This presentation premiered at WaterSmart Innovations

watersmartinnovations.com
Hot Water, Hot Savings: Recirculating Water Pump Study

Water Smart Innovations 2019
Elsinore Valley Municipal Water District

97 square miles
155,000+ population
45,000+ connections

Areas served:
Lake Elsinore
Canyon Lake
Wildomar
Parts of Corona & Murrieta
Hot Water Recirculating System

System that recirculates cool water sitting in the hot waterline back through the cold waterline and into the water heater to be reheated and reused.
Installation

At the hot water heater

Under kitchen sink
Phase 1

- Pilot program FY 2015-2016
- BOR grant funded
- $175 rebate
- 362 residential installations
  - Over 800 applications received
Customer Response

If you installed this yourself how satisfied are you with the ease of the installation?

- Strongly Agree: 128
- Agree: 110
- N/A: 92
- Neutral: 22
- Strongly Disagree: 7
- Disagree: 3

66% agree

Do you feel you will use less water now with this device?

- Strongly Agree: 232
- Agree: 120
- Neutral: 8
- Strongly Disagree: 1
- Disagree: 1

97% agree

Would you recommend this device to others?

- Yes: 358
- No: 4

99% yes

Did you notice a decrease in time to receive hot water?

- Yes: 346
- No: 16

96% yes
• Watts Brand – Estimated 11,000+ gallons each year
• BestHotWaterRecirculators.com – 5,000 to 10,000 gallons each year

**Without a hot water recirculation system:**
- Time to 95°F (shower): ~2-3 minutes
- Time to 120°F (washing dishes): ~3-4 minutes

**With a hot water recirculation system:**
- Time to 95°F (shower): 2 seconds
- Time to 120°F (washing dishes): 4 seconds
Methods for Data Analysis

- 291 Customers
- 42 Neighbor Controls
- Average Winter Usage (January, February, March)
- 2014 compared to 2017 – Both years had Stage 2 of water drought stages and surcharges
- Difference in Difference Design
Difference in Difference Results

Monthly Usage (HCF)

Average Winter Month 2014
- Recirculating Pump Rebate Participants
- EVWMD Controls

Assumption of usage if customers did not participate in program

Average Winter Month 2017
- Savings due to Program: 0.51 HCF/month
- 7% of overall savings due to Rebate Participation

9
Water Savings

- .51 hcf/month after control effect
- Average reduction 7% per customer
- 4,500 gallons per customer saved
- 5AF of water saved in 1 year

At A Glance

- 358 Participants
- 2015-2016 Time Period
- 6 Cities
- 1.6M Total Program Related Gallons Saved in 1 Year
- 4,500 Gallons Saved per Customer for the Year
- 1 Amount of Above Ground Swimming Pools (15ft round x 4ft) that the Water Saved per Customer that Could Fill Up
- 7% Average Reduction in Usage per Customer
Next Steps...

• Phase 2: FY 18/19, fund 200 rebates
  – 117 applications approved in 5 months (30% in 1st month)
  – $20,391.48 in rebates
  – 1.6 AFY savings

• FY 19/20, expand program to 400 rebates
  – Potential savings 5.52 AF
Customer Feedback

• “Thank you. Love this thing!” Carl G. 2/20/19
• “It has changed our life. You can't imagine how long it took to get warm water in our bathroom. And the water is soooooo cold. Thank you for informing us about this amazing product. We are really grateful.” Irene P. 2/20/19
• “Thank you so much Haley! I must say that it makes me smile to get hot water so quickly now. Wish I had done this change years ago but didn’t know about such a device, or they are still relatively new in the industry. So happy not to be wasting water now while waiting for heat.” James G. 2/27/19
• “Must say that I was unaware of the existence of the Hot Water Recirculating System and it has proved to be helpful in placing hot water needs quicker and saving water. Too early in our usage to say by how much savings. Installation was quite simple. A suggestion much appreciated.” Dennis M. 3/21/19
What We Learned

1. Simplify application
2. Marketing material
3. Implementation schedule
Contact Us

Haley Munson
Water Efficiency Specialist
Elsinore Valley Municipal Water District
951-674-3146 x8247
hmunson@evmwd.net

Melissa Matlock, Ph.D.
Water Resources Analyst
Western Municipal Water District
951-571-7260
mmatlock@wmwd.com
QUESTIONS?