Central Texas Water Conservation Symposium

Metropolitan Water District of Southern California

Bill McDonnell
February 11, 2015

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Who are we?
Regional water wholesaler
- Includes 6 counties
- 5,200 square miles
- 26 member agencies
- 250-300 retail water agencies
- 19 million people
- Add about 150,000 people/yr
- Imported water supplies meet about half of retail demands
Metropolitan Member Agency Cities

- Anaheim
- Beverly Hills
- Burbank
- Compton
- Fullerton
- Glendale
- Long Beach
- Los Angeles
- Pasadena
- San Fernando
- San Marino
- Santa Ana
- Santa Monica
- Torrance

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Metropolitan Member Agency Water Districts

- Calleguas
- Central Basin
- Eastern
- Foothill
- Inland Empire
- Las Virgenes
- Orange County
- San Diego
- Three Valleys
- Upper San Gabriel Valley
- West Basin
- Western

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Where Southern California Gets its Water

- 30% State Water Project
- 25% Colorado River
- 45% Local Supplies
  - Los Angeles Aqueduct
  - Groundwater recovery
  - Recycling
  - Desalination
  - Conservation

Average Rainfall = 15 inches per year
Historical Background Commercial Program

• 900 Commercial Surveys
• Sanitary Fixtures Mainly Recommended
• The Best Opportunity For Savings
From Audits to Incentives

- Most common audit recommendations
- MWD provided a base incentive
- Member agencies allowed to add funding
- Implemented at retail level by
  - 26 Water Agencies and 300 Plus Cities
Original Metropolitan Incentives

- Cooling Tower Controller
- High Efficiency Washer
- ULFT/Urinal
- Pre-Rinse Spray Valve
I Show Up
Early Issues

- Market Penetration
- Fragmented Implementation
- Customer Service
- Hard to Explain
- Limited Staff Resources
- Decisions at Corporate
MWD and Agency Advisory Committee

• First Recommendation from Agencies

– Commercial technologies
One Year of Training

- Sloan Training Facility
  - Toilets and urinals
  - Flushometer valves
  - Plumbing codes
- Cooling towers
- Clothes washers
Agencies Ask For

One-Stop Shop
Regional Program Born – Phase 1

- 2000 Issue RFP
  - Project Management
- 3 Year $2.5 Million Contract
- Contracts with Agencies
- USBR Funded Vendor
- Jan 2001, New Program

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“Save Water Save a Buck”

- 1-800 Number
- One Regional Application
- Strong out of the Gate
- Expended Funds Fast
- 2002, Add $5.4 Million
- Vendor Funded by MWD
Regional Program – Phase 2

- 2004 – 2009
- $45M Contract
- Paper Applications
- Added Technologies
  - Landscape
  - Kitchen Equipment
  - Medical Equipment
Regional Program - Phase 3

- 2010 – 2013
- $120M Contract
- Admin by Percent
- Online Only Reservation
- Added/Subtracted Technologies
Regional Program - Phase 4 (Current)

- 2012 – 2017
- $290M Contract
  - Originally $90M
  - EGIA Vendor
- CII and Residential
- Admin by Percent
- Online Reservation

Select the applicable rebate program below.

SoCal WaterSmart
For Residential Customers

SoCal WaterSmart
For Commercial Customers

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Transition Together
January, 2013

[Image of a satellite view of the Western United States showing prominent geographic features such as the Coast Range, Cascade Mountains, Sacramento Valley, Sierra Nevada, San Joaquin Valley, and Nevada, with the Pacific Ocean visible on the left side.]
Drought Worsening
Extreme and Exceptional Intensity Percentage

OCT 2011
0%
2011 SWP Allocation

OCT 2012
1%
2012 SWP Allocation

OCT 2013
11%
2013 SWP Allocation

OCT 2014
82%
2014 SWP Allocation

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U.S. Drought Monitor

January 27, 2015
(Released Thursday, Jan. 29, 2015)
Valid 7 a.m. EST

Drought Impact Types:
- Delineates dominant impacts
- S = Short-Term, typically less than 6 months (e.g. agriculture, grasslands)
- L = Long-Term, typically greater than 6 months (e.g. hydrology, ecology)

Intensity:
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

Author:
Brian Fuchs
National Drought Mitigation Center
Statewide Impacts

Lake Ghisolfo, Calistoga
January 2014

Folsom Lake, Sacramento
January 2014

Almaden Reservoir, San Jose
January 2014
Record Hot Conditions in 2014

Southern California
5.7 degrees above average
The Last Year Has Also Been Extremely Dry
Nearly 50% of Imported Supplies from Storage
**Metropolitan Storage Reserves**

<table>
<thead>
<tr>
<th>Year</th>
<th>Emergency Storage</th>
<th>Dry-Year Storage</th>
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<tbody>
<tr>
<td>2006</td>
<td>2.2</td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td>1.8</td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>1.1</td>
<td></td>
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<td>2009</td>
<td>1.0</td>
<td></td>
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<tr>
<td>2010</td>
<td>1.7</td>
<td></td>
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<tr>
<td>2011</td>
<td>2.4</td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>2.7</td>
<td></td>
</tr>
<tr>
<td>2013</td>
<td>2.3</td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td>1.2</td>
<td></td>
</tr>
</tbody>
</table>

*Estimated actual storage balances, subject to change.*
Demands Remain Flat Even As Population Grew By 5 Million

**Service Area Population**

**Retail Demands**

- **Million Acre-Feet/Million People**
- **Calendar Year**
- **www.bewaterwise.com**
Potable Per Capita Water Use Has Declined 24% Since the Late 1980’s
2014 MWD Drought Response

- New Devices
- New Programs
- Doubled Conservation Budget
- Radio Ads
- TV Ads
- Radio Ads
- Drought Declaration
- Water Supply Alert
- Gov. Executive Order
- SWRCB Emergency Regulations

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Adopts Emergency Water Conservation Regulations
Select the applicable rebate program below.

SoCal Water$mart
For Residential Customers

SoCal Water$mart
For Commercial Customers
Plumbing

• High Efficiency Toilets
  – Tank, dual flush, flushometer
  – 1.28 gpf or less
  – Base rebate $100 or $50

• High Urinals
  – From zero to .25gpf
  – Base rebate $200
Food Service

- **Air Cooled Ice Machines**
  - Replace water cooled ice-machine
  - Base rebate $1,000 per machine

- **Connectionless food Steamers**
  - Replace boiler based steamers
  - Base rebate $485/compartment
Cooling Tower Controllers

- Conductivity Controllers
  - Base rebate $625
- pH Conductivity Controllers
  - Base rebate $1,750

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• **Flow control valves**
  – Maintain water pressure & reduce flow in faucets and showers (2.0 gpm or less)
  – Base rebate: $5 per valve (min of 20)

• **Dry Vacuum Pumps**
  – 2 HP max
  – Base rebate $125 per ½ HP

• **Laminar Flow Restrictors**
  – Health care-related facilities only
  – Base rebate $10 each
Landscape - Controllers

- **Weather Based Irrigation Controllers**
  - Use historical or real-time data based on weather
  - Base rebate $25/station

- **Central Computer Irrigation Controller**
  - Base rebate $25/station
• Rotating Spray Nozzles
  – Multi-stream/multi-trajectory
  – Base rebate $4 per nozzle

• Large Rotary Nozzles
  – Long range watering
  – Base rebate $13/set
Residential Plumbing

• **High Efficiency Toilets**
  – Tank, dual flush
  – 1.28 gpf or less
  – Base rebate $50

• **High Efficiency Clothes Washers**
  – Water factor 4.0 or better
  – Base rebate $85

[SoCal Water$mart]

[www.bewaterwise.com]
Residential Landscape

- Rotating Spray Nozzles
  - Base rebate $4 per nozzle

Weather Based Irrigation Controllers
- Base rebate $80 ($25/station >1 acre)

Soil Moisture Sensor System
- Base rebate $80 ($25/station >1 acre)

- Rain Barrels
  - Min 50 gallon; Max 4 per home
  - Rebate $75 per barrel

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“Regional” Advertising Campaign

• Media mix
  – TV
  – Radio
  – Print
  – Billboards
  – Digital
  – Blogger outreach
  – Social media
Landscaping Efficiency or Inefficiency You Can See
Commercial Landscaping INEFFICIENCY You Can See
Commercial Landscaping **EFFICIENCY** You Can See
Commercial Turf Removal Incentive

$2 per square foot
Residential Landscaping INEFFICIENCY You Can See
Residential Landscaping **EFFICIENCY** You Can See
Residential Turf Removal Incentive

$2 per sqft
Commercial Turf Removal Requests in Metropolitan Water District Service Area

Millions of Square Foot

2/5 Football Field

136 Football Fields

97 Football Fields

Jan 2014
Feb 2014
Mar 2014
Apr 2014
May 2014
Jun 2014
Jul 2014
Aug 2014
Sept 2014
Oct 2014
Nov 2014
Dec 2014
Jan 2015

0.02 0.10 0.19 0.17 0.77 2.03 5.00 7.49 7.84 4.47 6.35 5.28 5.61
Residential Turf Removal Requests in Metropolitan Water District Service Area

Millions of Square Foot

65 Front Yards

4,000 Front Yards

2,500 Front Yards

Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sept
Oct
Nov
Dec
Jan

2014
2015

0.10
0.49
0.66
0.81
1.16
1.67
2.38
3.80
4.44
5.94
3.02
2.66
3.72

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## Conservation Program Status

<table>
<thead>
<tr>
<th></th>
<th>Reservation Requests *</th>
<th>Committed *</th>
<th>Paid FY 2014/2015 *</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential Rebates</td>
<td>$12.0M</td>
<td>$12.0M</td>
<td>$6.7M</td>
</tr>
<tr>
<td>Commercial Rebates</td>
<td>$19.6M</td>
<td>$19.6M</td>
<td>$8.0M</td>
</tr>
<tr>
<td>Turf Removal</td>
<td>$135.3M</td>
<td>$90.3M</td>
<td>$13.6M</td>
</tr>
<tr>
<td>Other</td>
<td>$45.6M</td>
<td>$10.8M</td>
<td>$8.4M</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$212.5M</strong></td>
<td><strong>$132.7M</strong></td>
<td><strong>$36.7M</strong></td>
</tr>
</tbody>
</table>

*As of February 3, 2015

**Requests:**
Applications requesting funds submitted by customers and member agencies

**Committed:**
Applications approved to proceed
Options for Customers Beyond Regional Rebates
Commercial Landscape Surveys

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- No cost
- Minimum 1 acre irrigated area
- Commercial, institutional, HOAs common areas
- Recommendations to improve water efficiency
New Water Savings Incentive Program

- Encourage custom projects
- Eligible projects
  - Industrial process improvement
  - Irrigation system improvement
  - Retrofit old equipment
- Incentives
  - $195/AF for measured water savings
  - $150/AF for estimated water savings
  - Up to 10 year life
  - Up to 50% of eligible project costs
On-Site Recycled Water Retrofit Pilot Program

- Public or private owners
- Online application
- Incentive of $975/AF
- Began July 1, 2014
- First come first serve

SoCal WaterSmart
Residential Landscape Classes

CALIFORNIA FRIENDLY LANDSCAPE TRAINING
BECOME A MORE WATERWISE GARDENER

LEARN 6 WAYS TO MAKE YOUR GARDEN CALIFORNIA FRIENDLY.
1. Using a Holistic Approach to Gardening
2. Building a Living Soil Sponge
3. Rethinking Elements of Your Site
4. Right Plant, Right Place
5. Using Rainwater as a Resource
6. Managing Irrigation

This class is geared for residential customers and provided at no cost. For class schedule and availability, visit www.bewaterwise.com

Agency logo and information (to be customized)

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Agency logo and information (to be customized)
What's new?
Public Agency Landscape Program

- **Up-front payments**
- **Enhanced Rebates**
  - Irrigation controllers: $40/station
    - Weather-Based
    - Central Computer
    - Soil Moisture Sensor Systems
  - Rotating spray nozzles: $6/nozzle
  - Large rotary nozzles: $13/set (of 2)
Fitness Center Program

• **Increased incentives for:**
  – High-Efficiency Toilets at $300/toilet
  – Ultra-Low-Water Use Urinals at $500/urinal

• **Can include installation costs**

• **Standard incentive for other items:**
  – Cooling Towers
  – Landscape Devices
Contractor Direct Rebates

Contractors installing qualifying water efficiency products can now receive rebates directly from SoCal Water$mart.

www.SoCalWaterSmart.com
www.bewaterwise.com
How Do You Evaluate and Add New Technologies to Regional Program
Ever Get Pitched Products or Ideas to Save Water?
Ideas Come from Everyone
How Do YOU Handle?

"This really is an innovative approach, but I'm afraid we can't consider it. It's never been done before."
In 2001 We Had No Mechanism To Fairly Evaluate the Ideas

Let’s get creative.
How to Equitably Handle Inquiries

• In 2001 Designed ICP
  – Competitive grant
  – MWD and USBR funded
  – Open to everyone
  – Same criteria for everyone
  – Simple process
  – Outside panel of expert judges
ICP Since 2001

• 2013 was fifth round
• To date issued 57 grants
• Approximately $2.0 million
• Received over 250 applications
Evaluation Criteria

- Project innovation
- Water/energy savings
- Market impact
- Cost effectiveness
- Project preparedness
- ICP focus
2013 Selected Projects

- Sprinkler Flow Control
- Biochar
- Actively Aerated Compost Tea
- Residential/Commercial Rainwater Harvesting
- Plant Sensing for Vineyard Irrigation
- Pressure Regulated Spray Heads
- Hydrogels Injected in Turf Root Zone
2013 Selected Projects

- Large Scale Drip Irrigation Scheduling
- CII Water Audit Mobile Application
- Stake Wireless Soil Moisture Sensor
- Polymer Coated Sand for Plant Water Retention
- Conveyor Dishwashers
- Greywater
Plant Sensing to Improve Vineyard Irrigation
Flexibility in design pays dividends
Questions?

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