of these lochs above sea-level is 412 feet, so that the mean height above the sea of the entire catchment is about 1347·129 feet.

The usual practice among engineers is to add 2½ per cent. of rainfall for each 100 feet of height above rain-gauges. Applying this rule to the Loch Vennachar catchment-basin, where we have an observed rainfall of 75·37 inches at an average height of 528 feet, we must add 12·7 per cent. for the additional 508 feet of mean height, making an average annual rainfall over the entire catchment of 84·94 inches. This would give an annual fall of rain on the entire catchment equal to 14,857,214,000 cubic feet. Applying this rule, in like manner, to the Loch Lubnaig catchment-basin, where we have an observed rainfall of 76·25 inches at an average height of 538 feet, we must add 20 per cent. for the additional 809 feet of mean height, making an average annual rainfall over the entire catchment of 91·5 inches. This would give an annual fall of rain on the entire catchment equal to 15,600,760,000 cubic feet.

There is another method of estimating the rainfall, without taking the mean height of the drainage-area into consideration. Supposing the usually accepted increase of 2½ per cent. per 100 feet of height, and also the mean annual rainfall at the average height of the rain-gauges, to be approximately correct, it is possible to calculate the rainfall at any given height. For the Loch Vennachar catchment the probable rainfall at the same heights and intervals as the contour-lines on the Ordnance Survey maps has been calculated from the starting-point of the mean of the observing stations 75·37 inches at 528 feet. Thus at the surface of Loch Vennachar the rainfall would be about 70·5 inches; at 500 feet above the sea, 75·2; at 750 feet, 79·9; at 1000 feet, 84·6 inches; and so on, adding 6¼ per cent. for each succeeding interval of 250 feet. Multiplying the area between any two consecutive contour-lines by the mean of the two figures calculated for the same two lines should give an approximation to the amount of rain falling on that area. The result as obtained by this method for the entire catchment-basin flowing out of Loch Vennachar is given in the following table —

						Cubic feet.
Level of lochs to	500 feet,	16·53	square miles	× 72 8	inches	= 2,795,710,000
500 ,,	750 ,,	10·67	,,	× 77·5	,,	= 1,921,117,000
750 ,,	1000 ,,	10·35	,	× 82·2	,,	= 1,976,514,000
1000 ,,	1250 ,,	9 46	,,	× 86·9	,,	= 1,909,847,000
1250 ,,	1500 ,,	10·22	,,	× 91·6	,,	= 2,174,874,000
1500 ,,	1750 ,,	7 86	,,	× 96 3	,,	= 1,758,476,000
1750 ,,	2000 ,,	5 94	,,	× 101 0	,,	= 1,393 784,000
2000 ,,	2250 ,,	3·06	,,	× 105 7	,,	= 751,422,000
2250 ,,	2500 ,,	0·99	,,	× 110 4	,,	= 253,917,000
Over 2500	,,	0 21	,,	× 115·1	,,	= 56,154,000
			Total ...	..	.	14,991,815,000

This result comes very near to that obtained from the calculation