

The following updates to Section 4.0 of the City of New Braunfels Drainage and Erosion Control Design Manual are proposed to take effect on **March 1, 2015** by authorization of the City Engineer and approval by City Council. Any projects currently in design that will be impacted by the proposed changes will need a letter of exception signed by the City Engineer (per Section 143-2 (c) of the Code of Ordinances) prior to construction permit approval. Developments with previously approved Stormwater Master Drainage Plans designed in accordance with the current DCM Section 4.0 may be granted an exception if plat requirements per Section 118-32 (k) of the Code of Ordinances are met.

"Section 4.1 Rainfall Intensity-Duration-Frequency-Rational Method" shall be renamed "Section 4.1 Rainfall Intensity-Duration-Frequency" and changed to read as follows below.

4.1 Rainfall Intensity-Duration-Frequency

The City evaluated area rainfall data in 2011 following procedures outlined in USGS Water Resources Investigation Report 98-4044, and which included several significant rain events that occurred after and thus were not part of the USGS analysis. The City determined the following rainfall data as most appropriate for use in this area. Rainfall intensities will be computed using the IDF equations and appropriate design frequency coefficients provided in Table 4-1. This equation shall be used only with time of concentrations between 10 minutes and 3 hours.

"Table 4-1 New Braunfels Rainfall Intensity Constants" shall be replaced with the updated Table 4-1 below.

Table 4-1
New Braunfels Rainfall Intensity Constants

Intensity for Durations of 10 min to 3 hours $I = b / (T_c + d)^e$			
Year	b	d	E
2	69.7	12.03	0.857
5	61.2	9.61	0.762
10	59.8	7.69	0.720
25	64.6	7.14	0.691
50	68.4	6.40	0.673
100	74.9	5.95	0.663

Note: I is rainfall intensity in inches per hour.

"Table 4-2 Comal County Rainfall Intensity Constants" shall be removed.

"Section 4.4 Hydrographs – TR-20, TR-55 or HEC-1" shall change reference from "Table 4-3" to "Table 4-2."

"Table 4-3 New Braunfels Area Depth-Duration Values (in)" shall be replaced with the updated Table 4-2 below.

Table 4-2
New Braunfels Area Depth-Duration Values (in)

Year	5-Min	15-Min	1-Hr	2-Hr	3-Hr	6-Hr	12-Hr	24-Hr	2-day	3-day
2	0.51	1.05	1.65	2.19	2.44	2.87	3.10	3.34	3.98	4.31
5	0.66	1.34	2.33	3.08	3.48	4.17	4.45	4.83	5.66	6.20
10	0.80	1.58	2.84	3.72	4.23	5.11	5.49	6.06	7.00	7.72
25	0.96	1.89	3.56	4.61	5.26	6.41	7.07	8.06	9.08	10.11
50	1.11	2.16	4.17	5.32	6.10	7.47	8.50	9.96	10.99	12.34
100	1.28	2.47	4.84	6.08	6.99	8.61	10.18	12.30	13.30	15.04