

RAINFALL IDF CURVES

PROTECTING OUR HOMES & COMMUNITIES



WHY SMARTER PLANNING MATTERS FOR ALL OF US

In the Caribbean, heavy rainfall can quickly turn into devastating flooding, damaging homes, washing away roads, and disrupting daily life. As climate contributes to changes in rainfall patterns and more destructive floods, the need for better preparation has never been greater. One tool that can help is the Rainfall Intensity-Duration-Frequency (IDF) curve.

WHAT ARE IDF CURVES?

Rainfall IDF curves show the likelihood of extreme rainfall events by making a connection between:

- How much rain is expected
- How long the rain lasts
- How likely it is to occur

In simple terms, IDF curves turn rainfall data into actionable information that helps us prepare for the future.

WHY IDF CURVES MATTER TO YOU

When engineers and other practitioners use reliable IDF data, they can:

- Design drains and culverts to reduce the impact of heavy rainfall
- Assess the performance of existing drainage infrastructure
- Develop flood hazard maps
- Improve early warning systems enabling people to take early action before disaster strikes

THE PROJECT

The Caribbean Institute for Meteorology and Hydrology (CIMH) has been engaged by the Caribbean Development Bank (CDB), to develop new IDF curves for all CDB Borrowing Member Countries (BMCs). These new curves will use:

- Satellite-based rainfall data to see the big picture
- Ground-based rainfall data to get accurate local insights
- Climate projections to show how rainfall patterns might change in the future

HOW IDF CURVES BENEFIT YOU

When the right data is used to plan our communities, everyone benefits:

- Safer homes and roads to reduce the impact of extreme rain
- Less damage and loss after storms
- Lower costs for repairs, meaning less strain on public funds
- Informed recovery if flooding happens

YOUR ROLE IN A SAFER FUTURE

IDF curves are powerful tools, but they work best when communities, governments, and organisations use them together. We all have a part to play in making our communities safer by:

- Supporting flood-safe building practices
- Staying informed about flood risks
- Encouraging leaders to plan with the future in mind



SCAN ME

