



WATER USE CALCULATIONS

(in plain english please)

Maximum Applied Water Allowance (MAWA)

$$\text{MAWA} = (\text{ETo})(0.62)[(0.7 \times \text{LA}) + (0.3 \times \text{SLA})]$$

ETo	= Reference Evapotranspiration (inches per year)
0.62	= Conversion Factor (to gallons)
0.7	= ET Adjustment Factor (ETAF)
LA	= Landscape Area including SLA (square feet)
0.3	= Additional Water Allowance for SLA
SLA	= Special Landscape Areas (square feet)

What is the maximum water use that DWR allows*?

Estimated Total Water Use (ETWU)

$$\text{ETWU} = (\text{ETo})(0.62)[((\text{PF} \times \text{HA})/\text{IE}) + \text{SLA}]$$

ETo	= Reference Evapotranspiration (inches per year)
0.62	= Conversion Factor (to gallons)
PF	= Plant Factor from WUCOLS
HA	= Hydrozone Area (square feet)
IE	= Irrigation Efficiency (minimum 0.71)
SLA	= Special Landscape Areas (square feet)

How much water is your current design estimated to use?

*Authority Cited: Section 65595, Government Code. Reference: Section 65596, Government Code.

Evapotranspiration, Maximum Applied Water Allowance, and Estimated Applied Water Use formulas per the California Department of Water Resources (DWR); <http://www.water.ca.gov/wateruseefficiency/landscape/>

WATER USE CALCULATIONS (estimated)

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MAWA = 5.55 acre feet/year

$$= (39.01)(0.62)[(0.7 \times 106821) + (0.3 \times 0)]$$

= 1,808,516 gallons/year

= 2,418 hundred cubic feet/year

Fill this building with

6.5 feet of water

-or-

2.7 Olympic Pools

ETWU = 8.91 acre feet/year

Shrubs = $(39.01)(0.62)[((0.5 \times 57774.6)/0.9) + 0]$

= 776,304 gallons/year

= 1,038 hundred cubic feet/year

= 2.38 acre feet/year

Fill this building with

10 feet of water

-or-

2.7 Olympic Pools

Turf = $(39.01)(0.62)[((0.8 \times 82507)/0.75) + 0]$

= 2,128,566 gallons/year

= 2,845 hundred cubic feet/year

= 6.53 acre feet/year



**Estimated 60% Overage
ETWU does not comply
with MAWA**

1 gallon = 0.001336806 CCF (hundred cubic feet); 1 gallon = .00000306888 AF (acre feet)

CSU CO Building = 0.8562 acres; Olympic Swimming Pool = 660,000 gallons

WATER USE CALCULATIONS (actual)

(in plain english please)

2014 = 23 acre feet

2013 = 26 acre feet

2012 = 21 acre feet

2011 = 20 acre feet

2010 = 22 acre feet

Fill this building with
27 feet of water

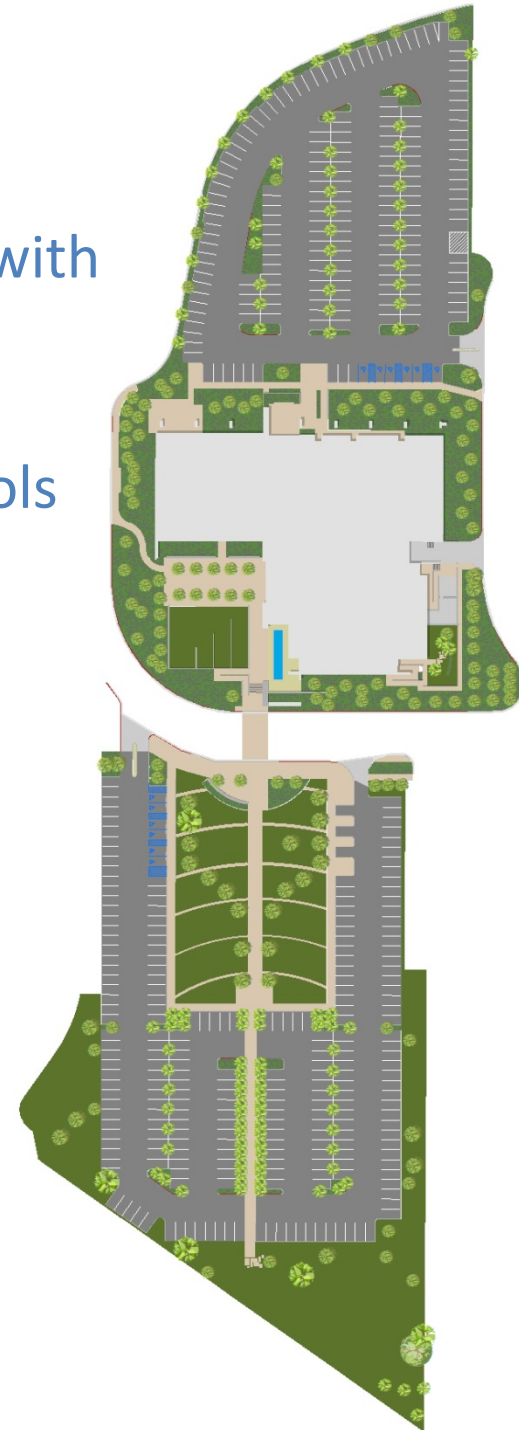
-or-

11.3 Olympic Pools

Why is the actual water used so high?

Metering

- This number presumably includes the building water
- Building vs landscape metering
- Landscape area vs property area vs actual landscape being watered



WATER USE CALCULATIONS (actual)

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What to do?

