

## Lawn Care within the Protected Shoreland

How you care for your lawn impacts the ecosystem in and around your waterbody. This fact sheet describes the restrictions on lawn and fertilizer imposed by the Shoreland Water Quality Protection Act (SWQPA). It also includes many tips on how to maintain a healthy and yet low-impact, and low-maintenance, lawn.

### EXPANDING THE SIZE OF EXISTING LAWNS

Stormwater runoff is water from rain or melting snow that does not soak into the ground. Plants help remove the oils, salt, heavy metals, fertilizers, and other contaminants from stormwater runoff before they enter our lakes and rivers. Native plants slow down, absorb, and purify much more stormwater than plants with shallow roots typically found in lawns. The SWQPA restricts the removal of native plants in proximity to the water in order to preserve this natural benefit. This restriction includes the conversion of native vegetation into lawn, especially within 50 feet of the shoreline.

Within 50 feet of the reference line of public waterbodies, vegetation composed of trees, shrubs, or native ground cover may not be converted to lawn. Between 50 and 150 feet from the reference line, at least 25% of the area must be managed as Natural Woodland where all existing native ground cover, shrubs and trees are allowed to grow. Before expanding existing lawns or creating new lawns, ensure that you meet these requirements. Consult the Vegetation Management for Water Quality fact sheet for more information.

### FERTILIZERS AND THE SHORELAND WATER QUALITY PROTECTION ACT

Phosphorus and nitrogen are used in fertilizers because they promote plant growth. Unfortunately, when these nutrients leach into waterbodies, they continue to promote growth and may trigger algal blooms (Figure 1). In turn, algal blooms **have a negative impact to water quality by reducing water clarity, reducing water oxygen levels, and ultimately threatening the survival of fish and other aquatic life.** The proper use and application of a fertilizer is therefore extremely important.

**The SWQPA prohibits the use of fertilizers within 25 feet of the reference line of public waters. This includes organic products.**



*Figure 1 - Phosphate and nitrogen leaching into waterbodies trigger algal bloom.*

Between 25 and 250 feet from the reference line, **only slow or controlled release fertilizer may be used**. Slow or controlled release fertilizer means fertilizer that is guaranteed, as indicated on the package label, to contain:

- At most 2% phosphorous, and
- A nitrogen component which contains at least 50% slow release nitrogen.

No chemicals, including organic pesticides, can be applied within 50 feet of the reference line, except by a professional licensed for pesticide application by the State of New Hampshire.

#### **PROPER LAWN CARE WITHIN THE PROTECTED SHORELAND**

Landowners can take several measures to reduce the impacts of their lawn care on the environment:

- *Grass Variety:* Choose grass varieties well-adapted for your area. Contact the [University of New Hampshire \(UNH\) Cooperative Extension](#) or another horticultural professional for recommendations.
- *Water:* Grass does need water, but improper watering can cause problems for lawns, such as diseases and shallow roots. Moreover, lawns with shallower roots are more susceptible to drought and erosion. Overwatering may also lead to nutrients leaching into waterbodies. A healthy lawn typically requires one good soaking of up to an inch of water per week.
- *Fertilizer:* Quick release fertilizers and pesticides can produce a green lawn in a short time. However, they may also disturb the natural chemical and biological balance of your lawn. The SWQPA only allows for the use of slow release, low phosphate fertilizer within the protected shoreland. Fertilizer may be applied no closer than 25 feet from the reference line. A single application of slow release, low phosphate **fertilizer** at the beginning of fall is adequate in most cases. To help protect the environment and reduce fertilization costs, it is recommended to have your soil tested to determine if fertilization is necessary for your lawn. You can have your soil tested by UNH labs or at several local garden centers.
- *Soil Aeration:* Soil can naturally contain clay or be packed down. In these circumstances it is difficult for water and air to penetrate the soil. The best method for aerating your soil is to use a machine that removes small cylindrical cores of soil from the lawn, allowing it to receive proper amounts of water and nutrients.
- *Mowing:* Leaving grass three inches or higher will encourage deeper roots and reduce fertilizer needs. Deeper roots enable the grass to tap into large volumes of nutrients and moisture. Longer grass will also shade and discourage weeds and helps a lawn survive heat and drought. Never cut more than one third of the height of the grass. If after mowing, the tips of grass blades are jagged or uneven, the lawn mower blades are dull and should be sharpened. Well sharpened blades reduce the fuel used by a mower.
- *Grass Clippings:* Mulch your grass as you mow your lawn. This is the best and most efficient way to fertilize your lawn as it naturally adds nutrients like nitrogen and potassium. Moreover, it will cut your mowing time by an average of 38% and will reduce the amount of solid waste in landfills. Thatch is a layer of undecomposed stems and roots that accumulates near the soil surface. Grass clippings on lawn that is not overwatered or over fertilized typically does not contribute to thatch accumulation.
- *Surround with Trees:* A shaded lawn requires less watering because grass is shielded from the sun's heat and will resist drying during the summer. Keeping a healthy, well distributed stand of trees will therefore benefit your lawn and the environment. Grass seed mixes are available that are tolerant of lower light conditions.
- *Consider Alternatives:* Use native ground cover, like Partridge-berry (*Mitchella repens*), as an alternative to grass. Ground cover can be hardier than grass, usually has a longer root system, and often stays healthier without the use of fertilizers.

#### **FOR MORE INFORMATION**

For more information, please visit [www.des.nh.gov](http://www.des.nh.gov). You may also contact the Wetlands Bureau by phone at (603) 271-2147, via email at [shoreland@des.nh.gov](mailto:shoreland@des.nh.gov), or by mail at 29 Hazen Drive; P.O. Box 95 Concord, NH 03302-0095.