

Arid Zone Times

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Tree Placement

Environmental and physical factors surrounding landscape trees can have dramatic effects on tree health, vigor and appearance. These factors may include reflected heat and light, wind, shade, availability of water, presence or absence of hardscape elements and the horticultural requirement of the surrounding landscape. One of the most common problems is mixing trees and shrubs that have differing water requirements. This typically involves trees with low water requirements planted either in turf or with high water demanding understory shrub plantings.

Excess water can also be associated with trees planted where rainfall runoff from roofs or paved areas cause periodic flooding. In retention basins, trees survive best when planted on the slopes rather than in the bottom of the basin. The majority of rain in the southwest typically falls during the winter months. Flooding associated with these rains occurs when many desert species are dormant and highly susceptible to root damage from saturated soils. Mesquites and Desert Willows will tolerate brief periods on standing water and are most suited for planting near the bottom of retention basins. Incompatible water requirements with understory plantings can adversely effect trees in two ways: 1) low water use trees can be more susceptible to root rotting fungi when soils are saturated for long periods and 2) those species that tolerate extra water will produce accelerated and unwanted growth that will require additional pruning or that may be more subject to wind damage.

Trees planted adjacent to or near south and west facing walls endure high temperatures 24 hours a day during the hotter months. Reflected heat and light from nearby walls and building is often overlooked as a potential problem for newly planted landscape trees. During the daylight hours walls heat up as a result of solar radiation. At night this "stored" heat is released back to the surrounding environment from the sun heated walls and structures. These conditions can create tremendous and uninterrupted heat stress that can cause serious damage or death to trees. Sidewalks and asphalt can further contribute to significant heat gain around trees. Mesquites are perhaps the best adapted to these harsh urban settings as they tolerate heat and the additional water needed to keep such trees vigorous. Conversely south or southwest exposures can offer a few degrees of protective warming in colder months for frost sensitive trees.

Trees are always subject to injury by high winds. Some landscape setting present greater threats than others. It is important to understand that streets lined with tall buildings or narrow courtyards or pedestrian malls between building can increase the intensity of winds. In confined areas winds can swirl and eddy putting a twisting or torsional stress on trunks and branches. Trees placed in these kinds of settings will require regular pruning to reduce wind resistance and the risk of serious damage.

The presence or absence of thorns is obviously a consideration in trees placement as is the mature height and width of the tree. The nature, amount and seasonal distribution of leaf, flower and seed pod litter will determine the appropriateness of tree placement near patios, pools and pedestrian areas.