

# Title: Stripped Down Water Management Practices with 24/7- 360 Degree Access

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1. Results
2. the idea that we need to do more to elevate landscape water management as an important part of managing water resources to property owners and utilities.

## **Abstract.**

*Current water management practices by landscape companies are in a defensive posture due to a lack of understanding a comprehensive water management approach and not fully grasping the business opportunity. This presentation will equip listeners and readers with insights on practices and online water management tools gained over the last 4 years in Southern California region (San Diego, Los Angeles, and Ventura) by a water management company that works closely with landscape contractors and water agencies. More comprehensive water efficiency methods as well as online water management tools will greatly enable our landscapers to succeed in practicing excellent water management. The shift in focus is to practice water management through data driven water budgets and use online tools to give all concerned parties 360-degree access. Return on investment calculations and real case studies will be shared.*

Since 2012, twenty five commercial sites in Southern California have received water surveys from a water agency. A water survey consists of the following: Detailed outdoor survey of the irrigation system, creation of a site-specific water budget, maps if needed and a recommended irrigation schedule and enrollment in an online water management program.

The purpose of the water conservation program was to exploit ways to accomplish the following:

1. Lower outdoor water survey costs
2. Increase the expertise of surveyors
3. Increase the survey efficiencies by increasing the number of customers that were willing to implement significant retrofits per the survey recommendations
4. Make a change in landscapers approach to water management with a heavy emphasis on management systems and tools.

Current technologies have allowed water agencies and now landscapers to use online webbased water tracking tracking tools. Using these online tools as a follow up process to surveys is a unique approach in these markets (about 4 water agencies currently use this approach). These programs have a pathway for each client to participate in. Each of these steps can be scaled down for any landscape maintenance company and applied to their current client base.

Here are the program steps:

1. Identify top water savings potential users. Savings potential is determined by comparing the sites water usage history obtained from the water agency to the satellite area measurements and projected water budget. Water budgets are built on plant material area measurements.

In this case a landscape company could survey their clients and find the top water savings potential users and take the same approach.

2. For each client there is a "kick off" meeting. Participants are utility, vendor and customer. Key staff are present and great effort is made to get the true decision makers. Meeting identifies decision makers for retrofit or budget decisions or at bare minimum who will repair identified leaks and other repairs to improve efficiency.

This type of meeting also can occur for a landscape company in that when they approach the client for an irrigation efficiency project, they can ensure they have the right people at the kick off meeting.

3. A voluntary water budget is established during the survey (which confirms and modifies to make it more precise than from the satellite images) reflecting appropriate indoor and outdoor water requirements for a customer

a. Data is recorded on tablets versus paper for easier and faster processing.

b. Survey reports address the lowest hanging fruit in short concise reports rather than numerous pages of charts and pictures, and unnecessary details.

c. More emphasis is placed on a water management plan for the site-specific requirements than just reporting the site needs weather based irrigation controllers and nozzle rebates. The goal is to avoid just identifying leaks and sprinkler issues and get to the heart of building a site appropriate water management system.

Once again, this approach can be used by landscape companies. Taking their estimating system for irrigation efficiency improvement projects to the a more streamline approach. A clear focus on items that have a significant return on investment will sell more in the long run.

4. Budget is entered into the monitoring tools and monthly post survey water usage is measured against the established budget.

a. This tool is used by landscape water managers, water agencies, and property owners.

b. These online tools allows water agencies to monitor sites after a survey has been completed and compared to their historical usage. A program summary page shows the savings achieved for all sites enrolled. This is used to evaluate the effectiveness of the water conservation program.

For a landscape company they can manage their sites internally and publish the data to their clients on a monthly basis. This data can be incorporated into the invoices as well so the client sees the added value each month and gets that monthly "feeling" of savings and knowledge that their landscape company is watching over their water bills as much as they are.

5. If a customer's usage significantly exceeds his budget for that particular month the water agency staff or the survey vendor will contact the customer and discuss potential issues regarding

the high use. In the same manner if the customer's usage is below budget they are cheered on by a complimentary email.

- a. Monthly e-mails are sent to the site owner and staff.
- b. On site landscape water managers take action with knowledge of their water usage whether it is above or below the budget. It is also a rewarding opportunity for them to save water and money for their client and for all involved to be in the know.
- c. The water conservationist at the agency can see all of their sites in their service area and quickly assess any problem sites. Performance is indicated by a red colored percentage over historical usage, a yellow colored percentage if under historical usage, and a green percentage if under budget. This creates a streamlined management dashboard to focus efforts on weak site performances.

In each of the online tools, the visual displays may differ, but the same message of water awareness is being communicated. A proactive landscape company can take an online water management tool and deliver great service to their clients versus waiting for the client to call about a high water bill.

6. Follow up meetings is scheduled with the same participants after the survey is completed to discuss results and further steps.

A landscape company can schedule quarterly meetings to review results in water savings for their clients and ensure them that this resource is being carefully handled.

Here are the results:

1. Positive feedback from customers
2. Has helped create a commitment from survey customers to follow up after a survey is conducted and reevaluate water efficiency practices rather than going back to status quo.
3. Highly effective in leading to a much closer customer- utility partnership for water efficiency improvements
4. Has led to significant capital investments from customers for improved water efficiency measures and some even beyond the survey recommendations. Here are two examples:
  - a. 8 acre High school in Ventura – purchased \$22,000 for 2 wireless Rain Master controllers, (4 controllers total plus the 2 wireless with 95 stations) weather station and many miscellaneous cable, parts, software boards to tie all the controllers together. Plans are to go forward with more work and getting the system dialed in as far as using based scheduling. The high school staff is excited about saving water with these new tools.
  - b. 16 acre Cemetery in Los Angeles- Purchased and installed \$30,000 worth of automated irrigation valves as well as 2 new controllers. They also retrofitted many of their rotors with the correct nozzle sizes.
5. Out of 25 sites that have participated in this program, approximately 50% have lowered their water consumption compared to their historical usage. Some sites have even lowered their consumption to remain under the established site budget.

## **Conclusion**

This approach to water management has made a major impact in the commercial landscape industry for southern California. Each site has had engagement with the water agency in some manner. Awareness through online tools has been a real help to all involved. Further research will be conducted on finding optimal scheduling approaches that fit each landscape company and

their level of expertise. Also mobile apps on smart phones are being incorporated. Water survey costs have been lowered and engagement for water savings actions has been increased.

Landscape companies can learn from this type of work in the water agency market. Water conservationists have a parallel role to a landscape water manager. Online tools, more emphasis on lowest hanging fruit for return on investment, and also not being afraid to take charge of water consumption is the new calling for our landscape water managers. Let's take that calling and run with it.