

Seneca that we are to look for this, no streams other than those above the Seneca can be made available for the supply of summit water.

These streams are the Patuxent and Calvin Branch. The following Table gives the result of 56 observations upon the quantity of water discharged by them in the months of August and September last, one and a half miles above Etchison's Mills:

In Cubic feet per minute.		
	Patuxent	Cabin Branch
<i>August</i>		
Maximum	363.600	478.800
Minimum	144.300	100.860
Mean	226.920	176.760
<i>September</i>		
Maximum	2198.520	781.320
Minimum	92.940	89.900
Mean	313.900	184.200
<i>August and September</i>		
Mean	270.860	180.480

The Patuxent passes at Etchison's Mills, within a mile of the lowest part of the Damascus ridge. Following the course of the stream the Cabin branch is the only one of any magnitude flowing into it for seven or eight miles, and in this distance its valley averages less than two miles in breadth. The condition therefore of crossing the single ridge, with the greatest command of water and a practicable length of tunnel is satisfied, by assuming the level of the Patuxent at Etchison's mill, as the drainage gained would not compensate for a greater depression of summit.

It was found however advisable to elevate the summit still more, with the view of bringing into it the drainage of the Cabin Branch with the greatest advantage.

About a mile above Etchison's mill, the stream approaches to within 500 yards of the Patuxent, and a short leader would connect the drainage of the two streams. By assuming the level of the Patuxent at this point as the summit, we would lose but about three miles of drainage. It was therefore determined to adopt it. This makes the summit level 82:57 feet below the lowest part of the Damascus ridge, a point about one mile north of H. Griffith, and 496.26 feet above mid tide at Baltimore. It requires, to pass the ridge, a tunnel of only 547 2-3 yards in length, and it commands the drainage of 11445.76 acres, or 17.884 square miles.

This drainage being that of the Patuxent and Cabin branch above the point mentioned, it is proposed to collect in two Reservoirs,—The first on Cabin branch would contain, with a dam of 30 feet in height, 1008.420 cubic yards, sufficient for the drainage above it of 2903,68 acres. Its capacity being based upon the supposition that it would contain the maximum quantity of water which could be col-