

for ascertaining the loss on the reservoirs, is the half inch of depth per diem which they are estimated to lose, amounting to 15.2 feet yearly. Supposing the yearly amount of loss obtained, we have yet to distribute it over the months, but the great variation in the amounts of evaporation for winter and summer months will render these monthly quantities proportionally variable. We have accordingly assumed them to be so in the following general proportions. The loss in the month of January is estimated at 3-8 of an inch, and varies with the temperature and depth of water conjointly, to 9-10 in the hottest summer months. The *total* loss however thus detailed corresponds always with the calculated loss or one half inch per diem of the reservoir. Had the loss been assumed as in the same proportions for every month, the results would have afforded smaller capacities, or reservoirs, than are given now; since the losses of the early months would have been so much greater and it is during one of these months that the water is found highest. The loss by evaporation and filtration in the reservoirs was not obtained by multiplying the superficial extent of the *greatest* surface or the *full* surface of the reservoir into 365 half inches, or 15.2 feet, for the yearly loss; which would obviously have given a result far exceeding the truth. It was multiplied into the extent of greatest surface, together with one-third of that extent, meaning; or, S being the surface of greatest extent $\frac{1}{2} (S \times S \cdot 3)$ gave the mean. The minimum amount of water in the reservoirs during the summer months has since been applied to the Patuxent reservoir which is a fair average in its character of the others; and while the lower surface ($\frac{1}{3}$ of the highest) *assumed*, gives an extent of 112 acres the actual minimum surface amounts to 90 acres. The mode of calculation is therefore probably sufficiently near the truth. The table is calculated for an extent of drainage of 100 square miles. The results can obviously be easily applied to any required extent.

The canal season is supposed to close on the 15th December, or the winter to commence then.

The contents given already of each reservoir it may be remarked always exceed the net capacities required according to the *Table*. (See accompanying Table.)