

Water Efficiency

Best Practices, Tools, & Resources

Lindsey Stuvick
Moulton Niguel Water District
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Water Supply

- Imported Water
- Recycled Water
- Local Reliability Projects
- Groundwater



Benefits of Water Efficiency

- Save water and money
- Reduce runoff & avoid property damage
- Improve quality of local creeks and beaches
- Delay investment in infrastructure and storage
- Keep water rates low



Integrated Demand Management



Turf Removal Program

Promote sustainable landscapes



Marketing

Cost effective & targeted



Water Shortage Contingency Plan

Choice not mandates



Education Programs

Workshops & customer service

Conservation – a California Way of Life

- Use water efficiently & eliminate water waste
- Each CA urban water retailer receives a budget
- Efficiency standards for landscaped areas
- Required and enforceable after 2022
- Financial penalties for non-compliance



Water Budgets

- Effective demand management tool
- Science-based metrics calculate budget
- Provides customized water budget for each meter
- Indicates efficient level of monthly water use
- High bills could indicate leaks or overwatering



Outdoor Water Budget

- Outdoor Budget calculation elements:
 - Irrigable Area
 - Evapotranspiration (ET)
 - Plant Factor
 - Conversion Factor(s)
- Variation driven by changes in ET



**Example
Water
Budget**

=



Irrigable Area

×



Monthly
Evapotranspiration

×

0.7 × 0.62 ÷ 748

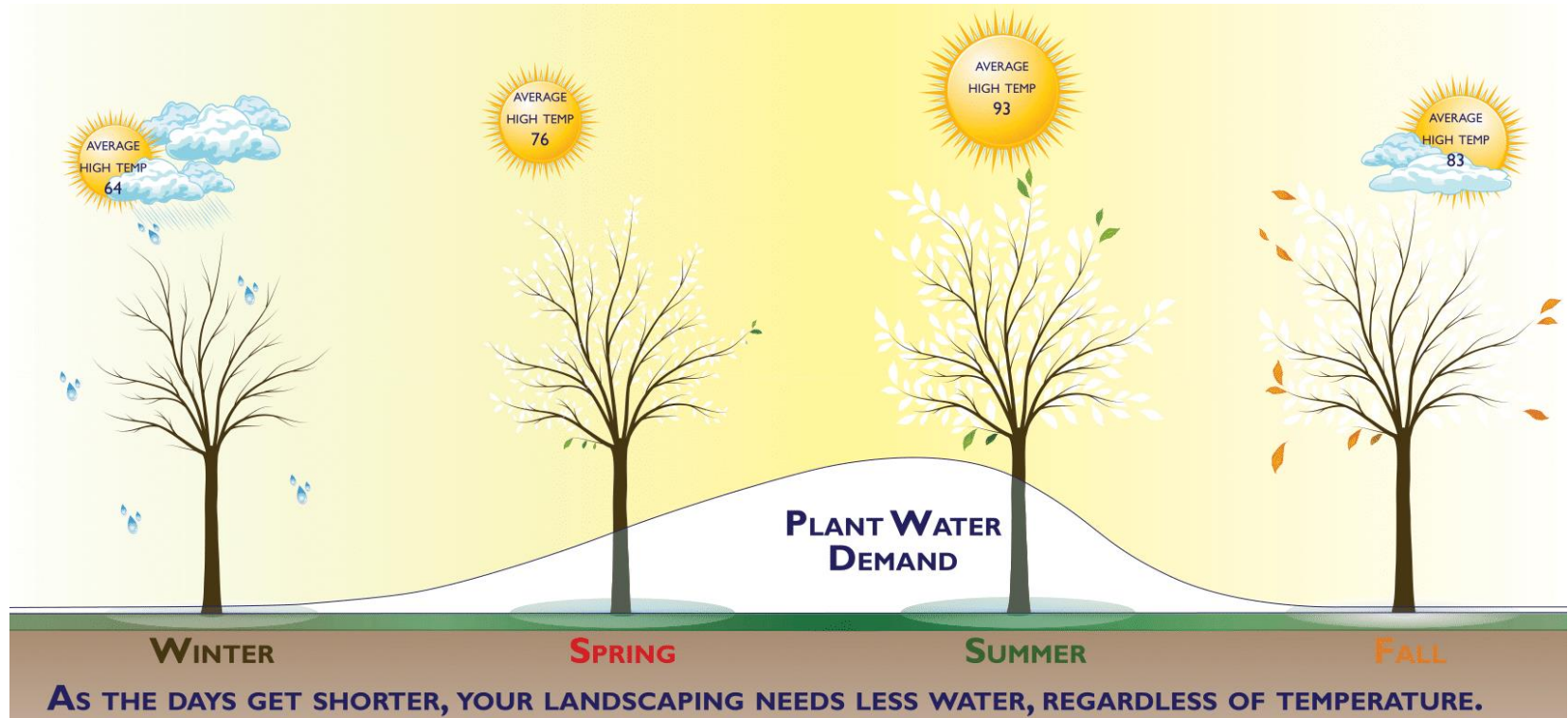
0.7 Plant Factor

0.62 Conversion
Factor

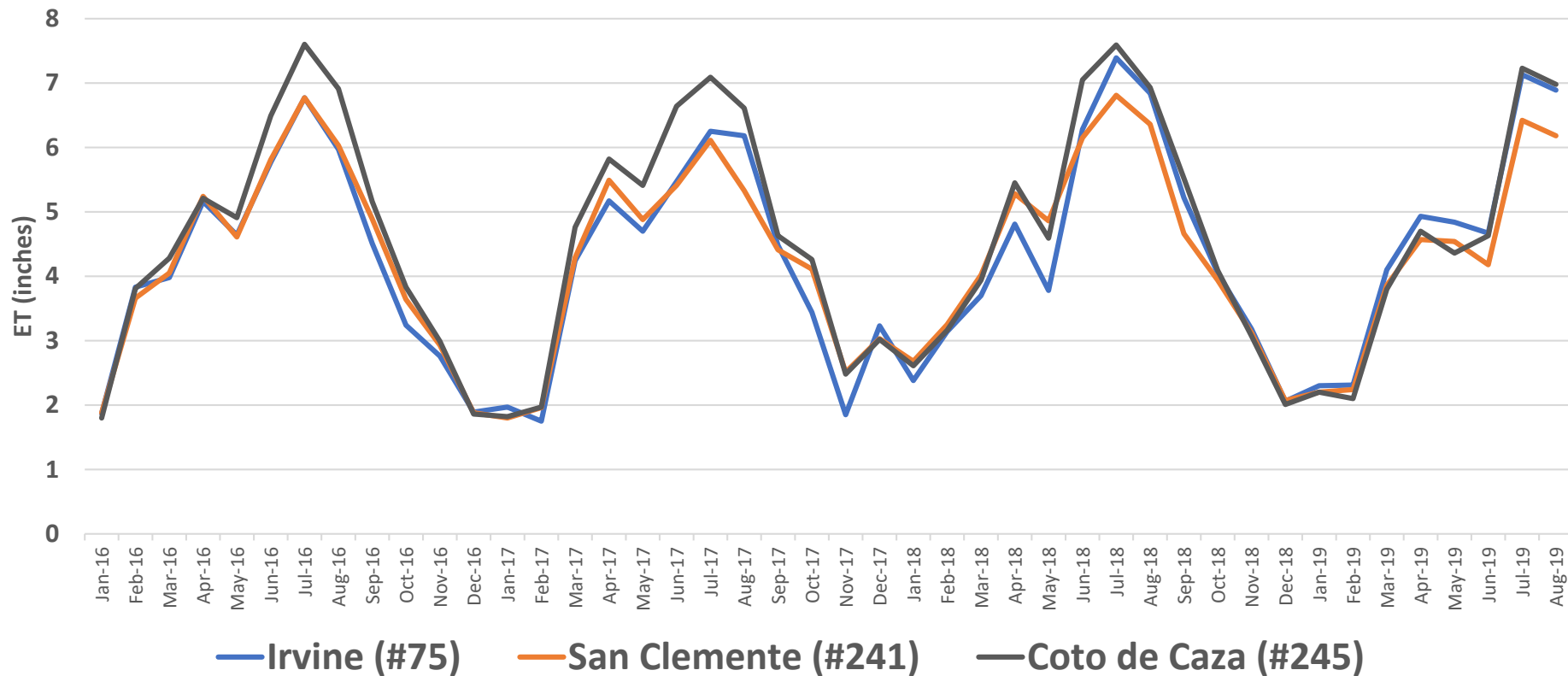
748 Conversion
Factor

ET and Plant Water Demand

4 Factors: solar radiation, air temperature, relative humidity, wind speed



ET in South Orange County 2016-2019



Recycled Water

- Offsets potable consumption
- Dedicated irrigation accounts
- Retrofit programs available
- BMP – Irrigate to a budget
- Check with local agency



Commercial High Efficiency Device Rebates



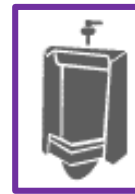
**Weather Based
Irrigation Controller**



**High Efficiency
Rotating Nozzles**



**Premium High
Efficiency Toilets**



**Ultra Low Flow
Efficiency Urinals**



**Soil Moisture
Sensors**



**Rain Barrels
& Cisterns**



**High Efficiency
Large Rotors**



**Ice
Machines**

*Check with your energy utilities for additional rebates

Commercial Rebates Procedure

- Check with your local water agency first
- Special Procedure for Commercial Rebates
 - Create an account at socalwatersmart.com
 - Request a reservation
 - Receive letter to proceed
 - Purchase & install within 60 days
 - Complete application online

The screenshot shows the 'REBATE PORTAL' for 'Rebate Application'. At the top, there are logos for 'SoCal WaterSmart' and 'THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA'. Below the logos is a navigation bar with 'REBATE PORTAL' and 'Rebate Application'. A red notice states: '* For commercial applications submitted prior to February 1, 2018, please [click here](#) to access the appropriate application submission portal.' The main content area is divided into two sections: 'NEW APPLICANT' and 'RETURNING APPLICANT'. The 'NEW APPLICANT' section includes a sub-header 'Why do I have to register?' and four input fields: 'Email*', 'Confirm Email*', 'Password*', and 'Confirm Password*'. A note below these fields says 'Note: You can always reset your password via email'. At the bottom of this section is a CAPTCHA box with the text 'The box below protects your information from unauthorized access:' and a checkbox labeled 'I'm not a robot'. The 'RETURNING APPLICANT' section includes two input fields: 'Email*' and 'Password*'. Below these is a 'Forgot your password?' link. At the bottom of this section is a 'Sign In' button. A CAPTCHA box is also present at the bottom of the 'RETURNING APPLICANT' section, identical to the one in the 'NEW APPLICANT' section.

SoCal WaterSmart | Rebate Application THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

REBATE PORTAL Rebate Application

* For commercial applications submitted prior to February 1, 2018, please [click here](#) to access the appropriate application submission portal.

NEW APPLICANT
Why do I have to register?

Email*

Confirm Email*

Password*

Note: You can always reset your password via email

Confirm Password*

The box below protects your information from unauthorized access:

☐ I'm not a robot

RETURNING APPLICANT

Email*

Password*

[Forgot your password?](#)

The box below protects your information from unauthorized access:

☐ I'm not a robot

Sign In

Turf Replacement & Spray-to-Drip

Commercial Turf Removal



- Goal: sustainable landscapes
- Check with your local agency first
- Replace grass with drought-tolerant or native plants
- Starts at \$2 per square foot
- Requires Pre- and Post-Inspection

Commercial Spray-To-Drip



- Goal: improve irrigation efficiency
- Check with your local agency first
- Replace traditional sprinkler system with inline drip
- Starts at \$0.20 per linear foot
- Requires Pre- and Post-Inspection

Turf Replacement Program

- Must convert to low-flow irrigation system or cap
- Plant density must be 3 plants per 100 square feet
- Bare soil must be covered by at least 3" of organic mulch
- At least 1 sustainability (runoff retention) feature
- Site must be free from invasive species
- Site must be 100% permeable to air and water

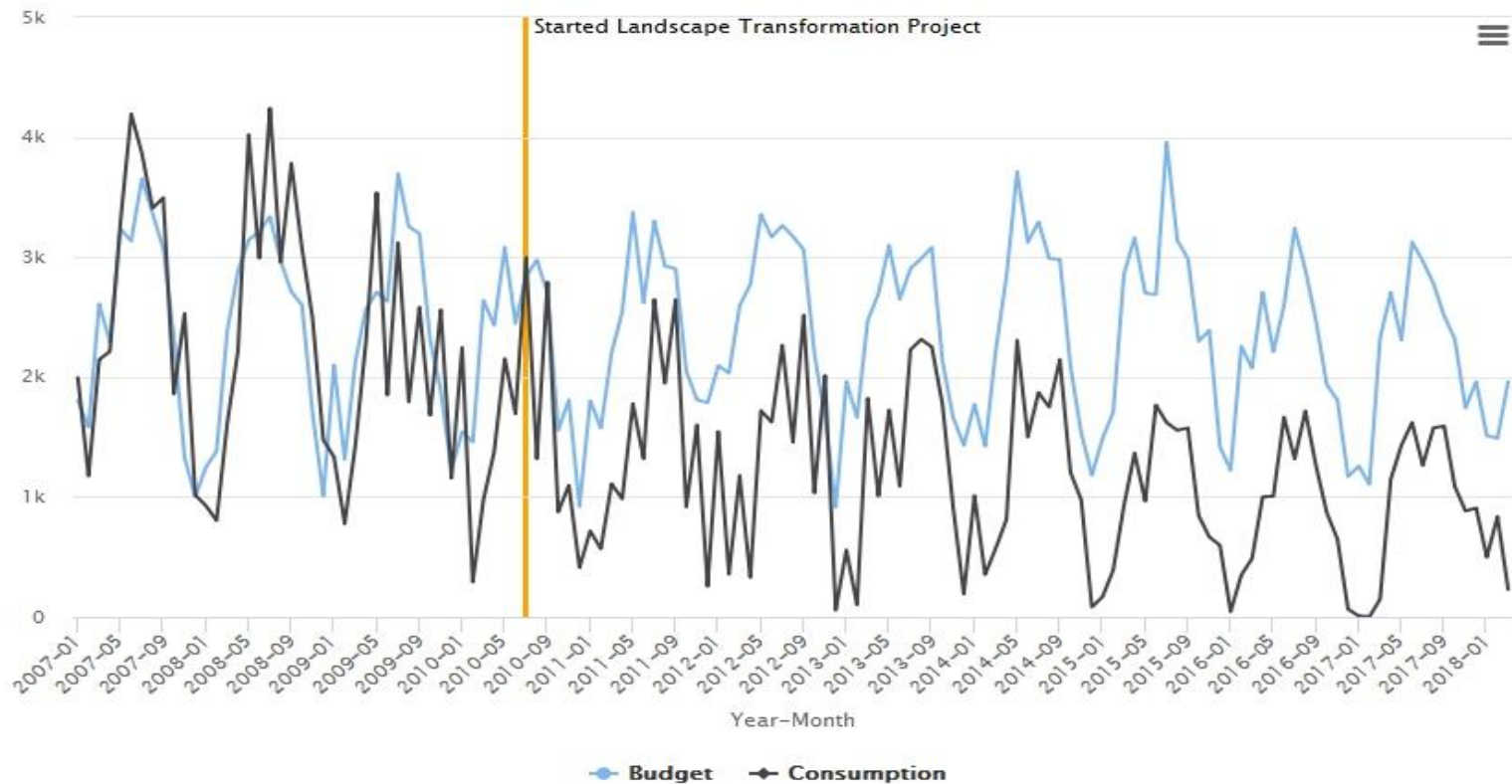


Case Study: Ocean Ranch HOA

- Large landscape transformation project
 - Removed dead shrubs & turf grass
 - Converted 2.3 million sq. ft. overall
- Keys to success
 - Forward-thinking Landscape Committee
 - Project champion
 - Inclusive planning approach
 - Frequent community updates



Ocean Ranch HOA: Budget to Actual Use



Demonstration Gardens

- Find examples of:
 - Drought-tolerant, native plants
 - Efficient irrigation systems
- Local gardens:
 - ETWD demonstration garden
 - SCWD demonstration garden
 - Niguel Botanical Preserve
 - Reata Park (SJC)
 - Check with local agency



Water Management – Best Practices

- Regular meter reads
 - Interval depends on meter technology
- Understand outdoor budget equations
- Utilize ET reference resources
- Implement weather-based irrigation technology
- Regular irrigation system site-walks
- Manage irrigation to reduce runoff
- Performance-based approach
- Convert non-functional turf
- Great communication

Performance-Based Irrigation Management Contract Template

A Water Smart Landscape Program



HOAs & Water-Efficient Landscapes

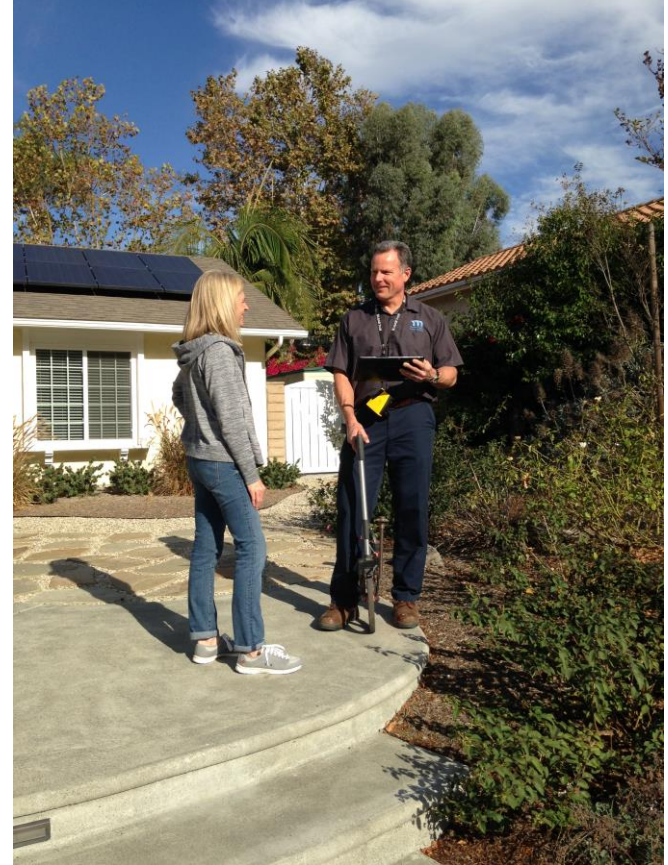
- Policies protect water-efficient landscapes
- HOAs cannot enact or enforce rules that restrict:
 - Drought-tolerant landscapes that replace turf
 - Artificial turf or synthetic surfaces that resemble grass
 - Compliance with water-efficiency landscape ordinances
- HOAs cannot impose a fine against an owner who reduces or eliminates watering their vegetation, if the:
 - Governor and/or local government declares a drought-related state of emergency

CA Civil Code §4735. Low Water-Using Plants and Artificial Turf.



Commercial & Landscape Site Visits

- On-site Assistance from Water Efficiency staff
 - Help identifying leaks, overspray/runoff
 - Opportunities to increase efficiency
- Free Large Landscape Audits
 - Identifies water conservation measures
 - Estimates potential water and money savings
 - Calculates ROI for specific devices



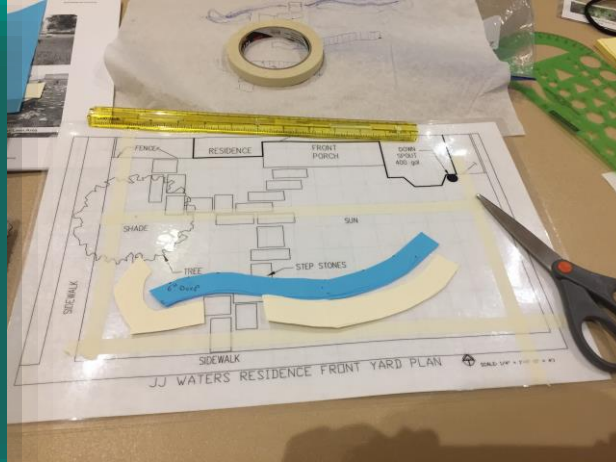
Commercial Portals

- Online Bill Pay
- View Current & Past Water Use
- Water Efficiency Tips & Resources
- Receive Leak Alerts
- Manage Water Portfolio
- Check with local agency



Professional Landscaper Training

- Qualified Water Efficient Landscaper Certification
- Watershed Wise Landscape Professional Certification
- Certified Landscape Irrigation Auditor
- Bilingual Training Institute (Instruction in Spanish & English)
- CLCA Mastering Water Efficient Landscapes



Opportunities to Outreach, Partner, and Pilot

- Build sustainable communities
- Materials for HOA outreach channels
 - Customer portals
 - Newsletters
 - Events
- Develop Water Saving Pilot Programs
 - Your ideas?



Thank you!

