

Conservation Landscaping

Most yards have beds that contain plantings of perennial herbaceous plants, shrubs and small trees to provide landscape interest. With a little shovel work, you can transform them into conservation landscapes that retain rainfall and adsorb runoff generated from adjacent turf or hard surfaces.



Conservation Landscaping is the replacement of turf grass with vegetation which is native to the Chesapeake Bay region. It so happens that while you are improving the aesthetics of your yard by creating a dynamic and changing seasonal landscape, you are also improving the quality of water in your closest stream and the Bay by increasing rainwater infiltration on your property. This practice is sometimes referred to as Bayscaping.

Once again, you will want to look at the flow paths to your bed, and make sure the bed is a few inches lower than the rest of the lawn, and use any extra soil to form a small berm on the opposite side to make sure water is retained during a storm.



Conservation Landscaping also plays an important role in ensuring the region's biological diversity and the viability of native plant and animal communities.

Many of the plants you could select have the ability to host wildlife and support valuable beneficial insects and pollinators. Did you know that there are a lot of endangered native plants? Interestingly enough native plant growers have been working to ensure that some endangered species continue to survive. Pink Muhly Grass (*Muhlenbergia capillaris*) is still on the endangered list however, it has become more readily available in local nurseries.

Where should I put my conservation landscaping?

Before you can install your conservation landscape there are few things to consider such as what are your objectives for the landscape which will help you decide where to locate it.

Choose Your Landscape Objectives

You have a lot of choices as to the planting objective for your new conservation landscape. For example, you may want to choose plants that:

- Attract pollinators such as butterflies and bees, and the occasional hummingbird
- Provide berries and seeds and nesting habitat for song birds
- Create seasonal color throughout the year by selecting different wildflowers, grasses and shrubs
- Create ideal growing conditions for some tasty heirloom tomatoes, melons, squash or that monster pumpkin you have been dreaming about
- Provide wetland habitat or a fern garden
- Screen your yard from your prying neighbors



Conservation landscapes are an especially good idea for:

- "Fertilizer-free" buffers around water features or shoreline on your property
- Lawn areas that can capture runoff from small areas of hard surfaces (e.g., sidewalks)
- Areas next to roof downspouts that are not treatable by a rain garden

In general, native plant species are preferred, but ornamental or garden plants are acceptable if they are adapted to regional climates. More resources on choosing the right plants for you and your conservation landscape can be found in Appendix C.

It is important to decide how much care you want to give this new landscape bed. Some people believe that Conservation Landscaping requires less maintenance than turf grass. Turf grass does require weekly/bi-weekly cutting, but conservation landscapes require more weeding. A more maintenance-free approach may be to plant primarily with trees, shrubs and grasses.

NOTE: If you already have a landscape contractor, make sure your contractor understands the new planting plan. Many contractors are still unfamiliar with native plant material and you don't want them to pull your new plants out thinking they are weeds.

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Locate Your Conservation Landscaping

There are several things to consider when deciding where to locate your conservation landscaping.

- Is it an extension of your "structural planting" around the house?
- Is it an extension of the neighbor's landscape? If so, very cool - by linking together landscapes that support nature you are creating a "Habitat Corridor"! You get extra eco-points for that!

It is recommended that your practice "connects" to a bed or a tree already planted in the landscape rather than be arbitrarily located on the site.

Select a location which does not conflict with another use of your property, such as play and pet roaming areas.

You should go back to your property assessment and determine your solar exposure. How many hours of sun/part shade/shade in the particular area to choose the right plants?

Make note of windy areas as some plants are less tolerant of exposure to wind. Also, if you are interested in a 'Wind Break' or a 'Sound Break', your conservation landscape can be designed as a vegetative screen to block wind and absorb noise.

Also look for the view-sheds on your property. You may drink coffee every morning from a particular room, and look for the views you are fond of or would like to screen.

Do deer, rabbits, voles, moles frequent your site? This will affect the type of vegetation you plant. Many people do not think of their property as a wildlife habitat, however many animals have adapted to living in your realm, whether urban or rural. Do cats frequently roam your property? If so, you may want to reconsider drawing birds and/or hummingbirds.

Do not locate over infrastructure (light poles, pipes, cables, FIOS, etc.) and do not hinder access to fuel tanks, well heads, septic tanks or septic fields. If you site a bed in the Right of Way, be aware that the County/City may own that property and can tear it up for maintenance without prior permission. And of course, always be aware of planting near power lines.

Make sure there is an accessible water source. Your plants will need to be watered until they are established in the first several months after installation. That is the case for native plants as well. Once established they should do fine with what nature supplies,

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except in case of extreme drought. Conservation landscaping can be used in concert with other practices such rain barrels that can water your conservation landscaping bed.

If you are working under any existing trees be sure to protect root zones. Many trees have shallow root systems which extend out to their canopy or beyond. It is best to stay out of the "drip line" of the tree.

How do I install my conservation landscape?

Creating a Design Plan

In this step you need to choose whether you want to handle the design or hire a professional landscape designer or landscape architect. A professional will have the expertise to consider all of the factors mentioned above and will be able to develop a design plan which has seasonal variety and dimension and most importantly meets your objectives. In some areas of the Bay, a Watershed Steward or Master Gardener may be available who also possesses this expertise.

Some owners may want to have the project designed and constructed, while others may want to do the job themselves.

If you plan to do the job yourself, start out by retrieving the basemap of your property you developed earlier.

Sketch out a design plan. Remember that in addition to trees and shrubs consider perennials to provide ground cover (ferns, forbs, grasses, sedges, rushes).

- Perennial: a plant that comes back every year
- Annual: a plant that lives only one year and so will have to be replanted every year
- Deciduous: a shrub or tree that loses its leaves
- Evergreen: a tree or shrub that holds its leaves all year

Research plant materials by visiting your local nursery to see what vegetation is available to purchase. As a note, nurseries sometimes do not have an extensive native plant selection; however a lot of native material is available. Refer to the Resource List in Appendix C for nurseries in your area. A designer and contractor will have access to more varieties of native plant material. In addition, many native plant societies have annual sales.

Avoid "invasive plants" which can spread and crowd out turf or native vegetation. Examples of invasive plants include English ivy, bamboo, and lesser celandine. For a good guide on how to identify and remove these invasive spreaders, consult the link to *Plant Invaders of Mid-Atlantic Natural Areas* <http://www.nps.gov/plants/alien/pubs/midatlantic/toc.htm>

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If you hire a designer and contractor, make sure they utilize eco-practices. Not all designers and contractors are skilled in this area of work although many claim to have the expertise. Get recommendations. Call your local watershed organization as they have a list of professionals with extensive experience.

Some things you will want from your designers and contractors: a) understand the need for the use of organic soil amendments in lieu of fertilizer; b) have a knowledge of native plants to include for wildlife benefits; c) be able to purchase native plant material; and d) the ability to assess whether you can add a cistern/rain barrel to reuse rainwater from your roof in your conservation landscape.

How do I care for my conservation landscape?

Once your Conservation Landscape has been installed, you will need to maintain it over the year. Some common tasks are:

Weeding

Your new planting will need to be weeded from time to time. In a few years you will find the plants will spread, filling in the spaces and you will have less weeding to do.

Use of Herbicides and Pesticides

Assess if you can transfer over to natural pesticides and herbicides (praying mantus, lady bugs, bat houses, homemade chemical free pesticides). If you need to use pesticides, use them wisely as pesticides can harm beneficial organisms in your landscape. One of the side benefits of creating wildlife habitat is that you create and introduce more species resulting in a more balanced ecosystem on your property.

Mulch

Mulch helps to retain moisture and prevent weeds and erosion, however, too much can rob plants of water. Be sure to use three inches or less. Always use aged leaf compost and aged wood mulch. Mulch around trees should be flush with the landscape and not piled high in "tree volcanoes" because that encourages a shallow root structure and can smother the roots of the tree.

Fall Maintenance

Ground up leaves are a great fertilizer. Rather than bagging up leaves, mow over them two times and let the leaves sit on the lawn over the winter. Excess leaves can be put into your compost pile to be used later in your gardens.

Resources

- BayScapes program (Alliance for the Chesapeake Bay)
<http://allianceforthebay.org/resources/publications/bayscapes/>
- Bay-Wise Certification Program (University of Maryland Extension)
<http://extension.umd.edu/baywise>
- "Eight Essential Elements of Conservation Landscaping" (Chesapeake Conservation Landscaping Council) <http://chesapeakelandscaping.org/eight-essential-elements>
- "Gardener for the Bay" program (Chesapeake Bay Foundation) <http://www.cbf.org/join-us/more-things-you-can-do/gardeners-for-the-bay>
- The Green Book for the Buffer (Maryland Department of Natural Resources)
http://www.dnr.state.md.us/criticalarea/pdfs/GreenBook_Buffer_sm.pdf
- "Habitat At Home" Guide (Virginia Department of Game and Inland Fisheries)
<http://www.dgif.virginia.gov/habitat/wild-in-the-woods/habitat-at-home.pdf>
- Home and Garden Information Center (University of Maryland)
<http://extension.umd.edu/hgic>
- "Landscapes for Life" Workbook (American Society of Landscape Architects)
http://www.landscapeforlife.org/publications/LFL_Workbooks_Print_downloadable.pdf



Appendix C

List of Plant Resources

Here we have compiled a list of helpful resources within the Chesapeake Bay Watershed for planting your tree, rain garden or conservation landscape. You will find that the resources have been listed by type of resource and jurisdiction.

NATIVE PLANT VENDORS (RETAIL AND WHOLESALE)

- U.S. Fish and Wildlife, list of native plant suppliers in the Chesapeake Bay Region, www.fws.gov/chesapeakebay/bayscapes.htm

Maryland

- American Natives Plants (Maryland Natives Nursery, Inc.), (Perry Hall, MD) www.americannativeplants.net
- Ayton State Tree Nursery (Maryland) www.dnr.state.md.us/forests/nursery
- Babikow Greenhouses (Baltimore, MD) www.babikow.com/ Wholesale
- Bay Ridge Nursery (Annapolis, MD) www.BayRidgeNursery.com
- Cavano's Perennials, Inc., (Kingsville, MD) www.cavanos.com Primarily wholesale, open to the public on Saturdays during the planting season
- Chesapeake Natives (Silver Spring, MD) www.chesapeakenatives.org Limited supply of native plants propagated from indigenous seed sources. Seeds, bare root plants, plugs, and pots available
- Classic Groundcovers www.classic-groundcovers.com (Wholesale only)
- Clear Ridge Nursery (Union Bridge, MD) www.gonative.us native trees and shrubs for conservation
- Davidsonville Nursery (Davidsonville, MD) www.davidsonvillennursery.com
- Environmental Concern (St. Michaels, MD) www.wetland.org Retail nursery (open by appointment) for riparian trees and wetland shrubs, education and research facility
- Greenstreet Gardens (Lothian, MD) www.greenstreetgardens.com/
- Herring Run Nursery (Baltimore, MD) www.bluewaterbaltimore.org/herring-run-nursery/
- Homestead Gardens (Davidsonville, MD) www.homesteadgardens.com Limited natives available
- Lower Marlboro Nursery (Owings, MD) www.lowermarlboronursery.com Native perennials, wildflowers, shrubs. The nursery is open to visitors by appointment during the spring and fall planting seasons.
- Patuxent Nursery (Bowie, MD) www.patuxentnursery.com/

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- Signature Horticultural Services (Freeland, MD) www.signaturehort.com/
Specializes in Northeastern native herbaceous plants for wetland mitigation, landscape design, restoration, and wildlife habitat enhancement
- Tidewater Growers: wholesale suppliers of trees and shrubs, 757-787-4079, TidewaterGrowers@comcast.net, <http://www.tidewatergrowers.com/>
- Treessentials (Roseville, MN) www.tubexusa.com/ Tree tubes and deer repellent for tree seedlings,

New Jersey

- New Moon Nursery (Bridgeton, NJ) www.newmoonnursery.com Native perennials (deep plugs), (Wholesale only)
- Pinelands Nursery, Inc. (Columbus, NJ) www.pinelandsnursery.com (wholesale only)
Wetland trees, shrubs, herbaceous plants

New York

- Fort Pond Native Plants (Montauk, New York) <http://nativeplants.net/>

Pennsylvania

- Appalachian Nursery (Chambersberg, PA) www.appnursery.com
- Keystone Wildflowers (Robesonia, PA) www.keystonewildflowers.com/ Native herbaceous perennial flowers and grasses for wildlife, habitat, naturalistic landscaping and restoration work
- North Creek Nurseries (Landenberg, PA) www.northcreeknurseries.com Native perennials (deep plugs) (Wholesale only)
- Octoraro Native Plant Nursery (Kirkwood, PA) www.octoraro.com Native trees, shrubs and herbaceous plants for reforestation and streambank restoration (Wholesale only)
- Redbud Native Plant Nursery (Glen Mills, PA) www.redbudnativeplantnursery.com
- Sylva Native Nursery and Seed Co., (Glen Rock, PA) www.sylvanative.com Native trees and shrubs

Virginia

- Colesville Nursery (Ashland, VA) <http://www.colesvillenursery.com/>
- Earth Sangha (Fairfax, VA) <http://www.earthsangha.org/>
- Forest Lane Botanicals (Williamsburg, VA) <http://www.forestlanebotanicals.com/>
- Go Native Grow Native, Northern Neck Chapter of the Virginia Native Plant Society http://www.nnnps.org/Go_Native_Grow_Native.html
- James River Association (Richmond, VA) <http://www.jamesriverassociation.org/what-we-do/watershed-restoration/Native%20Plants.pdf>
- Lancaster Farms, Inc. (Suffolk, VA) www.lancasterfarms.com
- Nature by Design (Alexandria, VA) www.nature-by-design.com

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- Piedmont Nursery (The Plains, VA) <http://www.piedmontnursery.com/>
- Sandy's Plants, Inc. Rare and Unusual Perennials (Mechanicsville, VA) <http://www.sandysplants.com/>
- Sassafras Farm (Hayes, VA) sassafrasfarm@verizon.net
- Southern Branch Nursery (Chesapeake, VA) <http://www.southernbranchnursery.com>
- Virginia Coastal Zone Management Program Plant Eastern Shore Natives Campaign <http://www.deq.virginia.gov/Programs/CoastalZoneManagement/CZMIssuesInitiatives/NativePlants/PlantsESNativesCampaignPartners.aspx>

West Virginia

- Enchanter's Garden (Hinton, WV) www.enchantersgarden.com
- Sunshine Farm and Gardens (Renick, WV) www.sunfarm.com

OTHER PLANT PROGRAMS AND RESOURCES

Anne Arundel County Planning and Zoning (Annapolis, MD) Will provide free marsh grasses (*Spartina alterniflora*) to AACO residents 410-222-7441.

SEEDS

- Ernst Conservation Seeds, 800-873-3321. 9006 Mercer Pike, Meadville, PA 16335, seeds of native grasses, wildflowers, wetland plants and shrubs; live stakes for streambank restoration, www.ernstseed.com
- Sylva Native Nursery and Seed Co., (Glen Rock, PA) www.sylvanative.com Native trees and shrubs

REGIONAL PLANT GUIDES

- National Wildlife Federation, searchable database by plant types and by state, with photos and detailed plant descriptions: http://enature.com/native_invasive/natives.asp
- Chesapeake Ecology Center, *Ecoscaping Back to the Future: Restoring Chesapeake Landscapes* (with examples of native plant gardens, rain gardens, xeriscapes), found under "EcoScaping:" www.chesapeakeecologycenter.org.
- U.S. Fish and Wildlife Service, Maryland native plant lists to download: www.nps.gov/plants/pubs/nativesMD/
- "Native Plants for Wildlife Habitat and Conservation Landscaping: Chesapeake Bay Watershed". On-line PDF <http://www.nps.gov/plants/pubs/chesapeake/>
- Society for Ecological Restoration (Mid Atlantic Chapter) <http://chapter.ser.org/midatlantic/>

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- Native Plant Center, Here you can find native plants of the same type, shape, color, size, and other desirable plant characteristics for creating attractive and more natural landscapes in your yard <http://www.nativeplantcenter.net/>
- Plant Native: a regional plant list for Maryland, Virginia and West Virginia. <http://www.plantnative.org/rpl-mdvawv.htm>

NATIONAL PLANT GUIDES

- Lady Bird Johnson Wildflower Center <http://www.wildflower.org/ladybird/>
- USDA Natural Resources Conservation Service, <http://plant-materials.nrcs.usda.gov>
- USDA PLANTS Database, (searchable), <http://plants.usda.gov/index.html>
- Society for Ecological Restoration <http://www.ser.org/home>
- Plant Native (searchable) <http://www.plantnative.org/>

STATE AND COUNTY GUIDES

District of Columbia

- The Botanical Society of Washington <http://www.wvnps.org/>
- Smithsonian National Museum of Natural History, Department of Botany <http://apsdev.org/welcome.html>
- National Arboretum, 3501 New York Avenue, NE, Washington, DC 20002, (202) 245-2726
- *Native Plants*: www.usna.usda.gov/Gardens/faqs/nativefaq2.html

Delaware

- Delaware Native Plant Society www.delawarenativeplants.org
- University of Delaware, "Plants for a Livable Delaware" <http://ag.udel.edu/extension/horticulture/pdf/PLD.pdf>

Maryland

- Maryland Native Plant Society, P.O. Box 4877, Silver Spring, MD 20914, www.mdflora.org
- *Native Plant Sources*: <http://www.mdflora.org/publications/nurseries.html>
- Anne Arundel County Native Plant Guide: <http://www.aacounty.org/IP/Resources/AANativePlants.pdf>
- *Native Plants of Maryland: What, When, and Where*: http://hgic.umd.edu/_media/documents/NativePlantsofMD.pdf
- Calvert County (Maryland) Native Plant Guide: www.co.cal.md.us/assets/Planning_Zoning/Environmental/NativePlantGuideOct07.pdf

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- Maryland Department of National Resources, State Forest Tree Nursery, 1-800-TREESMD www.dnr.state.md.us/forests/nursery
- Home and Garden Information Center, University of Maryland Extension, 800-342-2507, Available online, <http://www.hgic.umd.edu/>

New York

- New York Flora Association <http://www.nyflora.org/>
- Torrey Botanical Society <http://www.torreybotanical.org/>
- The Finger Lakes Native Plant Society of Ithaca <http://flnps.org/>
- The Native Plant Center at Westchester Community College
www.naiveplantcenter.org

Pennsylvania

- Pennsylvania Native Plant Society (State College, PA) www.pawildflower.org
- Botanical Society of Western Pennsylvania <http://www.botsocwpa.org/>
- Delaware Valley Fern & Wildflower Society <http://www.dvfws.org/>

Virginia

- Virginia Native Plant Society (Boyce, VA) www.vnps.org/
- Virginia Native Plants for Conservation, Restoration, and Landscaping
http://www.dcr.virginia.gov/natural_heritage/nativeplants.shtml
- Piedmont Virginia Native Plant Database (Albemarle County, VA)
<http://www.albemarle.org/nativeplants/>
- Virginia Eastern Shore Native Plant List
<http://www.deq.virginia.gov/Programs/CoastalZoneManagement/CZMIssuesInitiatives/NativePlants/NativePlantList.aspx>

West Virginia

- West Virginia Native Plant Society www.wvnps.org

NON-NATIVE / INVASIVE PLANT RESOURCES

- National Park Service, "Plant Invaders of Mid-Atlantic Natural Areas:"
<http://www.nps.gov/plants/alien/pubs/midatlantic/toc.htm>
- Ecology and Management of Invasive Plants Program, Cornell University, website with information on invasive plants, their impact on native species, and their control (particularly biological control) www.invasiveplants.net
- "*Invasive Species of Concern in Maryland:*" (Home and Garden Information Center, University of Maryland Extension)
www.hgic.umd.edu/media/documents/publications/invasive_species_list.pdf

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- Maryland Native Plant Society - Information on controlling non-natives, with lists of native plant alternatives,
<http://www.mdflora.org/publications/invasiveshandbook.html>
- The Nature Conservancy (Maryland Chapter) Information on the removal of specific non-native invasive plants,
<http://www.imapinvasives.org/GIST/ESA/index.html>