

Western Water

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Xeriscape

A New Word for Saving Water

MAY/JUNE 1986

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On the Cover:

A colorful tag identifies this plant as xeriphytic (low water-using) and appropriate for California's Mediterranean climate.

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EDITOR'S DESK



If "Xeriscape" sounds like Greek to you, don't feel foolish. It is Greek — from the word for "dry." The concept, featured as this issue's cover story, combines appropriate plantings and irrigation to result in water savings. In spite of last winter's rainfall, Xeriscape is receiving increased attention in both the water and landscaping worlds and we felt it merits a closer look.

To find out how much water you use indoors — as well as out, consult the Water Education Foundation's "Trivia" slide-rule game, available from us for \$1.00 plus 6 percent tax. There are discounts for large quantities of the game.

By the time this issue reaches your desk, we'll be ensconced in new quarters — a suite of offices located at 717 K Street. The new offices are conveniently located just around the corner from the old but are spacious enough to allow us room to grow. Be sure to change your Roladex entry for us (our phone number remains the same), and please stop by next time you're in town!

Since this is the last magazine before the June 3 election, it should be noted that a Water Conservation and Water Quality Bond Law of 1986 (Proposition 44) is on the ballot.

If passed, the proposition will authorize \$150 million in bonds, half of which would be used for water conservation and groundwater recharge facilities and half for agricultural drainage water facilities. Local agencies could apply to the State Water Resources Control Board and the Department of Water Resources for low-interest loans made available through the sale of bonds. So far, there is a lot of support and not much opposition to the proposition, but read your voter ballot pamphlet to decide how to vote.

The Wind Gap Pumping Plant officially became the Ira J. Chrisman Wind Gap Pumping Plant in a ceremony on April 11. Former Water Commission Chairman Dan Dooley ran the program and Water Commission member Clair Hill and DWR Director David Kennedy spoke. About 70 of Jack Chrisman's friends and associates attended the ceremony. The Chrisman Pumping Plant is located below Bakersfield, near the foot of the Tehachapi Mountains. Tours of the plant, which helps pump water into Southern California, may be arranged through the Department of Water Resources upon request.

Last, our annual briefing, held April 8 in Sacramento, received nothing but kudos from those who attended it. It was our largest to date, attended by 200 members of the water, business, media, legislative and business communities. "In the News" (facing page) features some scenes from this important event.

Rita Schmidt Sudman

IN THE NEWS



More than 200 attended the Foundation's third annual Executive Briefing, held April 8 in Sacramento. Speakers and attendees at this conference, which focused on the controversial topic of water marketing, included:

Left column, from top: **John Fraser**, Association of California Water Agencies, **Rita Schmidt Sudman**, Water Education Foundation, **Foundation President William Gianelli** and **David Kennedy**, Dept. of Water Resources; **Assemblyman Jim Costa**; **DWR Director Kennedy**.

Center column: **Thomas Graff**, Environmental Defense Fund, **William Gianelli** and **William Kahrl**, California Water Atlas editor; **William Gianelli**, who gave the introductory remarks and moderated the panels; **David Schuster**, State Water Contractors, **David Kennedy** and **David Houston**, U.S. Bureau of Reclamation; **Senator Marian Bergeson** discusses marketing with **Thomas Havens**, Parsons Water Resources, while **Assemblyman Richard Katz** and **Douglas Nelson** exchange views.

Right column: **Assemblyman Richard Katz** speaks on recent legislation; **William Gianelli** and **David Getches**, Colorado Dept. of Natural Resources; among those sharing a table at lunch were **Mary Ganir**, KROP Radio, **Lois Krieger**, Association of California Water Agencies and Foundation Board member, **Charles Shreves**, Imperial Irrigation District, and **Charles Terhune**, Parsons Water Resources.

Xeriscape — A New

By J. K. Hartshorn

Xeriscape?

You may not find it in Webster's Unabridged, but it's a word that is rapidly gaining in popularity. Derived from the Greek, *xeros*, for "dry," Xeriscape ("zeeri-scape") combines creative landscaping and efficient irrigation in a successful formula which saves effort, time, money — and, of course, water.

In view of last winter's torrential rains, it may seem a bit strange to be highlighting water conservation and drought-tolerant landscaping. Californians must constantly bear in mind, however, that their climate is capricious, and the same skies which deliver buckets of rain also bring blistering, blazing sunshine. Add to the unpredictable weather a burgeoning population and increasing water supply problems and costs and residents would do well to use the times of plenty to prepare for the inevitable lean years.



Demonstration gardens are one way of spreading the Xeriscape message. Pictured is a garden developed by the Irvine Ranch Water District in Southern California.

California's water and landscape experts are spreading the word in a big way through events such as a major *Xeriscape '86* conference recently held in Irvine. Nearly 700 professionals representing the landscape architecture and contracting, nursery, irrigation and water industries attended this conference, which was co-sponsored by the Municipal Water District of Orange County, Metropolitan Water District of Southern California and the California Department of Water Resources. Xeriscape conferences are planned for Northern California by East Bay Municipal Utility District, North Marin Water District and other agencies and in Southern California by the San Diego County Water Authority in coming months.

In this issue of *Western Water* we'll further define this important new term and look at Xeriscape efforts around the state. We'll also give some general guidelines for implementing the concept, including suitable types of plantings and where to turn for more information if you're inspired to do some "Xeriscaping" of your own.

The Greening of California

California hasn't always been home to lush green lawns and tropical plantings. When the Spanish padres first set foot here, they encountered a semiarid land much like their native Spain. The mission gardens reflected this and were filled with Mediterranean plantings. Settlers from the East coast and England, though, were accustomed to a greener landscape. Their desire to reshape California to resemble their homelands led to the importation of vegetation that needed lots of water to stay green.

Because much of the state's water supply occurs in the less populous north, conveyance systems were built by the federal and state governments to redistribute the water. Irrigated agriculture prospered and population centers attracted newcomers, all eager to share in the dream of a home with a broad expanse of Kentucky bluegrass front and back.

Most Californians didn't become aware of the need for water conserving landscaping until the last major drought, in 1977, when they watched their yards and gardens wither. Northern California, in particular, suffered. In some areas, water was rationed and outdoor water use was sacrificed for indoor purposes.

While some may think of a low water-using yard as resembling the Sahara Desert, since that last drought we've learned this needn't be the case. California's Department of Water Resources and local water agencies promoted attractive alternatives to traditional, thirsty landscaping and stressed the fact that "drought-tolerant" plants can be an appealing addition to any yard.

A New Movement

Not a new plant or irrigation method, Xeriscape has been described by its proponents as a "movement." The term was coined by the Denver (Colorado) Water Department in 1981 and "is really nothing more than appropriate plant material,

Word for Saving Water

irrigation techniques and maintenance practices for a semiarid or arid climate," explains Jim Van Haun, now with the Orange County Water District in Southern California. In 1982, Van Haun and his former employer, the Municipal Water District of Orange County, obtained permission from Denver to use the logo and trademarked name, and held California's first Xeriscape conference in 1983.

Many in the field see the word Xeriscape as the first acceptable term for what for years was called "drought-tolerant," "low-maintenance" or "low water-using" — all phrases that tend to bring to mind cacti and rock gardens. As the new terminology gained acceptance, California's horticulture industry began to embrace two important facts central to the Xeriscape concept: that plants appropriate to California's climate can be just as beautiful as thirsty "exotics," and that most conventional landscapes can prosper with much less water.

Xeriscape also involves a good measure of common sense. Randall Ismay, water resources administrator for the Mission Viejo Company in Orange County and another who was instrumental in the *Xeriscape '86* conference, defines it as "working smarter — not harder."

So how is Xeriscape any different from the water-saving programs which were pushed in 1977? Suzanne Butterfield, chief of the California Department of Water Resources (DWR) Office of Water Conservation, sees her office's own efforts as "maturing" in the intervening years, shifting from small-scale neighborhood projects such as demonstration gardens to programs aimed at influencing the water and landscaping industries to achieve greater efficiency.

"We're directing the majority of our conservation programs, including low water-use landscaping, into cooperative efforts with local agencies," Butterfield explains. "We provide technical and financial assistance — low interest loans and matching grants — to water purveyors, cities and others to initiate their own programs to improve efficiency of water use on large landscapes such as parks, golf courses, planned unit developments, commercial and industrial park landscaping.

"Water conservation is viewed today as an effective water management tool," says Butterfield. "The emphasis no longer is on conservation as the 'right' thing to do . . . it is viewed objectively, in terms of its cost-effectiveness. We are finding that state, local and private sector partnerships in reducing landscape water use can be very effective and are a fruitful conservation program area for the department to invest in for a long time to come," she concludes.

Marsha Prillwitz, DWR's landscape projects coordinator, sees today's Xeriscape advocates as being more attuned to how Californians do and don't want their yards to look. Although DWR does encourage homeowners to devote less of the yard to turf, "we realize people love their lawns," Prillwitz explains. "We're just telling them they can still keep the yard green and beautiful using less water" or can plant a

type of turfgrass that doesn't require so much. Also new within the past several years is the tremendous interest of landscape professionals in the concept, both Van Haun and Ismay note. "Xeriscape has evolved into a unique public/private sponsorship involving dedicated volunteers in the landscape architecture, landscape contractor, maintenance, nursery, development and water industries," according to Van Haun. "By conducting Xeriscape conferences and programs, we are helping to prepare the green industry for possible water shortages over the next decade." *Xeriscape '86*, in fact, was endorsed by numerous professional organizations — the California Landscape Contractors Association, American Society of Landscape Architects, American Society of Irrigation Consultants, Southern California Turfgrass Council, Association of California Water Agencies and 30 manufacturers and suppliers. While this conference focused on those who have control over large or numerous landscapes, many of the principles can be used just as effectively by homeowners.



The Golden State's official flower, the California poppy, adds a splash of color to yard or garden.

Xeriscape

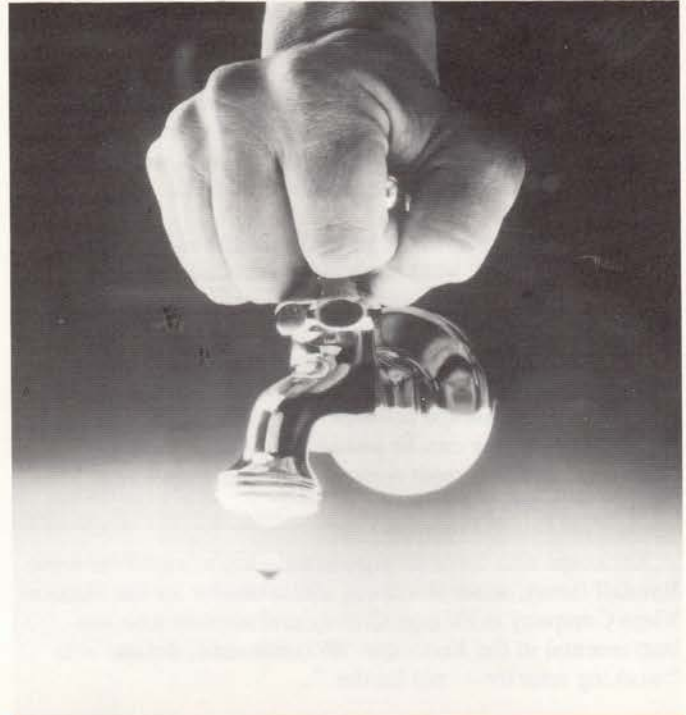
Why Xeriscape?

Several factors have helped give momentum to the Xeriscape movement.

Southern Californians rely on the Colorado River for a major portion of their water supply and because of a 1963 U.S. Supreme Court ruling are going to see that supply cut drastically. The process started last November when the Central Arizona Project began diverting Colorado River water. Gigantic Metropolitan Water District of Southern California will lose the most — half its Colorado supply — to Arizona.

Central and Southern California also rely on water from Northern California carried southward through an as-yet incomplete State Water Project, begun in the 1960s. Efforts to finish the project — the Peripheral Canal in the early 1980s and more recently, "Duke's Ditch" (Governor Deukmejian's plan to route more water through the Sacramento-San Joaquin Delta) — met with defeat. The system, "if left uncompleted, will eventually affect the entire state's economy because of water shortages in the central and southern parts of the state," predicts Orange County Water District's Van Haun.

Rising costs, too, are causing Californians to rethink the way they use water. Some districts have adopted rates designed to foster water conservation. The Los Angeles Department of Water and Power set a precedent by being the first utility in California to adopt higher rates during the summer, when outdoor use is at its peak, to encourage its



Facing prospects of water shortages and rising costs, California's urban water users are learning to turn off the tap through Xeriscape and other water-saving efforts.



Major water users, such as parks, benefit from both turf audit programs and water-conserving plantings.

customers to save. Increasing energy and chemical costs also have had an impact on the water industry, since it costs money to pump and transport water to where it is needed and to make it suitable for household use.

Yet another factor spurring interest in conservation and proper water management has been California's Urban Water Management Planning Act (AB 797), signed in 1983.

The act, which applies to urban agencies supplying more than 3,000 connections or delivering more than 3,000 acre-feet of municipal water a year, required suppliers to submit water management programs to DWR by the end of 1985. Landscape water conservation projects are a major component of many agencies' water management programs.

Before last winter's rains started, it looked as though the state would have to start bracing for another drought. Reservoir levels were their lowest in years and water agencies began gearing up for conservation campaigns.

Still, the rains didn't dampen enthusiasm for March's Xeriscape '86 conference and future events planned elsewhere are expected to experience similar capacity crowds.

Benefits

Benefits

The benefits to be realized by efficient irrigation and plant selection should be enough to sell anyone on Xeriscape, according to landscape architect Wayne Smith of Southern California Edison, one of the speakers at *Xeriscape '86*.

"Labor and maintenance costs can be reduced considerably," asserts Smith. Over-irrigation encourages disease and proliferation of rodents, weeds and other pests, so irrigating plants only when they need it results in healthier plants, reduced weeding, lower pest and disease control costs and less fertilizer. Because plants given less water will direct their efforts to developing root systems, reduced pruning is another labor-saving benefit. Labor, time and energy costs associated with mowing also are reduced as less area is devoted to turfgrass or lawns are eliminated altogether.

The energy savings benefit not only the individual rate-paying homeowner but apply to the entire state. "As water usage decreases, less energy is used," Smith explains. "This fact is constant whether we study individual sites or review the tremendous cost of pumping water from a distant source."

Overwatering Wastes the Most

According to investigations by California's Department of Water Resources, residential landscapes are overwatered by as much as 20 to 40 percent, often because the homeowner lacks information on how much water the lawn really needs.



Knowing how and when to water is important. By watering on windless days and in the early morning, evaporation losses can be kept to a minimum.



*Many plants which are appropriate for California's climate feature eye-catching flowers and lush foliage. Pictured is *Cistus corsicus* (rock rose).*

"Overwatering is the easiest condition to correct and seems to result in the biggest savings," says DWR's Marsha Prillwitz. A handy new way homeowners can have a healthy lawn but still reduce watering is by using a lawn watering guide. The Los Angeles Department of Water and Power was the first to develop a guide; other districts have followed suit and this spring Prillwitz says more than a million such guides will be distributed throughout the state.

It may sound too simplistic, but up to recently "people haven't known how to water their lawns," says Prillwitz. The missing ingredient in developing lawn watering guidelines was information about evapotranspiration rates (the rate at which plants take in and give off water vapor) which was developed in the past year by the University of California at Davis under contract with DWR.

To determine lawn watering needs, the homeowner sets three cans at various places on the lawn, turns on the sprinklers for 15 minutes, measures the depth of water in the cans and determines the average. He or she then consults the lawn watering guide (a simple chart or slide-rule card) to find out, according to the season, how many minutes the water needs to run. (To find out how much water you use indoors — as well as out — consult the Water Education Foundation's "Trivia" slide-rule game, available from the Foundation for \$1.00.)

Landscape Ideas

Irrigation

Efficient irrigation systems and practices are key to the Xeriscape concept. Hydrozoning — grouping plants with similar water needs — assures that plants won't be over- or under-watered. Installing and maintaining a properly designed irrigation system can cut water use by half and result in healthier plantings. Low- volume or low-gallonage irrigation systems such as drip are especially useful for shrub bed plantings, trees in turf areas, vegetable gardens and ground covers. Drip uses tubing and devices called emitters to release a controlled amount of water, at a low rate, to a small area of soil. Since its introduction to homeowners in the mid-1970s, it has enjoyed increasing acceptance in both residential and business landscapes.

Using timers set to apply water in the early morning, when there is less wind and lower temperatures, helps by keeping evaporation to a minimum. If a landscape is irrigated by sprinklers, it is also advisable to replace leaking sprinkler heads and to see that they are adjusted to sprinkle plantings — not pavement.

Horticultural practices, among them using soil amendments or mulching around plants, help keep the root zone moist and discourage weeds. A tensiometer (soil moisture probe), available at any garden center, helps take the guesswork out of irrigating.

Lawn Alternatives

Xeriscape puts an emphasis on lawn alternatives such as “hardscaping,” the non-water-using structures and paving in a yard. Lisa Iwata, a landscape architect with the Tree of Life Nursery who spoke at *Xeriscape '86*, suggests using patios, courtyards, walkways and storage areas to balance out trees, shrubbery and ground cover, helping eliminate the need to use turf as a “filler.”

Turf, besides being “energy-consuming and boring,” is the single largest user of water in the landscape, she explains. She recommends eliminating turf in the front yard and instead creating “privacy and functional areas by adding an entry courtyard, shady oasis, mounded color and tree display or theme planting to compliment the architecture — or create privacy with the use of screens and plantings.”

Landscape architect Smith also suggests reducing turf and increasing the areas of such materials as brick, concrete, decomposed granite, wood decking or mulched soils to decrease water requirements. His recommendations include increasing patio size by 10 to 30 percent and widening walkways to six to eight feet to accommodate two people walking abreast. Decking, he points out, increases property value, can cover large areas that otherwise would be devoted to lawn and is ideal for forming additional activity areas out of slopes.

For those who have their hearts set on turf or who require a lawn for recreation, warm-season grasses can use one-third less water than the traditional Kentucky bluegrass. These include Santa Ana hybrid bermuda, zoysia, tall fescue and seashore paspalum. These hardy grasses also experience fewer problems with pests and diseases.

Plant Selection

While it should be obvious by now that to embrace the Xeriscape concept homeowners needn't rip out existing plantings and install new ones, xeriphytic (“unthirsty”) native plants can be attractive in any setting. Landscape architect Lisa Iwata suggests using such plants the landscape's “backbone,” and colorful exotics as accents. “A design can even include a few delicate water guzzlers — if they are used very sparingly,” she says.



Californians are discovering that a large expanse of Kentucky bluegrass isn't essential to an attractive front yard.



This Bay Area home features low water-using landscaping installed by East Bay Municipal Utility District as part of its landscape conservation program.

California native plants received attention first during the 1977 drought and now with the interest in Xeriscape, but it should be recognized that not all natives are xeriphytic. Those that thrive along rivers may require as much water as exotic plant species. As a rule of thumb, though, plants native to California and other areas with similar climates (among them Australia and Mediterranean countries) are more apt to be appropriate than those from cooler, wetter climes. A bonus for California's hot, dry summers is that many natives are also fire-retardant.

Some outstanding native plants include oak, sage, monkey flower, *Artemisa*, *Fremontia* and *Toyon*. Excellent exotics adapted to California include *Cassia*, *Escalonia*, *Cistus*, *Acacia* and smaller eucalyptus species. Nurseries are becoming increasingly knowledgeable about native plants and many can recommend plants suitable for a homeowner's climate zone (see the list on page 11).

Around the State

In 1984, DWR funded a dozen "real world" cooperative projects around the state to measure the cost effectiveness of landscape conservation programs; the projects included the development of lawn watering guides, reducing water use by city parks and other turf areas and freeway landscaping and finding the most effective means of encouraging residents to conserve water. Program participants included the Los Angeles Department of Water and Power, Metropolitan Water District of Southern California, Municipal Water District of Orange County, California Polytechnic Institute at Pomona, South Tahoe Public Utility District, Desert Water Agency, Marin County Water District, the City of Fresno, California Department of Parks and Recreation University of California Cooperative Extension, California Department of Forestry.

Even though Northern California bore the brunt of the drought, a water-saving demonstration garden has graced the Los Angeles headquarters of the Metropolitan Water District of Southern California since 1977, according to Senior Analyst Phil Hitchcock, who heads that district's Xeriscape efforts. The district also has helped fund gardens at other sites, developed a lawn watering guide and in 1984 completed a turfgrass study to determine water requirements. In the planning stages is an irrigation management program for large turf users which will feature a series of weather stations around the service area to furnish up-to-the-minute evapotranspiration data.

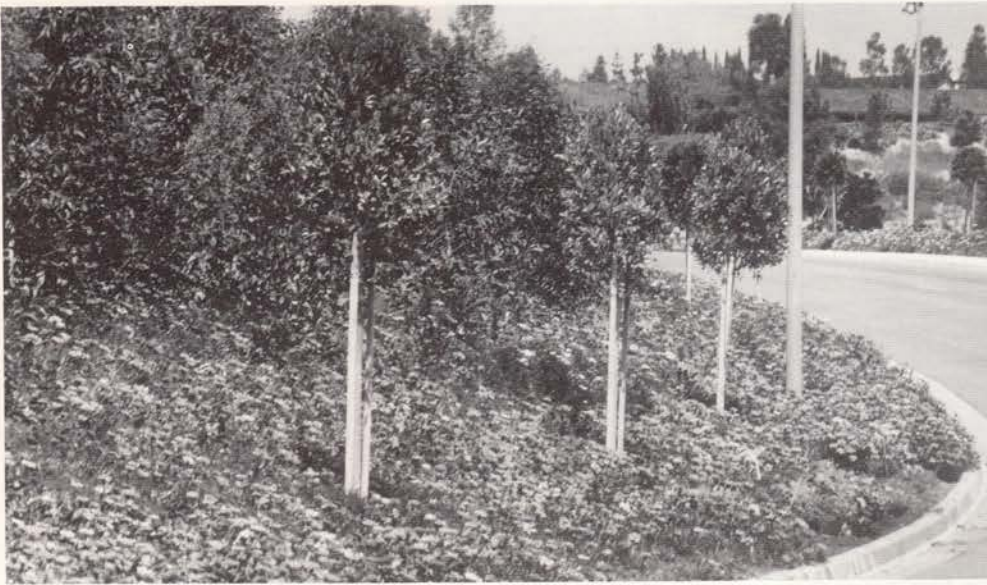
Firmly believing that "without a doubt" it is possible to have a lush garden without using lots of water, the Los Angeles Department of Water and Power recently invited city residents to participate in a water-efficient garden competition for \$7,500 in cash and prizes. The department, along with the cities of Santa Barbara and Goleta and the East Bay Municipal Utility District, also was selected by DWR to participate in a pilot Large Turf Landscape Water Audit Program aimed at increased efficiency in irrigating areas of three acres or larger.

"If successful, this water conservation program for large turf areas, such as parks and cemeteries, could significantly reduce peak summertime water use in Los Angeles," according to Assistant General Manager Duane L. Georgeson. The program involves DWP landscape consultants analyzing the existing irrigation systems and soil and water use records of selected turf areas, recommending changes in watering schedules and calculating water, energy and labor savings.

The state Department of Water Resources and many water agencies boast water-conserving demonstration gardens to give landscapers and the public a look at water-saving plants in context. One of the first was developed by Oakland-based East Bay Municipal Utility District, which cooperated with the city of Oakland in a garden which demonstrates drip irrigation and low water-using plants. In 1983, the district installed three residential demonstration gardens at homes in different parts of its service area.

Among other Xeriscape-related projects, North Marin Water District recently researched the effects of efficient landscape design in condominium developments, comparing units with traditional landscaping with very efficient landscapes that employed 50 percent less turf and emphasized xeriphytic plantings but overall had about the same total landscape area. Maintenance contractors cared for the landscaping as they normally would, without any coaching from the district.

"We want to show developers that water conserving designs will pay off handsomely," says General Manager John Olaf Nelson. "Based on our preliminary statistics, we found that the water conserving landscapes used 55 percent less water, 25 percent less labor, 60 percent less fertilizer and about the same amount of herbicides," Nelson says. "The apparent savings for the homeowner in these more efficiently designed landscapes is about \$70 per year." The district has already instituted a regulation which offers developers a \$150 per dwelling unit credit for utilizing water-conserving landscape design criteria published by the district.



Xeriscape makes a lot of sense for large planted areas, such as along freeways and streets, as well as for yards.

Local Ordinances

Other local water suppliers, DWR and county governments also hope to influence developers to choose low water-using landscaping and less turf for new development. The County of Contra Costa, located in the San Francisco Bay Area, recently adopted requirements which apply to new development (other than single-family residences and incorporated areas) and is working with individual cities to develop similar ordinances. The policy restricts use of turf to 20 percent (except where essential, such as for a school playing field) and prohibits its use in median strips. Plants in non-turf areas are to be of the low water-use variety, and low-volume irrigation systems are required.

The County of Ventura and several of its cities require Xeriscapes to be considered as an alternative to high water-using landscapes. A "County Guide to Landscape Plans" defines plant materials and irrigation methods and specifies that in tracts with more than two model homes, at least one be landscaped exclusively with water-conserving plants.

Other Conferences Planned

In addition to what has become Orange County's annual Xeriscape conference, other conferences are planned around the state.

Richard Bennett, East Bay Municipal Utility District's water conservation administrator, urges Northern Californians to mark their calendars for a one-day *Xeriscape '86: Northern California* conference scheduled for Friday, Nov. 21, at the Oakland Airport Hilton. This conference "will promote water conservation landscapes by educating landscape professionals and others associated with landscape planning for public agencies and homeowners' associations," Bennett elaborates. "We'll also feature exhibits of water-saving devices, books and educational materials."

Fifteen other public water agencies and landscape and equipment representatives are assisting by serving on the planning committee and providing financial endorsement, and the plan is to rotate the annual event among Northern California water agencies. For more information about the conference, contact Bennett at (415) 835-3000.

In the Southland, the San Diego County Water Authority plans to co-sponsor a Xeriscape conference with Cuyamaca College geared toward professionals and homeowners in San Diego and Imperial counties. The two-day event is set for Jan. 22 and 23, 1987, at the Atlantis restaurant in San Diego, according to Pete Rios, a spokesman for the authority. The authority's 24 member agencies will be involved in the conference as well.

California's universities also offer courses and programs in Xeriscape-related fields. The Office of Continuing Education of California State Polytechnic University at Pomona offers an extensive Landscape Technology Certificate Program with courses in dry climate landscaping, water management and Xeriscape systems. The University Extension of the University of California, Irvine, features a Xeriscape program and courses in drought-tolerant plants, drip irrigation design and dry climate landscaping, while UC Riverside's Extension offers seminars in such topics as irrigation systems for efficiency and economy and computers and their use in landscape maintenance.



Nearly 700 water and landscape professionals turned out for Xeriscape '86, a conference co-sponsored by the California Department of Water Resources, Municipal Water District of Orange County and Metropolitan Water District of Southern California.

For Additional Information

Attractive and practical, conserving much more than water, Xeriscape makes a lot of sense for yards and gardens of any size. For those interested in implementing the concept, literature on water-saving landscaping is available from a number of sources.

Local water districts also are good sources of information about landscaping and general water conservation. Many produce brochures on Xeriscape and some offer lawn watering guides. Call your local water supplier to find out what's available.

One of the most comprehensive Xeriscape brochures can be obtained from the Municipal Water District of Orange County and features plant lists for Southern California, how-tos and a bibliography. The district also has available more than 700 pages of proceedings from the four Xeriscape conferences, including the most complete bibliography compiled to date. For details, contact the MWDOC Public Information Office at (714) 973-1023.

The Department of Water Resources' Office of Water Conservation and district offices produce and distribute many fine brochures. Call or write:

DWR Office of Water Conservation — P.O. Box 942836,
Sacramento, CA 94236-001, (916) 445-4403

Free Reprint Available

Sunset magazine has long covered water conserving landscaping in its pages and in those of its excellent gardening books, available at bookstores. The Foundation has a limited number of reprints of *Sunset's* 1976 article, "For Summer-Dry California — Water Saving Planting Ideas," which lists suitable and attractive plants by climate zone. For a free copy, send this coupon with a business-size, self-addressed envelope stamped with \$0.38 postage to: Water Education Foundation, 717 K St., Suite 517, Sacramento, CA 95814 (note new address).

Name _____

Address _____

City _____ State _____ Zip _____

Some Plant Materials to Consider

Selected from a list printed in "For Summer-Dry California — Water Saving Planting Ideas" (*Sunset* magazine, Oct., 1976). Plants listed here are generally considered suitable for all climate zones, but be sure to double-check your selection with a nursery expert. For more complete listings, consult *Sunset* or other gardening books on the subject.

Flowering Plants

Achillea (Yarrow)
Centranthus ruber (Red valerian)
Coreopsis verticillata
Cotinus coggygria (Smoke tree)
Lavandula (Lavender)
Pennisetum setaceum (Fountain grass)
Satureja montana (Winter savory)

Foliage Plants

Artemisia (Wormwood)
Senecio cineraria (Dusty miller)
Yucca

Vines

Campsis (Trumpet creeper)
Wisteria

Trees

Pinus (Pines)
Quercus (Oaks)
Robinia (Locust)
Sequoiadendron giganteum (Big tree)
Tamarix aphylla (Salt cedar)

Ground Cover

Santolina chamaecyparissus

Many Forms

Cotoneaster (Ground cover to 20-ft. fountaining shrub)
Juniperus (Juniper; ground covers 2-in. high, shrubs, trees)





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