

The amount of rain which fell during the past year ending 31st December, 1875, was 42·493 inches. The depth of snow was 87·81 inches, and the total precipitation, or the combined rainfall and melted snow, was 51·48 inches.

The average for the last 13 years was as follows: Rain, 43·367 ins. Snow, 82·26 ins. Total precipitation, 52·172 ins.

It is not, however, so much with annual or mean annual results we have to deal in questions of sewerage, as with maximum falls within a limited period of time.

The heaviest rainfall in a short time—of which I have any information—occurred on the 19th June, 1872, when 0·183 of an inch fell in half an hour.

On the 20th Dec., 1869—1·024 in. fell in 5·6 hours	= 0·221 in. per hour	Other heavy rainfalls.
" 28th Aug., 1871—0·388 "	" 3·7 "	"
" 19th Feb., "—1·100 "	" 4·5 "	"
" 29th June, 1872—0·448 "	" 1·3 "	"
" 17th Aug., "—1·285 "	" 4·7 "	"
" 14th Oct., "—1·090 "	" 4·5 "	"
" 13th Nov., 1873—1·520 "	" 5·5 "	"
" 9th Jan., 1874—1·040 "	" 4·1 "	"

Mr. Allison remarks, "it is probable that these rains did not fall equally hour by hour; but where they persist, as these did, for four or five hours falling heavily, the want of proportion is not so great as an inexperienced person would imagine; and if, for instance we allow 37 to one hour of the fall of 13th November, 1873, leaving 1·15 to the remaining 4·5 hours, I think we will be within the limits of disproportion; for remarkably heavy showers, as that of 19th June, 1872, never last long."

Two very heavy rain storms occurred here during the past year, occasioning much damage to the streets and roads especially in the steep hill districts, and flooding a few cellars—see my annual report for 1875. The first took place on the 10th October, when 4·406 inches fell in 18 hours. This is the greatest fall recorded in 18 hours since 1859, or for a period of 17 years. The second occurred on the 10th and 11th November, when 2·418 inches fell in 17½ hours, and for violence at the time of its greatest height this exceeded the former. The gauges were observed every three hours, the result being that during the storm of 10th October the greatest fall was 0·996 inch from 9 a. m. to noon, while in the storm of 11th November 1·003 inch fell from 6 a. m. to 9 a. m.

Gaugings of Freshwater brook were taken in the Public Gardens during both of these storms, when it was found that the greatest flow occurred about 40 minutes after the heaviest fall on 11th November, at which time 3,500 cubic feet of combined sewage and rain-water were running per