State Water Resources Control Board
Order WR 2010-0018-DWR

Provision 13 - Actual Maximum Applied Water Allowance (MAWA) Achieved by Water Contractors

December 17, 2010

Prepared by

Sonoma County Water Agency
404 Aviation Blvd
Santa Rosa, CA 95403

1 Introduction 1
2 MAWA Achieved 1
3 Notifications 1
3.1 City of Cotati 1
3.2 North Marin Water District 2
3.3 City of Petaluma 2
3.4 City of Rohnert Park 2
3.5 City of Santa Rosa 2
3.6 City of Sonoma 2
3.7 Valley of the Moon Water District 2
3.8 Town of Windsor 2
Appendix A – MAWA Achieved by Water Contractor 3
Appendix B – Samples of Letters to Dedicated Irrigation Customers 4

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1 Introduction

This report has been prepared by the Sonoma County Water Agency (Water Agency) to fulfill the requirements of Provision 13 of the State Water Resources Control Board (State Board) Order WR 2010-0018 DWR (Order).

Provision 13 of Order WR 2010-0018 DWR directs the Water Agency to take the following actions:

> SCWA shall be responsible for ensuring all of its water contractors require their dedicated irrigation customers be assigned a water budget designed to achieve a Maximum Applied Water Allowance (MAWA) of 60 percent ETo, exceeding the State's requirements. SCWA shall report back to the Deputy Director by December 31, 2010 regarding the actual MAWA achieved by each of its contractors during May through November, 2010.

2 MAWA Achieved

Water contractors submitted information on water budgets and water use to the Water Agency. The water use reported was through October 2010, not November 2010 as stated in the Order. The reason for this is that the November water use will not be available until mid December for contractors that bill monthly or mid January for the contractors on bi-monthly billing.

The average MAWA achieved by the water contractors from May to October 2010 was 61% ETo. Although this figure falls short of the 60 percent goal stated in Provision 13, it is well below the requirements of the statewide Water Efficient Landscape Ordinance, which allows a MAWA of 80% for existing landscapes.

Individual statistics by water contractor are reported in Appendix A.

3 Notifications

Each of the water contractors below notified their dedicated irrigation meter customers of the 60 percent ETo water budget as stated in the Order. The notifications ranged from a letter specifying the water budget, to bill text indicating the 60 percent ETo goal. Sample letters are shown in Appendix B. The following is a summary of the type of notification completed by each water contractor.

3.1 City of Cotati

A letter was mailed to all dedicated irrigation meter customers. The letter provided resources for the customers to adjust their watering schedules to meet the reduced water use goal.

3.2 North Marin Water District

A site-specific letter was mailed to each dedicated irrigation meter customer. The letter provided the site square foot measurements on file, the bimonthly water use and the bimonthly water budget.

3.3 City of Petaluma

Each dedicated irrigation account received a water budget on its monthly bill. The bill shows the water budget as compared to the actual use for each billing period. There is also a message box that states that the budget is based on local weather conditions and is subject to change with the weather and with changes in City of Petaluma policy.

3.4 City of Rohnert Park

The dedicated irrigation meter customers with site measurements on file with the City received a site-specific letter notifying the customer of the water budget for the months of June to November. A separate letter was mailed to all other dedicated irrigation meter customers providing a resource for determining watering schedules.

3.5 City of Santa Rosa

Each dedicated irrigation account is billed based on a monthly site specific water budget. Each month a bill notice advises the customer of the 60% water budget goal.

3.6 City of Sonoma

Dedicated irrigation meter customers received a direct mailer in July 2010 detailing the Order. The mailer outlined the water budget methodology and notified customers of the maximum applied water allowance of 60% ETo.

3.7 Valley of the Moon Water District

Each dedicated irrigation meter customer received a site-specific letter notifying the customer of the water budget for the months of May to November. The water budget was based on historical ETo for the area. The letter also detailed the methodology for calculating the water budget.

3.8 Town of Windsor

Dedicated irrigation meter customers received a direct mailer on June 21, 2010 detailing the Order. The mailer outlined the water budget methodology and asked for confirmation of landscape measurements. A follow-up direct mailer was sent to dedicated irrigation customers with water budgets on September 16, 2010.

Appendix A – MAWA Achieved by Water Contractor

City of Cotati	
Water Budget w/ MAWA of 60% ETo (AF)[1]	N/A
Dedicated Irrigation Metered Sales (AF)	89.1
MAWA Achieved (%)	N/A
North Marin Water District	
Water Budget w/ MAWA of 60% ETo (AF)	622
Dedicated Irrigation Metered Sales (AF)	686
MAWA Achieved (%)	66%
City of Petaluma	
Water Budget w/ MAWA of 60% ETo (AF)	532
Dedicated Irrigation Metered Sales (AF)	534
MAWA Achieved (%)	64%
City of Rohnert Park	
Water Budget w/ MAWA of 60% ETo (AF)	255
Dedicated Irrigation Metered Sales (AF)	271
MAWA Achieved (%)	64%
City of Santa Rosa	
Water Budget w/ MAWA of 60% ETo (AF)	1,504
Dedicated Irrigation Metered Sales (AF)	1,398
MAWA Achieved (%)	56%
City of Sonoma	
Water Budget w/ MAWA of 60% ETo (AF)	52
Dedicated Irrigation Metered Sales (AF)	82
MAWA Achieved (%)	94%
Valley of the Moon Water District	
Water Budget w/ MAWA of 60% ETo (AF)	20
Dedicated Irrigation Metered Sales (AF)	31
MAWA Achieved (%)	90%
Town of Windsor	
Water Budget w/ MAWA of 60% ETo (AF)	88
Dedicated Irrigation Metered Sales (AF)	105
MAWA Achieved (%)	72%
All Water Agency Contractors	
Water Budget w/ MAWA of 60% ETo (AF)	3,045.64
Dedicated Irrigation Metered Sales (AF)	3,107.68
MAWA Achieved (%)	61%

[1] Information not available.

Appendix B – Samples of Letters to Dedicated Irrigation Customers

On the following pages are samples of letters sent by some water contractors to dedicated irrigation customers, asking for the information requested by the State Board in order to comply with Provision 13.

- City of Cotati
- North Marin Water District
- City of Rohnert Park
- City of Sonoma
- Valley of the Moon Water District
- Town of Windsor

City of Cotati

City of Cotati

Sonoma County, California

SUBJECT: IRRIGATION WATER BUDGETS

Dear Water Customer,

On May 24, 2010, the California State Water Resources Control Board issued Order WR 2010-0018-DWR. This Order included a directive that local water utilities assign a water budget designed to achieve a maximum water allowance of 60 percent of the reference evapotranspiration (ETo) to their customers with dedicated irrigation meters. In response, the City is asking customers with dedicated irrigation meters to follow a water budget that applies 60 percent of the ETo to landscape areas.

Evapotranspiration is the loss of water to the atmosphere by the combined processes of evaporation (from soil and plant surfaces) and transpiration (from plant tissues). It is an indicator of how much water your crops, lawn, garden, and trees need for healthy growth and productivity. ETo data is available on the weather page of the Press Democrat newspaper on the back page of the B-Section in a box called "Farm Report." Evapotranspiration data is shown in inches of water. The data is also available at the city of Santa Rosa website:

http://ci.santa-rosa.ca.us/DEPARTMENTS/UTILITIES/CONSERVE/Pages/yard.aspx

Your landscape professional can also use this data to set your irrigation system to apply only 60 percent of the projected 7-day ETo to meet the State Order requirements.

To alleviate the financial burden with retrofitting lawn, the City also sponsors a Cash for Grass Program that provides rebates of $1 per square foot for customers who replace their grass lawns with water conserving planted landscapes. To learn more about this program, or any of the City's water conservation programs, please call us at (707) 665-3631 or visit the City's website at:

http://www.ci.cotati.ca.us/wc/

We appreciate your cooperation in monitoring your water use to ensure that the City does its part in meeting the State Order requirements with respect to water use.

201 West Sierra Avenue, Cotati, CA 94931-4217 • TELEPHONE 707•792•4600 • FAX 795•7067

City of Cotati (continued)

City of Cotati
Sonoma County, California

If you have any questions or concerns, please contact me at (707) 665-3620 or dobid@ci.cotati.ca.us.

Sincerely,

Damien O'Bid, P.E.
Director of Public Works / City Engineer

201 West Sierra Avenue, Cotati, CA 94931-4217 • TELEPHONE 707•792•4600 • FAX 795•7067

North Marin Water District

NORTH MARIN WATER DISTRICT

999 Rush Creek Place
P.O. Box 146
Novato, CA 94948
PHONE
415.897.4133
FAX
415.892.8043
EMAIL
info@nmwd.com
WEB
www.nmwd.com

August 20, 2010

RE: **Large Landscape Budget for: IRRIGATION, [redacted]**
APARTMENTS
Service Number: [redacted]
Service Address:

The North Marin Water District (District) has calculated a water budget for your irrigation site's latest two-month billing period (ending between the two dates listed below). The water budget is a calculated volume of water needed for your landscape over the actual bi-monthly billing period using a formula that incorporates the landscape type and area (square footage) and local Novato weather data (evaporation-transpiration or ET). This year in response to a State Water Resources Control Board Order, your budget was calculated using 0.60 of ET. Your budget information is shown below.

Two-Month Billing Period That Ended Between: **(08/02/10-08/19/10)**

Turf Area:	**1,692** SQFT
Shrub Area:	**8,277** SQFT
Water Budget:	**61** Ccf or **45,703** Gallons
Actual Usage:	**38** Ccf or **28,424** Gallons
Percentage of Budget Used:	***62 %***

Please help conserve water! If the Actual Usage shown is less than the Water Budget, congratulations!

If the Actual Usage is above the calculated water budget, please call to learn how you can improve the water use efficiency at this site. The District offers **FREE** large landscape irrigation audits, irrigation efficiency upgrade incentives, and rebates for removing automatically irrigated turf.

If you have any questions regarding the Water Budget, your site area measurements, or any of the water conservation program information listed above, please call me at (415) 897-4133 ext. 8421.

Sincerely,

Ryan Grisso
Water Conservation Coordinator

DIRECTORS: JACK BAKER • RICK FRAITES • STEPHEN PETTERLE • DENNIS RODONI • JOHN C. SCHOONOVER
OFFICERS: CHRIS DEGABRIELE, General Manager • RENEE ROBERTS, Secretary • DAVID L. BENTLEY, Auditor Controller • DREW MCINTYRE, Chief Engineer

City of Rohnert Park

Development Services

[redacted]

Reduction in Irrigation of Commercial Turf
[redacted]

Dear Commercial Irrigation Customer:

The Sonoma County Water Agency petitioned the State Water Resources Control Board to allow lower minimum flows in the Russian River to improve habitat for endangered salmon and steelhead. The state approved the lower flows in the Russian River and, as a result, the City of Rohnert Park is required to assign a water budget to its dedicated irrigation customers to help reduce overall water use.

For customers with a dedicated irrigation water meter, the City of Rohnert Park has measured the landscaped area for each commercial property and calculated the water budget that applies 60 percent of the reference evapotranspiration (ETo) to overall landscape areas including lawns, median strips and other turf planted for ornamental purposes. Evapotranspiration is the amount of water plants need based on weather conditions. This data allows us to provide a landscape water budget for your property. Based on historic data, your water budget to meet the State Order is as follows:

Month	Water Budget in gallons
June	16,061
July	17,668
August	15,526
September	12,207
October	6,291
November	535

We appreciate your cooperation in monitoring your water use to ensure that the city does its part in meeting the State Order requirements with respect to commercial turf and an overall reduction in water use.

If you have any questions, please contact Ellen Beardsley at (707) 588-2213 for more information.

Thank you,

The City of Rohnert Park

130 Avram Avenue • Rohnert Park CA • 94928 • (707) 588-2232 • Fax (707) 794-9242
www.rpcity.org

City of Rohnert Park (continued)

Development Services

[redacted]

Reduction in Irrigation of Commercial Turf

Dear Commercial Irrigation Customer:

The Sonoma County Water Agency petitioned the State Water Resources Control Board to allow lower minimum flows in the Russian River to ensure improve habitat for salmon and steelhead. The state approved the lower flows in the Russian River and, as a result, the City of Rohnert Park is required to assign a water budget that uses 60 percent of the reference evapotranspiration to its dedicated irrigation customers to help reduce overall water use.

Evapotranspiration is the amount of water plants need based on weather conditions and the data is available on the weather page of the Press Democrat newspaper on the back page of the B-Section in a box called "Farm Report." Evapotranspiration data is shown in inches of water. Please apply no more than 60% of the inches of water shown in the Farm Report.

We appreciate your cooperation in monitoring your water use to ensure that the city does its part in meeting the State Order requirements with respect to commercial turf and an overall reduction in water use.

If you have any questions, please contact Ellen Beardsley at (707) 588-2213 for more information.

Thank you,

The City of Rohnert Park

130 Avram Avenue • Rohnert Park CA • 94928 • (707) 588-2232 • Fax (707) 794-9242
www.rpcity.org

City of Sonoma

June 28, 2010

Dear Water Customer,

The State Water Resources Control Board has ordered that dedicated irrigation customers be assigned a water budget designed to achieve maximum applied water allowance (MAWA) of 60 percent of ETo. The Sonoma County Water Agency must report progress to the State Water Board by the end of the year.

Please reduce your water this summer through October 15, 2010, call Kathy Toohey, at the number listed below to find tips on saving water.

Thank you for your continued support

Kathy Toohey
City of Sonoma
Water Conservation Coordinator
707-933-2247
ktoohey@sonomacity.org

Valley of the Moon Water District

VALLEY OF THE MOON WATER DISTRICT
A Public Agency Established in 1962
19039 Bay Street • P.O. Box 280
El Verano, CA 95433-0280
Phone: (707) 996-1037
Fax: (707) 996-7615

June 25, 2010

[redacted]
Sonoma, CA 95476

RE: Water Budget [redacted]

Dear Customer:

The State Water Resources Control Board (State Board), through its Order WR 2010-0018-DWR, has required the District to assign water budgets to all dedicated irrigation accounts for the period of May through November 2010. A water budget is a water efficiency tool that is used to determine the correct amount of water to be applied to a landscape. The water budget is specific to each site and is calculated based on the square footage of irrigated landscape, reference ET (from local weather data) and an ET adjustment factor. The formula for the calculation is as follows:

Water budget = square footage of irrigated area × ET_o × ET_{AF} × 0.62
Where: ET_o = Reference evapotranspiration
ET_{AF} = ET adjustment factor (0.60 per State Board Order)
0.62 = Conversion factor to gallons per square foot

Evapotranspiration (ET) is the amount of water lost by plants through the process of transpiration and from soil through the process of evaporation. ET is used as a guide for how much water a plant needs, where 100% ET is the amount of supplemental water (i.e. over and above rainfall) needed if the entire landscape were covered by well maintained, average height green grass. 60% ET means that the total landscape water allowance is 60% of that which would be required if the entire landscape were green grass.

DIRECTORS: Alfonso M. Bandur • Mark Bramfitt, P.E. • Ed Kenny • Ron Prusiko • Russell H. Townsend, Esq.
OFFICERS: Krishna Kumar, General Manager • Robert B. Maddow, Esq., District Counsel

Town of Windsor

TOWN OF WINDSOR

Administrative Services Department
9291 Old Redwood Highway
P.O. Box 100
Windsor, CA 95492-0100
Phone: (707) 838-1004
Fax No. (707) 838-1269

June 21, 2010

«Prime_Customer_Name»
«Main_Address» «Prime_Customer_Suite»
«City», «State» «Zip_Code»

Re: Account #«Account_»
Site Address: «Prime_Location_Address»

NOTICE OF STATE ORDER

Your urgent attention to this matter is requested. Please ensure that the appropriate person in your organization receives this notice.

To whom it may concern:

On May 24, 2010, the California State Water Resources Control Board (SWRCB) issued Order 2010-0018-DWR (Order), lowering minimum flows on the Russian River this summer as required under the Russian River Biological Opinion. The Biological Opinion was issued by the National Marine Fisheries Service (NMFS) in September 2008.

Term 13 of the Order stipulates that all dedicated irrigation water customers be assigned a water budget designed to achieve a maximum applied water allowance (MAWA) of 60 percent of reference evapotranspiration (ETo) for the period beginning May 25, 2010 through November 30, 2010.

This letter is to inform you of the State's Order to maintain your overall irrigation water use at a level not to exceed that specified by your monthly water budget shown below.

Water Budget Table

Meter #	Landscape Area (ft^2)		Water Budget (gal)						
	Turf	Non-Turf	May	Jun	Jul	Aug	Sep	Oct	Nov
«Meter_»	«Turf_ft2»	«Nonturf_ft2»	«May_gal»	«Jun_gal»	«Jul_gal»	«Aug_gal»	«Sept_gal»	«Oct_gal»	«Nov_gal»

Your water budget factors in the size of your irrigated landscape along with expected changes in weather. If you believe that the landscape area measurements listed in the water budget are not accurate, you may submit a revised estimate, along with a statement explaining the method used to obtain the revised estimate to:

Town of Windsor
Attn: Water Conservation Program or email wc@townofwindsor.com
P.O. Box 100
Windsor, CA 95492-0100

Town of Windsor (continued)

Upon the Town's acceptance of the revised estimate, you will be provided an updated water budget. It is requested you work cooperatively with the Town in meeting the State's Order by ensuring that the responsible party in your organization with oversight of landscape water management is made aware of this notification. Please speak with your landscape maintenance contractor about the need to meet the provided water budget so that any necessary change to irrigation scheduling happens in a timely manner.

If no amounts appear in your water budget, it means the Town of Windsor has not yet attained your landscape measurements needed to provide this site specific information. The lack of a Town provided water budget does not constitute an exemption from meeting the intent of the Order. We request your help in providing us with an accurate measurement of the irrigable landscape area at your site, along with a statement explaining what method was used to obtain the information. The Town can then update you with a revised water budget for complying with the State's Order. Alternatively, you may choose to work with your landscaper to calculate your monthly expected water use based on the following formula:

$$\mathbf{MAWA = (0.6) \times (ETo) \times (LA) \times (0.62)}$$

where;

- **MAWA** is the maximum applied water use
- **(0.6)** is the reduction factor set by the State Order
- **ETo** is the monthly reference evapotranspiration (CIMIS station #103, historical or actual)
- **LA** is the irrigable landscape area
- **(0.62)** is a conversion factor for gallons

Pursuant to the Order, the Town will report the maximum applied water use for all of its dedicated irrigation customers to the SWRCB following the period of the Order. It is expected that water budgets will be an annual summer requirement as a condition of reduced river flows to meet the Biological Opinion.

In the best interest of all parties, the Town requests your cooperation to meet the guidelines set by the State Water Board. To that end, the Town offers a variety of incentives for improving the efficiency of your irrigation system or for retrofitting high water use turf areas to low water use plants. Please visit www.townofwindsor/wc for more information about these programs, or call 838-5357 during the Town's regular business hours, Monday – Thursday, 7 a.m. to 6 p.m.

For additional information about the SWRCB Order and the NMFS Biological Opinion, please visit the Sonoma County Water Agency website at www.scwa.ca.gov.

Thank you,

Paul Piazza
Water Conservation Program Coordinator