

- Soil Compaction – Soil compaction is the most common cause of reduced plant vigor by reducing soil oxygen levels and root access to water and nutrients. Hollow core aeration once or twice a year is recommended to improve soil quality.
- Fertilization – Only light fertilization at the proper time is necessary, and generally only the addition of nitrogen (N) is needed. The best timing for a light addition of nitrogen is in the fall. This will increase the grasses ability to over-winter and green up earlier in spring.
- Typical Grand County soils already contain high amounts of the other common fertilizing ingredients-phosphorous (P) and potassium (K). In fact, most Colorado soils **DO NOT NEED PHOSPHATE FERTILIZERS** for growing grass. The addition of these constituents is not necessary and may negatively impact our water quality. For exact soil recommendations, have your soil tested.

Pollution problems arise from careless application of fertilizers or pesticides. Read the label or instruction booklet very carefully and follow it exactly. **The product label is the law! If the label doesn't specify a buffer zone to protect our water sources, please stay fifty feet from any standing or running water.**

Contact the Grand County DNR at 970-887-0745 or Colorado State University Extension at 970-724-3436 for more information on plant care or the use of pesticides and fertilizers.



# Home Landscape Care and Its Effect on Water Quality

## Home Landscape Care and Its Effect on Water Quality

Benefits of landscaping are many: from an aesthetic asset, to our health, to potentially increasing property values. Evidence points to the positive health and environmental contributions made by lawns, native grasses, and other high density plant areas. Bare ground should be re-vegetated as soon as possible to reduce erosion, prevent the spread of noxious weeds, and reduce dust.

### Fertilizers, pesticides, and water pollution

Home landscaping management techniques play a significant role in impacting local waters such as streams, lakes, and groundwater. If fertilizers and pesticides (herbicides, insecticides and fungicides) are over-applied or over-sprayed onto hard surfaces (driveways, sidewalks and streets), they may move with surface water (rain, over-sprinkling) into groundwater and neighboring lakes and streams. Surface water running down the gutter and into a street drain is not treated before discharging into lakes and rivers.

- Pesticides can harm unintended targets such as fish, primarily by killing their food source.
- Fertilizers can promote the growth of algae and aquatic plants.

Algae depend upon phosphorous and sometimes nitrogen (such as is found in fertilizers) to feed their growth. Algae decomposition can cause reduced oxygen levels in lakes and reservoirs and unsightly foam on rivers. Low dissolved oxygen can also harm or kill fish. It can cause mercury to become available and then accumulate in fish tissue. Consumption of these fish can then pass the harmful mercury on to humans.

### Organic Fertilizers

Organic fertilizers are not necessarily safer for the environment. The pollution potential is based on where and how the fertilizer is applied and the application rates. Any fertilizer becomes a potential pollution problem when over-spread onto hard surfaces or over-applied. The over-application of both manufactured and organic fertilizers has been linked to groundwater and surface water contamination.

## Tree Spraying

Three pesticides are commonly applied to prevent pine beetle damage: carbaryl (also known as Sevin), permethrin (also known as Astro), and bifenthrin (also known as Onyx). These pesticides are applied by high-pressure sprayer to the outside layer of bark and will protect the tree for short period of time. If these insecticides get into the water through over-spray, drift, or tank rinsing, they can kill the food which fish depend on or in some cases kill the fish.

### Lawn Care

To achieve the greatest environmental benefits, having a medium to low maintenance lawn is crucial. Grass type is an important factor. Cool season grasses are best suited to Grand County summers and with typical summer rains, once grasses are established, additional irrigation needs are minimal. Other important factors that need to be monitored to achieve a good looking lower-maintenance lawn:

Lawn Care Continued...