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Too much phosphorus is not a good thing

What harms water quality?

Nutrients such as phosphorus and nitrogen come from sediments (eroded soil), manure, pet wastes, improperly maintained septic systems, fertilizers, grass clippings and leaves.

Phosphorus, whether from natural sources or commercial fertilizers, is plant food. Too much phosphorus in our lakes causes excessive aquatic plant growth and algae blooms (when lakes turn green).

Excess algae can reduce desirable bottom-rooted plants by blocking sunlight. When algae, plants and other organic materials decay at the bottom of lakes, oxygen is depleted in the water, making it difficult for fish and other aquatic life to survive. Reduced oxygen levels also contribute to winter fish kills in shallow lakes.

Phosphorus provides the fuel algae need to transform lakes into a thick, smelly green soup. Where it takes 20 parts per million of soil phosphorus to grow healthy turf, 25 parts per billion (a quantity 1,000 times smaller) can promote excessive algae growth in lakes. One pound of phosphorus can support 500 pounds of algae.

Most Wisconsin lawns and soils already contain adequate -- and often excessive -- amounts of phosphorus. Although the amount of phosphorus in Wisconsin soils can vary, many residential lawns already have more than enough phosphorus to support a healthy lawn. Because plants do not absorb more fertilizer than they can use, your lawn does not benefit from phosphorus fertilizer if there is already a sufficient amount of phosphorus in the soil. Healthy lawns can be maintained with phosphorus-free fertilizers.

A healthy lawn needs 20 parts per million of phosphorus. The University of Wisconsin Soils Lab data finds agricultural soils in every Wisconsin county are above 20 (average is 53 ppm). Recent data estimates phosphorus levels on residential Wisconsin lawns have, on average, twice the amount of phosphorus (105 ppm) than the average farm field, which is five times more than necessary for healthy lawns.

Phosphorus-free fertilizers are available at a comparable cost to phosphorus fertilizers. (Locally, Ace Hardware and Green's Garden and Lawn Center carry phosphorus-free fertilizer; additionally Stay-Green Sprinkler Systems is a lawn service that uses it.) The amount of nitrogen, phosphorus and potash in a bag of fertilizer is shown by a series of three numbers on the package. The middle number indicates the amount of phosphorus the fertilizer contains. Look for the middle number of "0" to be sure you are buying phosphorus-free fertilizer.

Others steps you can take to help protect our lakes:

- Respect the shoreline -- no fertilizer or mowing within a 35-foot buffer zone.
- Install barley straw bags under your pier or along your shoreline.
- Use rain barrels, rain gardens and porous materials for driveways, patios and parking areas. Direct gutter spouts onto your lawn or landscaping (ideally a rain garden), not onto hard surfaces.
- Inspect and pump your septic system on a regular basis (at least once every three years).

For more information, call the Tri-Lakes Management Office at 325-3250.

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