

MANAGING WATER USAGE: PRIORITY ONE

Benjamin Franklin once said, "In this world, nothing can be said to be certain except death and taxes". I think it is time to add another item to the list: Water is our most valuable and finite resource. This has always been true and became even more evident as the migration to the western part of the United States ballooned in the mid 1900's. To provide water to the increasing population boom, the government went on a dam building frenzy to capture water from the Colorado River and store for distribution among seven states that surround the magnificent river. National Geographic magazine stated, "All the water that will ever be is, right now". Ninety-seven percent of all water is saltwater oceans and cost prohibitive to desalinate. Only three percent is fresh water available for drinking and crop production and of that, one and a half percent is locked in ice and snowpacks. Those are some daunting numbers that need to be addressed proactively as our storage of water is rapidly diminishing. More and more is being written on the subject and a great source of information is the book "Cadillac Desert: The American West and Its Disappearing Water" by Marc Reisner written in the mid 1980's.

As our cities grow, the available water resources will be stretched to its' limits and as inhabitants of the desert Southwest, we will be forced to make tough decisions around how we use it. It is important to have a plan in place before the government dictates usage. It is not a matter of if, but when, restrictions will be put in place around how much water a community is allowed to utilize to maintain their landscapes.

Arizona and Nevada will be hit the hardest in the United States. An agreement signed in 2019 outlines substantial cuts in water deliveries to both states and Mexico from Lake Mead due to critical low levels in the reservoir. The Colorado River feeds into Lake Mead and Arizona gets roughly thirty-six percent of its' water from the Colorado River through the Central Arizona Project (CAP) to provide water to cities, tribes, and farming areas. What can we do to ensure our communities stay vibrant throughout the extended drought periods we have been experiencing?

TURF AREAS

Healthy turf requires about three times more water annually than trees and shrubs in a decomposed granite bed. The standard established many years ago was six-acre feet per acre annually for healthy turf when overseeded with rye during the winter months. That equates to 1,955,106 gallons each year for every acre you have in your landscape. At Westbrook Village Association, this comes to 13,685,742 gallons of water annually to keep the seven acres of turf healthy. Arizona Department of Water Resources is now recommending utilizing 4.7-acre feet or 1,531,500 gallons annually, which is a reduction of 423,606 gallons per acre each year for turf management. Will that influence turf quality? You bet. I have always spoken to communities about turf has to be functional and esthetic and if it does not meet those two criteria, it should be on the table for reduction or elimination. By functional, I mean a park or athletic field and esthetic would refer to an entry point to a community or another highly visible area that was well designed to bring a softening look to the landscape. Westbrook Village Association has many of these areas but includes other areas that do not come close to meeting the objectives of functional or esthetic. An example would be the tiny strips of turf between common area walls and the sidewalks throughout the community. These areas are difficult to mow, fertilize and irrigate efficiently. More water ends up on sidewalks and streets due to runoff than is absorbed into the turf even with multiple start times to minimize the wasting of water. Well placed shrubs to mitigate the mass of the walls would be a far more viable solution in these locations.

TREES AND SHRUBS

The main criteria for choosing trees and shrubs in your landscape should be: Is it desert adapted? Does it require low water to thrive and flourish in our environment? Too often, developers go for the instant impact of jamming plants tightly together to sell homes and the long-term ramification of a community is more of an afterthought. This is understandable considering the huge investment in infrastructure costs up front by the developer. Placing trees and shrubs in the landscape is like what people say about real estate...location, location, location. Utilizing proper space allows trees and shrubs to grow naturally with little to no trimming required. This will reduce maintenance and water costs to keep the plants and trees healthy. Plants and trees in decomposed granite areas with normal density require one and a half acre feet of water per acre annually at 488,777 gallons per acre. In Westbrook Village Association, this equates to 14,663,310 gallons annually. There are thirty acres of granite beds within Westbrook Village deemed as common area landscape. Most cities in Arizona have a recommended low water use plants list for guidelines. When choosing plants, this is a valuable resource that saves time and money down the road.

HOW TO IRRIGATE

A good rule of thumb in providing water to your landscape is to water deeply and infrequently. There is a twofold reason for watering this way. Watering deeply encourages the root system of plants to grow deeper where soil temperatures are much cooler. Watering less frequently allows the soil to breathe and develop a stronger root system when seeking water. Avoid the temptation to overwater as this creates shallow roots and deoxygenates the soil over time. This is a good general rule to follow but each location is unique, and watering needs to be adjusted according to slope, soil conditions, exposure to sunlight and time of year.

CONCLUSION

Let us all do better with how we use our most valuable resource and planning is the first step in being successful long term. We have an opportunity and an obligation to do the right thing for our future generations.