

Domestic Water

See below calculations for proposed common meter sizes **OR** see below list for individual meter sizes:

1 Bedroom = **5/8" meter** (10.0gpm)

2 Bedroom = **5/8" meter** (14.0gpm)

3 Bedroom = **3/4" meter** (19.0gpm)

Pad A Meter Size – 2" (Badger "Recordall Turbo")

Peak Hour Demand = 165 gallons per minute

719 Total Fixture Units = 165gpm

1 Bathroom Dwelling Qty: 18 X 12.5wsfu = 225wsfu

2 Bathroom Dwelling Qty: 26 X 19.0wsfu = 494wsfu

Maximum Day Demand = 5,894 gallons per day

0.15AFY X 44 = 6.6AFY X 893gpd = 5,894gpd

1AFY = 893gallons per day

Total Annual Water Use = 6.6 acre foot year

0.15AFY X 44 = 6.6afy

Pad B + C Meter Size – 3" (Badger "Recordall Turbo")

Peak Hour Demand = 230 gallons per minute

1,116 Total Fixture Units = 230gpm

1 Bathroom Dwelling Qty: 2 X 12.5wsfu = 25wsfu

2 Bathroom Dwelling Qty: 44 X 19.0wsfu = 836wsfu

3 Bathroom Dwelling Qty: 10 X 25.5wsfu = 255wsfu

Maximum Day Demand = 7,501 gallons per day

0.15AFY X 56 = 8.4AFY X 893gpd = 7,501gpd

1AFY = 893gallons per day

Total Annual Water Use = 8.4 acre foot year

0.15AFY X 44 = 8.4afy

Pad B Figures

Peak Hour Demand = 142 gallons per minute

595 Total Fixture Units = 142gpm

1 Bathroom Dwelling Qty: 2 X 12.5wsfu = 25wsfu

2 Bathroom Dwelling Qty: 30 X 19.0wsfu = 570wsfu

Maximum Day Demand = 4,287 gallons per day

0.15AFY X 32 = 4.8AFY X 893gpd = 4,287gpd

1AFY = 893gallons per day

Total Annual Water Use = 4.8 acre foot year

0.15AFY X 32 = 4.8afy

Pad C Figures

Peak Hour Demand = 128 gallons per minute

521 Total Fixture Units = 128gpm

2 Bathroom Dwelling Qty: 14 X 19.0wsfu = 266wsfu

3 Bathroom Dwelling Qty: 10 X 25.5wsfu = 255wsfu

Maximum Day Demand = 3,215 gallons per day

0.15AFY X 24 = 3.6AFY X 893gpd = 3,215gpd

1AFY = 893gallons per day

Total Annual Water Use = 3.6 acre foot year

0.15AFY X 24 = 3.6afy

Irrigation Water

Pad A Meter Size - 1" (Badger "Recordall Disc")

Peak Hour Demand = 29 gallons per minute

Maximum Day Demand = 880 gallons per day

Total Annual Water Use = 0.98 acre foot year

Pad B+C Meter Size – 1.5"

(Badger "Recordall Disc")

Peak Hour Demand = 64 gallons per minute

Maximum Day Demand = 1,921 gallons per day

Total Annual Water Use = 2.15 acre foot year

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Table 1. Historic and 2018-19 Average Demand Factors

Land Use Category (2009 Study)	Monthly Factors				Annual Factors					
	1989 Study Values	2009 Study Values	2018-19 Avg Values	Units	1989 Study Values ⁴	2009 Study Values ⁴	2018-19 Demand (AFY)	2018-19 Total Units Analyzed (Total Units) ⁵	2018-19 Unit Demand ⁵	Units
Single Family Residential (Aggregate) ⁽¹⁾	18.00	14.40	9.66	HCF/month/dwelling unit	0.50	0.40	3,911.94	14,277	0.27	AFY/dwelling unit
Single Family - Small Lot size < 7000 SF	11.43	9.49	6.66	HCF/month/dwelling unit	0.32	0.26	962.49	5,084	0.19	AFY/dwelling unit
Single Family - Medium Lot size 7000 SF to 1 acre	18.24 – 30.42	15.09	10.05	HCF/month/dwelling unit	0.51 – 0.85	0.42	2,395.87	8,415	0.28	AFY/dwelling unit
Single Family - Large Lot size >1 acre	51.57	34.45	25.01	HCF/month/dwelling unit	1.44	0.95	553.58	778	0.71	AFY/dwelling unit
Multi-Family Residential (Aggregate) ⁽¹⁾	7.33	5.72	5.60	HCF/month/dwelling unit	0.20	0.16	2,880.67	19,007	0.15	AFY/dwelling unit
Service Commercial	N/A	6.18	11.28	HCF/month/1000 SF	N/A	0.17	760.01	1,969	0.39	AFY/1000 SF
Retail Large: >20,000 SF	2.43	(Retain 1989 values)	2.04	HCF/month/1000 SF	0.068	(Retain 1989 values)	77.98	1,064	0.07	AFY/1000 SF
Retail Small: <20,000 SF	3.93	(Retain 1989 values)	9.28	HCF/month/1000 SF	0.11	(Retain 1989 values)	152.54	1,017	0.15	AFY/1000 SF
Office	3.57	2.06	3.04	HCF/month/1000 SF	0.10	0.06	178.22	2,128	0.08	AFY/1000 SF
Industrial	2.49 – 5.37	2.84	4.03	HCF/month/1000 SF	0.07 – 0.15	0.08	84.32	712	0.12	AFY/1000 SF
Institutional	N/A	6.11	26.52	HCF/month/1000 SF	N/A	0.17	N/A ⁶	N/A ⁶	(Retain 2009 values) ⁶	AFY/1000 SF
Hotel/Motel	4.65	4.81	5.15	HCF/month/room	0.13	0.13	397.98	2,996	0.13	AFY/room
Hotel/Motel with Restaurant ⁽³⁾	5.37	7.17	--- ⁽³⁾	HCF/month/room	0.15	0.20	--- ⁽³⁾	--- ⁽³⁾	--- ⁽³⁾	AFY/room

Water Efficient Landscape Worksheet

Use drop down menus or type in values in white cells only. Results appear in Yellow or Red highlighted cells below.

Site Information

Site Name → Wildwood Solvang, CA

Site Type → Commercial Allowed ETAF: 0.45

Annual Eto (inches/yr) → 51.1

Hydrozone or Planting Description	Plant Factor (PF)	Irrigation Method	Irrigation Efficiency (IE)	ETAF (PF/IE)	Hydrozone Area (sqft.)	ETAF x Area	Estimated Total Water Use (gal./yr.)
Regular Landscape Areas							
Pad A	0.2	Low	Overhead Spray	0.75	0.3	38,000	321,044
Pad B & C	0.2	Low	Overhead Spray	0.75	0.3	83,000	701,228
SUBTOTAL →						121,000	701,228
Special Landscape Areas							
N/A				1.0		0	0
SUBTOTAL →						0	0
Estimated Total Water Use (ETWU) →						701,228	
Maximum Allowed Water Allowance (MAWA) →						1,725,085	

ETAF Calculations

Regular Landscape Areas		
Total ETAF x Area		22,133
Total Area		121,000
Average ETAF		0.18
All Landscape Areas		
Total ETAF x Area		22,133
Total Area		121,000
Sitewide ETAF		0.18

Notes:

Adapted from California Code of Regulations Title 23, Division 2, Chapter 2.7. Model Water Efficient Landscape Ordinance