

## Protect Rock Creek This Spring with Proper Fertilizer Use

Whether you're a Weed Warrior checking twice for spring ephemerals in the area where you serve or a park visitor enjoying the warm weather this week, it's clear that spring is (nearly) here! Just as the way you behave when you visit the park protects Rock Creek, so do the choices you make in your backyard, deck, or shared garden space.

As spring gardening kicks into gear, you can make smart choices to protect Rock Creek by applying fertilizer sparingly. Fertilizers are commonly used to support lawn and garden growth, and not all are necessarily harmful to the environment—but how and which ones you select can impact your garden, as well as the creek and habitats for wildlife.



*Fertilizers often contain high levels of nutrients that, when introduced into the environment, can have harmful effects on local flora and fauna.*

Fertilizers contain high levels of nitrogen, phosphorus, and potassium—three elements that plants need in abundance in order to grow. Spreading more fertilizer on your plants than they need means that some of that fertilizer will not be absorbed, and these **excess nutrients** will instead be swept up by rain and carried into our sewer systems, storm drains, or directly into streams like Rock Creek and its tributaries.

Algae, like the plants on your lawn, love fertilizer, and the same ingredients that help plants grow will do the same for algae in our waterways. Accelerated growth of algae creates algal blooms which consume, in addition to the nutrients in fertilizer runoff, huge amounts of oxygen. The phenomenon of algal blooms creating underwater zones of low oxygen concentration is called eutrophication, and eutrophication is a serious threat to the stability of aquatic ecosystems. It can create localized “dead zones” where the dissolved oxygen content is so low that other organisms cannot survive.

Some species of algae, including some found in Maryland, produce toxins. Under normal conditions, the toxins produced by these algae species occur in small enough concentrations that other species are unharmed. However, during a large bloom, these toxins can accumulate to the point where organisms, including humans and dogs or other pets, become sick if they come into contact with the water.



*A warning sign for toxic blue-green algae at Lake Needwood in 2019. [Photo credit: WUSA]*

There are a number of ways you can reduce your chance of contributing to fertilizer runoff. Most importantly, take extra care to only apply the amount of fertilizer you need. Most store-bought fertilizers label the amounts of nitrogen, phosphorus, and potassium in the mixture. Follow the recommended usage on the package as best you can, and sweep up any excess fertilizer that lands on impermeable surfaces (such as a sidewalk or walkway; these surfaces create runoff during rain).

In addition to using the right amount, choosing the right fertilizer for your needs is important as well. Both Montgomery County, Maryland and Washington, DC have fertilizer laws in place to promote proper application. These laws work to address some of these runoff nutrient concerns, by not allowing fertilizers with phosphorus (unless a soil test is completed first), discouraging use near any body of water, and only permitting use during a specific window of time in the year. (For more information on these laws, find DC guidance [here](#) and Montgomery County guidance [here](#).)

You can also take a more organic approach to lawn care to manage your impact. Composting food waste creates nutrient-rich dirt that can be spread on garden beds and lawns. Similarly, leaving lawn clippings out after using your mower will fertilize the soil as the clippings decay. These techniques will save you money and reduce your carbon footprint by reducing purchases, and help develop a circular approach to lawn care and nutrient cycling in the micro-ecosystems of your backyard.

While we're excited to see so much new growth around our homes and in the park with the coming of spring, remember that your home gardening and lawn care directly impact the health of our local streams. By changing your everyday behaviors, we can all work together to protect and restore our beloved Rock Creek.