Landscape Management during Drought and with Limited Water Availability in Colorado

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Multi-year droughts in Colorado occur on average of once every 20 years. Recent statewide droughts occurred in 2002, 1976 and 1954. Droughts may not last multiple years and are often area-specific rather than statewide. Some part of Colorado experiences drought during most any given year. Population growth is also placing increasing pressure on available water resources. Several river basins in the state are now considered over-appropriated and some aquifers tapped beyond one-for-one replenishment. Landscape irrigation consumes 50% of annual average residential water use in the Rocky Mountain region. For all these reasons, restrictions in home and commercial landscape irrigation may continue to be imposed by water utilities, communities, and other water-management entities.

New Landscapes

New plantings require additional moisture for two years to become established. Evaluate current and future water availability prior to design. If you decide not to plant this season, you can still get started on a new landscape by focusing on design, site preparation, irrigation and hardscape installation. Follow these principles even if planting is delayed until more water is available:

- Plan and design for water conservation, beauty and utility.
- Limit turf to practical sizes and select species according to use.
- Design an efficient irrigation system.
- In your design, select appropriate plants, group according to similar water needs and apply the appropriate amount of water after they are planted.
- Improve the soil by adding organic matter to help retain soil moisture.
- Apply two to four inches of mulch to reduce evaporation and reduce water use by as much as 50%.
- Control weeds to reduce water consumption.

Irrigation practices

Consider design, maintenance and management of irrigation systems. If landscapes have changed or a sprinkler system is over ten years old, consider upgrading the system for greater efficiency. Annual maintenance of irrigation systems is necessary to keep them operating efficiently.

- Straighten sprinkler heads tilted by winter soil heaving or blows from lawnmowers and foot traffic.
- Replace broken or missing sprinkler heads.
- Adjust head alignment so that water is thrown on landscapes, not sidewalks, driveways and streets.
- Pop-up heads that don't reach high enough to achieve a clear spray trajectory should be raised or replaced with taller heads.
- Check that rotor heads are turning properly and replace if necessary.
- Check nozzles for plugging and clean filters; if the spray head is misting, reduce the water pressure.
- Evaluate the cause of persistent dry spots (for example: slope, soil compaction, aspect, wind, sprinkler delivery).

- Water deeply and infrequently to develop deep root systems.
- To reduce water loss from evaporation, water at night between 9:00 p.m. and 9:00 a.m. or according to your local restrictions.
- Adjust water applied to meet seasonal needs. Spring and fall cool-season plant use is typically 60 percent of peak hot-weather summer water needs. Use the percent adjustment feature on automatic controllers to easily do this.
- Avoid runoff water waste by using the multiple start times feature on controllers or by manually watering, stopping to allow soaking and then resuming watering. Soak and cycle irrigation should be routine practice on slopes and compacted soils.
- Avoid irrigating in windy conditions and during rainfall.
- Install drip irrigation in shrub and perennial borders as drip irrigation can dramatically reduce water use.

Existing Landscapes

- Apply two to four inches of mulch to reduce evaporation.
- Control weeds to reduce water consumption.
- Improve soil by adding organic material that helps retain moisture.
- Evaluate potential for future watering restrictions before adding new plantings as they will require additional moisture for two years to become established.
- Maintain plants using good horticultural practices including winter watering in dry Front Range winters.

General Landscape Guidelines

- A healthy landscape should tolerate watering every 3 to 5 days.(depends on soil type, season, compaction).
- Irrigate when footprints or mower wheel tracks in turf don't disappear within a short time. Limit foot traffic with reduced water applications. If lawns are drought dormant, eliminate foot traffic as much as possible because drought-stressed plants are more easily damaged by traffic.
- Turn your irrigation controller to the "Manual" position (from "Automatic") and learn how to operate it using the Manual (On) and Off switch. Consider installing an ET controller that constantly adjusts amounts of water applied.
- Do not use a hose to wash down sidewalks and driveways.
- Mulch trees, shrubs and perennial plants. Apply two to four inches of mulch to limit evaporation.
- Avoid core cultivation (aeration) when the soil is dry and little irrigation water is available in hot weather.
- Water container grown plants on a given schedule.
- Refer to the recommended irrigation practices section above.
- Water every three to four weeks in the fall and winter months when there has been no moisture from snowfall. This maintains plant reserves and may allow the plant to withstand longer intervals of stress.
- Maintain your landscape according to wise water-use principles in both scarce and plentiful water years.