

An Ounce of Prevention

I have been discussing Mother Nature's watershed design and the importance of trees and wetland buffers in protecting lakes and streams. This week I'm going to introduce a human program that is designed to help protect watersheds based on Mother Nature's principles-Maine DEP's LakeSmart Program. This program is proactive in the sense that it is aimed at preventing degradation rather than remediating a badly damaged ecosystem. There is an old saying that "an ounce of prevention is worth a pound of cure." In terms of managing lake watersheds the expression should be "an ounce of prevention is worth a ton of cure."

Roads, camps, and houses built near the lakes disrupt Mother Nature's system and can bypass some of her protective buffer systems. Through normal every day activities, people introduce phosphorous and other contaminants into the watershed including road dust, fertilizers, pet waste, soaps, garbage, detergents, eroded soil, oil and grease from vehicles, septic effluent, grass clippings, raked leaves, and others too numerous to mention. Additionally, the creation of impervious surfaces such as roofs, driveways, and roads provides areas where stormwater runoff is concentrated and picks up speed while it rolls downhill. The kinetic energy of the flowing water exacerbates the situation by increasing erosion and transporting all the extra pollutants quickly down hill toward the lake. This can potentially increase the pollutant load to the lake a hundred fold or more compared to the undeveloped forest condition.

With smart design and a few simple management practices, the vast majority of this increased pollutant load can be prevented from reaching the lake. I will discuss some of these practices in a little more detail in future columns but they are all based on a few simple principles aimed at preventing pollution where possible, dispersing and slowing the flow of water as much as possible, taking advantage of any opportunities to infiltrate (soak into the ground) or filter (run through a vegetated buffer area) the runoff before it reaches the lake. And above all, don't dump anything directly into the lake.

To prevent pollution, make sure simple things like routine maintenance on your septic system or vehicles gets done. Don't drive around with oil leaks in your car or boat. A few drops of oil can contaminate hundreds of gallons of water. Upgrade your old two-stroke outboard to a newer four-stroke model. Don't fill your gas tanks in the boat-wherever possible, take them out, fill them carefully away from the water and carry them back to the boat.

Keep your property functioning as much like Mother Nature's system as possible. Don't let water run straight down your driveway toward the lake. Use berms, rubber razors or simply crown the road to divert the water off into the woods. Don't let runoff concentrate and pick up speed. Avoid bare soil- don't rake up the leaves and pine needles under the trees. Leave the natural duff layer in place. Don't cut your grass to the waters edge and then dump the clipping in the water. Maintain a good vegetated buffer along the waters edge. Mulch your walking paths and water access points to prevent erosion.

Maine DEP's LakeSmart Program will provide an assessment of your shorefront property in the following categories: 1) Road, driveway & parking areas; 2) Structures & septic systems; 3) Lawn, recreation, & footpaths; and, 4) Shorefront and beach area. For more information see: <http://mainelakessociety.org/lakesmart-2/>