

Water Efficient Landscape Worksheet

Appendix A layout · CCR Title 23, Chapter 2.7, §493.3 · text operative January 2, 2025

When the performance compliance option is selected, this worksheet is to be filled out by the project applicant or their designee and is required to be submitted with the Landscape Documentation Package. Additional rows or multiple sheets should be used if there are more than 12 hydrozones. The ETWU (gallons per year) must be equal to or less than the MAWA (annual gallons allowed) to comply with MWELo.

Project Applicant: Sample Applicant Phone Number (if available): _____

Project Address: 100 Sample Street, Sacramento, CA Date: October 3, 2026 (ETo^a) (in./year): 55.2

Maximum Applied Water Allowance (MAWA):

MAWA = ETo^a x 0.62 x [ETAF x RLA + 1.0 x SLA] = **55.2 x 0.62 x [0.55 x 1,700 + 1.0 x 0] = 31,999** (Annual Gallons Allowed)

The maximum ETAF allowed in the MAWA equation must be equal to or below:

- ☒ 0.55 - for residential regular landscape areas (RLA)
- ☐ 0.45 - for non-residential regular landscape areas (RLA)
- ☐ 1.0 - for special landscape areas (SLA)

Estimated Total Water Use (ETWU) Table: (see instructions)

A	B	C	D	E	F
Hydrozone (Number, letter, or other designation)	Plant Factor ^b "PF"	Irrigation Efficiency ^c "IE"	Evapotranspiration Adjustment Factor ETAF = PF / IE	Hydrozone Area (sq.ft.)	Estimated Water Use "EWU" = D x E x ETo ^a x 0.62 (gallons/year)
HZ-1 (V1)	0.20	0.81	0.2469	1,000	8,450
HZ-2 (V2)	0.50	0.81	0.6173	400	8,450
HZ-3 (V3)	0.80	0.75	1.0667	300	10,952
SLA -	NA	NA	1.0		
SLA -	NA	NA	1.0		
SLA -	NA	NA	1.0		
ETWU Total	NA	NA	NA	NA	27,852
MAWA	NA	NA	NA	NA	31,999

^aAnnual ETo for the nearest City from Appendix C

^bPlant Factor (PF) from WUCOLS:
Very Low = less than 0.1
Low = 0.1 - 0.3
Moderate = 0.4 - 0.6
High = 0.7 - 1.0

^cAverage Irrigation System Efficiency (IE):
Overhead Irrigation = 0.75
Drip Irrigation = 0.81

ETWU 27,852 gallons per year, MAWA 31,999 gallons per year: ETWU is 4,147 gallons per year below MAWA.

Appendix C row: Sacramento County, Sacramento, 55.2 in.

Instructions printed with the worksheet in Appendix A

Verbatim from Appendix A of the adopted text, the page that follows the form.

WATER EFFICIENT LANDSCAPE WORKSHEET INSTRUCTIONS

1. Reference Evapotranspiration.

- a. Lookup the Annual ET_0 value for the nearest City using the Reference Evapotranspiration (ET_0) Table provided in Appendix C and use this value in the EWU and MAWA calculations.

2. Calculate the Maximum Applied Water Allowance (MAWA).

- a. RLA is the total regular landscape area in square feet.
- b. SLA is the total special landscape area in square feet.
- c. MAWA is calculated based on the maximum ETAF allowed for the type of landscape areas for the landscape project and is expressed as annual gallons allowed.
- d. Effective Precipitation. Per Section 493.3(b)(5), a local agency may consider Effective Precipitation (Eppt), (25% of annual precipitation) in tracking water use and may use the following equation to calculate MAWA:

1. Residential landscapes:

$$MAWA = (ET_0 - Eppt) \times (0.62) \times [0.55 \times RLA + 1.0 \times SLA]$$

2. Non-residential landscapes:

$$MAWA = (ET_0 - Eppt) \times (0.62) \times [0.45 \times RLA + 1.0 \times SLA]$$

3. Calculate the Estimated Total Water Use (ETWU).

- a. Column A - List each hydrozone using the label corresponding to the Landscape Design Plan.
- b. Columns B and C - Complete the ETWU table for each hydrozone based on the plant factor (PF) and the average irrigation system efficiency (IE). The plant factor is found in Water Use Classification of Landscape Species (WUCOLS).
- c. Column D - calculate the ETAF for each hydrozone by dividing the PF (Column B) by the IE (column C); write the result in column D.
- d. Column E - for each hydrozone measure and report:
 - i. Regular landscape area (RLA) as defined in Section 490.2(a)(72).
 - ii. Special landscape areas (SLA), as defined in Section 490.2(a)(79), are not included in RLA measurements.
- e. Column F - calculate the Estimated Water Use (EWU) for each hydrozone by multiplying columns D, E, ET_0 and 0.62 (conversion factor) and write the result in column F.
- f. ETWU - is the sum of EWU for each hydrozone and is expressed as gallons per year.

4. Compare ETWU with MAWA.

The ETWU (gallons per year) must be equal to or less than the MAWA (annual gallons allowed) to comply with MWEL0.

How each number was computed

Every figure on the form follows from the entries below and the constants of the ordinance.

PROJECT

Project applicant: Sample Applicant

Landscape type: Residential, single-family (one or two-family dwelling or townhouse). Maximum ETAF for regular landscape areas 0.55 · §493.3(a)(1)(A); special landscape areas 1.0 · §493.3(a)(1)(C).

Project kind: New construction. Building or landscape permit, plan check or design review: needs a building or landscape permit, plan check or design review, as entered by the applicant.

Landscape area: 1,700 sq ft, regular 1,700 and special 0 · LA = RLA + SLA, §490.2(a)(41).

CLIMATE FIGURE · APPENDIX C

Appendix C row: Sacramento County, Sacramento, 55.2 in.

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1.3	2.1	3.5	4.9	6.7	8.0	8.6	7.7	5.8	3.8	1.8	1.1	55.2

Appendix C footnote 2: "The ETo values are monthly averages of Spatial California Irrigation Management Information System (CIMIS) for the 2004 to 2021 period. The Annual ETo is the sum of the monthly averages. ETo is expressed in inches." The twelve printed monthly values add up to 55.3; the form uses the printed annual, 55.2, as its footnote a directs ("Annual ETo for the nearest City from Appendix C").

ETo x 0.62 = 55.2 x 0.62 = 34.224 · conversion factor 0.62, §490.2(a)(11)

EACH ROW OF THE TABLE

- HZ-1 (V1) · drip, 0.81 (§490.2(a)(38)(B)) · ETAF 0.20 / 0.81 = 0.246914 (column D 0.2469) · EWU 0.20 x 1,000 x 34.224 / 0.81 = 684,480 / 81 = 8,450.37 gallons per year (column F 8,450)
- HZ-2 (V2) · drip, 0.81 (§490.2(a)(38)(B)) · ETAF 0.50 / 0.81 = 0.617284 (column D 0.6173) · EWU 0.50 x 400 x 34.224 / 0.81 = 684,480 / 81 = 8,450.37 gallons per year (column F 8,450)
- HZ-3 (V3) · overhead, 0.75 (§490.2(a)(38)(A)) · ETAF 0.80 / 0.75 = 1.066667 (column D 1.0667) · EWU 0.80 x 300 x 34.224 / 0.75 = 821,376 / 75 = 10,951.68 gallons per year (column F 10,952)

TOTALS

- ETWU, the sum of column F before rounding = 27,852.42 gallons per year (printed 27,852)
- MAWA = 34.224 x (0.55 x 1,700 + 1.0 x 0) = 34.224 x 935 = 31,999.44 gallons per year (printed 31,999)

ETWU 27,852 gallons per year, MAWA 31,999 gallons per year: ETWU is 4,147 gallons per year below MAWA.

ROUNDING

Every figure is computed exactly from the entries and the constants of the ordinance; nothing is rounded along the way. Column D prints four decimals, column F and the two totals print whole gallons, and this page prints two decimals, each rounded half up from the exact value. The comparison of ETWU with MAWA is decided on the exact values, never on rounded ones.

Thresholds and notes

Quoted from the adopted text next to the figures entered. The agency that reviews the project decides what applies to it.

Landscape area entered: 1,700 sq ft (regular 1,700, special 0). Project kind: new construction.

§491.2(b) "(b) An applicant may comply with either the prescriptive or performance compliance option for any new construction project with a landscape area between 500 and 2,500 square feet."

§492(a) "(a) This section contains prescriptive requirements, which may be used as a compliance option for new construction projects with a landscape area between 500 and 2,500 square feet."

WHAT THE TWO TOTALS ARE COMPARED AGAINST

§493.3(a) "ETWU must be equal to or below the MAWA."

ETWU 27,852 gallons per year, MAWA 31,999 gallons per year: ETWU is 4,147 gallons per year below MAWA.

REMINDERS FROM THE ADOPTED TEXT

§493.3(b)(4) "(4) All Special Landscape Areas (SLA) shall be identified in the Landscape Design Plan (Section 493.2) and the Irrigation Design Plan (Section 493.2.2) and their water use calculated as shown in Appendix A."

§493.2.2(c)(7) "(7) Identification of hydrozone areas shall be designated by number, letter, or other designation as identified on the landscape design plan. Designate the areas irrigated by each valve and assign a number to each valve using the Water Efficient Landscape Worksheet (see Appendix A)."

§491.3(c)(2)(C) "(2) Upon approval of the Landscape Documentation Package by the local agency, the project applicant shall: ... (C) for the performance-compliance option only, submit a copy of the Water Efficient Landscape Worksheet (Appendix A) to the local water purveyor."

LOCAL RULES

A city or county can adopt its own landscape ordinance and its own worksheet. Ask the agency reviewing the project which form it accepts.

SOURCES

- Model Water Efficient Landscape Ordinance, California Code of Regulations, Title 23, Division 2, Chapter 2.7, §490 to §495 and Appendices A and C; sections and appendices filed 1-2-2025, operative 1/2/2025 (Register 2025, No. 1). Read in the Department of Water Resources final text and appendices ([water.ca.gov, Final-MWELO-Text-and-Appendices_20250103.pdf](https://water.ca.gov/Final-MWELO-Text-and-Appendices_20250103.pdf)) and in the CCR text republished by the Legal Information Institute ([law.cornell.edu](https://www.law.cornell.edu)). Checked October 3, 2026.
- Appendix C row used: Sacramento County, Sacramento, annual 55.2 in, monthly 1.3, 2.1, 3.5, 4.9, 6.7, 8.0, 8.6, 7.7, 5.8, 3.8, 1.8, 1.1. Footnote 2: "The ETo values are monthly averages of Spatial California Irrigation Management Information System (CIMIS) for the 2004 to 2021 period. The Annual ETo is the sum of the monthly averages. ETo is expressed in inches."

ABOUT THIS WORKSHEET

WateringTimes generated this worksheet from the entries of the project applicant named on it. WateringTimes is an informational reference. It is not a government agency, a licensed landscape architect or contractor, or a plan reviewer. The figures apply the formulas and constants of the Model Water Efficient Landscape Ordinance (California Code of Regulations, Title 23, Division 2, Chapter 2.7, operative January 2, 2025) to those entries. The plant factors, areas, irrigation types and special landscape areas are the applicant's and were not checked on site. A city, county or water supplier can adopt its own ordinance, worksheet or numbers, and the agency that reviews the project decides what applies to it. Nothing in this document is regulatory or professional advice of any kind.

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