


Technical and Procedural Newsletter

June 28, 2021

TO: Members of the Land Development and Engineering Design Community

FROM: Alan Brewer, Director 

The purpose of this correspondence is to inform the Land Development and Engineering Design Community of technical and procedural updates that have recently transpired. Please distribute this information to applicable personnel within your organization.

IN THIS EDITION:

1. Rainfall Data Update

Section 5.210.D of the Facilities Standards Manual (FSM) provides the following link to rainfall intensity and rainfall depth values used in hydrologic design:

www.loudoun.gov/fsm-rainfall.

These values are developed based on data from the National Oceanic and Atmospheric Administration (NOAA) and the Virginia Department of Transportation (VDOT) and were last updated on June 27, 2013.

Staff has compiled information based upon updated NOAA Atlas 14 local rainfall event data and amended the rainfall intensity and 24-hour rainfall depth values accordingly. This update is necessary to ensure that runoff calculations are based on the best available data. The FSM Public Review Committee reviewed the updated data during their May 5, 2021, meeting and concurred with the amendments.

The new rainfall data shall be used in conjunction with first submission Construction Plans and Profiles, Site Plan, Grading Permit, and Floodplain applications submitted **on or after September 1, 2021**. The updated "County of Loudoun Rainfall Data" provided in the attachment has been posted online.

If you have any questions regarding this Newsletter or any other program elements, please contact Jimmy Edmonds, Virginia Stormwater Management Program Administrator, at James.Edmonds@loudoun.gov or (703) 737-8052.

COUNTY OF LOUDOUN RAINFALL DATA

TABLE I. Rainfall Intensity (inches/hr.)

Time of Concentration						
Storm Event	5-min.	10-min.	15-min.	30-min.	60-min.	120-min.
1-year	4.07	3.24	2.69	1.83	1.14	0.674
2-year	4.87	3.88	3.24	2.23	1.39	0.822
5-year	5.82	4.64	3.89	2.75	1.76	1.05
10-year	6.55	5.21	4.37	3.14	2.04	1.23
25-year	7.48	5.92	4.98	3.66	2.42	1.48
50-year	8.18	6.47	5.44	4.06	2.74	1.70
100-year	8.94	7.03	5.90	4.48	3.07	1.93

TABLE II. Rainfall Depth (24-hour rainfall)

Storm Event	Depth (inches)
1-year	2.54
2-year	3.06
5-year	3.91
10-year	4.65
25-year	5.78
50-year	6.76
100-year	7.87