

Resource Information

Get Ahead or Get Parched
Six Ways to Survive the Drought
June 25, 2014



Resources Information



- As our region experiences the second driest year on record. . .
- Done right, sustainable landscaping is an upgrade, not a compromise
- Help you design, install, maintain and manage your landscape more efficiently and sustainably

Lawn Conversion and Irrigation Upgrade Rebate Program



- Eligible upgrades:
 - Lawn Conversion
 - Drip Conversion
 - High-Efficiency Nozzles
 - Self-Adjusting Controllers
 - Pressure Regulators
 - Irrigation Submeters



Up to **\$2,500** Single - & Multi-Family (4 units or less) Residential

Up to **\$20,000** - Commercial & Multi-family (5 or more units)

CCWD Water Conservation Services



Key services:

- On-site water use evaluations
- Rebates & Incentives
- Education & Information



Available to CCWD customers living in:

Clayton, Concord, Martinez, Clyde, Port Costa, Bay Point, Pittsburg, Antioch, Oakley and parts of Pleasant Hill and Walnut Creek

Incentive Rebate Programs



EBMUD's Landscape Conversion and Irrigation Upgrades Program

<http://www.ebmud.com/water-and-wastewater/water-conservation/lawn-conversion-irrigation-upgrade-rebates>

Contra Costa Water District's Water-Efficient Landscape Rebate Program

<http://www.ccwater.com/conserve/Lawn.asp>

Contra Costa Water District's Commercial Irrigation Equipment Rebates

http://www.ccwater.com/conserve/rebates_lg_landscape.asp

Contra Costa Water District's Smart Sprinkler Timer Rebates

http://www.ccwater.com/smart_timer/

The Model Water Efficient Landscape Ordinance



www.water.ca.gov/wateruseefficiency/docs/MW_ELO09-10-09.pdf

Plant List Related Link



WUCOLS Landscape Water-Use Planning Tool

<http://www.waterwonk.us/>

Water Use Classification of Landscape Species (WUCOLS)

<http://ucanr.edu/sites/wucols/>

UC Davis Arboretum All Stars – 100 tough and reliable plants

http://arboretum.ucdavis.edu/arboretum_all_stars.aspx

EBMUD's award-winning plant book, *Plants and Landscapes for Summer-Dry Climates*

(\$10 discount for customers within EBMUD service area)

<http://www.ebmud.com/store/books/plants-and-landscapes>

Link to pdf of Karrie Reid's presentation on low water use plants

<http://ucanr.edu/filevault/fileview.cfm?filenum=41639&password=GLZDSF>

Resources on Water Supply and the Drought



<http://water.ca.gov/waterconditions/>

<http://www.saveourh2o.org/content/Drought2014WhatYouNeedtoKnow>

<http://saveourh2o.org/real-stories>

<http://www.cuwcc.org/Committees/Education/SaveOurWater.aspx?folderId=74&view=gridview&pageSize=10>

<http://www.cuwcc.org/>

Better Irrigation Through Landscape Water Budgeting

Get Ahead or Get Parched

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June 25, 2014



What is a Water Budget



Dose anybody know?

Estimate of how much water the landscape requires.

Upper limit.


Benchmark for adjusting the timer.

EBMUD Commercial Irrigation Water Budgets



- Over 10 years, water budgets printed on bill.
- NOW, a more detailed report is sent to customers when meter is read
- How to use this document.

EAST BAY MUNICIPAL UTILITY DISTRICT




Maximum Allowable Water Budget

Thank you for participating in our Landscape Irrigation Water Budget Program. The following is your customized water usage profile for the last two years. EBMUD reports indicate that this account primarily serves landscape irrigation. The graphical description compares your measured water usage versus your budgeted water usage for each billing period.

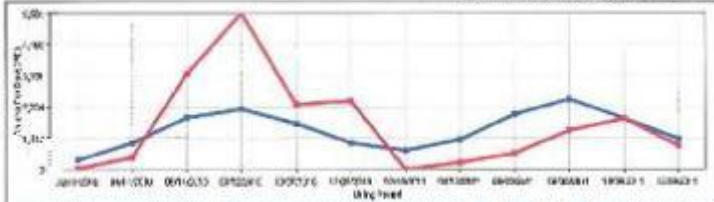
Customer Name: City of Alameda
 Service Address: 1497 Harbor Bay Pk
 City: Alameda
 Account #: 2664150001
 Meter #: 2910319
 Use Irrigated Area(s): 29790

Water Budget Summary	Used	Budgeted
Lettuce used for 12 months	295,900	376,839
Gallons used previous year	481,699	436,217

Used: 1,157,156 Budget: 1,004,592 Percent: 112%
 Noting over water budget and late fee of \$ 171



Irrigated Area at 1497 Harbor Bay Pk




Billing Period	2014-01-01	2014-02-01	2014-03-01	2014-04-01	2014-05-01	2014-06-01	2014-07-01	2014-08-01	2014-09-01	2014-10-01	2014-11-01	2014-12-01	2015-01-01
Budget (GPD)	242	258	309	218	164	166	167	167	198	252	188	188	188
Consumption (GPD)	145	132	348	355	233	235	0	250	590	129	188	188	188
Irrigation Efficiency (%)	1.7	6.62	8.43	16.44	7.15	3.28	2.46	4.48	7.61	10.2	3.18	3.18	3.18

*EPC represents the estimated water need of cool season grass (in inches) for each billing period. The Water Usage Calculation does not include typically irrigated systems on the account for the winter months of November, December, January, and February. The Maximum Allowable Water Budget, effective January 2015, is calculated using 80% of the average irrigation (EPC) for the irrigation area of established landscapes, using the new Model Efficient Landscape Guidelines from the State of California Department of Water Resources (DWR). If you feel the irrigated area is not accurate or would like more information on this program, contact EBMUD at (916) 486-7615

www.ebmud.com/watersmart

We make it easy to conserve.




Soon single-family residential will also be receiving budgets



- Next: Single Family Homes
 - satellite parcel image
 - target outdoor budget
 - customized for people in home & and landscape area
 - water and money savings projections

EAST BAY MUNICIPAL UTILITY DISTRICT




Maximum Allowable Water Budget

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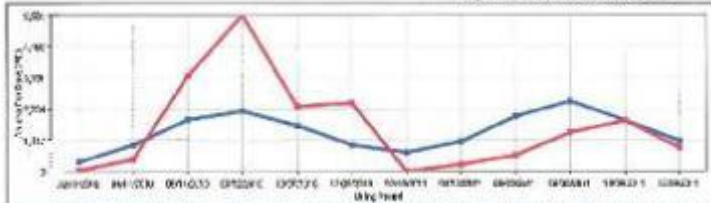
Customer Name: City of Alameda
Service Address: 1497 Harbor Way Pkwy
City: Alameda
Account #: 2664150001
Meter #: 29163149
Est. Irrigated Area: 11,297sq ft

Water Budget Summary	Actual	Budgeted
Gallons used over 12 months	295,800	371,374
Gallons used previous year	451,899	436,219

Used: 1,157.156 Budget: 1,004,592 Percent: 112.29
 Meeting our water budget could save \$ 171




Irrigated Area at 1497 Harbor Way Pkwy



Schedule	09/11/10	10/11/10	11/11/10	12/11/10	01/11/11	02/11/11	03/11/11	04/11/11	05/11/11	06/11/11	07/11/11	08/11/11	09/11/11	10/11/11	11/11/11	12/11/11	01/12/12
Budget (GPD)	142	358	1009	2185	1842	966	672	1071	1061	2512	1838	1094					
Consumption (GPD)	145	432	3648	5585	2333	2435	81	150	990	1395	1840	453					
Irrigation operation (inches)	1.7	4.62	8.43	10.44	7.15	3.28	2.44	4.48	7.61	10.2	7.18	1.44					

EPC Represents the estimated water need of cool season grass (in inches) for each billing period. The Water Budget Calculation does not include typically irrigation systems can be turned off for the winter months of November, December, January, and February. The Maximum Allowable Water Budget effective January 2010, is calculated using 90% of Reference Irrigation Requirements (EIR) for the irrigated area of established landscapes, using the new Model Efficiency 1 landscape Guidelines from the State of California Department of Water Resources (DWR). If you feel the irrigated area is not accurate or would like more information on this program, contact EBMUD at (910) 486-7615

www.ebmud.com/water-smart
We make it easy to conserve.


CCWD Commercial Irrigation Water Budgets



- Sent to customer with irrigation accounts.
- Will be adding web based budgets this fall.

Landscape Water Budget Site Report - 132



1331 Concord Avenue
PO Box H20
Concord, CA 94524
(925) 688-800 FAX (925) 688-8122

Customer Information

Billing Address
CONCORD NORTH PROPERTIES C/O 4075 NELSON AVE
4000 E 3RD AVE FL 6
FOSTER CITY, CA 94404-4805

Service Address
CONCORD

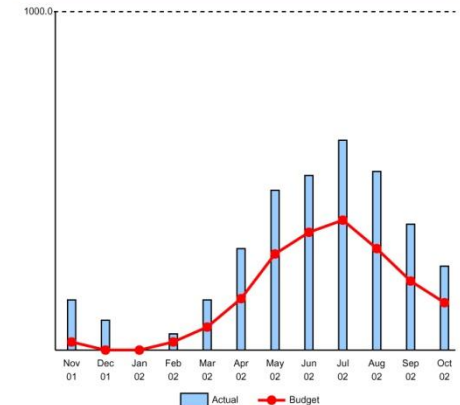
Parcel Area in Square Feet

Turf Area: 31,522
Landscape Area: 50,609
Water Features: 0
Hardscape: 122,744
Bare Ground: 5,318
Total Area: 210,193

Water Use History

Month	HCF Budget	HCF Actual	% Budget	\$ +/- Budget
Nov-01	25	149	600%	\$260
Dec-01	0	89		\$187
Jan-02	0	0		\$0
Feb-02	26	48	189%	\$47
Mar-02	68	149	219%	\$170
Apr-02	153	301	197%	\$310
May-02	282	472	167%	\$405
Jun-02	348	515	148%	\$356
Jul-02	385	622	162%	\$506
Aug-02	301	529	176%	\$487
Sep-02	206	370	180%	\$350
Oct-02	139	247	177%	\$229
Totals	1,933	3,492	181%	3,307

Budget vs. Actual



Accounts For This Site

Parcel	RouteSeq	Account	MeterNum	RevCode	Irrigation?	Billing Name
132	0210295	02102952	31551972	20	No	CONCORD NORTH PROPERTIES C/O
132	0210300	02103001	18756598	20	No	BLUE DEVILS PARENTS ASSN
132	0210310	02103102	39142133	20	No	CONCORD NORTH PROPERTIES,LLC
132	0210315	02103151	39142396	24	Yes	CONCORD NORTH PROPERTIES C/O
132	0210826	02108261	99676811	24	Yes	CONCORD NORTH PROPERTIES C/O
132	0210827	02108272	60124830	20	No	CONCORD NORTH PROPERTIES C/O

Water Budgets



- Adjusting your irrigation system to a *water budget* is the single most important change you can make in your business practice!

Water Budgets (Continued)



- Increase water use awareness
- You can't manage what you don't measure
- Most cost effective way to save water
- Key is getting water into the root zone
- Some systems may need upgrading to meet a water budget

How do you implement a Water Budget?



- Read your meter.
- Compare consumption to the water budget. (gpd)
- If over budget, adjust irrigation run-times
- If landscape shows stress, ask why?
- Check for Leaks.



Typical contractor budget tracker

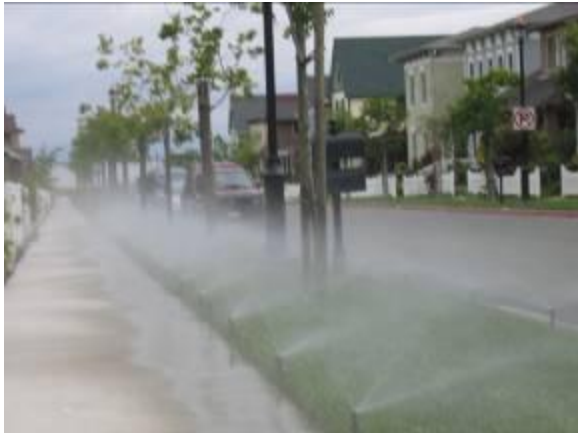


PROJECT:								
ADDRESS								
AREA (sq ft)	13,590							
BUDGET	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG
Inches Eto	1.00	1.50	3.00	4.00	5.00	6.00	7.00	5.00
Gallons per day	232	309	434	609	806	849	961	868
Date	Meter Read (CU FT)	Units since last read (CU FT)	Gallons since last read	Days since last read (CU FT)	Gallons per day	Budget by month	Over or under budget	
04/01/14	8198							
04/08/14	8205	7	5,236	7	748	609	139	
04/22/14	8217	12	8,976	14	641	609	33	
04/30/14	8223	6	4,488	8	561	609	-48	

To make a water budget work,
first prevent unnecessary waste



We can do better



Smart Irrigation Controller



Weather Based Irrigation Controllers

Great tool to help stay on budget

Drip conversion In-line drip grids



In-line drip rings

