

The valley of the Carp lies in a southeasterly direction, and is shut off from the north by some of the highest hills in the range, which end abruptly at the shore line of Lake Superior with almost precipitous cliffs, 800 feet high.

There are undoubtedly many springs that feed the Loch, but the main source of supply is from the natural precipitation within the drainage area.

The watershed consists largely of exposed rock, but the valleys formerly produced large and excellent white pine and cedar. The ravages of the lumberman and forest fires have, however, left little of the original forest, which is now replaced by small birch and poplar.

The character of the watershed leads one to believe that the normal loss from seepage and evaporation should not exceed 50 per cent. of the average rainfall, which for the last 20 years, as recorded by the Meteorological Station in the adjoining city of Port Arthur, is approximately 30 inches per annum, and, consequently, 15 inches of precipitation should be available for use. On a drainage area of 30 square miles this rainfall will produce practically 6,500,000,000 imperial gallons annually, or, say, 17½ million gallons per 24 hours. Gaugings taken at the Carp River during the past three years have produced an average of just over 11,000,000 gallons per 24 hours, but as this period has been the driest at the head of the Lakes since the years 1883 to 1885, it cannot be considered normal. The difficulty of gaining access to the weir during the spring thaw prevented sufficiently numerous readings at the time of greatest flow, amounting for a considerable period to over 70,000,000 gallons per 24 hours. It is therefore safe to assume that the average for any one year will not be less than 9,000,000 gallons per 24 hours, sufficient, at 60 imperial gallons per head, for a population of 150,000 people. In fact, it is quite within the bounds of probability that a population of 250,000 would be well served from this source of supply.

In proportion to the size of the drainage area, the storage capacity of the Loch is immense, the top 3½ feet alone holding more than one year's supply for 250,000 people. This feature not only makes the whole year's effective precipitation available, but would even carry the system over one or two very dry years, when the consumption might exceed the available annual precipitation.

The citizens of Fort William had always considered that Loch Lomond would eventually be the source of their permanent water supply, but the necessity of constructing a rock tunnel nearly a mile in length proved a stumbling block to the small population for many years. However, on two occasions, between 1896 and 1903, brief reports on the feasibility of the scheme and its approxi-