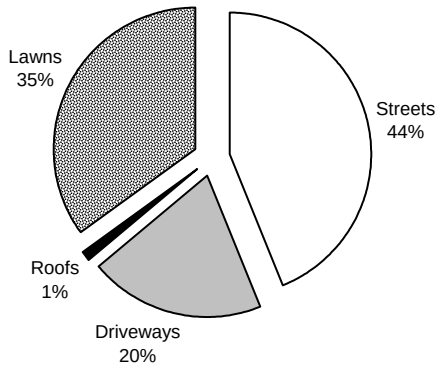
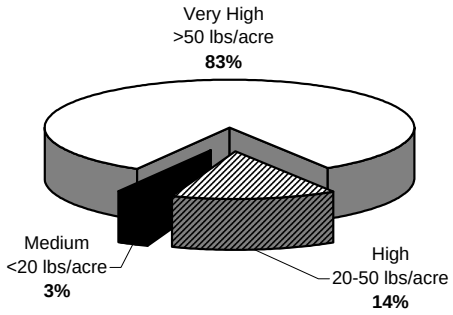
GREEN LAWNS - GREEN LAKES
THE PHOSPHORUS CONNECTION

Homeowners in the Twin Cities Metropolitan Area apply over six million pounds of phosphorus fertilizer to lawns each year. The fertilizer helps to keep lawns nice and green. Unfortunately, the phosphorus also helps to make lakes nice and green during the summer, which diminishes swimming, boating and fishing for many people. Recent studies have shown that 50 percent of the phosphorus in runoff from residential areas comes from lawns. Most of the rest comes from sources such as leaves, grass clippings and sediment on hard surfaces. It takes only one pound of phosphorus to grow 500 pounds of algae.

Urban Residential Runoff
Total Phosphorus Sources

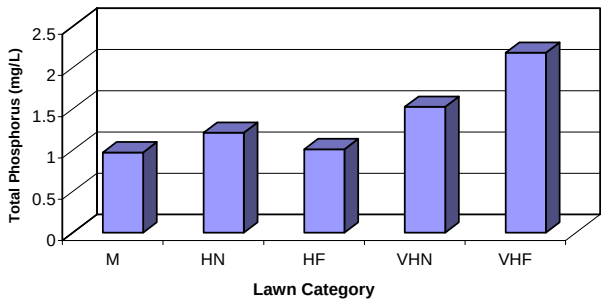


Soil Phosphorus Fertility Rating
Summary of 181 Study Lawns



The unfortunate thing about all this fertilizer use, is that it is unnecessary. Soil tests have shown that most lawns, almost 80 percent, have very high levels of phosphorus and do not need any additional phosphorus fertilizer. The accompanying figure shows the results of 181 soil tests done on lawns in Plymouth, Maple Grove, Minnetonka and Eden Prairie. Similar results have been documented throughout the metropolitan area.

Average Phosphorus Levels in Lawn Runoff



When phosphorus fertilizer is applied to lawns with very high levels of phosphorus, much of it runs off of the lawn into the street where it can be carried into lakes, streams, and wetlands. The graph shows the concentrations of phosphorus in runoff water from lawns with different fertility levels and fertilizer application practices. As the graph shows, much more phosphorus runs off of very high fertility lawns than other lawns. This is not surprising, applying phosphorus fertilizer to high fertility lawns is like pouring coffee into a full cup, some of it is going to spill out.

In fact, a lot of the phosphorus applied as fertilizer is spilling out of our lawns. The soil particles can only hold so much before the excess begins to run off. Approximately 25 pounds of phosphorus is added to lakes, wetlands and streams each year from a 100 acre residential development. It can cost over $5,000 per year to remove this phosphorus using ponds, street sweeping and other management practices.

We can all help to improve our lakes, streams and wetlands by not spilling phosphorus into rainfall runoff by doing the following:

Have a soil test done on your lawn before adding fertilizer.

Aerate your lawn each year.

If you fertilize, do it in the fall and sweep up any granules that land on hard surfaces.

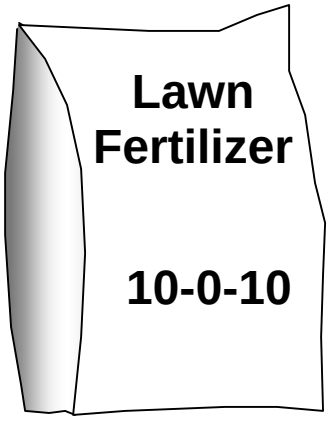
Keep grass clippings and leaves off of the street so they can=t wash into the stormsewers.

USE ONLY PHOSPHORUS FREE FERTILIZER ON YOUR LAWN!!!!!

Phosphorus free fertilizer can be purchased at many locations including the following:

Dundee Nursery	Bachman=s Nurseries
Otten Brothers	Mills Fleet Farm
Hennepin Coop	Linder=s Garden Center
City of Plymouth	Home Depot Stores

LOOK FOR A FERTILIZER BAG WITH A ≅0" FOR THE MIDDLE NUMBER.



Source: John Barten, Hennepin Parks, 1999