

# Think twice before fertilizing in Tahoe

By Angela Stevens

As summer approaches in the Tahoe basin, people naturally start looking at their yards and wondering what they should do to make that grass grow thick and green.

Many Tahoe homeowners and residents in recent drought years have opted to replace their lawns with native or drought-tolerant landscaping that saves water by needing less irrigation. Those who have kept their grass might be thinking it's time to apply fertilizer to keep that yard looking healthy.

Think again!

Many of us unknowingly waste time and money by putting too much fertilizer on our plants and lawns, often at the wrong times. Fertilizers contain nitrogen, phosphorus, and potassium (N-P-K), the primary nutrients for plant growth. All plants need an appropriate balance of essential nutrients, but applying fertilizer doesn't always mean a healthy green lawn, and there can be consequences for Lake Tahoe.

## Why fertilizer can be a problem

Lake Tahoe is naturally oligotrophic (nutrient-poor) due to the geology in the basin. This contributes to the lake's remarkable water clarity. Water bodies require some nutrients to be healthy, but too much can be harmful. Human-caused disturbances such as urbanization, accelerated erosion, fertilizer use, and stormwater runoff have caused nitrogen and phosphorus to become unnaturally abundant in the lake.

In Lake Tahoe, algae growth is limited by the available supply

of phosphorus. Excess phosphorus in the lake feeds the growth of algae and periphyton (attached algae). Increased algae growth decreases the water quality and lake clarity. The water can become green and cloudy, blocking light and depleting oxygen for fish and aquatic plants. Algal blooms can have an unpleasant odor and appearance that reduce the aesthetic quality and alter the ecology of Lake Tahoe.

Fertilizer, when it is overused, overwatered, or spilled onto paved surfaces or bare soil, can end up in the lake. Fertilizer typically finds its way into Lake Tahoe when irrigation, rain, or melted snow picks it up as the water flows over driveways, sidewalks, streets, or parking lots. This runoff delivers debris, dirt, road sand, fine particles, nutrients, and other pollutants, which flow directly into storm drains, streams, rivers, and Lake Tahoe.

### **What you can do**

You can help prevent fertilizer from reaching the lake by planting native or adapted vegetation instead of a lawn. Lawns can provide defensible space, erosion control, and play areas for children and pets, but these grassy areas tend to be overfertilized and overwatered. Many other combinations of trees, shrubs, and groundcover can achieve the same erosion-control benefits while using less water.

Generally speaking, lawns need much less fertilizer than is advertised. To find out exactly what your lawn needs, have your soils tested for pH and nutrient levels. Tahoe soils contain plenty of phosphorus, so choose a fertilizer that doesn't have any. Fertilizer labels will have a nutrient ratio for N-P-K, so choose a fertilizer with a middle number of zero, or ask your landscaper to use phosphorus-free fertilizer.

Choose alternatives: instead of synthetic fertilizers, select slow-release, organic fertilizers or organic compost.

Synthetic fertilizers are more concentrated than organic ones, which makes it is easier to overfertilize. This can burn vegetation and harm soil organisms. Synthetic fertilizers also tend to be more water-soluble, leaching out of the soil faster.

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