



Groundwater News

FALL

AUGUST 2012

The residents of Paynesville 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 winter resulting in a healthier lawn next spring that can utilize nutrients more effectively resulting in fewer nitrates in your groundwater.



Lawn Care Checklist: late summer- early fall

Fall lawn care during the active growth period of our grasses can be some of the most important and beneficial activities for your lawn. These practices will aid in good winter survival, early spring green up and growth, as well as provide many other benefits.

1. Overseeding & Sodding:

If the lawn suffered permanent injury during the dry conditions of summer, now is a good time to repair those areas by overseeding or resodding. The middle of August to the middle of September is the best time of the year to sow grass seed. To help ensure a successful overseeding, lightly work the seed into the soil and then keep it uniformly damp, NOT SOGGY, until seeds start to germinate and emerge from the soil. As new grass gets taller and more established, watering can be done less frequently but with more water applied per application.

2. Fertilizing:

The period right around Labor Day is an excellent time to put down an application of fertilizer. Applying one pound of nitrogen at this time of year helps provide the plant with the necessary available nitrogen needed to support and sustain



A well maintained yard does a better job filtering pollutants, recycling nutrients and minimizing erosion.

active plant growth through the fall period. Taking a soil test will determine whether or not you need either of the primary nutrients, phosphorus or potassium. Remember it is a

violation of MN State law to apply fertilizers containing phosphorus to your lawn unless a soil test indicates there is a need for the nutrient or you are (re)establishing a new lawn.

3. Watering:

As days get shorter, temperatures become cooler, and rainfall occurs on a somewhat regular basis reducing the need for additional watering during the fall. While an inch of water per week is usually necessary to keep lawns actively growing during the summer, that same one inch of water is sufficient for two or even three weeks depending on weather conditions. Periodic watering during the fall will help sustain active growth, allowing the grass plants to make and store food that will help it survive winter and resume healthy growth next spring.

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4. Manage Mowing Height:

Maintain mowing heights between 2.5 and 3.0 inches throughout most of the fall period. That will allow for plenty of leaf tissue to be actively involved in making food for the grass plant and a more robust root system that can take advantage of available water and nutrients in the soil. For the last two or three cuttings of the year, gradually reduce mowing heights to about 2.0 - 2.5 inches. This can help in the reduction of snow mold and allow for easier clean up of the lawn surface just prior to colder conditions arriving later in the fall.

5. Lawn Aeration:

If your lawn has significant compaction problems, the period right around Labor Day and through early fall is an excellent time to do some core aeration. Lawn aeration machines are usually available through most rental businesses.



Lawn aerifier. Note the hollow tines for removing soil cores.

Be sure to rent a core aerifier, one that actually pulls cores out of the soil and redeposits

them on the lawn or soil surface. The extra aeration in the soil will encourage more active roots as well as benefit the soil microbial community. Healthy plant roots and a soil microbial population make for a healthy, vigorous grass plant better able to withstand stress along with normal wear and tear of lawn activity. The cores can be left on the soil or lawn surface to naturally decompose. This will also help control the buildup of thatch in the lawn. It is best to make two or three passes over the lawn to increase the number of holes needed to maximize the benefit.

6. Thatch Control:

Occasionally, a thick layer of brown fibrous material will build up between the soil surface and where the grass plant shoots turn green. This brown fibrous mat is known as thatch. It is actually composed of both living and non-living material. Thatch develops from the regular sloughing off of plant roots and other dead and decaying parts of the grass plant. It is however, NOT composed of any grass clippings. While there may be some grass clippings left on the surface, they are not part of the true thatch layer. So, whether you pick up your grass clippings or not, it will make no difference on the build up of thatch. The living component of thatch consists of some roots, rhizomes and, of course the many microorganisms and other living creatures.

If thatch develops at a faster rate than can be broken down by microorganisms, it can accumulate to undesirable levels. Generally, thatch greater than half-inch is undesirable. Lawn care practices that contribute to thatch build up are excessive nitrogen fertilizer, overwatering, infrequent mowing, compacted soils and simply the genetics of the particular grasses.



Vertical mower or de-thatcher, sometimes referred to as a power rake.

Late summer (i.e. early September) is a good time to work at removing excess thatch build up. Machines known as vertical mowers or de-thatchers can be rented and used to mechanically remove some of the thatch build up. Leaving the soil cores on the surface after aeration will also help break down thatch. In fact, where very thick thatch layers exist, using both a vertical mower and core aerifier may be helpful. If this is the case, thoroughly aerify the lawn, then perform vertical mowing. This operation can be done back to back on the same day if

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desired. It is a good idea to follow up with a quarter to half inch of water to reduce lawn stress incurred from the dethatching and aerification processes.

7. Broadleaf Weed Control:

The month of September is an excellent time for controlling those pesky broadleaf perennial weeds such as dandelion and creeping Charlie. There are many different broadleaf weed control products available that can be used around the home. Always follow the product's

label directions exactly as printed on the container.



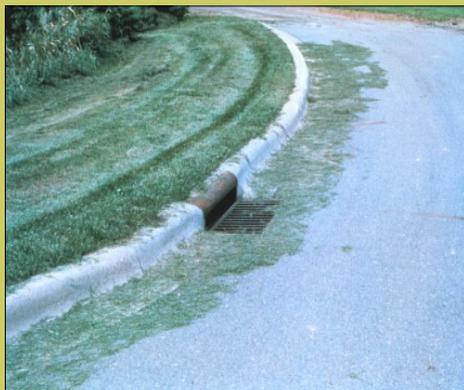
Fall is the best time to manage broadleaf weeds, like dandelions.

Remember, it is a violation of federal law to handle or use any weed killer inconsistent with its label directions.

Most broadleaf weed killers work best between the temperatures of 50 degrees F and 80 degrees F. Late summer and early fall is an especially good time as these perennial broadleaf weeds are actively growing and the material is moved throughout the plant and root system, resulting in better control. While you may not see the weeds completely dying this year, chances are that few, if any, will be around come next spring.



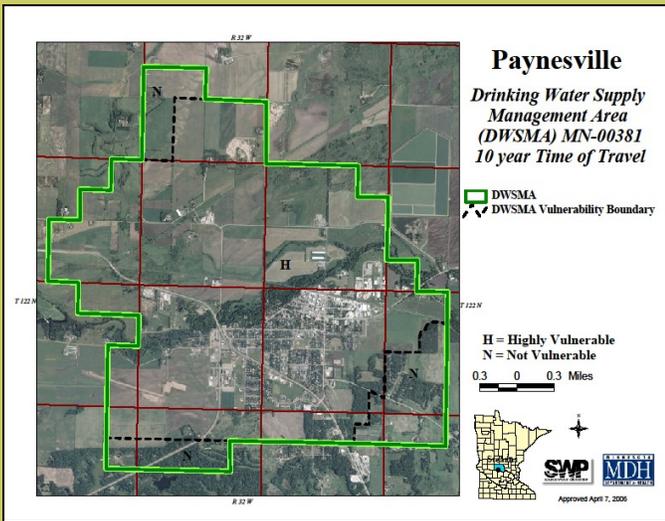
Green up your lawn, not your lakes and rivers



Grass clippings are a source of phosphorus, the nutrient that turns lakes and rivers green with algae. Homeowners and commercial groundskeepers need to take care NOT to direct grass clippings onto streets, driveways and other paved areas where they can wash away with stormwater runoff.

One simple step to deal with fewer grass clippings is to make the first few passes with the lawnmower blowing the grass clippings into the lawn NOT the street. If there are grass clippings on the street or sidewalk, use a broom or leaf blower to blow them back into the lawn. Do not use a hose to wash them into the street or storm drains.





The City of Paynesville is working to protect their drinking water supplies by implementing a **WELLHEAD PROTECTION PLAN**. Wellhead Protection (WHP) is a way to prevent drinking water from becoming polluted by managing possible sources of contamination in the area that supplies water to the public. Protecting drinking water is an ongoing need for the community and everyone has an important role to play in this process.

For more information on the City's WHP efforts, please contact City Hall at 320-243-3714.

Did You Know?

One bushel of fresh grass clippings contains 0.1 lbs of Phosphorus enough to produce 30 to 50 pounds of algae growth if it finds its way to a lake or river. Remember anything that enters a storm drain goes directly to a local lake or river.



Filamentous green algae—MPCA

Uses and Benefits of Compost

Compost is ready to use when it is dark, brown, and crumbly with an earthy odor. It should not be moldy and rotten. The original materials that went into the compost pile should not be recognizable in the finished compost. Once it appears finished, let it sit for at least another 3 weeks to make sure the decomposition process has stabilized. Finished compost can be used as a mulch to provide a protective layer over plant roots, as a soil amendment in new gardens, or as a compost tea to water with (fill a burlap bag, or old pillowcase with compost and place into a barrel, tub or watering can filled with water. Agitate for a few minutes and then let it steep for a few days). Some of the benefits in using finished compost are: improves the soil structure, porosity, and density thus creating a better plant root, it also increases moisture infiltration and permeability of heavy soils reducing erosion and runoff. Another compost benefit is the improved moisture retention in the soil and it supplies a variety of macro and micronutrients. It also supplies significant quantities of organic matter, improves and stabilizes soil pH. These are just a few of the many benefits of finished compost. You may pick-up finished compost at the Paynesville compost site during regular hours of operation and with a current compost site permit.



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