



**City of Annapolis**  
Planning & Zoning Department  
145 Gorman Street, 3<sup>rd</sup> Fl  
Annapolis, MD 21401-2535

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COMPLETED

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**Critical Area Minor or Major Buffer Management Plan**  
**For Non-Buffer Exemption Areas**  
 As Required by the State of Maryland Critical Area Commission

**Property information**

Owner of property \_\_\_\_\_

Address \_\_\_\_\_

Phone number \_\_\_\_\_

Other contact \_\_\_\_\_

Address \_\_\_\_\_

Phone number \_\_\_\_\_

Project address (if different) \_\_\_\_\_

Critical Area designation \_\_\_\_\_ Zoning \_\_\_\_\_

Expected start date of project \_\_\_\_\_ Expected planting date \_\_\_\_\_

**Proposed Project**

Major Buffer Management Plan - applicable to Buffer Establishment or Buffer Mitigation of 5,000 or more square feet.

Minor Buffer Management Plan - applicable to Buffer Establishment or Buffer Mitigation of less than 5,000 square feet.

Provide a brief explanation of your proposed project and the methods and/or equipment to be used in the space below.

**Justification of Project**

Provide justification for the proposed project and its intended purpose in the space below.

**Long-term Management Plan**

Provide a description of the management plan to be utilized. The plan is required to control invasive species, pests and predation. Monitoring and replacement of plants that do not survive is required for two years.

**STEP 1: DETERMINE ESTABLISHMENT AND/OR MITIGATION REQUIREMENTS**

**Scenario A:** For development or redevelopment activities outside of the 100’ buffer on property that includes the buffer

**Buffer Establishment** (required for development or redevelopment activity located outside the 100 foot buffer)

A development or redevelopment activity that occurs on a lot or parcel that includes a buffer to tidal waters, a tidal wetland or a tributary stream must establish the buffer based on the chart below if the buffer is not fully forested or fully established in woody or wetland vegetation. (Lot coverage is any material or structure that is not pervious. This includes but is not limited to the footprint of homes and accessory structures, walkways, steps, patios, garden ponds, and pools).

Development Category	Lot Created Before 1987	Lot Created After 1987
New development on a vacant lot	Establish the buffer based on total lot coverage	Fully establish the buffer
New subdivision or new lot	Fully establish the buffer	
New lot with an existing dwelling	Establish the buffer based on total lot coverage	
Conversion of a land use on a parcel or lot to another land use	Fully establish the buffer	
Addition or accessory structure	Establish the buffer based on net increase in lot coverage	
Substantial alteration	Establish the buffer based on total lot coverage	

**Calculation of Buffer Establishment**

The following process is used to compute the amount of buffer establishment required for development or redevelopment activity. Follow the steps below to calculate the buffer establishment planting requirements:

1. Determine the development category from the table above. \_\_\_\_\_
2. Determine the extent of buffer establishment per the table above. \_\_\_\_\_
3. Calculate the square footage of planting required based on the answers provided in numbers 1 and 2 of this Buffer Establishment section. This is the establishment required for Scenario A. Place this amount in Step 2, line #1. \_\_\_\_\_

**SCENARIO B:** For development or redevelopment activity inside the 100’ buffer or expanded buffer. Mitigation is required for the number of trees removed and the amount of disturbance within the buffer.

**Section I – Tree Removal due to development or redevelopment**

Buffer Mitigation for Tree Removal (required for development or redevelopment activity located inside the buffer)

A development or redevelopment activity that occurs on a lot or parcel that includes a buffer to tidal waters, a tidal wetland or a tributary stream must mitigate for tree removal. The amount of planting mitigation is based on the area of the tree measured 4.5 feet above the surrounding ground for trees that are a minimum of 2” in diameter. (For trees that are dead, dying or hazardous see Section III)

Tree Size Measured 4.5 Feet From Ground Surface	Mitigation Requirement
Every 1" of tree diameter	100 sq. ft. of mitigation

**Calculation of Buffer Mitigation for Tree Removal**

The following process is used to compute the amount of buffer mitigation required for tree removal in the buffer. Follow the steps below to calculate the replacement planting mitigation requirements:

- Determine the number of trees to be removed for development or redevelopment activity \_\_\_\_\_
- List the diameters of each tree and multiply by 100 sq. ft. per 1" diameter
 

Diameter	x 100 s.f. per 1" =	Mitigation sq. ft.
Tree 1 _____		_____
Tree 2 _____		_____
Tree 3 _____		_____
Tree 4 _____		_____
- Add together the mitigation square footages. This is the amount of planting mitigation required for tree removal due to development or redevelopment for Section I. Place this amount in Step 2, line #2. Area of Mitigation = \_\_\_\_\_

**SECTION II – Disturbance**

**Buffer Mitigation for Disturbance** (required for development or redevelopment activity located inside the buffer)

A development or redevelopment activity that occurs on a lot or parcel that includes a buffer to tidal waters, a tidal wetland or a tributary stream must mitigate for tree removal. The amount of planting mitigation is based on the area of disturbance the activity.

Activity	Mitigation Ratio
Shore erosion control	1:1
Riparian water access	2:1
Development or redevelopment of water-dependent facilities	2:1
Variance	3:1
Violation	4:1

**Calculation of Mitigation for Disturbance to the Buffer**

The following process is used to compute the amount of mitigation for development or redevelopment activity. Follow the steps below to calculate the buffer mitigation planting requirements:

- State the development category from the table above. \_\_\_\_\_
- List the corresponding mitigation ratio for the activity. \_\_\_\_\_
- List the total square footage of area disturbed within the buffer. \_\_\_\_\_
- Calculate the area of mitigation required (multiply the sq. ft. from number 3 above by the appropriate activity ratio from number 2 above). This is the planting mitigation required for disturbance in the buffer for Section II. Place this amount in Step 2, line #3. \_\_\_\_\_

**Section III – Removal of Dead, Dying or Hazardous Trees**

**Buffer Mitigation for Tree Removal** (required for removal of trees in the 100’ buffer)

This section is to be used for the removal of a tree that is in imminent danger of falling and causing damage or causing acceleration of shore erosion.

Trees Removed	Mitigation Requirement
For each 1” or greater caliper dead, dying or hazardous tree	Replacement with minimum 1” caliper canopy tree

**Calculation of Mitigation for Removal of Dead Dying or Hazardous Trees**

The following process is used to compute the amount of mitigation for dead, dying or hazardous trees. Follow the steps below to calculate the buffer establishment planting requirements:

1. State the number of dead, dying or hazardous trees to be removed. \_\_\_\_\_
2. State the number or replacement trees required at a 1:1 ratio. This is the tree replacement mitigation required for Section III. Place this amount in Step 2, line #5. \_\_\_\_\_

**STEP 2**

**Total Buffer Establishment and Buffer Mitigation Required**

The total buffer planting requirements are based on the cumulative total of the Buffer Establishment and Buffer Mitigation. The following process is used to compute the amount of mitigation. Follow the steps below to calculate the total area of planting required.

1. List the square footage of buffer establishment from Scenario A. \_\_\_\_\_
2. List the square footage of mitigation for tree removal from Scenario B, Section I. \_\_\_\_\_
3. List the square footage of mitigation for disturbance from Scenario B, Section II. \_\_\_\_\_
4. Add the square footage from steps 1, 2 and 3 above. Total sq. ft. = \_\_\_\_\_
5. List the number of replacement trees required for tree removal from Scenario B, Section III. \_\_\_\_\_

**STEP 3**

**Buffer Planting Plan and Schematic Drawing**

All Minor and Major Buffer Management Plan applications must include a schematic drawing identifying the areas of impact to the Critical Area. The schematic drawing must show the proposed activity, the limit of disturbance, existing lot coverage features, existing trees and shrubs, and the 100’ buffer or expanded buffer area. Vegetation to be removed and the replacement plantings are to be shown and labeled. A listing of the vegetation that will be used for establishment and mitigation and the amount of planting credit for each type must be provided. The list of vegetation should include the species type, quantity of plants, and sizes of plants. Note: all plants must be native, a single species may not exceed 20% of the total planting requirement and shrubs may not exceed 50% of the total planting requirement.

***Planting Location***

All mitigation should be located within the Critical Area in the following order preference:

1. On-site within the Buffer
2. On-site adjacent to the Buffer
3. On-site within the Critical Area
4. Off-site (follow order of preference 1-3 above)
5. Fee-in-lieu payment (only if options 1-4 cannot be met)

### Buffer Establishment and Mitigation Credits for Various Vegetation

Planting requirements can be met by utilizing the following credit tables:

Landscaping Stock Planting Credit Table			
Vegetation Type	Minimum Size Eligible for Credit	Maximum Credit Allowed (square footage per plant)	Maximum Percent of Credit (per type of vegetation)
Canopy tree	2-inch caliper and 8 feet high	200	Not applicable
Canopy tree	1-inch caliper and 6 feet high	100	Not applicable
Understory tree	1-inch caliper and 6 feet high	75	Not applicable
Large shrub	1 gallon and 4 feet high	50	30
Small shrub	1 gallon and 18 inches high	25	20
Herbaceous Perennial	1 quart	2	10
Planting Cluster 1*	1 canopy tree; and 3 large shrubs or 6 small shrubs	300	Not applicable
Planting Cluster 2*	2 understory trees; and 3 large shrubs or 6 small shrubs	350	Not applicable

\* These options are available only for buffer establishment or buffer mitigation of less than 1 acre.

Alternative planting standards may be permitted based on the following table below. Financial Assurance is required.

Requirement Type	Amount of Planting	Options
Establishment	Less than ¼ acre	Landscaping stock for the entire required area according to the planting credit table (shown above)
Establishment	¼ acre to less than or equal to 1 acre	At least 50% of the entire required area in landscaping stock according to the planting credit table (shown above) and the remainder according to the optional planting table (shown below)
Establishment	Greater than 1 acre to less than or equal to 5 acres	At least 25% of the entire required area in landscaping stock according to the planting credit table and the remainder according to the optional planting table
Establishment	Greater than 5 acres	At least 10% of the entire required area in landscaping stock according to the planting credit table and the remainder according to the optional planting table
Mitigation	Less than 1 acre	Landscaping stock for the entire required area according to the planting credit table (shown above)
Mitigation	1 acre or greater	At least 50 percent of the entire required area in landscaping stock according to the planting credit table (shown above) and the remainder according to the optional planting table (shown below)

Optional Flexible Stocking Size Planting Credit Table			
Stock Size of Trees Only	Required Number of Stems Per Acre	Survivability Requirement	Minimum Financial Assurance Period After Planting
Bare-root seedling or whip	700	50 percent	5 years
½-inch to 1-inch container grown	450	75 percent	2 years
More than 1-inch container grown	350	90 percent	2 years

**STEP 4**

**Long Term Maintenance Plan**

All Major Buffer Management Plans must include a long-term protection plan that provides financial assurance to cover the planting and survivability requirements and a provision for a minimum of two years of monitoring. A completed and signed City of Annapolis Landscape Maintenance Agreement and application for a Landscape Bond must be submitted to the City of Annapolis Department of Planning and Zoning prior to approval of a Major Buffer Management Plan.

**Authorization**

I certify these statements to be true and accurate and that any trees to be removed are on my property. I hereby grant the City of Annapolis officials permission to enter my property for inspections of the Buffer Management Plan.

Owner signature \_\_\_\_\_ Date \_\_\_\_\_

City of Annapolis authorized signatures:

Planning & Zoning \_\_\_\_\_ Date \_\_\_\_\_