

# How Can I Maintain a Healthy Lawn on My Lakeshore?



LAKE HOME & CABIN KIT • SECOND EDITION

## Healthy Lawns, Lakes, and Rivers

Maintaining healthy lawns and healthy lakes and rivers is a balancing act. Poorly maintained lawns with sparse grass can be a source of soil eroding into lakes and rivers. However, while well maintained lawns provide better protection from soil erosion, precautions must be taken to prevent applications of fertilizer and pesticides from entering water bodies. Achieving the balance between healthy lawns and healthy lakes and rivers is possible by following a few simple lawn care practices:

- Make your lawn a “rainwater sponge” by correcting soil compaction.
- Maintain only the amount of lawn necessary for your needs.
- Protect your soil from erosion.
- Provide natural plant buffers between lawns and water.
- Use pesticides responsibly and only when needed.

## Make Your Lawn a “Rainwater Sponge” by Correcting Soil Compaction

The more a lawn soaks up rainwater, the less runoff occurs that can carry nutrients, pesticides, and other pollutants into water. Soil compaction reduces the ability of lawns to soak up rainwater, and can be corrected in these ways:

*New lawns:* Often during construction activities, topsoil is removed and the remaining soil is compacted by vehicle traffic. Before establishing a lawn, compacted soil should be tilled as deeply as possible, ideally incorporating a 2-inch layer of compost or peat moss in the process. Multiple passes with tillage equipment may be needed to till to maximum depth and fully incorporate the compost or peat moss. If topsoil is re-applied, it should be incorporated into the subsoil to avoid forming a layer that impedes water infiltration and root growth.

*Existing lawns:* Compacted soil can be improved by using a core cultivator that removes small plugs of soil and deposits them on the soil surface. The soil plugs decompose in a few weeks. Core cultivators can be rented from hardware and rental stores.

## Maintain Only the Amount of Lawn Necessary for Your Needs

Lawns provide gathering areas, space for outdoor activities, and scenic open space. Determine how much lawn you need for these purposes, and grow only that amount. Natural forests and grasslands produce less water runoff than lawns and require no fertilizer or pesticide use to maintain. Maintain or restore these natural landscapes wherever a lawn is not needed.

## Protect Your Soil from Erosion

Sediment from eroding soil is a major pollutant of our lakes, rivers, and wetlands. Lawns with patches of bare soil are not doing their job in preventing soil erosion and protecting water quality.

*Remedy bare soil in shade and traffic areas.* Patches of bare soil in a lawn are often caused by growing lawns in areas of too much shade or too much traffic. If shade is the problem, a shade tolerant grass like red fescue can be tried, or the lawn can be replaced with shade tolerant plants other than grass. If traffic is the problem, redirect it with fencing or establish walkways and drives. Compacted soil caused by traffic can be improved by using a core cultivator as described above.

*Fertilize, but sparingly.* Fertilization helps lawns maintain a good protective soil cover. While several annual lawn fertilizer applications can be made for aesthetic reasons, one or two fall applications of fertilizer (in early September and late October) is usually all that is needed

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to maintain a healthy soil cover. After fertilizing, water lawns lightly to soak the fertilizer into the soil and prevent it from washing away with the next heavy rain.

Minnesota state law prohibits use of lawn fertilizer containing phosphorous unless it is the seeding year or a soil test shows need for phosphorus fertilization. Phosphorus is the plant nutrient that causes excessive algae growth in lakes and rivers. A fertilizer bag's nutrient content is displayed by a series of three numbers. A phosphorus-free fertilizer will have zero as the middle number as in 26-0-3.

*Avoid over watering.* Over watering saturates the soil making it less able to soak up rainwater and can lead to increased lawn disease. If a lawn is watered, use the following schedule to avoid over watering.

- Sandy soils: Water 1/2 inch two to three times a week.
- Loam and clay soils: Water 1 inch one time, or 1/2 inch two times a week.

*Mow high, manage clippings.* Mowing at the highest blade setting, typically 3-1/2 inches, increases a lawn's ability to conserve moisture, out-compete weeds, and tolerate stress. If mowing at 3-1/2 inches produces a lawn too "wooly" for your liking, mowing height can be lowered but should be kept above 2-1/2 inches. Be sure grass clippings are returned to the lawn where their nutrients can recycle into the soil. Never leave grass clippings on paved areas or blow them directly into water.

## Want to know more?

### INFORMATION ON THE WEB

[www.extension.umn.edu](http://www.extension.umn.edu) (under Garden Topics)

<http://www.sustland.umn.edu/>

[www.mda.state.mn.us](http://www.mda.state.mn.us) (under Water & Land > Environment)

## Provide Natural Plant Buffers between Lawns and Water

Maintaining lawns right up to the shoreline is not a good practice for two reasons. First, shallow root systems and the short top growth of turfgrass offer little protection from the erosive forces of waves and ice. Second, maintaining lawns on the shoreline often result in lawn clippings, fertilizer and pesticides going directly into the water. Maintaining a natural buffer of deep-rooted native plants between lawns and water addresses both these concerns. Natural buffers can be created by planting native plants or not mowing along the shoreline to let native plants re-establish on their own. The wider the buffer the greater the protection for your shoreland property and the water. Buffers 10 feet to 35 feet wide are common.

## Use Pesticides Responsibly and Only When Needed

Healthy lawns will tolerate low levels of pest populations without suffering permanent damage. If the level of weeds, insects, or disease exceeds the tolerance of you or your lawn, pest control may be needed. Pest control can include such methods as hand-pulling weeds or the use of pesticides.

If you plan to use a pesticide, follow the label directions exactly as stated on the product container. The label provides necessary information regarding proper application and container disposal procedures. Always consider spot treatment, treating only the affected area of the lawn, rather than a full-lawn application and avoid application near water or before impending rainstorms.

*Source: University of Minnesota Extension Service Faculty.*

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