This presentation premiered at WaterSmart Innovations

watersmartinnovations.com
Southern Nevada, Central Arizona, USBR, and MWD Partner on Innovative Grant Program

Metropolitan Water District of Southern California

Bill McDonnell
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Metropolitan Water District of Southern California

- 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

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Where Southern California Gets its Water

- Local Supplies
  - LA Aqueduct (Local)
  - Colorado River Aqueduct
- State Water Project
- Water Banking / Exchanges
  - Transfers & Storage
- Conservation, Recycling, Groundwater (Local)

Average Rainfall = 15 inches per year

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USBR Lower Colorado Issues

- Water for Future Needs
- Brine Concentrate Management
- Environmental Needs
- Implementing the Colorado River Plan
- Support CALFED/Bay Delta
- Tribal Needs
- Growing Demands
- Diminishing Supply Reliability
- Local Water Augmentation Strategies
- Emerging Rural Demands
- Drought
Value of Creative Solutions to USBR

- Leverages financial resources
- Advancement of new efficient technologies
  - regional water supplies used more efficiently
- More water for environmental uses
- Secure water for future generations
- Achievement of quality of life such as recreational opportunities
The Southern Nevada Water Authority (SNWA)

- A cooperative agency formed in 1991 to address Southern Nevada’s unique water needs on a regional basis.
- SNWA provides water withdrawals, treatment and wholesale deliveries as well as regional conservation services to their purveyors.
The Southern Nevada Water Authority (SNWA):

- Big Bend Water District (serving Laughlin, NV)
- Boulder City
- City of Henderson
- City of Las Vegas
- City of North Las Vegas
- Clark County Water Reclamation District
- Las Vegas Valley Water District

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Central Arizona Project

- Central Arizona Project
  - designed to bring about 1.5 million acre-feet of Colorado River water per year to Pima, Pinal and Maricopa counties.
  - CAP carries water from Lake Havasu near Parker to the southern boundary of the San Xavier Indian Reservation southwest of Tucson.
  - It is a 336-mile long system of aqueducts, tunnels, pumping plants and pipelines and is the largest single resource of renewable water supplies in the state of Arizona.
Ever Get Pitched Products or Ideas to Save Water?

Save water
Drink wine

“It’s a new design to save water.”

SOUTHERN NEVADA WATER AUTHORITY

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

CENTRAL ARIZONA PROJECT
YOUR WATER, YOUR FUTURE.
Ideas Come from Everyone
"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.
A Competitive Process

INNOVATIVE CONSERVATION PROGRAM
Metropolitan Water District of Southern California

SOUTHERN NEVADA WATER AUTHORITY
U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
CENTRAL ARIZONA PROJECT

YOUR WATER. YOUR FUTURE.
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
2013 was fifth round
• To date issued 57 grants
• Approximately $2.0 million
• Received over 250 applications
2013 Moves Beyond California

- Outside MWD co-funding
- Outside California water agencies co-funding
- Three state program

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Evaluation Criteria

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

- Landscape irrigation
- Commercial
- Industrial
- Institutional
### 2013 ICP Overview of Proposals

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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
Wireless Moisture Sensor Spike
Three State Pilot

4/25

7/25

5/25
Plant Sensing to Improve Vineyard Irrigation
Plant Sensing vs Standard Irrigation Practices

Figure 2: Picture taken on June 24th at [insert time].
(2 pictures of the 2 vine rows representing each a different treatment (fruition left, standard right); each row has two vines equipped with one sensor each)
Aerial View of Plant Sensing to Improve Vineyard Irrigation

Figure 7: aerial picture taken on June 15th at L’aventure (Paso Robles)
Aerial picture showing the block divided into the 2 treatment at l’aventure. The left section is the standard treatment, the right section is the Fruition treatment. Irrigation applied in the standard treatment has impacted the fruition treatment through underground water movement (blue arrow).
Irrigation Gauges

Figure 9: irrigation gauges installed under the water emitter (picture showing how the irrigation gauges have been installed to reflect the amount of water applied in the vine row corresponding to each treatment).
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