

File Number: _____

Application for a Land Disturbance Permit

Filing of this application and approved plans with the Department of Community Development is necessary to constitute an application for a Land Disturbance Permit. Note: applicants shall complete all information as noted in blank spaces below.

Date of application: _____

Responsible Land Disturber (or Surveyor or Engineer):

NAME (PRINT)

CERTIFICATION NUMBER

ADDRESS

CITY

STATE

ZIP

BUSINESS/CELL PHONE

EMAIL ADDRESS

Landowner:

NAME (PRINT)

DAYTIME/CELL PHONE

ADDRESS

CITY

STATE

ZIP

EMAIL ADDRESS

Project Title/Building Permit #: _____

Tax Map: _____ **Parcel Number:** _____ **Square Feet of Disturbance:** _____

I, _____, hereby certify that a valid Responsible Land Disturber according to the VA. Dept. of Environmental Quality will comply with the provisions of the Powhatan County Erosion and Sediment Ordinance Program, and that I accept responsibility for carrying out the Erosion and Sediment Plan for the above reference project as approved by Powhatan County.

I further grant the right-of-entry onto this property, as described above, to Powhatan County, its employees or agents for the purpose of inspecting and/or completing erosion control measures in compliance with Section 62.1-44.15:60 of the Virginia Erosion and Sediment Control Statute.

I further understand that the release of bonds and sureties is contingent upon the findings of a site inspection. Release shall occur within 60 days after disturbed areas are deemed permanently stabilized.

Landowner Signature: _____

Plan Prepared by: _____

Surety Type: _____ **Bond Amount:** _____

Surety Expires: _____ **Bond Expires:** _____

Approved: _____

Program Administrator

Date

Checklist for Erosion and Sediment Control Plans
Powhatan County
(To Be Submitted with the Application and Plan)

The following procedure is mandatory for erosion and sediment control planning:

- A. **Determine the limits of clearing and grading.** Decided which areas must be disturbed in order to accommodate the proposed construction. Pay special attention to critical areas which must be disturbed.

- B. **Divide the site into drainage areas.** Determine how runoff will travel over the developed site. Consider how erosion and sedimentation can be controlled in each small drainage area before looking at the entire site.

- C. **Select erosion and sediment control practices.** Erosion and sediment control practices can be divided into three broad categories: vegetative controls, structural controls, and management measures. Each of these categories have temporary and permanent control measures to be considered.

- D. **Minimum Standards** – *All* Minimum Standards shall be addressed, 1-19, in chart or list form as they apply to this site.

NARRATIVE

_____ Project description – Briefly describe the nature and purpose of the land-disturbing activity, and the area (acres) to be disturbed.

_____ Existing site conditions – A description of the existing topography, vegetation and drainage.

_____ Adjacent areas – A description of neighboring areas such as streams, lakes, residential areas, roads, etc., which might be affected by the land disturbance.

_____ Off-site areas – Describe any off-site land-disturbing activities that will occur (including borrow sites, waste of surplus areas, etc.). Will any other areas be disturbed?

_____ Soils --A brief description of the soils on the site giving such information as soil name, mapping unit, erodibility, permeability, depth, texture and soil structure.

_____ Critical areas – A description of areas on the site which have potentially serious erosion problems (e.g., steep slopes, channels, wet weather/underground springs, etc.).

_____ Erosion and sediment control measures – A description of the methods which will be used to control erosion and sedimentation on the site. (Controls should meet the specifications in Chapter 3).

_____ Permanent stabilization – A brief description, including specifications, of how the site will be stabilized after construction is completed.

_____ Stormwater runoff considerations – Will the development site cause an increase in peak runoff rates? Will the increase in runoff cause flooding or channel degradation downstream? Describe the strategy to control Stormwater runoff.

_____ Calculations – Detailed calculations for the design of temporary sediment basins, permanent stormwater detention basins, diversions, channels, etc. Include calculations for pre- and post –development runoff.

SITE PLAN

_____ Vicinity Map – A small map locating the site in relation to the surrounding area. Include any landmarks which might assist in locating the site.

_____ Indicate north – The direction of north in relation to the site.

_____ Existing contours – The existing contours of the site.

_____ Final contours – Changes to the existing contours, including final drainage patterns.

_____ Existing vegetation – The existing tree lines, grassed areas, or unique vegetation.

_____ Stream buffers, perimeter of parcel buffers – Areas required by the Zoning Ordinance or conditions of rezoning in which existing vegetation shall be retained and protected. (e.g., intermittent stream buffers are 50' on each side of the stream, perennial stream buffers 100', perimeter buffers range 50' – 200' in width).

_____ Existing drainage patterns – The dividing lines and the direction of flow for the different drainage areas. Include the size (acreage) of each drainage area.

- _____ Critical erosion areas – Areas with potentially serious erosion problems. (e.g., steep slopes, channels, underground springs)

- _____ Off-site areas – Identify any neighboring areas such as streams and ponds which could receive direct run off from the site. Identify any off-site land disturbing activities (e.g., borrow sites, waste areas, etc.). Show location of erosion controls.

- _____ Limits of clearing and grading – Areas which are to be cleared and graded.

- _____ Site Development – Show all improvements such as buildings, parking lots, access roads, utility construction, etc.

- _____ Location of Vegetative, Structural Controls and Management Practices – The locations of erosion and sediment controls and stormwater management practices used on the site. Provide detailed drawings.

- _____ Maintenance – A schedule of regular inspections and repair of erosion and sediment control structures shall be set forth.

- _____ Utilities – Drawings that show the locations of existing and proposed utilities and locations of existing and proposed utilities easements.

Application Fees:

Agricultural Zoning --	\$150.00 plus \$25.00 per disturbed acre
Residential Zoning --	\$300.00 plus \$75.00 per disturbed acre
Agreement in Lieu of an E&S Plan for a new dwelling--	\$100.00
Commercial/Industrial--	\$750.00 + \$150.00 per disturbed acre
Existing Business Site Expansion (<10,000 sq. ft.): Storm Water Analysis--	\$200.00
Resubmittal of E&S Control Plans (Second and Subsequent Resubmittals)--	\$150.00
Bond Amount--	\$3000.00 per disturbed acre
(To be submitted prior to preconstruction meeting)	

Number of Copies to be Submitted

Virginia Department of Transportation---

- 2 full sets of Construction Plans containing erosion and sediment controls.
- 1 set of Drainage Calculations.

Planning Department of Powhatan County---

- 2 full sets of Construction Plans containing erosion and sediment controls.
- 1 set of Drainage Calculations

Powhatan Department of Utilities---(for projects within the existing water and sewer districts)

- 2 full sets of Construction Plans containing locations of existing and proposed utilities and existing and proposed utilities easements.
- 1 set of Drainage Calculations.

TEMPORARY SEDIMENT BASIN DESIGN DATA SHEET

(with or without an emergency spillway)

Project _____

Basin # _____ Location _____

Total area draining to basin: _____ acres.

Basin Volume Design

Wet Storage:

1. Minimum required volume = 67 cu. yds. x Total Drainage Area (acres).

$$67 \text{ cu. yds.} \times \text{_____ acres} = \text{_____ cu. yds.}$$
2. Available basin volume = _____ cu. yds. at elevation _____. (From storage - elevation curve)
3. Excavate _____ cu. yds. to obtain required volume*.
 * Elevation corresponding to required volume = invert of the dewatering orifice.
4. Available volume before cleanout required.

$$33 \text{ cu. yds.} \times \text{_____ acres} = \text{_____ cu. yds.}$$
5. Elevation corresponding to cleanout level = _____.
 (From Storage - Elevation Curve)
6. Distance from invert of the dewatering orifice to cleanout level = _____ ft.
 (Min. = 1.0 ft.)

Dry Storage:

7. Minimum required volume = 67 cu. yds. x Total Drainage Area (acres).

$$67 \text{ cu. yds.} \times \text{_____ acres} = \text{_____ cu. yds.}$$

8. Total available basin volume at crest of riser* = _____ cu. yds. at elevation _____. (From Storage - Elevation Curve)

* Minimum = 134 cu. yds./acre of total drainage area.

9. Diameter of dewatering orifice = _____ in.
10. Diameter of flexible tubing = _____ in. (diameter of dewatering orifice plus 2 inches).

Preliminary Design Elevations

11. Crest of Riser = _____
 Top of Dam = _____
 Design High Water = _____
 Upstream Toe of Dam = _____

Basin Shape

12. $\frac{\text{Length of Flow}}{\text{Effective Width}} = \frac{L}{W_e} =$ _____
 If > 2 , baffles are not required _____
 If < 2 , baffles are required _____

Runoff

13. $Q_2 =$ _____ cfs (From Chapter 5)
 14. $Q_{25} =$ _____ cfs (From Chapter 5)

Principal Spillway Design

15. With emergency spillway, required spillway capacity $Q_p = Q_2 =$ _____ cfs. (riser and barrel)
 Without emergency spillway, required spillway capacity $Q_p = Q_{25} =$ _____ cfs. (riser and barrel)

16. With emergency spillway:

Assumed available head (h) = _____ ft. (Using Q_{25})

$h = \text{Crest of Emergency Spillway Elevation} - \text{Crest of Riser Elevation}$

Without emergency spillway:

Assumed available head (h) = _____ ft. (Using Q_{25})

$h = \text{Design High Water Elevation} - \text{Crest of Riser Elevation}$

17. Riser diameter (D_r) = _____ in. Actual head (h) = _____ ft.

(From Plate 3.14-8.)

Note: Avoid orifice flow conditions.

18. Barrel length (l) = _____ ft.

Head (H) on barrel through embankment = _____ ft.

(From Plate 3.14-7).

19. Barrel diameter = _____ in.

(From Plate 3.14-B [concrete pipe] or Plate 3.14-A [corrugated pipe]).

20. Trash rack and anti-vortex device

Diameter = _____ inches.

Height = _____ inches.

(From Table 3.14-D).

Emergency Spillway Design

21. Required spillway capacity $Q_e = Q_{25} - Q_p =$ _____ cfs.

22. Bottom width (b) = _____ ft.; the slope of the exit channel (s) = _____ ft./foot; and the minimum length of the exit channel (x) = _____ ft.

(From Table 3.14-C).

Anti-Seep Collar Design

23. Depth of water at principal spillway crest (Y) "" ____ft.
 Slope of upstream face of embankment (Z) "" ____ : 1.
 Slope of principal spillway barrel (Sb) = ____ %
 Length of barrel in saturated zone (L_s) = ____ft.
24. Number of collars required = ____ dimensions = ____

 (from Plate 3.14-12).

Final Design Elevations

25. Top of Dam = _____
 Design High Water = _____
 Emergency Spillway Crest = _____
 Principal Spillway Crest = _____
 Dewatering Orifice Invert = _____
 Cleanout Elevation = _____
 Elevation of Upstream Toe of Dam
 or Excavated Bottom of "Wet Storage
 Area" (if excavation was performed) = _____