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Xeriscape: Landscaping that saves

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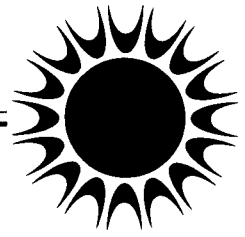
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Xeriscape: Landscaping that saves

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Introduction

Today's headlines trumpet urgent energy concerns. Still, there are ways in which individual effort cumulatively can slow, stop, and even reverse the negative impact of poor conservation habits.

Think Xeriscape

Landscaping spends energy in a variety of ways: in the manufacture and use of fertilizers; in the manufacture, use, and fueling of landscaping equipment; in the production and distribution of our water supply; and in physical effort. *But Xeriscaping saves energy.*

With 800 - 900 people a day moving to the land of sunshine, water is increasingly precious. In Florida, outdoor irrigation alone can consume up to 50 percent of the average homeowner's water use. *But Xeriscaping saves water.*

What is Xeriscape?

When properly planned, Xeriscape is a cost-effective method of landscaping to conserve fossil fuel energy and water on a residential and community-wide level.

Xeriscaping is an old concept with a new name. The term Xeriscape is derived from the Greek meaning dry, and was coined by the Denver Water District during its innovative and successful effort to address local water shortages. Xeriscape is now a registered trademark of the National Xeriscape Council.

Not just a pretty space

Simply stated, Xeriscape advocates seven basic steps. (See *Sound principles of Xeriscape design*). It emphasizes appropriate drought-tolerant plants and practical turf areas as part of a total management program. It takes into consideration local variables such as soil type, average rainfall, climate, and plant adaptability. It considers the need for or proposed use of turf areas, as well as the intended purpose of the area to be Xeriscaped.

Xeriscape for your life

Before you begin a landscape, ask yourself this:

- ☞ What do you want or need from your particular landscape?
- ☞ What limitations and potential does it have now?
- ☞ Will your landscape be simply for display? If so, what will you need to hide or want to highlight? Do you expect to play, entertain or garden in it?
- ☞ Do you have children or pets? They need turf areas to play on, and they need to be protected from poisonous or dangerous plants.
- ☞ How's the drainage?
- ☞ Where are the sunny spots? The shady ones? How do they change with the seasons?
- ☞ What liabilities (such as rocks or slopes) of your landscape can you turn to attractive advantage?

These are the types of questions you'll need to ask so you can best plan your unique Xeriscape.

Plugging the energy drain

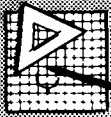
The major expenditures of energy in landscape maintenance (aside from muscle power) are in water pumping and treatment, and in the manufacture and shipping of fertilizers, insecticides and other gardening chemicals. The energy used to manufacture maintenance equipment such as lawn mowers is also significant.

You can help reduce this energy drain by preserving natural areas to diminish, if not eliminate, the need for additional plantings; by selecting species requiring little or no water, fertilizer or insecticides; and by maximizing the use of ground covers and mulched areas.

Getting along with your landscape

Zoning your property according to what are called microclimate conditions contributes to effective Xeriscaping. A particular microclimate shares similar

The seven principles of sound Xeriscape design



Plan your landscape to minimize expense and maintenance.

Use drought-tolerant plants, and use sun exposure as a guide to placement.



Irrigate efficiently: group plantings according to similar water needs, use low-volume irrigation devices, and use sprinklers only for turf. Water early in the day.



Use turf only where it is needed for functional purposes. Consider turf alternatives such as mulches and drought-tolerant ground covers.

Use mulches for water retention, long-term slow fertilization and to limit weed growth.



Improve the soil to allow, where appropriate, better absorption of water.

Maintain your landscape properly to save maintenance costs.



amounts of moisture, shade, sun, heat and air movement. A single yard can have several microclimates.

The point is to work with the microclimates rather than against them. Benefits arise from utilizing plants to increase or decrease the impact of sun, wind, and water, or its lack, upon the local environment.

Try mulching this around

Mulches keep the soil cool, cut down on evaporation and weed growth, retard erosion, and provide nutrients to the soil. With planning, they create a distinctive touch.

Inorganic mulches of rocks or gravel, and organic mulches such as bark chips, wood grindings or pole peelings can add to the most formal look, or create a casual environment. And think of the mowing you can avoid.

Keep in mind, however, that inorganic mulches reflect more heat. Use them in shady areas, and keep them away from buildings.

Mulches are best used at depths of at least three to four inches (the coarser the mulch, the more deeply it should be applied). Mulches should be placed directly on the soil or on breathable fabric in planting areas, never on plastic sheeting.

For maximum effect in promoting the growth and health of trees, mulches should be kept away from the trunk and should extend as far out as feasible to encourage extensive root growth.

Have your landscape for lunch

As long as you're seriously planning your landscape, why not take it a step further and make it edible? Vegetables and fruits can be just as attractive as any other plant, and a lot more useful.

While reaping the delicious rewards of a produce market in your own yard, you will also be conserving by redirecting the water and energy used in strictly ornamental landscapes.

And by planting according to Xeriscape microclimate concepts, you, as already shown, will save on energy and water.

More energy-saving tips:

- ☛ Plant shade trees, shrubs and vines to significantly reduce solar radiation striking east, south and west walls, and east and west windows.
- ☛ Use vegetation to block cold, northerly winds during the winter. Fences and vegetation can block air flow for a distance of from four to seven times their height. Plan their type and placement with care.
- ☛ Use fruit trees to provide color, fragrance and food. They have little need for water once their root system is established.
- ☛ To avoid stress to grass and to save on water, set the blades on your mower so that no more than one-third of the leaf blade is cut.
- ☛ To avoid constant pruning, consider the mature size a plant will attain when deciding its placement.
- ☛ Insects and disease are less of a problem when plants are adapted to an area.
- ☛ Select plants with soil, drainage, light, and drought and salt tolerances in mind.
- ☛ Overuse or misuse of nutrients creates pollution. If the plant doesn't absorb the fertilizer, then the soil and the underground water table will.
- ☛ If soil is improved too much, plants become dependent on extra care.
- ☛ Watering early in the day, when it's coolest, prevents evaporation. The rising sun will quickly dry the water from plant leaves, thus preventing the diseases and pests that thrive in a waterlogged environment.

- ☞ Watering lawns too frequently reduces their drought-resistance. Try to wait until early signs of wilting are evident before watering.
- ☞ Shred or chip yard clippings for composting or mulching. This not only conserves water, it also reduces solid waste.
- ☞ Where turf is appropriate, choose species that need less mowing, fertilization and water.
- ☞ To reduce time spent in maintenance, arrange plants in beds rather than as isolated specimens.
- ☞ Match the right kind and size of power tool to the job.

Hints from The Planet Janitor

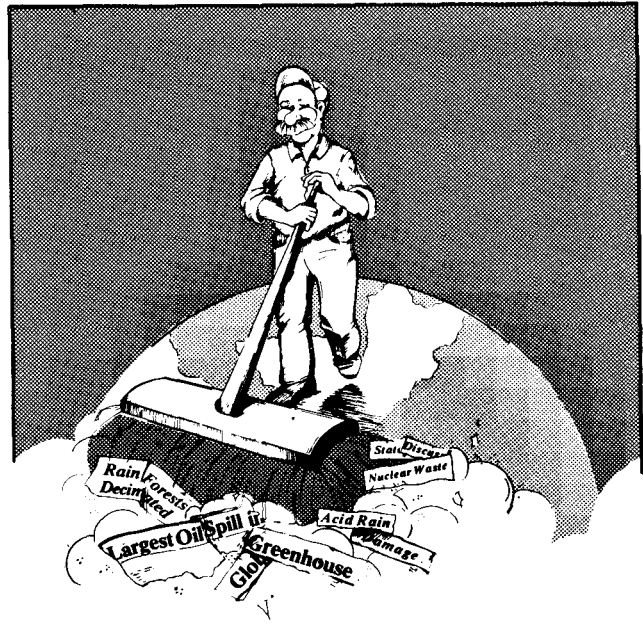
A concrete block and stucco wall can reach temperatures as high as 112-117 degrees F in direct sunlight. The shade from just one tree reduces that wall temperature by 25 degrees. Shrubs can reduce the wall's temperature by 24 degrees. Together, one large tree and a shrub can knock the temperature down by an average of 28 degrees. Energy-conserving landscaping can cut air-conditioning use by 20 to 40 percent.

When you're building a new home, you will also save energy and dollars by preserving all the natural vegetation that you possibly can. Mature trees make a significant difference in comfort and in property value. Bringing them in after construction is costly and the survival of transplanted trees is always a risk.

However, preserving mature landscaping in new construction areas requires care and planning. Damaged

roots or altered soil depth within the drip line (the circular area formed by the tips of the branches) can kill a mature tree, though the dying process may take as long as five years.

A landscape architect or arborist can give helpful advice on how to protect established trees from damage caused by mechanical equipment, excavation, chemicals, and parked or stored vehicles and materials.



The Planet Janitor is a "spokesman" for global environmental concerns.

Selected references:

South Florida Water Management District, **Xeriscape Plant Guide I and II**.

South Florida Water Management District, **How to Xeriscape in South Florida**.

Alan Meerow and Robert J. Black, **Landscaping to Conserve Energy Handbook**, Florida Cooperative Extension Service, IFAS, University of Florida, Gainesville.

Landscaping for Energy Efficient Homes (FS 220), Conservation and Renewable Energy Inquiry and Referral Service (CAREIRS), U.S. Department of Energy.

Rosalind Creasy, **The Complete Book of Edible Landscaping**, Sierra Club Books, 1982.

Resources:

Dr. Robert J. Black, Florida Cooperative Extension Service, IFAS, University of Florida, Gainesville, FL.

David Davis, South Brevard Water Authority, Melbourne, FL.

Dr. Jack Parker, Florida International University, Miami, FL.

Rob Vieira, Florida Solar Energy Center, Cape Canaveral, FL.

The Florida Solar Energy Center distributes over 300 free publications that offer more information on these and other energy-saving techniques. They include:

A checklist for building an energy efficient home in Florida, by Michael Houston. Order No. EN-10.

Landscaping for energy conservation, by Magdy Girgis. Order No. EN-12.

Dealing with heat and humidity in Florida homes, by Robin Vieira. Order No. EN-14.

The Greenhouse Effect, by Ingrid Melody. Order No. EN-16.

What to plant

The following are just a few of the many drought-tolerant plants suitable for Florida Xeriscapes. All but the grasses are native to Florida.

Grasses

| Name | Zone | Salt tolerance | Care | Wear tolerance |
|---------|-------------|----------------|----------|----------------|
| Bahia | all Florida | low | low | good |
| Bermuda | all Florida | high | high | excellent |
| Zoysia | all Florida | moderate | moderate | excellent |

Ground covers

| Name | Zone | Salt tolerance | Flower color |
|---------------------|---------------|----------------|----------------|
| Beach Morning Glory | all Florida | high | pink, lavender |
| Carolina Jessamine | north/central | low | yellow |
| Daylily | central | high | yellow, pink |
| Dwarf Lantana | Central | moderate | yellow |
| Dichondra | all Florida | low | none |

Shrubs

| Name | Zone | Salt tolerance | Flower color |
|------------------|---------------|----------------|--------------|
| Inkberry | central/south | high | white |
| Seven-Year Apple | south | high | white |
| Jamaican Caper | south | high | pink, white |
| Beautyberry | central | low | lavender |
| Wax Myrtle | central/south | high | white |

Trees

| Name | Zone | Salt tolerance | Wind tolerance |
|--------------|-------------|----------------|----------------|
| Dogwood | north | low | high |
| Sugarberry | north | low | high |
| Sweet Acacia | all Florida | high | moderate |
| Live Oak | all Florida | high | high |
| Gumbo Limbo | south | high | moderate |
| Pitch Apple | south | high | high |

Since north, central and south Florida actually enjoy quite different climates and topography, it's advisable to consult the local nursery or county extension service for specific information on appropriate plants for your area.

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