This presentation premiered at WaterSmart Innovations

watersmartinnovations.com



Partnering with Non-Profits to Reduce Water Consumption

October 8, 2009 Jason Millheim, EIT, LEED® AP







Why do we care?

- Save potable water for expanding population
- Reduce water costs
- Reduce water pumping and heating costs (energy)
- Reduce water treatment costs
- Reduce wastewater discharge & costs
- Reduce operating costs
- Save money—lots of money & water

Water is our most precious resource, and irreplaceable.





Conservation Methods

- Education and Outreach
- Diagnostics (Audits, Reports Cards, Monitoring Habits)
- Rebates and Incentives (Cash Back for Efficiencies)
- Rules (Water Waste, Soil Amendment, Irrigation Uses)
- Research, Monitoring and Evaluation
- Programs specific to Governments
- Tiered rates mean customers that use more pay more





Mile High Youth Corps



- The mission of MHYC is to help urban youth make a difference in themselves and their community through meaningful service opportunities and educational experiences.
- Green Collar Job Training
- Youth (18-23 years old) gain the skills and experience they need to be successful in today's workforce.









MHYC Water Conservation

- Mile High Youth Corps partners with Denver Water to help low-income residents, community organizations and faith-based institutions save water by:
 - Checking plumbing fixtures for leaks
 - Measuring flow rates and replacing aerators on appropriate faucets
 - Identifying flush volume of toilets
 - Replacing inefficient toilets (older than 1994) with a new High-Efficiency Toilet (HET) that uses 1 gallon per flush

MHYC Partnership

	Water Conservation Assessment	Goal (homes)	HET Retrofit	Goal (toilets)	Service Call
2007	\$35	2,100	\$130	1,000	
2008	\$35	2,100	\$155	1,500	\$40
2009-2012	\$35	6,000	\$181	12,000	\$40



Low Income Customers

- Low Income Energy Assistance Program
 - Federally funded program designed to assist with winter heating costs
- Estimated 16,000 LEAP clients in Denver

	Assessments Completed	HETs Installed
2007	2,115	567
2008	802	235

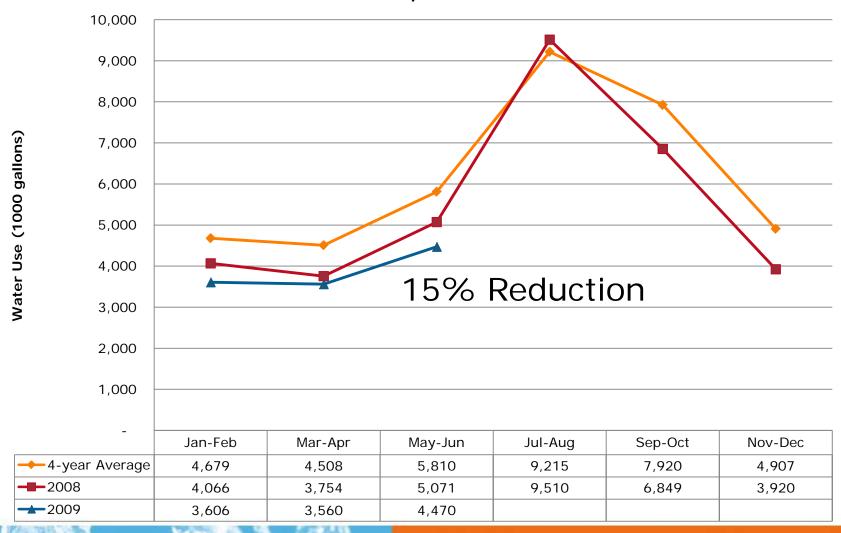






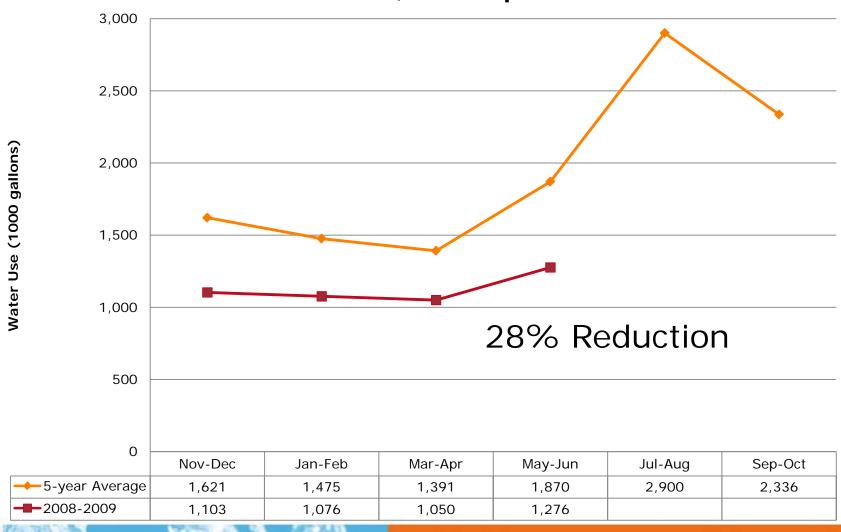


2007 LEAP 349 Accounts, Jan-Dec 2007





2008 LEAP 91 Accounts, Jan-Sept 2008





2007 & 2008 Low Income Customers

- Water Savings:
 - 15.1 million gallons per year
 - 46.3 acre-ft
- Cost of Project:

Assessments: \$102,095

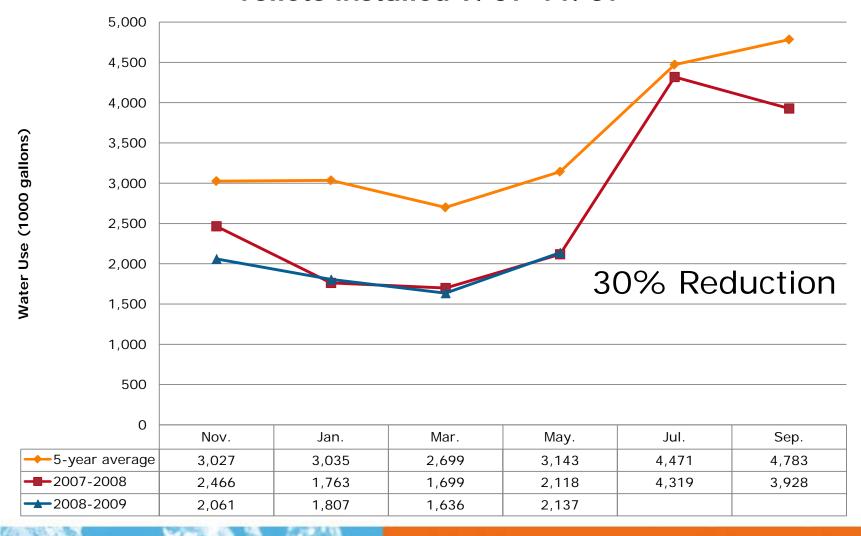
• HETs: \$148,575

Install: \$110,135

\$7,793/acre-ft



286 HETs in Multi-Family Units Toilets installed 9/07-11/07





2007 Multi-Family Customers



- Water Savings:
 - 7.0 million gallons per year
 - 21.6 acre-ft



• HETs: \$48,620

Install: \$37,180





\$3,972/acre-ft



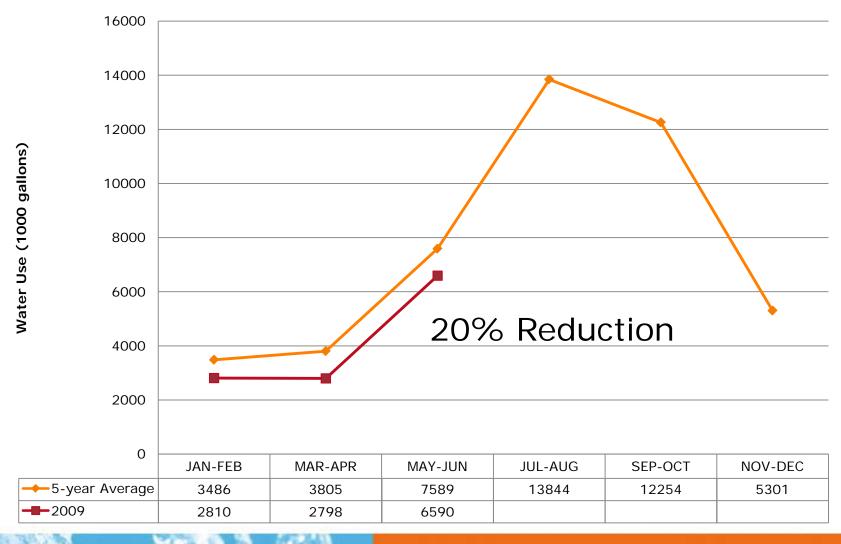
2008 Churches

- 2008: 953 toilets installed by MHYC
- 2009: 100+ toilets installed so far





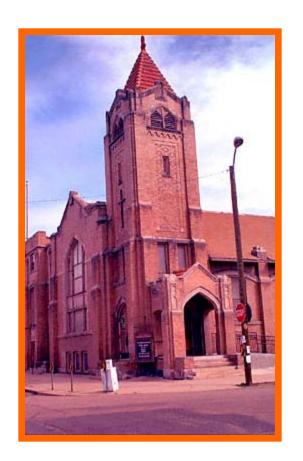
114 Churches, 748 HETs Installed Jan-Dec 2008





2008 Churches

- Water Savings:
 - 9.8 million gallons per year
 - 30.2 acre-ft
- Cost of Project:
 - HETs: \$190,660
 - Install: \$147,715



\$11,204/acre-ft

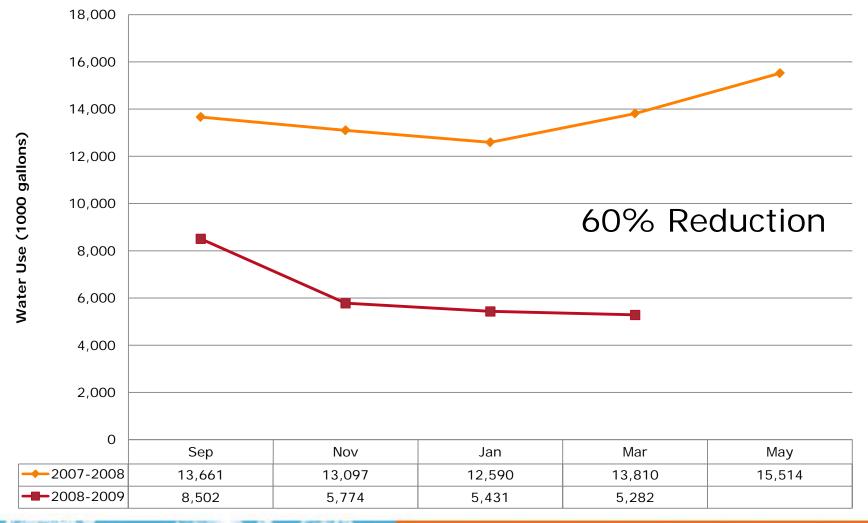
Lakewood Housing Authority



- Provides opportunities for affordable, decent, and safe living for those with low and moderate incomes.
- Privately owned units as well as units owned and managed by the Authority.
- Provides support services for subsidized residents, which enhances self-esteem, leads to economic independence and encourages participation in the community.

Belmar Groves – October 2008 Installed 107 HETs, Replaced 103 showerheads







2008 LHA - Belmar Groves

- Water Savings:
 - 42.4 million gallons per year
 - 130.1 acre-ft
- Cost of Project:

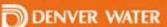
• HETs: \$18,040

Install by MHYC: \$16,585

Showerheads: \$302



\$268.46/acre-ft



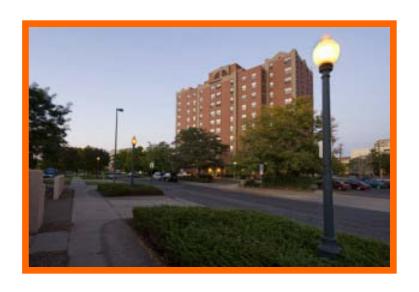
2008 Non-Profit Multi-Family

Archdiocesan Housing



NE Denver Housing

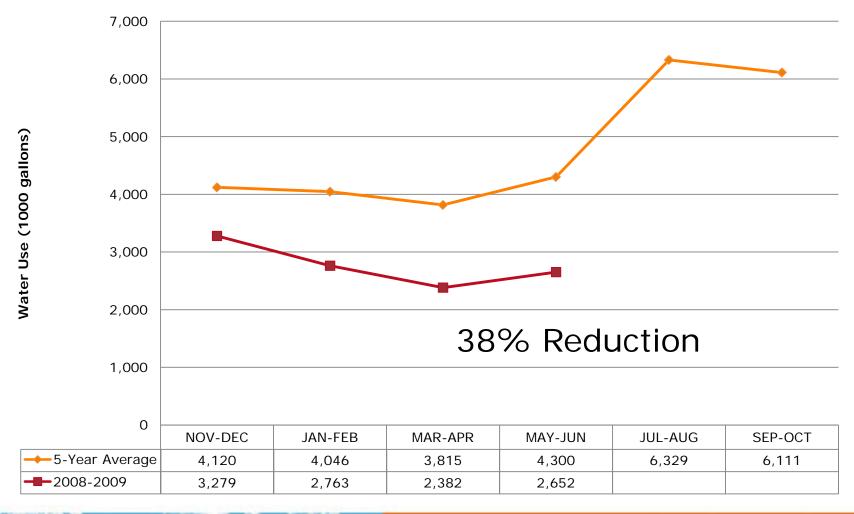




 2009: Already installed 750+ toilets in non-profit multi-family housing



Archdiocese Housing, 11 facilities 558 toilets installed 2nd Half of 2008





2008 Multi-Family Customers

- Water Savings:
 - 8.6 million gallons per year
 - 26.4 acre-ft
- Cost of Project:

• HETs: \$111,600

Install: \$86,490



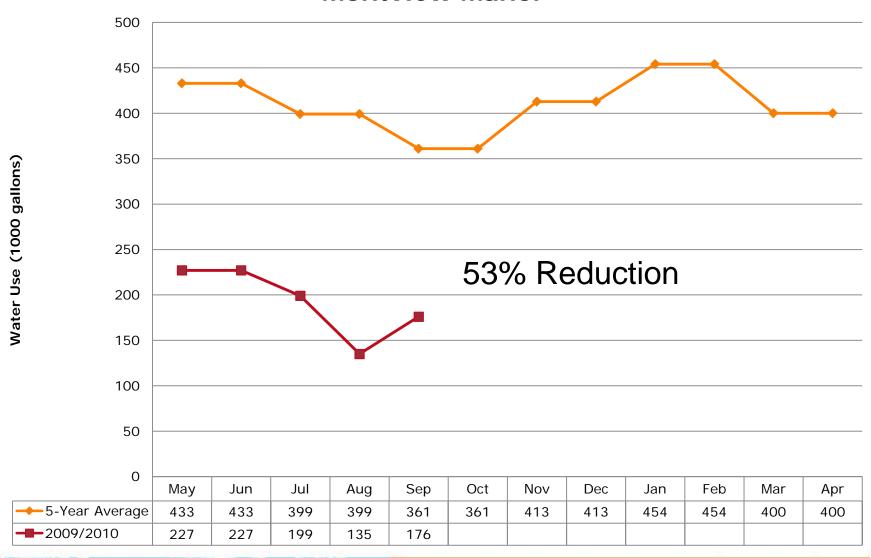
\$7,503/acre-ft

2009 Montview Manor

- Presbyterian Association of Homes and Services for the Aging
- 87 Units
- Replaced kitchen and bathroom aerators
- 90 HETs installed by Central Mechanical



Montview Manor





2009 Montview Manor

- Water Savings:
 - 3.0 million gallons per year
 - 9.3 acre-ft
- Cost of Project:

• Fixtures: \$29,044

Installation by Central Mechanical: \$18,240

\$5,084/acre-ft



Recycling of Old Toilets





Upcoming Projects

- Salvation Army
 - Countertops, sinks
 - Clothes Washers
- Habitat for Humanity toilet buy-back program
- Ice machines
- Commercial Dish Washers
- Denver Urban Renewal Authority





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