



# COUNTY OF LANCASTER

Department of Planning/Land Use  
8311 Mary Ball Road  
Lancaster, VA 22503

(804) 462-5129  
Fax (804) 462-0031

## Water Quality Impact Assessment / Landscape Plan Agreement

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This form is designed to aid in the assessment of impacts for proposed activities within a Resource Protection Area (RPA) and to ensure proper replacement and installation of vegetation. The applicant shall complete and remit to the above address. For inquiries or appointments, contact **Brian Barnes**, Environmental Codes Compliance Officer at (804) 462-5220.

Property Owner \_\_\_\_\_ Address \_\_\_\_\_  
\_\_\_\_\_

Tax Map# \_\_\_\_\_ Phone# \_\_\_\_\_ E-mail \_\_\_\_\_

Site 911 Address or driving directions: \_\_\_\_\_

Single-family residence\_\_\_ Accessory structure\_\_\_  
Commercial/community development\_\_\_ Silvicultural conversion\_\_\_  
Agricultural conversion\_\_\_ Water access\_\_\_  
Shoreline erosion project\_\_\_ Roadway\_\_\_  
Grading\_\_\_ Fill\_\_\_ (PE stamp req.) Bay Act violation \_\_\_  
Redevelopment\_\_\_ Other: \_\_\_\_\_

Description of project: \_\_\_\_\_  
\_\_\_\_\_

ft<sup>2</sup> of impervious area within RPA \_\_\_\_\_ (BMP: yes no), type: \_\_\_\_\_

ft<sup>2</sup> of land disturbance within RPA \_\_\_\_\_

Land Disturbance Permit obtained: Yes No

Number of 10'x10' units: (ft<sup>2</sup> of land disturbance in RPA/100 = units) \_\_\_\_\_

**Existing vegetation to be removed:**

Trees (quantity, type, size) \_\_\_\_\_

Shrubs (quantity, type, size) \_\_\_\_\_

Groundcovers \_\_\_\_\_

Lawn grass (ft<sup>2</sup>) \_\_\_\_\_

Chesapeake Bay Act FlowChart Worksheet:

1. Enter square footage of 100' buffer disturbance in box at right:

2. Divide buffer square footage by 100' to obtain "buffer units" then plug this number into each "buffer unit" box below to determine the three trophic layers needed for compliance with the CBPA: Total buffer disturbance  / 100 =  buffer units (100 ft. sq.)

Buffer units  X (multiplied by) .5 =  canopy trees required.

Buffer units  X (multiplied by) .5 =  understory trees req.

Buffer units  X (multiplied by) .75 =  shrubs required

Or. If you are removing single trees, bushes, or ground covers. Figure the total inches diameter of vegetation removed. This should only apply if the ground is not disturbed.

Total inches  x .33 =  inches of tree required for replanting

Total inches  x .33 =  inches of replanting required for understory

Total inches  x .33 =  shrubs and ground cover inches required

3. Select vegetation types:

Is the site in full sun or full shade?

Trees		Shrubs
FULL SUN	: Pin Oak, Pine, Cherry, Black Walnut	Dogwoods, Wax Myrtle
PARTIAL SUN	: Silver Maple, Hickory, Sycamore, T. Poplar	Chokeberry, Winterberry
FULL SHADE	: Red Maple, American Beech, Hemlock	M. Laurel, H.B. Blueberry

Steep slope or no slope?

Trees	Shrubs
Steep Slope (< 3to1) : Oaks, Hickory	Switchgrass, M. Laurel
Gentle Slope (>3to1): Loblolly, Maple	Highbush Blueberry

Flood zone or salt spray possible?

Trees	Shrubs
Salt tolerant: E. Red Cedar, Holly, Pitch Pine, Black Gum	Spicebush, Wax -Bayberry High Tide Bush
Flood tolerant: Bald Cypress, Black Gum, River Birch	Groundsel, Chokeberry, H. Blueberry, Buttonbush

Reduce or eliminate lawn grasses and turf

Turf grass (lawn) is to be discouraged in the 100' RPA buffer. Lawn contributes a large portion of the nutrient pollution to the Chesapeake Bay watershed and increases the amount of stormwater runoff leaving a site.



## INSTRUCTIONS PAGE

This agreement must include a site plan showing:

Lot size	RPA lines	Erosion control methods
Existing structures	Limit of wetlands	Limits of land disturbance
Proposed structures	Construction access	Replacement vegetation
Wooded areas	Shoreline	BMP's
Property lines	Existing vegetation to be removed within the RPA	

The following is a *general guideline* used in determining the minimum amount of replacement vegetation for most projects. Replacement strategies may be site specific. Some vegetative BMP's may have separate guidelines.

### Determining the required amount of replacement vegetation:

**Option A:** For small areas where the number and type of plants removed are known, replacement trees and shrubs must be one replacement tree (2.5") or ten small shrubs (15"-18") for every 4" DBH of vegetation removed. Replacement trees must be 2.5" caliper and shrubs must be 2' tall.

**Option B:** For large areas when units must be used instead of counting individual trees and shrubs: Calculate the number of units within the RPA that are to be disturbed, cleared, graded, become impervious, etc. Each 10'x10' area (100ft<sup>2</sup>) is a unit. Multiply .5 by the number of units to **calculate** the amount of trees required for planting. Multiply .5 by the number of units to **calculate** the amount of understory trees required for planting. Then multiply .75 by the number of units to **calculate** the amount of shrubs required. Trees shall be 1.5"-2" caliper and shrubs shall be 2' tall. Steep slopes (**2:1 or greater**) shall be planted with low woody shrubs, groundcovers, and warm season deep-rooted grasses.

*Example:: A riprap project requires 5,150ft<sup>2</sup> of bank grading and removal of vegetation within the 100'RPA.  $5,150/100 = 51.5$  rounded to 52 units.*

*26 canopy trees, 26 understory trees, and 39 shrubs would be required for the example.*



### - Site lines, Access Paths, Woodlot Management:

**The following may be removed if determined necessary, but only after a site inspection by Lancaster County staff:** Trees that are dead, diseased, dying, uprooted, or leaning. Staff will discuss appropriate removal of vegetation to insure the health of all trophic layers and give instruction for replacement vegetation when required. The construction of access paths shall be done so to effectively control erosion and surfaced with only permeable material.

### - Agriculture & Silviculture Conversion:

Where these land uses within the 100' RPA cease and are converted to other uses, the full 100' wide vegetative buffer shall be reestablished **with woody vegetation**.

### - Chesapeake Bay Preservation Act Violation:

Unauthorized removal of vegetation within the Resource Protection Areas of Lancaster County is deemed a violation of the Chesapeake Bay Preservation Act, a class 1 misdemeanor. Replacement vegetation will be prescribed in addition to any other fines or penalties that may be levied.

**SITE DRAWING/AERIAL VIEW: (to scale, 1" = 25' preferred)**