

Revisions made to USDCM Volume 1 and 2

The following details revisions been made since 2016:

2016, November: Chapter 9 (Hydraulic Structures). Corrected equations for curves shown (Figure 9-1, page EDB-5)

2017, March: Chapter 5 (Rainfall). Made changes throughout this chapter as UDFCD adopted NOAA Atlas 14 and used values from this publication in a CUHP recalibration effort. |

2017, March: Chapter 6 (Runoff). Changes reflect the adoption of NOAA Atlas 14 precipitation values and recalibration of CUHP. This includes revisions to runoff coefficients and the urban check equation for time of concentration (Equation 6-5). These items were revised to achieve better consistency between the rational method and CUHP (both peak flows and volume) |

2017, March: Chapter 12 (Storage).

- a. Revised Figure 12-19 and text in Section 5.6 (Trash Racks and Debris Blockage) to match UDFCD practice related to assumptions regarding open area and debris blockage. |
- b. Chapter 12 (Storage), Figure 12-20 was replaced and mislabeled equations were corrected. |
- c. Modified the simplified equation for the 100-year detention volume (Equation 12-4) per the revised Estimation of Runoff and Storage Volumes for Use with Full Spectrum Detention technical memorandum dated January 5, 2017. |
- d. Removed references to UD-FSD as UDFCD has retired this workbook and replaced it with UD-Detention. |
- e. Clarified a preference for open channel emergency spillways. |

2017, September: Chapter 9 (Hydraulic Structures). Changes eliminate use of grouted 18-inch boulders due to UDFCD observed problems in installation and stress the importance of proper installation of (including trimming) of joint restraints for pipe outfalls.

2017, September: Chapter 12 (Storage). Added references for riprap embankment protection. Updated tables 12 – 6, 12 – 7, and 12 – 8. These tables provide coefficients for pre-developed peak unit flowrates based on soil group and were revised as part of the technical memorandum entitled UDFCD Predeveloped Peak Unit Flowrates, dated December 21, 2016.

2018, August: Chapter 6 (Runoff). Corrected Table 6-4, Runoff coefficient equations based on NRCS soil group and storm return period. The correction was limited to the equation for the 25-year storm return period for Type A soils.

2024, March: Chapter 6 (Runoff). Full update including impervious values. Water Quality Peak Flow (WQPF) and 1% Plus Discharges were added to the chapter in 2024. |

2025, November: Chapter 11 (Bridges and Culverts). Incorporated new criteria for safety grates based on research completed in 2024. Also included: geomorphically-informed culvert configurations, fish-friendly considerations, and new guidance related to urban camping. |

2026, July: Chapter 6 (Runoff). Chapter was reformatted and a typo in equation 6-7 was corrected. |