This presentation premiered at WaterSmart Innovations

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Eugene Water & Electric Board

THE ENERGY & WATER NEXUS OF SMART CONTROLLERS

Eugene Water & Electric Board

The Energy & Water Nexus of Smart Controllers

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Short & Sweet

- Energy/Water Nexus
- Intro to EWEB
- BPA SIS to SIC
- EWEB Results
- Next steps

Energy/Water Nexus

- Defined as the interdependence of energy and water use
- Recognized by USDA NRCS since at least the 1960's
- US Energy Policy Act 2005
- California Energy Commission 2005 Integrated Energy Policy Report
- Several more recent publications

Intro to EWEB

- Began as a water utility, built the electric utility to treat and pump the water
- About 52,000 retail customers
- 2 wholesale customers
- Energy conservation for 30+ years
- Water conservation for 17 years
- Two pilot SIC rebates previously

BPA SIS to SIC

- Bonneville Power Administration (BPA)
- Scientific Irrigation Scheduling Program
- Smart Irrigation Controller Pilot Project
- EWEB one of 6 participating utilities
  - 4 dropped out
    - water vs. electric; staffing changes
  - 2 submitted results (1 with savings, 1 with no savings)

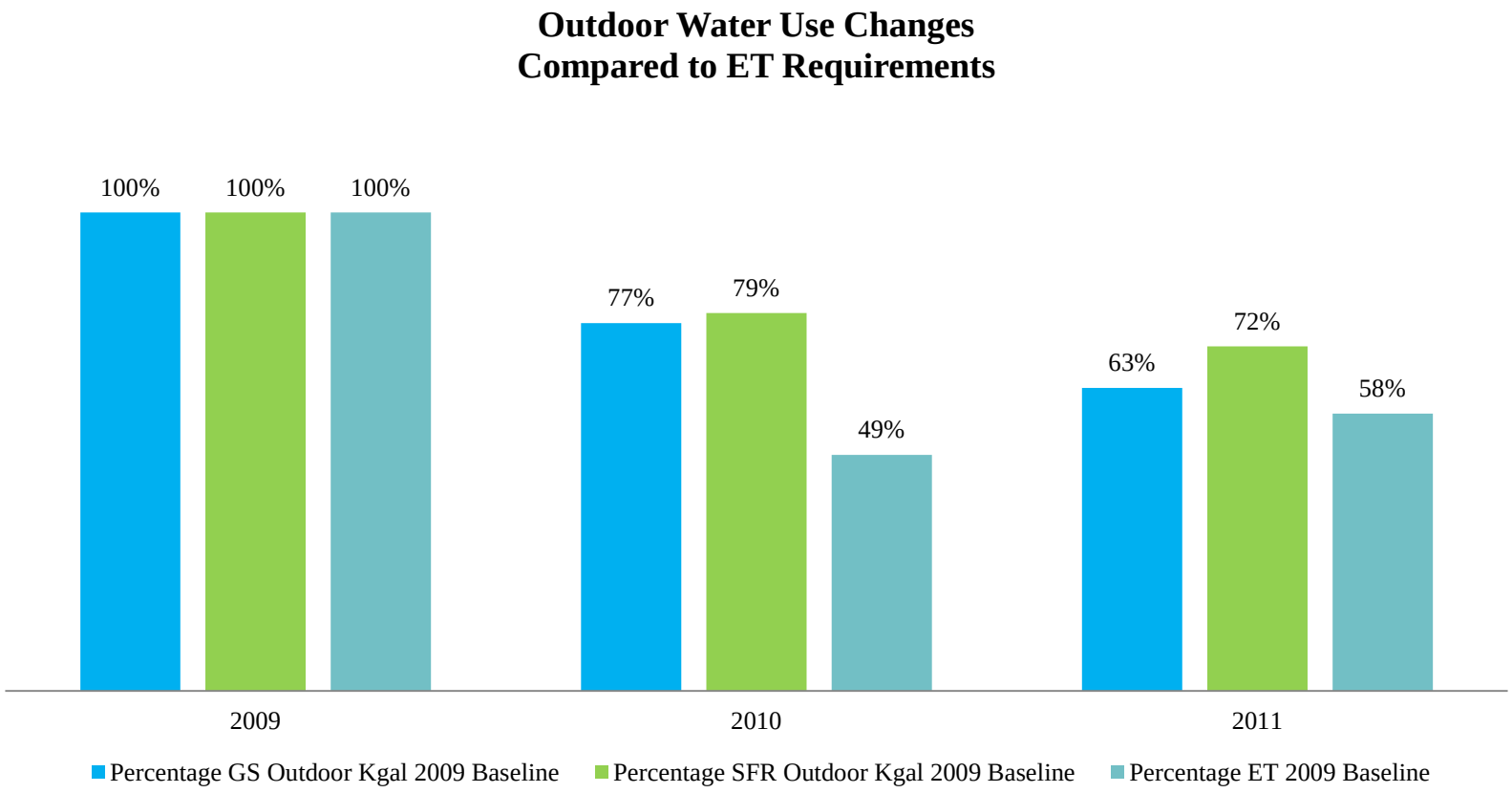
Weather: It's Complicated

- Evaluation year 2011
- 2010 & 2011 half of normal local ET
- Used 2009 & 2010 dual baseline
- Weather corrected by comparing actual use to ET requirements as a percentage, not by comparing actual use after installation to previous gallons used

EWEB Results: Water

- 22-percent water savings for MFR & CII customers attributable to use of SIC in cool summer year
- 16-percent water savings for SFR customers attributable to use of SIC in cool summer year
- Some question regarding hot summer year savings potential

EWEB Results: Water

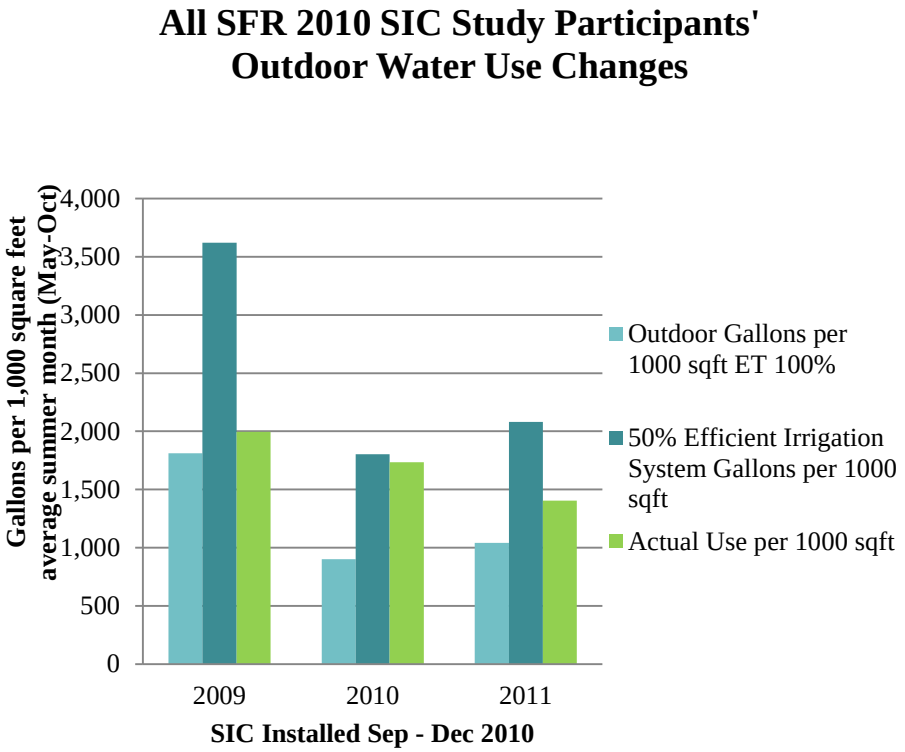


EWEB Results: SFR

- SFR large enough sample to be statistically valid
- Water budget methodology compared percent water change to percent ET change per 1000 sq/ft
- Different picture emerged from this more exact analysis

EWEB Results: SFR

- 57-percent decrease compared to cool summer year using water budget methodology
- 25-percent increase compared to hot summer year



EWEB Results: Electric

- 1 kWh savings per average summer month for base level customers attributable to use of SIC in cool weather year
- An additional16 kWh savings per average summer month for customers located in elevated pump zones attributable to use of SIC in cool weather year
- Some question regarding hot summer year savings potential

Full Report Includes…

- Results by customer segment
- Program design
- Local market maturation
- Customer selection process (before WaterSense had labeled any SIC)
- Installation preferences
- Financial analysis

Next Steps

- EWEB will conduct a 2012 evaluation
- BPA would like to have more SIC study participants region-wide
- New BPA study planned in 2013 administered through Energy Efficiency Emerging Technology program
- Stay tuned for further results

Questions?

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