

bottom of the lock chamber, so as to ensure the proper working of the lock gates, and a dredge may be required for cleaning out the channel.

Source of Supply Recommended.

From the foregoing data, it is evident that the only source of supply adequate to the requirements of a ship canal is the Bay of Fundy.

Under the above circumstances, the following mode of obtaining an efficient supply of comparatively clear water is proposed.

1. To admit the Bay of Fundy water freely into the projected canal, after it has attained an elevation of eighty-five feet in Cumberland Basin.
2. To keep as great a volume of water as possible in reserve in the canal, in order to draw the supply therefrom during low neap tides, without permanently impairing the drainage of the marshes.
3. If this supply is found to be insufficient to construct dams across one or more of the rivers emptying into Cumberland Basin near their outlets, in order to convert them into reservoirs from which water can be drawn when required.

Reservoirs.

The rivers or portions thereof that may be used as reservoirs of supply, in connection with the several lines examined, are the Tintamarre, Au Lac, Missiquash and La Planche.

In order to be in position to accelerate the flow of the supply to be derived from the reservoirs, towards Baie Verte, as much as their natural disposition on the isthmus will permit, and moreover to provide for the simultaneous distribution of the water over as large an extent of canal as practicable, it is of importance that the upper reach of the canal should be accessible from these reservoirs, and contiguous thereto at their extreme eastern end, and at several intermediate points, between it and the Bay of Fundy.

Bearing in mind that Fort Cumberland ridge is between the Rivers Au Lac and Missiquash, and Fort Lawrence ridge between the Missiquash and La Planche, it is evident that the only rivers suitable as reservoirs on each of the routes examined, are the Rivers Tintamarre and Au Lac for the Tintamarre and Au Lac lines, the River Missiquash for the Missiquash line, and the River La Planche for the La Planche and Sharp's Creek lines.

These streams have been accurately surveyed and cross-sectioned at various points.

The following are their respective capacities for one foot in depth, at ordinary high water, or when the tide has reached an elevation of eighty-seven to eighty-eight feet above datum.

	Cub. Feet.
Large bend of the Tintamarre cut off by dams X and Y, the river diverted being into new channel Z, so as to allow the tide to ascend as usual to long and Gravelly Lakes, for the formation of new marsh land.....	8,500,000
River Au Lac, as far as tide water will reach at an elevation of eighty-eight feet.....	12,600,000
River Missiquash, from outlet to first intersection with Missiquash Canal line.....	4,700,000
River La Planche, from outlet to Aboideau on Post road.....	7,800,000
River Tidnish from bridge on post road, at east end of Province boundary, to Doyle's mill dam, during ordinary high water at Baie Verte, or when the tide has reached an elevation of about seventy-four feet.....	2,500,000
The Tidnish is merely intended to receive the waste water from the canal.	

Proposed Canal.

The draught of water, as recommended by the Canal Commissioners in their Report of the 24th February, 1871, is fifteen feet in the canal; they have omitted, however, to state whether this draught should be available during low water at each terminus.