

# Spring Greening: Protecting Water Quality at Home

Spring is just around the corner. Soon it will be time to sharpen those garden tools and make plans for our home landscapes. Spring is also a time for radio commercials from fertilizer companies urging us to “feed your lawn” and put down the latest lawn makeover products. But there is something else to think about in this busy time, and that is the impact our manicured lawns might have on our local waterways. There are many ways homeowners can help protect our local waters and the Chesapeake Bay. The following sections highlight some easy tips for improving our landscapes while protecting water quality.

## Soil Testing

Before you can even think about changes to your lawn treatment or landscaping, you need to get your soil tested to find out what type of soil you have and whether you even need to add fertilizer. There are several options for soil testing, and there are easy instructions for how to sample your soil and send for testing. The following link provides useful information on how to collect soil samples.

### Recommended Soil Testing

#### Frequency:

**New lawns:** test after grading, before seeding

**Vegetable gardens:** test every three years

**Established lawns, landscape plants, and perennial gardens:** test every three years

Virginia Cooperative Extension, Soil Sampling for the Home Gardener:

<http://pubs.ext.vt.edu/452/452-129/452-129.html>

## Understanding Fertilizers

All fertilizer products are labeled with three numbers indicating the percentage of nitrogen, phosphorus and potassium (N, P, K), the three main plant nutrients. Nitrogen promotes grass shoot growth and leafy top growth; phosphorus encourages root, flower and fruit production; and potassium fosters hardiness, disease resistance and durability. A fertilizer is referred to as “complete” when it contains all three plant nutrients. A bag of 15-10-10 fertilizer, for example, contains 15 percent nitrogen, 10 percent phosphorus and 10 percent potassium. In terms of weight, a 10-pound bag of 15-10-10 fertilizer contains 1.5 pounds of nitrogen. Some plants require more of some nutrients than others. Root crops, such as carrots, garlic and radishes require less nitrogen than leafy crops such as





lettuce or spinach. Fertilizer should always be applied in accordance with soil test results. Remember, too much fertilizer may burn your lawn or landscape plants. Lime may be applied to acidic soils based on soil test results. Limestone does not pollute water if it is used and handled according to the manufacturer's instructions. Most soils in our area provide all the phosphorus that established lawns need. When fertilizing lawns or home landscapes, look for products that contain Water Insoluble Nitrogen, abbreviated "WIN." This means that the nitrogen will release slowly over time. Products labeled with the terms controlled release nitrogen, sulfur coated urea, IBDU, urea formaldehyde or resin coated urea also indicate slow release forms of nitrogen. Cottonseed meal, blood meal, bone meal, fish emulsion, compost and manures are examples of natural fertilizers. Compost and manures also add valuable organic matter to the soil.

### Mow to the Right Height

Mowing lawns to the proper height can reduce weeds by as much as 80 percent. Low and infrequent mowing can damage your lawn as well. Remove no more than 1/3 of the grass height each time you mow. For example, to maintain a 3-inch height, do not let the grass get much taller than 4 ½ inches. Sharpen lawn mower blades in the spring. A dull blade can damage grass.

### Select the Right Grass

Select grasses that do not require substantial fertilizer applications. Check out new, improved varieties of tall fescue and bluegrass. Ask for certified seed—it's worth the extra effort and cost. If you don't see a tag indicating certification you may be getting too many weeds with your seeds.



### Fertilize at the Right Time, Not When Fertilizer Companies Advertise

Cool season grasses (fescue, bluegrass, ryegrass) should be fertilized in late summer or early fall to help the grass recover from summer stresses. Nitrogen uptake in the fall is at its peak for cool season grasses. Zoysia grass and Bermuda grass are warm season grasses that should be fertilized in early summer when they are growing most actively.

#### It's The Law

Former VA Gov. Bob McDonnell signed into law a bill that prohibits the sale, use and distribution of lawn fertilizer containing phosphorus. The legislation went into effect on Dec. 31, 2013. The law also prohibits the sale of deicers containing urea, nitrogen or phosphorus. Additionally, golf courses must implement nutrient management plans by 2017. The law will prevent an estimated 230,000 pounds of phosphorus pollution from reaching the Chesapeake Bay and Virginia rivers each year. This is 22 percent of Virginia's 2017 phosphorus reduction goal.

The law also requires lawn service companies to apply fertilizer according to nutrient management standards. It requires that lawn fertilizer packages are clearly labeled with information on how to properly fertilize and reduce polluted runoff.



### Recycle Grass Clippings

Grass clippings are a free source of nutrients and will not cause thatch problems. “Grasscycling” can reduce your lawn’s nitrogen requirement by 50 percent. If clippings are too long, they may clump. Rake up excessive clippings for mulch or compost and mow more frequently. Sweep or blow grass clippings and other lawn debris away from street gutters.

### Aerate the Soil

Aerate the soil to reduce compaction. Lawn care professionals can provide this service or you can rent an aerator from a lawn and garden supplier.

### Let Lawns Go Dormant

Some grass species have natural dormancy periods and will turn brown. Applying fertilizer to force a lawn to turn green during its dormancy period can damage the grass. It is safe to let an established lawn go dormant in summer. Dormancy is a natural survival mechanism and lawns usually recover when the rains return. Dormant lawns continue to protect water quality by holding the soil and nutrients in place.

### Fertilizing Trees and Shrubs

Try to use native plants which require less fertilizer and often have a better survival rate. Healthy trees do not need fertilizer. Undersized leaves and short new twig growth could indicate a need for fertilizer. If a fertilizer is needed, choose one with a slow release form of nitrogen. Apply fertilizer to the area under the tree, beginning at the midpoint between the trunk and the drip line and extending approximately 8 feet beyond. The recommended rate is no more than 1 pound of nitrogen per 1,000 square feet. Do not use fertilizer spikes which can burn tree roots.

### Fertilizing Gardens

Choose a level site for a garden to help avoid fertilizer runoff after heavy rains. Use organic mulches to improve water infiltration and keep rainwater from splashing. Use compost to add valuable organic matter, improve soil structure, and enhance the effectiveness of fertilizers. Maintain a grassed area around gardens to trap sediment runoff, which can carry nutrients to nearby waterways. Plant crops with similar fertilizer needs together to help prevent over-fertilization. Do not broadcast fertilizer over the entire garden. Instead, apply fertilizer along rows of seeded vegetables or in a circle around each plant to reduce the amount of fertilizer used. Substitute local sources of composted manure for manufactured fertilizers.

