##### MDC Scorecard for Infiltration Devices

| Blue = In current 15A NCAC 2H .1008 rule language  Green = Completed at July 18 meeting.  Black = From BMP Manual | | **Is this proposed MDC necessary for the Infiltration Device to:** | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Function in perpetuity? | Protect WQ standards? | Remove TSS? | Optimize TN & TP removal? | Optimize bacteria removal? | Not necessary, just a good idea |
| 1. | SITING. Infiltration systems shall be a minimum distance of 50 feet from private water supply wells and 100 feet from public water supply wells. A subgroup of MDC Team members may propose other language in the future if they remain uncomfortable with this decision after the conclusion of this meeting. |  |  |  |  |  |  |
| 2. | SEPARATION FROM THE SHWT. The bottom of infiltration systems shall typically be a minimum of two feet above the SHWT. However, the separation can be relaxed to one foot when the applicant can prove that the water table will subside to its pre-storm elevation in five days or less. |  |  |  |  |  |  |
| 3. | SITING. BMP shall not be located on areas with currently contaminated soils. |  |  |  |  |  |  |
| 4. | DRAW DOWN TIME AND SOIL INVESTIGATION. Infiltration systems must be designed to completely dewater to the bottom of the infiltration device within 72 hours after the design storm. A site-specific soil investigation shall be performed to establish the hydraulic properties and characteristics of the area in which the infiltration device will be sited. |  |  |  |  |  |  |
| 5. | SITING. In-situ soils may be removed and replaced with suitable infiltration media if the applicant can demonstrate that natural conditions will allow for drainage of the infiltration device. |  |  |  |  |  |  |
| 6. | PRETREATMENT. Pretreatment devices for stormwater must be provided to prevent clogging, except for stormwater conveyed from a rooftop. Pretreatment devices may include measures such as sumps in catch basins, gravel verges, screens on patio drains, filters, filter strips, grassed swales and forebays. |  |  |  |  |  |  |
| 13. | RUNOFF VOLUME PER INLET DEVICE. There shall be a maximum of 2 ace-inches of runoff per inlet into the device. (BMP Manual MDE 16) |  |  |  |  |  |  |
| 14. | FLOW SPREADING. Inflow must be evenly spread out across the infiltration system. (BMP Manual text) |  |  |  |  |  |  |
| 15. | BOTTOM OF INFILTRATION BASINS. The bottom of infiltration basins must be lined with a layer of clean sand with a depth of 4 inches or greater, unless the native soil is equivalent (1-2% fines or less). (BMP Manual text) Question for the MDC Team: should vegetation be allowed at the bottom of an infiltration basin? |  |  |  |  |  |  |
| 16. | DRAINAGE MEDIUM FOR INFILTRATION TRENCHES. Uniform sand, gravel or crushed stone (i.e., uniformity coefficient of 2 or smaller) is preferable as a drainage medium. Drainage media should be enclosed on all sides by a geotextile filter. The top surface of the geotextile filter should be 6-12 inches below the upper surface of the drainage media. The other surfaces of the geotextile should be 6-12 inches below the upper surface of the drainage media. The fabric, together with the overlying material, can be removed and disposed of when excessive sediments accumulate on the filter and begin to retard flow into the device. (BMP Manual text) |  |  |  |  |  |  |
| 17. | GEOMETRY. The bottom shall be installed at a 0-0.05% grade (level). (BMP Manual MDE 14) |  |  |  |  |  |  |
| 18. | TRENCH GEOMETRY. Trenches must be shallower than their largest surface dimension to prevent categorization as an “injection well.” (BMP Manual MDE 13) |  |  |  |  |  |  |
| 19. | TRENCH GEOMETRY. Trench depth shall be no more than 8 feet (BMP Manual MDE 21; but later the chapter says: “Infiltration trench depths must be between 3 and 8 feet. It is recommended that the width of a trench (perpendicular to influent flow direction) be less than 25 feet. Broad, shallow trenches reduce the risk of clogging by spreading the flow over a larger area for infiltration.” |  |  |  |  |  |  |
| 21. | OBSERVATION WELL. Infiltration systems may be required on a case‑by‑case basis to have an observation well to provide ready inspection of the system; (d)(8) |  |  |  |  |  |  |
| 22. | OBSERVATION WELL. A minimum of 1 observation well shall be provided (BMP Manual MDE 22). The monitoring well shall consist of a 4- to 6-inch diameter PVC pipe with a locking cap. (BMP Manual text) |  |  |  |  |  |  |
| 23. | VEGETATIVE FILTERS. Vegetative filters designed in accordance with Paragraph (f) of this Rule are required from the overflow of all infiltration systems and discharge of all stormwater wet detention ponds. These filters shall be at least 30 feet in length, except where a minimum length of 50 feet is required in accordance with Rule .1005(2)(b)(iii) of this Section; (c)(4) Note the BMP Manual section 16.3.9 contains options for increasing the size of the infiltration device and |  |  |  |  |  |  |
| 24. | PUMPED INFILTRATION SYSTEMS. Pumped infiltration systems will be considered on a case-by-case basis, and will take into consideration the basin location, soils, water table and other site-specific factors per BMP Manual section 16.3.10. |  |  |  |  |  |  |
| 25. | DEWATERING PROVISION. There should be a dewatering provision in the event of failure. This can be done with underdrain pipe systems. (BMP Manual text) |  |  |  |  |  |  |
| 26. | CONSTRUCTION. BMP shall be used only after entire upstream area has been stabilized. (BMP Manual MDE 18) |  |  |  |  |  |  |
| 27. | CONSTRUCTION. Temporary drainage or erosion control measures should be used to reduce the potential for damage to the infiltration device before the site is stabilized. The control measures may include stabilizing the surface with erosion mats, sediment traps, and diversions. Vegetative cover and the emergency spillway also should be completed as quickly as possible during construction. (BMP manual text) |  |  |  |  |  |  |
| REC | SITING. The designer should consider the potential impacts of the infiltration device on nearby structures from seepage. |  |  |  |  |  |  |
| REC | SITING. Infiltration basins should not be located on slopes exceeding 15 percent (BMP Manual) |  |  |  |  |  |  |