Wouldn't we all love to have a lush, green lawn? However, a lush green lawn usually comes at a large environmental and public health cost.

But it doesn't have to be that way.

In this article, we'll cover how to achieve an attractive "stormwater-friendly" lawn without excessive fertilizer, water, or labor. If you care about protecting water quality, keep reading to learn some of the best ways to make small changes in your lawn-care routine in order to reduce pollution in your local streams and the Chesapeake Bay.

What Does Lawn Care Have To Do With Water Quality?

In urban areas, stormwater carries pollutants directly into Virginia's water resources through the storm drainage system. Unlike our household wastewater, stormwater doesn't go through a treatment plant first, but is dumped directly into creeks, wetlands, and the Chesapeake Bay. Common pollutants that can wash off our yards and streets include:

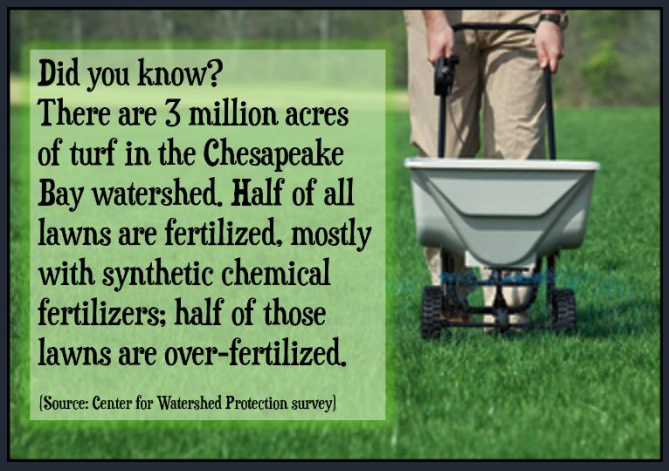
Phosphorus: From tree leaves, grass clippings, soil erosion, fertilizer, pet and wildlife waste

Eroding soil: From exposed soil on construction sites, sparse lawns, and unprotected garden beds set close to hard surfaces (like streets, sidewalks, and driveways)

Bacteria: From pet and wildlife waste, and failing septic systems

Toxins: Oil, paint, cleaners, etc. spilled on streets, sidewalks, and driveways. Or even worse… dumped directly down storm drains.

We count on the Chesapeake Bay to be clean for our recreational activities and much more. Is the water that runs off your yard the same water you want your seafood to come from?



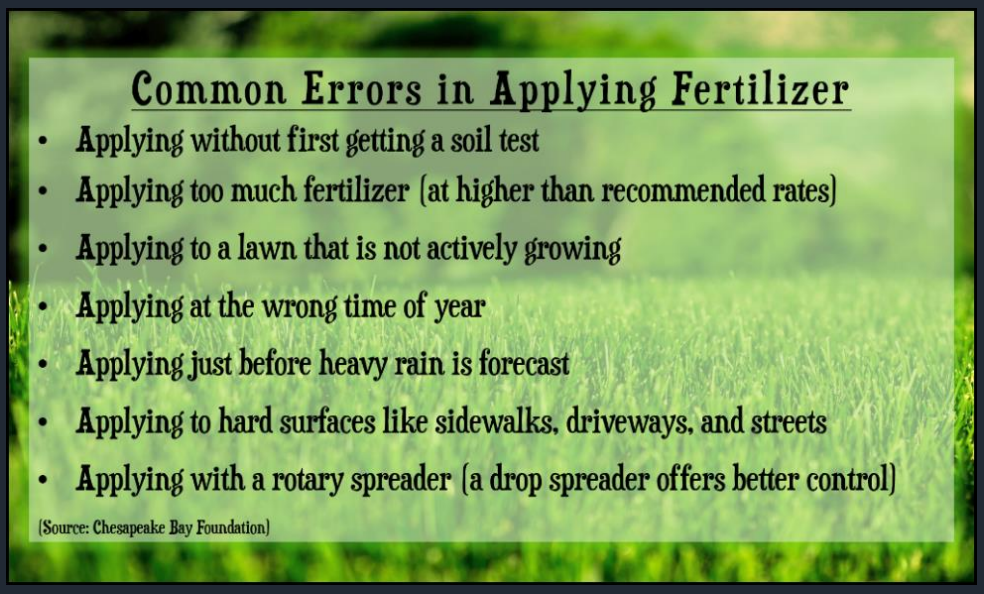
You can help reduce the pollutants entering the Chesapeake Bay and maintain a healthy lawn by following these ten tips!

1. Find Out What Your Lawn Needs: Test Your Soil

Testing your soil is one of the most important lawn care steps, and one of the most frequently ignored. Soil sample kits can be picked up at a local garden store or a local Virginia Cooperative Extension office.

2. Feed Your Lawn By Feeding the Soil

Healthy soil is full of life- and both fertilizer and compost feed the billions of bacteria, fungi, worms, and microscopic organisms that make nitrogen and other nutrients available to feed your grass. By using compost, you are recycling materials and nutrients that might otherwise end up in a landfill.



3. Pick the Right Grass Seed

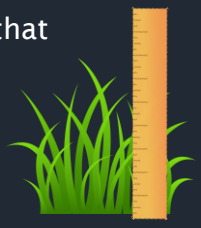
We are in a transition zone between warm season and cool season grasses. Use this chart to help you decide what lawn practices are best for your grass type:

Recommended Cultivars, Mowing Heights, and Fertilizer
(source: University of Maryland Cooperative Extension)

Type of Grass	Mowing Height (inches) Spring/Summer	Fall/Winter	If Recommended, Apply Slow-Release Fertilizer*
Tall Fescue	2.5-3.5	2.5	Sept/Oct
Fine Fescue	2.5-3.5	2.5	Oct
Perennial Ryegrass	2.5-3	2-2.5	half in May half in Nov
Kentucky Bluegrass	2.5-3	2-2.5	half in May half in Nov
Bermudagrass	0.5-1	0.5-1	June, July
Zoysiagrass	0.5-1	0.5-1.5	June

*In place of slow-release fertilizer, compost may be applied in spring and late summer.

4. Skip the Bags



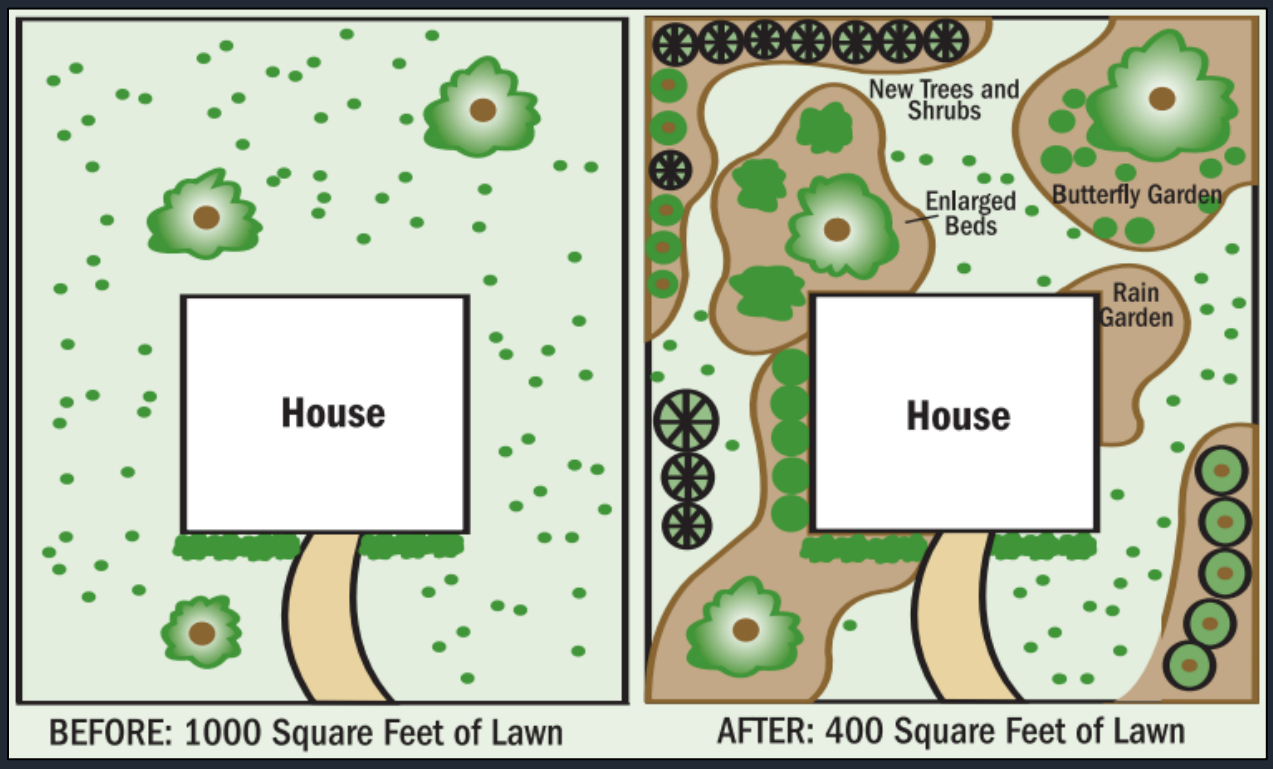
Mow high and don't bag your grass clippings. Raise the blade on your mower so that you can cut the grass 2½" to 3½" high. Taller grasses shade out weeds and help prevent their germination, allow roots to reach deeper, and stay green longer during drought. Deep roots also improve water infiltration and reduce runoff! After mowing, leave the grass clippings on the lawn. They will provide up to half of the nitrogen your lawn needs each year, and it's FREE!

5. Don't Skip the Sweeping

Grass clippings and leaves cause water quality problems when they enter our waterways. Their presence results in unwanted and uncontrolled growth of algae. Sweep, rake, or blow leaves and grass clippings back onto your lawn. You will be preventing leaves and grass clippings from entering nearby storm drains, while also helping to return nutrients back into your yard!

6. Give Yourself Less Area to Mow

Reduce your lawn size and increase native plant and wildlife diversity by enlarging flower and shrub beds, creating a rain garden, or extending mulched areas around trees. Not only will you have less area that you will need to mow, but you'll also be helping to improve water quality and reduce runoff.



(Source: CBF.org)

7. Reconsider How You're Dealing With Weeds, Insects, and Animal Pests

Weeds can be a sign that your soil has low fertility, has a low or high pH, is compacted or is stressed in other ways. There are non-toxic ways to control weeds in your yard, such as removing weeds with a shovel or hand tools or spraying weeds with 10%-strength vinegar solution (spray only the weeds).

Moles vs. Voles: Moles eat grubs and other underground insects that can damage your lawn and garden. They also aerate the soil, so think twice about eradicating them from your garden. Alternatively, voles feed on the roots of all kinds of plants, but not lawn grasses. If you have a vole problem, you can reduce their habitat by cutting very tall grasses and using thin layers of mulch.

8. Take Care of Your Lawn Equipment

Hundreds of thousands of gallons of fuel are spilled each year when mowers are refilled (Chesapeake Bay Foundation). Take care to not spill while refilling your lawn equipment, or have some way to capture and mitigate spills before they can reach any soil. It is also important to keep mower blades sharp to reduce stress on your grass. Sick grass makes the lawn more susceptible to insects and diseases.

9. Water Smart

In our area, it isn't uncommon to experience a summer drought with high temperatures. It won't hurt your lawn to let it go dormant in the summer –it may appear brown at the top for a little while, but its roots will remain healthy. However if you do choose to water, use these tips: water only as needed; water in the morning to reduce evaporation; water slowly and deeply; and avoid watering hard surfaces like your driveway or sidewalks.

10. Be A Storm Drain Hero

Have a storm drain nearby? Do your part to protect the drain. Keep it free of litter and leaves by sweeping and removing any debris. This will also prevent water from backing up in the gutter.

Now that you know how to transform your lawn in a "stormwater friendly" lawn, you can help make the Chesapeake Bay be a cleaner and healthier place. You'll also be helping the Bay meet its "diet" goals for the Chesapeake Bay TMDL.

Fall is coming, and now your lawn can be ready!

Wondering what NASA Langley is doing to ensure a healthy Chesapeake Bay? Be on the lookout for December's stormwater article to find out!