

This presentation premiered at WaterSmart Innovations

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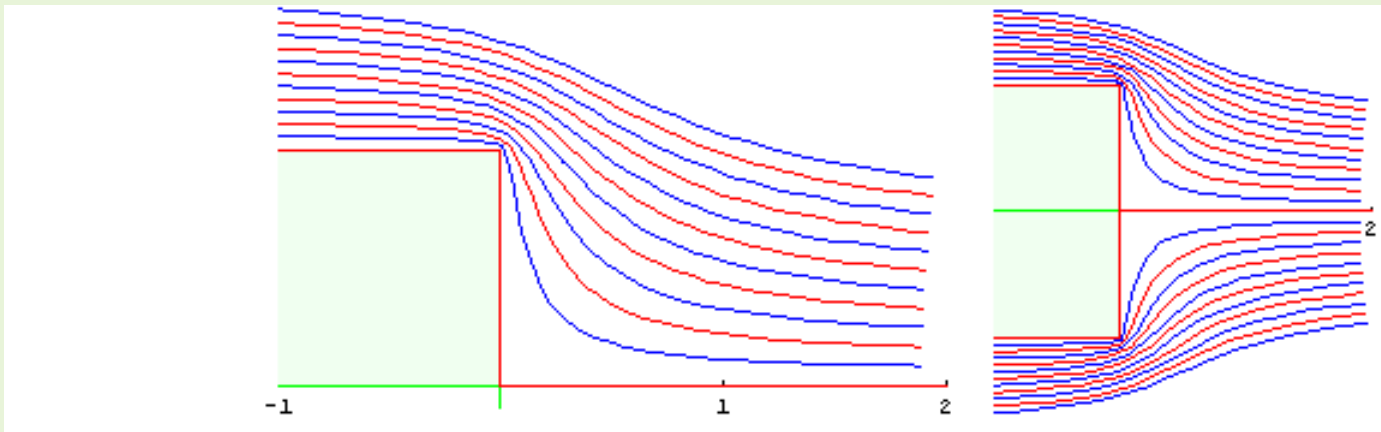


Every drop counts.

Stephanie Tanner, US EPA

**Marketing WaterSense® to Technical People
Water Smart Innovations Conference**

The Technical Mind



$$w_1 = \mathbf{i}, w_2 = 0$$

$$f'(z) = A (z - x_1)^{-\alpha_1/\pi} (z - x_2)^{-\alpha_2/\pi}$$

$$= A (z - (-1))^{-(-\pi/2)/\pi} (z - 1)^{-(\pi/2)/\pi}$$

$$= A (z + 1)^{\frac{1}{2}} (z - 1)^{-\frac{1}{2}}$$

$$= A \frac{(z + 1)^{\frac{1}{2}}}{(z - 1)^{\frac{1}{2}}}$$

$$\alpha_1 = -\frac{\pi}{2}, \alpha_2 = \frac{\pi}{2}$$

$$w = \frac{1}{\pi} \left[(z^2 - 1)^{\frac{1}{2}} + \text{Log} \left(z + (z^2 - 1)^{\frac{1}{2}} \right) \right]$$

$$u \leq 0, v = 1 \text{ and } u \geq 0, v = 0$$



What is it we want?

- The answer – tells us what we need to do or look for

BUT more importantly

- How you got the answer – tells us we can trust the answer



How Do We Decide What Gets Labeled?

WaterSense uses the following factors in determining which products to label. Products must:

- Offer equivalent or superior performance
- Realize significant water savings on a national level
- Achieve water efficiency through several technology options
- Provide measurable results
- Be cost-effective
- Be effectively differentiated by the WaterSense label
- Be independently certified



What is Our Specification Development Process

1. Technical and market research
 - Define scope, information gaps, and research needs
 - Define efficiency and performance
2. Notification of Intent (NOI) to develop a specification
 - Gather necessary data/conduct research to fill information gaps
 - Hold public meeting(s) to discuss criteria for draft specification
3. Draft specification
 - Hold public meetings and gather written comments on draft criteria
 - Address comments, finalize specification criteria
 - Establish licensed certifying bodies to conduct testing/certification
4. Final specification
 - Products certified to meet specification criteria for water-efficiency and performance



Why Should I Have Confidence in WaterSense Products

- WaterSense labeled products must meet EPA criteria for both water-efficiency *and* performance
 - In conjunction with industry, EPA defines measurable performance criteria
 - If necessary, EPA works with other organizations to develop performance criteria (e.g., ASME)
- WaterSense labeled products are certified by an accredited independent third-party
 - Test products
 - Assess manufacturers quality management system
 - Conduct periodic surveillance (i.e., audit factories, retest products, police the use of the label)



Did You Think About What Is Important to Me?

- WaterSense must identify performance attributes and test protocols
- Critical questions:
 - What performance attributes are important?
 - Are there defined evaluation methods for the attributes of importance?
 - Do the evaluation methods produce consistent and reproducible results within an independent laboratory community?
 - What is the existing range of product performance?
 - Are there any going to be any unintended impacts on the system?
- EPA works with stakeholders to fill data gaps through industry or utility sponsored research.



WaterSense®

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WaterSense Data Needs

In order to develop a new specification, EPA needs enough data to demonstrate the product category meets WaterSense [evaluation factors](#). Of greatest importance is how to measure and verify water savings for that product, and what makes up "good" performance.

In some product categories, these data are readily available. For example, many plumbing products have defined test protocols and have been independently tested for efficiency and performance for a number of years, resulting in a large body of available data. On the contrary, other product categories have limited experience with independent testing and/or lack independent studies to demonstrate efficiency or performance.

The process of defining performance attributes and identifying protocols to test those attributes includes answering the following questions:

- What performance attributes are important?
- Are there defined testing methods?



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Case Study: Showerheads

- What performance attributes are important?
 - Pressure compensation, spray pattern/distribution, force, and wetting
- Are there defined evaluation methods for the attributes of importance?
 - Working with the ASME Joint Harmonization Task Group to define methods
 - Evaluation methods must be correlated with user satisfaction
- Conduct user satisfaction study
 - Does satisfaction correlate with performance measures?
 - Establish performance levels
- Consider potential increased risk of thermal shock when selecting flow rate



What Else Are You Working On?

	<i>2006/2007</i>	<i>2008 and Beyond</i>
<i>Irrigation</i>	<i>Certification for Irrigation Professionals</i>	<i>Moisture Sensors Drip Micro Technology Smart Controllers</i>
<i>Residential Plumbing</i>	<i>Toilets Faucets</i>	<i>Showerheads Water Softening Systems Drinking Water Treatment Humidifiers</i>
<i>Commercial Plumbing</i>		<i>Toilets Pre-rinse Spray Valves Urinals</i>
<i>Other</i>		<i>New Homes Autoclaves Glassware washers Sterilizers</i>



Questions?

- What is WaterSense doing about drainline clogging from “low flow” fixtures?
- When will we have labeled showerheads?
- Why don't you label component parts?
- Anyone, Anyone, Bueller, Anyone??



More Information



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