

thrown into the lake as far as seven miles east of the intake pipe would, under the influence of strong east winds, reach the pipe in three hours. If this statement could be proved it would settle the matter in short order. It led me to follow up the question a little further and I reasoned thus; if the winds drove the water along at the rate of  $2\frac{1}{3}$  miles per hour it would reach Hamilton in about 16 hours. It is quite evident that the surface of the water is more influenced by the wind than at greater depths. We will suppose that 10 feet of the surface is so influenced, and that a storm lasts, as most easterly storms do, from two to three days; then consider that the cross section of the lake is somewhere about 40 miles broad, and that 10 feet of the surface is focussed on Hamilton for three days; the unhappy fate of that city may easily be predicted. She would no longer offer a butt for the stale jokes of Toronto wits, but we should speak of her in all sisterly tenderness as the "dear departed." The mountain would no doubt come in handy to the natives of the Ambitious City.

But, in all seriousness, it must be conceded that the influence of the winds and waves has a tendency to move the surface more or less in their own direction, and that during a strong easterly gale a few feet of the surface of the water is driven in a corresponding direction; and this is verified by the fact that under such conditions we find the level of the lake raised a few feet along the Hamilton beach. But though the storm may continue for days with unabated force it does not rise any higher; so what is the only conclusion we can arrive at? Only this, that the head so raised forces a portion of the water back as an undertow, and forms a current in the opposite direction. Thus it is evident that were a sewage outlet located well to the east of the intake of water, say in the neighborhood of Scarborough Heights, very little danger, if any, need be anticipated; for when an easterly storm arises it will give rise to an undercurrent in an opposite direction, which will first flow past the intake of water, thence on to the sewage outlet and so on to the east. So that any charge of water contamination from such a cause is as baseless as the wolf's indictment of the lamb for disturbing the water he was drinking. The answer which the lamb made will suffice for us, "Pray how can that be since the water flows from you to me." If this theory be true it will seriously militate against a westerly discharge of sewage as advocated by some local sanitarians, or against the two or three minor outlets to the west as recommended in the latest report on the subject. It stands to reason that it is unwise to have outlets both to the east and west of the intake of water, for whatever the conditions or nature of the currents that will render the one secure will cause the other to be a certain danger.