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Landscapes in urban backyards or around a rural home generally accommodate fruit or ornamental trees, shrubs, and flowers that serve a variety of purposes: food, shade, screen, color, or wildlife habitat. With the right plant choices and placement, pleasing and functional landscapes can be achieved that will thrive with minimum irrigation and maintenance.

“Xeriscape” promotes water-conserving landscapes and designs that aim to reduce the need for water, maintenance and other resources. Xeriscapes are dry landscapes: desert plants are also known as xerophytes, plants adapted to or native in desert environments. Xeriscapes rely primarily on native or desert-adapted plants that survive in the environment with little or no additional water.

Arizona is home to three hot desert ecosystems, the Mohave Desert in northwest Arizona, the Sonoran Desert in central and most of southern Arizona and the Chihuahuan Desert in the southeastern part of the state. Native plants that are well-adapted to alkaline soils with pH between 7.5 and 8.5, and can handle fluctuating annual and daily changes in temperature, and low natural rainfall are at home in each of these ecosystems. Native plants have evolved with the diseases and pests common to each area and have developed tolerance or resistance, enabling them to survive.

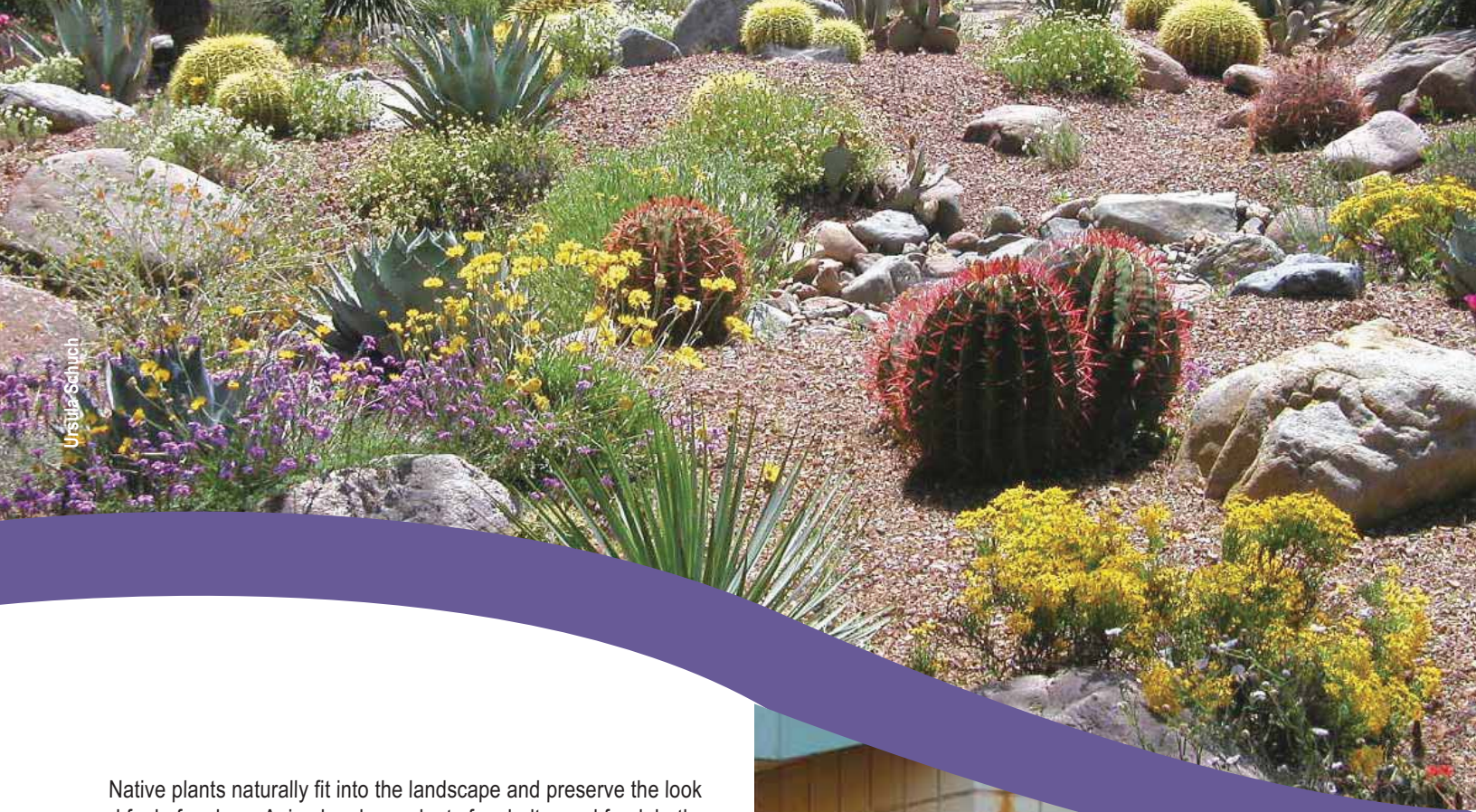
All of these characteristics are reasons why native plants make a good choice when minimal maintenance of a landscape is desired. While desert-adapted plants from climates similar to those of central and southern Arizona may be able to grow here, they might not be ideally suited to deal with a hard freeze, the low humidity of May and June, and the local pests and diseases.



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# LANDSCAPING WITH NATURE – XERISCAPE

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Native plants naturally fit into the landscape and preserve the look and feel of a place. Animals rely on plants for shelter and food, both in the wild and in landscapes around homes. Many native plants are superior in serving the needs of wildlife, while some introduced species do not provide adequate habitat or food for the local animals. For example, native mesquite trees play an important role in the desert ecosystem. They provide shelter for birds, their pods are an important food source for animals, and young saguaro cacti find shelter in the shade of the trees. Conversely, palm trees are popular choices for achieving a desert oasis look, but they lack the benefits that mesquite trees furnish for the local flora and fauna.

Using native plants in a home landscape also prevents potentially invasive plants from displacing local vegetation and wildlife. In recent years grass species like buffelgrass (*Pennisetum ciliare*) and green fountain grass (*Pennisetum setaceum*) have invaded natural areas, threatening extinction of native grasses and other plant species. Some of the non-native grasses create a dense carpet of vegetation that increases damage from fires. The Mexican paloverde (*Parkinsonia aculeata*) and African sumac (*Rhus lancea*) are examples of trees that have become invasive and should not be planted.

Xeriscaping uses several principles to create a landscape that conserves water and requires minimum resources and input to maintain. Water-wise planning and design is the first step, based on the needs of people using the space. While many desert-dwellers would like to create a mini-oasis close to the house, the lush plants used for shade, color, or fruit are often non-native and require irrigation, fertilizer, and pruning more often than xeric (low water use) plants. Areas in the transition and desert zone further away from the main outdoor living spaces typically rely on the use of xeric plants.

Low water-use or drought-tolerant plants are a hallmark of xeriscapes. Thus, lawns are encouraged only in limited areas that serve a specific purpose. In arid climates, the need for more frequent irrigation, mowing and fertilizing makes turfgrass impractical on slopes and large expanses unless used for sports or play.



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Successful xeriscapes include such tools as efficient irrigation design and equipment, and water harvesting. Drip irrigation supplies most of the supplemental water to the plants, conserving moisture by putting it right near plant roots. Water harvesting has been used by humans in dry climates for thousands of years.

Homeowners now can find many products to catch, store, and redistribute precious rain runoff from structures, in addition to using the proven principles of land contouring, where the soil surface is shaped to channel rainwater towards plant basins. The application of surface mulch helps conserve moisture around the root zone of plants and can prevent competition from weeds. Sound horticultural practices to maintain xeriscapes will preserve plant health and functionality of plants.

How to choose plants for your xeriscape garden? Decide what the space will be used for such as a shaded seating area with flowering plants providing color or a habitat that attracts wildlife. Plants may be used as screens, or as striking background accents. Taking clues from nature in surrounding areas can be helpful in creating a natural setting.

Good tree choices that work well for native landscaping in most of Arizona's lower and mid-elevation deserts are mesquite (*Prosopis* sp.), desert willow (*Chilopsis linearis*), and Arizona rosewood (*Vauquelinia californica*—which is available as a shrub or trained as a tree). Arizona ash (*Fraxinus velutina*) thrives in naturally moist areas. With supplemental irrigation it will develop a large canopy that creates a pleasant shaded area. For windbreaks or year-round shade,

evergreens are a good choice. Afghan pine (*Pinus eldarica*), Arizona cypress (*Cupressus arizonica*), or live oak (*Quercus virginiana*) come in various sizes and shapes.

Visiting local botanical or demonstration gardens and observing what does well in yards or in nature make it easier for homeowners to find suitable plant materials for a new landscape. Cooperative Extension offices throughout Arizona have lists of native or low water-use plants that are well-adapted to the local climate and soil conditions. New varieties of native and desert-adapted plants with improved performance traits, showy leaves or flowers, seedlessness and other features are becoming more available in nurseries each year. Using plants that create a sense of place in xeriscapes can enhance any home in the Southwest whether in town or out on the ranch.

#### WHY GO 'NATIVE'?

- Proven, locally-adapted plants
- Drought tolerant, water conserving
- Better fit with the natural landscape
- Low maintenance
- Beneficial for wildlife (food, habitat)
- Non-invasive, stable vegetation
- Preserves wildlands by limiting invasive plants