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Seizing an Opportunity ; A School Retrofit Effort

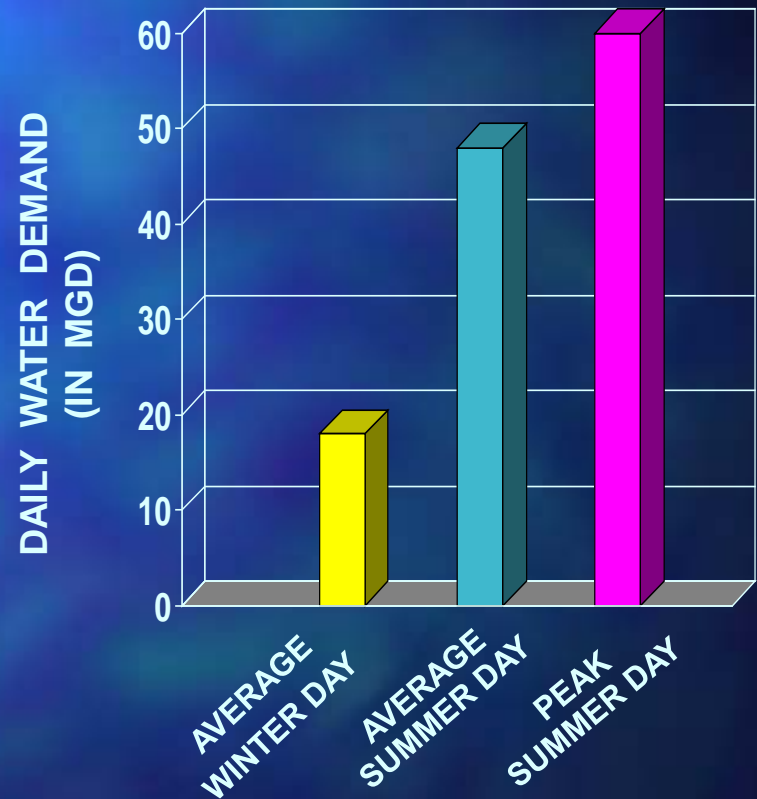
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2010 WaterSmart Innovations Conference

Overview;

Medford Water Commission

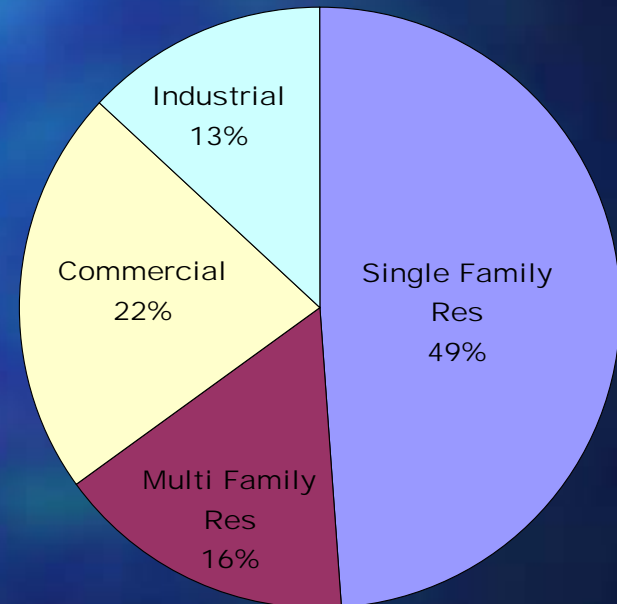
- Located in southwest Oregon, 25 miles north of California
- Population served: 130,000 (retail and wholesale)
- Climate: modest rainfall (20" per year) and hot, dry summers (mid 80s to low 100s)
- Summer use 3 times winter levels



MWC's Conservation Program

- Modest program; initiated in 1992 with one part time employee, currently 1.5 employees
- Peak usage is primary focus of conservation activities, especially landscape irrigation; no ICI program
- With no immediate water shortage and very low rates, getting customers' attention can be challenging

Water Use Breakdown 2009



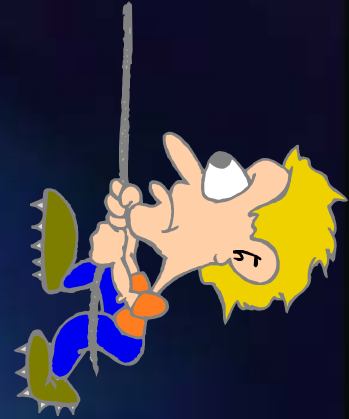
Seeing An Opportunity



November 2006 – Bond measure passed for significant remodels and new construction at many local schools

- 💧 School district management held public meetings about proposed projects
- 💧 Energy efficiency touted as a focus, but water efficiency noticeably absent
- 💧 District forging ahead; can we get onboard?

Initial Challenges



- ◆ We had no contacts or relationship with the school district management
- ◆ Conservation staff had minimal expertise or comfort level with ICI programs
- ◆ Our budget was minimal, though a small grant program offered potential opportunity to open the door
- ◆ This was a once-in-a-decade opportunity; take advantage now or lose out



The First Challenge

Getting the school district's attention

- 💧 Letter sent by staff to the school district Superintendent; no reply
- 💧 MWC Board Chair sent letter to district Superintendent; again no reply
- 💧 MWC Board Chair contacted School Board member he knew; **SUCCESS!**
- 💧 First lesson learned: don't give up!

Through the Door; Now What ??



- Initiated communication with construction project manager
- Inquired about details of proposed projects to determine potential opportunities
- Were honest about limited expertise relative to boilers, commercial kitchens, etc. but provided literature on these potential water efficiency options

Building Relationships



Connecting with school district staff and the design contractors

- 💧 Written information we provided was passed on to architects; some also called us
- 💧 We worked with engineers to encourage right sizing of meters after noting tendency to upsize unnecessarily
- 💧 Though not exciting, restrooms emerged as an area where our small grants might make a difference

The First Year



A restroom retrofit project

- 💧 Initiated a pilot program at one elementary school; limited by budget and enabled assessing satisfaction before expanding
- 💧 Two products installed: sensor-operated faucets and 1/8 gallon per flush urinals
- 💧 We paid the difference between the cost of the efficient models and what fixtures initially specified would have cost (\$6,000)



Lessons Learned:

- 💧 The 1/8 gpf urinals worked great. Only minor challenge was that the littlest tykes weren't tall enough to activate sensor, but learned to "wave"
- 💧 The faucets also worked well, but with new research showing that they did not save water, chose not to continue. Retrofitted the faucets already installed with 1/2 gpm aerators
- 💧 A leak at the school during the winter foiled efforts to compare consumption pre and post installation

Year Two; More Urinals



- Many more schools undergoing construction, and with product acceptance known, grant budget was tripled (\$18,000)
- MWC paid for 52 (1/8 gpf) urinals. Another 20 were installed solely at school district's expense
- At a less used facility (football stadium), 1/2 gpf urinals installed; plumber facilitated and discovered they cost little more than 1 gpf models – but had to be special ordered

Year Three; Finishing Up



Still more urinals

- 💧 Remodels winding down, but 22 (1/8 gpf urinals) retrofitted at 5 locations
- 💧 New high school being completed, with another 17 ultra efficient urinals installed
- 💧 During inspections, other water saving fixtures were evident; unlike first year, all faucets had .5 gpm aerators

Year Four



No projects initially anticipated,
BUT situation changed:

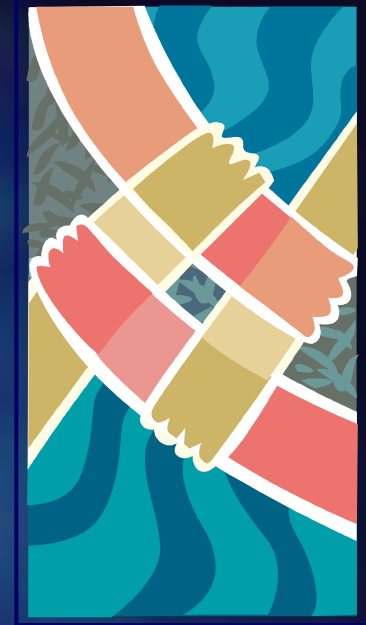
- 💧 Irrigation installation occurring at new high school; over 100 zones on 18 acres
- 💧 Landscape architect and contractor both encouraging weather-based irrigation control
- 💧 Grant opened the door for us to join the discussion; MWC grant (\$10,000) made the difference, partially paying for weather station and some artificial turf

Outcomes:



- Over 3 years, 102 ultra low flush urinals (1/8 gpm) installed with grant funds, another 20 installed solely at school district expense (plus some .5 gpf models at stadium)
- 18 sensor-operated faucets installed first summer; all retrofitted with 1/2 gpm aerators
- Weather-based irrigation control (and some artificial turf) installed at new high school
- Indoor water savings from renovations varied from 60% reduction to 90% reduction; highly influenced by whether or not water line was also replaced.

Lessons Learned; Many were Positive



- Relationships proved valuable and worked both ways
 - I can now quickly contact the school district regarding other high use issues
 - I was the school district's contact when they experienced a lead issue



- The plumber can be a helpful advocate
 - Can influence purchasing decisions
 - Can provide information and product research
 - Can be an avenue for installation of fixtures such as pre-rinse spray valves, low flow aerators

Some Challenges Remain



- Management at school district has many divisions and layers:
 - Contact person for building maintenance may not have authority over landscape and field maintenance
 - No communication between field staff and accounting, which pays water bills
- Some district staff not too receptive
 - Many nearing retirement; either don't care or not open to change
 - May have to go above them to inspire participation

Final Observations



- We had to adjust priorities and move quickly, but effort proved worthwhile
- School district project being phased over multiple years enabled us to adjust our budget to accommodate increasing scope
- Still working on some high use issues, including irrigation; district replacing water cooled refrigeration at one high-use site
- Success with this project provided us with increased knowledge and an example to publicize



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Questions?

Comments?

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