

# Qualified Water Efficient Landscaper (QWEL)

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North Coast Water  
Conservation Group



# What is QWEL?

- ▶ Water management training series for landscapers
  - Twelve 1 ½ hour training modules (18 hours total)
  - *Topics range from: irrigation systems and plants to irrigation scheduling, water budgets and selling water management to customers.*
  - Final exam: 120 questions
    - Passing grade = 70% or better



# The Need for QWEL

- ▶ Creating an educated landscape workforce
  - Training one person may result in water savings at 20 or more sites!!!
- ▶ Current trainings
  - Green Gardener (Santa Barbara)
  - Certified Landscape Technician (PLANET)
  - Certified Irrigation Landscape Auditor (IA)
  - Certified Water Manager (CLCA)
- ▶ Ability to provide options for our water customers



# Background of QWEL

- ▶ North Coast Water Conservation Group
  - Landscape Water Advisory Group: A mix of landscape professionals, water agencies, cities and educators
  
- ▶ Major Contributors:
  - Sonoma County Water Agency
  - City of Santa Rosa
  - Marin Municipal Water District
  - CLCA (North Coast Chapter)
  - City of Petaluma
  - College of Marin
  - Santa Rosa Junior College
  - Toro Irrigation Company



# Creation of QWEL

- ▶ 2004–2005
    - Each agency was doing separate trainings
    - Outline of our training program complete
  - ▶ 2006–2007
    - Created PowerPoints and Manual
    - Beta tested twice resulting in an overhaul of training based on feedback (Spanish Beta too)
  - ▶ 2008
    - QWEL receives US EPA WaterSense recognition
    - QWEL is taught at the Santa Rosa Junior College and College of Marin
    - Over 100 Qualified Water Efficient Landscapers
- 2<sup>nd</sup> Program in the Nation!!!
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# Sample of QWEL



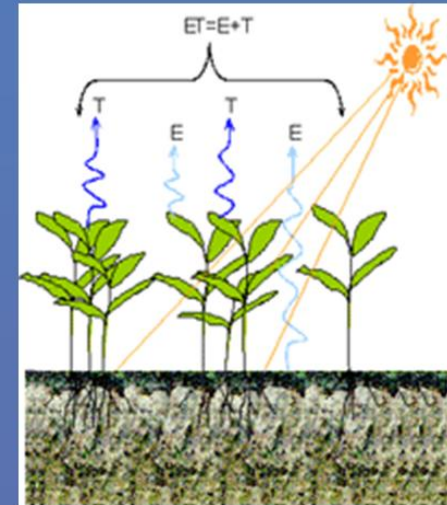
How much water do your plants need

## What is ET?

Evapotranspiration = water loss

ET from landscape due to weather factors such as sunlight, wind, humidity, and temperature, which cause

- Evaporation from soil and plant surfaces
- Transpiration by plants (people perspire, plants transpire)



# Sample of QWEL (cont.)



## Irrigation Scheduling Cycle



QWEL

# Sample of QWEL (cont.)



*New technology*

## Residential turf installation











QWEL

# QWEL Irrigation Scheduler



## WEEKLY SCHEDULING GUIDELINES

\* For weekly ET (evapotranspiration in inches), call Turf-Time at 707-543-3466

|  |  | Turf<br>(cool season)  |  |      |      |      |      |      |      |      |      |      |      |    |
|--|--|--|--|------|------|------|------|------|------|------|------|------|------|----|
|  |  | WEEKLY ET * (inches)   |  |      |      |      |      |      |      |      |      |      |      |    |
|  |  | 0.25   | 0.50   | 0.75 | 1.00 | 1.25 | 1.50 | 1.75 | 2.00 | 2.25 | 2.50 | 2.75 | 3.00 |    |
| <br>Multistream Rotating Nozzle |                         | 10   | 20   | 15   | 20   | 17   | 20   | 18   | 20   | 18   | 20   | 22   | 24   |    |
|  | <br>Rotor Sprinkler     |                           | 7  | 13   | 10   | 13   | 11   | 13   | 12   | 13   | 12   | 13   | 15   | 16 |
|  |  | <br>Fixed Spray Sprinkler |   | 3    | 6    | 4    | 6    | 5    | 6    | 5    | 6    | 5    | 6    | 6  |
|  | <br>Drip (sub-surface) |  |  | 5    | 10   | 8    | 10   | 8    | 10   | 9    | 10   | 9    | 10   | 11 |
| Days per Week  |  | 1  | 1  | 2    | 2    | 3    | 3    | 4    | 4    | 5    | 5    | 5    | 5    |    |
| Start Times per Day  |  | 3  | 3  | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    |    |

1.) This chart is for Turf

2.) Determine your weekly ET

3.) Choose your sprinkler type

4.) Determine station runtime per start in minutes

5.) Days per week

6.) Start times per irrigation day

# QWEL Irrigation Scheduler (cont.)

| Site Info:           |  |
|----------------------|--|
| Weekly ET (inches) = |  |
| Soil Type =          |  |

| Controller Start Times: |   |
|-------------------------|---|
| Number of Starts        | 3 |

| Landscape Sqaure Footage Info: |  |
|--------------------------------|--|
| High Water Use                 |  |
| Moderate Water Use             |  |
| Low Water Use                  |  |

| Precipitation Rate: |      |
|---------------------|------|
| Drip                | 1    |
| Pop-up Spray        | 1.5  |
| Rotating Sprinkler  | 0.75 |

| Root Zone (inches): |    |
|---------------------|----|
| High Water Use      | 6  |
| Lawn                | 6  |
| Low Water Use       | 8  |
| Moderate Water Use  | 8  |
| Ornamental Shrubs   | 12 |
| Trees               | 18 |

| Distribution Uniformity: |     |
|--------------------------|-----|
| Drip                     | 0.9 |
| Pop-up Spray             | 0.7 |
| Rotating Sprinkler       | 0.8 |



| Station Number | Gallons per Minute | Sun Exposure | Plant Type | Irrigation Method | Weekly Runtime | Number of Irrigation Days | Mintues per Irrigation Day | Number of Start Times | Minutes per Start | Controller Program |
|----------------|--------------------|--------------|------------|-------------------|----------------|---------------------------|----------------------------|-----------------------|-------------------|--------------------|
| 1              |                    |              |            |                   |                |                           |                            |                       |                   |                    |
| 2              |                    |              |            |                   |                |                           |                            |                       |                   |                    |
| 3              |                    |              |            |                   |                |                           |                            |                       |                   |                    |
| 4              |                    |              |            |                   |                |                           |                            |                       |                   |                    |
| 5              |                    |              |            |                   |                |                           |                            |                       |                   |                    |
| 6              |                    |              |            |                   |                |                           |                            |                       |                   |                    |
| 7              |                    |              |            |                   |                |                           |                            |                       |                   |                    |
| 8              |                    |              |            |                   |                |                           |                            |                       |                   |                    |
| 9              |                    |              |            |                   |                |                           |                            |                       |                   |                    |
| 10             |                    |              |            |                   |                |                           |                            |                       |                   |                    |
| 11             |                    |              |            |                   |                |                           |                            |                       |                   |                    |
| 12             |                    |              |            |                   |                |                           |                            |                       |                   |                    |

Estimated Montly Irrigation Water Use (gallons) =  Enter Station Info

Estimated Water Budget (gallons) =  Enter ET and Sqaure Footage Info

Water Use vs. Budget = **Cannot Calculate**

Required Input Fields  
Auto Calculated Fields





# QWEL in Your Area

- ▶ QWEL can be use by your city/agency/district
- ▶ Terms and Conditions of Use
- ▶ QWEL Website
  - [www.qweltraining.com](http://www.qweltraining.com)
- ▶ Remember...QWEL is already recognized by the US EPA as a WaterSense irrigation auditor training program
- ▶ For more details call or email:
  - 707-543-3988
  - [dmuelrath@srcity.org](mailto:dmuelrath@srcity.org)