

Assessing Your Property

A good first step to helping the Chesapeake Bay is to walk around your lot and assess the site conditions. This simple and fast assessment of your site will help you determine which stewardship practices are best for your property.



Image of a typical suburban lot in Maryland with the planned stewardship practices plotted out (CL= Conservation Landscaping, BR = Rain Garden, PP = Permeable Hard-scapes, Green Dots = Trees).

Step 1. Map your Lot

Begin by obtaining a recent aerial photo of your property. You can do this by using Google Earth or <http://landserver.org/> also, many localities have great online resources for mapping your property. In some cases, you may want to simply pace off the boundaries of your property.

You can take the roof dimensions directly off your property deed. Most homes have a roof area around 1500 to 2500 square feet.

Next, draw the boundary dimensions of your property from above on a piece of graph paper (Appendix A), and then sketch in the roof, any decks, sheds or pools, the driveway and sidewalks, major trees, and any landscaping beds. The rest is usually turf.

You don't need to be a Rembrandt, but try to draw it to scale, using five or ten feet per square on the graph paper, depending on the size of your lot. Next, pace off (or measure) the approximate dimensions of all your hard surfaces and landscaping areas, and enter them into the table provided in Box A to determine how much hard surface you have.

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Box A. Basic Data on Lot Cover for My Home and Impressive Sketch			
LOT COVERAGE	Area: Square Feet	% of Lot	Sketch of Property
Hard Surfaces		28%	
Roof-tops	3360		
Driveway/Sidewalk	2790		
Pervious Cover		72%	
Trees/Landscaping	5500		
Lawn	10,130		
TOTAL	21,780		
Note: 43,560 square feet = one acre			

Step 2. Figure Out Your Natural Plumbing

It's pretty simple, water flows downhill. Most lots are graded to move rainwater away from the home and down to the street, or in some cases, the back yard. So your job is to define the flow path of runoff in your lot.



Start at the downspout to find its flow pathway across your property

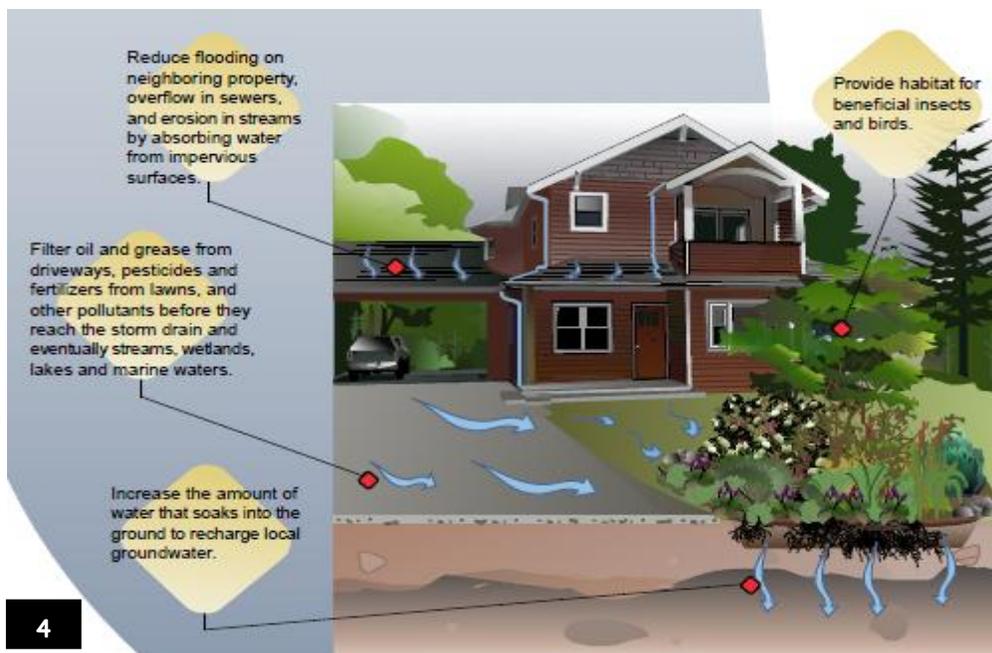
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Most lots have multiple flow paths, so start out by finding each of your downspouts, and look down slope to see where the water goes. Pay special attention to see if the flow path extends to your driveway and from there to your street. These areas are usually great candidates for stewardship practices because you can divert the runoff to them to soak up runoff and remove pollutants.

Some downspouts already flow over lawn, landscaping or trees and infiltrate into the ground. These downspouts are good, as the runoff is disconnected and never reaches the street or stream.

In other cases, the flow path from the downspout runs over a few feet of grass before reaching the street or driveway. These are often excellent locations for stewardship practices, such as rain gardens.

Lastly, there are a few cases where the downspout is plumbed directly to the street via an underground pipe (see Box B). With a bit of ingenuity, the underground pipe can be partially dug out, and replaced with a rain garden.



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Box B. Be a Downspout Detective



Downspouts discharging near driveways are usually connected to the street, and are prime candidates for locating a rain garden



This downspout is plumbed directly to the street, and would be quite easy to retrofit with a rain garden

This downspout is too far away from any pervious areas for a rain garden, but a rain barrel might work



Runoff from both of these downspouts travels at least 40 feet over grass which will usually disconnects them unless your lawn is very steep, These disconnected downspouts are often a poor candidate for a rain garden

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Step 3. Figure Out Your Other Plumbing

Underground utilities are definitely one of the great inventions of the 20th century, but they can complicate the design of your residential stewardship practices.

Things to locate on your lawn and avoid (and add to your sketch)		
Natural gas feeder line	Underground electric lines	Street right of way
Sewer lateral and cleanout	Cable and fiber optic lines	Septic field (if present)
Water lines and wells	Sump pump discharges	Overhead forest canopy

After all, you probably wouldn't want to blow up your house, create a gusher, back up sewage into your basement, electrocute yourself, or cutoff cable access to your entire neighborhood. I bet you didn't think a little digging could be so dangerous!

State	Resource	Contact Information
MD	Miss Utility of Maryland*	811 or 1-800-257-7777**
DE	Miss Utility of Delmarva	811 or 1-800-282-8555
DC	District One Call	811 or 1-800-257-7777
PA	Pennsylvania One Call System, Inc.	811 or 1-800-242-1776
VA	Virginia 811	811 or 1-800-552-7001
WV	WV811	811 or 1-800-245-4848
* For the Eastern Shore of MD call Miss Utility of Delmarva ** or use website link http://www.missutility.net/homeowners/		

Most states have "call before you dig" rules and provide a hotline to help you locate your underground utilities. The following table provides the contact information for individual Chesapeake Bay states however, in any state you can call "811" and you will be directed to your local call center.

In many cases you will need to call several days in advance so you should check with your specific state. More information about this free resource can be found:
<http://www.call811.com/state-specific.aspx>

Please note that Miss Utility and similar hotlines do not mark private utilities. You will need to scout your lawn to locate where utilities leave the street or right of way, and cross your yard to enter or leave your home. Box C provides some examples of "visual indicators" for locating underground utilities. You should try to mark these on your property sketch and work around them when locating the best area for your stewardship practices. In general, it is not advisable to install practices in your street right of way,

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since your local government and utilities have the right to dig it up for street improvements and utility repairs.

Box C. Visual Indicators for Areas to Avoid When Assessing Your Yard for Stewardship Practices		
		
Water Lines	Natural Gas Lines	Sewer Lines
		
Underground Cable	Storm Drain Manhole	Sewage Pipe Cleanout
		
Basement	Sump Pump Discharge	Street Right of Way

Step 4. Assess Soil Quality in Your Yard

Healthy soils are the foundation for any vigorous lawn, conservation landscape, or rain garden, so it is a good idea to do some simple tests to assess your soil quality.

Take a soil test in the areas of your lawn where grass doesn't grow very well. Take a trowel and dig 8 or 10 thin slices from the top 2 or 3 inches of soil in your lawn "problem areas". Mix the slices together so that you have a total sample of between 1 and 2 cups. Remove any rocks, debris or grass thatch, and put them into the sample bag provided by the testing lab.



A list of testing labs in the Bay watershed can be found at the end of the following link.

<http://www.hgic.umd.edu/content/documents/SelectingandUsingaSoilTestLabwithchart209.pdf>.

The cost for most soil tests is about \$10 to \$12, and most labs can e-mail you the results in less than a week and recommend any needed soil amendments (such as lime) to improve growing conditions.

Additional soil information may be necessary for implementing specific stewardship practices and can be found in those sections of the document.

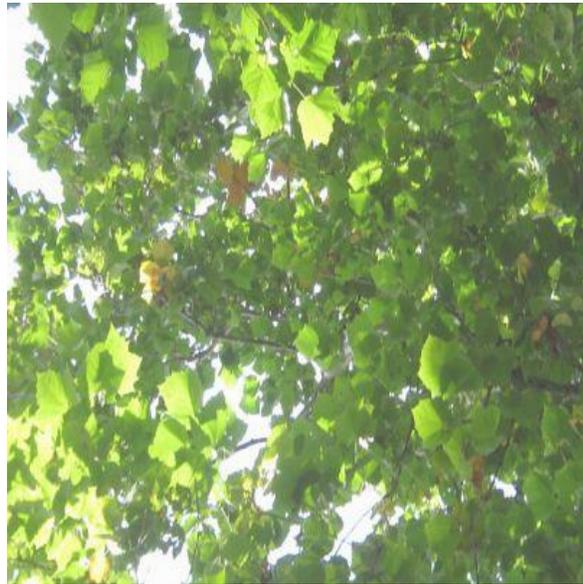
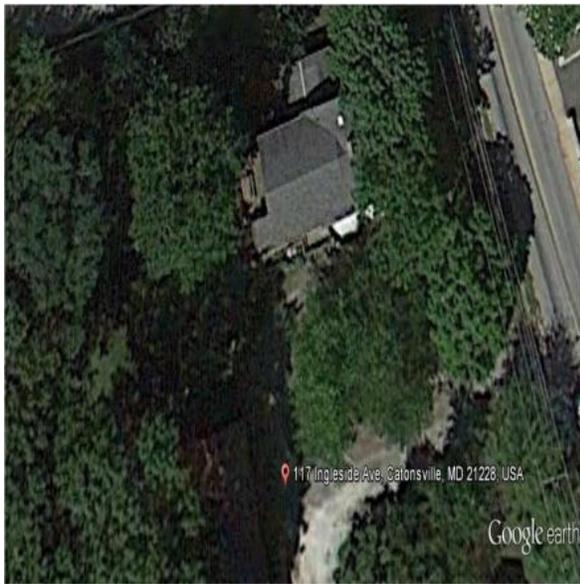
Step 5. Check Your Solar Exposure and Tree Canopy

Go back to your aerial photo of your yard that you retrieved in Step 1, and check to see how much tree canopy exists over your yard. If you have less than 25% tree canopy, you may want to consider planting more trees, since they add to the market value of your home and can help reduce your heating and cooling costs. Some localities and states have tree planting programs that will pay you to plant more trees. More information can be found in the Tree Planting section of this document.

There are a few tips to locate the best spots to plant a tree and figure out which tree species will grow best under your yard conditions and landscaping preferences. Not to worry, the Center for Watershed Protection has a handy reference called *Part 3 Urban Tree Planting Guide* which can help you quickly figure out which tree species you want and where to plant them. The guide can be accessed at:

http://www.na.fs.fed.us/pubs/uf/watershed3/urban_watershed_forestry_manual_part3.pdf

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The next task is to determine the solar exposure of your property to see if the plants will receive full sun or will be partially shaded. Your solar exposure is determined by three factors: the orientation of your property in relation to the east-west path of the sun, shading by the existing tree canopy in your yard (and often your neighbors), and the shading effect of your home.

Often, North or West-facing areas of your yard will be shadier, but you can do a quick shade analysis and add it your property sketch by clicking: <http://www.thegardencontinuum.com/blog/bid/28513/How-much-sun-does-your-garden-have>. The shade analysis will help you decide to buy sun or shade tolerant plants for your yard.

Step 6. Pulling it all Together in a Plan

Now you have all the basic data needed to make your property more Bay friendly, and to choose the right stewardship practices that meet your environmental objectives and your lawn and landscaping preferences. The next several sections describe how to design and install the different options for residential stewardship practices.

Appendix A

Graph Paper for Property Sketch

