

# Recommended Best Management Practices for Urban Turfgrass in Colorado

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## **Best Management Practices**

Best Management Practices often referred to, as BMPs are pollution prevention practices to protect our water resources. Traditionally BMPs focus on good housekeeping measures (such as preventing or properly clean up spills of chemicals, fertilizers etc.) as well as good management techniques. BMPs may also focus on other methods that would minimize potential contamination of water resources by conservation means, or changing how we have traditionally done things. BMPs should meet the following criteria: environmentally beneficial, economically feasible and voluntarily implemented. When practiced, BMPs will have a positive impact upon protecting our water resources.

### **Select turfgrass species that will best meet the requirements and purposes of the lawn area.**

Areas that receive wear and tear will require a more aggressive grass species and one that is a sod-forming grass such as Kentucky bluegrass. Areas that are difficult to mow, or are only for visual appeal, could use other grass varieties that will require less inputs such as fertilizing, mowing, and watering. Such grasses include buffalograss or blue grama or other slower growing species.

**Use turfgrass in areas that are large and relatively flat.** This will help minimize the potential for run-off of water or where other fertilizers and chemicals would land on impervious surfaces and could easily be washed into surface waters and drainage areas.

**Mulch mowing** at 2.5 to 3.0 inches helps turfgrass develop deeper root systems and at the same time look neat and appealing. Mulched grass clippings can return approximately 25-30 percent of the needed nitrogen that grass requires to be healthy. This means a reduction of at least 1 pound of nitrogen per thousand square feet over the growing season. Mulch mowing also reduces the amount of trash that is put into the land fill. If grass clippings are caught, then recycle them by making compost that can be returned as a soil conditioner in the future. Avoid throwing grass clippings on to hard surfaces such as streets and sidewalks. They most often end up in our surface waters and are a source of nutrient pollution.

**Apply fertilizer at the rate recommended by the manufacturer.** With mulch mowing, an additional three pounds of nitrogen fertilizer per thousand square feet should be sufficient for the growing season. This means one less application of fertilizer in most situations. Fewer inputs reduces the run-off and or leaching potential of fertilizers throughout the growing season. Slowly available nitrogen is best. Fertilizers that have slow-release, controlled release, slowly soluble nitrogen or natural organic based fertilizer are examples of fertilizers that release the nutrients slowly over a period of weeks or months. If the fertilizers release slowly, then there is less potential for it to suddenly leach or move because of run-off. This protects our water resources, both surface and ground water. Read labels on the fertilizer bags, which will explain if they are slowly available or not.

**Apply fertilizer when the grass needs it.** Cool season grasses need to be fertilized when the growing season is cool. The following schedule works well based upon their growth cycle. Early April, late May, early September and mid October. Apply no more than 1 pound of nitrogen per thousand square feet at each application. Warm season grasses need less fertilizer and are best fertilized when the temperature is hot. One application about mid June with another at the beginning of August is usually sufficient.

**Correct application of fertilizer and other chemicals** is one of the best and easiest ways to protect our water resources. Fertilizer and other chemicals that land upon the turfgrass can be put to beneficial use. It is the fertilizer and other chemicals that end up on hard surfaces such as roadways, parking lots and sidewalks that are easily washed into surface waters by rainfall or improper irrigation and pollutes our water resources. Use a drop spreader to apply the fertilizers and other lawn care products when they are next to hard surfaces to keep them where they were intended to be used.

**Proper irrigation** can minimize how much fertilizer and other chemicals are leached past the root zone of the grass or washed away by run-off. Run-off occurs because the soil is unable to absorb the water being applied. Run-off is affected by the precipitation rate of the sprinkler, the length of time the sprinkler is left running and the slope of the terrain. Apply only enough water to replace what has been lost by evapotranspiration. Match the irrigation application to the slope, soil type and root depth. Frequent changes to the irrigation schedule are needed because of the constant changing of weather conditions that impact plant growth. Proper maintenance of the sprinkler system helps to make sure water is being applied to the turfgrass and not to hard surfaces. Fix broken heads and pipes immediately. **Conserving water resources** is one of the best ways to maintain high water quality. Don't use more than is needed.

Water quality hazards associated with proper turfgrass management have been shown to be significantly less than with other land uses. The high organic matter in the thatch and fibrous root system in the soils gives the grass the ability to attract and hold onto the fertilizers and other chemicals so that they can't move as easily through the soil profile as happens in bare or cultivated soils. Turfgrass managers and homeowners can avoid negative environmental impacts and demonstrate a progressive response to public concerns by implementing best management practices. The implementation of these BMPs will be rewarded by improved water quality that impacts everyone and a conservation of resources (time, money etc.)