

## **MWELO SUBMITTAL CHECKLIST**

Submittal Date: \_\_\_\_\_

Project Address: \_\_\_\_\_

Applicant Name: \_\_\_\_\_ Phone: \_\_\_\_\_

The following checklist provides a list of information that must be included on the plans before your permit application can be processed.

### **PERFORMANCE APPROACH**

#### **Landscape Documentation Package (Title 23, Chapter 2.7 §492.3)**

- The project's address, total landscape area, water supply type, and contacts shall be stated on the plans.
- Add, sign and date the following statement on the plans: "I agree to comply with the requirements of the water efficient landscape ordinance and submit a complete Landscape Documentation Package."
- Water Efficient Landscape Worksheet that includes a hydrozone information table and water budget calculations shall be submitted for plan check.
- A landscape design plan and irrigation design plan shall be submitted for plan check.

#### **Water Efficient Landscape Worksheet (Title 23, Chapter 2.7 §492.4 and §492.13)**

- Incorporate the Water Efficient Landscape Worksheet into plans. Show that the Maximum Applied Water Allowance (MAWA) meets or exceeds the calculated Estimated Total Water Use (ETWU).
- The evapotranspiration adjustment factor (ETAF) for the landscape project shall not exceed a factor of (0.55 for residential areas) (0.45 for non-residential areas).
- The plant factor used shall be from WUCOLS or from horticultural researchers with academic institutions.  
WUCOLS plants database can be found on-line at: <http://ucanr.edu/sites/WUCOLS/>
- All water features shall be included in the high water use hydrozone. All temporary irrigated areas shall be included in the low water use hydrozone.
- All Special Landscape areas shall be identified on the plans. The ETAF for new and existing (non-rehabilitated) Special Landscape Areas shall not exceed 1.0.
- For the purpose of calculating ETWU, the irrigation efficiency is assumed to be 0.75 for overhead spray devices and 0.81 for drip system devices.

#### **Landscape Design Plan (Title 23, Chapter 2.7 §492.6)**

- The landscape design plans, at a minimum, shall:
  - Delineate and label each hydrozone by number, letter, or other methods.
  - Identify each hydrozone as low, moderate, high water, or mixed water use.
  - Identify recreational areas, areas solely dedicated to edible plants, areas irrigated with recycled water, type and surface area of water features, impermeable and permeable hardscape, and any infiltration systems.
- For hydrozone with a mix of both low and moderate water use plants or both moderate and high water use plants, the higher plant factor or the plant factor based on the proportions of the respective plant water uses shall be used. Hydrozones containing a mix of low and high water use plants is not permitted.

- Turf is not allowed on slopes greater than 25% where the toe of the slope is adjacent to an impermeable hardscape.
- Add note to plans: "Recirculating water systems shall be used for water features"
- Add note to plans: "A minimum 3-inch layer of mulch shall be applied on all exposed soil surfaces of planting areas except turf areas, creeping or rooting groundcovers, or direct seeding applications where mulch is contraindicated."
- Add note to plans: "For soils less than 6% organic matter in the top 6 inches of soil, compost at a rate of a minimum of four cubic yards per 1,000 square feet of permeable area shall be incorporated to a depth of six inches into the soil"

**Irrigation Design Plan (Title 23, Chapter 2.7 §492.7)**

- The irrigation plans, at a minimum, shall contain the following:
  - Location and size of spate water meters for landscape
  - Location, type, and size of all components of the irrigation system, including controllers, main and lateral lines, valves, sprinkler heads, moisture sensing devices, rain switches, quick couplers, pressure regulators, and backflow prevention devices.
  - Static water pressure at the point of connection the public water supply
  - Flow rate (gallons per minute), application rate (inches per hour), and design operating pressure (pressure per square inch) for each station.
- A dedicated water service meter or private submeter shall be installed for all (non-residential irrigated landscapes of at least 1,000sqft) (residential irrigated landscape areas of at least 5,000sqft).
- Add note to plans: "Pressure regulating devices are required if water pressure is below or exceeds the recommended pressure of the specified irrigation devices."
- Manual shut-off valves shall be required, as close as possible to the point of connection of the water supply, to minimize water loss in case of an emergency or routine repair.
- Add note to plans: "Check valves or anti-drain valves are required on all sprinkler heads where low point drainage could occur."
- Areas less than 10-feet in width in any direction shall be irrigated with subsurface or drip irrigation.
- Overhead irrigation shall not be permitted within 24-inches of any non-permeable surface.

**Required Statements and Certification (Title 23, Chapter 2.7 §492.6, §492.7 and §492.9)**

- Add the following statement on the landscape and irrigation plans: "I have complied with the criteria of the ordinance and applied them for the efficient use of water in the landscape design plans".
- The final set of landscape and irrigation plans shall bear the signature of a licensed landscape architect, licensed landscape contractor, certified irrigation designer, licensed architect, licensed engineer, licensed land surveyor, or personal property owner.
- Add note to plans: "A diagram of the irrigation plan showing hydrozones shall be kept with the irrigation controller for subsequent management purposes."
- Add note to plans: "A Certificate of Completion shall be filled out and certified by either the designer of the landscape plans, irrigation plans, or the licensed landscape contractor for the project".
- Add note to plans: "An irrigation audit report shall be completed at the time of final inspection."

## Appendix B – Sample Water Efficient Landscape Worksheet.

### WATER EFFICIENT LANDSCAPE WORKSHEET

This worksheet is filled out by the project applicant and it is a required element of the Landscape Documentation Package.

#### Reference Evapotranspiration (ET<sub>o</sub>)

Hydrozone # /Planting Description <sup>a</sup>	Plant Factor (PF)	Irrigation Method <sup>b</sup>	Irrigation Efficiency (IE) <sup>c</sup>	ETAF (PF/IE)	Landscape Area (sq, ft.)	ETAF x Area	Estimated Total Water Use (ETWU) <sup>e</sup>
<b>Regular Landscape Areas</b>							
				Totals	(A)	(B)	
<b>Special Landscape Areas</b>							
				1			
				1			
				1			
				Totals	(C)	(D)	
				<b>ETWU Total</b>			
				<b>Maximum Allowed Water Allowance (MAWA)<sup>e</sup></b>			

<sup>a</sup>Hydrozone #/Planting Description

E.g

- 1.) front lawn
- 2.) low water use plantings
- 3.) medium water use planting

<sup>b</sup>Irrigation Method

overhead spray  
or drip

<sup>c</sup>Irrigation Efficiency

0.75 for spray head  
0.81 for drip

<sup>d</sup>ETWU (Annual Gallons Required) =

$Eto \times 0.62 \times ETAF \times Area$

where 0.62 is a conversion factor that converts acre-inches per acre per year to gallons per square foot per year.

<sup>e</sup>MAWA (Annual Gallons Allowed) =  $(Eto) (0.62) [(ETAF \times LA) + ((1-ETAF) \times SLA)]$

where 0.62 is a conversion factor that converts acre-inches per acre per year to gallons per square foot per year, LA is the total landscape area in square feet, SLA is the total special landscape area in square feet, and ETAF is .55 for residential areas and 0.45 for non-residential areas.

#### ETAF Calculations

##### Regular Landscape Areas

Total ETAF x Area	(B)
Total Area	(A)
<b>Average ETAF</b>	<b><math>B \div A</math></b>

**Average ETAF for Regular Landscape Areas must be 0.55 or below for residential areas, and 0.45 or below for non-residential areas.**

##### All Landscape Areas

Total ETAF x Area	(B+D)
Total Area	(A+C)
<b>Sitewide ETAF</b>	<b><math>(B+D) \div (A+C)</math></b>

## **CERTIFICATE OF COMPLETION**

This certificate is filled out by the project applicant upon completion of the landscape project.

### **PART 1. PROJECT INFORMATION SHEET**

Date		
Project Name		
Name of Project Applicant	Telephone No.	
	Fax No.	
Title	Email Address	
Company	Street Address	
City	State	Zip Code

Project Address and Location:

Street Address		Parcel, tract or lot number, if available.
City		Latitude/Longitude (optional)
State	Zip Code	

Property Owner or his/her designee:

Name	Telephone No.	
	Fax No.	
Title	Email Address	
Company	Street Address	
City	State	Zip Code

Property Owner

"I/we certify that I/we have received copies of all the documents within the Landscape Documentation Package and the Certificate of Completion and that it is our responsibility to see that the project is maintained in accordance with the Landscape and Irrigation Maintenance Schedule."

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Property Owner Signature

Date

**PART 2. CERTIFICATION OF INSTALLATION ACCORDING TO THE LANDSCAPE  
DOCUMENTATION PACKAGE**

"I/we certify that based upon periodic site observations, the work has been completed in accordance with the ordinance and that the landscape planting and irrigation installation conform with the criteria and specifications of the approved Landscape Documentation Package."

Signature*	Date	
Name (print)	Telephone No.	
	Fax No.	
Title	Email Address	
License No. or Certification No.		
Company	Street Address	
City	State	Zip Code

\*Signer of the landscape design plan, signer of the irrigation plan, or a licensed landscape contractor.

**PART 3. IRRIGATION SCHEDULING**

Attach parameters for setting the irrigation schedule on controller per ordinance Section 492.10.

**PART 4. SCHEDULE OF LANDSCAPE AND IRRIGATION MAINTENANCE**

Attach schedule of Landscape and Irrigation Maintenance per ordinance Section 492.11.

**PART 5. LANDSCAPE IRRIGATION AUDIT REPORT (Performance Compliance method only)**

Attach Landscape Irrigation Audit Report per ordinance Section 492.12.

**PART 6. SOIL MANAGEMENT REPORT (Performance Compliance method only)**

Attach soil analysis report, if not previously submitted with the Landscape Documentation Package per ordinance Section 492.5.

Attach documentation verifying implementation of recommendations from soils analysis report per ordinance Section 492.6.