Fertilizer impact on water quality

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Spring is the time to get outside and ready our landscapes for growth. It is therefore important to know how our landscaping practices affect the quality of our water. Our yards can have a positive impact on water quality by slowing and filtering runoff water, or it can contribute to water quality problems. Here are some of the things you can do to protect water quality:

- Redirect downspouts to vegetated areas.
- Select landscape plants that are well adapted to your site and have low water needs.
- Mow grass high and often so clippings and their nutrients can be recycled.
- Water your lawn on an "as needed" basis, rather than a calendar schedule.
- Adjust sprinklers to avoid watering paved areas.
- Use slow release fertilizer, and only the amount that is recommended. More is not better.
- Treat specific weedy areas rather than resorting to general "weed and feed" mixtures.
- Keep fertilizers and pesticides off sidewalks and driveways.
- Wash off fertilizer application equipment on the lawn, not on the sidewalk or driveway.
- Don't fertilize prior to a predicted rain event.
- Maintain natural buffer areas where no chemicals are applied between your property and any stream, lake, or drainage way.

Improper use of fertilizers can negatively impact our lakes and streams and affect our drinking water.

Effective lawn fertilization is done in the fall, not the spring. Spring application alone may promote excessive top growth, leaving shallow root systems that poorly sustain lawns during hot dry spells or harsh winters. However, fertilizer applications in the fall on established grass promotes healthy root systems and hardy lawns.

According to Montana State University Extension, Montanans should generally apply no more than 2 to 4 pounds of actual nitrogen per 1,000 square feet of lawn per year spread across two to three applications of no more than 1 1/2 pounds at one time.

It is important to understand fertilizer bag labels because they describe the active ingredients such as nitrogen, phosphate and potash (the numbers on the bag appear in that order).

For instance, a ratio of 30-10-10 would include 30 percent nitrogen, 10 percent phosphate, and 10 percent potash. There are also carriers such as sand or ground limestone in the mix.

Fertilizer should be selected based on nutrient analysis (percent of each). A 100 pound bag will contain 30 pounds of available nitrogen. Figure out how much you need to apply using this formula: pounds of nitrogen you want divided by the percentage of nitrogen in the fertilizer mix equals pounds of fertilizer mix needed.

The precise times for fertilizing vary statewide, but fertilizing around Memorial Day and Columbus Day (after the last mowing but four weeks before the soil freezes) are good rules of thumb. If fertilizing only once or twice a season, the two fall applications are the most important.

Consider organic fertilizers such as plant and animal byproducts which re-emphasize the role of other organic components and act as a slow-release fertilizer. They increase physical and biological nutrient storage mechanisms in soils, mitigating risks of over-fertilization.

— Mike Koopal and Lori Curtis, Whitefish Lake Institute