

Summary of 2013 Update to Surface Water Engineering Standards

| 2012 Surface Water Engineering Standards | 2013 Surface Water Engineering Standards | Revision |
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| Cover Sheet | Cover Sheet | Change 2012 to 2013, correction to web address |
| Chapter D1, Section D1-01 | Chapter D1, Section D1-01 | Added two new definitions- new impervious surface and replaced impervious surface. |
| Chapter D1, Section D1-03 | Chapter D1, Section D1-03 | Added a new reference (Design of Small Dams) and replaced a broken web page link for the Rain Garden Handbook. |
| Chapter D3, Section D3-02.2 | Chapter D3, Section D3-02.2 | Revised the isopluvials in Figures 3.1, 3.2 and 3.3 |
| Chapter D3, Section D3-03 | Chapter D3, Section D3-03 | Provided clarity to the design flows for 40/20 basins. |
| Chapter D3, Section D3-04 | Chapter D3, Section D3-04 | Clarifies that the land use code impervious lot coverages be used for the maximum build-out conditions. |
| Chapter D4, Section D4-04.3 | Chapter D4, Section D4-04.3 | Specifies the horizontal and vertical clearances for natural drainage practices BMPs. |
| Chapter D4, Section D4-04.4 C (3) | Chapter D4, Section D4-04.4 C (3) | Provides a source for other acceptable hydraulic models to perform standard step backwater calculations. |
| Chapter D4, Section D4-04.5 A | Chapter D4, Section D4-04.5 A | Corrected the BCC citation in Table 4.4 |
| Chapter D4, Section D4-04.7 B | Chapter D4, Section D4-04.7 B | Corrected a table number. |
| Chapter D4, Section D4-05.1 | Chapter D4, Section D4-05.1 | Paragraph 6, Remove “If precast is not an option, cast-in-place structures require submitted and stamped drawings by the Design Engineer to the City.” |
| Chapter D4, Section D4-06.6 | Chapter D4, Section D4-06.6 | Paragraph 6, Remove last sentence, “See Standard Detail D-46” |
| Chapter D4, Section D4-06.7 D | Chapter D4, Section D4-06.7 D | Requires the infiltration test to be performed three times consecutively to represent saturated hydraulic conditions. |
| Chapter D4, Section D4-07.1 | Chapter D4, Section D4-07.1 | Added setbacks in Table 4.13 for onsite drainage facilities. |

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| Chapter D4, Section D4-07.1 | Chapter D4, Section D4-07.1 | Corrected broken web link for locations of Superfund and RCRA regulated sites. |
| Chapter D4, Section D4-06.6B | Chapter D4, Section D4-06.6B | Deleted reference to Detail D-46 for information on underdrains. |
| Chapter D5, Section D5-03.5 | Chapter D5, Section D5-03.5 | Added footnote 4 to Figure 5.1 |
| Chapter D6, Section D6-03.2 A 1 iii | Chapter D6, Section D6-03.2 A 1 iii | A new section was added to provide criteria to check the grain size differences between the bioretention soil mixture and the reservoir course to prevent migration of materials. |
| Chapter D6, Section D6-03.2 A 1 iii | Chapter D6, Section D6-03.2 A 1 iii | Change in dimension of the retention zone due to the minimum size diameter of an under drain being changed from four to six inches. |
| Chapter D6, Section D6-03.2 A 1 iii | Chapter D6, Section D6-03.2 A 1 iii | Added additional requirements to Planting Materials to provide minimum planting coverage and in some cases the designer's qualifications. |
| Chapter D6, Section D6-03.2 A 1 iii | Chapter D6, Section D6-03.2 A 1 iii | Added a new overflow section. |
| Chapter D6, Section D6-03.2 A 1 iii | Chapter D6, Section D6-03.2 A 1 iii | Modifications to the observation port section to require the port near the outlet and access outside of ponded area. |
| Chapter D6, Section D6-03.2 2 iii | Chapter D6, Section D6-03.2 2 iii | Clarifies when an observation port should be used in a bioretention planter and when the port can be combined with an overflow device. |
| Chapter D6, Section D6-03.2 2 iii | Chapter D6, Section D6-03.2 2 iii | Added a new overflow section to the bioretention planter section. |
| Chapter D6, Section D6-03.2 B ii | Chapter D6, Section D6-03.2 B ii | Clarifies when a private property owner may design a pervious pavement. |
| Chapter D6, Section D6-03.2 B iii | Chapter D6, Section D6-03.2 B iii | Relocated the subsection entitled "Native Soil/ Subgrade" in its entirety. |
| Chapter D6, Section D6-03.2 B iii | Chapter D6, Section D6-03.2 B iii | Added word "non-woven" to in front on geotextile. |
| Chapter D6, Section D6-4.1A | Chapter D6, Section D6-4.1A | Under the submittal requirements changed 10 working days to 14 calendar days prior to the placement of the BSM. |

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| Chapter D6, Section D6-04.2 A | Chapter D6, Section D6-04.2 A | Added Aqua Pave as an approved permeable/porous paver wearing course. |
| Chapter D6, Section D6-04.10 | Chapter D6, Section D6-04.10 | Three NDS products were added as approved plastic catch basin components. |
| Chapter D6, Section D-6-05 | Deleted | Delete entire section and reference in table on contents; NPDES standard details are in Appendix D-1 |
| Appendix D-4 | Appendix D-4 | Added Aqua Pave to the approved material list for pervious pavement materials and added some NDS products under the miscellaneous materials. |
| Standard Detail NDP-2 | Standard Detail NDP-2 | Changed the minimum size diameter of the under drain from 4 inch to 6 inch; added MR 6 & 7 to note 9; modified location where a geotextiles is located if directed by the engineer. |
| Standard Detail NDP-3 | Standard Detail NDP-3 | Changed the minimum size diameter of the under drain from 4 inch to 6 inch. |
| Standard Detail NDP-4A | Standard Detail NDP-4A | Added new note 12 and clarified under drain note in detail. |
| Standard Detail NDP-6 | Standard Detail NDP-6 | Clarified that the discharge location must be to an approved location. |
| Standard Detail NDP-7 | Standard Detail NDP-7 | Clarified that the discharge location must be to an approved location. |
| Standard Detail NDP-9 | Standard Detail NDP-9 | Modified detail A to show the observation port is to be constructed 6 inches above the ground. |
| Standard Detail NDP-11 | Standard Detail NDP-11 | Added note 8. |
| Standard Detail NDP-12 | Standard Detail NDP-12 | Modified location that a non-woven geotextile might be used. |
| Standard Detail NDP-13 | Standard Detail NDP-13 | Clarified that the discharge location must be to an approved location. |
| Standard Detail NDP-15 | Standard Detail NDP-15 | Clarified that the discharge location for the under drain must be to an approved location. |
| Standard Detail NDP-16 | Standards Detail NDP-16 | Made correction to note 3. |
| Standard Detail NDP-19 | Standard Detail NDP-19 | Added some minimum dimensions to the detail. |

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| Standard Details D-4, D-17, D-18, D-19 | Standard Details D-4, D-17, D-18, D-19 | Removed option for separate bottom slab (requiring lower section with integral bottom). |
| Standard Detail D-26 | Standard Detail D-26 | Removed “Screw Type” from note 11 and removed reference to std. det. D-26 from shear gate callout. |
| Standard Detail D-31, D-32, D-47, D-48 | Standard Detail D-31, D-32, D-47, D-48 | Corrected title of referenced detail in last note. |
| Standard Detail D-31, D-32, D-47, D-48 | Standard Detail D-31, D-32, D-47, D-48 | Last note on each drawing. Revised leak test. |
| Standard Details D-31, D-32, D-47, D-48 | Standard Details D-31, D-32, D-47, D-48 | Updated wording of last note to match specific type of structure being detailed. |
| Standard Detail D-40 | Standard Detail NDP-22 | Deleted D-40 because it was replaced by NDP-22 in 2012 update. |
| Standard Detail D-41 | Standard Detail NDP-23 | Deleted D-41 because it was replaced by NDP-23 in 2012 update. |
| Standard Detail D-60 | Standard Detail D-60 | Reference to Recycled Concrete for spalls was removed from the detail. |