



Xeriscape Landscaping

Preventing Pollution and
Using Resources Efficiently



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EPA wishes to gratefully acknowledge the assistance of Dr. Douglas Welsh, Texas A&M University, and Fox McCarthy, Cobb County-Marietta Water Authority, in the preparation of this booklet.

The information in this booklet has been funded wholly or in part by the U.S. Environmental Protection Agency under assistance agreement no. CX-818191-01 to the Terrene Institute. It has been subjected to the Agency's publications review process and has been approved for publication as an EPA document. Mention of trade names and commercial products does not constitute endorsement or recommendation for their use.



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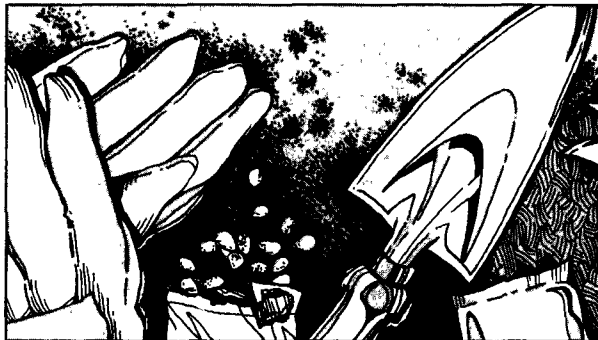
What is Xeriscape Landscaping?

Without water, life ceases. Yet, many of us in the United States take this precious resource for granted — and we continue to use more and more. In fact, each household consumes approximately 125 to 200 gallons per day.

The “water conscious” install water-saving shower heads and wash only full loads of clothes and dishes, but still, household use increases dramatically during the summer: by 40 to 100 percent. Obviously, we’re outdoors gardening and caring for our lawns.

We can have stunning gardens and lawns — and save water, prevent pollution, and protect the environment, too — by employing a form of landscaping called Xeriscape landscaping. Defined as “quality landscaping that conserves water and protects the environment,” Xeriscape produces attractive landscapes that use less water because they’re based on designs and plants suited to the locale.

This booklet describes Xeriscaping and its many benefits, cites some successful examples, and provides a short bibliography and contact/reference list. Although the principles and concepts discussed will help you understand how to use Xeriscaping, local resources — especially your county extension service and garden/nursery centers — can give you more specific information about applying it to your geographical area.





Homes with Xeriscape landscapes can be beautiful, environmentally friendly, and easy to maintain.

Xeriscape landscaping can be defined as “quality landscaping that conserves water and protects the environment.” This definition is based on seven principles:

- ❖ *P*lanning and design,
- ❖ *S*oil analysis,
- ❖ *A*ppropriate plant selection,
- ❖ *P*ractical turf areas,
- ❖ *E*fficient irrigation,
- ❖ *U*se of mulches, and
- ❖ *A*ppropriate maintenance.

How is Xeriscape Landscaping Done?

Landscaping that conserves water and protects the environment does not mean urban landscapes with only rocks and cactus. Through careful planning, landscapes can be designed to be both pleasing to the senses and kind to the environment.

❖ *Planning and design*

Developing a landscape plan is the first and the most important step. Your plan should take into account the regional and microclimatic conditions of the site, existing vegetation, topography, intended uses of the property, and most importantly, the grouping of plants by their water needs. The landscape plan also allows landscaping to be done over a period of time.

❖ *Soil analysis and improvements*

Because soils vary from site to site, test your soil before beginning or improving your landscape. Your county extension service can analyze your soil and suggest ways to improve its ability to support plants and retain water.

❖ *Appropriate plant selection*

Your landscape design should take into account your local climate as well as soil conditions. Focus on preserving as many existing trees and shrubs as possible because established plants usually require less irrigation water and maintenance. Choose local or regional plants known for their beauty, water efficiency, and resistance to disease and pests.



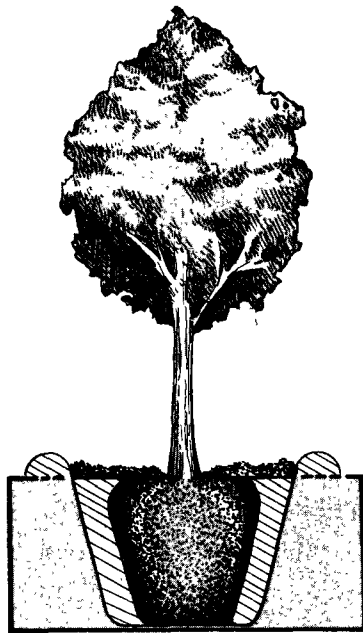
Groundcovers, shrubs, and trees make a pleasant Xeriscape landscape.

❖ ***Practical turf areas***

How and where turf is placed in the landscape can significantly reduce the amounts of irrigation water needed to support the landscape. Lawns are major users of supplemental water and generally require greater maintenance than other vegetation. Turf should be used where it aesthetically highlights the house or buildings, and where it has a practical function, such as play and recreation areas. Select a type of grass that can withstand drought periods and becomes dormant in hot, dryer seasons.

❖ ***Efficient irrigation***

Much of the water applied to lawns and gardens is not absorbed by the plants. It is lost in runoff because it is applied too quickly — or through evaporation. Low-volume or drip-type irrigation are efficient methods for many trees, shrubs, flowers, and groundcovers. But to promote the strong root growth that supports a plant during drought, always water deeply and only when the plant needs water. Grouping plants according to similar water needs also makes watering easier and more efficient.



*Proper planting
initially reduces
need for
pesticides,
fertilizers, and
constant care.*

❖ ***Use of mulches***

Mulches encourage greater retention of water, reduce weed growth, and prevent erosion. They also improve the condition of your soil. Mulches are typically wood bark chips, wood grindings, pine straws, nut shells, small gravel, or shredded landscape clippings. Avoid using rock mulches because they radiate large amounts of heat that promote water loss from the landscape.

❖ ***Appropriate maintenance***

Water and fertilize plants only as needed. Too much water promotes weak growth and increases pruning and mowing requirements. Cutting grass only when it reaches two to three inches promotes deeper root growth; the proper cutting height varies, however, with the type of grass so you may want to contact your county extension agent. Avoid shearing plants or giving them high nitrogen fertilizers during dry periods because these practices encourage water-demanding new growth.

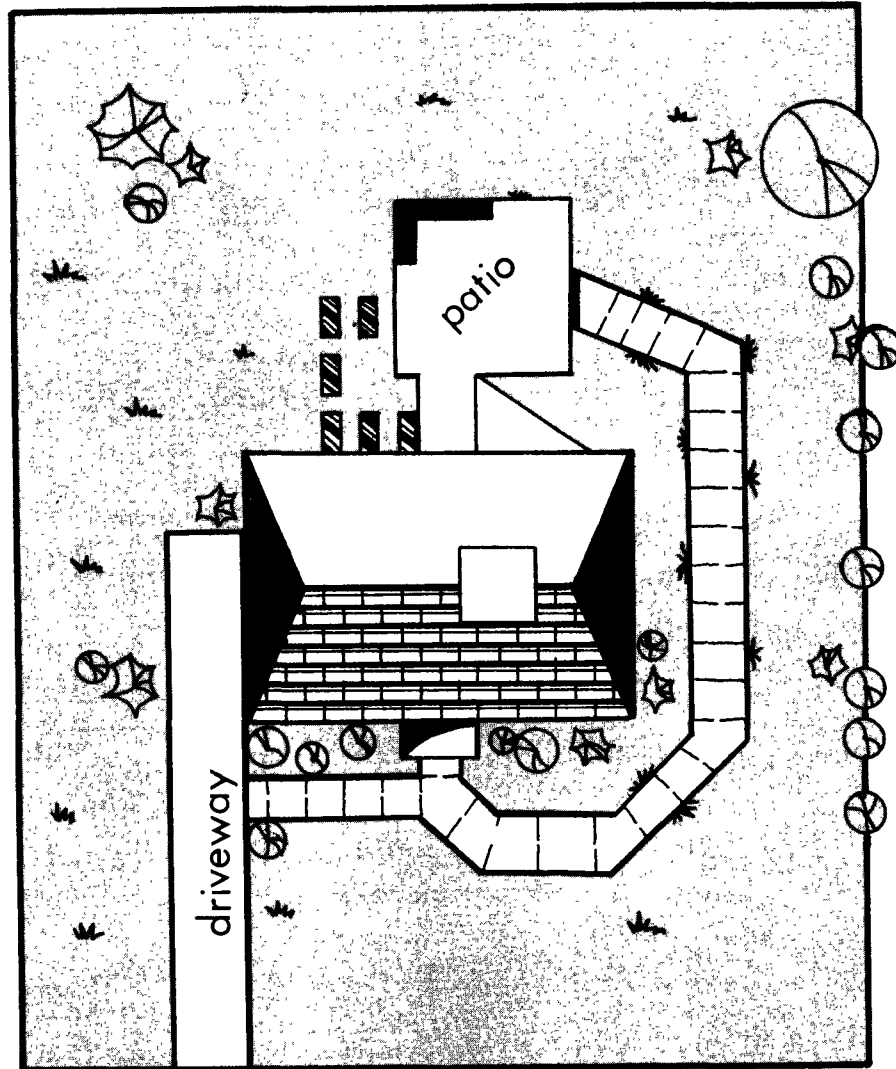
Why You Should Use Xeriscape Landscaping

Proper landscaping techniques can create both a beautiful landscape and one that benefits the environment and saves water. In fact, attractive, water-efficient, low-maintenance landscapes can increase home values between 7 and 14 percent. In addition, using trees and shrubs to provide shade in the summer and sunlight in the winter can reduce cooling and heating costs by half.

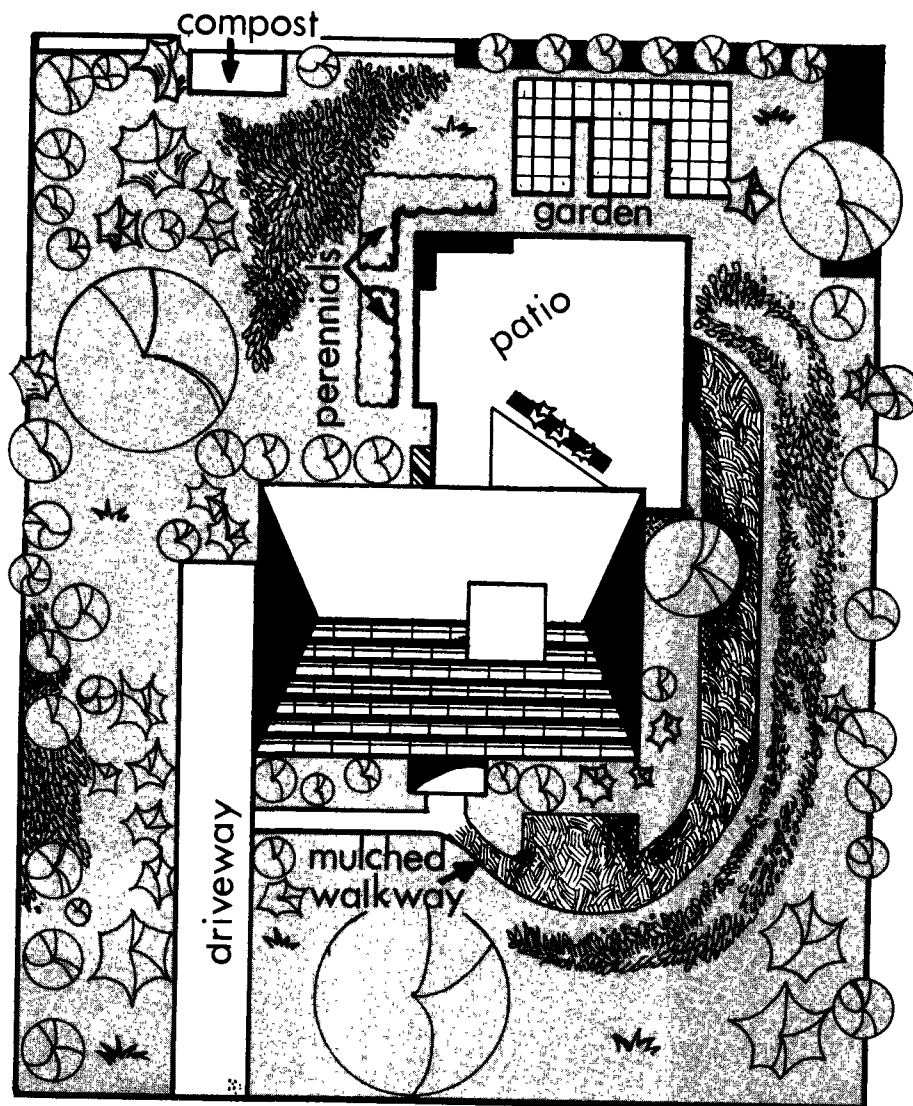
Xeriscape landscaping offers many economic and environmental benefits, including

- ❖ ***R***educed water use, thus leaving more water for fish, wildlife, and other needs;
- ❖ ***D***ecreased energy use (and pollution) because less pumping and treatment of water is required;
- ❖ ***R***educed heating and cooling costs because of careful placement of trees and plants;
- ❖ ***M***inimal runoff of stormwater and irrigation water that carries soils, fertilizers, and pesticides;
- ❖ ***F***ewer yard wastes that need to be landfilled;
- ❖ ***M***ore habitat for plants and wildlife;
- ❖ ***L***ower labor and maintenance costs; and
- ❖ ***E***xtended life for our water resources infrastructure, e.g., reservoirs, treatment plants, groundwater aquifers, thus reducing taxpayer costs.

Xeriscape Landscaping



Xeriscape Landscaping



Examples of Successful Xeriscape Landscaping Projects

Xeriscape landscaping techniques can be used by individuals, companies, state and local governments, and businesses to physically enhance their properties, reduce long-term maintenance costs, and, at the same time, create environmentally conscious landscapes. The following examples illustrate how Xeriscape landscapes can be used in various situations.



❖ Homeowner— public/private partnership

The South Florida Water Management District, the Florida Nurserymen and Growers Association, the Florida Irrigation Society, and local businesses have produced a television video called "Plant It Smart with Xeriscape." The video shows how a typical Florida residential yard can be retrofitted with Xeriscape to save energy, time, and money. The yard (selected from 70 applicants) had a history of heavy water use — more than 90,000 gallons per month. After the retrofit, the yard is more beautiful, uses over 75 percent less water, and relies on yard wastes for mulch and compost.



A display of perennials, turf, and woody ornamentals that give a good picture of what Xeriscape landscaping is all about.

❖ ***State government***

Although perceived as a water-rich state, Florida has become the first to enact a statewide Xeriscape law. Florida's legislature recognized that its growing population and vulnerable environment dictated legal safeguards for its water resources. The Xeriscape law requires Florida's Departments of General Services and Transportation to use Xeriscape landscaping on all new public properties and to develop a five-year program to phase in Xeriscape on existing properties. All local governments must also consider requiring the use of Xeriscape and offering incentives to install Xeriscaping.

❖ ***City government***

Even though California and its local governments have long been leaders in water conservation, half of the water consumed by a typical Los Angeles homeowner is used on lawns and gardens. As a result, the Department of Water and Power introduced a multifaceted outdoor water conservation program that includes an annual spring garden exposition to provide information on low-water-use plants and efficient irrigation techniques. In addition, Xeriscape landscapes are required for all new construction projects.



Xeriscape principles—from an excellent design to the practical turf areas—combine to conserve water while enhancing the beauty of this apartment home.

❖ **Developers**

Post Properties, Inc., a developer and manager of more than 50 upscale apartment communities in Georgia and Virginia, uses Xeriscape landscaping on its properties. The landscaping has been so successful that the company launched Post Landscape Services in 1990 to help other developers and property managers design creative landscapes while effectively lowering long-term maintenance costs and water use.

Although Post communities in Atlanta are located in an area with 50 to 60 inches of natural rainfall annually, the company is careful to apply Xeriscape principles. Only about 10 percent of their landscaped areas are irrigated. Soil amendments are added when construction begins, plants are carefully selected, mulch is applied annually, and mulching mowers are used on the lawns. Post also practices integrated pest management to reduce pesticide use. Insect and disease problems decline because superior plant species are used in conjunction with soil improvements and mulching to help plants thrive and resist pest infestations.

❖ *Public/private partnerships*

In Georgia, per capita water use rose from 50 gallons per day in 1965 to 200 in 1991. Much of this water is used for recreation, gardening, and landscaping. In some areas, summer household use doubles over winter levels. Many individuals recognized that Georgia faced severe constraints on its future growth and quality of life if water issues were not addressed.

Commercial building in Atlanta. (right) Use of recycled water both for aesthetics and irrigation.

(below) Practical use of turf for minimal foot traffic, water flow, and aesthetics, not as a ground cover.



Through the initial efforts of the University of Georgia Cooperative Extension Service, the Georgia Water Wise Council was established in 1989. The Council now has 140 members from water and energy utilities, the "green industry," the development community, homebuilders, and federal, state, and local governments. To help curb the growing demand for outdoor water, the Council recently published a 40-page guide to Xeriscape for Georgians.

The Council also works with water utilities to offer homeowners a free landscape consultation by senior landscape architecture students, and with the Greater Atlanta Homebuilders Association to develop standards for a "water-smart house."



For More Information

The following is a partial listing of organizations that can provide you with more information on Xeriscape landscaping. Many local water utilities have information especially tailored to your locale and some have demonstration gardens that allow you to see the beauty and practicality of a Xeriscape landscape.

Your local county extension service is also an excellent source of information. Local nurseries can also provide information on native and low water use plants as well as plants that are disease resistant or adapted to the soil conditions in your yard.

Water Utilities

Cobb-Marietta County Water
Authority
1660 Barnes Mill Road
Marietta, GA 30062
(404) 426-8788

East Bay Municipal Utility
District
P.O. Box 24055
Oakland, CA 94623
(510) 835-3000

Los Angeles Department of
Water and Power
111 N. Hope Street
Los Angeles, CA 90012
(213) 481-4211

Massachusetts Water Resources
Authority
Public Education Department
Charleston Navy Yard
100 First Avenue
Boston, MA 02129
(617) 242-6000

The Metropolitan District
555 Main Street
Post Office Box 800
Hartford, CT 06142-0800
(203) 278-0127

North Marin Water District
P.O. Box 146
Novalto, CA 94948
(415) 897-4133

South Florida Water
Management District
P.O. Box 24680
West Palm Beach, FL 33416-4680
(407) 686-8800

Southwest Florida Water
Management District
2379 Broad Street
Brooksville, FL 34609-6899
(904) 796-7211

Public-Private Partnerships

The Georgia Water Wise Council, Inc.
1033 Franklin Road, Suite 11-187
Marietta, GA 30067

Extension Service

Clemson University
Department of Horticulture
172 Poole Agricultural Center
Clemson, SC 29634-0375
(803) 656-4964

Cooperative Extension Service
The University of Georgia
College of Agricultural and
Environmental Sciences
Athens, GA 30220-1797
(706) 542-2861

Texas Agriculture Extension
Service
Texas A&M University System
225 Horticulture/Forestry
Service Building
College Station, TX 77843-2134
(409) 845-7341

National Organizations

American Association of
Nurserymen
National Landscape Association
1250 I Street, N.W., Suite 500
Washington, DC 20005
(202) 789-2900

American Water Works
Association
6666 West Quincy Avenue
Denver, CO 80235
(303) 347-6195

Rocky Mountain Institute
1739 Snowmass Creek Road
Snowmass, CO 81654-9199
(303) 927-3851

Software

WATER EFFICIENT LANDSCAPE PLANNER
available from:
Alfred Krause
U.S. EPA Region V
77 West Jackson Boulevard (WCP-15J)
Chicago, IL 60604-3507

References and Bibliography

The following is a partial listing of books and pamphlets on resource efficient landscaping. For a more extensive list, particularly for plants suited to your locale, consult your local library, county extension service, nurserymen, garden clubs, and water utility.

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- Xeriscape Plant Guide II Homeowner's Edition*. Southwest Florida Water Management District, 2379 Broad Street, Brooksville, FL 34609-6899.
- Xeriscape: Water Conservation Through Creative Landscaping*. Southwest Florida Water Management District, 2379 Broad Street, Brooksville, FL 34609-6899.
- 40 Ways to Save Water*. 1977. L. Ken Smith. Environmental Design Consultants, 253 Beech Road, Newbury Park, CA 91320.