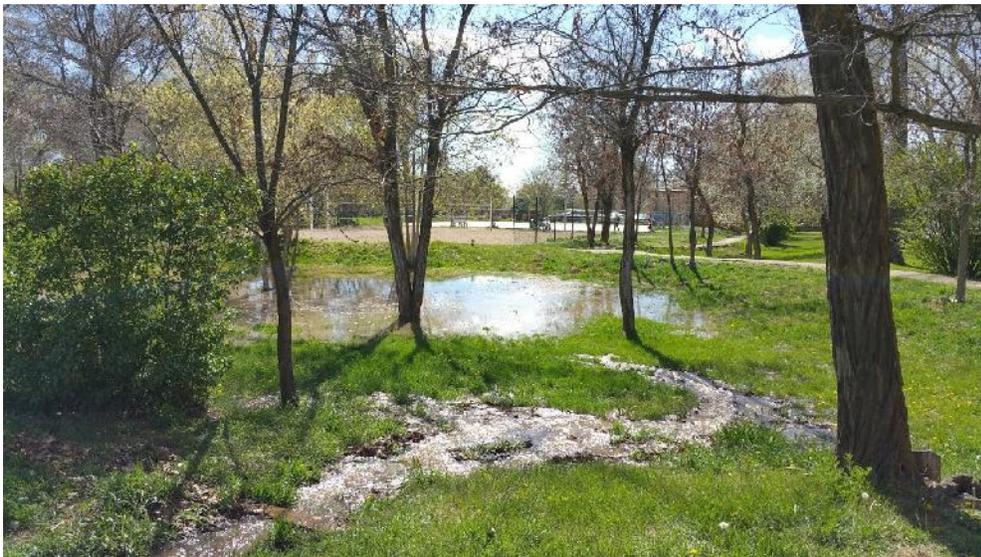


Tree talk

Trees and water in Taos

by Ben Wright

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Flood irrigation of large trees at Kit Carson Park in Taos.
Ben Wright

One look around our surrounding landscape will affirm that trees play an important role in the Taos community. They are enduring symbols in our culture and create the ecological context for many of our lives and identities, yet truth be told, we are often unable to adequately provide for their needs.

We frequently assume that once established, trees take care of themselves, just as they do in nature. There are some key differences. When we plant a tree in our yard, we choose which tree, where it will reside and the degree of attention we give. When a tree is granted the opportunity to root in a situation where it can thrive, it will outlive us, our children and probably our grandchildren. A large part of the success of this equation, particularly in the semi-arid Southwest, is water. Taos arborist Paul Bryan Jones describes this water-tree nexus grounded in the Taos landscape as firmly dependent on our participation.

Everyone knows that trees need water. But many of us are not clear as to how much, where it should be applied and when. There is a common misperception that once trees are established, they send down taproots to access the water table, rendering further irrigation unnecessary. Despite the fact that very few species under rare conditions actually grow a mature taproot, a quick internet search on tree root visualization supports the dominance of the "diving root" hypothesis and our cultural inclination toward this perception.

The error of this commonly held vision may contribute to our inability to water and care for trees properly. A more realistic view of tree root anatomy shows lateral roots spreading in the top 12 inches of soil, spreading wide well beyond the drip line, rather than diving vertically deep for water. If we can visualize a root system as a woven plate resting within the surface of the soil, rooting more broadly than deeply, we may learn to adopt watering techniques that give the trees a better chance to survive in the challenging landscape of Taos.

In the past, acequia-driven flood irrigation provided broad-scale water delivery to augment the winter snowmelt and summer rain events. The trees in Kit Carson Park, along Pueblo Road, in Taos Plaza and along Kit Carson Road grew to massive size under this reliable source of water, providing much relief from the sun and aesthetic pleasure to the citizens and visitors of Taos. As the town grew in size and incorporated modern standards of infrastructure, the developed landscape began to restrict the possibilities for the use of flood irrigation to maintain the large trees. These old trees are now suffering under the modern and severely restricted watering regime, leading to a need for heavy pruning, some removals and strong adjustments to the water supply method.

This is a problem that is not easily resolved. Recent efforts, such as the "Town of Taos Acequia Revitalization Plan," have reinvigorated the importance of acequias in the town of Taos, not just as symbols of resilience and collaboration, but as significant contributors to the reality of community and ecological sustainability. The epiphany of the flowing acequia re-engaging Kit Carson Park gives me hope, not only for the trees currently suffering under water deprivation, but that replanting of large stature trees will have a chance of success.

Outside of extremely high water tables, alternatives to acequias, such as drip-irrigated distribution of water to the entire breadth of the root zone, may also provide the water capacity for large trees, but this needs to be well planned for the long-term future. Tree species also differ in water requirements. Each situation needs to be evaluated based on the long-term probability of water availability, and species must be chosen accordingly. We have the ability to successfully maintain our existing trees and engage in the planting of the future Taos tree canopy, but only if we learn to manage our collective water resources wisely.

Wright is a Taos arborist.