Steel and North Lake Newsletter
Federal Way Surface Water Management

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THE LAKE VIEW

FERTILIZER APPLICATION: HOW AND WHEN

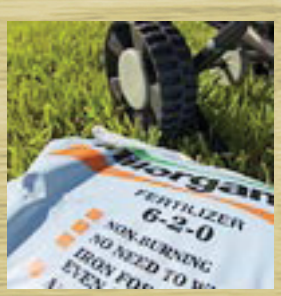
BY HOLLIE SHILLEY

How can you tell which fertilizer you should use? Look for the middle number on the bag, it should be 2 or lower meaning it is low in phosphorus. Use slow-release fertilizers instead of putting potent nutrients on your lawn all at once. This kind of fertilizer releases small quantities over a period of time. Plants will absorb more minerals and nutrients in a gradual feeding process.

Fertilizers are often overused. More is not better! Over-fertilization can lead to excess growth and pest problems. Over-fertilization is also a waste of time, labor and money. Finally, over-fertilization also contributes to pollution through stormwater runoff and leaching. You usually only need to apply fertilizer once or twice per year, especially when you use slow-release fertilizer.

Never apply fertilizer when you expect heavy rainfall. Why? Most fertilizer will be flushed away, and that's money and pollution down the drain. Be sure to apply fertilizer evenly and avoid overlapping. Clean up any spills. Put a plastic bag or tarp on the ground where you pour out the fertilizer, so any spills can be caught and used.

Always leave a "ring of responsibility" around or along the edges of lakes and other waterways. This is an important buffer zone that protects water quality. The buffer zone helps to ensure that fertilizers and other lawn chemicals do not come into direct contact with the water or with any structure bordering the water, such as a sidewalk, brick border, driveway, or street.



If applying liquid fertilizers, the "ring of responsibility" should be at least 3 feet from the edge of the water. The same is true for applying granular fertilizers with a fertilizer spreader that features a deflector shield. A deflector shield only allows fertilizer to be distributed on one side. This half-circle application (instead of the typical full-circle application of most fertilizer spreaders) allows for more accurate fertilizer application. If you are applying fertilizer without a deflector shield, the "ring of responsibility" should extend at least 10 feet from the edge of the water.

Many homeowners hire professionals to design our landscapes, to mow and fertilize our lawns or to treat weeds or infestations. We may assume these professionals are doing what's best for the landscape and the environment. That may or may not be true. It's important to communicate that you want to maximize water savings or limit the use of chemicals. Ask questions, and let the professionals you hire know what's important to you.

Secchi Disk Transparency

What do measurements with a Secchi Disk tell us about a lake?

What is transparency?

Transparency, sometimes referred to as water clarity, is a measure of how far light can travel in water.

What affects transparency?

Transparency is directly affected by the level of suspended particles and dissolved materials in the water. The main types of suspended particles that affect transparency are algae and sediment. Algae are naturally occurring microscopic plant life found in most water bodies. Algae are a part of a healthy aquatic ecosystem, but their populations can increase dramatically when there are high nutrient inputs into a lake. Too much algae can block sunlight from penetrating deeper into the water, restricting plant growth and altering the balance of the ecosystem.

Suspended sediments can come from many sources. During storm events, high runoff can carry silt and sand from streets, yards, fields and construction sites into aquatic ecosystems. In shallow waters, boats and high winds can stir up bottom sediments. Also in shallow waters, aquatic life, such as carp and crayfish, can stir up the lake sediment. For some lakes, the formation of fine particles of calcium carbonate in the water is a major factor affecting transparency. Dissolved materials in the water can also potentially change the water's color (for example, in a "tea" colored lake), which can also affect the water transparency.

Why is transparency important?

Transparency is a basic indicator for the health of an aquatic ecosystem. When transparency is measured consistently week to week and year to year, these measurements are a useful indicator of water quality changes and patterns. When assessed along with other parameters such as chlorophyll a and total phosphorus, transparency measurements give us useful insight into the level of biological productivity in a lake, and ultimately its water quality conditions.

How is it measured?

Transparency is most commonly measured using a Secchi disk. This gives a direct measure of how deeply sunlight is penetrating through the water. The Secchi disk is a weighted steel or heavy plastic disk, eight inches in diameter, attached to a line with calibrated measurements. In both North and Steel Lakes, transparency is measured by lowering the disk down into the water until it is no longer visible, noting the depth on the calibrated line.

Secchi disk transparency is measured as part of the Steel and North Lake's Lake Management District's monitoring program. Regularly readings are taken from mid-May through mid-October and will be published in the annual reports. Repeated measurements are necessary throughout the growing season since algal species composition in lakes can change significantly during the spring and summer months, dramatically affect overall water clarity.

Swimmer's Itch Information

According to the Center for Disease Control and Prevention, a skin rash, commonly called Swimmers Itch is reported in many of the lakes found throughout Washington State. It is caused by an allergic reaction to a parasite that migrates from the feces of water fowl such as ducks and geese, and seeks a new host.

Who is at risk?

Anyone who swims or wades in freshwater lakes and ponds may be at risk. The parasite (Cercarial) is more likely to be present in shallow water by the shoreline, therefore children are most often affected because they tend to swim, play, and wade in shallow water more than adults. A small amount of water remains on the skin when a swimmer leaves the water. As the water evaporates or runs off, the larvae that are present burrow into the skin and die off.

What are the symptoms?

Symptoms may occur within minutes to days after swimming in infested water. Symptoms include:

- Tingling, burning, or intense itching
- Small reddish pimples or blisters

What is the treatment?

- Corticosteroid cream
- Cool compress
- Epson salt or baking soda
- Oatmeal bath
- Anti-itch lotion

How can you prevent Swimmer's Itch?

- Avoid swimming in areas with waterfowl
- Do not swim or wade in marshy areas
- Shower or towel dry immediately
- Apply a waterproof sunscreen

The Importance of Healthy Shorelines

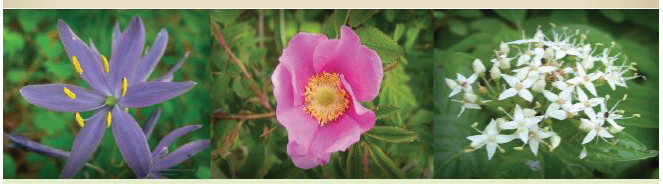
Healthy shorelines are simply lake edges that have a border of native plants like shrubs, trees, or perennials instead of turf grass that extends all the way to the shoreline.

Healthy shorelines help your lake by:

- Trapping and filtering pollution from run-off *like phosphorus and sediment*
- *Providing great habitat for birds, turtles, frogs, and other aquatic wildlife.*

Healthy shorelines also benefit the homeowner by:

- *Improving privacy while keeping views*
- *Reducing mowing and lawn maintenance*
- *Helping keep geese out of the yard*
- *Preventing or reducing shoreline erosion*



Public Works Department
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Help keep your lake clean.
Do not feed the waterfowl.

Your PET'S WASTE affects your lake

If it's in your yard,
it's in your lake.

Scoop pet waste, bag it and
place it in the trash.

Thank You