

# Important Terms

**Best Management Practices (BMPs).** Conservation practices and management measures that control soil loss and reduce water quality degradation caused by nutrients, toxins, sediment, and animal waste.

**Buffer.** A naturally vegetated area or planted area established or managed to protect aquatic, wetland, shoreline, and terrestrial environments from manmade disturbances. The Critical Area Buffer is a minimum of 100 feet from the HWW (Mean High Water) Line, the edge of tidal wetlands or tributary streams. In some circumstances, such as when wetlands or steep slopes are present, it may be expanded beyond 100 feet.

**Buffer Exemption Area.** Areas that have been officially designated and mapped where specific development activities may be permitted within the Buffer without a variance, in accordance with specific standards and requirements, including mitigation. (Kent County calls these Buffer Modification Areas.)

**Buffer Management Plan.** A landscape plan and supporting written documentation used to show and describe development activities or the alteration of land or vegetation within the Critical Area Buffer. Buffer Management Plans include existing conditions, proposed activities, and restoration or mitigation actions.

**Critical Area.** All waters of and land under the Chesapeake Bay and its tributaries and the Atlantic Coastal Bays and their tributaries to the head of tide, and all land and water areas within 1,000 feet of tidal waters and the edge of tidal wetlands.

**Critical Area Commission.** A 29-member group responsible for overseeing the effective implementation of Maryland's Chesapeake Bay Critical Area Program. The Commission was created by the Critical Area Act in 1984.

**Development Activities.** Human activities that result in disturbances to land in conjunction with the construction or substantial alteration of residential, commercial, industrial, institutional, or transportation facilities or structures.

**Expanded Buffer.** An area where the Critical Area Buffer is extended to include contiguous sensitive areas such as steep slopes or highly erodible soils.

**Forest Interior Dwelling Species (FIDS).** Bird species that require relatively large, undeveloped, forested tracts for successful breeding. Examples include flycatchers, warblers, vireos, and woodpeckers.

**Habitat Protection Areas.** Those areas, including the 100-foot Buffer, nontidal wetlands, habitats of threatened or endangered species and species in need of conservation, certain plant and wildlife habitats, and fish propagation waters that are designated for protection and generally require specific conservation measures under the Critical Area Law and Criteria.

**Habitat Protection Area Plan.** A plan to conserve certain special habitat types developed in cooperation with Maryland Department of Natural Resources.

**Lot Coverage.** The percentage of a total lot or parcel that is occupied by a structure, accessory structure, parking area, driveway, walkway, or roadway; or that is covered with gravel, stone, shell, impermeable decking, a paver, permeable pavement, or any manmade material. Lot coverage does not include a fence or wall that is less than one foot in width that has not been constructed with a footer; a walkway in the Buffer or expanded Buffer, including a stairway, that provides direct access to a community or private pier; a wood mulch pathway; or a deck with gaps to allow water to pass freely.

**Mean High Water (MHW) Line.** The average level of high tides at a given location.

**Mitigation.** An action or activity performed to compensate for, or offset, adverse impacts to water quality, habitat, or other natural resources associated with development activities, changes in land use, or other land alterations or disturbances.

**Native Plants.** Plants that have evolved in a region over hundreds of thousands of years without direct or indirect human actions. These species are adapted to local soils, climate, and hydrologic conditions.

**Natural Vegetation.** Plants that grow in the absence of human activities.

**Site Plan.** A graphic depiction of the existing or proposed development of a property that may include structures, setbacks, parking, utilities, environmental features, and landscaping. A site plan is normally required by local governments for all development activities or redevelopment activities.

**Soil Erosion and Sediment Control Plan.** A written plan that describes how erosion and transportation of sediment are to be managed and controlled on a development site or a site undergoing an alteration or disturbance.

**Timber Harvest Plan.** A plan required for the removal of one acre or more of forest in the Critical Area within any one-year period. The plan must be prepared by a registered professional forester and in the Critical Area must be reviewed and approved by the District Forestry Board.

**Variance.** An administrative exception to a land use or zoning regulation to compensate for a deficiency on a property that would prevent the property from complying with a specific regulation.

**Wetland Delineation.** The process that is used to determine if a wetland is present and to identify its boundaries. Wetland delineations include information about soils, hydrology, and vegetation and must be conducted by an environmental professional.

## Resources

### ***First Stop for the Bay***

[www.firststopforthebay.org](http://www.firststopforthebay.org)

### **COUNTY PLANNING OFFICES**

#### **Caroline County Department of Planning, Codes and Engineering**

Health & Public Services Building

403 South 7th Street, Suite 210

Denton, MD 21629-1335

(410) 479-8100

[www.carolineplancode.org](http://www.carolineplancode.org)

*Caroline County's Critical Area Program*

#### **Kent County Department of Planning, Housing and Zoning**

400 High Street

Chestertown, MD 21620

(410) 778-7475

[www.kentcounty.com/gov/planzone/](http://www.kentcounty.com/gov/planzone/)

*From My Backyard to Our Bay—A Guide to Improving Our Environment and Drinking Water.*

#### **Queen Anne's County Land Use, Growth Management and Environment**

160 Coursevall Drive

Centreville, MD 21617

(410) 758-1255

[www.qac.org](http://www.qac.org)

*From My Backyard to Our Bay—A Guide to Improving Our Environment and Drinking Water.*

#### **Talbot County Office of Planning and Zoning**

28712 Glebe Road, Ste. 2

Easton, MD 21601

(410) 770-8030

[www.talbotcountymd.gov](http://www.talbotcountymd.gov)

### **STATE AND COUNTY GOVERNMENT AGENCIES**

#### **Natural Resources Conservation Service**

Maryland State Office

John Hanson Business Center, Suite 301

339 Busch's Frontage Road

Annapolis, MD 21401-5534

(410) 757-0861

[www.nrcs.usda.gov/](http://www.nrcs.usda.gov/)

#### **Queen Anne's County Office**

211 East Water Street

Centreville, MD 21617-1101

(410) 758-1671

#### **Kent County Office**

122 Speer Road

Chestertown, MD 21620-1037

(410) 778-5353

#### **Talbot County Office**

28577 Mary's Court

Easton, MD 21601

(410) 822-1577

#### **Caroline County Office**

640 Legion Road

Denton, MD 21629-2040

(410) 479-1202

#### **Maryland Cooperative Extension Divisions**

<http://extension.umd.edu/>

#### **Home and Garden Information Center**

12005 Homewood Road

Ellicott City, MD 21042

(800) 342-2507

[www.hgic.umd.edu](http://www.hgic.umd.edu)

*Many publications, factsheets, and diagnostic tools are available.*

#### **Caroline County Office**

207 South Third Street

Denton, MD 21629

(410) 479-4030

**Kent County Office**

Kent County Public Works Complex  
709 Morgnac Road, Suite 202  
Chestertown, MD 21620  
(410) 778-1661

**Queen Anne's County Office**

505 Railroad Avenue, Suite 4  
Centreville, MD 21617  
(410) 758-0166  
*Call for a free Baywise site visit from Master Gardeners.*

**Talbot County Office**

Talbot Agriculture Service Center  
28577 Mary's Court  
P.O. Box 519  
Easton, MD 21601  
(410) 822-1244  
*Call for a free Baywise site visit from Master Gardeners.*

**Maryland Department of Agriculture**

50 Harry S. Truman Parkway  
Annapolis, MD 21401  
(410) 841-5871  
[www.mda.state.md.us](http://www.mda.state.md.us)  
Maryland Noxious Weed I.D.  
*Information on invasive plants, pest control in forests, erosion*

**Maryland Department of Natural Resources**

580 Taylor Avenue  
Tawes State Office Building  
Annapolis, MD 21401  
(877) 620-8DNR  
[www.dnr.state.md.us/](http://www.dnr.state.md.us/)  
*Shore Erosion Control documents*

**Watershed Restoration Action Strategies**

[www.dnr.state.md.us/watersheds/wras/index.html](http://www.dnr.state.md.us/watersheds/wras/index.html)

**Maryland's Coastal Zone Management Program**

(410) 260-8732  
[www.dnr.state.md.us/bay/czm](http://www.dnr.state.md.us/bay/czm)  
*Funding available for local governments and nonprofits*

**Critical Area Commission for the Chesapeake and Atlantic Coastal Bays**

1804 West Street, Suite 100  
Annapolis, MD 21401  
(410) 260-3460  
[www.dnr.state.md.us/criticalarea/](http://www.dnr.state.md.us/criticalarea/)  
*Bay Smart: A Citizen's Guide to MD's Critical Area Program*

*Critical Area Buffer management guidance  
Overview of 2008 Critical Area Legislation*

**Forest Service—Caroline and Talbot counties**

Upper Shore Project  
Martinak State Park  
105 Deep Shore Road  
Denton, MD 21629  
(410) 479-1623  
*Riparian forest buffer design and maintenance*

**Forest Service—Kent and Queen Anne's counties**

120 Broadway  
Centreville, MD 21617  
(410) 778-4439  
(410) 819-4120  
[www.dnr.state.md.us/forests/](http://www.dnr.state.md.us/forests/)

**Wildlife and Heritage Service**

(410) 260-8540

**Wildlife and Heritage Service—Eastern Region**

Eastern Regional Office  
Wye Mills Field Office  
P.O. Box 68  
Wye Mills, MD 21679  
(410) 827-8612  
[www.dnr.state.md.us/wildlife/](http://www.dnr.state.md.us/wildlife/)  
*Backyard Habitat for Wildlife*

*Invasive and Exotic Species*

**Wildlife & Heritage Service—Project Wild**

3740 Gwynnbrook Avenue  
Owings Mills, MD 21117  
(410) 356-0941  
[www.dnr.state.md.us](http://www.dnr.state.md.us)

**Maryland Department of the Environment**

1800 Washington Boulevard  
 Baltimore, MD 21230  
 (410) 537-3000 or toll free at  
 (800) 633-6101  
[www.mde.state.md.us/](http://www.mde.state.md.us/)

**Joint Federal/State Application of the Alteration of Tidal Wetlands in Maryland**

(410) 537-3762 or (800) 876-0200  
[www.mde.state.md.us/assets/document/permit/alter\\_sf.pdf](http://www.mde.state.md.us/assets/document/permit/alter_sf.pdf)

**Septic Upgrade Grant Program**

(410) 537-4195 or toll free at  
 (800) 633-6101  
[www.mde.state.md.us/assets/document/water/MDE-WMA-FIN020.pdf](http://www.mde.state.md.us/assets/document/water/MDE-WMA-FIN020.pdf)

**FEDERAL AGENCIES**

**U.S. Army Corps of Engineers**

Baltimore District  
 P.O. Box 1715  
 Baltimore, MD 21203-1715  
 (410) 962-7608 General Information  
[www.usace.army.mil/](http://www.usace.army.mil/)

**U.S. Department of Agriculture**

<http://plants.usda.gov/>  
*Plants database*

**U.S. Environmental Protection Agency, Region 3**

1650 Arch Street  
 Philadelphia, PA 19103-2029  
 (215) 814-5000  
[www.epa.gov/region03](http://www.epa.gov/region03)

**Chesapeake Bay Program Office**

U.S. Environmental Protection Agency  
 410 Severn Avenue, Suite 109  
 Annapolis, MD 21403  
 (800) YOUR-BAY  
[www.chesapeakebay.net](http://www.chesapeakebay.net)

**Chesapeake Bay Field Office**

U.S. Fish and Wildlife Service  
 177 Admiral Cochrane Drive  
 Annapolis, MD 21401  
 (410) 573-4500  
[www.fws.gov/chesapeakebay/](http://www.fws.gov/chesapeakebay/)  
*Partners for Wildlife Program has funding for private landowners.*

*Native Plants for Wildlife Habitat and Conservation Landscaping*

*Bayscapes Program and information*

**U.S. Forest Service**

U.S. Department of Agriculture  
 Sidney R. Yates Federal Building  
 201 14th Street, SW  
 Washington, DC 20024  
 (202) 205-8528  
[www.fs.fed.us/r9/](http://www.fs.fed.us/r9/)  
*Caring for your Forest with a Forest Stewardship Program*

**NONPROFITS**

**Adkins Arboretum**

12610 Eveland Road  
 P.O. Box 100  
 Ridgely, MD 21660  
 (410) 634-2847  
[www.adkinsarboretum.org](http://www.adkinsarboretum.org)  
*First Stop for the Bay information*  
*400-acre native garden and preserve; adult and children's programs; native plant sales, gift shop, art exhibits*

**Alliance for the Chesapeake Bay**

6600 York Road, Suite 100  
 Baltimore, MD 21212  
 (410) 377-6270  
[www.acb-online.org](http://www.acb-online.org)  
*Many guidebooks available.*

**American Forests**

734 15th Street NW, Suite 800  
 Washington, DC 20005  
 (202) 737-1944  
[www.amfor.org](http://www.amfor.org)

**Center for Watershed Protection, Inc.**

8390 Main Street, Second Floor  
Ellicott City, MD 21043-4605  
(410) 461-8323  
www.cwp.org  
*Many guidance documents on stormwater management*

**Chesapeake Bay Environmental Center**

P.O. Box 519  
600 Discovery Lane  
Grasonville, MD 21638  
(410) 827-6694  
info@BayRestoration.org

**Chesapeake Bay Foundation**

Philip Merrill Environmental Center  
6 Herndon Avenue  
Annapolis, MD 21403  
(410) 268-8816  
*Many documents available*

Salisbury, MD Office  
212 West Main Street, Suite 204B  
Salisbury, MD 21801  
(410) 543-1999  
www.cbf.org

**Chesapeake Bay Trust**

60 West Street, Suite 405  
Annapolis, MD 21401  
(410) 974-2941  
www.cbtrust.org  
*Funding for nonprofits and local governments*

**Chesapeake Conservation Landscaping Council**

www.chesapeakelandscape.org  
*Conservation Landscaping Guidelines*

**Chesapeake Ecology Center**

Adams Academy (middle school)  
245 Clay Street  
Annapolis, MD 21401  
www.chesapeakeecologycenter.org  
*Ecoscaping Back to the Future...Restoring Chesapeake Landscapes*  
*Rainscaping with Rain Gardens*

**Chesapeake Bay Maritime Museum**

Navy Point, P.O. Box 636  
St. Michaels, MD 21663  
(410) 745-2916  
www.CBMM.org

**Chesapeake Wildlife Heritage**

P.O. Box 1745  
46 Pennsylvania Avenue  
Easton, MD 21601  
(410) 822-5100  
www.cheswildlife.org  
*Assists private and public landowners in design, building and management of wildlife habitat projects*

**Ducks Unlimited**

Mid-Atlantic Field Office  
34 Defense Street, Suite 200  
Annapolis, MD 21401  
www.ducks.org

**Environmental Concern, Inc.**

P.O. Box P  
210 Boundary Lane  
St. Michaels, MD 21663  
www.wetland.org  
*Living shoreline design and installation, wholesale nursery catalog, native wetland plants*

**Maryland Nursery and Landscape Associations**

P.O. Box 726  
Brooklandville, MD 21022  
(410) 823-8684  
www.mnlaonline.org

**Maryland Oyster Recovery Partnership**

P.O. Box 6775  
Annapolis, MD 21401  
(410) 990-4970  
www.oysterrecovery.org

**Maryland Native Plant Society**

P.O. Box 4877

Silver Spring, MD 20914

[www.mdflora.org](http://www.mdflora.org)*Maryland's Native Plants: A Master Checklist**Control of Invasive Nonnative Plants**Native Plants for Wildlife Habitat and**Conservation Landscaping***Maryland Eastern Shore Resource  
Conservation and Development Council,  
Inc.**

28577 Mary's Court, Suite 6

Easton, MD 21601-7131

(410) 822-9300

[www.md-esrcd.org](http://www.md-esrcd.org)*Shore Erosion Control—The Natural Approach***National Wildlife Federation  
Chesapeake Bay Mid-Atlantic Regional  
Center**

11100 Wildlife Center Drive

Reston, VA 20190

[www.nwf.org](http://www.nwf.org)*Certify your Backyard Wildlife Habitat***Pickering Creek Audubon Center**

11450 Audubon Lane

Easton, MD 21601

(410) 822-4903

[www.pickeringcreek.org](http://www.pickeringcreek.org)**Wilmer Park**

Chestertown, MD 21620

[www.wilmerparkrestoration.org](http://www.wilmerparkrestoration.org)**WATERSHED ASSOCIATIONS****Chester River Association**

100 North Cross Street, Suite 1

Chestertown, MD 21620

(410) 810-7556

[www.chesterriverassociation.org](http://www.chesterriverassociation.org)**Choptank River Eastern Bay  
Conservancy**

P.O. Box 1276

St. Michaels, MD 21663

(410) 745-8341

[tdjunkin@comcast.net](mailto:tdjunkin@comcast.net)[www.crebconservancy.org](http://www.crebconservancy.org)**Corsica River Conservancy**

P.O. Box 235

Centreville, MD 21617

[corsicariverconservancy@verizon.net](mailto:corsicariverconservancy@verizon.net)[www.corsicariverconservancy.org](http://www.corsicariverconservancy.org)*Funding for rain gardens***Sassafras River Association**

P.O. Box 333

Georgetown, MD 21930

(410) 275-1400

[www.sassafrasriver.org](http://www.sassafrasriver.org)**Talbot River Protection Association**

P.O. Box 2234

Easton, MD 21601

[info@talbotrivers.org](mailto:info@talbotrivers.org)

# Notes

**BUFFER MANAGEMENT PLAN**

Please attach site plan.

Property Owner **SAMPLE**

Address of property **123 Waterfront Lane, Anytown, MD 21000**

Election District **7** Map **52** Grid **4E** Parcel **500** Lot \_\_\_\_\_

Size of property **2** acres

Total disturbed area **250** square feet

The buffer is a naturally vegetated area 100 feet or more from mean high tide or a tidal wetland. There are a limited number of reasons why vegetation may be removed from the buffer. Please list the reasons you are removing vegetation in the buffer.

**There is dying locust tree leaning over the shoreline and into the creek. The tree has not produced leaves in its last growing season, is dropping branches, and is in danger of falling onto the proposed pier, taking a large section of bank with it into the creek.**

Please list types of plants to be removed and types to be planted (include size of replacement trees and whether balled and burlap or container grown). See the Buffer Mitigation Requirements on the back of this sheet to calculate replacement requirements.

Understory to be removed.

**NA**

Understory to be replanted (See the Forest Mitigation Requirements on the back of this sheet to calculate replacement requirements).

**2 Flowering Dogwoods, 3 Red Chokeberry, 3 Inkberry, & 2 Pink Azaleas**

Canopy trees to be removed.

**1 Dying Locust tree**

Canopy trees to be replanted (See the Forest Mitigation Requirements on the back of this sheet to calculate replacement requirements).

**1 Hackberry and 2 Willow Oaks**

Proposed Maintenance Plan. **All plantings to be completed within 2 growing seasons of project completion and maintained for the health of the species.**

Signature \_\_\_\_\_ Printed Name \_\_\_\_\_

Mailing Address \_\_\_\_\_

City, State, ZIP \_\_\_\_\_ Daytime Phone \_\_\_\_\_

My Documents/Critical Area/Critical Area Clearing Plans/Revised 10-04/agn

## BUFFER MANAGEMENT PLAN: FOREST MITIGATION REQUIREMENTS

The calculations below are based on replacement of tree canopy and understory. Tree replacement is calculated by plant spacing on 8-foot centers (8X10) and based on trees that have either 1½-2 inch calipers or are 5-8 feet tall. Understory replacement is calculated by plant spacing on 5-foot centers (5X5) and based on understory plantings that are a minimum of 1 gallon in size. In the buffer, canopy and understory replacement is figured at 2 times the square footage of proposed removal (i.e.: if 200 square feet of canopy are proposed for removal, then 400 square feet of potential canopy must be replaced).

Figure the square feet of the proposed disturbed area and divide that figure by 43,560 square feet (one acre). Multiply that number by 544 for tree removal (trees per acre based on tree spacing on 8-foot centers) or 1,742 for understory removal (understory plantings per acre based on spacing on 5-foot centers). The resulting number will be multiplied by two and will equal the replanting plan. This replanting plan may include a mixture of trees and understory plantings and will be decided on a case-by-case basis according to existing lot conditions.

Enter the square footage of canopy or understory proposed for removal into the equation below to calculate the appropriate mitigation requirement to produce a potential replacement canopy or replacement understory plantings. Always round up when a calculation results in a half number 5 (0.5) or greater (i.e.: 1.5=2 trees).

**Canopy Mitigation Calculation:** Deciduous/hardwood trees must be replaced by deciduous/hardwood trees, and coniferous/evergreen trees must be replaced by coniferous/evergreen trees. Native cultivars are recommended.

$\frac{250}{\text{square footage of disturbed area}} / 43,560 \times 544 = \underline{3}$  trees  $\times 2 = \underline{6}$  trees to be replanted

~SEE MITIGATION OPTIONS OUTLINED BELOW~

**Understory Mitigation Calculation:** Understory plantings must be replaced by understory plantings. Native species are recommended.

$\frac{250}{\text{square footage of disturbed area}} / 43,560 \times 1742 = \underline{10}$  understory plantings  $\times 2 = \underline{20}$  understory to be replanted

### \*Replanting Options

**Option One:** 2 trees and 10 understory plantings

**Option Two:** 4 trees and 7 understory plantings

**Option Three:** 2 trees and 13 understory plantings

Please submit a site plan showing the following (this site plan does not have to be to scale; just for illustrative of your lot configuration):

- Lot dimensions
- Location of dwelling and any buildings onsite
- Location of existing vegetation
- Location of trees to be removed
- Location of replacement plantings (option 1 seems most appropriate to your site)

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