





1



WEBINAR HOUSEKEEPING

Please keep microphones muted. 

Submit questions via chat to host. 

Questions will be answered at the end of the presentation.

The presentation will be posted for future reference.



2

AGENDA

Create a Beautiful Landscape
Reduce Your Landscapes Water Needs

The Watershed Approach

- Create Healthy Living Soil
- Capture Rainwater As a Resource
- Climate Appropriate Plants
- Efficient Irrigation



3

WHAT IS A WATERSHED?

A watershed is the geographic area draining into a river system, ocean or other body of water through a single outlet and includes the receiving waters.

Watersheds are usually bordered and/or separated from other watersheds by mountain ridges or other naturally elevated areas.



4



Create a Beautiful Landscape

LANDSCAPE WATER NEEDS

5

REDUCE YOUR LANDSCAPES WATER NEEDS

Consider reducing or eliminating unused areas of lawn

Convert to climate appropriate plants

- CA native & non-native climate appropriate plants

More decorative permeable hardscapes



6

6

LANDSCAPING WITH GRASS

The highest water-use plant:

- Every 1,000 square feet requires 25,000 to 35,000 gallons per year
- 4,000 +/- gallons: monthly summer demand



7

CLIMATE APPROPRIATE LANDSCAPES SAVE WATER

- 30%-50% water savings
- 15,000-20,000 gallons per year for every 1,000 square feet
- 2,500 +/- gallons: monthly summer demand



8

LANDSCAPING WITH LOW WATER USE PLANTS

- 60%-80% water savings
- 4,000-12,000 gallons per year for every 1,000 square feet
- 1,500 +/- gallons: monthly summer demand



9

CALIFORNIA NATIVES: THE RIGHTSCAPE

- 80%+ water savings
- Build habitat for pollinators
- Fully or partially summer dormant
- Require little to NO supplemental water once established.



10



Build Healthy Living Soil

THE WATERSHED APPROACH

11

PLANTS & SOIL

Manage what we have & build them up
Most plants thrive in well drained soil...
What's our soils like in our area?
What do CA native plants require?



12

12

BUILD UP OUR SOILS

Too much clay, too sandy, too stony or too acidic???

Turn a poor soil into a plant friendly soil

- First, understand the components of a healthy soil
 - Weathered rock
 - Organic matter
 - Water
 - Air



13

SOIL LIFE

Soils hidden "magic" are.... Organisms!!!

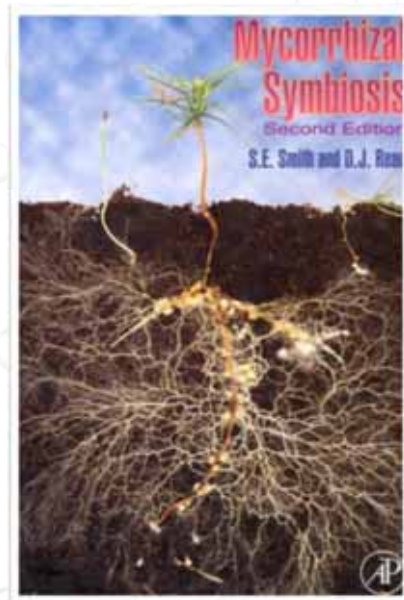
- Small animals, worms, insects and microbes

Flourish when other soil elements are in balance

Bacteria are vital for recycling nutrients

Fungi help to hold and transfer nutrients directly to plants through symbiotic relationships

Both need to be well balanced since they are the DECOMPOSERS



14

SOIL LIFE

Soils Predators prey upon the bacteria, fungi, etc.

Release soluble or plant-available nutrients

Soil arthropods, soil shredders, small and large, foster a complete food chain within, and beyond the soil

Beneficial Nematodes help turn organic matter into plant nutrients and prey on soil-dwelling plant pests

Protozoa digest bacteria and release excess nitrogen in plant available forms around roots



15

OVERALL ADVANTAGE OF SOIL LIFE

They assist in the decomposition of organic matter

- Makes nutrients available for the plants

Controls the population of soil pathogens

They improve or enhance soil structure

- Circulation of water and air
- Helps decrease soil compaction
- Healthier environment for roots



16

ENCOURAGE SOIL LIFE

Let plant litter or debris lay where it falls

- Great source of organic matter and mulch
- It is a food source for critters

Water appropriately and effectively

- Provide adequate oxygen and moisture

Try not to till or disturb you soil to much

- Remember the beneficial fungi filaments



17

SOIL CONDITIONERS

What is the best soil amendment?

- For sandy soils..
- For clay soils...

COMPOST!!!



18

COMPOSTING

Best supplement you can give your garden soil
 Add nutrient-rich humus which fuels plant growth
 Restores vitality to depleted soil

It's also free!!!

Easy to make
 Good for the environment

Mix:

Nitrogen & Carbon or
 Greens & Browns
 In Layers
 Keep Moist
 Air circulation
 Heat, heat, heat



COMPOSTING BENEFITS

Soil conditioner: Creating rich humus for lawn and garden. This adds nutrients to your plants and helps retain moisture in the soil.

Recycles kitchen and yard waste: Composting can divert as much as 30% of household waste away from the garbage can.

Introduces beneficial organisms to the soil: Microscopic organisms in compost help aerate the soil, break down organic material for plant use and ward off plant disease.

Good for the environment: Composting offers a natural alternative to chemical fertilizers.

Reduces landfill waste!



WHAT TO COMPOST

Browns = High Carbon		Greens = High Nitrogen	
Ashes, wood	Peanut shells	Grass clippings	Garden waste
Bark	Peat moss	Coffee grounds	Hay
Cardboard, shredded	Pine needles	Vegetable scraps	Hedge clippings
Newspaper, shredded	Sawdust	Algae	Manures
Paper	Stems & twigs	Fruits	Seaweed
Dried fruit waste	Straw	Clover	Weeds*
Dry leaves	Wood ashes	*Avoid weeds that have gone to seed, as seeds may survive all but the hottest compost piles.	
Dryer lint	Cardboard rolls		

21

CA NATIVE PLANTS & SOIL

Native plants like undisturbed soil

Your soil is good enough

Know what you are planting

- Plant communities

Grow with their associated plants

Our areas have very diverse soils

- Acidic sand on hard pan
- Alkaline clays
- Blends



22

PLANTS & SOIL

MULCH, MULCH, MULCH!!!

All plants and soil will benefit

- Retain soil moisture
- Reduce soil temperature
- Erosion control
- Helps control weeds
- Beneficial insects and earthworms will thrive
- It will break down and become part of your soil



23



Rainwater Capture & Use

EVERY LITTLE BIT COUNTS

24

RAINWATER HARVESTING

What is stormwater?

Stormwater is excessive rainfall that does not soak into the ground, but instead flows over the land's hard surface into the nearest water body through storm drain channels.



25

RAIN HARVESTING FOR WATER USE EFFICIENCY

- Rain Barrels
- Cisterns
- Rain Chains
- Bioswales
- Rain Gardens
- Permeable Hardscapes



26

RAIN BARRELS & CISTERNS

A system that collects and stores rainwater that would otherwise be lost to runoff and diverted to storm drains and streams.



27

RAIN BARRELS – BE CREATIVE



28

RAIN CHAINS

- Transport rainwater from gutters
- They are decorative
- Water feature
- Into containment
- Into landscape



29

RAIN CHAINS



30

RAIN CHAINS



31

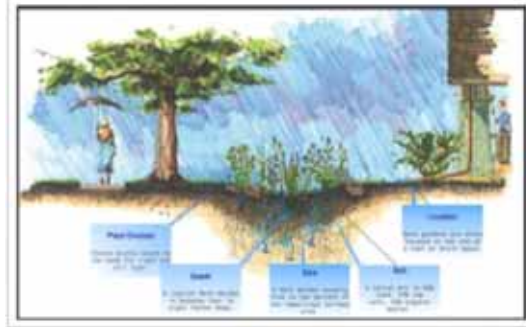
DIVERT GUTTERS TO LANDSCAPE



32

BASINS, SWALES & RAIN GARDENS

Basins, swales, and rain gardens, are simple landscaping features used to slow, collect, infiltrate, and filter stormwater.



33

CONTOUR YOUR LANDSCAPE – DRY CREEKS & PONDS



34

PERMEABLE HARDSCAPES

Permeable hardscapes allow rainwater to filter slowly into the ground

Pollutants are largely removed by filtration, chemical interactions and soil organisms

The ground also stores water, which is then taken up by plants or goes to recharge local aquifers



35

FLAGSTONE ON SAND



36

PAVERS

A paver is a paving stone, tile, brick or brick-like piece of concrete commonly used as exterior flooring

- Place on sand or gravel base
- Porous pavers also available



37

DECOMPOSED GRANITE

Decomposed granite can be used in a variety of projects, such as paths, driveways, patios, and many more projects

- It's versatile
- It's attractive
- It's inexpensive
- It's easy to maintain
- It provides excellent drainage



38



Selecting Climate Appropriate Plants

MEDITERRANEAN CLIMATE

39

THE RIGHT PLANTS FOR OUR CLIMATE

What are **California Friendly**® or drought tolerant plants?
What are **California native** plants?
Is there a difference?



40

40

SO. CA MEDITERRANEAN CLIMATE

California is NOT a desert!



41

CALIFORNIA FRIENDLY® PLANTS

Climate appropriate plants from
around the world

They are moderate water users

They need summer water

Easy to adapt



42

THE RIGHT PLANTS FOR OUR CLIMATE

There is a diversity of climate appropriate plants available.

California native plants require different care throughout the year compared to non-native drought tolerant plants.



CALIFORNIA NATIVE PLANT SOCIETY

Calscape

Restore Nature One Garden at a Time



43

CALIFORNIA NATIVE PLANTS

Natives build habitat for pollinators

Fully or partially summer dormant

They require little or no supplemental water once established



44

LOCAL CA NATIVE PLANTS

CA native plants have adapted to our local climate
We can create habitats for birds, insects, etc.

Plant characteristics

- Silver/grey in color
- Small leaves
- Leather leaves/waxy

Salvia apiana



Heteromeles arbutifolia



Ceanothus crassifolius



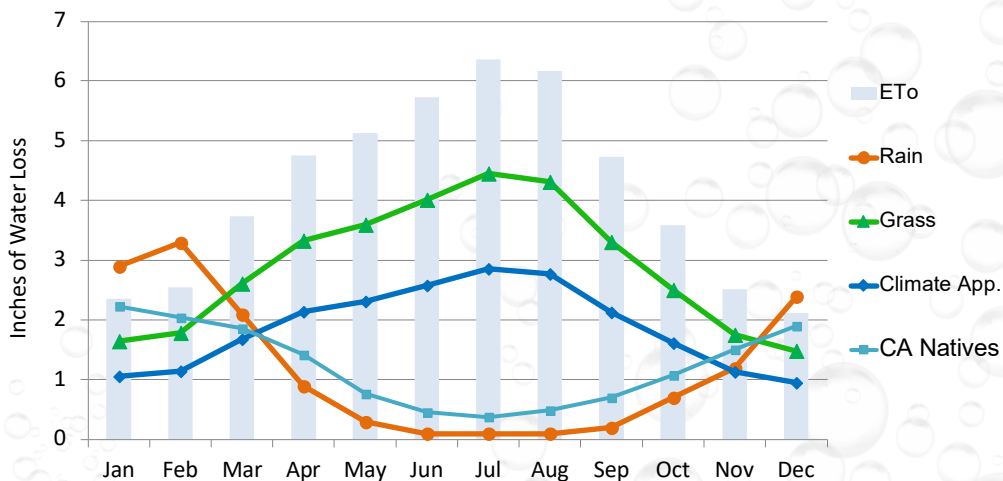
Rhus integrifolia



45

PLANTS SEASONAL WATER REQUIREMENTS

CA Native Plants vs. Non-Native Climate Appropriate Plants



46

HYDROZONING

Hydrozoning Principles

- Inherent limitation of which plants can be grouped together
 - Plant types
 - Water requirement
 - Sun exposure
 - Soil requirements
 - Growth Rate



47

PLANT NAMES

We call this Nomenclature

Scientific or Botanical names

Genus share certain structural characteristics.

species usually refers to a place where the plant is native, the plant's appearance, or the name of the person credited with discovering it

Cultivar selected and cultivated

Variety often occurs in nature and are true to seed

Common names; can vary from country to region

Ex. Botanical name

Genus species

Philadelphus lewisii

Ex. Common name

Mock Orange



48

PLANT NAMES – GENUS & SPECIES

What about when species change?

Rosa californica; California wild rose

Rosa floribunda 'Iceberg'



49



**WATER
EFFICIENCY**

NATURE'S WATER FIRST

50

STORM WATER AS FIRST SOURCE



51

HAND WATERING IS THE MOST EFFICIENT WAY TO WATER



52

EFFICIENT IRRIGATION AS SUPPORT

What does an irrigation system do?

An irrigation system simply controls the way you water your landscape.

- **Smart Controllers**
- **Overhead irrigation**
 - Spay heads, rotors
 - Specialty nozzles
- **Drip irrigation**
 - Inline emitter tubing
 - Microsprays



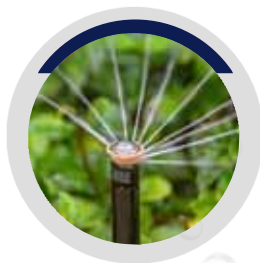
53

EFFICIENT IRRIGATION



SPRAY HEADS

Applies water at fast rate so make sure to divide runtimes into multiple start times for better efficiency



ROTATING NOZZLES

Delivers a pattern of wind-resistant, multi-trajectory streams that result in uniform distribution and reduced water loss



ROTORS

Delivers water in a single stream that oscillates. Applies water at a slower rate allowing soil to absorb and permeate deeper into the root zone



SMART CONTROLLER

Can assist with appropriate watering schedule for landscape and soil needs, and adjust for changes in the weather

54

DRIP IRRIGATION

Very efficient method of watering the landscape

- Around 95%+ efficient
- Consider micro-sprays or micro-bubblers



55

CONVERT SPRAY HEADS TO DRIP

All in one drip components

- Built in pressure regulator
- Mesh filter



56

IRRIGATION ISSUES

Visually Inspect Your System

- Maintenance is KEY!!!
- 1 – 2 times a month
- Sprinkler Issues
- Needed repairs
- Retrofit opportunities

Missing nozzles can waste as much as 40+/- gallons per minute!!!



57



RESIDENTIAL INCENTIVES

58

DIY TURF REMOVAL PROGRAM

Help California save water by removing your grass.

Residential Customers

- Receive \$2 per sq.ft.
- Capped at max of 5,000 sq.ft.
- 250 sq.ft. minimum
- See FAQ below for more details



59

[RightScapeNow.com/rebates/residential-rebates](https://www.rightscapenow.com/rebates/residential-rebates)



Financial incentives to help save water

Outdoor rebates

- Turf removal rebate program
- Weather-based irrigation controllers
- Rotating spray nozzles
- Rain barrels and cisterns
- Soil moisture sensors
- Drip conversion

Indoor rebates

- High-efficiency clothes washers
- High-efficiency toilets

60



ONLINE RESOURCES

IRWD.COM / RIGHTSCAPENOW.COM

61

SAVE WATER & MONEY: RightScapeNow.com

- Water-saving tips
- Upcoming workshops
- Rebates
- Online training
- How-to videos
- Do-it-yourself home check-up

Upcoming workshops & events

	Wednesday, Nov. 18 12 p.m. to 1 p.m. Plant Like a Local
	Wednesday, Dec. 9 12 p.m. to 1 p.m. Sprinkler Spruce Up

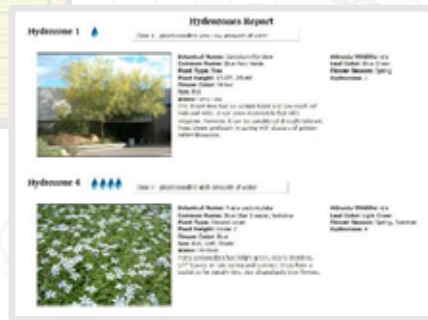


62

LANDSCAPING IDEAS: RightScapeResources.com



- View gardens
- Watering calculator
- Search for plants
- Design ideas
- Printable plant lists



63

QUESTIONS ABOUT YOUR LANDSCAPE?

Ask Juan!


Juan Garcia is IRWD's landscape water efficiency specialist with more than 10 years of experience in efficient irrigation practices and drought-tolerant plant selection


- Monthly "Ask Juan" column featured in IRWD's Pipelines newsletter
- Email him at: AskJuan@IRWD.com


Ask
Juan




64



 Irvine Ranch Water District

 @IRWDnews

 youtube.com/IrvineRanchWD



Website: IRWD.com

Water efficiency information
RightScapeNow.com

Email: Info@IRWD.com

Phone: 949-453-5300

15600 Sand Canyon Ave., Irvine, CA 92618

65

THANK YOU FOR ATTENDING!






66