

The following amendment to the 2019 version of the Engineering Design Manual is issued by the City of Vancouver on January 13, 2025. Delete and replace the content in 5.2.2.2 with the following:

### 5.2.2.2 Rainfall Intensity

The rainfall intensity,  $I$ , is calculated using the City of Vancouver Intensity Duration Frequency (IDF) curves and the IDF Equation which is defined as:

$$I = A * T^B$$

Where:

$T$  = Time (hours)

$A, B$  = Coefficients

$I$  = Rainfall Intensity (mm/hr)

There are three IDF curves used by the City of Vancouver: 2018, 2050, and 2100. These curves are provided below as well as a description of when each curve is to be used.

#### 2018 IDF

The 2018 IDF curve, [Figure 5-1](#), and coefficients in [Table 5-3](#), are to be used for on-site storm water management pre-development estimates.

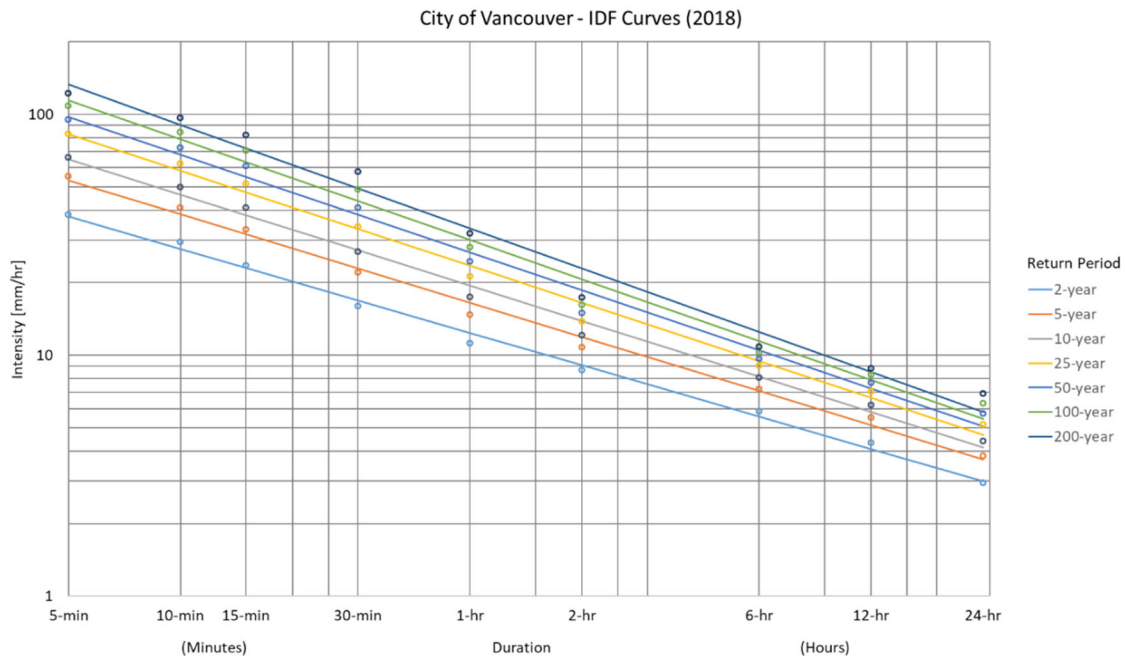


Figure 5-1: 2018 IDF Curve

Table 5-3: 2018 IDF Equation Coefficients

Recurrence Interval	Probability	A	B
1 in 2 year	50%	12.386	-0.447
1 in 5 year	20%	16.517	-0.471
1 in 10 year	10%	19.449	-0.486
1 in 25 year	4%	23.487	-0.508
1 in 50 year	2%	26.673	-0.522
1 in 100 year	1%	30.043	-0.537
1 in 200 year	0.5%	33.646	-0.553

### 2050 IDF (RCP 8.5 Moderate Projection)

The 2050 IDF (RCP 8.5 Moderate Projection) curve, [Figure 5-2](#), and coefficients in, [Table 5-4](#), are to be used for storm component of sanitary sewer design in a “combined connection to sanitary sewer area”.

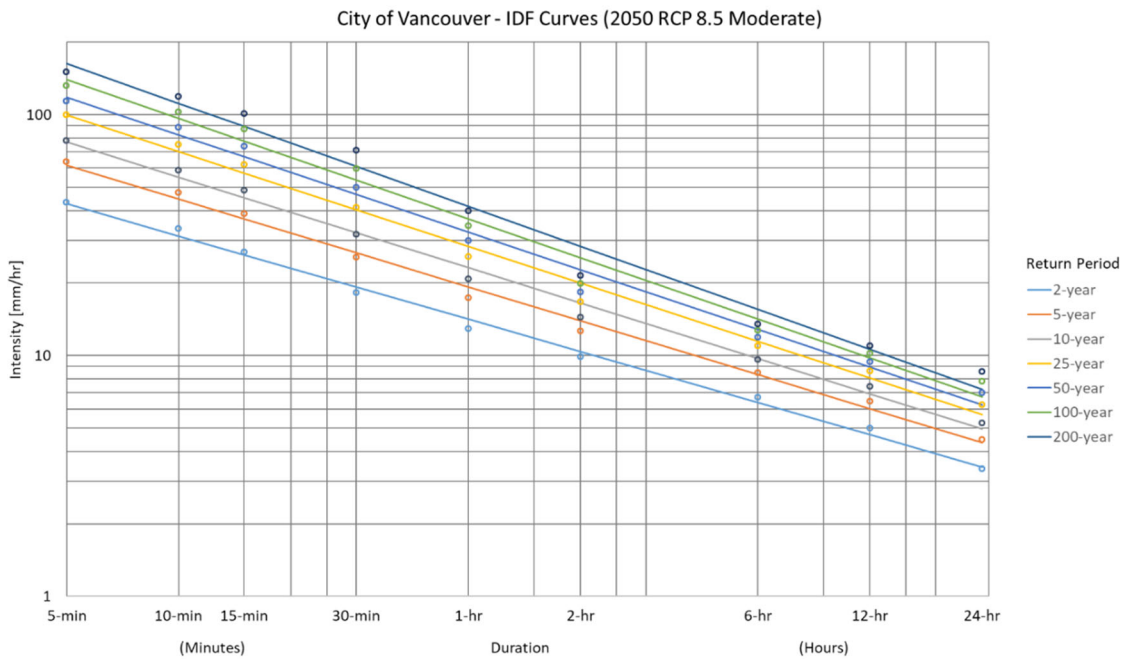


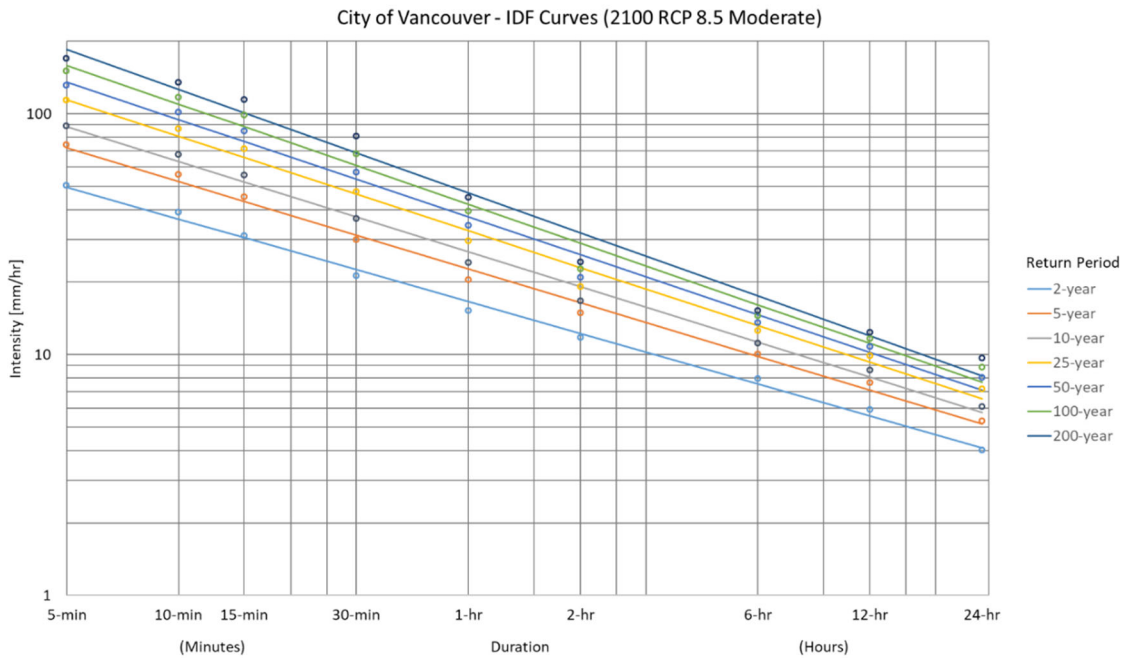
Figure 5-2: 2050 IDF (RCP 8.5 Moderate Projection) Curve

Table 5-4: 2050 IDF (RCP 8.5 Moderation Projection) Equation Coefficients

Recurrence Interval	Probability	A	B
1 in 2 year	50%	14.138	-0.445
1 in 5 year	20%	19.285	-0.469
1 in 10 year	10%	23.116	-0.484
1 in 25 year	4%	28.368	-0.506
1 in 50 year	2%	32.502	-0.520
1 in 100 year	1%	36.913	-0.535
1 in 200 year	0.5%	41.579	-0.550

## 2100 IDF (RCP 8.5 Moderate Projection)

The 2100 IDF (RCP 8.5 Moderate Projection) curve, [Figure 5-3](#), and coefficients in [Table 5-5](#), are to be used for storm sewer design and on-site storm water management post-development estimates.



*Figure 5-3: 2100 IDF (RCP 8.5 Moderate Projection) Curve*

*Table 5-5: 2100 IDF Equation Coefficients*

Recurrence Interval	Probability	A	B
1 in 2 year	50%	16.607	-0.440
1 in 5 year	20%	22.698	-0.466
1 in 10 year	10%	26.651	-0.482
1 in 25 year	4%	32.615	-0.506
1 in 50 year	2%	37.252	-0.520
1 in 100 year	1%	42.014	-0.535
1 in 200 year	0.5%	46.968	-0.551