

water discharged over the land finds its way, to a very large extent, at once into brooks and rivers, by which it reaches the sea. Mr. David Stevenson remarks that, according to different observations, the amount carried off in floods varies from 1 to 100 cubic feet per minute per acre.¹¹⁰

In estimating and comparing, therefore, the ratios between rainfall and river discharge in different regions, regard must be had to the nature of the rainfall, whether it is crowded into a rainy season or diffused over the year. Thus, though floods cannot be deemed exceptional phenomena, forming as they do a part of the regular system of water-circulation over the land, they do not represent the ordinary proportions between rainfall and river discharge in such a climate as that of Britain, where the rainfall is spread more or less equally throughout the year. According to Beardmore's table,¹¹¹ the Thames at Staines has a mean annual discharge of 32.40 cubic inches per minute per square mile, equal to a depth of 7.31 inches of rainfall run off, or less than a third of the total rainfall. The most carefully collected data at present available are probably those given by Humphreys and Abbot for the basin of the Mississippi and its tributaries, as shown in the subjoined table:¹¹²

Mr. Greaves found that at Lea Bridge the evaporation from a surface of water was 20.946 inches, while the rainfall was 25.534 (Symons's *British Rainfall for 1869*, p. 162). But we need an accumulation of observations, taken in many different situations and exposures, in different rocks and soils, and at various heights above the sea. (For a notice of a method of trying the evaporation from soil, see *British Rainfall*, 1872, p. 206.)

¹¹⁰ "Reclamation and Protection of Agricultural Land," Edin. 1874, p. 15.

¹¹¹ "Hydrology," p. 201. *Comp. Report of Royal Commission on Water Supply*, 1869, p. liii.

¹¹² "Physics and Hydraulics of the Mississippi River," Washington, 1861, p. 136.