

## ENVIRONMENTAL STEPS AND PROCEDURES FOR DEVELOPER PLAN REVIEWS COUNTY OF YORK

The following is a list of common comments concerning Environmental issues and concerns that, when applicable, must be addressed in an approved plan. A brief explanation of each comment is also provided. A complete plan review cannot be accomplished until this information has been provided. Once this information has been received, additional comments may follow.

\_\_1) Erosion and Sediment Control Checklist

- \_\_a The Erosion and Sediment Control plans should be prepared in accordance with the Virginia Erosion and Sediment Control Handbook, Third Edition 1992. There is a checklist for design purposes in Section VII, page 26. Please utilize this checklist as minimum design criteria and **submit a copy** with your next plan submittal to the County. Where Erosion and Sediment Control (ESC) details and standards are necessary to address these issues and concerns, refer to the 1992 Edition of the Virginia ESC Handbook.

\_\_2) Erosion and Sediment Control Narrative

- \_\_a Supply an Erosion and Sediment Control narrative **on the plans**. This narrative should include all applicable items listed in the Virginia Erosion and Sediment Control Handbook, Third Edition 1992.

\_\_3) Site Specific Sequence of Construction.

- \_\_a This should be specific to the project and start with conducting a preconstruction meeting with County staff.
- \_\_b Silt fence and traps/basins must be installed before any disturbance can occur.

\_\_4) County of York Standard Erosion and Sediment Control Notes (2012).

\_\_5) Land Disturbing Permit Requirements

- \_\_a Provide the area of disturbance on the plans. Disturbance over 2500 square feet requires a permit.
- \_\_b Disturbance over an acre also requires a DEQ VSMP permit. If in a Chesapeake Bay area and/or part of a common plan (2004) ( greater than 2500 sq ft but less than 1 acre )will require an York County VSMP agreement in lieu of a plan. Evidence of this will be needed prior to issuance of the County permit.
- \_\_c The name of the Responsible Land Disturber (RLD) with must be indicated on the form with all the other appropriate information filled out and signed.

- \_\_6) Adequate silt fence, tree protection, inlet protection, construction entrance, and limits of clearing is clearly denoted on plans where needed and are in compliance with *Virginia Erosion and Sediment Control Handbook, Third Edition, 1992*.
  - \_\_a Details are provided for all erosion and sediment control measures shown on plans only.
  - \_\_b Provide major perimeter sediment trapping (Sediment Trap / Basin) if site is greater than 3 acres.
  - \_\_c Provide adequate E&S during initial clearing operations. (Inlet protection is not acceptable as only control for a subdivision.)
  
- \_\_7) Sediment Traps / Sediment Basins
  - \_\_a Sediment Traps
    - \_\_i Design in accordance with *Virginia Erosion and Sediment Control Handbook, Third Edition, 1992*.
      - \_\_1 No more than 3 acres of drainage area
      - \_\_2 Provide 67 CY/Ac wet and 67 CY/Ac dry volume
      - \_\_3 Provide adequate spillway length properly located with supporting calculations
  - \_\_b Sediment Basins
    - \_\_i Design in accordance with *Virginia Erosion and Sediment Control Handbook, Third Edition, 1992*.
      - \_\_1 Provide computations similar to the worksheet in the handbook
      - \_\_2 Provide 67 CY/Ac wet and 67 CY/Ac dry volume
      - \_\_3 Provide adequate draw-down time for the dry storage
      - \_\_4 Provide the cleanout elevation
      - \_\_5 Verify that the 2-year and 25-year storm can pass and indicate elevation on detail.
      - \_\_6 If the sediment basin is to be converted into a BMP, provide adequate notes and details for conversion.
  
- \_\_8) Storm Drain Calculations and Design
  - \_\_a Provide Pre and Post-Drainage Area Maps.
  - \_\_b The plans and calculations use the same information (Size, length, inverts, “C” values, drainage areas, and slope of pipe) Show how “C” values were determined for both pre and post drainage.
  - \_\_c Insure proper inlets are used for the structure (DI-3 for catch basins, DI-1 for yard inlets, etc.).
  - \_\_d If inlet shaping is used in calculations, then it must be provided on plans.

- \_\_e Proposed flows do not exceed capacity of pipe.
- \_\_f Self-cleansing velocity in pipes (2.5 ft/sec)
- \_\_g Adequate erosion protection at outfall (VDOT Standard, or specifically designed if velocity is exceptionally high)
- \_\_h HGL is below the rim of the structure.
- \_\_i Open ditches are allowed if slope is 0.5% on property and 1% in VDOT ROW.
- \_\_j Pipe is required if ditch is 3 feet deep or greater.
- \_\_k All criteria within the *County of York, Subdivision, Zoning, Stormwater and Erosion Control Ordinances*, are met. See Chapters 10, 20.5, 23.3 and 24.1.

*All storm systems that collect runoff from offsite areas must have a drainage easement dedicated to the County of York.*

*Minimum width of 20 feet (10 feet if adjacent to existing one of at least 10 feet).  
Drainage easement should be centered over pipe or ditch.*

\_\_9) Best Management Practices (BMP's)

- \_\_a Peak Flow reduction and Pass 100 year storm.
  - \_\_i The critical storm duration is acceptable for small sites (less than 1~3 acres)
  - \_\_ii To route the storm, the Rational Method is acceptable for sites up to approximately 5 acres.
  - \_\_iii The 24 hour storm (SCS Type II method) must be used for sites greater than 5 acres.
  - \_\_iv Verify the 100 year storm can be safely passed through the BMP. Either route the 100 year hydrograph, or show the peak design flow can flow through either the principal outlet structure or over the emergency spillway with adequate freeboard for either in accordance with *Virginia Stormwater Management Handbook*.
  - \_\_v Address maintenance of the selected BMP's
  - \_\_vi Provide BMP Maintenance Agreement. (County of York form)

\_\_b Retention Basins

- \_\_i Design in accordance with *Virginia Stormwater Management Handbook, 1999*.
  - \_\_1 Provide 4x Water Quality Volume (2in. per impervious acre)
  - \_\_2 Provide a profile of the pond with all the details shown; side slopes, depth, inlets and outfall structures and elevations to include, 2, 10, and 100-year storms.
  - \_\_3 Water depth must be a minimum of 6 ft deep or greater with 3:1 side slopes.
  - \_\_4 Provide sediment forebays at all outlets to the pond.

\_\_5 It is recommended that a safety bench (5 ft minimum & 10:1 slope) and an aquatic bench be provided.

\_\_c Extended Detention Basins

\_\_i Design in accordance with *Virginia Stormwater Management Handbook, 1999.*

- a. Provide 2x Water Quality Volume (1in. per impervious acre)
- b. Provide a 24 to 30 hour draw-down time

\_\_d Detention Basins

\_\_i Design in accordance with *Virginia Stormwater Management Handbook, 1999.*

- \_\_1 No Water Quality Volume is provided
- \_\_2 This type of basin is only used for peak flow reduction
- \_\_3 Provide a profile of the pond with all the details shown; side slopes, depth, inlets and outfall structures and elevations to include, 2, 10, and 100-year storms.

\_\_e Infiltration Practices

\_\_i Design in accordance with *Virginia Stormwater Management Handbook, 1999.*

- \_\_1 Verify the infiltration rate through soil boring logs. Provide the number of borings indicated in the handbook.
- \_\_2 Provide Water Quality Volume (Depends on style)
- \_\_3 Pretreatment of Runoff is preferred for all infiltration practices

\_\_f Other BMP's

\_\_i Design in accordance with *Virginia Stormwater Management Handbook, 1999.*

\_\_g Easements

- \_\_i Place in common area or provide an impoundment easement over any BMP that collects and/or treats runoff.
- \_\_ii Provide adequate maintenance easement around the top of the BMP (20' typ.)

\_\_h Outfall Adequacy-Grandfathered Projects

\_\_i Give pre and post 2 and 10 year storm events for the adequacy of the outfall. There will also need to be a cross section of the receiving outfalls with the storm events noted and a statement verifying that they are adequate on the plan.

\_\_ii The capacity of the downstream systems should be provided. The adequacy needs to be shown to a point where the site area is 1% of the total drainage area. The downstream system will be assumed to be adequate if the water quality volume is detained for 48-hours, the 1-year storm is detained 24 hours, and the 1.5, 2 and 10 year storms are detained to pre-development assuming pre-development site conditions of good forest. Full version is found in M.S. 19, 4VAC 50-30-10.

\_\_10) Part IIb Projects will need to either submit the Runoff Reduction Development or Redevelopment spreadsheets.

\_\_11) Natural Resources Inventory

\_\_a Per Chapter 23.2-6, a Natural Resources Inventory is required for **ALL** plans.

\_\_b At the minimum it should address the following:

\_\_i The inventory shall be prepared and certified by a professional qualified to perform environmental inventories. Evidence of the professional qualifications of the person preparing the inventory shall be submitted as a part of the inventory. In the case of construction of individual single-family detached dwellings, the inventory shall be required; however, professional preparation or certification shall not be required except for perennial stream flow determination or unless professional involvement is deemed necessary by the zoning administrator because of the magnitude of land disturbance or the particular sensitivity of the location. Subdivisions effected through the subdivision ordinance shall comply fully with the terms of this section.

\_\_ii The inventory shall contain a plan sheet that clearly depicts the extent and location of any of the features and areas listed in part iv) below. For each feature and area, descriptive information such as slope percents, wetlands classification, soil type, etc., shall be provided.

\_\_iii The applicant is responsible for having a site-specific in-field determination for perennial flow made by a qualified professional. The zoning administrator shall confirm the site-specific in-field perennial flow determination.

\_\_1 For the purpose of determining whether water bodies have perennial flow, a state approved, scientifically valid system of in-field indicators of perennial flow must be used.

\_\_iv The inventory shall also contain a narrative element that describes and defines the relative values of the natural resources defined below which are found to be present on the site, including flora and fauna:

\_\_1 Areas with an elevation of less than four feet above mean sea level;

\_\_2 Areas with slopes in excess of 20 percent;

\_\_3 Tidal and nontidal wetlands;

\_\_v The exact boundaries of the RPA shall be adjusted, as necessary, based on the site-specific in-field evaluation and the Natural Resources Inventory.

\_\_vi Natural resources inventories shall be submitted to the zoning administrator for review and approval concurrent with the submission of applications for site plans, subdivision plans, land disturbing permits building permits or any other activity that constitutes development. The zoning administrator shall not approve the submitted documents unless the natural features and ecological relationships inherent on the site have been identified as deemed appropriate by the zoning administrator.

\_\_11) Chesapeake Bay Preservation Act (CBPA)

\_\_a The RPA (Resource Protection Area) and RMA (Resource Management Area) limits must be shown on the plans.

\_\_b The CBPA calculations must be presented and prepared in accordance with the Guidance Calculation Worksheet or the forms as presented in *Virginia Stormwater Management Handbook, 1999*.

\_\_c The site areas for the calculations must match the table of statistical information.

\_\_d For subdivisions, the calculations of impervious cover per lot must be provided either by square foot or percentage. This will then be used to review the building permit site plan.

\_\_e The BMP selection shall be based on removal efficiency and adequacy of the site.

\_\_12) Floodplain

\_\_a The floodplain information must be noted on the plans.

\_\_b If all or portion of development is in an AE or V zone, the requirements of the Floodplain Ordinance must be met, Sec. 24.1-373.

\_\_13) As-Builts

Certified by professional engineer or surveyor that all drainage facilities have been installed in accordance with the design and information provided has been field verified.

\_\_a Provide details for all BMP's to include inverts, depth, structures and any other associated details.

\_\_b Maintenance information should also be provided on plan.

\_\_c Inverts and slopes on all pipes and ditches, especially those in County easements.

**Extras**

\_\_a It is recommended that no more than 100 feet of pipe maintain a water surface above the crown of the pipe and no more than 500 feet of pipe maintain standing water at all times.