

Return Periods

Civil Engineering

What a one in 100 year storm means.

An intensity-duration-frequency curve gives rainfall intensity for a chosen duration and return period.

1 IN 30, ANY ONE YEAR
About 3.3%

1 IN 30, OVER 30 YEARS
About 64%

- Shorter storms are more intense, not wetter
- Return period is a probability, not a timetable
- A one in 100 event can happen twice running
- Its chance in any single year is about 1%
- Design duration matches time of concentration
- Climate allowances are added to older curves

LOOK FOR IT

A one in 30 year sewer still has roughly a 64% chance of surcharging in 30 years.

Educational reference. Design return periods and climate change allowances are set by the regulator and the standard.