

To Protect Water Quality, Allow your Landscape to Act Like a Sponge

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What we do in our landscapes has a huge impact on the future of Lake Tahoe. If we allow eroded soil or sediment to run off our properties into the lake, its beauty could be destroyed in our lifetime. The first line of defense against water pollution from polluted runoff is to follow guidelines known as Best Management Practices, or BMPs. The most challenging BMP at Lake Tahoe is erosion control. Erosion control BMPs should be used during landscape design and construction, and also for existing landscapes.

How Erosion Hurts Water Quality

Soil erosion occurs when soil particles are detached and moved from their original location, usually by water, wind or gravity. Though soil erosion is a natural process, accelerated erosion, caused by soil compaction, construction or other human-caused soil disturbance, causes serious environmental problems. Soil loss from your property makes it less attractive and fertile.

During rainstorms, snowmelt or heavy irrigation, flowing water moves eroded soil, called sediment. Moving water transports sediment to Lake Tahoe via ditches, creeks and storm drains.

Once in a creek or river, sediment buries aquatic organisms, smothers fish eggs, clogs fish gills and spawning gravels, and muddies clean waters. Fine sediment particles and dust not only can transport phosphorus into the lake to feed algae, but they

can also remain suspended in the lake water rather than sinking.

Spot and Correct Erosion Problems on your property

Observe what happens during prolonged irrigation, a rainstorm or strong winds. Do you see muddy water flowing off your property, or dust clouds carrying your soil away? If so, you have an erosion problem. Look for bare, unprotected soil, especially on slopes, soil disturbed by construction, or unpaved areas where soil has been compacted by vehicles. Such areas are especially vulnerable to erosion.

Your soil, mulch and vegetation should be able to absorb rainwater, snowmelt and irrigation to prevent soil erosion. Ideally, you want your landscape to absorb all the water it receives like a sponge. When water can't "soak" or infiltrate into your soil, it accumulates on the surface, then runs off. Runoff is the enemy. It begins to flow downslope as a sheet, or thin film, taking soil with it. Small streams of water that cut separate channels, called rills, are greater threats. Rills or gullies that appear after rainstorms are clear evidence of soil erosion. So is the accumulation of soil at the bottom of slopes or in other low-lying areas.

Cover Bare Soil

Without a protective cover of vegetation, duff (decaying leaves and needles) or mulch, bare soil is easily dislodged by raindrop impact, wind and flowing water (see illustration). Cover the ground.

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The Lake Tahoe Report

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Vegetation and mulch also encourage rain and snowmelt to soak into the soil. Among the many options to prevent erosion are living ground covers (dense, low-growing plants) or physical covers such as organic or inorganic mulches. Inorganic mulches such as gravel are recommended next to structures.

One easy way to protect unvegetated soil is to leave the bottom inch or two of decomposing pine needles in place instead of raking them up completely each year. Needles that are raked from rooftops and near structures can be composted briefly and then spread to a depth of up to 2 inches over bare soil on your property, providing mulch that can develop into duff. While soil loss can occur on level ground during high winds or floods, soil erosion is much more prevalent on unvegetated, sloping ground. Slope stabilization techniques are described in the Home Landscaping Guide for Lake Tahoe and Vicinity.

For a free BMP Site Evaluation to help you control erosion problems, please call either the Nevada Tahoe Conservation District at (775) 586-7223, or the Tahoe Resource Conservation District at (530) 543-1501, ext 6. You will receive a free copy of the Home Landscaping Guide for Lake Tahoe as a part of your Site Evaluation.
