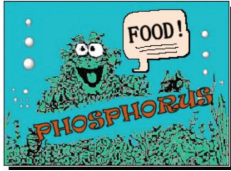


What Happens to Nutrients in Water?



The extremely high level of P often found in lawns of urban neighborhoods are likely the result of residents frequently applying P-fertilizer when it was not needed.

When it rains, excess fertilizer from lawns may be washed through streets and storm drains to nearby lakes and streams. Plant nutrients that reach lakes and streams. This starts a process called eutrophication, or over production of algae and aquatic weeds. Such “blooms” of algae can use up the oxygen in the water. Extreme cases can lead to fish kills.

The eutrophication process is very difficult, and expensive, to stop. Once excess nutrients enter a lake, they cycle between bottom sediments and the water. This continues long after the source of the nutrients has been eliminated. Like many other problems, the best cure is prevention.



Nutrient Pollution Prevention



To minimize water quality problems, it is important to get a soil test and apply fertilizer at the proper time and rate, specific to the type of plant and its individual needs. Low P or no P fertilizers should be used if soil test shows P is adequate in the soil.

For more information about proper soil fertilization, contact your local County Office of the OSU Cooperative Extension Service. Ask for the Oklahoma Homeowner's Handbook for Soil and Nutrient Management E-1003 or OSU Soil Test Interpretation Fact Sheet PSS-2225.

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Responsible Lawn Care

Protection for Your Creek or Lake



L-346



Too Much Lawn Fertilizer Causes Water Pollution



Most people don't think of adding a little extra fertilizer to their own yard or land-scape as a pollution source. However, when a whole community adds that little extra, the cumulative effect is a very real threat to water quality. A recent study of urban lawns in Stillwater Oklahoma, suggests that may be the case.

Fertilize Responsibly

All plants, including grasses, need 16 essential nutrients. Most of these are plentiful in the soil. Nitrogen (N), phosphorus (P) and potassium (K), however, may be depleted by removing grass clippings from a lawn or harvesting a garden and soils cannot provide



enough. For this reason, most commercial fertilizers contain all three of these nutrients

Nitrogen, a water soluble nutrient responsible for lush, green color in plants and grasses, is generally depleted first.



The problem is that fertilizers high in N may contain more P than a lawn or garden needs. As a result many lawns and gardens build up P in the soil, becoming a source of pollution.

Soil Testing Gets it Right



A soil test measures the ability of soil to provide nutrients to plants. This analysis takes some of the guesswork out of fertilizer application.

Soil test results come with recommendations for the type and quantity of nutrients needed. The table below lists recommended soil test levels to support most Bermuda grass lawns.

Recommended Soil Test Values	
pH	5.5-7.0
Nitrogen (N)	21-40 lb/ac
Soil Test P Index	65-120 lb/ac
Soil Test K Index	250-350 lb/ac

Professional Help

A soil test is a good idea even if a professional service manages your landscape.

Generally, professional lawn services are good for water quality. They split fertilizer applications over several visits, reducing the potential for excess nutrients to run off to lakes and creeks.

However, landscape businesses may treat all lawns the same. They don't usually do a soil test and modify the fertilizer blend unless the customer expressly asks for it.

Individual lawns have individual needs. Requesting a soil test can help you get more personalized lawn care service and protect the environment.



The Stillwater Creek Project

In August 2003, 122 lawns from two Stillwater, Oklahoma neighborhoods were sampled and analyzed. Both neighborhoods had lakes that were green with algae. The study showed many lawns were over-fertilized, particularly with respect to P. In fact 61 percent were above the recommended P-value, with 18 percent over 300 which is considered excessive!

