ANNE ARUNDEL COUNTY
MARYLAND

STAFF ONLY

*Permit No.*_____
Revision No. _____
Date _____

BMP Group 3 Checklist
Stormwater Infiltration

Instructions: All stormwater management plan submissions that use a Stormwater Infiltration from BMP Group 3 (I-1; infiltration trench, I-2; infiltration basin) shall contain the following information for each facility that is a Stormwater Infiltration. Any submissions brought to the County with missing or incomplete plans, may be rejected and not reviewed until all necessary information has been provided. It should be noted that not all items contained below will, necessarily, be required for every project.

Consulting Engineer shall place one of the following marks (as appropriate) on each line (engineering reviewer shall verify each mark).
***N/A** - not applicable **Y** - provided*

Note: The following checklist is provided to assist the design professional in developing a complete stormwater management plan set to expedite review by the Department. All final stormwater management plans submitted for review are to include a copy of the checklists(s) signed by a registered design professional in responsible charge with the firm. Submittals made that do not include the checklist will be returned without review, comments, or approval. Compliance with the checklist, however, in no way is meant to relieve the design professional of responsibility for project design.

1. Performance Criteria for BMP #_____ *(see 2000 Maryland Stormwater Design Manual page 3.28)*

a) Infiltration Feasibility Criteria
1) infiltration rate (*f*) exceeds 1.02 inches per hour,
2) number of boring test holes is at least one hole per 5000 square feet of facility,
3) borings performed in accordance with Chapter 4 of the Anne Arundel County Stormwater Management Practices and Procedures Manual,
4) facility not located in fill slopes,
5) facility not located on slopes greater than 15%,
6) if project is a hotspot adequate pretreatment is provided to remove hydrocarbons, trace metals or toxicants,
7) infiltration is not used in karst area,
8) bottom of facility is, at least, four feet above seasonally high water table, or bedrock,
9) maximum contributing drainage area is, generally, less than 5 acres.

b) Infiltration Conveyance Criteria
1) overland flow has been evaluated to preclude erosive concentrated flow,
2) facility has been designed to fully de-water the entire WQ_v within 48 hours,
3) truncated hydrograph method is used if facility is design to manage the Cp_v or Q_p.

c) Infiltration Pretreatment Criteria
1) Pretreatment Volume
   (a) minimum of 25% of WQ_v is pretreated (if the infiltration rate (*f*) is less than 2.00 inches per hour),
   (b) minimum of 50% of WQ_v is pretreated (if the infiltration rate (*f*) is greater than 2.00 inches per hour),
   (c) exit velocity from pretreatment device is non-erosive.
2) Pretreatment Techniques to Prevent Clogging
   (a) there are at least three pretreatment techniques per trench;
      (1) grass channel,
      (2) grass filter strip,

(3) bottom sand layer,
(4) upper sand layer,
(5) use of washed non-graded aggregate.

d) Infiltration Treatment Criteria

1) facility must exfiltrate the entire WQ_v (minus the pretreatment) through the bottom of facility.

e) Infiltration Landscaping Criteria

1) dense vegetative cover shall be established in upstream drainage area prior to the facility accepting any runoff,
2) sequence of construction clearly states that contributing drainage area must be completely stable before construction of the facility may begin.

f) Infiltration Maintenance Criteria

1) Facility may not be designed to serve as sediment control device,
2) sediment control plan clearly shows how sediment will be prevented from entering infiltration site,
3) observation well shown in each infiltration facility and consists of;
   (a) perforated PVC pipe, and
   (b) a lockable cap,
4) de-watering device included incase of failure,
5) direct access is provided to each infiltration facility for maintenance and rehabilitation.

g) Additional Criteria required by Anne Arundel County Practices and Procedures Manual

1) Underlying soils shall have an infiltration rate (f) of 1.02 inches per hour or greater, as initially determined from NRCS soil textural classification, to be suitable for infiltration, and subsequently confirmed by field geotechnical tests, in accordance with Chapter 4 of the Anne Arundel County Practices and Procedures Manual.
2) Soils shall have a clay content of less than 15% and a silt/clay content of less than 40%.
3) Infiltration shall be prohibited within areas of karst topography.
4) The maximum contributing area to an individual infiltration practice shall be less than 5 acres.
5) If stormwater runoff is delivered by a storm drain pipe or along the main conveyance system, the infiltration practice shall be designed as an off-line practice.
6) An adequate, non-erosive outfall shall be provided for the overflow associated with the ten-year design storm event (i.e. non-erosive velocities on the down-slope conveyance).
7) Infiltration designs includes dewatering methods in the event of failure.