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How Agencies are Looking Outside for Conservation Program Funding

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The Context:
Water Conservation and Funding for Agencies

- **Conserved water is the cheapest "new supply" of water available to most water agencies**
- **Conserved water may be the "only" new source of water for some agencies**
- **Southern California agencies spent $1/2 Billion to retrofit 2 million + low flow plumbing devices, saving 25% in the process** (billions required to gain 25% more water)
- **Plumbing device programs proved to be "easy" compared to landscape conservation programs**
- **Expect continued drought and/or climate change**
- **Increasing pressure on agency revenues**

Are Current Rate Structures Working?

Customer: "You ask me to save water, I do, then you raise my water rates…"

Agency Revenue Shortfalls Example:

- **Charlotte, NC sees $27 million in reduced revenues after drought restrictions** (2007/2008)
- **"Water Conservation is causing higher rates."**
- **"We miss people washing their cars and sprinkling lawns."**
- **We are all going to have to find a better way to do things. I really am afraid of what's ahead for us if we don't."** (Wayne Co Manager, Lee Smith)

More Pain…

Atlanta - $33 million shortfall ("because of people saving water")

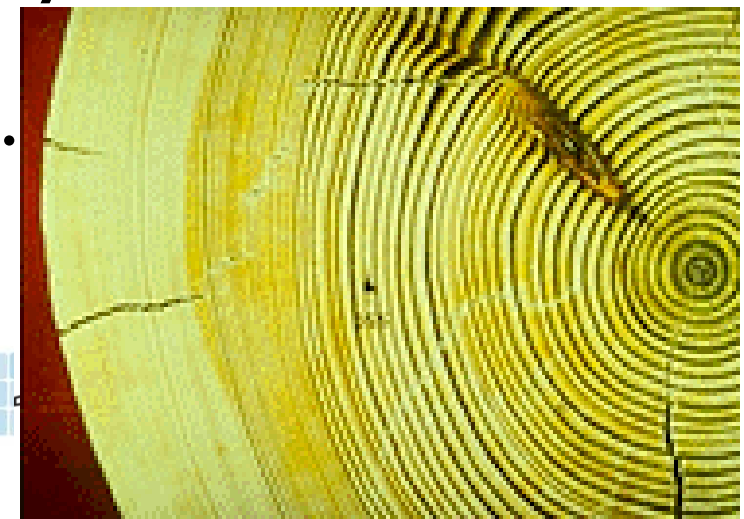
Charlotte, NC - $27 million shortfall

Palm Beach, Fl - $13 million shortfall

"The next 2,3,4,5,6,7 years are going to be rough". (Ca. Farm Bureau)

Cal Tech suggests the *Pacific Decadal Oscillation* "can impact climate for the next 20-30 years"

EBMUD sees landscape irrigation customers miss savings goal by 28%.



How to Pay for Conservation Programs?

1. **Establish water budget rate structures that recover "fixed" revenue needs independent of water use**
   - Water waste penalty revenue pays for conservation programs
2. **Require customers to pay for efficiency upgrades**
3. **Supply rebates for efficiency upgrades**
4. **Raise water rates**
5. **"Finance" the cost of conservation programs**
   - Single large accounts
   - Multiple/any accounts from the agency level

All Those Options Can Co-Exist - Why Financing?

- **Allows relatively low cost for customers to implement efficiency upgrades**
  - Actual savings (reduced water bills) becomes part of the Return on Investment (ROI) for customers
- **Focuses on the "process" for successful programs**
- **Gains more water savings for a longer time period**
  - Players have a stake in the program
  - Targeting the highest water wasters is key to the program process and success
  - Finance period helps maintain customer awareness and site efficiency

Why Financing Landscape Conservation Programs?

- **Expensive to bring landscapes up to high efficiency levels**
- **Require a comprehensive process to gain efficiencies**
  - Overcome poor irrigation systems, landscapers, etc.
- **Continued efficiency (years) is desired/needed**
- **Limited expertise in the field of landscape water efficiency**
  - Qualified irrigation evaluations, installation and oversight is used for long-term efficiency

Who Finances the Program?

The Customer/Manufacturer:

- Customers directly benefit and it is reasonable to suggest they should pay for that benefit
- Agency motivators and education can drive customers to finance efficiency upgrades
- Manufacturer shows confidence in products & process

The Agency:

- Easier access to good money rates
- Shows customers the agency commitment to helping save water/reduce customer bills
- Speeds the process to retrofit for increased water efficiency

The Customer / Manufacturer Financed Program

Case Study: Anaheim Hills Community Association

- **Regional Wholesale water provider offers per/acre rebate for conservation device upgrades** ($630/ac)
- **HOA had an aging and inefficient irrigation system**
- **HOA wanted to take advantage of local rebates but were not comfortable with typical landscape upgrade options**

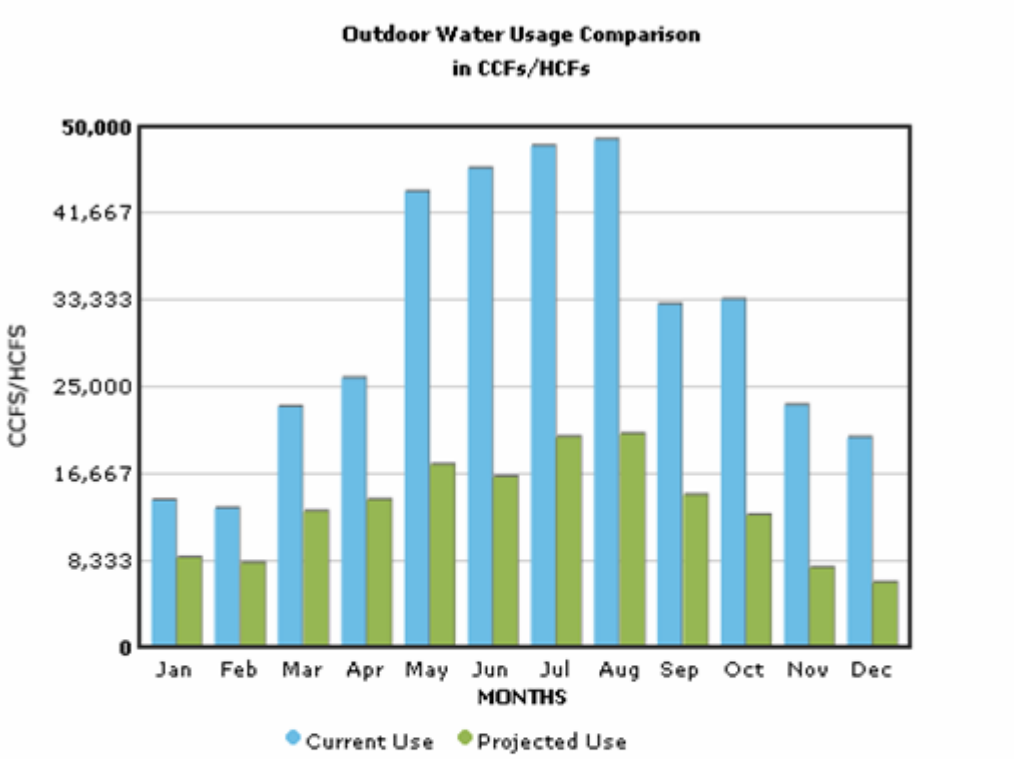
Financial Assumptions @ AHPCA

- **111 Acres**
- **44 controllers; 570 valves**
- **Water bills:**
  - 2007 = $210K
  - 2006 = $185K
  - 2005 = $116K
- **Dedicated irrigation meters**
- **Irrigation water rate @ $.50 per CCF**
  - Water rate increases will take place

Reasons for AHPCA to Select the Manufacturer Financing Option

- **Financial case was compelling**
  - Water bill reduction accelerates payback
  - Financing option offered by the Manufacturer improves cash flow and protects reserve account assets for the HOA
- **Manufacturer offered a project process that was designed to deliver long-term efficiency**
  - Thorough review of entire irrigation system
  - Improve plant health and landscape appearance
  - Reduce risk (slope failure, street damages)
  - Certified "perfect" SWAT scores and 20 public agency studies
- **Long term partnership**
  - Assist in development and implementation of 5 year plan
  - Manufacturer services to landscaper maintains efficiency success
  - Combination of People, Process & Technology

ROI Calculator Results



Your Annual Outdoor Water Savings

Current *(372,298 CCF/HCF)*:	**$186,149**
Projected *(159,188 CCF/HCF)*:	**$79,594**
WeatherTRAK Saves You:	**$106,555**

(213,110 CCF/HCF)

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Financial Benefit Summary

- **HydroPoint Water Savings Calculator predict annual savings in excess of $106,555 per year**
  - Baseline on AHPCA 2006 water rates and usage, HOA acreage, and estimated ratio of Turf / Shrubs / LWU plants and normalized weather

- ***Estimate of 30% of actual water bills per year**

- **$83,910 Year 1, MWD rebates**
- **$25,000 Year 1, Water Bill Savings**
- **$35,000 Year 2, Water Bill Savings***
- **$55,000 Year 3, Water Bill Savings**
- **$75,000 Year 4, Water Bill Savings**
- **$105,000 Year 5, Water Bill Savings**

  ======
- **$338,910 5 Year Financial Benefits**

- **AHPCA Challenge: Implement Best Practices and proven technology over a 5 year plan to fully realize savings potential by 2012.**

Cost Summary

Hardware	$158,105
Installation	$17,627
5 Year Services	$45,000
Rebate	($83,910)
Net Acquisition Cost	$136,822

Cost Detail

- **Hardware: $158,105**
  - Pro2 Controllers (44)
  - Patented Scheduling Engine
  - Internet Upgrade (44)
  - Stainless Steel Enclosures (44)
    - In-line surge protection
    - GFI power receptacle
  - Wireless Rain Sensors (44)
  - Data Industrial Flow Sensors (44)

- **WeatherTRAK.net Internet Service + ET Everywhere Service + ongoing contractor training: $45,000**
  - 7 Year hardware warranty
  - 5 Years fixed price on ETE
    - Daily ET Transmission
    - 6 day x 10 hrs Customer Support fully bilingual
    - Unlimited access to http://www.weathertrak.net
    - Free software upgrades
    - Ongoing Contractor training
    - Managed alerts
      - Email
      - Text Message
      - Phone

- **Managed Installation: $17,627**
  - 44 controllers
  - 44 enclosures
  - 570 stations
  - 9 new concrete pads
  - 44 wireless rain sensors
  - Controller programming

- **Gross Total: $220,732**

- **Less: $83,250 in MWD rebates**
  - 111 acres x $630 per acre

- **$136, 822 Net Acquisition Cost to AHPCA**

Installation Service:
Managed WeatherTRAK Installation

Physical Installation

Test all station wires w/ volt meter
Record any shorts or N/C
Lablel existing station wires
Unwire station wires
Shut off power to controller (breaker, fuse box)
Unwire power and remove old controller
Install new controller
Re-wire using wire harness, junction box, terminal strip
Install external antenna (if needed)
Run Valve Check and fix wiring/note issues
Install wireless rain sensor
Bring wiring up to code

WeatherTRAK Programming

Complete station by station program worksheet
Call 800# activate w/ customer service (Address, phone #, billing contacts, contractor name, etc.)
Complete Set Up Information (Date, Time etc)
Complete Days and Times scheduling
Program each station w/ worksheet information
Review Alerts
Run Manual and verify watering

Installation Detail:
Irrigation System Integrity Check

WT Phase Integrity Check (verify reception)
Record existing controller run-times
Label valve wires
OHM & Volt testing on each station
Turn on each station & document problems
Checkmate Solenoid test (ID N/C)
Soil Moisture probe
Estimate acreage
Estimate plant material (% breakdown)
Record general site conditions
Photo(s) of problem areas
Write report

Ongoing Service:
Bi-Annual Field Checkup

Review mounting, wiring, weather tight
Photo of controller (wiring, mounting)
Review Set Up information
Review water window (at controller)
Review station programming (at controller)
Review phase integrities (at controller)
Verify correct antenna installation
Volt Meter test (only if RV4 in metal enc)
Review alerts
Perform valve check / record results (at controller)
Manual station test for head and valve issues
Review precip rates (site walk)
Visually inspect landscape (stie walk)
Make notes of problems
Photos of issues / problems
Write Report

Financing Summary

		Projected Purchase Amount			$ 220,732
			Lease Term - Years		5
Month #	Annual Payment @ 8% interest	Projected Annual Water Savings	Annual Cash Flow	MWD Rebates	Net Annual Cash Flow
Year 1	$ 53,708	$ 25,000	$ (28,708)	$ 83,250	$ 54,542
Year 2	$ 53,708	$ 35,000	$ (18,708)		$ 35,834
Year 3	$ 53,708	$ 55,000	$ 1,292		$ 37,126
Year 4	$ 53,708	$ 75,000	$ 21,292		$ 58,418
Year 5	$ 53,708	$ 105,000	$ 51,292		$ 109,710
Total	$ 268,540	$ 295,000	$ 26,460	$ 83,250	

Direct Acquisition Summary

Month #	Acquisition	Projected Annual Water Savings	Annual Cash Flow	MWD Rebates	Net Annual Cash Flow
Year 1	$ 220,732	$ 25,000	$ (195,732)	$ 83,250	$ (112,482)
Year 2		$ 35,000	$ 35,000		$ (77,482)
Year 3		$ 55,000	$ 55,000		$ (22,482)
Year 4		$ 75,000	$ 75,000		$ 52,518
Year 5		$ 105,000	$ 105,000		$ 157,518
Total	$ 220,732	$ 295,000	$ 74,268	$ 83,250	

Single Site Program Approved Based on Positive Cash Flow Estimate

What Actually Happened:

- **Higher water savings (42%) than estimated**
- **Shorter payback/higher cash flow than estimated**
- **Improved site conditions**
  - Reduced site damages
  - Increased HOA savings
  - Improved landscape appearance
  - Master association promoted the process to 39 smaller HOA's

Financing Conservation at the Agency Level

Case Study: Palmdale Water District

- **Needed a significant landscape water conservation program; 70% of water used outside**
- **Agency has limited "conservation program" funds, small staff**
- **Agency purchased a complete "turn-key" or "direct" smart controller installation program**
  - Marketing, targeting customers, scheduling, installations, irrigation audits, landscaper training, customer service and follow-up
- **Agency will offer the program to targeted high users at no initial cost, but with a "conservation fee" placed directly on the water bill** (agency recovers the cost of the program from monthly customer payments)

Planned Palmdale Water Bill

billing period		meter read			units
8/10/08	9/09/08	1255	1337		82 CCF

USAGE - LOW VOLUME DISCOUNT	16	.480	$7.68
USAGE - CONSERVATION BASE RATE	23	.640	$14.72
USAGE – PENALTY	20	1.280	$25.60
USAGE – PENALTY	19	2.560	$48.64
USAGE - PENALTY	4	5.120	$20.48
WATER SERVICE CHARGE			$3.90
SEWER SERVICE CHARGE			$6.90
YOUR ALLOCATION FOR THIS BILL	39	CCF	
BILL CALCULATION BASED ON	.12	ACRES	
			$127.92

Conservation Fee: $14.95 **$137.87**

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Financing as an Option for Funding Conservation Programs

- **Single project**
  - **Agency motivates the customer to spend their own funds**
  - **Return on Investment is contemplated for the customer**
  - **No HOA dues increase to convert irrigation for efficiency**
- **Agency level**
  - Spread across larger customer group
- **Both require agency support and private sector expertise**
- **Leverages and extends limited customer and agency funds**
- **Implements a process that maximizes water efficiency**
- **Links stakeholders to keep efficiency in place for years to come**
  - Customer, product manufacturer, agency, landscaper

Direct Installation Examples

- **Residential**
  - Newport Beach (700 homes; 500 planned)
  - Palmdale (210 homes, 225 planned)
  - Charlotte, NC (500 planned)
  - Hilton Head, SC (200 planned)
  - Riverside (WMWD), (200 homes)
- **Commercial**
  - WalMart (3,000 stores)
  - AIMCO Apartments (nation wide)
  - Jack-in-the-Box, Kohls, McDonalds, City of Charleston, SC

Financing Summary

- **Expands the tools to help retrofit large water using customers**
- **Provides a real public/private partnership opportunity**
- **Insures a successful "process" for upgrading landscapes**
- **Agencies act as a "facilitator" through rebates and/or water bill access**
- **Agencies do not need expanded staff and/or expertise**