

1 DRA does not support Cal Am's response to DR MA1-002, which states
 2 that additional items such as bathroom and kitchen aerators, moisture meters,
 3 shower timers, hose nozzles, etc. are necessary, because Cal Am did not
 4 adequately justify these additional items nor did Cal Am provide the associated
 5 costs. (See Appendix D)

6 In addition, before any money is approved in the next General Rate Case,
 7 DRA recommends Cal Am should document and confirm that devices distributed
 8 to customers at events or upon request were actually installed in the customers'
 9 residences. This documentation should be available to DRA staff upon request.

10 **(v) BMP 3, 4, 5 Rebates (CII, Large Landscape,**
 11 **Residential Toilet):**

12 Cal Am proposes a CII and Residential Rebate budget of \$2,150,525 for
 13 three (3) years starting 2012, 2013 and 2014. This is a budget of \$716,841.66 per
 14 year.

15 Cal Am and MPWMD collaborated on several programs including the CII
 16 and Residential Rebate program. While Cal Am proposed the budget for this
 17 program, MPWMD will administer the rebate program to ensure that water
 18 savings are not double counted. ¹⁶

19 DRA recommends a total reduction of (\$6,750) from Cal Am's total rebate
 20 budget for a total of \$2,143,775.

21 Cal Am and MPWMD presented a list of rebate items which include the
 22 lifetime estimate of the retrofit and the potential lifetime savings of each retrofit in
 23 Acre Feet (AF). (see Appendix G)

¹⁶ Ms. Pintar testimony, pg. 16

1 DRA broke down Cal Am and MPWMD's list of rebate items into two
2 categories, residential rebate savings per retrofit and CII rebate savings per
3 retrofit, as shown below in Tables 7 and 8.

4 **Table 7: Residential Rebate Savings per Retrofit**

Item	Est. No. of Rebates in 2012	CY 2012	Est. No. of Rebates 2013	CY 2013	Est. No. of Rebates in 2014	CY 2014	Amount of Rebate	Life Time of Retrofit	Annual Savings Per Retrofit	Projected Savings (3 year) in AF	Life Savings of all retrofits by item in AF	Cost/AF
High Efficiency Toilets (HET)	750	150,000	500	100,000	0	0	200	25	0.0417480	135.68	1,304.63	192.01
High Efficiency Clothes Washer (HECW)	750	187,500	500	125,000	250	62,500	250	10	0.0161000	56.35	241.50	1,555.90
Lawn Removal & Replacement with Drought Tolerant or Permeable Landscape (aka Cash for Grass)	108900	136,125	108900	136,125	108900	136,125	1	15	0.0000338	22.06	165.43	3,785.14
Synthetic Turf	25000	50,000	25000	50,000	25000	1	2	15	0.0000506	6.33	37.98	3,949.48
High Efficiency Dishwasher	20	2,500	20	2,500	20	2,500	125	9				
IAHWS and on-demand systems	50	10,000	50	10,000	50	0	200	10		0.00	0.00	
Rainwater storage	436	10,890	436	10,900	436	10,900	25	20		0.00		
Smart Controllers	25	7,500	25	7,500	25	7,500	300	10		0.00		
Rain Sensors	50	1,250	50	1,250	50	0	25	10		0.00		
Rebate Total		555,765		443,275		219,526				220.42	1749.5400	

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6 **Table 8: CII Rebate Savings Per Retrofit**

Item	Est. No. of Rebates in 2012	CY 2012	Est. No. of Rebates 2013	CY 2013	Est. No. of Rebates in 2014	CY 2014	Amount of Rebate	Life Time of Retrofit	Annual Savings Per Retrofit	Projected Savings (3 year) in AF	Life Savings of all retrofits by item in AF	Cost/AF
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Greywater Irrigation System (Laundry to Landscape and Bathroom to Landscape)		0		0		0	100	10		0.00	0.00	
Dry vacuum pumps -- Retrofit or new construction per REBATE per 0.5 HP to 4 HP	10	2,000	10	2,000	10	2,000	200	7	0.6400000	38.40	134.40	44.79
Water Efficient Ice Machine	100	50,000	25	12,500	25	12,500	500	10	0.8345070	312.94	1,251.76	59.96
Cooling Tower pH/conductivity controllers	5	12,500	5	12,500	5	20	2,500	5	3.9815430	99.57	199.24	125.63
Cooling tower conductivity controller	5	5,000	5	5,000	5	5,000	1,000	5	1.03225	30.97	77.42	193.88
Medical Equipment Steam sterilizer retrofit	10	15,000	10	15,000	10	15,000	1,500	20	1.5380000	92.28	922.80	48.79
X-Ray recirculation	20	50,000	20	50,000	20	50,000	2,500	10	2.3780000	285.36	1,426.80	105.16
Water Broom	2	300	2	300	2	0	150	5	0.1534000	1.53	3.07	196.84
High Efficiency Urinals (0.5 gpf)	300	60,000	100	20,000	0	0	200	15	0.0806030	88.66	483.62	165.63
Commercial Dishwasher - Large Size	2	2,000	2	2,000	2	2,000	1,000	20	0.3690000	4.43	44.28	
Zero Water Urinals	50	15,000	50	15,000	50	15,000	300	15	0.0921146	27.63	207.26	217.60
CII HECW	250	112,500	0	0	0	0	450	10	0.1166180	87.46	291.55	385.87
Pint Urinals	200	60,000	100	30,000		0	300	15	0.0870000	69.60	391.50	230.14
Commercial Dishwasher - Med Size	5	5,000	5	5,000	5	5,000	1,000	20	0.2000000	6.00	60.00	250.17
Boilerless/connectionless food steamers (per compartment)	20	30,000	20	30,000	20	5	1,500	10	0.25	25.00	100.01	600.39
Soil Moisture Sensors	50	1,250	50	1,250	50	1,250	25	10		0.00		
Steam oven	10	15,000	10	15,000	10	15,000	1,500	12		0.00	0.00	
Rotator or High Efficiency spray nozzles	7000	28,000	7000	28,000	7000	0	4			0.00	0.00	
Waterless Wok	2	4,000	2	4,000	2	4,000	2,000	10		0.00	0.00	
Rebate Total		467,550		247,550		126,775				1169.83	5593.7100	

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2 DRA performed a cost/benefit analysis by taking MPWMD's projected
3 three (3) year rebate water savings and multiplying it by the value per acre foot

1 (AF) of \$2,400.¹⁷ DRA added the estimated number of rebates and multiplied
2 them by the amount of rebate to get the total rebate cost. The benefit cost ratio is
3 the value of the cost of water saved divided by the rebate cost. DRA then ranked
4 Cal Am's residential and CII rebate programs by their benefit/cost ratio as shown
5 in Tables 9 and Table 10, respectively.¹⁸

6 **Table 9: Residential Rebate Savings by Cost Effectiveness**

	Cost of Water	Savings in water costs per year	Cost of rebates	Cost effectiveness
High Efficiency Toilets (HET)	\$2,400	\$325,632	\$250,000	1.302528
High Efficiency Clothes Washer (HECW)	\$2,400	\$135,240	\$375,000	0.36064
Lawn Removal & Replacement with Drought Tolerant or Permeable Landscape (aka Cash for Grass)	\$2,400	\$52,944	\$326,700	0.162056933
Synthetic Turf	\$2,400	\$15,192	\$150,000	0.10128
High Efficiency Dishwasher	\$2,400			
IAHWs and on-demand systems	\$2,400			
Rainwater storage	\$2,400			
Smart Controllers	\$2,400			
Rain Sensors	\$2,400			

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9 **Table 10: CII Rebate Savings by Cost Effectiveness**

¹⁷ Electronic mail from Ms. Pintar indicating average cost of water is \$2,400.

¹⁸ DRA ranked all rebate programs to determine which measures are more cost effective than others.

Item	Cost of Water	Savings in water costs per year	Cost of rebates	Benefit/Cost
Greywater Irrigation System (Laundry to Landscape and Bathroom to Landscape)	\$2,400	0	0	
Dry vacuum pumps -- Retrofit or new construction per REBATE per 0.5 HP to 4 HP	\$2,400	\$92,160	\$4,000	23.04
Water Efficient Ice Machine	\$2,400	\$751,056	\$62,500	12.02
Cooling Tower pH/conductivity controllers	\$2,400	\$238,968	\$25,000	9.56
Cooling tower conductivity controller	\$2,400	\$74,328	\$10,000	7.43
Medical Equipment Steam sterilizer retrofit --	\$2,400	\$221,472	\$30,000	7.38
X-Ray recirculation	\$2,400	\$684,864	\$100,000	6.85
Water Broom	\$2,400	\$3,672	\$600	6.12
High Efficiency Urinals (0.5 gpf)	\$2,400	\$212,784	\$80,000	2.66
Commercial Dishwasher - Large Size	\$2,400	\$10,632	\$4,000	2.66
Zero Water Urinals	\$2,400	\$66,312	\$30,000	2.21
CII HECW	\$2,400	\$209,904	\$112,500	1.87
Pint Urinals	\$2,400	\$167,040	\$90,000	1.86
Commercial Dishwasher - Med Size	\$2,400	\$14,400	\$10,000	1.44
Boilerless/connectionless food steamers (per compartment)	\$2,400	\$60,000	\$60,000	1.00
Soil Moisture Sensors	\$2,400	0	\$2,500	0.00
Steam oven	\$2,400	0	\$30,000	0.00
Rotator or High Efficiency spray nozzles	\$2,400	0	\$56,000	0.00
Waterless Wok	\$2,400	0	\$8,000	0.00

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2 Cal Am and MPWMD request that the rebate program be treated on a “first
3 come first served” resource and should not be limited to a specific number of

1 rebates per each type of retrofit. In other words, rebates should be allowed as
2 demand increases.

3 Further, Cal Am and MPWMD anticipate that the rebate program will
4 likely expand as new technology becomes available and request flexibility to add
5 additional rebates over the next three (3) years.

6 DRA recommends the total disallowance of \$3,750 for the rain sensor
7 rebate since this is duplicative of Cal Am's Rain Sensor Installation Program.

8 DRA recommends a reduction of (\$3,000) for the dry vacuum pumps
9 rebate. Cal Am and MPWMD explains that this rebate is primarily for retrofit or
10 new construction. However, in a response to an electronic inquiry, MPWMD
11 states that there is very little construction growth within Cal Am's service area.
12 (See Appendix A)

13 Of the rebate items listed in Table 9, the High Efficiency Toilet (HET) had
14 a benefit/cost ratio of 1.3. That is, for every \$1 spent in rebate, the cost of water
15 saved \$1.30. HET is also the only residential rebate item with a benefit/cost ratio
16 greater than one (1).

17 Most CII rebates under the Table 10 had a benefit/cost ratio greater than
18 one (1).

19 DRA understands that there are several rebate items that may be
20 advantageous but not quantifiable. For example, it would seem reasonable that
21 rainwater storage is valuable because rain water may supplement existing water
22 supply. However, DRA does not know the effectiveness of this program because
23 there has been no historical data provided. DRA therefore, recommends that Cal
24 Am and MPWMD conduct a benefit/cost analysis of all rebate items included in
25 this testimony and include it in its annual conservation report.

1 DRA recommends that the Commission allow Cal Am and MPWMD to
2 transfer funds relatively freely within each of these rebate groupings. For
3 example, funds earmarked for HETs could be used for High Efficiency Urinals if
4 there is greater customer demand for these devices. However, Cal Am and
5 MPWMD should be required to make a good effort to promote those items with
6 the highest benefit/cost ratio.

7 DRA recommends that the Commission allow Cal Am and MPWMD
8 flexibility to add additional rebates over the next three years provided funds are
9 still available. Cal Am and MPWMD should provide proof or study that the new
10 rebate item will directly help increase the level of water conservation. The study
11 should be made available to DRA upon request.

12 **(vi) BMP 4 CII Audits**

13 Cal Am proposes a budget of \$375,000 (or \$125,000 per year) for three (3)
14 years specifically for CII audits. Ms. Na in her testimony states that this is based
15 on a cost of \$2,500 per audit for a projection of 50 audits per year.¹⁹

16 In its previous GRC, Cal Am requested a substantial increase in its budget
17 for CII audits from \$3,100 in 2008 to \$161,889 in 2009 and \$147,014 in both 2010
18 and 2011. During that time no CII audits were completed.

19 Cal Am states that it had planned to complete 39 audits in 2009 utilizing
20 trained internal staff and experienced consultants. However, in its 2009 report,
21 Cal Am did not complete any audits; instead Cal Am stated that it contracted with
22 Water Wise to complete 35 CII audits in 2010.

¹⁹ Ms. Na testimony