

Climate Based Smart Irrigation Control



THE CITY OF SANTA CLARITA GETS SMART ABOUT IRRIGATION MANAGEMENT

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data systems, inc.

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Where the Good Life Takes You

 **ValleyCrest**
Landscape Maintenance

About HydroPoint

Leader in Water Management

- Over 24,000 WeatherTRAK customers nationally
- Delivering Smart Irrigation technology and services for over 13 years
- Headquarters in Petaluma, CA
- Work with California cities, schools and private companies to meet water management goals
- Deliver compelling and proven Return on Investment



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Leading CA Companies Use Smart Irrigation

WAL*MART
Save money. Live better.™

America Comes Home to
AIMCO

ARCHSTONE SMITH

regencycenters

Google



 **THE IRVINE COMPANY**

LOWE'S
Home Improvement Warehouse
Improving Home Improvement™

bre 



KOHL'S

LOCKHEED MARTIN
We never forget who we're working for™ 



ebay®

Coca-Cola®

Holiday®
RETIREMENT CORP.

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Leading CA Municipalities Use Smart Irrigation



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What is Smart Irrigation

“The primary goal of a smart controller is to reliably match the actual irrigation application to the theoretical irrigation requirement of the landscape or the crop being irrigated.”

Irrigation Association

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What is Smart Irrigation

Irrigation consumes over 50% of urban water across the US

Traditional irrigation “timers / clocks” are not designed to save water

Over-watering costs millions of \$\$\$\$

- Water bills
- Run-off fines and damages
- Liabilities and costs to address mold, puddles, plant disease, erosion etc.
- Landscape replacement
- Poor PR / environmental stewardship



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What is Smart Irrigation

What Makes a Controller “Smart”

Weather Data

- Sensor vs Service

Scheduling

- Time Based vs Budget Based

Remote Network Managed

- Central Internet vs Stand Alone



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What is Smart Irrigation

National Performance Testing – SWAT

<http://www.irrigation.org/swat/>



EPA **WaterSense** labeling

<http://www.epa.gov/watersense/products/controltech.html>

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About the City of Santa Clarita

Leading by Example

- Location and size
- Earned reputation for innovation and effective technology use
- Numerous accolades for outstanding programs, services and events



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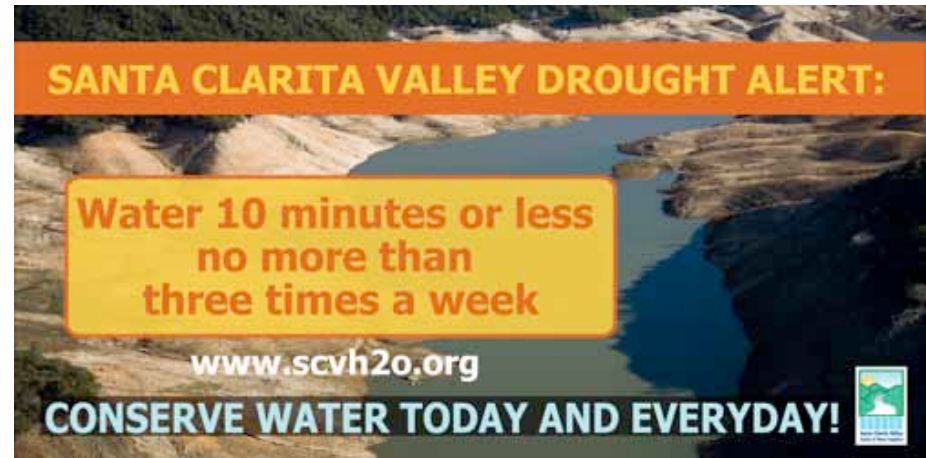
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Water Conservation Project Objectives

Challenges Faced

- Dwindling water resources
- Rising water rates
- Complying with water use legislation
- Setting a positive example for the community



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About ValleyCrest Landscape

Leader in Water Management

- 60 Years as Leader in Landscape Maintenance
- Earned reputation as innovation and effective service provider
- Proven best practices approach to exceed customer expectations
- Water Management is core service to the ValleyCrest way of business



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Search for a Solution

Process and Criteria

- Evaluated proven solutions to maximize water savings
- Rigorous field testing
- Analyze cost effectiveness



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Smart Water Management

Technology Requirements

- Ease of installation
- Power of central internet management
- Reliability of water efficiency



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Choosing the Right Implementation Partner

Implementation Partner Selection Criteria

- Issued Open RFP to landscape contractors
- Expertise and experience to ensure that technology achieves conservation and plant health goals
- Reputation and Reliability
- Proven process for wide-scale project management



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The Implementation Process

Starts with a Planning Meeting and a Checklist

4 Simple Phases for Success

1. Discovery
2. Field Survey
3. Installation
4. Customer Sign Off



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The Implementation Process

Phase 1: Discovery

- Goal: Provide installation team with all necessary information to ensure smooth process
- Steps
 1. Locate each controller
 2. Check existing information
 3. Document information
 4. Prep for installation



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The Implementation Process

Phase 2: Field Survey

- Goal: Document plant material and environmental conditions that determine irrigation requirements
- Steps
 1. Look at types of plants/trees/turf and watering needs
 2. Evaluate conditions such as soil type and root depth
 3. Calculate slope and sun exposure
 4. Determine sprinkler type



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The Implementation Process

Phase 3: Installation

- Goal: Plan out the people and equipment needed for efficient installation process
- Steps
 1. Review documentation daily and plan out next day's schedule
 2. Provide installers with checklist
 3. Install according to agreed scope
 4. Program controllers per survey
 5. Activate controllers on network



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The Implementation Process

Phase 4: Customer Sign Off

- Goal: Ensure work meets project scope and goals
 1. Regular progress reviews
 2. Team approach with installer, manufacturer and city
 3. Final sign off and training to maintenance staff



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Project Completion Summary

Fast, Efficient, Predictable

- 300+ controllers installed and programmed per scope
- Project completed in 60 days (60 days ahead of schedule)
- Issues found and solved along the way concurrent to implementation
- No unplanned or added costs
- Strong foundation for success



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Measuring Success

Quantifying Results

- Project on time and ahead of schedule
- On track to save 180 million gallons of water annually
- 20%-40% rate hike cost protection
- Compliance automation
- Health of plants throughout the Landscape Maintenance Districts



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Thank You

View complete case study at
www.hydropoint.com/weathertrak-updates/webcasts.php

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Poll Results

Q&A

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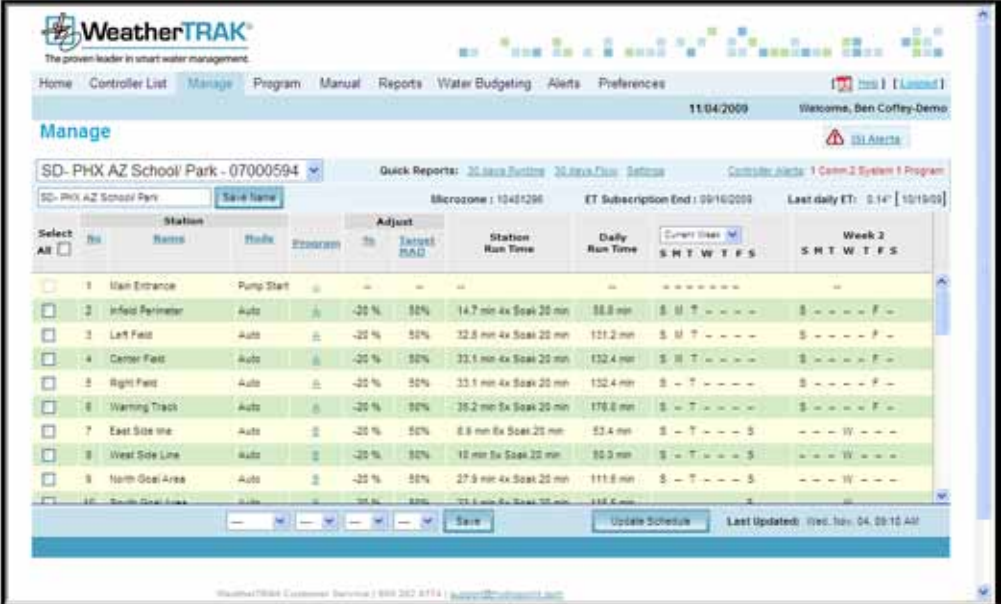
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WeatherTRAK Smart Water Management

Easy Predictable Installation

- All inclusive hardware and communication
- Instant central internet activation
- Modular design for easy customization
- Complete diagnostics ensure proper set up
- Web-based programming for speed and consistency



The screenshot displays the WeatherTRAK web interface. At the top, there is a navigation menu with options like Home, Controller List, Manage, Program, Manual, Reports, Water Budgeting, Alerts, and Preferences. The main content area is titled 'Manage' and shows a dropdown menu for 'SD- PHX AZ School/ Park - 07000594'. Below this, there is a table with columns for 'Station', 'Name', 'Mode', 'Ezzone', 'Adjust', 'Station Run Time', 'Daily Run Time', and 'Week 2 SMTWTFS'. The table lists 10 stations, each with a checkbox, a name, a mode (e.g., Pump Start, Auto), and various run time and schedule details.

Select	Station	Name	Mode	Ezzone	Adjust	Station Run Time	Daily Run Time	Week 2 SMTWTFS
<input type="checkbox"/>	1	Main Entrance	Pump Start					
<input type="checkbox"/>	2	Infield Perimeter	Auto		-20 % 50%	14.7 min 4x Soak 20 min	58.8 min	S M T - - - - S - - - - F - -
<input type="checkbox"/>	3	Left Field	Auto		-20 % 50%	32.8 min 4x Soak 20 min	131.2 min	S M T - - - - S - - - - F - -
<input type="checkbox"/>	4	Center Field	Auto		-20 % 50%	31.1 min 4x Soak 20 min	124.4 min	S M T - - - - S - - - - F - -
<input type="checkbox"/>	5	Right Field	Auto		-20 % 50%	33.1 min 4x Soak 20 min	132.4 min	S - T - - - - S - - - - F - -
<input type="checkbox"/>	6	Warning Track	Auto		-20 % 50%	26.2 min 5x Soak 20 min	131.0 min	S - T - - - - S - - - - F - -
<input type="checkbox"/>	7	East Side Line	Auto		-20 % 50%	8.8 min 6x Soak 20 min	52.8 min	S - T - - - - S - - - - W - - - -
<input type="checkbox"/>	8	West Side Line	Auto		-20 % 50%	12 min 6x Soak 20 min	72.0 min	S - T - - - - S - - - - W - - - -
<input type="checkbox"/>	9	North Goal Area	Auto		-20 % 50%	27.8 min 4x Soak 20 min	111.8 min	S - T - - - - S - - - - W - - - -
<input type="checkbox"/>	10	South Goal Area	Auto		-20 % 50%	21.8 min 4x Soak 20 min	87.2 min	S - T - - - - S - - - - W - - - -

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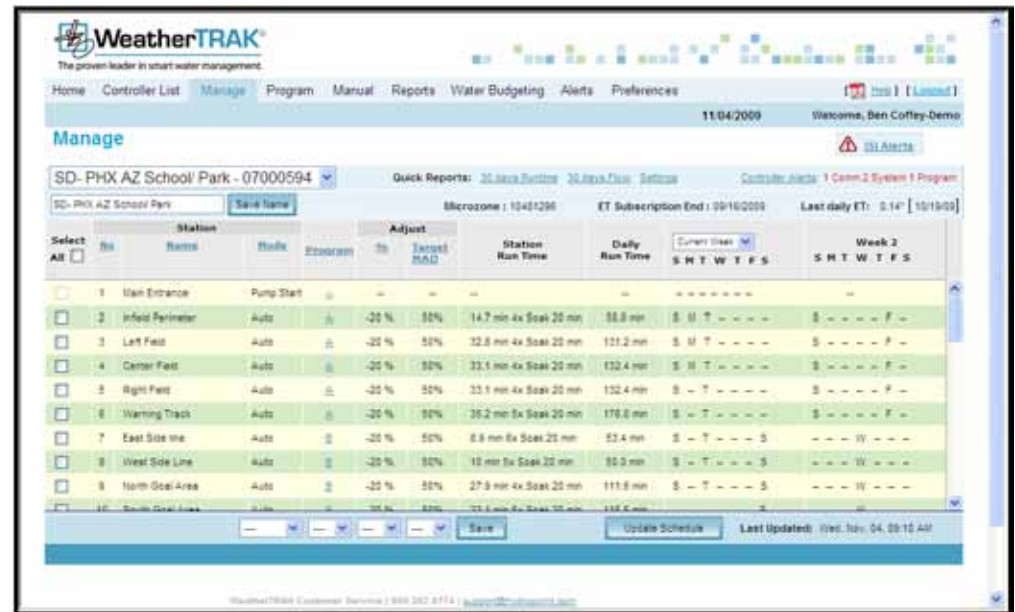
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Smart Water Management Solution

Power of Central Internet Management

- Real-time remote internet control for maximum management
- Customizable email alerts and diagnostics
- Two-way communication



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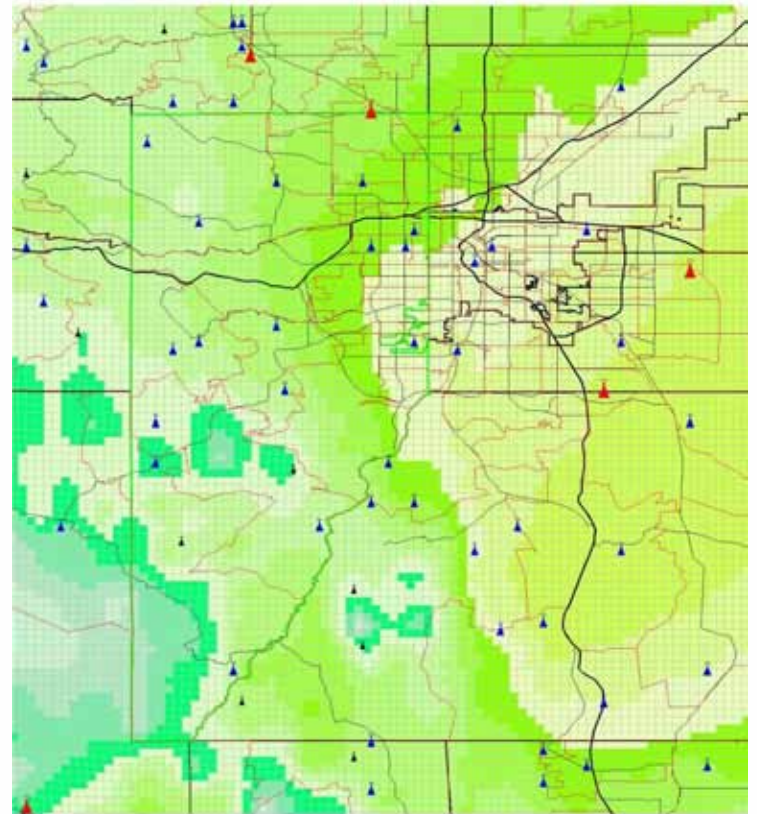
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Where the Good Life Takes You

WeatherTRAK Smart Water Management

Reliability of Water Efficiency

- Smart Scheduling Engine™
- 6 factors: sprinkler type, system efficiency, soil type, plant type, exposure, slope
- Station-specific programming and control
- Complete user control on restrictions
- Flow sensing abilities
- ET Everywhere™ – high resolution weather data



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