

This presentation premiered at WaterSmart Innovations

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The Benefits of Water Budgeting Why It is an Efficient Method of Reducing Outdoor Water Use

~

By Peter Estournes CLP, CWM



Water Use Restrictions Facing Landscape Professionals

- **Municipal Drought Responses**
- **Green Building Codes**
- **LEED (Leadership in Energy and Environmental Design)**
- **EPA WaterSense**
- **Sustainable Sites Initiative**





This Affects Our Industry . . .

- **Water Conservation Here to Stay**
- **Urban Water Use is an Easy Political Target**
- **Using Water Budgets Will Make a Difference in the Market Place**
- **Certification = Validation**
- **If Not Us - Then Who?**



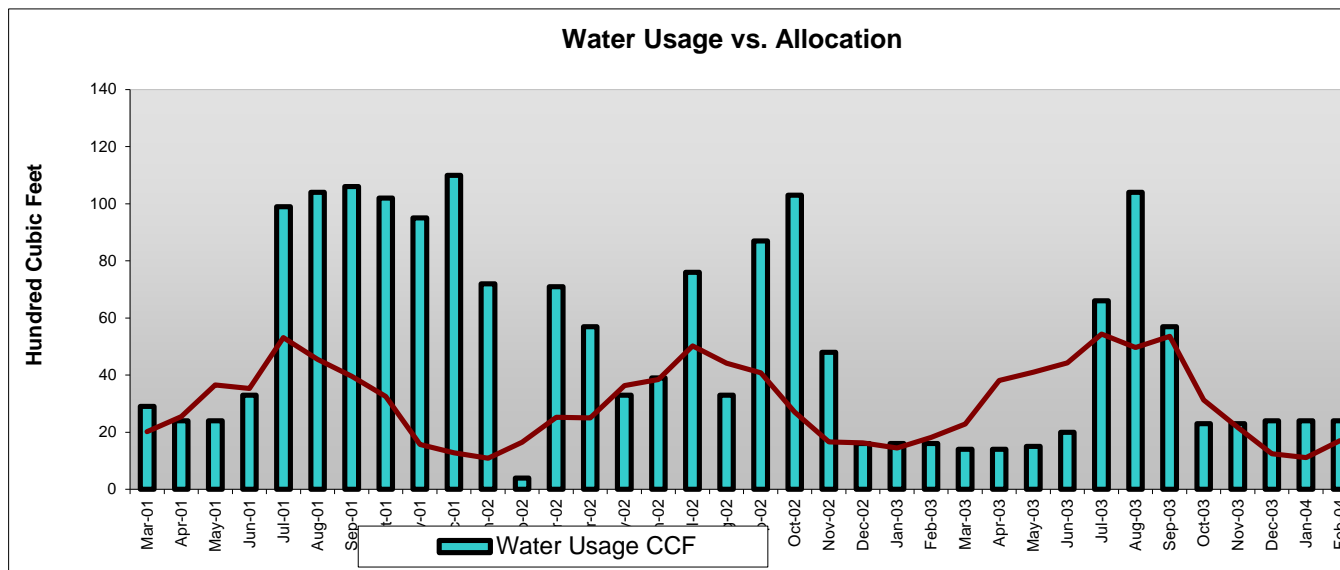


What is a Water Budget

- A budget is generally a list of all planned expenses and revenues. It is a plan for *saving* and spending.
- A water budget is a plan for managing water use and *saving*.
 - Tracks planned water use versus actual water use.
 - A water budget helps manage costs and improves site maintenance and efficiency.

Using A Water Budget

- Calculate Site's Water Needs
 - Need site acreage
 - Use formula to estimate water requirement
- Compare Water Usage to Budget – Water Meter Readings





Maximum Applied Water Amount

- **Means - Upper Limit of Annual Water Use Allowed**
- **Sets – A Not to exceed Goal**
- **Creates - Process to Quantify and Adjust**

Et x Et Adjustment Factor x Landscape Area x .62

Where:

- **Et = Evapotranspiration (transpiration + evaporation)**
- **Et Adjustment Factor set @ 70% of Et**
- **Landscaped Area in Square Feet**
- **.62 = Conversion to Gallons**



Water Budget Calculation

Et x Plant Type x Landscape Area x .62

Where:

- **Et = Evapotranspiration (transpiration + evaporation)**
- **Plant Type = High (1-.8), Moderate (.8-.6), Low (.5-.4), Very Low (.4 and less) Water Needs**
- **Landscaped Area = Square Footage size**
- **.62 = Conversion to Gallons**



CLCA's Water Management Certification Program helps meet WELO, CGBC, LEED, WaterSense and other Sustainability requirements using advanced irrigation techniques, technology and a water budget.

It is the only **PERFORMANCE** known based program.

The screenshot shows the website for the CLCA Water Management Certification Program. At the top, there are logos for the program and WaterSense. Below the logos, there are sections for 'Founding Partners' (Ewing, Hunter, IORR) and 'Charter Partners' (Horizon, John Deere Landscapes). A 'Need Help?' link is also present.

The CLCA Water Management Certification Program

Certified professionals help cut water costs with high-efficiency techniques

CLCA's Water Management Certification Program was started in 2007 and helps reduce landscape water usage by using a water audit, budget and advanced irrigation technology. The program is designed for green industry professionals like landscape contractors, landscape designers, landscape architects, HOA property managers, water agency personnel, city water conservation personnel, students in the landscape industry and anyone from the public concerned about saving landscape water. CLCA's Water Management Certification program carries the [WaterSense Label](#) from the U.S. Environmental Protection Agency and is also approved for continuing education units by [CLCA's](#) [International Association of Arboriculture](#).

Important Updates For Program Participants

Check here for periodic WMCP updates and program requirements!

Want More Marketing Exposure For Your Company?

Let Us Market Your Success

The program is currently seeking program success stories to market the consumer public that highlight water savings, dollar savings and sustainability on a particular project. We will feature your story and photos on [www.clca.org](#), [weekly](#) in the California Landscaping Magazine and on [youtube.com](#).

If you are interested, please submit your contact information and story to marketing@clca.org. Once selected, you will be contacted by a staff writer and we will feature your story.

Next Workshop, Audit & Test Sessions:
[Click Here to Register](#)

*Presented by Marin Municipal Water District
College of Marin, Indian Valley Campus MW 214
Ignacio, CA
November 1, 2011

*2011 IA Irrigation Show
San Diego Convention Center
San Diego, CA

Registered Users: Enter your username and password below, then click "Login"

Username: Password:

[Register Here](#) [Request a password reset](#)
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Mission Statement: The CLCA Landscape Water Management Performance Certification program is dedicated to the task of managing water continuously to a water budget and to promoting those professionals who can do so.

More information about CLCA's Water Management Program can be found [here](#). Fees apply to participate in the program [Click here](#) for fee information.

Hunter THE IRRIGATION INNOVATORS **FX** IRRIGATION



CLCA's Water Management Certification Workshop was Made Possible by the Strong Support of our Partners:

**Certified Water Management Program
Founding Partners**

EWING Hunter[®] TORO

Charter Partners

Horizon



**JOHN DEERE
LANDSCAPES**



Water Budgeting Examples

A water saving tool

The California Landscape Contractors Association



Founding Partners

Charter Partners



Need Help?
Click Here To Access Website Help Center

New Site New Company View Home Page in: ▾ Help Change Password Contact the Program Manager Logout

Sites you manage:

Site (click Site Name for meter readings)	- 2011 Year-To-Date Performance			
	Usage	ETo	Budget	Last Month
0009 - Janvrin Residence	128.32 HCF	123% of 104.74 HCF	187% of 68.78 HCF	322.08%
0094 - North Coast Bank	5.50 HCF	21% of 26.09 HCF	25% of 21.75 HCF	31.26%
0320 - Tristar Automotive	145.27 HCF	90% of 162.07 HCF	260% of 55.82 HCF	464.05%
0749 - Frazer Rental	112.20 HCF	142% of 78.91 HCF	123% of 91.24 HCF	205.78%
1170 - Applewood / Donohoe	698.46 HCF	40% of 1,765.63 HCF	45% of 1,568.54 HCF	105.28%
1348 - Naber Residence	148.52 HCF	151% of 98.47 HCF	157% of 94.75 HCF	425.56%
1478 - Murphy Residence	14.17 HCF	10% of 141.11 HCF	7% of 207.84 HCF	22.35%
1480 - Perry Residence	284.43 HCF	25% of 1,117.30 HCF	57% of 497.20 HCF	61.00%
1700 - Zaney Residence	133.17 HCF	39% of 340.12 HCF	44% of 303.91 HCF	57.00%
2021 - Metzger Residence	65.25 HCF	75% of 86.86 HCF	62% of 105.44 HCF	99.33%
2056 - Muck Residence	439.37 HCF	126% of 349.98 HCF	121% of 362.71 HCF	129.04%
2057 - Lannin, B. Residence	82.67 HCF	33% of 247.72 HCF	72% of 114.99 HCF	102.19%
2058 - Lavin Residence	94.76 HCF	59% of 160.36 HCF	88% of 107.33 HCF	110.78%

[Export Year-to-Date Performance Data](#)

You are a Water Manager for:

Gardenworks Inc.

You are a Water Management Supervisor for:

[Gardenworks Inc.](#) [Sal Ledezma Expert](#)
[Jeff Hausman Expert](#)

Your Information

First Name Peter
Last Name Estournes
Username PETER.ESTOURNES
Email pje@gardenworks-inc.com
Phone 707-857-2050

[Update Your Info](#)



Founding Partners

Charter Partners



Need Help?
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Home Print This Report Usage Report Water Budget Mid-month Projection Edit Site Add Meter View Usage in: ▾ Logout

Meters at: 1170 - Applewood / Donohoe

[Need to know how to read a water meter?](#)

Serial	Description	- Year +	Start	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1111	meter1 Gallons	2011	1,845,600	1,846,490	1,847,245	1,848,500	1,885,600	1,945,800	2,071,700	2,152,000	2,368,400		----	----	----

[Enter Meter Readings and Click Here to Update Usage](#)

Estimated/Actual Water Usage

[Use WMCP Irrigation Scheduler to help you schedule to your budget](#)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
Evapotranspiration (inches)	0.82	1.44	2.87	4.31	5.26	6.14	6.30	5.76	4.25	3.10	1.38	0.86	
100% ETo (HCF)	44.01	77.28	154.02	231.30	282.29	329.51	338.10	309.12	228.08	166.37	74.06	46.15	1,765.63
Budget (HCF)	39.09	68.65	136.83	205.48	250.78	292.73	300.36	274.62	202.62	147.80	65.79	41.00	1,568.54
Site Usage (HCF):	1.19	1.01	1.68	49.57	80.43	168.20	107.28	289.11	-	-	-	-	698.46
Domestic Usage (HCF)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	-	-	-	0.00
Irrigation Usage (HCF):	1.19	1.01	1.68	49.57	80.43	168.20	107.28	289.11	-	-	-	-	698.46
Amount Over/Under Budget (HCF):	-37.90	-67.64	-135.15	-155.91	-170.35	-124.53	-193.08	+14.49	-	-	-	-	-870.08
% of Budget	3.04%	1.47%	1.23%	24.12%	32.07%	57.46%	35.72%	105.28%	-	-	-	-	44.53%
% ETo	2.70%	1.31%	1.09%	21.43%	28.49%	51.05%	31.73%	93.53%	-	-	-	-	39.56%

Notes:

ETo used is Applewood / Donohoe=42.49"
100% ETo: 2,280.30 HCF

[Add a Custom Budget](#)

Site has inactive meters:
[View Inactive Meter](#)

Crop	Square Footage	Crop k	Average DU	Annual Water Budget
Cool Season Turf	28000	0.80	0.000	0.00
Shrubs and Trees	36400	0.50	0.000	0.00

Site Information

95472
Total Area: 64400 square feet
People: 0.00

Managing Company: [Gardenworks Inc.](#)
Site Type: Single-family Residential Site
Water District: Sonoma County Water Agency

Site Managers		Add
Peter Estournes	PETER.ESTOURNES	Delete



Founding Partners

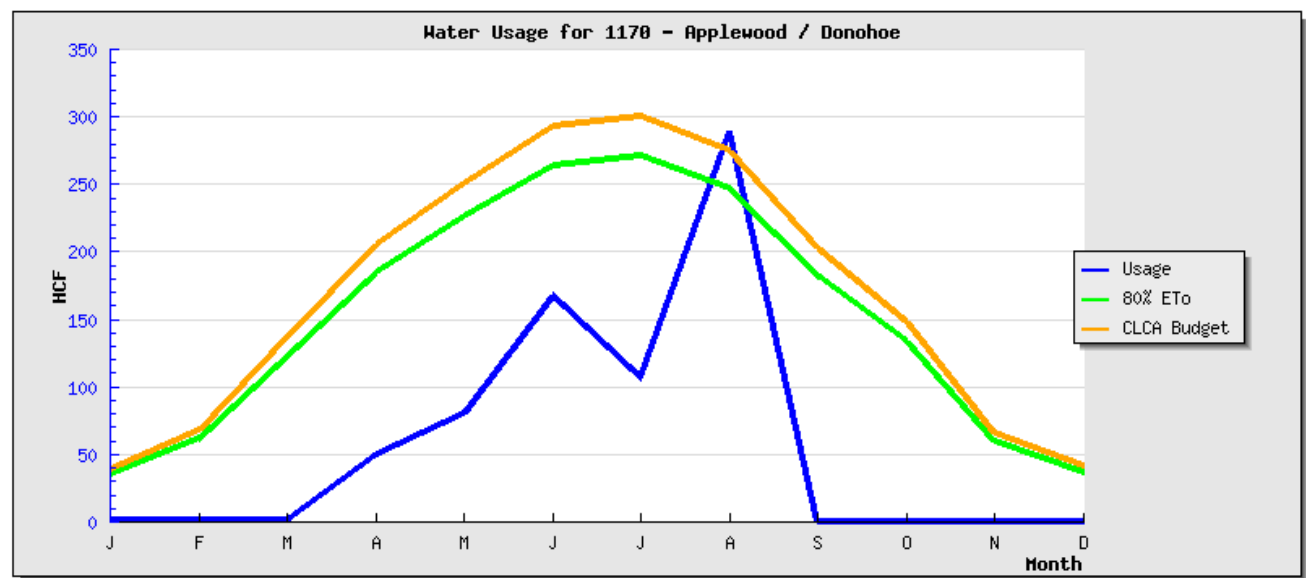
Charter Partners



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Home Print This Report Meter Readings Water Budget View Usage in: 2nd Year for Graph: Report Settings Logout

2011 Water Usage Report for: 1170 - Applewood / Donohoe



2011 Water Use History						
Month	ETo (inches)	Water Usage (HCF)	Water Budget (HCF)	Over/Under (HCF)	% Budget	% ETo
jan	0.82	1.19	39.09	-37.90	3.04%	2.70%
feb	1.44	1.01	68.65	-67.64	1.47%	1.31%
mar	2.87	1.68	136.83	-135.15	1.23%	1.09%
apr	4.31	49.57	205.48	-155.91	24.12%	21.43%
may	5.26	80.43	250.78	-170.35	32.07%	28.49%
jun	6.14	168.20	292.73	-124.53	57.46%	51.05%
jul	6.30	107.28	300.36	-193.08	35.72%	31.73%
aug	5.76	289.11	274.62	+14.49	105.28%	93.53%
sep	4.25	0	202.62	-	-	-
oct	3.10	0	147.00	-	-	-
nov	1.44	0	68.65	-	-	-
dec	0.82	0	39.09	-	-	-





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Meters at: 2057 - Lannin, B. Residence

[Need to know how to read a water meter?](#)

Serial	Description	- Year +	Start	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
0	Meter 1	Gallons	2011	318,120	318,540	318,540	318,540	331,840	339,210	354,930	373,970	391,140	<input type="text"/>	----	----	----

[Enter Meter Readings and Click Here to Update Usage](#)

Estimated/Actual Water Usage

[Use WMCP Irrigation Scheduler to help you schedule to your budget](#)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
Evapotranspiration (inches)	1.24	1.68	3.41	4.80	6.20	6.90	7.44	6.51	5.10	3.41	1.80	0.93	
100% ETo (HCF)	8.05	10.90	22.13	31.14	40.23	44.77	48.27	42.24	33.09	22.13	11.68	6.03	247.72
Budget (HCF)	3.73	5.06	10.27	14.46	18.67	20.78	22.41	19.61	15.36	10.27	5.42	2.80	114.99
Site Usage (HCF):	0.56	0	0	17.77	9.85	21.00	25.44	22.94	-	-	-	-	97.55
Domestic Usage (HCF)	2.90	2.62	2.90	2.81	2.90	2.81	2.90	2.90	-	-	-	-	22.74
Irrigation Usage (HCF):	0	0	0	14.96	6.95	18.19	22.54	20.04	-	-	-	-	82.67
Amount Over/Under Budget (HCF):	-3.73	-5.06	-10.27	+0.50	-11.72	-2.59	+0.13	+0.43	-	-	-	-	-16.99
% of Budget	0	0	0	103.45%	37.21%	87.55%	100.57%	102.19%	-	-	-	-	71.90%
% ETo	0	0	0	48.03%	17.27%	40.63%	46.69%	47.44%	-	-	-	-	33.37%

Notes:

ETo used is Copy of Sonoma Corridor=49.40"
100% ETo: 320.52 HCF

[Add a Custom Budget](#)

Crop	Square Footage	Crop k	Average DU	Annual Water Budget
Drought Resistant and Natives	6940	0.30	0.600	142.91
Pool, Pond, Water Feature	756	0.80	0.000	0.00
Cool Season Turf	90	0.80	0.500	5.93

Site Information

95448
Total Area: 7786 square feet
People: 1.00

Managing Company: [Gardenworks Inc.](#)
Site Type: Single-family Residential Site
Water District: Alameda County Flood Control and Water Conservation, Zone 7

Site Managers		Add
Peter Estournes	PETER.ESTOURNES	Delete

Certification History



Founding Partners

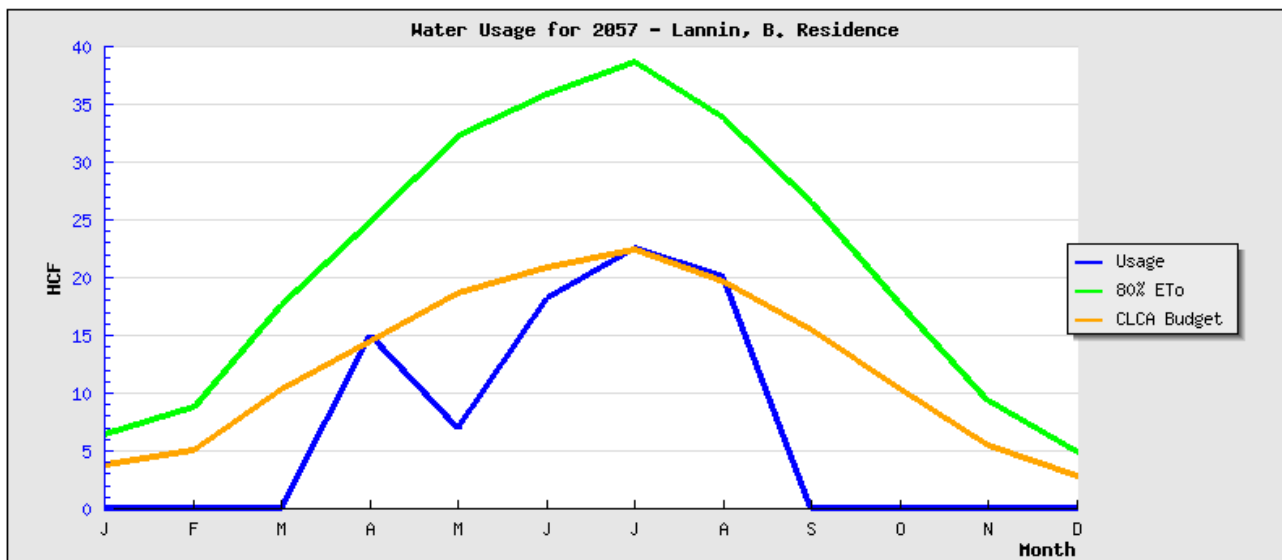
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2011 Water Usage Report for: 2057 - Lannin, B. Residence



2011 Water Use History

Month	ETo (inches)	Water Usage (HCF)	Water Budget (HCF)	Over/Under (HCF)	% Budget	% ETo
jan	1.24	0	3.73	-3.73	0	0
feb	1.68	0	5.06	-	-	-
mar	3.41	0	10.27	-	-	-
apr	4.80	14.96	14.46	+0.50	103.45%	48.03%
may	6.20	6.95	18.67	-11.72	37.21%	17.27%
jun	6.90	18.19	20.78	-2.59	87.55%	40.63%
jul	7.44	22.54	22.41	+0.13	100.57%	46.69%
aug	6.51	20.04	19.61	+0.43	102.19%	47.44%
sep	5.10	0	15.36	-	-	-
oct	3.41	0	10.27	-	-	-





Summary

- **Water costs are increasing**
- **Water restrictions are here to stay**
- **Water budgets, allocations and tiered rates are the future**
- **Check and track quantities of water and patterns of use**
- **Use the info to identify potential problems**
- **Staying within budget and controlling costs:**
 - **Sells site improvements/modifications to minimize hard to irrigate areas and improve efficiency**
 - **Leads to installing water efficient irrigation technologies**