Landscaping with a GREEN vision

The term "green" is being tossed around a lot these days with everyone from food, energy and architecture companies using the "green" word to promote their product. The basic concept is to lower your carbon footprint in the world with "sustainability:" **lower energy is better**. There are three important areas where everyone can be more "green" in their landscape and gardening practices.

WATER CONSERVATION

Water has become the new energy of the future with less fresh water available each year for the growing population. The conservation of this resource utilizes true "xeric" (low water) principles as in traditional xeriscapes.

• **Nozzles.** Nothing can bring home a feeling of "waste" more than seeing water running down the gutters and into the storm drain systems from a sprinkler system that is irrigating inefficiently. Many sprayheads will shoot 2/3 of their water away from the head and land in a constant stream at the end of its arch. The irrigation heads don't act like rain does. Use a ***rotator nozzle*** on a popup head which acts like a fountain that mimics rain and uses fewer gallons per minute each head. The slower rate of water over the area allows the water to percolate into the soil. Slower water application allows more natural, deeper absorption to occur. A rotator nozzle can use 30% less water than conventional sprinkler heads. The rotator nozzle does not spray as high into the air so it is less affected by wind.

Be Green Colorado

Mark Turner

• **Training your turfgrass.** Turfgrass can be trained to be very water efficient with a proper watering cycle. Watering deeply and infrequently promotes deep root growth, allowing water to soak deep into the soil: the roots will follow the water for nourishment. Water as deeply as possible until just before the point of runoff so the soil at and below the root level is saturated. Watering infrequently even to the point of stressing the grass a little bit will force deeper root growth. The soil below the turf will hold water for a longer time—it is the surface water that quickly evaporates.

Water is one of our most precious resources and will become even more valuable in the future.

Nothing can bring home a feeling of "waste" more than seeing a sprinkler running while it is raining.

• **Rain sensors.** Controlling your irrigation system with a rain sensor is another means of natural resource conservation. A water sensor will automatically turn off the irrigation clock when it is raining and activate the system to resume the preset cycles when the sensor is dry. The sensor is controlled by fibers that absorb the moisture in the air. When proper saturation occurs, the clock is turned off. When the moisture evaporates in the fibers of the sensor, the sensor reactivates the clock to resume the normal watering cycle. All new irrigation clocks have a plug-in jack for a watering sensor.

• **Programming your clock with percents.** Irrigation clocks have a nice feature that allows for ***percentage*** watering. This means that you can initially set a determined amount of minutes for each zone and then have the ability to change the percentage time up or down with one quick adjustment. Instead of adjusting each zone back and forth, you can make one change at the clock that controls the whole system.

• **Smart systems.** There are now very affordable "smart" irrigation systems that use everything from weather data, evapotranspiration rates, wind speed and soil moisture sensors to keep your system programmed to the maximum efficiency.

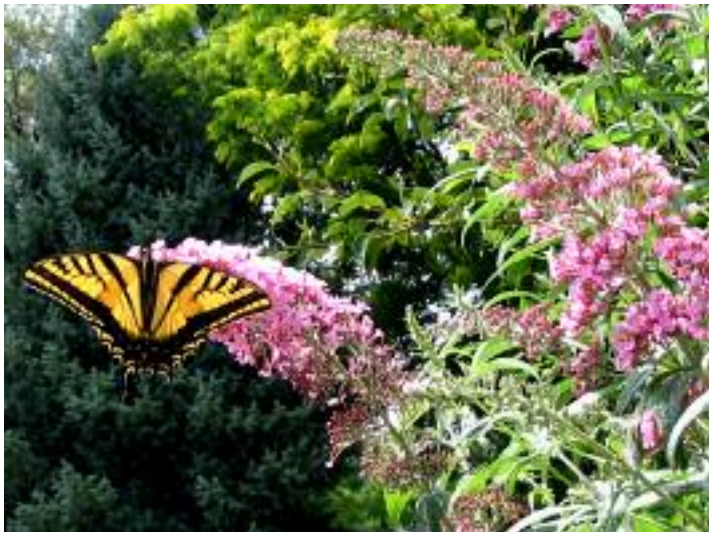
SUSTAINABILITY

According to *Wikipedia*, the definition of sustainability is the "capacity to endure and remain diverse and productive over time."

• **Design your plants for the proper location.** Install xeriscape plants on top of a berm. Plants requiring more water belong in a swale area that receive runoff from irrigated grass areas, roof gutters and natural rain. Think of these areas as mini-ecosystems. On the south side, deciduous trees will shade and cool the home from the hot sun during the summer. During winter, the trees are bare and will allow warming sunlight to reach the side of the home and enter through windows for passive solar gain to the home. Install plant materials that have lower maintenance requirements and where they are likely to grow best.

• **Use a humus-rich compost for proper sod and plant material preparation.** The true test of a compost is how much ***humus*** is available. This is the rich microbe by-product of aged compost. Soil preparation improves the soil through aeration, breaking up hard packed soils for tender grass roots, increased water retention, providing long-term sources of nutrients, softening possible pH extremes and providing the main source of energy for soil micro-organisms and their essential biochemical activity. Always augment the soil with lots of class #1 compost before sod installation and rototill it 4-6 inches into the soil. This is crucial to do before installation because it is not something you can do later. You will notice the difference during the hot months of July when there is little rain support and more heat. Blend the compost with clean fill soil to produce a "planting mix" to install around the roots of the plant material. The plants will have a fertile area to spread their roots into the first couple of years and their survival rate will increase dramatically.

Xeriscape plants can be colorful, diverse and add an array of textures to your planting beds.



The butterfly bush is a xeriscape shrub that flowers in late summer and attracts monarch butterflies.

There is no reason to direct your drainspouts out to the property lines and waste your rainwater.

• **Mulching is organic.** The use of mulch in limited amounts will contribute to the health of your landscape by conserving moisture, cooling the roots of your plant material and recycling nutrients through the soil. Use a shredded cedar or "gorilla" mulch in high wind areas. A shredded mulch will intertwine with itself and prevent it from blowing. Install mulch at the surface over the root systems of the plant material. Lower your landscape maintenance by only installing mulch areas where needed. Use polyspun weed fabrics under planting beds that allow the water to drain through the fabric.

• **Use our natural resources.** Rainwater is best used to irrigate your plant material—not the stormwater drain down the street. Wherever possible, direct the drainspout extensions to the turfgrass or wind a perforated pipe through a cobble swale to irrigate the plant material. There is no reason to direct all of your drainspouts out to the property lines, annoying your neighbors and wasting your rainwater.

• **Substitute hardscapes for turf.** Maintaining a large lawn area uses lots of energy resources. Consider smaller areas of turf and expand your exterior home spaces with pavers, flagstone or decorative concrete

patios. These can be used for barbeques, fire pits, outdoor kitchens, fireplaces, pergolas, gazebos and water features. Once installed they are durable and low maintenance. Use nearby parks when a large grass area is needed.

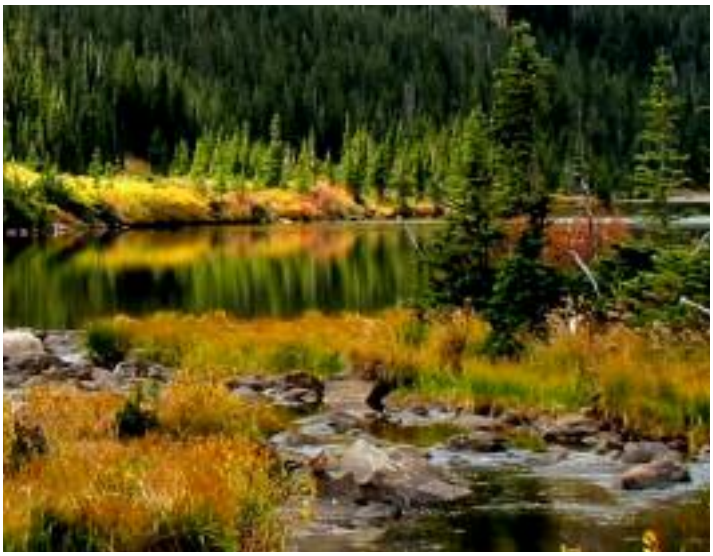
• **Energy efficiency with LED lighting.** Landscape lighting is a great way to complement your landscape at night and offer safety and security as well. LED lights provide a richer spectrum of light, have a fifteen year bulb life, are free of mercury and toxic chemicals and give a ***75% savings in energy!***

GREEN PRACTICES

These are ecologically friendly practices that everyone can do to conserve energy consumption and help the environment.

• **Recycle.** All reusable plant containers should be returned to a green nursery with a recycling program. Buying Colorado-grown plant material and products for your landscape is the same concept as buying produce at your local farmers' markets. You are supporting your local economy and reducing the carbon footprint for importing those items from other states and countries. Landscape waste should be recycled or disposed of properly.

• **Cultural.** By following good aeration, fertilization and watering maintenance schedules, you can keep your turfgrass and plant material free from disease and insect damage. You should aerate your lawn twice a year, spring and fall. Fertilizing right after an aeration is the best time to apply a light, full-bodied blend of fertilizer. It has been shown that fertilizing your turfgrass lightly and frequently will alleviate yout lawn's susceptibility to drought stress. It takes a year to establish turf grass and the first year is critical in affecting how the grass will look in five years.



Adapting "green" practices in our lifestyles today will protect natural resources for our children in the future.

Perennials use less water than annuals, do not have to be replaced each year and provide beautiful color.

• **Adapt to changes.** The climate of Colorado has changed in the last twenty years. Gone are the days when you could plant a "collected" Aspen and expect it to survive. The same is true for many less hardy coniferous trees and shrubs that are susceptible to drying northwest winter winds and lower humidity. By planting hardier species you will ensure that less energy will be expended and less time lost for replacing plant material. Some garden centers will sell you anything. A lot of money, effort and energy is wasted each year because consumers have not been informed about what is sustainable in our climate.

Each landscape has a large collection of mini-ecosystems that need to be properly addressed for water allotment, drainage, wind and sun exposure. A good design will allow trees, shrubs, perennials and grasses not just to survive, but to thrive as intended. Choose an experienced designer to create an attractive, sustainable and cost effective area that you will look at with pride for years to come. Make sure your landscape fits your goals!

Mark Turner is the owner of Aspen Creek Landscape LLC which has served the Metro Denver/Boulder region for more than 25 years. Specializing in custom, residential design/builds, Aspen Creek is based in Lakewood. Mark holds a degree from Kansas State University and is a member of the Associated Landscape Contractors of Colorado. Mark lives in Lakewood with his wife, Margaret, and daughters Maddie & Sarah.