

The Myth of Water Scarcity

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Gardening is in large part a drama of survival, adaptation, and an effort to make the spaces in which we live more beautiful, hospitable and productive. In the high desert and Piñon-Juniper ecosystems of Sedona and the Verde Valley - with wild animals, scorching June days, dehydrating winds, torrential monsoon downpours, and freezing winter nights, gardening really is a challenge!

One of the biggest factors for successful gardening in our high desert is water. Participants in our water harvesting workshop last month learned the astonishing fact of how abundant water is in our environment and that we are just throwing it away, or worse, letting it create damage as it flows off our properties unchecked. A central principle of sustainability is to view what we waste as a potential asset.

Consider these facts: One inch of rain on one square foot of surface produces .6 gallons of water. The thirty-year average of rainfall in Sedona is more than twenty inches, or 12 gallons of water per square foot per year. A two thousand square foot home receives 24,000 gallons of rainwater just on its roof each year. Sedona annually receives more than 522,000 gallons of water per acre! So if you have a small quarter-acre lot you will receive more than 130,000 gallons of water per year on your property.

The Sedona Village of Oak Creek area is about five square miles, which equals 3,200 acres. Multiply that times 522,000 and Big Park receives 1,670,400,000 gallons of water per year, not counting the water that flows into the VOC from surrounding forestland! What can be done with all that water?

To bring these water facts to your garden you can see that there is great potential for a lush landscape if you could only slow and “plant” that water instead of moving it away from your property. Most homeowners consider it necessary to drain rainwater away from their property as fast as possible. If you live downhill from a homeowner that does this then you may be vulnerable to flooding every time it rains. However, using the water harvesting principle “first plant the water; then plant the plants,” you can be water rich and enjoy a lush and bountiful garden with healthy rich soil.

The key to harvesting rainwater in your landscape is to sculpt it to create areas where it can pool up, big basins around trees and vegetation, and mulch, mulch, mulch. A thick layer of mulch creates a permeable “sponge” to absorb and retain water. Besides doing this it will reduce the amount of water that evaporates, insulate the earth from temperature extremes, and slowly break down creating food for plants and for the microorganisms and worms in the soil. It also creates a natural weed barrier. Most of the materials needed for mulch are free; think of the bags of leaves you send to the landfill, and wood chips, which can be sourced locally free or inexpensively by the truckload.

To illustrate this, in the accompanying photos, a Village of Oak Creek resident was experiencing flooding on her property and from the adjacent street. She enlisted the help of a water harvesting expert. They turned a problem into a resource by creating water harvesting

earthworks and planting them densely with fruiting plants, flowering perennials, natives and companion plants. In the “before” and “after” photos we see how a garden can solve problems while adding value and quality of life to a home environment.

Below: Residence before - (Photo credit Chris Anderson - submitted with permission)



Below: Residence After - (Photo Credit Chris Anderson - submitted with permission)

