

FINAL WATER SAVINGS PROGRESS REPORT DUE TO
MODIFICATION OF SPRINKLER HEADS WITH “LITTLE VALVES”
AT INDUSTRIAL BUILDING, 26901 AGOURA ROAD CALABASAS,
CALIFORNIA

TRIAL PERIOD: DECEMBER 31, 2008 – DECEMBER 29, 2009

The subject building is located on Agoura Road just south of the 101 Freeway in the City of Calabasas, California. It is an industrial building with landscaping that is watered with 23 valves. The building is managed by Mid-Valley Properties, Kat Stimac, Property Manager. The LittleValve change-out took place during the first part of November, 2008. That work was performed by Ed Wallace of Midwest Landscaping, Long Beach, aka Unique Landscaping. Shortly after the change-out, the landscape maintenance was taken over by Specialized Landscape Management Services, Inc. (SLM)

The water for the landscape irrigation is reclaimed and is provided by Las Virgines Municipal Water District. The reclaimed water meter number is ‘EUNIT9’. The water meter is read on a bi-monthly basis.

The pop-up riser stems on many of the sprinklers were changed out with Valvette Systems’ LittleValve replacement riser stems. Some of the pop-up sprinklers were replaced with Valvette System’s Little Tuffy pop-up sprinklers with the LittleValve built-into the stem. All existing shrub adapters were replaced with LittleValve shrub adapters – Model No. MB200.

Prior to change-out, watering was taking place 4 times weekly in all areas. After change-out, the watering days remained the same but the watering times were reduced. At the beginning of June, the maintenance contractor noticed that watering could be reduced even further likely due to the higher uniformity that LittleValve parts provide. Consequently, the watering days for the turf areas were kept at 4 times weekly, but days for the shrub and ground cover areas were cut in half and reduced to 2 times weekly.

The Progress Reports for this one-year trial period have FOUR ITEMS OF INTEREST that indicate that the true water savings are indeed higher than what is shown in this Final Report. **See page 3**

CALABASAS INDUSTRIAL BUILDING TRIAL

TRIAL PERIOD: DECEMBER 31, 2008 – DECEMBER 29, 2009

All figures are in HCF (748 gallons)

D = Decrease

I = Increase

Period	This Period's Usage	Usage in Prev. Year's Corresponding Period	Difference	Percentage Results
12/31 - 2/26/09	4.28 HCF/day 58 days (132 HCF)	5.37 HCF/day 63 days (338 HCF)	- 3.09	57.5% D
2/27 - 4/28/09	4.34 HCF/day 61 days (265 HCF)	5.55 HCF/day 62 days (344 HCF)	- 1.21	22% D
4/29 – 6/26/09	4.90 HCF/day 59 days (289 HCF)	6.92 HCF/day 61 days (422 HCF)	- 2.02	29.2% D
6/27 – 8/27/09	5.82 HCF/day 62 days (361 HCF)	9.44 HCF/day 59 days (557 HCF)	- 3.62	38.3% D
8/28 – 10/28/09	6.23 HCF/day 62 days (386 HCF)	9.22 HCF/day 63 days (581 HCF)	- 2.99	32.4% D
10/29 – 12/29/09	3.92 HCF/day 61 days (243 HCF)	3.41 HCF/day 59 days (208 HCF)	+ .051	15% I
TOTALS:	1,676 HCF = 1,253,648 gallons	2,450 HCF = 1,832,600 gallons		A Decrease of 578,952 gallons of water

Net result: **Year over Year Water Savings of 31.6%**

4 Items of interest:

1) Southern California experienced a record-setting heat wave in the first part of April. Hot spots in the turf started appearing, which required opening up the LittleValves to allow the spray pattern to cover a larger area. Doing this, of course necessarily causes an increase in water consumption. The turf watering times are presently twice daily for 3 minutes at each watering, 4 days weekly. Now that the turf areas have been restored back to their normally lush appearance, the watering days will be reduced to 3 days weekly on June 5th.

2) This year, a portable car wash operation has commenced on the property. The washing takes place once weekly and pulls its water from the irrigation supply lines. Naturally, this affects the water usage bottom line when comparing this year's usage against last year's when car washing did not take place. Building management is considering asking the car wash operator to provide an inexpensive in-line flow meter to his hose apparatus so that the water used by the car washing operation can be measured with the result that the actual irrigation water usage can be better defined.

3) Around June 5th, the Account Manager for the landscape maintenance firm (SLM) noticed a marked increase in water usage. He checked out the clock and his weekly usage figures and it appears that around May 1st, someone had changed the lawn watering program from 3 days weekly to 5 days weekly. He immediately changed it back to 3 days weekly. For the 3-week period commencing June 5th and ending June 26th, the weekly water usage dropped almost 50% from approximately 4100 cu. ft. (30,668 gallons) down to 2,087 cu. ft. (15,611 gallons.)

4) In the latest 2009 period, there was just one day of rain. However, in the 2008 period, there were six days of rain plus it rained just five days before the 2008 period started. All of which means that the controller was turned off for a significant amount of time during the 2008 November-December period.

Each day of rain means that the controller will or should be off for at least three, possibly four days in addition to being off on the rainy day. Not knowing the 2008 watering schedule, we assume that the property was being watered at least three or four days per week. Since it rained six days, we must assume that the controller was **off for twelve watering days** of the estimated 37 in that period. (37 watering days is the estimate for four watering days per week, whereas 28 would be the estimate for 3 watering days per week.) This translates into the controller being off for approximately 34% of the 2008 2-month period.

The watering schedule for the 2009 period was four days weekly for turf areas and two days weekly for ground cover areas. (We did know that in 2008 all areas were being watered for the same amount of days.) Hence, for the one rainy day in the 2009 November-December period, the controller was, at a maximum, **off for three watering days**. This translates into the controller being off for approximately 10% of the 2009 2-month period.