Definition of flood magnitude

Hydrologic events can be described by their statistically derived recurrence interval or return period. The return period is based on the probability that the given event will be equalled or exceeded in any given year. For example, a 1 in 100-year flood is calculated to be the flood flow or level that is expected to be equalled or exceeded every 100 years on average. The 1 in 100-year flood is more accurately referred to as the 1% annual exceedance probability (AEP) flood, since it is a flood that has a 1% chance of being equalled or exceeded in any given year. A 1 in 100-year flood will not simply strike in a particular area once, then leave it be for the next 99 years. It could happen two years in a row, its just not that likely.

Return period (or recurrence interval), in years	Probability of occurrence in any given year	Percent (%) chance of occurrence in an given year
1000	1 in 1000	0.1
200	1 in 200	0.5
100	1 in 100	1
50	1 in 50	2
25	1 in 25	4
10	1 in 10	10
5	1 in 5	20
2	1 in 2	50