

Water Efficient Landscaping: FSU's Commitment to Xeriscaping

Water is one of the planet's most precious resources; one that all forms of life depend on inextricably. It is, therefore, of great concern that a mere 0.3% of the earth's water supply is suitable for use by humans, and both population and the demand for water are increasing while the supply of exploitable water remains constant. According to the U.S. Geological Survey, of the 26 billion gallons of water consumed everyday in the United States, 30% is devoted to outdoor use, with the majority used for landscaping practices (Water Efficient Landscaping 1). Water conservative and efficient technologies are being employed in all aspects of life, including outdoor and landscaping projects, through applying ecologically aware techniques to new developments and adapting and updating prior ventures.

One of the most progressive and effective methods for conserving water in landscaping is the philosophy of "Xeriscaping," a term that stems from the Greek word "xeros," meaning "dry." Xeriscape describes the practice of utilizing sound horticultural practices coupled with a common-sense approach to landscaping and resource use. These ideals are itemized into seven principles that chart the evolution of a Xeriscape design, from planning to maintenance. "Watering costs alone can be cut by one-half to two-thirds by installing a Xeriscape instead of turf or other types of water-thirsty landscapes," states the Facility Manager's Guide to Water Management, demonstrating the practicality and equity of such an approach (44). As an institution with a commitment to increasing sustainability, Florida State University is designing and implementing water conservative landscaping techniques in compliance with the Xeriscape philosophy and the seven principles. This approach has proven effective since its conception a decade ago, and will facilitate FSU's evolution towards a more sustainable campus.

The Seven Xeriscape Principles

1. Proper Planning and Design

Proper Planning and Design is the first and most important principle in the Xeriscape approach. This stage includes taking into account the regional and microclimatic conditions of the site, topography, soil conditions, existing vegetation, intended use of the property, and importantly, the clustering of plants by water usage to ensure efficient allocation of resources (Water Efficient Landscaping 4). Policy 2D-2 of the 2005 Florida State University Master Plan 9 on General Infrastructure prescribes that "the use of xeric landscaping techniques, including the maintenance or installation of selected vegetative species, low irrigation and compact hydrazone concepts, shall be considered for all new building and ancillary facility construction" (11).

2. Soil Analysis and Improvement

The second principle in a water efficient plan incorporates testing soil for nutrient levels and developing a course of action for enhancement to improve the soil's ability to support plants and retain water (Water Efficient Landscaping 4).

3. Plant Selection

The third convention of a Xeriscape methodology calls for the selection of appropriate plants, since native or established plants require little to no additional water beyond normal rainfall (4). “The overall campus shall appear to be not only unified, but set in a landscape that is part of a region and which appears to be indigenous [...] The selection of plant materials shall consider the use of plant species that are indigenous to the native plant communities of the region and which promote the use of Xeriscape principles whenever possible and appropriate. Reference shall be made to local sources which identify drought tolerant and native plant materials” (Florida State University Master Plan 16 31). The administration further specifies that water requirements shall be reduced through preservation of existing plant communities, re-establishment of native plant communities, and use of shade trees to reduce transpiration rates (31).

4. Use of Turf

The fourth guideline of a Xeriscape plan, instructs on the utilization of practical turf areas, both in use and placement. FSU has specified turf practicality in the use of “drought tolerant ground cover” (Florida State University Master Plan 13 4).

5. Efficient Irrigation

The fifth principle of the progressive Xeriscape plan calls for efficient irrigation, a concept that FSU has recommended extensively. Master Plan 13 proposes the use of low volume delivery fixtures, zoned irrigation systems, moisture sensors and rain switches to reduce unnecessary water usage (4). It further stipulates limiting the hours of outdoor irrigation and the use of treated wastewater effluent for an extended campus irrigation system (3). FSU’s decision to investigate the implementation of a “gray water” irrigation system is in line with the Xeriscape philosophy and progressive in its own right as a state-of-the-art technology.

6. Use of Mulches

The sixth convention, the Use of Mulches, allows for the greater retention of water by minimizing evaporation, reducing weed growth, moderating soil temperatures, and preventing erosion (Water Efficient Landscaping 5). Policy 1B-8 of Plan 13 specifies for such usage.

7. Maintenance

Appropriate Maintenance, the final principle, ensures that the landscaping is both kept in top aesthetic condition and ecologically efficient condition. Proper maintenance means less waste, a healthy, long-lasting landscape, and the prevention of costly repairs to the irrigation system (Facility Manager’s Guide to Water Management 41). Long-term maintenance is an important provision in the 2005 Master Plan 16 with special emphasis on the longevity and permanence of landscaping selection, demonstrating commitment to sustainability in environment.

With the increasing burden on the planet’s water supply and 7.8 billion gallons a day used in the United States alone for outdoor functions, water efficient endeavors like

Xeriscaping are at the forefront of conservation. FSU's commitment to such a preservationist attitude through the seven principles represents a massive leap in the drive to a sustainable campus. The Campus Sustainability Assessment Project notes both responsible and sustainable campus water usage and maintaining campus ecological integrity through landscaping plant choice in their Proposed Snapshot CSA Indicators of university sustainability, demonstrating Florida State University's dedication to a future sustainable campus (2-3).

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