

This presentation premiered at WaterSmart Innovations

watersmartinnovations.com



Water Efficient Gardens An SSWD Story



Four Demonstration Gardens

- Antelope Gardens
- American River Parkway Foundation Garden
- Garden On Eden
- Gardens at Howe Park



Goals of Each Garden

1. Upgrade landscape at District facilities or to partner with other agencies for combined interest
2. Demonstrate a unique sustainable River-Friendly landscape
3. Provide an educational opportunity for District customers and Sacramento-area residents



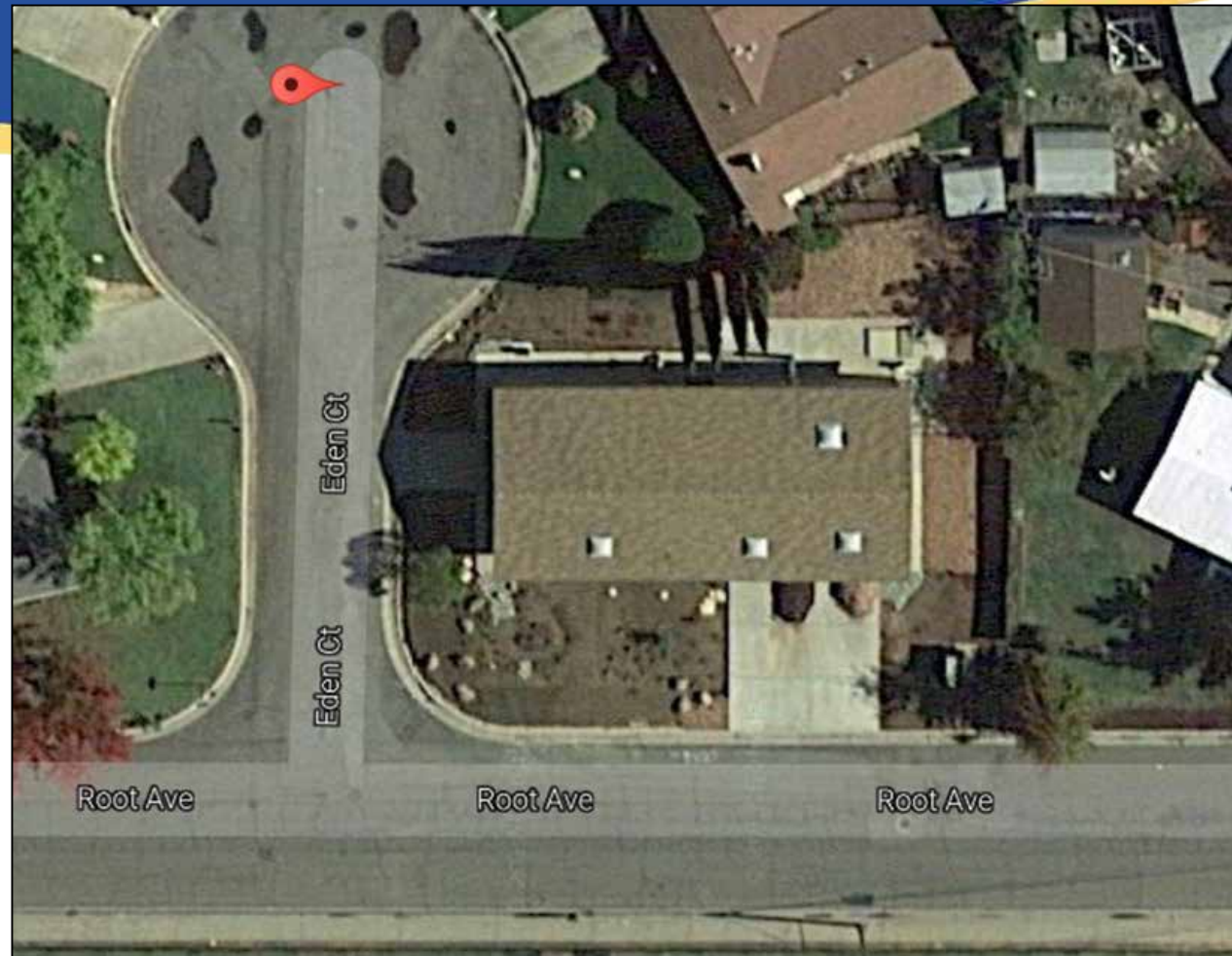
RIVER-FRIENDLY LANDSCAPING

SACRAMENTO, CALIFORNIA



Garden On Eden & Howe Park

Demonstrations in River-Friendly Landscaping



Primary Objective:

Upgrade Landscape Using Principles of River-Friendly Landscaping and the Watershed Approach

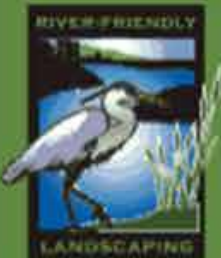


Principles of River-Friendly Landscaping

The Seven Principles of River-Friendly Landscaping



1. Landscape Locally
2. Nurture the Soil
3. Wildlife Habitat
4. Less to the Landfill
5. Conserve Water
6. Conserve Energy
7. Water & Air Quality

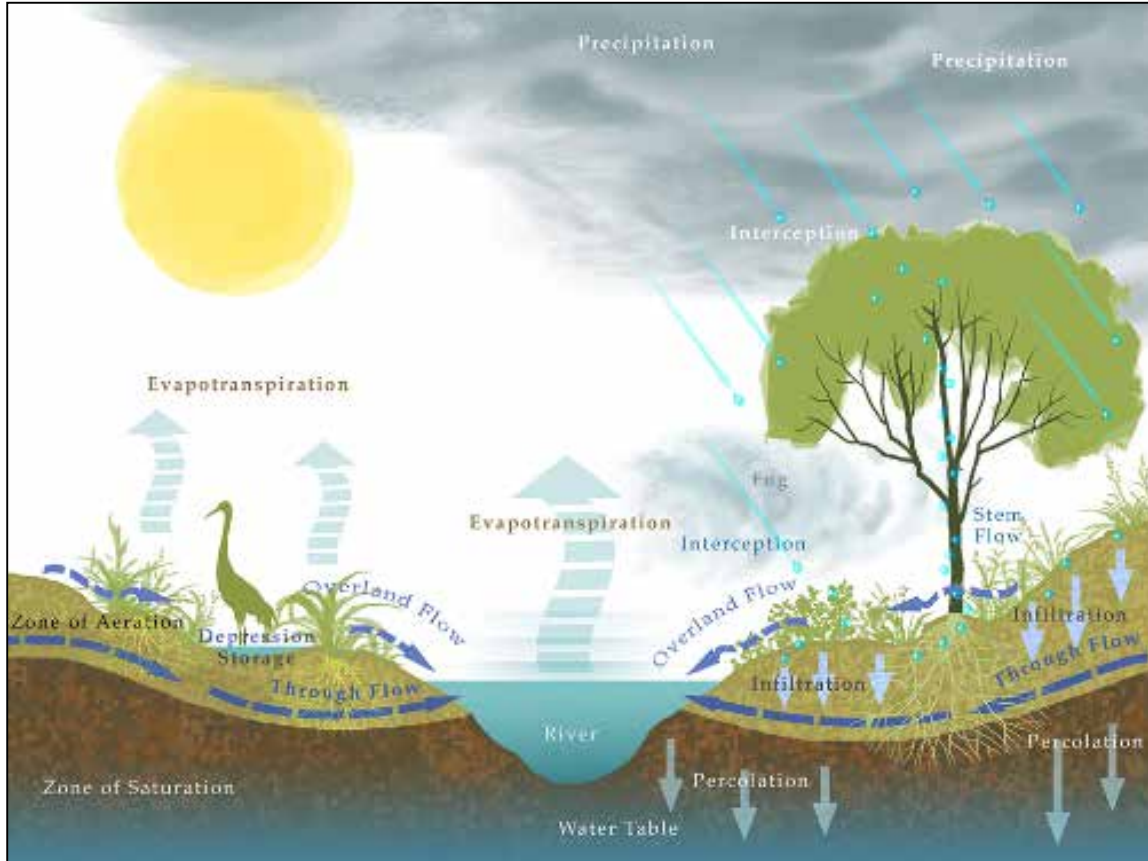


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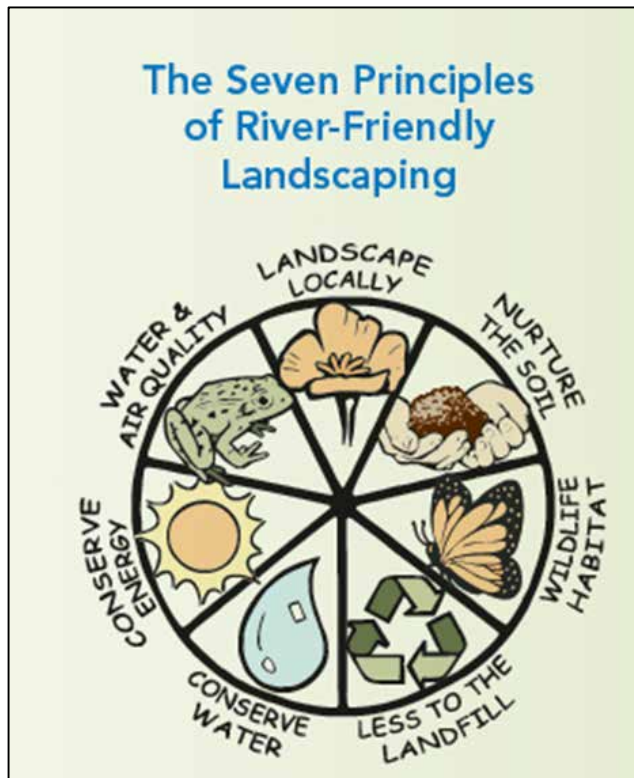
Watershed Approach to Landscaping



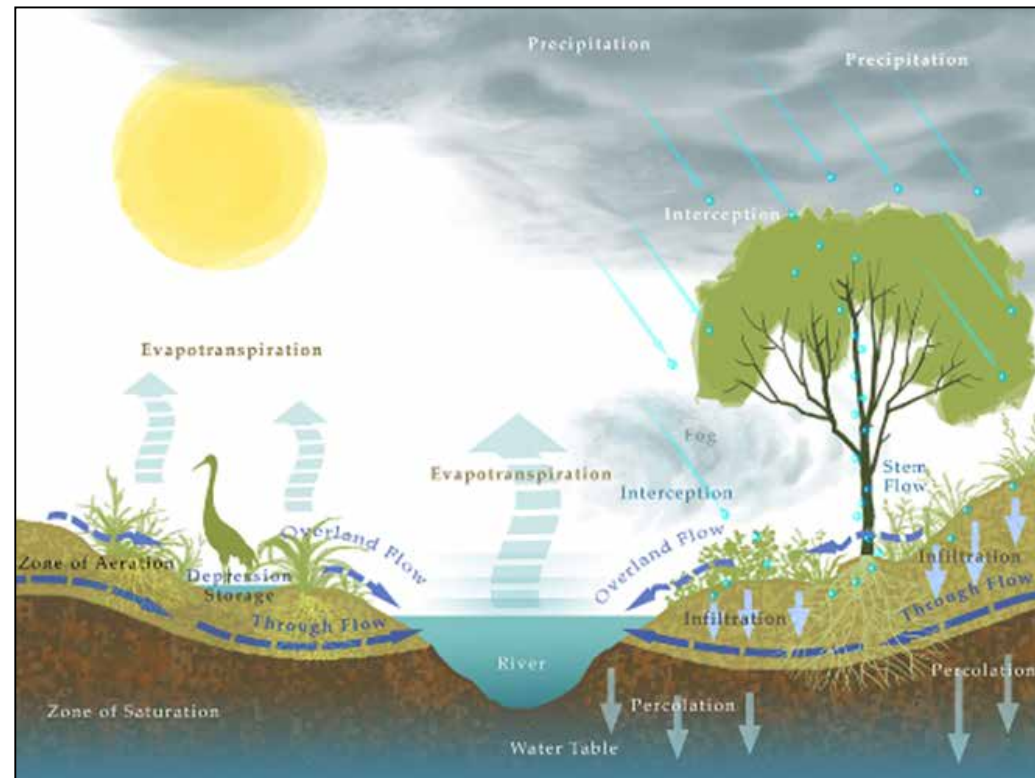
1. Build healthy living soil
2. Use highly efficient irrigation only when necessary
3. Select local, climate-appropriate plants
4. Capture rainwater as a resource

Two Concepts Melded Together

River Friendly Landscaping



Watershed Approach



Project Management

Garden On Eden

- Contract Manager:
 - Marian Bender, Executive Director of EcoLandscape California
- Project Management, Landscape Design and Instructor
 - Cheryl Buckwalter
- Project Contractor
 - Martin Carrion, Landscape Symphonies
- Irrigation system design & irrigation instructor
 - Lori Palmquist
- Sheet mulching
 - Nicolai Laquaglia
- Soil/Compost/Mulch Instructor
 - Steven Zien



EcoLandscape
CALIFORNIA

bringing landscapes into
HARMONY with nature

Right As Rain Conceptual Design



Build Healthy Living Soils

- Layers of organic compost and worm castings were added to the soil
- Sheet mulching was utilized to replace any turf that had not died



Use Highly-Efficient Irrigation Only When Necessary



Total landscape area: 4,888 sq. ft.
 Total linear feet of Netafim: 4,181
 Soil: Sandy loam

Netafim grids: TLDL4-18
 .4 gph
 18" emitter spacing
 14" row spacing
 Precip. rate: .37 in/hr

Note:
 1. For all zones, use existing sprinkler nipples as drip connection points.
 2. Remove and cap all orange sprinklers.

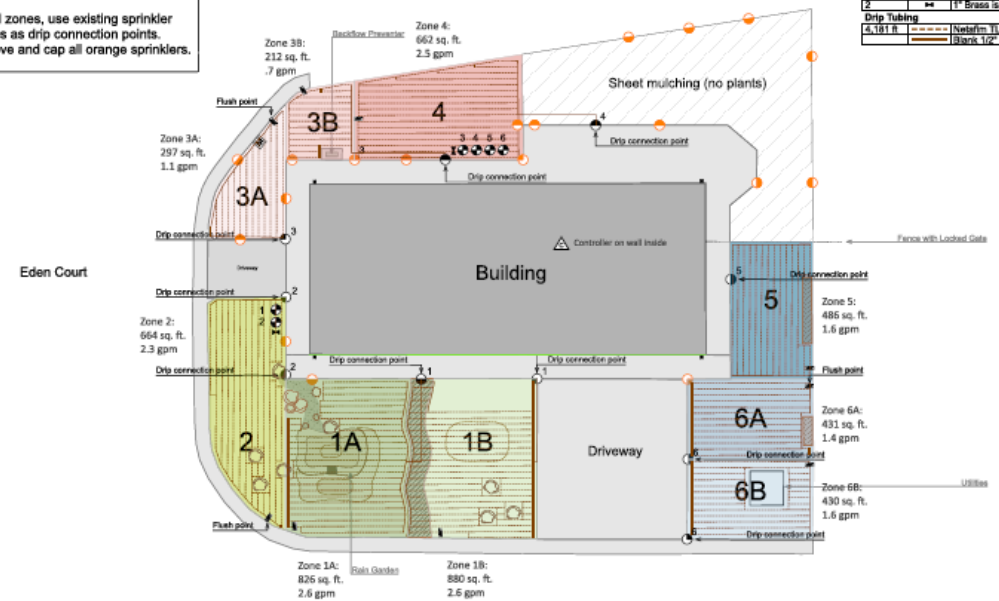
Water Budget

The previous landscape of cool season turfgrass and inefficient sprinklers had a water requirement of 125,829 gallons per year.

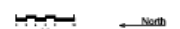
This landscape, with its low and very low water plants, and efficient drip system will only need 33,113 gallons per year, once established.

Irrigation Legend

Quantity	Symbol	Description
Sprinklers	9	Existing sprinkler for drip connection point
	20	Existing sprinkler to remove
Meters/Pumps	1	3/4 inch meter
Backflow Devices	1	1" Ebasco B2E-Y 112"
Control Valves	2	Hunter PGV-100G
Y-Strainers / Filters	6	Landscape Products Wye Filter
Irrigation Accessories		
	1	Run Blind ESP-8
	9	Manual Flush Valves
	2	1" Brass isolation valve
Drip Tubing	4,181 ft	Netafim TLDL4-18
		Blank 1/2" polyethylene tubing



Root Avenue



Selecting Climate-Appropriate Plants

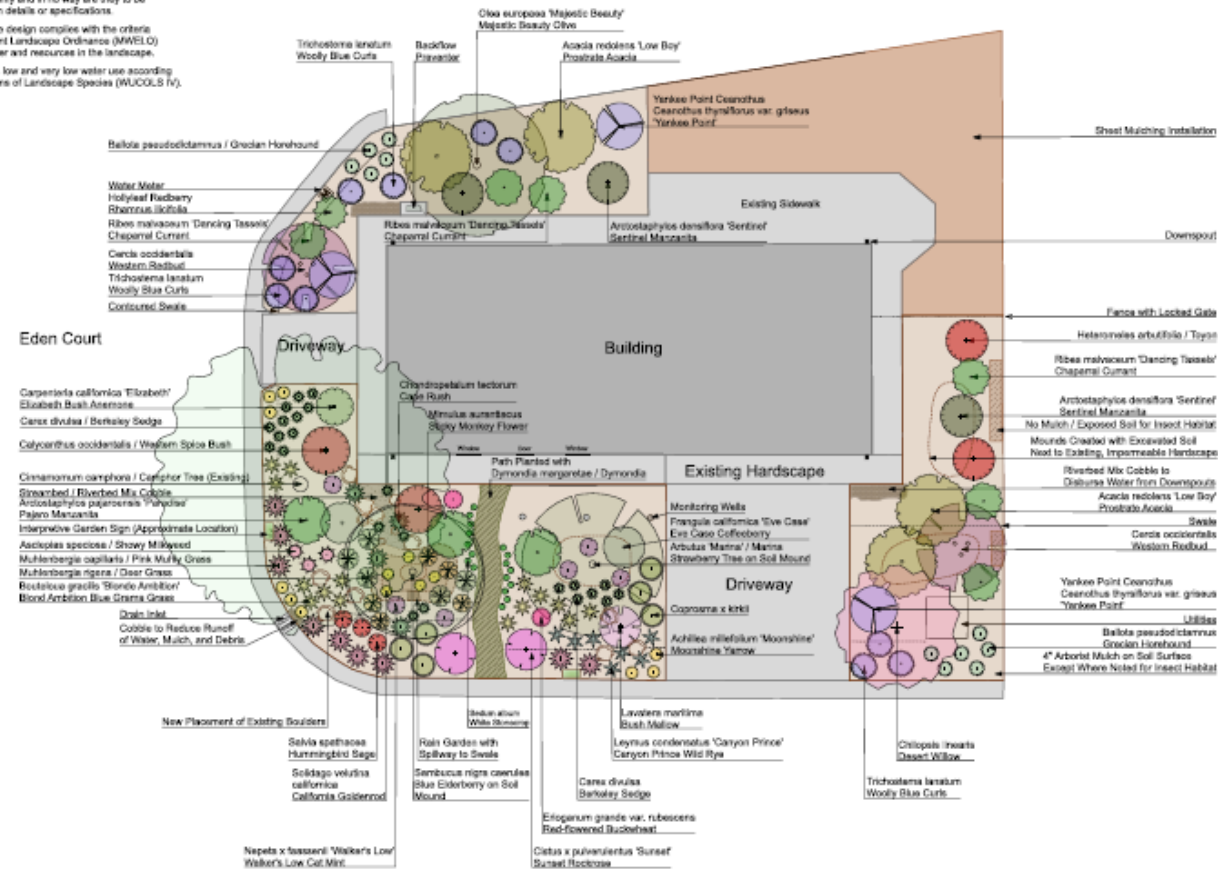
Please Note:

The information presented is provided as a public service. This information is not a substitute for the exercise of sound judgement in particular circumstances and is not intended as recommendations for particular products or services. This conceptual landscape design, notes, diagrams, resources, and any other information provided herein are for informational and illustration purposes only and in no way are they to be interpreted as construction details or specifications.

This conceptual landscape design complies with the criteria of the Model Water Efficient Landscape Ordinance (MWELO) for the efficient use of water and resources in the landscape.

All plants are classified as low and very low water use according to Water Use Classifications of Landscape Species (WUCOLS IV).

The Garden on Eden



Selecting Climate-Appropriate Plants



Capture Rainwater as a Resource



Provide Educational Opportunities



River-Friendly Landscaping Green Gardener at Home

An EcoLandscape California [Training Program](#)
Teaching home gardeners how to grow beautiful, healthy, sustainable landscapes.

9 classes + 2 hands-on training days for only \$75!

Tuesdays, September 6 through November 1
6:30 to 8:30 p.m.
plus two hands-on days
September 24 and October 15

Antelope Gardens
7800 Antelope North Road, Antelope, CA



River-Friendly Landscaping is a way of gardening that works with nature to reduce water use, reduce waste, prevent pollution, attract birds and butterflies, and support the health of our region's waterways.

River-friendly landscapes help home gardeners save water, time and money.

Register Online www.sswd.org before September 1

The Green Gardener At Home Training Program is nine weekly classes that address:

- River-Friendly Landscaping Principles
- Introduction to Soil Science
- Compost and Mulch
- Water Wise Irrigation
- Landscape Design
- Putting the Right Plant in the Right Place
- Edible Gardens
- Integrated Pest Management (IPM)
- Pruning for Plant Health
- Fertilizer and Lawn Care

Plus two "hands on" landscape installation days!

On September 24 and October 15, practice what you've learned at a landscape installation in the front yard of a Sacramento Suburban Water District well site.

Sponsored by:  Taught by: 

SSWD 086

Two Hands On Works Days

Irrigation Installation



Plant Installation



On-Site Signage

Creating a Water-Wise "Garden on Eden"



Berkeley Sedge
Carex oivulsa

In the fall of 2016, the Sacramento Suburban Water District partnered with EcoLandscape California to transform this area from traditional high-water-use lawn to a water-wise sustainable landscape. Local home gardeners learned about water-wise landscaping at a series of workshops, and received hands-on experience by helping with the transformation.



Scan code for more details about the plants and irrigation system on this landscape.

Getting the Best Yard with the Least Water

- A water-wise approach
- dramatically reduces the amount of water used for irrigation
 - filters and makes use of the rain that falls on the property
 - minimizes run-off of water into the storm drain.

Here's how:

Replace sprinklers with drip irrigation

This landscape is irrigated by a system of tubing with built-in emitters, protected by a layer of organic mulch. In operation, water is delivered slowly to the plants' root zones. This prevents water from being wasted through evaporation and run-off into storm drains.



Sprinklers can lose over 25% of their water to evaporation, or to watering unplanted areas. Drip irrigation is 95% efficient, so almost every drop is used by plants.

Irrigation provided by **NETAFIM**

Keep rain water in the garden, not the storm drain



The rain garden on the northwest corner of the property captures rain water to enrich the soil and water the plants. Plants were carefully selected that could handle periods of heavy rain. The rocks help to spread and slow the flow of water, and the plants and soil help filter it as it soaks into the ground.

One-quarter of the roof's surface drains to the downspout near the rain garden, capturing 452 gallons of water from just one inch of rain!



Rain gardens provide benefits in both dry and wet seasons.

Choose water-wise plants

Using plants that require low amounts of irrigation, once they are mature, allows this landscape to thrive on less than 25,000 gallons of irrigation per year—compared to 110,000 gallons for traditional grass and shrubs. This saves more than 85,000 gallons of water per year—enough to support a family of four for 9 months!



Most plant problems are caused by poor irrigation practices. The highly efficient drip irrigation on this landscape will help plants not only survive, but thrive.



YouTube Video



<https://www.youtube.com/watch?v=3pkKYoOpKHE>



Gardens at Howe Park



Awards

- Business Environmental Resource Center
 - Sustainable Business of Year – Water Conservation



Conclusion

- ü Upgrade landscape at District facilities or to partner with other agencies for combined interest
- ü Demonstrate a unique sustainable River-Friendly landscape
- ü Provide an educational opportunity for District customers and Sacramento area residents



Thank You

