

This presentation premiered at WaterSmart Innovations

watersmartinnovations.com



RECLAMATION

Managing Water in the West

Water and Energy Efficiency Program (WEEP)

**for Commercial, Industrial, and Institutional
Customer Classes in Southern California**

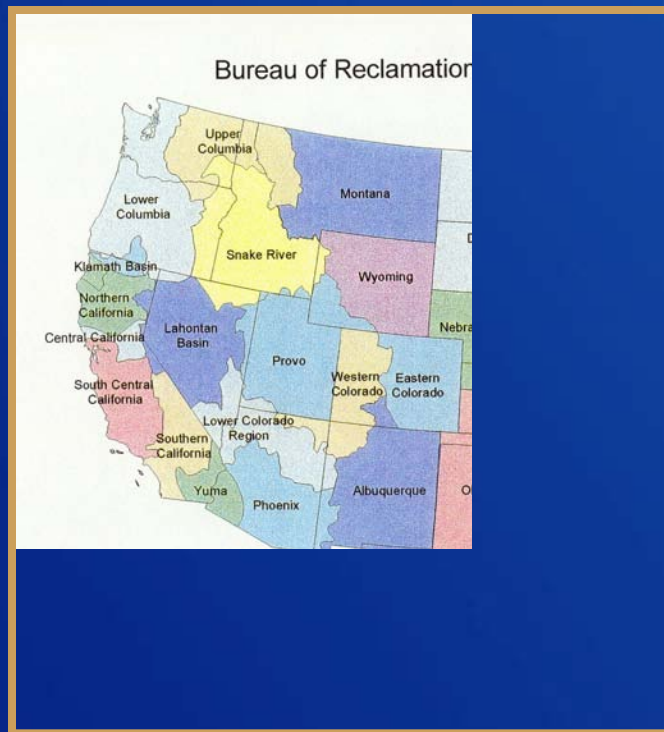
**WaterSmart Innovations Conference
October 7, 2009**



U.S. Department of the Interior
Bureau of Reclamation

Bureau of Reclamation

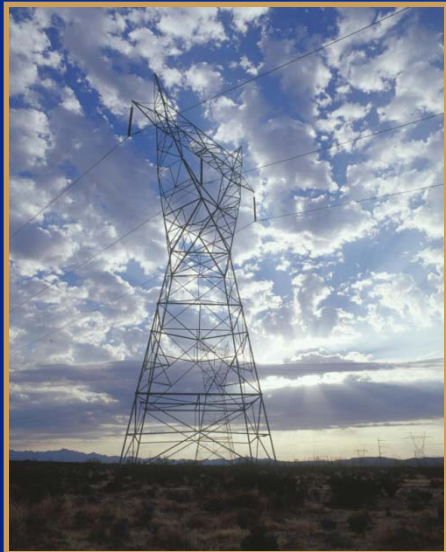
The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.



RECLAMATION

Water Storage and Hydropower

- 348 reservoirs with total storage capacity of 245 million acre-feet
- Second largest producer of hydropower
- Fifth largest electric utility
- 58 hydroelectric power plants producing 44 billion kilowatt-hours



RECLAMATION

WEEP Study developed to...



Assess potential opportunities, identify barriers, and examine local and statewide benefits of a regional program that enables water, wastewater and energy utilities to create incentives that will promote the installation of water and energy efficiency measures within the commercial, industrial, and institutional (CII) sectors throughout southern California.

RECLAMATION

Why was WEEP unique?



- Brought together water and energy utilities to study the effectiveness of combining water and energy efficiency programs.
- Identified customer classes with the best likelihood for success in implementation.
- Recommended which types of incentive programs will result in business participation.
- Developed tools for businesses and utilities.

RECLAMATION

Project Advisory Committee (PAC)

- Burbank Water and Power
- Bureau of Reclamation
- California Department of Water Resources
- California Energy Commission
- Castaic Lake Water Authority
- Central Basin Municipal Water District
- City of Anaheim Public Utilities Department
- City of Azusa Light and Water
- City of Glendale Water and Power
- City of Oxnard Public Works
- City of Riverside Public Utilities
- City of San Diego Water Department
- Inland Empire Utilities Agency
- Irvine Ranch Water District
- Los Angeles Department of Water and Power
- Metropolitan Water District of Southern California
- Municipal Water District of Orange County
- San Diego County Water Authority
- San Diego Gas and Electric Company
- Sanitation Districts of Los Angeles County
- Southern California Edison
- Southern California Gas Company
- The Cadmus Group, Inc.
- Water Replenishment District of Southern California
- West Basin Municipal Water District

RECLAMATION

WEEP Accomplishments

- Identified and selected CII customer classes
- Summarized savings for CII customers
- Developed guidelines and tools for undertaking integrated audits
- Identified marketing and outreach best practices
- Developed a sample method for evaluating costs and benefits
- Identified potential barriers and the types of needed incentives



RECLAMATION

Study Reports

- Volume 1: Executive Summary
- Volume 2: Cataloguing CII Customer Classes
- Volume 3: Audit Field Guidance Document
- Volume 4: Marketing and Outreach Practices Review
- Volume 5: Barriers and Incentives Analysis



Available online at:

<http://www.usbr.gov/lc/socal/planning.html>

RECLAMATION

Targeted Customer Classes

- Accommodation
- Amusement, Gambling, and Recreation Industries
- Chemical Manufacturing
- Computer and Electronic Product Manufacturing
- Educational Services
- Fabricated Metal Product Manufacturing
- Food Manufacturing
- Food Services and Drinking Places
- Hospitals
- Personal and Laundry Services
- Petroleum and Coal Products Manufacturing
- Professional, Scientific, and Technical Services
- Real Estate
- Textile Mills
- Utilities



RECLAMATION

Savings Potential Example

Professional, Scientific, and Technical Services

Water and Energy Savings Potential*			
Item	Water	Electricity	Natural Gas
Clean rooms		70%	
Ice Making	20%	20%	
Food Service	10% to 30%	10% to 30%	10% to 30%
Landscape	20% to 50%		
Water Heating ¹		15%	15%
Plumbing Fixtures	20% to 50%	10% to 25%	10% to 25%
Lighting		26% to 75%	
Cooling	20% to 30%	20% to 30%	

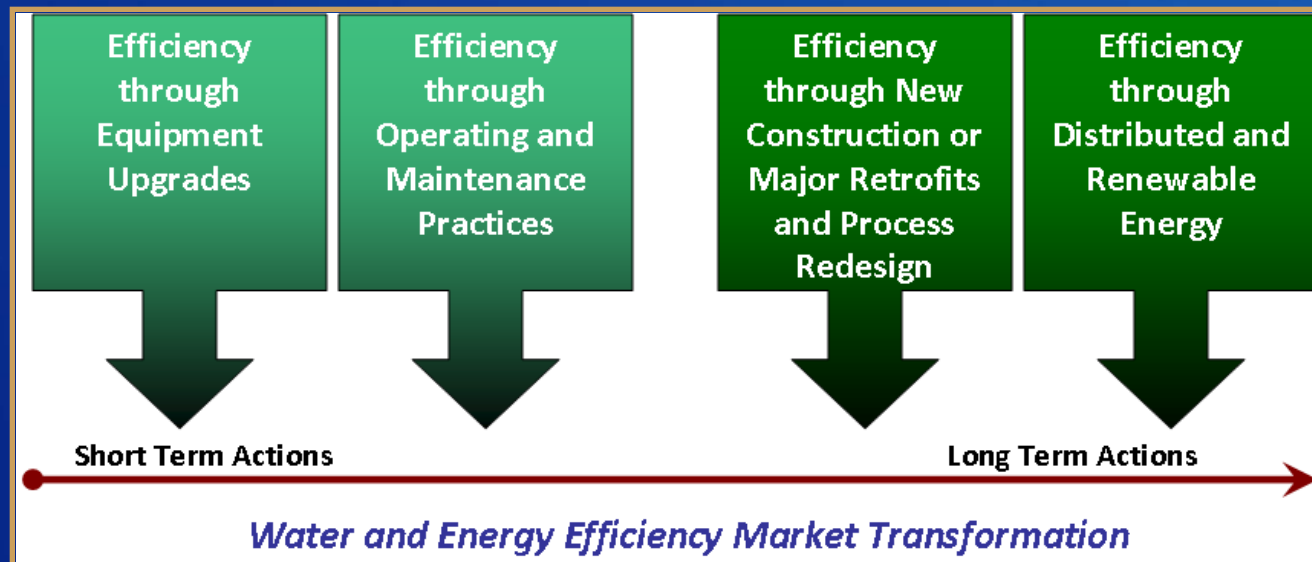
¹ Energy savings would be either electricity or natural gas depending on water heating equipment.

* All figures are general illustrations of technical savings potential. Actual savings will depend on many variables including existing equipment, new construction or retrofit, economic costs and benefits, and programmatic factors.

Integrated Water and Energy Audit

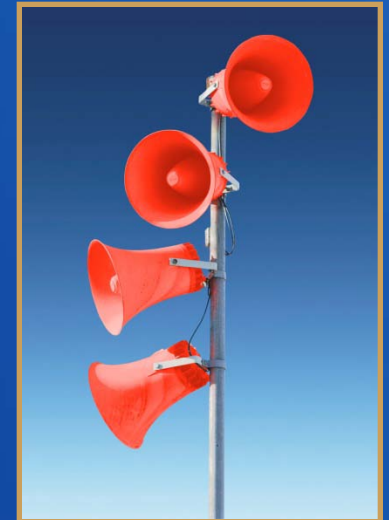
CII customer benefits associated with an integrated audit:

- Learn about the full range of incentives available
- Obtain a single audit report detailing the full net benefits accruing to the site
- Receive recommendations for equipment upgrades and/or process changes



Marketing and Outreach Practices

- Expand use of partnerships
- Establish an awards program
- Leverage existing customer segmentation research
- Develop clear, simple messages
- Maximize the “transaction point”
- Establish a committee to advance an integrated approach

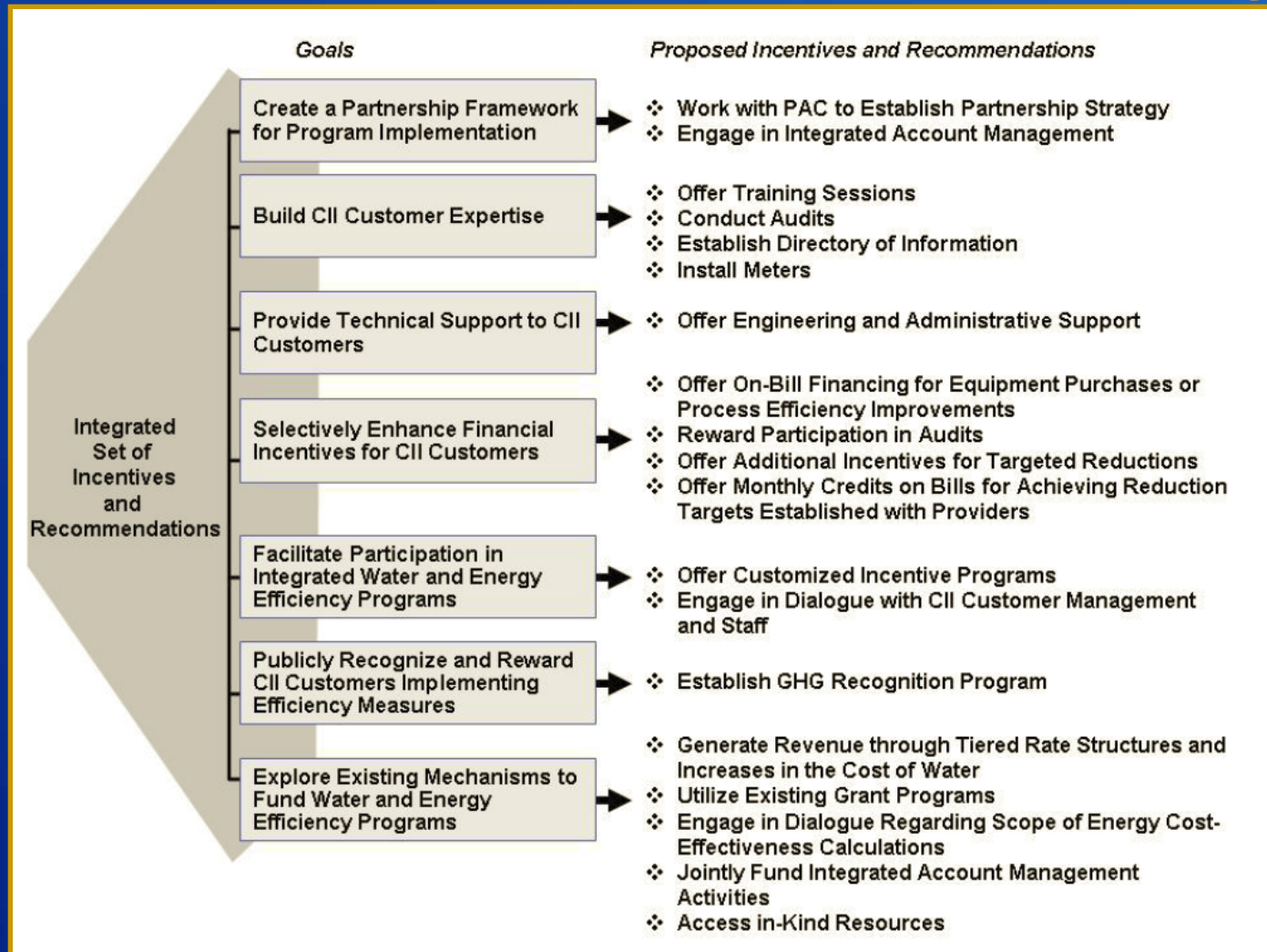


RECLAMATION

Incentives and Barriers Analysis

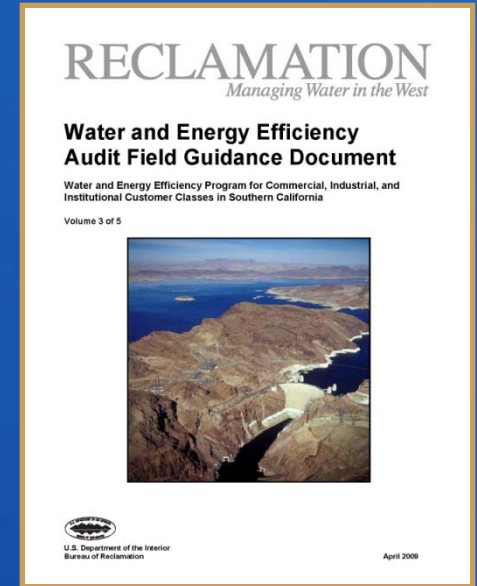
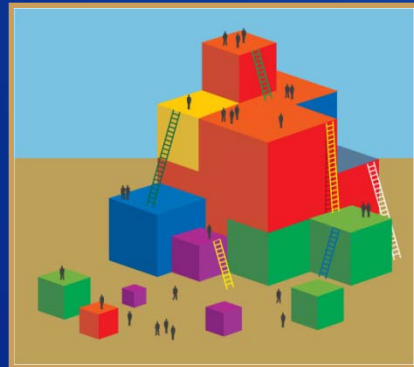
- ***Limited Program Coordination Between Water Districts, Energy Utilities, and Wastewater Sanitation Districts*** to implement integrated water and energy efficiency activities.
- ***Gaps in CII Customer Knowledge about*** rebates, incentives, and the technical aspects associated with designing and implementing water and energy efficiency improvements.
- ***Limited Availability of CII Engineering and Administrative Support to evaluate*** the technical feasibility of implementing water and energy efficiency opportunities.
- ***CII Capital and Financial Limitations*** that impact the availability of funds to finance efficiency improvements.
- ***CII Institutional Issues related to*** management approvals, regulatory requirements, and availability of funds to finance projects, all of which create delays in implementing efficiency projects.
- ***Limited Availability of CII Recognition Programs for customers implementing*** water and energy efficiency activities.

Incentives and Barriers Analysis



Conclusions and Recommendations

1. Integrated Resource Management Programs could reduce water and energy usage.
2. Need Coordinated Management Efforts and Partnerships:
 - Gather comparable usage data
 - Conduct audits and report the costs and benefits consistently
 - Engage in joint marketing and outreach activities
 - Coordinate administration of water and energy rebates



RECLAMATION

Conclusions and Recommendations

3. Increased Participation in Water and Energy Efficiency Programs would result from customized Incentives:

- Building customer level expertise
- Offering technical assistance
- Enhancing the value of rebates
- Make it easy to participate
- Publically recognize and reward customers



RECLAMATION

Conclusions and Recommendations

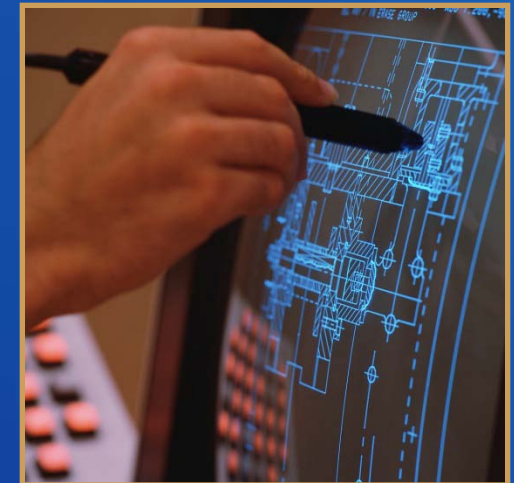
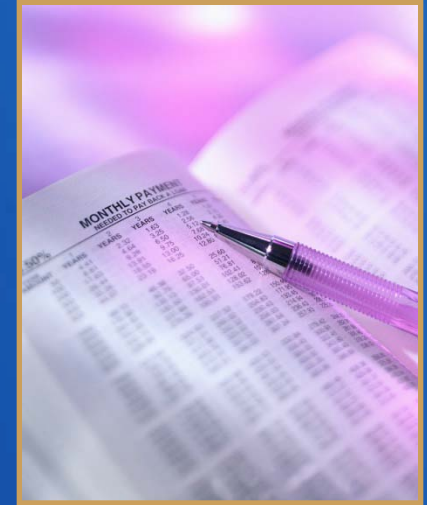


4. Financial attractiveness of water and energy projects Increases when all savings are included in a cost/benefit analysis.

- **Payback periods decrease when incentives are bundled**
- **Greater returns for customer as cost of water increases**

Conclusions and Recommendations

5. **Need secure funding for future programs (training programs, marketing and outreach activities, audits, and rebates and incentives). Consideration should be given to:**
- **Tiered water rate structure for CII and/or increasing the cost of water**
 - **Applying for funding from all sources**
 - **Engaging in dialogue about including water in energy cost-effectiveness calculations**
 - **Accessing existing staff resources to assist CII customers**



RECLAMATION

Thank you



Amy Campbell
Water Resources Planner
acampbell@usbr.gov
951-695-5310

RECLAMATION