, we are naturally surprised to see that, at some point or other, the whole of these immense watersheds contribute their drainage to some one or other of these great lakes, as completely as if Ontario were an island and the great lakes the surrounding ocean. Remembering, too, the comparatively small distance north and south that the various watersheds of the great lakes occupy from the points at which their waters are delivered into some particular lake reservoir, we are surprised to see how comparatively short is the course of any individual river, even the longest, the Ottawa. There result from these conditions two remarkable phenomena, without, I think, any parallel on the face of the globe. The first of these is the unusual exposure of the sources of these streams to the effects due to the destruction of their protective forests. Already, as will be noticed, all the protection is gone from the head waters of the rivers of Western Ontario. Follow them along, starting with the Lake Simcoe and Severn supply, and note them till we have reached the Humber and Rouge. Where are the Nottawasaga, the Sydenham, the Maitland, the Saugeen, the Thames, the Irvine and Grand, and the many creeks, as Stoney creek, Twenty-mile creek, etc., flowing into Lake Ontario from the Niagara escarpment? Even in the brief history of fifty years since settlement properly began many of them remain as little more than memories, unless when the sudden floods of some autumnal storm fill them almost as suddenly as does a storm among the rocky scaurs of the mountains of Scotland. But note again the watershed, starting at the Upper Ottawa and follow along the undulating table land, for it is nothing more, of the Laurentides, till where the waters run toward Lake Nipissing and the Georgian Bay, then skirting along the line of the C. P. R. till Port Arthur is reached, and it will be noticed how really short are the courses of the streams flowing into Lake Superior or the Georgian Bay. To many who have been on exploring or surveying parties in these