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As the farms on the east of canal are not injured by the inundation, and do not come within our instructions, we avoid tampering with the natural course of the water.

DRAINS AND SEWERS, ETC.

Thirdly. The backwater rises in the cellars of the houses within its sphere, nearly as fast as in the harbor, through the St. Ann's creek and other drains, and also by quicksands or gravel below the level of the quay wall. The remedies we shall afterwards submit.

QUICKSANDS.

The influence of the quicksand is probably much less than is generally supposed. If it cannot be cut off, it will at least require small means to carry it off.

STREAMS WITHIN THE CITY.

Fourthly. The streams falling into the St. Lawrence, within the precincts of the city, contribute to the inundation, and the mode of remedy requires consideration.

HOLWELL CREEK.

The Holwell creek is merely the drain of a marsh, on the west of Upper Lachine road, as far as the ridge before mentioned on the city side of the Tanneries. It is joined near the brewery of Messrs. Dow and Dow by an offset from the St. Pierre, passing through the St. Gabriel culvert.

The latter stream can be confined to the east side of canal during an inundation. The Holwell creek discharges at Point à Callière.

MOUNTAIN STREAMS.

There is another stream which descends from the Côte à Barron and crosses Bleury street near the upper end. On arriving at a swamp at the head of St. Lawrence suburb, it passes by a water course into the Craig street tunnel, which meets the Howell creek before its discharge at Point à Callière. This stream will be hereafter adverted to.

REMEDIAL PLANS PROPOSED BY INDIVIDUALS.

Several plans have been proposed by individuals for prevention of the rise of water in the harbor.

EXCAVATION IN THE BED OF THE RIVER.

The most obvious remedy is to deepen the shoals in the west channel, and to lower the small island at the foot of St. Helen's to about three feet below summer level. The expense attending this plan would be very great, the effect uncertain, as it would afford very little additional relief to the channel, which is 37 feet deep at low water. The effect anticipated is that it would afford scope for the escape of the ice below, without forming dams.

In the summer it would have the injurious effect of lowering the water in the Harbor,

but, on the other hand, it would diminish the rapid of St. Mary, by lowering the head, and allowing the water to spread.

Another objection to this plan is that it would require several seasons to complete it.

Although it is not recommended by the commissioners for the present time and purpose, it may deserve attention at a future time, as an auxiliary means of relief, keeping always in view the effect it would have on the harbor. The shoals above the head of the current St. Mary may be removed without risk.

PROPOSED MOLE AND ITS PROBABLE EFFECTS.

It has been proposed and supported by several persons whose opinions are worthy of the greatest consideration, that a mole should be thrown out, either continuous or in detached piers, from Windmill Point on the shoals towards St. Helen's, or from a point higher up the river.

Two effects are anticipated by the movers of this plan. First, that by creating dead water above it, the ice would take sooner, and arrest the floating ice at a higher level, and thus prevent the formation of ice dams below the harbor. Secondly, that if the mole were formed in piers it would break the ice in small pieces, which it is expected would not form into accumulations.

The first expectation is, however, problematical, and the second superfluous, because the greater part of the ice is broken small by the rapids, particularly that which comes down immediately before the ice is fixed, and which is equally arrested by the ice below.

It was at first overlooked that the mole, if continuous, would occupy about one-third the breadth of the river, and then the water thus backed up would very much increase the rapidity of the steam boat channel in the summer, and the only bateau channel would be blocked up.

At the commencement of the winter, the ice would be arrested, either in fields or masses, above the mole and would flood lands above the rapids which are now exempt. The water, which in some seasons has flowed over the canal a few inches in depth, would then be precipitated over in a torrent unless the banks were raised to a height which we cannot estimate, and would create evils far more fearful than those it is proposed to avoid.

EFFECTS OF PROPOSED MOLE.

If, instead of a continuous mole, piers were placed at intervals, the evils to be dreaded would certainly occur in proportion to the shortness of the intervals, but it is not so certain that the good effects anticipated would actually ensue.

The commission do not therefore propose any work of this kind, but it may be a matter of future consideration, as an auxi-