

Why Phosphorus Matters...

Phosphorus and nitrogen are factors which promote algae growth. Other factors are sunlight, warm weather, low turbulence, or cloudy water with low light levels.

What most lawn owners don't know is that the majority of Indiana soils already contain enough phosphorus for a healthy lawn, so most lawns don't need the extra food. The excess phosphorus in lawn fertilizer runs off with the storm water across lawns, roads and woods into streams and ditches, and eventually into reservoirs and lakes.

Phosphorus is a **limiting factor**, which is to say that the growth of algae is more dependent on the amount of available phosphorus than any other contributing factor.

Stormwater and Sediment

Stormwater pollution comes from a variety of sources. The single largest contaminant in our waterways today is sediment (U.S. EPA).

There are many types of land use which contribute to erosion and sedimentation but the greatest loss is earth-moving. During the course of development, without proper soil and water protection, the loss can be as high as 5 tons per half-acre.

Lawn maintenance requires a certain amount of bare soil and most people use fertilizer to "jump start" their lawn in the spring. Any nutrients not taken up by your lawn or garden ends up attaching to soils and washing off into a storm drain in the next rainfall.

This added burden contributes to ideal conditions and ample nutrient source for Blue-green algae to form.

Blue-green algae

There has been a lot of attention on the amount of algae appearing in our lakes, ponds and reservoirs.

The amount of excess phosphorus and nitrogen from fertilizers reaching our waterways is what leads to most of these "blooms."

While there is no doubt that the largest single user of fertilizers is the agricultural community, there is also another group that is a large contributor -the urban and suburban landowner.

Without proper application, a lot of this fertilizer is washed from lawns into the storm drains without treatment.

This leads to an over-abundance of nutrients in the waterways and causes the algae to grow. In many ways, we are limiting our own enjoyment of the lakes, ponds and reservoirs.

This also impairs the water quality when we draw from the rivers and reservoirs for our drinking water.

The bigger question is - why would we add to the amount of contamination that we pay a water utility to clean?



Blue-green algae
Photo: T. Bridgeman/

Test Your Soil

Don't waste time and money!

Test you soil for nutrients and pH to determine what kind of care your lawn and garden need.

You can purchase a home test for soil pH, nitrogen, phosphorous, and potassium at a garden center or contact a commercial testing service if you would like more detailed or special tests.

What you should know about...

Fertilizer

A Reference Guide for Residents



www.acwater.org

You Are the Solution to Storm Water Pollution!

ACPWQ



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FERTILIZER APPLICATION

Methods to Reduce Fertilizer Runoff

- Apply fertilizer only to target the desirable plants.
- Reduce excess by applying fertilizers at the rate of plant uptake.
- Apply small quantities of fertilizer several times during the growing season.
- Use natural, organic or slow release organic fertilizers.
- Grass clippings from mowing are full of nutrients; use a mulching mower and cut no more than the top third of the grass.
- Always read directions and follow them. It is better to know your soil test results.
- Most fertilizer applied on windy days or before a storm event is lost-save your time and money.
- Any fertilizer on driveways, sidewalks, and streets can wash into storm water drains.
- Above all, apply fertilizer carefully.
- Avoid lakes, streams or ponds.



Look for the zero in the middle for no phosphorus fertilizer



If we can all work toward knowing the needs of our soil better, our water quality will improve as a result.

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The solution to phosphorus runoff is to control the source.



Using phosphorus-free lawn fertilizer is one easy way anyone can contribute to better water quality-regardless of where you live.

Remember the 4 "R's"

Right Source-The right type of fertilizer

Right Rate-The recommended coverage rate

Right Time-The period of time where the nutrients can be taken up without loss to wind or water

Right Place-The area only where the soil needs the type of applied nutrient

For more information on Blue-green algae and its effects, go to...



Indiana Department of Environmental Management

www.in.gov/idem

Choose Native Plants

Native plants are well-suited to their area, requiring less water, fertilizer and pesticides than other species. Their lower maintenance and high conservation value make them a good choice for your yard.

Ask your local garden center for some native plant choices.

You Are the Solution to Storm Water Pollution!

Unlike agricultural application, the city landscape is a lot of land divided into small parcels under the care of many thousands of individuals.



Anyone for a swim?

Each of these individuals has a different idea on how their land is used and how to achieve that perceived "perfect lawn look."

Lawn Fertilizer is usually broadcast without much regard to cost, type, labor, weather or location. Many homeowners read and follow the directions on the bags of fertilizer.

As a result, these landowners tend to overuse chemicals.

More likely than not, all the treatments being applied are done without knowing their soil needs.



Allowing pet waste to sit on your lawn also adds a lot of e. Coli and excessive nutrients in our waterways.

Use Biosolids & Compost

Biosolids can be applied as fertilizer. They are nutrient-rich organic materials, resulting from the wastewater treatment process. Applied to land before planting, they can provide nutrients vital to growth and reduce the chemical fertilizers needed.