

Fertilizer pollution enters Tellico Lake

By Marilyn Hawkey May 20, 2020

With the arrival of spring, we begin fertilizing our lawns, shrubs, trees and plants so they look healthy, dark green and beautiful. Isn't this what we all want?

The problem is that natural events like water and rainwater runoff carry excess amounts of these chemicals into the lake directly or via streams and creeks.

Why is the Watershed Association of the Tellico Reservoir concerned about this? Because no one wants to live on or near a lake full of slime and unwanted vegetation. Unless these chemicals are controlled and managed, these pollutants promote the growth of algae and slime and unwanted vegetation in the lake.

The economic viability of our community, including the value of homes, depends on pristine water for esthetic and recreational purposes.

To better understand the issue, let's look at these chemical and organic fertilizers and why we use them. Labels sometime refer to them as N/P/K and they are reported as a percent of the mix in the bag.

Nitrogen — N — is used to develop dense, dark green grass blades and leaves. Nitrogen does not cling to soil and is easily flushed out by water runoff. Excess nitrogen will lower a lawn's tolerance to temperature extremes, traffic, drought and diseases and can cause foliage burn. Too little nitrogen, which is evidenced by a yellowish color, results in a lawn that is less dense and more susceptible to weed growth and disease like rust and dollar spot.

Phosphorus — P — is needed by new lawns and plantings to develop a strong and fibrous root system. Phosphorus clings to soil. Once established, phosphorus as an additive does not need to be applied unless soil tests indicate deficiencies or grass and plantings are thin and show poor growth. Phosphorus in fertilizers has been banned by many water-rich states though not Tennessee. Major national manufacturers of lawn fertilizers for home use — sold at Sloan's, Home Depot and garden stores — do not contain phosphorus. However, since Tennessee does not prohibit its use, commercial lawn companies may be using it in their chemical mix. Some plant and shrub fertilizers in Tennessee still contain phosphorus.

Potassium — K — or potash in lawn fertilizers increases resistance to diseases and improves the hardiness of lawns to temperature and moisture stresses. Potassium is harmless to lake water.

Soil sample analysis can determine your lawn's need for N/P/K.

All living plant life, including trees, grasses, plants and shrubs, need and pull out or uptake N/P/K from the soil in order to grow and thrive. Clear cutting the trees and removal of vegetation from a lot is the first mistake to managing our environment. Trees and plants naturally absorb N/P/K. The larger the "plant" like a tree, the greater amount of nitrogen and potassium is removed from its surrounding soil. The second environmental mistake is the excess use of these chemicals because they are washed out of the soil and end up in Tellico Lake causing "greening" and unwanted vegetation.

Once upon a time, most of the Tellico Watershed was a natural forest, free of chemical pollution from humans. Urbanization has seen the construction of more than 10,000 homes and commercial establishments. This density coupled with clear cutting of trees and excessive use of fertilizers and bug and weed spray can overwhelm the lake water's ability to assimilate chemical in-flow. Excess amounts of these chemicals stimulate the growth of algae and unwanted shoreline vegetation.

Home buyers in waterfront communities want pristine conditions. The presence of slime and a forest of unwanted shoreline plants is likely to reduce property values and have an overall negative economic effect on the community.

Working with the community to change attitudes and well-worn behaviors that cause chemical pollution is a slow and difficult task. It is not “they” that pollute; it’s “we” who pollute. Doing our small part will maintain our lake water and improve our environment.

Please do the right thing and do your part to reduce this flow.

Soil test your lawn in March or September to determine chemical needs. Use no more than is recommended by the soil test or on the bag.

Replace as many trees on your lot as you can.

Talk to the owner of your lawn service and ask to have phosphorus deleted from your fertilizer mix.

For those living along the shoreline, tell the employees who apply lawn fertilizer not to apply it within 20 feet of the shoreline.

If you replace your concrete driveway, use permeable pavers to allow water to seep into the ground rather than flow as runoff into the lake.

For more information, visit www.tellicowater.org and read the University of Tennessee Agricultural Extension Services booklet on [Fertilization and Management of Home Lawns](#).

Become a member and sustain WATeR’s effort to protect and improve the quality of water in the Tellico Reservoir and Watershed. WATeR is an all-volunteer, not-for-profit organization. For more information, visit www.tellicowater.org or email tellicowater@aol.com.