

How Your Maximum Applied Water Allowance is Calculated

The water allowance for a landscape area is based on a percentage of “reference evapotranspiration” or “ET_o,” which is the annual water use of lawn grass or “cool season turf” in your climate zone. Since lawns need more water than most other plants, the overall water allowance for your total landscape is set at fifty percent (50%) of reference evapotranspiration, to allow a moderate level of water application overall. If you plant turf that uses a lot of water, you will need to balance this with other watering areas (“or hydrozones”) that use less water, so that the average annual water use for the whole landscape is moderate.

To express your maximum applied water allowance in gallons per year rather than inches, the following equation is used:

$$\text{MAWA, in gallons per year} = \text{ET}_o \times 0.5 \times 0.62 \times \text{landscape area}$$

Where:

MAWA is the Maximum Applied Water Allowance for your entire landscape, (not including exempt areas) in gallons per year,

“ET_o” is the Reference Evapotranspiration, in inches per year,

“0.5” is the adjustment factor to insure that total water use is moderate,

“0.62” converts inches to gallons per square foot, and

“Landscape Area” is your landscape area in square feet, not including any landscape areas that are exempt (see below) from water limits.

The following areas are exempt from landscape watering limits, so should not be included in your landscape area:

- Agricultural crops or feedlots.
- Areas solely dedicated to edible plants within family or community gardens.
- Ecological restoration projects.
- Registered historical sites with a period landscape style.
- Plants cultivated for scientific research or public exhibit in botanical institutions.
- Landscape areas installed solely for stormwater treatment.
- Landscape areas irrigated by hand or low-volume irrigation for one establishment period not to exceed 2-5 years following final inspection (per SCCC 13.13.070), after which time the irrigation system is removed.
- Paddocks or pastures.
- Artificial turf areas and landscapes of less than 500 sq.ft. in area
- Landscapes for a second unit or residential remodel

Most water bills measure water in units of a hundred cubic feet (CCF), so the online calculator converts gallons to CCF for convenience. One hundred cubic feet equals 748 gallons.

Since certain types of landscapes, such as golf courses, soccer fields, baseball diamonds and other turf-dependent facilities require extra water, these “Special Landscape Areas” are allowed 100% of reference evapotranspiration. The water surface area of a swimming pool is

a Special Landscape Area, as is any landscape area receiving 60% of its water from recycled, harvested or gray water is considered an SLA, too. The equation that adds Special Landscape Areas to the water allowance for regular landscape areas is:

$$\text{MAWA (in gal. per year)} = \text{ET}_o \times 0.62 \times [(\text{Landscape area} \times 0.5) + (\text{SLA} \times 0.5)]$$

Where:

“ET_o” is the reference evapotranspiration, in inches per year,

“0.5” is the adjustment to allow moderate water for regular landscape areas,

“0.62” converts inches per year into gallons per square foot,

“Landscape Area” is your landscape area in square feet, including any Special Landscape Areas but excluding exempt areas,

“Special Landscape Area” is your total SLA area in square feet, and

“0.5” is the adjustment factor for SLAs

When using the online calculator to calculate the water allowance for a regular landscape area combined with a Special Landscape Area, use the second sheet of the calculator, titled *MAWA with SLA Calculator*. Be sure to enter the two area figures separately. The “Special Landscape Area” is entered in one box, and the total “Landscape Area,” which includes the “Special Landscape Area,” is entered in the other. Use the pull-down menu to select the correct reference evapotranspiration (ET_o). The calculator will provide your “**Maximum Applied Water Allowance (MAWA)**,” in inches, gallons and ccfs.

For 1-2 unit residential development, a [Water Efficient Landscape Checklist](#) may be submitted in lieu of a full landscape plan. For these landscapes, the MAWA does not need to be calculated, but 75 percent of the landscape must be comprised of low or very low water use species (plant factor 0.3 or lower). The remaining 25 percent area cannot exceed an average plant factor of 0.6.