and assume the proportion of this precipitation (of rain and snow) which, after deductions for evaporation, the demands of vegetation, or infiltration, would reach the wheels. An allowance must also be made for that portion of the rainfall which may be carried off in floods.

The area over which this precipitation would be in reach for water power purposes, would embrace all the main land of Canada south of the St. Lawrence, as well as all north of it in the St. Lawrence valley, and so much of the Hudson Bay and Mackenzie River watersheds as can be utilized, or imported by transmission.

As regards the power of the water thus estimated, we must embark in a much more speculative estimate as to the average fall which should be assigned to it for the whole region. We have in the undeveloped districts some scattered meteorological observations to assist us in estimating probable rainfall, and we have also a few barometrical observations giving the height above sea level of summit waters. On lower levels we have more numerous rain gauges, and summit levels ascertained by railway surveys.

For the whole river the total fall may be less than 100 feet, as in the case of the French river which has Lake Nipissing for a mill pond, or rise to 1,500 feet or more as at the rivers below Anticosti. In the case of the French river (which is the lower part of a longer stream) we have surveys, and know that its whole fall can be utilized, as would be done if it is made navigable by locks and dams. In the others (where no surveys have been made) some will be more or less like French river, while at others only a portion of the total fall upon them may be profitably utilized. The most valuable will be those which, like Montmorency, bring all their water with sufficient head to the point where it is worth most. The upper sections of the rivers will be the least valuable, as having less water and being more remote until reached by a new railway, or a transmission wire.

The chief difficulty with respect to the quantity of water is the want of rain gauges over so great an extent of unoccupied territory. Where the rainfall is known, the proportions which reach the streams have been ascertained in connection with reservoirs for water supply and other purposes. We can therefore only state a hypothetical case especially as to the power to be assigned to the available water.

Assuming, however, an average annual precipitation of twenty-four inches and taking one-half of this as available for water power, every ten square miles would yield an average of nearly one horse power for every foot of fall. A million square miles (and there is much more) would give nearly 100,000 horse power for every foot of fall. As there would be several hundred feet of fall which could be utilized, our water