

WATER SAVINGS

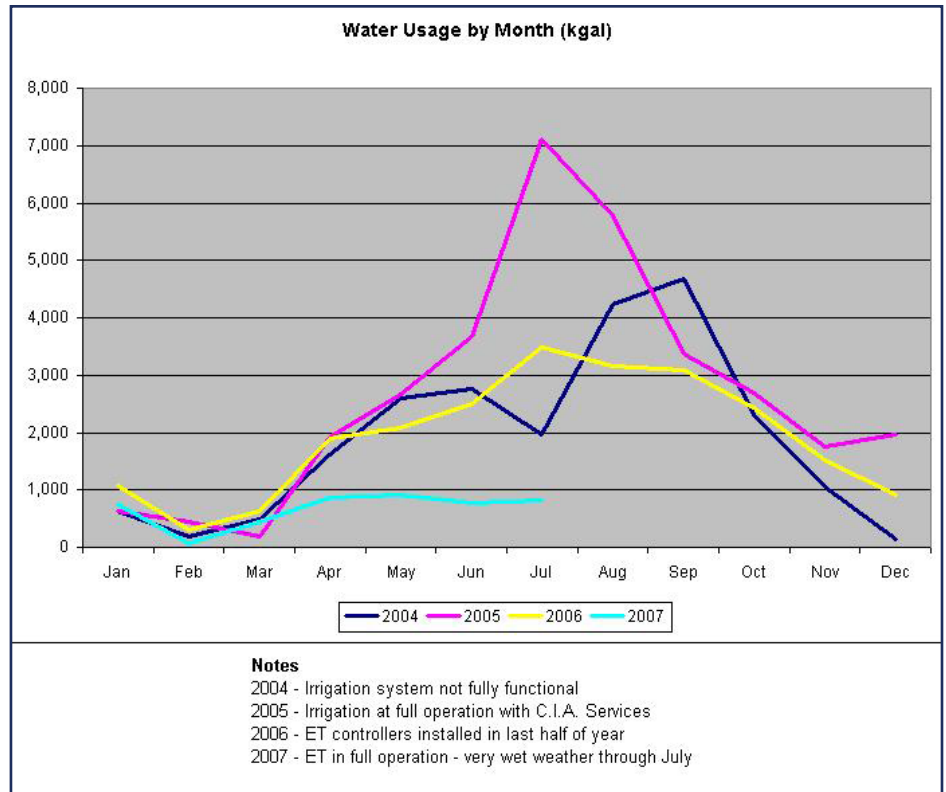
C.I.A Services, Inc... Newsletter

September 2007

With all of the rain we have had in the Houston area this year, **water conservation** is not a high profile issue. But trust me, our hot, dry summers will be back. Regional conversion to surface water will continue to raise the cost of water and push for more conservation measures. One of our communities has been closely monitoring water usage for several years and recently installed advanced irrigation controllers. The savings are impressive.

The **Clear Lake City Boulevard Association** was established in 1991 to share the cost of maintaining the new boulevard between the adjacent neighborhoods of Bay Pointe, Northfork and Pine Brook. It's only responsibility is the boulevard so it's major expenses are grounds maintenance and irrigation. The boulevard has a very high traffic load so thousands of people see the landscaping every day. Irrigation on the boulevard is high profile - every misaligned head sprays into the street, all runoff goes into the street and down storm drains, water on the street annoys drivers with previously clean cars.

Because the boulevard stretches over 3-1/2 miles with a center esplanade and side setbacks, **it takes 13 controllers** and over 100 stations to cover the whole area. In 2005, we used 32 million gallons of water for irrigation at a cost of \$43,000. From April to October 2006, we replaced all of the conventional irrigation "clocks" with advanced irrigation controllers by **ET Water**. Conventional controllers have settings for each station where you set the days of the week the station will run, the time the cycle will start and the duration of the cycle (e.g. run Monday, Wednesday and Friday starting at 6:00 a.m. and run for 20 minutes). Cycle changes require an irrigation technician to make the changes. The advanced irrigation controller by **ET Water**, uses an ET (evapotranspiration) algorithm to calculate the amount of water loss from plant materials based on temperature, humidity, solar radiation measured constantly. Based on locally measured rainfall, the controller determines how much water must be added through the irrigation system to meet the plant needs. The controller also takes into account factors such as soil porosity, slope and plant type to determine the optimal irrigation cycle for each station. During wet or cold weather, a particular station may not run for many weeks.



This graph shows the results of the **CLCBA experience with the ET controllers**. 2004 and most of 2005 were artificially low and high during the summer because portions of the system were either shut down or leaking due to system problems. C.I.A. Services became the management company in September 2005 and the irrigation system was promptly restored to full operation. In 2006, the ET controllers were installed and setup between April and October. 2007 reflects full operation under the ET controllers.

At this point you may be saying, "Well, of course you used less water - it's been raining all summer". That is exactly the point! We should have used less water and the controllers automatically made sure that happened. With mechanical clocks, reducing water only happens when and if the irrigation technician goes to every clock and reduces the watering time. And no grounds maintenance company will set the clock to the water needs of an average or wet August day - they will set it for the hottest, driest day that could happen so the begonias don't wilt!

We expect to spend less than \$20,000 for irrigation this year compared to \$43,000 in 2005. With an installed cost under \$20,000, we recovered our investment within the first year of operations. CLCBA was ideal for using these controllers but most communities would have similar savings and returns. Ask your community manager at C.I.A. Services to review whether ET controllers would benefit your community.

