CITY OF COLD SPRING

APRIL 2014

Cold Spring Water News

NOTICE: It is now safe for residents to stop running their water to prevent freezing. Just this week the ground has now completely thawed and the freezing threat no longer exists.

The residents of Cold Spring and the surrounding area rely on groundwater for their drinking water supply. Groundwater aquifers are vulnerable to contamination from land use activities on the surface. **One potential source of contamination can actually be your own lawn.** In this newsletter we'll highlight how to prepare your lawn for spring, resulting in a healthier lawn that can utilize nutrients more efficiently, leaching fewer nitrates into your groundwater.

Your Lawn and the Environment

What can I do to protect water quality?

The two biggest contributors of nitrogen loss from your lawn is **over application of fertilizers** and **over watering**. Both practices can contribute to pollution of your groundwater. You can do your part to protect water quality by doing the following:

- Applying fertilizer at the recommended rate and time.
- Incorporating water friendly lawn care practices.
- Getting a soil test to determine what nutrients your soil is lacking.

How do I find out what my soil needs?

Not all soils are created equal. To better understand what your soil needs, a soil test is a good idea. Instructions on soil testing are available through the University of Minnesota Soil Testing Laboratory: soiltest.cfans.umn.edu, or 612-625-3101. The U of M charges $15 per sample to analyze basic nutrition for lawns. The soil test results will include fertilizer recommendations.

A list of laboratories certified for soil testing by the Minnesota Dept. of Agriculture can be found at www.mda.state.mn.us, then search "soil testing labs".

Water friendly lawn care practices:

Water is essential for all plant growth, although timing and rate can impact the health of your lawn & the environment. Below are beneficial lawn watering practices:

- In the spring when root growth is active & extends deeper into the soil, larger amounts of water can be applied per application but with longer periods of time between watering. Drying out the soil between watering supports root growth.
- During the summer months, lawns will need 1" of water per week including rainfall to remain green & growing.
- Avoid applying excessive amounts of water. The excess water can be lost by moving past the plant's root system. This increases nitrogen-nitrate loss into your groundwater.

Nitrogen recommendations for established lawns

Maintenance practices	*Nitrogen (N) to apply lb. N/1,000 ft²*	*Timing of applications**
High-maintenance lawn		
(irrigation, clippings removed)	4	Aug, Sept, mid-Oct, May-June
(irrigation, clipping NOT removed)	3	Aug, mid-Oct, May-June
Low-maintenance lawn		
(irrigation, clippings removed)	2	Aug, mid-Oct
(irrigation, clippings NOT removed)	1	Sept

* Assuming 1 lb. N/1,000 ft² of quickly available nitrogen is applied at each application. The remaining portion of N should be in a slow release form, such as IBDU (isobutytlidene diurea), Sulfur-coated urea, Polymer-coated urea, Urea-formaldehyde (such as Nitroform), and Natural organics (such as Milorganite).

Phosphorus Law

It is illegal to apply fertilizers containing phosphorus to lawns in Minnesota. Look for the middle number on a bag of fertilizer. It should be zero (0).

Exceptions

Fertilizers containing phosphorus may be used on lawns if a soil or plant tissue test indicates that it is needed **or** if you are establishing a new lawn by laying sod or seeding.

It's also illegal to spread any fertilizer on hard surfaces such as streets, sidewalks, and driveways. Rain can wash fertilizer into nearby storm drains or road ditches, eventually getting into a lake or river near you. If you accidently spill or spread fertilizer on a hard surface, clean it up immediately.

What do I look for?

On any bag or box of fertilizer, there is a string of 3 numbers. These numbers represent the primary nutrients of: nitrogen (N), phosphorus (P), and potassium (K).

To comply with the MN phosphorus free law, the middle number for phosphorus (P) content should read "0".

For more information on lawn care

- **Fertilizing Lawns:** http://www.extension.umn.edu/distribution/horticulture/DG3338.html
- **Understanding and Using Lawn Fertilizers:** http://www.sustland.umn.edu/maint/selectin.htm
- **Watering Practices:** http://www.sustland.umn.edu/maint/watering.htm
- **Sustainable Lawncare Information Series:** http://www.sustland.umn.edu/maint/maint.htm

Fertilizer rate for a single application

The release characteristics of a fertilizer and its burn potential determine the amount that can be applied in a single application. Fertilizers with quick-release sources of nitrogen and potassium can burn the plants if applied at high rates. In addition, applying too much nitrogen in one application is inefficient since the nitrogen not used by the plant can leach through the soil past the root zone and into your groundwater.

The area to be covered by a bag of fertilizer using a desired rate of nitrogen application can be determined from the information on the bag.

$$\frac{\text{Weight of bag x N in fertilizer (fractional basis)}}{\text{Desired rate of application}} = \text{area to be covered by fertilizer in bag}$$

For example, if you want to apply fertilizer at a rate of 1 lb. N/1,000 ft² and you have a 20 pound bag of fertilizer having a grade of 23-0-6 (the fertilizer is 23% N), then:

$$\frac{20 \text{ lbs.} \times .23}{1 \text{ lb. N/1,000 ft}^2} = 4{,}600 \text{ ft}^2$$

The fertilizer should be used to cover 4,600 square feet of lawn area. If the lawn is less than 4,600 ft², then only a portion of the bag is needed to supply 1 lb. N/1,000 ft². If your lawn area is 2,500 ft², then 11 pounds of fertilizer should be applied.

$$20 \frac{\text{lbs}}{\text{bag}} \times \frac{2{,}500 \text{ ft}^2}{4{,}600 \text{ ft}^2/\text{bag}} = 11 \text{ lbs}$$

Calibrating your fertilizer spreader

Fertilizer spreaders will apply different materials at different rates. Ideally you should calibrate your spreader for your pace and the fertilizer used. To calibrate a spreader with a given fertilizer, adjust the spreader setting to a selected level, weigh out a known amount of fertilizer, spread that amount of fertilizer, and measure the ground area covered in the process. It may be convenient to do this on a sheet of plastic. To calibrate according to the pounds of nitrogen/1,000 ft², make the following calculation:

$$\frac{20 \text{ lbs.} \times .23}{\text{ft}^2 \text{ of area covered}} \times \text{N in fertilizer} = \text{lbs. N/ft}^2 \text{ (then lb. N/ft}^2 \times 1{,}000 = \text{lb. N/1,000 ft}^2\text{)}$$

For example, if the spreader is set at 8, you find 0.6 lbs. of fertilizer covers an area of 100 ft², and the fertilizer has a grade of 23-0-6 (the fertilizer is 23% N), then:

$$\frac{0.6 \text{ lb. of fertilizer}}{100 \text{ ft}^2 \text{ area}} \times .23 \frac{\text{lb. N}}{\text{lb. fertilizer}} = 1.4 \text{ lb. N/1,000 ft}^2 \quad \rightarrow \quad 0.0014 \frac{\text{lb. N}}{\text{ft}^2} \times 1{,}000 = 1.4 \text{ lb. N/1,000 ft}^2$$

This spreader at a setting of 8 applies this fertilizer at the rate of 1.4 lb. N/1,000 ft². Next, make the same measurement at several spreader settings to determine nitrogen application rates for each setting.

Other City News

Changes on the Way

The summer of 2014 will see a number of projects throughout the City. To compliment our other available residential lots, construction will make available the River Links addition in the southwest part of the City. Expect to see development in the Business Park to include the installation of a storage unit facility and also a 50-unit multi-family residential complex to the east of North Pointe. Business developments will include a Central Minnesota Credit Union building near Teals Market, a conference room and extra rooms expansion of the Riverside Inn, and tank expansions at the Thirdstreet Brewhouse. County Road 50 will be undergoing a reconstruction from the Cemetery to 4th Street North, 14th Avenue South will be linked to State Highway 23, and 2nd Avenue North will be linked to 1st Street South.

ROCORI Trail News

The three cities of the ROCORI Trail Construction Board – Rockville, Cold Spring, and Richmond – are planning to extend the Trail from Cold Spring to Rockville this summer. This is a result of the nearly one million-dollar bond we were granted a year ago due to the hard work from State Senator Michelle Fischbach and State Representative Jeff Howe. Also, look forward to the Glacial Lakes Trail portion to the west of town being paved later this summer. Have a happy and healthy summer!

City of Cold Spring
27 Red River Avenue South
Cold Spring MN 56320

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