ANNE ARUNDEL COUNTY
MARYLAND

STAFF ONLY
*Permit No.*_____
Revision No. _____
Date _____

BMP Group 5 Checklist
Open Channel Systems

Instructions: All stormwater management plan submissions that use a Open Channel System from BMP Group 5 (O-1; dry swale, O-2;wet swale) shall contain the following information for each facility that is an Open Channel. 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 3.45)*

a) Open Channel Feasibility Criteria
1) Open channel systems providing water quality have longitudinal slopes less then 4.0%.

b) Open Channel Conveyance Criteria
1) Soil and vegetative cover provide for non-erosive ten year storm velocities (see Appendix D.12),
2) Adequate freeboard is provided to safely convey ten year storm volume,
3) Channel side slopes rise to run ratio is no greater than 2/1,
4) Volume of stored runoff ponds for no longer then 48 hours, under-drain system is provided.

c) Open Channel Pretreatment Criteria
1) Runoff volume of one-tenth inch per acre of impervious area draining to practice is pre-treated upstream of facility,
2) Prior to entering practice, runoff flows conveyed via closed conduit system are be pre-treated.

d) Open Channel Treatment Criteria
1) Maximum storage time of treated runoff volume is 48 hours for either dry or wet swale,
2) Open channels have either a bottom width no greater then eight feet or a meandering path of flow.

e) Open Channel Landscaping Criteria
1) Vegetation for natural channel conveyance and within practice are as indicated in Table A.7, on Page A.19, in Appendix A of State Design.

f) Open Channel Maintenance Criteria
1) Maintenance note specifies when 25% of required runoff storage volume is lost due to sediment build-up, soils will be removed, properly disposed of and practice design bottom re-established with proper vegetation.
2) Cross-sectional view of practice should indicate the elevation, which corresponds to this volume.