

**INFORMATION FOR COMPLETING
the
OUTDOOR WATER USE EFFICIENCY CHECKLIST
TIER I SINGLE-FAMILY DEVELOPMENT**

This guide contains information to help assist the applicant in completing the Outdoor Water Use Efficiency Checklist for Tier I (parcel size is less than 10,000 square feet) Single-Family Residential Development.

Terms:

Total Landscape Area – all the planting areas, turf areas, and water features in a landscape. The landscape area does not include footprints of buildings or structures, sidewalks, driveways, parking lots, decks, patios, gravel or stone walks, other pervious or non-pervious hardscapes, or other non-irrigated areas designated for non-development (e.g., open spaces and existing native vegetation). Landscape area is measured in square feet, and is used to calculate a water budget, or the amount of water needed by the landscape per year.

Turf Area – the area of the landscape, in square feet, that is devoted to turf (i.e., lawn).

High, Moderate, Low, and Very Low Water Use Plants – the amount of water needed by a plant is species-specific. Plants are classified as high, moderate, low or very low water use.

To determine plant water needs, the following reference documents may be used:

- The Water Use Classification of Landscape Species (WUCOLS IV), 2014. It is available on-line at: <http://ucanr.edu/sites/WUCOLS/>
- The Water Smart Gardening in Santa Cruz County on-line guide, (<http://www.santacruz.watersavingplants.com>).

If you cannot find the information you need, please contact District staff for assistance.

Water Feature Surface Area – the surface area of the landscape, in square feet, that is devoted to ponds, lakes, waterfalls, fountains, artificial streams, spas and swimming pools.

- You will need to know the area of the landscape that is composed of moderate to high water use plants, turf and water features. The combined area of these landscape components may not exceed 25% of the total landscape area.**

Hydrozone – a part of the landscape having plants with similar water needs. Low, moderate and high water use hydrozones need to be irrigated separately to maximize water use efficiency.

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Low-volume Irrigation – the application of irrigation water at low pressure through a system of tubing or lateral lines and low-volume emitters such as drip, drip lines, micro spray and bubblers. Low volume irrigation is designed to apply small volumes of water slowly at or near the root zone of plants.

Automatic Self-adjusting Irrigation Controllers – an automatic timing device used to remotely control valves that operate an irrigation system using weather-based (evapotranspiration) and/or sensor-based (soil moisture) data. For Tier I landscapes, the use of automatic self-adjusting irrigation controllers is recommended. If a traditional controller (i.e., non-self-adjusting) is installed, it must have multiple programming capabilities and an automatic rain shut-off device.

Moisture Sensor/Rain Sensor Shut-offs – devices that sense when irrigation is not necessary because precipitation is occurring. If an automatic irrigation controller is installed, an automatic rain shut-off device is required.

Check Valves – a valve located under a sprinkler head, or other location in the irrigation system, to hold water in the system and prevent drainage from sprinkler heads when the sprinkler is off. Check valves are required at the lowest elevation point(s) on each irrigation valve run or lateral.

Swing Joints – an irrigation component that provides a flexible, leak-free connection between the emission device (i.e., sprinkler head) and lateral pipeline to allow movement in any direction and to prevent equipment damage.

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To Be Completed by Applicant

Page 1

I certify that the subject project, upon installation, meets the requirements of the Soquel Creek Water Conservation in Landscaping Ordinance.

Signature _____

Title _____

Date _____

Project Information

Applicant Name (print):	Contact Phone #:
Project Site Address:	Email address:
Assessor's Parcel Number:	# of Units: # of Meters:
<i>For a new single-family (one or two-unit) residential development project with a parcel size less than 10,000 square feet, please complete the following project information:</i>	Parcel Area (sq.ft.): <input type="checkbox"/> Tier I (<10,000 sq. ft. parcel)
	Total Landscape Area (sq. ft.):
	Turf Area (sq.ft.):
	Moderate to High Water Use Plant Area (sq. ft.):
	Water Feature Surface Area (sq.ft.):

Landscape Parameter	Requirements	Project Meets Requirements
General Limits	Combined area of turf, moderate to high water use plants and water features is less than 25% of the total landscape area	<input type="checkbox"/> Yes <input type="checkbox"/> No
Turf Limits	No turf in areas less than 10 feet wide in any direction	<input type="checkbox"/> Yes <input type="checkbox"/> No
	All turf is planted on slopes less than 12%	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Turf is a water-conserving species (moderate water use as defined by WUCOLS). Contact District Staff if WUCOLS factor is not available.	<input type="checkbox"/> Yes <input type="checkbox"/> No
Plants	Plants are grouped by hydrozones	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Hydrozones are irrigated separately	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Plants are selected and planted appropriately based on their adaptability to the area and water use and at least one listed method for planting hydrozones was utilized	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Only very low or low water use plants on slopes greater than 33%	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Invasive plants are not used (recommended)	<input type="checkbox"/> Yes <input type="checkbox"/> No
Irrigation System Design	The use of rainwater and/or graywater for irrigation was evaluated	<input type="checkbox"/> Yes <input type="checkbox"/> No
	A pressure regulator is used if water pressure (at meter) is greater than 80 psi.	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Manual shut-off valve present	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Low-volume irrigation used for all non-turf areas	<input type="checkbox"/> Yes <input type="checkbox"/> No
	No overhead sprinkler systems within 24 inches of non-permeable surfaces	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Overhead spray nozzle precipitation is less than 0.75 inches per hour	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Sprinkler heads and emission devices have matched precipitation rates	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Swing joints installed (recommended)	<input type="checkbox"/> Yes <input type="checkbox"/> No

OUTDOOR WATER USE EFFICIENCY CHECKLIST TIER I SINGLE-FAMILY DEVELOPMENT

Project Information, Continued

Landscape Parameter	Requirements	Project Meets Requirements
Irrigation System Design	Automatic, self-adjusting irrigation controllers (i.e., weather or sensor-based) installed (recommended)	<input type="checkbox"/> Yes <input type="checkbox"/> No
	If installed, automatic, self-adjusting irrigation controllers have moisture sensor and/or rain sensor shutoffs	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Check valves installed at lowest point(s) on each valve run	<input type="checkbox"/> Yes <input type="checkbox"/> No
Irrigation System Efficiency	No overspray or runoff	<input type="checkbox"/> Yes <input type="checkbox"/> No
Irrigation Schedule	Overhead turf irrigation to occur between 8 PM and 10 AM	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Irrigation will be avoided during windy or freezing weather and is prohibited within 48 hours of rainy weather	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Irrigation schedule to be reduced (frequency & duration) after plants are established (1 year)	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Irrigation schedule to be adjusted seasonally based on plant needs	<input type="checkbox"/> Yes <input type="checkbox"/> No
Landscape/Irrigation Maintenance	Irrigation system to be maintained in good working order	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Repairs to be made using identical or improved parts	<input type="checkbox"/> Yes <input type="checkbox"/> No
Soil Management	Soil conditioned with 6 cubic yards organic amendment/1,000 sq. ft. topsoil	<input type="checkbox"/> Yes <input type="checkbox"/> No
	At least 3-inches of mulch on exposed soil surfaces	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Compacted soils are transformed to friable conditions (recommended)	<input type="checkbox"/> Yes <input type="checkbox"/> No
Metering	Private irrigation submeter (recommended)	<input type="checkbox"/> Yes <input type="checkbox"/> No
Water Features	Water features are recirculating	<input type="checkbox"/> Yes <input type="checkbox"/> No
	No automatic fill valves	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Covers for pools and spas	<input type="checkbox"/> Yes <input type="checkbox"/> No
Stormwater Management	Hardscape areas are constructed of pervious materials (recommended)	<input type="checkbox"/> Yes <input type="checkbox"/> No

Water Budget

A water budget shall be calculated and used to gauge effective annual landscape water use. Review future usage against the water balance to determine whether outside irrigation usage is within a normal range. If you do not have a dedicated irrigation meter, you may assume that 25% of your total usage is for irrigation purposes. Please contact SqCWD Conservation Department if you require assistance with the water budget calculation. Irrigation should not exceed the budget.

Calculate a water budget below using the following formula:

Water Budget (gallons/year) = (11.40) x (Landscape Area in square feet)

Water Budget = (11.40) x _____ = _____ gallons/year
(Landscape Area in sq. ft)

Note: 11.40 = 36.6 inches per year (the reference evapotranspiration for Santa Cruz) x 0.5 (the reference evapotranspiration adjustment factor) x 0.623 (conversion factor from inches to gallons)

**OUTDOOR WATER USE EFFICIENCY CHECKLIST
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To Be Completed by SqCWD

Reviewer Name:

Date Received:

Date Approved:

Recommendations and Comments: