EWEB

Eugene Water & Electric Board

THREE CASE STUDIES: PEAK HOUR DEMAND MANAGMENT

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Three Case Studies:
Peak Hour Demand Management

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PNWS-AWWA Annual Conference

EWEB

Water Management Services (WMS)

- Water Conservation
  - Program development
  - Program implementation
- Cross Connection Control
  - Backflow Protection

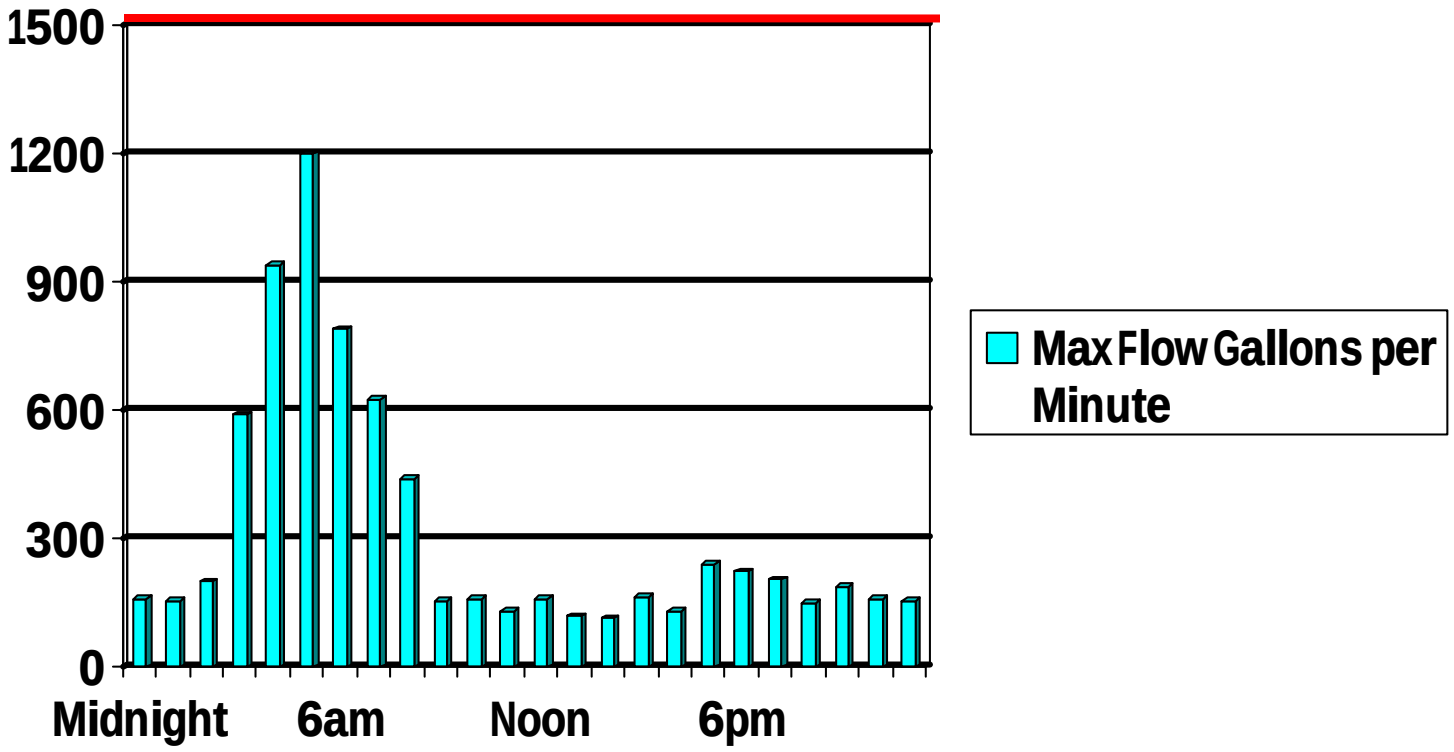
Peak Water Demand: 2 Flavors

- Seasonal Peak Water Demand
  - High water use during a certain time of the year
  - Typical outdoor water conservation program
- Peak Hour Water Demand
  - High water use during a certain time of day
  - Also related to outdoor water use
  - Occurs at the same time as seasonal peak

EWEB Peak Hour Projects

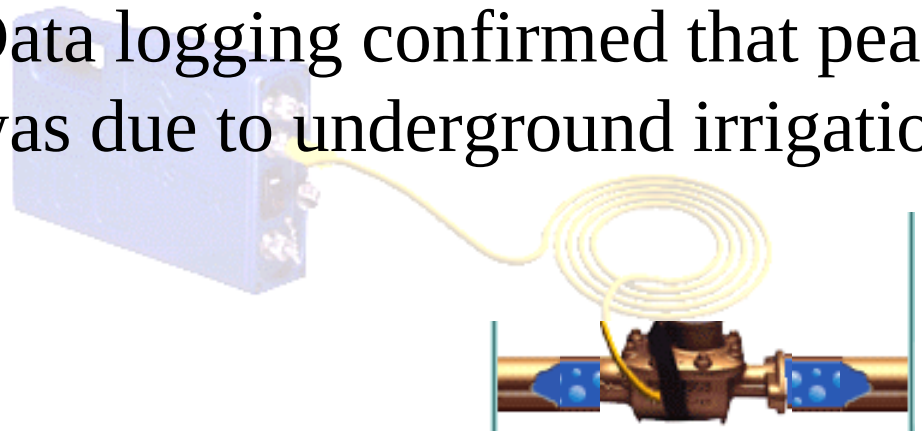
- 2003: A single upper level pump system
- 2004: Successful management, sought to expand to other upper level pump systems
- 2007: Peak hour an emerging problem in the base level system
- 2008: First effort as system-wide message
- 2009: Added an upper level pump system
- 2010: Refined system-wide message

2003: Upper level pump system



Focus on Peak Hour

- 158 residential customers
- Virtually all irrigate, but only a few are classified as top 10% water users.
- Recent change in landscaping for new homes.
- Recent change in meter sizing for new services.
- Data logging confirmed that peak hour demand was due to underground irrigation systems.



Focus on Peak Hour

- Residential focus groups identify landscape and irrigation contractors and local extension service as credible educators.
- Customer may disregard advice and rely on Grandpa or Grandma Gardener for direction.
- EWEB was identified as THE credible educator about the water system but not about landscape water use.

Focus on Peak Hour

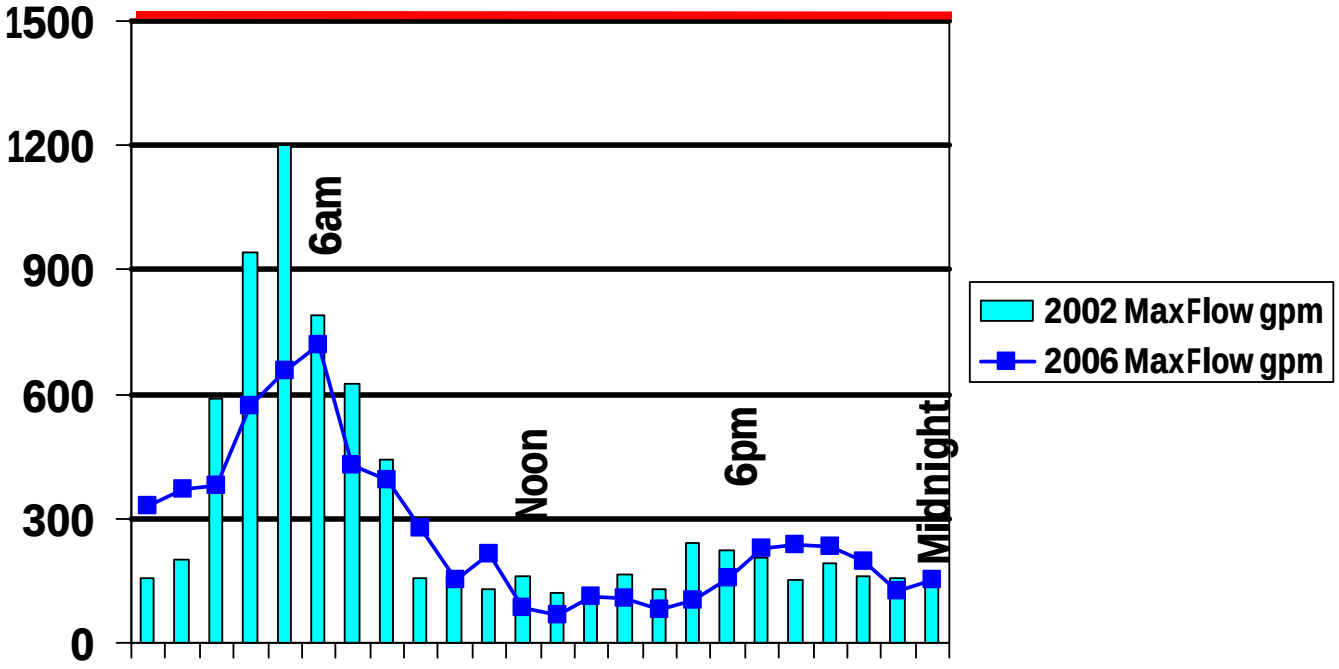
- Customers value their yard…emotionally connected
- Convenience

- NO REGULATION!

Focus on Peak Hour

- Newsletter first week of August 2004.
  - -400 GPM THE NEXT DAY!
- Follow-up “peak of the week” postcards
  - Goal of maximum 700 GPM achieved the day after the first postcard (and ever since).
- Closing season newsletter in the fall.
- Same information pattern, same success every year since.

Focus on Peak Hour



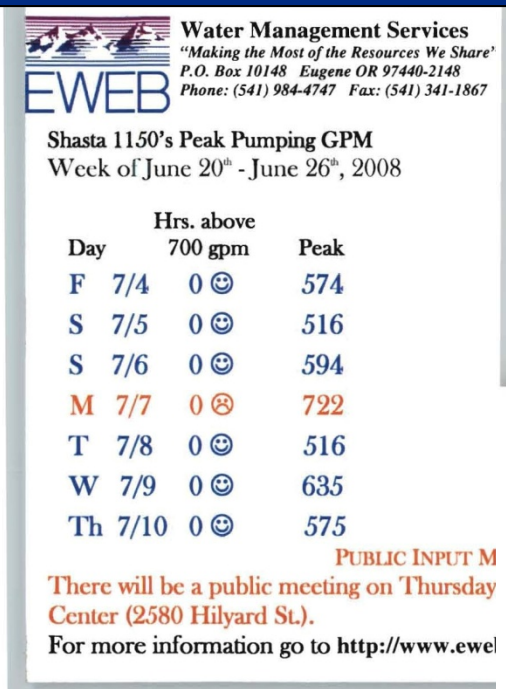
- Avoided $500,000 emergency build-out and allowed upgrade to be built on original timeline

Time to build

- The reservoir site was purchased in 1960's
- In 2000's the ridgeline was turned into parkland preserve
- Stakeholder input sought for build-out
  - Peak hour mgmt project provided well educated stakeholders

Basic Tools of Peak Messaging

- Newsletter, opens and closes season
- Weekly postcard, timely feedback
- Educate the educators



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Water Management Services
"Making the Most of the Resources We Share"
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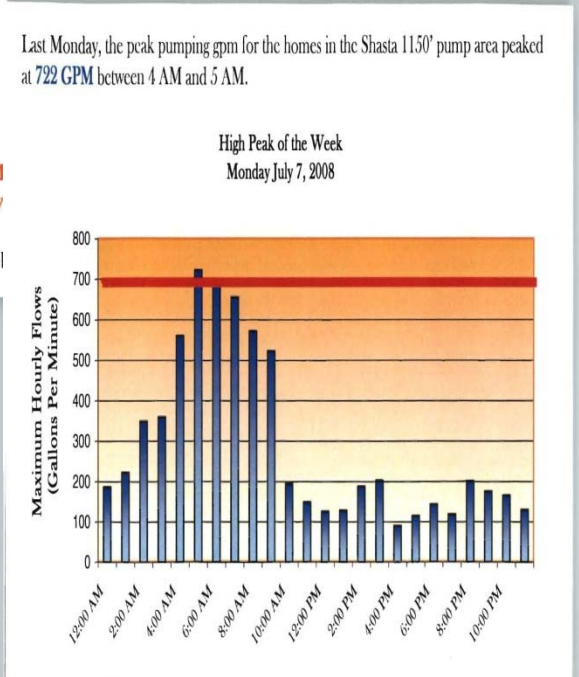
Shasta 1150's Peak Pumping GPM
Week of June 20th - June 26th, 2008

Day		Hrs. above 700 gpm	Peak
F	7/4	0 ☺	574
S	7/5	0 ☺	516
S	7/6	0 ☺	594
M	7/7	0 ☹	722
T	7/8	0 ☺	516
W	7/9	0 ☺	635
Th	7/10	0 ☺	575

PUBLIC INPUT M

There will be a public meeting on Thursday
Center (2580 Hilyard St.).
For more information go to http://www.ewel



Last Monday, the peak pumping gpm for the homes in the Shasta 1150' pump area peaked at 722 GPM between 4 AM and 5 AM.

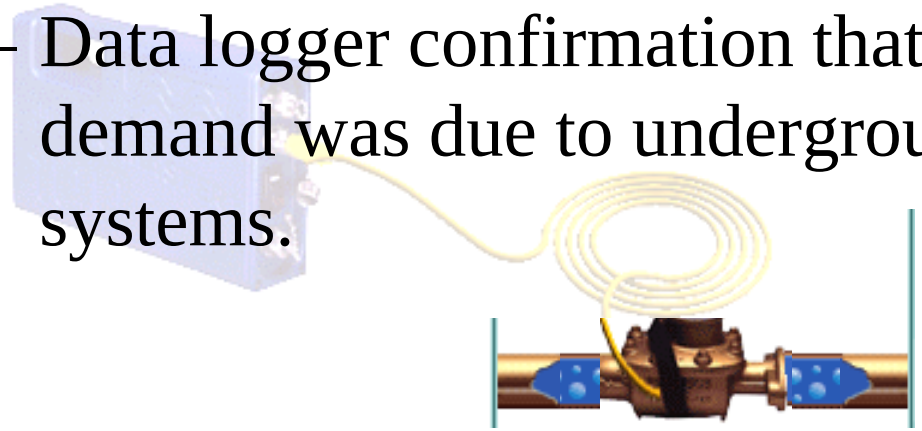
High Peak of the Week
Monday July 7, 2008

2004: Expand the Project?

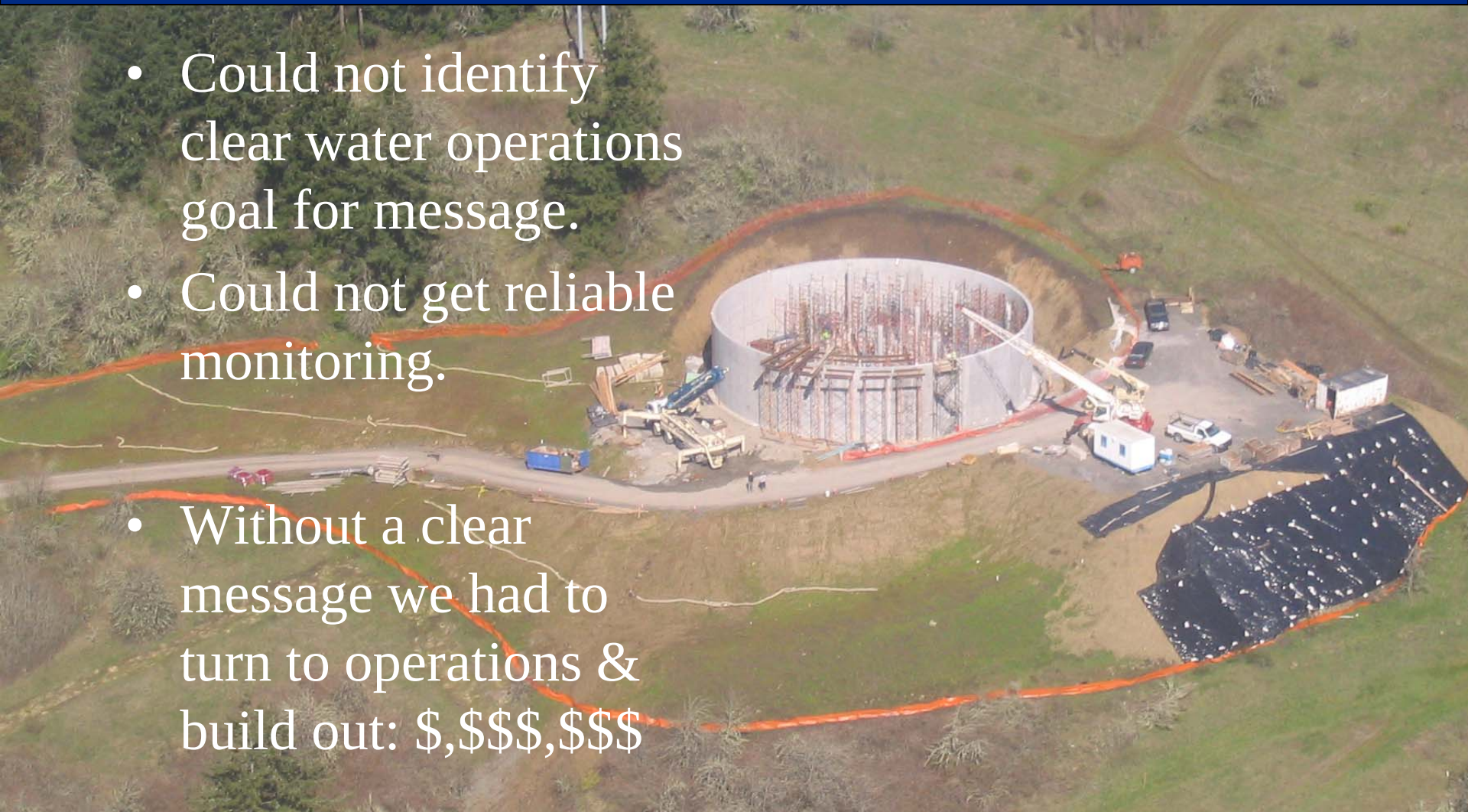
- Three peak hour demand challenged areas identified:
  - Upper level pump zone nearing capacity of continuous running pumps.
  - Established neighborhood with new construction at the top of the hill.
  - Annexed inadequate neighborhood water system in hilly part of town.

2004: Expand the Project?

- Initially these three areas looked similar to the successfully managed peak hour areas.
  - Exclusively residential customers
  - Problems with flow and pressure during early morning irrigation hours.
  - Data logger confirmation that peak hour demand was due to underground irrigation systems.



2004: Expand the Project?



- Could not identify clear water operations goal for message.
- Could not get reliable monitoring.
- Without a clear message we had to turn to operations & build out: $,$$$,$$$

2009: Expand the Project!

- Build-out ultimately unsuccessful in solving peak hour issues in some areas
- Began peak hour messaging for additional upper level pump area in mid-summer
- Similar success, but response not so fast
- These efforts continue, refining tools

2008: Base Level Messaging

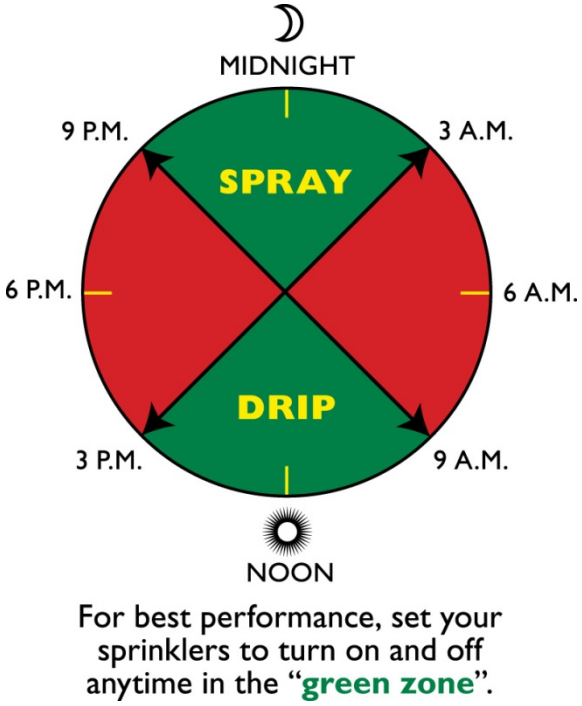
- More focus groups to find the WIIFM for wider audience
- Simplify the message
- Metro letter, who, what, when
  - First mailed to contractors
  - 4 weeks later mailed to top 10% customers
  - Late production so late letters…no effect ☹

2009: Base Level Messaging

- Focus groups with customers who received the letter
- VERY IMPORTANT FINDINGS
  - Daytime watering suggestion was confusing
  - University not a credible testimonial
  - Suggested postcard follow-up
- Not enough time to change the letter so no mailing in 2009

2010: Base Level Messaging

- Key changes in base level message
  - Shorter letter
  - Modified sticker to suggest "spray" watering at night; "drip" watering during the day
  - Testimonial from local landscape contractor



Advanced Tools

- Newsletter or general letter
  - Beginning and end season
  - Timer sticker
- Weekly postcard, timely feedback
  - Graph scale, consistent for each season
  - Emoticons? YES! ☺
  - Transition to e-mail notification
- Website view page in development
- Continue to educate the educators

Rely on us.